WKE

AUG 2013

PROJECT ID: 1060-33-78

COUNTY: MILWAUKEE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 1066

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1060-33-78	WISC 2013376	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

ZOO IC - S.76TH ST BRIDGE OVER I94

KEARNEY ST TO O'CONNOR ST

LOCAL STREET

MILWAUKEE COUNTY

STATE PROJECT NUMBER

1060-33-78



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N

DESIGN DESIGNATION

		IH 94	76TH STREET
A.A.D.T.	2014	= 158,900	= 10,360
A.A.D.T.	2035	= 186,240	= 13,100
D.H.V.	2035	= 13,450	= 1,470
D.D.		= 49 EB/51 WB	= 41 NB/59 SB
T.		= 6.8 %	= 2.0 %
DESIGN SPEED		= 60 MPH	= 35 MPH
ESALS		= 20,016,600 RIGID DESIGN	= N/A

CONVENTIONAL SYMBOLS

PLAN

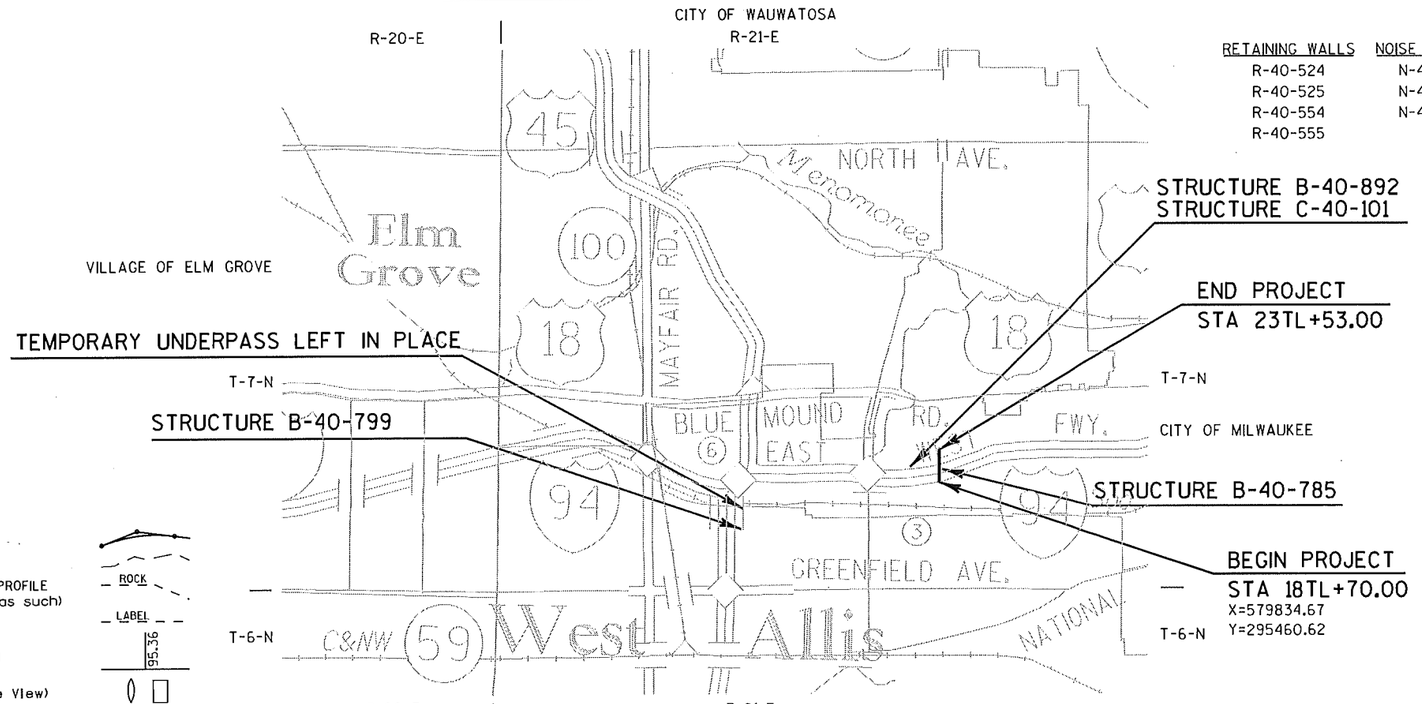
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE
- TRANSMISSION TOWER



TEMPORARY UNDERPASS LEFT IN PLACE

STRUCTURE B-40-799

STRUCTURE B-40-892

STRUCTURE C-40-101

END PROJECT
STA 23TL+53.00

STRUCTURE B-40-785

BEGIN PROJECT
STA 18TL+70.00
X=579834.67
Y=295460.62

RETAINING WALLS	NOISE BARRIER
R-40-524	N-40-70
R-40-525	N-40-71
R-40-554	N-40-72
R-40-555	

LAYOUT
SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.091 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MILWAUKEE COUNTY ZONE, NAD 83 (2007)

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (2007)

FORWARD 45

ORIGINAL PLANS PREPARED BY
MILWAUKEE, WISCONSIN

WISCONSIN
MICHAEL R. ERNST
41457
WAUKESHA, WI
PROFESSIONAL ENGINEER

6-12-13 (Date)

Michael R Ernst (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	FORWARD 45
Designer	FORWARD 45
Project Manager	JEFF BOHEN
Regional Examiner	
Regional Supervisor	ROBERTO GUTIERREZ
C.O. Examiner	

APPROVED FOR THE DEPARTMENT

DATE: 6-10-13 (Signature)

E

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TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

DIGGERS HOTLINE

Call 811 3 Work Days Before You Dig
Or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH COMPACTED BACKFILL GRANULAR UNLESS REGULATIONS REQUIRE OTHERWISE. BACKFILL GRANULAR MATERIAL IS INCIDENTAL TO THE REMOVAL ITEM.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

CURB AND GUTTER GRADES ARE GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER.

THE FLANGE ELEVATION ALONG S. 84TH STREET FROM STA 42F+51.28 TO STA 42F+27.04 AND RAMP FDA ARE 3' BELOW FINISHED GRADE TO ALLOW FOR ASPHALTIC PAVEMENT OVERLAY.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

THE EXACT LOCATION OF EXCAVATION BELOW SUBGRADE (EBS) WILL BE DETERMINED BY THE ENGINEER.

SAWCUT ASPHALTIC AND CONCRETE DRIVEWAYS AND/OR PARKING LOTS AT THE MATCHLINE AS SHOWN ON THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER.

UNLESS OTHERWISE SHOWN OR NOTED, TEMPORARY PAVEMENTS SHALL BE 5 INCHES OF ASPHALTIC SURFACE TEMPORARY OVER 8 INCHES OF BASE AGGREGATE DENSE, 1 1/ 4 INCH.

WHEN DEFINING THE PAVEMENT STRUCTURE, THE BOTTOM OF THE BASE AGGREGATE DENSE IS CONSIDERED THE SUBGRADE LINE. THE SELECT CRUSHED MATERIAL LAYER IS A SUBGRADE IMPROVEMENT

THE EMBANKMENT WORK SHOWN FOR RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN IN THE PLANS TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE AN ESTIMATE.

RESTORE THE PARKING LOT AT HONEY CREEK CORPORATE CENTER DUE TO SANITARY SEWER CONSTRUCTION WITH 5 INCHES OF ASPHALTIC SURFACE OVER 10 INCHES OF BASE AGGREGATE DENSE 1 1/4 INCH.

RESTORE SCHLINGER AVENUE IN KIND WITH 9" OF CONCRETE PAVEMENT OVER 6" OF BASE AGGREGATE DENSE 1 1/4 -INCH.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER THE ITEM TRAFFIC CONTROL COVERING SIGNS.

PROVIDE TEMPORARY POSITIVE DRAINAGE ON THE NEWLY INSTALLED STORM SEWER SYSTEM UNTIL IT IS ABLE TO EFFECTIVELY DRAIN TO ITS INTENDED OR PLANNED OUTFALL.

ALL INLETS IN DRIVING LANES DURING CONSTRUCTION MUST HAVE WELDED OR BOLTED COVERS.

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

CONCRETE PAVEMENT TINING SHALL BE LONGITUDINAL

PAVEMENT TYPE	TOTAL LAYER PAVEMENT THICKNESS	LAYERS	NOMINAL MAXIMUM SIZE GRADATION	ASPHALTIC MATERIAL
E-1	3"	3"	19.0 MM	PG-64-22
E-1	5"	2 1/2" UPPER LAYER 2 1/2" LOWER LAYER	12.5 MM 12.5 MM	PG-64-22 PG-64-22
E-10	7 1/2"	3 1/2" UPPER LAYER 4" LOWER LAYER	25.0 MM 25.0 MM	PG-64-28 PG-64-28
E-30	3"		19.0 MM	PG-64-22
ASPHALTIC SURFACE	5"		25.0 MM	
ASPHALTIC SURFACE TEMPORARY	5"		25.0 MM	

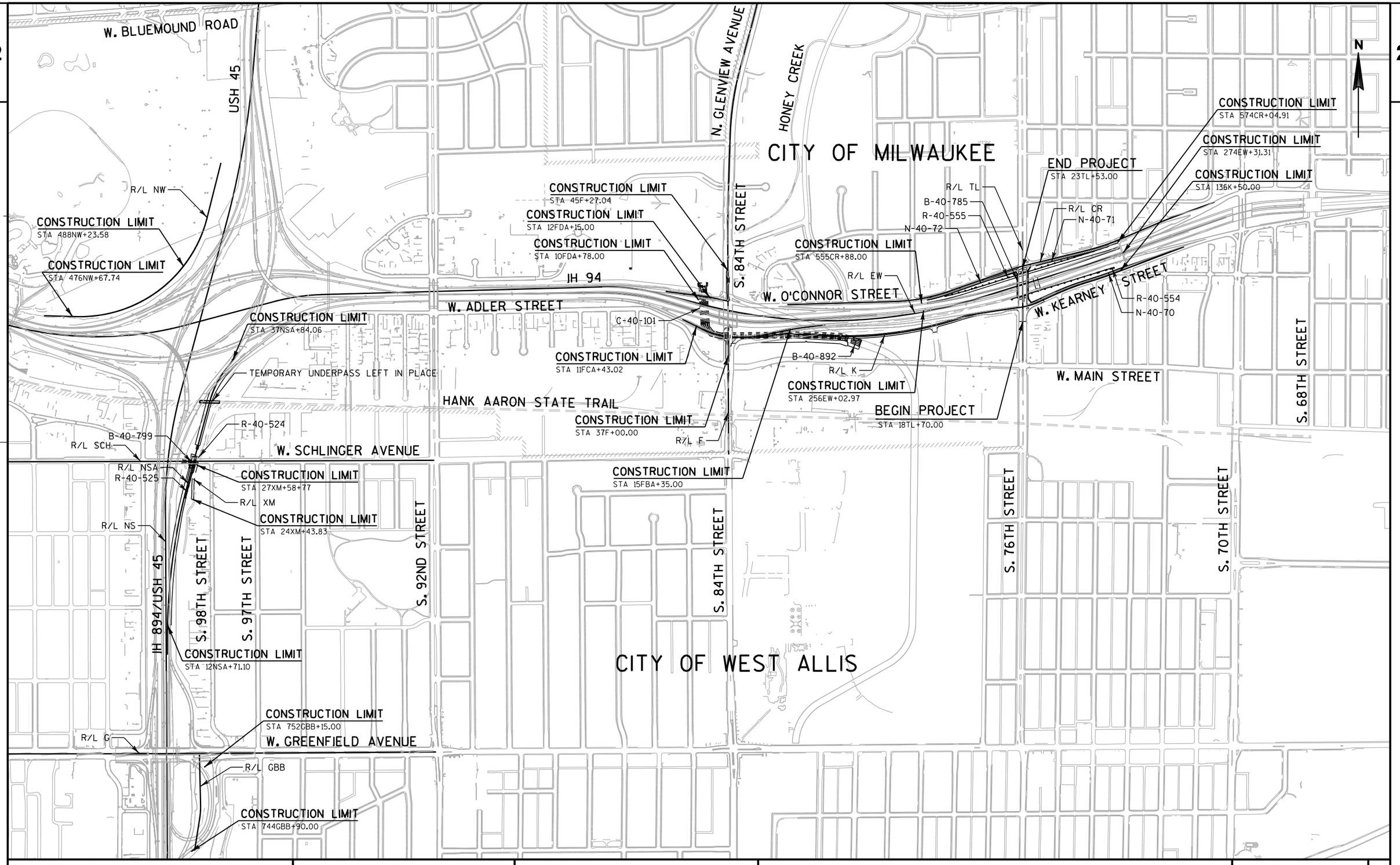
ORDER OF SECTION 2 DETAIL SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLANS
PLAN DETAILS
FTMS
CONTOUR MAP
CROSS SECTION MATCHLINES
EROSION CONTROL
STORM SEWER
SANITARY SEWER
WATER MAIN
UTILITY PLANS
PERMANENT SIGNING
LIGHTING PLAN
TRAFFIC SIGNALS
COMMUNICATIONS
PAVEMENT MARKING
TRAFFIC CONTROL
STAGE CONSTRUCTION
DETOUR PLAN
FENCING
ALIGNMENT LAYOUT

STANDARD ABBREVIATIONS

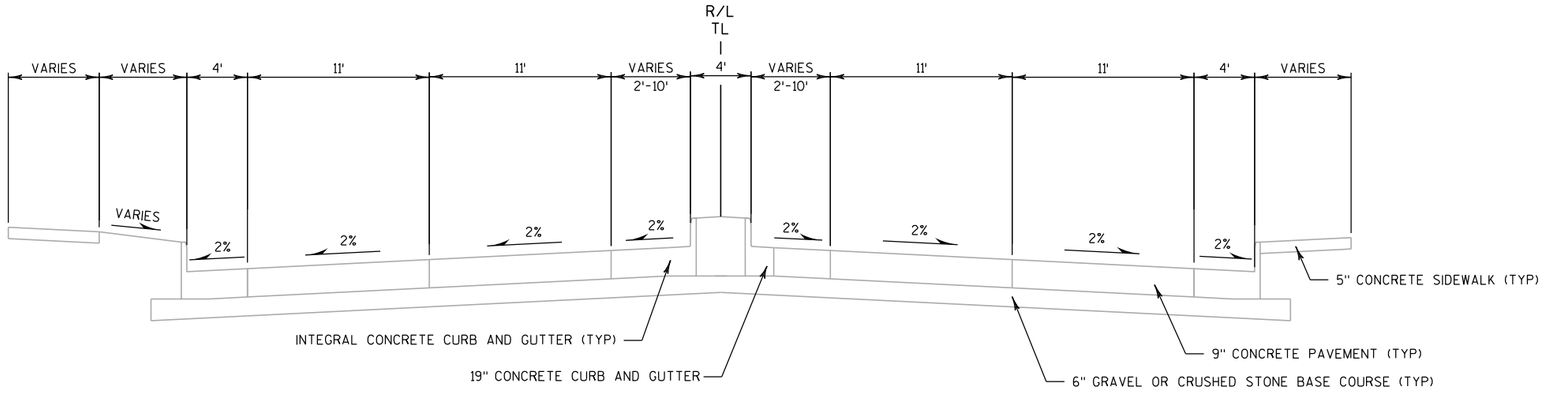
AEW	APRON END WALL
AGG	AGGREGATE
ASPH	ASPHALTIC
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CMCP	CULVERT PIPE CORRUGATED METAL
CONC	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC-YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
EB	EASTBOUND
FE	FIELD ENTRANCE
FL	FLOW LINE
HMA	HOT MIX ASPHALT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LP	LOW POINT
LT	LEFT
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
REQD	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RRSP	RAILROAD SPIKE
RT	RIGHT
SALV	SALVAGED
SAPBC	SALVAGED ASPHALTIC PAVEMENT BASE COARSE
SB	SOUTHBOUND
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF	SQUARE FOOT
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PROJECT OVERVIEW	SHEET E

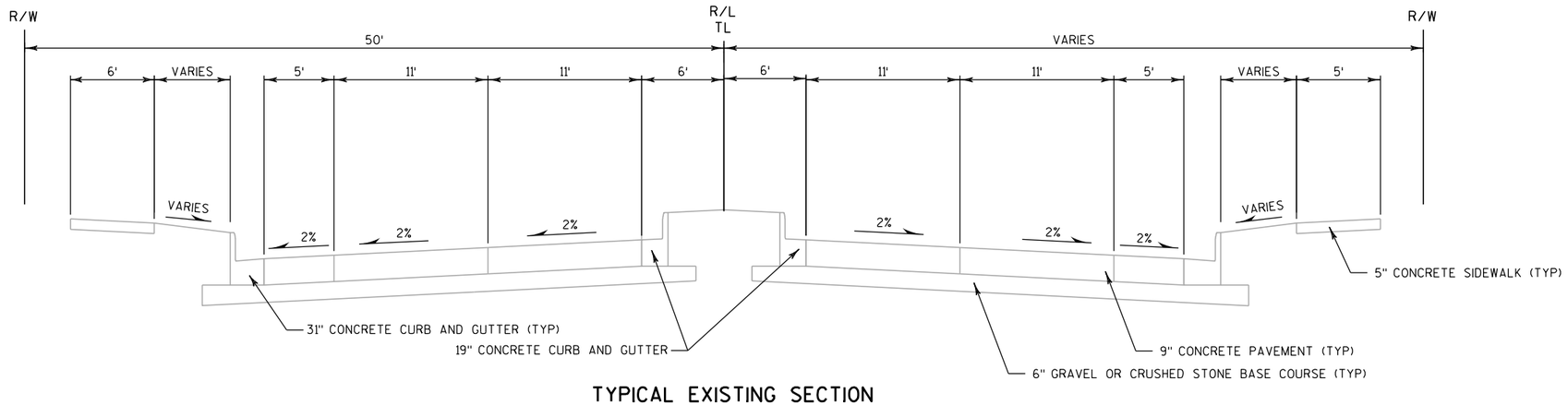
2



TYPICAL EXISTING SECTION

S. 76TH STREET

STA 20TL+19.55 TO STA 20TL+72.50



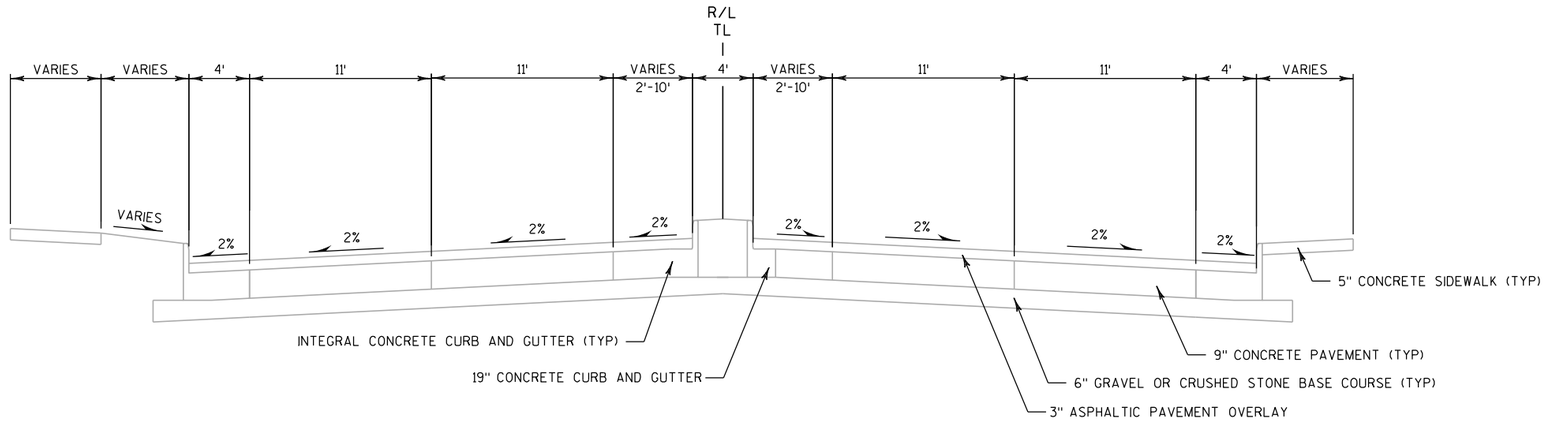
TYPICAL EXISTING SECTION

S. 76TH STREET

STA 18TL+70.00 TO STA 20TL+19.55

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



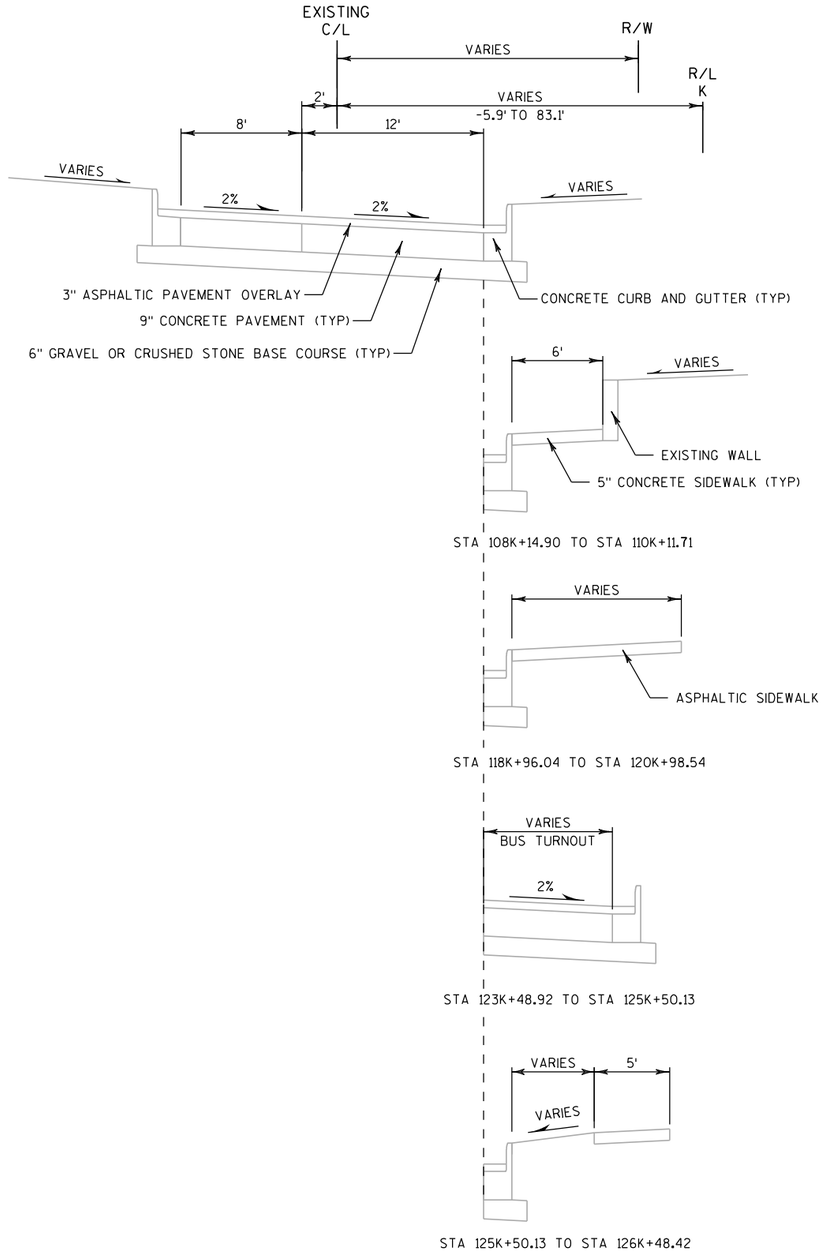
TYPICAL EXISTING SECTION

S. 76TH STREET

STA 22TL+90.00 TO STA 23TL+53.00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

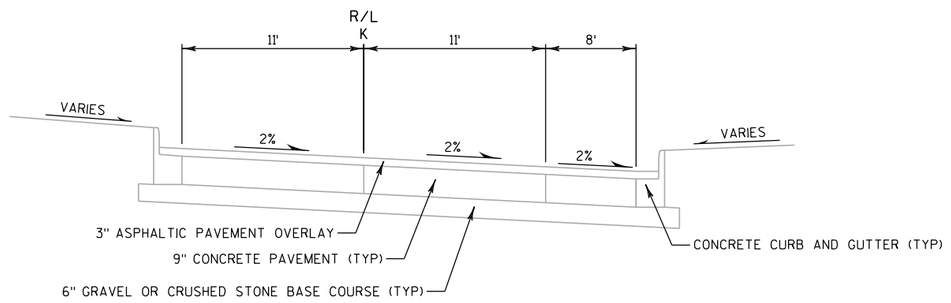
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TYPICAL EXISTING SECTION

W. KEARNEY STREET

STA 104K+58.57 TO STA 126K+63.97



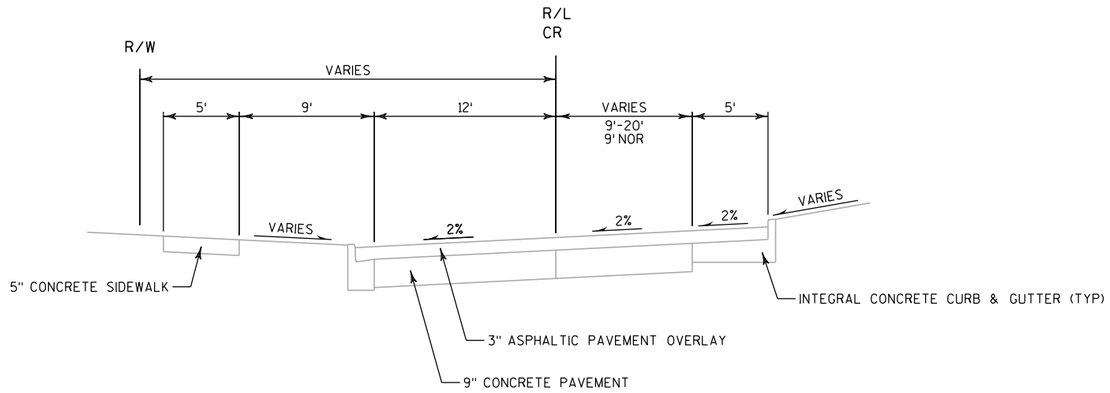
TYPICAL EXISTING SECTION

W. KEARNEY STREET

STA 127K+38.05 TO STA 141K+39.55

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

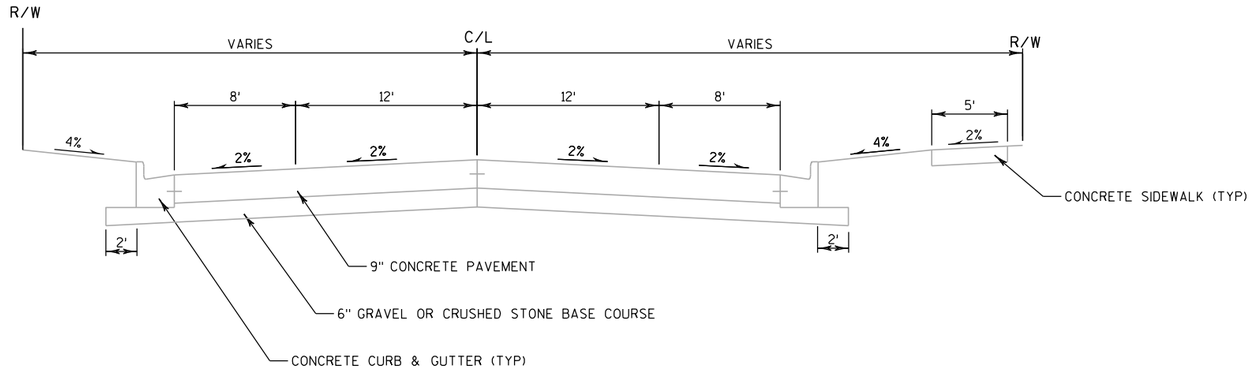
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TYPICAL EXISTING SECTION

W. O'CONNOR STREET

STA 556CR+75.00 TO STA 578CR+00.91



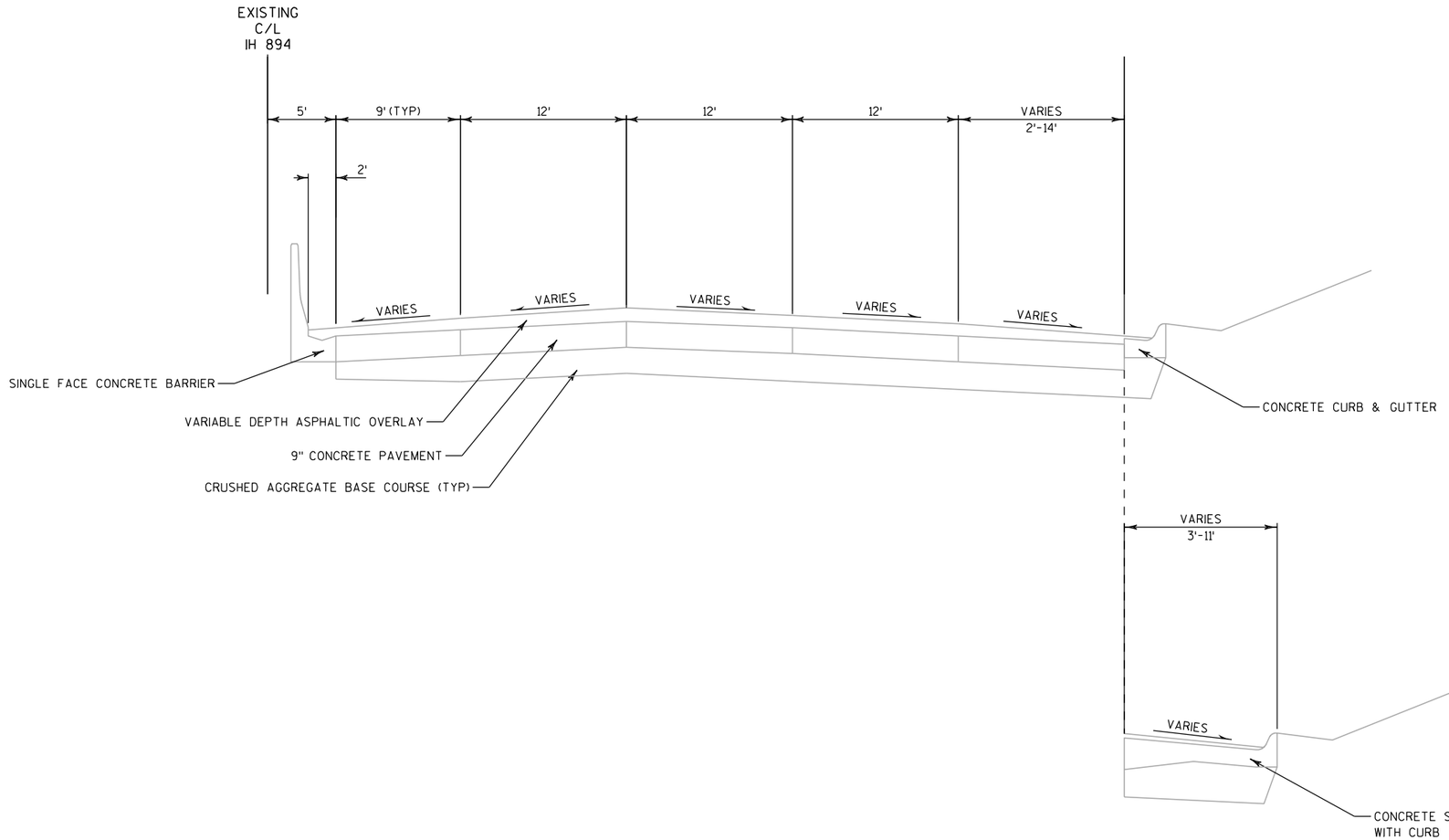
TYPICAL EXISTING SECTION

SCHLINGER AVENUE

STA 530SCH+00.00 TO STA 531SCH+50.89

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



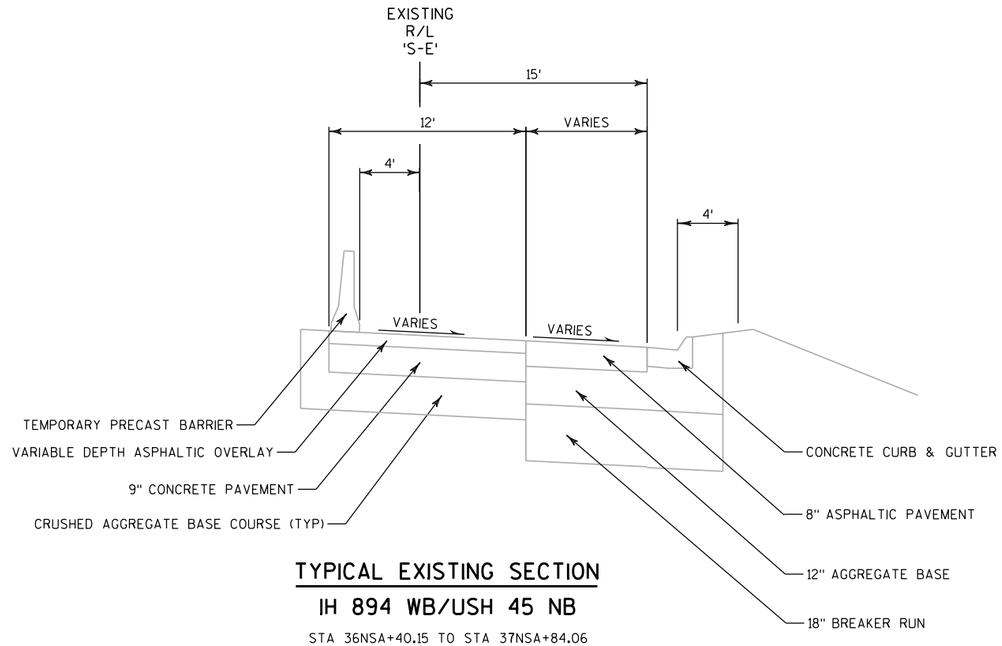
TYPICAL EXISTING SECTION

IH 894 WB/USH 45 NB

STA 12NSA+71.40 TO STA 18NSA+76.66

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

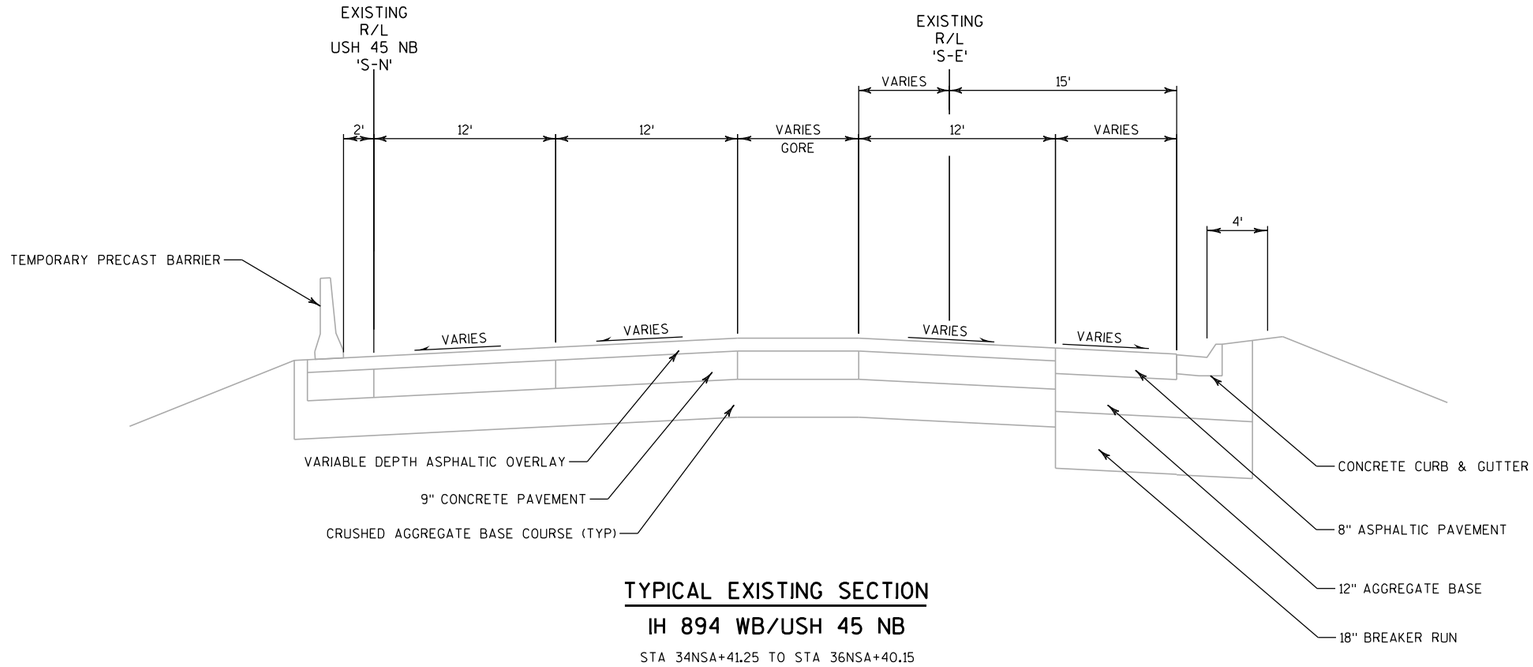
2



TYPICAL EXISTING SECTION

IH 894 WB/USH 45 NB

STA 36NSA+40.15 TO STA 37NSA+84.06



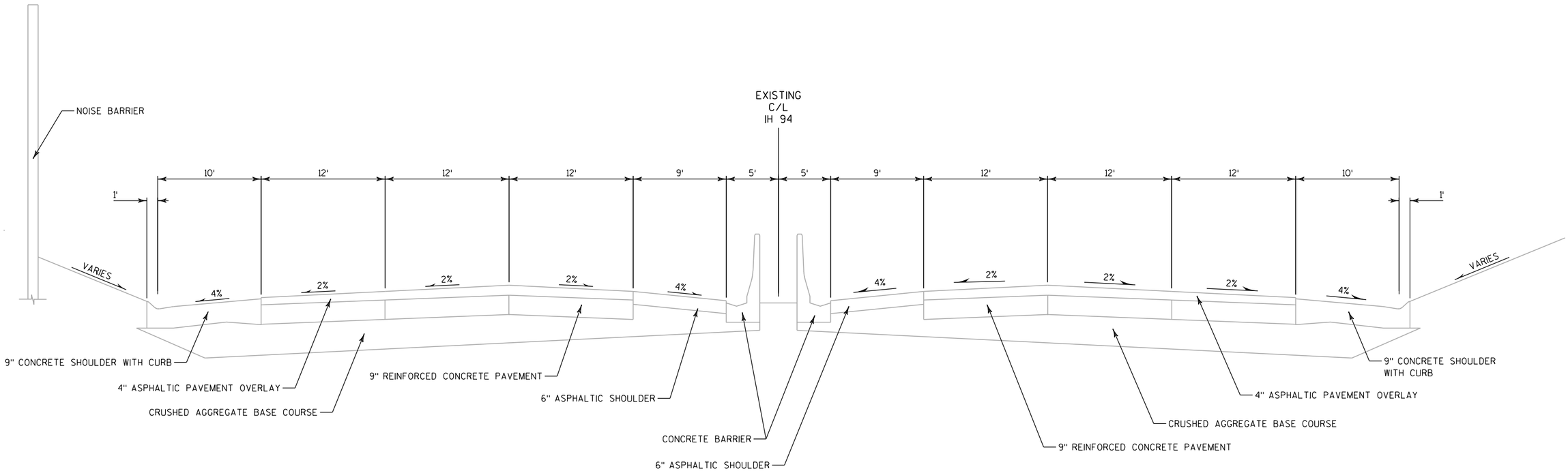
TYPICAL EXISTING SECTION

IH 894 WB/USH 45 NB

STA 34NSA+41.25 TO STA 36NSA+40.15

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2

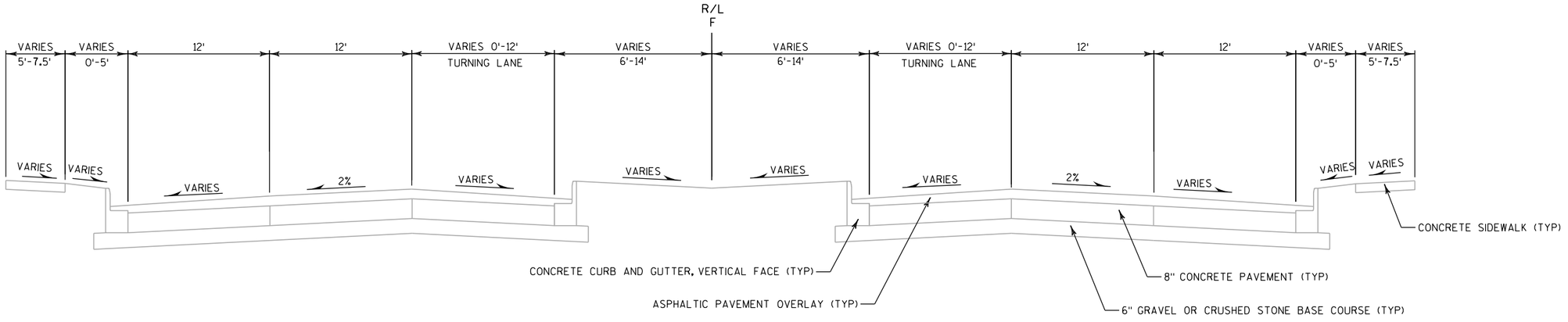


TYPICAL EXISTING SECTION

IH 94

STA 256EW+02.97 TO STA 274EW+31.41

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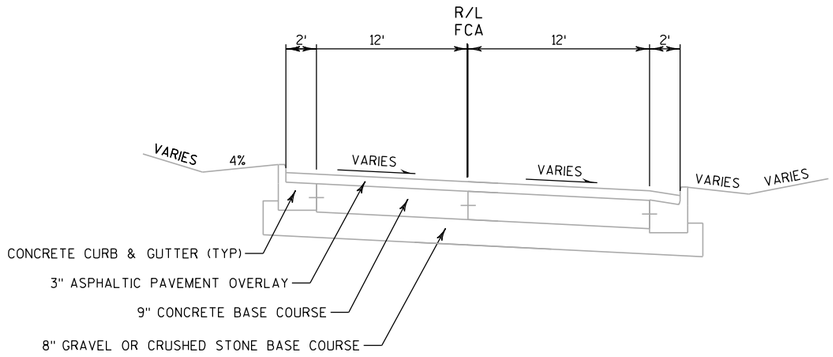
TYPICAL EXISTING SECTION

S. 84TH STREET

STA 37F+51.00 TO STA 40F+35.00

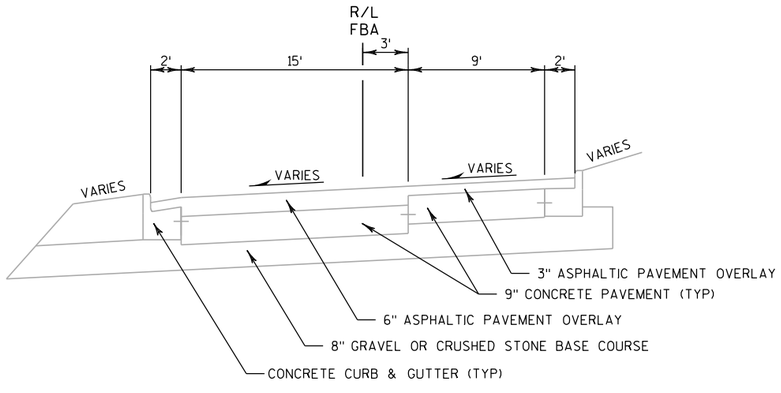
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



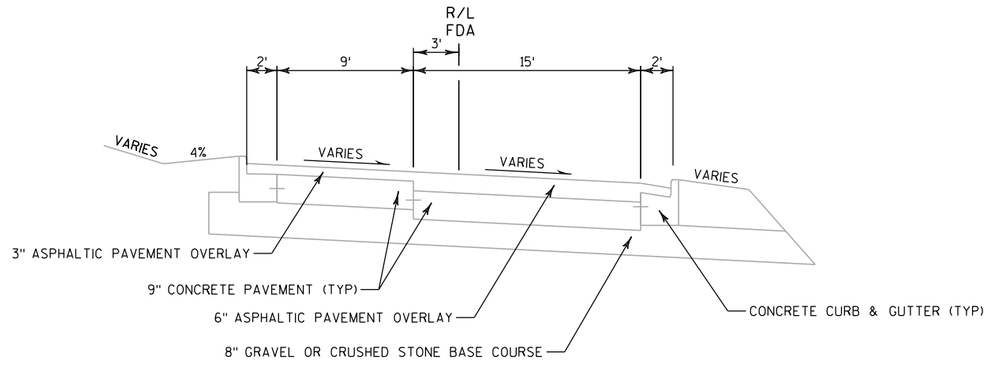
TYPICAL EXISTING SECTION
RAMP FCA

STA 11FCA+43.02 TO STA 14FCA+01.56



TYPICAL EXISTING SECTION
RAMP FBA

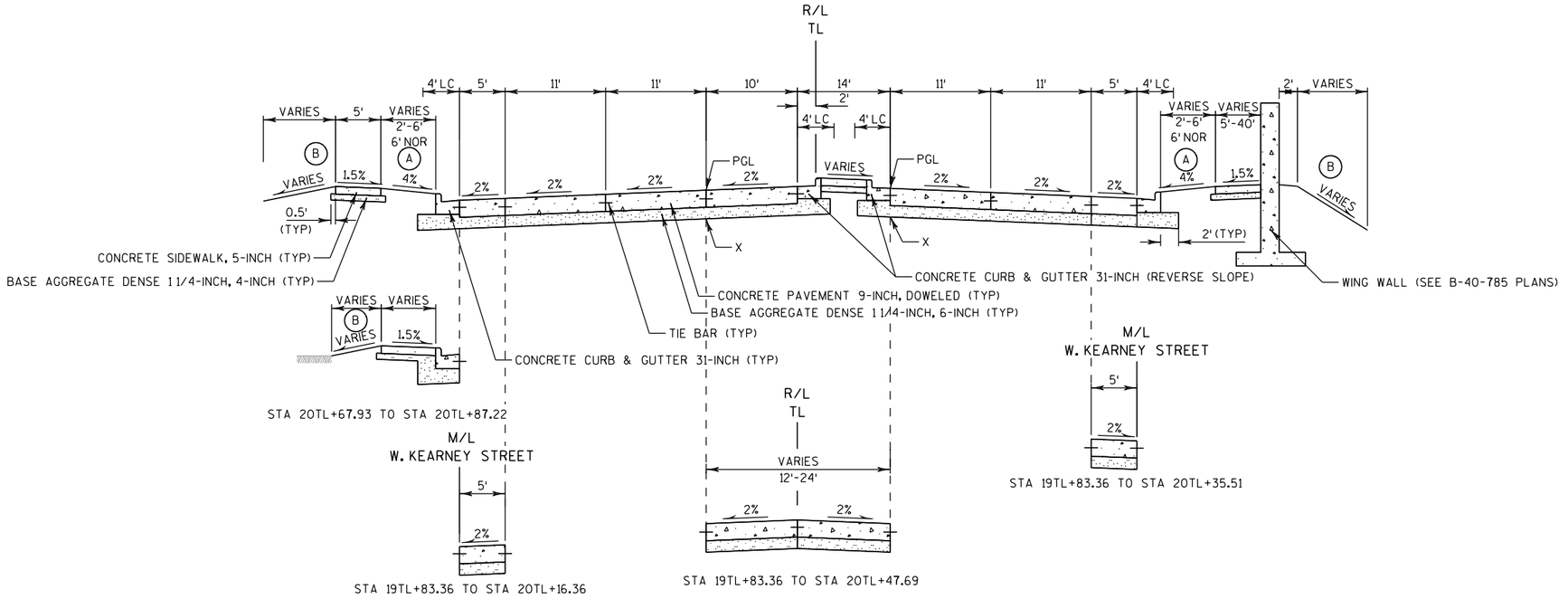
STA 10FBA+00.00 TO STA 15FA+35.00



TYPICAL EXISTING SECTION
RAMP FDA

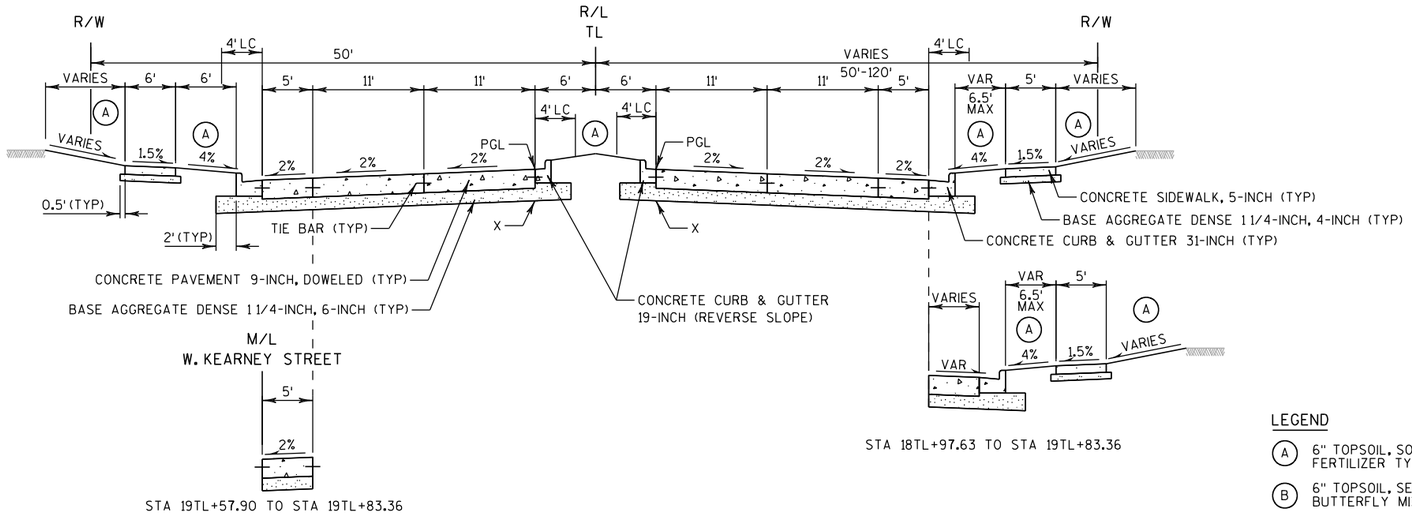
STA 11FDA+00.00 TO STA 11FDA+98.37
STA 12FDA+60.61 TO STA 13FDA+46.88

2



TYPICAL FINISHED SECTION
S. 76TH STREET

STA 19TL+83.36 TO STA 20TL+87.22



TYPICAL FINISHED SECTION
S. 76TH STREET

STA 18TL+70.00 TO STA 19TL+83.36

NOTES

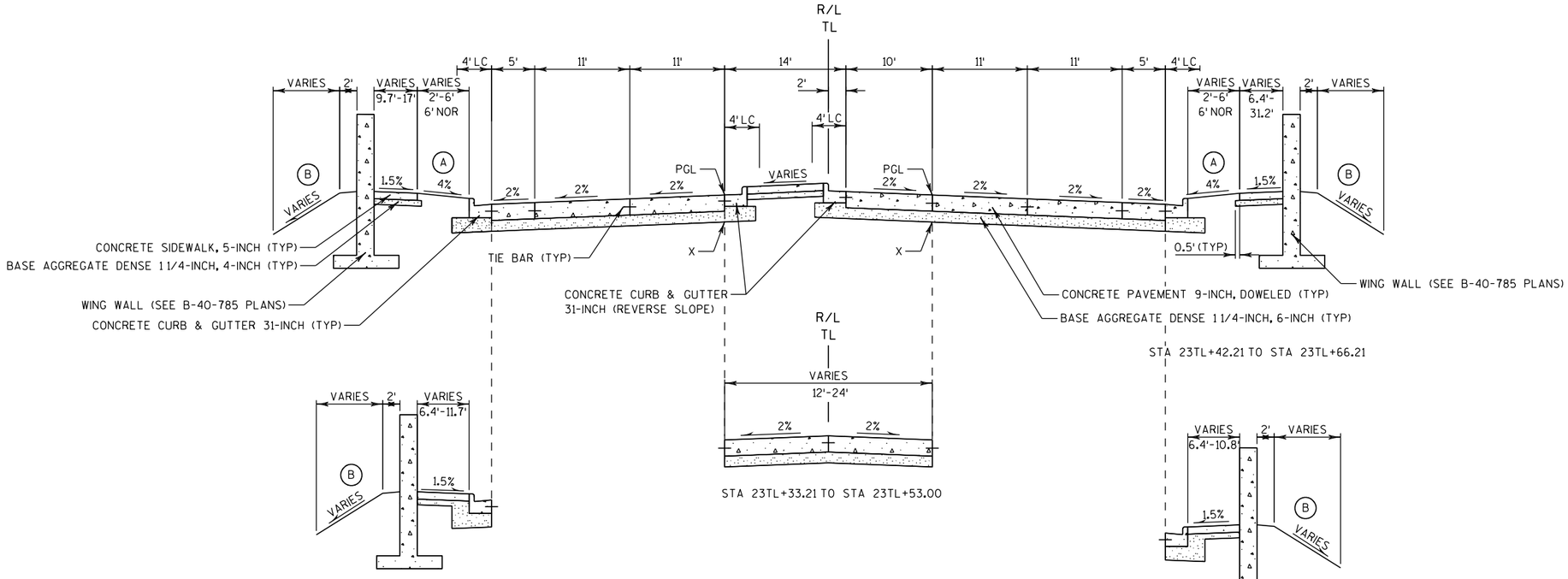
PGL = POINT REFERRED TO ON PROFILE
X = POINT REFERRED TO ON CROSS-SECTION
LC = LATERAL CLEARANCE

LEGEND

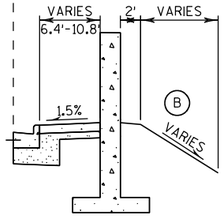
- (A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B
- (B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT
- (C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, AND MULCH/EROSION MAT
- (D) SLOPE PAVING CRUSHED AGGREGATE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



STA 23TL+33.21 TO STA 23TL+53.00



STA 23TL+27.15 TO STA 23TL+42.21

TYPICAL FINISHED SECTION
S. 76TH STREET

STA 23TL+25.65 TO STA 23TL+53.00

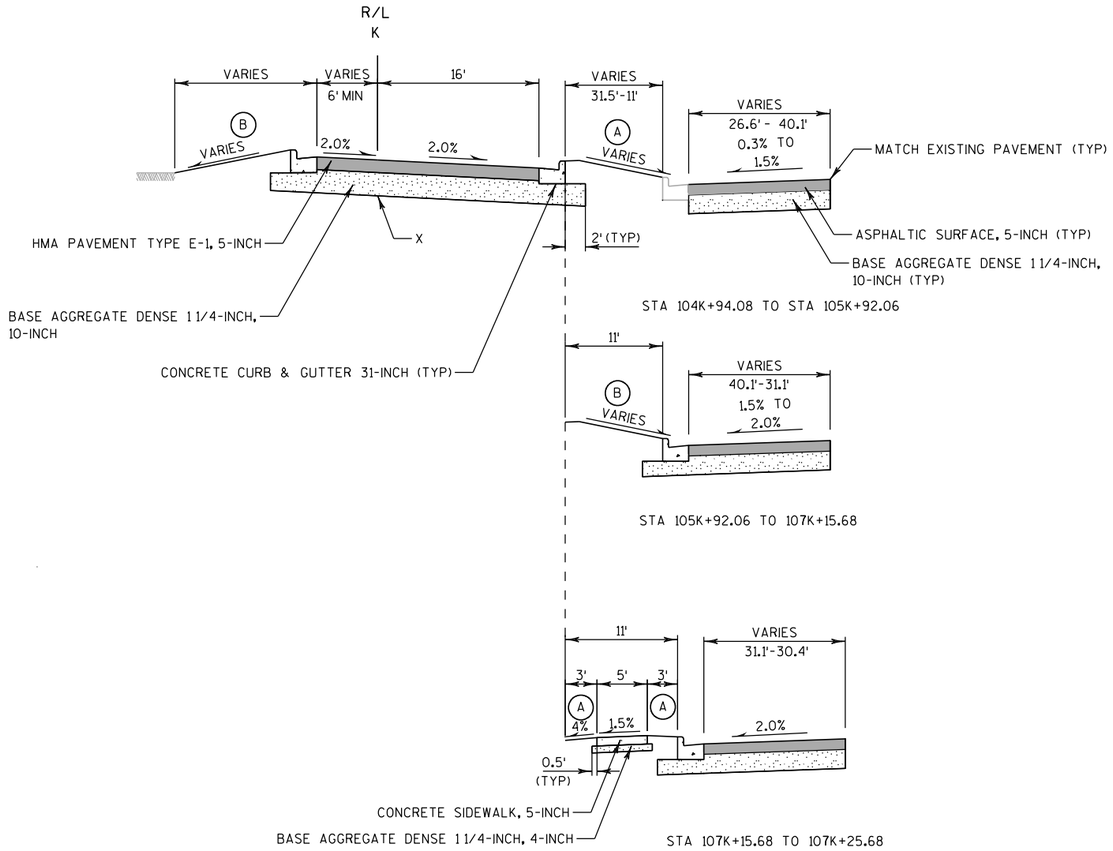
NOTES

PGL = POINT REFERRED TO ON PROFILE
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LC = LATERAL CLEARANCE

LEGEND

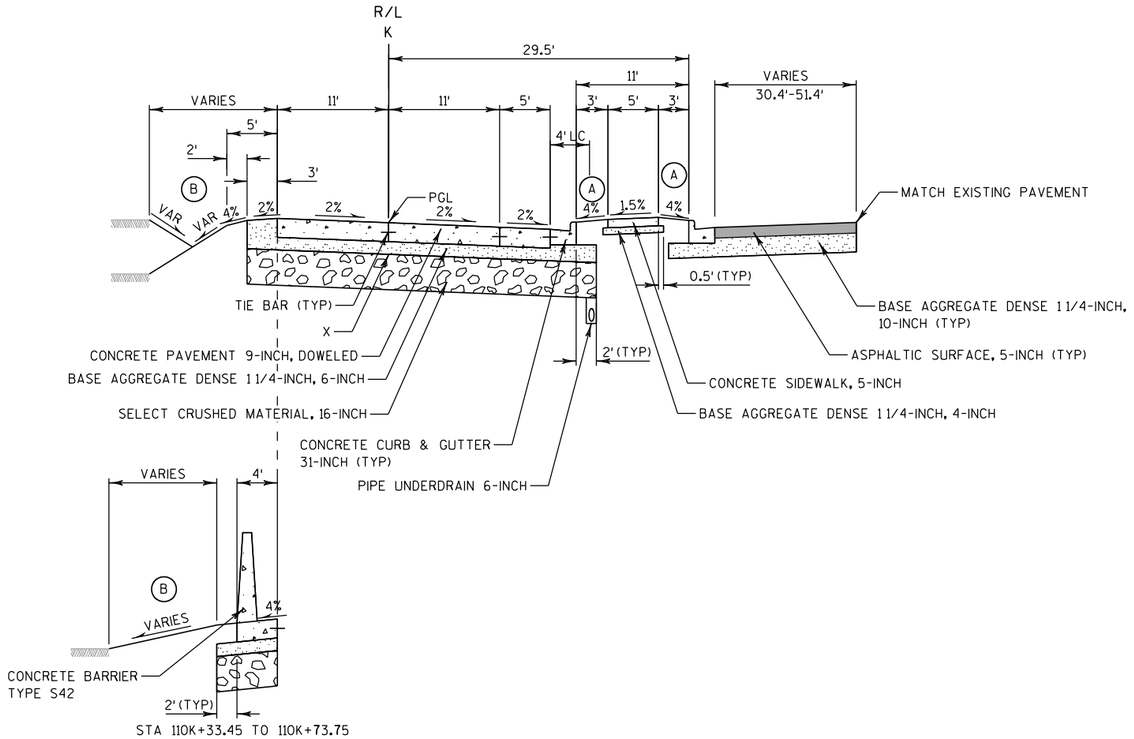
- (A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B
- (B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT
- (C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, AND MULCH/EROSION MAT
- (D) SLOPE PAVING CRUSHED AGGREGATE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL FINISHED SECTION
W. KEARNEY STREET

STA 104K+94.08 TO STA 107K+25.68



TYPICAL FINISHED SECTION
W. KEARNEY STREET

STA 107K+25.68 TO STA 110K+73.75

NOTES

PGL = POINT REFERRED TO ON PROFILE
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LEGEND

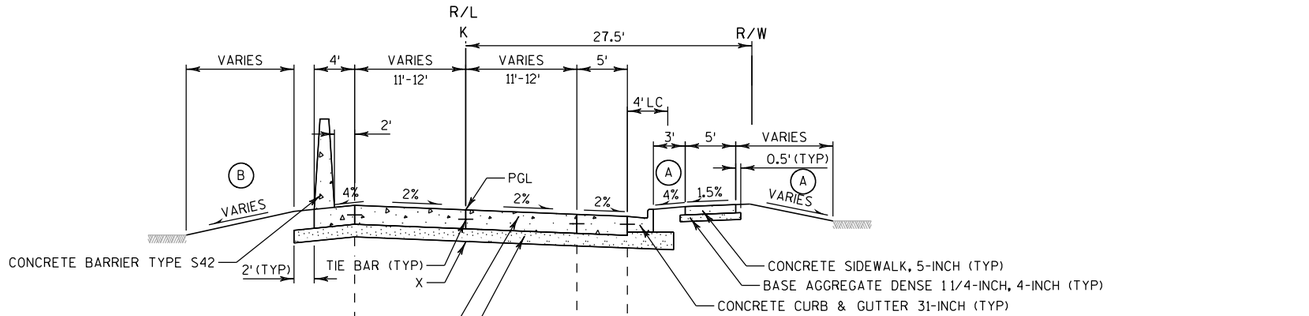
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

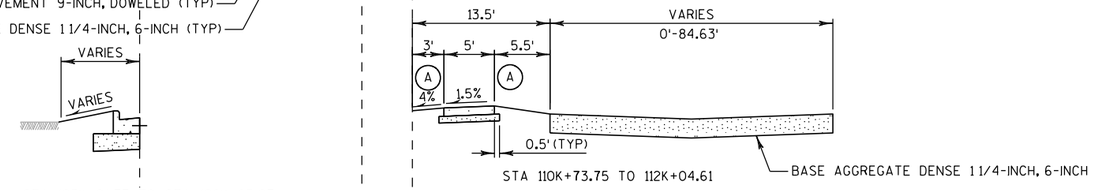
(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, AND MULCH/EROSION MAT

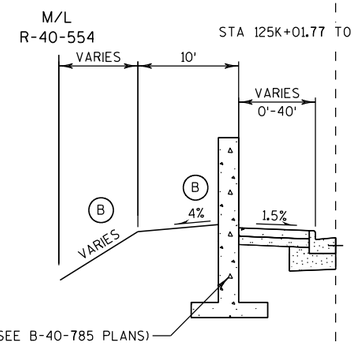
(D) SLOPE PAVING CRUSHED AGGREGATE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

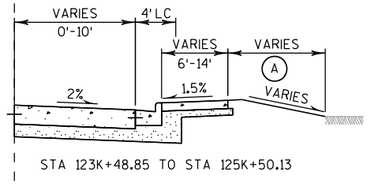




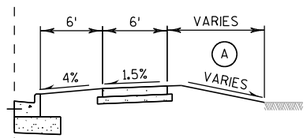
STA 110K+73.75 TO 112K+04.61



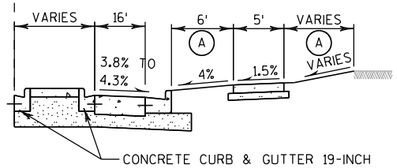
STA 125K+01.77 TO STA 126K+63.97



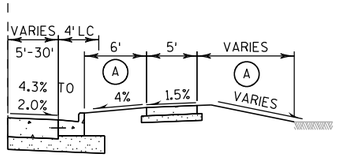
STA 123K+48.85 TO STA 125K+50.13



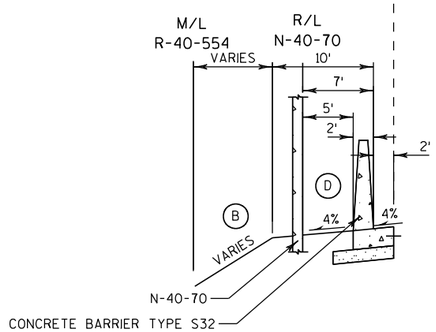
STA 125K+50.13 TO STA 126K+63.97



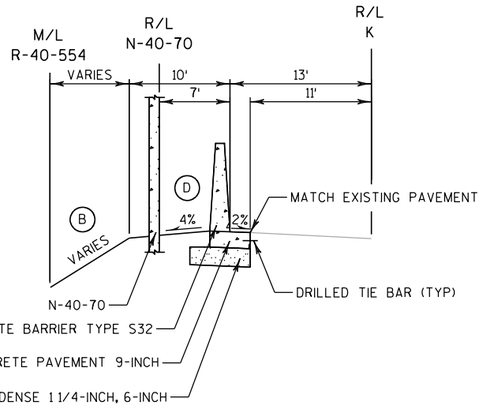
STA 127K+38.05 TO STA 127K+51.04



STA 127K+51.04 TO STA 128K+56.35



STA 127K+89.52 STA 129K+00.00



TYPICAL FINISHED SECTION
W. KEARNEY STREET

STA 129K+00.00 TO STA 136K+50.00

NOTES

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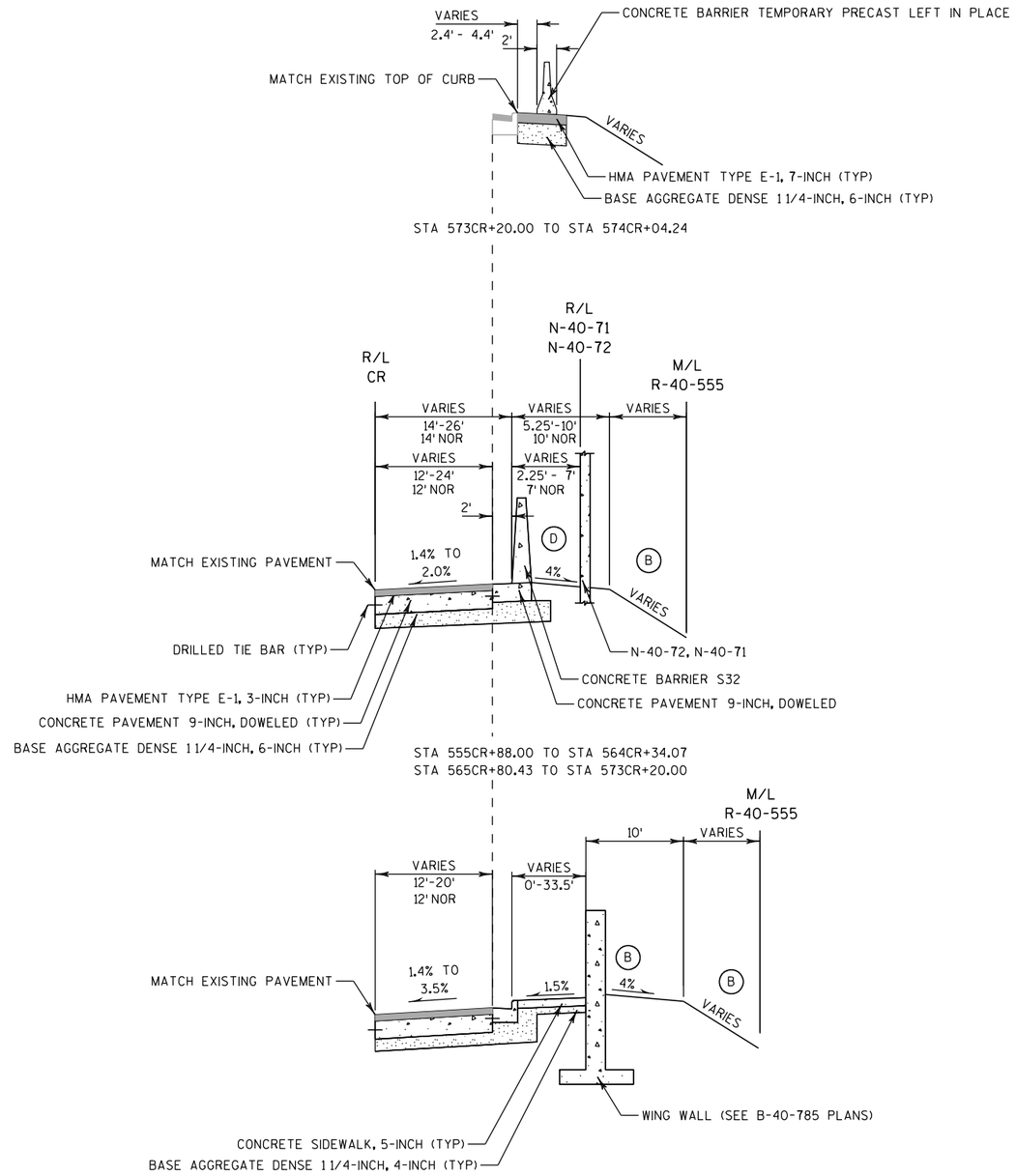
TYPICAL FINISHED SECTION
W. KEARNEY STREET

STA 110K+73.75 TO STA 126K+63.97
STA 127K+38.05 TO STA 129K+00.00

LEGEND

- (A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B
- (B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT
- (C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, AND MULCH/EROSION MAT
- (D) SLOPE PAVING CRUSHED AGGREGATE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL FINISHED SECTION
W. O'CONNOR STREET

STA 555CR+88.00 TO STA 573CR+20.00

NOTES

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LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

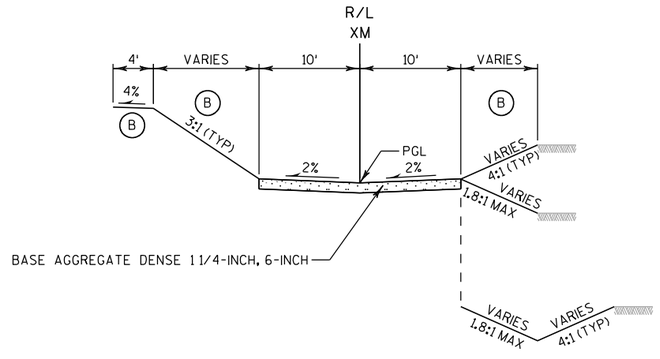
(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

(C) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX, AND MULCH/EROSION MAT

(D) SLOPE PAVING CRUSHED AGGREGATE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



STA 24XM+50.01 TO STA 25XM+60.00

TYPICAL FINISHED SECTION
UTILITY ACCESS PATH

STA 24XM+42.32 TO STA 27XM+58.76

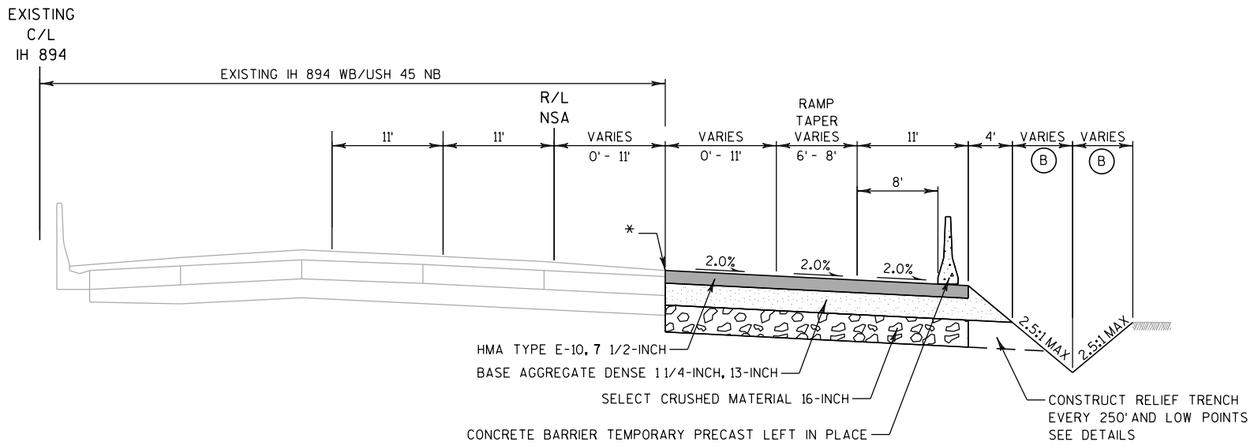
NOTES

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LEGEND

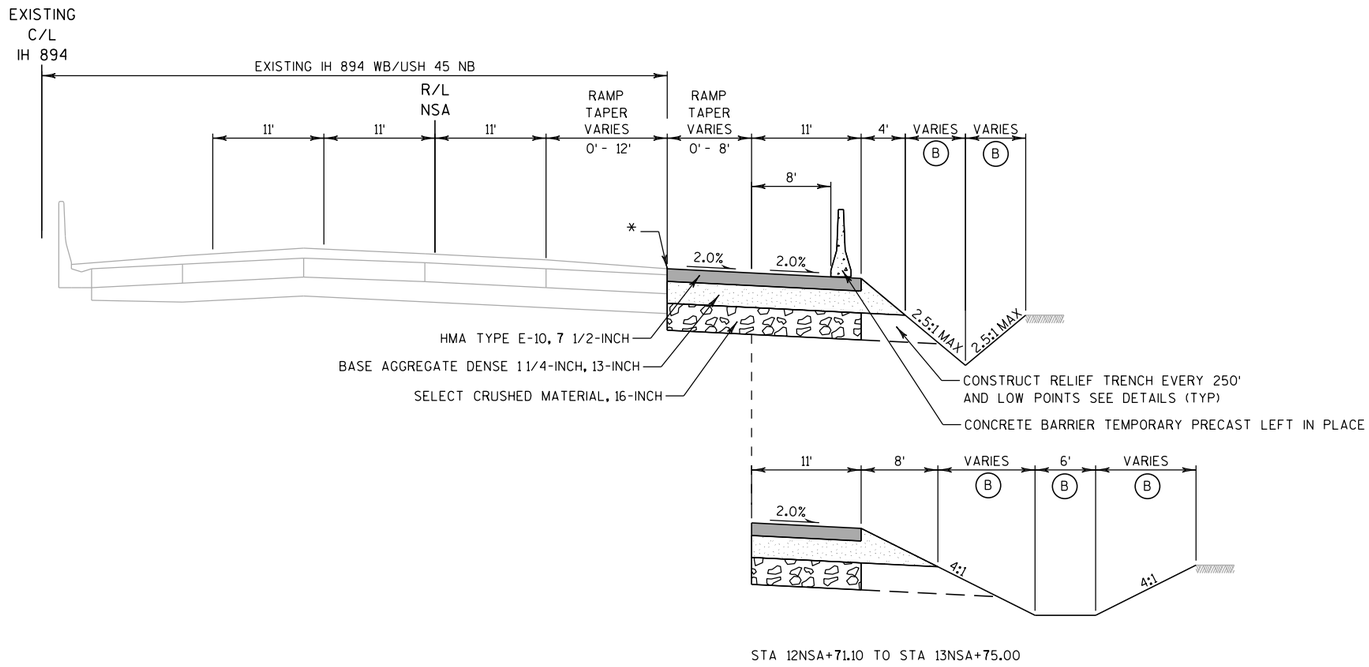
- (A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B
- (B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL FINISHED SECTION
RAMP NSA

STA 14NSA+62.11 TO STA 15NSA+80.37



STA 12NSA+71.10 TO STA 13NSA+75.00

TYPICAL FINISHED SECTION
RAMP NSA

STA 12NSA+71.10 TO STA 14NSA+62.11

LEGEND

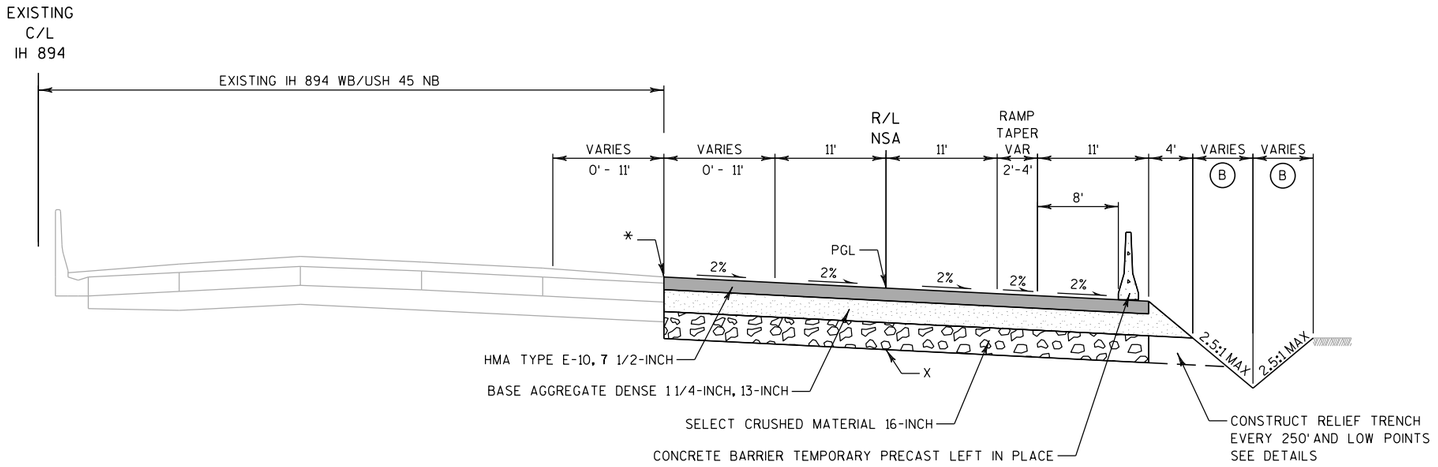
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

NOTES

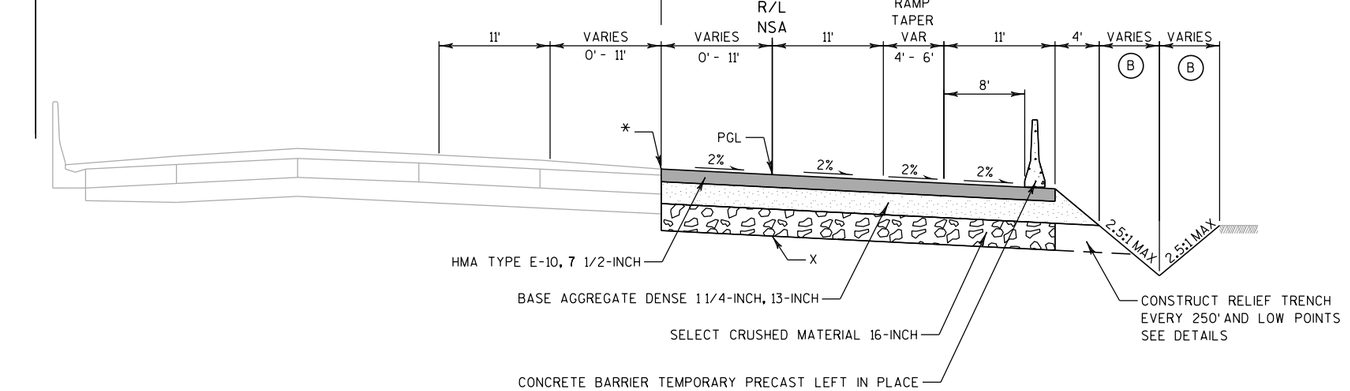
* = MATCH EXISTING PAVEMENT
VERIFY ELEVATIONS SHOWN ON CROSS-SECTIONS
AND ADJUST AS NECESSARY

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL FINISHED SECTION
RAMP NSA

STA 16NSA+77.90 TO STA 17NSA+60.67



TYPICAL FINISHED SECTION
RAMP NSA

STA 15NSA+80.37 TO STA 16NSA+77.90

LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

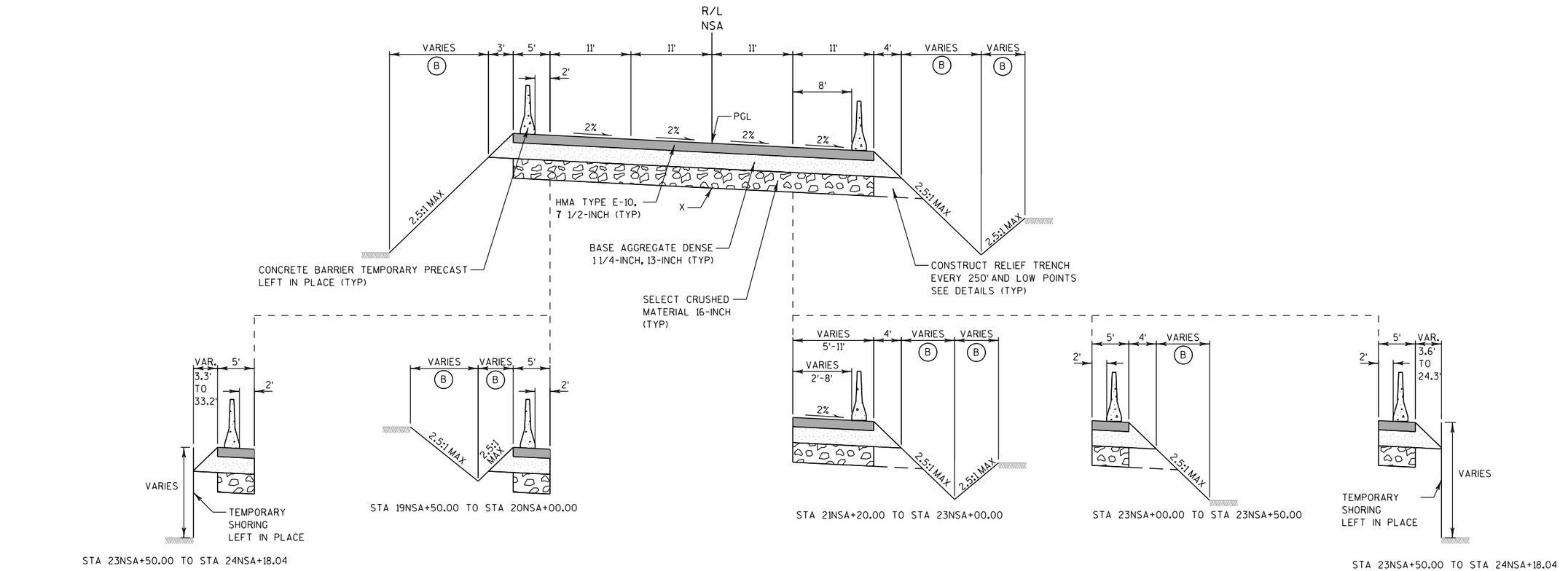
NOTES

X = POINT REFERRED TO ON CROSS-SECTION

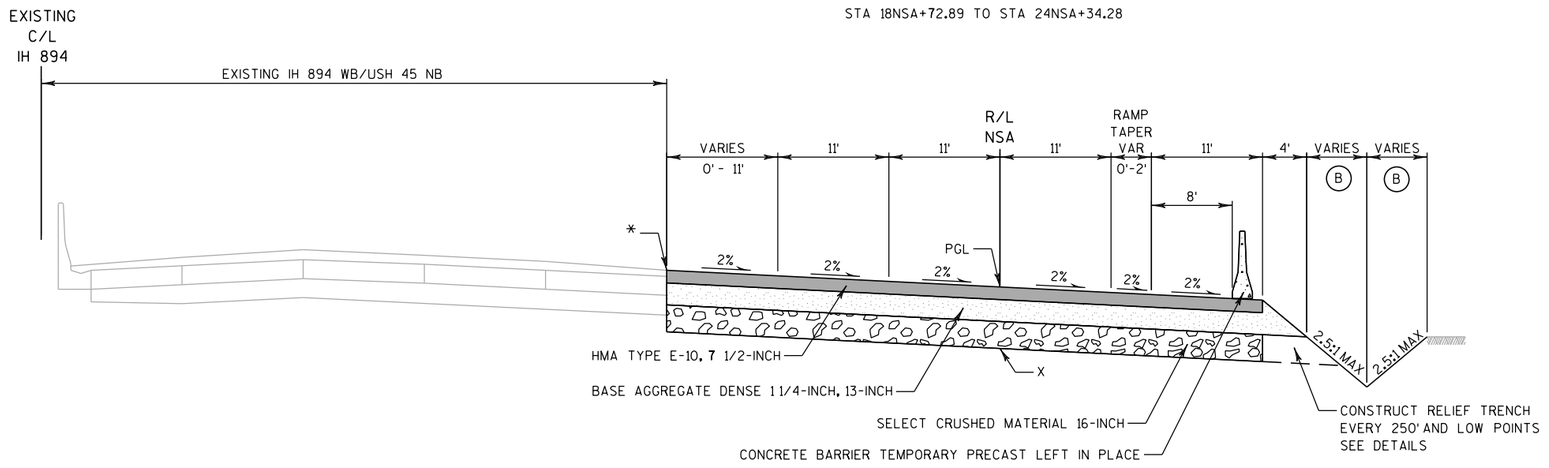
* = MATCH EXISTING PAVEMENT
VERIFY ELEVATIONS SHOWN ON CROSS-SECTIONS AND ADJUST AS NECESSARY

PGL = PROFILE GRADE LINE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL FINISHED SECTION
RAMP NSA
STA 18NSA+72.89 TO STA 24NSA+34.28



LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

TYPICAL FINISHED SECTION
RAMP NSA
STA 17NSA+60.67 TO STA 18NSA+72.89

NOTES

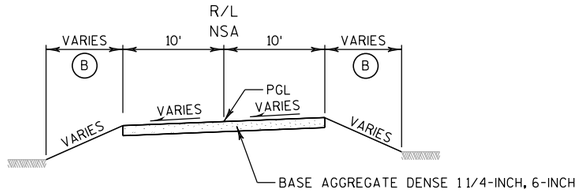
X = POINT REFERRED TO ON CROSS-SECTION

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VERIFY ELEVATIONS SHOWN ON CROSS-SECTIONS
AND ADJUST AS NECESSARY

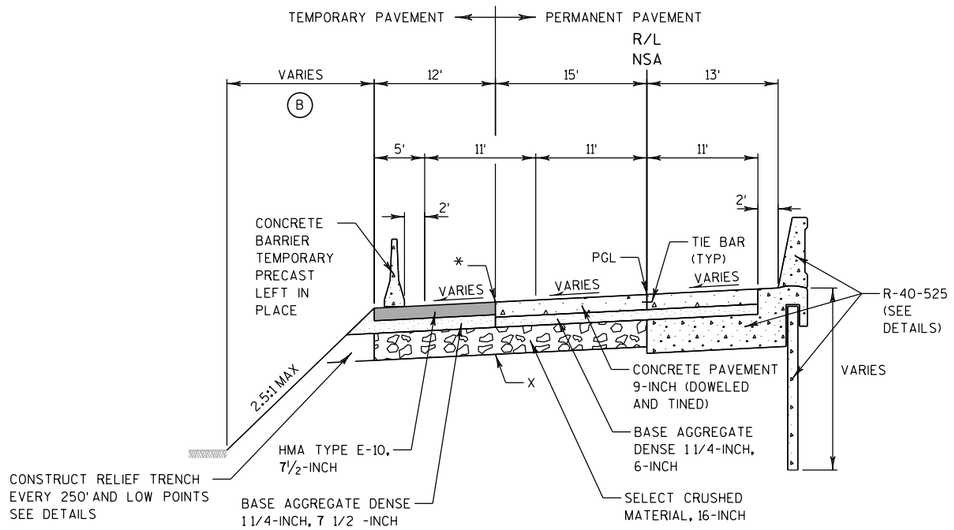
PGL = PROFILE GRADE LINE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

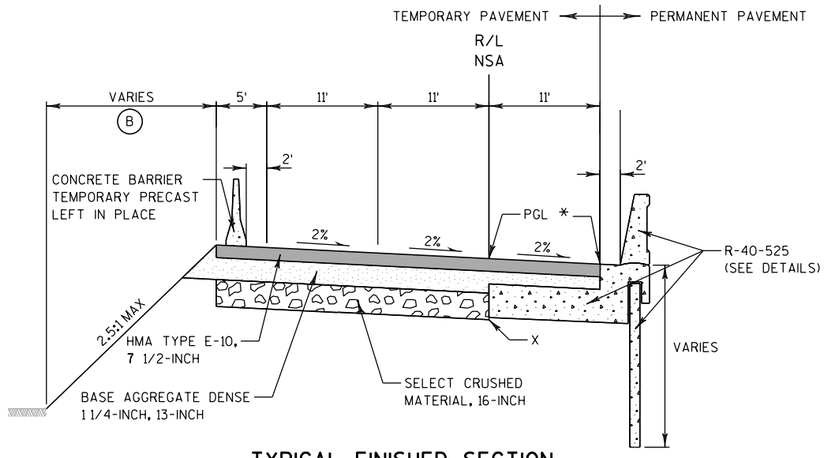
2



TYPICAL FINISHED SECTION
RAMP NSA
STA 29NSA+00.00 TO STA 29NSA+37.50



TYPICAL FINISHED SECTION
RAMP NSA
STA 25NSA+89.64 TO STA 27NSA+34.88



TYPICAL FINISHED SECTION
RAMP NSA
STA 24NSA+34.28 TO STA 25NSA+89.64

LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

NOTES

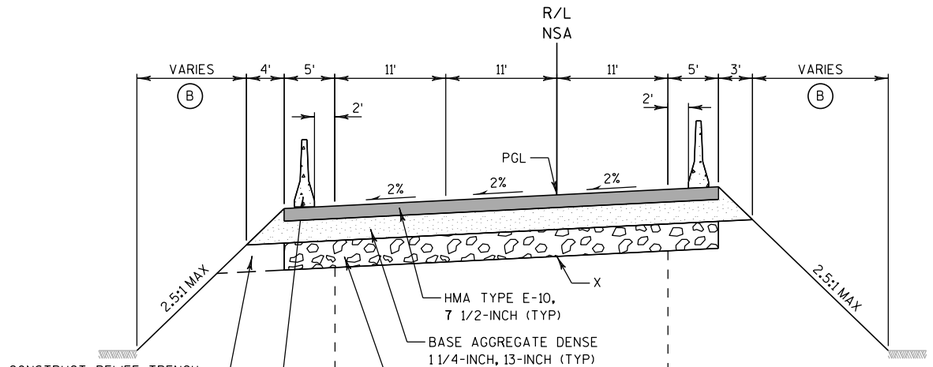
X = POINT REFERRED TO ON CROSS-SECTION

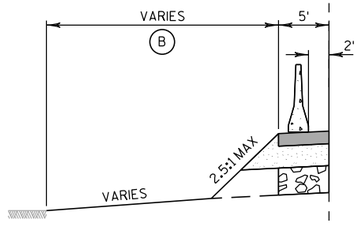
* = MATCH EXISTING PAVEMENT VERIFY ELEVATIONS SHOWN ON CROSS-SECTIONS AND ADJUST AS NECESSARY

PGL = PROFILE GRADE LINE

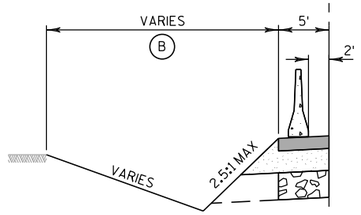
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2

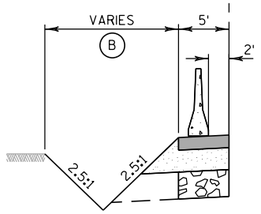




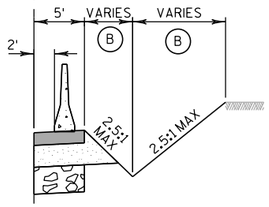
STA 29NSA+37.50 TO STA 29NSA+60.00



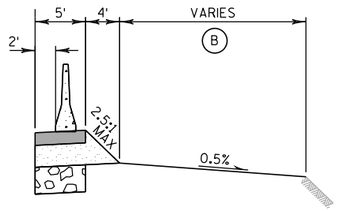
STA 29NSA+60.00 TO STA 31NSA+25.00



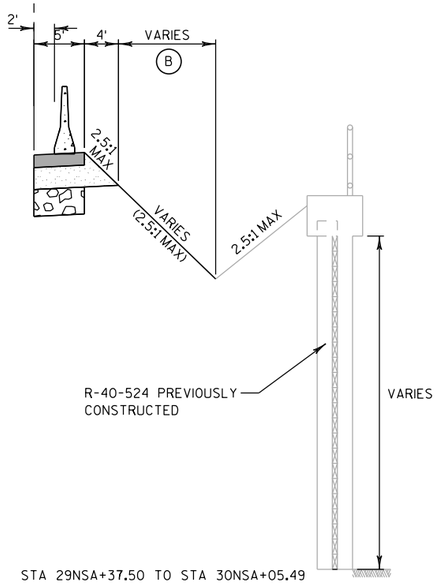
STA 31NSA+25.00 TO STA 32NSA+50.00



STA 31NSA+75.00 TO STA 32NSA+75.00



STA 30NSA+05.49 TO STA 31NSA+75.00



STA 29NSA+37.50 TO STA 30NSA+05.49

LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

TYPICAL FINISHED SECTION

RAMP NSA

STA 29NSA+37.50 TO STA 32NSA+94.21

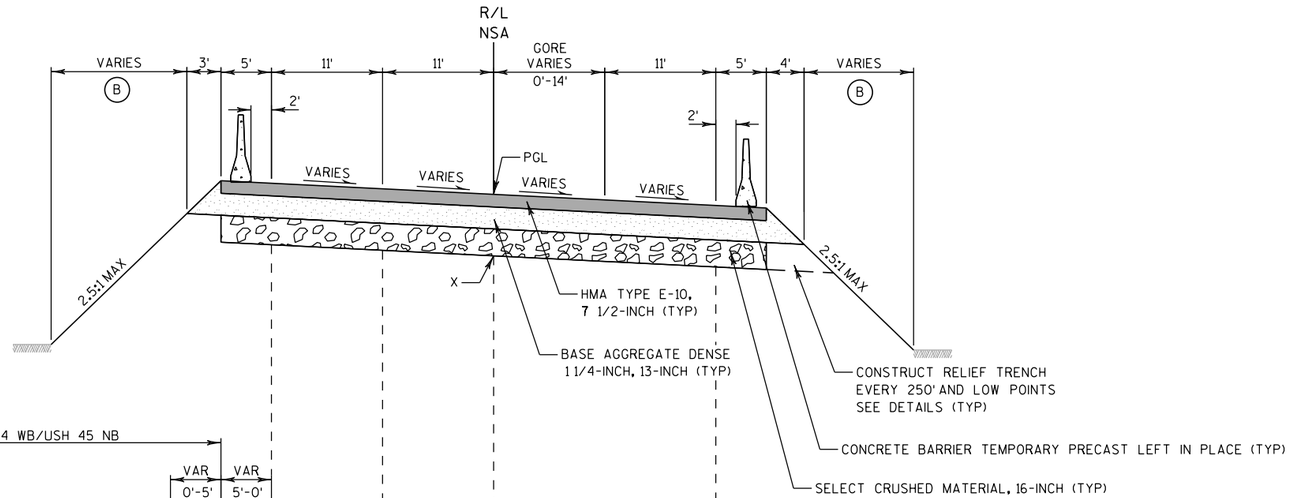
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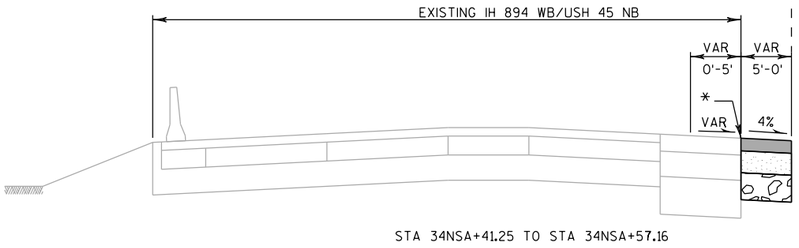
X = POINT REFERRED TO ON CROSS-SECTION

* = MATCH EXISTING PAVEMENT
VERIFY ELEVATIONS SHOWN ON CROSS-SECTIONS
AND ADJUST AS NECESSARY

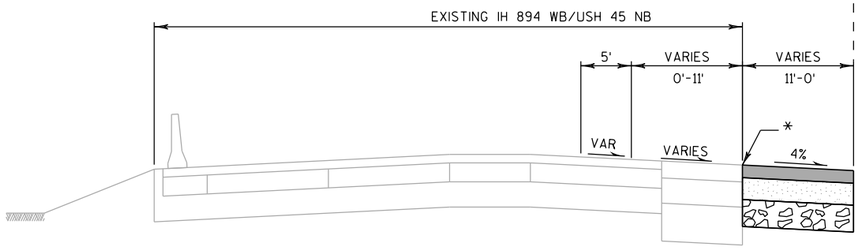
PGL = PROFILE GRADE LINE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

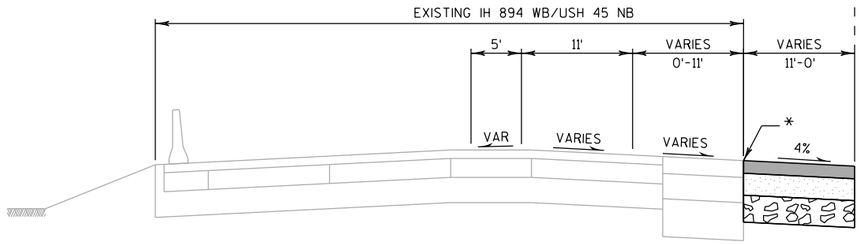




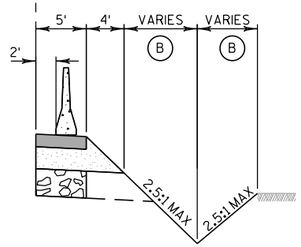
STA 34NSA+41.25 TO STA 34NSA+57.16



STA 34NSA+57.16 TO STA 34NSA+92.20



STA 34NSA+92.20 TO STA 35NSA+28.21



STA 34NSA+25.00 TO STA 35NSA+28.21

LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

TYPICAL FINISHED SECTION

RAMP NSA

STA 32NSA+86.08 TO STA 35NSA+28.21

NOTES

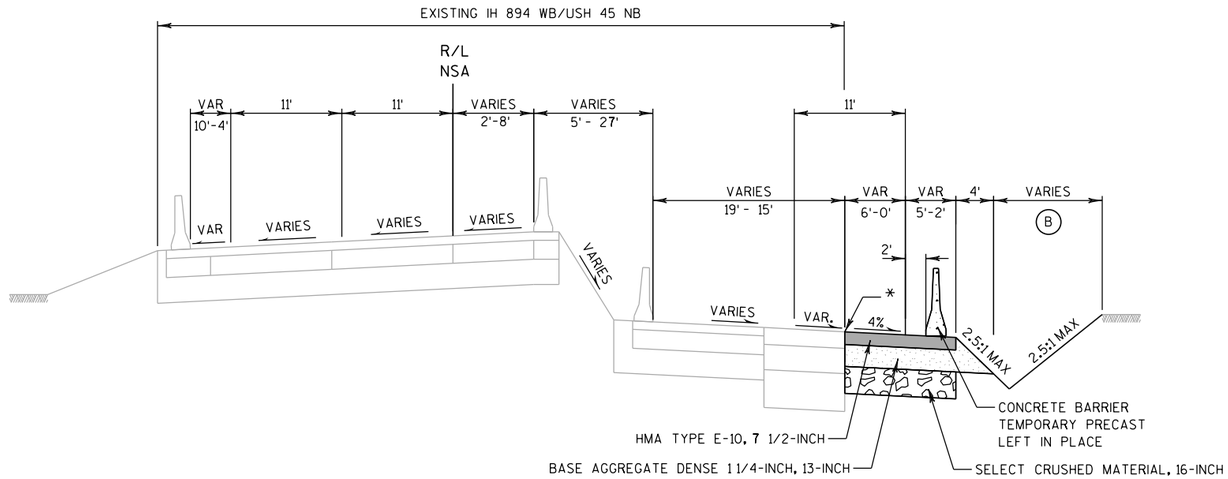
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* = MATCH EXISTING PAVEMENT
VERIFY ELEVATIONS SHOWN ON CROSS-SECTIONS
AND ADJUST AS NECESSARY

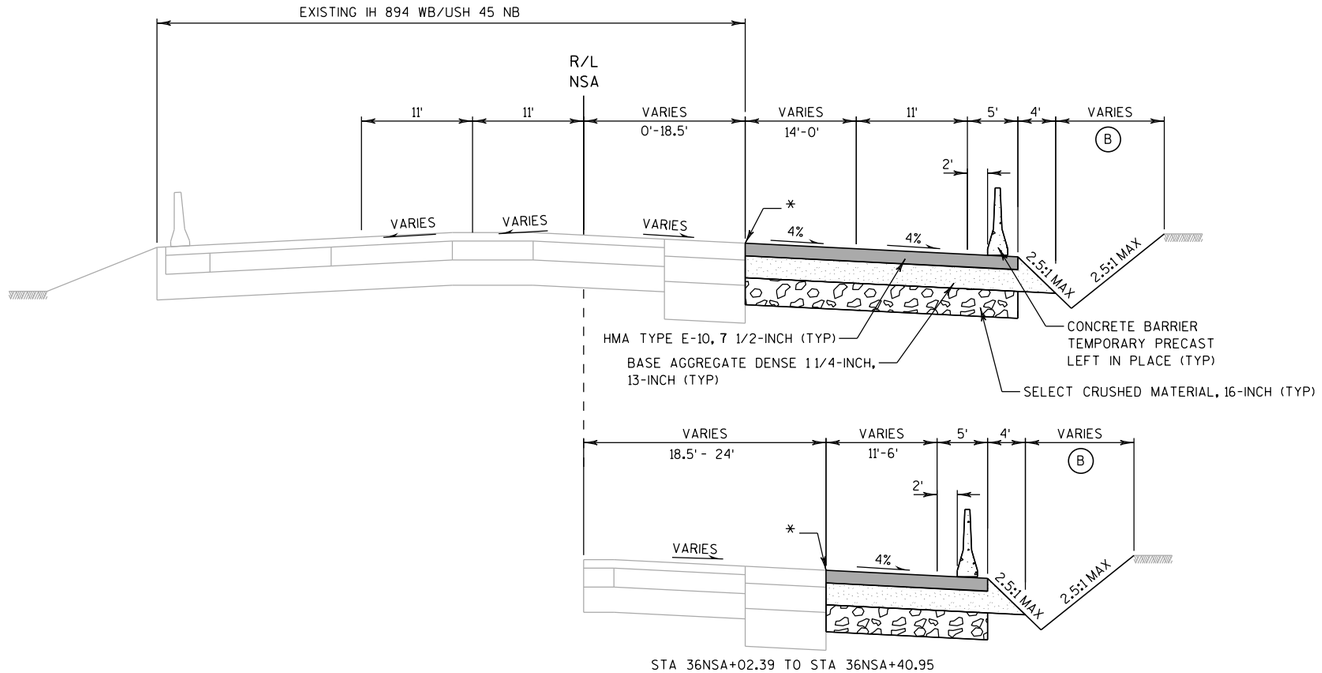
PGL = PROFILE GRADE LINE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



TYPICAL FINISHED SECTION
RAMP NSA
STA 36NSA+40.95 TO STA 37NSA+84.06



STA 36NSA+02.39 TO STA 36NSA+40.95

TYPICAL FINISHED SECTION
RAMP NSA
STA 35NSA+28.21 TO STA 36NSA+40.95

LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

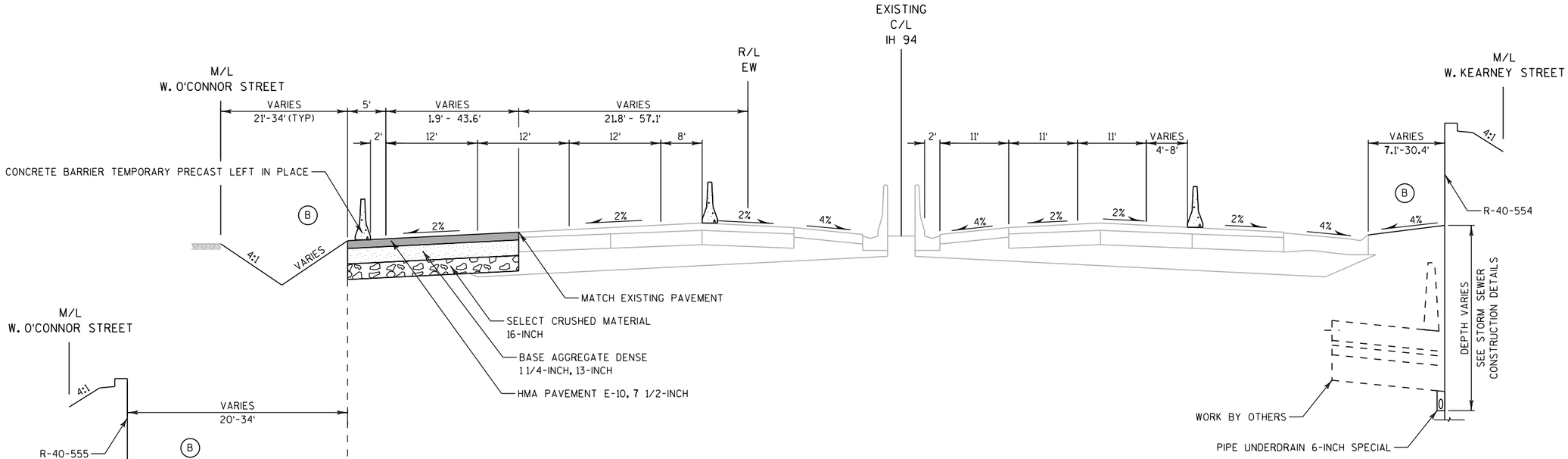
(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

NOTES

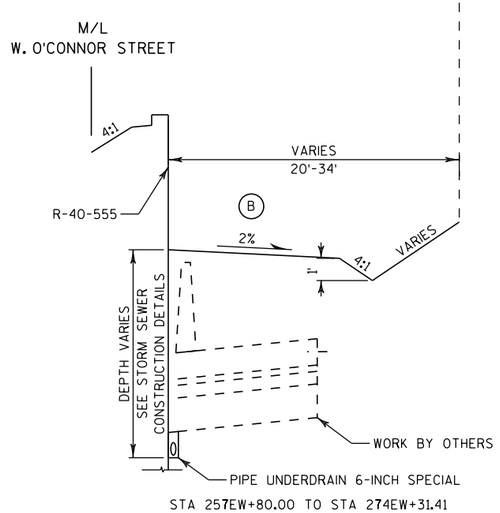
* = MATCH EXISTING PAVEMENT
VERIFY ELEVATIONS SHOWN ON CROSS-SECTIONS AND ADJUST AS NECESSARY

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



STA 263EW+50.00 TO STA 273EW+32.09



STA 257EW+80.00 TO STA 274EW+31.41

LEGEND

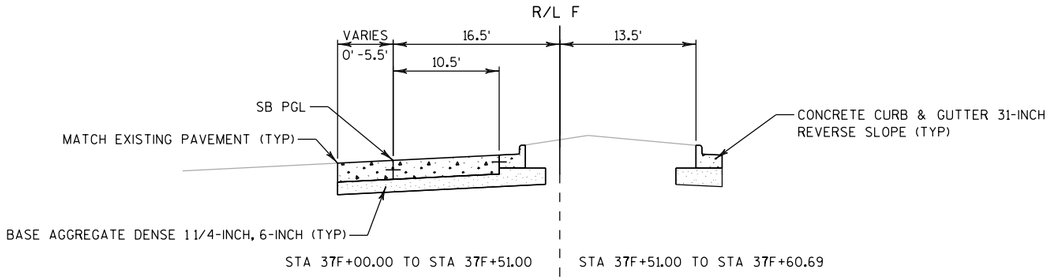
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

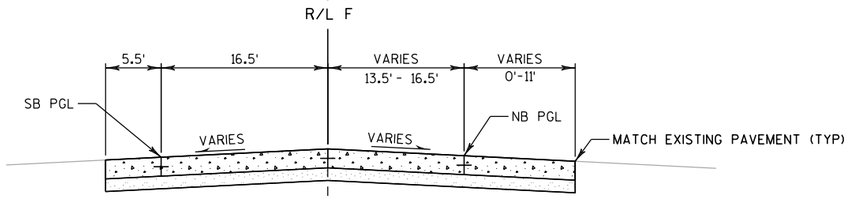
TYPICAL FINISHED SECTION
IH 94

STA 256EW+02.97 TO STA 274EW+31.41

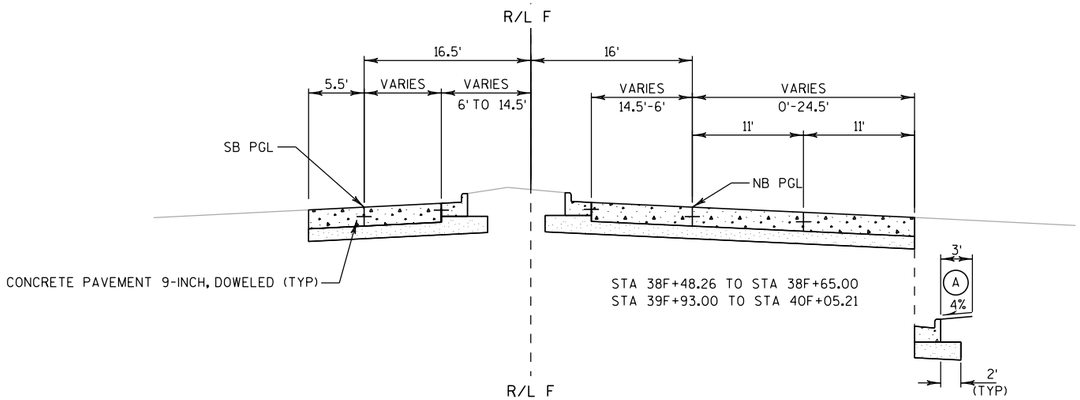
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



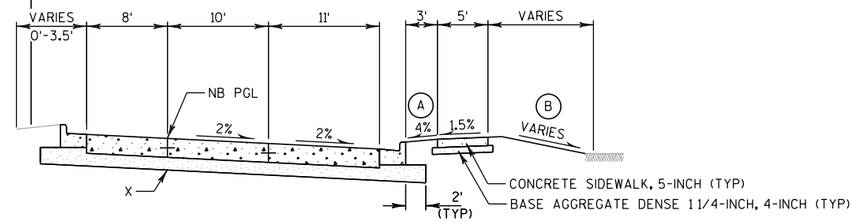
STA 37F+00.00 TO STA 37F+51.00 | STA 37F+51.00 TO STA 37F+60.69

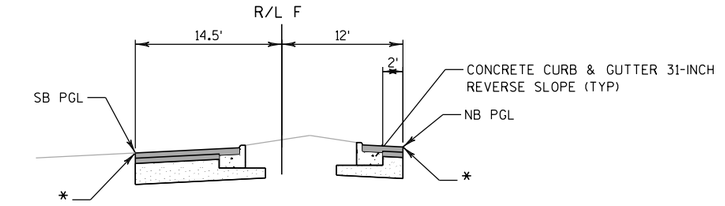


STA 37F+60.00 TO STA 38F+48.26

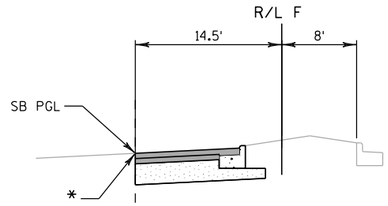


STA 38F+48.26 TO STA 38F+65.00
STA 39F+93.00 TO STA 40F+05.21

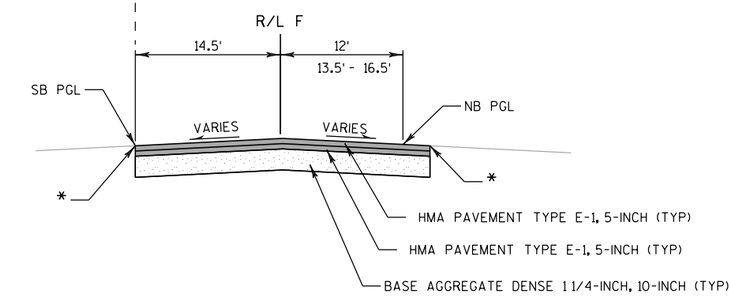




STA 42F+47.00 TO STA 42F+86.94
STA 44F+51.00 TO STA 44F+70.00



STA 42F+86.94 TO STA 44F+51.00
STA 44F+70.00 TO STA 45F+24.04



TYPICAL FINISHED SECTION
S. 84TH STREET

STA 42F+51.28 TO STA 45F+27.04

LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

TYPICAL FINISHED SECTION
S. 84TH STREET

STA 37F+00.00 TO STA 38F+65.00
STA 39F+93.00 TO STA 40F+35.00
STA 42F+51.28 TO STA 45F+27.04

NOTES

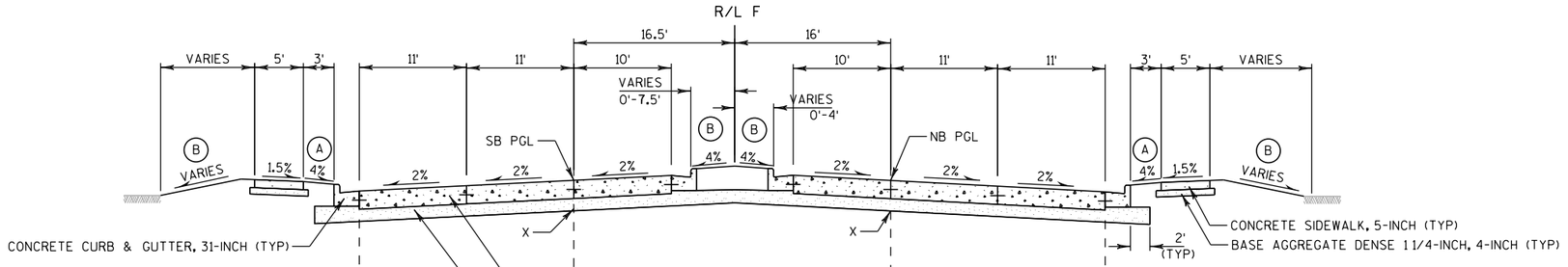
X = POINT REFERRED TO ON CROSS-SECTION

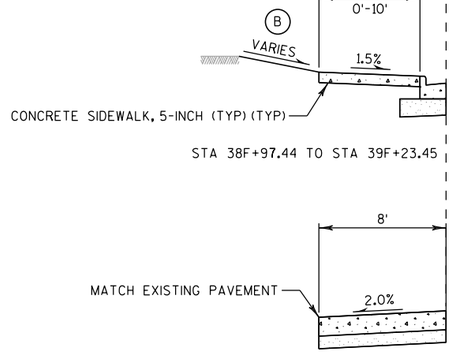
* = MATCH EXISTING PAVEMENT
VERIFY ELEVATIONS SHOWN ON CROSS-SECTIONS AND ADJUST AS NECESSARY

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\020402_ts_temp.dgn PLOT DATE : 30-APR-2013 10:32 PLOT BY : MSCAFB PLOT NAME : 020402_ts_temp8 PLOT SCALE : 15:1

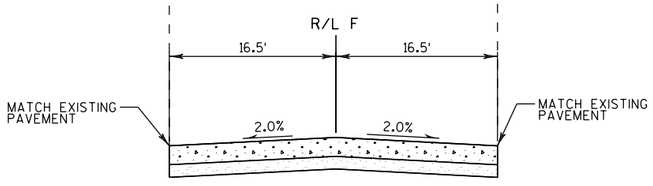
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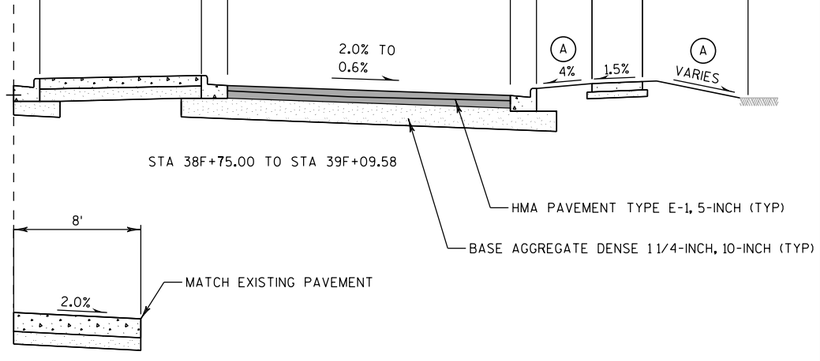


STA 38F+97.44 TO STA 39F+23.45

STA 39F+23.45 TO STA 39F+61.91



STA 39F+12.58 TO STA 39F+65.00



STA 38F+75.00 TO STA 39F+09.58

STA 39F+09.58 TO STA 39F+37.73

TYPICAL FINISHED SECTION
S. 84TH STREET

STA 38F+65.00 TO STA 39F+93.00

LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

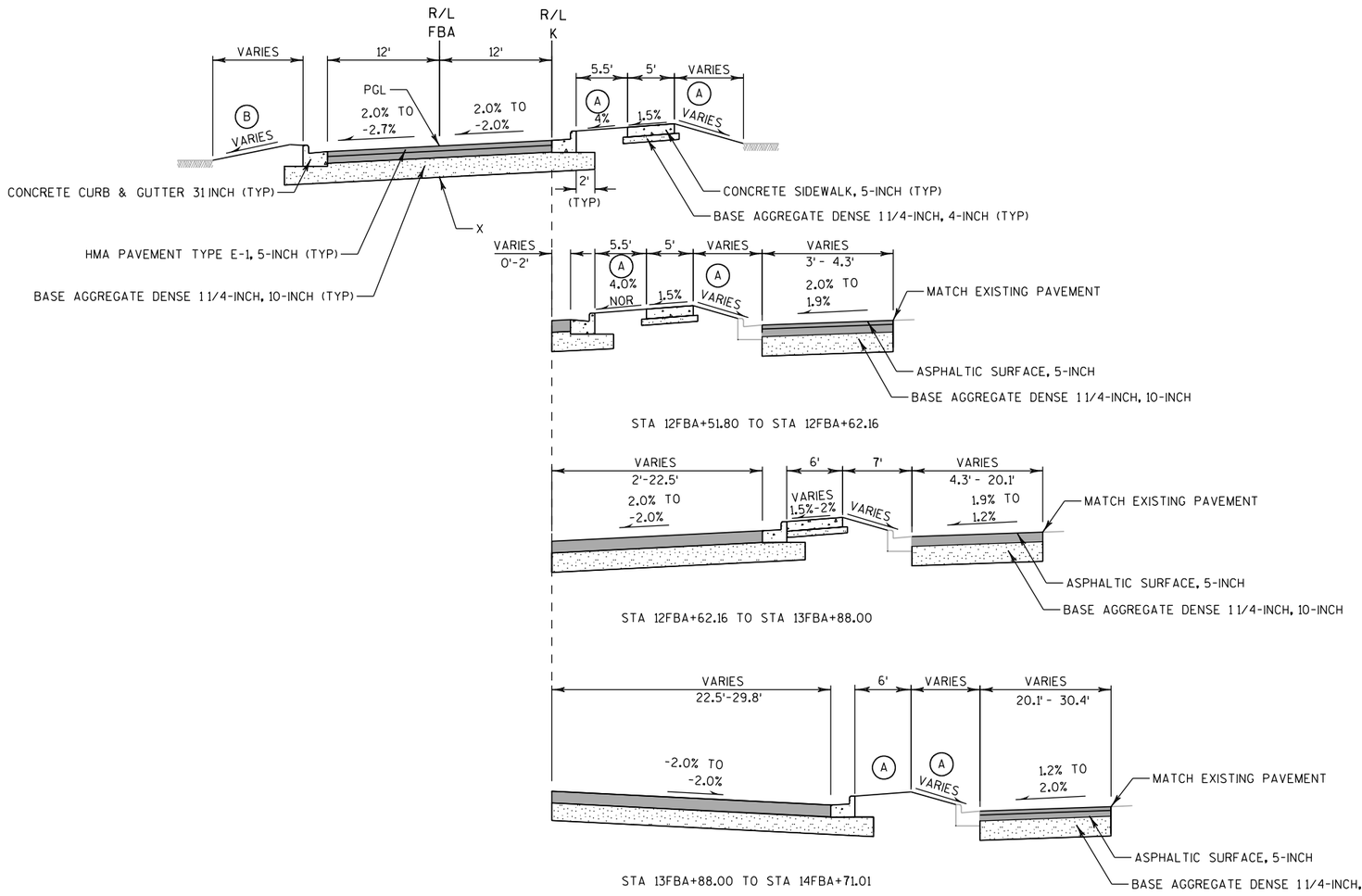
NOTES

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VERIFY ELEVATIONS SHOWN ON CROSS-SECTIONS AND ADJUST AS NECESSARY

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E

2



LEGEND

(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

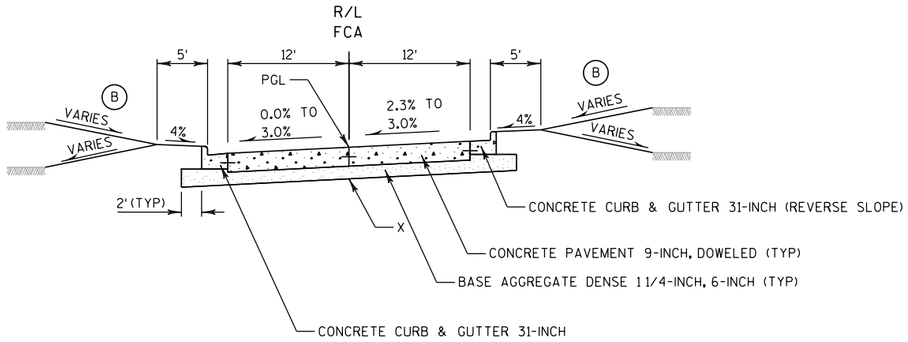
(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

TYPICAL FINISHED SECTION

RAMP FBA

FBA STA 10FBA+30.54 TO STA 15FBA+35.00

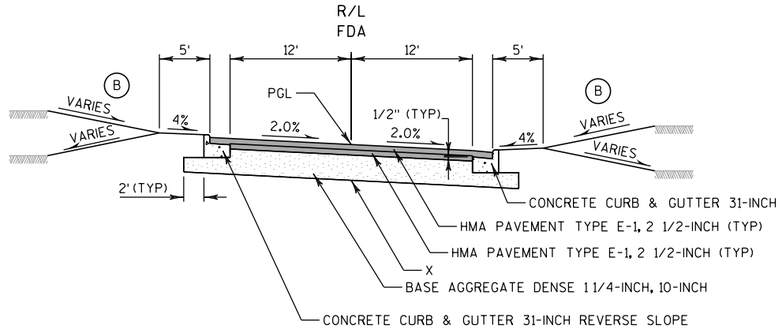
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



TYPICAL FINISHED SECTION

RAMP FCA

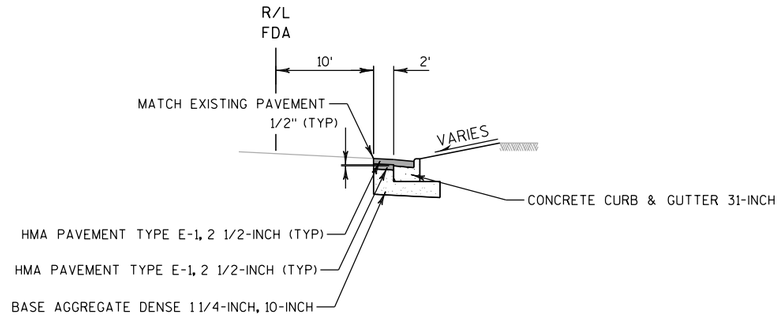
FCA STA 11FCA+43.01 TO STA 14FCA+10.29



TYPICAL FINISHED SECTION

RAMP FDA

FDA STA 11FDA+00.00 TO STA 11FDA+98.37



TYPICAL FINISHED SECTION

RAMP FDA

FDA STA 9FDA+64.40 TO STA 9FDA+80.00

LEGEND

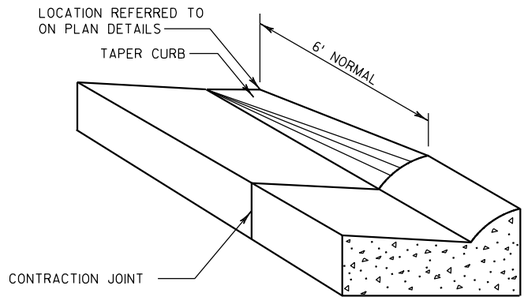
(A) 6" TOPSOIL, SOD LAWN & FERTILIZER TYPE B

(B) 6" TOPSOIL, SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX & FERTILIZER TYPE B, AND MULCH/EROSION MAT

NOTES

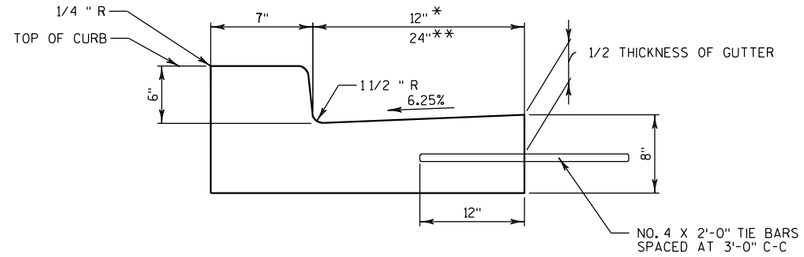
X = POINT REFERRED TO ON CROSS-SECTION

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TYPICAL SECTIONS	SHEET	E



CURB & GUTTER TERMINI

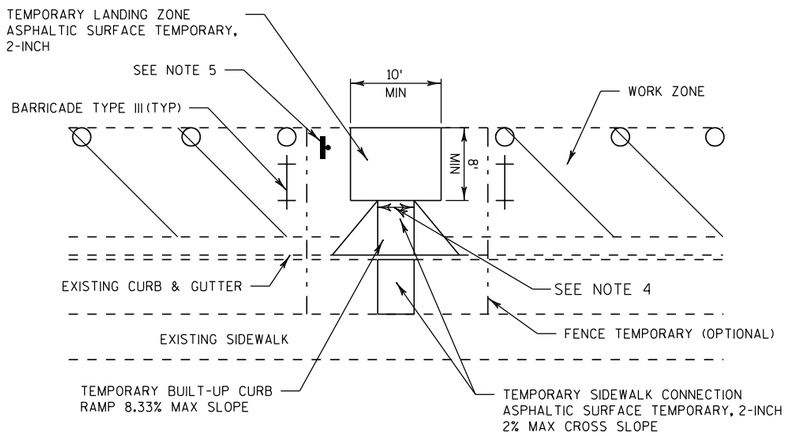
SEE PLAN DETAILS FOR LOCATIONS



NOTES

1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER ADJACENT TO NEW CONCRETE PAVEMENT.
2) OMIT TIE BARS WHERE INTEGRAL CURB AND GUTTER IS REQUIRED.
3) SEE STANDARD DETAIL DRAWING FOR DETAILS NOT SHOWN HERE.

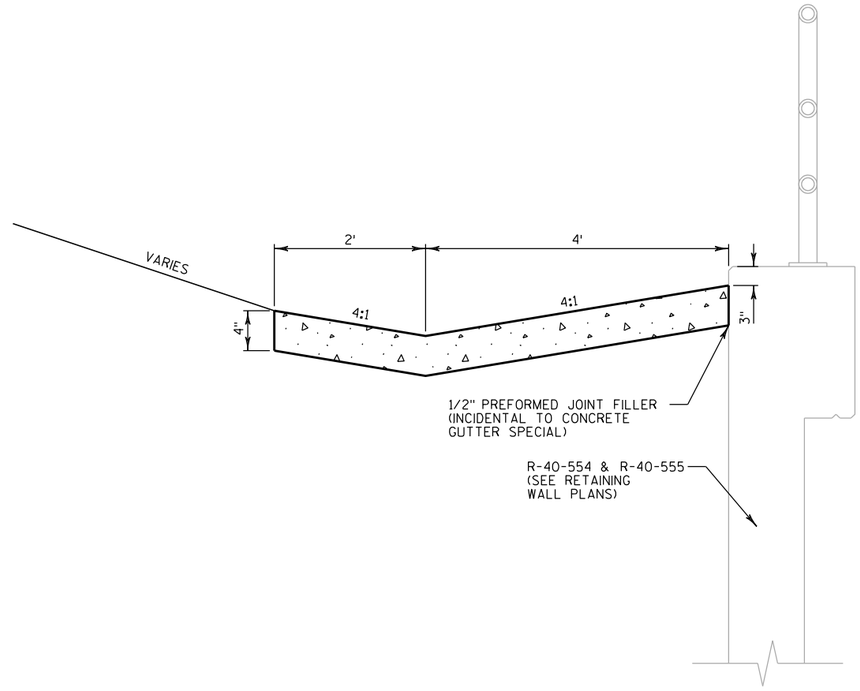
CONCRETE CURB AND GUTTER 19-INCH* AND 31-INCH**



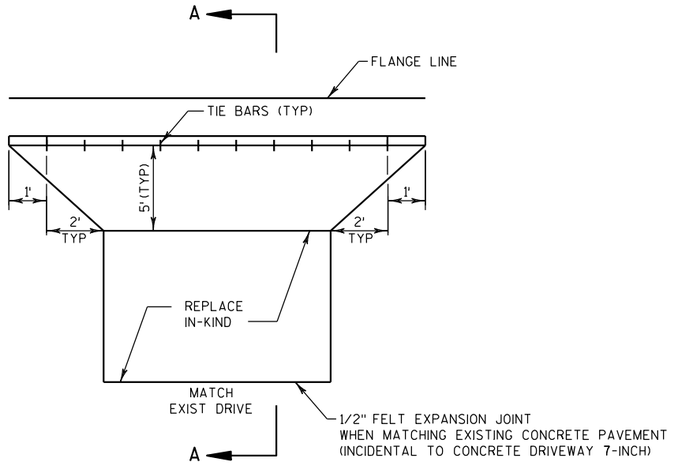
NOTES

1) MAINTAIN ACCESS TO BUS STOPS.
2) GAP SIDEWALK WORK TO MAINTAIN PEDESTRIAN ACCESS WHERE APPLICABLE.
3) ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.
4) 5' WIDE MIN WITH FENCE TEMPORARY, 10' WIDE MIN WITHOUT FENCE TEMPORARY.
5) MOVE EXISTING BUS STOP SIGN TO WOOD POST 4" X 6" X 18'.

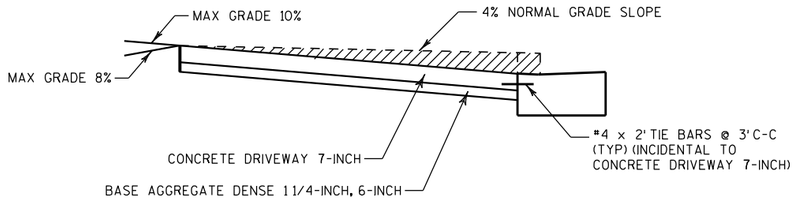
TEMPORARY BUS STOP PAD



CONCRETE GUTTER SPECIAL

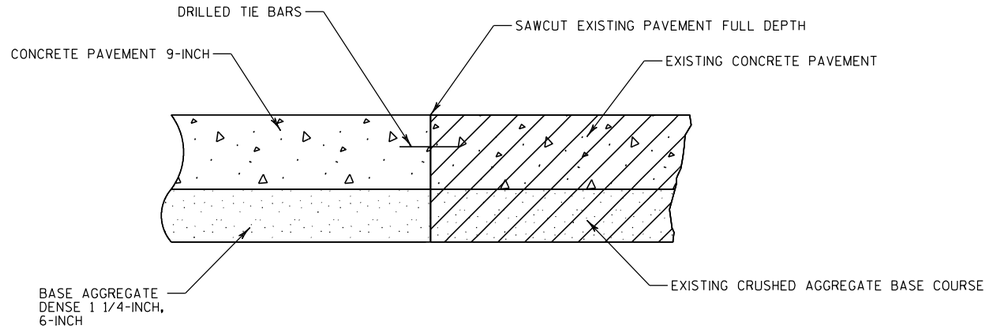


PLAN VIEW



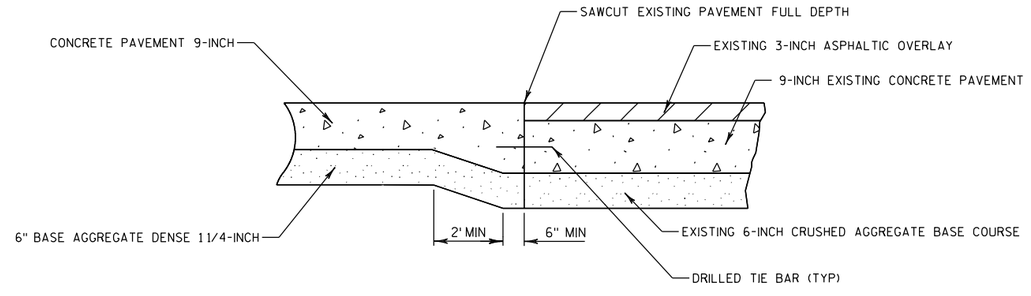
SECTION A-A

DRIVEWAY AND ALLEY ENTRANCE



MATCH AT EXISTING CONCRETE PAVEMENT

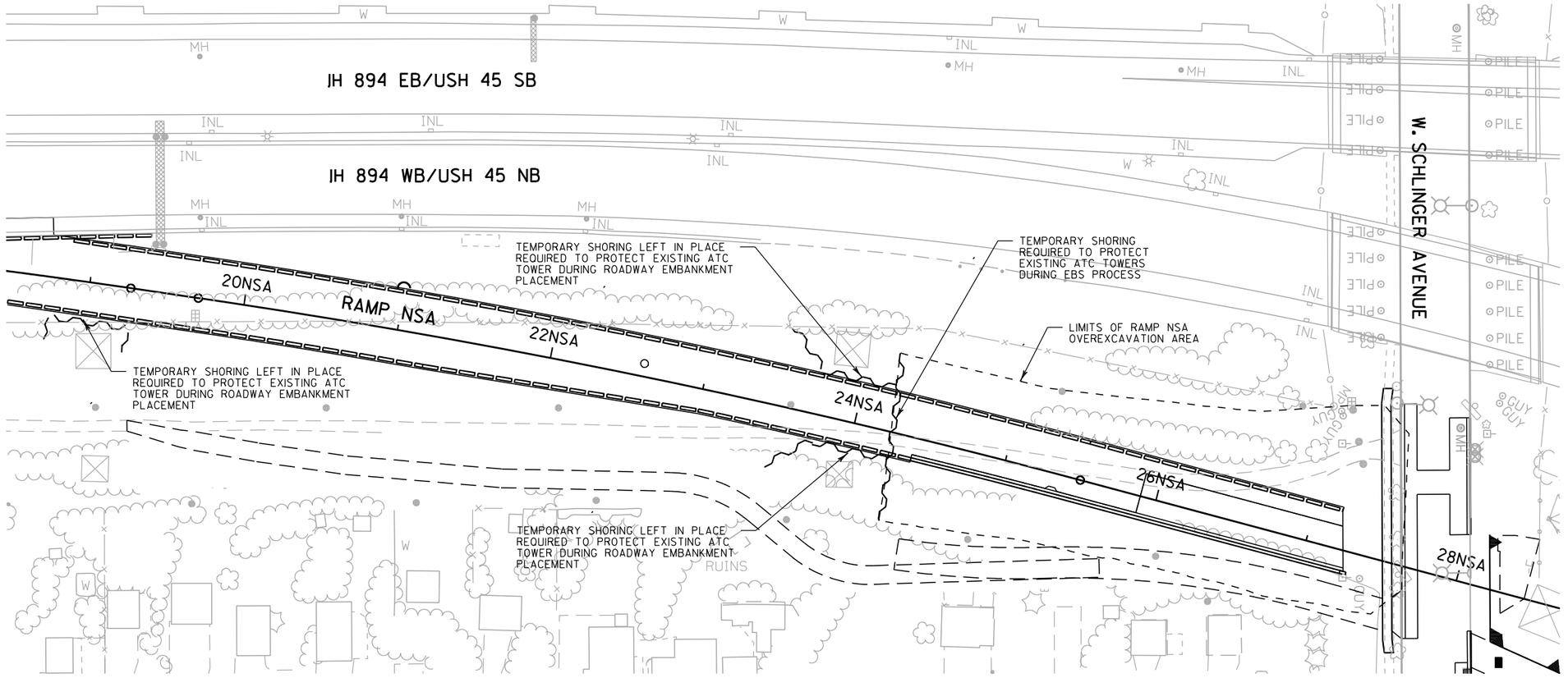
S. 76TH STREET SOUTH END
S. 76TH STREET NORTH END



MATCH AT EXISTING CONCRETE PAVEMENT WITH ASPHALT OVERLAY

STA 129K+00.00 TO STA 136K+50.00
S. 84TH STREET SOUTH END
S. 84TH STREET NORTH END
RAMP FDA WEST END

2



NOTES

1. TEMPORARY SHORING REQUIRED TO PROTECT THE EXISTING ATC TOWERS DURING THE EXCAVATION BELOW SUBGRADE PROCESS.
2. TEMPORARY SHORING LEFT IN PLACE REQUIRED TO PROTECT THE EXISTING ATC TOWERS DURING THE ROADWAY EMBANKMENT PLACEMENT PROCESS.
3. PLACE AND COMPACT BACKFILL IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
4. CONTRACTOR TO VERIFY ALL EXCAVATION AND BACKFILL LIMITS IN THE FIELD.
5. PLACE TEMPORARY SHORING AND TEMPORARY SHORING LEFT IN PLACE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.
6. CONTRACTOR TO VERIFY ALL TEMPORARY SHORING AND TEMPORARY SHORING LEFT IN PLACE LIMITS IN THE FIELD.
7. THE EXCAVATION LIMITS ARE DIRECTED IN THE FIELD BY THE ENGINEER.

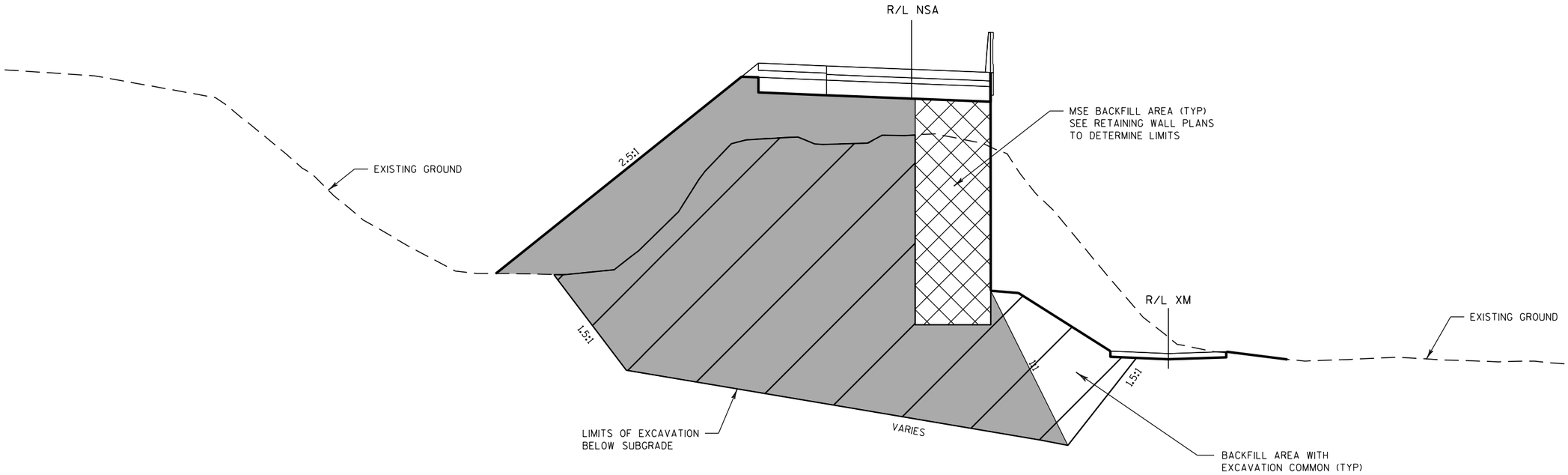
EMBANKMENT OVEREXCAVATION AREA AND TEMPORARY SHORING LOCATION DETAIL

RAMP NSA SOUTH OF W. SCHLINGER AVENUE

PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

EXCAVATION BELOW SUBGRADE

GRANULAR BACKFILL



NOTES

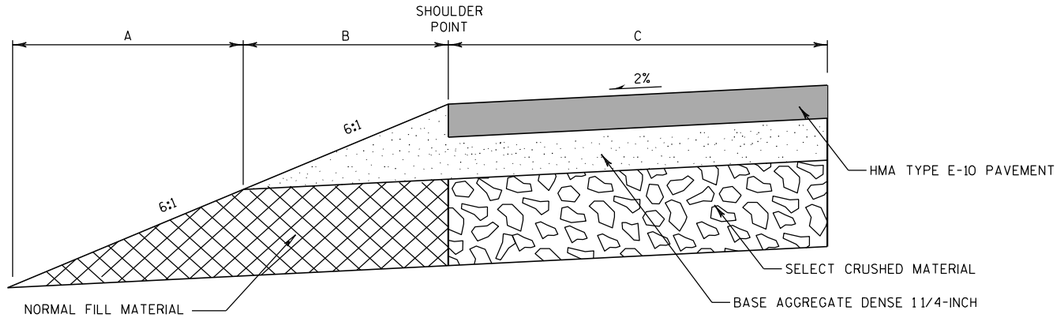
1. REMOVE SOILS IN THE EXCAVATION BELOW SUBGRADE AREA.
2. BACKFILL THE EXCAVATION AREA AS REQUIRED WITH THE MATERIAL TYPE NOTED.
3. PLACE AND COMPACT BACKFILL IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
4. CONTRACTOR TO VERIFY ALL EXCAVATION AND BACKFILL LIMITS IN THE FIELD.

EMBANKMENT OVEREXCAVATION AND BACKFILL DETAIL

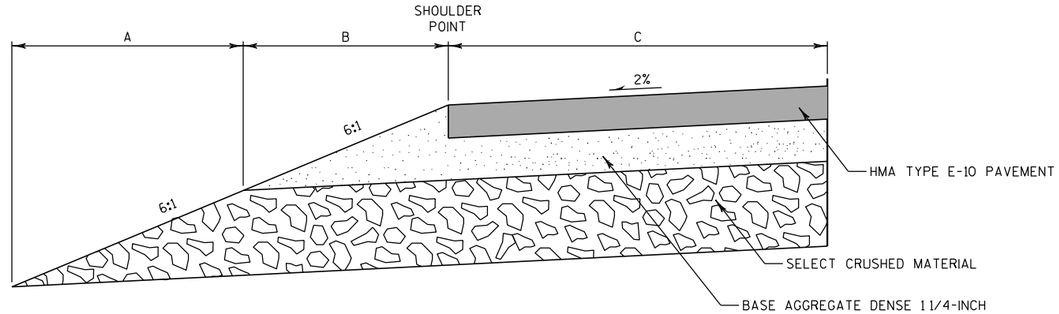
RAMP NSA SOUTH OF W. SCHLINGER AVENUE

PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

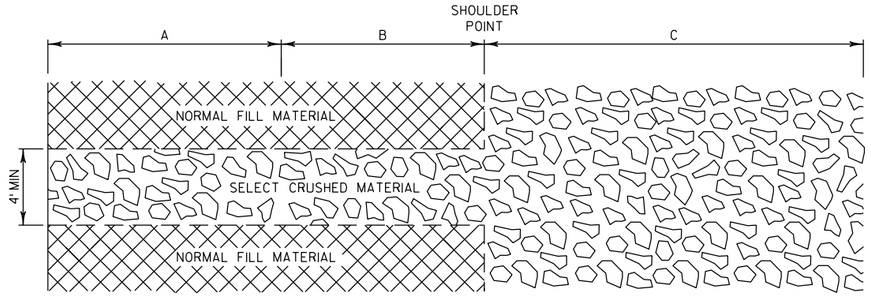
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TYPICAL HALF SECTION WITHOUT RELIEF TRENCH



TYPICAL HALF SECTION WITH RELIEF TRENCH

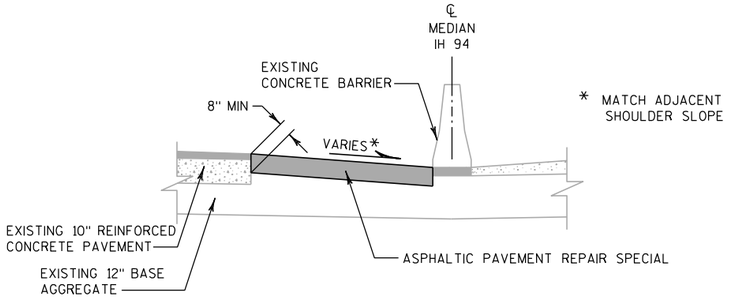


RELIEF TRENCH PLAN VIEW

RELIEF TRENCH

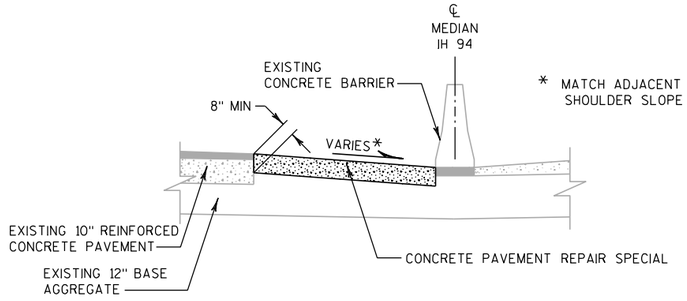
CONSTRUCT RELIEF TRENCH AT:

12NSA+71.10, RT	24NSA+21.10, RT
15NSA+21.10, RT	27NSA+00.00, LT
17NSA+71.10, RT	31NSA+33.68, LT (LP)
20NSA+21.10, RT	33NSA+83.68, RT
22NSA+71.10, RT	36NSA+33.68, RT



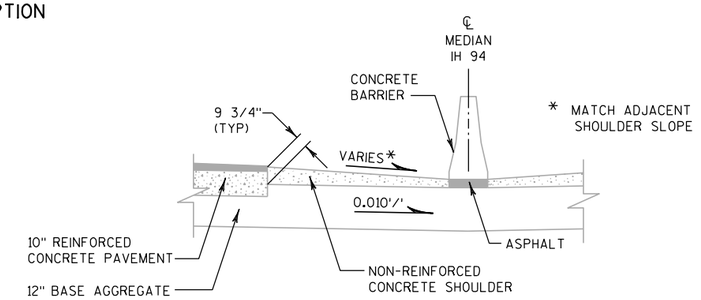
TYPICAL PROPOSED SECTION - ASPHALT OPTION

(DRAINAGE STRUCTURES NOT SHOWN)



TYPICAL PROPOSED SECTION - CONCRETE OPTION

(DRAINAGE STRUCTURES NOT SHOWN)

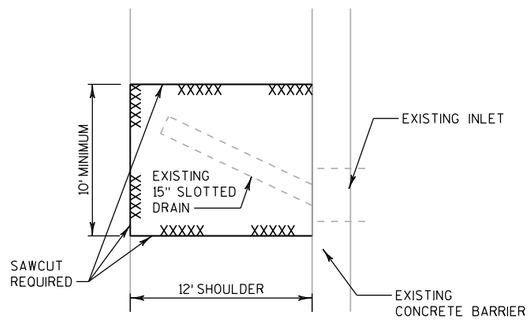


TYPICAL EXISTING SECTION

(DRAINAGE STRUCTURES NOT SHOWN)

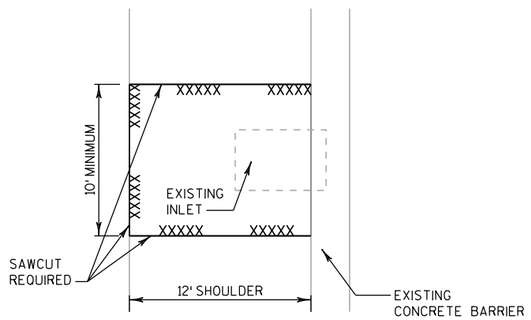
NOTES

1. SAWCUT LIMITS TO BE DETERMINED BY THE ENGINEER.
2. IF VOIDS EXIST UNDER AREAS TO BE REPAIRED, AND AT THE DIRECTION OF THE ENGINEER, BACKFILL WITH BASE AGGREGATE DENSE AND/OR BACKFILL CONTROLLED LOW STRENGTH.



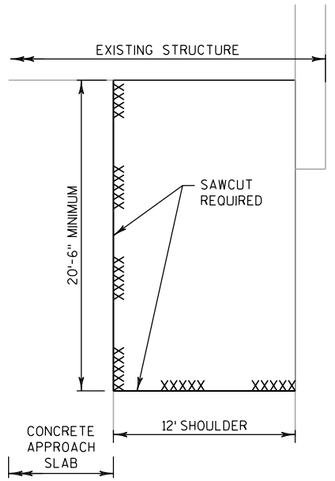
PLAN VIEW

REPAIR AT SLOTTED DRAIN



PLAN VIEW

REPAIR AT INLET



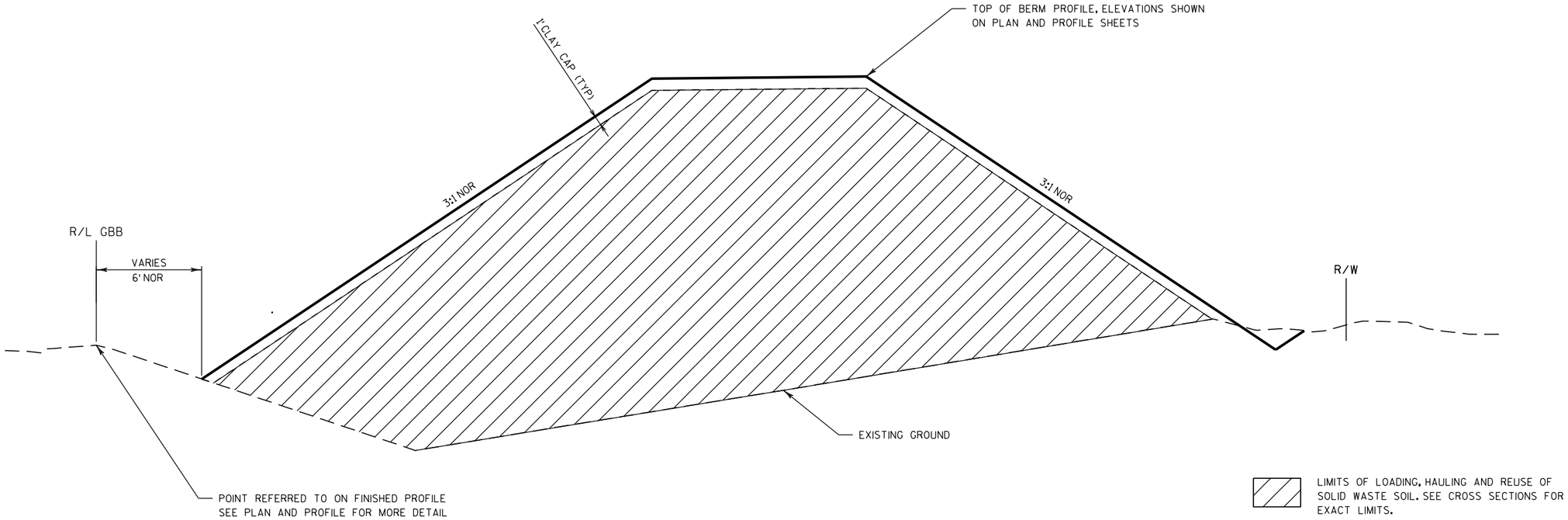
PLAN VIEW

REPAIR AT BRIDGE APPROACH SLAB

SHOULDER REPAIR

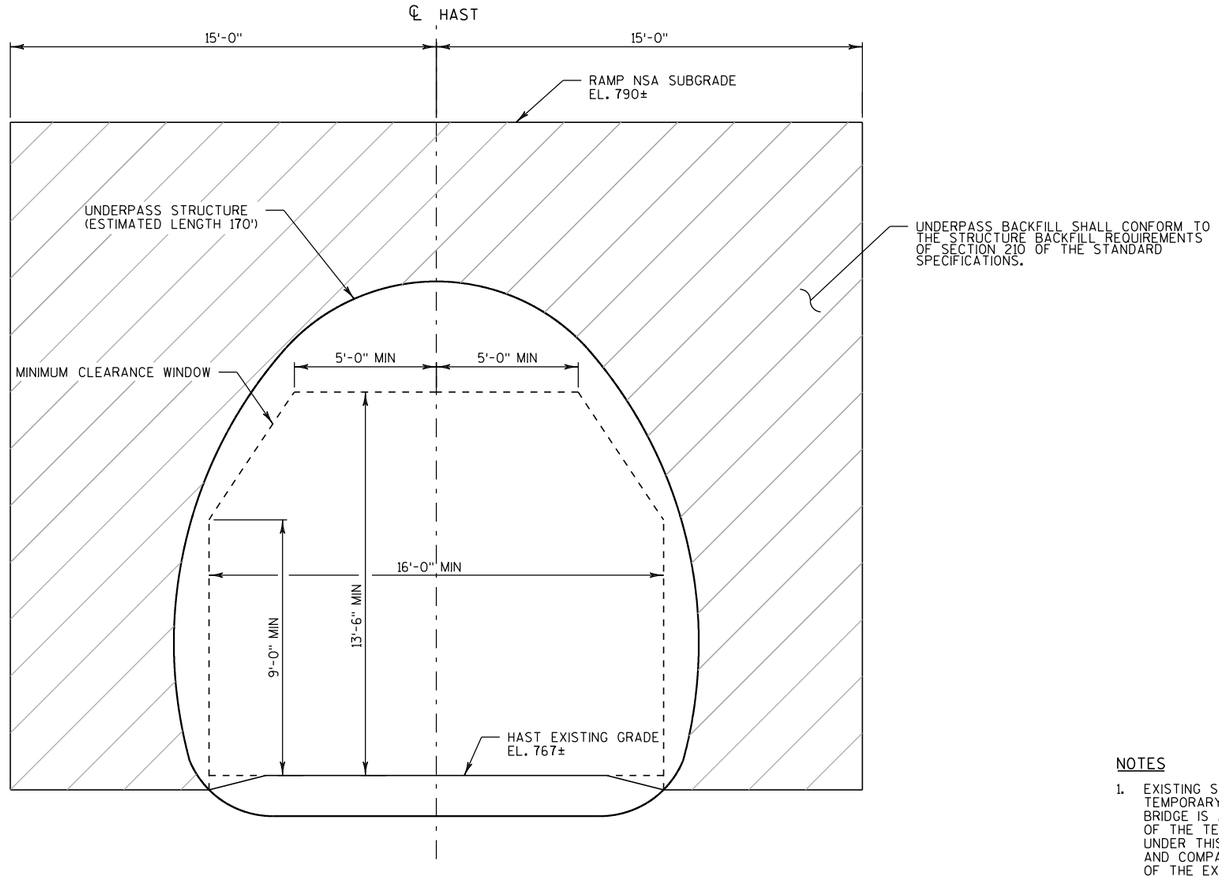
PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

2



GREENFIELD BERM DETAIL

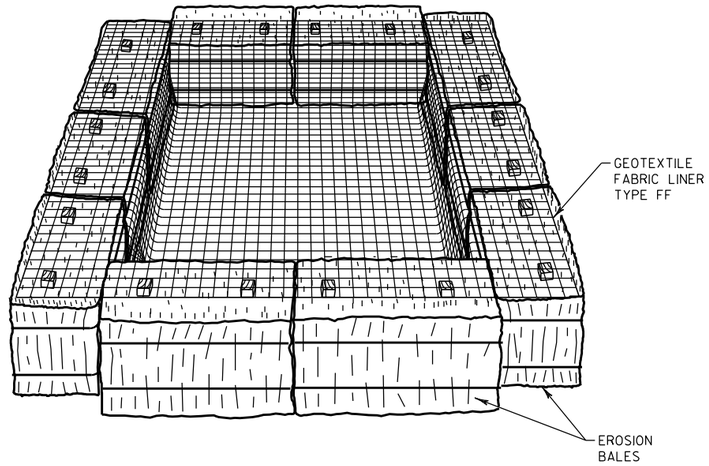
2



TEMPORARY UNDERPASS LEFT IN PLACE

NOTES

1. EXISTING STRUCTURE B-40-99 IS IMMEDIATELY WEST OF TEMPORARY ROADWAY NSA. THE LOW CHORD OF THIS BRIDGE IS APPROXIMATELY ELEVATION 790.5. A PORTION OF THE TEMPORARY UNDERPASS MUST BE PLACED UNDER THIS BRIDGE. THE BACKFILL MUST BE PLACED AND COMPACTED BELOW THE OVERHEAD CONSTRAINT OF THE EXISTING BRIDGE.
2. "TEMPORARY UNDERPASS LEFT IN PLACE SOIL BORINGS AND GEOTECHNICAL DATA REPORT," DATED FEBRUARY 1, 2013, ARE AVAILABLE UPON REQUEST.
3. TEMPORARY CROSSING MUST ACCOMMODATE DRAINAGE ALONG EACH SIDE OF HAST.
4. TEMPORARY UNDERPASS AND BACKFILL PAID FOR UNDER LUMP SUM BID ITEM "TEMPORARY UNDERPASS LEFT IN PLACE".



(SIZE TO BE DETERMINED IN FIELD AS INDICATED BELOW:)

STORAGE VOLUME (C.F.) = 16 X GPM (PUMP RATE)

EXAMPLE:
CONTRACTOR INDICATES PUMP CAPABLE OF 50 GPM
HEIGHT OF BALES = 1.5 FT.

SOLUTION:
SV (C.F.) = 16 X 50
SV = 800 C.F.

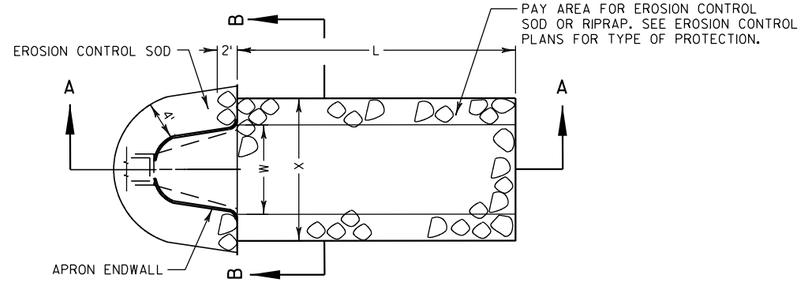
$\frac{800\ C.F.}{1.5\ FT.}$ = 533 S.F.

USE A 20 FT. X 27 FT. BASIN

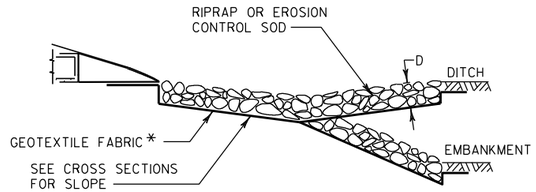
NOTES

1. CONTRACTOR TO PUMP WATER FROM EXCAVATION TO BASIN PRIOR TO DISCHARGING TO THE WATERWAY.
2. BASIN TO BE KEPT LESS THAN 10% FULL OF SEDIMENT. GEOTEXTILE FABRIC AND SEDIMENTS TO BE DISPOSED BY THE CONTRACTOR OFF OF THE PROJECT SITE.
3. TEMPORARY SETTLING BASIN TO BE PAID FOR AS EROSION BALES AND GEOTEXTILE FABRIC TYPE FF.

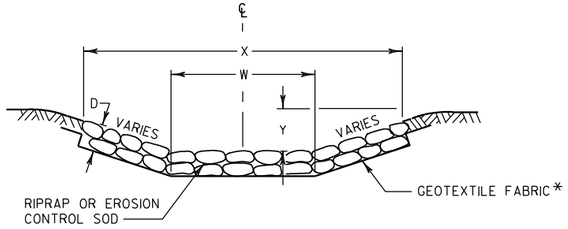
TEMPORARY SETTLING BASIN



PLAN VIEW



SECTION A-A



SECTION B-B

L = 3 x W (NOR) OR 10' MIN
OR AS INDICATED IN THE PLANS
OR AS DIRECTED BY THE ENGINEER

D = 12" FOR RIPRAP LIGHT
18" FOR RIPRAP MEDIUM
24" FOR RIPRAP HEAVY

X = W+2' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
W+5' FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

Y = 0' FOR TYPICAL CULVERT
DISCHARGE INTO DITCH
12" FOR CULVERT DISCHARGE
DOWN EMBANKMENT SLOPE

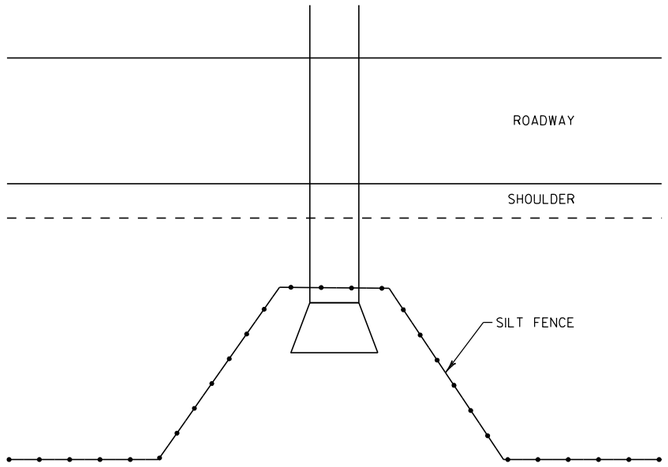
* TYPE R (FOR RIPRAP LIGHT ONLY)
TYPE HR (FOR RIPRAP HEAVY AND MEDIUM ONLY)

SOD, RIPRAP AND GEOTEXTILE FABRIC DETAIL AT APRON ENDWALLS

SEE EROSION CONTROL PLAN FOR LOCATIONS

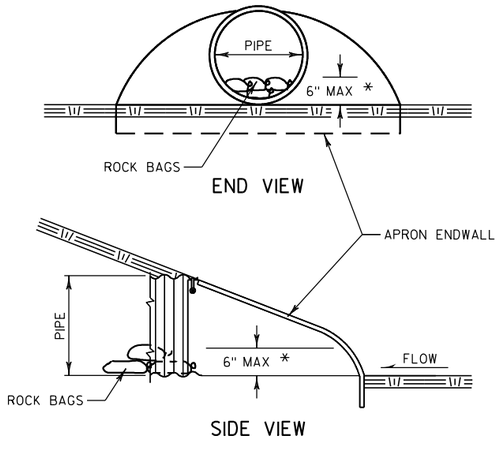
2

PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E



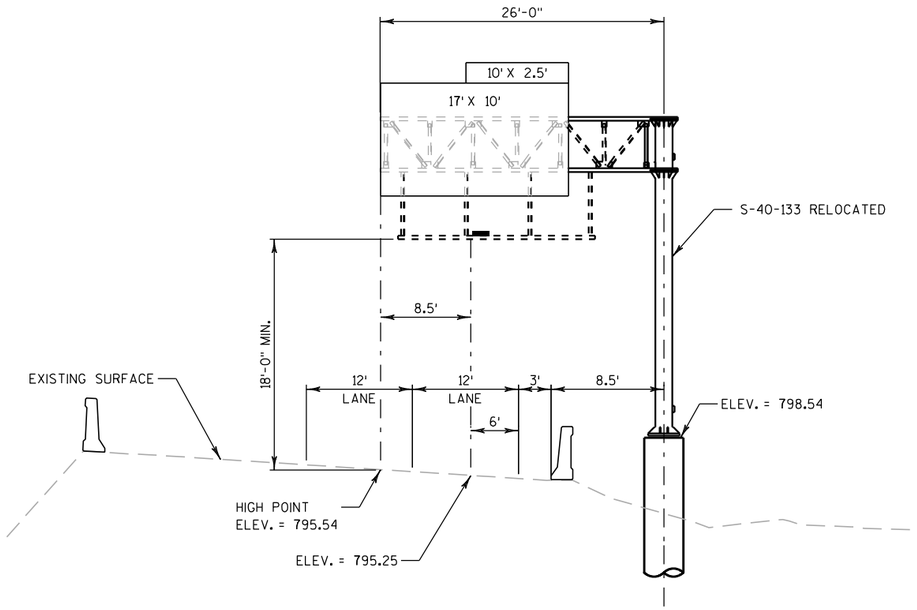
NOTE
SEE SILT FENCE SDD FOR ADDITIONAL INFORMATION.

TYPICAL SILT FENCE DETAIL AT PIPE INLET



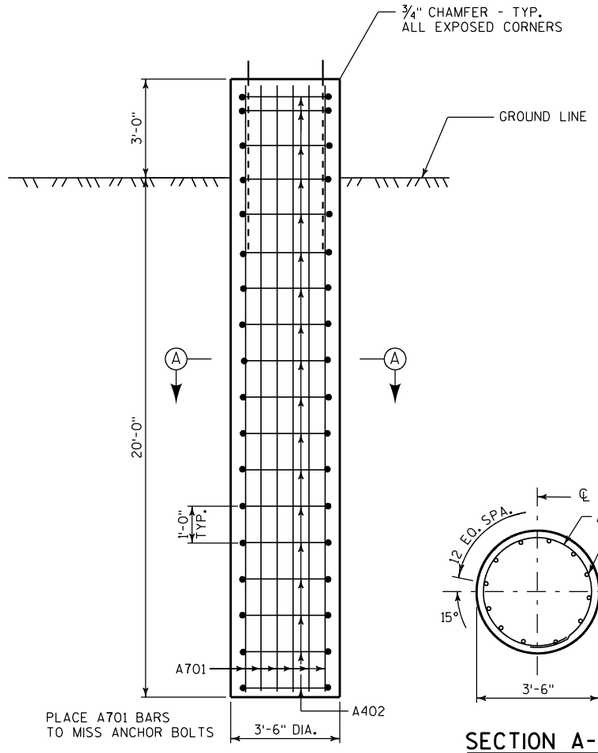
* OR AS DIRECTED BY THE ENGINEER

CULVERT PIPE CHECK

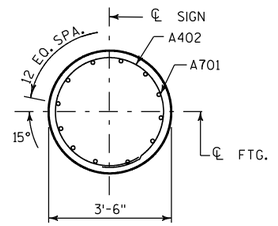


ELEVATION

(LOOKING NORTH)
STA 32NSA+30



ELEVATION

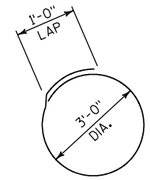


SECTION A-A

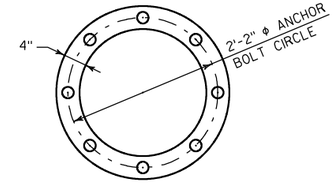
NOTE:
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS

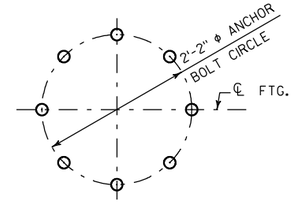
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	CUT. DIAG.	BUN-DLE	LOCATION
A701		12	22'-7"				FOOTING - COLUMN/TOP
A402		23	10'-6"	X			FOOTING - COLUMN/TOP



A402



TOP VIEW OF TOP & BOTTOM TEMPLATES



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

PROVIDE IDENTIFICATION PLAQUE, INCIDENTAL TO "OVERHEAD SIGN SUPPORT, S-40-150". FABRICATE IN ACCORDANCE WITH S.D.D. "STRUCTURE IDENTIFICATION PLAQUES, SIGN BRIDGES & OVERHEAD SIGN SUPPORT".

MOUNTING BRACKETS FOR SIGNS SHALL BE PER APPROVED PRODUCT LIST.

ELEVATIONS ARE IN FEET UNLESS OTHERWISE SHOWN OR NOTED.

FOR JUNCTION BOXES, WIRING REQUIREMENTS, AND ELECTRIC SERVICE, SEE LIGHTING AND FTMS PLANS. PROVIDE GROUNDING OF OVERHEAD SIGN SUPPORTS PER S.D.D. "SIGN BRIDGE STRUCTURE GROUNDING".

ALL BARS CONTAINED ENTIRELY IN BELOW-GRADE BASES ARE TO BE UNCOATED REINFORCING STEEL. ALL OTHER BARS, INCLUDING BARS THAT ARE PARTIALLY EMBEDDED IN BASES BUT EXTEND OUTSIDE THE BASE INTO AN ABOVE-GRADE PEDESTAL, 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 SUBMIT DRAWINGS OF OVERHEAD SIGN SUPPORT AND DESIGN CALCULATIONS TO THE PROJECT ENGINEER AND TRAFFIC OPERATIONS CENTER FOR APPROVAL.

CONTRACTOR SHALL SHOW SIGNS ON SHOP DRAWINGS.

SIZE THE ANCHOR BOLT/TEMPLATE ASSEMBLY TO FIT WITHIN THE BAR CAGE OF THE FOOTING BASE IN ADDITION TO MEETING ALL APPLICABLE DESIGN REQUIREMENTS FOR THE DESIGN OF THE UPRIGHT BASE CONNECTION.

SIGNS OR BLANKS SHALL BE INSTALLED ON THE OVERHEAD SIGN SUPPORT AT THE TIME OF ERECTION. BLANKS, IF USED, SHALL BE OF THE SAME SIZE AND LOCATION AS PERMANENT SIGNS.

ALLOWABLE DESIGN STRESSES

CONCRETE MASONRY ——— f'c=3,500 P.S.I.
HIGH STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy=60,000 P.S.I.
ANCHOR BOLTS ASTM F1554 GRADE 55 ——— fy=55,000 P.S.I.

ESTIMATED QUANTITIES (1 FTG.)

SIGN SUPPORTS CONCRETE MASONRY ——— 9 C.Y.
SIGN SUPPORTS STEEL REINFORCEMENT HS ——— 715 LB.

DESIGN DATA

DESIGN SIGN AREA (CONTRACTOR DESIGNED)
MAXIMUM SIGN DEPTH (CONTRACTOR DESIGNED)

DESIGNED ACCORDING TO AASHTO "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 5TH EDITION, WITH 2010 & 2011 INTERIMS.

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

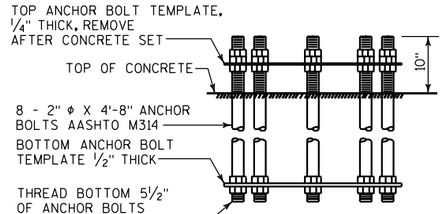
GROUP LOADS	% OF ALLOWABLE STRESS
I. DEAD	100
II. DEAD + WIND	133
III. DEAD + ICE + ½WIND	133

NOTE: WIND LOAD FOR GROUP 3 LOADING SHALL NOT BE LESS THAN 25 PSF.

FOUNDATION DATA

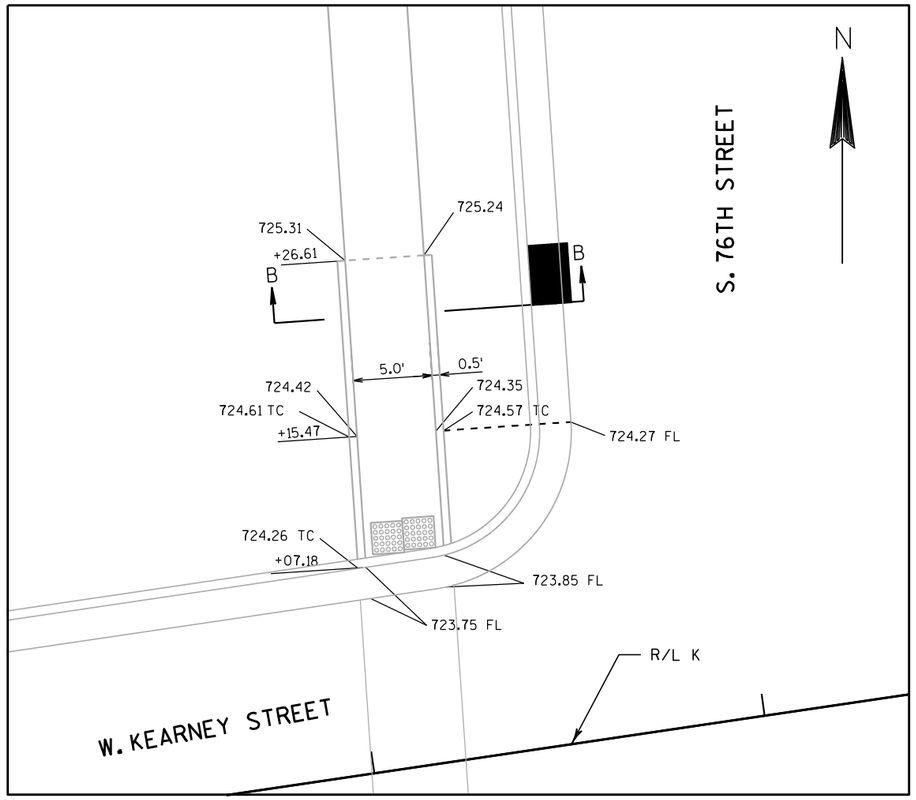
THE FOLLOWING ASSUMPTIONS WERE USED FOR THE DESIGN OF THE CONCRETE BASE INDICATED IN S.D.D. "36" DIAMETER FULL SPAN OVERHEAD SIGN SUPPORT BASE". IF VARIATIONS IN THE ASSUMED DESIGN PARAMETERS ARE FOUND DURING CONSTRUCTION, NOTIFY THE PROJECT ENGINEER FOR REQUIRED MODIFICATION TO THE FOUNDATION SYSTEM.

ALLOWABLE SOIL BEARING PRESSURE = 3000 PSF
ALLOWABLE SKIN FRICTION = 500 PSF
ALLOWABLE COHESION = 1000 PSF
ASSUMED FRICTION ANGLE = 30 DEGREES

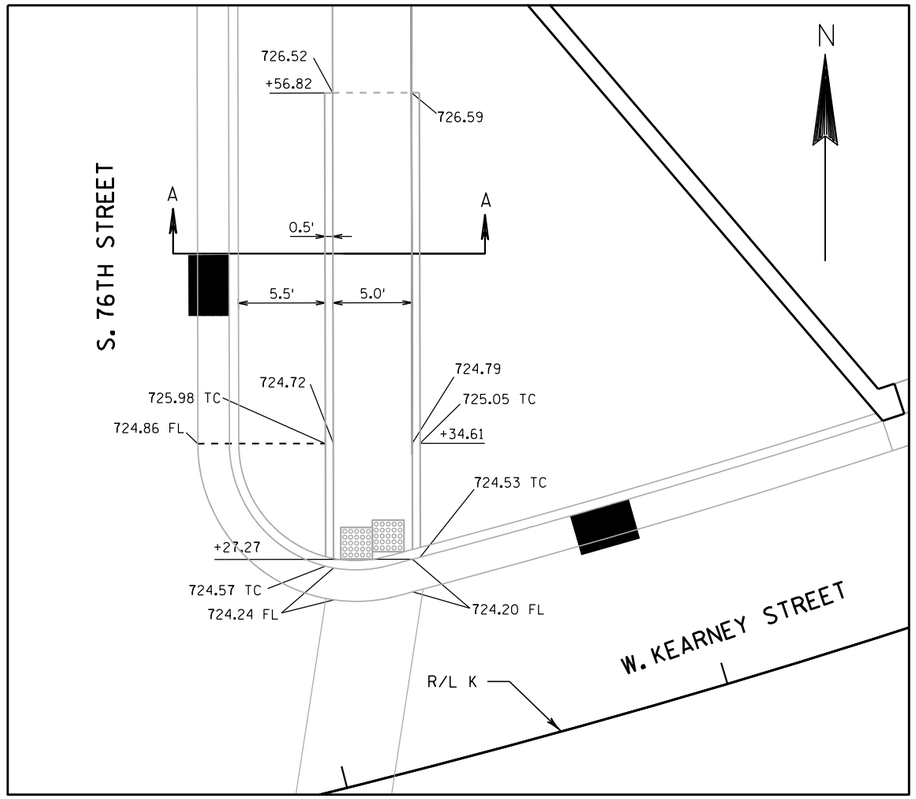


ANCHOR BOLT DETAILS

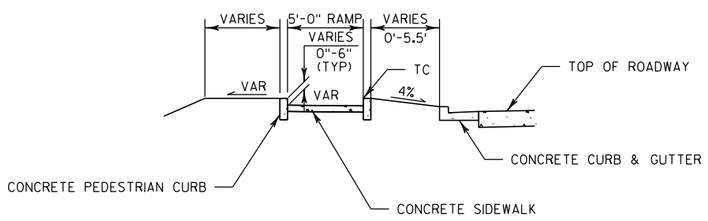
PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E



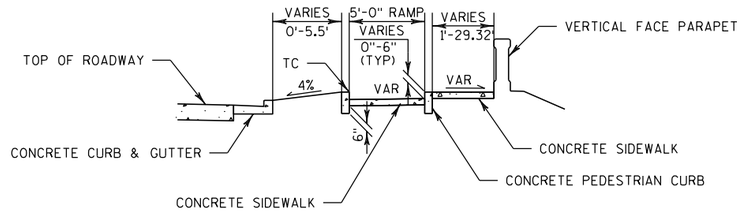
NW RETURN PLAN



NE RETURN PLAN



SECTION B-B

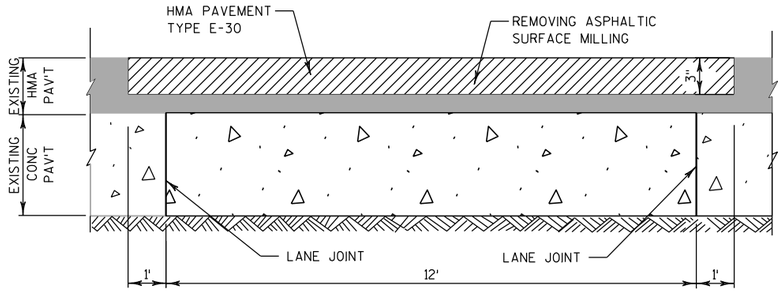


SECTION A-A

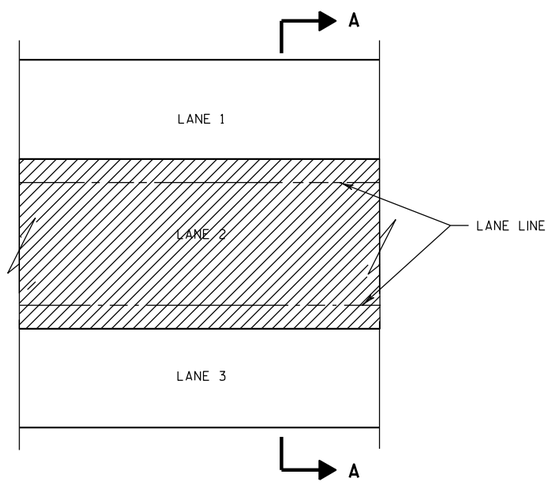
CURB RAMP DETAIL

SEE PLAN DETAILS FOR LOCATIONS

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E



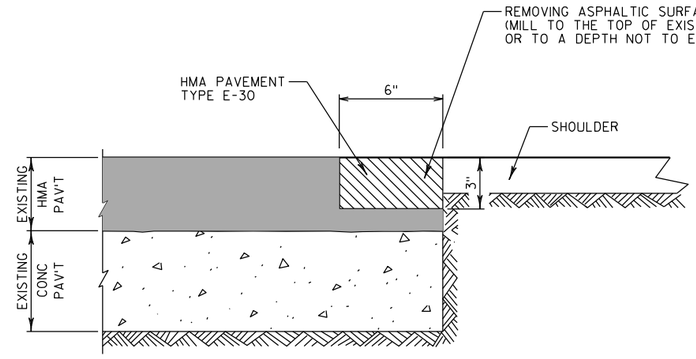
SECTION A-A



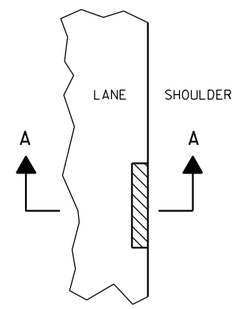
PLAN VIEW

LANE REPAIR

SEE TRAFFIC CONTROL PLANS FOR LOCATIONS



SECTION A-A

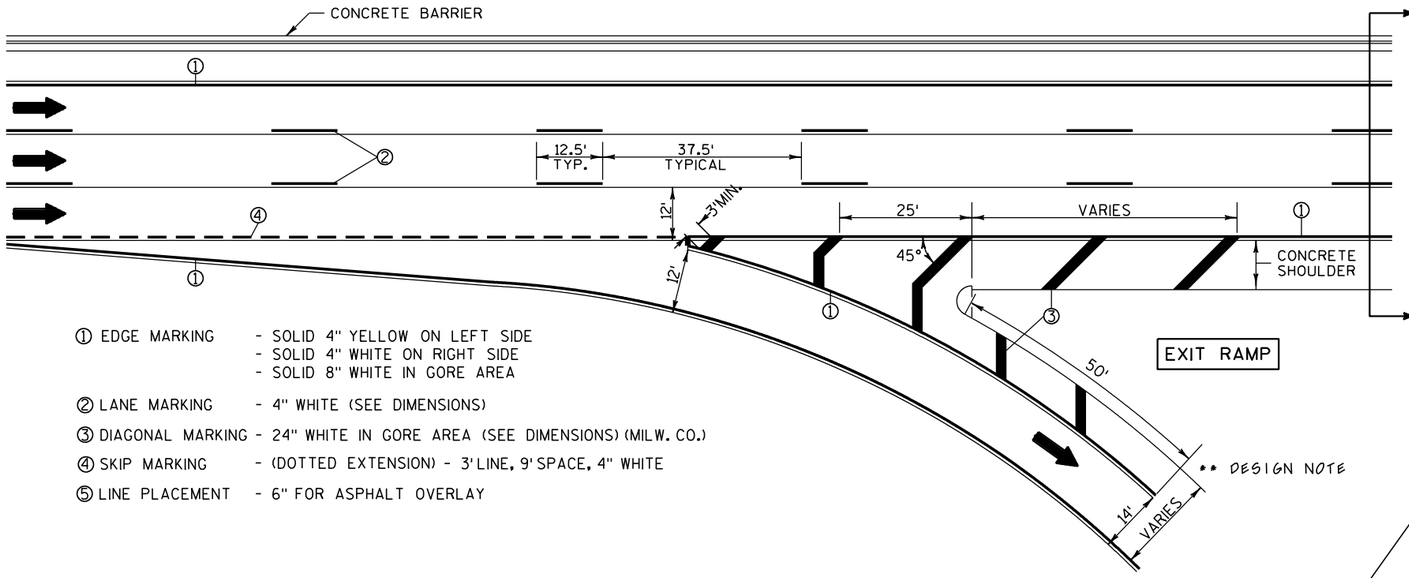


PLAN VIEW

EDGE LINE JOINT REPAIR

SEE TRAFFIC CONTROL PLANS FOR LOCATIONS

2



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE
- SOLID 8" WHITE IN GORE AREA

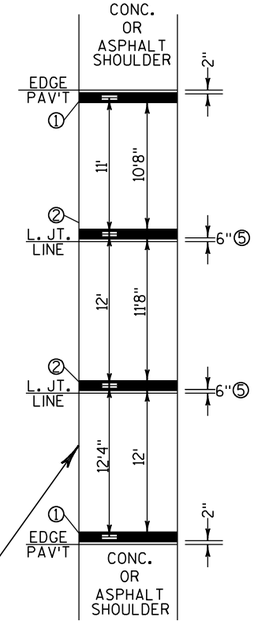
② LANE MARKING - 4" WHITE (SEE DIMENSIONS)

③ DIAGONAL MARKING - 24" WHITE IN GORE AREA (SEE DIMENSIONS) (MILW. CO.)

④ SKIP MARKING - (DOTTED EXTENSION) - 3' LINE, 9' SPACE, 4" WHITE

⑤ LINE PLACEMENT - 6" FOR ASPHALT OVERLAY

EXIT RAMP



SECTION A-A

LINE PLACEMENT DETAILS

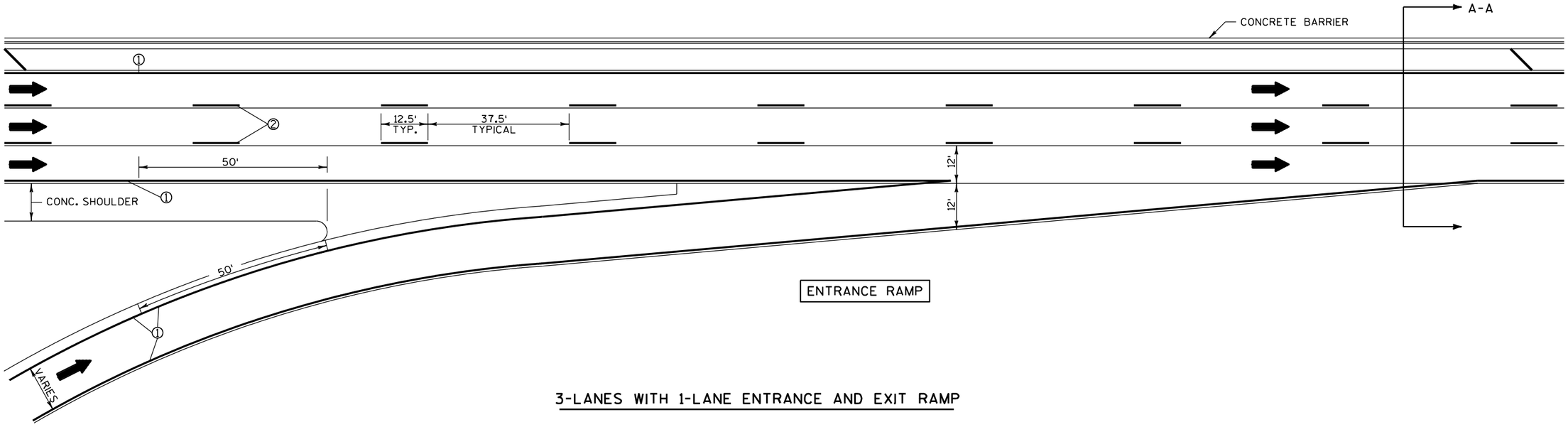
NOTES

1. WHERE THE DOTTED EXTENSION OF THE RIGHT EDGE LINE IS SHOWN ON THE PLAN, IT SHALL BE 4" WIDE, WITH A LINE SKIP PATTERN CONSISTING OF A 3' LONG LINE AND A 9' SKIP.

2. PAVEMENT LANE MARKINGS SHALL BE LOCATED 6" OFF THE LONGITUDINAL JOINT OF THE UNDERLYING CONC. PAVEMENT.

3. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

4. SPOTTING FOR PAVEMENT LANE MARKINGS AND EDGE LINES SHALL BE 4"x4" PIECES OF REFLECTORIZED PAV'T MARKING TAPE SPACED AT 50' INTERVALS, INCIDENTAL TO PAV'T MARKING.



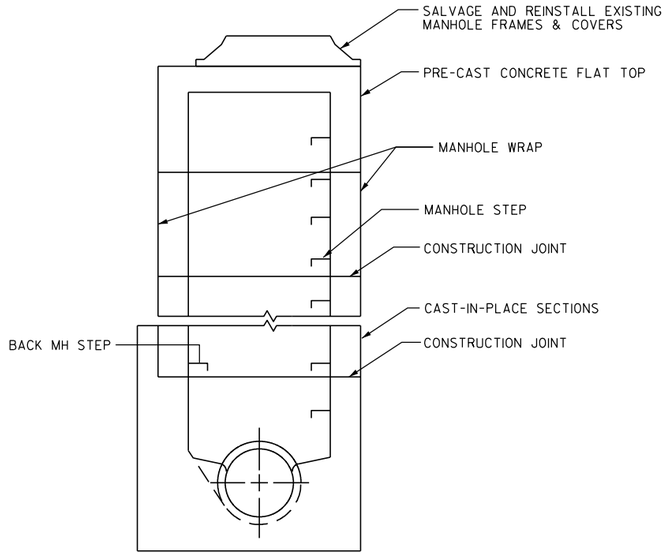
ENTRANCE RAMP

3-LANES WITH 1-LANE ENTRANCE AND EXIT RAMP

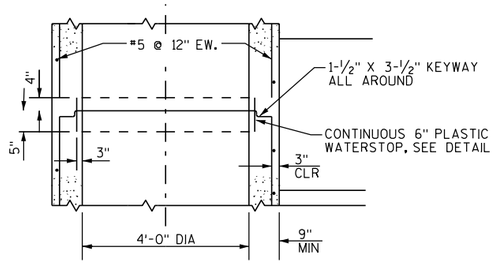
GORES, FREEWAYS, & EXPRESSWAYS (EPOXY)

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CONSTRUCTION DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021001_cd.dgn PLOT DATE : 30-APR-2013 12:28 PLOT BY : MSCDYB PLOT NAME : PLOT SCALE : 2:1
WISDOT/CADDS SHEET 42



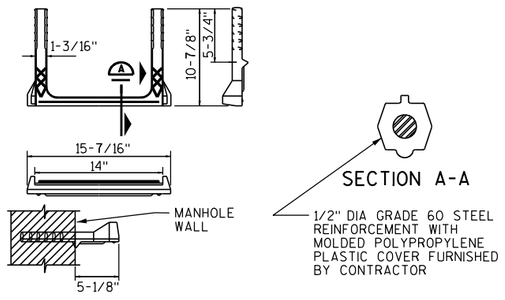
CAST-IN-PLACE MANHOLE
NTS



NOTE

REINFORCEMENT SHOWN IS FOR STANDARD MANHOLES

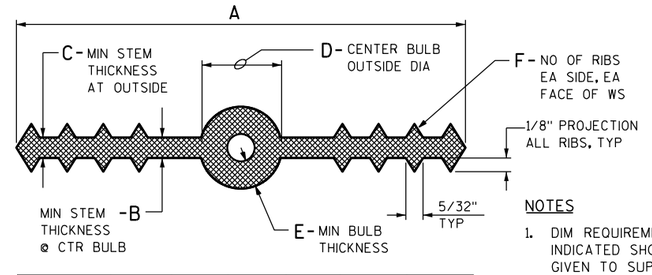
CAST-IN-PLACE MANHOLE CONSTRUCTION JOINTS
NTS



NOTES

1. DESIGN LIVE LOADS - 800LB VERTICAL CONCENTRATED
   - 400LB HORIZONTAL PULLOUT
2. FIRST MH STEP TO BE PLACED AT 1'-0" ABOVE BENCH OR INVERT. SUBSEQUENT STEPS TO BE AT 1'-3" EXCEPT AT MANHOLE CONE

MMSD STANDARD MANHOLE STEPS PS-2-BG
NTS



SIZE	A	B	C	D	E	F
4"x3/16"	4"	3/16"	3/16"	3/4"	1/4"	4
6"x3/8"	6"	3/8"	3/8"	7/8"	1/4"	6
9"x3/8"	9"	3/8"	3/8"	1"	1/4"	8

NOTE

USE 6"x 3/8 " UNLESS NOTED OTHERWISE ON PLANS

NOTES

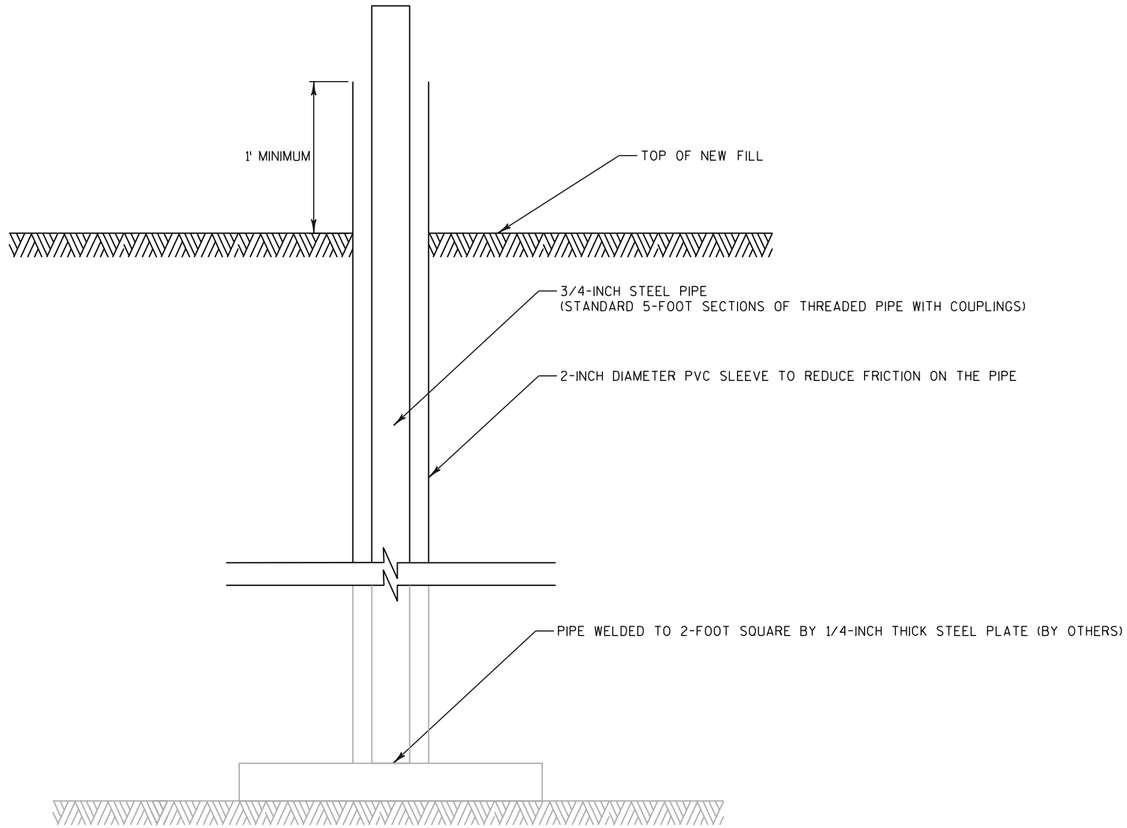
1. DIM REQUIREMENTS INDICATED SHOULD BE GIVEN TO SUPPLIERS PRIOR TO PLACING ORDERS.
2. NON-ROUND CENTER BULBS SHALL HAVE A MIN OUTSIDE DIM OF D

PLASTIC WATERSTOP
NTS

EXTEND MMSD MANHOLE

STA 480NW+25, 40.6' RT
STA 481NW+83, 31.0' RT
STA 483NW+43, 35.6' RT

2



SURFACE SETTLEMENT PLATE EXTENSION

STA 477NW+00
STA 479NW+00
STA 481NW+00
STA 483NW+00
STA 485NW+00
STA 487NW+00

NOTES

FOR FTMS REMOVALS REFER TO FTMS PLANS

FOR LIGHTING REMOVALS REFER TO LIGHTING PLANS

FOR TRAFFIC SIGNAL REMOVALS REFER TO TRAFFIC SIGNAL PLANS

FOR SIGN REMOVALS REFER TO SIGN PLANS

FOR STRUCTURE REMOVALS REFER TO STRUCTURE PLANS

FOR SANITARY SEWER REMOVALS REFER TO SANITARY SEWER PLANS

FOR WATER MAIN REMOVALS REFER TO WATER MAIN PLANS

LEGEND

X CLEARING AND GRUBBING (I.D.)

CLEARING AND GRUBBING (STA.)

REMOVING PAVEMENT

REMOVING ASPHALTIC SURFACE (PAID AS EXCAVATION COMMON UNLESS NOTED OTHERWISE IN PLAN)

REMOVING CONCRETE SIDEWALK

REMOVING CURB AND GUTTER

REMOVING FENCE

REMOVING NOISE BARRIER

SLOPE INTERCEPT

X X X SAWING ASPHALT

X̲ X̲ X̲ SAWING CONCRETE PAVEMENT

REMOVING INLETS

REMOVING MANHOLES

REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE

BULKHEAD PIPE MASONRY

—RM— REMOVING STORM SEWER

2

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	REMOVAL PLAN - LEGEND	SHEET	E

2

2

SEE B-40-892 & C-40-101
PLAN FOR CONCRETE
CHANNEL REMOVALS

EXISTISNG CONCRETE CULVERT
APRON AND RETAINING WALLS
TO BE REMOVED BY OTHERS

EXISTING SIGN
TO REMAIN

EXISTING BUS STOP
TO REMAIN

REMOVING STORM SEWER PIPE (72-INCH)

PLAYGROUND

RIP RAP

RAMP FDA

10FDA

12FDA

W. O'CONNOR STREET

226EW

228EW

230EW

232EW

234EW

236EW

238EW

240EW

MATCHLINE 241EW+00

IH 94 WB

IH 94 EB

REMOVING STORM
SEWER PIPE (15-INCH)

REMOVING STORM
SEWER PIPE (12-INCH)

S. 84TH STREET

REMOVING STORM SEWER
PIPE (48-INCH)

REMOVING STORM SEWER
PIPE (12-INCH)

RAMP FCA

12FCA

14FCA

12FBA

RAMP FBA

EXISTING FENCE
TO REMAIN

REMOVING STORM SEWER
PIPE (15-INCH)

REMOVING STORM SEWER PIPE (15-INCH)

REMOVING STORM SEWER PIPE (12-INCH)

REMOVING STORM SEWER PIPE (18-INCH)

REMOVING STORM SEWER PIPE (48-INCH)

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021101_rm.dgn PLOT DATE : 29-APR-2013 22:10 PLOT BY : MSCDYB PLOT NAME : 021101_rm PLOT SCALE : 100:1

2

2

N

544CR
546CR
548CR
550CR
552CR
554CR

MATCHLINE 241EW+00

MATCHLINE 256EW+00

242EW
244EW
246EW
248EW
250EW
252EW
254EW

IH 94 WB

IH 94 EB

W. KEARNEY STREET

RAMP FBA
14FBA
16FBA
18FBA

104K
106K
108K
110K
112K
114K
116K
118K

REMOVING STORM SEWER PIPE (15-INCH)

REMOVING STORM SEWER PIPE (12-INCH)

EXISTING SIGN
TO REMAIN

REMOVING STORM SEWER PIPE (24-INCH)

REMOVING STORM SEWER PIPE (18-INCH)

REMOVING SIGN FOOTING

SIGN TO BE REMOVED
BY OTHERS

EXISTING TREE
TO REMAIN

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021102_rm.dgn PLOT DATE : 29-APR-2013 22:10 PLOT BY : MSCDYB PLOT NAME : 021102_rm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

S. 78TH STREET
S. 77TH STREET
S. 76TH STREET
S. 75TH STREET
W. O'CONNOR STREET
W. KEARNEY STREET
IH 94 WB
IH 94 EB
MATCHLINE 256EW+00
MATCHLINE 271EW+00
REMOVING STORM SEWER PIPE (15-INCH)
REMOVING CONCRETE BARRIER
REMOVING STORM SEWER PIPE (12-INCH)
EXISTING HYDRANT TO REMAIN
EXISTING SIGNALS TO REMAIN
REMOVING CONCRETE BARRIER
REMOVING STORM SEWER PIPE (12-INCH)
REMOVING GUARDRAIL
REMOVE AND CAP EXISTING STRUCTURE
REMOVING GUARDRAIL
REMOVING STORM SEWER PIPE (12-INCH)
SALVAGE EXISTING LIGHTPOLE
REMOVE AND CAP EXISTING STRUCTURE
REMOVE AND CAP EXISTING STRUCTURE
WELDING STORM SEWER COVERS & REMOVING WELDS FROM STORM SEWER COVERS
WELDING STORM SEWER COVERS
REMOVING STORM SEWER PIPE (12-INCH)
REMOVE AND CAP EXISTING STRUCTURE
REMOVE AND CAP EXISTING STRUCTURE
WELDING STORM SEWER COVERS & REMOVING WELDS FROM STORM SEWER COVERS
REMOVING CONCRETE BARRIER
BULKHEAD PIPE MASONRY
REMOVING GUARDRAIL
BULKHEAD PIPE MASONRY
BULKHEAD PIPE MASONRY
REMOVING STORM SEWER PIPE (12-INCH)
REMOVE EXISTING GATE
EXISTING TREE TO REMAIN
BUS SHELTER TO BE REMOVED BY OTHERS
REMOVING STORM SEWER PIPE (12-INCH)
EXISTING TREES TO REMAIN
EXISTING SS STRUCTURE TO REMAIN
EXISTING TREES TO REMAIN
REMOVING STORM SEWER PIPE (12-INCH)
S. 75TH STREET
S. 74TH STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021103_rm.dgn PLOT DATE : 10-JUN-2013 08:33 PLOT BY : MSCDYB PLOT NAME : 021103_rm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

W. O'CONNOR STREET

572CR 574CR 576CR 578CR 580CR 582CR

EXISTING PEDESTRIAN BRIDGE TO REMAIN

RM

REMOVE AND CAP EXISTING STRUCTURE

REMOVING STORM SEWER PIPE (12-INCH)

IH 94 WB

IH 94 EB

272EW 274EW 276EW 278EW 280EW 282EW 284EW

MATCHLINE 271EW+00

REMOVE AND CAP EXISTING STRUCTURE

EXISTING GUARDRAIL TO REMAIN

W. KEARNEY STREET

134K 136K 138K 140K 142K

W. ADLER STREET

S. 70TH STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021104_rm.dgn PLOT DATE : 29-APR-2013 22:10 PLOT BY : MSCDYB PLOT NAME : 021104_rm PLOT SCALE : 100:1

2

2

S. 100TH STREET

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

260NS

262NS

10NSA

264NS

12NSA

266NS

14NSA

268NS

16NSA

270NS

18NSA

272NS

20NSA

RAMP NSA

REMOVE AND CAP EXISTING STRUCTURE

REMOVING CRASH BARRELS (REMOVING FOUNDATION PAD IS INCIDENTAL)

MATCHLINE 21NSA+00

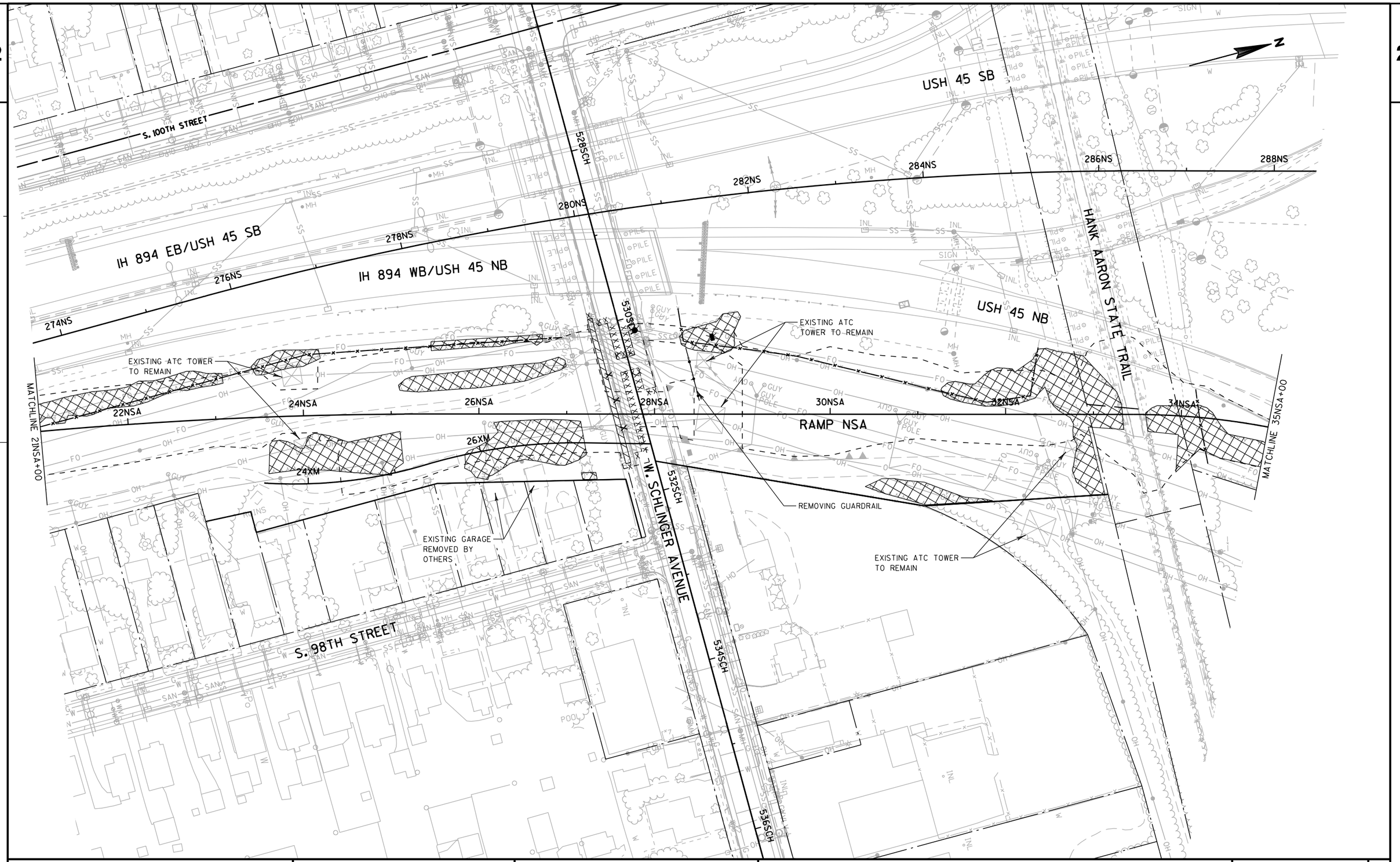
EXISTING ATC TOWER TO REMAIN

S. 98TH STREET

N

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021106_rm.dgn PLOT DATE : 29-APR-2013 22:13 PLOT BY : MSCDYB PLOT NAME : 021106_rm PLOT SCALE : 100:1

2

294NS

292NS

290NS

190EW

192EW

194EW

196EW

198EW

200EW

IH 94 EB

IH 94 WB

USH 45 NB

RAMP NSA

36NSA

38NSA

MATCHLINE 35NSA+00

EXISTING CULVERT TO REMAIN

12" SS

18" FO

N

2

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021107_rm.dgn PLOT DATE : 29-APR-2013 22:14 PLOT BY : MSCDYB PLOT NAME : 021107_rm PLOT SCALE : 100:1

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

242NS 244NS 246NS 248NS 250NS 252NS 254NS 256NS

516G 518G 520G 522G 524G

746GBB 748GBB 750GBB 752GBB

W. GREENFIELD AVENUE

W. ORCHARD PLACE

S. 98TH STREET

S. 97TH STREET

PKNG REC AREA PKNG PKNG

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	REMOVAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021108_rm.dgn PLOT DATE : 10-JUN-2013 08:33 PLOT BY : MSCDYB PLOT NAME : 021108_rm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

LEGEND

- (CP08) CONCRETE PAVEMENT 9-INCH, DOWELED
- (CP24) SLOPE PAVING CRUSHED AGGREGATE
- (CP25) CONCRETE PAVEMENT HES 9-INCH, DOWELED
- (AP05) HMA PAVEMENT TYPE E-1, 5-INCH
- (AP23) HMA PAVEMENT TYPE E-10, 7 1/2-INCH
- (AP28) HMA PAVEMENT TYPE E-1, 3-INCH
- (AG02) BASE AGGREGATE DENSE 1 1/4-INCH
- (PV01) CONCRETE PAVEMENT APPROACH SLAB
- (PV11) ASPHALTIC SURFACE, 5-INCH
- (PV12) ASPHALTIC SURFACE TEMPORARY, 5-INCH
- (CG01) CURB RAMP TYPE 1
- (CG03) CURB RAMP TYPE 2
- (CG06) CURB RAMP TYPE 4B
- (CG07) CURB RAMP TYPE 5
- (CG08) CURB RAMP TYPE 6
- (CG14) CONCRETE CURB AND GUTTER 19-INCH
- (CG15) CONCRETE CURB AND GUTTER 19-INCH REVERSE SLOPE
- (CG16) CONCRETE CURB AND GUTTER 31-INCH
- (CG17) CONCRETE CURB AND GUTTER 31-INCH REVERSE SLOPE
- (CG22) CONCRETE CURB PEDESTRIAN
- (CG30) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE A
- (CG42) CONCRETE GUTTER SPECIAL
- (CM01) CONCRETE MEDIAN SLOPED NOSE TYPE 1
- (CM02) CONCRETE MEDIAN SLOPED NOSE TYPE 2
- (CM07) CONCRETE SIDEWALK 5-INCH
- (DR02) CONCRETE DRIVEWAY 7-INCH
- (CB01) CONCRETE BARRIER TYPE S32
- (CB02) CONCRETE BARRIER TYPE S42
- (CB32) CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE
- (CB39) CONCRETE BARRIER TRANSITION TYPE S32 TO S36
- (CB40) CONCRETE BARRIER TRANSITION TYPE S36 TO S42
- (BG23) CRASH CUSHION PERMANENT LOW MAINTENANCE TL3
- (SW01) SAWING ASPHALT
- (SW02) SAWING CONCRETE

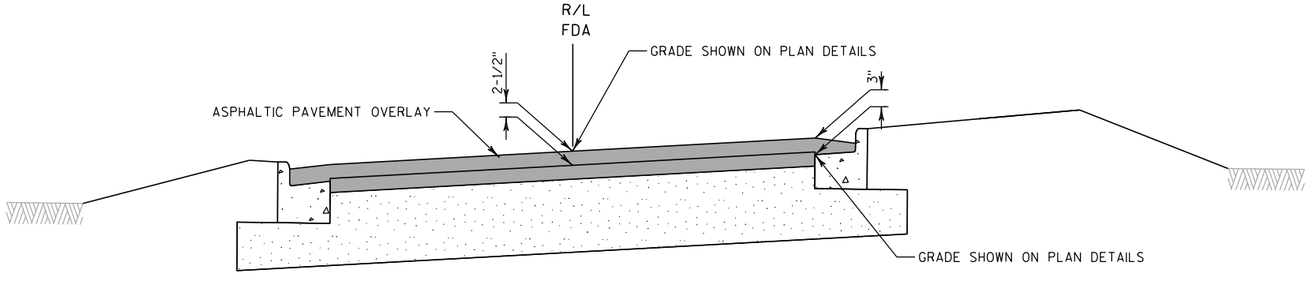
- ● PROPOSED MANHOLE
- ■ PROPOSED INLET
- ⓣ TRAFFIC SIGNAL PULL BOX

NOTES

RADIUS INFORMATION IS GIVEN TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE OF INTEGRAL CURB AND GUTTER AND CONCRETE CURB TYPE D. CURB AND GUTTER RADII ARE MEASURED TO THE FLANGE OF CURB AND GUTTER OR THEORETICAL FLANGE OF INTEGRAL CURB AND GUTTER AND CONCRETE CURB TYPE D.

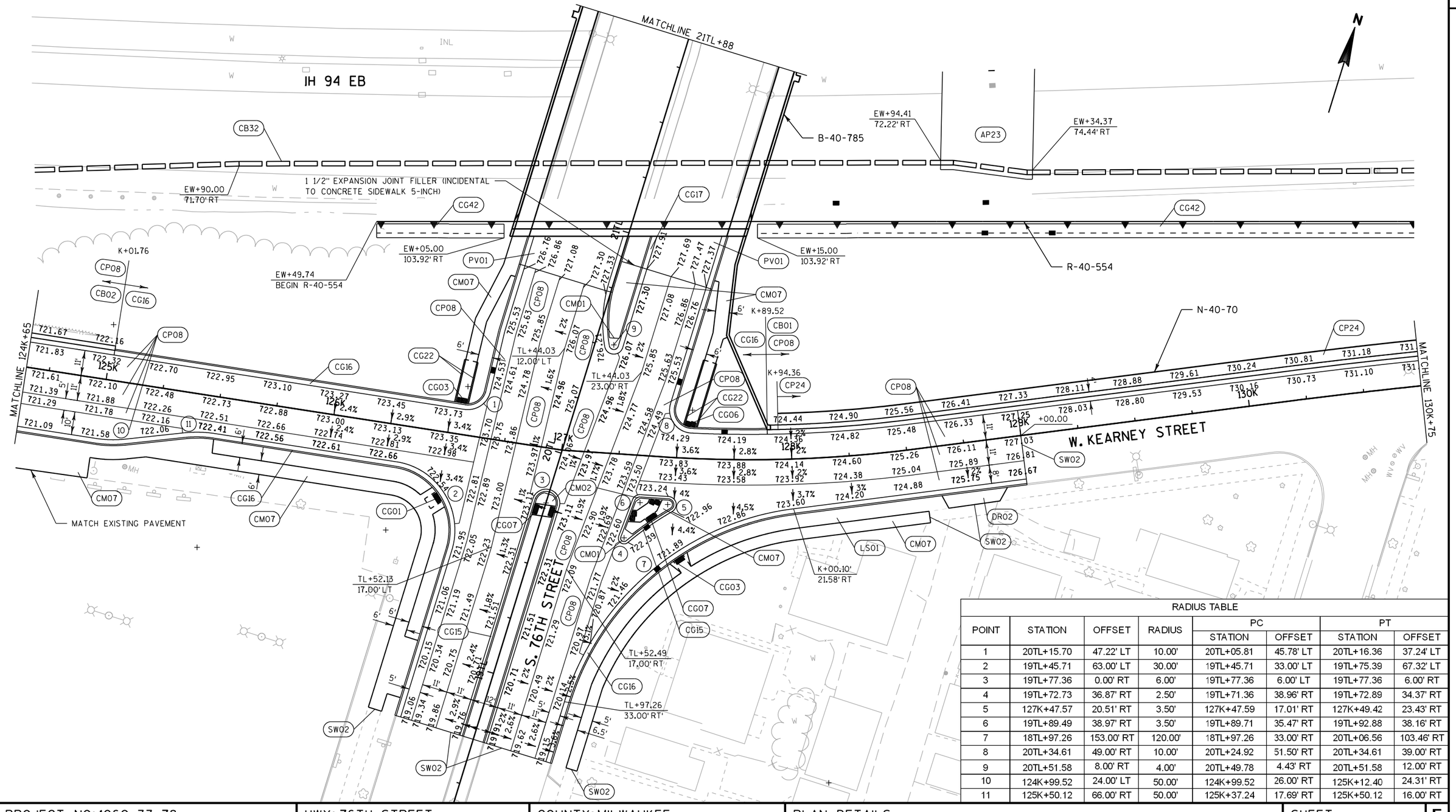
SEE TYPICAL SECTIONS, EROSION CONTROL, AND PLANS FOR MEDIAN, TERRACE, AND ISLAND RESTORATION.

ALL PAVEMENT ELEVATIONS IN PLAN DETAILS ARE SHOWN TO FINISHED GRADE EXCEPT AS NOTED. FLANGE ELEVATIONS ALONG RAMP FDA AND S. 84TH STREET IN ASPHALTIC PAVEMENT SECTION ARE SHOWN 3" BELOW FINISHED GRADE TO ALLOW FOR OVERLAY OF PAN. PROFILE GRADELINE ELEVATIONS ARE SHOWN TO FINISHED GRADE. SEE TYPICAL SECTION FOR ADDITIONAL INFORMATION.



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS - LEGEND	SHEET	E

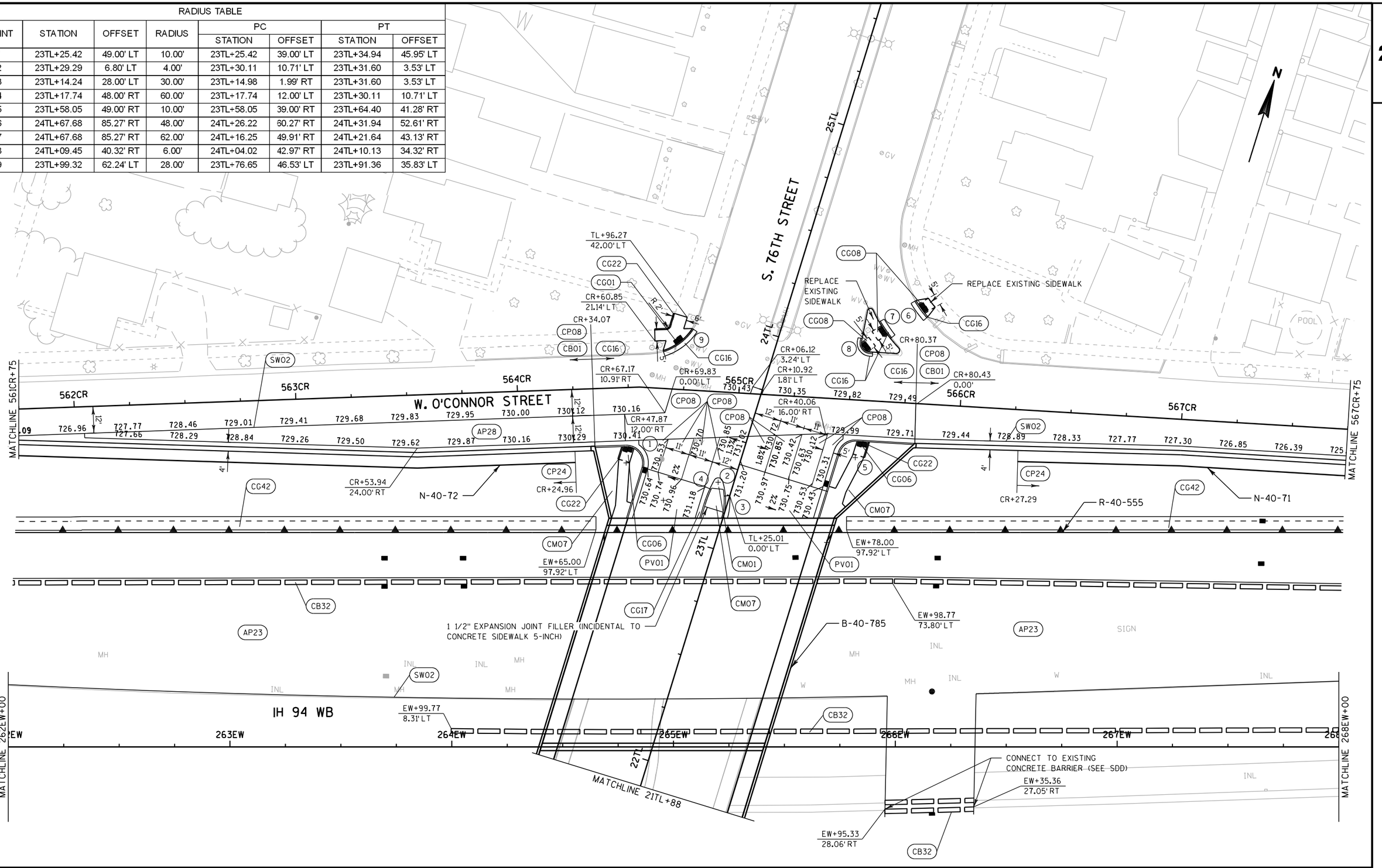
2



RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	20TL+15.70	47.22' LT	10.00'	20TL+05.81	45.78' LT	20TL+16.36	37.24' LT
2	19TL+45.71	63.00' LT	30.00'	19TL+45.71	33.00' LT	19TL+75.39	67.32' LT
3	19TL+77.36	0.00' RT	6.00'	19TL+77.36	6.00' LT	19TL+77.36	6.00' RT
4	19TL+72.73	36.87' RT	2.50'	19TL+71.36	38.96' RT	19TL+72.89	34.37' RT
5	127K+47.57	20.51' RT	3.50'	127K+47.59	17.01' RT	127K+49.42	23.43' RT
6	19TL+89.49	38.97' RT	3.50'	19TL+89.71	35.47' RT	19TL+92.88	38.16' RT
7	18TL+97.26	153.00' RT	120.00'	18TL+97.26	33.00' RT	20TL+06.56	103.46' RT
8	20TL+34.61	49.00' RT	10.00'	20TL+24.92	51.50' RT	20TL+34.61	39.00' RT
9	20TL+51.58	8.00' RT	4.00'	20TL+49.78	4.43' RT	20TL+51.58	12.00' RT
10	124K+99.52	24.00' LT	50.00'	124K+99.52	26.00' RT	125K+12.40	24.31' RT
11	125K+50.12	66.00' RT	50.00'	125K+37.24	17.69' RT	125K+50.12	16.00' RT

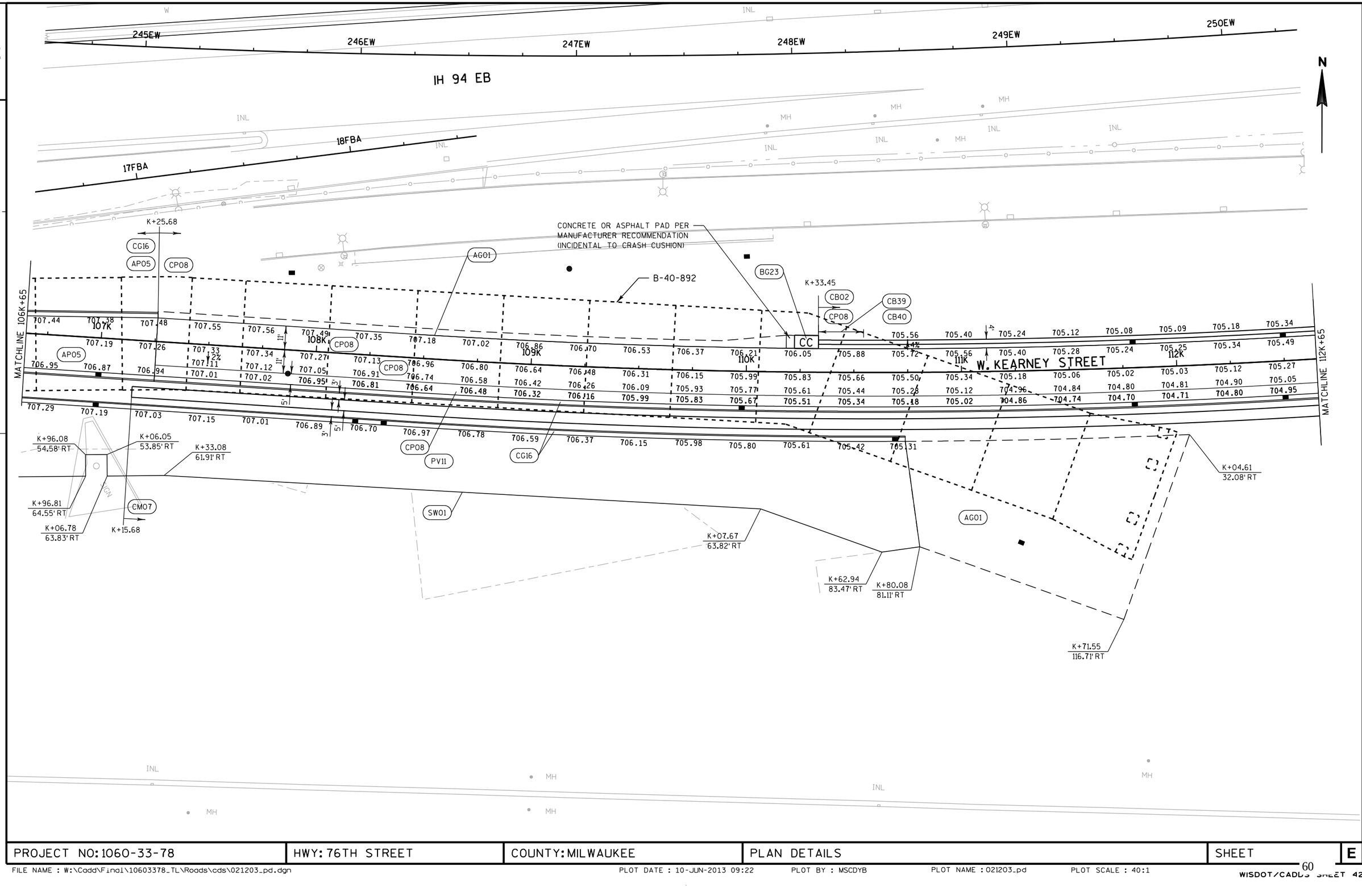
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	23TL+25.42	49.00' LT	10.00'	23TL+25.42	39.00' LT	23TL+34.94	45.95' LT
2	23TL+29.29	6.80' LT	4.00'	23TL+30.11	10.71' LT	23TL+31.60	3.53' LT
3	23TL+14.24	28.00' LT	30.00'	23TL+14.98	1.99' RT	23TL+31.60	3.53' LT
4	23TL+17.74	48.00' RT	60.00'	23TL+17.74	12.00' LT	23TL+30.11	10.71' LT
5	23TL+58.05	49.00' RT	10.00'	23TL+58.05	39.00' RT	23TL+64.40	41.28' RT
6	24TL+67.68	85.27' RT	48.00'	24TL+26.22	60.27' RT	24TL+31.94	52.61' RT
7	24TL+67.68	85.27' RT	62.00'	24TL+16.25	49.91' RT	24TL+21.64	43.13' RT
8	24TL+09.45	40.32' RT	6.00'	24TL+04.02	42.97' RT	24TL+10.13	34.32' RT
9	23TL+99.32	62.24' LT	28.00'	23TL+76.65	46.53' LT	23TL+91.36	35.83' LT



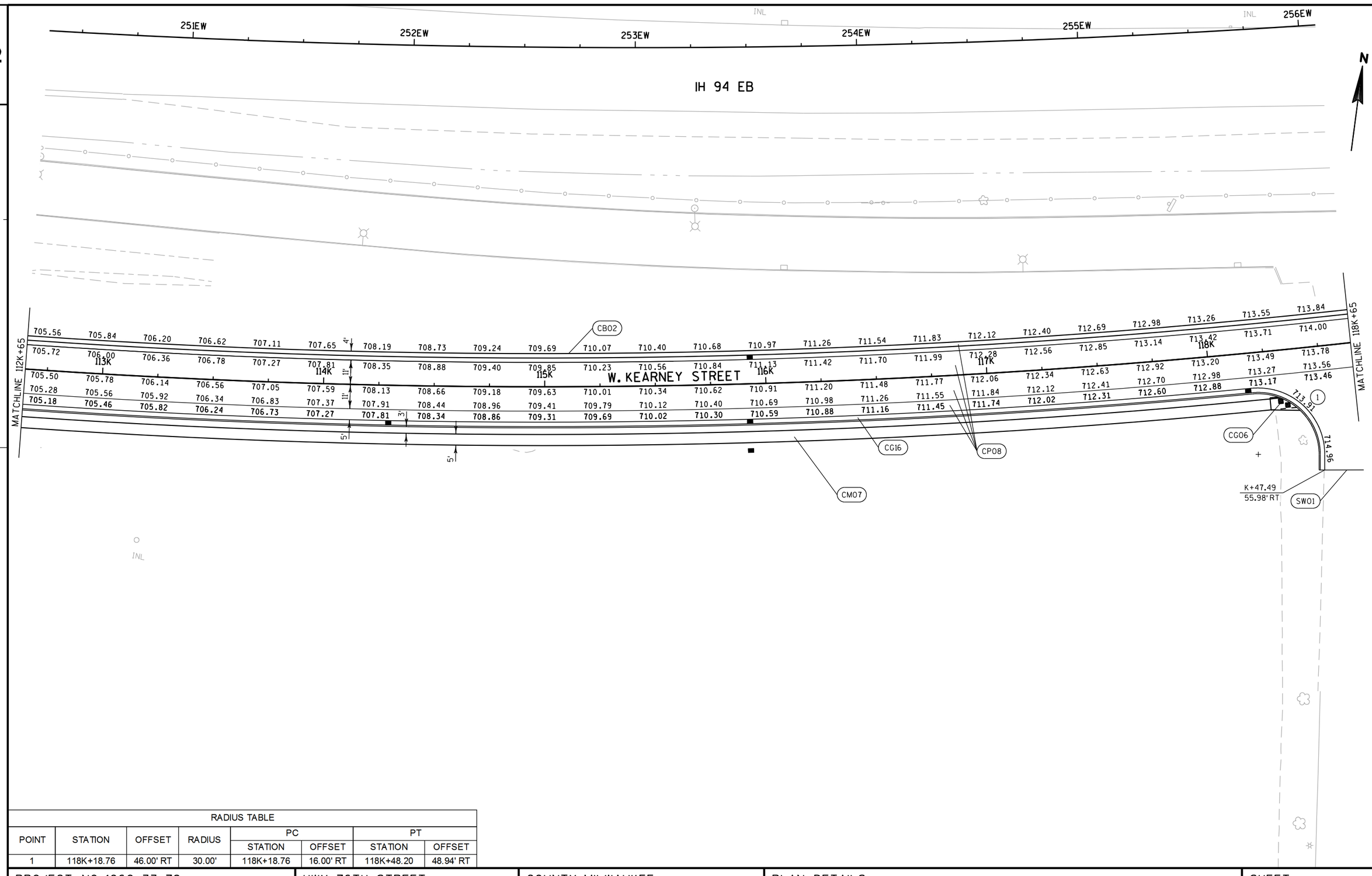
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021203_pd.dgn PLOT DATE : 10-JUN-2013 09:22 PLOT BY : MSCDYB PLOT NAME : 021203_pd PLOT SCALE : 40:1

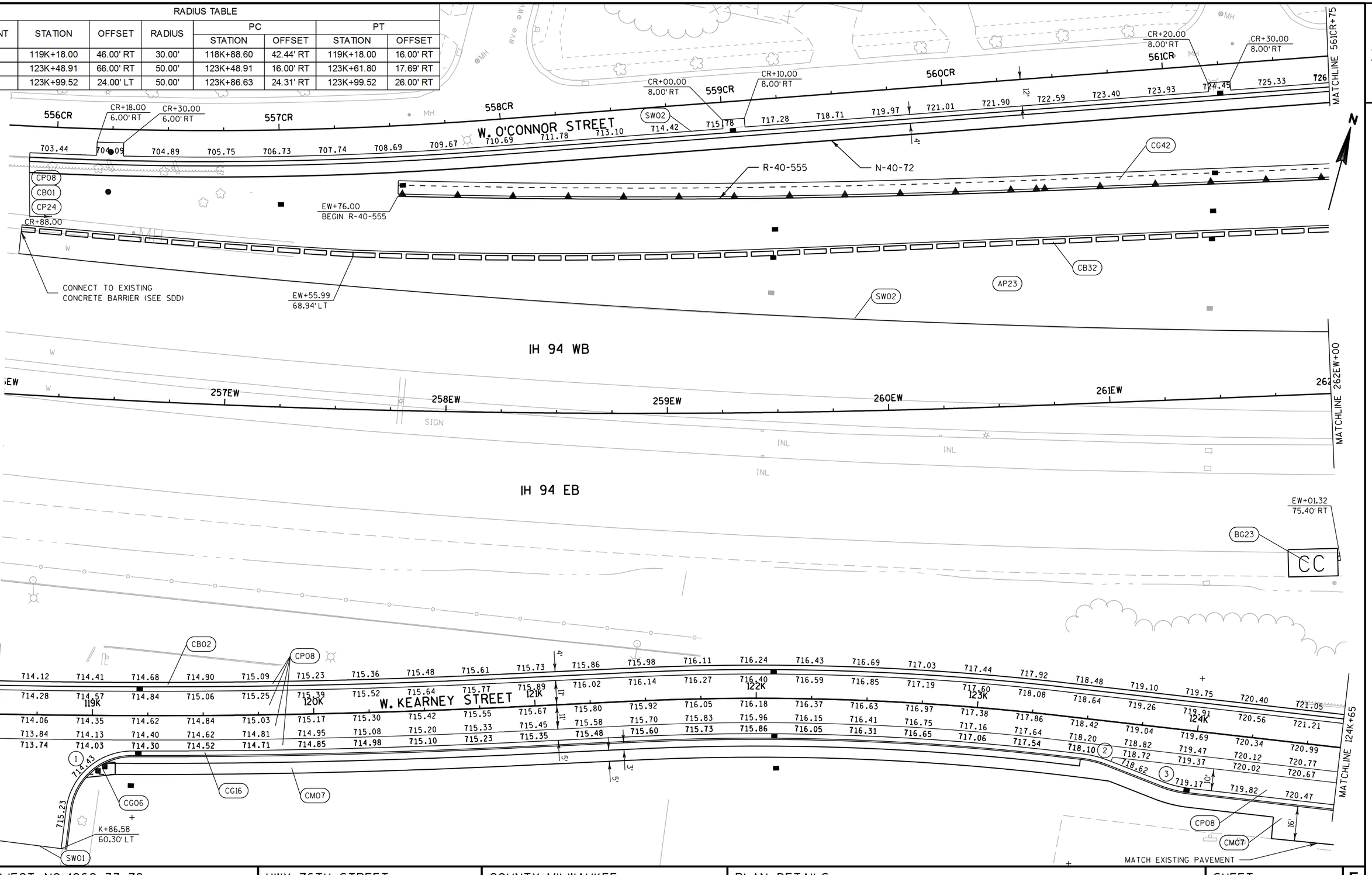


RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	118K+18.76	46.00' RT	30.00'	118K+18.76	16.00' RT	118K+48.20	48.94' RT

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

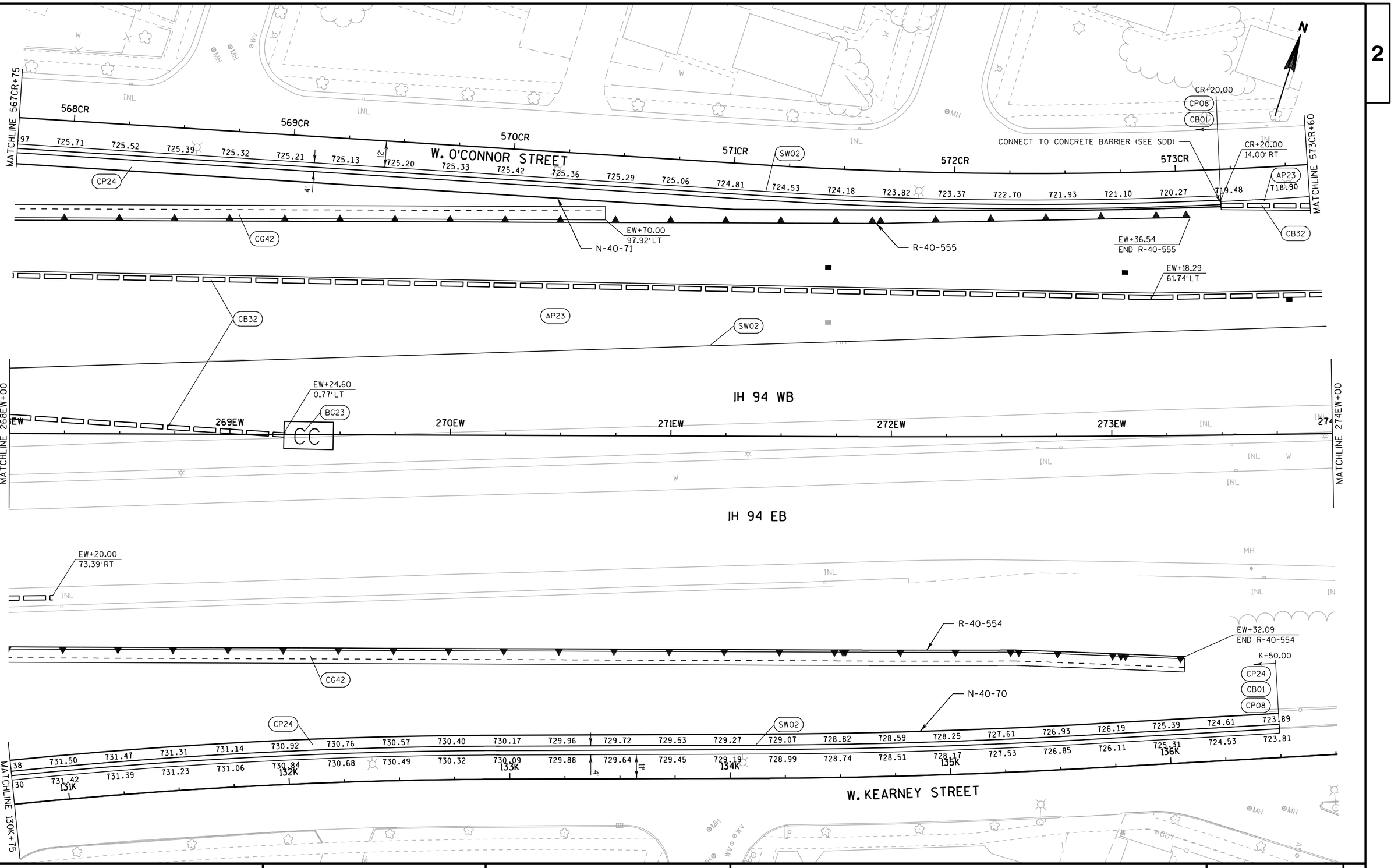
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RADIUS TABLE							
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				STATION	OFFSET	STATION	OFFSET
1	119K+18.00	46.00' RT	30.00'	118K+88.60	42.44' RT	119K+18.00	16.00' RT
2	123K+48.91	66.00' RT	50.00'	123K+48.91	16.00' RT	123K+61.80	17.69' RT
3	123K+99.52	24.00' LT	50.00'	123K+86.63	24.31' RT	123K+99.52	26.00' RT



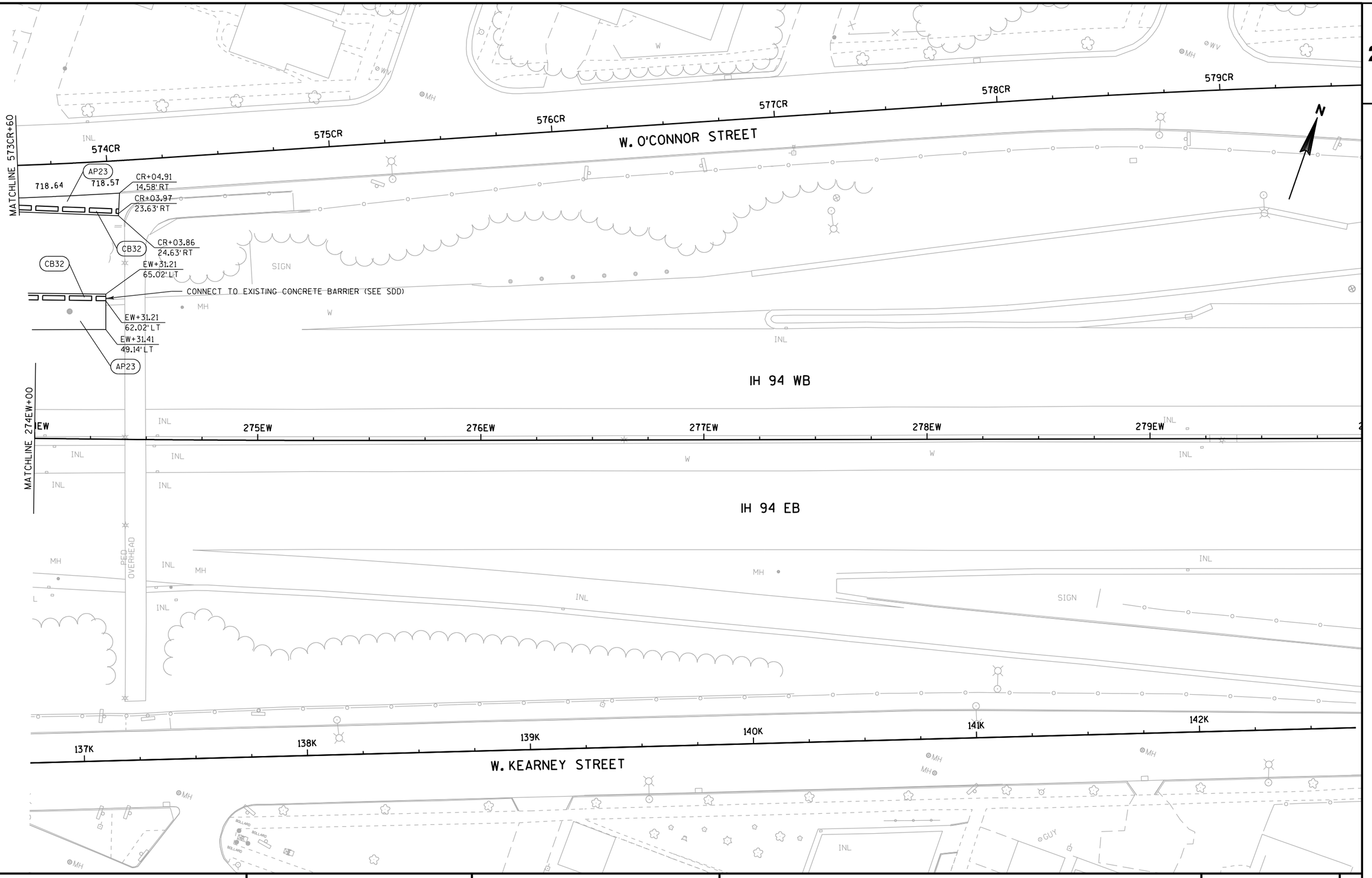
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2

2

N

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

261NS 262NS 263NS 264NS 265NS 266NS

10NSA 11NSA 12NSA 13NSA 14NSA

MATCHLINE 14NSA+00

SW02

AP23

788.39

788

788.12

2.0%

RAMP NSA

NSA+71.25
23.27' RT

NSA+71.55
34.32' RT

MH

INL

W

OH

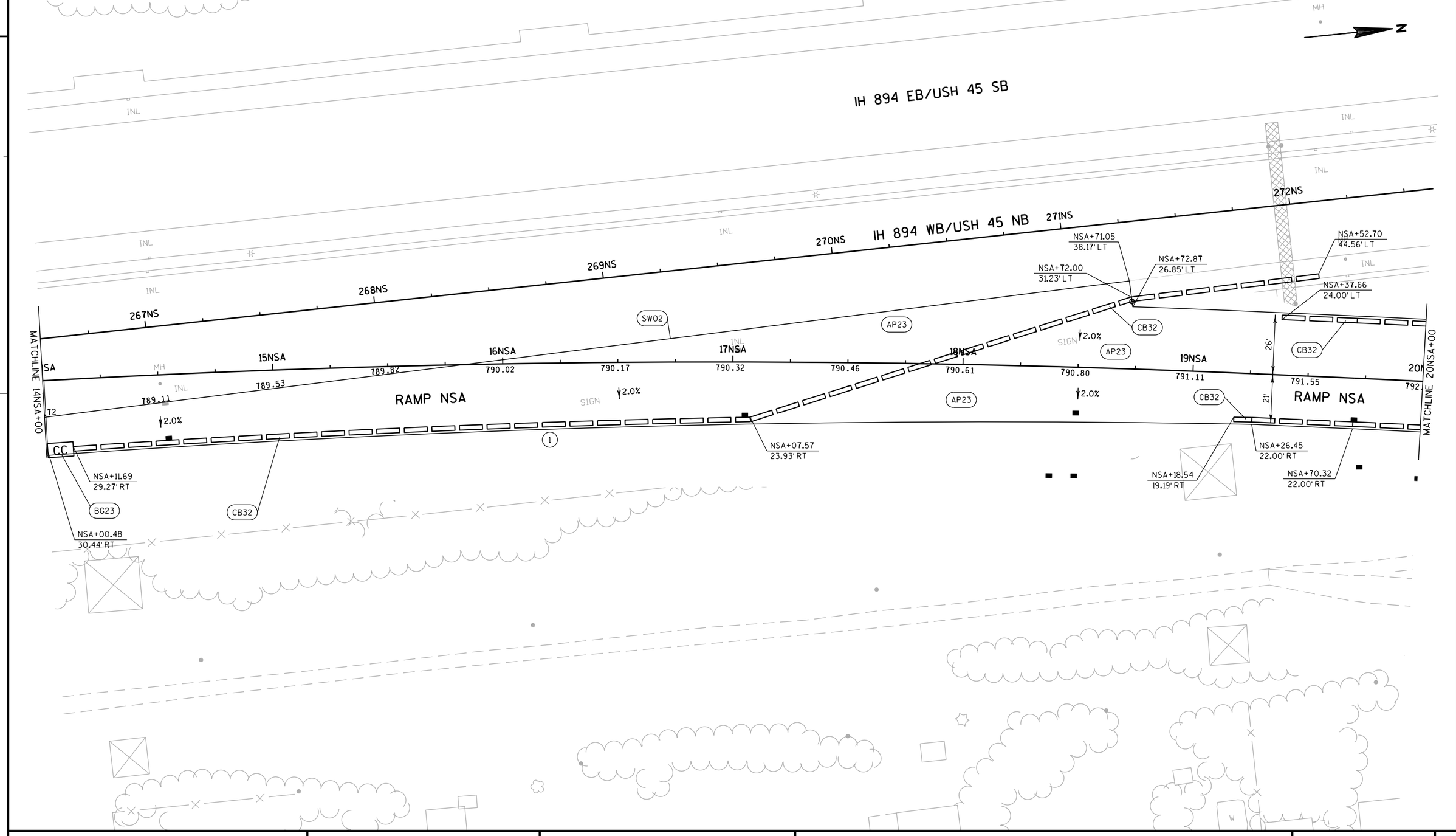
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SIGN

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

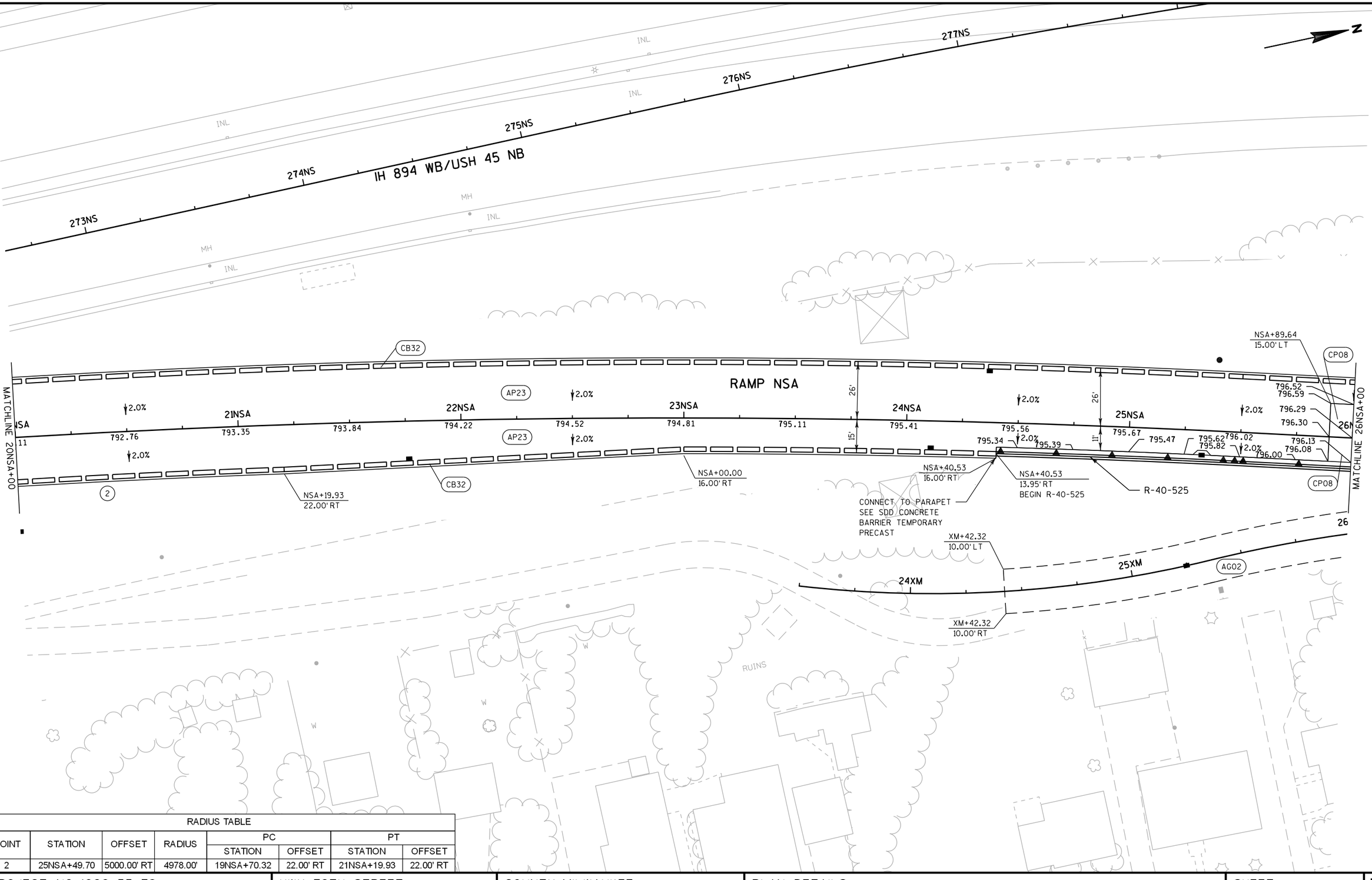
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RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	27NSA+43.07	5808'	5804.97'	12NSA+71.54	34.32' RT	19NSA+26.45	22.00' RT



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2



RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
2	25NSA+49.70	5000.00' RT	4978.00'	19NSA+70.32	22.00' RT	21NSA+19.93	22.00' RT

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021210_pd.dgn PLOT DATE : 10-JUN-2013 11:48 PLOT BY : MSCAFB PLOT NAME : 021210_pd PLOT SCALE : 40:1
WISDOT/CADDS SHEET 42

2

USH 45 NB

SIGN

W

N

INL

INL

MH

⊙PILE

⊙GUY

CP08

CG16

CB32

AP23

AG02

DR02

CM07

530SCH

531SCH

532SCH

533SCH

SCH+00.00
12.00' RT

SCH+09.05
9.00' LT

SCH+90.00
27.27' RT

SCH+42.77
12.00' RT

SCH+42.77
9.00' LT

SCH+58.19
12.00' RT

SCH+58.19
9.00' LT

SCH+84.29
9.00' LT

SCH+50.89
12.00' RT

CONNECT TO PARAPET
SEE SDD CONCRETE
BARRIER TEMPORARY
PRECAST

NSA+41.37
34.30' LT
END R-40-525

NSA+20.44
15.00' LT

795.16
NSA+17.99
27.00' LT

B-40-799

NSA+13.09
34.15' LT
BEGIN R-40-524

NSA+29.14
38.00' LT

NSA+45.06
39.55' LT

NSA+45.06
0.00' RT

NSA+32.64
13.00' RT

R-40-524

NSA+31.17
32.39' RT
END R-40-524

NSA+00.00
10.00' LT

NSA+00.00
10.00' RT

NSA+37.50
27.00' LT

NSA+37.50
16.00' RT

R-40-525

26NSA+00

MATCHLINE 26NSA+00

1.6%
796.52
796.31
0.6%
796.05
795.75
2.0%
795.56
795.25
795.38
795.64
796.29
796.25
796.17
796.03
795.86
796.08
795.85
796.21
796.25
796.24
796.13
11'
15'

27NSA

28NSA

29NSA

27XM

XM

30NSA

RAMP NSA

31NSA

32NSA+00

MATCHLINE 32NSA+00

791.61
790.61
789.92
789.55
789.50
789
2.0%
26'
15'

W. SCHLINGER AVENUE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2

HANK AARON STATE TRAIL

IH 94 EB

USH 45 NB

RAMP NSA 33NSA

MATCHLINE 32NSA+00

WETLAND BOUNDARY

WETLAND BOUNDARY

NSA+45.44
27.00' LT

NSA+41.25
27.00' LT

NSA+87.92
16.00' RT

NSA+84.07
51.62' RT

NSA+83.64
53.70' RT

TEMPORARY UNDERPASS LEFT IN PLACE
SEE CONSTRUCTION DETAIL

AP23
CB32
SW02

34NSA
35NSA
36NSA
37NSA
38NSA

792.74
793.40
793.88
793.96
793.58
792.95
792.13
791.14
791.95
791.14
790.35

4.0%
2.9%
0.6%
1.6%
2.0%

26'
15'

3

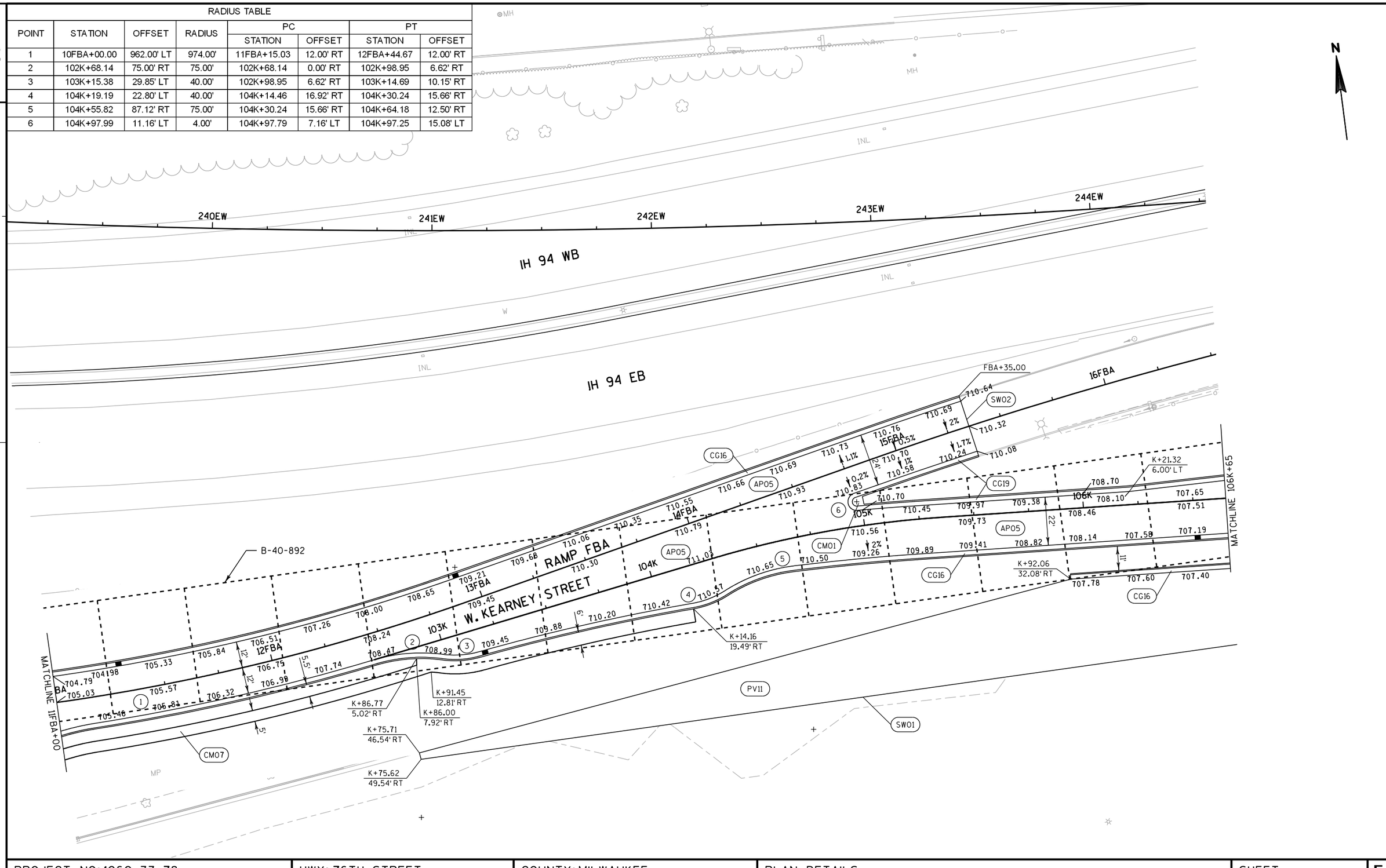
RADIUS TABLE							
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				STATION	OFFSET	STATION	OFFSET
3	32NSA+87.92	844'	828.00'	32NSA+87.92	16.00' RT	37NSA+83.64	53.70' RT

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021212_pd.dgn PLOT DATE : 05-JUN-2013 09:25 PLOT BY : MSCAFB PLOT NAME : 021212_pd PLOT SCALE : 40:1

2

RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	10FBA+00.00	962.00' LT	974.00'	11FBA+15.03	12.00' RT	12FBA+44.67	12.00' RT
2	102K+68.14	75.00' RT	75.00'	102K+68.14	0.00' RT	102K+98.95	6.62' RT
3	103K+15.38	29.85' LT	40.00'	102K+98.95	6.62' RT	103K+14.69	10.15' RT
4	104K+19.19	22.80' LT	40.00'	104K+14.46	16.92' RT	104K+30.24	15.66' RT
5	104K+55.82	87.12' RT	75.00'	104K+30.24	15.66' RT	104K+64.18	12.50' RT
6	104K+97.99	11.16' LT	4.00'	104K+97.79	7.16' LT	104K+97.25	15.08' LT



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2

EW+35.67
185.95' LT
EW+19.33
183.97' LT
EW+20.29
174.03' LT
CG16
PV11

SW02
AP05
9FDA
10FDA
RAMP FDA
FDA+64.40
10.00' RT
FDA+80.00
10.00' RT
CG16
FDA+78.00
11FDA
701.55
2%
701.57
2%
701.07
24'
701.08
700.63
700.18
699.81
12FDA
700.64
700.15
699.70
699.82
699.33
FDA+15.00
CG16
MATCHLINE 12FDA+50

231EW
232EW
233EW
234EW
235EW
236EW

EW+52.00
7.58' RT
EW+72.00
8.21' RT
SW02
CG30

IH 94 WB

C-40-101

IH 94 EB

B-40-892

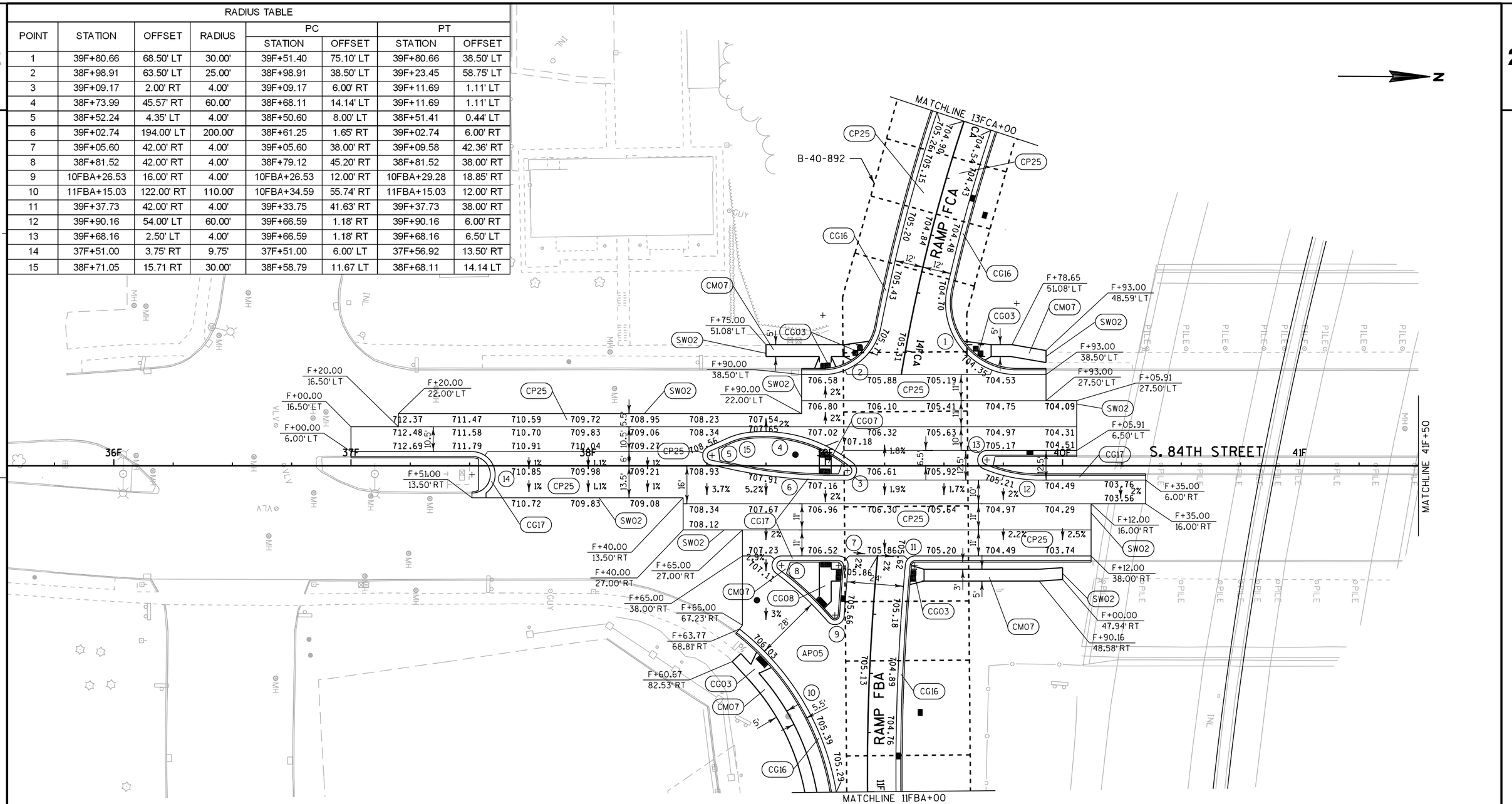
11FCA
RAMP FCA
FCA+43.02
SW02
706.87
0.4%
12'
706.92
3%
707.23
12'
706.35
1.9%
706.94
705.87
12FCA
3%
706.23
706.59
705.53
705.18
704.83
CG16
CP25
706.25
705.54
705.90
705.55
CG16
13FCA+00
MATCHLINE 13FCA+00

N

2

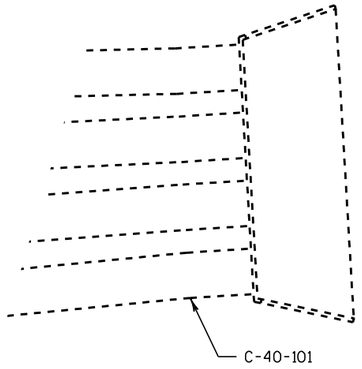
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	39F+80.66	68.50' LT	30.00'	39F+51.40	75.10' LT	39F+80.66	38.50' LT
2	38F+98.91	63.50' LT	25.00'	38F+98.91	38.50' LT	39F+23.45	58.75' LT
3	39F+09.17	2.00' RT	4.00'	39F+09.17	6.00' RT	39F+11.69	1.11' LT
4	38F+73.99	45.57' RT	60.00'	38F+68.11	14.14' LT	39F+11.69	1.11' LT
5	38F+52.24	4.35' LT	4.00'	38F+50.60	8.00' LT	38F+51.41	0.44' LT
6	39F+02.74	194.00' LT	200.00'	38F+61.25	1.65' RT	39F+02.74	6.00' RT
7	39F+05.60	42.00' RT	4.00'	39F+05.60	38.00' RT	39F+09.58	42.36' RT
8	38F+81.52	42.00' RT	4.00'	38F+79.12	45.20' RT	38F+81.52	38.00' RT
9	10FBA+26.53	16.00' RT	4.00'	10FBA+26.53	12.00' RT	10FBA+29.28	18.85' RT
10	11FBA+15.03	122.00' RT	110.00'	10FBA+34.59	55.74' RT	11FBA+15.03	12.00' RT
11	39F+37.73	42.00' RT	4.00'	39F+33.75	41.63' RT	39F+37.73	38.00' RT
12	39F+90.16	54.00' LT	60.00'	39F+66.59	1.18' RT	39F+90.16	6.00' RT
13	39F+68.16	2.50' LT	4.00'	39F+66.59	1.18' RT	39F+68.16	6.50' LT
14	37F+51.00	3.75' RT	9.75'	37F+51.00	6.00' LT	37F+56.92	13.50' RT
15	38F+71.05	15.71 RT	30.00'	38F+58.79	11.67 LT	38F+68.11	14.14 LT



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2



HONEY CREEK

RADIUS TABLE							
POINT	STATION	OFFSET	RADIUS	PC		PT	
				STATION	OFFSET	STATION	OFFSET
1	44F+94.23	50.13' RT	60.00'	44F+90.24	9.74' LT	45F+22.45	2.82' LT
2	42F+74.48	1.00' RT	7.50'	42F+72.70	8.29' RT	42F+74.48	6.50' LT
3	42F+86.94	50.00' LT	60.00'	42F+72.70	8.29' RT	42F+86.94	10.00' RT

MATCHLINE 12FDA+50

RAMP FDA

MATCHLINE 41F+50

S. 84TH STREET

42F 43F 44F 45F 46F 47F

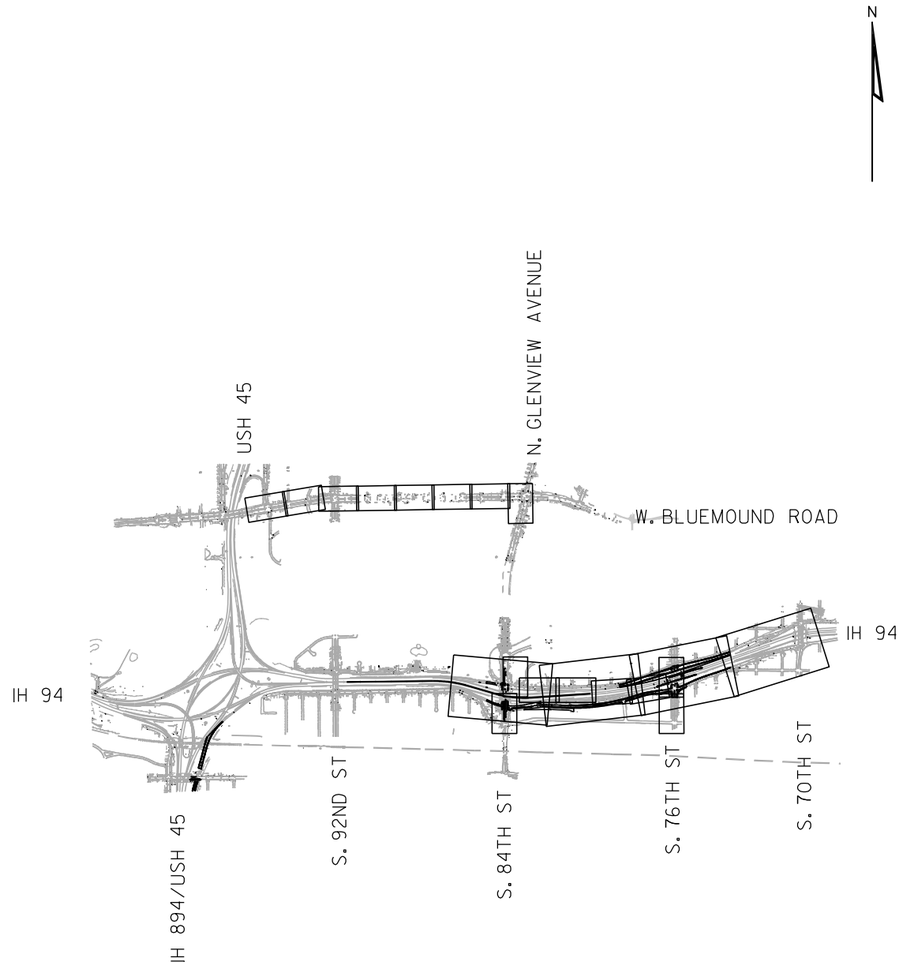
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PLAN DETAILS	SHEET	E

2

LEGEND — EXISTING — PROPOSED

FTMS CONVENTIONAL SYMBOLS

- JUNCTION BOX
- CCTV CAMERA AND POLE
- FTMS FIELD CABINET AND BASE
- METER BREAKER PEDESTAL
- 24"X36" STEEL PULL BOX
- ANTENNA POLE
- MANHOLE
- FTMS (ITS) CONDUIT
- BREAKER DISCONNECT BOX
- COMMUNICATIONS VAULT, TYPE 1
- RETAINING WALL
- VEHICLE DETECTION ZONE
- MICROWAVE DETECTOR
- TEMPORARY VEHICLE DETECTOR ASSEMBLY
- PORTABLE VIDEO SURVEILLANCE SYSTEM



FTMS STANDARD ABBREVIATIONS

CCTV	CLOSED CIRCUIT TELEVISION SITE
CB	CONTROLLER CABINET
CV	COMMUNICATIONS VAULT
PB	PULL BOX
MH	MANHOLE
MD	MICROWAVE DETECTOR
MB	METER BREAKER PEDESTAL
FOC	FIBER OPTIC CABLE
FY	ADVANCE FLASHER (ASSEMBLY)
EX	EXISTING
TMD	TEMPORARY VEHICLE DETECTOR ASSEMBLY
TCCTV	PORTABLE VIDEO SURVEILLANCE SYSTEM

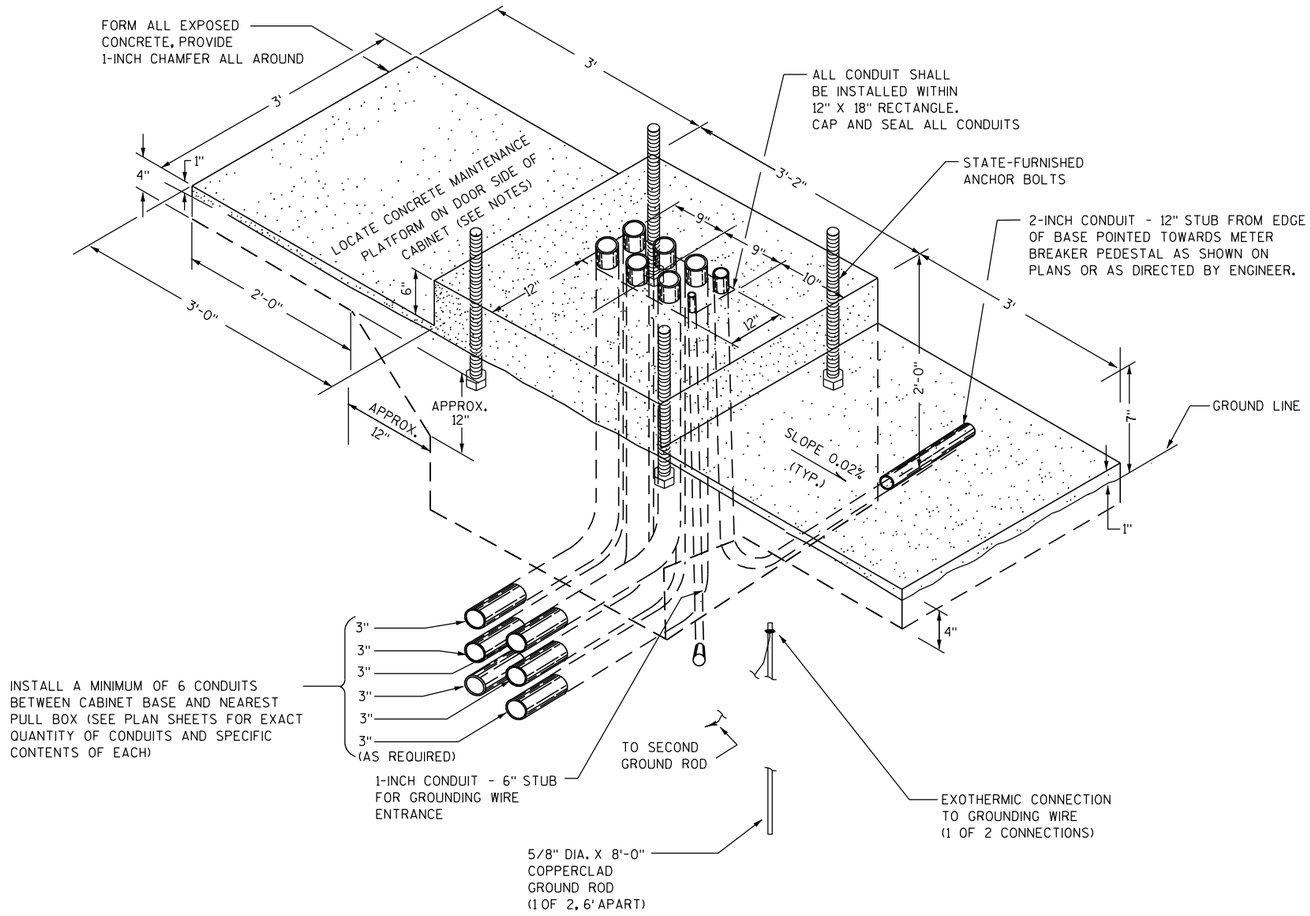
FTMS GENERAL NOTES

1. THESE PLANS AND THE ASSOCIATED SPECIAL PROVISIONS REFLECT CONDITIONS KNOWN DURING THE DEVELOPMENT OF THE PLANS AND TECHNICAL SPECIAL PROVISIONS. ALL SCALES, DIMENSIONS AND LOCATIONS SHOWN IN THESE PLANS ARE APPROXIMATE. ACTUAL PHYSICAL FIELD CONDITIONS SHALL PROVIDE THE BASIS FOR THE APPLICATION OF WORK SHOWN IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR THE APPLICATION OF ALL WORK SHOWN IN THE PLANS TO THE ACTUAL PHYSICAL FIELD CONDITIONS TO PROVIDE A COMPLETE AND ACCEPTED PROJECT. IN THE EVENT THAT ACTUAL PHYSICAL FIELD CONDITIONS AFFECT OR PREVENT THE APPLICATION OR PROGRESSION OF ANY WORK SHOWN IN THE PLANS OR TECHNICAL SPECIAL PROVISIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY, AND PRIOR TO ANY FURTHER WORK ACTIVITY. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY LOCATION CHANGES OTHER THAN MINOR ADJUSTMENTS.
2. BE AWARE THAT ALL EXISTING UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES WITHIN THE SCOPE OF THIS PROJECT MAY NOT BE LOCATED IN THE PLANS. THE CONTRACTOR IS FULLY RESPONSIBLE FOR LOCATING AND AVOIDING ALL UNDERGROUND AND ABOVE GROUND STRUCTURES AND FACILITIES.
3. BE AWARE THAT NO TEST BORINGS WERE MADE WHERE CONDUITS, PULLBOXES, POLES, CABINET FOUNDATIONS, OR OTHER EQUIPMENT IS TO BE INSTALLED. THE CONTRACTOR IS FULLY RESPONSIBLE FOR EXAMINING THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS.
4. NO TREES (AND/OR SHRUBS) SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
5. AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR FTMS CONSTRUCTION SHALL BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, SEED, AND EROSION MAT, AND SHALL BE INCLUDED IN THE COST OF INSTALLING FTMS ITEM. RESTORATION FOR AREAS DISTURBED FOR OTHER CONSTRUCTION OPERATIONS BUT ALSO CONTAINING FTMS CONSTRUCTION SHALL BE DONE ACCORDING TO REQUIREMENTS AND PAYMENT PROVISIONS FOR THE OTHER CONSTRUCTION OPERATIONS.
6. THE LOCATION OF EXISTING AND PROPOSED UTILITY INSTALLATIONS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
7. DUE TO RAMP, LANE, SHOULDER CLOSURE RESTRICTIONS, AND WORK UNDER OTHER CONTRACTS, SOME WORK MAY BE REQUIRED TO BE PERFORMED AT NIGHT.
8. THE CONTRACTOR IS FULLY RESPONSIBLE FOR COORDINATING RAMP, LANE, SHOULDER, AND ROADWAY CLOSURES WITH OTHER CONTRACTS IN THE AREA.
9. THE CONTRACTOR SHALL CONTACT THE WISDOT STATEWIDE TRAFFIC OPERATIONS CENTER AT (414) 227-2166 FIVE (5) WORKING DAYS PRIOR TO ENTERING ANY EXISTING WISDOT FTMS OR ITS CABINET.
10. ALL LOOP DETECTORS ARE STATIONED TO CENTER OF LEADING EDGE AS APPROACHED BY NORMAL VEHICLE PATH.
11. HAND DIG TRENCHES CROSSING EXISTING CONDUIT CONTAINING FIBER OPTIC CABLE.
12. VISUALLY VERIFY DEPTHS OF EXISTING CONDUITS CONTAINING FIBER OPTIC CABLE PRIOR TO CROSSING BY DIRECTIONAL BORE OR SPECIAL METHOD.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS PLANS - OVERVIEW	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021400_fm.dgn PLOT DATE : 29-APR-2013 22:17 PLOT BY : MSCDYB PLOT NAME : PLOT SCALE : 2400:1
WISDOT/CADDS SHEET 42

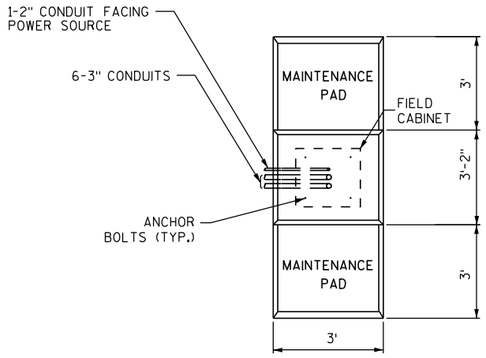
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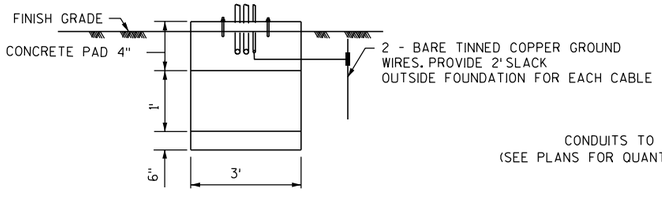
BASE ITS CONTROLLER CABINET

NOTES

1) DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
2) WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.
3) CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 3-INCHES.
4) DEPTH OF CONDUIT SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM.
5) ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.
6) CONTROLLER CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL, PRIOR TO CABINET INSTALLATION. LEVELING OF TOP SURFACES AFTER CONCRETE BASE HAS CURED SHALL ONLY BE ACCOMPLISHED BY GRINDING.
7) MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.
8) MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.
9) ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.
10) CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.
11) PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.
12) 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 PLACED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.
13) CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6-INCH MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.
14) ALL METALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE BUSHINGS IF WIRE IS INSTALLED.
15) ALL NONMETALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE END BELLS IF WIRE IS INSTALLED.
16) ANCHOR BOLTS TO ANCHOR THE FIELD CABINET TO THE CABINET BASE WILL BE STATE FURNISHED WITH THE FIELD CABINET.
17) CONFIRM BOLT PATTERN OF CABINET PRIOR TO CONSTRUCTION OF CONCRETE BASE.



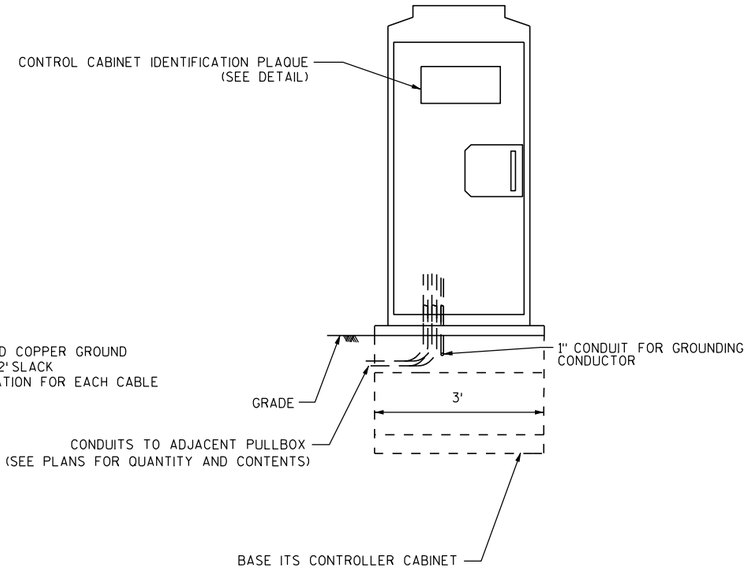
PLAN VIEW



FRONT VIEW

FTMS FIELD CABINET

STATE-FURNISHED FIELD CABINET

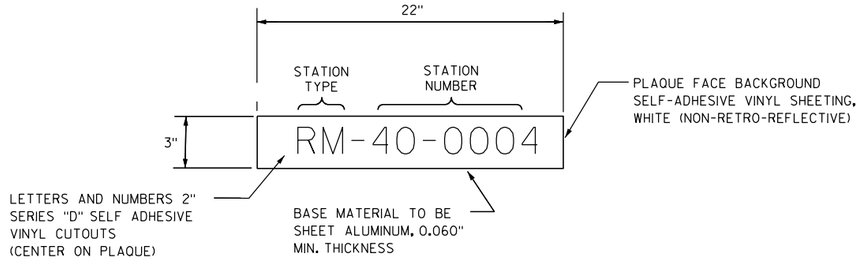


NOTES

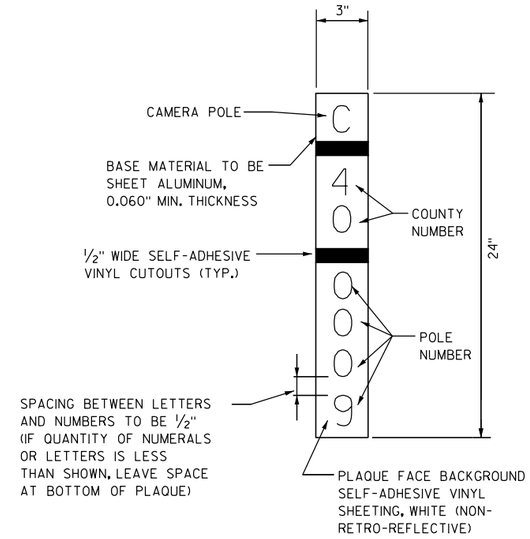
1) DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
2) WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.
3) CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 3-INCHES.
4) DEPTH OF CONDUIT SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM.
5) ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.
6) CONTROLLER CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED AND LEVEL PRIOR TO CABINET INSTALLATION. LEVELING OF TOP SURFACES AFTER CONCRETE BASE HAS CURED SHALL ONLY BE ACCOMPLISHED BY GRINDING.
7) MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.
8) MINIMUM BENDING RADIUS OF CONDUIT SHALL BE SIX TIMES THE CONDUIT DIAMETER.
9) ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.
10) CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.
11) PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.
12) 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 PLACED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.
13) CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6-INCH MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.
14) ALL METALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE BUSHINGS IF WIRE IS INSTALLED.
15) ALL NON METALLIC CONDUIT ENDS AT TOP OF CONCRETE BASES SHALL HAVE END BELLS IF WIRE IS INSTALLED.
16) ANCHOR BOLTS TO ANCHOR THE FIELD CABINETS TO THE CABINET BASE WILL BE STATE FURNISHED WITH THE FIELD CABINET.
17) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CABINET PRIOR TO CONSTRUCTION OF CONCRETE BASE.
18) THE CABINET SHALL BE SEALED WITH A SILICONE SEALANT AT THE INSIDE AND OUTSIDE JOINTS.
19) MAINTENANCE PADS SHALL BE INSTALLED ON BOTH SIDES OF THE CABINET.
20) STATE FURNISHED FIELD CABINETS WILL BE TYPE 334 CONTROLLER CABINETS.

FTMS FIELD CABINET

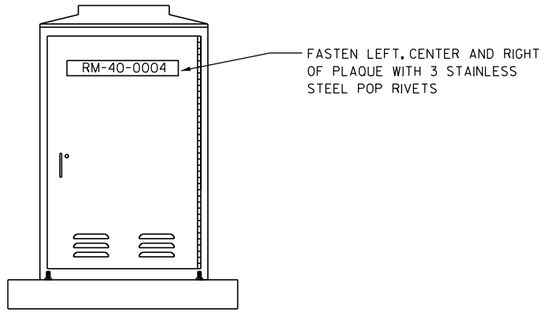
2



CONTROL CABINET IDENTIFICATION PLAQUE DETAIL



POLE IDENTIFICATION PLAQUE DETAIL



CONTROL CABINET IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENTS

(TYPICAL ALL CONTROL CABINETS)

LEGEND STATION TYPE

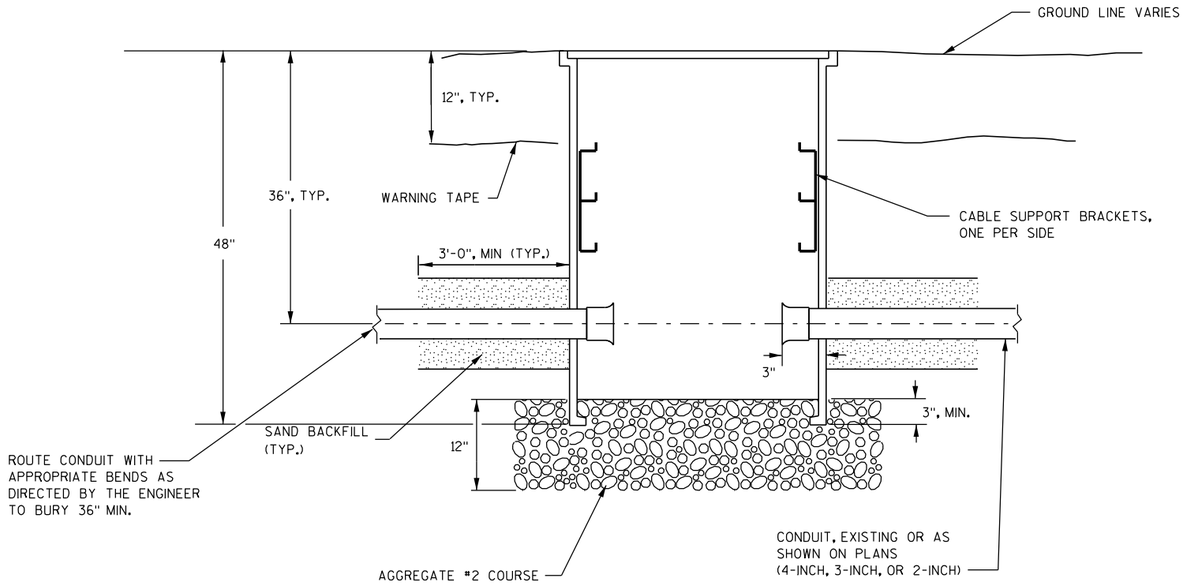
RM - RAMP METER
CCTV - CLOSED CIRCUIT TELEVISION
ATR - AUTOMATIC TRAFFIC RECORDER
SDS - SYSTEM DETECTOR STATION
MD - MICROWAVE DETECTOR

NOTES

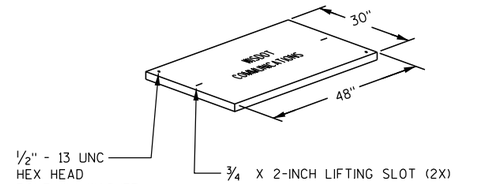
1) TWO PLAQUES PER CABINET REQUIRED ON CONTROL CABINET.
2) FASTEN ONE PLAQUE ON FRONT DOOR, UPPER HALF.
3) FASTEN ONE PLAQUE ON SIDE FACING LOCAL STREET. IF NO LOCAL STREET NEARBY, OR IF SUCH LOCATION COINCIDES WITH LOCATION OF PLAQUE IN NOTE 2, FASTEN PLAQUE ON REAR OF CABINET, UPPER HALF.
4) COUNTY NUMBER NOT REQUIRED ON RAMP METER CABINETS.

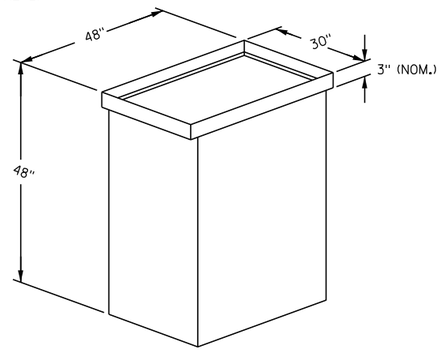
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

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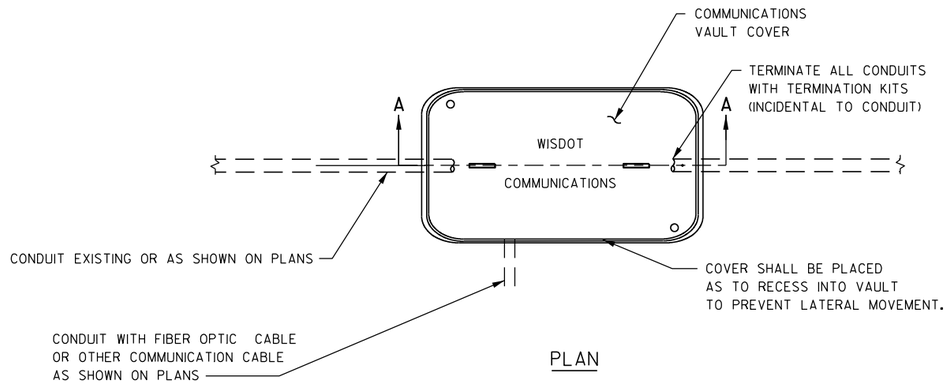


SECTION A-A





ISOMETRIC



PLAN

COMMUNICATIONS VAULT

NOTES

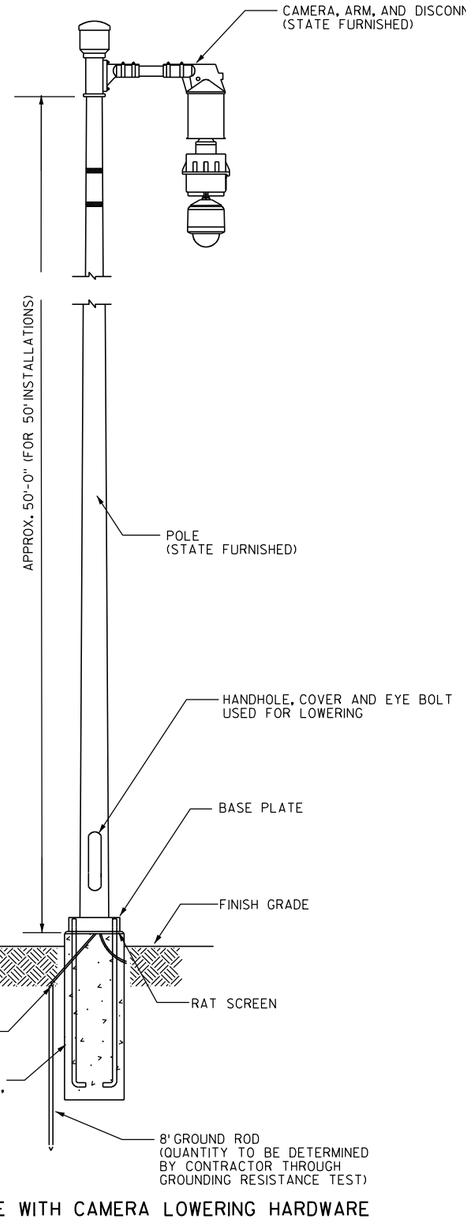
1) BOX SHALL HAVE AN OPEN BASE.

2) COVER SHALL HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

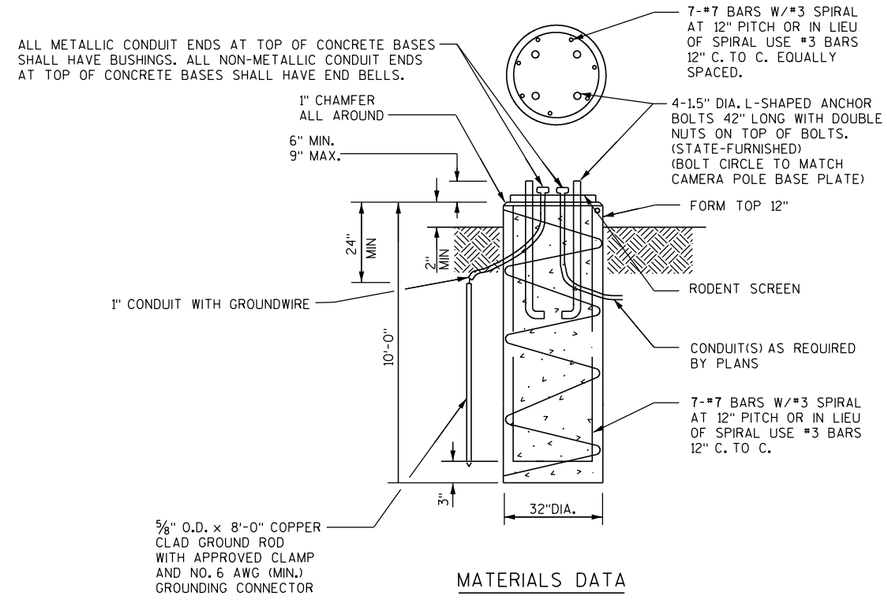
3) ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

4) VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

5) FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.



CAMERA POLE WITH CAMERA LOWERING HARDWARE

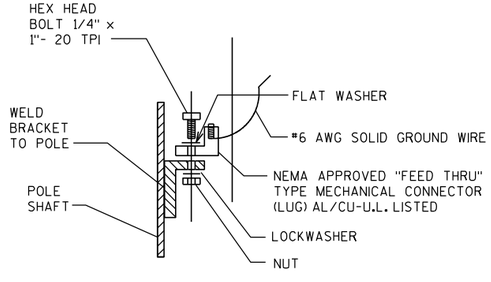


MATERIALS DATA

CONCRETE	f'c=3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT	fy = 60,000 psi

CONCRETE BASE, 50' CAMERA POLE

NOT TO SCALE



FIELD INSTALLED GROUNDING LUG

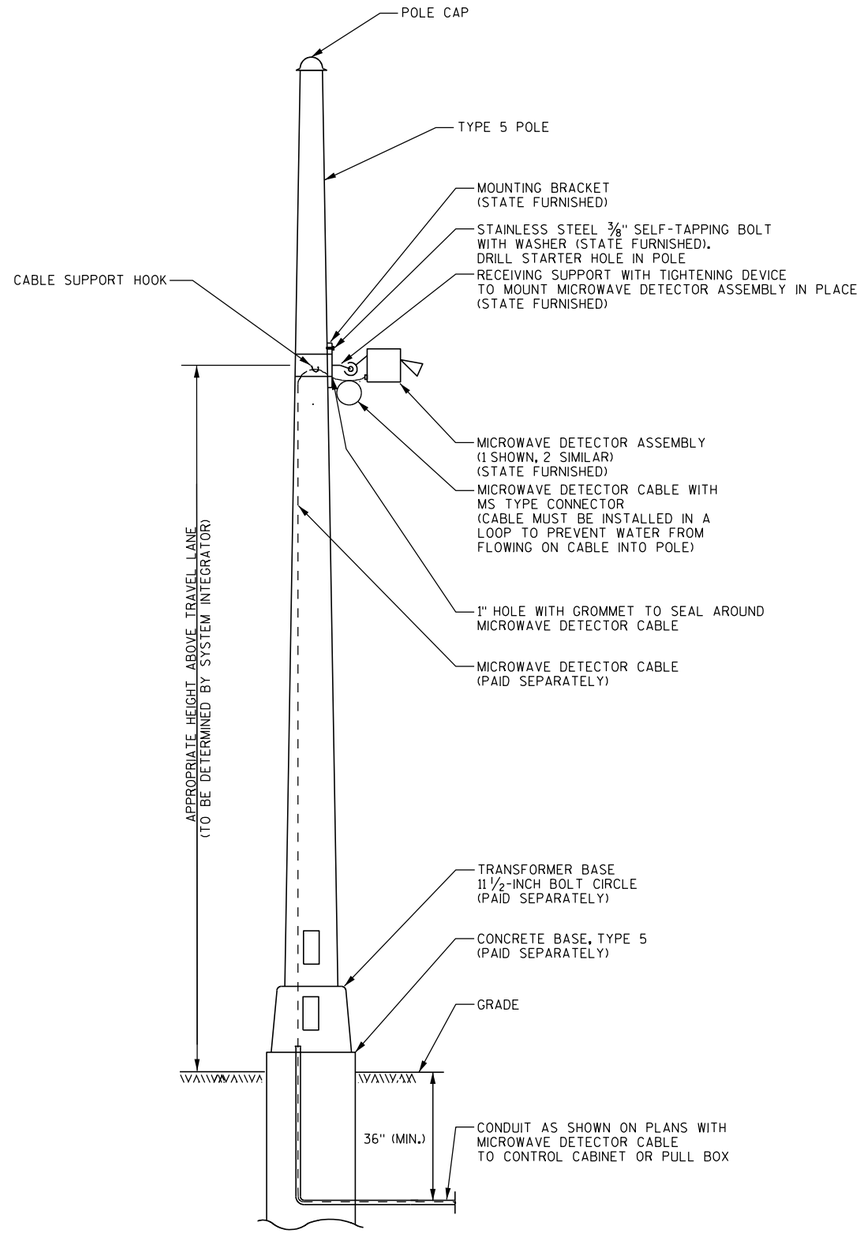
NOTES

1) ALL HARDWARE AND FASTENERS SHALL BE STAINLESS STEEL
2) POLE DRAWINGS SHOWN FOR BIDDING INFORMATION PURPOSES ONLY. POLES WILL BE STATE FURNISHED.
3) CONTRACTOR SHALL CONFIRM BOLT PATTERN OF CAMERA POLE PRIOR TO CONSTRUCTION OF CONCRETE BASE.
4) CONTRACTOR SHALL INSTALL GROUNDING LUG AS SHOWN

CAMERA POLES & FOUNDATIONS

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

2

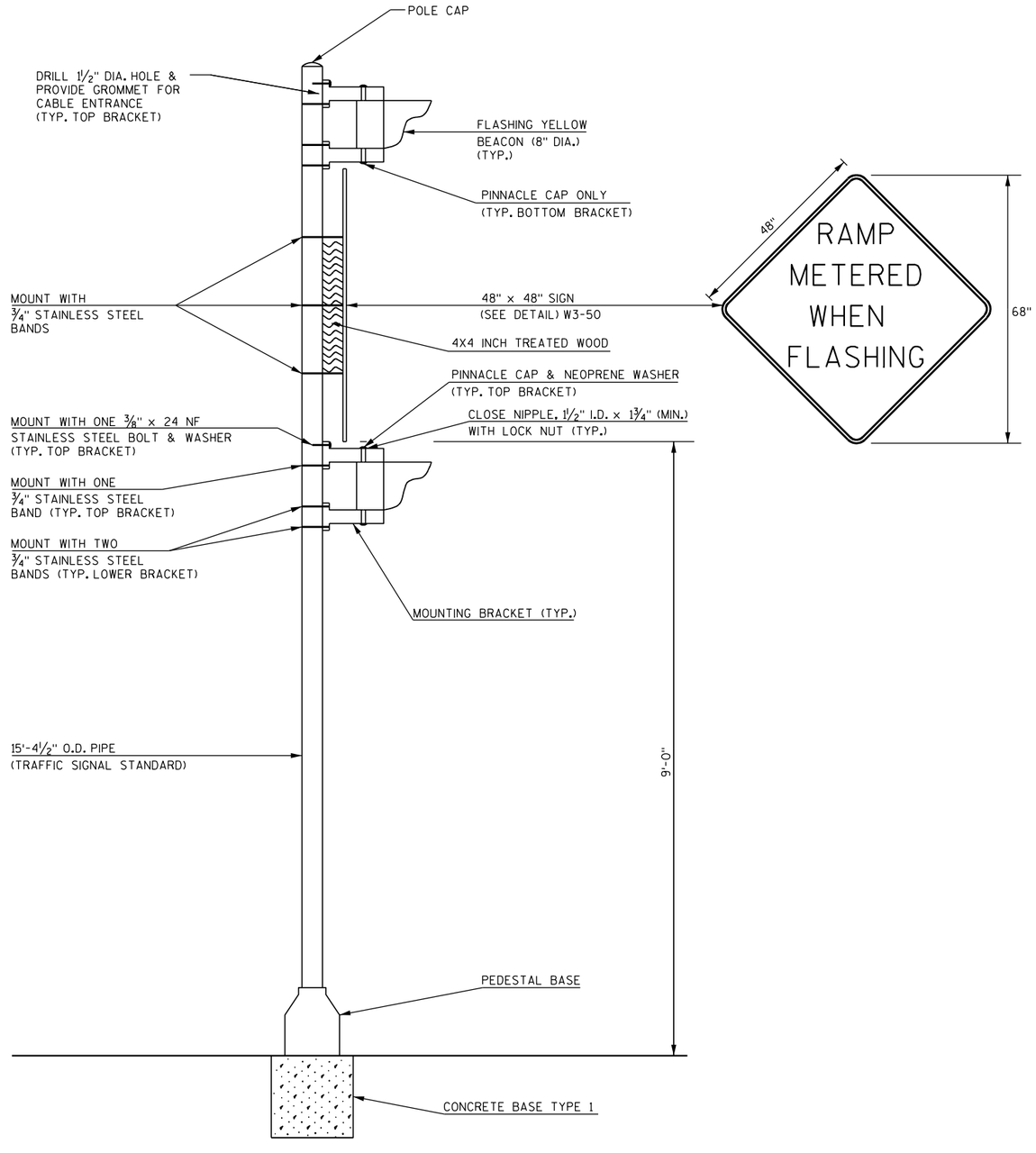


MICROWAVE DETECTOR INSTALLATION

ON TYPE 5 POLE

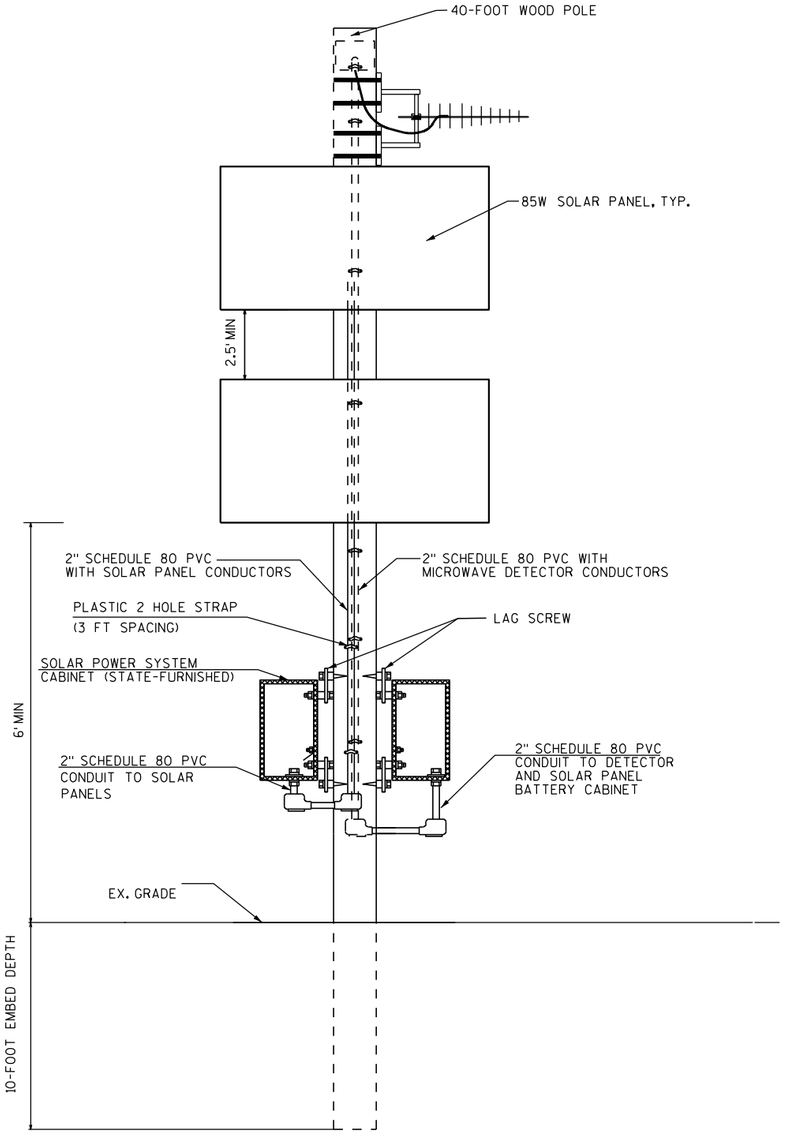
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

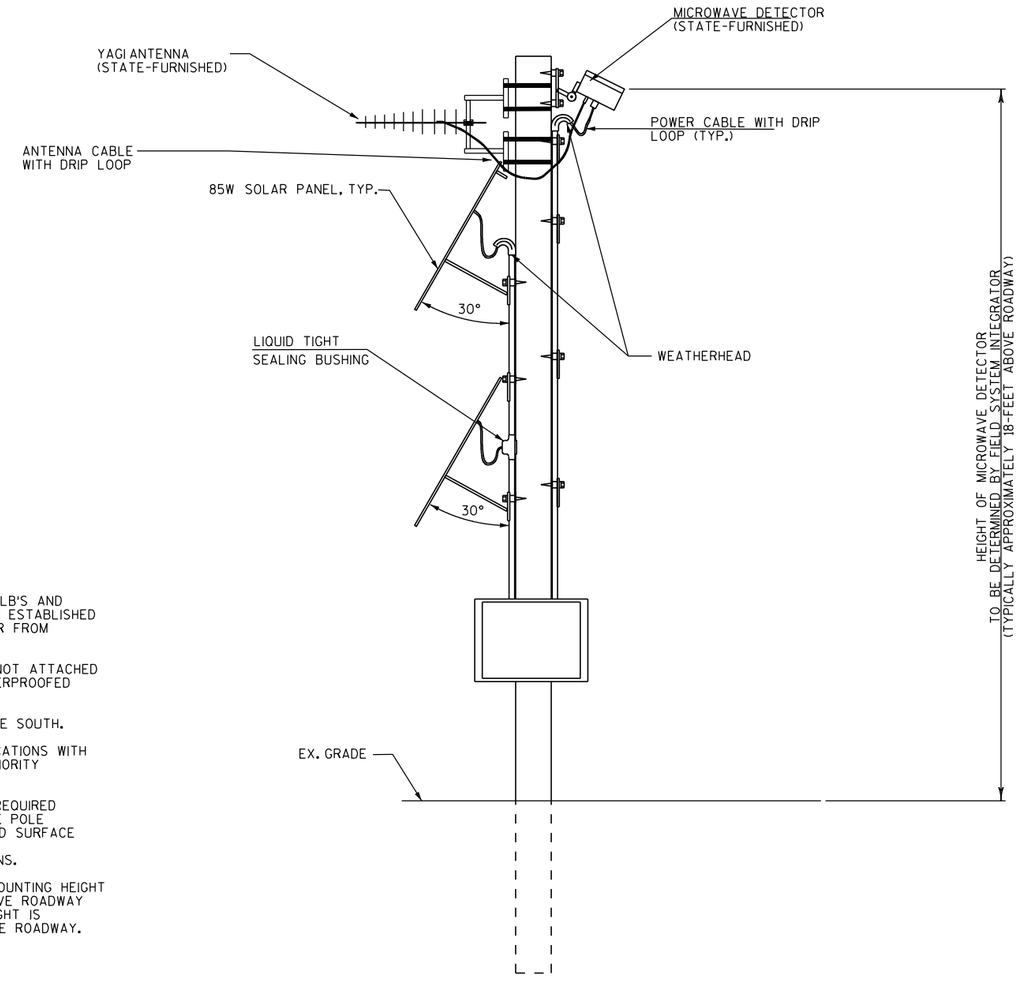
2



SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

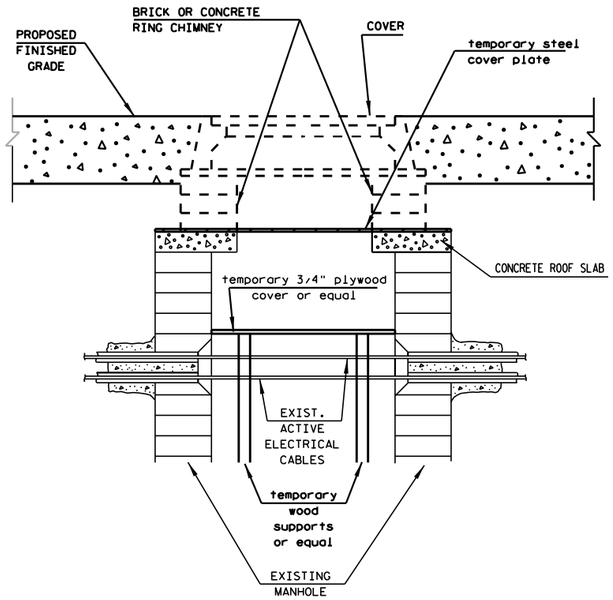




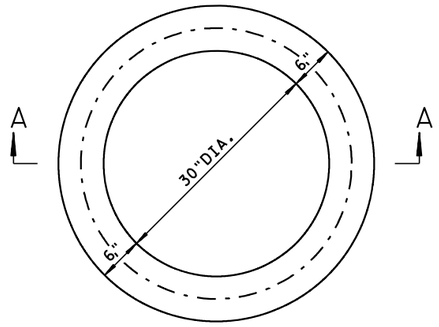
NOTES:

1. ALL WIRES ENTERING CONDUIT, LB'S AND SERVICE CAPS SHALL HAVE AN ESTABLISHED DRIP LOOP TO PREVENT WATER FROM ENTERING CONDUIT.
2. ANY LB OPENINGS THAT ARE NOT ATTACHED TO CONDUIT SHALL BE WEATHERPROOFED USING A SILICONE SEAL.
3. SOLAR PANELS MUST FACE DUE SOUTH.
4. COORDINATE SOLAR PANEL LOCATIONS WITH VEHICLE DETECTORS, GIVING PRIORITY TO VEHICLE DETECTORS.
5. CONTRACTOR SHALL PROVIDE REQUIRED SETTING DEPTH AND ADEQUATE POLE HEIGHT ABOVE MONITORED ROAD SURFACE TO MEET VEHICLE DETECTOR MANUFACTURER'S SPECIFICATIONS.
6. CONTRACTOR TO DETERMINE MOUNTING HEIGHT OF MICROWAVE DETECTOR ABOVE ROADWAY BEING DETECTED. NOMINAL HEIGHT IS APPROXIMATELY 18-FEET ABOVE ROADWAY.

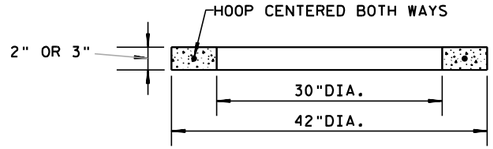
TEMPORARY VEHICLE DETECTOR ASSEMBLY



BLOCK OR PRECAST MANHOLE



PLAN



SECTION A-A

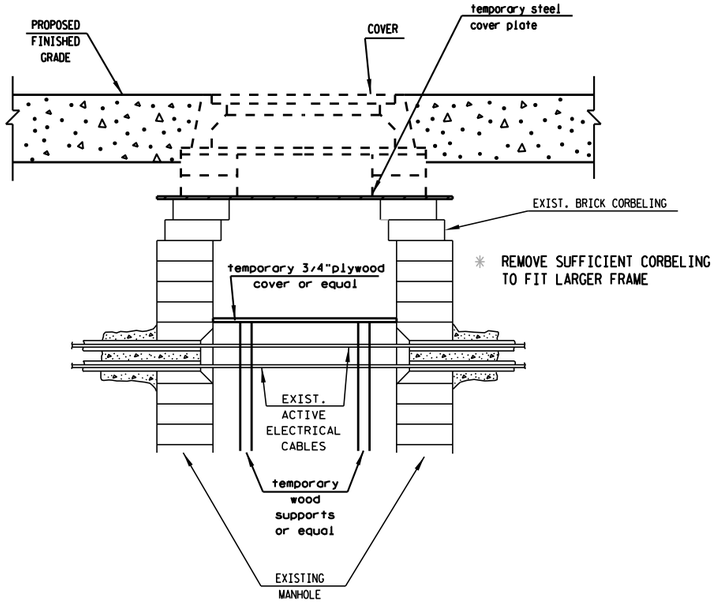
THE ADJUSTING RING SHALL BE 2" OR 3" IN HEIGHT.

THE CIRCUMFERENTIAL STEEL SHALL BE CENTERED WITHIN THE RING.

AREA OF CIRCUMFERENTIAL STEEL = 0.07 SQ. INCH PER VERTICAL FOOT WITH A MINIMUM OF .024 SQ. INCH IN ANY ONE RING.

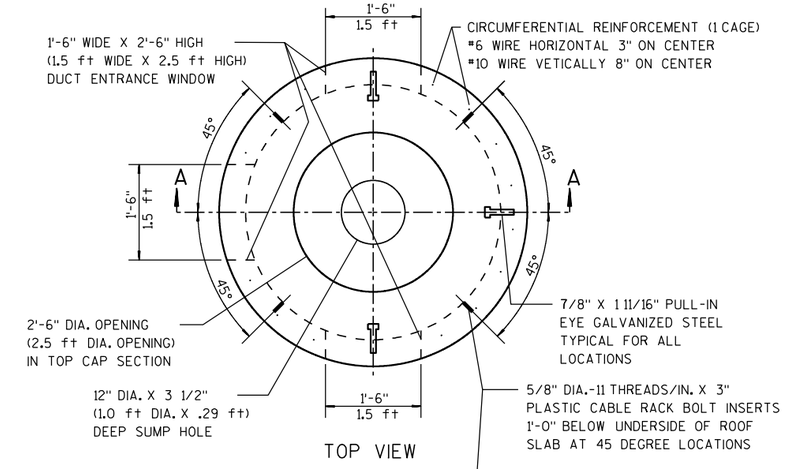
THE MINIMUM COMPRESSIVE STRENGTH OF THE CONCRETE CORE SHALL BE 4000 P.S.I.

CONCRETE ADJUSTING RING

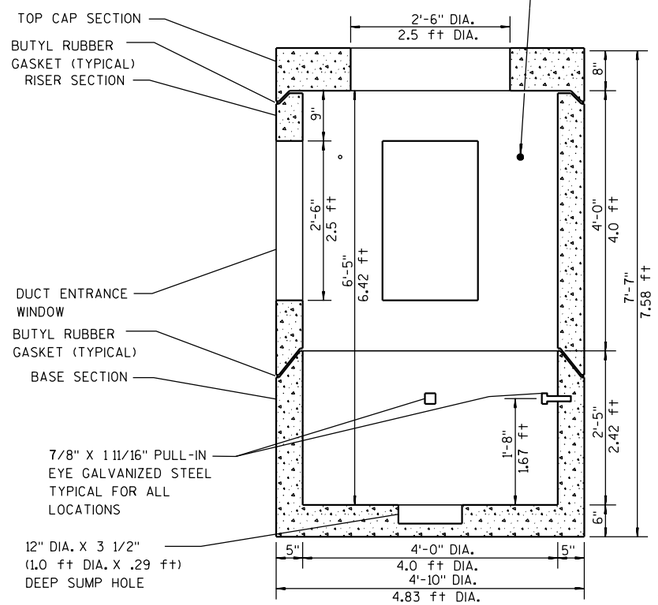


BRICK ROUND MANHOLE

ADJUSTING TES MANHOLES



TOP VIEW



SECTION VIEW "A-A"
N.T.S.

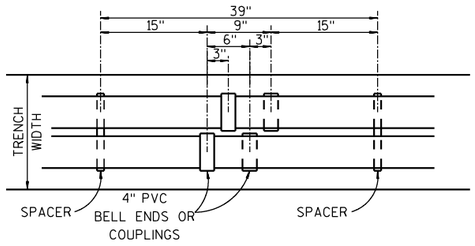
NOTES:
THE JOINTS MAY BE EITHER "BELL UP" OR "SPIGOT UP". THE NUMBER OF PULL-IN IRONS AND CABLE RACK BOLT INSERTS MAY VARY BY ORDER.

REINFORCING IN THE FLOOR & TOP CAP SECTION SHALL CONFORM TO ASTM SPECIFICATION C-478.

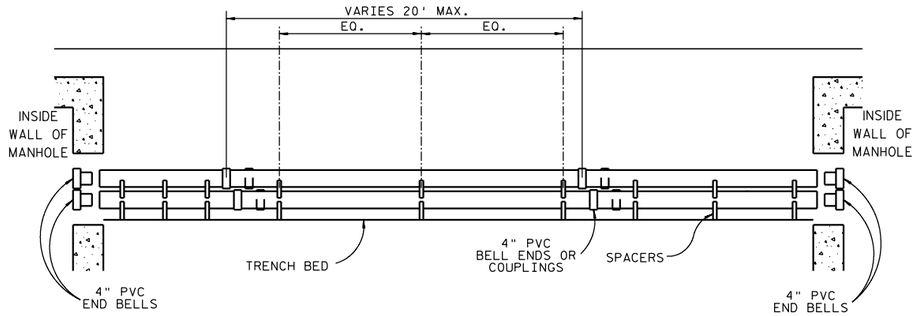
SIZE, LOCATION, SHAPE AND NUMBER OF KNOCK-OUT AREA AND THE SIZE, LOCATION, SHAPE AND NUMBER OF WINDOWS MAY VARY. (3 WINDOWS SHOWN). UNIT PRICE OF MANHOLE SHALL NOT VARY FOR NUMBER OF OPENINGS.

3 WINDOW OPENING
4' DIA. X 6'-5" HEADROOM
PRECAST CONCRETE MANHOLE

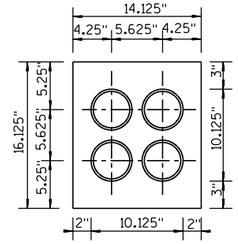
4' DIAMETER MANHOLE TYPE TES

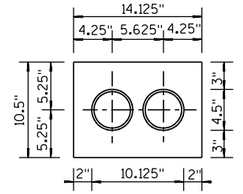


PLAN VIEW
N.T.S.

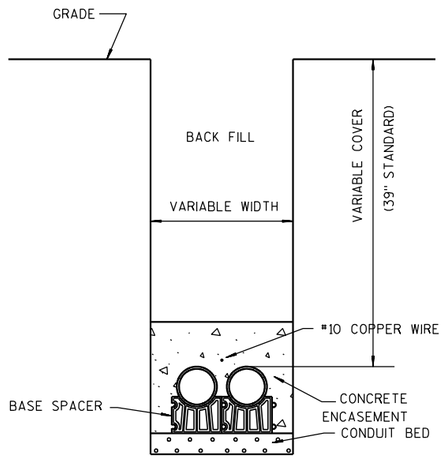


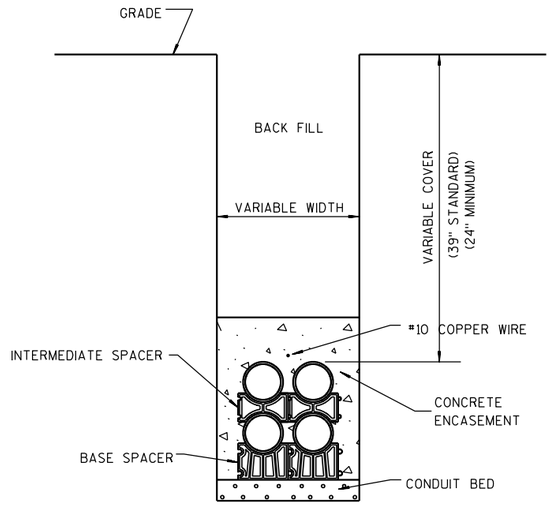
SECTION VIEW
N.T.S.





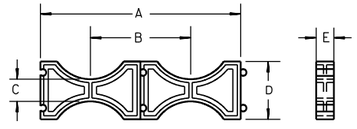
CROSS SECTION VIEW
N.T.S.





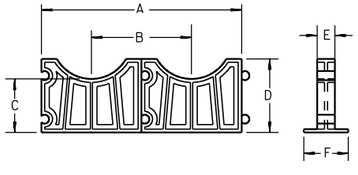
CROSS SECTION VIEW, TYP.
N.T.S.

COND.	3"	4"
A	10"	11 1/2"
B	5"	5 5/8"
C	1 1/2"	1 1/4"
D	3 1/4"	3 1/4"
E	1"	1"



INTERMEDIATE SPACER

COND.	3"	4"
A	10"	11 1/4"
B	5"	5 5/8"
C	3"	3"
D	3 7/8"	4 1/8"
E	1"	1"
F	2 1/2"	2 1/2"

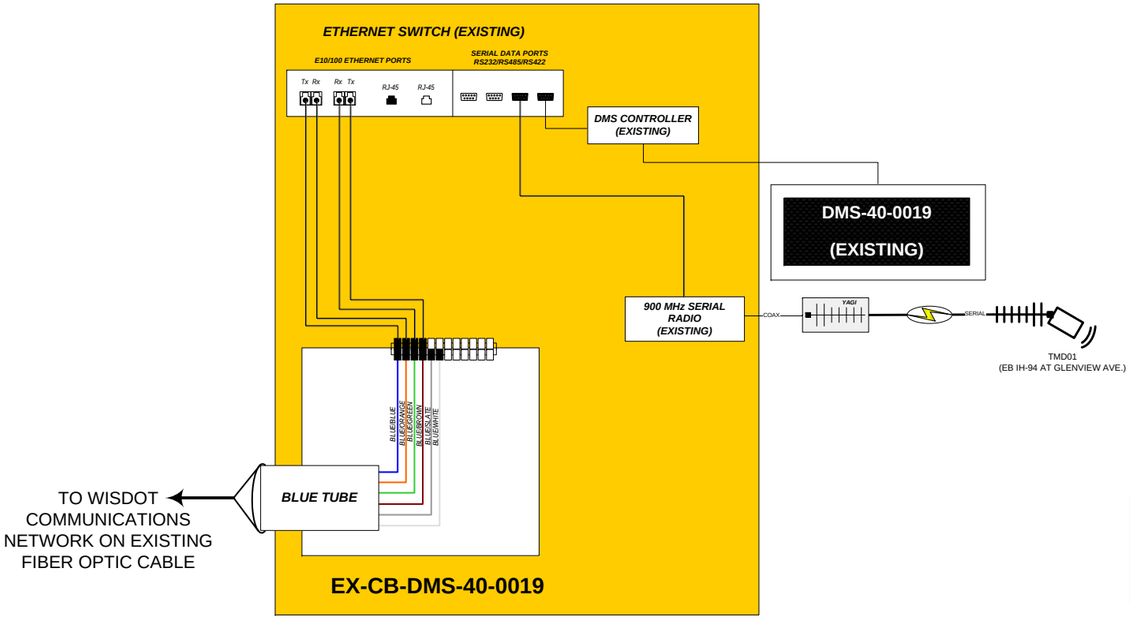


BASE SPACER

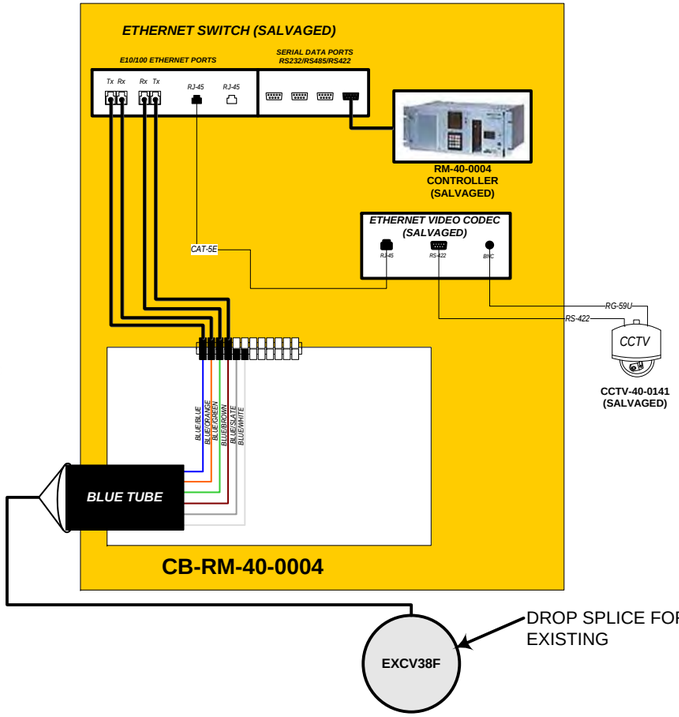
INTERMEDIATE AND BASE SPACER DETAIL

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS DETAILS	SHEET	E

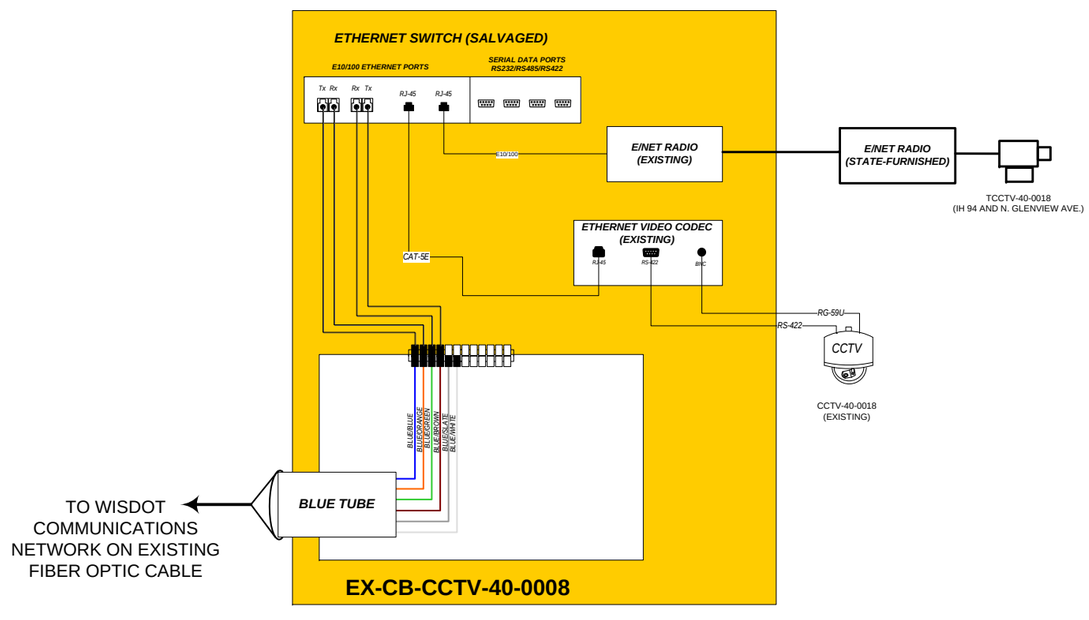
IH-94 @ N. 89TH ST.

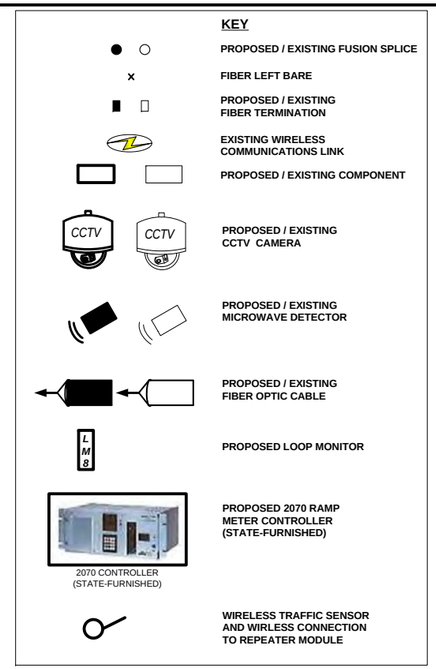


IH-94 @ N. GLENVIEW AVE.



IH-94 @ N. 92ND ST.

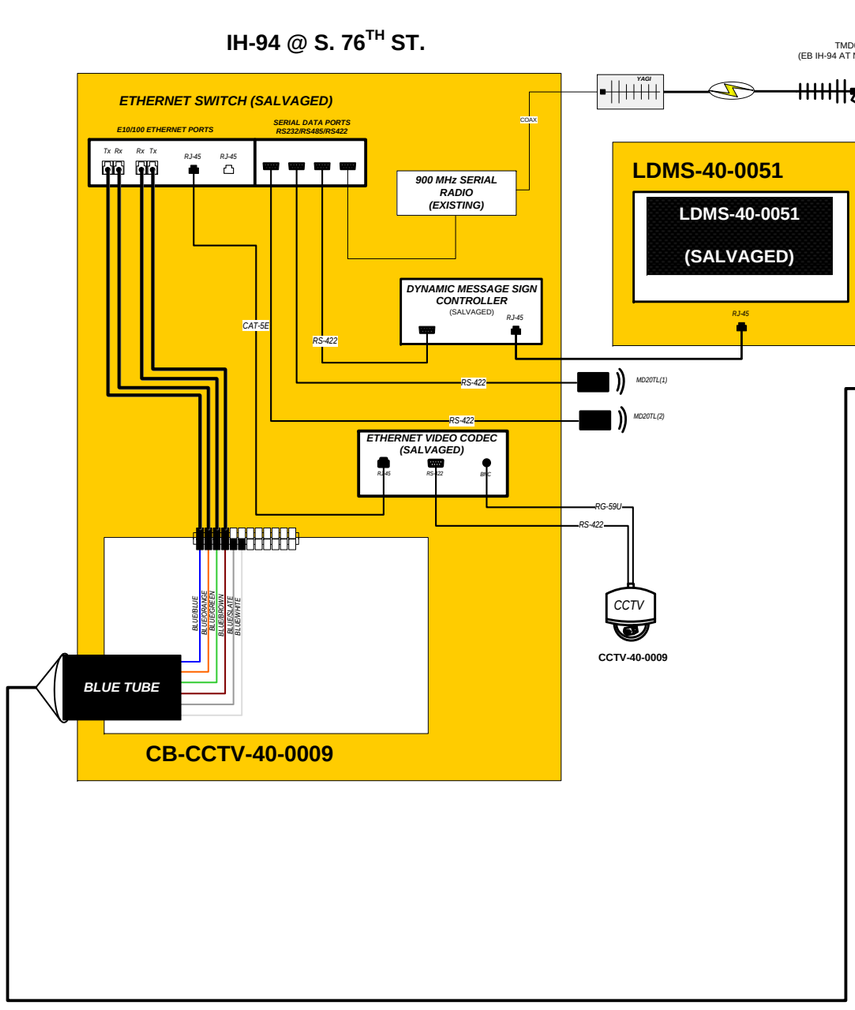


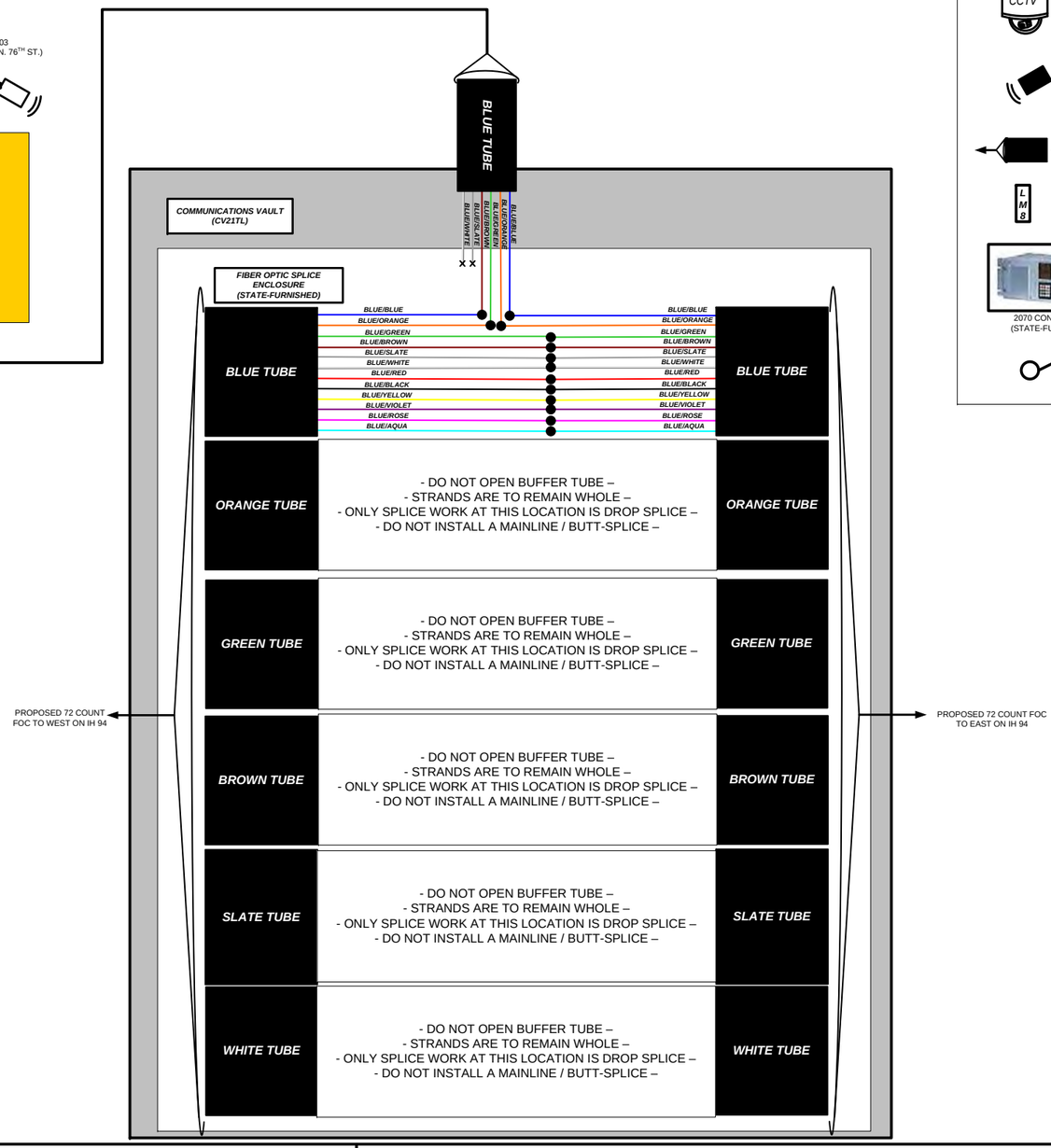


PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS - COMMUNICATIONS DETAILS	SHEET E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : $FILE$ PLOT SCALE : $$.....plotscale.....$$

IH-94 @ S. 76TH ST.





KEY

- PROPOSED / EXISTING FUSION SPLICE
- FIBER LEFT BARE
- PROPOSED / EXISTING FIBER TERMINATION
- EXISTING WIRELESS COMMUNICATIONS LINK
- PROPOSED / EXISTING COMPONENT
- PROPOSED / EXISTING CCTV CAMERA
- PROPOSED / EXISTING MICROWAVE DETECTOR
- PROPOSED / EXISTING FIBER OPTIC CABLE
- PROPOSED LOOP MONITOR
- PROPOSED 2070 RAMP METER CONTROLLER (STATE-FURNISHED)

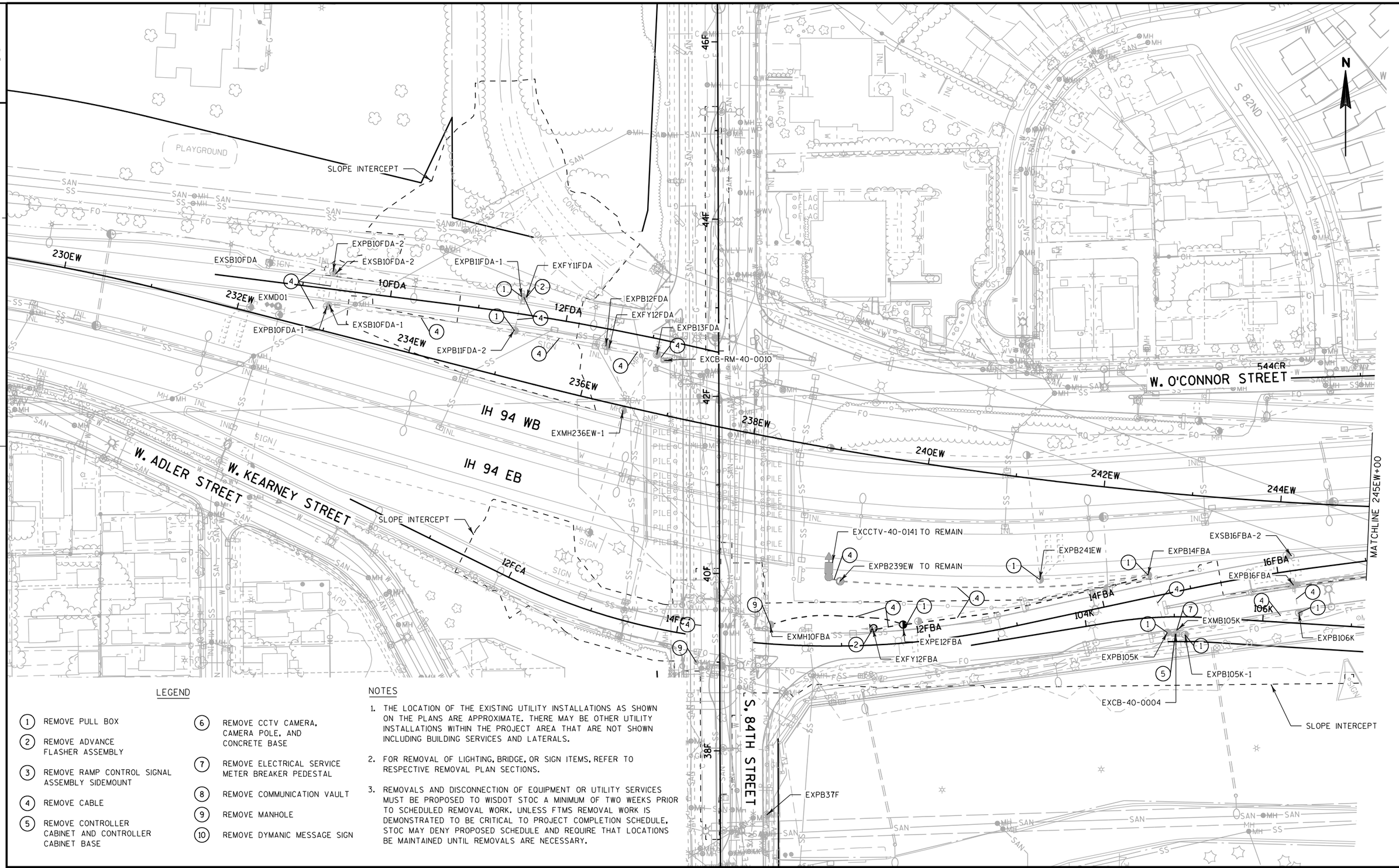
2070 CONTROLLER
(STATE-FURNISHED)

- WIRELESS TRAFFIC SENSOR AND WIRLESS CONNECTION TO REPEATER MODULE

2

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS - COMMUNICATIONS DETAILS	SHEET E

2



LEGEND

1. REMOVE PULL BOX
2. REMOVE ADVANCE FLASHER ASSEMBLY
3. REMOVE RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT
4. REMOVE CABLE
5. REMOVE CONTROLLER CABINET AND CONTROLLER CABINET BASE
6. REMOVE CCTV CAMERA, CAMERA POLE, AND CONCRETE BASE
7. REMOVE ELECTRICAL SERVICE METER BREAKER PEDESTAL
8. REMOVE COMMUNICATION VAULT
9. REMOVE MANHOLE
10. REMOVE DYMANIC MESSAGE SIGN

NOTES

1. THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS.
2. FOR REMOVAL OF LIGHTING, BRIDGE, OR SIGN ITEMS, REFER TO RESPECTIVE REMOVAL PLAN SECTIONS.
3. REMOVALS AND DISCONNECTION OF EQUIPMENT OR UTILITY SERVICES MUST BE PROPOSED TO WISDOT STOC A MINIMUM OF TWO WEEKS PRIOR TO SCHEDULED REMOVAL WORK. UNLESS FTMS REMOVAL WORK IS DEMONSTRATED TO BE CRITICAL TO PROJECT COMPLETION SCHEDULE, STOC MAY DENY PROPOSED SCHEDULE AND REQUIRE THAT LOCATIONS BE MAINTAINED UNTIL REMOVALS ARE NECESSARY.

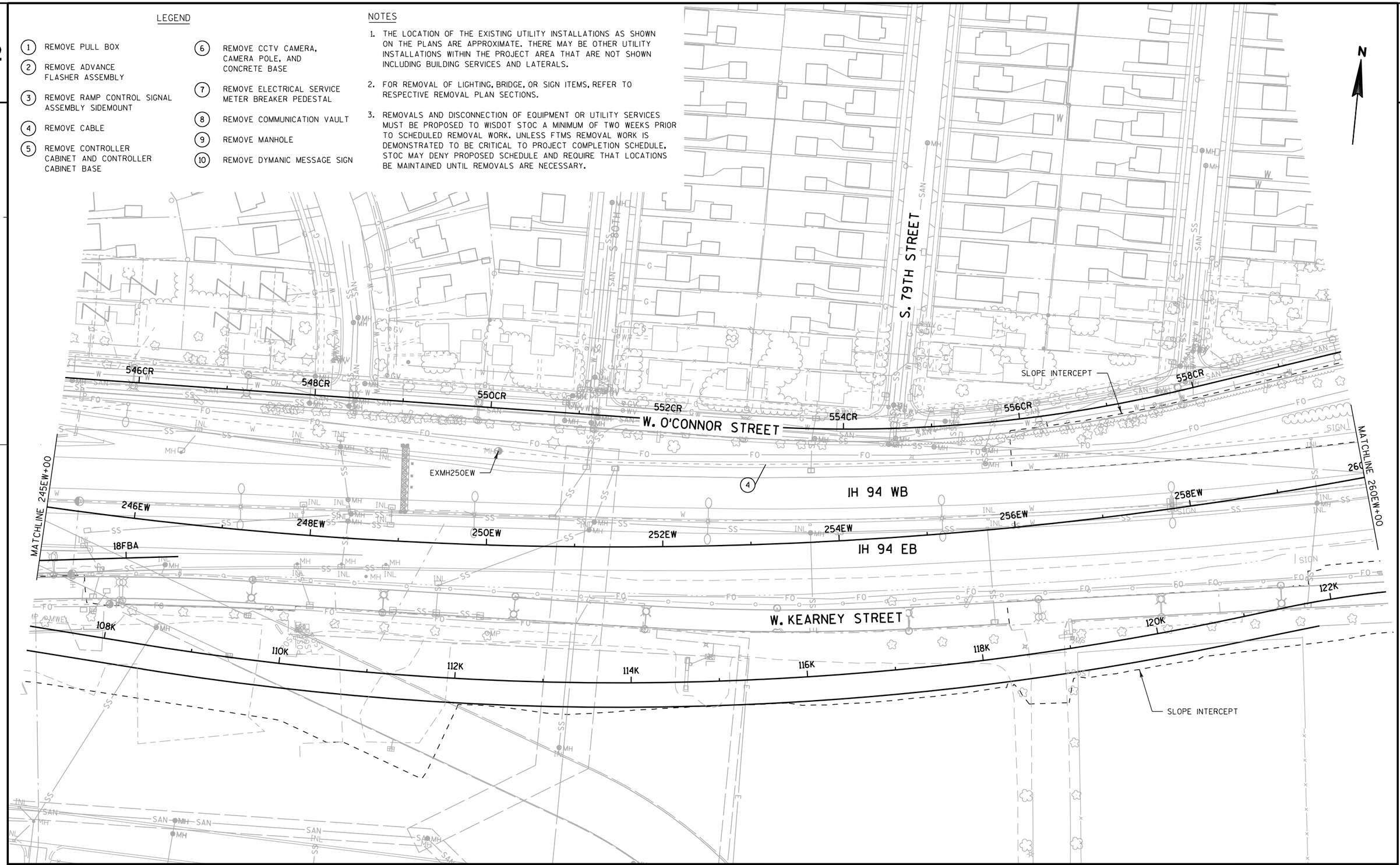
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET	E

LEGEND

1. REMOVE PULL BOX
2. REMOVE ADVANCE FLASHER ASSEMBLY
3. REMOVE RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT
4. REMOVE CABLE
5. REMOVE CONTROLLER CABINET AND CONTROLLER CABINET BASE
6. REMOVE CCTV CAMERA, CAMERA POLE, AND CONCRETE BASE
7. REMOVE ELECTRICAL SERVICE METER BREAKER PEDESTAL
8. REMOVE COMMUNICATION VAULT
9. REMOVE MANHOLE
10. REMOVE DYMANIC MESSAGE SIGN

NOTES

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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET	E

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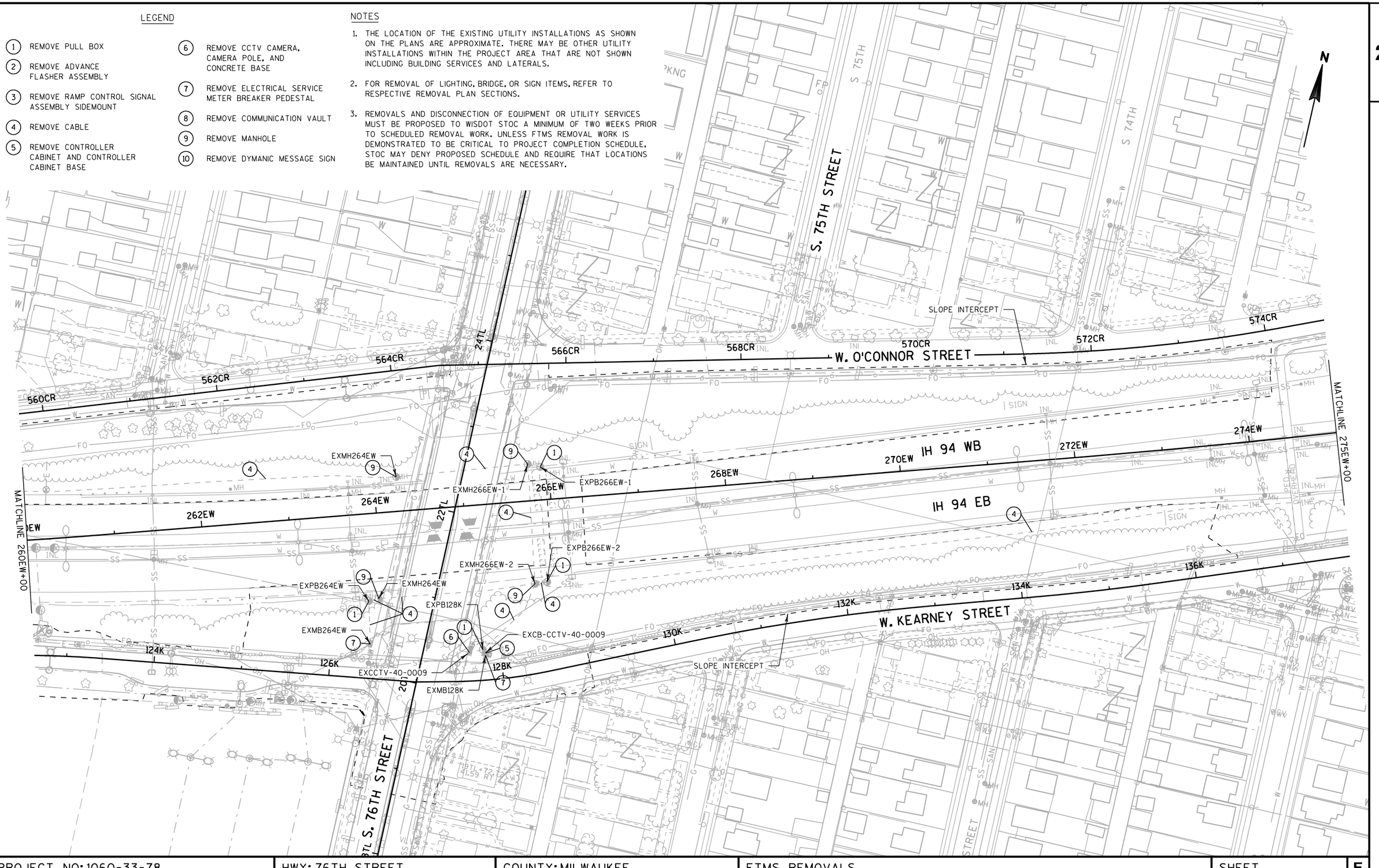
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LEGEND

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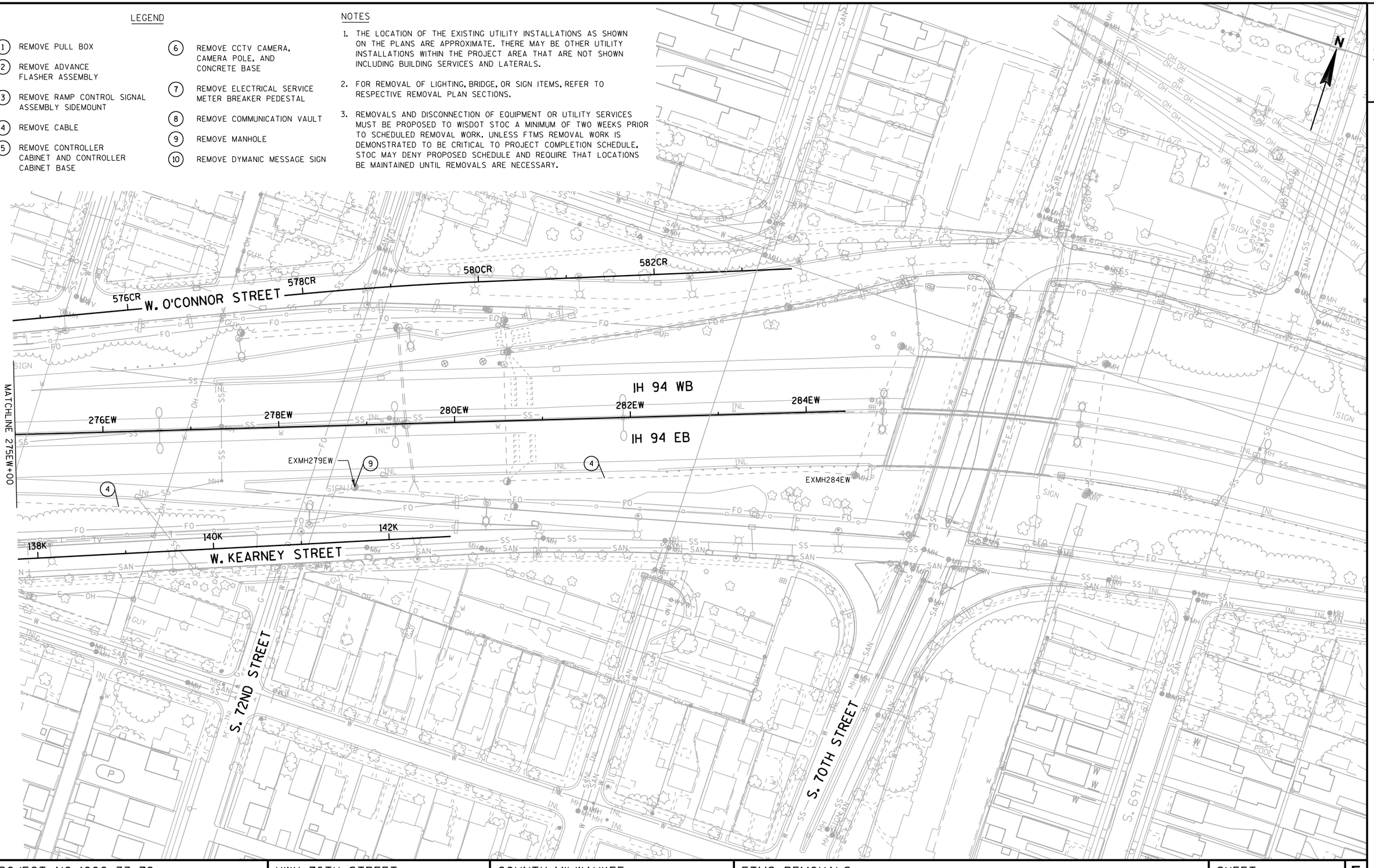
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LEGEND

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5. REMOVE CONTROLLER CABINET AND CONTROLLER CABINET BASE
6. REMOVE CCTV CAMERA, CAMERA POLE, AND CONCRETE BASE
7. REMOVE ELECTRICAL SERVICE METER BREAKER PEDESTAL
8. REMOVE COMMUNICATION VAULT
9. REMOVE MANHOLE
10. REMOVE DYMANIC MESSAGE SIGN

NOTES

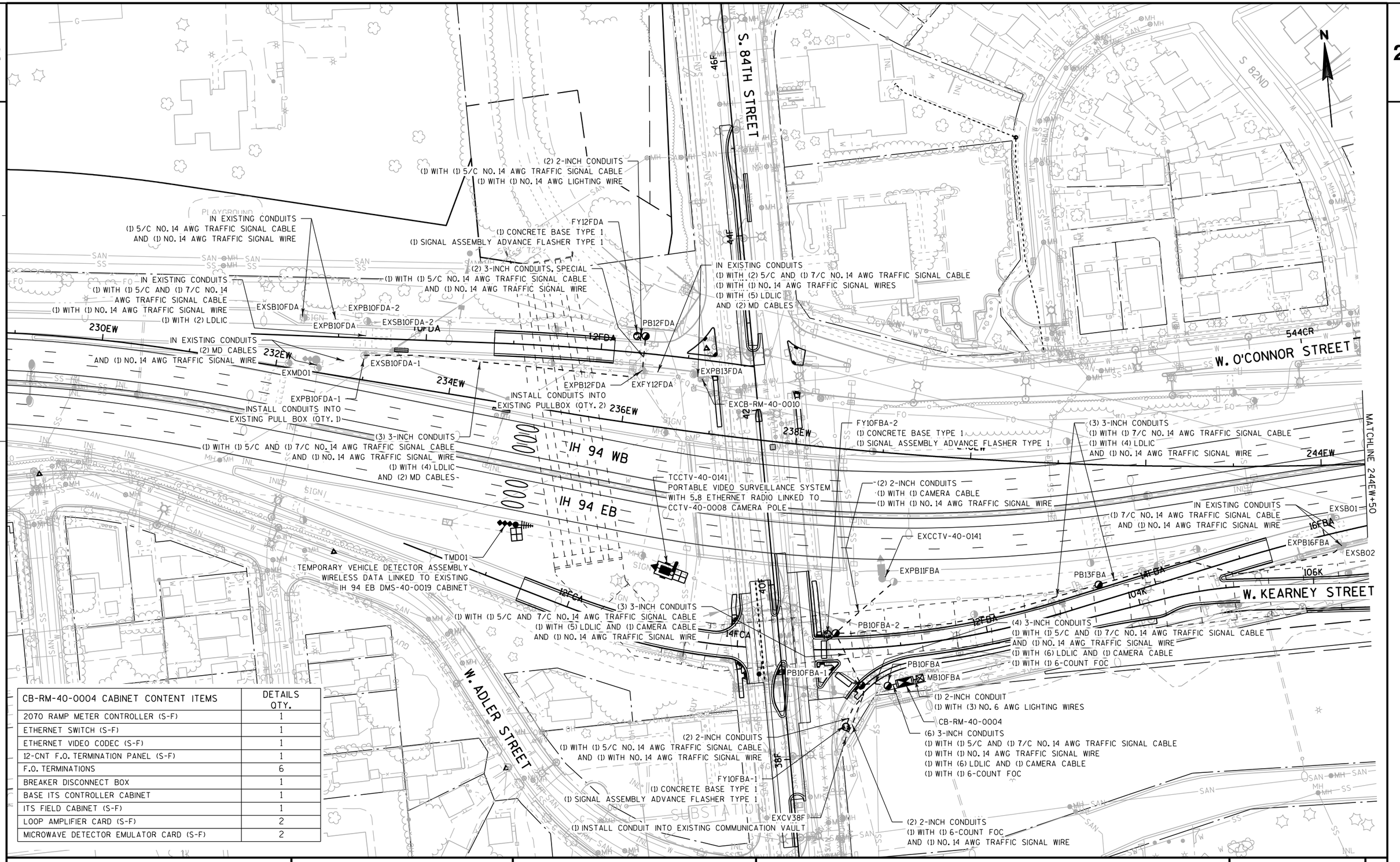
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS REMOVALS	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021413_fm.dgn PLOT DATE : 29-APR-2013 22:31 PLOT BY : MSCDYB PLOT NAME : 021413_fm PLOT SCALE : 100:1

2



CB-RM-40-0004 CABINET CONTENT ITEMS	DETAILS QTY.
2070 RAMP METER CONTROLLER (S-F)	1
ETHERNET SWITCH (S-F)	1
ETHERNET VIDEO CODEC (S-F)	1
12-CNT F.O. TERMINATION PANEL (S-F)	1
F.O. TERMINATIONS	6
BREAKER DISCONNECT BOX	1
BASE ITS CONTROLLER CABINET	1
ITS FIELD CABINET (S-F)	1
LOOP AMPLIFIER CARD (S-F)	2
MICROWAVE DETECTOR EMULATOR CARD (S-F)	2

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

N

HONEY CREEK DRIVE

S. 80TH

S. 76TH

W. O'CONNOR STREET

R/W

546CR

548CR

550CR

552CR

554CR

556CR

558CR

(3) 2-INCH HDPE DUCTS, DIRECTIONAL BORE
(1) WITH (1) 72-COUNT FOC
(1) WITH (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC
(1) WITH (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

CV250EW

CV258EW

EXMH250EW

INSTALL CONDUITS INTO EXISTING MANHOLE (QTY. 1)
(72) F.O. SPLICES IN NEW SPLICE ENCLOSURE (S-F)

MATCHLINE 244EW+50

246EW

248EW

250EW

252EW

254EW

256EW

258EW

MATCHLINE 259EW+00

IH 94 WB

IH 94 EB

18FBA

TMD02
TEMPORARY VEHICLE DETECTOR ASSEMBLY
WIRELESS DATA LINKED TO EXISTING
IH 94 EB DMS-40-0019 CABINET

108K

110K

112K

114K

116K

118K

120K

W. KEARNEY STREET

R/W

W. ALDER STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021421_fm.dgn PLOT DATE : 29-APR-2013 22:35 PLOT BY : MSCDYB PLOT NAME : 021421_fm PLOT SCALE : 100:1

2

N

W. O'CONNOR STREET

W. KEARNEY STREET

S. 76TH STREET

IH 94 WB

IH 94 EB

MATCHLINE 259EW+00

MATCHLINE 273EW+50

560CR 562CR 564CR 566CR 568CR 570CR 572CR

262EW 264EW 266EW 268EW 270EW 272EW

122K 124K 126K 128K 130K 132K 134K 136K

18TL 20TL 22TL 24TL 26TL

CV23TL-1

CV23TL-2

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC
(1) WITH (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC
(1) WITH (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

(2) 2-INCH CONDUIT IN BRIDGE PARAPET
(1) WITH (1) 72-COUNT FOC
AND (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

TMD03
TEMPORARY VEHICLE DETECTOR ASSEMBLY
WIRELESS DATA LINKED TO EXSITING
IH 94 EB DMS-40-0019 CABINET

SEE DETAIL A

CV21TL
(15) F.O. SPLICES IN
NEW SPLICE ENCLOSURE (S-F)

TCCTV-40-0009
PORTABLE VIDEO SURVEILLANCE SYSTEM
COMMUNICATION LINK TO BE ACCOUNTED
FOR BY OTHERS

(2) 2-INCH CONDUITS
(1) WITH (1) 6-COUNT FOC
AND (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

MD20TL
(1) TYPE 5 CONCRETE BASE
(1) 1½-INCH TRANSFORMER BASE
(1) TYPE 5 POLE
(2) MICROWAVE DETECTORS

(2) 2-INCH CONDUITS
(1) WITH (2) MD CABLES
AND (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

LDMS-40-0051

(2) 2-INCH CONDUITS
(1) WITH (1) DMS CABLE
(1) WITH (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

(3) 3-INCH CONDUITS
(1) WITH (2) MD CABLES
AND (1) DMS CABLE
(1) WITH (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

(1) 2-INCH CONDUIT
(1) WITH (3) NO. 6 AWG LIGHTING WIRE

CCTV-40-0009
(1) 50-FOOT CCTV CAMERA POLE BASE
(1) 50-FOOT CCTV CAMERA POLE (S-F)
(1) CCTV CAMERA ASSEMBLY (S-F)

(2) 2-INCH CONDUITS
(1) WITH (1) CAMERA CABLE
AND (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

PB21TL
PB20TL
MB20TL

(6) 3-INCH CONDUITS
(1) WITH (2) MD CABLES
(1) WITH (1) DMS CABLE
AND (1) NO. 14 AWG LIGHTING WIRE
(1) WITH (1) CAMERA CABLE
(1) WITH (1) 6-COUNT FOC

CB-CCTV-40-0009
(1) BASE ITS CONTROLLER CABINET

A DETAIL
NOT TO SCALE

CB-CCTV-40-0009 CABINET CONTENT ITEMS	DETAILS QTY.
ETHERNET SWITCH (S-F)	1
ETHERNET VIDEO CODEC (S-F)	1
12-CNT F.O. TERMINATION PANEL (S-F)	1
F.O. TERMINATIONS	6
ITS FIELD CABINET (S-F)	1
BREAKER DISCONNECT BOX	1

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS PLANS	SHEET E

2

2

N

W. O'CONNOR STREET

574CR

576CR

578CR

580CR

582CR

IH 94 WB

IH 94 EB

274EW

276EW

278EW

280EW

282EW

284EW

MATCHLINE 273EW+50

(3) 2-INCH HDPE DUCTS
(1) WITH (1) 72-COUNT FOC
(1) WITH (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

EXMH284EW
INSTALL CONDUITS INTO EXISTING MANHOLE (QTY. 1)
(72) F.O. SPLICES IN NEW SPLICE ENCLOSURE (S-F)

CV277EW

138K

140K

142K

W. KEARNEY STREET

(3) 2-INCH HDPE DUCTS - DIRECTIONAL BORE
(1) WITH (1) 72-COUNT FOC
(1) WITH (1) NO. 14 AWG TRAFFIC SIGNAL WIRE

W. ALDER STREET

S. 70TH STREET

S. 69TH

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021423_fm.dgn PLOT DATE : 29-APR-2013 22:35 PLOT BY : MSCDYB PLOT NAME : 021423_fm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

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3. DIMENSIONS SHOWN ARE TO CENTER OF MANHOLE, DUCT PACKAGE OR UTILITY.

4. MAINTAIN A MINIMUM 6-INCH VERTICAL CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.

2

W. ADLER STREET

SUBSTATION

R/W

CMH3002
STA. 38F+99.9, 26.6' LT
PROPOSED CITY MANHOLE

107' - (4) 4" PVC CONDUITS
CEMENT ENCASED

113' - (4) 4" PVC CONDUITS
CEMENT ENCASED
(1) 12-PAIR ITS COMMUNICATION CABLE

EXCMH3001
STA. 38F+93.4, 20.6' LT
EXISTING CITY MANHOLE

STA. 40F+06, 20.9' LT
TIE IN TO EXISTING CONDUITS

IN EXISTING CITY CONDUITS
(1) 12-PAIR ITS COMMUNICATION CABLE

S. 84TH STREET

(1) INSTALLING CONDUIT INTO
EXISTING MANHOLE

PROPOSED BOX CULVERT
B-40-892

EXCMH3003
STA. 41F+44.4, 15.8 LT
EXISTING CITY MANHOLE

13FCA

14FCA

11FBA

236EW

237EW

238EW

239EW

IH 94 EB

IH 94 WB

37F

38F

40F

41F

42F

PROJECT NO: 1060-33-93	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

CITY OF MILWAUKEE FIRE HOUSE

CAP DUCTS TO ALLOW FOR FUTURE COUPLING
X=577337.18
Y=295952.57

SEE DETAIL 1 FOR CONCRETE CURB AND GUTTER REPAIR

150'
(2) 4" PVC CONDUIT CEMENT ENCASED
(1) 25-PAIR ITS COMMUNICATION CABLE
(1) 72-COUNT FOC (S-F) INSIDE (1) 1-INCH SUBDUCT

CMH3102
X=577469.14
Y=295879.69
PROPOSED CITY MANHOLE
COIL 100' - 25-PAIR ITS COMMUNICATION CABLE
AND 72-COUNT FOC

251'
(2) 4" PVC CONDUIT CEMENT ENCASED
(1) 25-PAIR ITS COMMUNICATION CABLE
(1) 72-COUNT FOC (S-F) INSIDE (1) 1-INCH SUBDUCT

S. 83RD STREET

SEE DETAIL 2 FOR CONCRETE PAVEMENT REPAIR

(1) INSTALLING CONDUIT INTO EXISTING MANHOLE

EXCMH3101
X=577479.23
Y=295635.42
EXISTING MANHOLE
COIL 100' - 72-COUNT FOC

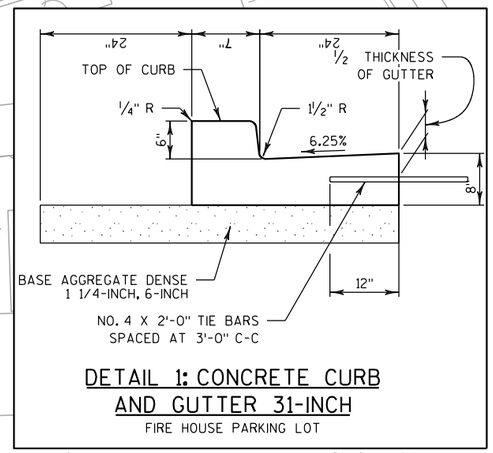
IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F) INSIDE (1) 1-INCH SUBDUCT

W. O'CONNOR STREET

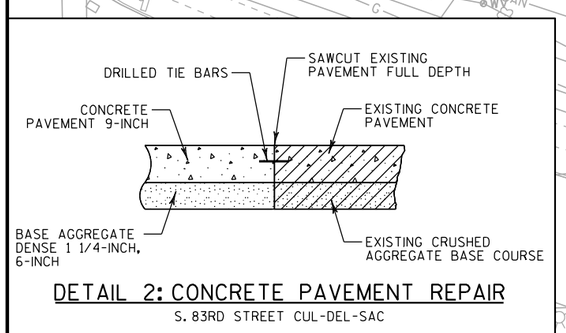
544CR

MATCHLINE 544CR+25

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6. SEE WISDOT S.D.D. "TRAFFIC CONTROL, SIDEWALK CLOSURE" FOR SIDEWALK CLOSURE.



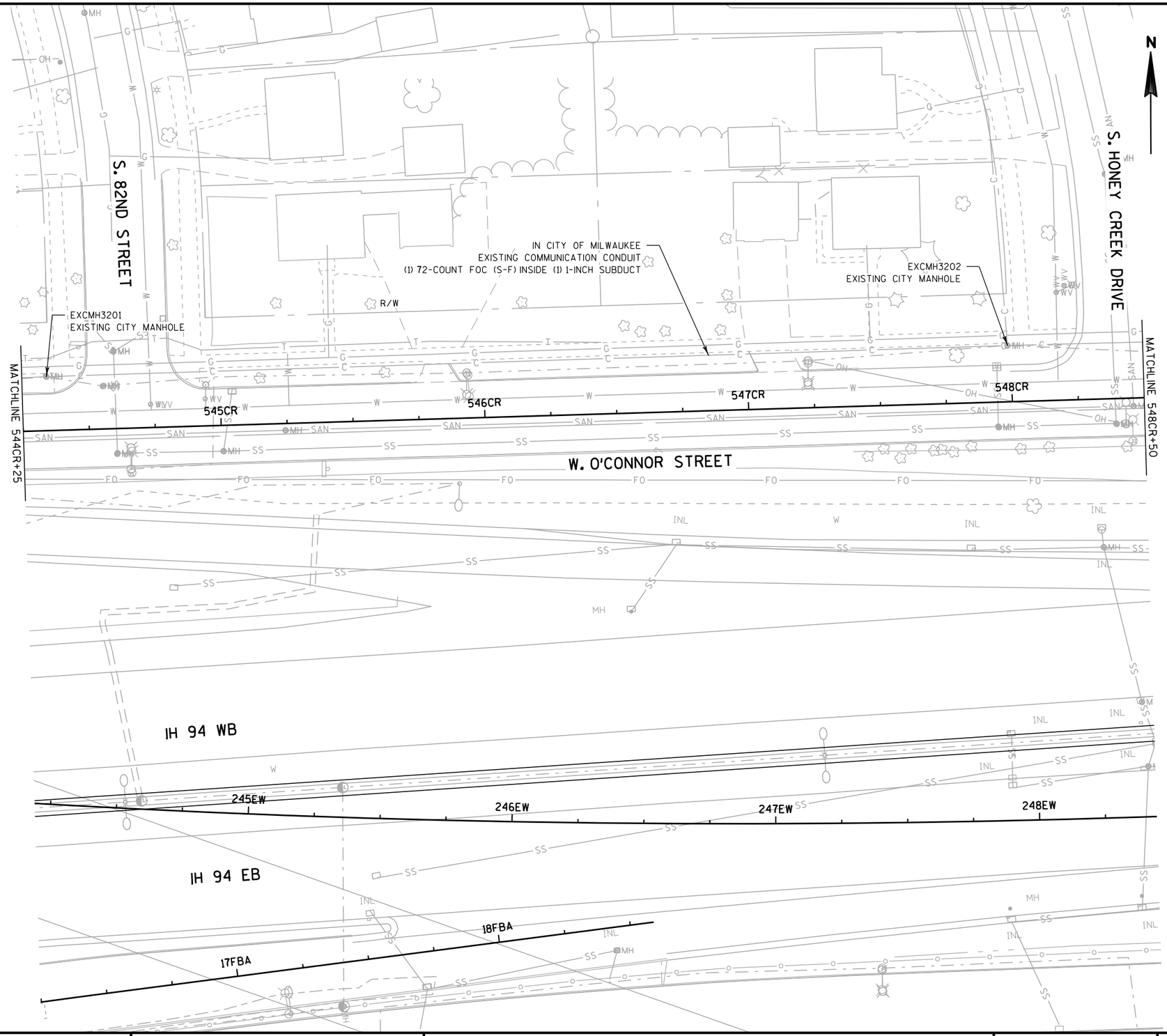
DETAIL 1: CONCRETE CURB AND GUTTER 31-INCH
FIRE HOUSE PARKING LOT



DETAIL 2: CONCRETE PAVEMENT REPAIR
S. 83RD STREET CUL-DEL-SAC

PROJECT NO: 1060-33-93	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021431_fm.dgn PLOT DATE : 29-APR-2013 22:39 PLOT BY : MSCDYB PLOT NAME : 021431_fm PLOT SCALE : 40:1



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PROJECT NO: 1060-33-93	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

N

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F) INSIDE (1) 1-INCH SUBDUCT

EXCMH3302
EXISTING CITY MANHOLE

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F) INSIDE (1) 1-INCH SUBDUCT

S. 80TH STREET

R/W

R/W

MATCHLINE 548CR+50

549CR 550CR 551CR 552CR 553CR 554CR

W. O'CONNOR STREET

IH 94 WB

IH 94 EB

249EW 250EW 251EW 252EW 253EW 254EW

MATCHLINE 254EW+50

W. KEARNEY STREET

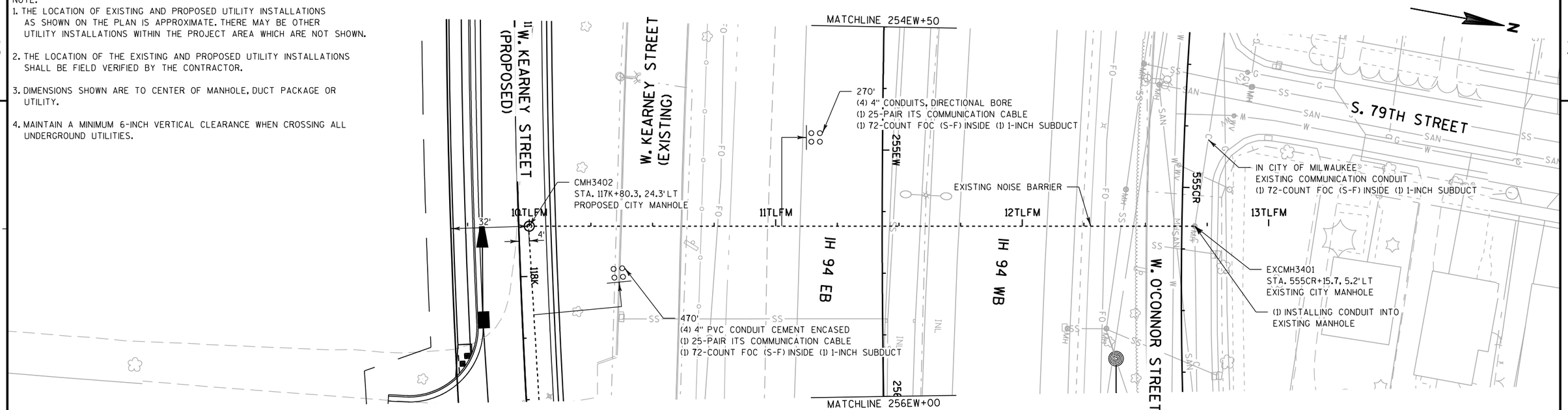
PROJECT NO: 1060-33-93	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

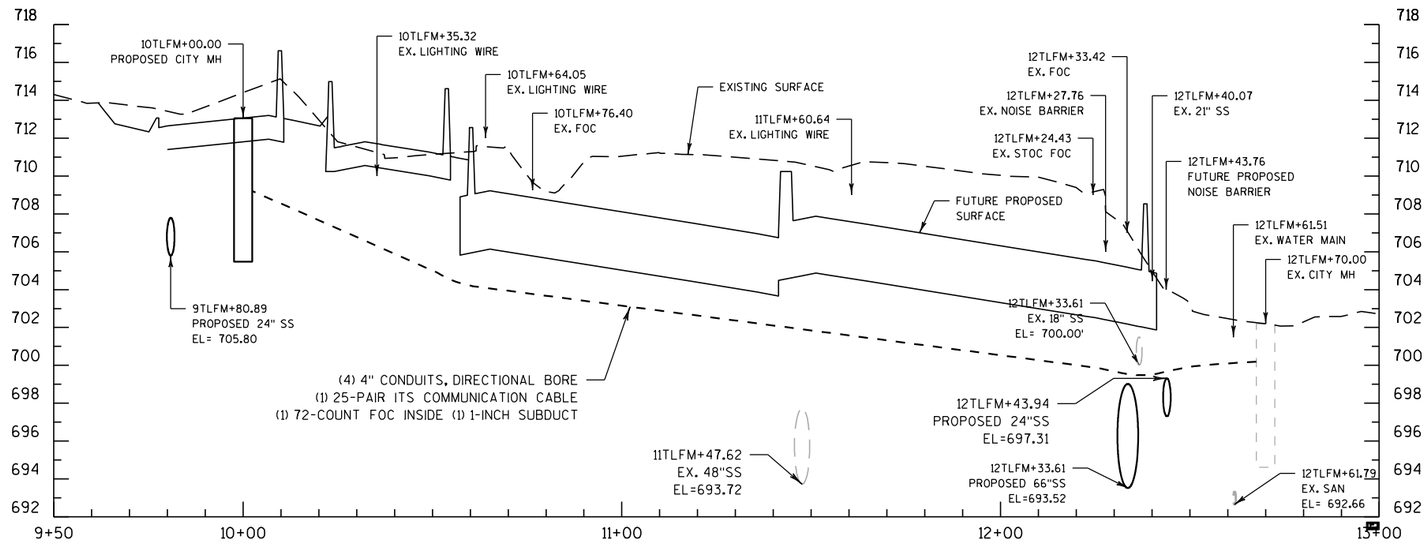
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4. MAINTAIN A MINIMUM 6-INCH VERTICAL CLEARANCE WHEN CROSSING ALL UNDERGROUND UTILITIES.





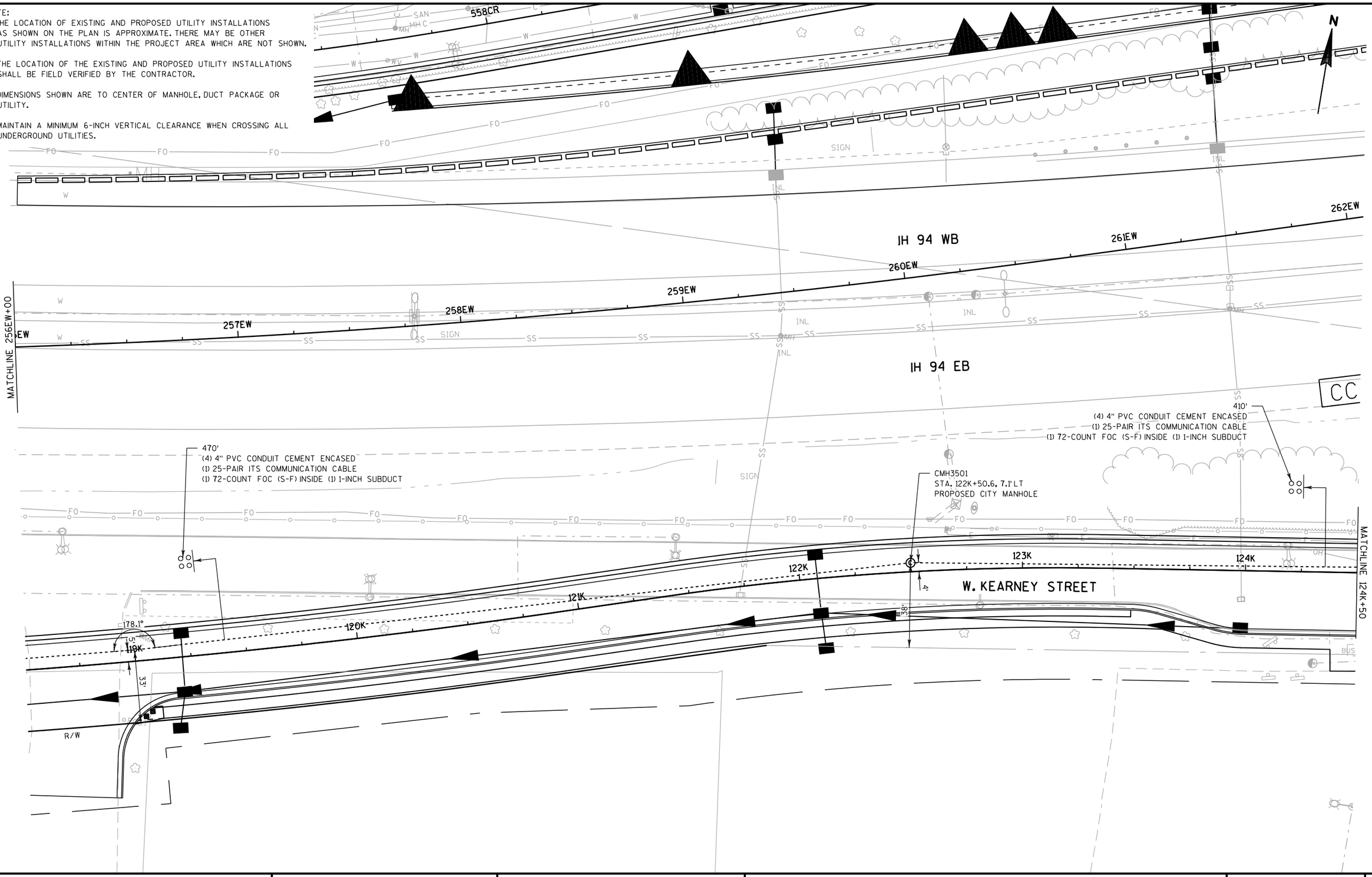
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PROJECT NO: 1060-33-93	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

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WISDOT/CADDS SHEET 42

2

MATCHLINE 124K+50

W. KEARNEY STREET

125K

126K

410'
(4) 4" PVC CONDUIT CEMENT ENCASED
(1) 25-PAIR ITS COMMUNICATION CABLE
(1) 72-COUNT FOC (S-F) INSIDE (1) 1-INCH SUBDUCT

(1) ADJUSTING TES MANHOLE COVER
(1) INSTALLING CONDUIT INTO EXISTING MANHOLE
(1) ABANDONING MANHOLES
ABANDON ONLY THE CONDUITS OVER
76TH STREET BRIDGE AFTER CITY
HAS REMOVED CABLE.
COORDINATE WITH CITY FORCES.

263EW

264EW

W. O'CONNOR STREET

563CR

564CR

565CR

EXCMH3602
STA. 564CR+60.3, 6.1' LT
EXISTING CITY MANHOLE

(1) ABANDONING MANHOLES
ABANDON ONLY THE CONDUITS OVER
76TH STREET BRIDGE AFTER CITY
HAS REMOVED CABLE.
COORDINATE WITH CITY FORCES.

EXCMH3601
STA. 126K+59.1, 4.0' LT
EXISTING CITY MANHOLE

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F) INSIDE (1) 1-INCH SUBDUCT

S. 76TH STREET

MATCHLINE 19TL+00

20TL

21TL

22TL

23TL

24TL

25TL

127K

128K

265EW

19TL+41.59

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PROJECT NO: 1060-33-93	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

2

2

N

W. MAIN STREET

S. 76TH STREET

EXCMH3702
EXISTING CITY MANHOLE

IN EXISTING MANHOLE
COIL 100' - 72-COUNT FOC

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F) INSIDE (1) 1-INCH SUBDUCT

EXCMH3701

R/W

16TL

17TL

18TL

19

MATCHLINE 19TL+00

PROJECT NO: 1060-33-93	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021437_fm.dgn PLOT DATE : 29-APR-2013 22:39 PLOT BY : MSCDYB PLOT NAME : 021437_fm PLOT SCALE : 40:1

2

N

N. 97TH STREET

EXCV194BL
(1) F.O. SPLICE ENCLOSURE

W. BLUEMOUND ROAD

N. 95TH STREET

CV4001

CV4002

(1) 2-INCH CONDUIT STUB

(3) 2-INCH HDPE DUCTS, SPECIAL
(1) WITH (1) 72-COUNT FOC (S-F)

EXCMH4001
EXISTING MANHOLE

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)

MATCHLINE 205BL+50

W. BLUEMOUND ROAD

NOTE:
SEE WISDOT S.D.D. "TRAFFIC CONTROL, SIGNLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY" FOR LANE CLOSURE..

2

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021440_fm.dgn PLOT DATE : 29-APR-2013 22:40 PLOT BY : MSCDYB PLOT NAME : 021440_fm PLOT SCALE : 40:1

2

2

N

N. 93RD STREET

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)

EXCMH4101
EXISTING MANHOLE

IN CITY OF MILWAUKEE
COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)

MATCHLINE 205BL+50

MATCHLINE 211BL+25

W. BLUEMOUND ROAD

SIGN

U/C

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021441_fm.dgn PLOT DATE : 29-APR-2013 22:41 PLOT BY : MSCDYB PLOT NAME : 021441_fm PLOT SCALE : 40:1

2

2

N

N. 92ND STREET

W. BLUEMOUND ROAD

FILLER CAPS

CANOPY

BOLLARDS (4)

VENT SUPPORT

VENT PIPE (3)

EXCV4201

IN EXISTING CONDUIT
(2) 72-COUNT FOC (S-F)

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 72-COUNT FOC (S-F)

EXCMH4201
EXISTING MANHOLE

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE
(1) 72-COUNT FOC (S-F)

SIGN

R/W

INL

BOLLARD

MATCHLINE 211BL+25

MATCHLINE 217BL+00

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021442_fm.dgn PLOT DATE : 29-APR-2013 22:42 PLOT BY : MSCDYB PLOT NAME : 021442_fm PLOT SCALE : 40:1

2

2

N

N. 90TH STREET

W. BLUEMOUND ROAD

MATCHLINE 217BL+00

MATCHLINE A

EXCMH4301
EXISTING MANHOLE

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE
(1) 72-COUNT FOC (S-F)

PKNG

PKNG

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021443_fm.dgn PLOT DATE : 29-APR-2013 22:45 PLOT BY : MSCDYB PLOT NAME : 021443_fm PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

N. 89TH STREET

W. BLUEMOUND ROAD

MATCHLINE A

MATCHLINE B

EXCMH4402
EXISTING MANHOLE

WATER STATION

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE
(1) 72-COUNT FOC (S-F)

EXCMH4401
EXISTING MANHOLE

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE
(1) 72-COUNT FOC (S-F)

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021444_fm.dgn PLOT DATE : 29-APR-2013 22:45 PLOT BY : MSCDYB PLOT NAME : 021444_fm PLOT SCALE : 40:1

2

2

N

MAYWOOD AVENUE

W. BLUEMOUND ROAD

MATCHLINE B

MATCHLINE C

EXCMH4501
EXISTING MANHOLE

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE
(1) 72-COUNT FOC (S-F)

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021445_fm.dgn PLOT DATE : 29-APR-2013 22:46 PLOT BY : MSCDYB PLOT NAME : 021445_fm PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

2

N

ELM SPRING AVENUE

W. BLUEMOUND ROAD

MATCHLINE C

MATCHLINE D

IN EXISTING CONDUIT
(1) WITH (1) 72-COUNT FOC (S-F)

EXCV4601

IN EXISTING CONDUITS
(1) WITH (1) 72-COUNT FOC

EXCMH4601
EXISTING MANHOLE

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE
(1) 72-COUNT FOC (S-F)

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021446_fm.dgn PLOT DATE : 29-APR-2013 22:47 PLOT BY : MSCDYB PLOT NAME : 021446_fm PLOT SCALE : 40:1

2

MATCHLINE D

N

W. BLUEMOUND ROAD

N. GLENVIEW AVENUE

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE

EXCMH4702
EXISTING MANHOLE

IN EXISTING CONDUIT
(1) WITH (1) 72-COUNT FOC (S-F)

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE

EXCMH4701
EXISTING MANHOLE

IN CITY OF MILWAUKEE
EXISTING COMMUNICATION CONDUIT
(1) 12-PAIR ITS COMMUNICATION CABLE

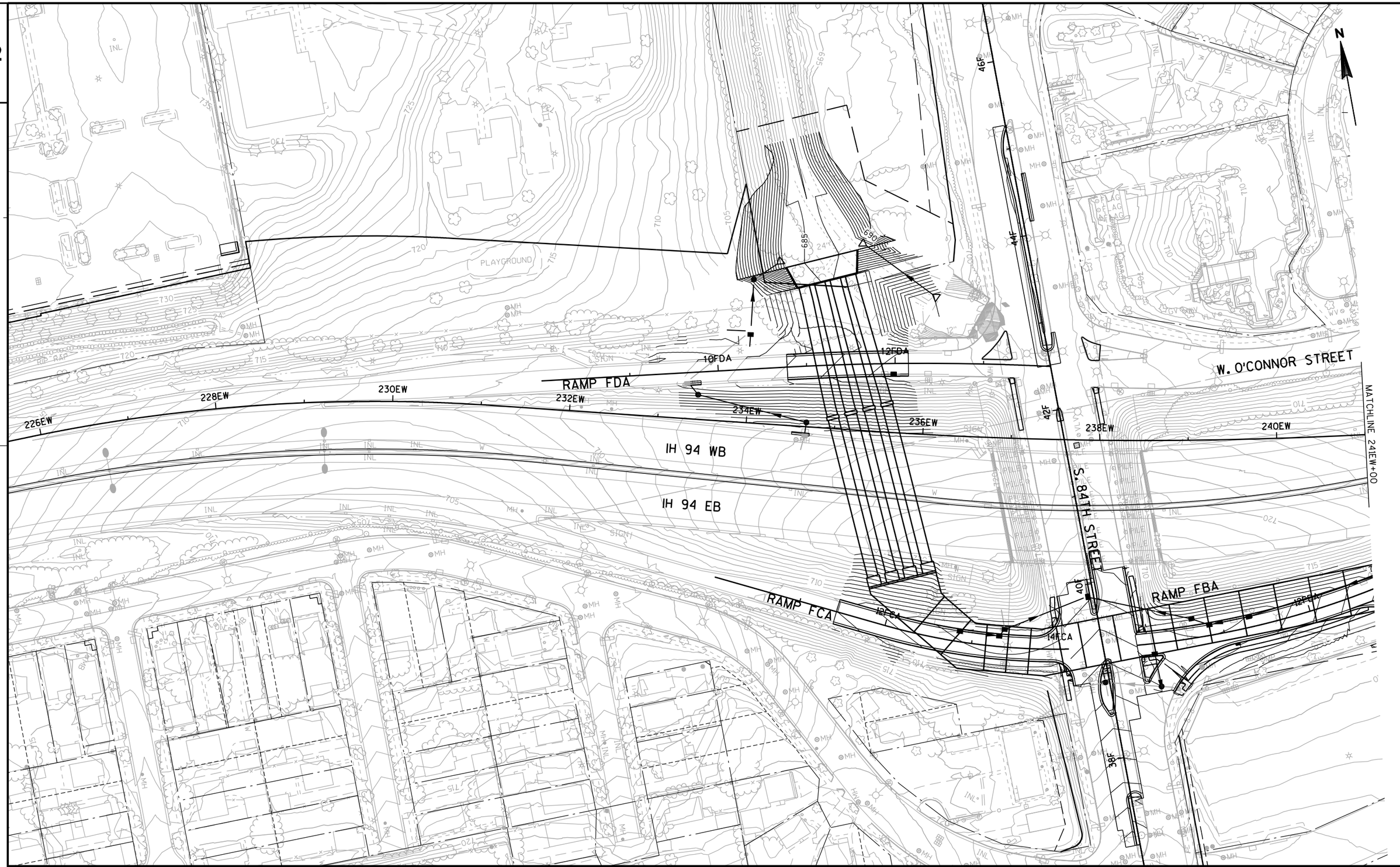
EXCV4701
(72) F.O. SPLICES IN
NEW SPLICE ENCLOSURE (S-F)

TO POLICE CALL BOX

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	FTMS PLANS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021447_fm.dgn PLOT DATE : 29-APR-2013 22:47 PLOT BY : MSCDYB PLOT NAME : 021447_fm PLOT SCALE : 40:1

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021601_cm.dgn PLOT DATE : 10-JUN-2013 16:26 PLOT BY : mscgz1 PLOT NAME : 021601_cm PLOT SCALE : 100:1

2

N

544CR 546CR W. O'CONNOR STREET 548CR 550CR 552CR 554CR

MATCHLINE 241EW+00

242EW 244EW 246EW 248EW 250EW 252EW 254EW

MATCHLINE 256EW+00

IH 94 WB

IH 94 EB

RAMP FBA

14FBA 16FBA 18FBA

104K 106K 108K 110K 112K 114K 116K

W. KEARNEY STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021602_cm.dgn PLOT DATE : 29-APR-2013 22:49 PLOT BY : MSCDYB PLOT NAME : 021602_cm PLOT SCALE : 100:1

2

N

S. 78TH STREET

S. 77TH STREET

S. 76TH STREET

S. 75TH STREET

W. O'CONNOR STREET

W. KEARNEY STREET

556CR 558CR 560CR 562CR 564CR 566CR 568CR 570CR

256EW 258EW 260EW 262EW 264EW 266EW 268EW 270EW

120K 122K 124K 126K 128K 130K 132K

MATCHLINE 256EW+00

MATCHLINE 271EW+00

24TL 26TL 20TL 18TL

CC

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021603_cm.dgn PLOT DATE : 29-APR-2013 22:49 PLOT BY : MSCDYB PLOT NAME : 021603_cm PLOT SCALE : 100:1

2

2

N

W. O'CONNOR STREET

572CR 574CR 576CR 578CR 580CR 582CR

IH 94 WB

IH 94 EB

272EW 274EW 276EW 278EW 280EW 282EW 284EW

MATCHLINE 271EW+00

W. KEARNEY STREET

134K 136K 138K 140K 142K

W. ADLER STREET

S. 70TH STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021604_cm.dgn PLOT DATE : 29-APR-2013 22:49 PLOT BY : MSCDYB PLOT NAME : 021604_cm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

S. 100TH STREET

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

RAMP NSA

10NSA 12NSA 14NSA 16NSA 18NSA 20NSA 22NSA 24NSA

264NS 266NS 268NS 270NS 272NS 274NS 276NS

24XM

MATCHLINE 25NSA+00

S. 98TH STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021605_cm.dgn PLOT DATE : 10-JUN-2013 08:35 PLOT BY : MSCDYB PLOT NAME : 021605_cm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

USH 45 SB

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

USH 45 NB

IH 94 EB

528SCH

530SCH

532SCH

534SCH

536SCH

280NS

282NS

284NS

286NS

288NS

290NS

292NS

26NSA

28NSA

30NSA

32NSA

34NSA

36NSA

38NSA

25XM

RAMP NSA

MATCHLINE 25NSA+00

W. SCHLINGER AVENUE

S. 98TH STREET

HANK AARON STATE TRAIL

DOCK

POOL

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021606_cm.dgn PLOT DATE : 10-JUN-2013 08:35 PLOT BY : MSCDYB PLOT NAME : 021606_cm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

242NS 244NS 246NS 248NS 250NS 252NS 254NS 256NS

746GBB 748GBB 750GBB 752GBB

516G 518G 520G 522G 524G

W. GREENFIELD AVENUE

W. ORCHARD PLACE

S. 98TH STREET

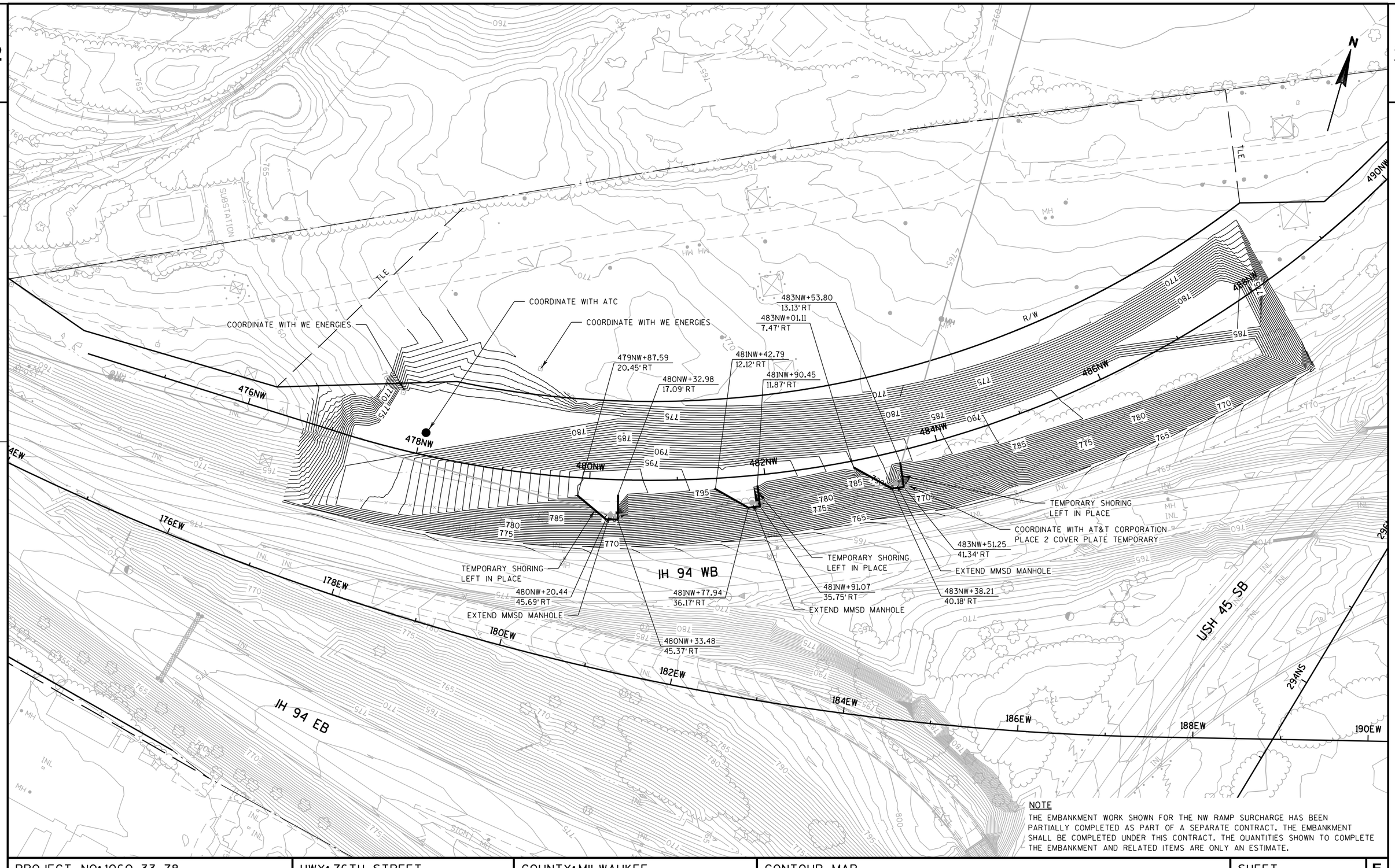
S. 97TH STREET

2 2

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021607_cm.dgn PLOT DATE : 10-JUN-2013 08:36 PLOT BY : MSCDYB PLOT NAME : 021607_cm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42



NOTE

THE EMBANKMENT WORK SHOWN FOR THE NW RAMP SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CONTOUR MAP	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021608_cm.dgn PLOT DATE : 14-JUN-2013 11:18 PLOT BY : mscgzl PLOT NAME : 021608_cm PLOT SCALE : 100:1

2

2

N

S. 82ND ST

S. HONEY CREEK DRIVE

S. 84TH STREET

W. O'CONNOR STREET

W. KEARNEY STREET

IH 94 WB

IH 94 EB

RAMP FDA

RAMP FCA

RAMP FBA

10FDA

12FDA

14FDA

12FCA

14FCA

12FBA

14FBA

16FBA

18FBA

234EW

236EW

238EW

240EW

242EW

244EW

246EW

248EW

544CR

546CR

548CR

104K

106K

108K

110K

R/L FDA

R/L F

R/L EW

R/L CR

R/L FCA

R/L FBA

R/L K

M/L

42F

44F

40F

38F

47.50'

26.13'

37.14'

24.93'

38.50'

63.33'

27.59'

17.67'

50.06'

66.56'

91.57'

40.29'

17.60'

18.10'

19.52'

11.66'

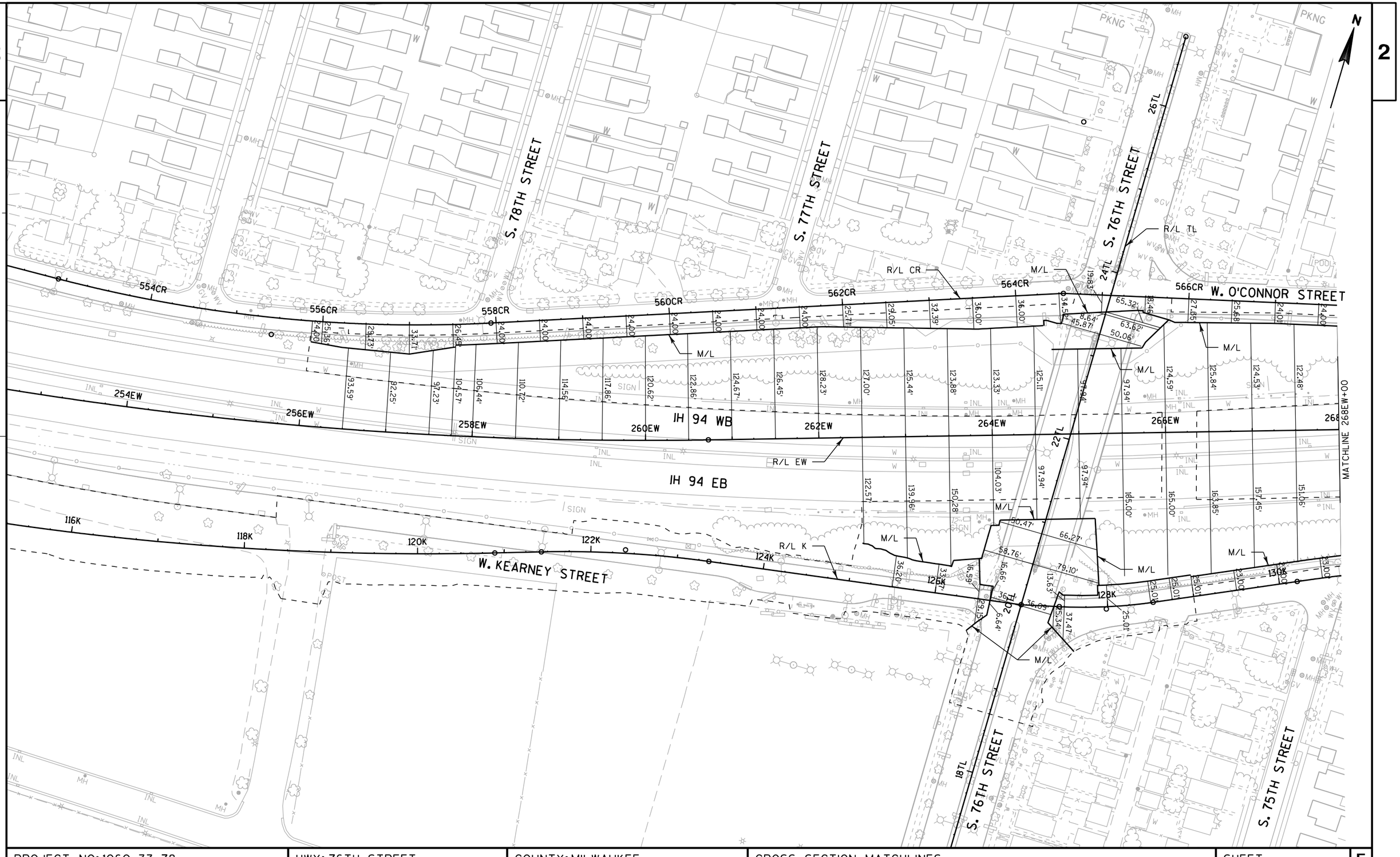
20.28'

7.20'

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTION MATCHLINES	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021701_xm.dgn PLOT DATE : 07-JUN-2013 11:07 PLOT BY : mscgzl PLOT NAME : 021701_xm PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTION MATCHLINES	SHEET	E

2

S. 75TH STREET

W. O'CONNOR STREET

IH 94 WB

IH 94 EB

W. KEARNEY STREET

W. ADLER STREET

S. 74TH STREET

MATCHLINE 268EW+00

R/L CR

R/L EW

R/L K

M/L

568CR 570CR 572CR 574CR 576CR 578CR 580CR 582CR

270EW 272EW 274EW 276EW 278EW 280EW 282EW

132K 134K 136K 138K 140K 142K

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTION MATCHLINES	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\021703_xm.dgn PLOT DATE : 29-APR-2013 22:54 PLOT BY : MSCDYB PLOT NAME : 021703_xm PLOT SCALE : 100:1

2

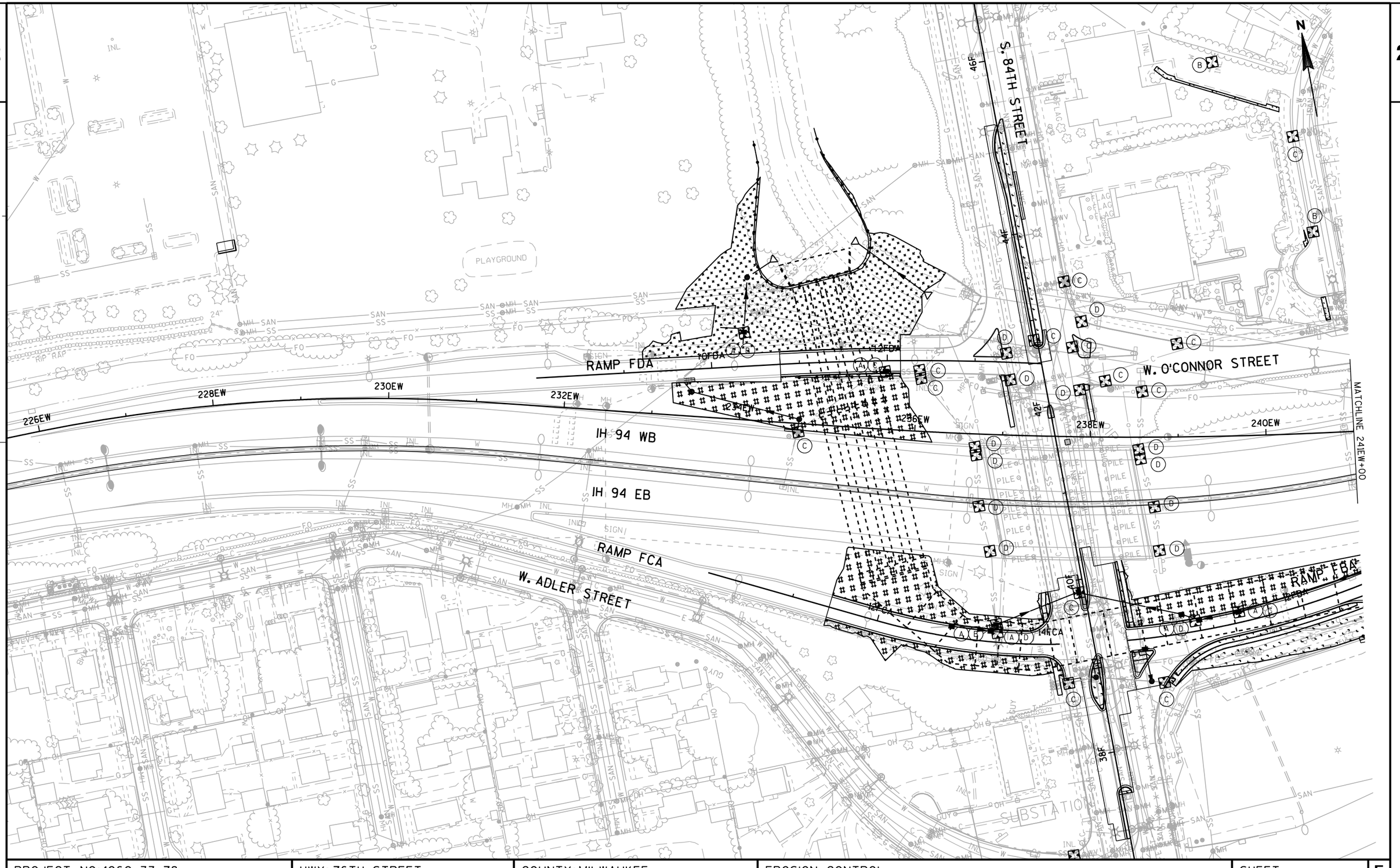
LEGEND

- EROSION MAT CLASS I, TYPE B
- SOD LAWN
- SILT FENCE
- EROSION BALES
- SURFACE WATER FLOW
- SLOPE INTERCEPT
- (A) INLET PROTECTION TYPE A
- (B) INLET PROTECTION TYPE B
- (C) INLET PROTECTION TYPE C
- (D) INLET PROTECTION TYPE D
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- MEDIUM RIP RAP

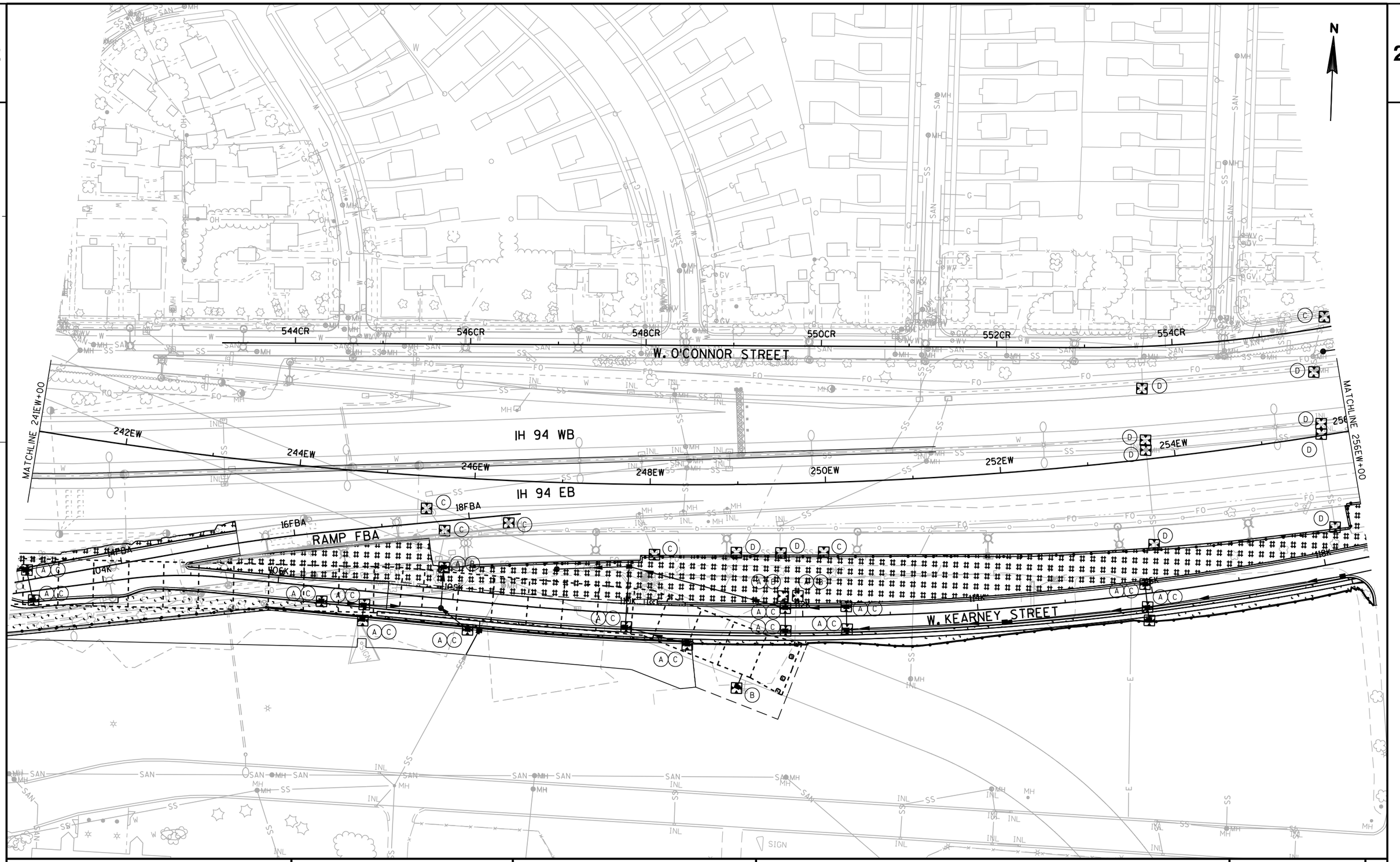
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL - LEGEND	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\022000_ec.dgn PLOT DATE : 10-JUN-2013 15:58 PLOT BY : MSCMRE PLOT NAME : PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

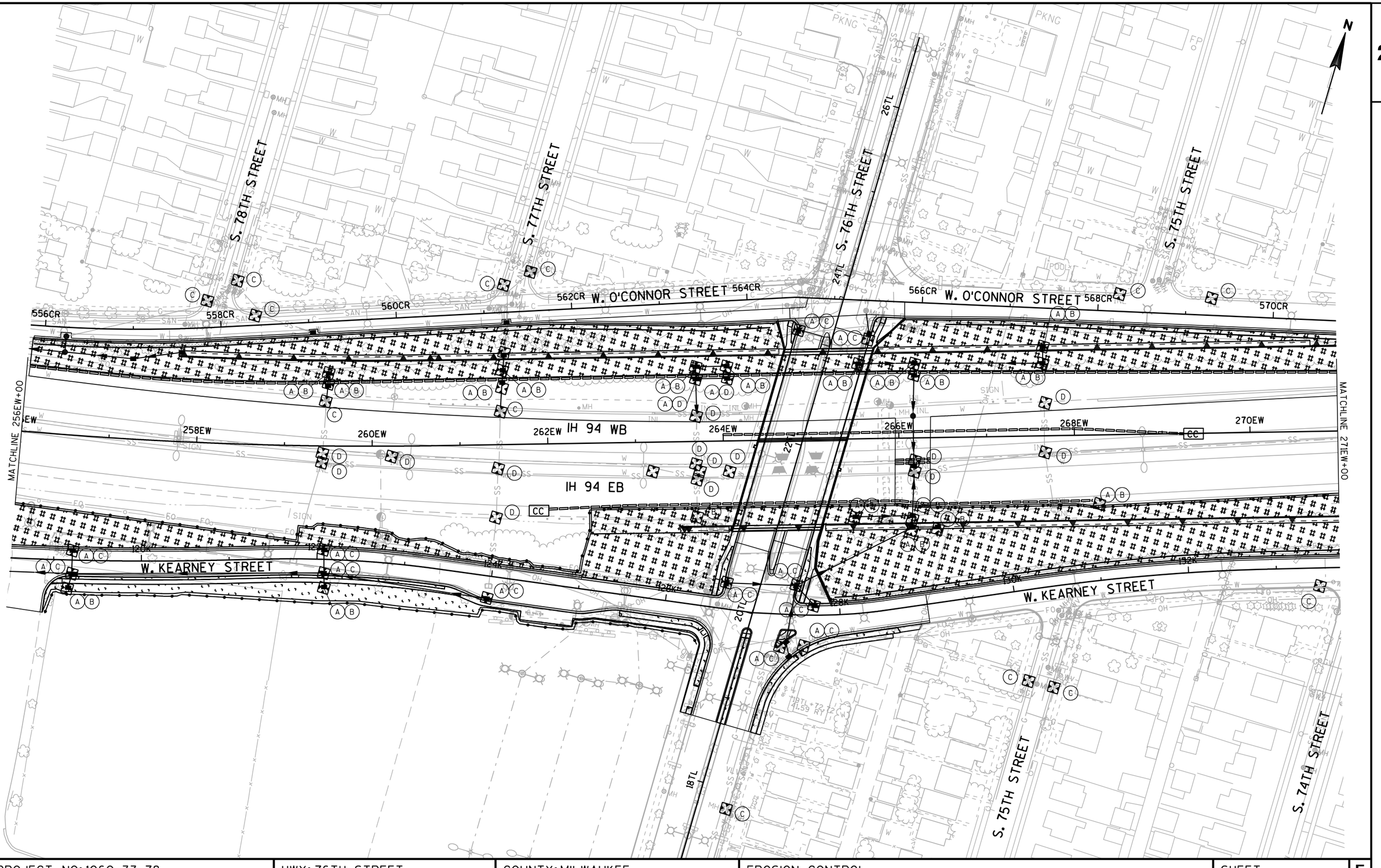


PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\022002_ec.dgn PLOT DATE : 10-JUN-2013 14:18 PLOT BY : MSCDYB PLOT NAME : 022002_ec PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

2

2

N

W. O'CONNOR STREET

572CR 574CR 576CR 578CR 580CR 582CR

IH 94 WB

IH 94 EB

272EW 274EW 276EW 278EW 280EW 282EW 284EW

MATCHLINE 271EW+00

W. KEARNEY STREET

134K 136K 138K 140K 142K

W. ADLER STREET

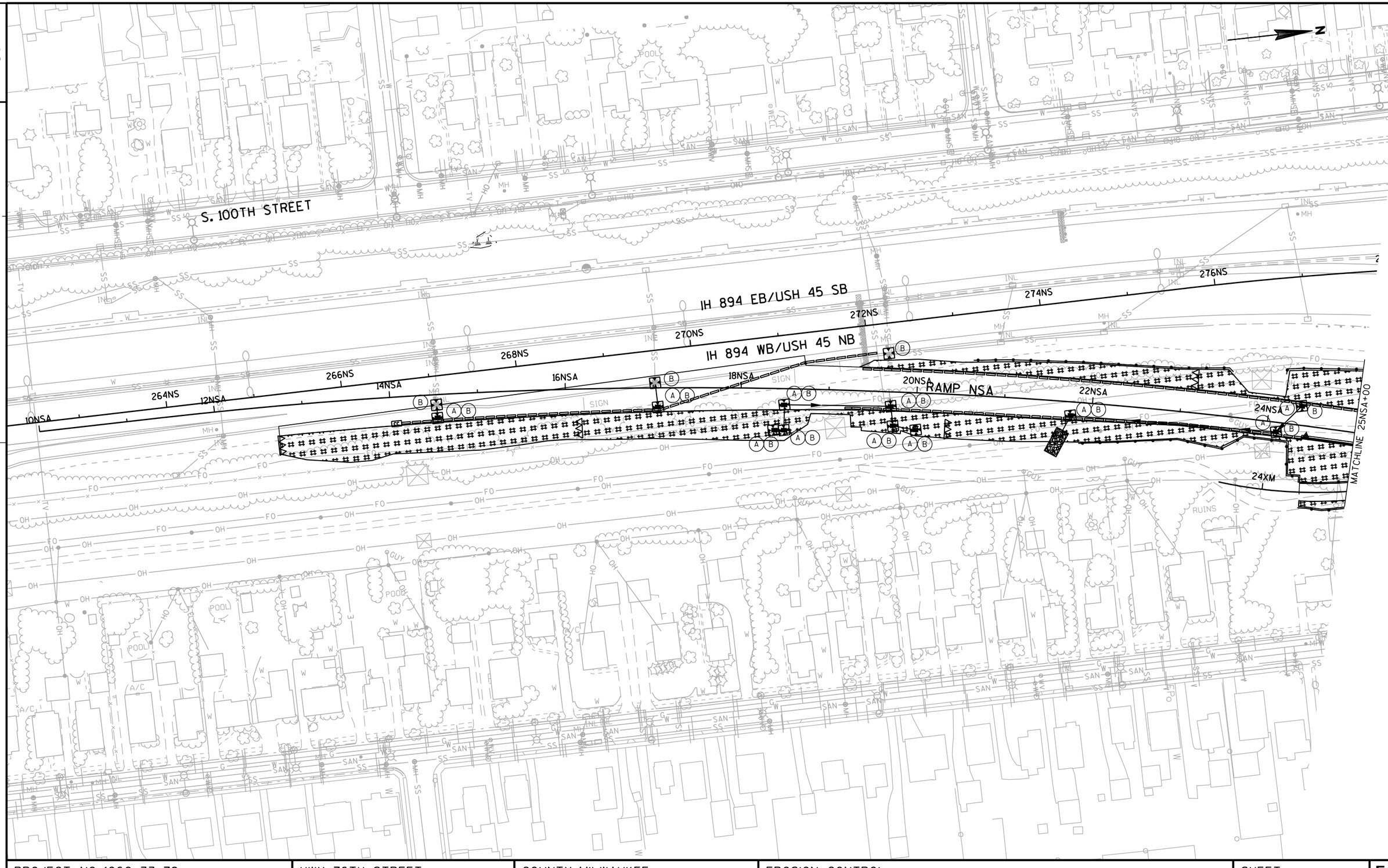
S. 70TH STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\022004_ec.dgn PLOT DATE : 29-APR-2013 22:57 PLOT BY : MSCDYB PLOT NAME : 022004_ec PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\022005_ec.dgn PLOT DATE : 07-JUN-2013 10:57 PLOT BY : mscgzl PLOT NAME : 022005_ec PLOT SCALE : 100:1

2

2

USH 45 SB

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

USH 45 NB

528SCH

530SCH

532SCH

534SCH

536SCH

278NS

280NS

282NS

284NS

286NS

288NS

290NS

292NS

188EW

26NSA

28NSA

30NSA

32NSA

34NSA

RAMP NSA

36NSA

38NSA

MATCHLINE 25NSA+00

WETLAND BOUNDARY

WETLAND BOUNDARY

IH 94 EB

S. 98TH STREET

W. SCHLINGER AVENUE

HANK AARON STATE TRAIL

DOCK

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\022006_ec.dgn PLOT DATE : 07-JUN-2013 10:57 PLOT BY : mscgzl PLOT NAME : 022006_ec PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

242NS 244NS 246NS 248NS 250NS 252NS 254NS 256NS

516G 518G 520G 522G 524G

WETLAND BOUNDARY

746GBB 748GBB 750GBB 752GBB

W. ORCHARD PLACE

W. GREENFIELD AVENUE

S. 98TH STREET

S. 97TH STREET

PKNG

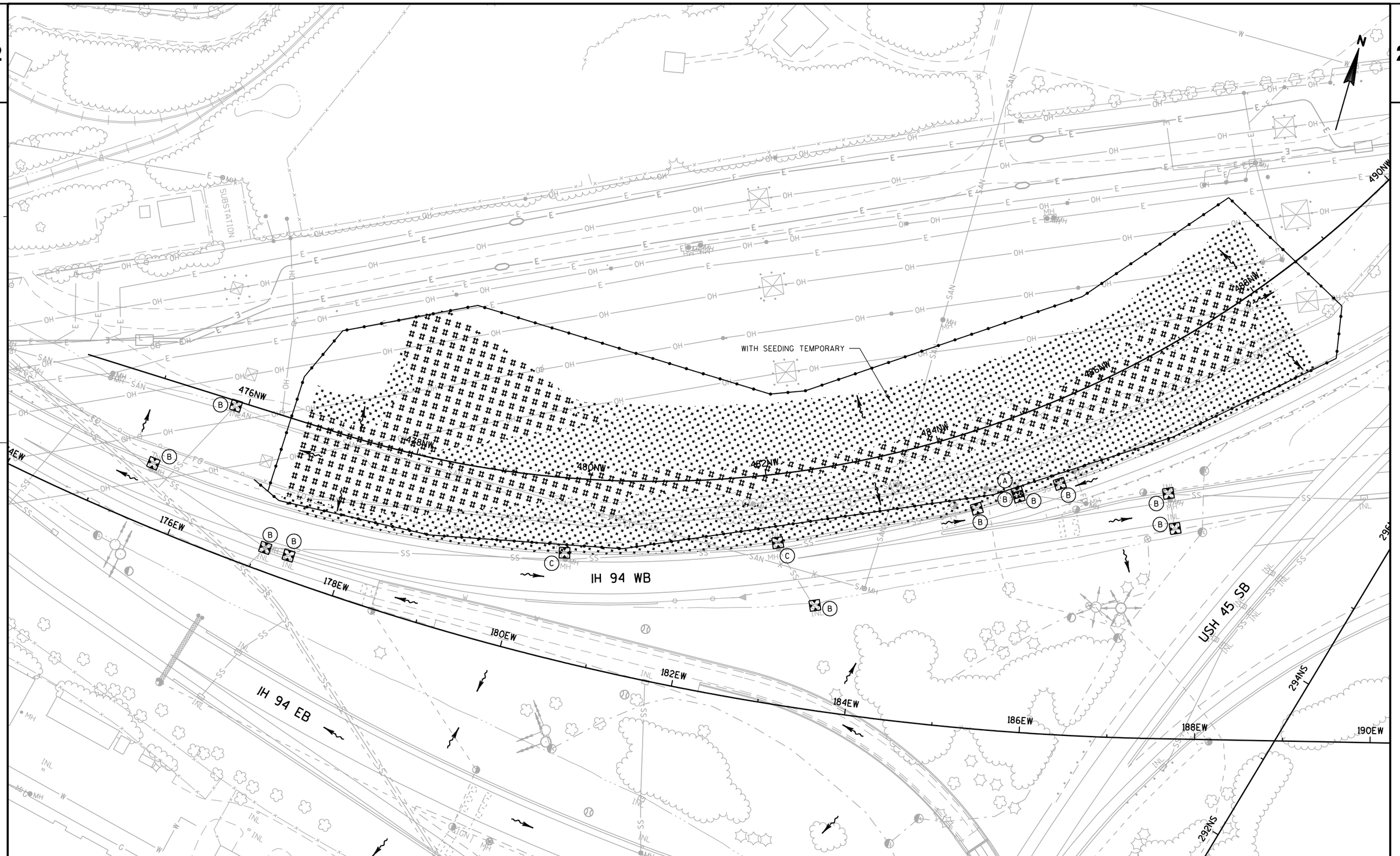
REC AREA

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\022007_ec.dgn PLOT DATE : 07-JUN-2013 10:58 PLOT BY : mscgzl PLOT NAME : 022007_ec PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EROSION CONTROL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\022008_ec.dgn PLOT DATE : 13-JUN-2013 15:04 PLOT BY : MSCDYB PLOT NAME : 022008_ec PLOT SCALE : 100:1

GENERAL DRAINAGE NOTES

LOCATION OF STRUCTURES IN CURB AND GUTTER SECTION REFER TO FLOW LINE.
LOCATION OF STRUCTURES NOT IN CURB AND GUTTER SECTION REFER TO CENTER OF STRUCTURE.

RIM ELEVATIONS ARE GIVEN AT FLOW LINE OF INLET OR AT CENTER OF MANHOLE. SEE STRUCTURE LOCATIONS DETAIL.

ADJUSTMENT RINGS MAY BE USED TO A COMBINED MAXIMUM THICKNESS OF 6-INCHES.

PLAN LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND IS USED FOR ESTIMATING. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE AND IS USED TO COMPUTE PIPE SLOPE.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES AND PIPES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. LOCATIONS SHOWN ARE TAKEN FROM EXISTING RECORDS AND BEST INFORMATION AVAILABLE FROM EXISTING PLANS. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION OF UTILITIES AND STRUCTURES SHOWN. VERIFY ALL LOCATIONS IN THE FIELD.

VERIFY THE EXISTING STORM SEWER SYSTEM CONNECTION LOCATIONS AND ELEVATIONS PRIOR TO ORDERING DRAINAGE STRUCTURES AND PIPES. NOTIFY THE ENGINEER OF ANY DEVIATIONS FROM THE INFORMATION SHOWN ON THE PLANS PRIOR TO INSTALLING THE PROPOSED STORM SEWER.

SEE REMOVAL PLANS FOR REMOVAL OF EXISTING STORM SEWER SYSTEM.

ALL DRAINAGE STRUCTURES, EXISTING OR PROPOSED, SUBJECT TO TRAFFIC LOADING SHALL HAVE NON-ROCKING COVERS AS DIRECTED BY THE ENGINEER IN THE FIELD. COST INCIDENTAL TO NEW COVER ON PROPOSED STRUCTURE OR "RECONSTRUCTING/ADJUSTING MANHOLES OR INLETS" ON EXISTING STRUCTURE UNLESS SPECIFICALLY CALLED OUT FOR WELDING STORM SEWER STRUCTURES.

PROVIDE TEMPORARY POSITIVE DRAINAGE THROUGHOUT THE PROJECT DURING ALL PROJECT STAGES.

SUPPORTING UTILITIES DURING STORM SEWER CONSTRUCTION IS INCIDENTAL TO STORM SEWER PIPE AND/OR STORM SEWER STRUCTURE.

JOINT TIES FOR CONCRETE PIPE SHALL BE USED TO CONNECT ALL CONCRETE APRON ENDWALLS AND THE LAST THREE PIPE SEGMENTS PRECEDING THE APRON ENDWALL. THE COST OF JOINT TIES SHALL BE INCIDENTAL TO THE STORM SEWER PIPE.

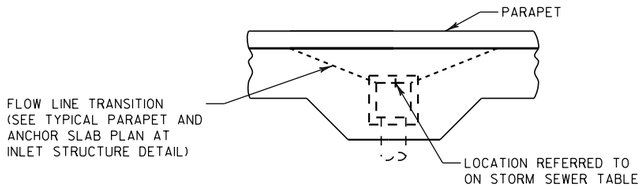
FOR CONCRETE BARRIER TEMPORARY PRECAST, PROVIDE TWO (2) LIFTING SLOTS PER UNIT (12'-6") ONE (1) FOOT WIDE BY THREE (3) INCHES HIGH AS PER S.D.D. "CONCRETE BARRIER TEMPORARY PRECAST 12'-6".

STORM SEWER LEGEND

EXISTING TLE***	EXISTING STRUCTURE
TL***	PROPOSED DRAINAGE STRUCTURE
●	PROPOSED MANHOLE
■	PROPOSED INLET
△	PROPOSED ENDWALL
EXISTING PE***	EXISTING PIPE
P***	PROPOSED PIPE

2

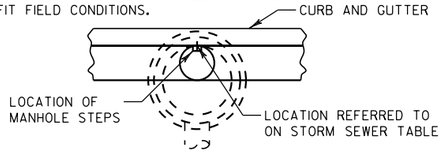
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER - CONSTRUCTION DETAILS	SHEET E



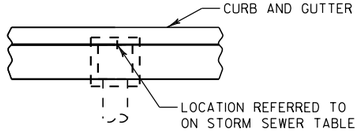
INLET IN RETAINING WALL ANCHOR SLAB

NOTE

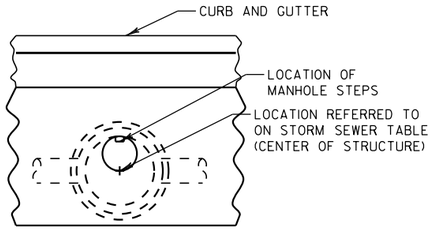
1) LOCATION OF STRUCTURE MAY BE ADJUSTED TO FIT FIELD CONDITIONS.



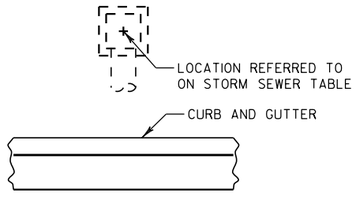
MANHOLE IN CURB AND GUTTER



INLET IN CURB AND GUTTER

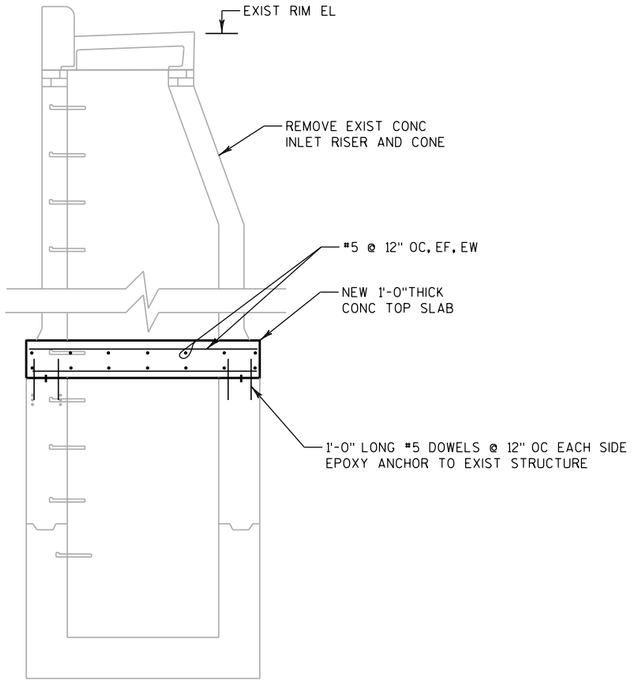


MANHOLE NOT IN CURB AND GUTTER



INLET NOT IN CURB AND GUTTER

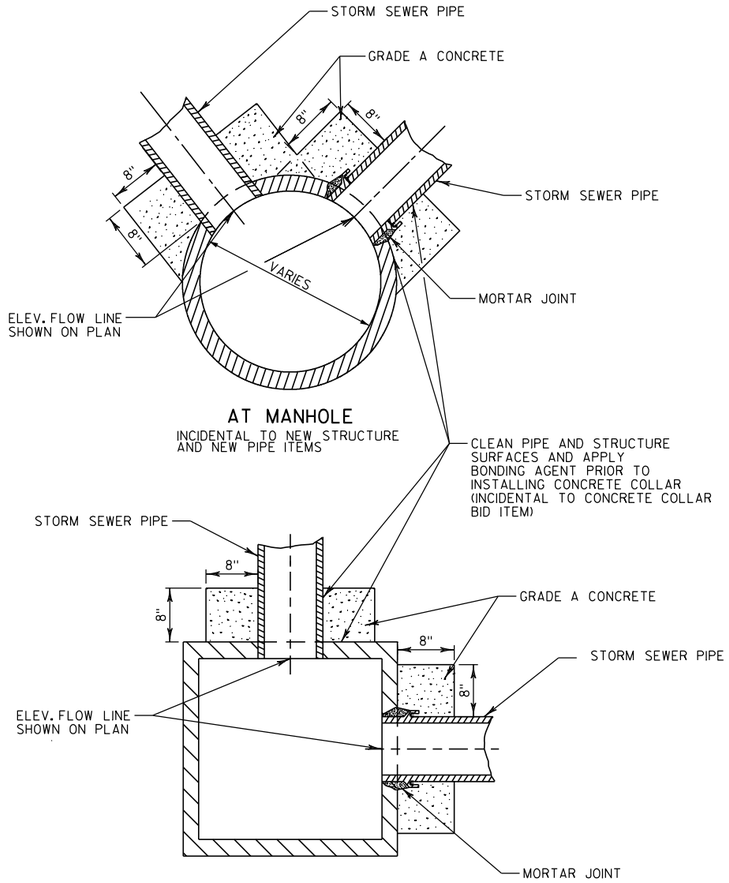
STRUCTURE LOCATION DETAIL



SECTION

REMOVE AND CAP EXISTING DRAINAGE STRUCTURE

259EW+48 53' LT
261EW+47 36' LT
263EW+70 31' LT
267EW+67 38' LT
271EW+71 50' LT
274EW+15 57' LT
14NSA+52 11' RT
17NSA+02 7' LT
267EW+76 78' RT



AT MANHOLE

INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS

CLEAN PIPE AND STRUCTURE SURFACES AND APPLY BONDING AGENT PRIOR TO INSTALLING CONCRETE COLLAR (INCIDENTAL TO CONCRETE COLLAR BID ITEM)

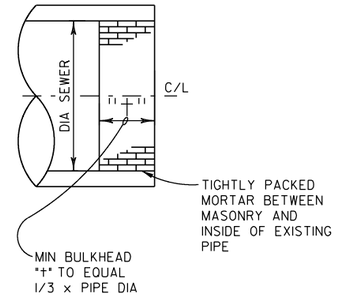
AT STORM SEWER INLET

INCIDENTAL TO NEW STRUCTURE AND NEW PIPE ITEMS

NOTE

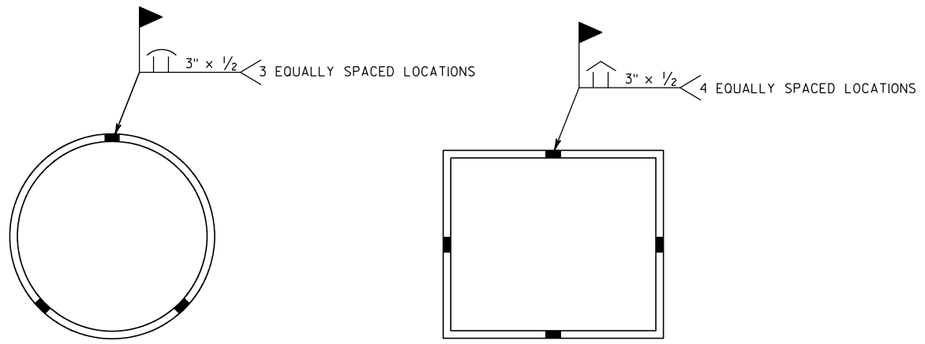
CONCRETE COLLAR TO BE PAID AS A BID ITEM WHEN CONNECTING AN EXISTING PIPE TO A NEW STRUCTURE.

CONCRETE COLLAR DETAIL



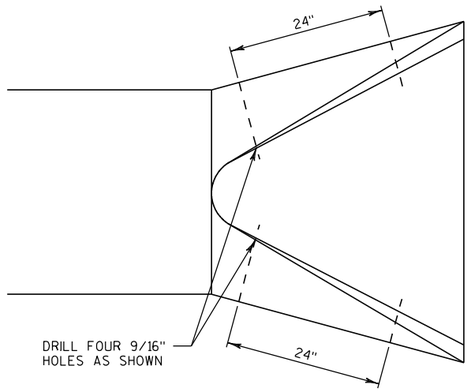
BULKHEAD PIPE MASONRY

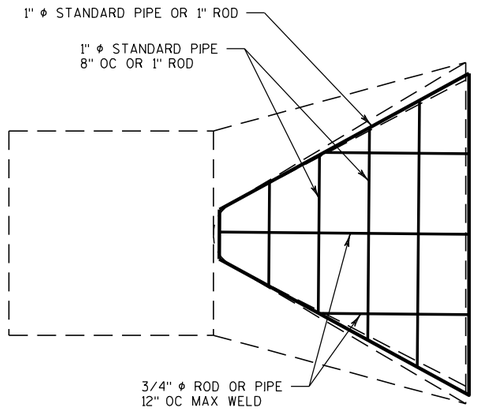
ITEM TO BE PAID FOR UNDER ITEM "SEALING PIPES"



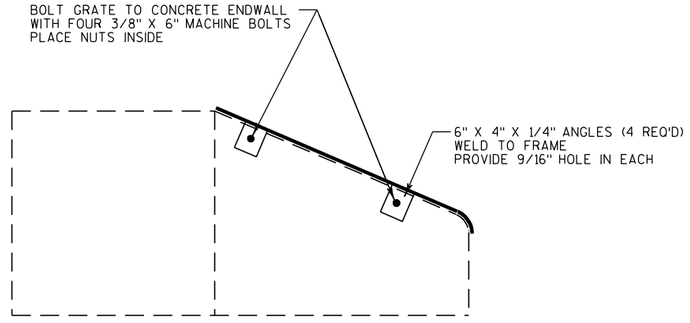
WELDING STORM SEWER COVERS

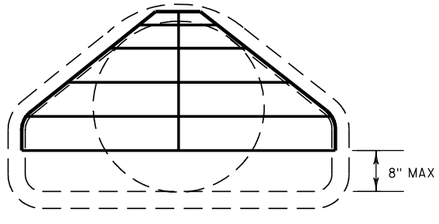
WELD EACH STORM SEWER COVER WITH A 1/2 WIDE WELD 3" LONG



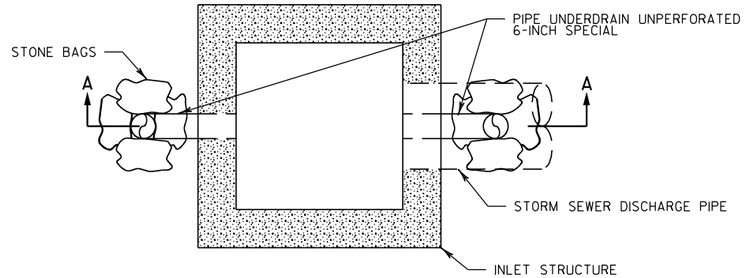


AT EACH PIPE

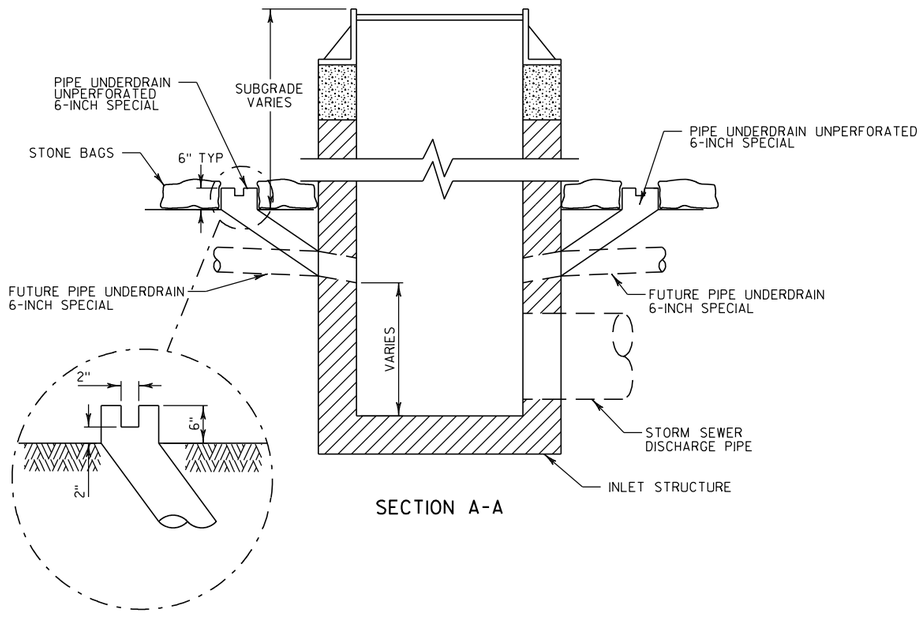




PIPE GRATE DETAIL

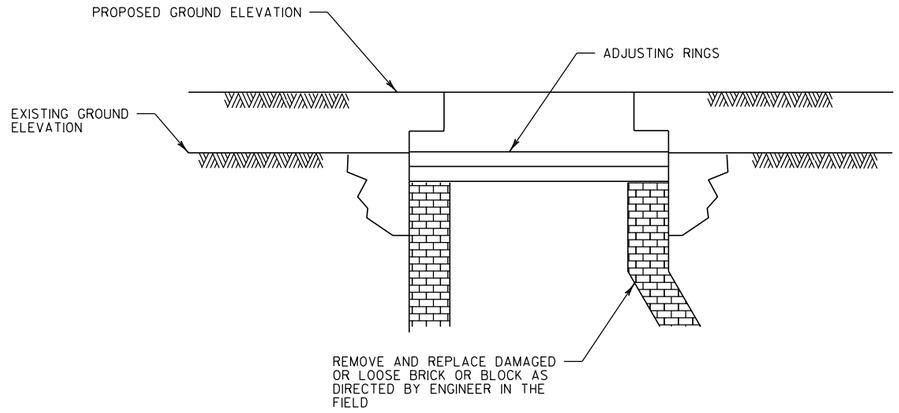


PLAN VIEW



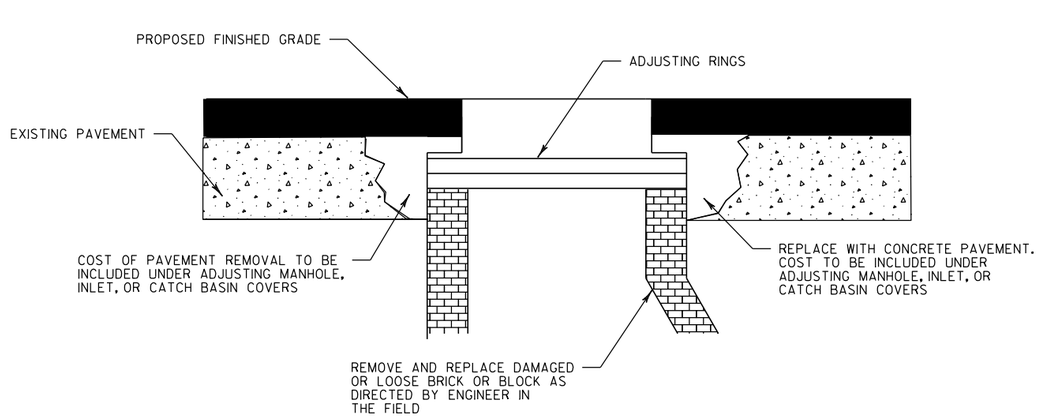
SECTION A-A

TEMPORARY SUBGRADE DRAINAGE AT SAG POINTS



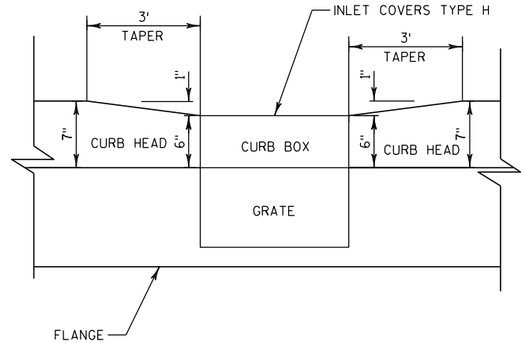
NON-PAVED LOCATION

ADJUST CHIMNEY WITH PROPER SIZE CONCRETE ADJUSTING RINGS (SIZE OF OPENING OF CONCRETE ADJUSTING RING TO BE DETERMINED BY SIZE OF OPENING IN FRAME) AND REINSTALL EXISTING FRAME AND LID TO FINISHED GRADE. BACKFILL AND OTHER WORK TO BE DONE IN ACCORDANCE WITH ITEM ADJUSTING INLET COVERS.



PAVED LOCATION

ADJUSTING MANHOLE OR INLET COVERS

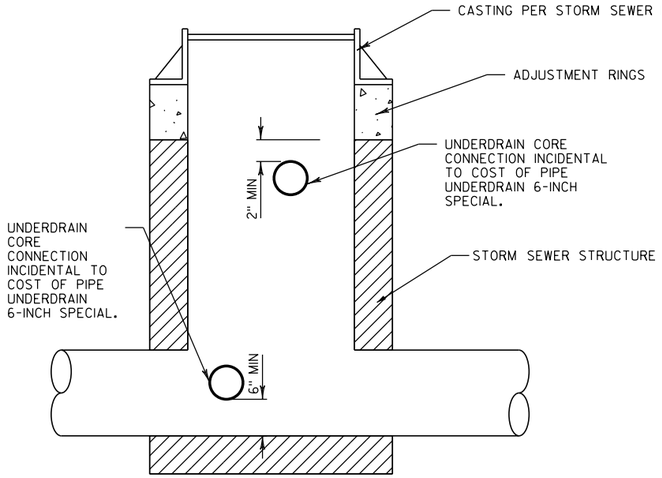


PLAN VIEW

NOTE

TAPER BACK CURBHEAD EDGE; MAINTAIN FRONT CURB FACE. PAID FOR AS CONCRETE CURB AND GUTTER 31-INCH.

CURB HEAD TRANSITION FOR INLET COVERS TYPE H



SECTION A-A

MINIMUM AND MAXIMUM CORED PIPE UNDERDRAIN 6-INCH SPECIAL UNDERDRAIN CORE LOCATIONS WITH CROSSPIPE.

NOTE

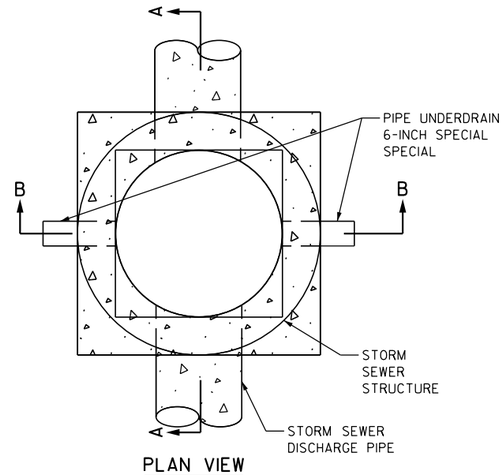
(1) BOTTOM OF CORE PLACED A MINIMUM OF 6" ABOVE THE INVERT OF THE REINFORCED CONCRETE STORM SEWER PIPE.

(2) TOP OF CORE HOLES WILL BE A MINIMUM OF 2" BELOW THE TOP OF THE INLET STRUCTURES (BOTTOM OF RINGS)

(3) PIPE UNDERDRAIN 6-INCH SPECIAL SHALL NOT BE ALLOWED IN THE RING OF THE STRUCTURE OF INLETS OR SEWER ACCESS STRUCTURES.

(4) CORE HOLES SHALL PROVIDE FOR A MINIMUM OF 2" OF CONCRETE BETWEEN THE CUTOUT FOR A CONCRETE PIPE AND THE EDGE OF THE CORE HOLE.

(5) CORE HOLES MAY HAVE 0" CLEARANCE FROM THE INSIDE WALL OF A STRUCTURE.



PLAN VIEW

PIPE UNDERDRAIN 6-INCH SPECIAL OUTFALL AT INLET/MANHOLE (ROUND OR SQUARE)

NOTES

1. CONNECTIONS TO INLETS OR MANHOLES SHALL EXTEND PIPE UNDERDRAIN 6-INCH SPECIAL TO THE INSIDE WALL OF STORM SEWER STRUCTURE.

2. PROVIDE UNDERDRAIN PIPE CORED HOLES AT OR BETWEEN ELEVATIONS SHOWN IN SECTION A-A.

3. SEE STORM SEWER PLANS FOR PIPE UNDERDRAIN LOCATIONS.

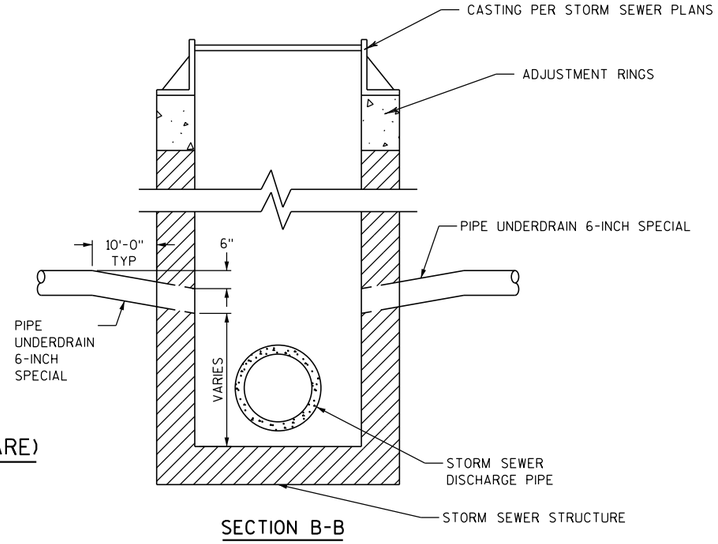
4. PROVIDE POSITIVE DRAINAGE (0.3% MINIMUM GRADE) THROUGH PIPE UNDERDRAIN 6-INCH SPECIAL AND CORE INTO STORM SEWER STRUCTURE.

5. WHEN INLET DEPTH IS SHALLOW, PIPE UNDERDRAIN 6-INCH SPECIAL MAY BE PLACED AT A DEPTH TO PROVIDE POSITIVE DRAINAGE TO BE COORDINATED WITH ENGINEER IN FIELD.

6. ATTACHMENT OF PIPE UNDERDRAIN 6-INCH SPECIAL TO REAR OF INLET IS SATISFACTORY IF REINFORCED CONCRETE STORM SEWER PIPE SIZE RESTRICTS SPACE FOR UNDERDRAIN CORE.

7. COORDINATE LOCATION AND TIMING OF ANY CONNECTIONS BEING MADE TO PIPE UNDERDRAIN 6-INCH SPECIAL FOR RETAINING WALL PIPE UNDERDRAIN STRUCTURES WITH WALL CONTRACTOR.

8. CONNECT PIPE UNDERDRAIN 6-INCH SPECIAL AT STORM SEWER STRUCTURES SUCH THAT ANY SINGLE RUN DOES NOT EXCEED 800 FEET IN LENGTH.

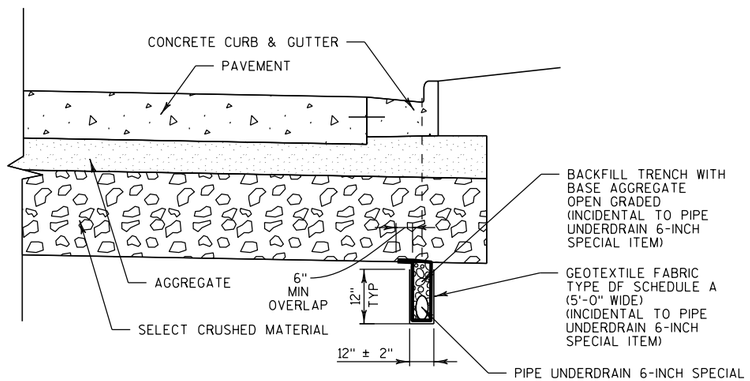


SECTION B-B

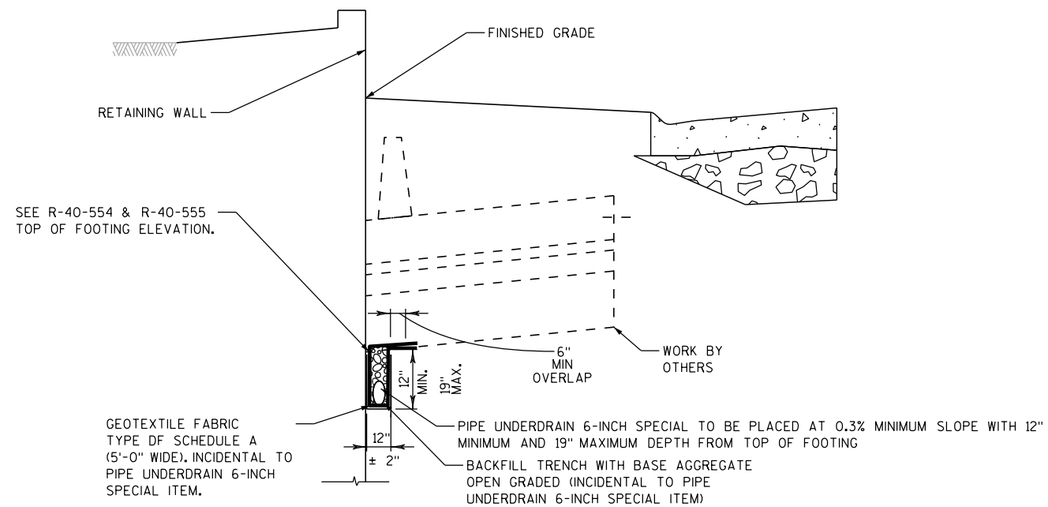
TYPICAL INLET CONFIGURATION WITH UNDERDRAIN CORED INTO WALL

NOTE

(1) TYPICAL ELEVATION OF PIPE UNDERDRAIN 6-INCH SPECIAL SHALL BE PLACED BELOW THE SELECT CRUSHED MATERIAL.



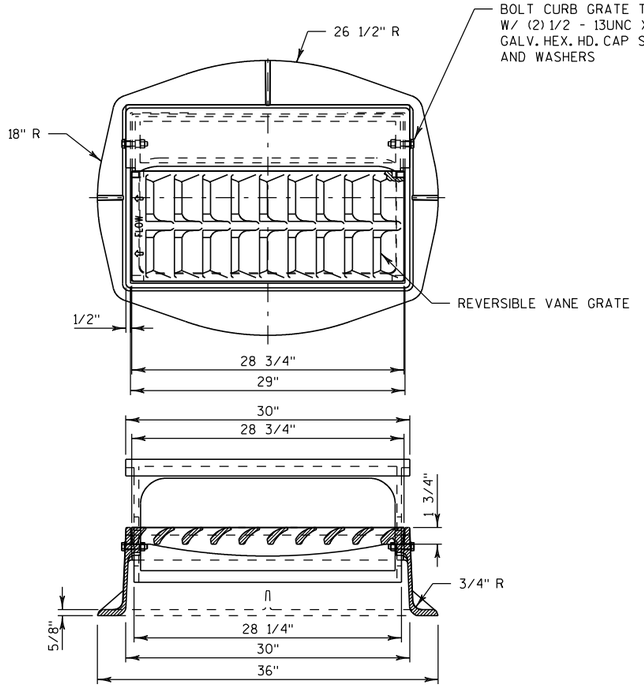
PIPE UNDERDRAIN 6-INCH SPECIAL TRENCH DETAIL - CURB AND GUTTER SECTION

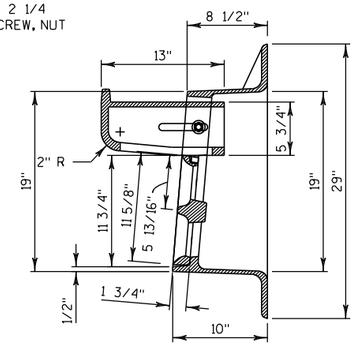


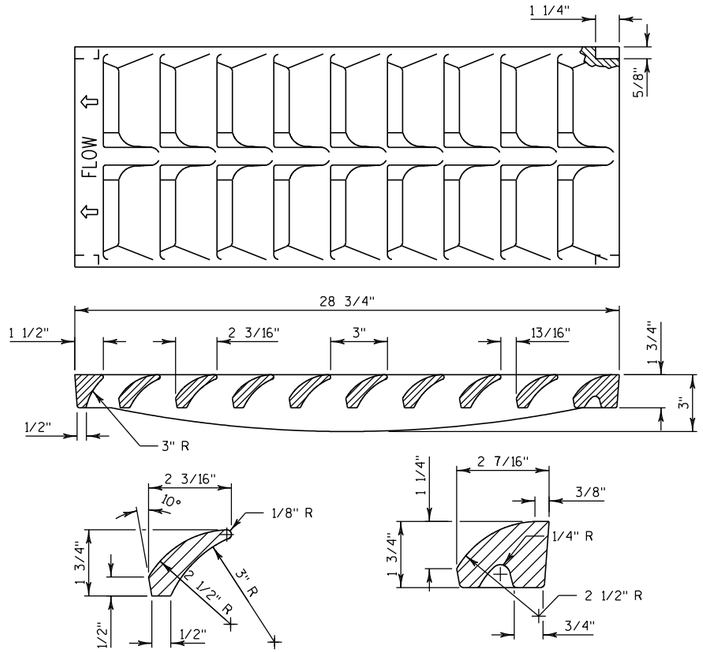
PIPE UNDERDRAIN 6-INCH SPECIAL TRENCH DETAIL - RETAINING WALL SECTION

N.T.S.

2

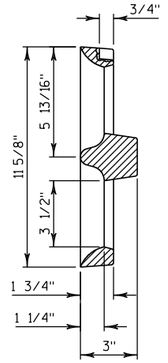


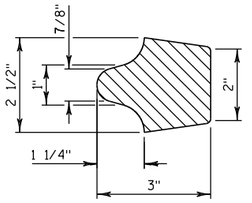




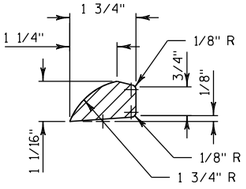
VANE DETAIL

FRONT VANE DETAIL





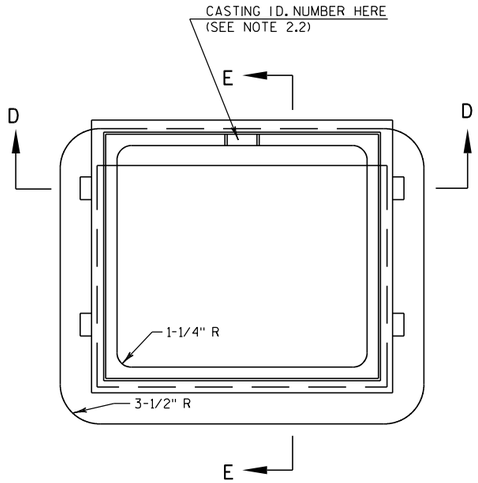
MIDDLE RIB DETAIL

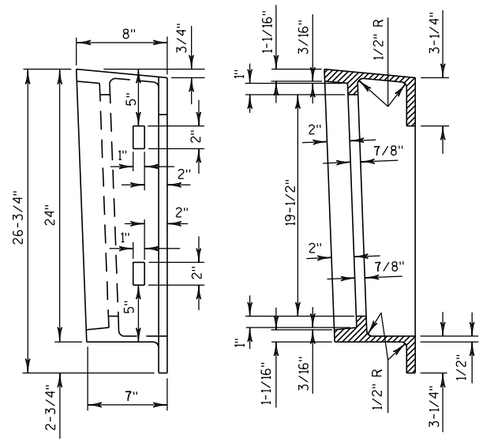


SIDE RIB DETAIL

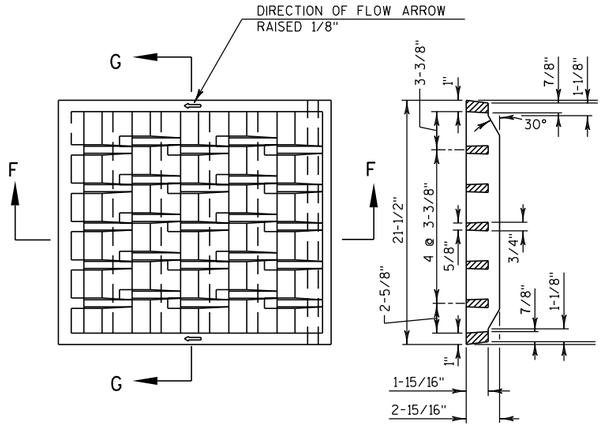
INLET COVERS TYPE R-SPECIAL

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER - CONSTRUCTION DETAILS	SHEET	E



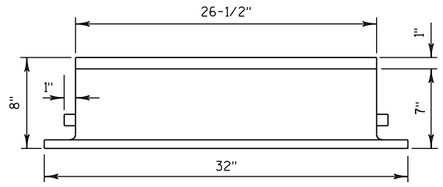


SECTION E-E

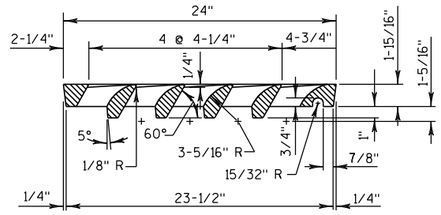


GRATE

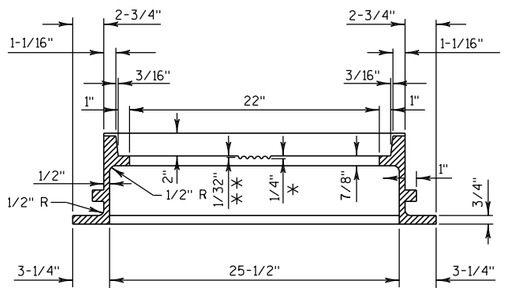
SECTION G-G



FRAME



SECTION F-F



SECTION D-D

* DEPRESSION FOR LETTERS

** CLEARANCE FROM TOP OF LETTERS TO FACE OF SEAT

GENERAL NOTES

1. ALL EDGES ARE TO BE GROUND.

2. ALL CASTINGS SHALL BEAR THE FOLLOWING IDENTIFICATION MARKS IN THE FORM OF LEGIBLE LETTERS OR NUMERALS RAISED 1/8":

   ON THE FRAME
   1. ON THE UPPER FACE OF THE FLANGE IN 1 INCH HIGH LETTERS THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.
   2. ON THE SEAT OF THE FRAME IN 1 INCH HIGH LETTERS, THE CASTING IDENTIFICATION NUMBER (M.S.51).

   ON THE GRATE
   1. ON THE UPPER SIDE OF THE GRATE IN 1 INCH HIGH LETTERS, THE INITIALS OR MONOGRAM OF THE FOUNDRY, THE YEAR MADE, THE CASTING IDENTIFICATION NUMBER (M.S.57) AND THE SERIAL NUMBER OF THE INDIVIDUAL CASTING.

CASTING - TYPE 57

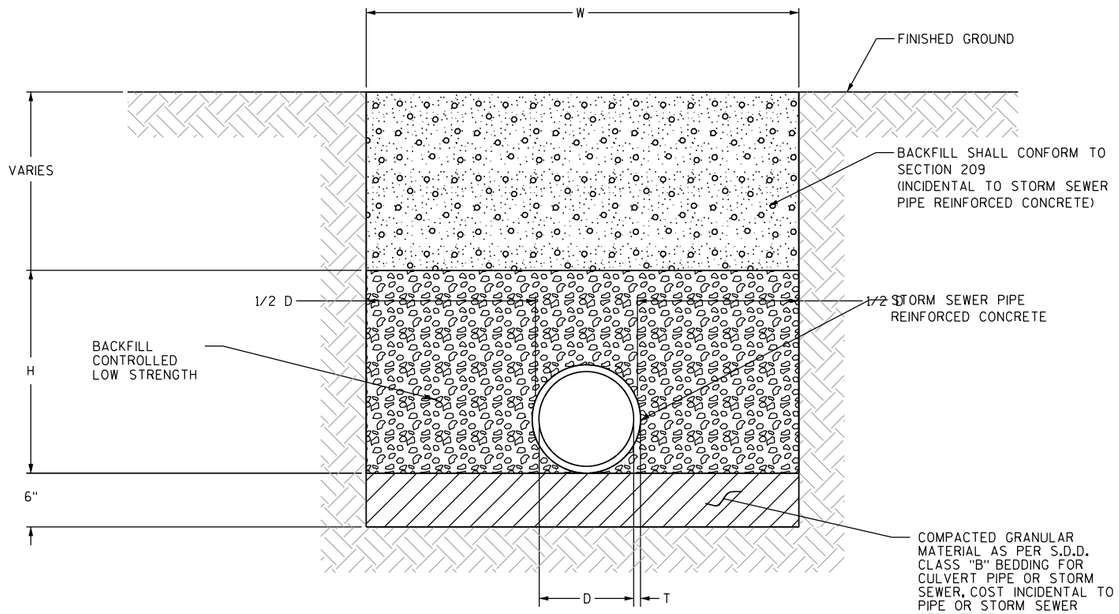
LID-145 LBS., FRAME-204 LBS.

2

BACKFILL CONTROLLED LOW STRENGTH (BCLS) (FOR INFORMATION ONLY)

LOCATION	PIPE SIZE (INCH) DIAMETER D	THICKNESS T	HEIGHT BCLS (FT) H	TRENCH WIDTH (LF) (2*(1/2)D)+(2*T)+D W	PIPE AREA IN BCLS (SF) PA	TRENCH AREA IN BCLS (SF) H x W TA	BCLS AREA (SF) TA-PA BA
P109	15	2.25	9.38	2.9	2.1	27.0	16.4
P109A	24	3	7.76	4.5	4.9	34.9	30.0
P304	12	2	6.09	2.3	1.4	14.2	12.8
P308	15	2.25	2.5	2.9	2.1	7.2	5.1
P111	12	2	4.54	2.3	1.4	10.6	9.2
P111B	15	2.25	5.35	2.9	2.1	15.4	13.3
P111A	15	2.25	9.9	2.9	2.1	28.5	26.4
P419	24	3	9.5	4.5	4.9	42.8	37.8
TL185	---	---	---	---	---	---	12.6

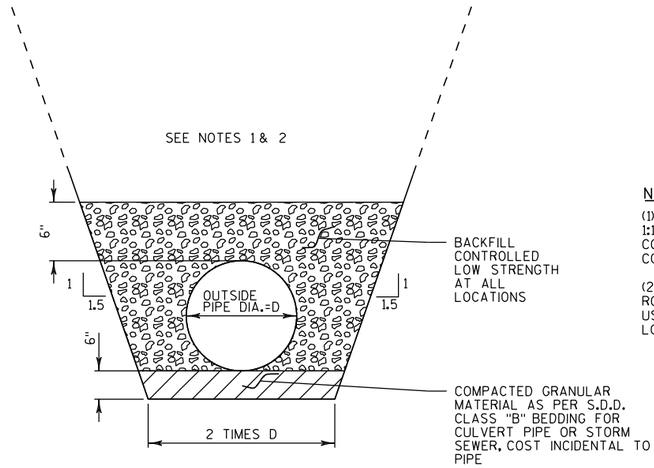
BACKFILL CONTROLLED LOW STRENGTH (BCLS) VOLUME (CUBIC YARDS) = $\frac{\text{BCLS AREA (BA) X PIPE PLAN LENGTH}}{27}$



BACKFILL CONTROLLED LOW STRENGTH LOCATION IDENTIFIED IN ABOVE TABLE DETAIL-TRENCH

BACKFILL CONTROLLED LOW STRENGTH (FOR INFORMATION ONLY)

PIPE DIAMETER INCHES	Wall Thickness Inches	Bottom Trench Width FT	Height of Pipe Zone to 6" above top of	Trench Top Width At 1.5:1 Slope	Area of Pipe Zone SF
12	2	2.7	1.83	8.17	9.93
15	2.25	3.3	2.13	9.63	13.68
18	2.5	3.8	2.42	11.08	18.02
24	3	5.0	3.00	14.00	28.50
30	3.5	6.2	3.58	16.92	41.36
36	4	7.3	4.17	19.83	56.60
48	5	9.7	5.33	25.67	94.22
60	6.75	12.3	6.63	32.13	146.99
72	7.75	14.6	7.79	37.96	204.69
84	8	16.7	8.83	43.17	264.26
96	9	19.0	10.00	49.00	340.00

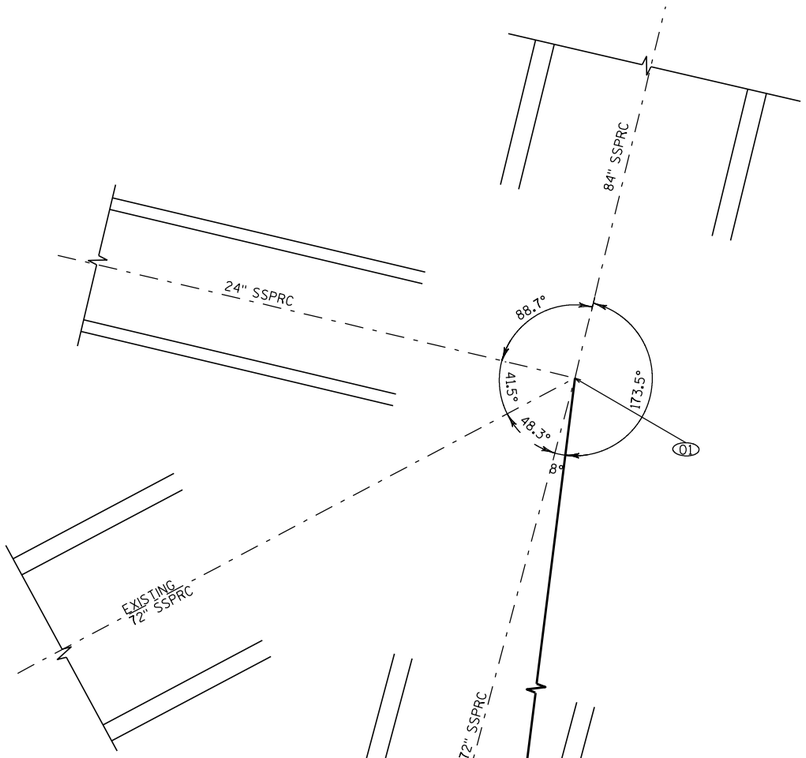


NOTE

(1) IF THE PIPE IS WITHIN THE ROADWAY 1:1, BACKFILL ABOVE BACKFILL CONTROLLED LOW STRENGTH SHALL CONFORM TO SECTION 209.

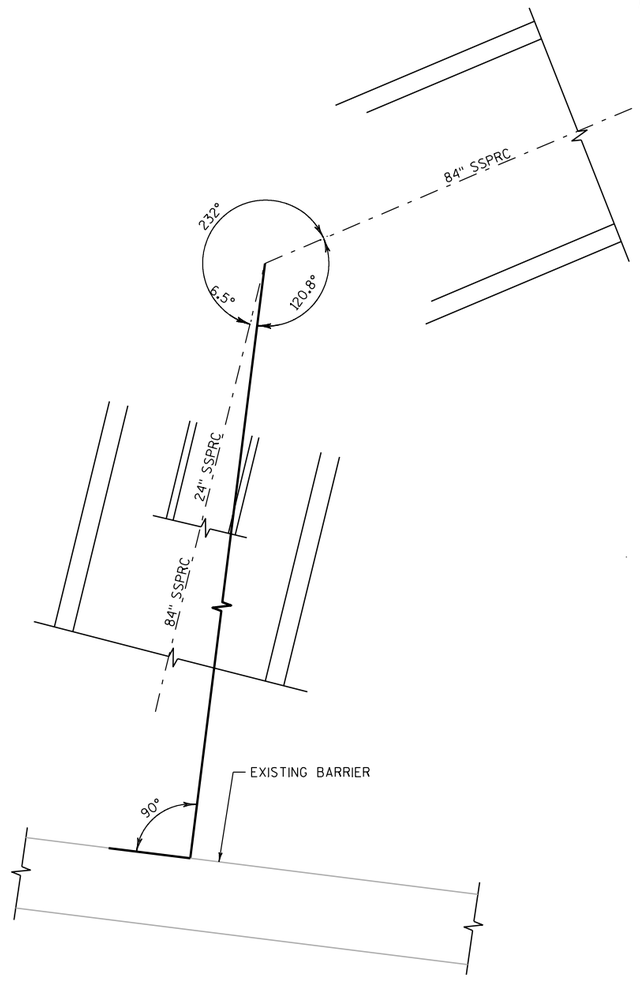
(2) IF THE PIPE IS OUTSIDE THE ROADWAY 1:1, NATIVE BACKFILL MAY BE USED ABOVE BACKFILL CONTROLLED LOW STRENGTH.

STORM SEWER BACKFILL DETAIL



GEOMETRIC PLAN - STRUCTURE NO. TL219

RAMP FDA



GEOMETRIC PLAN - STRUCTURE NO. TL220

RAMP FDA



NOTES

1. THE NORTH ARROW DIRECTION IS TYPICAL FOR ALL PLANS ON THIS SHEET.

2. STRUCTURES SHALL BE DESIGNED ACCORDING TO APPLICABLE AASHTO AND/OR ASTM REQUIREMENTS AS PER STANDARD SPECIFICATION 611.

3. THE CENTER OF THE SEWER IS NOT NECESSARILY THE CENTER OF THE TOP OPENING IN THE STRUCTURE. ADJUST THE LAYOUT AS DIRECTED BY THE ENGINEER TO ENSURE PROPER LOCATION OF THE FRAME ON THE STRUCTURE.

4. DESIGN LOADS
EARTH:
SOIL WEIGHT: 120PCF
HYDROSTATIC PRESSURE: 62.5 PCF
AT-REST LATERAL EARTH PRESSURE: 60 PCF

LIVE:
HL-93 AXLE LOAD

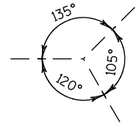
5. STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING: PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS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

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

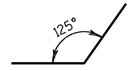
7. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND HORIZONTAL LOAD OF 400 LBS.

8. SEE STORM SEWER MISCELLANEOUS QUANTITIES FOR CASTING TYPE, RIM OR FLOW ELEVATION, AND PIPE ELEVATION.

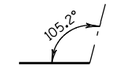
LEGEND



SUBTENDED ANGLES OF PIPE CENTERLINES

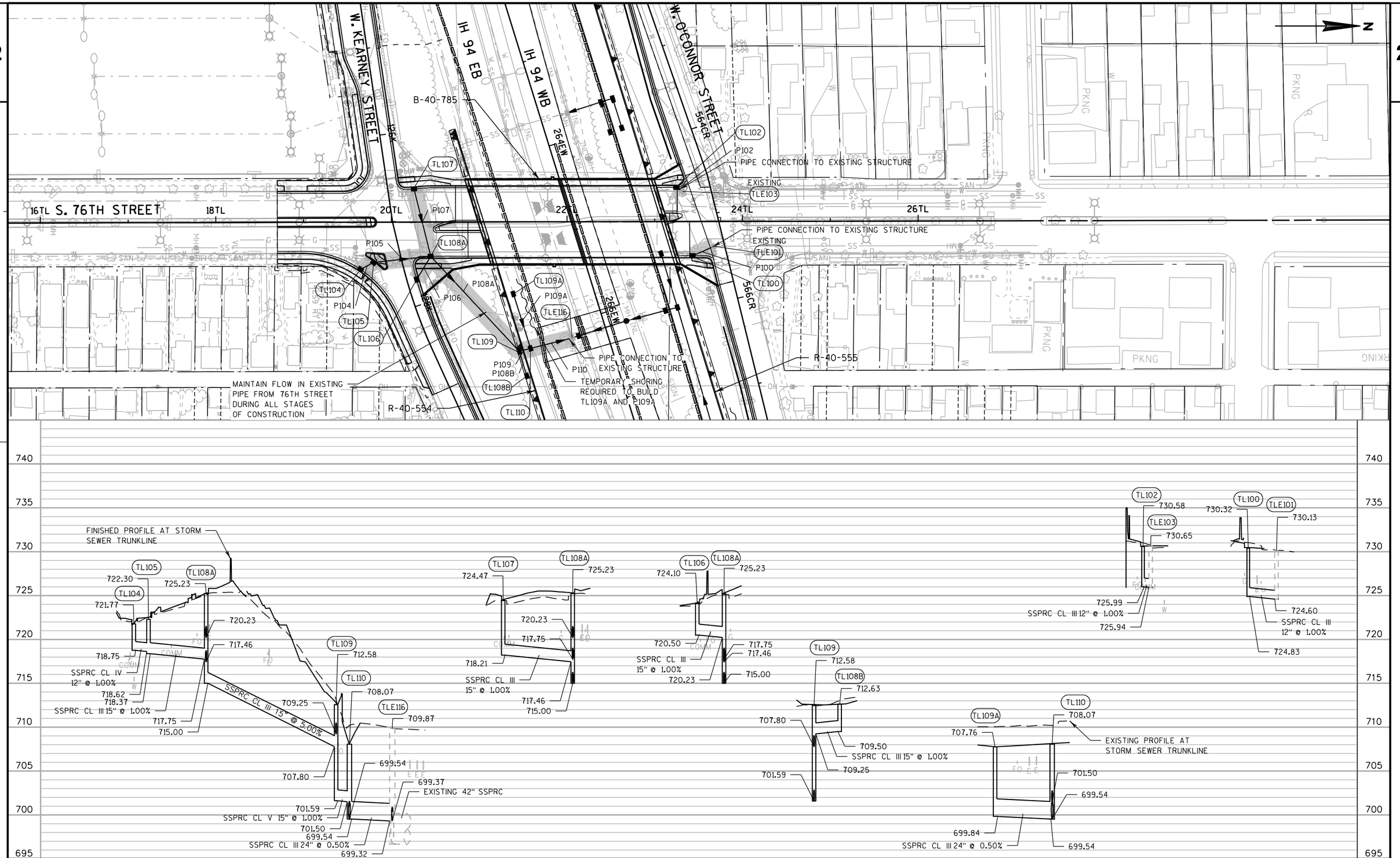


SUBTENDED ANGLE OF LOCATION REFERRED TO ON STORM SEWER MISCELLANEOUS QUANTITY TABLE TO PROPOSED CURB FACE



SUBTENDED ANGLES OF LINE PERPINDICULAR TO CURB FACE AND PIPE CENTERLINES

(01) LOCATION REFERRED TO ON STORM SEWER MISCELLANEOUS QUANTITY TABLE



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

2

HONEY CREEK

S. 84TH STREET

W. O'CONNOR STREET

PLAYGROUND

REQUIRED FOR FUTURE CONSTRUCTION

BULKHEAD PIPE MASONRY

CONNECT EXISTING 72" PIPE WEST 1-CONCRETE COLLAR REQUIRED

EXISTING PE218

10FDA

12FDA

RAMP FDA

CONNECT EXISTING 15" PIPE WEST 1-CONCRETE COLLAR REQUIRED

EXISTING PE227

EXISTING TLE218

PIPE CONNECTION TO EXISTING STRUCTURE

PIPE CONNECTION TO EXISTING STRUCTURE

EXISTING TLE217

EXISTING PE216

TEMPORARY SHORING REQUIRED TO CONSTRUCT TL219

C-40-101

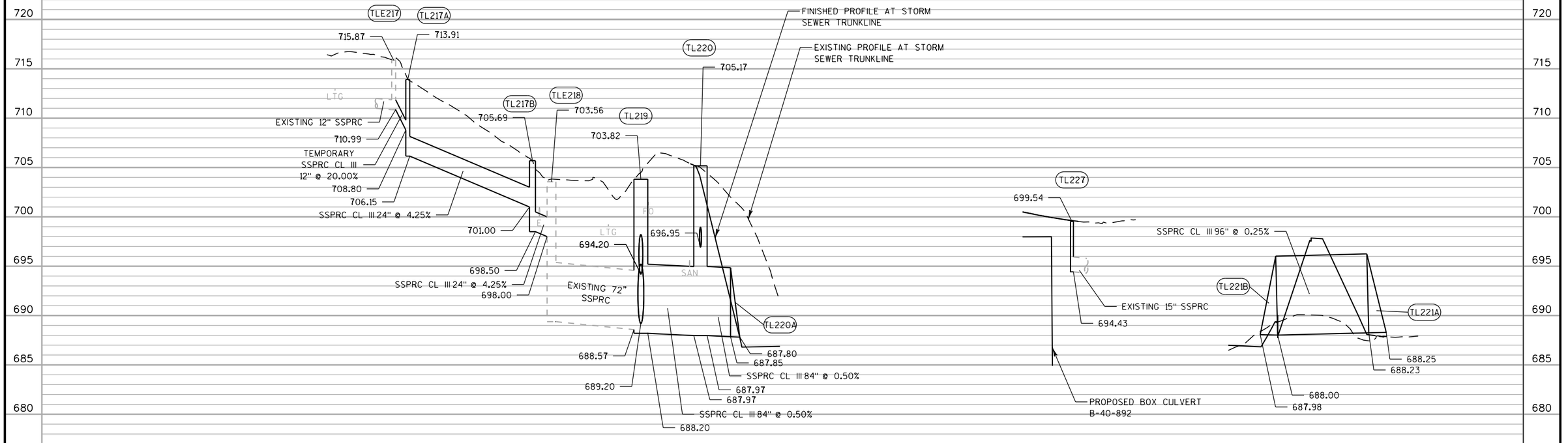
228EW 230EW 232EW 234EW 236EW 238EW 240EW 242EW

IH 94 WB

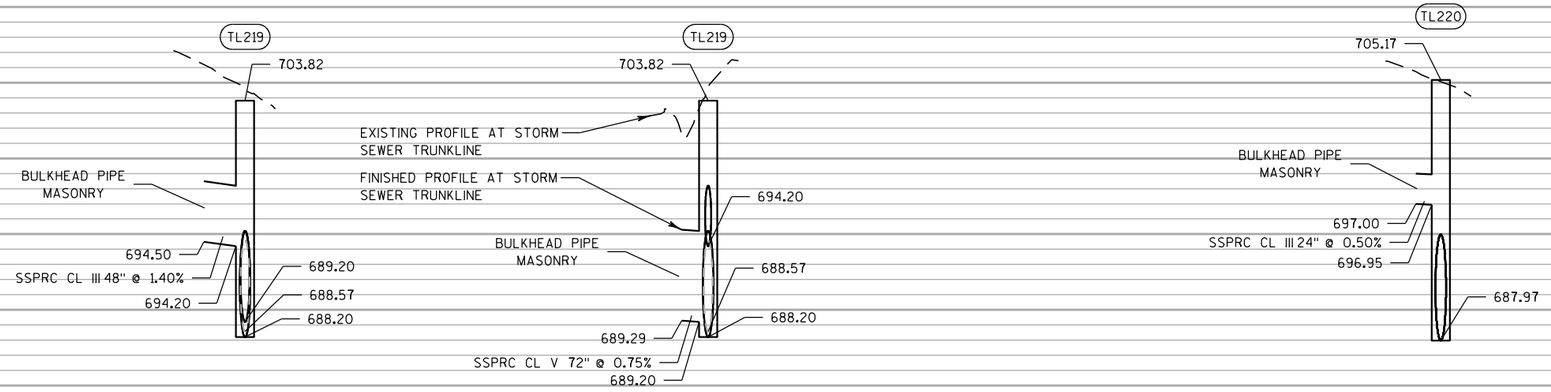
IH 94 EB

P220 P221 P219A P219 P218A P218B P217A P217 P216

TL220 TL220A TL221B TL219 TL221A TL227 TL218 TL217A TL217B TL217 TLE218 TLE217 TLE216



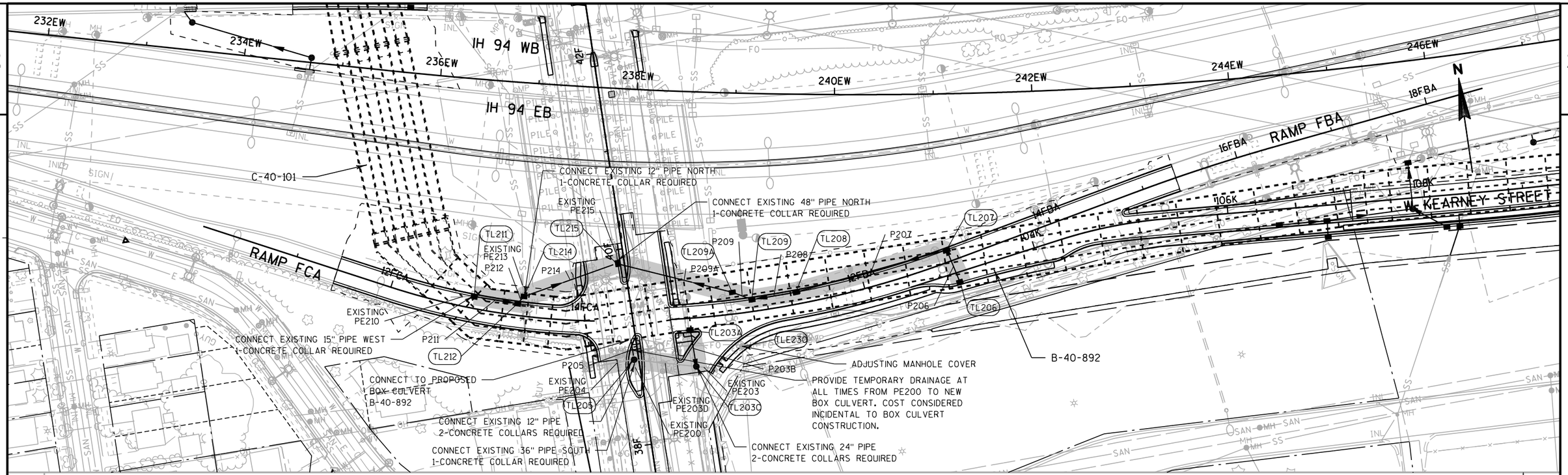
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET E

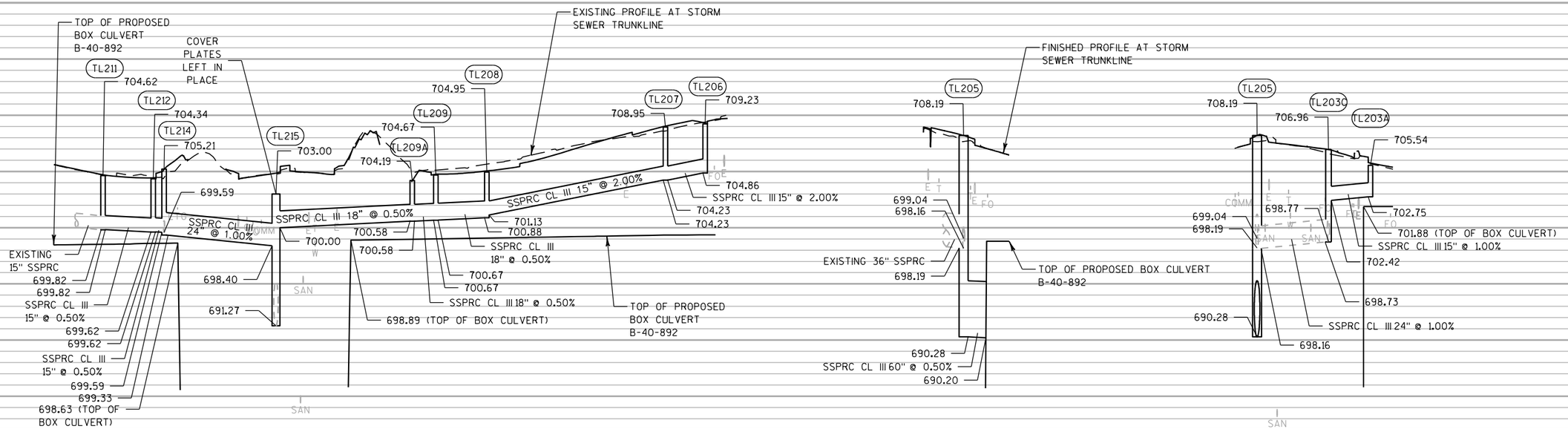


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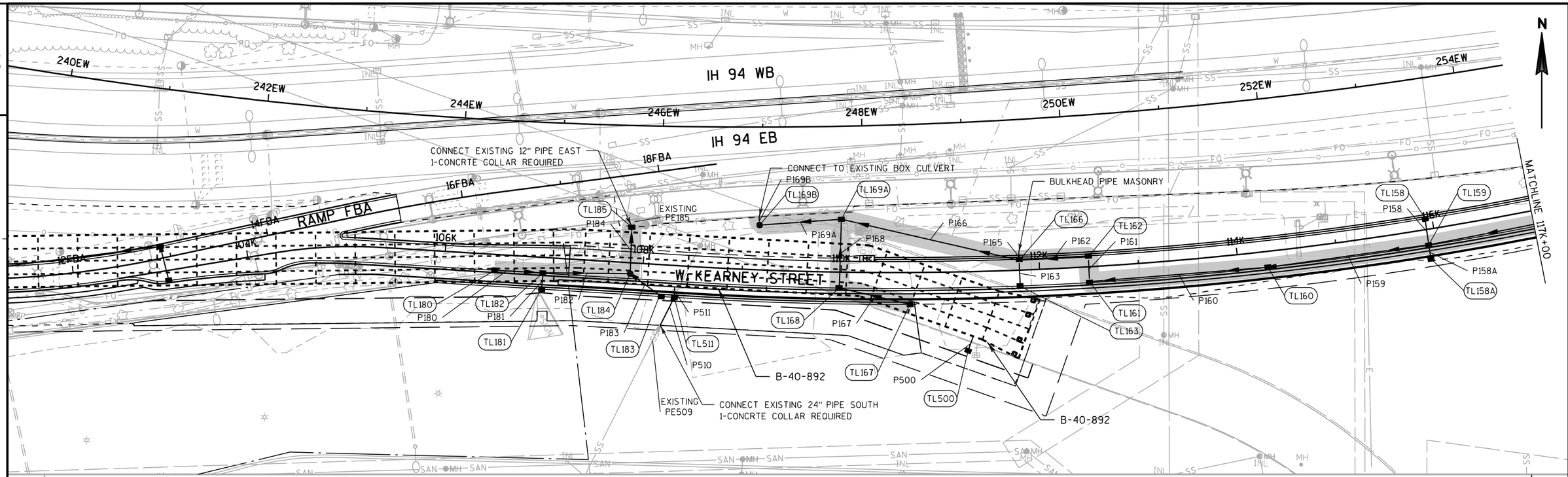
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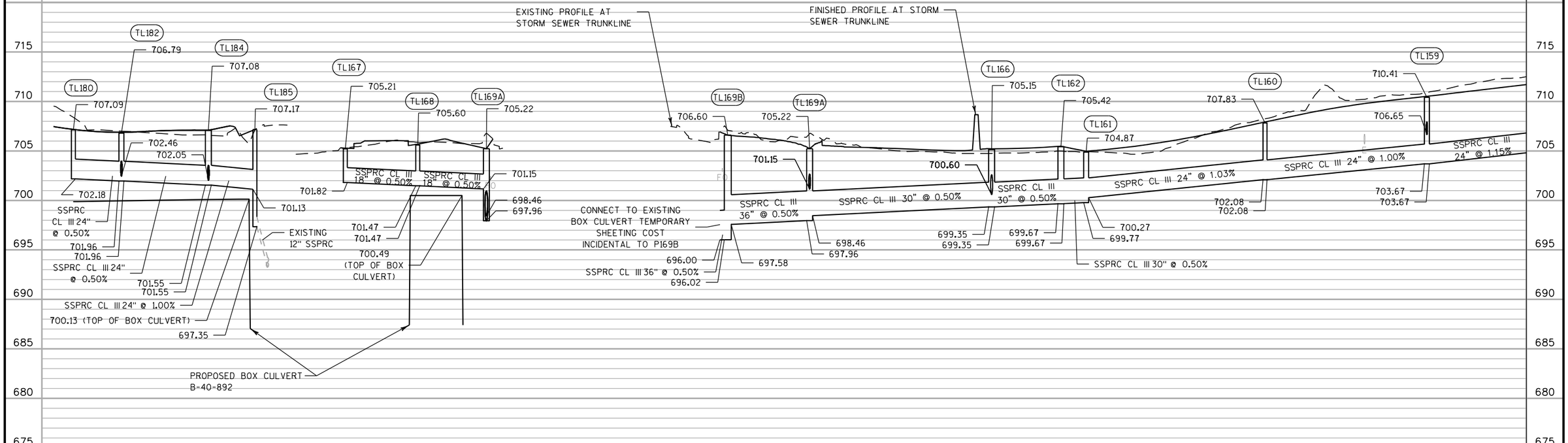
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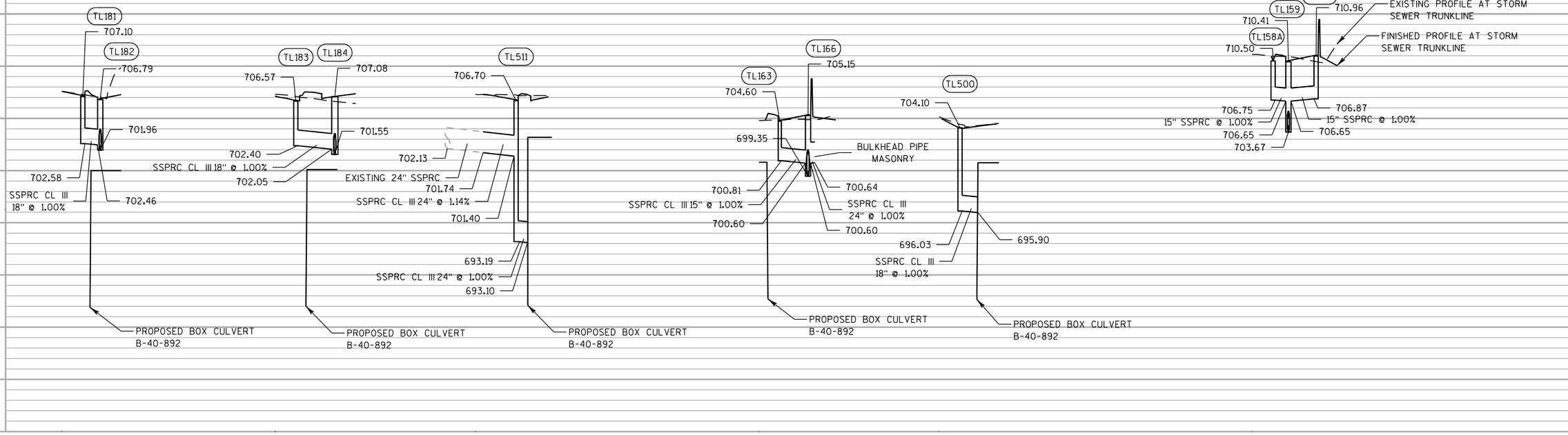


PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

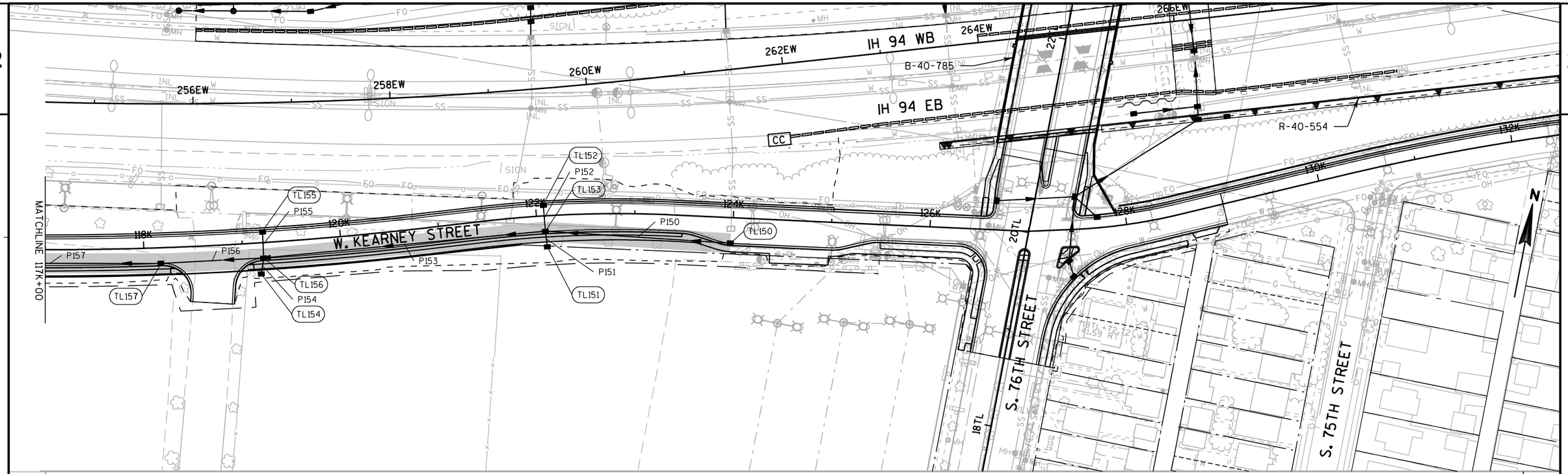


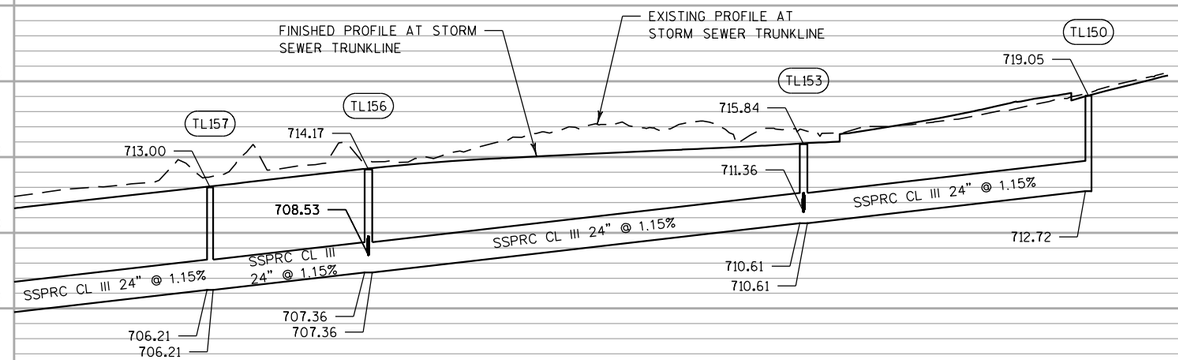


PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E



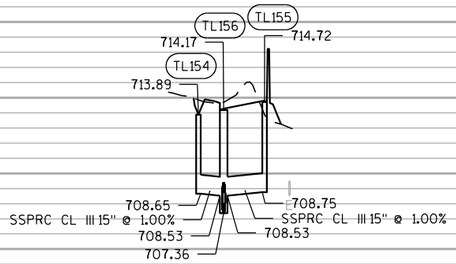
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

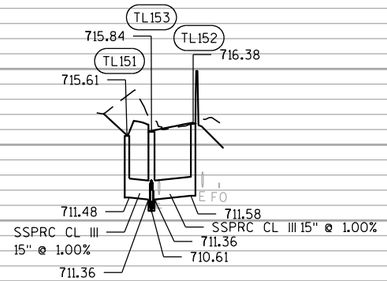




PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

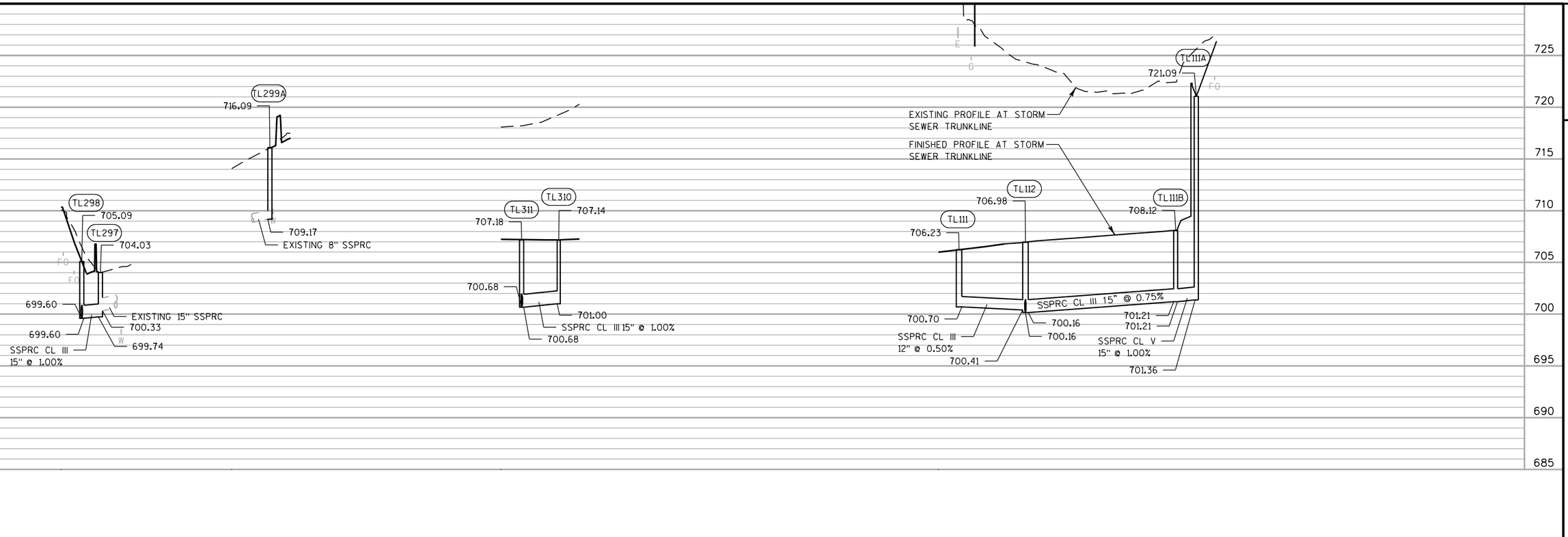
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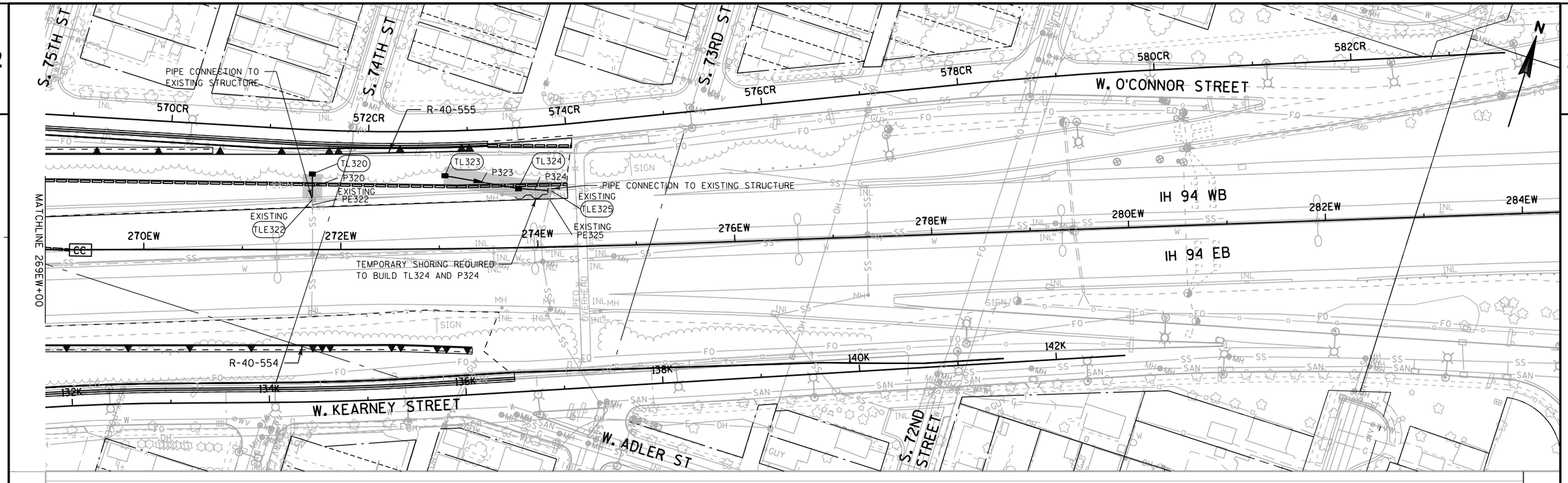
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

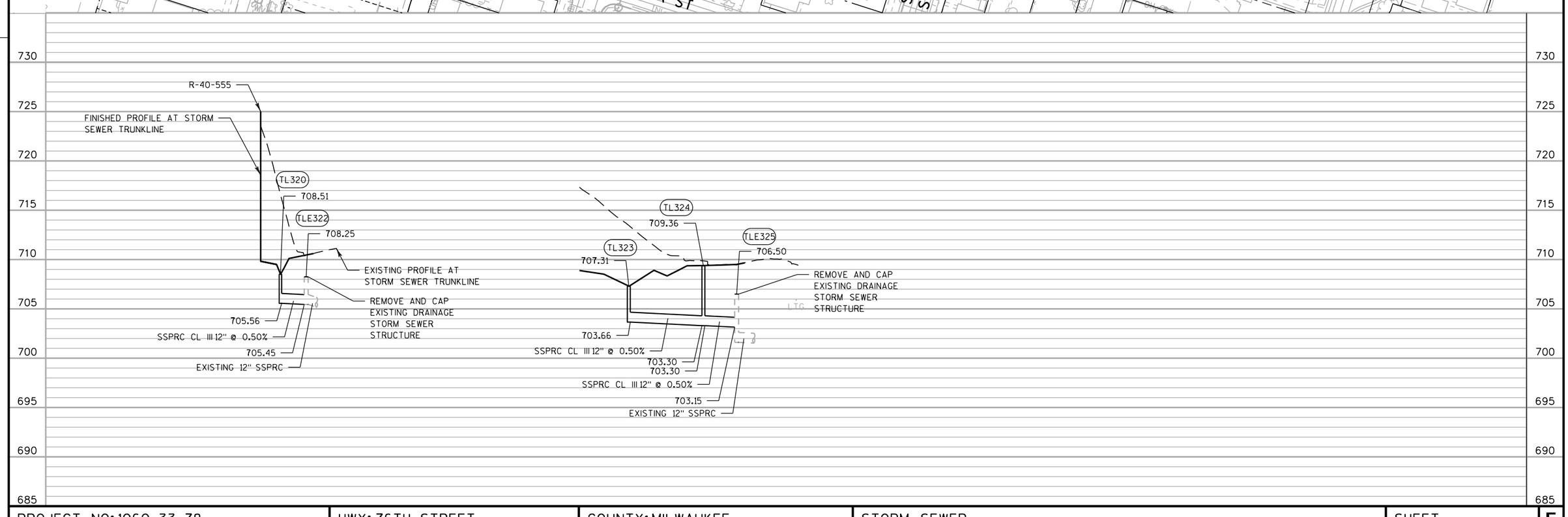
S. 79TH STREET
S. 78TH STREET
S. 77TH STREET
S. 76TH STREET
W. O'CONNOR STREET
W. KEARNEY STREET
IH 94 WB
IH 94 EB
N
MATCHLINE 269EW+00
R-40-555
R-40-554
B-40-785
CC
554CR
556CR
558CR
560CR
562CR
564CR
566CR
568CR
254EW
256EW
258EW
260EW
262EW
264EW
266EW
268EW
118K
120K
122K
241
22
TL294
TL295
TL296
TL297
TL298
TL299
TL299A
TL300
TL301
TL303
TL304
TL305
TL306
TL309
TL310
TL311
TL111
TL111A
TL111B
TL112
TL113
TL114
TL115
TL116
TLE302
TLE307
TLE312
P294
P295
P296
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P299
P300
P301
P304
P305
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P308
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P310
P311
P111
P111A
P111B
P112
P113
P114
P115
EXISTING PE296
EXISTING PE299
EXISTING PE299A
EXISTING PE302
EXISTING PE302A
EXISTING PE303
EXISTING PE307
EXISTING PE312
EXISTING PE115A
EXISTING PE117
EXISTING TLE302
EXISTING TLE307
EXISTING TLE312
EXISTING TLE116
CONNECT EXISTING 15" PIPE NORTHEAST 1-CONCRETE COLLAR REQUIRED
CONNECT EXISTING 15" PIPE SOUTHWEST 1-CONCRETE COLLAR REQUIRED
CONNECT EXISTING 12" PIPE 2-CONCRETE COLLARS REQUIRED
CONNECT EXISTING PIPE NORTH 1-CONCRETE COLLAR REQUIRED
MAINTAIN FLOW FROM EXISTING PIPE DURING ALL STAGES OF CONSTRUCTION
TEMPORARY SHORING REQUIRED TO CONSTRUCT TL304
TEMPORARY SHORING REQUIRED TO CONSTRUCT TL111A
PIPE CONNECTION TO EXISTING STRUCTURE
REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE
FINISHED PROFILE AT STORM SEWER TRUNKLINE
EXISTING PROFILE AT STORM SEWER TRUNKLINE
EXISTING 15" SSPRC
EXISTING 12" SSPRC
EXISTING 15" SSPRC
EXISTING 42" SSPRC
SSPRC CL III 15" @ 1.00%
SSPRC CL III 12" @ 1.00%
SSPRC CL III 12" @ 0.50%
SSPRC CL III 15" @ 0.50%
SSPRC CL III 18" @ 0.50%
SSPRC CL V 12" @ 1.00%
706.21
703.86
705.70
709.14
699.09
699.09
699.60
699.60
702.00
700.34
702.51
705.24
705.13
705.13
709.88
707.75
705.01
708.50
724.41
716.70
718.38
718.36
713.36
707.01
708.43
706.50
704.15
704.02
704.02
703.97
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703.70
707.18
704.78
704.43
704.50
700.89
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709.43
709.87
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700.11
699.90
699.90
699.64
699.39
699.37
699.32
730
725
720
715
710
705
700
695
690
685
PROJECT NO: 1060-33-78
HWY: 76TH STREET
COUNTY: MILWAUKEE
STORM SEWER
SHEET
E
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PLOT BY : MSCJXF
PLOT NAME : 022506_ss
PLOT SCALE : 100:1
WISDOT/CADDS SHEET 41
149



2

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E





PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

2

PIPE CONNECTION TO EXISTING STRUCTURE

PIPE CONNECTION TO EXISTING STRUCTURE

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

CONNECT 12" PIPE TO EXISTING 12" PIPE WEST 1-CONCRETE COLLAR REQUIRED

262NS 10NSA 264NS 12NSA 266NS 14NSA 268NS 16NSA 270NS 18NSA 272NS 20NSA 274NS 22NSA 276NS

RAMP NSA

24NSA

24XM

MATCHLINE 25NSA+00

R-40-525

EXISTING TLE401

EXISTING TLE403

EXISTING PE410

SIGN P402

P400 P404 P405 P406 P407 P408 P409 P411 P412 P413

TL400 TL402 TL404 TL405 TL406 TL407 TL408 TL409 TL411 TL412 TL413 TL413A

REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE

REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE

TLE401 787.25 TL400 788.79

EXISTING 12" SSPRC 784.55

SSPRC CL IV 12" @ 0.50% 784.61

TLE403 788.75 TL402 789.86

EXISTING 12" SSPRC 786.05

SSPRC CL IV 12" @ 0.50% 786.17

FINISHED PROFILE AT STORM SEWER TRUNKLINE

EXISTING PROFILE AT STORM SEWER TRUNKLINE

TL406 790.39 TL405 782.01 TL404 782.09

TL409 791.39

779.70

SSPRC CL III 24" @ 0.50%

778.00

SSPRC CL III 15" @ 1.00% 777.94

777.07 777.07 776.49

777.19

770.86

SSPRC CL III 24" @ 0.50%

TL409 791.39 TL408 785.52 TL407 784.90

776.49

780.00

SSPRC CL III 24" @ 1.00%

779.79

779.79

SSPRC CL III 24" @ 0.50%

779.70

770.86

SSPRC CL IV 12" @ 3.34%

770.66

EXISTING 12" SSPRC

TL413 793.69 TL412 795.17 TL411 795.98

TL413A 787.50

SSPRC CL III 24" @ 0.50%

787.73 787.73

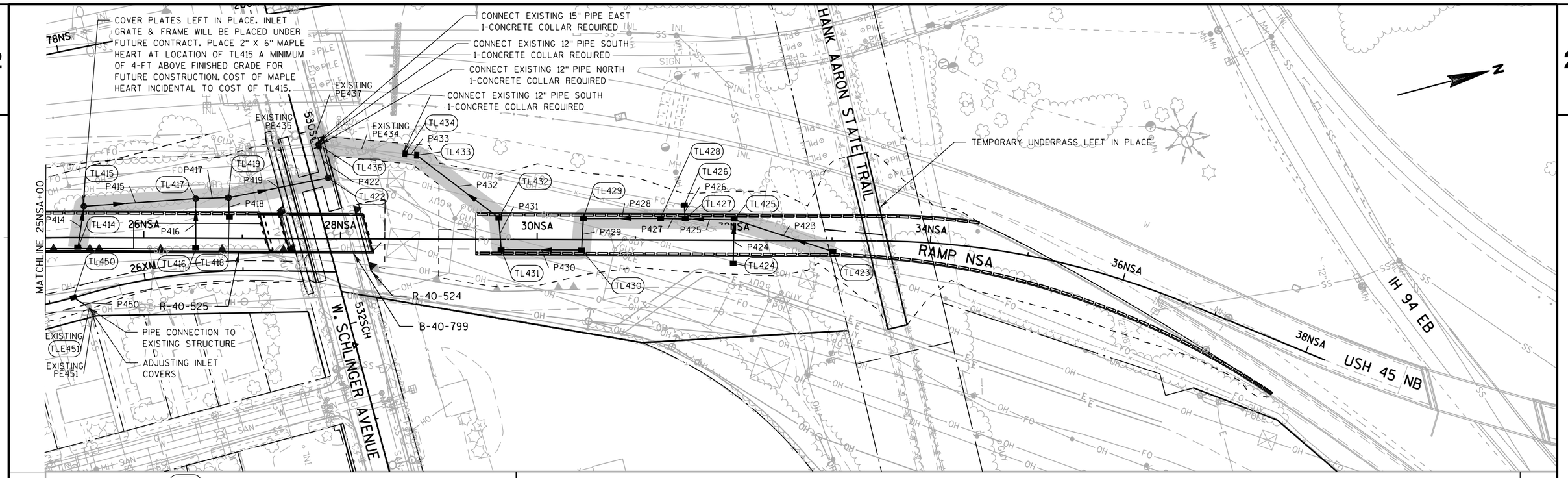
SSPRC CL III 24" @ 1.00% 787.56

788.88 788.88

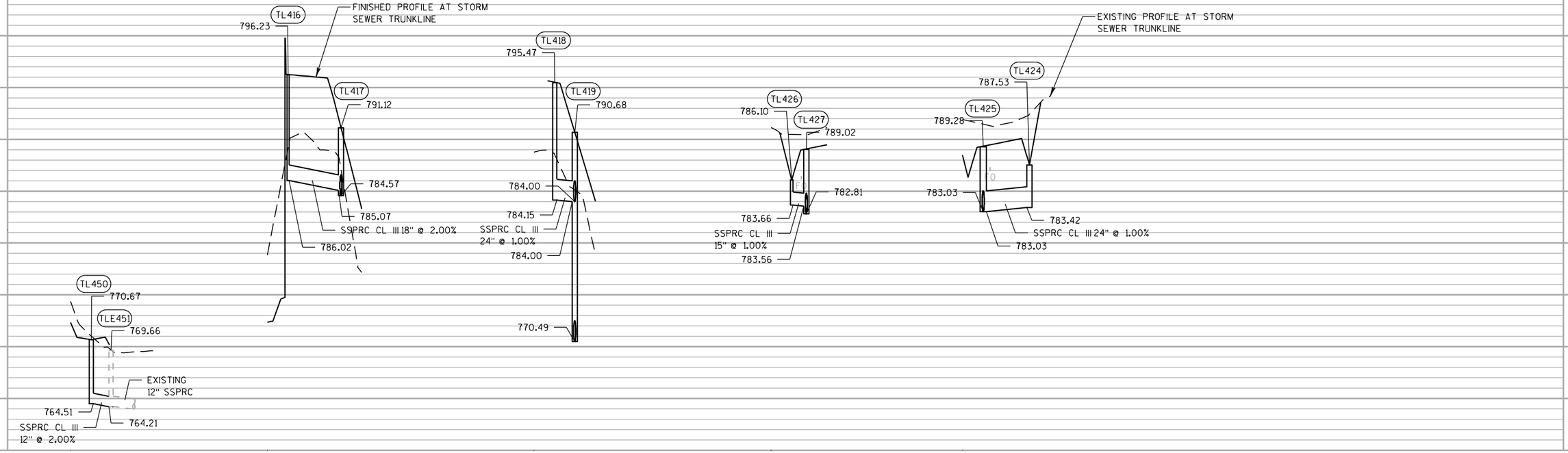
SSPRC CL III 24" @ 1.00% 789.26

795 790 785 780 775 770 765 760 755 750

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET E



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET E



2

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER	SHEET	E

PROP. MH. #1
STA. 228EW+40.94, 164.52'LT.

PROPOSED 24" STORM SEWER

PROP. MH. #2
STA. 229EW+87.54, 169.95'LT.

PROPOSED R.O.W.

MATCH LINE - SEE SHEET X
STA. 232EW+00.00, 168.54'LT.

0 20 40

PROP. MH. #3
STA. 232EW+00.00, 178.54'LT.

PROP. 24" F.E.S. #1
STA. 228EW+07.04, 96.88'LT.

REMOVE 412 L.F. OF EXIST. 24" RCP STORM SEWER AS REQUIRED FOR CONSTRUCTION

REMOVE EXIST. STORM MANHOLE

REMOVE EXIST. STORM MANHOLE

459.37 L.F. - 24" RCP CL. III STORM SEWER W/ECAVATED MATERIAL BACKFILL

76.74'

159.55'

223.08'

FUTURE GRADE OVER C/L OF PROPOSED STORM SEWER

PROPOSED 24" STORM SEWER

EXISTING GRADE OVER C/L OF PROPOSED STORM SEWER

10+00 11+00 12+00 13+00 14+00

S.=0.0100'/'

S.=0.0100'/'

S.=0.0100'/'

PROP. 24" F.E.S. #1
STA. 228EW+07.04, 96.88'LT.
24" I.E. 139.40

PROP. MH. #1
STA. 228EW+40.94, 164.52'LT.
RIM EL. 154.47+/-
24" W.I.E. 138.63
24" E.I.E. 136.10

PROP. MH. #2
STA. 229EW+87.54, 169.95'LT.
RIM EL. 140.23+/-
24" W.I.E. 134.50
24" E.I.E. 129.43

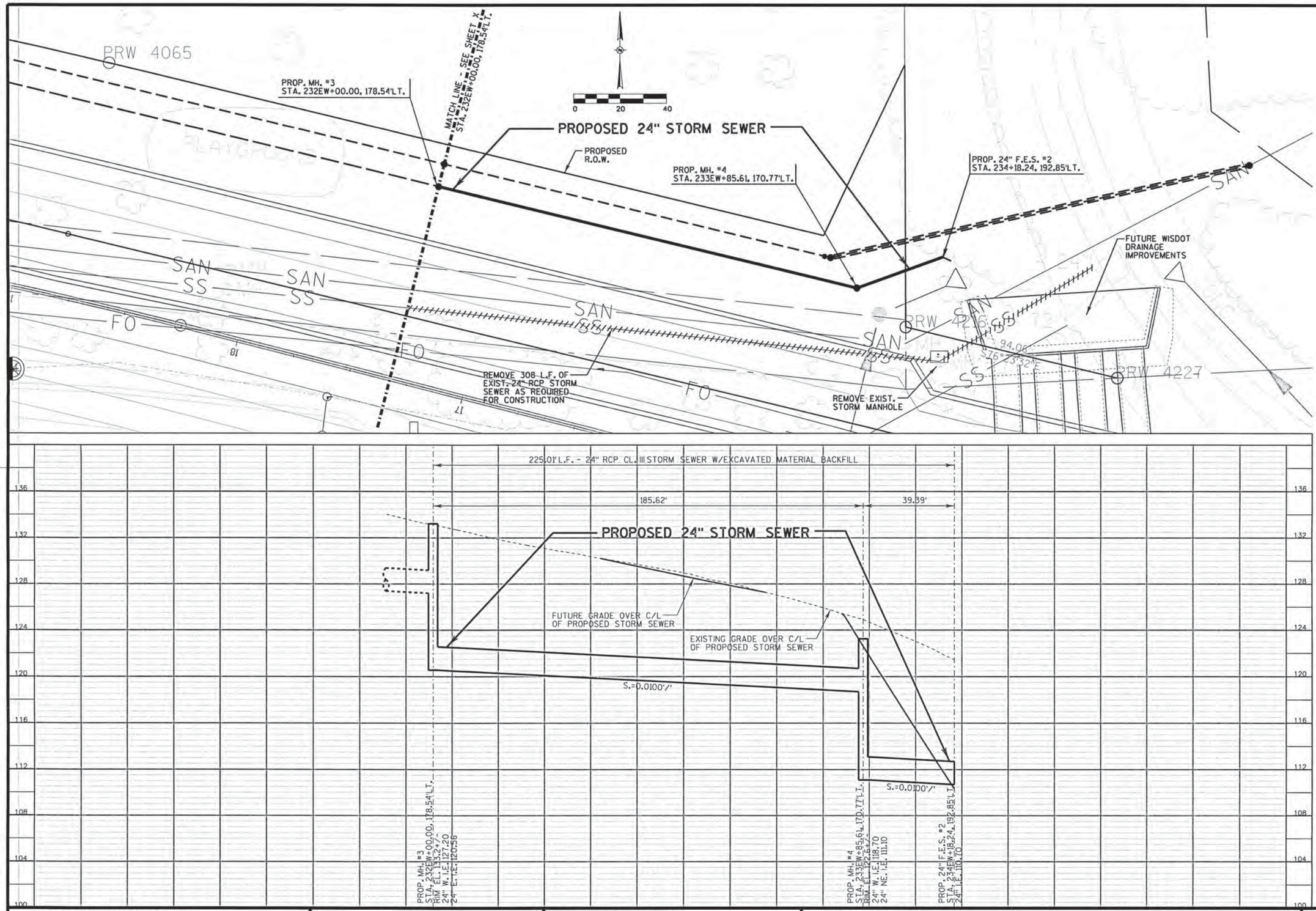
PROP. MH. #3
STA. 232EW+00.00, 178.54'LT.
RIM EL. 133.2+/-
24" W.I.E. 127.20
24" E.I.E. 120.56

WISCONSIN
JAMES A. LISAK
E-30490
MUSKEGO, WI
PROFESSIONAL ENGINEER
6-10-2013

GRAEF
One Honey Creek Corporate Center
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Milwaukee, WI 53214-1470
414 / 259 1500
414 / 259 0037 fax
www.graef-usa.com

IN ACCORDANCE WITH WISCONSIN STATUTE 182.0175, DAMAGE TO TRANSMISSION FACILITIES, EXCAVATOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE ADVANCE NOTICE TO THE DESIGNATED "ONE CALL SYSTEM" NOT LESS THAN THREE WORKING DAYS, PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THIS DRAWING, AND FURTHER, EXCAVATOR SHALL COMPLY WITH ALL OTHER REQUIREMENTS OF THIS STATUTE RELATIVE TO EXCAVATOR'S WORK.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET C100	E



WISCONSIN
JAMES A. LISAK
E-30490
MUSKEGO, WI
PROFESSIONAL ENGINEER
1-10-2013

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414 / 259 0037 fax
www.graef-usa.com

IN ACCORDANCE WITH WISCONSIN STATUTE 182.0175, DAMAGE TO TRANSMISSION FACILITIES, EXCAVATOR SHALL BE SOLELY RESPONSIBLE TO PROVIDE ADVANCE NOTICE TO THE DESIGNATED "ONE CALL SYSTEM" NOT LESS THAN THREE WORKING DAYS PRIOR TO COMMENCEMENT OF ANY EXCAVATION REQUIRED TO PERFORM WORK CONTAINED ON THIS DRAWING, AND FURTHER, EXCAVATOR SHALL COMPLY WITH ALL OTHER REQUIREMENTS OF THIS STATUTE RELATIVE TO EXCAVATOR'S WORK.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STORM SEWER PLAN	SHEET C101	E

FILE NAME :L:±Jobs2012±20120177±CAD±Site±dgn±00±C_00_C101_STORM_177.dgn

PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$

SPECIAL PROVISIONS FOR SANITARY SEWER MAIN PLAN FILE NO.233-45 ONLY:

1. STANDARD SPECIAL PROVISIONS,PLAN FILE NUMBER 52-4-51,DATED AUGUST 22,2011(OR LATEST REVISION THERE OF),ARE PART OF THIS CONTRACT.

2. THIS PROJECT HAS BEEN SUBMITTED TO THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT (MMSD) AND THE DEPARTMENT OF NATURAL RESOURCES (DNR) FOR APPROVALS.NO WORK SHALL BE PERFORMED ON THIS CONTRACT UNTIL MMSD AND DNR APPROVALS HAVE BEEN OBTAINED.THE CONSTRUCTION ENGINEER SHALL CONTACT MR.PATRICK COE (MMSD) AT (414) 225-2219 TO CONFIRM THAT THE APPROVALS HAVE BEEN GRANTED.

3. ALL CONNECTIONS FOR BUILDING SEWERS OF RECORD HAVE BEEN SHOWN ON THE PLAN.ALL ACTIVE BUILDING SEWERS SHALL BE RECONNECTED TO THE NEW SANITARY SEWER.CONTRACTOR SHALL FIELD VERIFY ALL LATERALS AND ONLY RECONNECT ACTIVE LATERALS.THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE 8-INCH DIAMETER SANITARY RELAY,CLASS "C" BEDDING.

4. THE PRECISE LOCATION OF THE EXISTING LATERAL IS UNKNOWN.AT LEAST 10 DAYS PRIOR TO WORKING ON THE BUILDING SEWER LATERAL AT 459 SOUTH 84TH STREET THE CONTRACTOR SHALL CONTACT MONTY MEYROSE AT (414)335-1268 OR (414)286-8534,CITY OF MILWAUKEE,HOUSING AUTHORITY.THE CONTRACTOR SHALL FIELD VERIFY AND LOCATE THE PRECISE LOCATION,SIZE AND DEPTH OF LATERAL,AND BUILD A NEW SANITARY MANHOLE TO FIT WITH THE LATERAL.THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE SANITARY SEWER MANHOLE.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT NO ACTIVE BUILDING SEWERS ARE CONNECTED TO THE MAIN SEWERS OR MANHOLES TO BE ABANDONED PRIOR TO THEIR ABANDONMENT.THE CONTRACTOR SHALL CONTACT THE CONSTRUCTION ENGINEER IF AN ACTIVE BUILDING SEWER(S) IS CONNECTED TO ANY PROPOSED SEWER ABANDONMENT.

6. THE CONTRACTOR SHALL PROTECT AND SUPPORT THE EXISTING UTILITIES,FACILITIES,CONDUITS,AND STRUCTURES WITHIN THE PROJECT LIMITS WHILE RELAYING THE SANITARY SEWER.THE COST OF SUPPORTING,SHORING AND BRACING,PROTECTING,RAT HOLING OR TUNNELING UNDER THE EXISTING MANHOLES AND UTILITIES NECESSARY TO RELAY PROPOSED SEWERS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE 8-INCH DIAMETER SANITARY RELAY,CLASS "C" BEDDING.

7. SOUTH 84TH STREET IS A MILWAUKEE COUNTY TRANSIT SYSTEM (MCTS) BUS ROUTE.

8. ALL SIGNS USED FOR TRAFFIC CONTROL SHALL MEET THE NEW NATIONAL REQUIREMENTS FOR SIGN RETROREFLECTIVITY STANDARDS.

9. PAVEMENT RESTORATION IN SOUTH 84TH STREET SHALL CONSIST OF REMOVAL OF EXISTING PAVEMENT TO A WIDTH OF THE OUTSIDE DIAMETER OF THE PIPE,PLUS 4-FEET,AND REPLACEMENT WITH 9-INCH CONCRETE ON 6-INCH CRUSHED AGGREGATE BASE.ALL WIDTHS SHALL BE CENTERED ON THE PROPOSED SANITARY SEWER.

10. MECHANICAL COMPACTION IS REQUIRED FOR ALL OPEN CUT SEWER WORK.THE CONTRACTOR SHALL CONSOLIDATE ALL BACKFILL BY MECHANICAL COMPACTION PER SPECIFICATION 2.6.14(B) OF THE STANDARD SPECIFICATIONS. PER SPECIFICATION,THE INITIAL COMPACTED LIFT SHALL BE TWO (2) FEET.EACH SUBSEQUENT COMPACTED LIFT OF MATERIAL SHALL BE ONE (1) FOOT.COSTS ARE TO BE INCLUDED IN THE UNIT PRICE BID FOR THE RESPECTIVE SEWER.SETTLING THE TRENCH BY FLOODING THE BACKFILL WILL NOT BE ALLOWED.

11. IN ADDITION TO THE ALLOWABLE 1-1/2 INCH GRADED AGGREGATE,AS PER TABLE 39 OF SECTION 8.43.7 OF THE STANDARD SPECIFICATION,THE CONTRACTOR IS ALSO ALLOWED TO USE 1-1/4 INCH GRADED AGGREGATE.THE 1-1/4 INCH GRADED AGGREGATE SHALL MEET THE WISCONSIN DEPARTMENT OF TRANSPORTATION (WISDOT) STANDARDS,AS PER SECTION 305 DENSE GRADED BASE.CONFORMING TO THE TABLE LISTED AS "PERCENT PASSING BY WEIGHT" IN 2012 WISDOT STANDARD SPECIFICATION,SUBSECTION 305.2.2.1 GENERAL.

12. THE CONTRACTOR SHALL PERFORM LOW PRESSURE SANITARY AIR TESTING OF ALL NEW SANITARY SEWER ON THIS SEWER CONTRACT EXCEPT THE SANITARY SEWER SECTION WITH ACTIVE BUILDING SEWER CONNECTION.THE SANITARY AIR TESTING SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 3.7.3 OF THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN" SIXTH EDITION AND ADDENDA THERETO.

13. THE CONTRACTOR SHALL PERFORM VACUUM TESTING ON EACH NEW SANITARY MANHOLE BUILT ON THIS PROJECT IN ACCORDANCE WITH SECTION 3.7.6 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN SIXTH EDITION DATED DECEMBER 22,2003.

14. THE CONTRACTOR SHALL PROVIDE THE CITY WITH TWO (2) COPIES OF A POST INSTALLATION DVD EXAMINATION AND REPORT OF THE SEWER.THESE RECORDED EXAMS WILL BECOME THE PROPERTY OF THE CITY OF MILWAUKEE.THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE 8-INCH DIAMETER SANITARY RELAY,CLASS "C" BEDDING.

15. THE CONTRACTOR SHALL PROVIDE THE CITY WITH "AS-BUILT" PLANS AT EACH MANHOLE AFTER THE COMPLETION OF THE SEWER WORK.THE COST OF PROVIDING THE "AS-BUILT" PLANS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE 8"DIA.SANITARY SEWER,CLASS "C" BEDDING.

LINE CODE LEGEND

GAS	G	SANITARY SEWER	SAN	STREET LIGHTING	
ELECTRIC	E	STORM SEWER	STO	PAVING LIMITS	
TELEPHONE	T	COMBINED SEWER	CMB	STRUCTURE / BUILDING	
FIBER OPTICS	FO	SEW.DISTRICT SEWER	MNSD	FENCE	
CITY UNDERGROUND CONDUIT	CUC	WATER MAIN	W		
		SEWER/WATER OVER 24"			

FORWARD 45

CALL DIGGERS HOTLINE 1-800-242-8511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND UTILITIES BEFORE YOU DIG.WISCONSIN STATUTE REQUIRES MINIMUM 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

NO.	BY	REVISION	DATE

AS BUILT CONTRACT NO. _____
DATE ENT'D _____ ENT'D BY _____

WISCONSIN GREGORY L. GOVERNATORI E-16034 RACINE, WI PROFESSIONAL ENGINEER
4/18/2013

ENVIRONMENTAL ENGINEERING SECTION
INFRASTRUCTURE SERVICES DIVISION
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN

SEWER MAIN PLAN

IN S 84TH STREET
FROM 300' N OF W. ADLER STREET
TO W. ADLER STREET

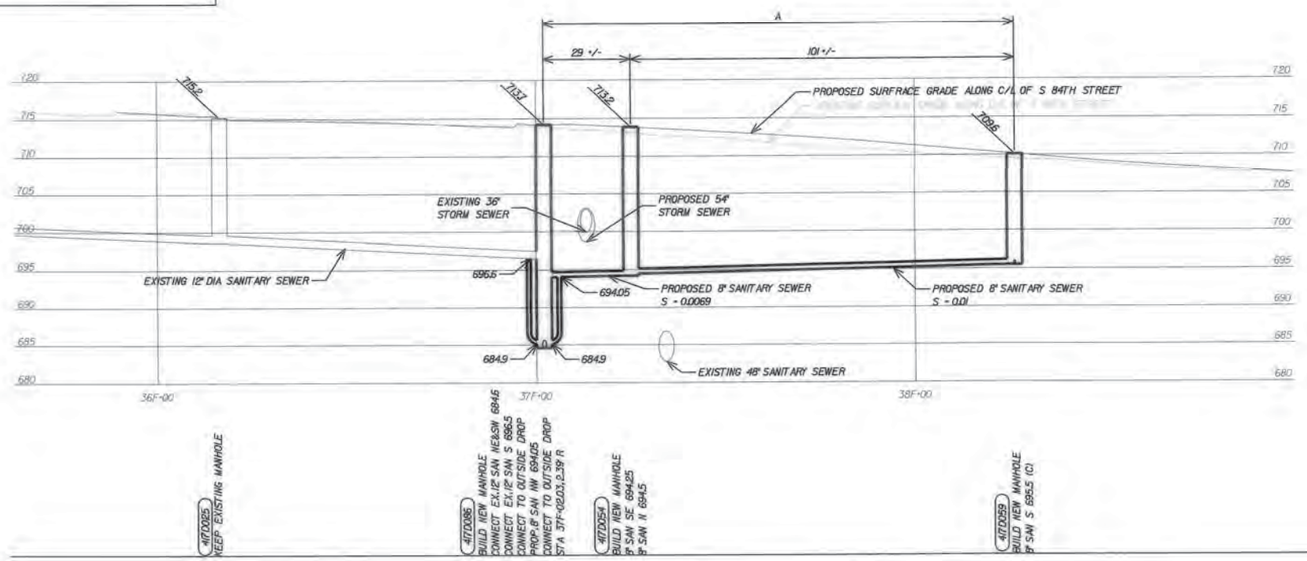
		APPROVED	DATE
SCALE HORIZONTAL		Zafar Yousaf DESIGN ENGINEER	4/19/2013
SCALE VERTICAL			
1/A SEC. NO.	417	Timothy J. Thun ENGINEER IN CHARGE	4/19/13
PLAN DATE	March 26, 2013		
DESIGNED BY	ORC		
DRAWN BY	GRC		4/23/13
CHECKED BY	KRD	CITY ENGINEER OR SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS	
SYSTEM NO.	1490		
EASEMENT NO.		PROJECT NO.	C.C. FILE NO.
CONTRACT NO.		OFF. NOTICE NO.	DATE ADOPTED
PROJ. ID.	WKA2320441		

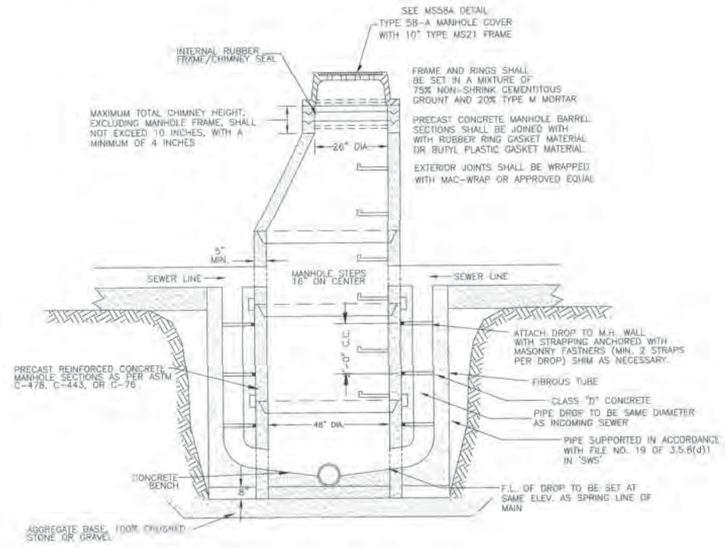
SHEET NO. __ OF __ PLAN F 233-46

STATE PROJECT NUMBER 1060-33-78 | HWY: | COUNTY : MILWAUKEE | SEWER MAIN | SCALE FEET | SHEET NO: E

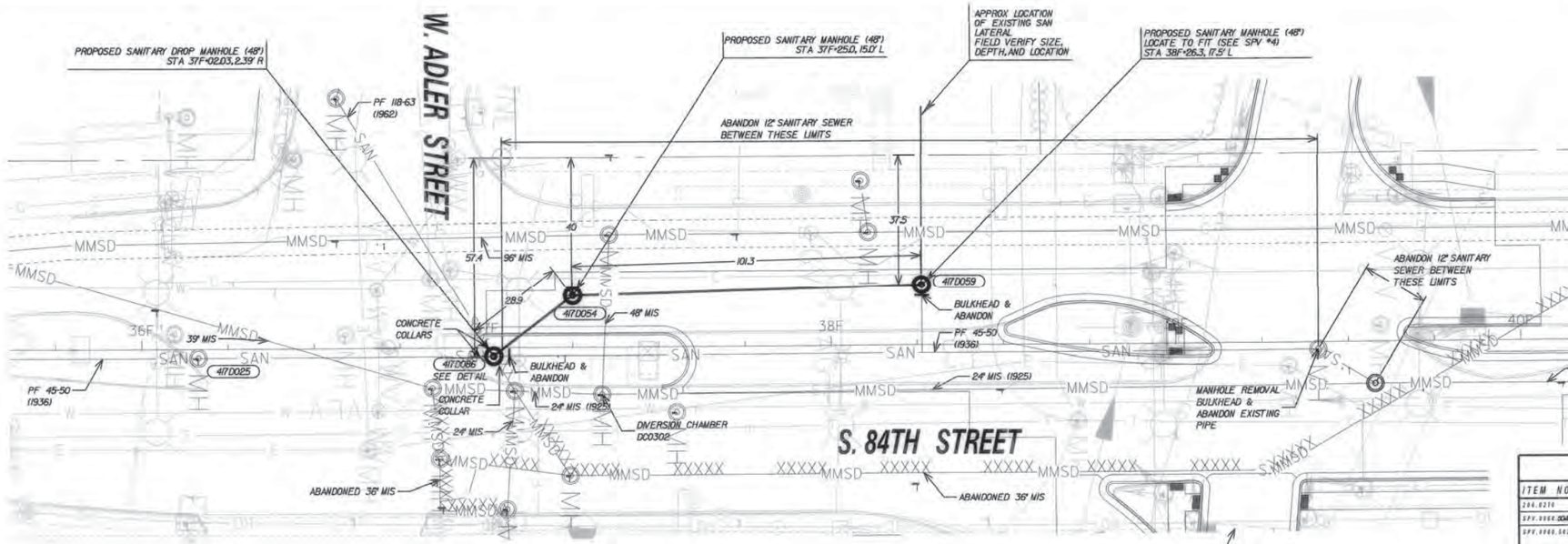
IMAGED ____ SCANNED ____ MICROFILMED ____

A	
8" SANITARY SEWER PVCP	CLASS 'C' BEDDING





417D086 SANITARY OUTSIDE DROP
N.T.S



ESTIMATE OF QUANTITIES		
ITEM NO.	QUANTITY	DESCRIPTION
204.0210	1 EACH	REMOVING MANHOLES
SPV.0060.0044	2 EACH	EXPOSING EXISTING UTILITY
SPV.0060.5020	1 EACH	SANITARY SEWER DROP MANHOLE, 48-INCH, PRECAST CONCRETE W/ CASTING W/ INTERNAL SEAL
SPV.0060.5030	2 EACH	SANITARY SEWER MANHOLE, 48-INCH, PRECAST CONCRETE WITH CASTING W/ INTERNAL SEAL
SPV.0060.5040	1 EACH	SANITARY MANHOLE VACUUM TESTING
SPV.0090.5010	100 LF	SANITARY AIR TESTING
SPV.0090.5020	725 LF	8-INCH SANITARY SEWER, CLASS "C" BEDDING
SPV.0090.5024	230 LF	ABANDONING SEWER
415.0090	75 SQ YD	CONCRETE PAVEMENT 9"
305.0120	25 SQ YD	BASE AGGREGATE - DENSE

GREGORY L. GOVERNATORI E-36034 RACINE, WI PROFESSIONAL ENGINEER 4/18/2013

ENVIRONMENTAL ENGINEERING SECTION
INFRASTRUCTURE SERVICES DIVISION
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN

SEWER MAIN PLAN

IN S 84TH STREET
FROM 300' N OF W. ADLER STREET
TO W. ADLER STREET

		APPROVED	DATE
SCALE	HORIZONTAL 1"=20' VERTICAL 1"=10'	Zafar Yousaf DESIGN ENGINEER	4/19/2013
T4 SEC. NO.	417	Timothy J. Thur ENGINEER IN CHARGE	4/19/13
PLAN DATE	March 26, 2013		
DESIGNED BY	GRC		
DRAWN BY	GRC		
CHECKED BY	KAD		
SYSTEM NO.	1400		4/23/13
BASEMENT NO.		CITY ENGINEER/A SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS	
CONTRACT NO.		PROJECT NO.	C.C. FILE NO.
PROJ. ID.	WBS#310041	OFF. NOTICE NO.	DATE ADOPTED

SHEET NO. __ OF __ PLAN FI 33-45

LINE CODE LEGEND			
GAS	G	SANITARY SEWER	SAN
ELECTRIC	E	STORM SEWER	STO
TELEPHONE	T	COMBINED SEWER	CMB
CABLE TELEVISION	CATV	SEW DISTRICT SEWER	MMSD
FIBER OPTICS	FO	WATER MAIN	W
CITY UNDERGROUND CONDUIT	CUC	SEWER/WATER OVER 24"	
		STREET LIGHTING	
		PAVING LIMITS	
		STRUCTURE / BUILDING	
		FENCE	

FORWARD 45

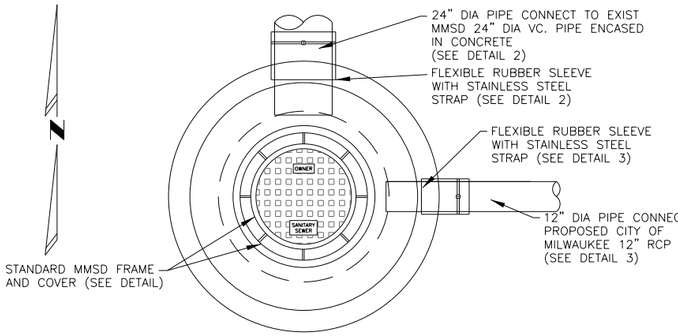
CALL DIGGERS HOTLINE 1-800-242-8511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND UTILITIES BEFORE YOU EXCAVATE. WISCONSIN STATUTES REQUIRES AT LEAST 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

NO.	BY	REVISION	DATE

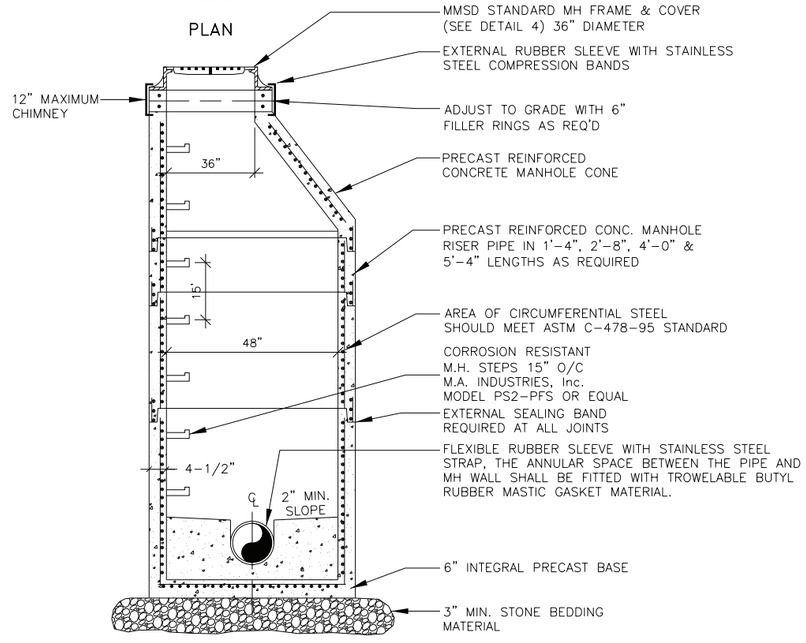
AS BUILT CONTRACT NO. ____
DATE ENT'D. ____ ENT'D. BY ____

STATE PROJECT NUMBER 1060-33-78	HWY:	COUNTY: MILWAUKEE	SEWER MAIN	SCALE FEET	SHEET NO: ____ E

MMSD ____ SCANNED ____ MICROFILMED ____



PLAN



SANITARY MANHOLE NOTES:

1.) PRECAST CONCRETE ADJUSTING RINGS TO BE REINFORCED WITH ONE HOOP OF STEEL CENTERED WITHIN THE RING. WHERE NECESSARY, RINGS SHALL BE GROOVED TO RECEIVE STEP.

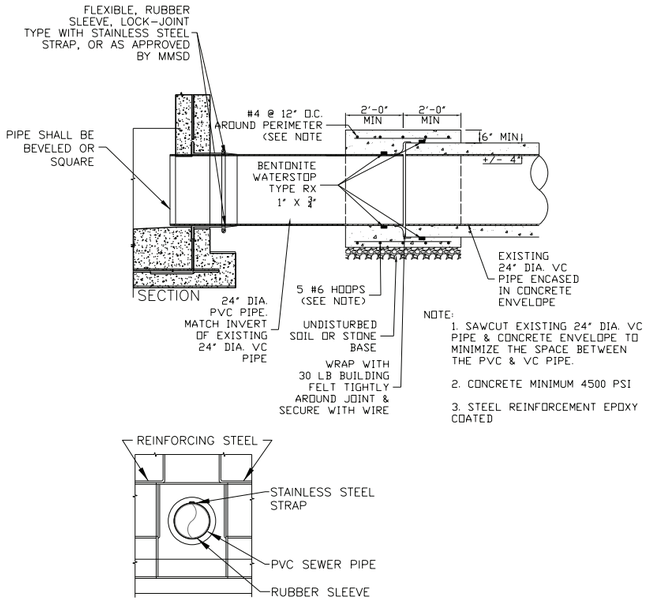
2.) CONCRETE AND STEEL REINFORCEMENT SHALL CONFORM TO DESIGNATION C-478 REQUIREMENTS OF ASTM SPECIFICATIONS.

3.) JOINTS SHALL BE WATERTIGHT AND SHALL BE MADE USING RUBBER GASKETS OR BUTYL RUBBER MASTIC MATERIAL.

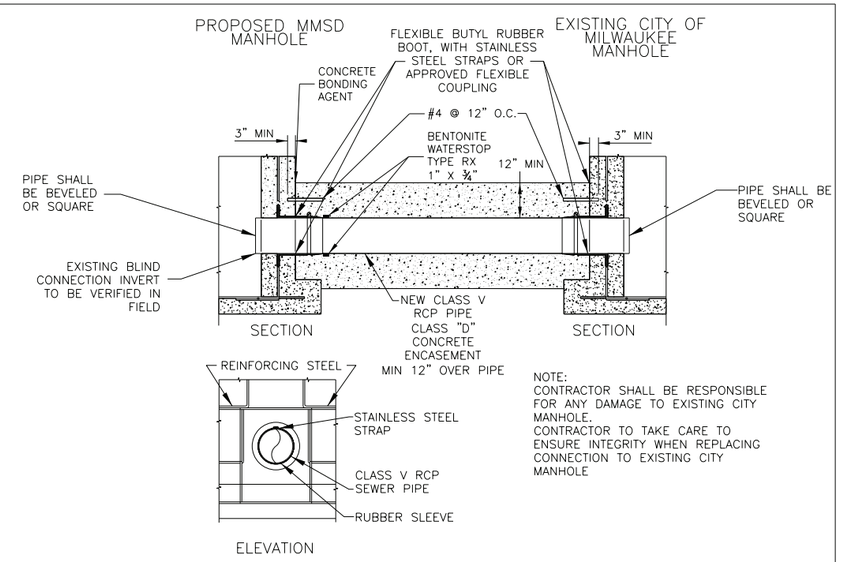
4.) 3" MIN. BEDDING MATERIAL REQUIRED UNDER MANHOLE BASE AND BACKFILLED STRUCTURE WITH GRANULAR BACKFILL MATERIAL.

5.) SEE STANDARD SPECIFICATIONS, FILE NO. 12 FOR PRECAST MANHOLE AND FILE NO. 13 FOR MANHOLE INVERTS, INCLUDING INVERTS OF LATERAL SEWERS THAT CONNECT DIRECTLY TO MANHOLES.

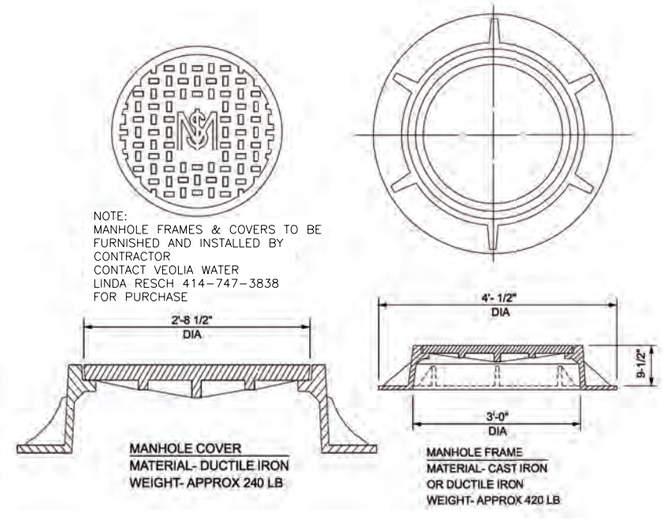
1 SANITARY MANHOLE DETAIL
N.T.S.



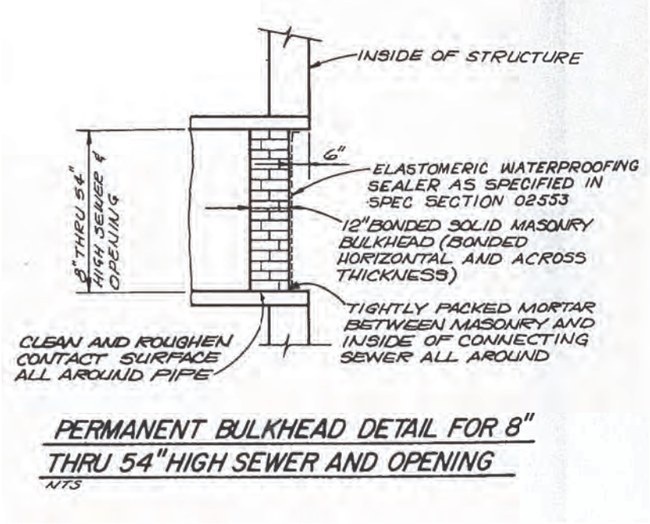
2 MMSD SEWER CONNECTION DETAIL
N.T.S.



3 MILWAUKEE CONNECTION DETAIL
N.T.S.



4 MMSD STANDARD MANHOLE FRAME AND COVER
N.T.S.



5 BULKHEAD DETAIL
N.T.S.

WISCONSIN
GREGORY L. GOVERNATORI
E 36034
RACINE, WI
PROFESSIONAL ENGINEER
4/26/2013

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VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING
0" 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

DSGN G. CALHOUN
DR G. CALHOUN
CHK
APVD

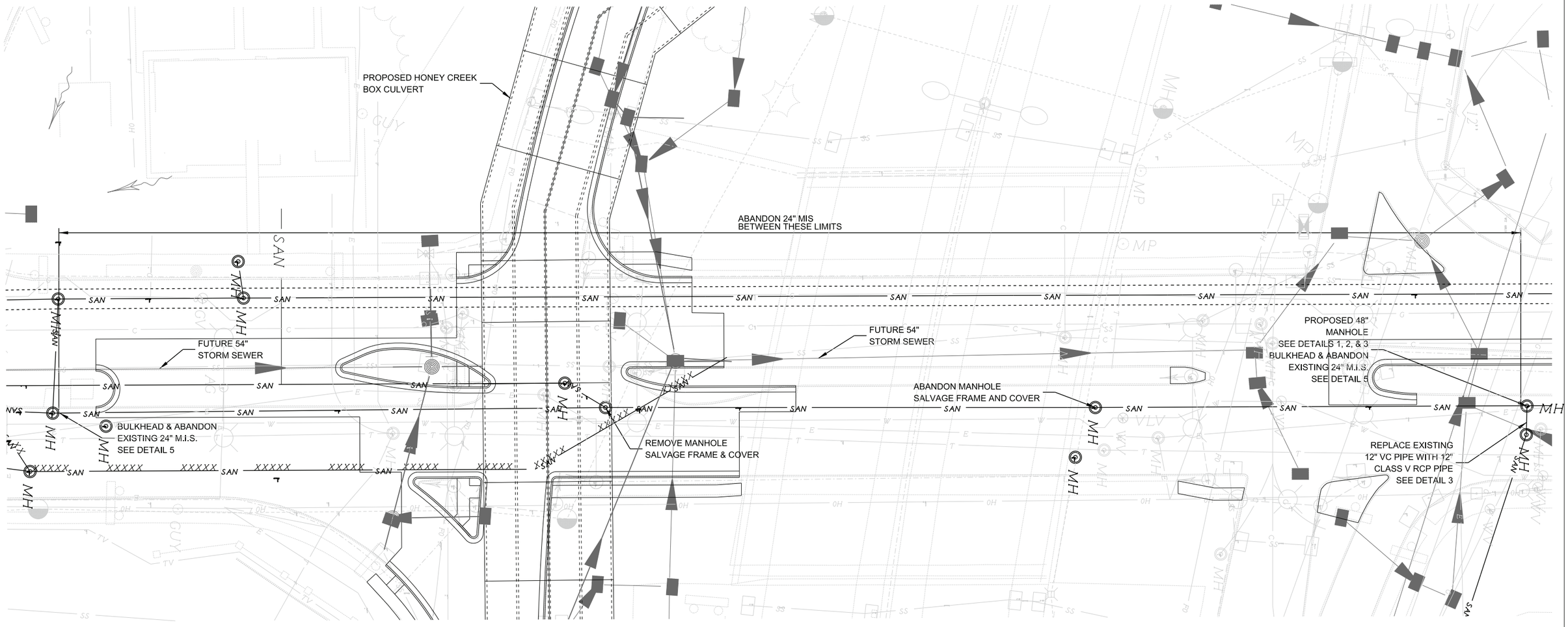
This Design Prepared For MMSD By:
FORWARD 45

REV. NO.	DATE	REVISION DESCRIPTION	BY	APVD
REV. 3	04/19	EDIT: MANHOLE CONNECTION DETAILS	GRC	
REV. 2	04/15	EDIT: MANHOLE CONNECTION DETAILS	GRC	
REV. 1	04/04	EDIT: PER REDLINE CHANGES	GRC	

MMSD PARTNERS FOR A CLEANER ENVIRONMENT

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

DRAWING NO.:
SHEET:
DATE: APRIL, 2013
CONTRACT: 159 1060-33-78
MMSD FILE:



HORIZONTAL SCALE: 1" = 40'

1.) CONTACT LINDA RESCH WITH VIOLIA WATER FOR SALVAGED FRAME AND CASTING PICK UP (414-747-3838)

2.) ABANDONED MMSD SANITARY SEWER PER STATE OF WISCONSIN STANDARD SPECIFICATIONS FOR SANITARY SEWER SECTION 3.2.24

WISCONSIN
GREGORY L. GOVERNATORI
E 36034
RACINE, WI
PROFESSIONAL ENGINEER

4/26/2013

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0" 1"
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DSGN	G. CALHOUN
DR	G. CALHOUN
CHK	
APVD	

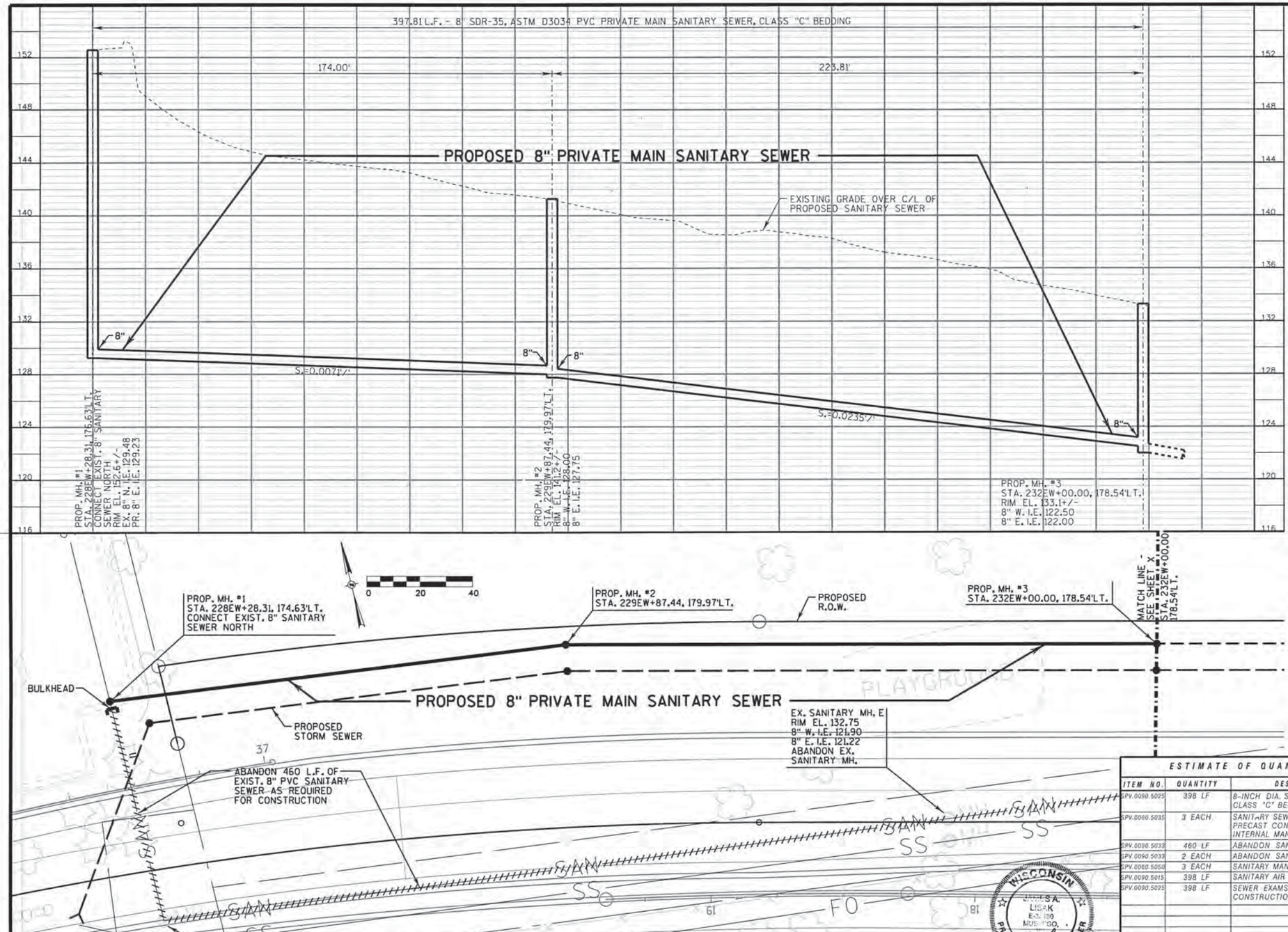
This Design Prepared For MMSD By: FORWARD 45

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REV. 2	04/15	EDIT: MANHOLE CONNECTION DETAILS	GRC	
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MMSD PARTNERS FOR A CLEANER ENVIRONMENT

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT

DRAWING NO.:	
SHEET:	
DATE:	APRIL, 2013
CONTRACT:	160 1060-33-78
MMSD FILE:	



GENERAL NOTES

1. VERTICAL DATUM IS MILWAUKEE METROPOLITAN SEWERAGE DISTRICT (MMSD) DATUM. APPROXIMATE ELEVATIONS BASED ON DOT DATUM NAVD88 (2007) CAN BE OBTAINED BY ADDING 580.33 FEET ALGEBRAICALLY TO THE MMSD DATUM ELEVATIONS.
2. WORKING POINTS FOR MANHOLES ARE AT CENTER OF MANHOLE BARREL.
3. ALL INVERT ELEVATIONS ARE ALONG PROFILE CENTER LINE. INVERTS FOR MAIN LINE SEWER ARE AT MANHOLE WORKING POINTS.
4. SURFACE RESTORATIONS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR 8-INCH AND 10-INCH SANITARY SEWER PER SECTION 5.10.17 OF THE CITY OF MILWAUKEE SPECIFICATIONS.

SPECIAL PROVISIONS

1. THIS PROJECT HAS BEEN SUBMITTED TO THE MILWAUKEE METROPOLITAN SEWERAGE DISTRICT (MMSD) FOR APPROVAL. NO WORK SHALL BE PERFORMED ON THIS SEWER UNTIL MMSD APPROVAL HAS BEEN OBTAINED. THE CONSTRUCTION ENGINEER SHALL CONTACT MR. PATRICK COE (MMSD) AT (414) 225-2219 TO CONFIRM THAT THE APPROVALS HAVE BEEN GRANTED.
2. STANDARD SPECIAL PROVISIONS (PLAN FILE NO. 52-4-5L DATED MAY 1, 2013 OR LATEST VERSION THEREOF) ARE PART OF THIS CONTRACT.
3. A PUBLIC WORKS INSPECTOR WILL BE ASSIGNED TO THE PROJECT. ALL WORK SHALL BE PERFORMED IN THE PRESENCE OF THIS INSPECTOR. COST OF THIS INSPECTION WILL BE BORNE BY THE CONTRACTOR. NO WORK SHALL BE STARTED ON THE PRIVATE MAIN SANITARY SEWER UNTIL THE NECESSARY INSPECTION FEE HAS BEEN DEPOSITED WITH THE DEPARTMENT OF PUBLIC WORKS, CONTRACT & PERMIT SECTION (RM. 507, MUNICIPAL BLDG, 841 N. BROADWAY, MILWAUKEE, WI 53202). THE CONTRACTOR SHALL NOTIFY CONSTRUCTION SECTION, INFRASTRUCTURE DIVISION AT (414) 286-2497, AT LEAST (3) WORKING DAYS PRIOR TO START OF WORK ON THE PRIVATE MAIN SEWER PROJECT SO THE INSPECTION OF WORK CAN BE ARRANGED.
4. THE REQUIRED JOINTS FOR THE SANITARY SEWER SHALL BE IN ACCORDANCE WITH SECTION 3.2.10 OF THE STANDARD SPECIFICATION FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN.
5. THE CONTRACTOR SHALL PROPERLY RESTRAIN THE 10-INCH PVC PIPE WITHIN THE 20-INCH STEEL CASING PIPE BY ANCHORING TO PREVENT HORIZONTAL AND VERTICAL MISALIGNMENT OF THE SANITARY SEWER.
6. ALL CASTINGS SHALL BE SUPPLIED BY THE CONTRACTOR. THE COST OF THE CASTINGS SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THEIR RESPECTIVE STRUCTURES. THE MANUFACTURING AND WORKMANSHIP OF ALL CASTINGS SUPPLIED SHALL CONFORM TO ASTM 48-83. THE GREY IRON SHALL BE CLASS 308. ALL SANITARY MANHOLES SHALL HAVE MS 2J FRAME AND MS 58A LID WITH GASKET.
7. THE BENCH OF EACH MANHOLE, WITH THE EXCEPTION OF DEAD END MANHOLES, SHALL BE CONSTRUCTED IN "U" SHAPE TO THE ELEVATION OF THE OUTSIDE TOP OF THE DOWNSTREAM PIPE.
8. THE CONTRACTOR SHALL INSTALL AN INTERNAL FRAME AND CHIMNEY SEAL AS SPECIFIED FOR EACH NEW SANITARY MANHOLE. THE COST OF PROVIDING AND INSTALLING THE SEAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE MANHOLE.
9. THE MINIMUM VERTICAL DISTANCE FROM THE TOP OF THE FRAME OF ANY MANHOLE TO THE TOP OF THE CORBEL SECTION OR FLAT SLAB TOP SHALL BE 22 INCHES.
10. ALL MANHOLE STEPS USED ON THE CONTRACT SHALL BE CAPABLE OF WITHSTANDING A MINIMUM DESIGN VERTICAL LOAD OF 800 LBS. WITH A MAXIMUM PERMANENT SET OF 1/2INCH AFTER APPLICATION OF THE VERTICAL LOAD AND A HORIZONTAL PULL OUT LOAD OF 400 LBS. PER FILE NO. 15 OF STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN, DATED DECEMBER 22, 2003 SECTION 4.13.1(D) OF THE CITY OF MILWAUKEE SEWER AND BUILDING SERVICE SPECIFICATIONS IS REVISED USING A 1/2INCH DIAMETER REINFORCING BAR (MINIMUM SIZE) INSTEAD OF A 3/8 INCH DIAMETER REINFORCING BAR.
11. ANY COSTS INCURRED IN THE TESTING OF PIPE OR MATERIALS SHALL BE BORNE BY THE CONTRACTOR. ALL MATERIAL TESTS REQUIRED ON THIS CONTRACT SHALL BE PERFORMED AT A TESTING LABORATORY DESIGNATED BY THE CITY OF MILWAUKEE.
12. MECHANICAL COMPACTION OF BACKFILL IS REQUIRED AND SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF SEWER AND WATER CONSTRUCTION IN WISCONSIN SECTION 2.6.1(4)(D), TRENCH MAINTENANCE IS THE RESPONSIBILITY OF THE CONTRACTOR.
13. PIPE LENGTHS ARE GIVEN TO THE CENTER OF THE STRUCTURE UNLESS OTHERWISE NOTED ON THE PLAN.
14. CONTRACTORS SHALL BE RESPONSIBLE FOR NOT TRACKING SEDIMENT ONTO PUBLIC STREETS. SHOULD SEDIMENTATION FROM THE SITE REACH A PUBLIC STREET, IT SHALL BE REMOVED BY STREET CLEANING OTHER THAN FLUSHING BEFORE END OF EACH WORKDAY.
15. THE CONTRACTOR SHALL PERFORM LOW PRESSURE SANITARY AIR TESTING OF ALL NEW SANITARY SEWER. THE SANITARY AIR TESTING SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 3.7.3 OF THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN" SIXTH EDITION DATED DECEMBER 22, 2003 AND ADDENDA THERETO. THE COST OF SANITARY AIR TESTING OF THE SANITARY SEWER SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE SANITARY AIR TESTING.
16. THE CONTRACTOR SHALL PERFORM MANHOLE VACUUM TESTING OF EACH NEW SANITARY MANHOLE ON THIS SEWER CONTRACT. THE VACUUM TESTING SHALL CONFORM TO THE REQUIREMENTS OF CHAPTER 3.7.6 OF THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN" SIXTH EDITION DATED DECEMBER 22, 2003 AND ADDENDA THERETO. THE COST OF VACUUM TESTING OF THE SANITARY MANHOLE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE SANITARY MANHOLE VACUUM TESTING.
17. THE CONTRACTOR SHALL PROVIDE THE CITY WITH TWO (2) COPIES OF A POST INSTALLATION DVD EXAMINATION AND REPORT OF THE SEWER. THESE RECORDED EXAMS WILL BECOME THE PROPERTY OF THE CITY OF MILWAUKEE. THE POST CONSTRUCTION DVD EXAMINATION AND REPORT SHALL ALSO BE REQUIRED FOR THE SANITARY SEWER BETWEEN MANHOLE NUMBERS 4 AND 5, ONCE THE NEW CHANNEL IS CONSTRUCTED AND RIPRAP IS PLACED UNDER THE CHANNEL. THE COST OF THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE SEWER EXAM BY CCTV POST-CONSTRUCTION.

SPECIAL PROVISIONS CONTINUE ON P.F. NO. PM-294

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND BEFORE YOU DIG. WISCONSIN STATUTE 182.175 REQUIRES MIN OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

ESTIMATE OF QUANTITIES		
ITEM NO.	QUANTITY	DESCRIPTION
SPV.0090.5025	398 LF	8-INCH DIA. SANITARY SEWER, CLASS "C" BEDDING
SPV.0060.5035	3 EACH	SANITARY SEWER MANHOLE, 48-INCH, PRECAST CONCRETE W/CASTING AND INTERNAL MANHOLE SEAL
SPV.0090.5033	460 LF	ABANDON SANITARY SEWER 8-INCH
SPV.0090.5033	2 EACH	ABANDON SANITARY MANHOLE
SPV.0060.5050	3 EACH	SANITARY MANHOLE VACUUM TESTING
SPV.0090.5015	398 LF	SANITARY AIR TESTING
SPV.0090.5025	398 LF	SEWER EXAMS BY CCTV POST-CONSTRUCTION

WISCONSIN
JAMES A. LISAK
E-30100
MUSKEGO
PROFESSIONAL ENGINEER
6-10-2013

NO.	BY	REVISION	DATE

AS BUILT CONTRACT NO.
DATE ENT'D. ENT'D. BY

ENVIRONMENTAL ENGINEERING SECTION
INFRASTRUCTURE SERVICES DIVISION
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN

SEWER MAIN PLAN

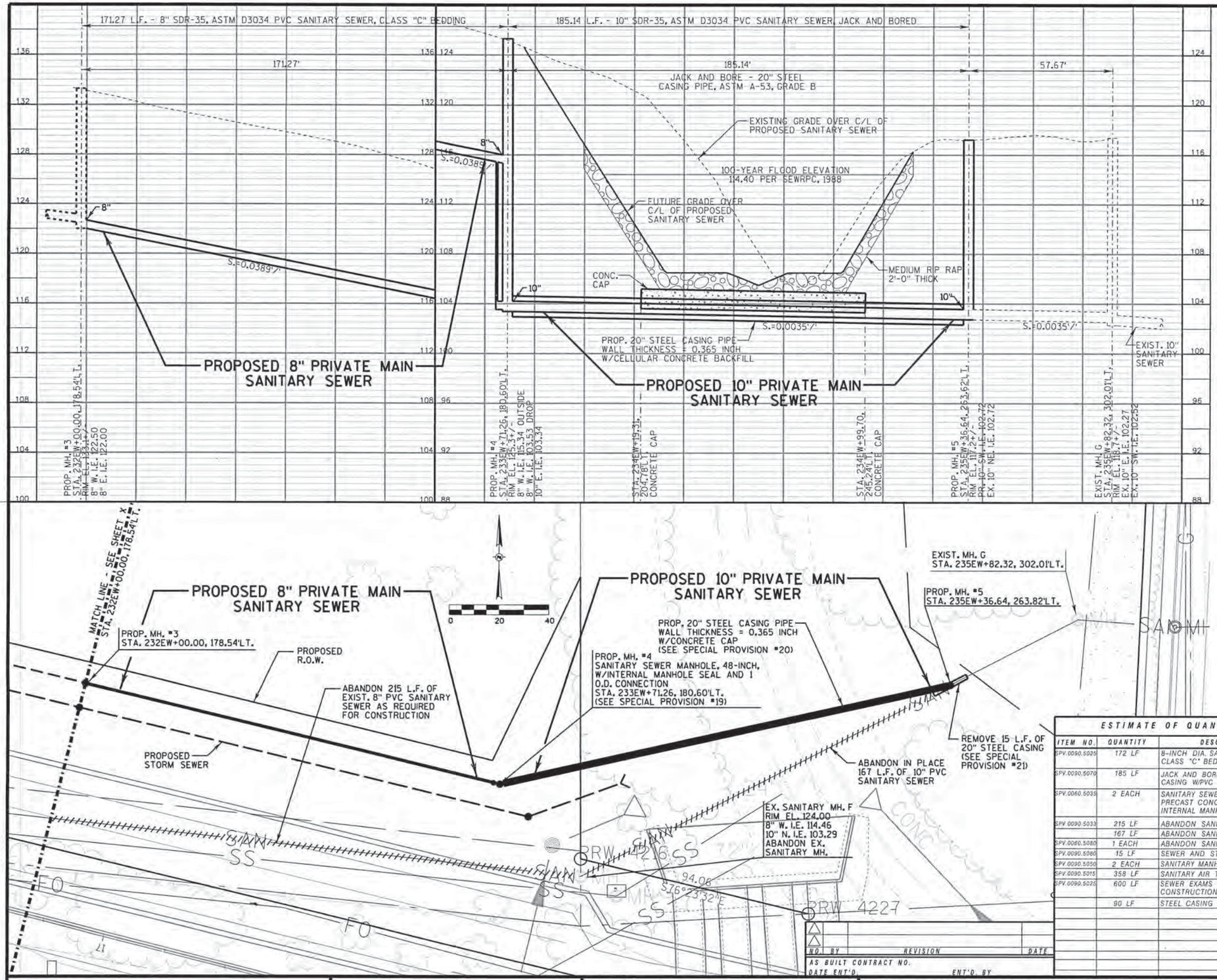
IN **EASEMENT**
FROM **890' WEST OF S. 84TH STREET**
TO **500' WEST OF S. 84TH STREET**

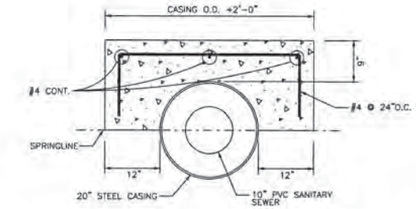
		APPROVED	DATE
SCALE	HORIZONTAL 1"=20' / VERTICAL 1"=4'	Zafar Yousaf	6/10/2013 DESIGN ENGINEER
1/4 SEC. NO.	417	Timothy J. Thur	6/10/13 ENGINEER IN CHARGE
PLAN DATE	5-9-13	Jeffrey D. Polenske PE	6/10/13 CITY ENGINEER & SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS
DESIGNED BY	JAL		
DRAWN BY	FKO		
CHECKED BY	JAL		
SYSTEM NO.	1831		
EASEMENT NO.			
CONTRACT NO.		PROJECT NO.	C.C. FILE NO.
PROJ. ID.	ST320125245	OFF. NOTICE NO.	DATE ADOPTED

SHEET NO. 1 OF 2 PLAN FILE NO. PM-293

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PRIVATE MAIN SANITARY SEWER	SHEET C200	E

FILE NAME : L:\Jobs2012\20120177\CAD\Site\dgn\00\C_00_C200_SANITARY_177.dgn PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ MMSD _____ SCANNED _____ MICROFILMED _____





STEEL CASING CONCRETE CAP DETAIL

N.T.S.

GENERAL NOTES

1. VERTICAL DATUM IS MILWAUKEE METROPOLITAN SEWERAGE DISTRICT (MMSD) DATUM. APPROXIMATE ELEVATIONS BASED ON DOT DATUM NAVD88 (2007) CAN BE OBTAINED BY ADDING 580.33 FEET ALGEBRAICALLY TO THE MMSD DATUM ELEVATIONS.
2. WORKING POINTS FOR MANHOLES ARE AT CENTER OF MANHOLE BARREL.
3. ALL INVERT ELEVATIONS ARE ALONG PROFILE CENTER LINE. INVERTS FOR MAIN LINE SEWER ARE AT MANHOLE WORKING POINTS.
4. SURFACE RESTORATIONS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR 8-INCH AND 10-INCH SANITARY SEWER PER SECTION 5.10.17 OF THE CITY OF MILWAUKEE SPECIFICATIONS.
5. CASING PIPE AND CARRIER PIPE SHALL BE INSTALLED UNDER EXISTING CONCRETE CHANNEL AND FLOW ESTABLISHED. CONCRETE CAP SHALL BE INSTALLED OVER CASING PIPE DURING CHANNEL WORK PRIOR TO PLACEMENT OF RIP RAP.

SPECIAL PROVISIONS

SPECIAL PROVISIONS CONTINUED FROM P.F. NO. PW-293.

18. THE CONTRACTOR SHALL PREPARE AN "AS-BUILT" OF THE PRIVATE MAIN SEWER. "ANY CHANGES IN LOCATION, ELEVATION, OR MATERIALS FROM THOSE SHOWN ON THE APPROVED PLANS SHALL BE APPROVED BY THE ENVIRONMENTAL ENGINEERING DIVISION OF THE CITY OF MILWAUKEE AND ONE MARKED UP "AS-BUILT" PRINT SHALL BE FURNISHED UPON COMPLETION OF THE SEWER WORK FOR RECORD PURPOSES."
19. THE PROPOSED OUTSIDE DROP CONNECTION TO THE SANITARY MANHOLE NUMBER 4 SHALL BE IN ACCORDANCE WITH FILE NO. 22 OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN. THE COST OF BUILDING AN OUTSIDE DROP CONNECTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SANITARY SEWER MANHOLE, 48-INCH, PRECAST CONCRETE WITH CASTING AND INTERNAL MANHOLE SEAL.
20. THE CONTRACTOR SHALL JACK AND BORE THE 20-INCH STEEL CASING WITH PVC 10-INCH DIA. SANITARY FROM MANHOLE 4 TO MANHOLE 5 AS SHOWN ON THE PLAN. THE CONTRACTOR SHALL NOT DISTURB THE EXISTING CONCRETE CHANNEL DURING THE JACK AND BORE PROCESS. A REINFORCED CONCRETE CAP SHALL BE INSTALLED OVER THE STEEL CASING PIPE ONCE THE EXISTING CONCRETE CHANNEL IS REMOVED, AND BEFORE THE RIPRAP IS PLACED. A DETAIL DRAWING OF THE CONCRETE CAP IS SHOWN ON PAGE PM-294.
21. THE PROPOSED CONSTRUCTION OF MANHOLE 5 REQUIRES THE REMOVAL OF AN APPROXIMATELY 15-FOOT SECTION OF EXISTING 20-INCH STEEL CASING. THE CONTRACTOR SHALL REPLACE THIS EXISTING STEEL CASING SECTION WITH THE SAME KIND OF PIPE AND WITH THE SAME SLOPE. THE COST OF REMOVAL AND REPLACEMENT OF THIS STEEL CASING SECTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE JACK AND BORE 20-INCH STEEL CASING WITH PVC 10-INCH DIA. SANITARY.

WISCONSIN JAMES A. LISEK E-30411 MILWAUKEE, WI PROFESSIONAL ENGINEER
6-10-2013

CALL DIGGERS HOTLINE 1-800-242-8511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND BEFORE YOU DIG WISCONSIN STATUTE 182.0175 REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

ESTIMATE OF QUANTITIES

ITEM NO.	QUANTITY	DESCRIPTION
SPV.0090.5025	172 LF	8-INCH DIA. SANITARY SEWER, CLASS "C" BEDDING
SPV.0090.5070	185 LF	JACK AND BORE 20-INCH STEEL CASING W/PVC 10-INCH DIA. SANITARY
SPV.0060.5035	2 EACH	SANITARY SEWER MANHOLE, 48-INCH, PRECAST CONCRETE W/CASTING AND INTERNAL MANHOLE SEAL
SPV.0090.5033	215 LF	ABANDON SANITARY SEWER 8-INCH
	167 LF	ABANDON SANITARY SEWER 10-INCH
SPV.0060.5080	1 EACH	ABANDON SANITARY MANHOLE
SPV.0090.5060	15 LF	SEWER AND STEEL CASING REMOVAL
SPV.0090.5050	2 EACH	SANITARY MANHOLE VACUUM TESTING
SPV.0090.5015	358 LF	SANITARY AIR TESTING
SPV.0090.5025	600 LF	SEWER EXAMS BY CCTV POST-CONSTRUCTION
	90 LF	STEEL CASING CONCRETE CAP

NO.	BY	REVISION	DATE

AS BUILT CONTRACT NO.
DATE ENT'D ENT'D BY

ENVIRONMENTAL ENGINEERING SECTION
INFRASTRUCTURE SERVICES DIVISION
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE, WISCONSIN

SEWER MAIN PLAN

IN **EASEMENT**
FROM 500' WEST OF S. 84TH STREET
TO S. 84TH STREET

SCALE	HORIZONTAL 1"=20' / VERTICAL 1"=4'	APPROVED / DATE	Zafar Yousaf 6/10/2013 DESIGN ENGINEER
1/4 SEC. NO.	417		Timothy J. Thur 6/10/13 ENGINEER IN CHARGE
PLAN DATE	5-9-13		Jeffrey D. Polenske 6/10/13 CITY ENGINEER & SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS
DESIGNED BY	JAL		
DRAWN BY	FKO		
CHECKED BY	JAL		
SYSTEM NO.	1831		
EASEMENT NO.		PROJECT NO.	C.C. FILE NO.
CONTRACT NO.		OFF. NOTICE NO.	DATE ADOPTED
PROJ. ID.	ST320125245		

SHEET NO. 2 OF 2 PLAN FILE NO. PM-294

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PRIVATE MAIN SANITARY SEWER	SHEET C201	E

FILE NAME : L:\Jobs2012\20120177\CAD\Site\dgn\00\C_00_C201_SANITARY_177.dgn PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$

MMSD _____ SCANNED _____ MICROFILMED _____

STATE PROJECT NUMBER	SHEET NO.
1060-33-78	

ESTIMATE OF QUANTITIES

FURNISH PIPE AND INSTALL

(DUCTILE IRON RESTRAINED JOINT) (SPV.0090.5060)
154.8 FT. - 30" WATER MAIN

FURNISH AND INSTALL

1 - 30" B.F. VALVE (MJ)
1 - 2" A.V.
1 - 30" COUPLING

WATER MAIN ABANDONMENTS

WATER BLOWOFF MANHOLE
8" WATER BLOWOFF MAIN

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF MILWAUKEE "WATER MAIN INSTALLATION SPECIFICATIONS", DATED JANUARY 2, 1987. ADDITIONALLY, ALL WORK SHALL BE DONE IN ACCORDANCE WITH "THE MILWAUKEE WATER WORKS STANDARD PLAN NOTES REGARDING WATER MAIN CONSTRUCTION", WHICH ARE ATTACHED AND MADE A PART OF THESE WATER MAIN PLANS AND CONTRACT DOCUMENTS. NOTES 4, 6, 16 THROUGH 18, AND 21 SHALL NOT APPLY TO THIS PROJECT.

THE CONTRACTOR SHALL FURNISH ALL ITEMS REQUIRED TO COMPLETE THIS PROJECT.

ALL MATERIALS WILL REQUIRE INSPECTION BY THE CITY.

NOTIFY MR. STEVE BRENGOSZ AT 414-708-2808 OR MR. MARK SCHELLER AT 414-286-2427, FOR MATERIALS INSPECTION AND THE CITY OF MILWAUKEE'S CONSTRUCTION SECTION AT 414-286-2497, FOR INSTALLATION INSPECTION, FOUR DAYS PRIOR TO STARTING CONSTRUCTION.

THE MILWAUKEE WATER WORKS WILL SHUT OFF THE WATER MAIN TO BE ALTERED AND PROVIDE TEMPORARY HOSE CONNECTIONS TO AFFECTED SERVICES AS REQUIRED.

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 88(2007). TO CONVERT TO CITY OF MILWAUKEE DATUM, SUBTRACT 580.29 FROM ELEVATIONS SHOWN.

RESTRAINED JOINT PIPE NOTES

MATERIAL TESTING DONE BY CITY WILL REMOVE AT LEAST ONE WELDED END FROM A RESTRAINED PIPE PIECE. CONTRACTOR TO PROVIDE ENOUGH PIPE FOR TESTING AND INSTALLATION.

CONTRACTOR TO USE MANUFACTURER RECOMMENDED RESTRAINT METHODS FOR ALL FIELD CUT RESTRAINED JOINT PIPE.

CONTRACTOR TO FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR ASSEMBLY AND INSTALLATION OF ALL RESTRAINED JOINT PIPE.

MILWAUKEE WATER WORKS COORDINATION

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING MR. JAY LLOYD, (414) 708-9012, ONE MONTH PRIOR TO MAKING WET CONNECTIONS AT S. 76TH ST. & W. KEARNEY ST. AND AT S. 76TH ST. & W. O'CONNOR ST. THE INITIAL CONTACT WITH MR. LLOYD IS TO PROVIDE HIM INFORMATION OF THE CONTRACTOR'S PLANNED TIMING.

ANOTHER NOTIFICATION IS REQUIRED 10 WORKING DAYS PRIOR TO EITHER WET CONNECTION TO CONFIRM THE SCHEDULE.

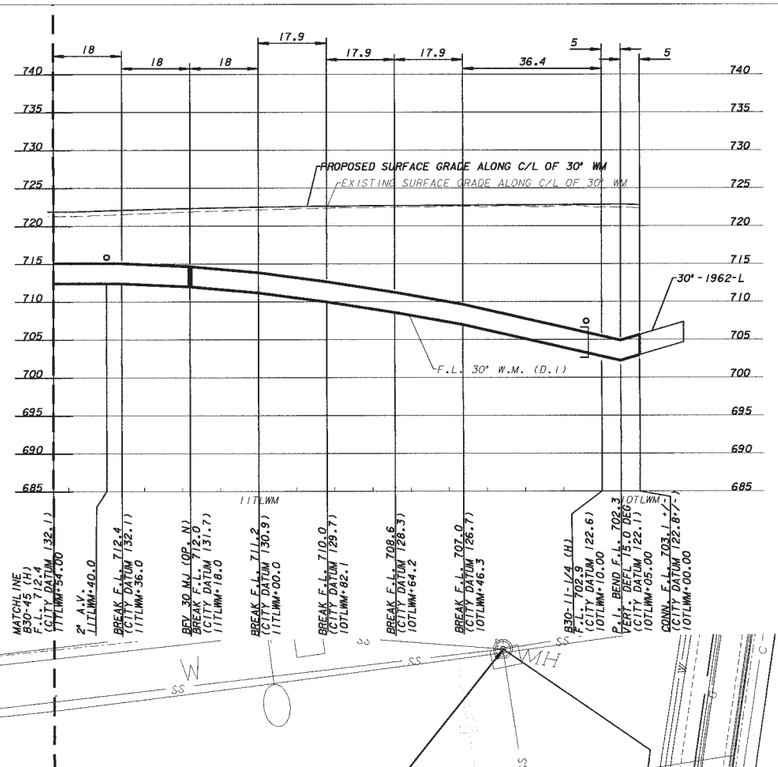
CITY OF MILWAUKEE RESIDENT / BUSINESS NOTIFICATION

WITHIN TEN (10) BUSINESS DAYS OF THE AWARD OF THIS CONTRACT, THE CONTRACTOR SHALL MAIL A NOTICE OF THE WATER MAIN PROJECT TO THE CITY OF MILWAUKEE CONSTRUCTION SECTION (CONTACT 414-286-2497) AT 841 N. BROADWAY, ROOM 710, MILWAUKEE, WI 53202 FOR REVIEW AND APPROVAL.

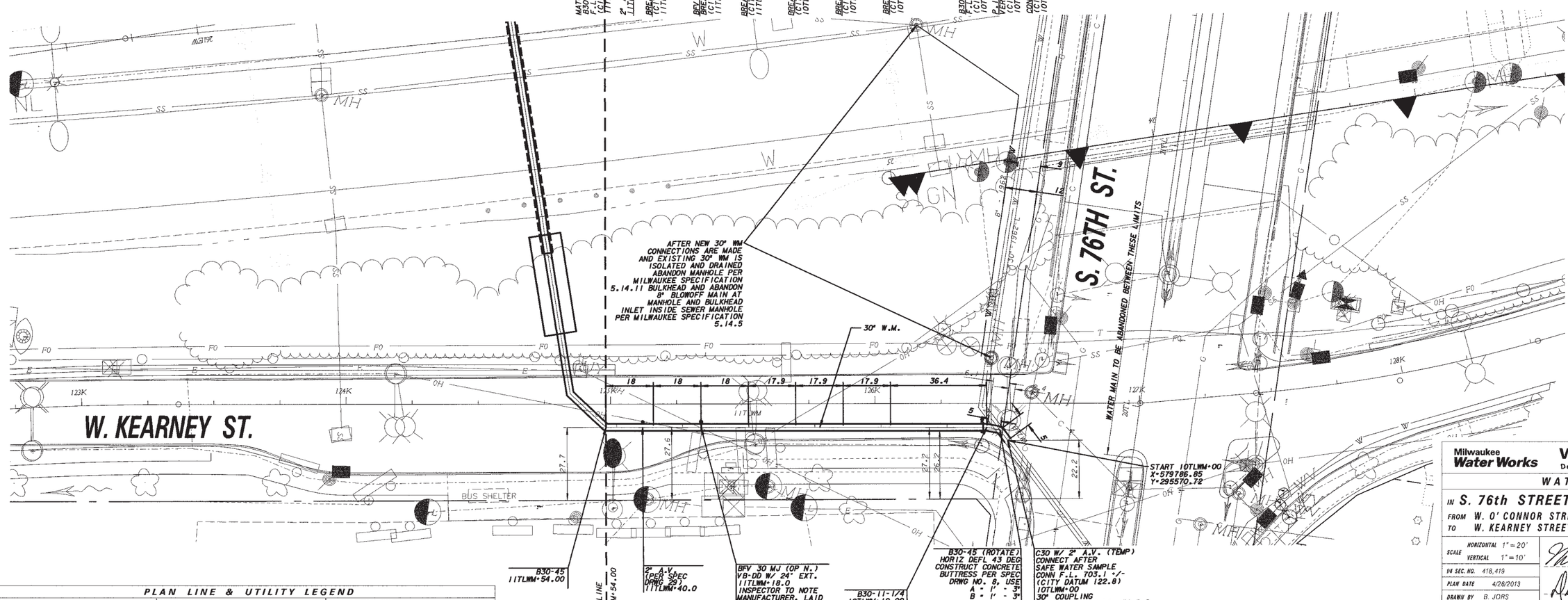
WITHIN FIVE (5) BUSINESS DAYS OF APPROVAL, THE CONTRACTOR SHALL MAIL THE PROJECT NOTICE TO ALL AFFECTED AREA RESIDENTS AND BUSINESSES AND INCLUDE ANY INFORMATION DEEMED NECESSARY FOR THE SUCCESSFUL PERFORMANCE OF THE WATER MAIN WORK.

IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL NOTICES ARE CONVEYED TO THE PUBLIC REGARDING THIS PROJECT.

CONTRACT WORK SHALL NOT START PRIOR TO COMPLETING THE NOTICE REQUIREMENT. ANY DELAY AS A RESULT OF NON-COMPLIANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.



NOTE: CONTRACTOR TO VERIFY CONNECT POINT LOCATIONS, ELEVATIONS, AND SLOPES. REPORT ANY DISCREPANCIES TO ENGINEER.



PLAN LINE & UTILITY LEGEND

GAS	G	SANITARY SEWER	SAN
ELECTRIC	E	STORM SEWER	STO
TELEPHONE	T	COMBINED SEWER	CMB
CABLE TELEVISION	TV	WATER MAIN	W
FIBER OPTICS	FO	WATER SERVICE	
PROPOSED UTILITY		PRESSURE DISTRICT	
		STREET LIGHTING	
		CITY UNDERGROUND CONDUIT	CUC
		PROPOSED CURB / PVMT	
		PAVING LIMITS	X X X X
		STRUCTURE / BUILDING	
		FENCE	x

POWER POLES ○-CONCRETE ○-ALUMINUM ○-WOOD WATER MAIN VALVES —|— GATE —●— BUTTERFLY W-SERVICE

UTILITIES ⊡-TRAFFIC SIGNAL ⊡-TRAFFIC CONTROL BOX G-GAS VALVE HYDRANTS -1 NOZZLE -3 NOZZLE

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND BEFORE YOU DIG. WISCONSIN STATUTE 182.0175 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

FORWARD 45
A JOINT VENTURE OF KAPUR, CROW WEG AND HATS

NO.	BY	REVISION	DATE

WISCONSIN
GREGORY L. GOVERNATORI
E 36034
RACINE, WI
PROFESSIONAL ENGINEER
4/26/2013

Milwaukee Water Works — Water Engineering, Department of Public Works

WATER MAIN

IN S. 76th STREET
FROM W. O' CONNOR STREET
TO W. KEARNEY STREET

		APPROVED	DATE
SCALE	HORIZONTAL 1" = 20'		
	VERTICAL 1" = 10'	MAINS DESIGN ENGINEER	4-26-13
1/4 SEC. NO.	418,419		
PLAN DATE	4/26/2013	CHIEF DESIGN ENGINEER	4/26/13
DRAWN BY	B. JORS		
CHECKED BY	G. GOVERNATORI	SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS	4/29/13
SURVEY BY	FORWARD 45		
PROGRAM NO.	2013-505	CONTRACT NO.	C.C. FILE NO.
WORK ORDER	WT410130505	O.N. & PROJECT NO. 163	ADOPTED

SHEET NO. 1 OF 3 PLAN FILE NO. 2013033

STATE PROJECT NUMBER	SHEET NO.
1060-33-78	

ESTIMATE OF QUANTITIES

FURNISH PIPE AND INSTALL

215.8 FT. - STEEL CASING PIPE WITH DUCTILE IRON RESTRAINED JOINT (SPV.0090.5010)

(DUCTILE IRON RESTRAINED JOINT (SPV.0090.5060)
133.3 FT. - 30" WATER MAIN

GENERAL NOTES

SEE GENERAL NOTES ON PLAN FILE NO. 2013033 (SHEET 1 OF 3)

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 88(2007). TO CONVERT TO CITY OF MILWAUKEE DATUM, SUBTRACT 580.29 FROM ELEVATIONS SHOWN.

RESTRAINED JOINT PIPE NOTES

MATERIAL TESTING DONE BY CITY WILL REMOVE AT LEAST ONE WELDED END FROM A RESTRAINED PIPE PIECE. CONTRACTOR TO PROVIDE ENOUGH PIPE FOR TESTING AND INSTALLATION.

CONTRACTOR TO USE MANUFACTURER RECOMMENDED RESTRAINT METHODS FOR ALL FIELD CUT RESTRAINED JOINT PIPE.

CONTRACTOR TO FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR ASSEMBLY AND INSTALLATION OF ALL RESTRAINED JOINT PIPE.

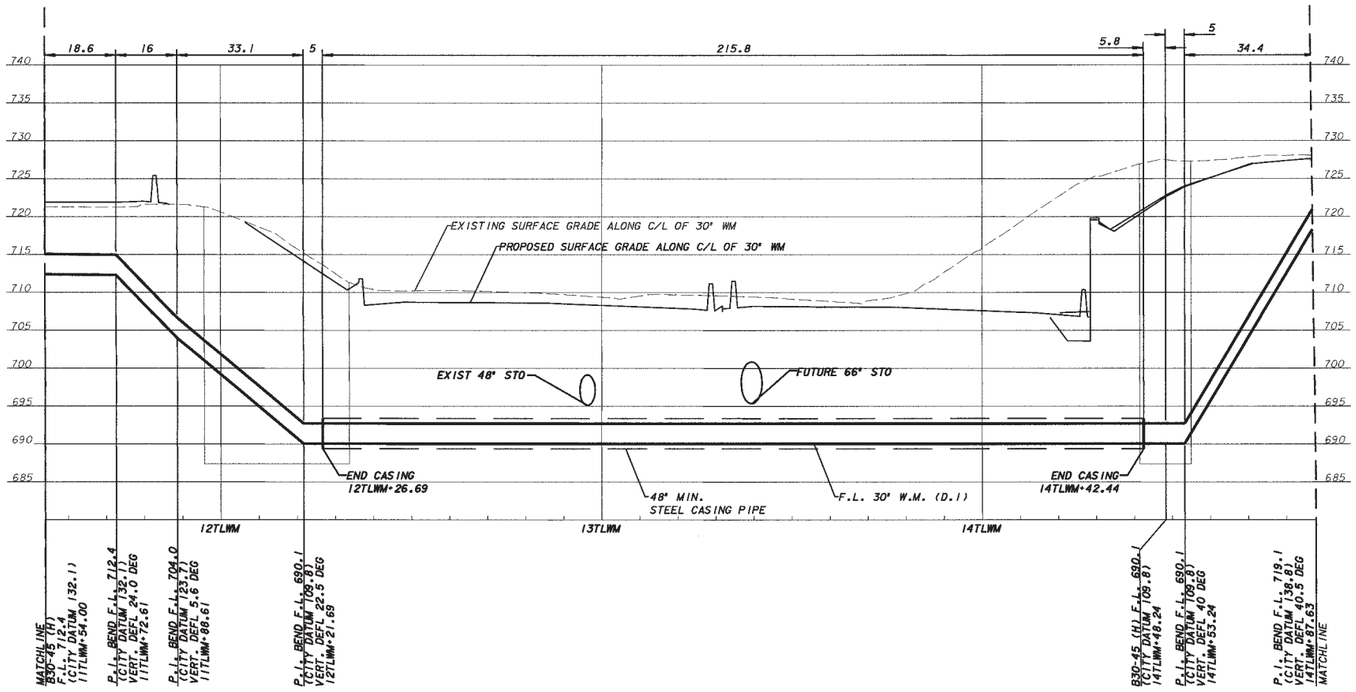
MILWAUKEE WATER WORKS COORDINATION

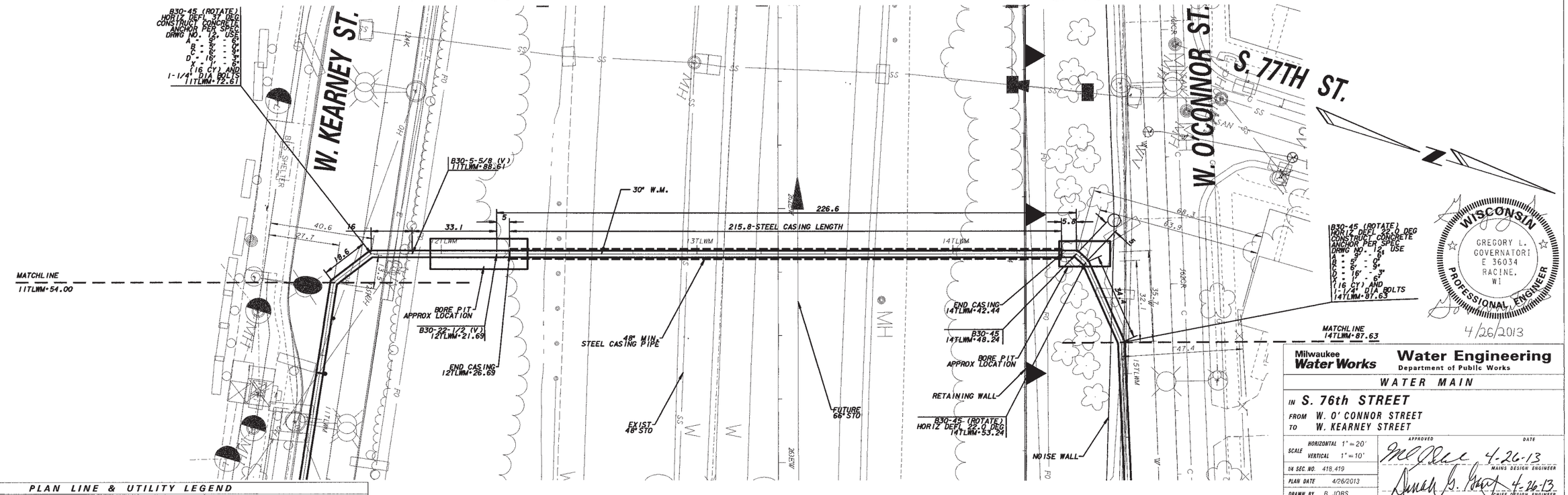
THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING MR. JAY LLOYD, (414) 708-9012, ONE MONTH PRIOR TO MAKING WET CONNECTIONS AT S. 76TH ST. & W. KEARNEY ST. AND AT S. 76TH ST. & W. O'CONNOR ST. THE INITIAL CONTACT WITH MR. LLOYD IS TO PROVIDE HIM INFORMATION OF THE CONTRACTOR'S PLANNED TIMING.

ANOTHER NOTIFICATION IS REQUIRED 10 WORKING DAYS PRIOR TO EITHER WET CONNECTION TO CONFIRM THE SCHEDULE.

CITY OF MILWAUKEE RESIDENT / BUSINESS NOTIFICATION

SEE CITY OF MILWAUKEE RESIDENT / BUSINESS NOTIFICATION NOTES ON PLAN FILE NO. 2013033 (SHEET 1 OF 3)





GREGORY L. GOVERNATORI
E 36034
RACINE, WI
WISCONSIN
PROFESSIONAL ENGINEER
4/26/2013

PLAN LINE & UTILITY LEGEND

GAS ——— G ———	SANITARY SEWER ——— SAN ———	STREET LIGHTING	
ELECTRIC ——— E ———	STORM SEWER ——— STO ———	CITY UNDERGROUND CONDUIT ——— CUC ———	
TELEPHONE ——— T ———	COMBINED SEWER ——— CMB ———	PROPOSED CURB / PVMT	
CABLE TELEVISION ——— TV ———	WATER MAIN ——— W ———	PAVING LIMITS	
FIBER OPTICS ——— FO ———	WATER SERVICE ———	STRUCTURE / BUILDING	
PROPOSED UTILITY ———	PRESSURE DISTRICT	FENCE	

POWER POLES ○-CONCRETE ○-ALUMINUM ○-WOOD WATER MAIN VALVES —|—GATE —|—BUTTERFLY ○W-SERVICE

UTILITIES ⊠-TRAFFIC SIGNAL ⌶-TRAFFIC CONTROL BOX ○G-GAS VALVE HYDRANTS ⊖-1 NOZZLE ⊖-3 NOZZLE

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FORWARD 45
A JOINT VENTURE OF KAPUR, GRAF HILL AND HNTB

NO.	BY	REVISION	DATE
△			
△			
△			

Milwaukee Water Works — **Water Engineering**
Department of Public Works

WATER MAIN
IN S. 76th STREET
FROM W. O'CONNOR STREET
TO W. KEARNEY STREET

		APPROVED	DATE
SCALE	HORIZONTAL 1" = 20'		4-26-13
	VERTICAL 1" = 10'	MAINS DESIGN ENGINEER	
1/4 SEC. NO.	418,419		4-26-13
PLAN DATE	4/26/2013	CHIEF DESIGN ENGINEER	
DRAWN BY	B. JORS		4/29/13
CHECKED BY	G. GOVERNATORI	SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS	
SURVEY BY	FORWARD 45		

PROGRAM NO.	2013-505	C.C. FILE NO.	
WORK ORDER	WT410130505	O.N. & PROJECT NO.	164
ADOPTED			

SHEET NO. 2 OF 3 PLAN FILE NO. 2013034

STATE PROJECT NUMBER	SHEET NO.
1060-33-78	

ESTIMATE OF QUANTITIES

FURNISH PIPE AND INSTALL

(DUCTILE IRON RESTRAINED JOINT) (SPV.0090.5060)
293.6 FT. - 30" WATER MAIN

(DUCTILE IRON PUSH-ON RUBBER GASKET JOINT) (SPV.0090.5050)
8.5 FT. - 16" WATER MAIN

FURNISH AND INSTALL

1 - 30" B.F. VALVE (MJ)
1 - 16" B.F. VALVE (MJ)
1 - 2" A.V.
1 - 30" COUPLING

WATER MAIN ABANDONMENTS

430 FT. - 30" WATER MAIN - 1950-L
VALVE ABANDONMENT

GENERAL NOTES

SEE GENERAL NOTES ON PLAN FILE NO. 2013033 (SHEET 1 OF 3)

ELEVATION NOTE

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RESTRAINED JOINT PIPE NOTES

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CONTRACTOR TO USE MANUFACTURER RECOMMENDED RESTRAINT METHODS FOR ALL FIELD CUT RESTRAINED JOINT PIPE.

CONTRACTOR TO FOLLOW MANUFACTURER'S RECOMMENDATIONS FOR ASSEMBLY AND INSTALLATION OF ALL RESTRAINED JOINT PIPE.

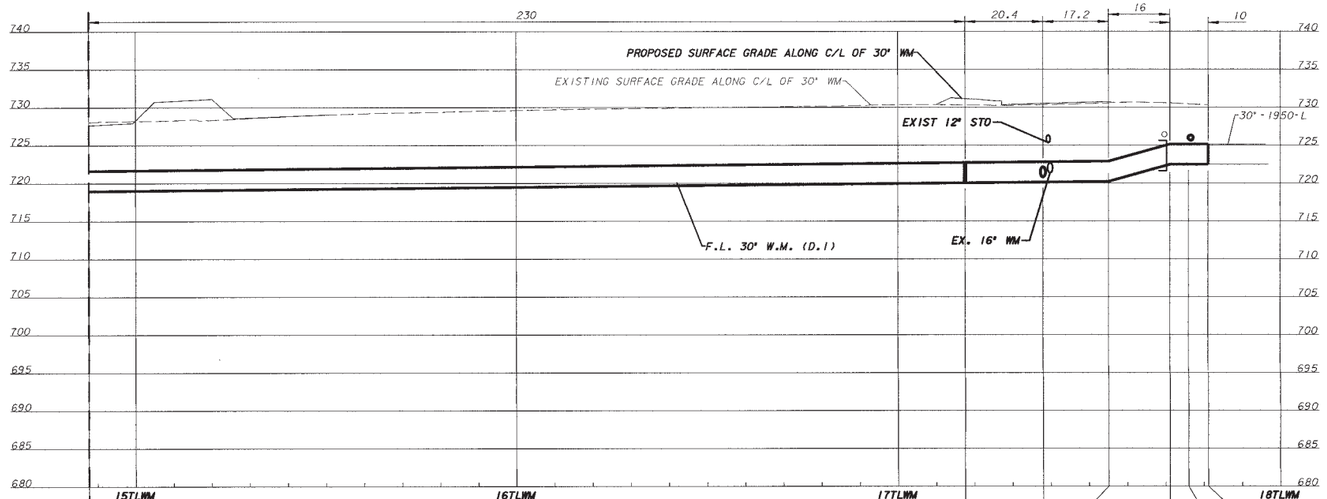
MILWAUKEE WATER WORKS COORDINATION

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING MR. JAY LLOYD, (414) 708-9012, ONE MONTH PRIOR TO MAKING WET CONNECTIONS AT S. 76TH ST. & W. KEARNEY ST. AND AT S. 76TH ST. & W. O'CONNOR ST. THE INITIAL CONTACT WITH MR. LLOYD IS TO PROVIDE HIM INFORMATION OF THE CONTRACTOR'S PLANNED TIMING.

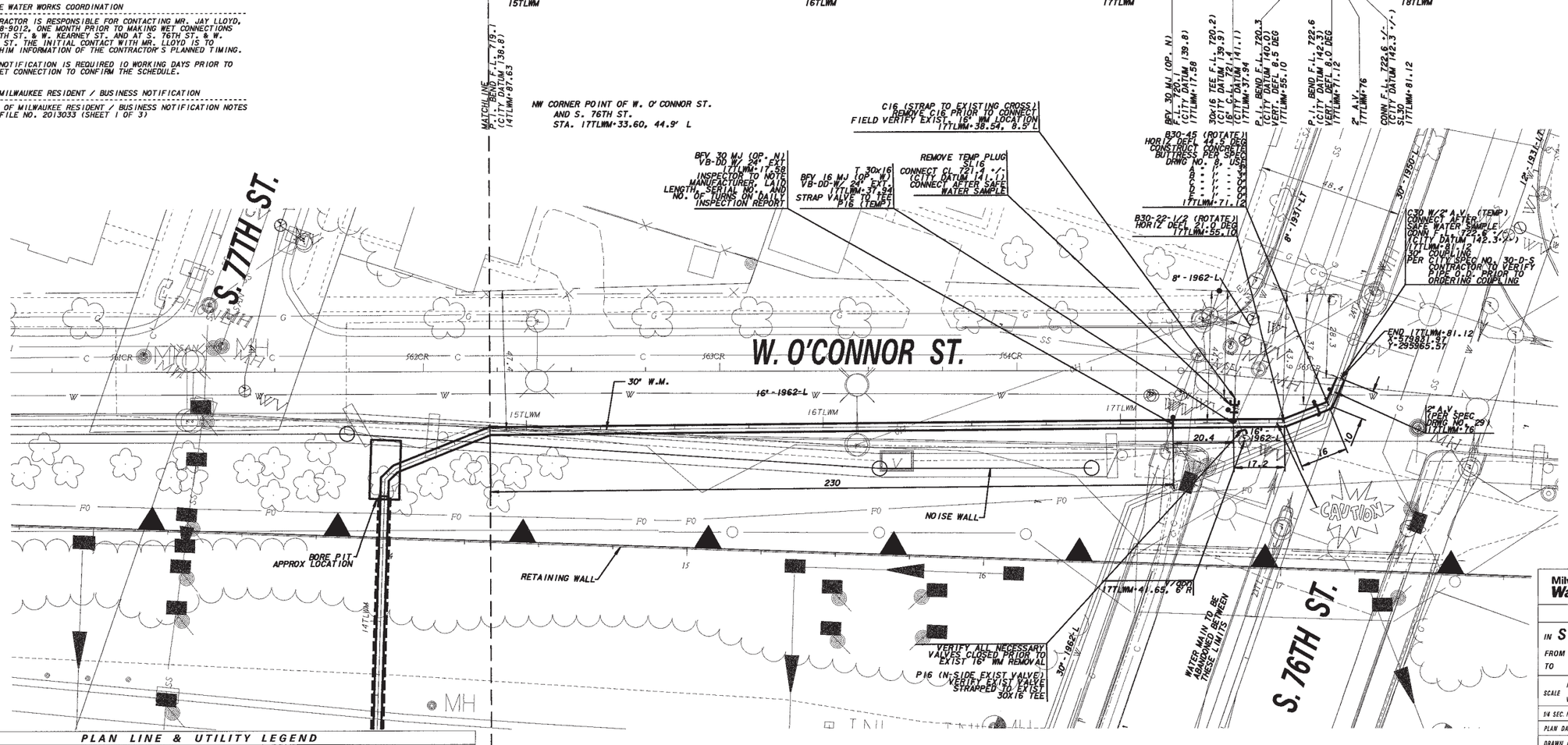
ANOTHER NOTIFICATION IS REQUIRED 10 WORKING DAYS PRIOR TO EITHER WET CONNECTION TO CONFIRM THE SCHEDULE.

CITY OF MILWAUKEE RESIDENT / BUSINESS NOTIFICATION

SEE CITY OF MILWAUKEE RESIDENT / BUSINESS NOTIFICATION NOTES ON PLAN FILE NO. 2013033 (SHEET 1 OF 3)



NOTE: CONTRACTOR TO VERIFY CONNECT POINT LOCATIONS, ELEVATIONS, AND SLOPES. REPORT ANY DISCREPANCIES TO ENGINEER.



PLAN LINE & UTILITY LEGEND

GAS ——— G ———	SANITARY SEWER ——— SAN ———	STREET LIGHTING
ELECTRIC ——— E ———	STORM SEWER ——— STO ———	CITY UNDERGROUND CONDUIT ——— CUC ———
TELEPHONE ——— T ———	COMBINED SEWER ——— CMB ———	PROPOSED CURB / PVMT
CABLE TELEVISION ——— TV ———	WATER MAIN ——— W ———	PAVING LIMITS x x x x
FIBER OPTICS ——— FO ———	WATER SERVICE ———	STRUCTURE / BUILDING
PROPOSED UTILITY ———	PRESSURE DISTRICT ...	FENCE ——— x ———

POWER POLES ○-CONCRETE ⌑-ALUMINUM ⌑-WOOD **WATER MAIN VALVES** —|—-GATE —|—-BUTTERFLY ○W-SERVICE

UTILITIES ⊡-TRAFFIC SIGNAL ⌑-TRAFFIC CONTROL BOX ⊙G-GAS VALVE **HYDRANTS** ⌂-1 NOZZLE ⌂-3 NOZZLE

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND
BEFORE YOU DIG. WISCONSIN STATUTE 182.0175 REQUIRES
MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

FORWARD 45
A JOINT VENTURE OF KAPUR, CRGM MILL AND HNTB

NO.	BY	REVISION	DATE

WISCONSIN
GREGORY L. GOVERNATOR
E 36034
RACINE, WI
PROFESSIONAL ENGINEER
4/26/2013

Milwaukee Water Works — **Water Engineering** Department of Public Works

WATER MAIN

IN S. 76TH STREET
FROM W. O' CONNOR STREET
TO W. KEARNEY STREET

		APPROVED	DATE
SCALE	HORIZONTAL 1"=20' VERTICAL 1"=10'		
14 SEC. NO.	418,419	MAINS DESIGN ENGINEER	4-26-13
PLAN DATE	4/26/2013		
DRAWN BY	B. JORS	CHIEF DESIGN ENGINEER	4-26-13
CHECKED BY	G. GOVERNATORI		
SURVEY BY	FORWARD 45	SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS	4/29/13
PROGRAM NO.	2013-505	CONTRACT NO.	C.C. FILE NO.
WORK ORDER	WT410130505	O.N. & PROJECT NO.	165
			ADOPTED

SHEET NO. 3 OF 3 PLAN FILE NO. 2013035

STATE PROJECT NUMBER	SHEET NO.
1060-33-78	

ESTIMATE OF QUANTITIES

FURNISH PIPE AND INSTALL

72.1 FT - STEEL CASING PIPE WITH DUCTILE IRON PUSH-ON RUBBER GASKET JOINT (SPV.0090.5020)

105 FT - 12" WATER MAIN (DUCTILE IRON PUSH-ON RUBBER GASKET JOINT) (SPV.0090.5040)

WATER MAIN ABANDONMENTS

145 FT - 12" WATER MAIN - 1936 - L.T.
15 FT - 12" WATER MAIN - 1962 - R

FURNISH AND INSTALL

2 - 2" AIR VENT

GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF MILWAUKEE "WATER MAIN INSTALLATION SPECIFICATIONS", DATED JANUARY 2, 1987. ADDITIONALLY, ALL WORK SHALL BE DONE IN ACCORDANCE WITH "THE MILWAUKEE WATER WORKS STANDARD PLAN NOTES REGARDING WATER MAIN CONSTRUCTION, WHICH ARE ATTACHED AND MADE A PART OF THESE WATER MAIN PLANS AND CONTRACT DOCUMENTS. NOTES 4, 6, 16 THROUGH 18, AND 21 SHALL NOT APPLY TO THIS PROJECT.

THE CONTRACTOR SHALL FURNISH ALL ITEMS REQUIRED TO COMPLETE THIS PROJECT.

ALL MATERIALS WILL REQUIRE INSPECTION BY THE CITY.

NOTIFY MR. STEVE BRENGOSZ AT 414-708-2808 OR MR. MARK SCHELLER AT 414-286-2427, FOR MATERIALS INSPECTION AND THE CITY OF MILWAUKEE'S CONSTRUCTION SECTION AT 414-286-2497, FOR INSTALLATION INSPECTION, FOUR DAYS PRIOR TO STARTING CONSTRUCTION.

THE MILWAUKEE WATER WORKS WILL SHUT OFF THE WATER MAIN TO BE ALTERED AND PROVIDE TEMPORARY HOSE CONNECTIONS TO AFFECTED SERVICES AS REQUIRED.

ELEVATION NOTE

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO NAVD 88(2007). TO CONVERT TO CITY OF MILWAUKEE DATUM, SUBTRACT 580.29 FROM ELEVATIONS SHOWN.

MILWAUKEE WATER WORKS COORDINATION

THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING MR. JAY LLOYD, (414) 708-9019, ONE MONTH PRIOR TO MAKING WET CONNECTIONS IN S. 84TH ST. THE INITIAL CONTACT WITH MR. LLOYD IS TO PROVIDE HIM INFORMATION OF THE CONTRACTOR'S PLANNED TIMING. ANOTHER NOTIFICATION IS REQUIRED 10 WORKING DAYS PRIOR TO EITHER WET CONNECTION TO CONFIRM THE SCHEDULE.

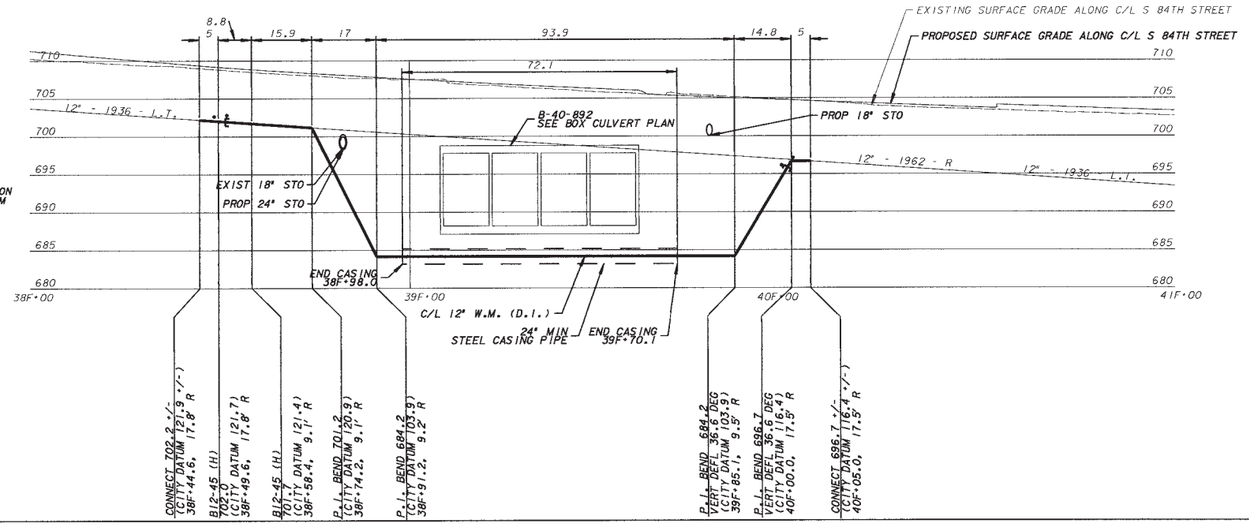
CITY OF MILWAUKEE RESIDENT / BUSINESS NOTIFICATION

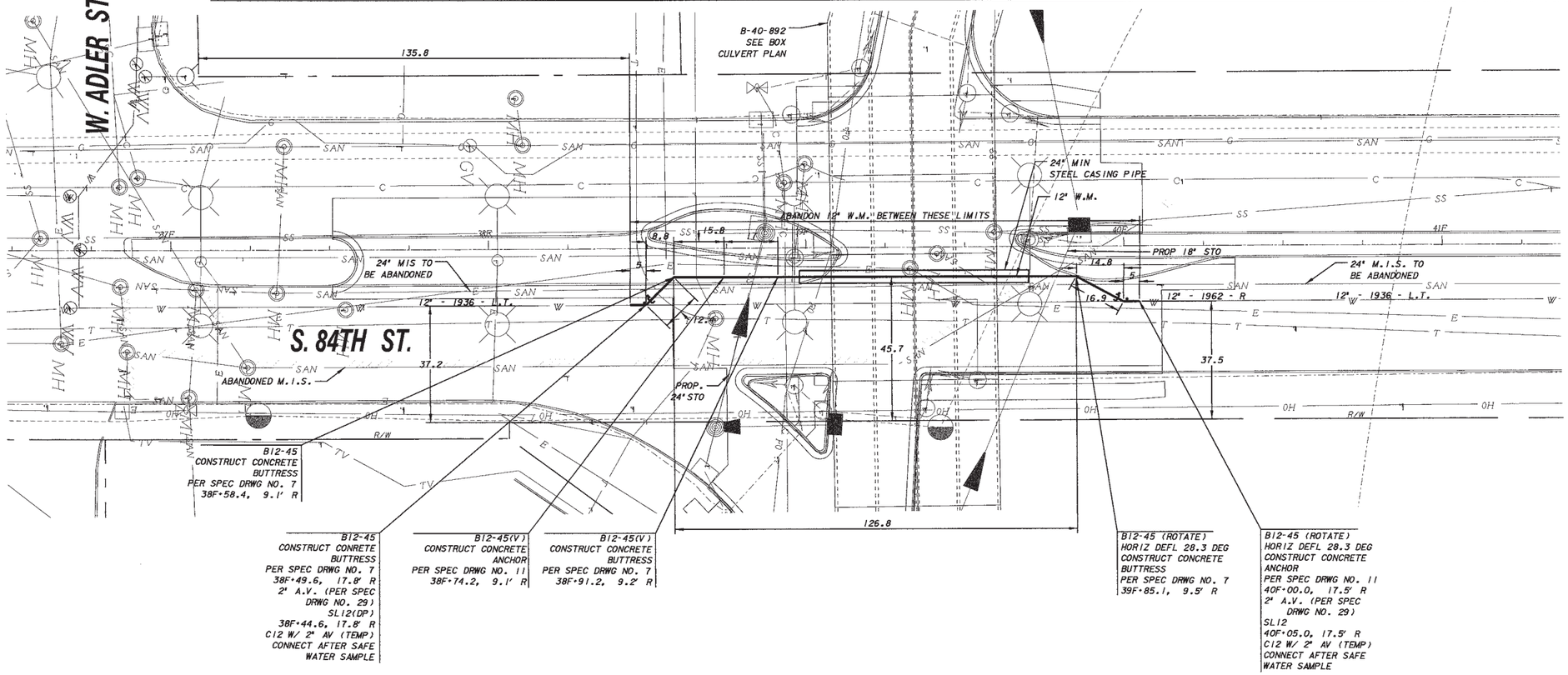
WITHIN TEN (10) BUSINESS DAYS OF THE AWARD OF THIS CONTRACT, THE CONTRACTOR SHALL MAIL A NOTICE OF THE WATER MAIN PROJECT TO THE CITY OF MILWAUKEE CONSTRUCTION SECTION (CONTACT 414-286-2497) AT 841 N. BROADWAY, ROOM 710, MILWAUKEE, WI 53202 FOR REVIEW AND APPROVAL.

WITHIN FIVE (5) BUSINESS DAYS OF APPROVAL, THE CONTRACTOR SHALL MAIL THE PROJECT NOTICE TO ALL AFFECTED AREA RESIDENTS AND BUSINESSES AND INCLUDE ANY INFORMATION DEEMED NECESSARY FOR THE SUCCESSFUL PERFORMANCE OF THE WATER MAIN WORK.

IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT ALL NOTICES ARE CONVEYED TO THE PUBLIC REGARDING THIS PROJECT.

CONTRACT WORK SHALL NOT START PRIOR TO COMPLETING THE NOTICE REQUIREMENT. ANY DELAY AS A RESULT OF NON-COMPLIANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.





PLAN LINE & UTILITY LEGEND

GAS ..... G	SANITARY SEWER ..... SAN	STREET LIGHTING	
ELECTRIC ..... E	STORM SEWER ..... STO	CITY UNDERGROUND CONDUIT ..... CUC	
TELEPHONE ..... T	COMBINED SEWER ..... CMB	PROPOSED CURB / PVMT	
CABLE TELEVISION ..... TV	WATER MAIN ..... W	PAVING LIMITS ..... X X X X	
FIBER OPTICS ..... FO	WATER SERVICE	STRUCTURE / BUILDING	
PROPOSED UTILITY	PRESSURE DISTRICT	FENCE x	

POWER POLES ○-CONCRETE ☼-ALUMINUM ⊗-WOOD WATER MAIN VALVES —|—GATE —|(—BUTTERFLY ○W-SERVICE

UTILITIES ⊡-TRAFFIC SIGNAL ⊡-TRAFFIC CONTROL BOX ⊄G-GAS VALVE HYDRANTS ⊖-1 NOZZLE ⊖-3 NOZZLE

CALL DIGGERS HOTLINE
1-800-242-8511
TOLL FREE TO OBTAIN LOCATION OF UNDERGROUND BEFORE YOU DIG. WISCONSIN STATUTE 182.0175 REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

FORWARD 45
A JOINT VENTURE OF RAPIDE, GRAM HILL AND HUTS

NO.	BY	REVISION	DATE
△			
△			
△			

WISCONSIN
GREGORY L. GOVERNATORI
E 36034
RACINE, WI
PROFESSIONAL ENGINEER
4/26/2013

Milwaukee Water Works — **Water Engineering**
Department of Public Works

WATER MAIN

IN S. 84TH ST.
FROM 150' N. OF W. ADLER ST.
TO 300' N. OF W. ADLER ST.

SCALE HORIZONTAL 1"=20' VERTICAL 1"=10'	APPROVED / DATE: MWWS DESIGN ENGINEER 4-26-13; CHIEF DESIGN ENGINEER 4.26.13; SPECIAL DEPUTY COMMISSIONER OF PUBLIC WORKS 4/29/13
1/4 SEC. NO. 417, 418	
PLAN DATE 4/26/2013	
DRAWN BY G. CALHOUN	
CHECKED BY G. GOVERNATORI	
SURVEY BY FORWARD 45	
PROGRAM NO. 2013-503	CONTRACT NO. / C.C. FILE NO.
WORK ORDER WT410130503	O.N. & PROJECT NO. 166 ADOPTED

SHEET NO. 1 OF 1 PLAN FILE NO. 2013032

2

2

NOTE

THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023001_up.dgn PLOT DATE : 07-JUN-2013 11:08 PLOT BY : mscgzl PLOT NAME : 023001_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

N

W. O' CONNOR STREET

W. KEARNEY STREET

IH 94 WB

IH 94 EB

MATCHLINE 241EW+00

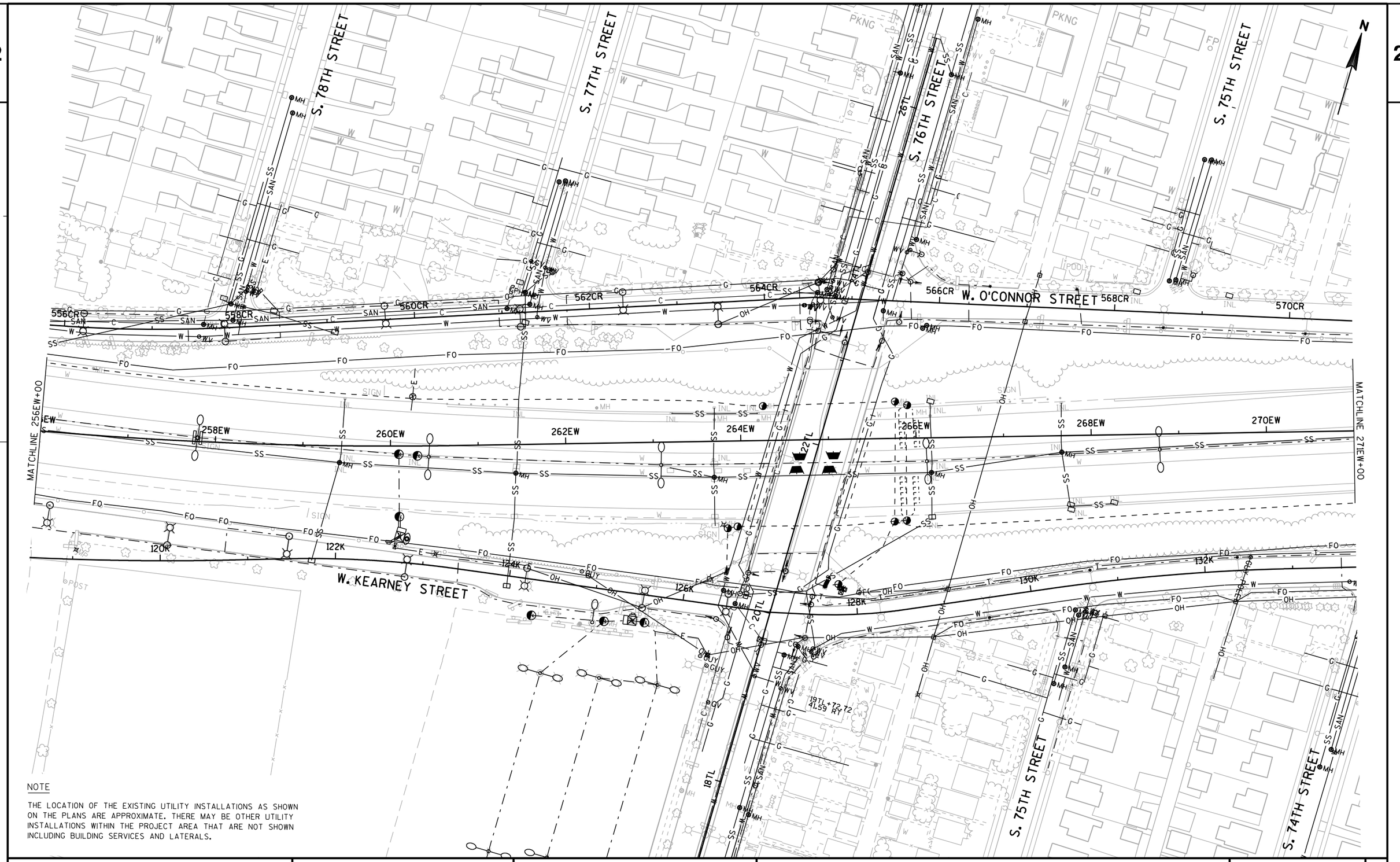
MATCHLINE 256EW+00

NOTE

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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

2



NOTE

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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

2

2

N

W. O'CONNOR STREET

572CR 574CR 576CR 578CR 580CR 582CR

IH 94 WB

IH 94 EB

272EW 274EW 276EW 278EW 280EW 282EW 284EW

MATCHLINE 271EW+00

W. KEARNEY STREET

134K 136K 138K 140K 142K

W. ADLER STREET

S. 70TH STREET

NOTE

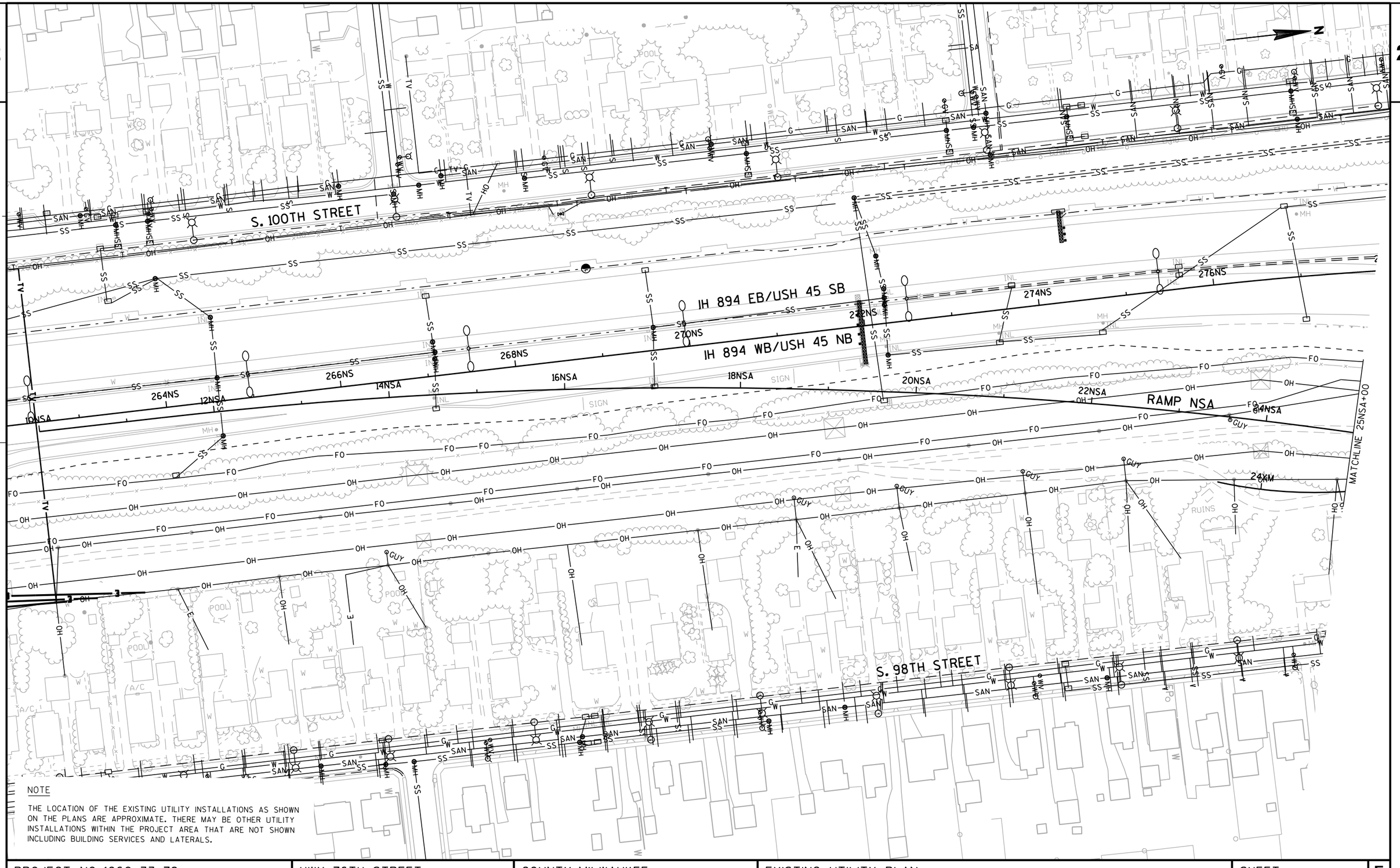
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023004_up.dgn PLOT DATE : 29-APR-2013 23:11 PLOT BY : MSCDYB PLOT NAME : 023004_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



NOTE

THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023005_up.dgn PLOT DATE : 29-APR-2013 23:14 PLOT BY : MSCDYB PLOT NAME : 023005_up PLOT SCALE : 100:1

2

2

USH 45 SB

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

HANK AARON STATE TRAIL

USH 45 NB

IH 94 EB

RAMP NSA

W. SCHLINGER AVENUE

MATCHLINE 25NSA+00

26NSA

26XM

28NSA

30NSA

32NSA

34NSA

36NSA

38NSA

78NS

280NS

282NS

284NS

286NS

288NS

290NS

292NS

5285CH

5305CH

5325CH

5345CH

NOTE

THE LOCATION OF THE EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN INCLUDING BUILDING SERVICES AND LATERALS.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023006_up.dgn PLOT DATE : 29-APR-2013 23:14 PLOT BY : MSCDYB PLOT NAME : 023006_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

242NS 244NS 246NS 248NS 250NS 252NS 254NS 256NS

746GBB 748GBB 750GBB 752GBB 754GBB

W. GREENFIELD AVENUE

S. 98TH STREET

W. ORCHARD PLACE

S. 97TH STREET

PKNG REC AREA PKNG PKNG

NOTE

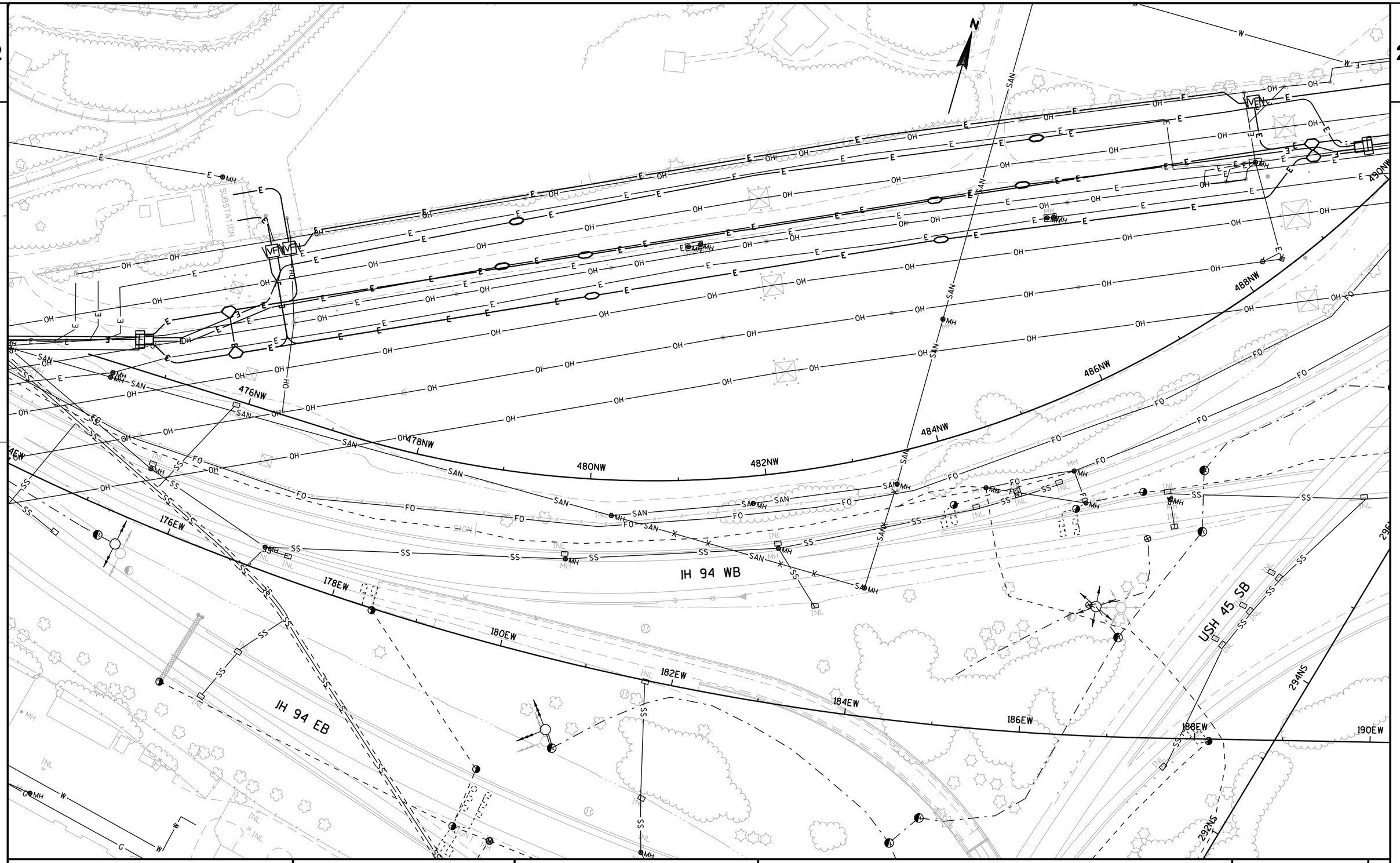
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023007_up.dgn PLOT DATE : 29-APR-2013 23:15 PLOT BY : MSCDYB PLOT NAME : 023007_up PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

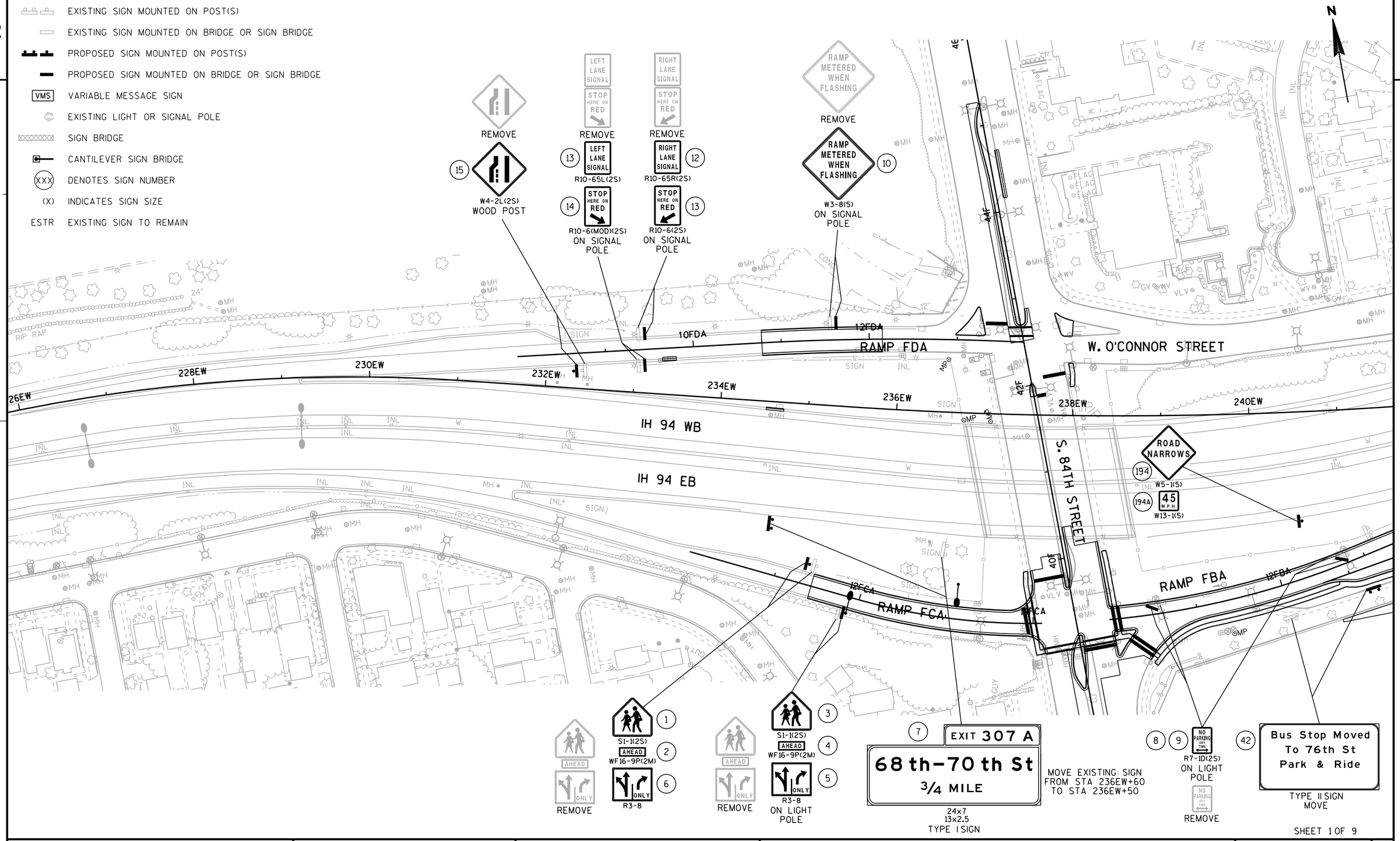


PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	EXISTING UTILITY PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023008_up.dgn PLOT DATE : 13-JUN-2013 11:21 PLOT BY : MSCDYB PLOT NAME : 023008_up PLOT SCALE : 100:1

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN



SHEET 1 OF 9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 175	E

FILE NAME : J:\projects\d2_10603394\78\sign\023201_ps.dgn PLOT DATE : 25-MAR-2013 07:57 PLOT BY : MSCCXV PLOT NAME : $FILE$ PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

2

2

N

I-94 EB

I-94 WB

RAMP FCA

RAMP FBA

S. 84TH STREET

NORTH 181 M3-1 / SOUTH 181 M3-3 (32) — M1-6 / M1-6 — M6-1 / MB6-1 — J3-2(2S)

29 — D9-2

29A — MB6-1 — ON LIGHT POLE

30 — S1-1(2S)

31 — WF16-7L(2M) — ON SIGNAL POLE

REMOVE

EAST 94 MB3-2 (17) — M1-1 — MB6-1 — J3-1(2S)

REMOVE

33 — ON WOOD POST

REMOVE

37 — S1-1(2S)

38 — WF16-7R(2M) — ON WOOD POST

REMOVE

34 — ONE WAY — R6-2L(2S) — ON SIGNAL POLE

25 26 — DO NOT ENTER — R5-1(3) — ON WOOD POST 3' HEIGHT AND 7' HEIGHT

REMOVE

27 28 — DO NOT ENTER — R5-1(3) — ON SIGNAL POLE 3' HEIGHT AND 7' HEIGHT

REMOVE

24 — R3-1(2S)

35 — R4-7(2S) — ON SIGNAL POLE

REMOVE

193 — R3-18(2S) — ON LIGHT POLE

19 — W12-1D(2S) — 2' HEIGHT

36 — R3-18(2S) — ON SIGNAL POLE

R3-18(2S) — REMOVE

WEST 195 MB3-4 — 94 M1-1 — MB6-1 — J3-1(2S) — ON SIGNAL ARM

WEST MB3-4 / EAST MB3-2 (16) — 94 M1-1 / 94 M1-1 — USE LEFT LANE M4-20L / MB6-1 — J3-2(2S)

EAST 94 — REMOVE

18 — R1-2(2S)

REMOVE

20 21 — R10-3E(MOD)

23 — NO ENGINE BRAKING — MOVE

22 — RAMP METERED WHEN FLASHING — W3-8(5) — ON SIGNAL POLE

RAMP METERED WHEN FLASHING — REMOVE

36F 37F 38F 39F 40F 41F 42F

15' 25' 20' 25' 25' 15' 20' 25'

236EW 237EW 238EW 239EW

SHEET 2 OF 9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET E

FILE NAME : J:\projects\d2_10603394\78\sign\023202_ps.dgn PLOT DATE : 25-MAR-2013 07:58 PLOT BY : MSCCXV PLOT NAME : $FILE$ PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

N

IH 94 EB

IH 94 WB

2356W

12FDA

RAMP FDA

196 EAST MB3-2 INTERSTATE 94 M1-1 MB6-1 J3-1(2S) ON SIGNAL ARM

197 EAST MB3-2 INTERSTATE 94 M1-1 USE LEFT LANE M4-20L J2-1(2S)

EAST INTERSTATE 94 USE LEFT LANE REMOVE

40 R3-18(2S)

REMOVE

S. 84TH STREET

42F 43F 44F 45F 46F 47F 48F

39 WEST MB3-4 INTERSTATE 94 M1-1 MB6-1 J3-1 MOVE

W. O'CONNOR STREET

41 W11-8(2S) ON LIGHT POLE

W11-8 REMOVE

SHEET 3 OF 9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 177 E

2

2

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
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- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- (XXX) — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

N

RIGHT LANE
BUSES MOTORCYCLES AND 2 OR MORE OCCUPANT CAR POOLS ONLY
REMOVE

RIGHT LANE
BUSES MOTORCYCLES AND 2 OR MORE OCCUPANT CAR POOLS ONLY
R3-5(R)

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED
REMOVE

PEDESTRIANS BICYCLES NON MOTORIZED TRAFFIC MOTOR BICYCLES PROHIBITED
R5-57(3)
ON LIGHT POLE

RIGHT LANE SIGNAL
R10-65R(2S)

STOP HERE ON RED
R10-6(2S)
ON SIGNAL POLE

RIGHT LANE SIGNAL
STOP HERE ON RED
REMOVE

W4-2R(2S)
ON LIGHT POLE

REMOVE

NO PARKING ANY TIME
R7-1D
REMOVE
ON LIGHT POLE

NO PARKING ANY TIME
R7-1D
REMOVE
ON LIGHT POLE

NO PARKING ANY TIME
R7-1D
REMOVE

DO NOT ENTER
R5-1
REMOVE

IH 94 WB

IH 94 EB

W. KEARNEY STREET

544CR 546CR 548CR 550CR 552CR 554CR 556CR

242EW 244EW 246EW 248EW 250EW 252EW 254EW 256EW

16FBA 18FBA

104K 106K 108K 110K 112K 114K 116K

PARK & RIDE AHEAD
D4-2A

NO PARKING ANY TIME
R7-1D(2S)
ON LIGHT POLE

SPEED LIMIT 30
R2-1
REMOVE

EAST
MB3-2
INTERSTATE 94
M1-1

MB6-2
J3-1(2S)

NO PARKING ANY TIME
R7-1D(2S)

NO PARKING ANY TIME
R7-1D
REMOVE
ON LIGHT POLE

SPEED LIMIT 30
R2-1(2S)

NO PARKING ANY TIME
R7-1D(2S)

NO PARKING ANY TIME
R7-1D(2S)

NO PARKING ANY TIME
R7-1D(2S)

NO PARKING ANY TIME
R7-1D(2S)

DO NOT ENTER
R5-1(2S)

PARK & RIDE AHEAD
REMOVE

AHEAD
D4-55A

NO PARKING ANY TIME
R7-1D
REMOVE

EAST
INTERSTATE 94

AHEAD
REMOVE

REMOVE

SHEET 4 OF 9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 178	E

FILE NAME : J:\projects\d2_10603394\78\sign\023204_ps.dgn PLOT DATE : 25-MAR-2013 07:58 PLOT BY : MSCCXV PLOT NAME : $FILE$ PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

N

106 HOSPITAL EXIT 306 — E10-61 — MOVE TYPE I SIGN NEW STEEL POSTS

105 ONE WAY — R6-2R(2S) ON LIGHT POLE

REMOVE ONE WAY

N 78th St / W O'Connor St — D3-1 MOVE BY OTHERS

REMOVE DO NOT ENTER

107 DO NOT ENTER — R5-1(2S)

REMOVE ONE WAY

99 ONE WAY — R6-2R(2S) ON LIGHT POLE

N 77th St / W O'Connor St — D3-1 MOVE BY OTHERS

REMOVE NO PARKING ANY TIME

98 NO PARKING ANY TIME — R7-1D(2S)

REMOVE DO NOT ENTER

97 DO NOT ENTER — R5-1(2S)

96 SPEED LIMIT 30 — R2-1(2S) ON LIGHT POLE

92 ← State Fair — MOVE

CRASH INVESTIGATION SITE — D4-54L — REMOVE

90 — D4-55L

PARK & RIDE — ESTR

W O'Connor St / N 75th St — D3-1 MOVE BY OTHERS

REMOVE ONE WAY

91 ONE WAY — R6-2R(2S) ON LIGHT POLE

192 ONE WAY — R6-2R(2S) ON LIGHT POLE

REMOVE SPEED LIMIT 30

104 SPEED LIMIT 30 — R2-1(2S)

Miller Park EXIT 308 B — ELECTRONIC PANEL — 100

MOVE TYPE I SIGN AT NEW STEEL POSTS 263+25
ELECTRONIC SIGN-SEE FTMS PLAN FOR QUANTITIES)
REUSE SMALL IBEAMS THAT SUPPORT ELECTRIC SIGN (INCIDENTAL)

Wisconsin Lutheran College EXIT 306 — 93 — MOVE TYPE I SIGN NEW STEEL POSTS

89 DO NOT ENTER — R5-1(2S) ON LIGHT POLE

REMOVE DO NOT ENTER

94 95 — 76th Street — MI-94(5)

76th Street — REMOVE

W Kearney St — D3-1 MOVE BY OTHERS

W. KEARNEY STREET

REMOVE NO PARKING ANY TIME — 108 — R7-1D

WRONG WAY — REMOVE

85 WRONG WAY — R5-1A(2S)

N 75th St — D3-1 MOVE BY OTHERS

73 NO PARKING ANY TIME — R7-1D(2S)

76 77 NO PARKING ANY TIME — R7-1D — REMOVE ON LIGHT POLE

79 NO PARKING ANY TIME — R7-1D — REMOVE

80 NO PARKING ANY TIME — R7-1D(2S)

82 PARK & RIDE — D4-2R(2S) UP HIGH ON ON LIGHT POLE

PARK & RIDE — REMOVE

74 ONE WAY — R6-2R(2S)

75 — R3-2(2S)

102 ONE WAY — R6-2R

103 — R3-2 — REMOVE ON LIGHT POLE

78 NO PARKING ANY TIME — R7-1D(2S)

101 TO / MB4-5 / WEST / MB3-4 / INTERSTATE 94 / M1-1 / MB5-1L / J2-1(2S)

81 — State Fair / Park & Ride — TYPE I SIGN MOVE TO NEW STEEL POSTS AT SAME LOCATION

83 — R3-2(2S) — REMOVE

84 ONE WAY — R6-2R(2S) ON LIGHT POLE — REMOVE ONE WAY

86 ONE WAY — R6-2R(2S) ON STEEL POST — REMOVE ONE WAY

76 NO PARKING ANY TIME — R7-1D(2S) ON LIGHT POLE — REMOVE NO PARKING ANY TIME

88 DO NOT ENTER — R5-1(2S) ON LIGHT POLE

REMOVE DO NOT ENTER

S. 78TH STREET · S. 77TH STREET · S. 76TH STREET · S. 75TH STREET · S. 74TH STREET

556CR 558CR 560CR 562CR 564CR 566CR 568CR 570CR

256EW 258EW 260EW 264EW 266EW 268EW 270EW

120K 122K 124K 126K 128K 130K 132K

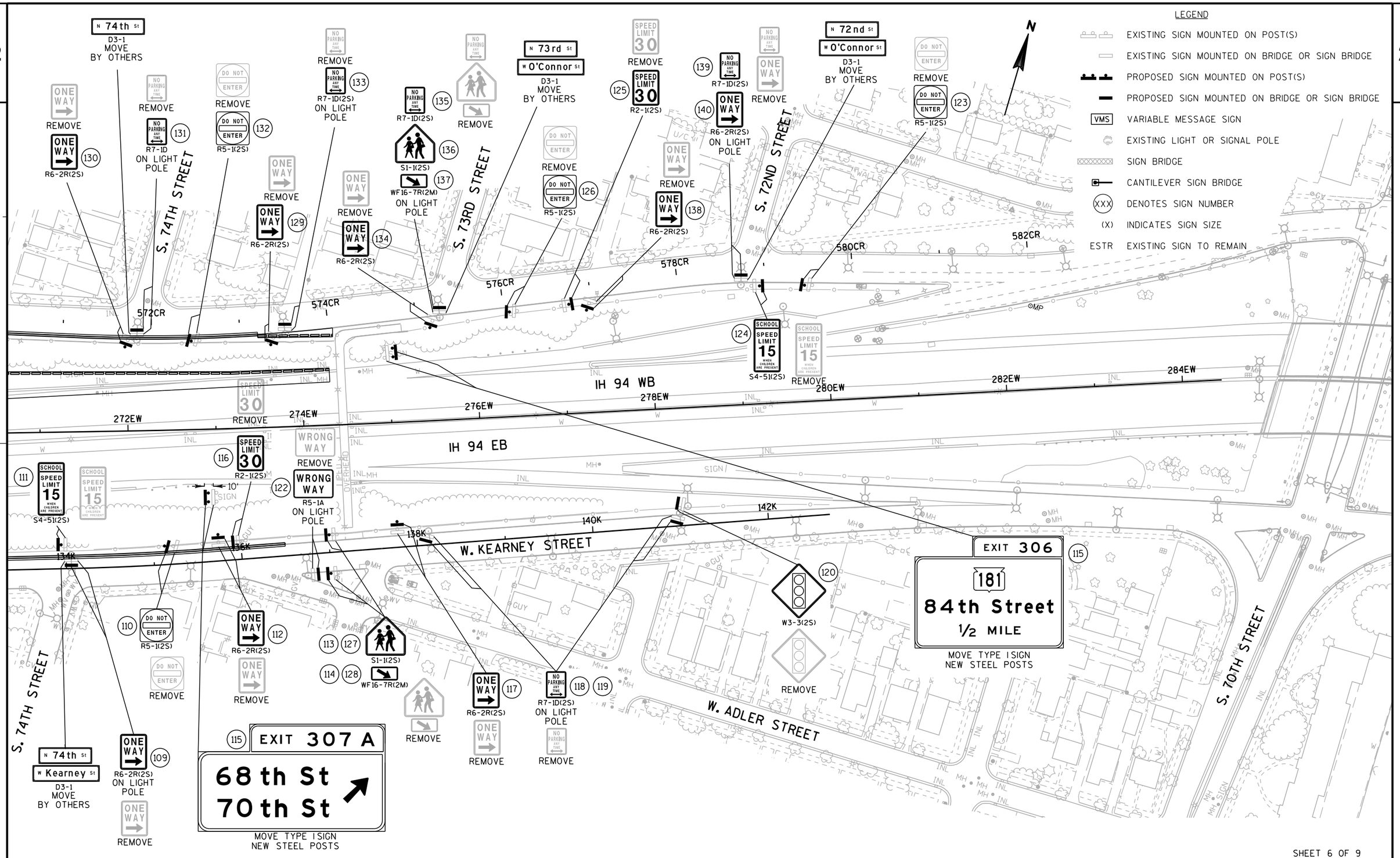
18TL 20TL 22TL 24TL 26TL

SHEET 5 OF 9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 179 E

FILE NAME : J:\projects\d2_10603394\78\sign\023205_ps.dgn PLOT DATE : 25-MAR-2013 07:58 PLOT BY : MSCCXV PLOT NAME : $FILE$ PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42



SHEET 6 OF 9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 180 E

FILE NAME : J:\projects\d2_10603394\78\sign\023206_ps.dgn
PLOT DATE : 25-MAR-2013 07:58
PLOT BY : MSCCXV
PLOT NAME : $FILE$
PLOT SCALE : 100:1
WISDOT/CADDS SHEET 42

2

N

171 NO PARKING ANY TIME R7-1R(2S)
REMOVE
170 NO PARKING ANY TIME R7-1D(2S)
REMOVE
168 WRONG WAY R5-1A(3)
169
WRONG WAY REMOVE
TO MB4-5 EAST MB3-2 INTERSTATE 94 M1-1 167
MB6-1 J3-1(2S) ON LIGHT POLE
TO EAST INTERSTATE 94 REMOVE
N 76th St
W Kearney St
D3-1 ON SIGNAL POLE MOVE BY OTHERS
IH 94 EB
IH 94 WB
265EW
264EW
158 EAST MB3-2 INTERSTATE 94 M1-1
MB5-1L J2-1(2S) UP HIGH ON LIGHT POLE
EAST INTERSTATE 94 REMOVE
W O'Connor St
D3-1 ON SIGNAL POLE MOVE BY OTHERS
W. O'CONNOR STREET
564GR
REMOVE
NO PARKING ANY TIME R7-1R(2S) 156
WEST INTERSTATE 94 REMOVE
153 R4-7(2S)
154 R3-18(2S)
155 W5-52L(2S) ON SIGNAL POLE
REMOVE
177 WEST MB3-4 INTERSTATE 94 M1-1
MB5-1L J3-1(2S) UP HIGH ON SIGNAL POLE
N 76th St
ON SIGNAL POLE MOVE BY OTHERS
172 D4-55A
CRASH INVESTIGATION SITE D4-54R
REMOVE
STOP REMOVE
174 STOP R1-1F(3) ON SIGNAL POLE
DO NOT ENTER REMOVE
175 DO NOT ENTER R5-1(3) ON SIGNAL POLE
W Kearney St
D3-1 ON SIGNAL POLE MOVE BY OTHERS
126K
173 STOP R1-1F(3) ON LIGHT POLE
STOP REMOVE
DO NOT ENTER REMOVE
166 DO NOT ENTER R5-1(3) ON LIGHT POLE
NO PARKING ANY TIME REMOVE
157 NO PARKING ANY TIME R7-1D
S. 76TH STREET
19TL
20TL
127K
21TL
22TL
23TL
24TL
565GR
ONE WAY 159 R6-2R
ONE WAY REMOVE
176 R3-18(2S) ON SIGNAL POLE
REMOVE
164 R4-7(2S)
165 W5-52L(2S) ON SIGNAL POLE
REMOVE
141 W12-1D 2'HEIGHT ON SIGNAL POLE
REMOVE
N 76th St
D3-1 ON SIGNAL POLE MOVE BY OTHERS
128K
TO MB4-5 WEST MB3-4 INTERSTATE 94 M1-1 143
MB6-1 J3-1(2S) ON SIGNAL POLE
TO WEST INTERSTATE 94 REMOVE
NO PARKING ANY TIME R7-1D(2S) 163
REMOVE
160 R4-7(2S)
161 R3-18(2S)
162 W5-52L(2S) ON SIGNAL POLE
REMOVE
NO PARKING ANY TIME R7-1R 142
REMOVE
DO NOT ENTER R5-1(2S) 144
ONE WAY R6-2R(2S) 145
ONE WAY REMOVE
W. KEARNEY STREET
12TL
TO MB4-5 WEST MB3-4 INTERSTATE 94 M1-1 146
MB5-1L J2-1(2S) UP HIGH ON LIGHT POLE
TO WEST INTERSTATE 94 REMOVE
ONE WAY REMOVE
R3-1(2S) 147
ONE WAY R6-2L(2S) ON SIGNAL POLE 148
ONE WAY REMOVE
ONE WAY 178 R6-2R(2S) ON SIGNAL POLE
DO NOT ENTER R5-1 149
DO NOT ENTER REMOVE
NO PARKING ANY TIME REMOVE
NO PARKING ANY TIME R7-1R(2S) 150
566GR
WRONG WAY R5-1A(3) 151
WRONG WAY REMOVE
ONE WAY REMOVE
ONE WAY R6-2R(2S) 152
567TC

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX DENOTES SIGN NUMBER
- (X) INDICATES SIGN SIZE
- ESTR EXISTING SIGN TO REMAIN

SHEET 7 OF 9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 181	E

2

S. 100TH STREET

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

TEMPORARY USH 45 NB

SIGN BRIDGE TO REMAIN
S-40-37

10NSA 12NSA 14NSA 16NSA 18NSA 20NSA 22NSA 24NSA

264NS 266NS 268NS 270NS 272NS 274NS 276NS

10XM 12XM 14XM 16XM 18XM 24XM

(179) RIDESHARE INFO CALL 1-800-455-POOL
MOVE TYPE II SIGN
WOOD POSTS

RAMP CLOSED (181) (182)
R11-2R(5)

SPEED LIMIT 55 (183)
R2-1(5)

SPEED LIMIT 55
R2-1
REMOVE

RAMP CLOSED (184) (185)
R11-2R(5)

County Zoo
NORTH ON 45
EXIT 39
(180)
14' X 8'
MOVE TYPE I SIGN
NEW STEEL POSTS

RUINS

POOL

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

SHEET 8 OF 9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 182 E

EXIT
45
MPH
W13-2C
ESTR

EXIT 1 A
INTERSTATE 94 EAST
Milwaukee
EXIT ONLY
MOVED UNDER
MOVE SIGN BRIDGE PAY ITEM

188
W1-13L(5)
45 M.P.H.
189
W13-1(5)
MOVE TO NEW LOCATION
OF SIGN BRIDGE S-40-133

528SCH
530SCH
534SCH
536SCH
278NS
280NS
282NS
286NS
288NS
290NS
292NS
188EW
IH 894 WB/
USH 45 NB
USH 45 NB
IH 94 EB
NEW LOCATION OF
S-40-133
OLD LOCATION OF
S-40-133
26XM
26NSA
28NSA
30NSA
32NSA
34NSA
36NSA
38NSA
TEMPORARY USH 45 NB
W. SCHLINGER AVENUE
HANK AARON STATE TRAIL
W1-2R
ESTR
45
M.P.H.
W13-1
ESTR
DO NOT
ENTER
190
R5-1(5)

N

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS — VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- XXX — DENOTES SIGN NUMBER
- (X) — INDICATES SIGN SIZE
- ESTR — EXISTING SIGN TO REMAIN

SHEET 9 OF 9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING	SHEET 183 E

2

2

USH 45

IH 94

S. 92ND ST

S. 84TH ST

S. 76TH ST

W. SCHLINGER AVE

IH 894/
USH 45

N

EXISTING

HL-40-KT	
A,B,C,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30A
480V 2 WIRE GROUNDED NEUTRAL	

RELOCATED

HL-40-SF		
A,C	RED	30 A, LTG
B,D	BLACK	30 A, LTG
E	RED	20 A, SHELTER
F	BLACK	15 A, PHONE
N	WHITE	
GND	GREEN OR BARE	
120/240V 3 WIRE ISOLATED NEUTRAL		

CIRCUITS E & F
NOT USED

RAMP NSA ONLY

DISTRIBUTION CENTER HL-40-TA, ALL CONDUIT, WIRING AND PULLBOXES ARE FURNISHED, INSTALLED AND TESTED UNDER THIS CONTRACT. POLES, ARMS AND LUMINAIRES ARE NOT FURNISHED UNDER THIS CONTRACT AND ARE NOT PART OF THIS CONTRACT. TESTING TO BE IN CONFORMANCE WITH SECTION 651.3.3 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

NEW

HL-40-TA	
A, A'	RED
B, B'	BLACK
N	WHITE
GND	GREEN OR BARE
A,B	30A
120/240V, 3 WIRE ISOLATED NEUTRAL	

ALL FUTURE LUMINAIRES
WILL BE 240V

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL - OVERVIEW	SHEET	E

GENERAL NOTES

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

LOCATIONS OF THE PVC CONDUITS ARE IDENTIFIED IN THE PLANS WHERE THEY ARE REQUIRED. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. FIELD MARK EACH CONDUIT LOCATION IN RED.

THE TRENCH SHALL NOT BE BACK FILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL CONDUITS SHALL BE CAPPED OR PLUGGED WITH ENGINEER APPROVED FITTINGS IMMEDIATELY AFTER INSTALLATION.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR IMMERSION 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 ALL CONDUITS.

PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

CONDUIT RUNS SHALL BE THE SAME SIZE PIPE FROM ONE END TO THE OTHER (FROM PULL BOX-TO-PULL BOX OR JUNCTION BOX OR BASE-TO-BASE, ETC.) UNLESS OTHERWISE NOTED ON PLANS.

PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUITS.

CONTRACTOR SHALL SUPPLY AS-BUILT DRAWING FOR ALL THE WORK BEING DONE.

INSTALLATION OF LATERAL UNDERGROUND CONDUIT UNDER PAVEMENT SHALL BE INSTALLED MINIMUM 30 INCHES BELOW PROPOSED GRADE. CONDUIT LATERALS SHALL BE TRENCHED UNDER PAVEMENT BEFORE PAVEMENT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ROADWAY CONSTRUCTION FOR CONDUIT LATERALS INSTALLATION.

PITCH ALL CONDUITS TOWARD PULL BOXES. INSTALL A 2" DRAIN DUCT TO STORM SEWER OR DRAIN SUMP AS REQUIRED FOR DAMAGE. THE 2" DRAIN DUCT OR SUMP IS INCIDENTAL TO THE PULL BOX BID ITEM AND IS NOT SHOWN.

THE LOCATION OF EXISTING AND PROPOSED UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE, IN ADDITION, THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES PRIOR TO CONSTRUCTION.

HAND DIGGING MAY BE REQUIRED FOR LOCATIONS ADJACENT TO EXISTING GAS AND POWER LINES. HAND EXCAVATION SHOULD BE ANTICIPATED & WILL BE CONSIDERED INCIDENTAL TO THE CONCRETE BASES BID ITEM. COORDINATE ALL WORK NEAR GAS LINE WITH WE ENERGIES.

EXISTING CONDUIT AND CID NO LONGER BEING USED IS ABANDONED IN PLACE. THE CONTRACTOR MAY REMOVE ABANDONED WIRING AT THE CONTRACT'S EXPENSE. ABANDONED PULL BOX REMOVAL IS INCIDENTAL TO THE ROAD CONSTRUCTION.

ALL UNDERGROUND WIRING AND CONDUIT FOR POLES BEING REMOVED IS ABANDONED IN PLACE UNLESS NOTED OTHERWISE. CONTRACTOR MAY SALVAGE ABANDONED WIRING AT HIS OWN EXPENSE.

STAGING NOTES

MAINTAIN LIGHTING AT ALL TIMES DURING CONSTRUCTION USING EXISTING LIGHTING, PROPOSED LIGHTING OR BOTH.

DO NOT REMOVE EXISTING LIGHTING UNTIL THE NEW OR TEMPORARY LIGHTING IS OPERATIONAL. REFER TO DRAWINGS FOR STAGING INFORMATION.

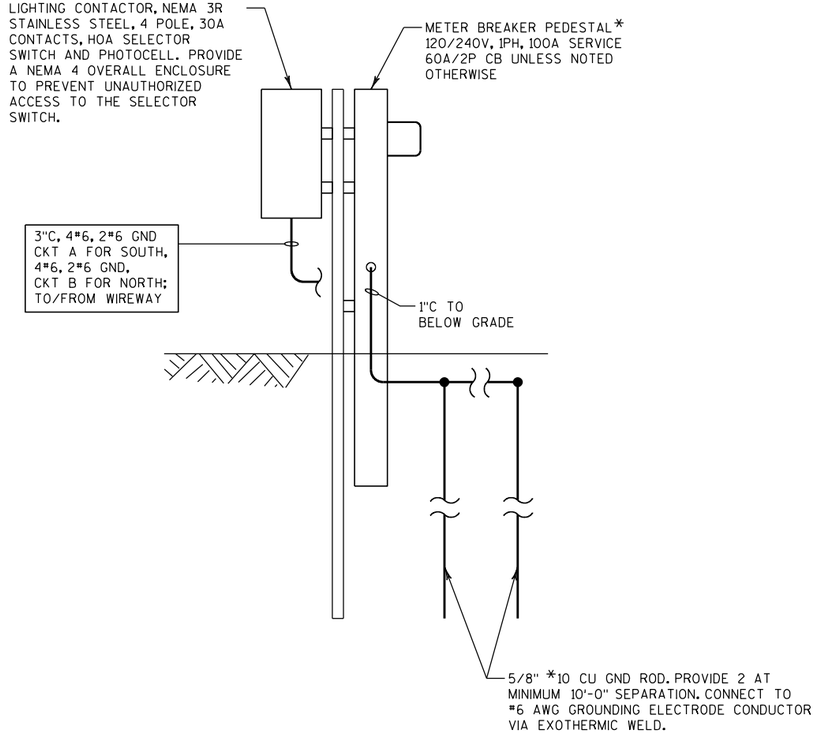
MAINTAINING SYSTEM CONTINUITY SHALL BE INCIDENTAL TO THE "REMOVE EXISTING STREET LIGHTS" BID ITEM.

DUE TO THE PHASING OF CONSTRUCTION SOME FINAL LIGHTING UNITS MAY BE ORPHANED UNTIL A LATER STAGE IS COMPLETE. IT IS AT THE DISCRETION OF THE CONTRACTOR TO SCHEDULE THESE ITEMS. THE CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF THE PLACEMENT OF RACEWAY THAT SPANS TWO DIFFERENT PHASES OF CONSTRUCTION.

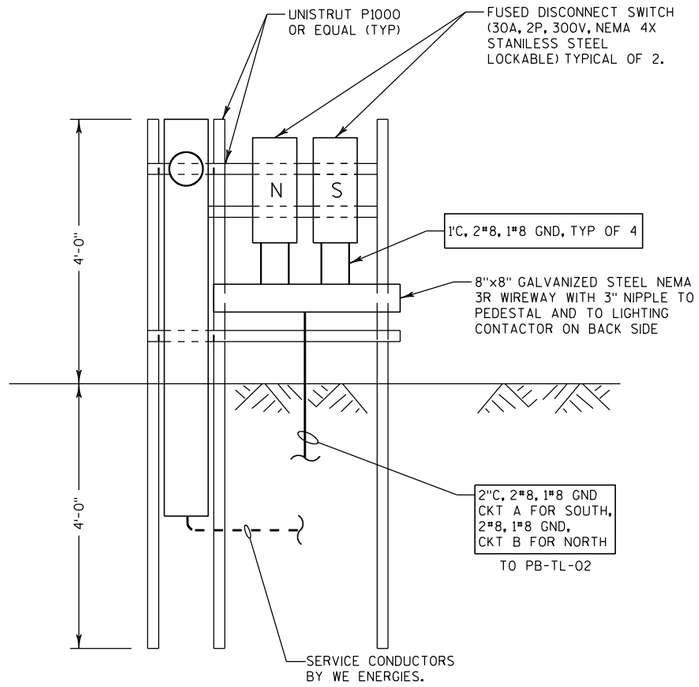
TEMPORARY LIGHTING MAY ILLUMINATE AN AREA BEFORE EXISTING LIGHTING UNITS IN THE AREA ARE SCHEDULED FOR REMOVAL. THE SCHEDULING OF REMOVAL IS AT THE DISCRETION OF THE CONTRACTOR WITH THE PROVISION THAT LIGHTING OF THE ROADWAY IS PROVIDED AT ALL TIMES.

ON RAMP NSA (TEMPORARY NB US45), ALL UNDERGROUND WORK (BASES, CONDUIT, PULLBOXES, WIRING) FOR RAMP NSA IS FURNISHED, INSTALLED AND TESTED UNDER THIS CONTRACT. UPON SUCCESSFUL COMPLETION OF TESTING, CIRCUIT A AND B ARE TO BE DISCONNECTED AT DISTRIBUTION CENTER HL-40-TA TO AWAIT A FUTURE CONTRACT.

POLES, ARMS AND LUMINAIRES ARE NOT FURNISHED ON RAMP NSA UNDER THIS CONTRACT AND WILL BE FURNISHED AND INSTALLED UNDER A FUTURE CONTRACT.



SIDE VIEW



FRONT VIEW

*SEE WE ENERGIES ELECTRIC SERVICE AND METERING MANUAL, PAGES U5, D11

NOTES

1. MAKE THE WIREWAY LOCKABLE.
2. RIGID METALLIC CONDUIT FOR EXPOSED RACEWAY & TO A DEPTH OF 2'-0".

DETAIL - ELECTRICAL SERVICE METER BREAKER PEDESTAL - TA

NTS BID ITEM: SPV.0060.1154

2

W. WASHINGTON STREET

W. WALKER STREET

S. 100TH STREET

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

RAMP NSA

STA. 19NSA+00.4, 25.3' RT
4 ATA3

STA. 20NSA+53.6, 25.3' RT
ATA4 4

STA. 23NSA+
69.6, 32.5' LT
PB-TA-08

MATCH LINE 24NSA+25

STA. 15NSA+97.2, 35.0' RT
4 ATA1

STA. 17NSA+50.5, 29.1' RT
4 ATA2

STA. 22NSA+
01.8, 22.9' RT
4 ATA5

STA. 23NSA+54.4, 19.9' RT
4 ATA6

STA. 23NSA+
65.4, 21.2' RT
4 PB-TA-09

FUTURE ATC TOWER
(TYP)

S. 98TH STREET

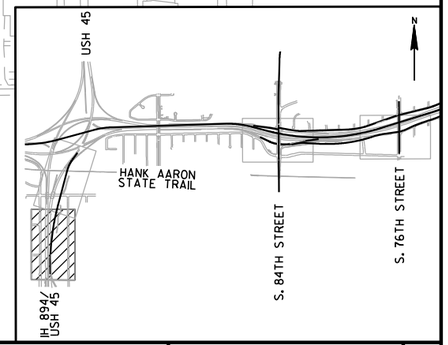
CAUTION

RUINS

POOL

WELL

WALLS



LEGEND

- CID (CABLE IN DUCT)
- CABLE IN CONDUIT - SIZE AS NOTED
- PROPOSED SINGLE ARM FREEWAY LIGHTING UNIT
- PROPOSED TWIN ARM FREEWAY LIGHTING UNIT
- CONCRETE BASE WITH WIRING INSTALLED (POLE, ARM & LUMINAIRE NOT INSTALLED)
- V, W / XYYZ — POLE LABEL, V - STATION, W - OFFSET, X - CIRCUIT, YY - DISTRIBUTION CENTER, Z - POLE NUMBER
- ELECTRIC METER SOCKET
- XX — DENOTES THE CONSTRUCTION STAGE FOR INSTALLATION
- XX/XX — DENOTES THE CONSTRUCTION STAGE FOR INSTALLATION/REMOVAL OR REMOVAL/REINSTALLATION
- DISTRIBUTION CENTER
- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- CONDUIT STUB

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET	E

2

W. WASHINGTON STREET

W. WALKER STREET

N

2

S. 100TH STREET

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

262NS 10NSA 264NS 12NSA 266NS 14NSA 268NS 16NSA 270NS 18NSA 272NS 20NSA 274NS 22NSA 276NS

STA. 19NSA+00.4, 25.3' RT
4 ATA3

RAMP NSA

STA. 20NSA+53.6, 25.3' RT
ATA4 4

CAUTION

4 STA. 23NSA+
69.6, 32.5' LT
PB-TA-08

24NSA

MATCH LINE 24NSA+25

STA. 15NSA+97.2, 35.0' RT
4 ATA1

STA. 17NSA+50.5, 29.1' RT
4 ATA2

STA. 22NSA+
01.8, 22.9' RT
4 ATA5

CAUTION

3#8 CID, A,A',GND
TO ATA1

24XM

STA. 23NSA+54.4, 19.9' RT
4 ATA6

FUTURE ATC TOWER
(TYP)

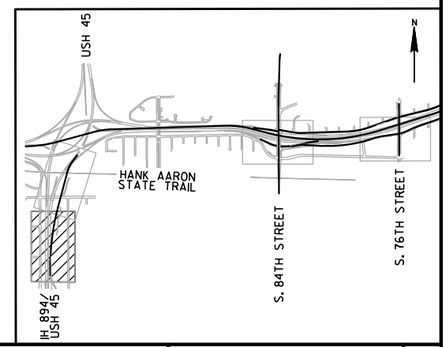
2"C, 3#8, A,A',GND
TO PB-TL02

STA. 23NSA+
65.4, 21.2' RT
4 PB-TA-09

S. 98TH STREET

LEGEND

- CID (CABLE IN DUCT)
- CABLE IN CONDUIT - SIZE AS NOTED
- PROPOSED SINGLE ARM FREEWAY LIGHTING UNIT
- PROPOSED TWIN ARM FREEWAY LIGHTING UNIT
- CONCRETE BASE WITH WIRING INSTALLED (POLE, ARM & LUMINAIRE NOT INSTALLED)
- V, W / XYYZ — POLE LABEL, V - STATION, W - OFFSET, X - CIRCUIT, YY - DISTRIBUTION CENTER, Z - POLE NUMBER
- ELECTRIC METER SOCKET
- XX — DENOTES THE CONSTRUCTION STAGE FOR INSTALLATION
- XX/XX — DENOTES THE CONSTRUCTION STAGE FOR INSTALLATION/REMOVAL OR REMOVAL/REINSTALLATION
- DISTRIBUTION CENTER
- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- CONDUIT STUB



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023552_lp.dgn PLOT DATE : 30-APR-2013 15:41 PLOT BY : MSCITM PLOT NAME : 023552_lp PLOT SCALE : 100:1

2

S. 100TH STREET

USH 45 SB

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

USH 45 NB

RAMP NSA

W. SCHLINGER AVENUE

S. 98TH STREET

HANK AARON STATE TRAIL

MATCH LINE 24NSA+25

STA. 25NSA+04.3, 32.2' LT
ATA7 (4)

STA. 27NSA+02.9, 33.1' LT
(4) PB-TA-04

STA. 26NSA+56.9, 34.7' LT
(4) ATA8

STA. 28NSA+64.6, 32.2' LT
(4) ATA9

STA. 28NSA+51.4, 34.0' LT
(4) PB-TA-03

(1) STA. 28NSA+5, 5' LT
PB-WA-1
REMOVE POLE ON W. SCHLINGER AVE.
RECONNECT CIRCUIT. COORDINATE
WITH CITY OF WEST ALLIS DPW.
POLE AND LUMINAIRE TURNED OVER
TO CITY OF WEST ALLIS.

STA. 29NSA+31.7, 31.2' LT
PB-TA-02 (4)

STA. 29NSA+53.5, 35.2' LT
BTA1 (4)

STA. 29NSA+31.1, 18.7' RT
PB-TA-01 (4)

STA. 29NSA+27.0, 27.4' RT
HL-40-TA (4)

HL-40-TA	
A,A'	RED
B,B'	BLACK
N	WHITE
GND	GREEN OR BARE
A,B	30A
120/240V ISOLATED NEUTRAL	3 WIRE

STA. 31NSA+15.9, 33.7' LT
BTA2 (4)

STA. 32NSA+53.7, 33.9' LT
BTA3 (4)

STA. 32NSA+64.4, 35.1' LT
PB-TA-05 (4)

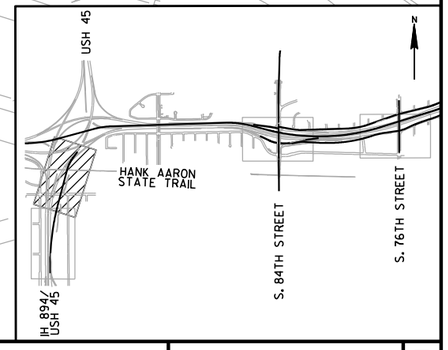
STA. 32NSA+86.0, 20.4' RT
PB-TA-06 (4)

STA. 34NSA+30.7, 28.9' RT
(4) PB-TL-07

STA. 34NSA+38.5, 30.9' RT
BTA4 (4)

STA. 35NSA+57.0, 35.4' RT
BTA5 (4)

FUTURE ATC TOWER
(TYP)



LEGEND

- CID (CABLE IN DUCT)
- CABLE IN CONDUIT - SIZE AS NOTED
- PROPOSED SINGLE ARM FREEWAY LIGHTING UNIT
- PROPOSED TWIN ARM FREEWAY LIGHTING UNIT
- CONCRETE BASE WITH WIRING INSTALLED (POLE, ARM & LUMINAIRE NOT INSTALLED)
- V, W / XYYZ — POLE LABEL, V - STATION, W - OFFSET, X - CIRCUIT, YY - DISTRIBUTION CENTER, Z - POLE NUMBER
- ELECTRIC METER SOCKET
- XX — DENOTES THE CONSTRUCTION STAGE FOR INSTALLATION
- XX/XX — DENOTES THE CONSTRUCTION STAGE FOR INSTALLATION/REMOVAL OR REMOVAL/REINSTALLATION
- DISTRIBUTION CENTER
- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- CONDUIT STUB

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023553_lp.dgn PLOT DATE : 30-APR-2013 15:41 PLOT BY : MSCITM PLOT NAME : 023553_lp PLOT SCALE : 100:1

2

S. 100TH STREET

526SCH

528SCH

530SCH

532SCH

534SCH

USH 45 SB

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

USH 45 NB

RAMP NSA

278NS 280NS 282NS 284NS 286NS 288NS 290NS 292NS

24NSA 26NSA 28NSA 30NSA 32NSA 34NSA 36NSA 38NSA

26XM

MATCH LINE 24NSA+25

STA. 25NSA+04.3, 32.2' LT
4 ATA7

STA. 27NSA+02.9, 33.1' LT
4 PB-TA-04

STA. 26NSA+56.9, 34.7' LT
4 ATA8

SEE BRIDGE B-40-799 STRUCTURAL DRAWINGS FOR CONDUIT IN PARAPET.

STA. 28NSA+64.6, 32.2' LT
4 ATA9

STA. 28NSA+51.4, 34.0' LT
4 PB-TA-03

2"C, 3#8,A,A',GND
TO ATA6

STA. 29NSA+31.7, 31.2' LT
PB-TA-02 4

STA. 29NSA+53.5, 35.2' LT
BTA1 4

2"C, 6#8, A,A',GND
B,B',GND
FROM HL-40-TA
VIA PB-TA-01

STA. 29NSA+31.1, 18.7' RT
PB-TA-01 4

STA. 29NSA+27.0, 27.4' RT
HL-40-TA 4

1 STA. 28NSA+5, 5' LT
PB-WA-1

REMOVE POLE ON W. SCHLINGER AVE. RECONNECT CIRCUIT. COORDINATE WITH CITY OF WEST ALLIS DPW. POLE AND LUMINAIRE TURNED OVER TO CITY OF WEST ALLIS.

HL-40-TA	
A,A'	RED
B,B'	BLACK
N	WHITE
GND	GREEN OR BARE
A,B	30A
120/240V	3 WIRE
ISOLATED NEUTRAL	

STA. 31NSA+15.9, 33.7' LT
BTA2 4

STA. 32NSA+53.7, 33.9' LT
BTA3 4

STA. 32NSA+64.4, 35.1' LT
PB-TA-05 4

2"C, 3#8,B,B',GND
PB-TL02 TO BTA5

STA. 32NSA+86.0, 20.4' RT
PB-TA-06 4

STA. 34NSA+38.5, 30.9' RT
BTA4 4

STA. 35NSA+57.0, 35.4' RT
BTA5 4

STA. 34NSA+30.7, 28.9' RT
4 PB-TL-07

FUTURE ATC TOWER (TYP)

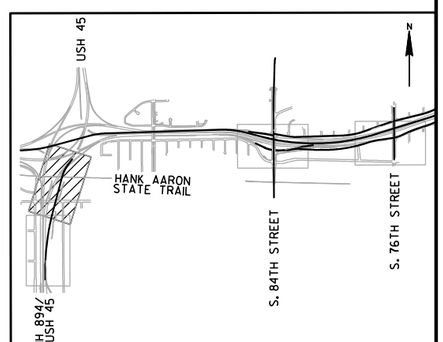
S. 98TH STREET

W. SCHLINGER AVENUE

HANK AARON STATE TRAIL

CAUTION

N



LEGEND

- CID (CABLE IN DUCT)
- CABLE IN CONDUIT - SIZE AS NOTED
- PROPOSED SINGLE ARM FREEWAY LIGHTING UNIT
- PROPOSED TWIN ARM FREEWAY LIGHTING UNIT
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET	E

2

PLAYGROUND

1 STA. 10FDA+57.4, 26.8'LT
PB-KT-4
WET SPLICE

1 DISCONNECT CID TO EAST DURING INSTALLATION OF NEW PIPES UNDER THE RAMP.

NOTE 2

EXISTING BKT14 TO REMAIN

S. 84TH STREET

S. 82ND STREET

N

230EW

232EW

234EW

236EW

238EW

240EW

242EW

244EW

10FDA

12FDA

RAMP FDA

544CR

W. O'CONNOR STREET

IH 94 WB

IH 94 EB

1D STA. 13FCA+10.1, 39.5'LT
AKT-13 (RELOCATED)

1D STA. 13FCA+42.3, 63.2'LT
PB-KT-1
WET SPLICE TO EXISTING 2#8 CID

A/1D STA. 13FBA+79.9, 19.3'LT
AKT7
REMOVE BASE, SALVAGE POLE IN STAGE 1A.
RE-INSTALL AFTER BOX CULVERT IS CONSTRUCTED

ATK6 TO REMAIN

1D STA. 14FBA+10.2, 28.7'LT
PB-KT-3
WET SPLICE TO 2#8 CID

A/1D STA. 15FBA+67.8, 16.7'RT
ATK8

16FBA

14FBA

12FBA

RAMP FBA

106K

1D STA. 16FBA+46.8, 16.2'RT
PB-KT-5

W. KEARNEY STREET

S. 86TH STREET

RAMP FCA

12FCA

14FCA

A/1D STA. 11FCA+89.3, 18.7'RT
AKT-14
REMOVE POLE DURING STAGE 1A.
RE-INSTALL DURING STAGE 1D.
BASE TO REMAIN.

1D STA. 12FCA+09.0, 20.4'RT
PB-KT-2
WET SPLICE TO EXISTING 2#8 CID

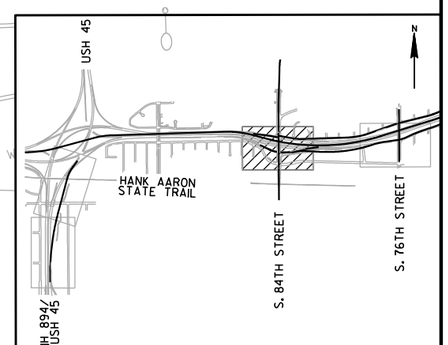
1B STA. 13FCA+40.0, 19.7'RT
EXISTING AKT13

W. ADLER STREET

SUBSTATION

S. 84TH STREET

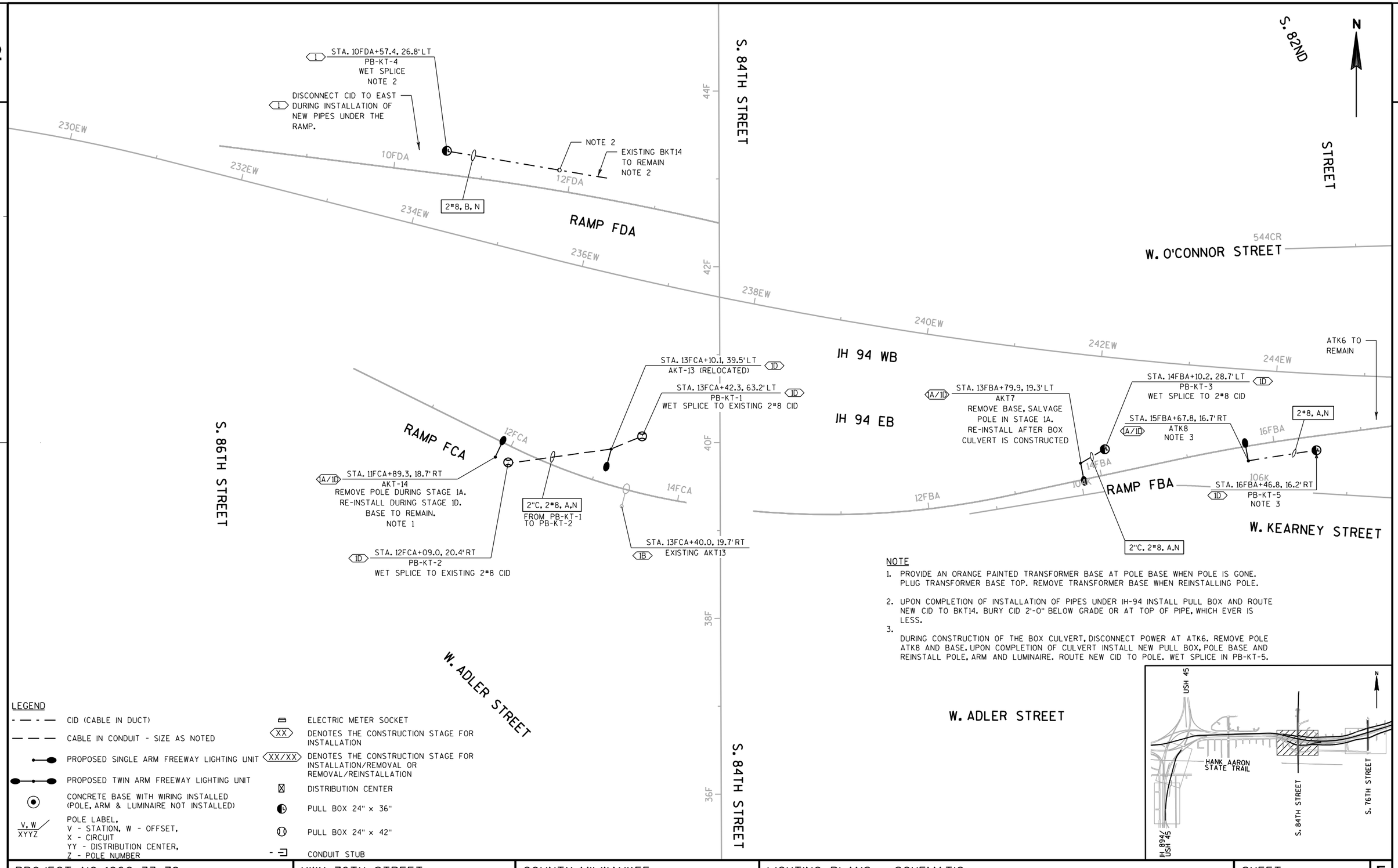
W. ADLER STREET



LEGEND

- CID (CABLE IN DUCT)
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- PROPOSED SINGLE ARM FREEWAY LIGHTING UNIT
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- CONDUIT STUB

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET	E



NOTE

1. PROVIDE AN ORANGE PAINTED TRANSFORMER BASE AT POLE BASE WHEN POLE IS GONE. PLUG TRANSFORMER BASE TOP. REMOVE TRANSFORMER BASE WHEN REINSTALLING POLE.
2. UPON COMPLETION OF INSTALLATION OF PIPES UNDER IH-94 INSTALL PULL BOX AND ROUTE NEW CID TO BKT14. BURY CID 2'-0" BELOW GRADE OR AT TOP OF PIPE, WHICH EVER IS LESS.
3. DURING CONSTRUCTION OF THE BOX CULVERT, DISCONNECT POWER AT ATK6. REMOVE POLE ATK8 AND BASE. UPON COMPLETION OF CULVERT INSTALL NEW PULL BOX, POLE BASE AND REINSTALL POLE, ARM AND LUMINAIRE. ROUTE NEW CID TO POLE. WET SPLICE IN PB-KT-5.

LEGEND

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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET	E

2

S. 78TH STREET

S. 77TH STREET

W. O'CONNOR STREET

IH 94 WB

IH 94 EB

EXISTING CKT3/DKT3
TO BE RELOCATED

STA. 266EW+04.1, 26.7' RT
1
CKT3/DKT3

STA. 266EW+42.1, 25.6' RT
JB-KT3
1

STA. 265EW+67.1, 26.8' RT
JB-KT2
1

STA. 263EW+96.5, 28.7' RT
1
JB-KT1

HL-40-SF		
A,C	RED	30 A, LTG
B,D	BLACK	30 A, LTG
E	RED	20 A, SHELTER
F	BLACK	15 A, PHONE
N	WHITE	
GND	GREEN OR BARE	
120/240 VAC 3WIRE ISOLATED NEUTRAL		

CKT E & F NOT USED

STA. 125K+70.8, 38.5' RT
4
PB-SF-1

STA. 125K+45.5, 31.0' RT
4
EXISTING HL-40-SF

STA. 125K+42.4, 39.1' RT
4
HL-40-SF RELOCATED

4
EXISTING PB-SF-2 TO REMAIN. WET SPLICE 2#8, C,D TO CSF6 AND 3#8, C,N,D TO CSF7/DSF7.

CSF6

CSF7

DSF7

BSF1

ASF1

CAUTION

W. KEARNEY STREET

W. KEARNEY STREET

STA. 122K+71.2, 29.3' LT
EXISTING HL-40-KT

HL-40-KT	
A,B,C,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30 A
480VAC 2 WIRE GROUNDED NEUTRAL	

STATE FAIR
PARK & RIDE

W. ADLER STREET

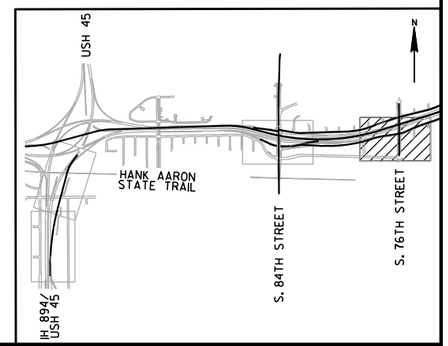
W. MAIN STREET

S. 76TH STREET

S. 75TH STREET

S. 74TH STREET

N



LEGEND

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- CABLE IN CONDUIT - SIZE AS NOTED
- PROPOSED SINGLE ARM FREEWAY LIGHTING UNIT
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	LIGHTING PLANS - FINAL	SHEET	E

S. 78TH STREET

S. 77TH STREET

W. O'CONNOR STREET

564CR

562CR

560CR

558CR

IH 94 WB 268EW

IH 94 EB

266EW

264EW

262EW

260EW

258EW

256EW

22TL

134K

132K

130K

128K

126K

124K

122K

120K

20TL

18TL

16TL

W. KEARNEY STREET

W. KEARNEY STREET

W. ADLER STREET

W. MAIN STREET

S. 76TH STREET

S. 75TH STREET

S. 74TH STREET

N

EXISTING CKT3/DKT3
TO BE RELOCATED

STA. 266EW+04.1, 26.7' RT
1 CKT3/DKT3
NOTE 2

STA. 266EW+42.1, 25.6' RT
JB-KT3 1
NOTE 2

STA. 263EW+96.5, 28.7' RT
1 JB-KT1
NOTE 1

STA. 265EW+67.1, 26.8' RT
JB-KT2 1
NOTES 1 & 2

DISCONNECT POWER TO UNDER DECK LIGHTS. REMOVAL OF UNDER DECK LIGHTS INCIDENTAL TO BRIDGE DEMOLITION. 1

HL-40-SF		
A,C	RED	30 A, LTG
B,D	BLACK	30 A, LTG
E	RED	20 A, SHELTER
F	BLACK	15 A, PHONE
N	WHITE	
GND	GREEN OR BARE	
120/240 VAC 3WIRE ISOLATED NEUTRAL		

CKT E & F NOT USED

STA. 125K+70.8, 38.5' RT
4 PB-SF-1
2"C, 4#8, A,N,B, GND
2"C, EMPTY
WET SPLICE TO CID TO ASF1/BSF1

STA. 125K+45.5, 31.0' RT
4 EXISTING HL-40-SF

STA. 125K+42.4, 39.1' RT
4 HL-40-SF RELOCATED

4 EXISTING PB-SF-2 TO REMAIN. WET SPLICE 2#8, C,D TO CSF6 AND 3#8, C,N,D TO CSF7/DSF7.

CSF6

2"C, 5#8, C,N,C,N,D
2"C, EMPTY

CSF7

DSF7

BSF1

ASF1

CAUTION

STA. 122K+71.2, 29.3' LT
EXISTING HL-40-KT

HL-40-KT	
A,B,C,D	BLACK
N	WHITE
GND	GREEN OR BARE
A,B,C,D	30 A
480VAC 2 WIRE GROUNDED NEUTRAL	

STATE FAIR
PARK & RIDE

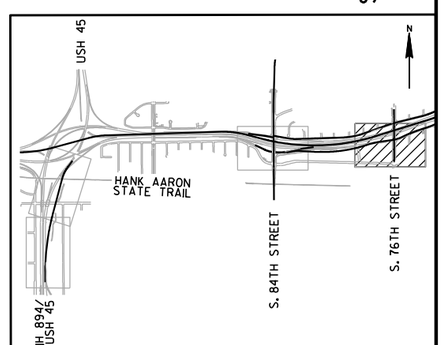
NOTES

1. MOUNT JB-KT1 AND JB-KT2 ON THE MEDIAN SIDE OF THE TRAFFIC BARRIER COMMON TO THE EB TRAFFIC. INTERCEPT THE EXISTING 4-1-4 CID CABLE AND ROUTE INTO THE JUNCTION BOXES. PROVIDE 2"C, 2#4, C,D, 1#1, N (RIGID METALLIC CONDUIT) BETWEEN JB-KT1 AND JB-KT2. COORDINATE ROUTE WITH THE BRIDGE DEMOLITION. DO NOT ROUTE WHERE TRAFFIC MAY IMPACT THE CONDUIT. CONDUIT TO REMAIN AFTER THE EXISTING BRIDGE IS DEMOLISHED.

2. COORDINATE JB-KT3 AND RELOCATION OF POLE CKT3/DKT3 WITH PROPOSED SEWER CONSTRUCTION CROSSING IH-94 ADJACENT TO THE EXISTING POLE. FREEWAY LIGHTS TO THE EAST OF CKT3/DKT3 MUST BE OPERATIONAL AT NIGHT IF THE ROADWAY IS IN USE. MINIMIZE THE OUTAGE OF CKT3/DKT3. MOUNT JB-KT3 ON THE INSIDE OF THE ROADWAY BARRIER. PROVIDE WIRING AND RACEWAY BETWEEN JB-KT2 AND JB-KT3 TO ALLOW THE CIRCUIT TO BE OPERATIONAL WHILE RELOCATING CKT3/DKT3. JB-KT3 TO REMAIN AFTER CKT3/DKT3 IS RELOCATED AND THE SEWER INSTALLED. PROVIDE 1"C,3#8, C,N,D (RIGID METALLIC CONDUIT) FROM JB-KT2 TO CKT3/DKT3. PROVIDE 2"C, 2#4, C, D, 1#1, N (RIGID METALLIC CONDUIT) FROM JB-KT2 TO JB-KT3. RECONNECT WIRING TO EAST.

LEGEND

- CID (CABLE IN DUCT)
- CABLE IN CONDUIT - SIZE AS NOTED
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- PROPOSED TWIN ARM FREEWAY LIGHTING UNIT
- CONCRETE BASE WITH WIRING INSTALLED (POLE, ARM & LUMINAIRE NOT INSTALLED)
- V, W / XYYZ — POLE LABEL, V - STATION, W - OFFSET, X - CIRCUIT, YY - DISTRIBUTION CENTER, Z - POLE NUMBER
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- PULL BOX 24" x 36"
- PULL BOX 24" x 42"
- CONDUIT STUB



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	LIGHTING PLANS - SCHEMATIC	SHEET	E

2

TRAFFIC & STREET LIGHTING GENERAL NOTES:

PRIOR TO CONSTRUCTION, THE LOCATION OF UNDERGROUND UTILITIES SHALL BE DETERMINED IN THE FIELD BY CONTACTING "DIGGERS HOTLINE."

STREET LIGHTING & TRAFFIC SIGNALS SHALL BE INSTALLED IN COMPLIANCE WITH WISCONSIN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 652 EXCEPT:

THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS INCLUDING REPAIRS, REPLACEMENT OR RELOCATION ETC. OF STREET LIGHTING OR TRAFFIC SIGNAL FACILITIES IF THE CONTRACTOR DOES ANY DEVIATION FROM THE STREET LIGHTING OR TRAFFIC SIGNAL DESIGN WITHOUT THE STREET LIGHTING ENGINEERS SIGNED PERMISSION.

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

2 LOCATIONS OF THE PVC CONDUITS WHERE THEY ARE REQUIRED ARE IDENTIFIED IN THE PRINTS. HOWEVER, INSTALLATION MAY REQUIRE INTEGRATION WITH EXISTING FIELD CONDITIONS. APPROPRIATE ADJUSTMENT ON CONDUIT LOCATIONS MAY BE MADE IF THE FIELD CONDITIONS ARE SUCH THAT THE CONDUIT CANNOT BE INSTALLED AT THE SPECIFIED LOCATIONS. ANY RELOCATIONS MUST BE APPROVED BY THE ENGINEER. FIELD MARK EACH CONDUIT LOCATION BY STAMPING AND PAINTING WITH RED PAINT ON TOP AND BACKSIDE OF CURB.

3 TYPICAL CONDUIT INSTALLED UP TO DIRECT BURIED STREET LIGHT POLES IS AS FOLLOWS 3-INCH OR 2.5-INCH (AS NOTED) SCHEDULE 40 RIGID PVC TO STREET LIGHTING METAL HOUSING (PEDESTAL), THE 1.5-INCH SCHEDULE 40 RIGID PVC TO STREET LIGHT POLE CABLE SLOT, AND THE 2-INCH SCHEDULE 40 RIGID PVC TO SIGNAL STANDARD BASE AND RISER FOR TRAFFIC SIGNAL ON STREET LIGHT POLE.

4 DEPTH OF CONDUIT INSTALLED BELOW THE STREETS, HIGHWAYS, ROADS, AND ALLEYS SHALL BE 24-INCHES MINIMUM AND 36-INCHES MAXIMUM. (MEASURED FROM FINISHED FLANGE LINE)

5 CONDUIT INSTALLED BEHIND CURB, AND UNDER DRIVEWAYS SHALL BE INSTALLED AT THE BASE OF THE BACKSIDE OF THE CURB/GUTTER SECTION.

6 WHEN THERE IS MORE THAN ONE CONDUIT TO BE LAID BEHIND THE CURB, PLACE ALL CONDUITS IN THE SAME TRENCH.

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

8 THE CONTRACTOR OR HIS SUBCONTRACTOR MUST MAKE SURE THE AREA BEHIND CURB AND/OR WITHIN TRENCH SHALL BE FREE OF DEBRIS AND OVERPOUR AND SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

9 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.

10 ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON ALL CONDUITS. (SEE NEC 352.28 2008 CODE)

11 PRIOR TO CONDUIT ACCEPTANCE, ALL CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND BE CAPPED IMMEDIATELY AFTER INSTALLATION WITH THE APPROPRIATE CAST PLASTIC CAP WHICH FITS SNUGGLY ON THE CONDUIT, BUT EASILY REMOVED IN THE FUTURE. DUCT TAPE OR ANY OTHER CAPPING METHOD IS NOT ACCEPTABLE.

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

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

14 PULL ROPE (3/8-INCH NYLON) SHALL BE INSTALLED IN ALL NEW CONDUIT.

15 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 UNLESS OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

16 WHEN ENDS OF CONDUIT DO NOT CONNECT TO A VAULT AND WILL END UP UNDER CONCRETE WALK. THE CONTRACTOR IS REQUIRED TO LEAVE A 24" X 24" BOX FORM CENTERED OVER THE END OF CONDUIT AND FILL THE BOXFORM WITH CRUSHED GRAVEL. (PER WISDOT SPEC 209.2.1(1) GRANULAR BACKFILL)

17 ALL PIPE CROSSINGS AND VAULTS SHALL BE AT LEAST SIX (6) FEET AWAY FROM FIRE HYDRANTS, UNLESS NOTED OTHERWISE, OR APPROVED BY THE STREET LIGHTING ENGINEER.

18 ALL POLES AND TRAFFIC STANDARDS IN CONCRETE ARE REQUIRED TO HAVE A 30"X30" BOX SHAPED JOINT PLACED AROUND THEM USING AN EXPANSION JOINT FILLER. UNLESS NOTED OTHERWISE (SEE DETAIL 122)

19 TYPICAL RECTANGULAR VAULTS SHOULD BE INSTALLED AS SHOWN ON PLANS, BUT WHEN IT IS NOT POSSIBLE, A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS AND FIRE HYDRANTS SHOULD BE USED, OTHERWISE APPROVED BY THE STREET LIGHTING ENGINEER.

TRAFFIC & STREET LIGHTING GENERAL NOTES:

20 COORDINATE NEW CONDUIT CONNECTIONS WITH EXISTING CONDUIT, DUCT PACKAGES, AND VAULTS/ MANHOLES WITH CITY OF MILWAUKEE STREET LIGHTING. THE CITY REQUIRES THREE WORKING DAYS ADVANCED NOTICE. CONTACT ELECTRICAL SUPERVISOR
STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251 OR DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148 OR DISPATCHER @ 414-286-3687

21 IMMEDIATELY AFTER THE CONTRACTOR HAS COMPLETED ALL THE ELECTRICAL VAULT, CONDUIT AND CONDUIT CONNECTIONS, AND JUST BEFORE ELECTRICAL WORK IS COVERED UP WITH CONRETE, SOIL, OR ETC. THE CONTRACTOR IS REQUIRED TO CONTACT THE CITY OF MILWAUKEE ELECTRICAL SHOP SUPERVISORS FOR FINAL INSPECTION AND APPROVAL OF ALL WORK.
STREET LIGHTING - DENNIS MILLER (OFFICE) 414-286-5942 (CELL) 414-708-4251
STREET LIGHTING - GEORGE BERDINE (OFFICE) 414-286-5943 (CELL) 414-708-4245
STREET LIGHTING - THOMAS HUGHES (OFFICE) 414-286-3457 (CELL) 414-708-3175
STREET LIGHTING - DISPATCHER @ 414-286-5944
TRAFFIC SIGNALS - AL NICHOLS (OFFICE) 414-286-3687 (CELL) 414-708-5148
TRAFFIC SIGNALS - DISPATCHER @ 414-286-3687

22 CONDUIT WILL ONLY BE INSTALLED AFTER THE CURB IS POURED, UNLESS APPROVED BY BOTH THE ENGINEER & STREET LIGHTING SHOP SUPERVISOR.

2

UTILITY LINE CODE

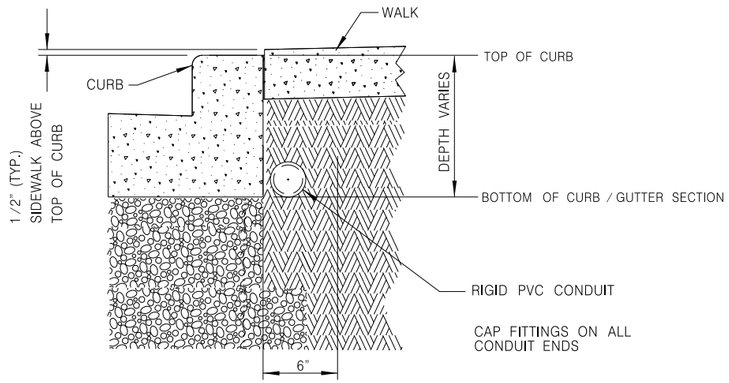
SAN	SANITARY SEWER
STO	STORM SEWER
W	WATER
G	GAS
G	PROPOSED GAS
E	ELECTRIC
TE&ES	TRAFFIC & STREET LIGHTING
	OVERHEAD LINE
CUC	PROPOSED CITY UNDERGROUND CONDUIT
T	TELEPHONE
TV	CABLE

SHEET 1 OF 10

PROJECT NO: 1060–33–78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 195	E

2

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



100 DETAIL "A"

TYPICAL CONDUIT INSTALLATION
BEHIND CURB

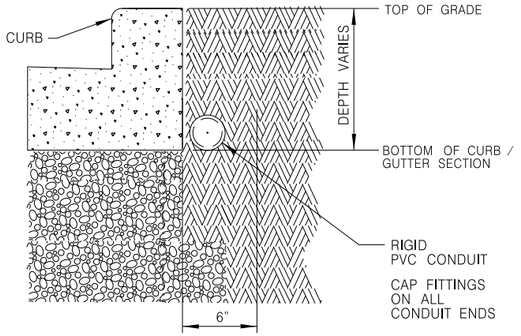
NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

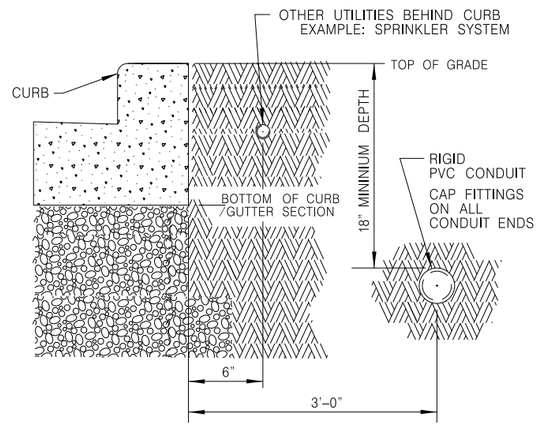
NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.

DETAIL "B"

CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB,
UNLESS NOTED OR APPROVED BY ENGINEER.



DETAIL "C"

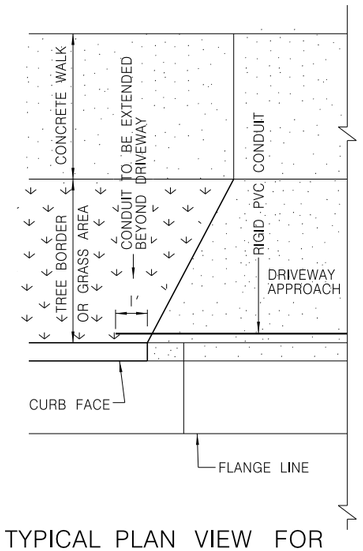


100 DETAIL "B" & "C"

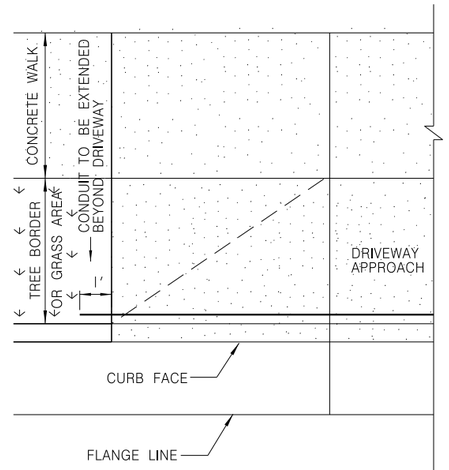
TYPICAL CONDUIT INSTALLATION
BEHIND CURB

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



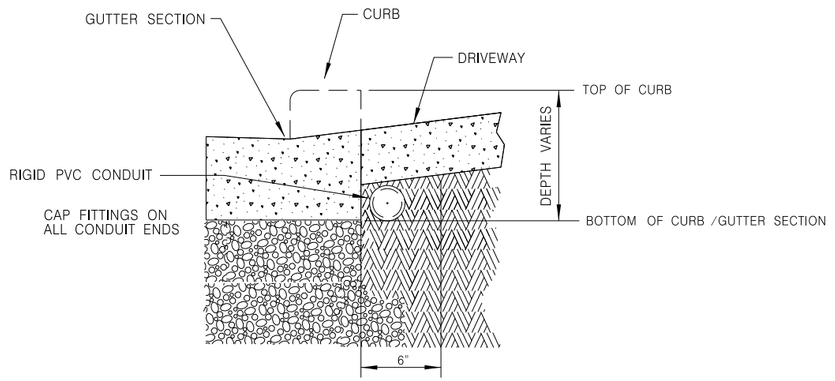
TYPICAL PLAN VIEW FOR
FLARED DRIVEWAY



TYPICAL PLAN VIEW FOR
DEPRESSED DRIVEWAY

2

NOTE: 1.) KEEP AREA BEHIND CURB FREE OF DEBRIS AND CONCRETE OVERPOUR.
2.) CONDUIT TO BE PLACED WITHIN A 6" AREA DIRECTLY BEHIND CURB, UNLESS NOTED OR APPROVED BY ENGINEER.



101 DETAIL

TYPICAL CONDUIT INSTALLATION
UNDER DRIVEWAYS OR PEDESTRIAN RAMPS

NOT TO SCALE

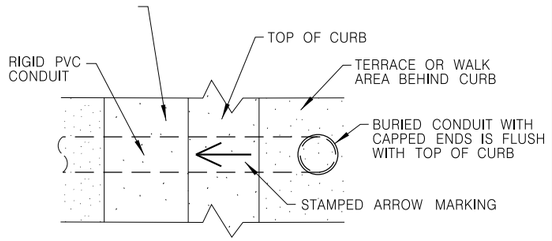
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 2 OF 10

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 196	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

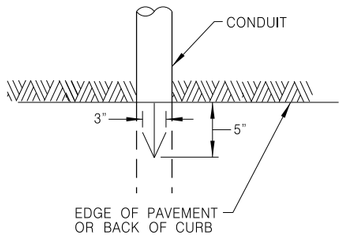
WISDOT/CADDS SHEET 42



TOP VIEW OF CURB STAMPING

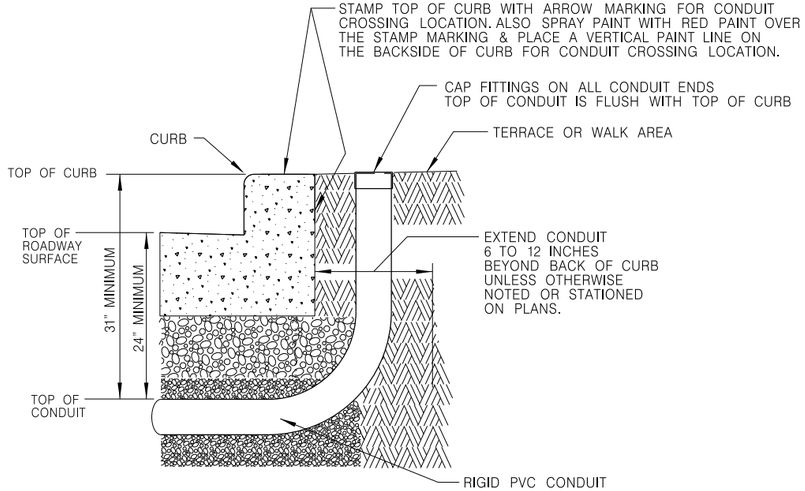
NOT TO SCALE

NOTE:
ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4–INCH TO 3/8–INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.



ARROW MARK

NOT TO SCALE

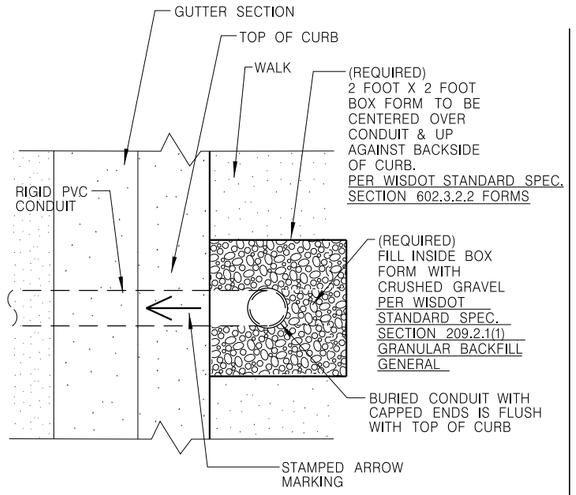


102 DETAIL VERSION #2

TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS

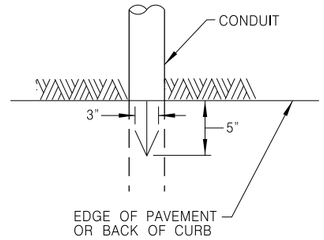
NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



TOP VIEW OF CURB STAMPING

NOTE:
ARROW MARK SHALL BE INSCRIBED IN PAVEMENT SURFACE 1/4–INCH TO 3/8–INCH DEEP AT EACH LOCATION WHERE CONDUITS ARE PLACED UNDER THE PAVEMENT.

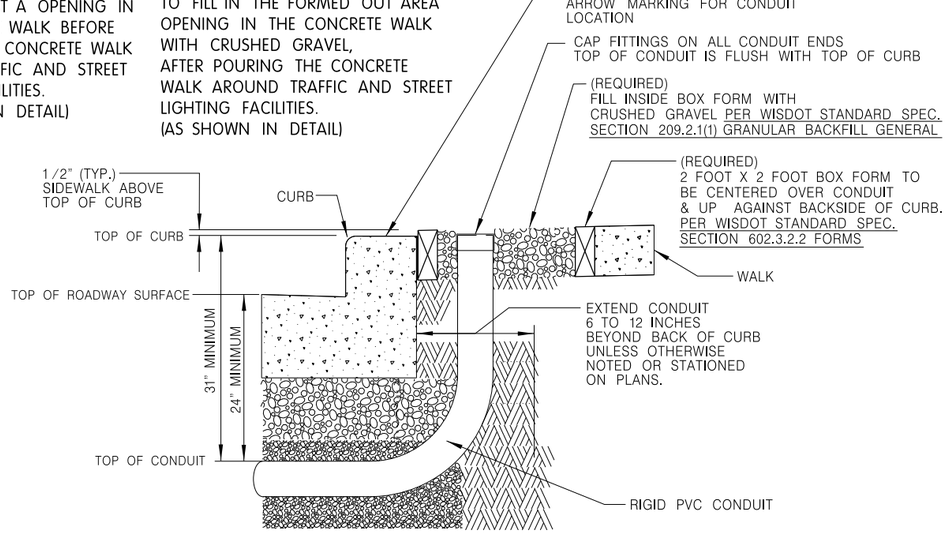


ARROW MARK

NOT TO SCALE

THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH CRUSHED GRAVEL, AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN DETAIL)



103 DETAIL VERSION #2

TYPICAL CONDUIT INSTALLATION FOR CROSSING ROADWAYS FROM FULL WALK AREAS

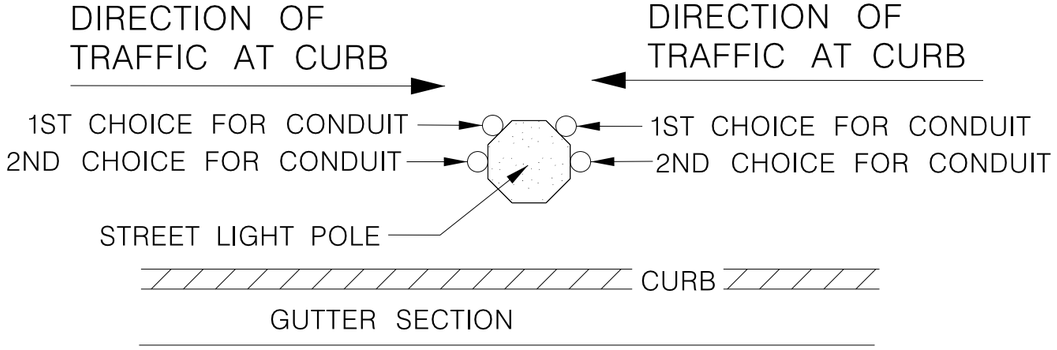
NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 3 OF 10

PROJECT NO: 1060–33–78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 197	E

NOTE: CAP FITTINGS ON CONDUIT ENDS



104 DETAIL

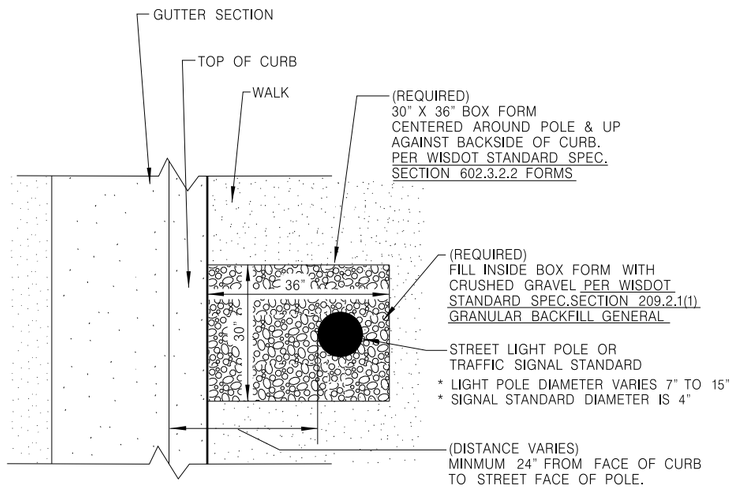
TYPICAL TRAFFIC SIGNAL RISER CONDUIT LOCATIONS ON STREET LIGHT POLE DEPENDING ON DIRECTION OF TRAFFIC AT CURB

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC / STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

THE CONTRACTOR IS REQUIRED TO FORM OUT A OPENING IN THE CONCRETE WALK BEFORE POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN ADJACENT DETAIL)

THE CONTRACTOR IS REQUIRED TO FILL IN THE FORMED OUT AREA OPENING IN THE CONCRETE WALK WITH CRUSHED GRAVEL, AFTER POURING THE CONCRETE WALK AROUND TRAFFIC AND STREET LIGHTING FACILITIES. (AS SHOWN IN ADJACENT DETAIL)

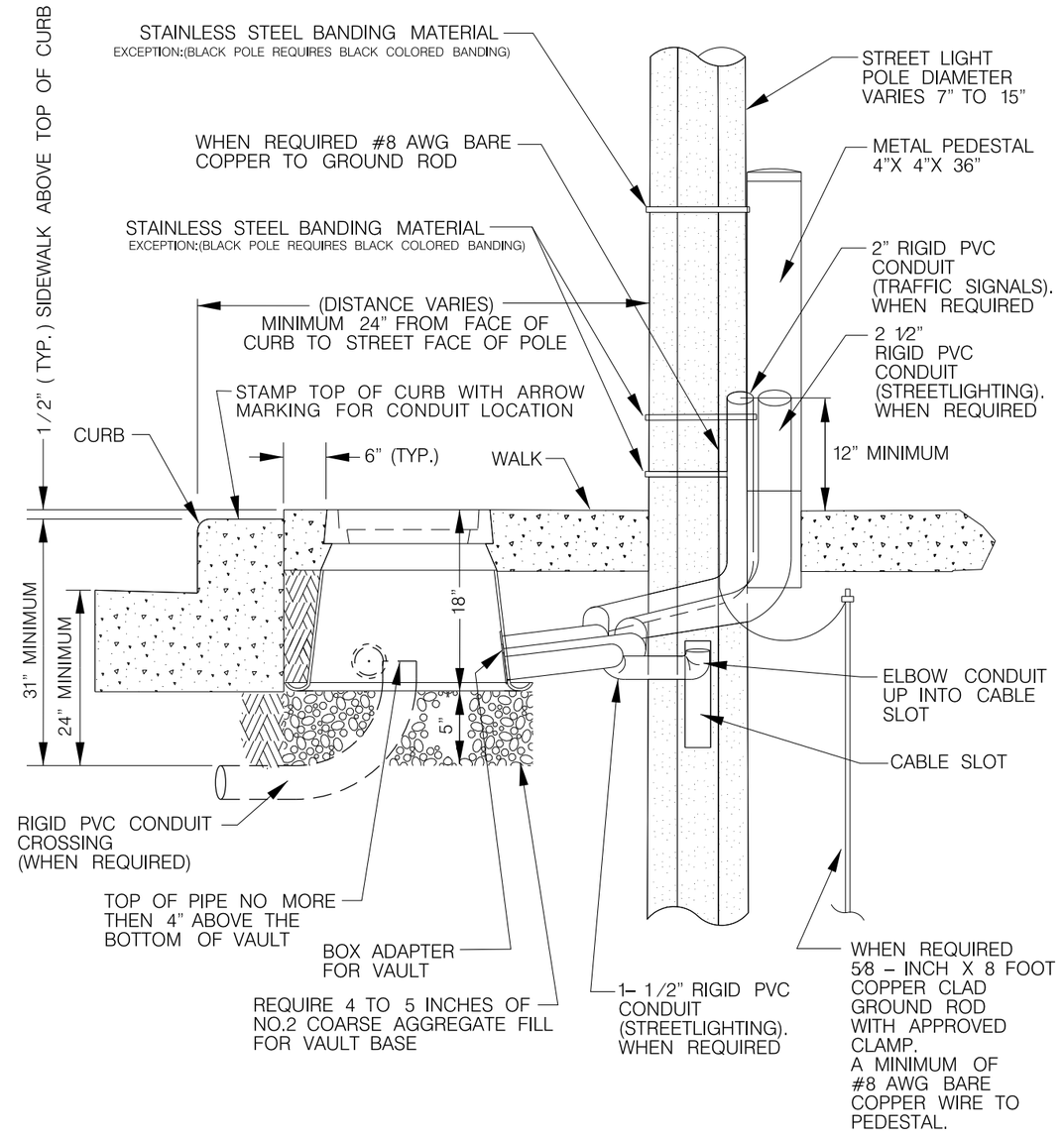


105 DETAIL

TYPICAL 30" X 36" BOX FORM AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL STANDARD

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



108 DETAIL

TYPICAL CONDUIT INSTALLATION FROM VAULT TO POLE

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES. CONTACT DISPATCHER AT (414) (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

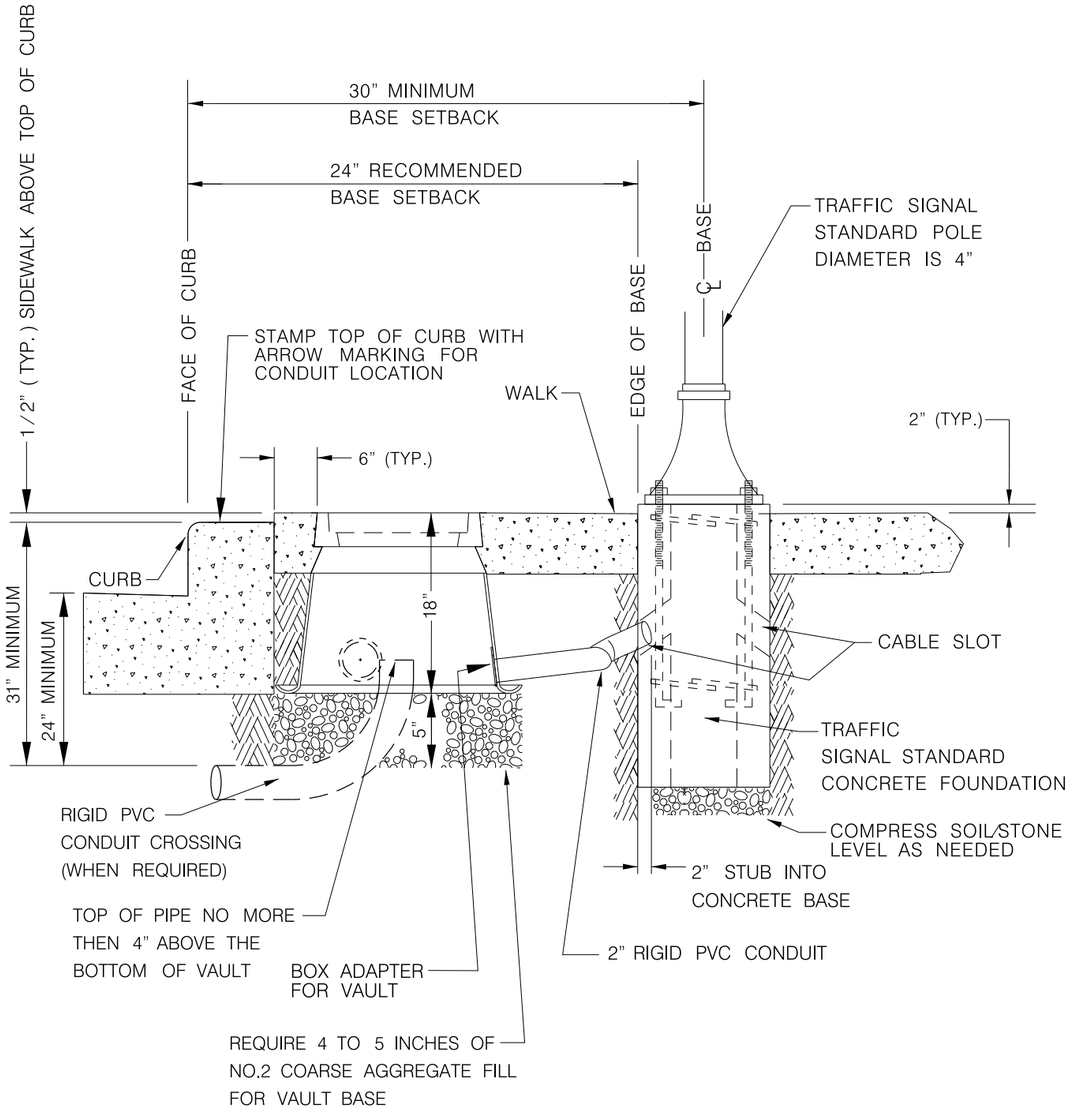
SHEET 4 OF 10

PROJECT NO: 1060–33–78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 198	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

2

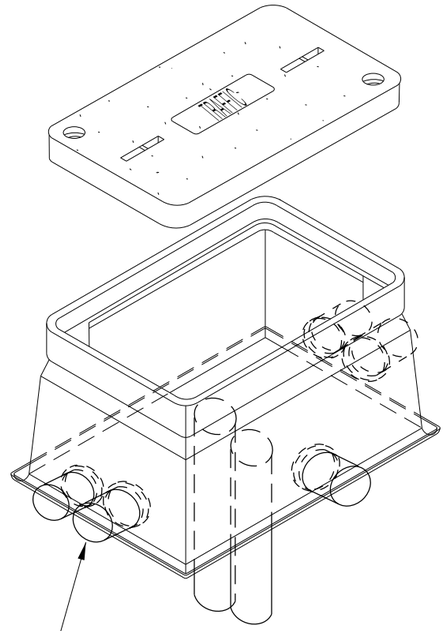


109 DETAIL

TYPICAL CONDUIT INSTALLATION
FROM VAULT TO SIGNAL STANDARD
AND TYPICAL BASE INSTALLATION

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM TRAFFIC & LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



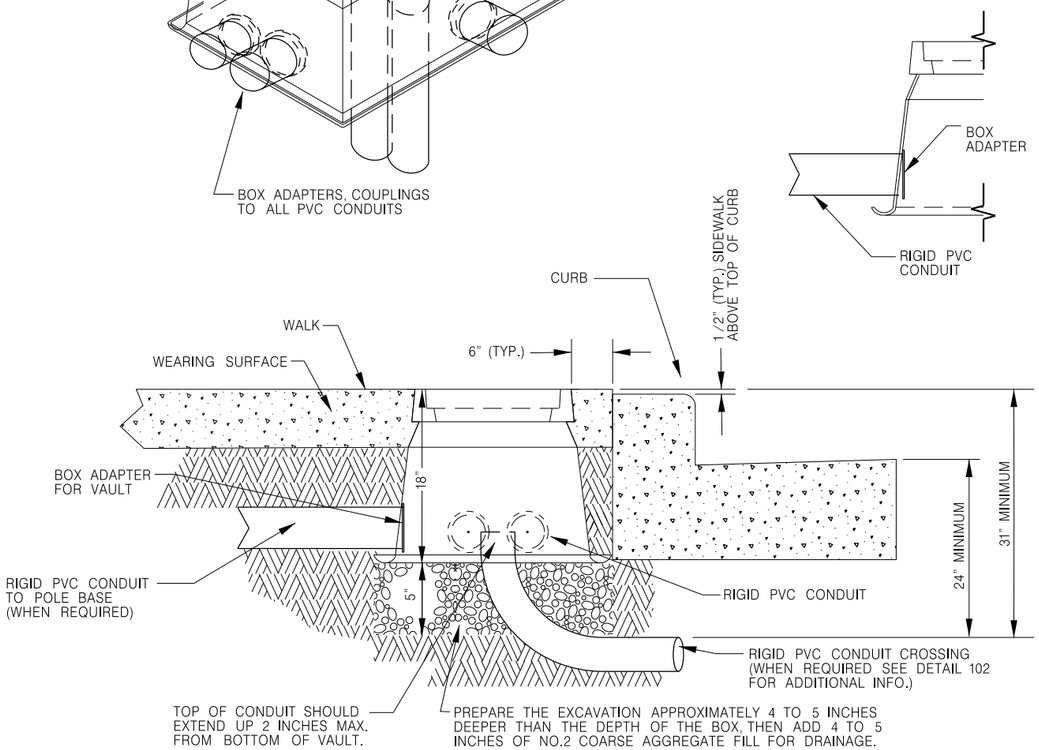
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W /2 BOLTS
COLOR: GRAY

ELECTRICAL VAULT
FLARED WALL
BOX W /NO BASE
COLOR: GRAY

(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL PVC CONDUITS



112 DETAIL

TYPICAL VAULT INSTALLATION IN WALK

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286-5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

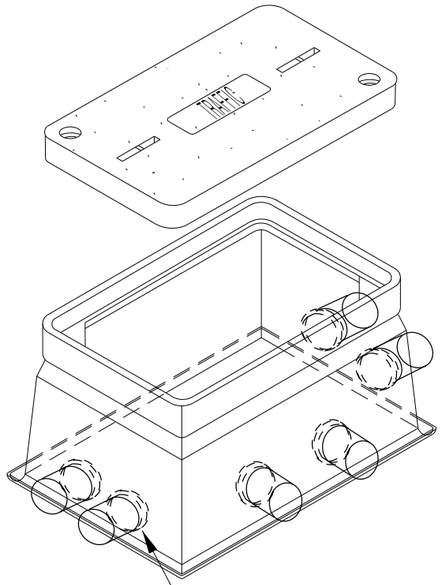
SHEET 5 OF 10

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 199	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : $$.....plotscale.....$$

WISDOT/CADDS SHEET 42

2

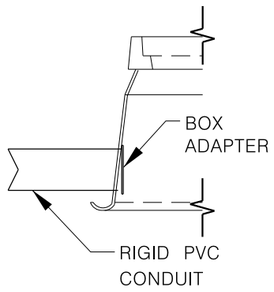


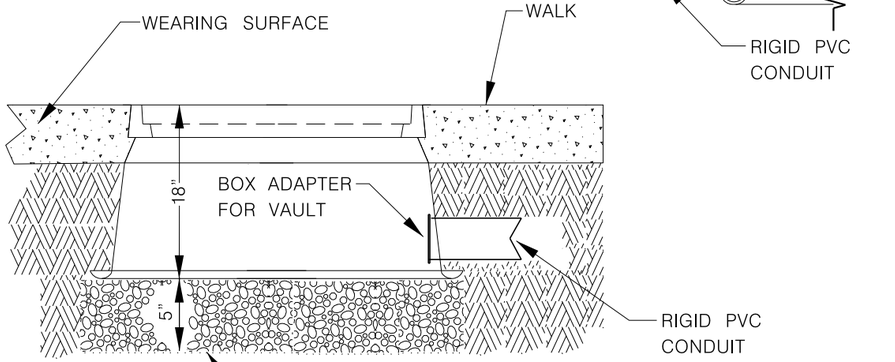
HEAVY DUTY COVER
W/ ELECTRIC LOGO
& W / 2 BOLTS
COLOR: GRAY

ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY
(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL PVC CONDUITS



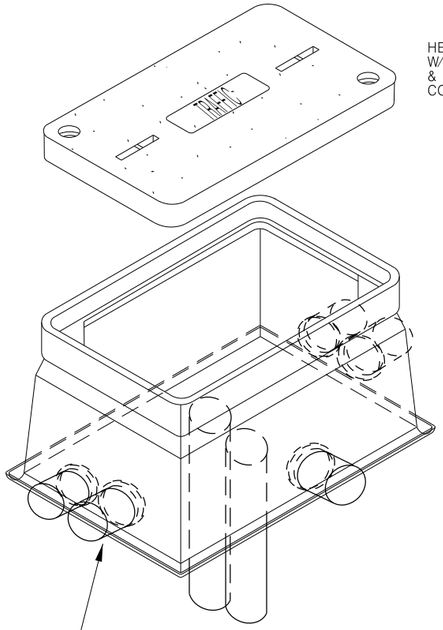


113 DETAIL

TYPICAL VAULT INSTALLATION
IN SIDEWALK

NOT TO SCALE

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.



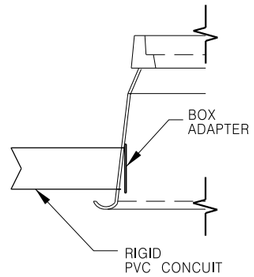
HEAVY DUTY COVER
W/ STREETLIGHTING LOGO
& W / 2 BOLTS
COLOR: GRAY

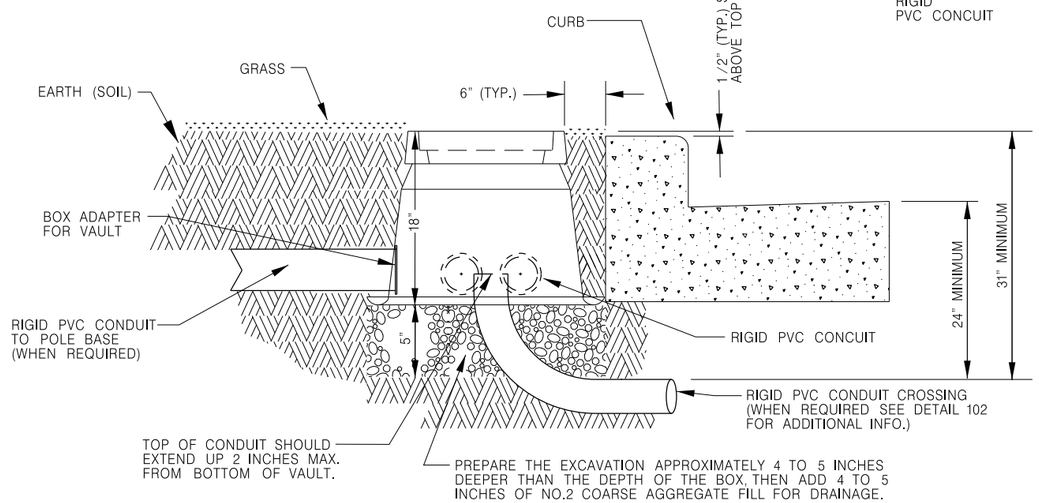
ELECTRICAL VAULT
FLARED WALL
BOX W / NO BASE
COLOR: GRAY

(VARIOUS SIZES)

PLUG OR CAP FITTINGS ON ALL
UNUSED CONDUITS IN THE ENCLOSURE

BOX ADAPTERS, COUPLINGS
TO ALL P.V.C. CONDUITS





121 DETAIL

TYPICAL VAULT INSTALLATION IN GRASS AREA

NOT TO SCALE

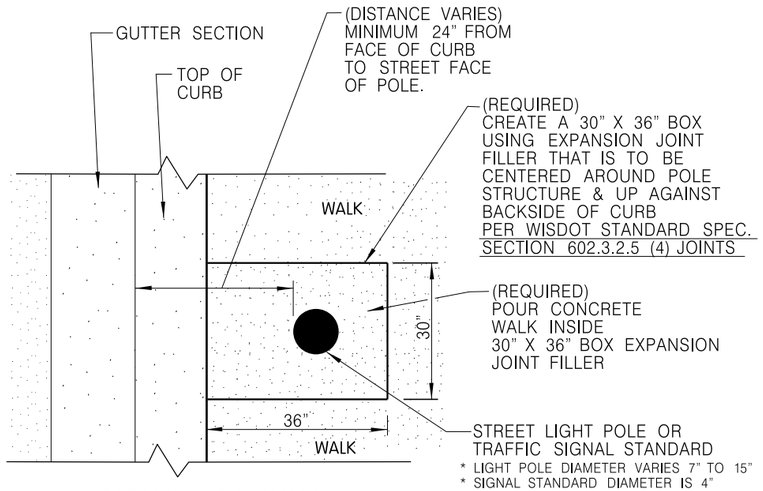
ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 6 OF 10

PROJECT NO: 1060–33–78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 200	E

THE CONTRACTOR IS REQUIRED TO INSTALL EXPANSION JOINT FILLER INTO THE CONCRETE WALK, WHICH SHALL BE 1/2" WIDE MINIMUM TO BE USED TO CREATE A SEPARATION BETWEEN A SMALL CONCRETE AREA AROUND THE TRAFFIC & STREET LIGHTING FACILITIES AND THE REST OF THE CONCRETE WALK.

THE BOX SIZE OF THE AREA CREATED USING THE EXPANSION JOINT FILLER IS STANDARD AROUND LIGHT POLES AND TRAFFIC SIGNALS, BUT WILL VARY WHEN PLACED AROUND TRAFFIC & LIGHTING CONTROL CABINETS.



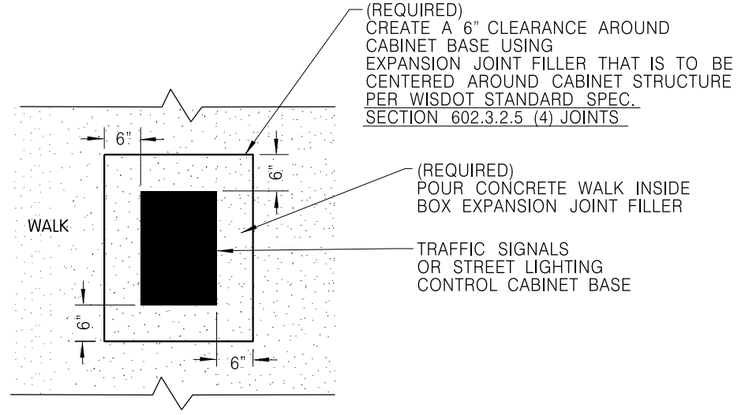
122 DETAIL VERSION #1 — NOT TO SCALE

TYPICAL 30" X 36" BOX EXPANSION JOINT FILLER AROUND STREET LIGHTING POLE OR TRAFFIC SIGNAL STANDARD

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

THE CONTRACTOR IS REQUIRED TO INSTALL EXPANSION JOINT FILLER INTO THE CONCRETE WALK, WHICH SHALL BE 1/2" WIDE MINIMUM TO BE USED TO CREATE A SEPARATION BETWEEN A SMALL CONCRETE AREA AROUND THE TRAFFIC & STREET LIGHTING FACILITIES AND THE REST OF THE CONCRETE WALK.

THE BOX SIZE OF THE AREA CREATED USING THE EXPANSION JOINT FILLER IS STANDARD AROUND LIGHT POLES AND TRAFFIC SIGNALS, BUT WILL VARY WHEN PLACED AROUND TRAFFIC & LIGHTING CONTROL CABINETS.



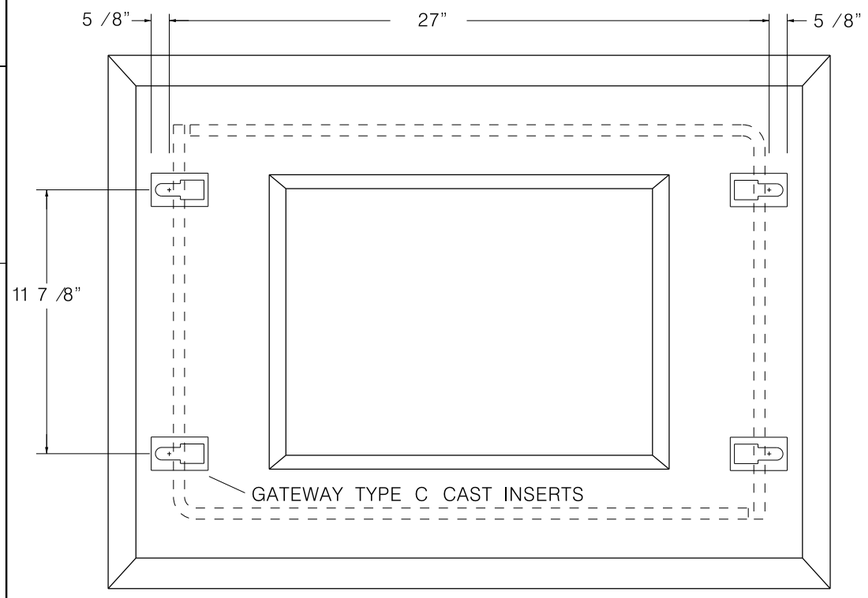
122 DETAIL VERSION #2 — NOT TO SCALE

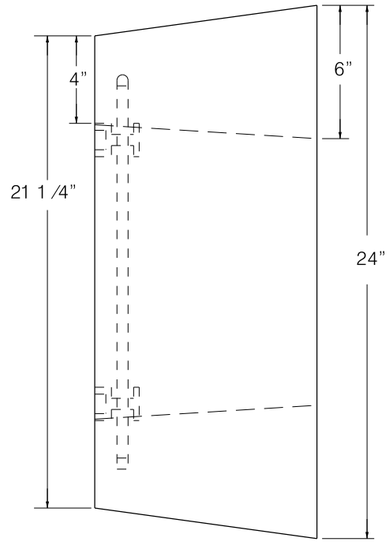
TYPICAL BOX EXPANSION JOINT FILLER AROUND TRAFFIC SIGNAL OR STREET LIGHTING CONTROL CABINET

ANY DEVIATIONS FROM DETAIL WILL REQUIRE PERMISSION FROM STREET LIGHTING FORCES.
CONTACT DISPATCHER AT (414) 286–5944 FOR THE APPROPRIATE SHOP SUPERVISOR.

SHEET 7 OF 10

PROJECT NO: 1060–33–78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 201	E

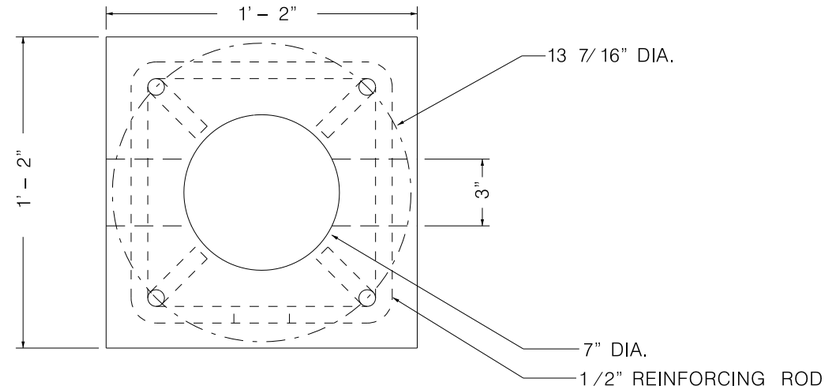


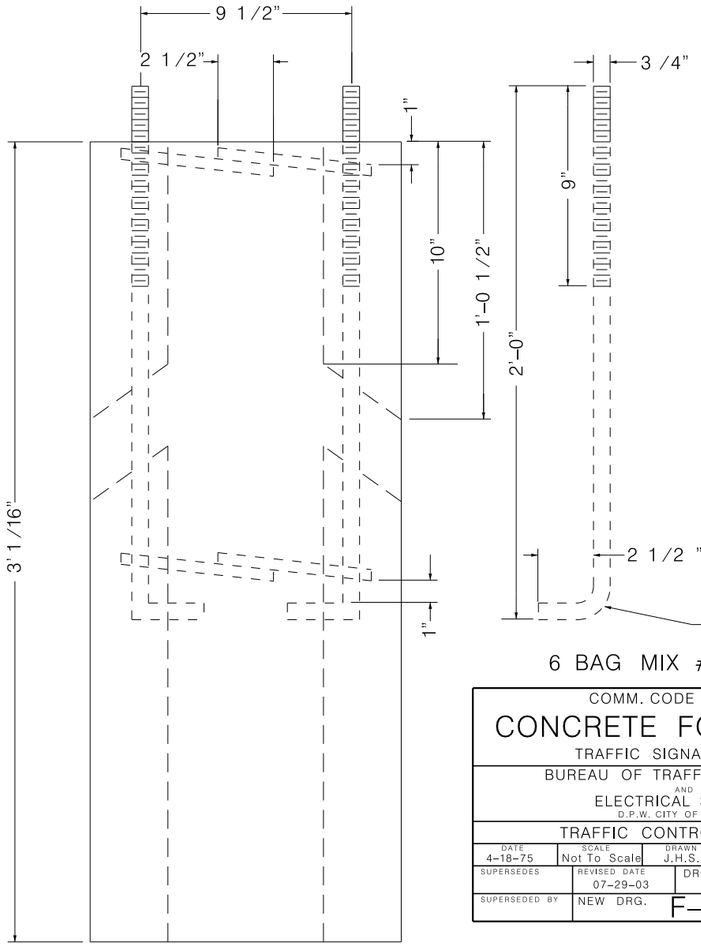


NOT TO SCALE

6 BAG MIX #1 STONE

COMM. CODE 1238-927				
CONCRETE FOUNDATION				
TRAFFIC SIGNAL CONTROL CABINET				
BUREAU OF TRAFFIC ENGINEERING AND ELECTRICAL SERVICES D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 4-22-75	SCALE 1/4"=1"	DRAWN J.H.S.	CHECKED B.J.T.	APPROVED R.J.B.
SUPERSEDES C-65-546-T	REVISED DATE 01-30-02	DRG. C-75-564-T		
SUPERSEDED BY	NEW DRG. F-82-536-T			





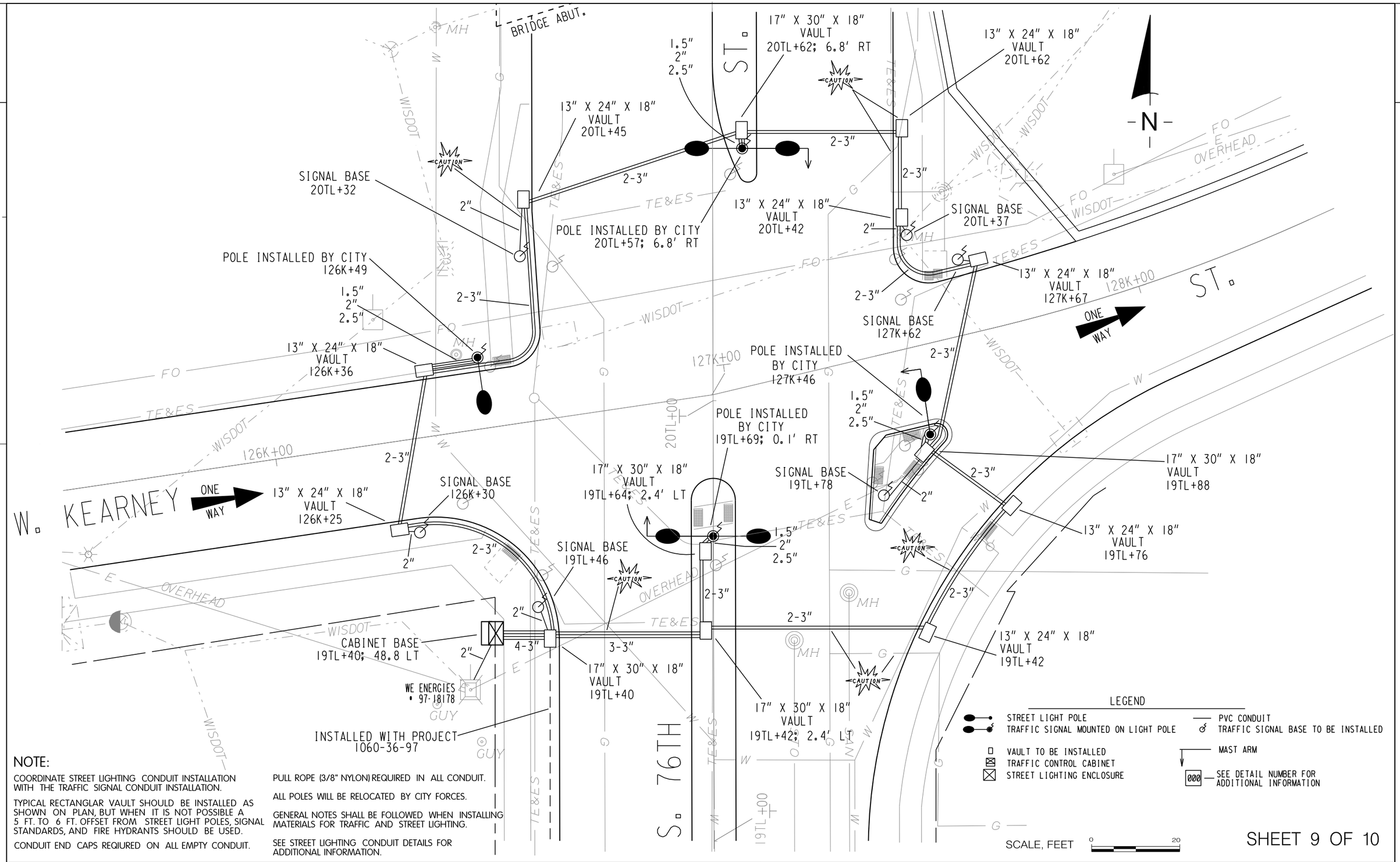
NOT TO SCALE

6 BAG MIX #1 STONE

COMM. CODE 1238-936				
CONCRETE FOUNDATION				
TRAFFIC SIGNAL STANDARD				
BUREAU OF TRAFFIC ENGINEERING AND ELECTRICAL SERVICES D.P.W. CITY OF MILWAUKEE				
TRAFFIC CONTROL MATERIAL				
DATE 4-18-75	SCALE Not To Scale	DRAWN J.H.S.	CHECKED B.J.T.	APPROVED R.J.B.
SUPERSEDES	REVISED DATE 07-29-03	DRG. C-75-563-T		
SUPERSEDED BY	NEW DRG. F-82-535-T			

SHEET 8 OF 10

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 202 E



NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

PULL ROPE (3/8" NYLON) REQUIRED IN ALL CONDUIT.

ALL POLES WILL BE RELOCATED BY CITY FORCES.

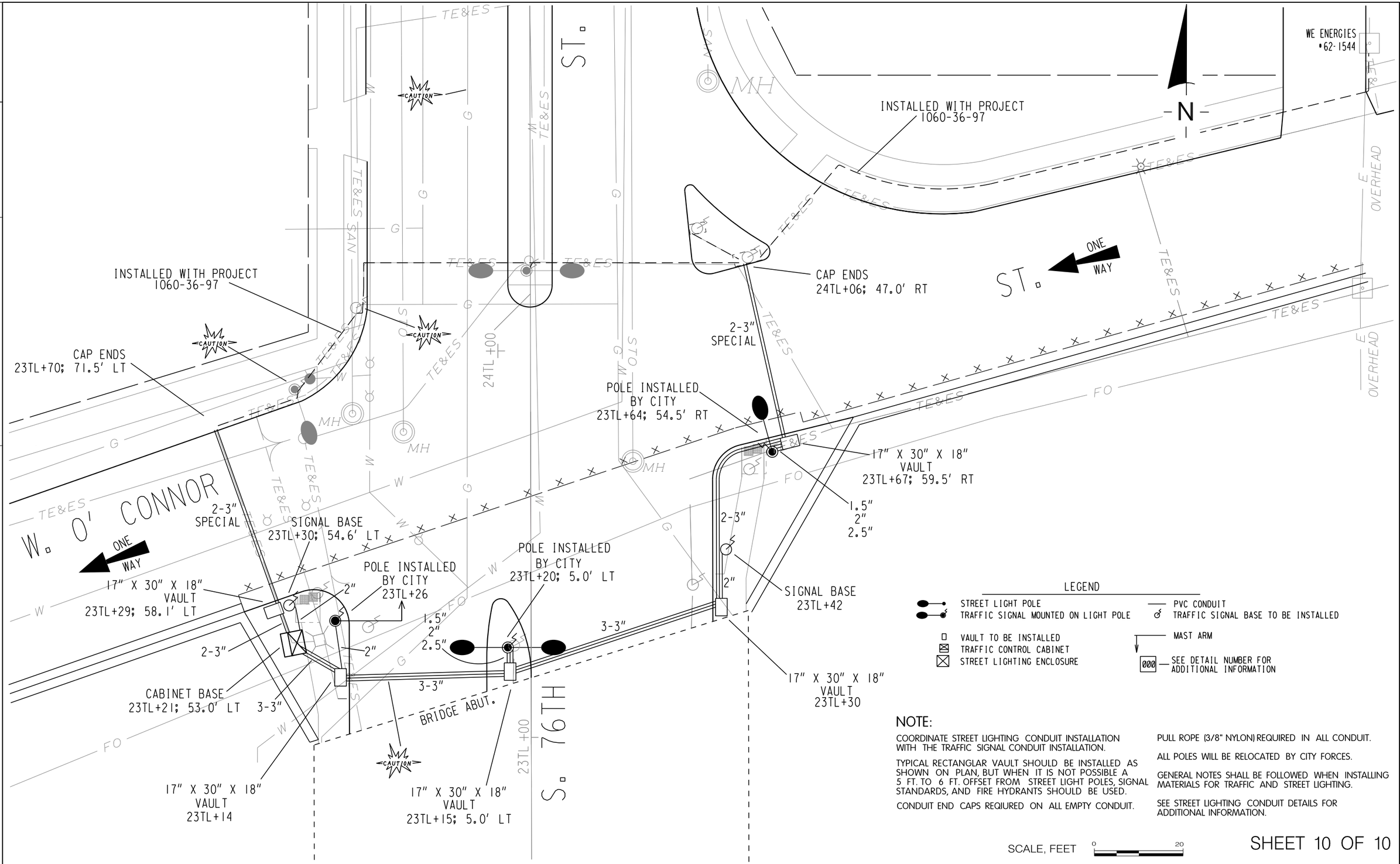
GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

SHEET 9 OF 10

PROJECT NO: 1060–33–78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 203	E

2



NOTE:

COORDINATE STREET LIGHTING CONDUIT INSTALLATION WITH THE TRAFFIC SIGNAL CONDUIT INSTALLATION.

TYPICAL RECTANGLAR VAULT SHOULD BE INSTALLED AS SHOWN ON PLAN, BUT WHEN IT IS NOT POSSIBLE A 5 FT. TO 6 FT. OFFSET FROM STREET LIGHT POLES, SIGNAL STANDARDS, AND FIRE HYDRANTS SHOULD BE USED.

CONDUIT END CAPS REQIURED ON ALL EMPTY CONDUIT.

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GENERAL NOTES SHALL BE FOLLOWED WHEN INSTALLING MATERIALS FOR TRAFFIC AND STREET LIGHTING.

SEE STREET LIGHTING CONDUIT DETAILS FOR ADDITIONAL INFORMATION.

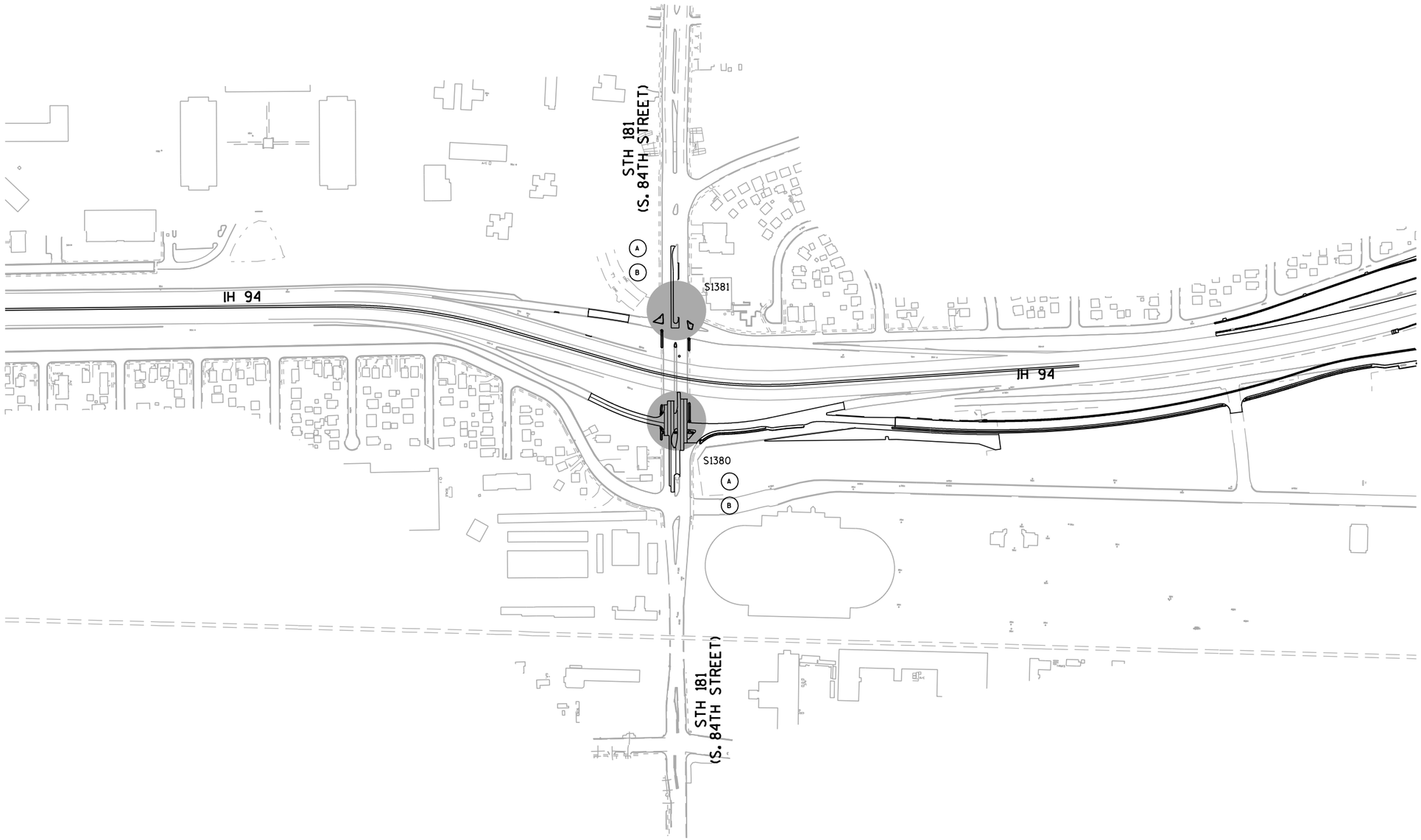
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SHEET 10 OF 10

PROJECT NO: 1060–33–78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC SIGNAL CONDUIT DETAILS & PLAN	SHEET 204	E

2

N



LEGEND

CITY OF MILWAUKEE OWNED EXISTING TRAFFIC SIGNAL
WISDOT OWNED PERMANENT TRAFFIC SIGNAL
SXXXX

(A) INSTALL TEMPORARY TRAFFIC SIGNAL

(B) REMOVE TEMPORARY TRAFFIC SIGNAL UPON 1060-33-78 PROJECT COMPLETION

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET	E

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH GRAY SHADE REPRESENTS EXISTING

SUBSTATION

IH 94 EB OFF RAMP

R/W IS OFF THE PAGE

POSTED SPEED LIMIT=30 MPH

STH 181 (S. 84TH STREET)

IH 94 EB ON RAMP

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

V1 V2

36F 37F 38F 39F 40F 41F

23TEW 23SEW 23QEW

CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
4. DETECTION AREAS ARE APPROXIMATE. ZONES SHALL BE ADJUSTED BY THE CONTRACTOR TO MATCH FIELD CONDITIONS.
5. WISDOT ELECTRICAL (414 266-1170) SHALL BE NOTIFIED 5 WORKING DAYS BEFORE SWITCH TO TEMPORARY TRAFFIC SIGNALS.
6. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
7. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
8. MAINTAIN 12 FOOT VERTICAL CLEARANCE BETWEEN SIDEWALK AND OVERHEAD LINES.

SUMMARY OF MATERIALS	
CLASS IV WOOD POLES	4
4"X4" WOOD POSTS	4
TRAFFIC SIGNAL HEADS	12
PEDESTRIAN HEADS	6
PUSH BUTTONS	6
250W HPS LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	2
EVP DETECTOR HEADS	3
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

WISCONSIN
JASON R. MATSON
37111
WAUKESHA, WI
PROFESSIONAL ENGINEER
04/25/2013

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1380

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023910_sp_tmp.dgn PLOT DATE : 27-APR-2013 23:24 PLOT BY : MSCDYB PLOT NAME : 023910_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH GRAY SHADE REPRESENTS EXISTING

N

IH 94 EB OFF RAMP

SUBSTATION

R/W IS OFF THE PAGE

STH 181 (S. 84TH STREET)

POSTED SPEED LIMIT=30 MPH

23TEW

238EW

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

IH 94 EB ON RAMP

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1380

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023911a_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:10 PLOT BY : mscjym PLOT NAME : 023911a_sp_tmp PLOT SCALE : 40:1

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH GRAY SHADE REPRESENTS EXISTING

N

IH 94 EB OFF RAMP

SUBSTATION

R/W IS OFF THE PAGE

POSTED SPEED LIMIT=30 MPH

STH 181 (S. 84TH STREET)

23RD EW

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

36F 37F 38F 39F 40F 41F

IH 94 EB ON RAMP

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1380

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 3 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023911b_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:11 PLOT BY : mscjym PLOT NAME : 023911b_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH GRAY SHADE REPRESENTS EXISTING

N

IH 94 EB OFF RAMP

SUBSTATION

R/W IS OFF THE PAGE

POSTED SPEED LIMIT=30 MPH

STH 181 (S. 84TH STREET)

23TEW

23SEW

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

36F 37F 38F 39F 40F 41F

IH 94 EB ON RAMP

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1380

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 4 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1C	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023911c_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:11 PLOT BY : mscjym PLOT NAME : 023911c_sp_tmp PLOT SCALE : 40:1

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH GRAY SHADE REPRESENTS EXISTING

N

IH 94 EB OFF RAMP

SUBSTATION

R/W IS OFF THE PAGE

POSTED SPEED LIMIT=30 MPH

STH 181 (S. 84TH STREET)

23TEW

23SEW

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

IH 94 EB ON RAMP

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1380

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 5 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1D	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023911d_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:11 PLOT BY : mscjym PLOT NAME : 023911d_sp_tmp PLOT SCALE : 40:1

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

IH 94 EB OFF RAMP

R/W IS OFF THE PAGE

SUBSTATION

R/W

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8 WP9

POSTED SPEED LIMIT=30 MPH

STH 181 (S. 84TH STREET)

36F 37F 38F 39F 40F 41F

23RD EW

IH 94 EB ON RAMP

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1380

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 6 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023912_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:11 PLOT BY : mscjym PLOT NAME : 023912_sp_tmp PLOT SCALE : 40:1

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø2 R/W	Ø2 CLEAR TO **	Ø3 R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
		NOT USED				NOT USED				
Ø1										
Ø2	5,6,7			G	Y R			R	R R	R
Ø3										
Ø4	10,11,12			R	R R			G	Y R	R
Ø5	8,9			R ←	R R ←			R ←	R R ←	R ⇄
Ø6	1,2,3,4			R	R R			R	R R	R
Ø7										
Ø8										
Ø2P	15,16			*	D D			D	D D	
Ø4P	13,14			D	D D			*	D D	
Ø6P	17,18			D	D D			D	D D	
Ø8P										

RING 2

	HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
			NOT USED				NOT USED		
Ø1									
Ø2	5,6,7	R	R R	R	R R				
Ø3									
Ø4	10,11,12	R	R R	R	R R				
Ø5	8,9	G ←	Y R ←	R ←	R R ←				
Ø6	1,2,3,4	R	R R	G,G	Y R				
Ø7									
Ø8									
Ø2P	15,16	D	D D	D	D D				
Ø4P	13,14	D	D D	D	D D				
Ø6P	17,18	D	D D	*	D D				
Ø8P									

BARRIER

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
41		X			4	4		X			VIDEO
42		X			4	4					VIDEO
51		X			5	5					VIDEO

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2		6	MAX.	X
3				
4				X
5		2		X
6		2	MAX.	X
7				
8				

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

Z

TYPE OF INTERCONNECT COMMUNICATION	
NONE	
TBC	X
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C
MOVEMENT	← ↙	← →	↓
PHASE	2+5	2+6	4

AFTER PREEMPTION SEQUENCE 2+5 OR 2+6, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1		
2	5 OR 6	4
3		
4	NONE	2,5,6
5	2	4,6
6	2	4,5
7		
8		

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1.)

IH 94 EB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1380

CONTROLLER TYPE: TEMP

DATE 04/13

PAGE NO. 7 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY SEQUENCE OF OPERATIONS - ALL STAGES	SHEET E

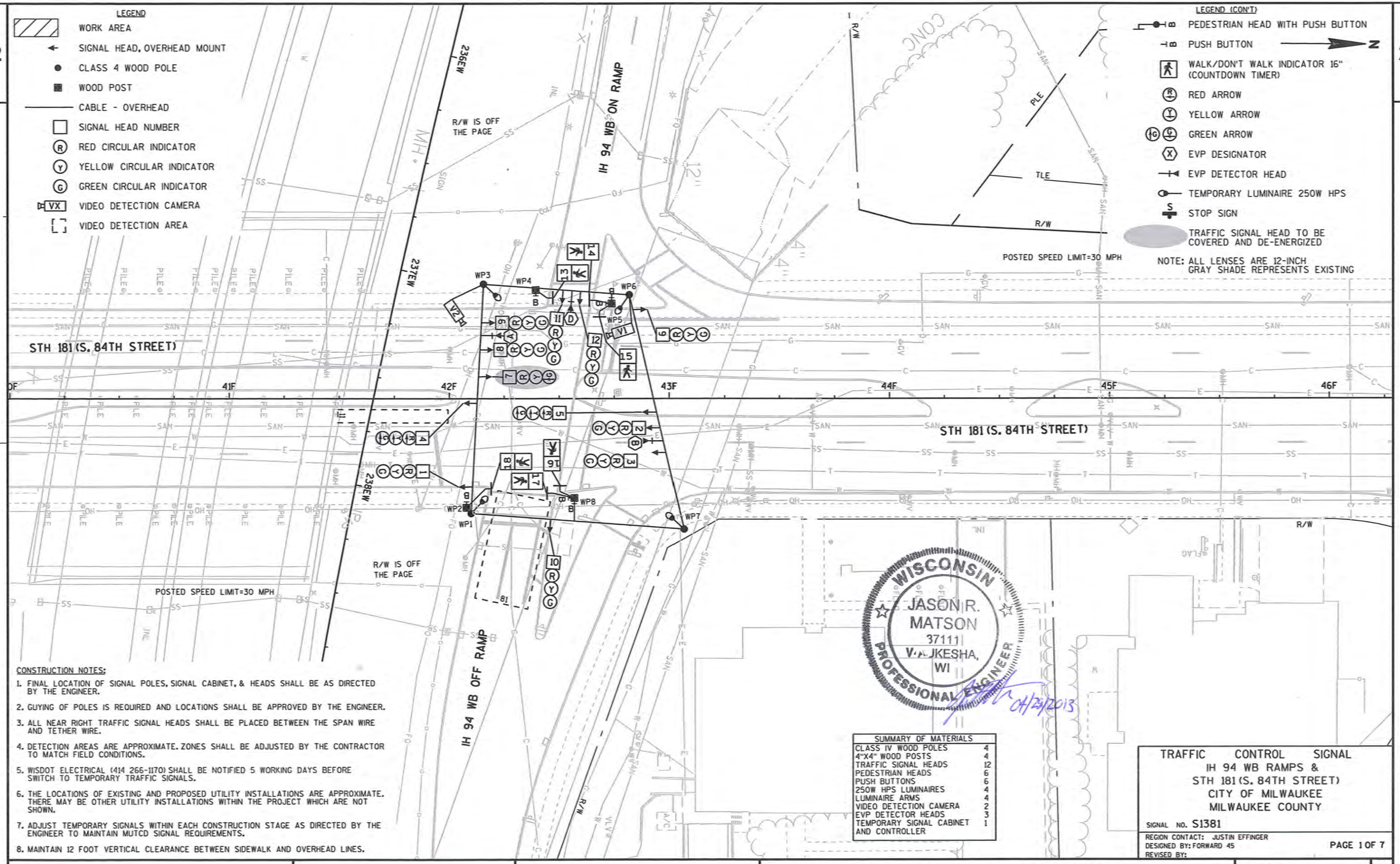
LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH GRAY SHADE REPRESENTS EXISTING



CONSTRUCTION NOTES:

1. FINAL LOCATION OF SIGNAL POLES, SIGNAL CABINET, & HEADS SHALL BE AS DIRECTED BY THE ENGINEER.
2. GUYING OF POLES IS REQUIRED AND LOCATIONS SHALL BE APPROVED BY THE ENGINEER.
3. ALL NEAR RIGHT TRAFFIC SIGNAL HEADS SHALL BE PLACED BETWEEN THE SPAN WIRE AND TETHER WIRE.
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7. ADJUST TEMPORARY SIGNALS WITHIN EACH CONSTRUCTION STAGE AS DIRECTED BY THE ENGINEER TO MAINTAIN MUTCD SIGNAL REQUIREMENTS.
8. MAINTAIN 12 FOOT VERTICAL CLEARANCE BETWEEN SIDEWALK AND OVERHEAD LINES.

SUMMARY OF MATERIALS

CLASS IV WOOD POLES	4
4"X4" WOOD POSTS	4
TRAFFIC SIGNAL HEADS	12
PEDESTRIAN HEADS	6
PUSH BUTTONS	6
250W HPS LUMINAIRES	4
LUMINAIRE ARMS	4
VIDEO DETECTION CAMERA	2
EVP DETECTOR HEADS	3
TEMPORARY SIGNAL CABINET AND CONTROLLER	1

WISCONSIN JASON R. MATSON 37111 WAUKESHA, WI PROFESSIONAL ENGINEER

04/23/2013

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1381

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - PRE CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023920_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:12 PLOT BY : mscjym PLOT NAME : 023920_sp_tmp PLOT SCALE : 40:1 WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH GRAY SHADE REPRESENTS EXISTING

N

STH 181 (S. 84TH STREET)

IH 94 WB ON RAMP

IH 94 WB OFF RAMP

R/W IS OFF THE PAGE

POSTED SPEED LIMIT=30 MPH

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

41F 42F 43F 44F 45F 46F

2361W 2371W 2381W 2391W

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1381

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1A	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023921a_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:12 PLOT BY : mscjym PLOT NAME : 023921a_sp_tmp PLOT SCALE : 40:1

2

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH GRAY SHADE REPRESENTS EXISTING

N

2

IH 94 WB ON RAMP

IH 94 WB OFF RAMP

STH 181 (S. 84TH STREET)

STH 181 (S. 84TH STREET)

23EW

23EW

23EW

23EW

R/W IS OFF THE PAGE

R/W IS OFF THE PAGE

POSTED SPEED LIMIT=30 MPH

POSTED SPEED LIMIT=30 MPH

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

41F 42F 43F 44F 45F 46F

PLE TLE R/W CONC

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1381

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 3 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1B	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023921b_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:12 PLOT BY : mscjym PLOT NAME : 023921b_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- RED ARROW
- YELLOW ARROW
- GREEN ARROW
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH GRAY SHADE REPRESENTS EXISTING

N

STH 181 (S. 84TH STREET)

IH 94 WB ON RAMP

IH 94 WB OFF RAMP

23EW

23EW

23EW

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POSTED SPEED LIMIT=30 MPH

POSTED SPEED LIMIT=30 MPH

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

41F 42F 43F 44F 45F 46F

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1381

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 4 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1C	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023921c_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:12 PLOT BY : mscjym PLOT NAME : 023921c_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN
- TRAFFIC SIGNAL HEAD TO BE COVERED AND DE-ENERGIZED

NOTE: ALL LENSES ARE 12-INCH GRAY SHADE REPRESENTS EXISTING

N

IH 94 WB ON RAMP

IH 94 WB OFF RAMP

STH 181 (S. 84TH STREET)

STH 181 (S. 84TH STREET)

236EW

237EW

238EW

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R/W IS OFF THE PAGE

POSTED SPEED LIMIT=30 MPH

POSTED SPEED LIMIT=30 MPH

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

41F 42F 43F 44F 45F 46F

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1381

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 5 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 1D	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023921d_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:12 PLOT BY : mscjym PLOT NAME : 023921d_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

LEGEND

- WORK AREA
- SIGNAL HEAD, OVERHEAD MOUNT
- CLASS 4 WOOD POLE
- WOOD POST
- CABLE - OVERHEAD
- SIGNAL HEAD NUMBER
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA

LEGEND (CON'T)

- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- TEMPORARY LUMINAIRE 250W HPS
- S STOP SIGN

NOTE: ALL LENSES ARE 12-INCH
GRAY SHADE REPRESENTS EXISTING

N

STH 181 (S. 84TH STREET)

IH 94 WB ON RAMP

IH 94 WB OFF RAMP

236EW

238EW

R/W IS OFF THE PAGE

POSTED SPEED LIMIT=30 MPH

WP1 WP2 WP3 WP4 WP5 WP6 WP7 WP8

41F 42F 43F 44F 45F 46F

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1381

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 6 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\023922_sp_tmp.dgn PLOT DATE : 28-APR-2013 15:13 PLOT BY : mscjym PLOT NAME : 023922_sp_tmp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

RING 1

	HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø2 R/W	Ø2 CLEAR TO **	Ø3 R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
Ø1	4,5	G ←	Y ← R ←	R ←	R ← R ←					R ←
Ø2	6,7,8,9	R	R R	G,G↓	Y R					R
Ø3										
Ø4										
Ø5										
Ø6	1,2,3	R	R R	R	R R					R
Ø7										
Ø8	10,11,12	R	R R	R	R R					R
Ø2P	13,14	D	D D	*	D D					
Ø4P										
Ø6P	17,18	D	D D	D	D D					
Ø8P	15,16	D	D D	D	D D					

RING 2

	HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
Ø1	4,5			R ←	R ← R ←			R ←	R ← R ←
Ø2	6,7,8,9			R	R R			R	R R
Ø3									
Ø4									
Ø5									
Ø6	1,2,3			G	Y R			R	R R
Ø7									
Ø8	10,11,12			R	R R			G	Y R
Ø2P	13,14			D	D D			D	D D
Ø4P									
Ø6P	17,18			*	D D			D	D D
Ø8P	15,16			D	D D			*	D D

BARRIER

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					VIDEO
81		X			8	8					VIDEO

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2		6	MAX.	X
3				
4				
5				
6		2	MAX.	X
7				
8				X

OVERLAPS

O.L. "A" =
O.L. "B" =
O.L. "C" =
O.L. "D" =

Z

TYPE OF INTERCONNECT COMMUNICATION	
NONE	
TBC	X
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	
RADIO	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
BY OTHER AGENCY	
IN TRAFFIC SIGNAL CABINET	X
IN SEPARATE DOT LIGHTING CABINET	

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL D
MOVEMENT	← →	↗ ↘	↑
PHASE	2+6	6+1	8

AFTER PREEMPTION SEQUENCE 2+6 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 8, CONTROLLER SHALL RETURN TO PHASE 8.

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	6	2,8
2	6	1,8
3		
4		
5		
6	1 OR 2	8
7		
8	NONE	1,2,6

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1.)

IH 94 WB RAMPS &
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1381

CONTROLLER TYPE: TEMP

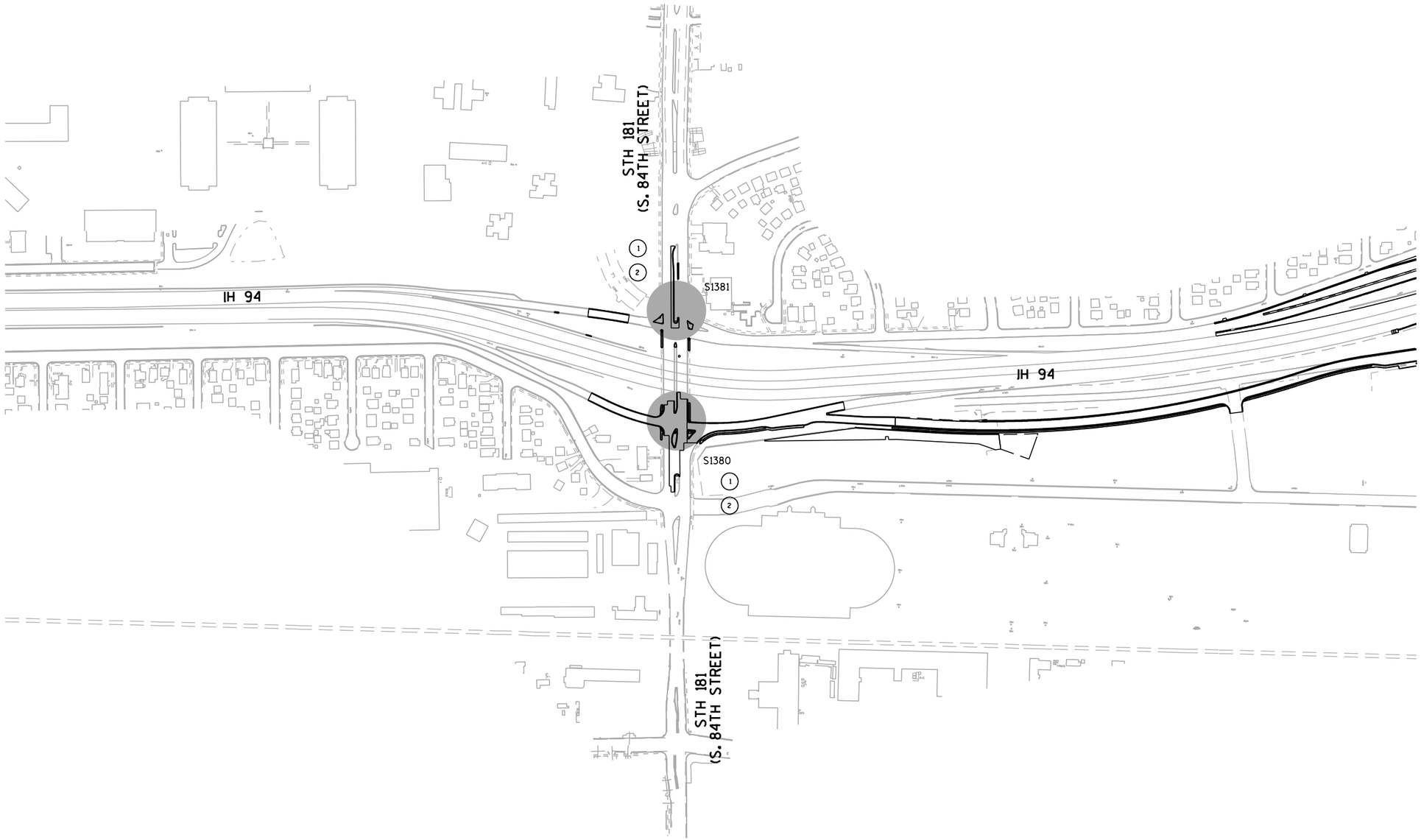
DATE 04/13

PAGE NO. 7 OF 7

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TEMPORARY SEQUENCE OF OPERATIONS - ALL STAGES	SHEET E

2

N



LEGEND

SXXXX — CITY OF MILWAUKEE OWNED EXISTING TRAFFIC SIGNAL
WISDOT OWNED PERMANENT TRAFFIC SIGNAL

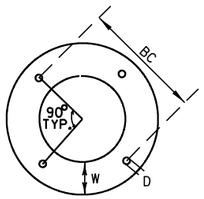
(1) CITY OF MILWAUKEE TO REMOVE EXISTING TRAFFIC SIGNAL EQUIPMENT

(2) INSTALL COMPLETE PERMANENT TRAFFIC SIGNAL

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PROJECT OVERVIEW	SHEET	E

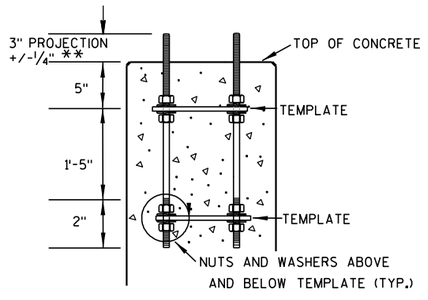
SPREAD FOOTING DIMENSIONS
STEEL AND CONCRETE QUANTITIES ARE APPROXIMATE

TYPE OF BASE	IF D =	THEN L=	401 HOOPS LBS.	402 VERTICAL BARS LBS.	602 VERTICAL BARS LBS.	403 HORIZ BARS LBS.	TOTAL LBS. STEEL	CONCR YDS.
TYPE 1	2'	5' 0"	8	7	-	36	51	1.9
TYPE 1	3'	4' 6"	12	13	-	36	61	1.6
TYPE 1	4'	4' 6'	8	18	-	36	62	1.6
TYPE 2 OR 5	2'	6' 6"	8	-	14	72	94	3.1
TYPE 2 OR 5	3'	6' 6"	12	-	26	72	110	3.2
TYPE 2 OR 5	4'	6' 0"	12	-	35	55	102	2.8
TYPE 2 OR 5	5'	6' 0"	15	-	44	55	114	2.9
TYPE 2 OR 5	6'	6' 0"	20	-	53	55	128	3.0



	TYPE 1	TYPE 2 OR 5
THICKNESS OF PLATE	1/2"	1/2"
BOLT CIRCLE "BC"	12.75"	11.50"
WIDTH "W"	3" +/-	3" +/-
HOLE DIAMETER "D"	1.125"	1.125"
ANCHOR ROD	1" X 2'-3"	1" X 2'-3"

ANCHOR ROD TEMPLATE



ANCHOR ROD ASSEMBLY

ANCHOR ROD SHALL BE ASTM A449/AASHTO M314-90 GR55
THREADED 12-INCH AT TOP; 4-INCH AT BOTTOM,
HOT-DIP GALVANIZED TO ASTM A153, GR C

REQUIRED:

2 TEMPLATES
4 ANCHOR RODS
16 FLAT WASHERS HOT-DIP GALVANIZED
16 HEAVY DUTY HEX NUTS* HOT-DIP GALVANIZED

*CHASE THREADS FOR HOT-DIP GALVANIZED ANCHOR RODS
** FAILURE TO MEET TOLERANCE CONDEMNS THE BASE

GENERAL NOTES

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

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 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.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

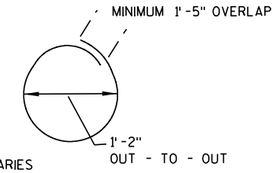
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL PER SECTION 5.17.6.3, AASHTO 2001 4TH EDITION STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS.

WELDING OF THE ANCHOR RODS TO THE CAGE OR TEMPLATE 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).

CONDUIT SHOWN FOR ILLUSTRATION ONLY AND VARIES BY "D"

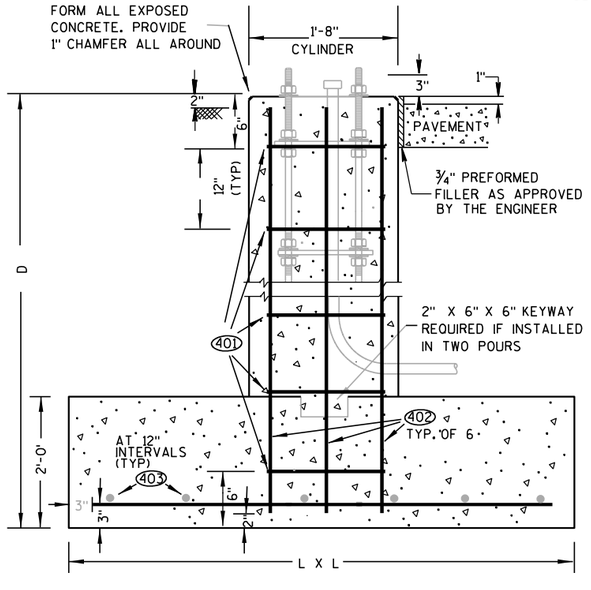
ANCHOR ROD PATTERN SHALL BE PARALLEL TO THE ROADWAY



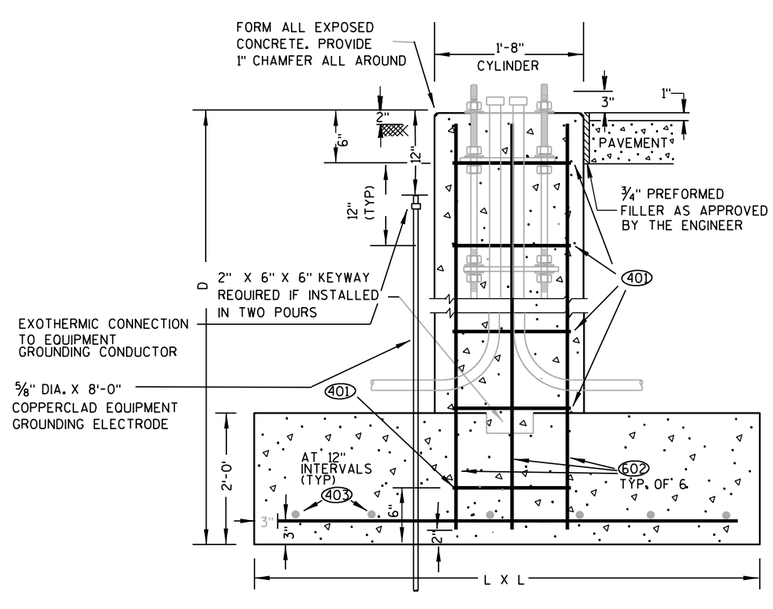
(401) HOOP
QUANTITY VARIES

(402) OR (602) VERTICAL "D" - 4"
QUANTITY 6, LENGTH VARIES

(403) HORIZONTAL "L" - 6"
QUANTITY AND LENGTH VARY

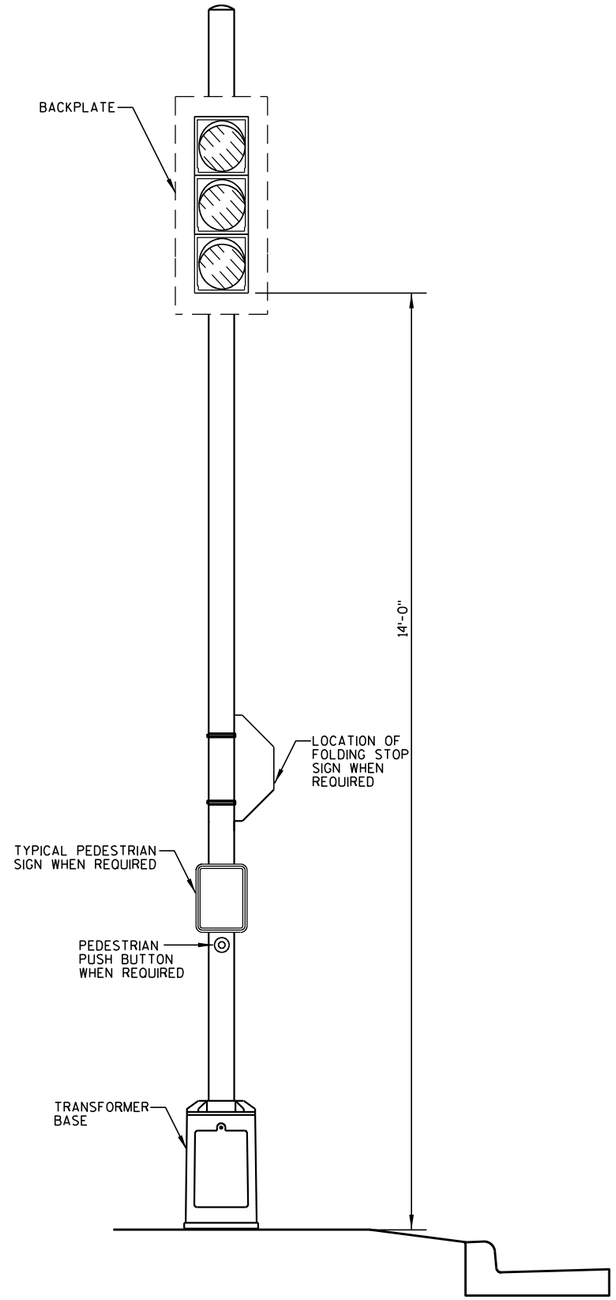


SPREAD FOOTING
TYPE 1



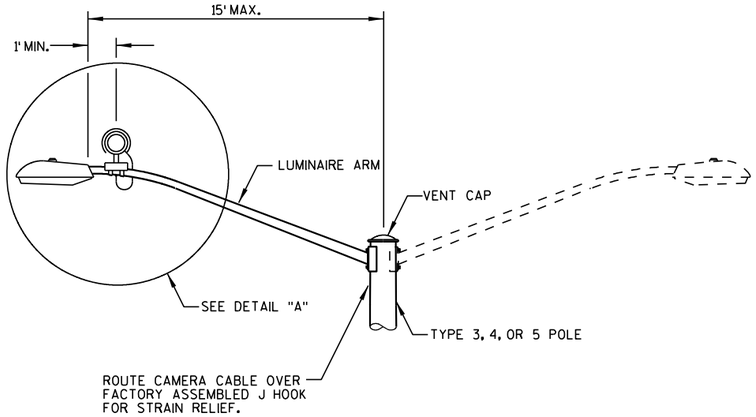
SPREAD FOOTING
TYPE 2 OR 5

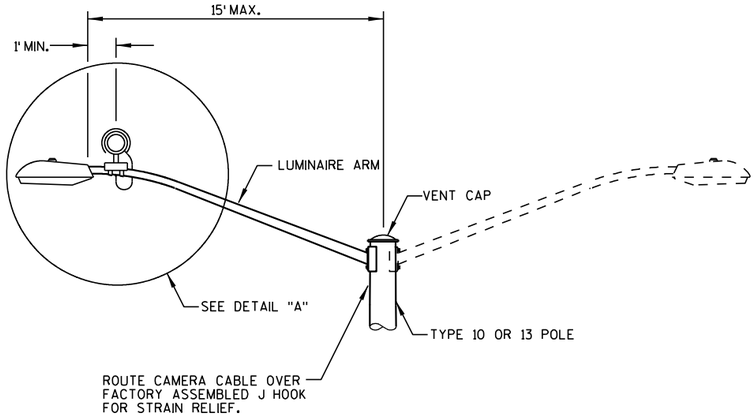
2

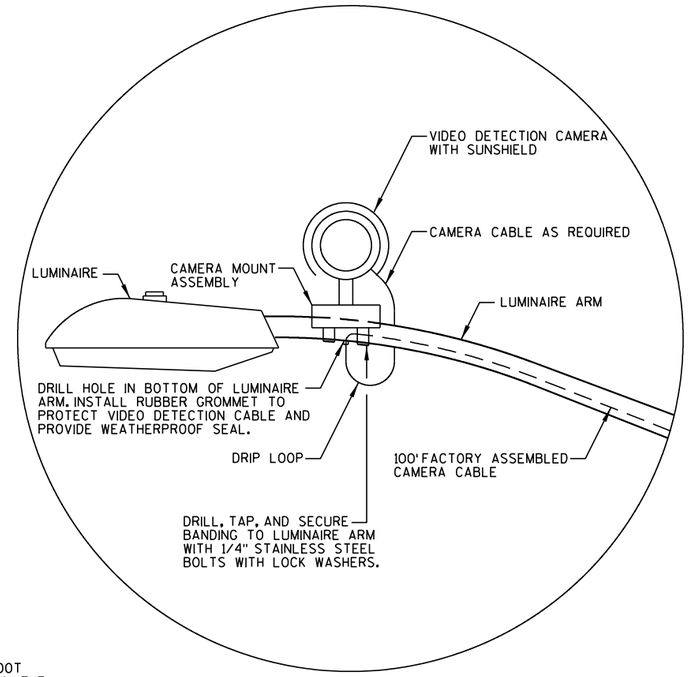


FAR INDICATIONS
TYPE 2 OR TYPE 3 POLE, TYPE 2 CONCRETE BASE

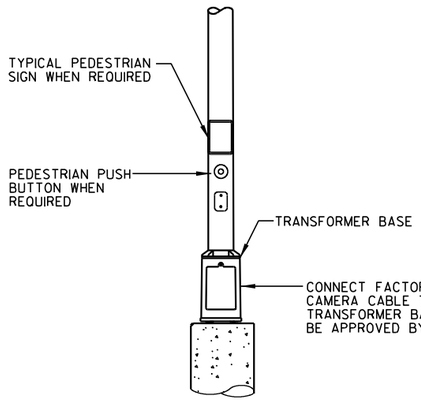
PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL DETAILS	SHEET	E



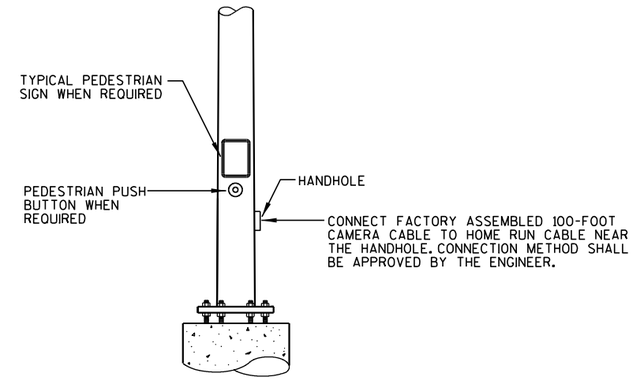




DETAIL "A"



TYPE 3, 4, OR 5
MOUNTING CONFIGURATION



TYPE 10 OR 13
MOUNTING CONFIGURATION

VIDEO DETECTION MOUNTING DETAIL (LUMINAIRE ARM MOUNT)

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL DETAILS	SHEET	E

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- Y YIELD SIGN
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- (X) EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER

LEGEND (CON'T)

- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N

IH 94 EB OFF RAMP

STH 181 (S. 84TH STREET)

KEARNEY STREET

SUBSTATION

R/W IS OFF THE PAGE

POSTED SPEED LIMIT=30 MPH

225' TO STOP LINE

6'X18' 4 TURNS

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
5. PROPOSED STORM SEWER, LIGHTING, STRUCTURES, DETECTABLE WARNING FIELDS, AND FTMS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.
6. LUMINAIRES TO BE PLACED AT THE INTERSECTION BY THE CITY OF MILWAUKEE. LOCATIONS ARE TO BE DETERMINED.

WISCONSIN JASON R. MATSON 37111 WAUKESHA WI PROFESSIONAL ENGINEER 04/22/2013

TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & STH 181
(S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

CABINET TYPE: TS-2
SIGNAL NO. S1380 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED Date 4/23/13 Paul A. Ruston, P.E. REGION TRAFFIC ENGINEER

APPROVED Date 4/23/13 Joanna L. Brush STATE TRAFFIC ENGINEER

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

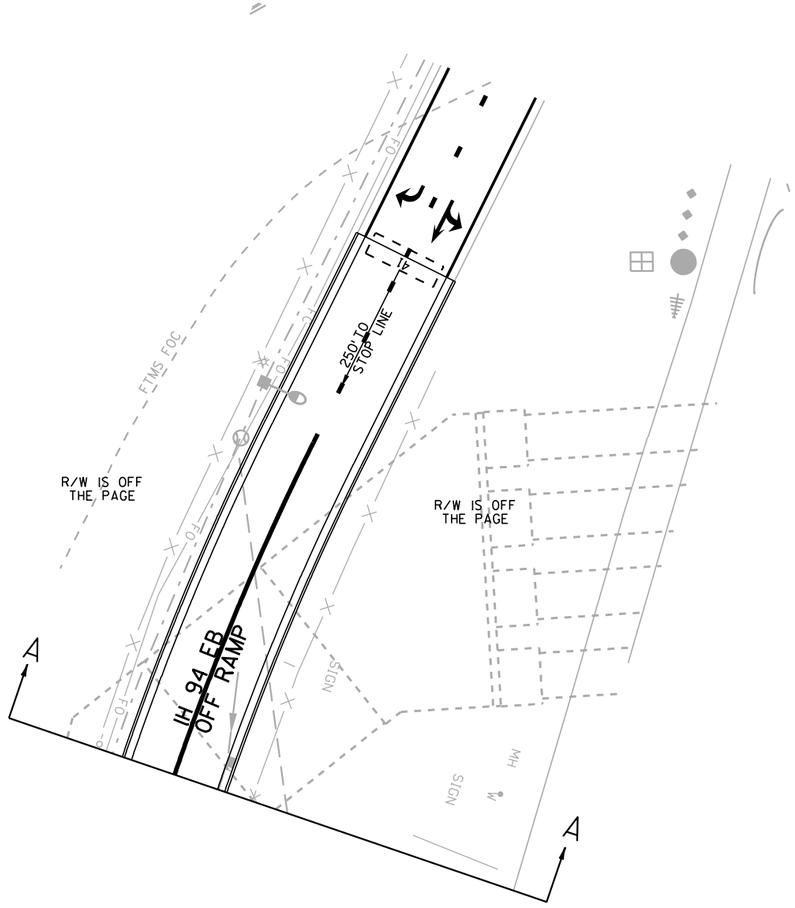
JRE 4/23/13

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024015_sp.dgn PLOT DATE : 22-APR-2013 16:05 PLOT BY : mscjym PLOT NAME : 024015_sp PLOT SCALE : 40:1 WISDOT/CADDS SHEET 42

2

N



TRAFFIC CONTROL SIGNAL
IH 94 EB RAMPS & STH 181
(S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1380

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024016_sp.dgn PLOT DATE : 22-APR-2013 16:05 PLOT BY : mscjym PLOT NAME : 024016_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

SEQUENCE OF OPERATION

		HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø2 R/W	Ø2 CLEAR TO **	Ø3 R/W	Ø3 CLEAR TO **	Ø4 R/W	Ø4 CLEAR TO **	FLASH
	Ø1										
	Ø2	4,5			G	Y R			R	R R	R
	Ø3										
	Ø4	8,9			R	R R			G	Y R	R
RING 1	Ø5	6,7			-	- -			-	- -	-
	Ø6	1,2,3			R	R R			R	R R	R
	Ø7										
	Ø8										
	ØLA										
	ØLB										
	ØLC	6,7			R	R R			R	R R	R
	ØLD										
	Ø2P	12,13			*	D D			D	D D	
	Ø4P	10,11			D	D D			*	D D	
	Ø6P	14,15			D	D D			D	D D	
	Ø8P										

NOT USED | NOT USED

OLC

NOT USED | NOT USED

		HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø6 R/W	Ø6 CLEAR TO **	Ø7 R/W	Ø7 CLEAR TO **	Ø8 R/W	Ø8 CLEAR TO **
	Ø1									
RING 2	Ø2	4,5	R	R R	R	R R				
	Ø3									
	Ø4	8,9	R	R R	R	R R				
	Ø5	6,7	G	- -	-	- -				
	Ø6	1,2,3	R	R R	G,G	Y R				
	Ø7									
	Ø8									
	ØLA									
	ØLB									
	ØLC	6,7	-	Y R	FY	Y R				
	ØLD									
	Ø2P	12,13	D	D D	D	D D				
	Ø4P	10,11	D	D D	D	D D				
	Ø6P	14,15	D	D D	*	D D				
	Ø8P									

BARRIER

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	DETECTOR OPERATION: CALLS ONLY	DETECTOR OPERATION: EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
21	3	X			2	2				6X18	4
41				X		4			X		VIDEO
42		X			4	4		X			VIDEO
43		X			4	4					VIDEO
51		X			5	5					VIDEO
61		X			6	6					VIDEO

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1				
2	X	6	MIN.	X
3				
4				X
5		2		X
6	X	2	MIN.	X
7				
8				

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =		
O.L. "B" =		
O.L. "C" =	5	6
O.L. "D" =		

N

TYPE OF INTERCONNECT COMMUNICATION	
NONE	
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
RADIO	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	X
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
BY OTHER AGENCY	X
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1		
2	5 OR 6	4
3		
4	NONE	2,5,6
5	2	4,6
6	2	4,5
7		
8		

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL C
MOVEMENT	←	← FY, →	↓
PHASE	2+5	6+2	4

AFTER PREEMPTION SEQUENCE 2+5 OR 6+2, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 4, CONTROLLER SHALL RETURN TO PHASE 4.

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1.)

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

IH 94 EB RAMPS & STH 181
(S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1380

CONTROLLER TYPE: ECONOLITE

DATE 04/13 PAGE NO. 3 OF 3

4/23/13 JRE
4/23/13 DMG

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET	E

PROJECT ID:	1060-33-78
INTERSECTION:	IH 94 EB RAMPS & STH 181 (S. 84TH STREET)

SIGNAL WIRE COLOR CODING	BLK-BLACK WHT-WHITE	RED-RED BLU-BLUE	GRN-GREEN ORG-ORANGE

FROM	TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING> <YELLOW>	D/WALK	WALK	PED BUTTON
CB1	SB1	12	8	RED	ORG	GRN							
			14								BLK	BLU	
			B										WHT/BLK
CB1	SB3	15	6				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
			9	RED	ORG	GRN							
			10								BLK	BLU	
			B										WHT/BLK
			15								RED/WHT	GRN/WHT	
			B										BLU/WHT
SB3	SB2	7	15								BLK	BLU	
			B										WHT/BLK
CB1	SB4	12	4	RED	ORG	GRN							
			7				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
			B										WHT/BLK
CB1	SB5	15	5	RED	ORG	GRN							
			11								BLK	BLU	
			B										WHT/BLK
			12								RED/WHT	GRN/WHT	
			B										BLU/WHT
SB5	SB6	7	12								BLK	BLU	
			B										WHT/BLK
CB1	SB8	15	1	RED	ORG				GRN				
			2	RED	ORG	GRN							
			13								BLK	BLU	
			B										WHT/BLK
SB8	SB7	7	13								BLK	BLU	
			B										WHT/BLK
CB1	SB9	12	3	RED	ORG	GRN							

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.



EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	CB1

PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB2	SB2
PB3	SB3
PB4	SB4
PB5	SB5
PB6	SB5
PB7	SB7
PB8	SB7
PB10	SB8
PB11	SB9
PB12	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB4 (HEAD A)
CB1	SB8 (HEAD B)
CB1	SB1 (HEAD C)

VIDEO DETECTION CABLE	
FROM	TO
CB1	SB4 (V1)
CB1	SB8 (V2)
CB1	SB2 (V3)

LEGEND

- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL BASE
- (XX) SIGNAL HEAD, TRAFFIC SIGNAL POLE, TRANSFORMER BASE
- LUMINAIRE UNDER PERMIT TO LOCAL MUNICIPALITY
- VIDEO DETECTION AREA
- VX VIDEO DETECTION CAMERA
- Y YIELD SIGN
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- PEDESTRIAN HEAD WITH PUSH BUTTON
- PUSH BUTTON
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- CONTROL CABINET
- TRAFFIC SIGNAL HEAD
- SIGNAL HEAD NUMBER

LEGEND (CON'T)

- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- (R) RED CIRCULAR INDICATOR
- (Y) YELLOW CIRCULAR INDICATOR
- (G) GREEN CIRCULAR INDICATOR
- (R) RED ARROW
- (Y) YELLOW ARROW
- (G) GREEN ARROW

NOTE: ALL LENSES ARE 12-INCH GRAYSHADE REPRESENTS EXISTING

N

IH 94 WB ON RAMP

R/W IS OFF THE PAGE

STH 181 (S. 84TH STREET)

POSTED SPEED LIMIT=30 MPH

6'X18' 3 TURNS 225' TO STOP LINE

FO I/C IN TRAFFIC SIGNAL CONDUIT

I/C CV1002

1/4" FO I/C

238TH AVE

O'CONNER STREET

R/W

POSTED SPEED LIMIT=30 MPH

225' TO STOP LINE

STH 181 (S. 84TH STREET)

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. INSTALL CABINET BASE 6" ABOVE FINAL ROADWAY ELEVATION.
5. PROPOSED STORM SEWER, LIGHTING, STRUCTURES, DETECTABLE WARNING FIELDS, AND FTMS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.
6. LUMINAIRES TO BE PLACED AT THE INTERSECTION BY THE CITY OF MILWAUKEE. LOCATIONS ARE TO BE DETERMINED.

WISCONSIN JASON R. MATSON 37111 WAUKESHA, WI PROFESSIONAL ENGINEER 04/22/2013

TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & STH 181
(S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

CABINET TYPE: TS-2
SIGNAL NO. S1381 CONTROLLER TYPE: ECONOLITE

WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVAL RECOMMENDED
Date 4/23/13 David G. Buntner, P.E. REGION TRAFFIC ENGINEER

APPROVED
Date 4/23/13 Joanna L. Bush STATE TRAFFIC ENGINEER

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 3

JRE 4/23/13

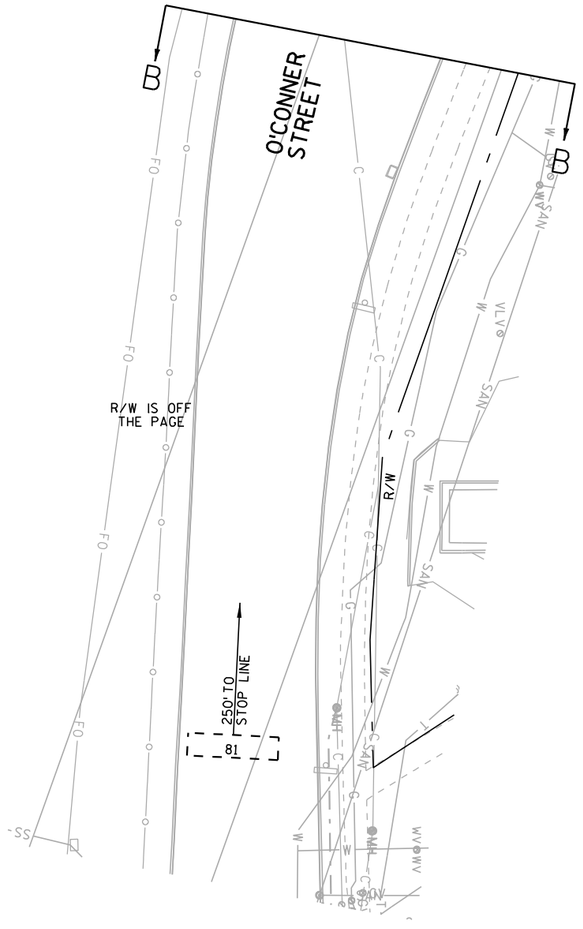
PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024025_sp.dgn PLOT DATE : 22-APR-2013 16:24 PLOT BY : mscjym PLOT NAME : 024025_sp PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N



TRAFFIC CONTROL SIGNAL
IH 94 WB RAMPS & STH 181
(S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1381

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 2 OF 3

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024026_sp.dgn PLOT DATE : 22-APR-2013 16:06 PLOT BY : mscjym PLOT NAME : 024026_sp PLOT SCALE : 40:1

SEQUENCE OF OPERATION

		HEAD NUMBERS	Ø1 R/W	Ø1 CLEAR TO **	Ø1 CLEAR TO	Ø1 CLEAR TO	Ø2 R/W	Ø2 CLEAR TO **	Ø2 CLEAR TO	Ø2 CLEAR TO	Ø3 R/W	Ø3 CLEAR TO **	Ø3 CLEAR TO	Ø3 CLEAR TO	Ø4 R/W	Ø4 CLEAR TO **	Ø4 CLEAR TO	Ø4 CLEAR TO	FLASH
	Ø1	3,4	G	-	-		-	-	-										-
	Ø2	5,6,7	R	R	R		G,G	Y	R										R
	Ø3																		
	Ø4																		
RING 1	Ø5																		
	Ø6	1,2	R	R	R		R	R	R										R
	Ø7																		
	Ø8	8,9,10,11	R	R	R		R	R	R										R
	OLA	3,4	-	Y	R		FY	Y	R										R
	OLB																		
	OLC																		
	OLD																		
	Ø2P	12,13	D	D	D		*	D	D										
	Ø4P																		
	Ø6P	16,17	D	D	D		D	D	D										
	Ø8P	14,15	D	D	D		D	D	D										

NOT USED

NOT USED

		HEAD NUMBERS	Ø5 R/W	Ø5 CLEAR TO **	Ø5 CLEAR TO	Ø5 CLEAR TO	Ø6 R/W	Ø6 CLEAR TO **	Ø6 CLEAR TO	Ø6 CLEAR TO	Ø7 R/W	Ø7 CLEAR TO **	Ø7 CLEAR TO	Ø7 CLEAR TO	Ø8 R/W	Ø8 CLEAR TO **	Ø8 CLEAR TO	Ø8 CLEAR TO
	Ø1	3,4					-	-	-						-	-	-	
	Ø2	5,6,7					R	R	R						R	R	R	
	Ø3																	
	Ø4																	
RING 2	Ø5																	
	Ø6	1,2					G	Y	R						R	R	R	
	Ø7																	
	Ø8	8,9,10,11					R	R	R						A	B	R	
	OLA	3,4					R	R	R						R	R	R	
	OLB																	
	OLC																	
	OLD																	
	Ø2P	12,13					D	D	D						D	D	D	
	Ø4P																	
	Ø6P	16,17					*	D	D						D	D	D	
	Ø8P	14,15					D	D	D						*	D	D	

A = G,G
B = Y,Y

BARRIER

DETECTOR LOGIC

DETECTOR NUMBER	DETECTOR INPUT	DETECTOR OPERATION: CALLS AND EXTENDS	CALLS ONLY	EXTENDS ONLY	PHASE CALLED	PHASE EXTENDED	DETECTOR DISCONNECT PHASE	CALLING DELAY	EXTENSION STRETCH	SIZE	NUMBER OF TURNS
11		X			1	1					VIDEO
21		X			2	2					VIDEO
61	3	X			6	6				6X18	3
81				X		8			X		VIDEO
82		X			8	8		X			VIDEO
83		X			8	8					VIDEO
84		X			8	8					VIDEO

CONTROLLER LOGIC

PHASE NUMBER	PHASE LOCKING	DUAL ENTRY W / Ø	PHASE RECALL	PHASE ACTIVE
1		6		X
2	X	6	MIN.	X
3				
4				
5				
6	X	2	MIN.	X
7				
8				X

SPECIAL OVERLAPS

	PROTECTIVE	PERMISSIVE
O.L. "A" =	1	2
O.L. "B" =		
O.L. "C" =		
O.L. "D" =		

Z

TYPE OF INTERCONNECT COMMUNICATION	
NONE	
TBC	
CLOSED LOOP TWISTED PAIR*	
CLOSED LOOP FIBER OPTIC*	
FIBER OPTIC (ETHERNET)	X
RADIO	
*LOCATION OF MASTER CONTROLLER NO:	S-
SIGNAL SYSTEM #:	SS- -

TYPE OF PRE-EMPT	
NONE	
RAILROAD	
EMERGENCY VEHICLE	
GTT	X
TOMAR	
HARDWIRE	
OTHER	
LIFT BRIDGE	
QUEUE DETECTOR	

TYPE OF LIGHTING	
BY OTHER AGENCY	X
IN TRAFFIC SIGNAL CABINET	
IN SEPARATE DOT LIGHTING CABINET	

CHART 1

PHASE ON	NONCONFLICTING PHASE ALLOWED TO TIME CONCURRENTLY	PHASES IN CONFLICT WITH PHASE ON
1	6	2,8
2	6	1,8
3		
4		
5		
6	1 OR 2	8
7		
8	NONE	1,2,6

EMERGENCY VEHICLE PREEMPTION SEQUENCE

EMERGENCY VEHICLE PREEMPTOR	CHANNEL A	CHANNEL B	CHANNEL D
MOVEMENT	FY		
PHASE	2+6	6+1	8

AFTER PREEMPTION SEQUENCE 2+6 OR 6+1, CONTROLLER SHALL RETURN TO PHASES 2+6.

AFTER PREEMPTION SEQUENCE 8, CONTROLLER SHALL RETURN TO PHASE 8.

GENERAL NOTES:

1. ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE SKIPPED.
2. WHEN ONE PHASE IS ON ALONE, ANY NONCONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. (SEE CHART 1.)

** CLEARANCE TO A PHASE IN CONFLICT WITH THIS PHASE ON (SEE CHART 1)

* WHEN CALLED, TIMED STEADY WALK, THEN FLASHING DON'T WALK, THEN GOES TO STEADY DON'T WALK

IH 94 WB RAMPS & STH 181
(S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1381

CONTROLLER TYPE: ECONOLITE

DATE 04/13 PAGE NO. 3 OF 3

4/23/13 JRF

4/23/13 2PM

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	SEQUENCE OF OPERATIONS	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024029_sp_ph.dgn PLOT DATE : 22-APR-2013 16:06 PLOT BY : mscjym PLOT NAME : 024029_sp_ph PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

PROJECT ID:	1060-33-78
INTERSECTION:	IH 94 WB RAMPS & STH 181 (S. 84TH STREET)

SIGNAL WIRE COLOR CODING	BLK-BLACK WHT-WHITE	RED-RED BLU-BLUE	GRN-GREEN ORG-ORANGE

FROM	TO	NO. OF CONDUCTORS	HEAD NO.	RED	YELLOW	GREEN	<RED>	<YELLOW>	<GREEN>	<FLASHING> <YELLOW>	D/WALK	WALK	PED BUTTON
CB1	SB1	7	17								BLK	BLU	
			B										WHT/BLK
CB1	SB2	12	5	RED	ORG				GRN				
			6	RED	ORG	GRN							
CB1	SB3	12	7	RED	ORG	GRN							
			8	RED/BLK	ORG/BLK	GRN/BLK							
			12								BLK	BLU	
			B										WHT/BLK
SB3	SB4	7	8	RED	ORG	GRN							
			12								BLK	BLU	
			B										WHT/BLK
CB1	SB6	15	3				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
			14								RED/WHT	GRN/WHT	
			B										BLU/WHT
			9	RED	ORG	GRN							
			13								BLK	BLU	
			B										WHT/BLK
SB6	SB5	7	9	RED	ORG	GRN							
			13								BLK	BLU	
			B										WHT/BLK
CB1	SB7	15	1	RED	ORG	GRN							
			4				RED/BLK	ORG/BLK	GRN/BLK	BLK/WHT			
			10	RED/WHT				BLU/WHT	GRN/WHT				
			11	RED/WHT				BLU/WHT	GRN/WHT				
SB7	SB8	7	10	RED				ORG	GRN				
SB7	SB9	7	11	RED				ORG	GRN				
CB1	SB10	15	2	RED	ORG	GRN							
			15								BLK	BLU	
			B										WHT/BLK
			16								RED/WHT	GRN/WHT	
			B										BLU/WHT
SB10	SB11	7	16								BLK	BLU	
			B										WHT/BLK

NOTES: USE WHITE CONDUCTOR IN THE SIGNAL CABLE AS THE GROUNDED CONDUCTOR FOR ALL TRAFFIC SIGNAL INDICATIONS.
ENSURE THE GROUNDED CONDUCTOR IN THE FEEDER CABLE AND THE POLE CABLES ARE BOTH 18" LONGER THAN THE UNGROUNDED CONDUCTORS.
AT THE SIGNAL BASES, CONNECT ON TERMINAL FROM THE PEDESTRIAN PUSH BUTTONS TO THE COLOR INDICATED IN THE CHART. CONNECT THE OTHER TERMINAL TO THE GROUNDED CONDUCTOR.

WISCONSIN
JASON R. MATSON
37111
WAUKESHA, WI
PROFESSIONAL ENGINEER
04/23/2013

EQUIPMENT GROUNDING CONDUCTOR 10 AWG GRN XLP	
FROM	TO
CB1	SB1
SB1	SB2
SB2	SB3
SB3	SB4
SB4	SB5
SB5	SB6
SB6	SB7
SB7	SB8
SB8	SB9
SB9	SB10
SB10	SB11
SB11	CB1

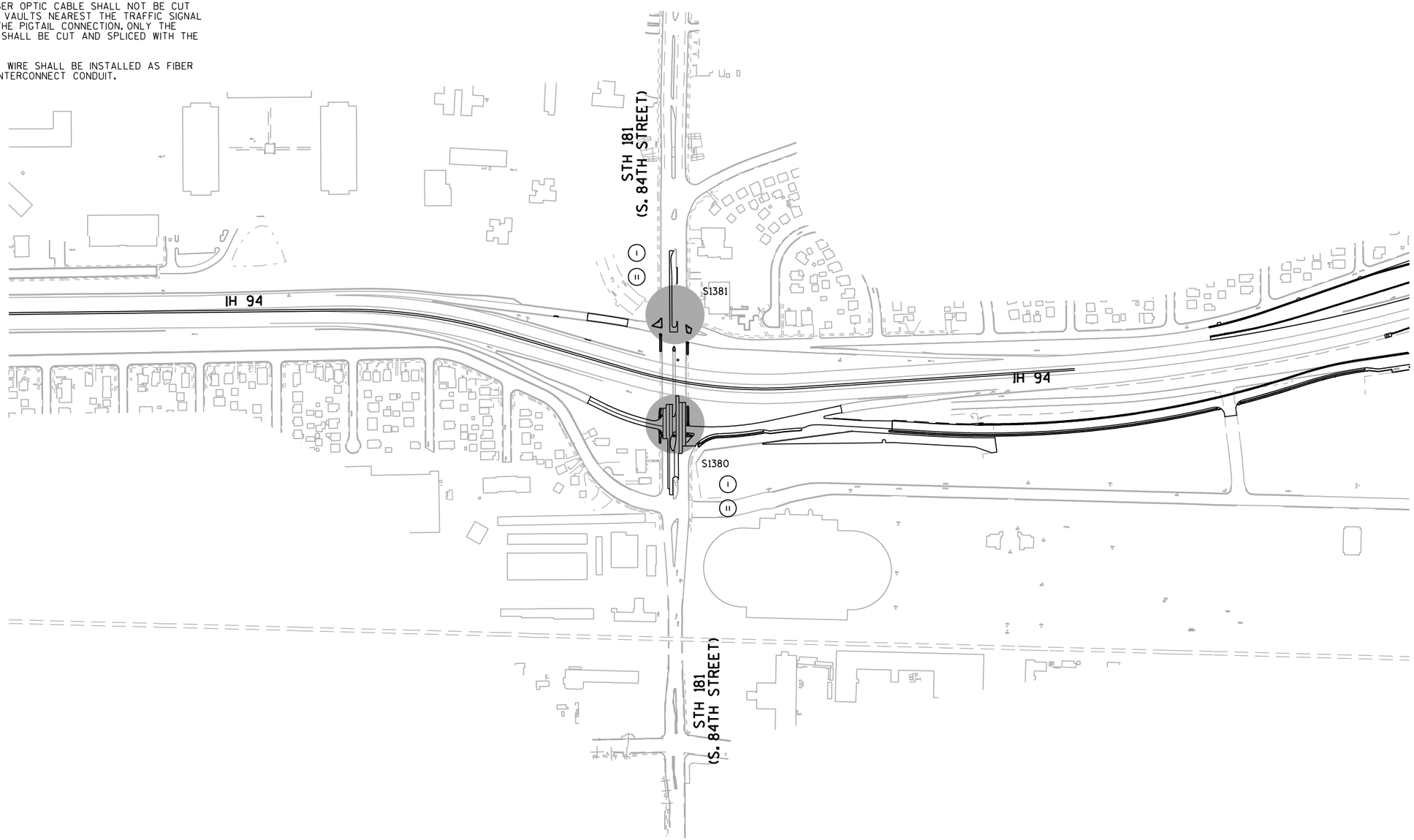
PULL BOX BONDING JUMPER 10 AWG GRN XLP	
FROM	TO
PB1	CB1
PB4	SB2
PB5	SB3
PB6	SB4
PB7	SB5
PB8	SB6
PB9	SB8
PB10	SB11
PB11	SB11
PB12	CB1

EMERGENCY VEHICLE PREEMPTION	
FROM	TO
CB1	SB2 (HEAD A)
CB1	SB7 (HEAD B)
CB1	SB5 (HEAD D)

VIDEO DETECTION CABLE	
FROM	TO
CB1	SB2 (V1)
CB1	SB7 (V2)
CB1	SB5 (V3)

CONSTRUCTION NOTES:

1. MAXIMUM SPLICE LOSS SHALL BE 0.1 dB.
2. NO INTERMEDIATE SPLICES ALLOWED.
3. ALL SPLICES SHALL BE FUSION SPLICES.
4. COORDINATE FIBER ASSIGNMENTS WITH MARIE TREAZISE, STOC, AT (414) 225-3720 BEFORE SPLICING FIBER OPTIC CABLE.
5. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
6. INCIDENTAL 14 AWG PULL WIRE SHALL BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.



LEGEND

SXXXX — CITY OF MILWAUKEE OWNED EXISTING TRAFFIC SIGNAL
WISDOT OWNED PERMANENT TRAFFIC SIGNAL

(I) INSTALL ETHERNET SWITCH IN TRAFFIC SIGNAL CABINET

(II) INSTALL PRE-TERMINATED PATCH PANEL IN TRAFFIC SIGNAL CABINET AND 8-CT SINGLE MODE FIBER OPTIC PIGTAIL IN CONDUIT

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PROJECT OVERVIEW	SHEET	E

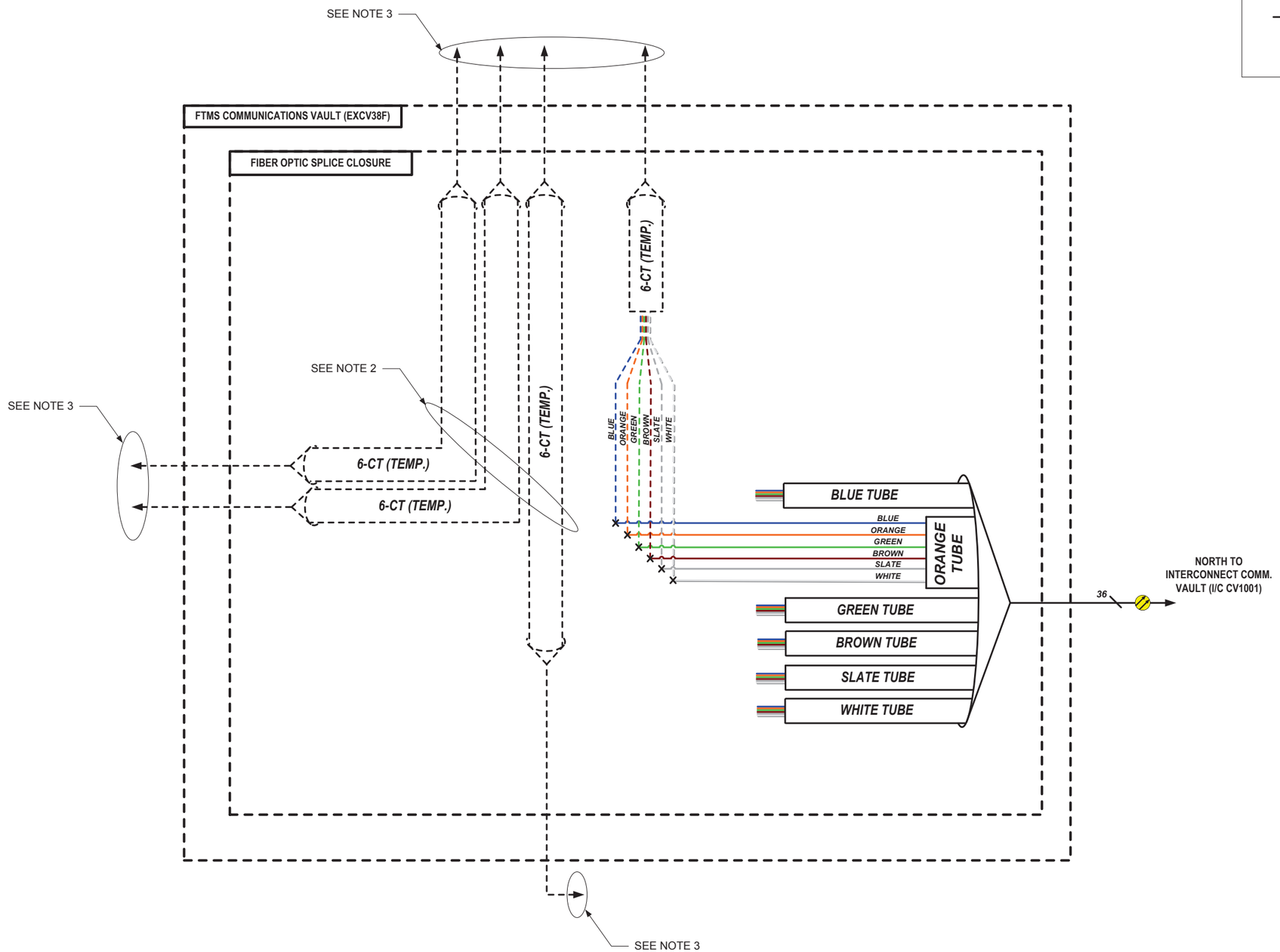
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2

LEGEND

36 — SM FIBER OPTIC CABLE (# STRANDS)

× — FUSION SPLICE



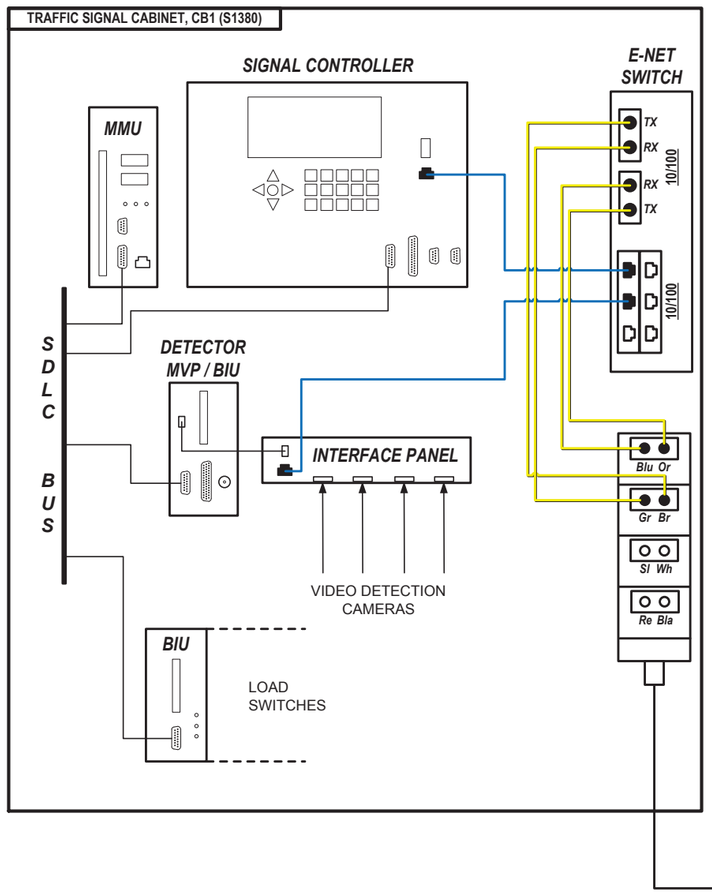
NOTES:

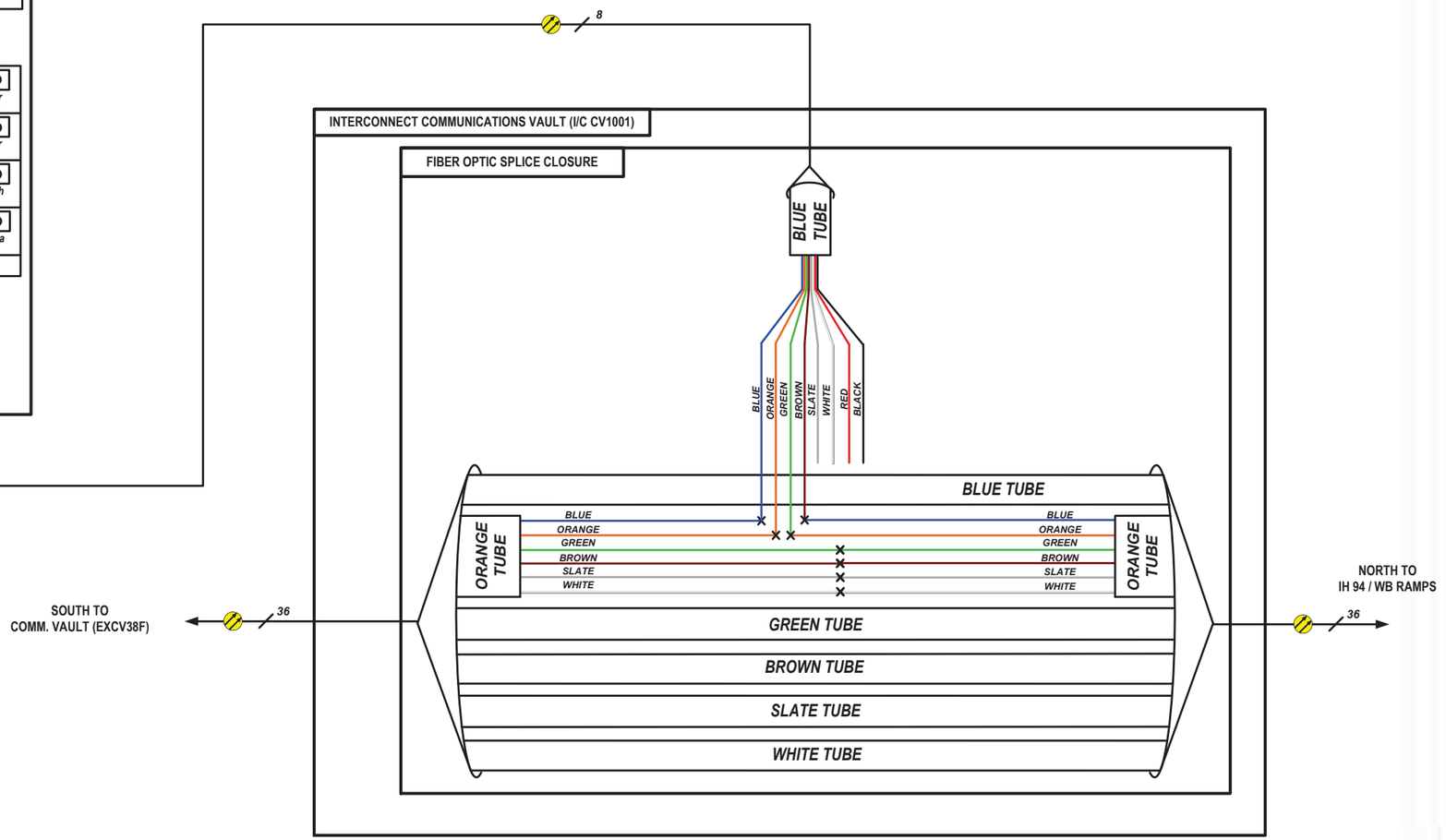
1. DASHED LINES INDICATE EXISTING ITEMS.
2. FTMS FIBER ASSIGNMENTS NOT SHOWN FOR CLARITY. SEE FTMS PLANS FOR FTMS SPLICE ASSIGNMENTS.
3. SEE FTMS PLANS FOR FIBER CABLE ROUTE.

2

LEGEND

- CAT 5E PATCH CORD
- SM FIBER JUMPER
- 36 — SM FIBER OPTIC CABLE (# STRANDS)
- × — FUSION SPLICE





PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT - IH 94 EB RAMPS	SHEET: 236	E

2

LEGEND

- CAT 5E PATCH CORD
- SM FIBER JUMPER
- 36 — SM FIBER OPTIC CABLE (# STRANDS)
- × — FUSION SPLICE

TRAFFIC SIGNAL CABINET, CB1 (S1381)

SIGNAL CONTROLLER

MMU

E-NET SWITCH

TX
RX
RX
TX
10/100
10/100

SDLC BUS

DETECTOR MVP / BIU

INTERFACE PANEL

VIDEO DETECTION CAMERAS

BIU

LOAD SWITCHES

Blu Or
Gr Br
Sl Wh
Re Bla

8

INTERCONNECT COMMUNICATIONS VAULT (I/C CV1002)

FIBER OPTIC SPLICE CLOSURE

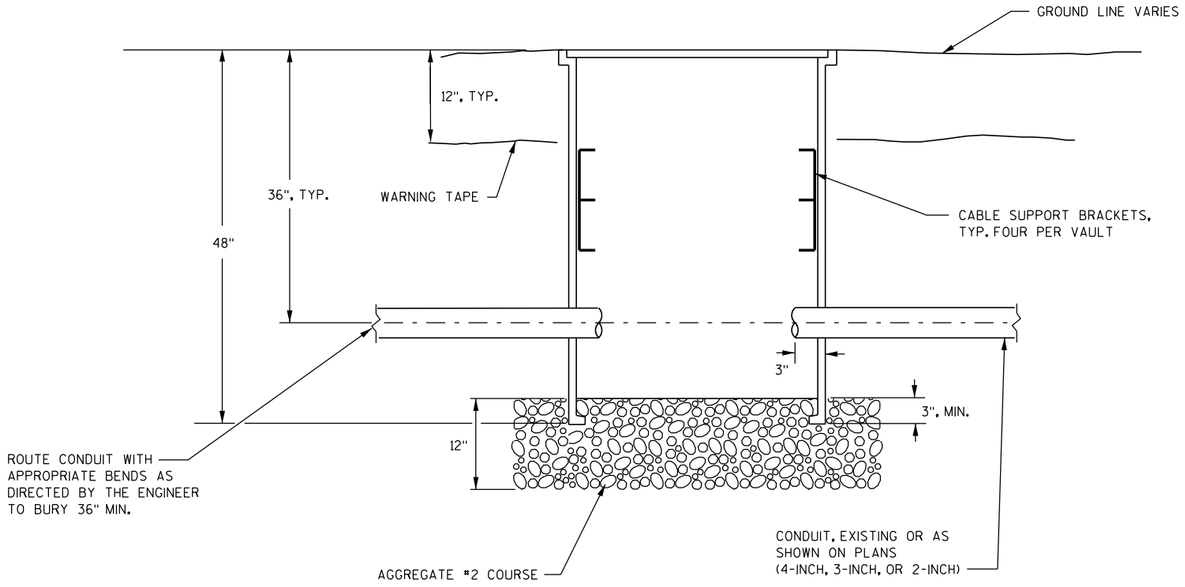
BLUE TUBE

BLUE
ORANGE
GREEN
BROWN
SLATE
WHITE
RED
BLACK

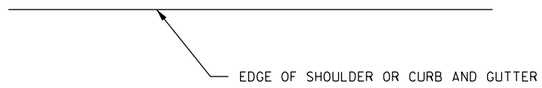
BLUE TUBE
ORANGE TUBE
GREEN TUBE
BROWN TUBE
SLATE TUBE
WHITE TUBE

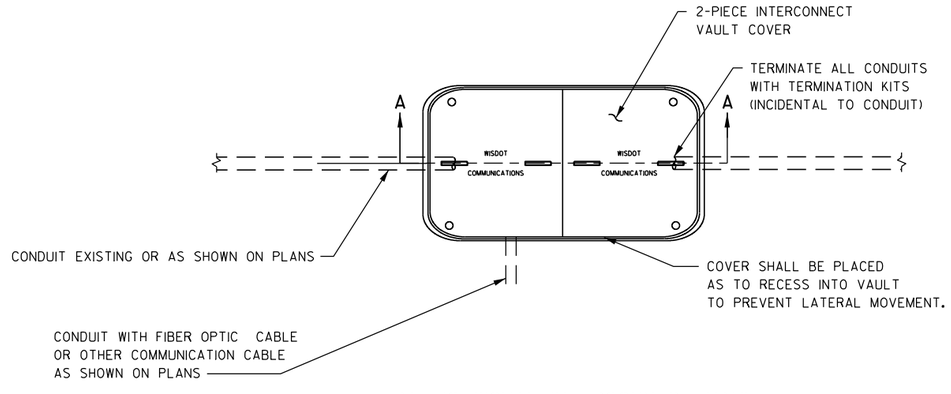
SOUTH TO IH 94 / EB RAMPS

36



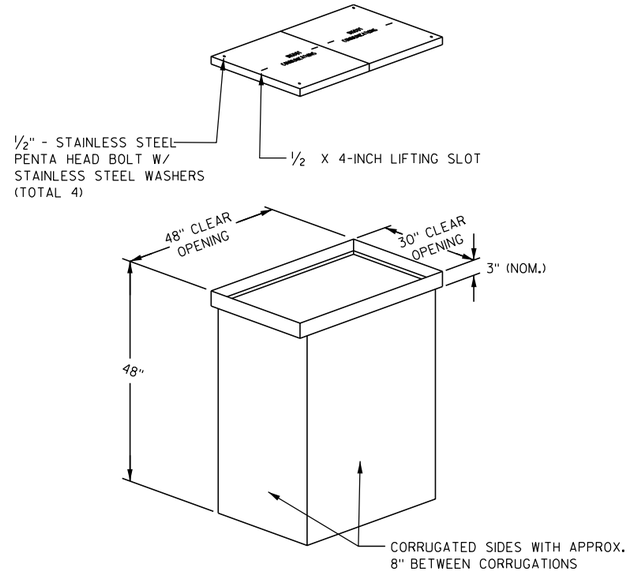
SECTION A-A





TRAFFIC SIGNAL INTERCONNECT VAULT

PLAN VIEW



ISOMETRIC

NOTES

1) BOX SHALL HAVE AN OPEN BASE.

2) COVER SHALL HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

3) ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

4) VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

5) FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.

2

LEGEND

NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED

FTMS HDPE MULTIDUCT CONDUIT WITH FO CABLE, SEE FTMS PLANS FOR DETAILS

FTMS VAULT

CONTROL CABINET

NOTE: GRAYSHADE REPRESENTS EXISTING

IH 94 EB OFF RAMP

IH 94 WB ON RAMP

STH 181 (S. 84TH STREET)

38F 39F 40F 41F 42F 43F

V1 V2

INSTALL FO CABLE OUTDOOR PLANT 36-CT IN FTMS CONDUIT

INSTALL FO CABLE OUTDOOR PLANT 36-CT IN TRAFFIC SIGNAL CONDUIT

PB3 (S1381)

PB12 (S1380)

PB11 (S1380)

INSTALL FO CABLE OUTDOOR PLANT 36-CT FIBER OPTIC TRACER CABLE

CB1 (S1380)

FIBER OPTIC SPLICE (8) FIBER OPTIC SPLICE ENCLOSURE

I/C CV1001

1¼" FO CABLE PIGTAIL 8-CT FIBER OPTIC TRACER CABLE

INSTALL FO CABLE OUTDOOR PLANT 36-CT FIBER OPTIC TRACER CABLE

INSTALL FO CABLE OUTDOOR PLANT 36-CT IN FTMS CONDUIT

FIBER OPTIC SPLICE (6) USE EXISTING FIBER OPTIC SPLICE ENCLOSURE

KEARNEY STREET

PB10FBA-2

PB10FBA-1

INSTALL FO CABLE OUTDOOR PLANT 36-CT IN TRAFFIC SIGNAL CONDUIT

INSTALL FO CABLE OUTDOOR PLANT 36-CT FIBER OPTIC TRACER CABLE

PB2 (S1381)

I/C CV1002

FIBER OPTIC SPLICE (2) FIBER OPTIC SPLICE ENCLOSURE

CB1 (S1381)

1¼" FO CABLE PIGTAIL 8-CT FIBER OPTIC TRACER CABLE

O'CONNER STREET

23EW 23ENW 23ESW 23ENE 23ESE 23EE

R/W

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING INTERCONNECT CABLE INTO SYSTEM. CONTACT THE REGIONAL ELECTRICAL FIELD UNIT AT (414) 266-1170.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. THE ENGINEER MAY ADJUST THE LOCATIONS OF ITEMS UNDER THIS CONTRACT TO AVOID CONFLICT WITH EXISTING UTILITY FACILITIES.
4. LEAVE 100-FEET OF FIBER OPTIC INTERCONNECT PIGTAIL COILED IN EACH COMMUNICATIONS VAULT AND 30-FEET IN EACH PULL BOX.
5. THE ENTIRE MAINLINE FIBER OPTIC CABLE SHALL NOT BE CUT AND/OR SPLICED IN THE VAULTS NEAREST THE TRAFFIC SIGNAL CABINET WHILE MAKING THE PIGTAIL CONNECTION. ONLY THE REQUIRED BUFFER TUBE SHALL BE CUT AND SPLICED WITH THE PIGTAIL CONNECTION.
6. INCIDENTAL 14 AWG PULL WIRE TO BE INSTALLED AS FIBER OPTIC TRACER WIRE IN INTERCONNECT CONDUIT.
7. PROPOSED STORM SEWER, LIGHTING, FTMS, DETECTABLE WARNING FIELDS, AND TRAFFIC SIGNALS ARE SHOWN GRAYSHADED FOR PLAN CLARITY.

TRAFFIC CONTROL INTERCONNECT
STH 181 (S. 84TH STREET)
CITY OF MILWAUKEE
MILWAUKEE COUNTY

SIGNAL NO. S1380,S1381

REGION CONTACT: JUSTIN EFFINGER
DESIGNED BY: FORWARD 45
REVISED BY:

PAGE 1 OF 1

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	TRAFFIC SIGNAL INTERCONNECT PLAN	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024311_co.dgn PLOT DATE : 27-APR-2013 23:54 PLOT BY : MSCDYB PLOT NAME : 024311_co PLOT SCALE : 40:1

2

LEGEND

- (1) PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
- (2) PAVEMENT MARKING EPOXY 4-INCH (WHITE)
- (3) PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (4) PAVEMENT MARKING EPOXY 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
- (5) PAVEMENT MARKING EPOXY 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
- (6) PAVEMENT MARKING EPOXY 8-INCH (WHITE)
- (7) PAVEMENT MARKING STOPLINE EPOXY 18-INCH (WHITE)
- (9) PAVEMENT MARKING CROSSWALK 6-INCH EPOXY (WHITE)
- (13) PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)
- (14) PAVEMENT MARKING WORDS EPOXY (WHITE)
- (15) PAVEMENT MARKING ARROWS EPOXY TYPE 1 (WHITE)
- (16) PAVEMENT MARKING ARROWS EPOXY TYPE 2 (WHITE)
- (17) PAVEMENT MARKING ARROWS EPOXY TYPE 3 (WHITE)
- (21) PAVEMENT MARKING ISLAND NOSE EPOXY (YELLOW)
- (29) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (WHITE)
- (30) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (39) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
- (55) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (WHITE)
- (57) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
- (63) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 2 (WHITE)
- (67) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS (WHITE)
- (68) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH (WHITE)
- (69) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH (WHITE)
- (70) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH (WHITE)
- (150) PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH (WHITE)
- (156) PAVEMENT MARKING EPOXY 4-INCH (DASHED WHITE) (10 FT LINE 30 FT SKIP)
- (157) PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH (DASHED WHITE) (10 FT LINE 30 FT SKIP)

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING - LEGEND	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024500_pm.dgn PLOT DATE : 04-JUN-2013 14:05 PLOT BY : MSCDYB PLOT NAME : 024500_pm PLOT SCALE : 40:1

2

N

MATCHLINE 125K+50

K+50.12

MATCHLINE 563CR+50

CR+53.95

IH 94 EB

IH 94 WB

264EW

W. O'CONNOR STREET

564CR

CR+34.07

S. 76TH STREET

19TL

20TL

127K

21TL

22TL

265EW

23TL

565CR

24TL

TL+70.00

TL+51.77

TL+52.13

TL+68.32

TL+23.96

TL+43.31

TL+43.67

TL+44.03

TL+71.54

TL+91.6

TL+25.55

TL+01.9

TL+05.77

TL+52.49

TL+52.13

TL+35.69

TL+44.03

TL+43.67

TL+53.4

TL+14.27

TL+42.35

TL+34.97

TL+62.69

K+53.1

K+89.52

128K

266EW

W. KEARNEY STREET

K+00.00

MATCHLINE 129K+00

CR+62.67

CR+80.43

566CR

MATCHLINE 566CR+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024501_pm.dgn PLOT DATE : 04-JUN-2013 14:05 PLOT BY : MSCDYB PLOT NAME : 024501_pm PLOT SCALE : 40:1

2

2

N

ZOO ACCESS ROAD

IH 94 WB

IH 94 EB

EW+58.92

EW+53.62

12'

12'

12'

12'

1

2

3

5

167EW

168EW

169EW

170EW

171EW

172EW

MATCHLINE 172EW+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024502_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024502_pm PLOT SCALE : 40:1

2

N

IH 94 WB

EW+42.74

EW+45.45

12'

MATCHLINE 172EW+50

MATCHLINE 178EW+50

173EW

174EW

175EW

176EW

177EW

178EW

IH 94 EB

EW+34.62

EW+52.55

EW+50.29

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2

MATCHLINE 178EW+50

179EW

180EW

181EW

182EW

183EW

184EW

MATCHLINE 184EW+25

N

2

5

6

1

EW+58.94

IH 94 EB

2

3

12'

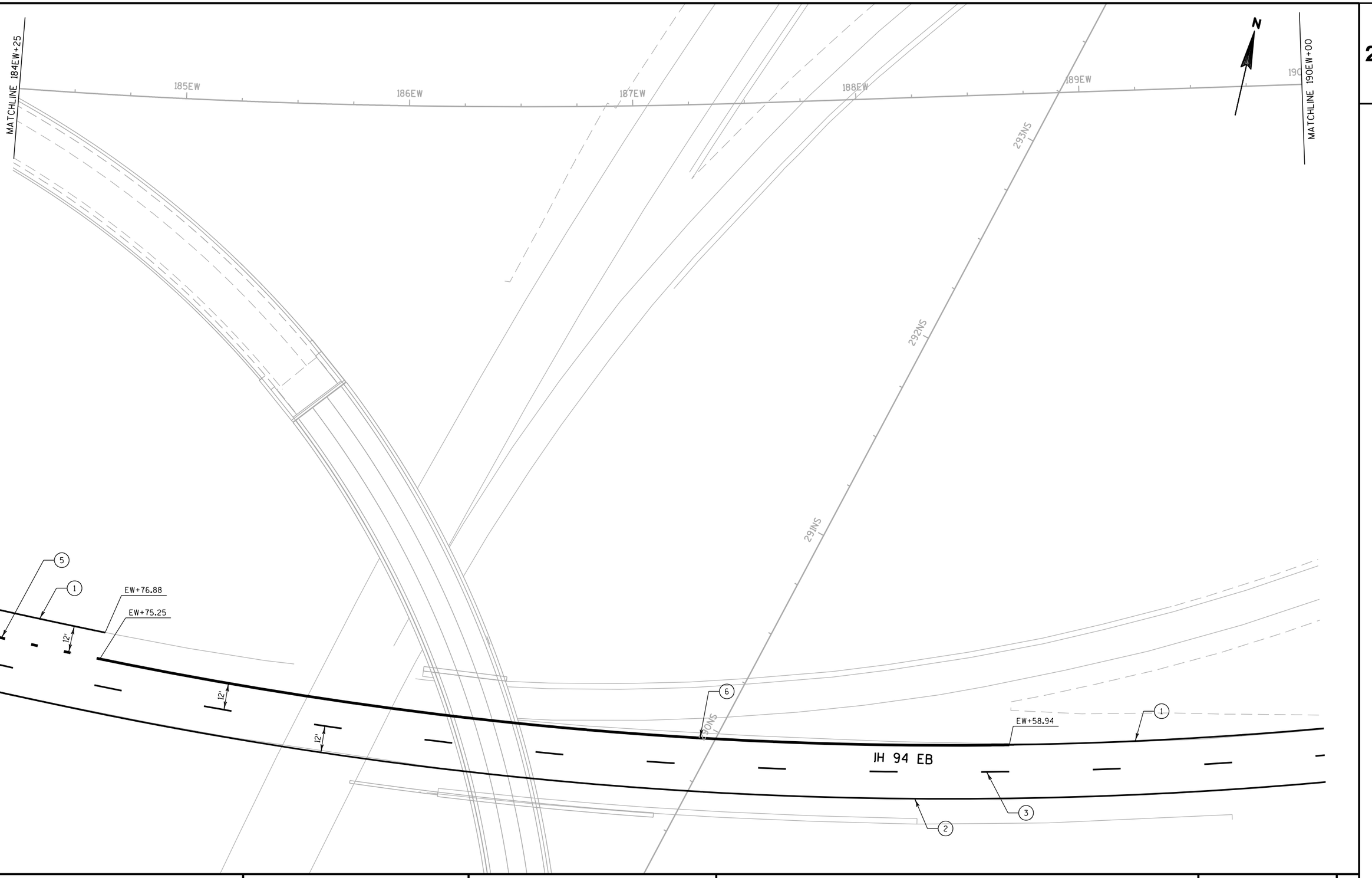
12'

12'

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024504_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024504_pm PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42



2

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024505_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024505_pm PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

MATCHLINE 190EW+00

190EW

191EW

192EW

193EW

194EW

195EW

196

MATCHLINE 196EW+00

2

N

IH 94 EB

1

2

3

12'

12'

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024506_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024506_pm PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N

MATCHLINE 196EW+00

MATCHLINE 202EW+00

197EW

198EW

199EW

200EW

201EW

IH 94 EB

1

2

3

5

6

12'

12'

EW+20.88

EW+24.66

EW+31.32

EW+34.79

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2

N

6

EW+89.83

EW+92.04

2

3

12'

12'

12'

IH 94 WB

1

MATCHLINE 178EW+50

179EW

180EW

181EW

182EW

183EW

184EW

MATCHLINE 184EW+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2

N

EW+41.16

IH 94 WB

12'
12'

2

6

3

1

296NS

295NS

294NS

293NS

MATCHLINE 184EW+50

185EW

186EW

187EW

188EW

189EW

190EW

MATCHLINE 190EW+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024509_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024509_pm PLOT SCALE : 40:1

2

297NS

3

2

IH 94 WB

12'

12'

1

N

EW+23.61

EW+13.6

6

MATCHLINE 190EW+50

191EW

192EW

193EW

194EW

195EW

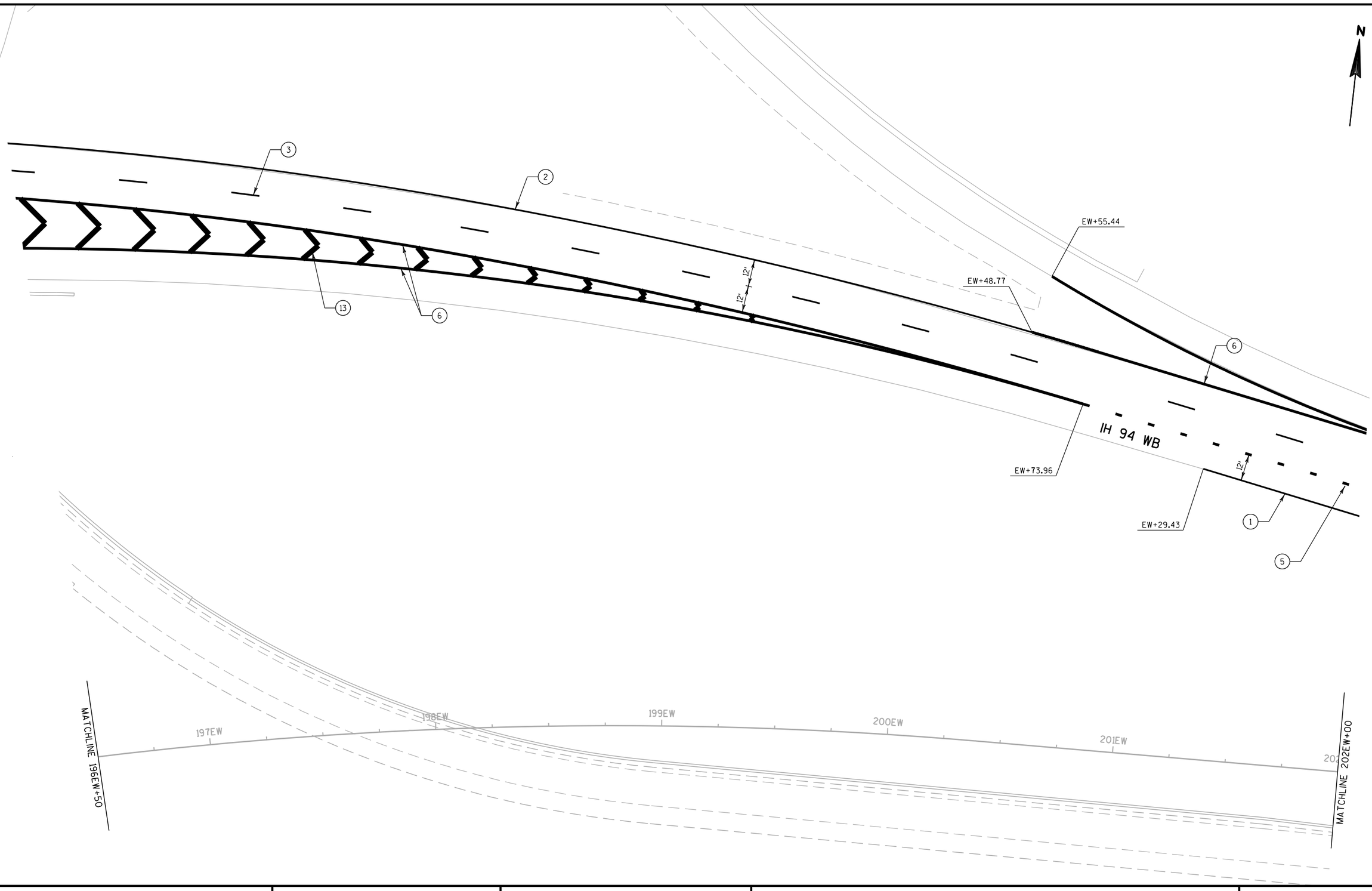
196EW

MATCHLINE 196EW+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024510_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024510_pm PLOT SCALE : 40:1

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024511_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024511_pm PLOT SCALE : 40:1

2

N

W. CHESTER ST

6

EW+51.38

EW+47.74

12'

12'

12'

12'

3

2

5

1

IH 94 WB

5

202EW

203EW

204EW

205EW

206EW

207EW

208EW

MATCHLINE 208EW+00

6

EW+06.99

EW+08.44

EW+58.33

EW+04.81

IH 94 EB

1

3

5

2

MATCHLINE 202EW+00

W. ADLER ST

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024512_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024512_pm PLOT SCALE : 40:1

2

2

N

W. CHESTER ST

S. 92ND ST

209EW

210EW

211EW

212EW

213EW

MATCHLINE 208EW+00

MATCHLINE 214EW+00

EW+23.25

EW+23.04

12'

12'

12'

12'

12'

12'

12'

IH 94 WB

IH 94 EB

W. ADLER ST

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024513_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024513_pm PLOT SCALE : 40:1

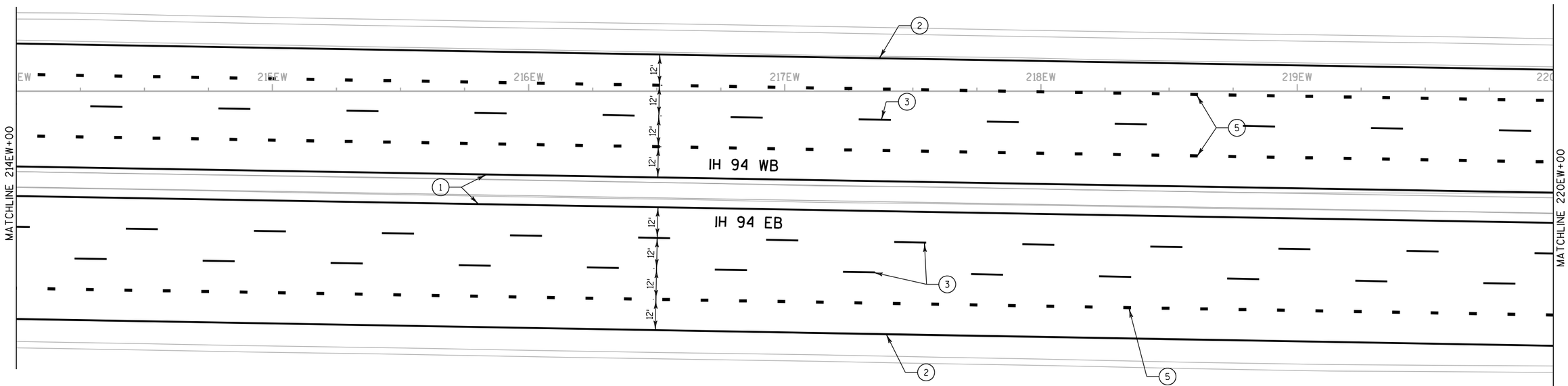
WISDOT/CADDS SHEET 42

2

2

N

W. CHESTER ST



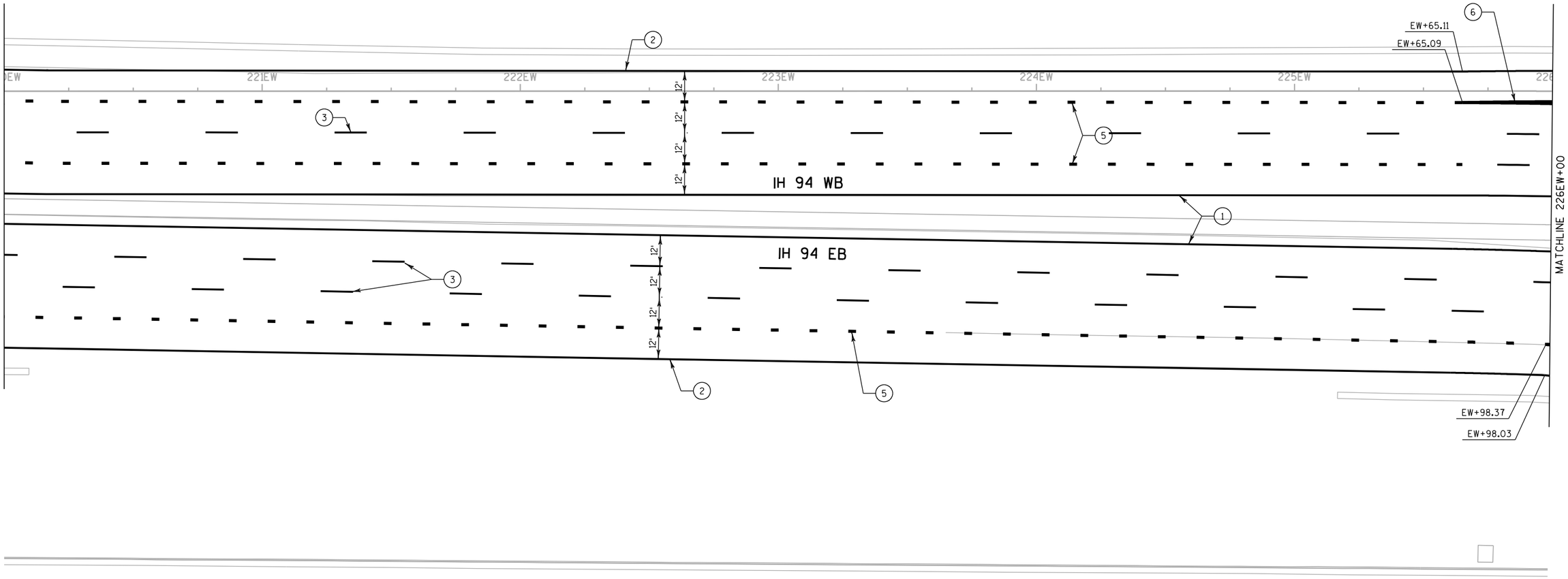
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024514_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024514_pm PLOT SCALE : 40:1

WISDOT/CADDS SHEET 42

2

N



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2

2

N

MATCHLINE 226EW+00

227EW

228EW

229EW

EW+73.34

230EW

231EW

EW+69.60

MATCHLINE 232EW+00

IH 94 WB

IH 94 EB

12'

12'

12'

12'

12'

12'

1

2

3

6

13

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024516_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024516_pm PLOT SCALE : 40:1

2

2

N

RAMP FDA

9FDA

10FDA

11FDA

12F

FDA+37.67

MATCHLINE 12FDA+00

MATCHLINE 232EW+00

232EW

233EW

234EW

235EW

236EW

237EW

S. 84TH STREET

42F

MATCHLINE 238EW+00

IH 94 WB

IH 94 EB

12'

EW+22.17

EW+16.30

FCA+78.53

FCA+80.32

FCA+95.59

RAMP FCA

11FCA

12FCA

13F

MATCHLINE 13FCA+00

W. ADLER ST

10F

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024517_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024517_pm PLOT SCALE : 40:1

2

W. O' CONNOR ST

N

EW+18.20

15

1

2

MATCHLINE 238EW+00

MATCHLINE 244EW+00

239EW

240EW

241EW

242EW

243EW

12'

12'

12'

IH 94 WB

IH 94 EB

3

1

2

3

FBA+35.00

K+45.66

K+98.54

K+63.73

6

21

2

K+47.26

15FBA

14FBA

106K

105K

K+97.79

13FBA

104K

3

K+63.23

K+64.18

12FBA

103K

6

K+68.14

MATCHLINE 11FBA+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024518_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024518_pm PLOT SCALE : 40:1

2

N

545CR 546CR 547CR 548CR 549CR 55(

W. O'CONNOR STREET

RAMP FAA

EW+16.89 EW+16.73 EW+93.03

IH 94 WB

12' 12' 12'

MATCHLINE 244EW+00

244EW 245EW 246EW 247EW 248EW 249EW 25(

MATCHLINE 250EW+00

IH 94 EB

12' 12' 12'

EW+07.92 EW+38.16

FBA+15.09 EW+09.02

17FBA 16FBA

RAMP FBA

107K 108K 109K 110K 111K 112K

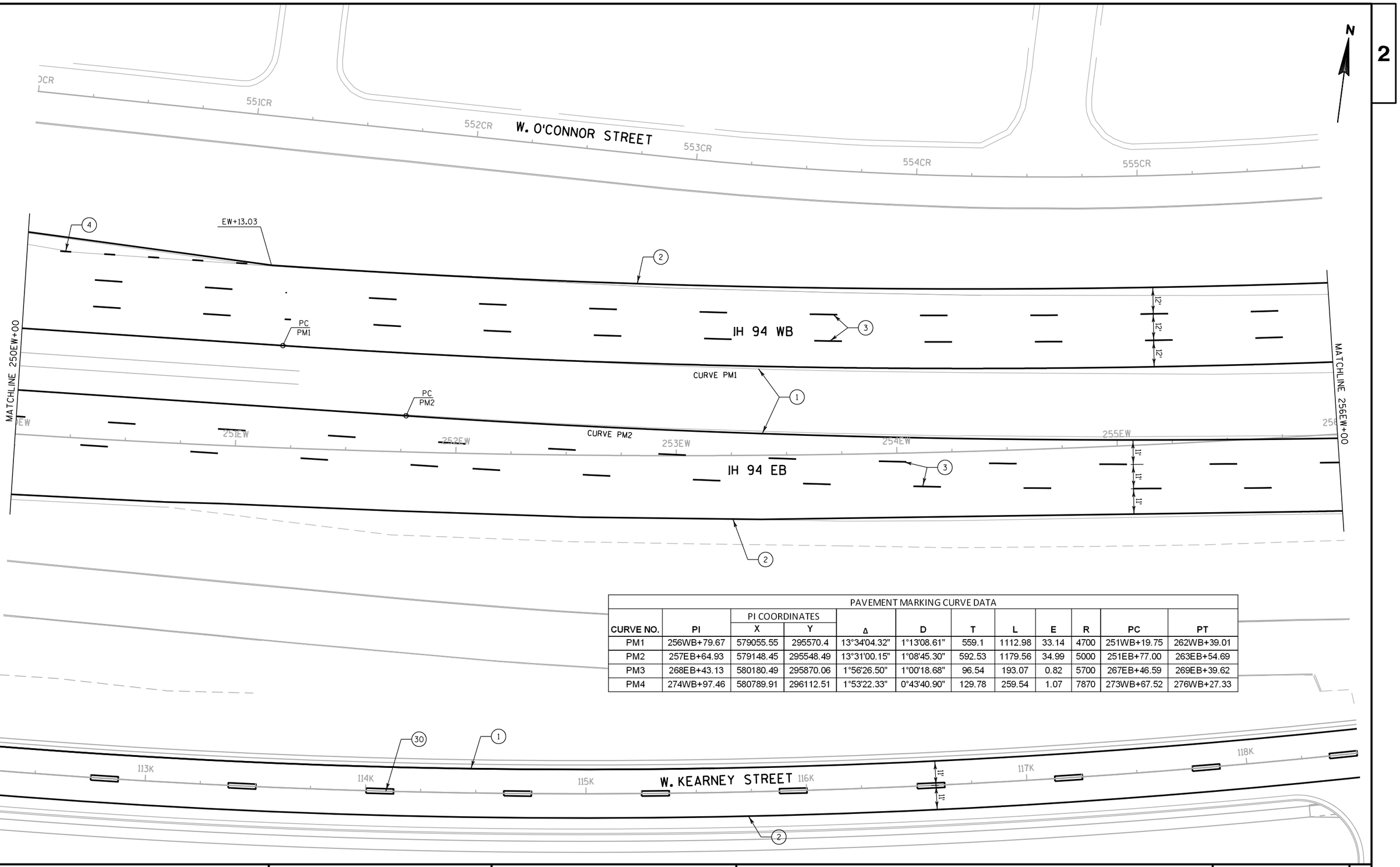
K+22.11 K+25.68

11' 11'

W. KEARNEY STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024519_pm.dgn PLOT DATE : 30-APR-2013 13:34 PLOT BY : MSCPLR PLOT NAME : 024519_pm PLOT SCALE : 40:1

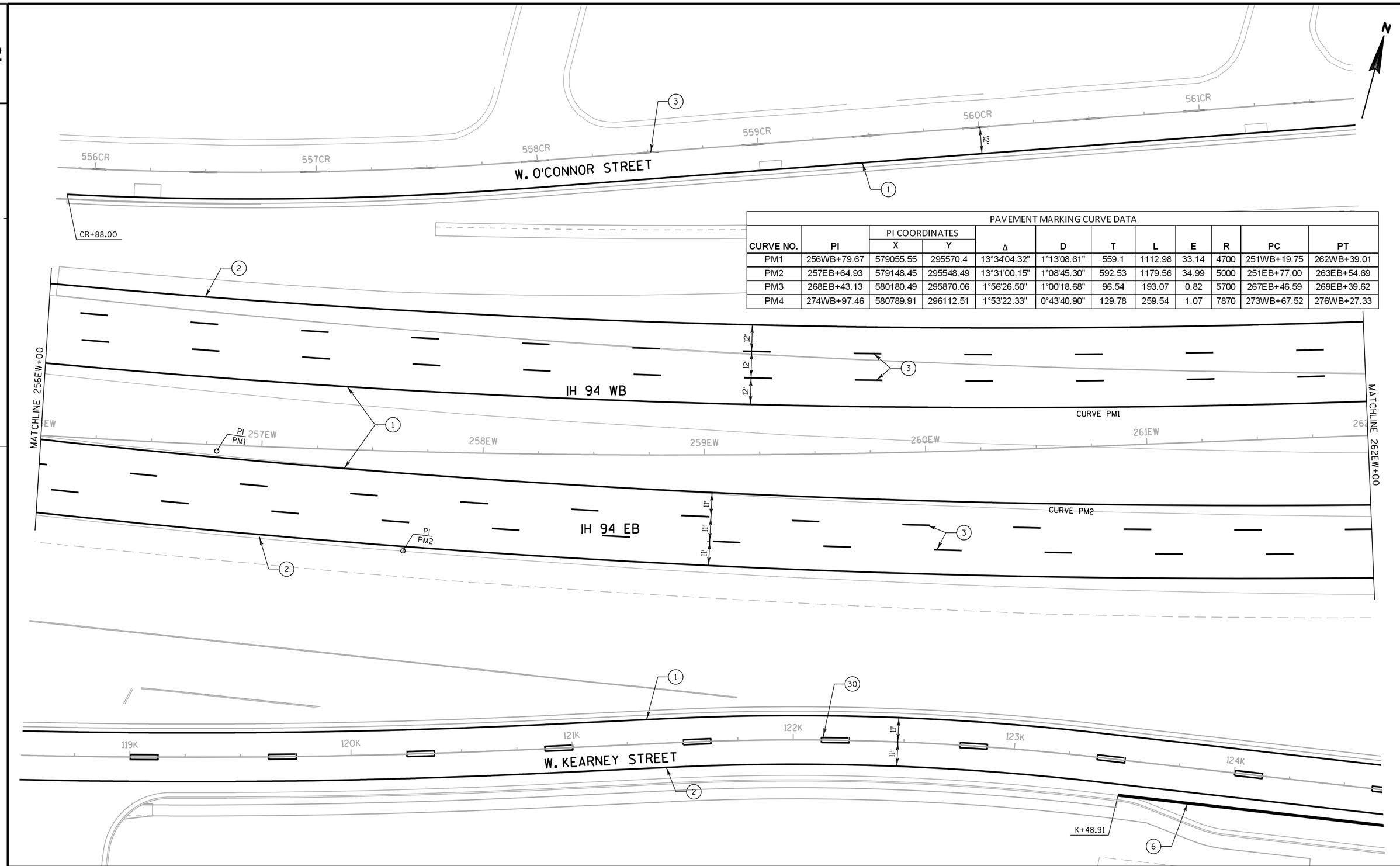


PAVEMENT MARKING CURVE DATA

CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
PM1	256WB+79.67	579055.55	295570.4	13°34'04.32"	1°13'08.61"	559.1	1112.98	33.14	4700	251WB+19.75	262WB+39.01
PM2	257EB+64.93	579148.45	295548.49	13°31'00.15"	1°08'45.30"	592.53	1179.56	34.99	5000	251EB+77.00	263EB+54.69
PM3	268EB+43.13	580180.49	295870.06	1°56'26.50"	1°00'18.68"	96.54	193.07	0.82	5700	267EB+46.59	269EB+39.62
PM4	274WB+97.46	580789.91	296112.51	1°53'22.33"	0°43'40.90"	129.78	259.54	1.07	7870	273WB+67.52	276WB+27.33

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2

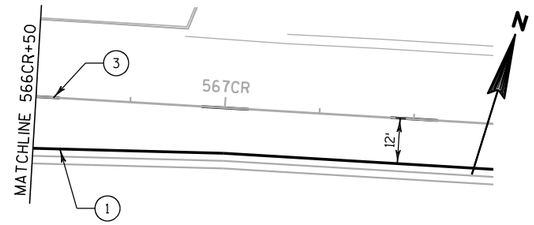


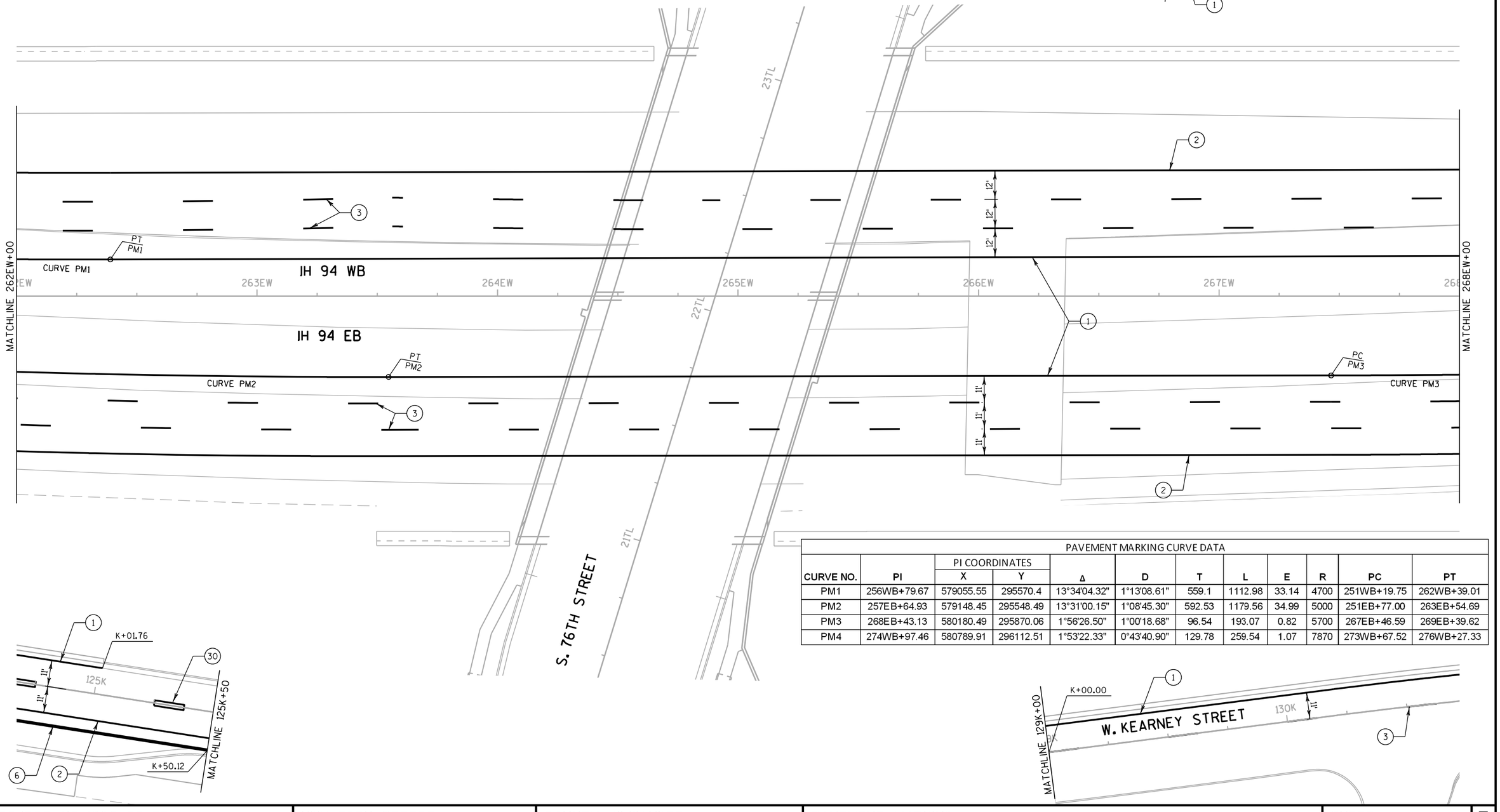
PAVEMENT MARKING CURVE DATA

CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
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PM4	274WB+97.46	580789.91	296112.51	1°53'22.33"	0°43'40.90"	129.78	259.54	1.07	7870	273WB+67.52	276WB+27.33

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

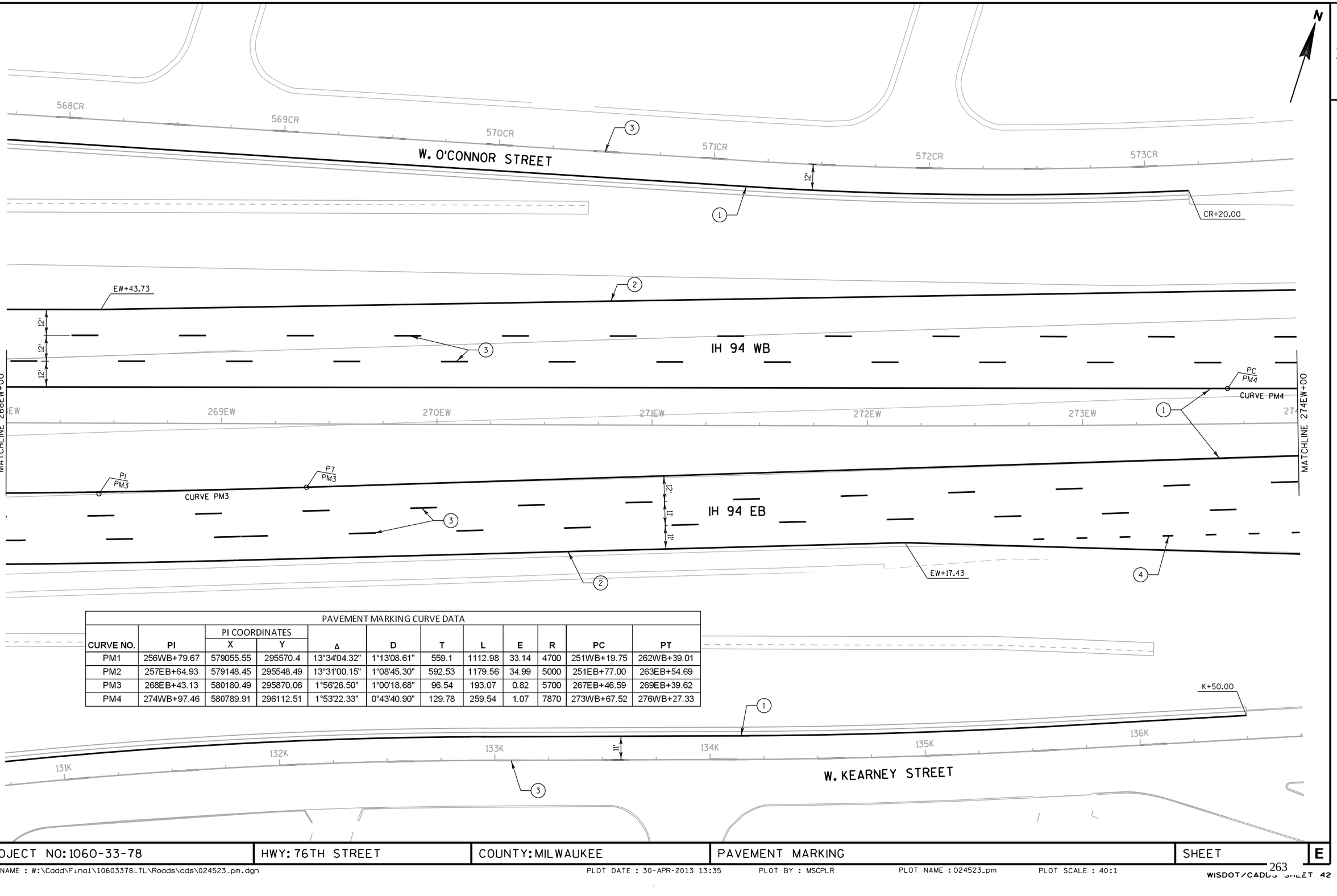






PAVEMENT MARKING CURVE DATA											
CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
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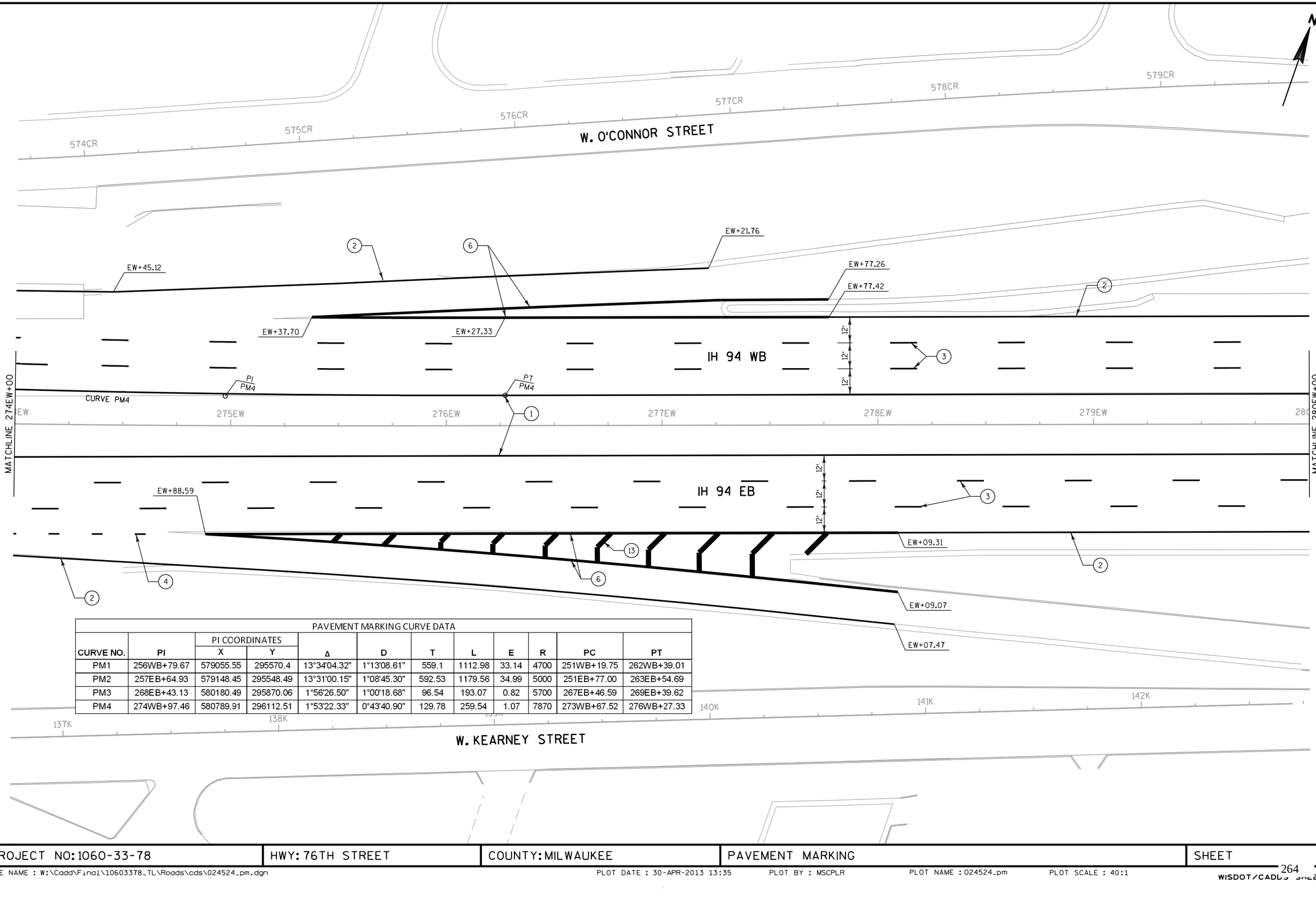
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E



PAVEMENT MARKING CURVE DATA											
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2

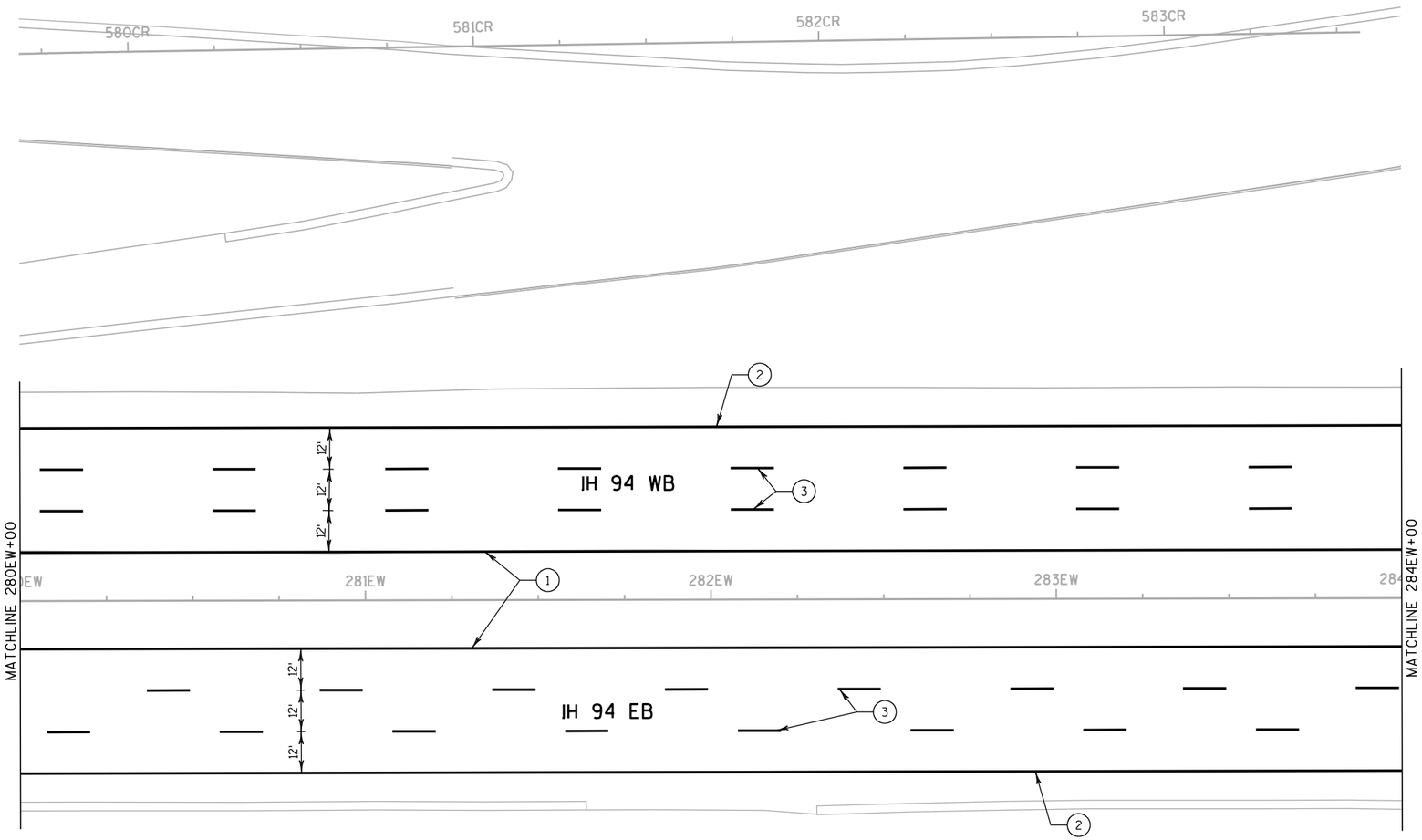


PAVEMENT MARKING CURVE DATA

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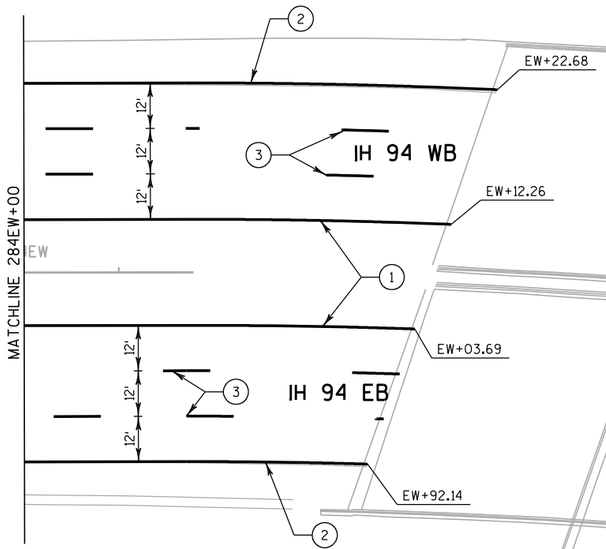
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

2



S. 70TH STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024526_pm.dgn PLOT DATE : 30-APR-2013 13:36 PLOT BY : MSCPLR PLOT NAME : 024526_pm PLOT SCALE : 40:1

2

N

MATCHLINE 13FCA+00

RAMP FCA

FCA+92.82

F+82.00

F+82.00

F+81.47

F+17.15

F+51.00

F+02.86

F+56.92

F+06.70

F+14.73

F+56.61

F+80.66

F+90.16

F+86.65

S. 84TH STREET

RAMP FBA

MATCHLINE 11FBA+00

MATCHLINE 42F+00

36F

37F

38F

39F

40F

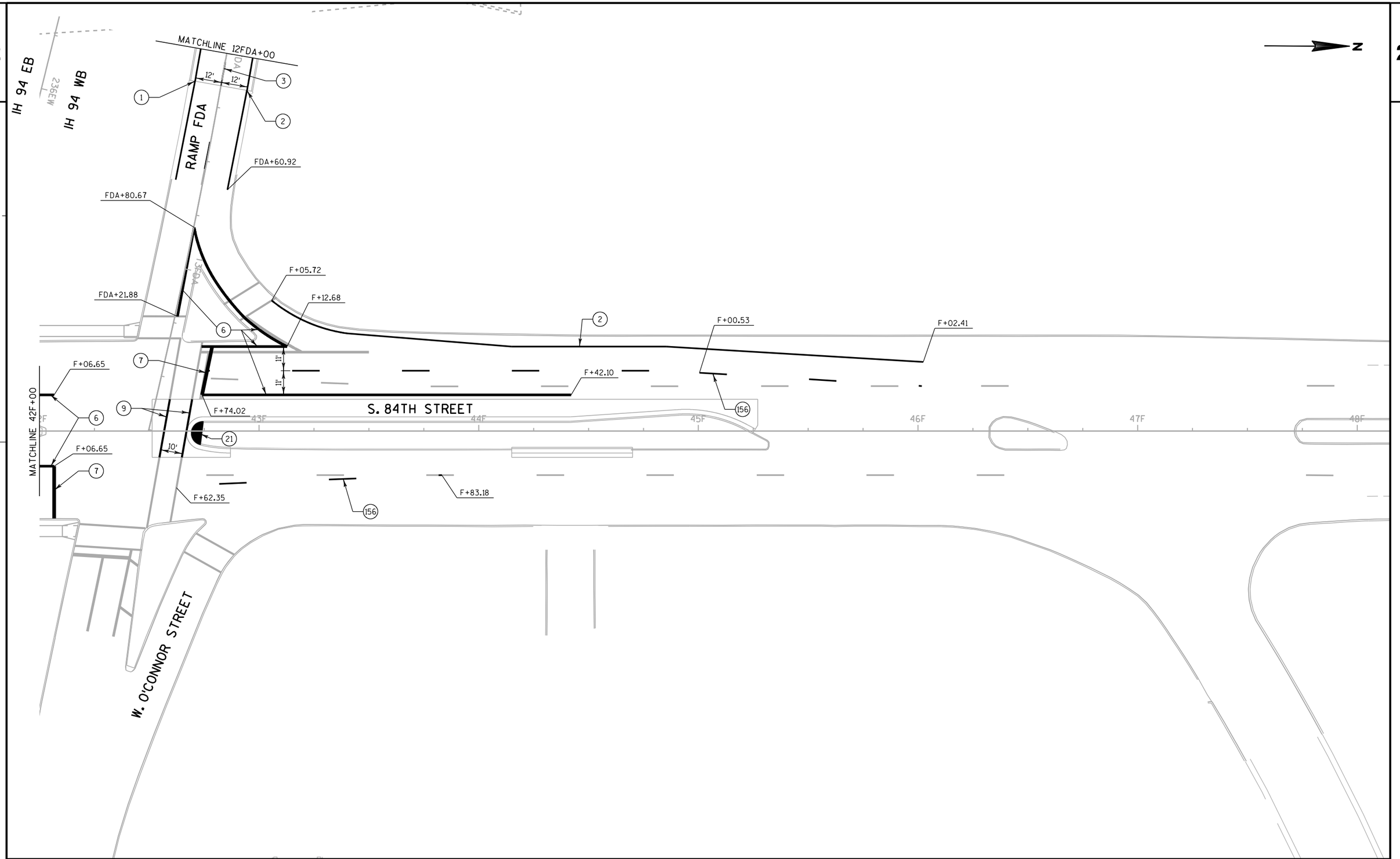
41F

42F

23TEW

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\024527_pm.dgn PLOT DATE : 30-APR-2013 13:36 PLOT BY : MSCPLR PLOT NAME : 024527_pm PLOT SCALE : 40:1



2

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PAVEMENT MARKING	SHEET	E

GENERAL NOTES FOR TRAFFIC CONTROL

1) THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

2) A FLAGGER MAY BE REQUIRED WHERE CONSTRUCTION VEHICLES ENTER OR LEAVE WORK AREAS IF WARRANTED BY CONDITIONS OR AS DIRECTED BY THE ENGINEER. FLAGGING IS NOT PERMITTED ON FREEWAY LANES.

3) ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

4) "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

5) FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A TYPE C STEADY BURN WARNING LIGHT.

6) ALL TYPE III BARRICADES SHALL BE 8' WIDE, UNLESS OTHERWISE NOTED, AND EQUIPPED WITH TWO TYPE "A" (LOW INTENSITY FLASHING) LIGHTS.

7) DIMENSIONS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF BARRIER ADJACENT TO TRAFFIC. STATION CALL-OUTS TO CONCRETE BARRIER TEMPORARY PRECAST ARE TO THE FACE OF THE BARRIER.

8) WORK AREAS SHOWN MAY NOT ILLUSTRATE ALL REMOVALS. SEE REMOVAL SHEETS FOR ADDITIONAL INFORMATION.

9) ALL TRAFFIC CONTROL SIGNS LOCATED IN MEDIANS SHALL BE MOUNTED ON CONCRETE BARRIER UNLESS OTHERWISE NOTED, SEE TRAFFIC CONTROL DETAILS.

10) WHEN A SEGMENT OF THE PROJECT IS NOT SHOWN ON THE STAGING PLANS, USE THE SAME TRAFFIC CONTROL AS THE PREVIOUS STAGE FOR THAT SEGMENT.

GENERAL NOTES FOR FIXED MESSAGE SIGNS FOUND ON TRAFFIC CONTROL SHEETS

1) CONTRACTOR SHALL LOCATE FIXED MESSAGE SIGNS A MINIMUM OF 400' FROM ANY TYPE I SIGN AND A MINIMUM OF 200' FROM ANY TYPE II SIGN, OR AS DIRECTED BY THE ENGINEER.

2) ALL FIXED MESSAGE SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON STANDARD REFLECTIVE SHEETING - REFERENCE:"WISDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.

3) "BEGIN XXX XX" SIGNS SHALL BE PLACED 10 DAYS PRIOR TO DATE SPECIFIED.

4) "BEGIN XXX XX" SIGNS SHALL BE SEPARATE PANELS AND ARE CONSIDERED AS PART OF THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE DIRECTED BY THE ENGINEER IN THE FIELD.

5) SEE FIXED MESSAGE SIGN CONSTRUCTION DETAIL SHEETS FOR MORE INFORMATION.

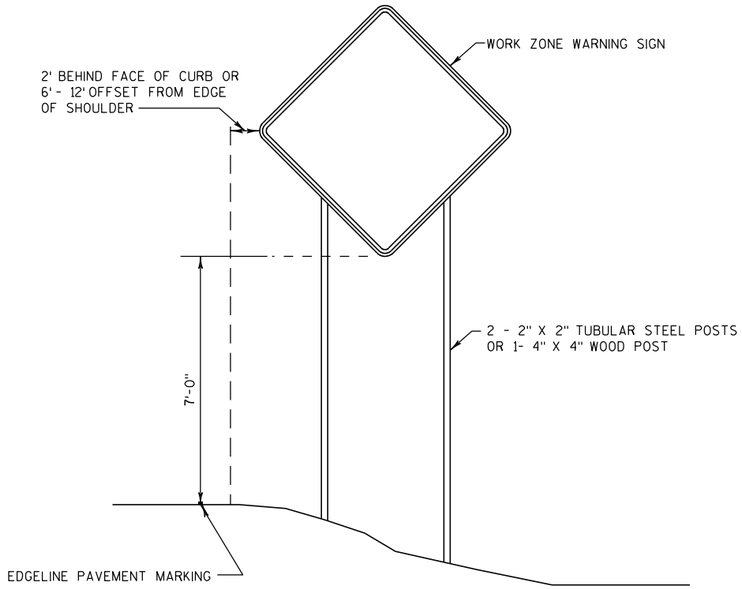
LEGEND

- TRAFFIC CONTROL BARRICADE TYPE III WITH LIGHTS TYPE A
- TRAFFIC CONTROL BARRICADE TYPE III WITH LIGHTS TYPE A AND ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- CC — CRASH CUSHION TEMPORARY
- CC — CRASH CUSHION TEMPORARY PLACED IN PRIOR STAGE
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE
- TEMPORARY RAISED PAVEMENT MARKERS
- FLAGS, 16" X 16" MIN. (ORANGE)
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER
- CONCRETE BARRIER TEMPORARY PRECAST (CBTP)
- CONCRETE BARRIER TEMPORARY PRECAST PLACED IN PRIOR STAGE
- FENCE TEMPORARY
- TRAFFIC FLOW ARROW
- WORK ZONE THIS STAGE
- TEMPORARY PAVEMENT
- WORK BY OTHERS

TEMPORARY PAVEMENT MARKING LEGEND

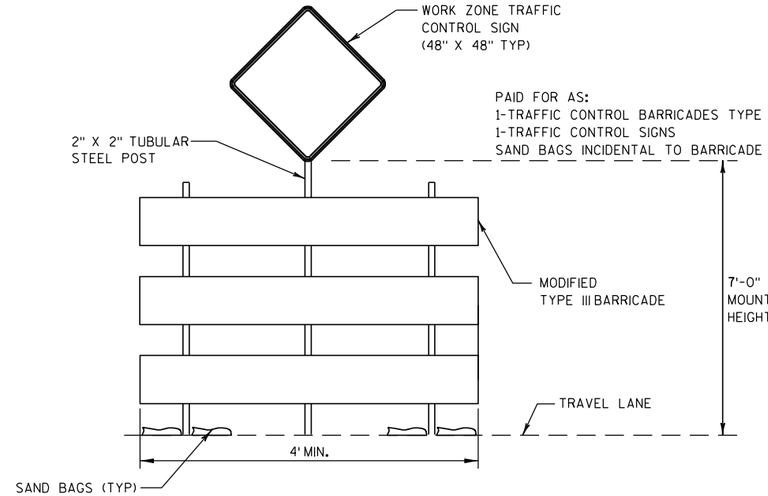
- (45) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- (46) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- (49) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH (WHITE)
- (51) TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (52) TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH (WHITE)
- (112) TEMPORARY PAVEMENT REMOVABLE TAPE 4-INCH (DOT PATTERN WHITE) (3 FT LINE 9 FT SKIP)
- (113) TEMPORARY PAVEMENT REMOVABLE TAPE 4-INCH (DOT PATTERN YELLOW) (3 FT LINE 9 FT SKIP)
- (114) TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (YELLOW)
- (115) TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE)
- (116) TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (DASHED WHITE) (12.5 FT LINE 37.5 FT SKIP)
- (P) PERMANENT PAVEMENT MARKING, SEE PAVEMENT MARKING PLAN
- (X) EXISTING PAVEMENT MARKING

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL NOTES AND LEGENDS	SHEET	E



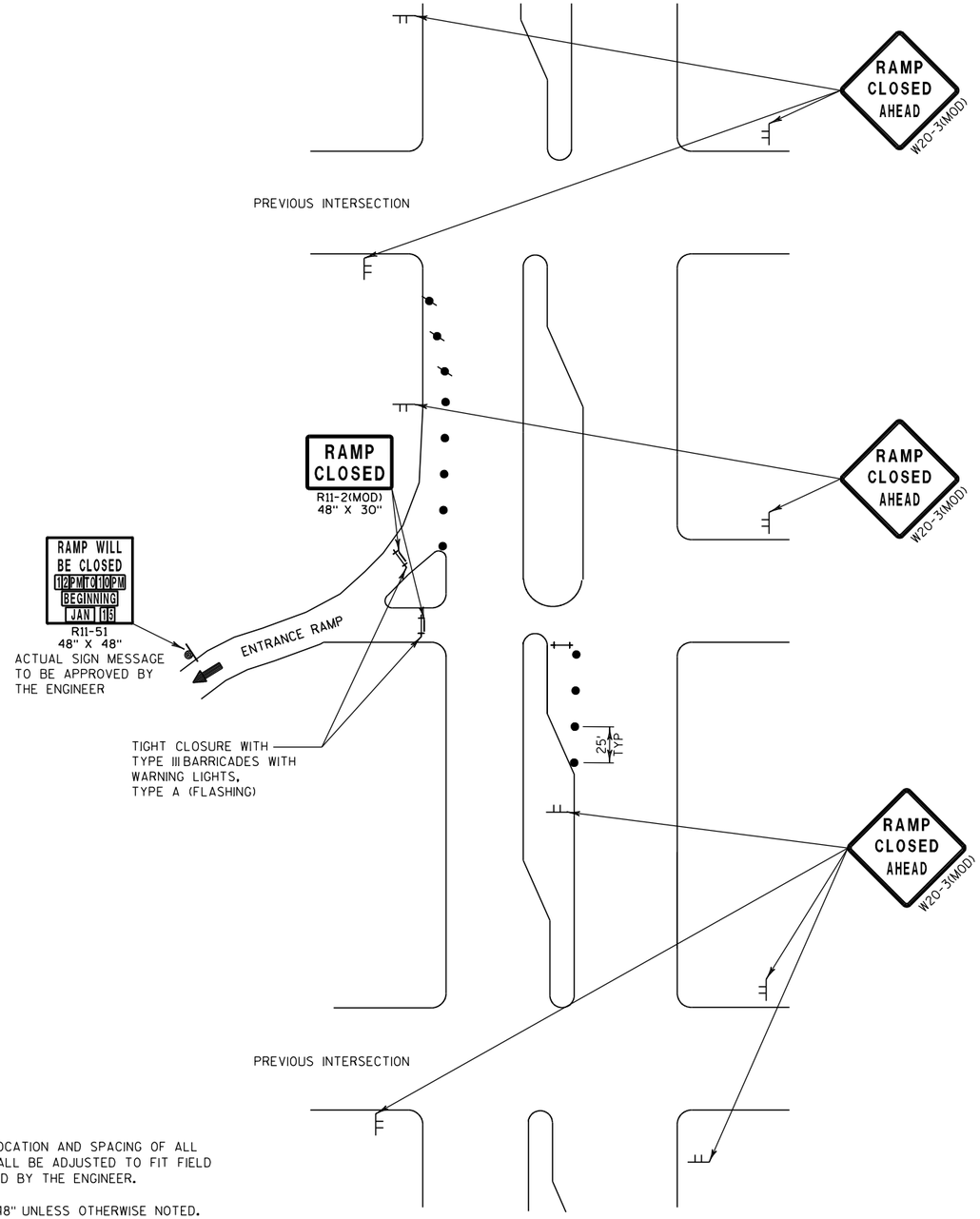
TYPICAL TEMPORARY TRAFFIC CONTROL SIGN MOUNTING ON FIXED SUPPORT

LONG TERM
7 DAYS OR MORE



TYPICAL TEMPORARY TRAFFIC CONTROL DETAIL MOUNTING ON TEMPORARY SUPPORT

2



LEGEND

- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL III BARRICADE
- TRAFFIC CONTROL III BARRICADE WITH LIGHT TYPE A AND ATTACHED SIGN
- DIRECTION OF TRAFFIC

NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

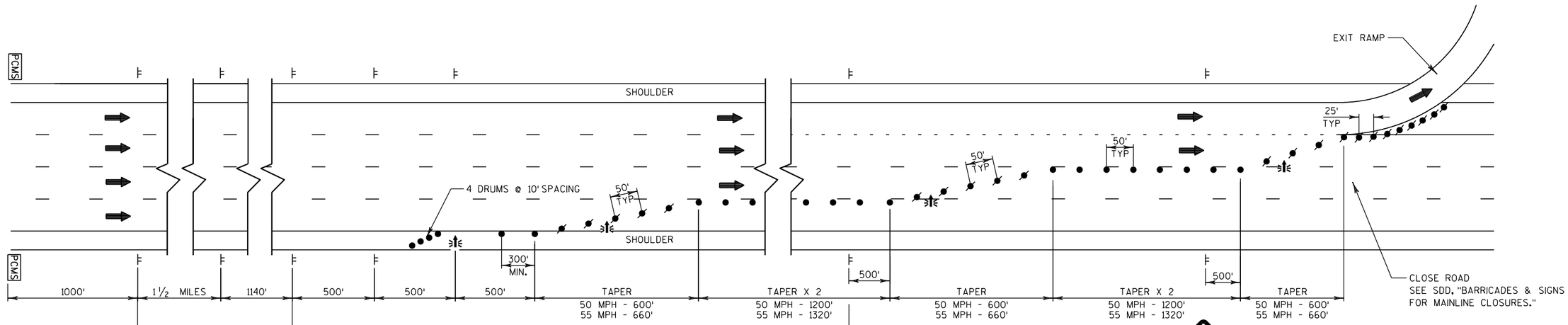
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

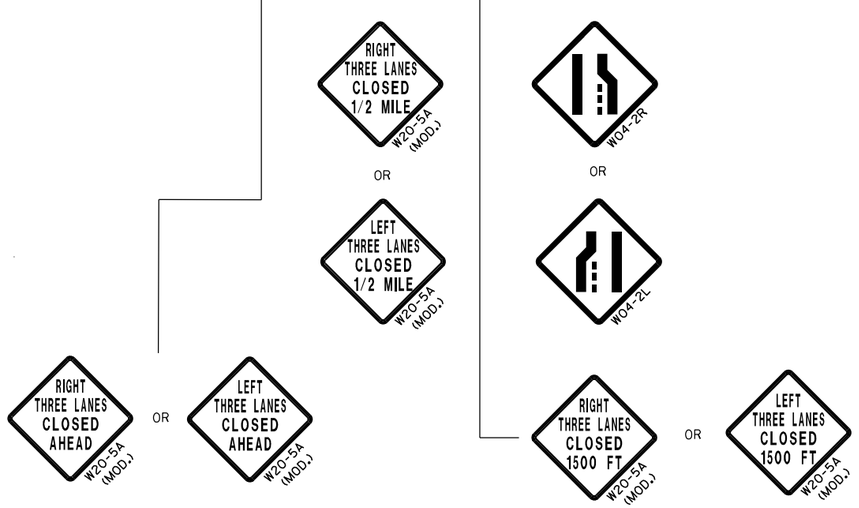
"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

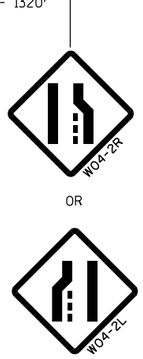
ENTRANCE RAMP CLOSURE

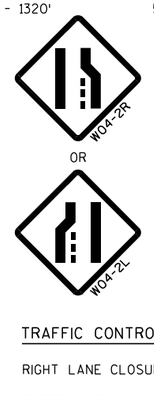
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - CONSTRUCTION DETAIL	SHEET	E

2









LEGEND

- ● TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH LIGHT TYPE C
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL ARROW BOARD
- DIRECTION OF TRAFFIC
- PCMS TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE

FULL FREEWAY CLOSURE DETAIL

3 LANE CLOSURE - SPEEDS 45 MPH OR GREATER

TRAFFIC CONTROL NOTES

RIGHT LANE CLOSURE SHOWN (LEFT LANE CLOSURE SIMILAR).

THREE LANE CLOSURE SHOWN. ADJUST DETAIL ACCORDINGLY FOR ROADWAY WITH FEWER LANES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS SHALL HAVE A WARNING LIGHT, TYPE C (STEADY BURN).

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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 DIRECTED BY THE ENGINEER.

ALL SHORT TERM LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL ARROW BOARDS AND DEVICES REMOVED BEYOND THE SHOULDER WHEN THE WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

ALL WARNING SIGNS FOR LONG TERM OPERATIONS SHALL BE NON-FLUORESCENT DIAMOND GRADE SHEETING. TYPE A LIGHTS AND FLAGS ARE NOT REQUIRED.

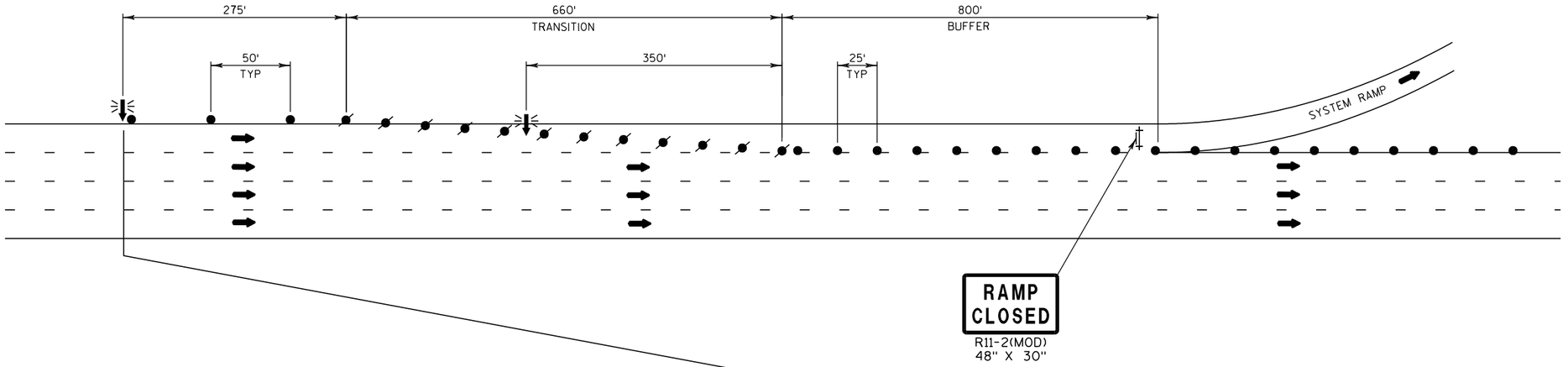
IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1000' ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

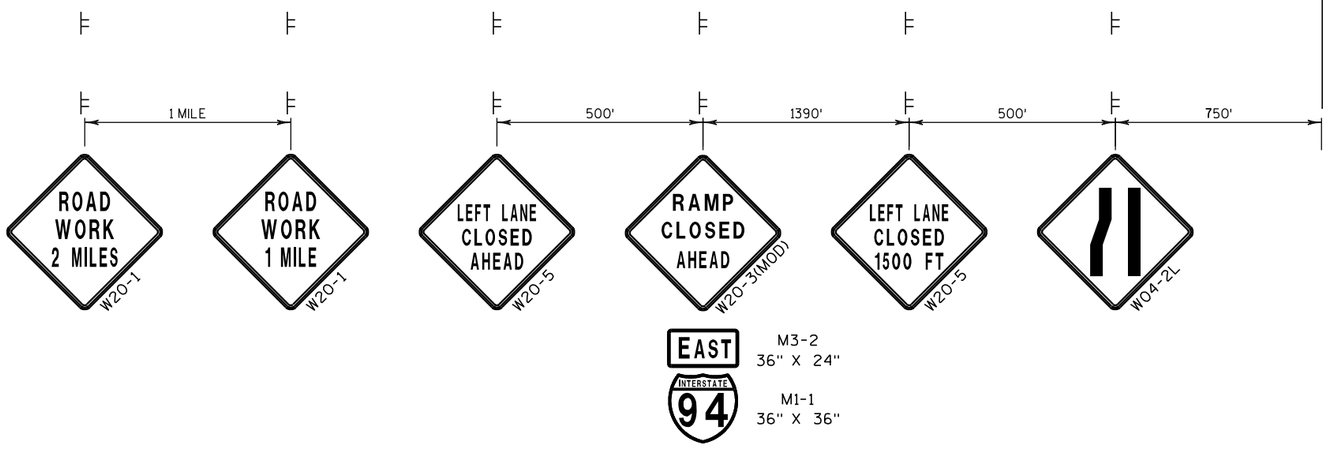
CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500' IN FRONT OF DRUMS WITH LANE CLOSED SIGN.

SEE DETOUR PLANS FOR ADDITIONAL SIGNING REQUIREMENTS.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - CONSTRUCTION DETAIL	SHEET	E

2





LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- SIGN ON TEMPORARY SUPPORT
- DIRECTION OF TRAFFIC

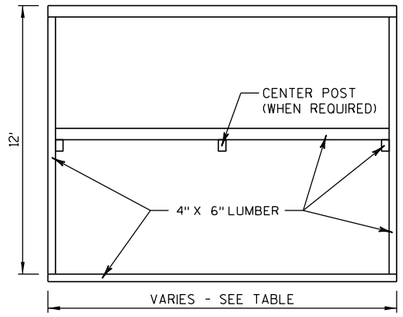
NOTES

1. THIS DETAIL SHALL APPLY FOR CLOSING SYSTEM RAMPS WITHIN THE ZOO INTERCHANGE.
2. SEE DETOUR PLANS FOR ADDITIONAL SIGNING REQUIREMENTS.
3. DETAIL TYPICAL FOR CLOSING LEFT-HAND EXIT RAMP. FOR CLOSING RIGHT-HAND EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

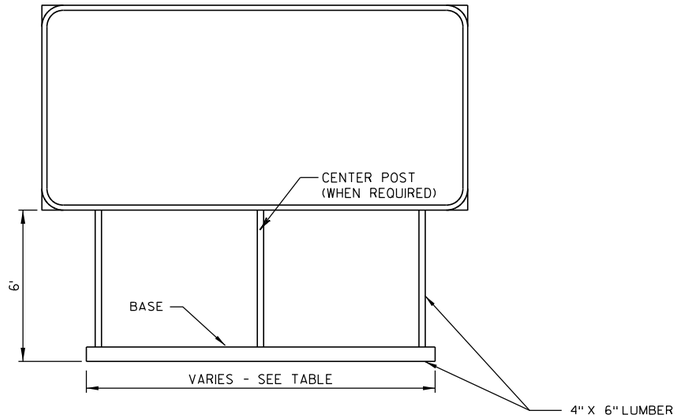
SYSTEM RAMP CLOSURE DETAIL

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - CONSTRUCTION DETAIL	SHEET	E

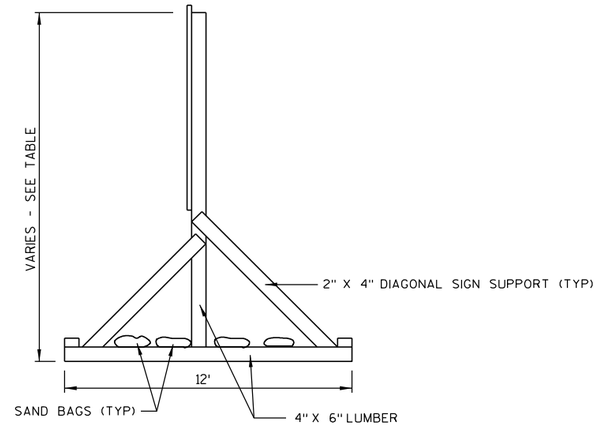
2



BASE DETAIL



FRONT VIEW



SIDE VIEW

QUANTITY AND LENGTH OF
HORIZONTAL POSTS (SEE BASE DETAIL)
(FOR INFORMATION ONLY)

	SIGN NUMBER		
	204	205	
6'	2	0	
12'	2	6	

QUANTITY AND LENGTH
OF VERTICAL POSTS
(FOR INFORMATION ONLY)

	SIGN NUMBER		
	204	205	
14'	2	3	

NOTES

1) SEE "TRAFFIC CONTROL DETAILS - FIXED MESSAGE SIGN LAYOUT", "STAGE 1B CONSTRUCTION" AND "STAGE 3A CONSTRUCTION" FOR SIGN LOCATIONS.

2) FOUR DIAGONAL SUPPORTS SHALL BE INCLUDED. DIAGONAL SUPPORTS SHALL BE AFFIXED TO THE OUTSIDE SUPPORTS AND ARE CONSIDERED INCIDENTAL TO FIXED MESSAGE SIGN PORTABLE SUPPORT.

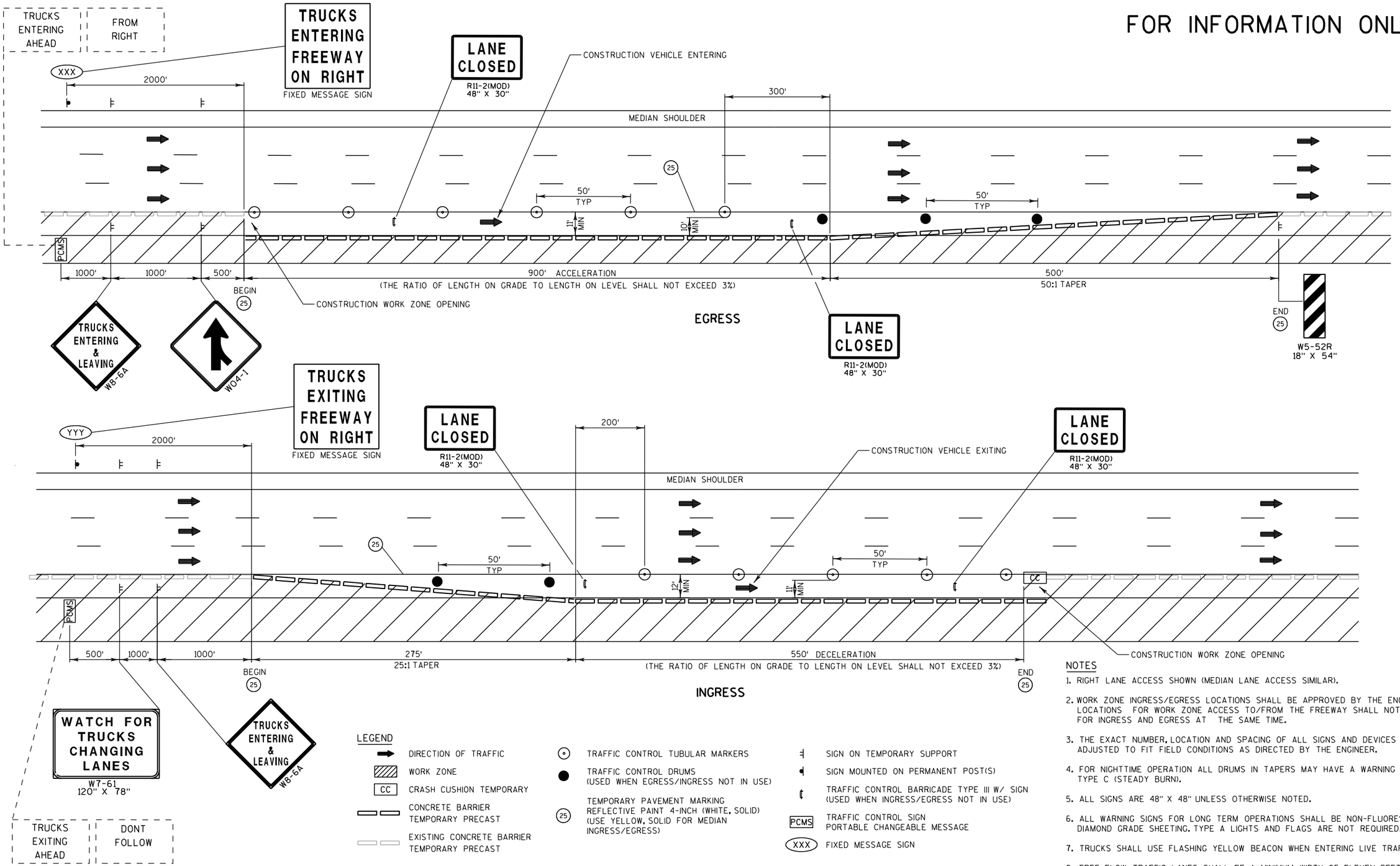
3) LUMBER PAID FOR UNDER FIXED MESSAGE SIGN PORTABLE SUPPORT.

4) PROVIDE AN ADEQUATE NUMBER OF SAND BAGS TO HOLD THE SIGN IN PLACE. SAND BAGS ARE INCIDENTAL TO FIXED MESSAGE SIGN PORTABLE SUPPORT.

5) SEE "TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS" SIGN PLATE FOR ADDITIONAL REQUIREMENTS.

FIXED MESSAGE SIGN PORTABLE SUPPORT

FOR INFORMATION ONLY



LEGEND

- DIRECTION OF TRAFFIC
- WORK ZONE
- CC — CRASH CUSHION TEMPORARY
- CONCRETE BARRIER TEMPORARY PRECAST
- EXISTING CONCRETE BARRIER TEMPORARY PRECAST
- TRAFFIC CONTROL TUBULAR MARKERS
- TRAFFIC CONTROL DRUMS (USED WHEN EGRESS/INGRESS NOT IN USE)
- 25 — TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH (WHITE, SOLID) (USE YELLOW, SOLID FOR MEDIAN INGRESS/EGRESS)
- SIGN ON TEMPORARY SUPPORT
- SIGN MOUNTED ON PERMANENT POST(S)
- TRAFFIC CONTROL BARRICADE TYPE III W/ SIGN (USED WHEN INGRESS/EGRESS NOT IN USE)
- PCMS — TRAFFIC CONTROL SIGN PORTABLE CHANGEABLE MESSAGE
- XXX — FIXED MESSAGE SIGN

WORK ZONE INGRESS/EGRESS

POSTED SPEEDS 55 MPH OR LESS

NOTES

1. RIGHT LANE ACCESS SHOWN (MEDIAN LANE ACCESS SIMILAR).
2. WORK ZONE INGRESS/EGRESS LOCATIONS SHALL BE APPROVED BY THE ENGINEER. LOCATIONS FOR WORK ZONE ACCESS TO/FROM THE FREEWAY SHALL NOT BE USED FOR INGRESS AND EGRESS AT THE SAME TIME.
3. THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
4. FOR NIGHTTIME OPERATION ALL DRUMS IN TAPERS MAY HAVE A WARNING LIGHT, TYPE C (STEADY BURN).
5. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
6. ALL WARNING SIGNS FOR LONG TERM OPERATIONS SHALL BE NON-FLUORESCENT DIAMOND GRADE SHEETING. TYPE A LIGHTS AND FLAGS ARE NOT REQUIRED.
7. TRUCKS SHALL USE FLASHING YELLOW BEACON WHEN ENTERING LIVE TRAFFIC.
8. FREE FLOW TRAFFIC LANES SHALL BE A MINIMUM WIDTH OF ELEVEN FEET AND ACCOMMODATE A ONE FOOT SHY DISTANCE FROM TRAFFIC CONTROL DEVICES.
9. ITEMS ON THIS SHEET TO BE PAID USING STANDARD BID ITEMS.

111015

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - CONSTRUCTION DETAIL	SHEET	E

2

S. 74TH STREET

W. DIXON STREET

N

350' 350'

W04-2L | LEFT LANE CLOSED AHEAD W20-5 | ROAD WORK AHEAD W20-1

INCLUDE 2 SIGNS AT EACH LOCATION

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD CLOSED

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

S. 76TH STREET

25' (TYP)

245' TAPER

25' (TYP)

245' TAPER

W01-6
48" X 24"

25' (TYP)

350' 350'

ROAD WORK AHEAD W20-1 | LEFT LANE CLOSED AHEAD W20-5 | W04-2L

INCLUDE 2 SIGNS AT EACH LOCATION

SEE TRAFFIC CONTROL STAGE 1A FOR ADDITIONAL TRAFFIC CONTROL DEVICES AND PAVEMENT MARKINGS

W. KEARNEY STREET

IH 94 EB

IH 94 WB

W. O'CONNOR STREET

S. 75TH STREET

W. DIXON STREET

S. 74TH STREET

W. MAIN STREET

LEGEND

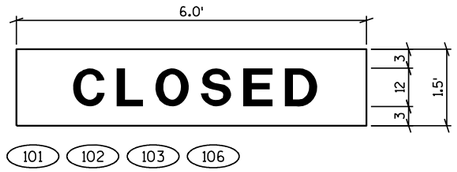
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- FLASHING ARROW BOARD
- DIRECTION OF TRAFFIC

76TH STREET/O'CONNOR STREET CLOSURE DETAIL

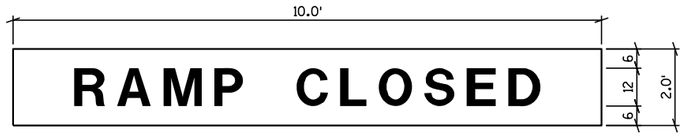
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL - CONSTRUCTION DETAIL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\025501_tc.dgn PLOT DATE : 29-APR-2013 23:51 PLOT BY : MSCDYB PLOT NAME : PLOT SCALE : 150:1

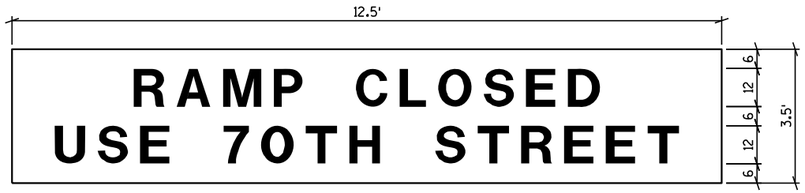
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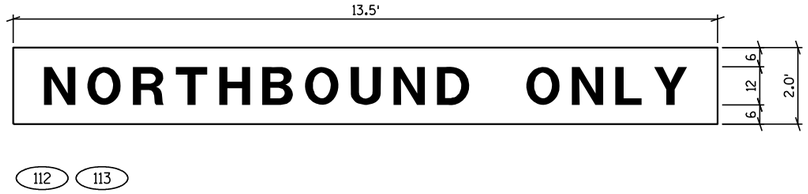
101 102 103 106



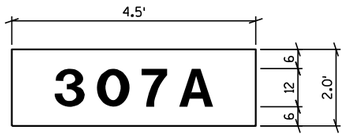
105 107



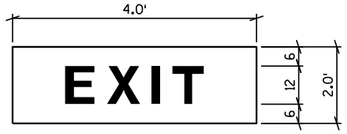
104



112 113



108 109



114



110 111

NOTES

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2. ALL SIGNS TO BE MOUNTED ON WOODEN POST SUPPORTS (4"x6"). THE NUMBER OF POSTS REQUIRED FOR EACH LAYOUT IS SHOWN. STEEL POSTS (2"X2") MAY BE USED FOR SIGNS ON SURFACE STREETS. SIGNS WHERE NO POSTS ARE SHOWN ARE TO BE MOUNTED ON EXISTING SIGNS. FOR SIGNS MOUNTED ON POSTS, USE POSTS FROM FHWA LIST OF ACCEPTED BREAKAWAY SIGN SUPPORTS.

3. POSTS SHALL MEET THE BREAKAWAY REQUIREMENTS OF SECTION 643.2.9.1 OF THE STANDARD SPECIFICATIONS AND SIGN PLATE A4-11.

4. SIGNS ON THIS SHEET TO BE PAID UNDER THE ITEM "TRAFFIC CONTROL SIGNS FIXED MESSAGE".

5. SIGNS SHALL BE BLACK NON-REFLECTIVE MESSAGE ON ORANGE REFLECTIVE BACKGROUND UNLESS OTHERWISE NOTED.

6. ALL SIGNS SHALL HAVE CAPITAL LETTERS AND NUMERALS: 12" CAPS SHALL BE SERIES "D", 6" CAPS SHALL BE SERIES "C".

7. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO ENGINEER FOR REVIEW PRIOR TO MANUFACTURING.

8. SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.

9. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

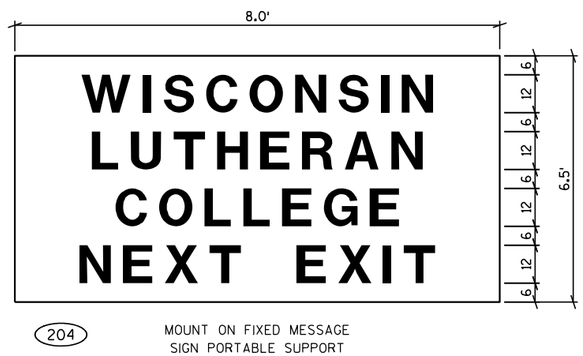
10. "BEGIN XXX XX" SIGNS SHALL BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.

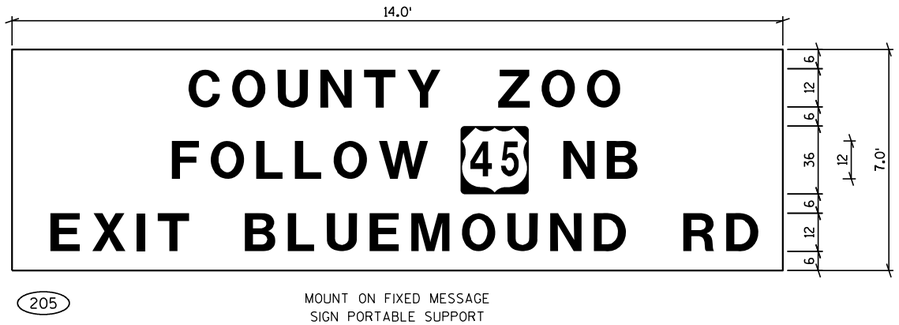
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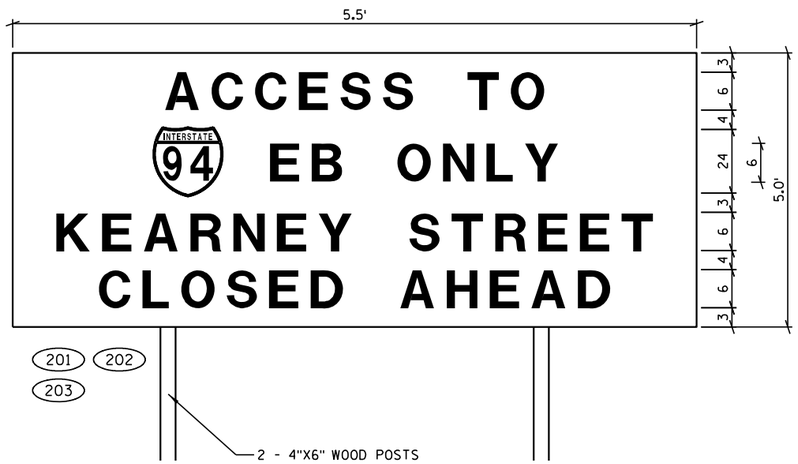
(XXX) = SIGN NUMBER FIXED MESSAGE







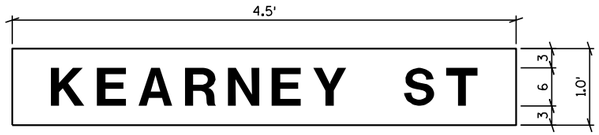




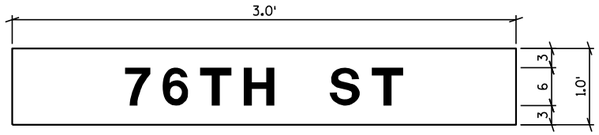
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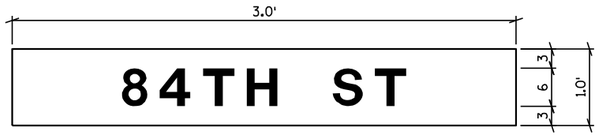
(XXX) = SIGN NUMBER FIXED MESSAGE



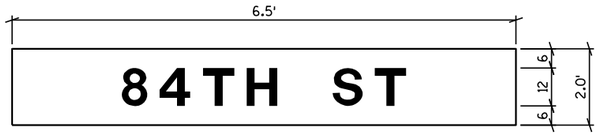
901
21 REQUIRED



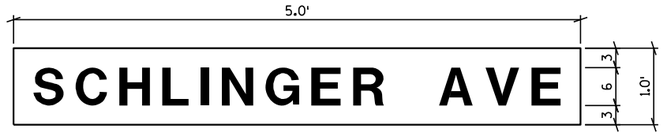
902
32 REQUIRED



903
33 REQUIRED



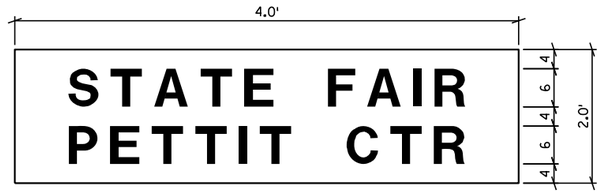
904
13 REQUIRED



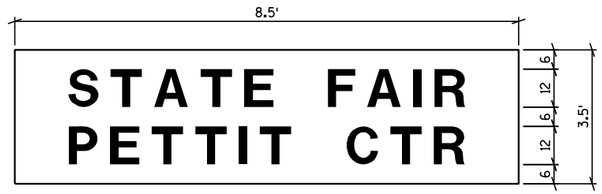
905
14 REQUIRED



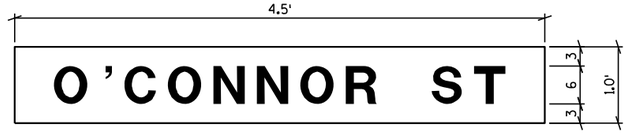
906
4 REQUIRED



907
29 REQUIRED



908
9 REQUIRED

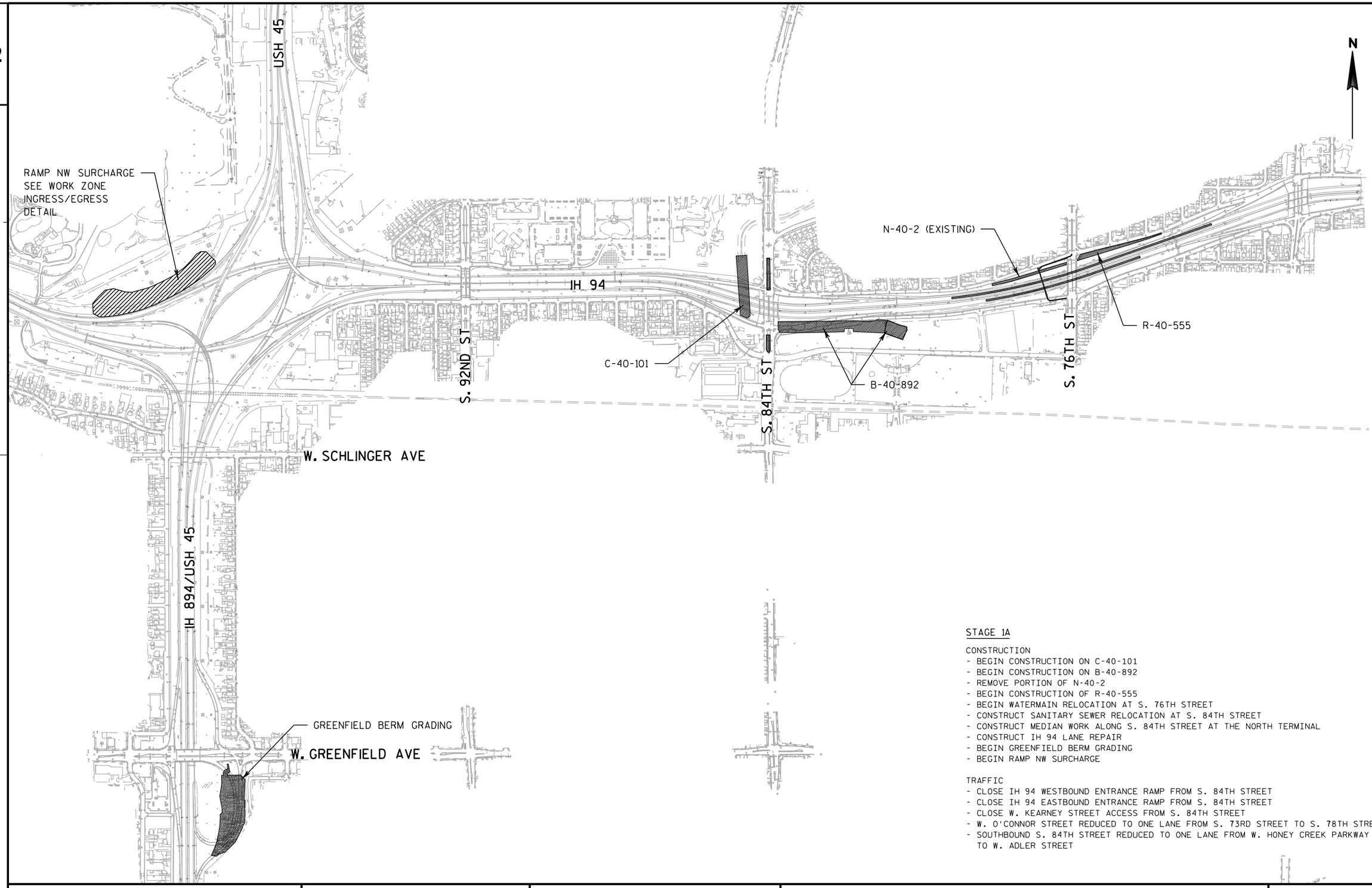


909
7 REQUIRED

NOTES

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8. SIGN BASE MATERIAL SHALL BE ACCORDING TO SECTION 637.2.1.2.
9. DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
10. "BEGIN XXX XX" SIGNS SHALL BE PLACED 10 DAYS PRIOR TO CONSTRUCTION.
11. "BEGIN XXX XX" SIGNS SHALL BE SEPARATE PANELS, AND ARE CONSIDERED INCIDENTAL TO THE SIGN AND SHOULD BE REMOVED OR COVERED AFTER THEIR EFFECTIVE DATE. THE MONTH AND DAY SHALL BE DIRECTED BY THE ENGINEER IN THE FIELD.

(XXX) = SIGN NUMBER FIXED MESSAGE



STAGE 1A

CONSTRUCTION
- BEGIN CONSTRUCTION ON C-40-101
- BEGIN CONSTRUCTION ON B-40-892
- REMOVE PORTION OF N-40-2
- BEGIN CONSTRUCTION OF R-40-555
- BEGIN WATERMAIN RELOCATION AT S. 76TH STREET
- CONSTRUCT SANITARY SEWER RELOCATION AT S. 84TH STREET
- CONSTRUCT MEDIAN WORK ALONG S. 84TH STREET AT THE NORTH TERMINAL
- CONSTRUCT IH 94 LANE REPAIR
- BEGIN GREENFIELD BERM GRADING
- BEGIN RAMP NW SURCHARGE

TRAFFIC
- CLOSE IH 94 WESTBOUND ENTRANCE RAMP FROM S. 84TH STREET
- CLOSE IH 94 EASTBOUND ENTRANCE RAMP FROM S. 84TH STREET
- CLOSE W. KEARNEY STREET ACCESS FROM S. 84TH STREET
- W. O'CONNOR STREET REDUCED TO ONE LANE FROM S. 73RD STREET TO S. 78TH STREET
- SOUTHBOUND S. 84TH STREET REDUCED TO ONE LANE FROM W. HONEY CREEK PARKWAY TO W. ADLER STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1A OVERVIEW	SHEET	E

COVER EXISTING
WESTBOUND
SPEED LIMIT SIGN

WORK ZONE W21-620 48" X 30"
SPEED LIMIT 50 R2-1 48" X 60"
FINES DOUBLE W21-62R 48" X 30"

END ROAD WORK
G20-2A
48" X 24"

IH 94 WB

IH 94 EB

220EW 222EW 224EW 226EW 228EW 230EW 232EW 234EW

10FDA

EW+83.7
13.4' RT

MATCHLINE 234EW+00

W. ADLER STREET

ROAD WORK 1000 FT W20-1

ROAD WORK AHEAD W20-1

ROAD WORK 1/2 MILE W20-1

ROAD WORK 1500 FT W20-1

2460'

1140'

S. 89TH ST

S. 88TH STREET

S. 87TH PLACE

S. 87TH STREET

PLAYGROUND

RIP RAP

PKNG

PARKING

ROAD WORK AHEAD W20-1

PLACE SIGN ALONG RAMP SE
APPROXIMATELY 400' BEYOND
RAMP GORE WITH USH 45

ROAD WORK AHEAD W20-1

PLACE SIGN ALONG RAMP NE
APPROXIMATELY 900' BEYOND
RAMP GORE WITH USH 45

WORK ZONE W21-620 48" X 30"
SPEED LIMIT 50 R2-1 48" X 60"
FINES DOUBLE W21-62R 48" X 30"

COVER EXISTING EASTBOUND
SPEED LIMIT SIGN
AT STA 214EW+42, RT

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET E

2

S. 82ND STREET

S. HONEY CREEK DRIVE

S. 80TH STREET

S. 79TH STREET

N

2

LANE REPAIR, SEE CONSTRUCTION DETAIL
TO BE CONSTRUCTED DURING
NIGHTTIME HOURS
REFER TO SPECIAL PROVISIONS AND
SDD "TRAFFIC CONTROL, TWO LANE
CLOSURE ON FREEWAY OR EXPRESSWAY,
SHORT-TERM (LESS THAN 24 HOURS)"
FOR DETAILS.

FENCE TEMPORARY

544CR 546CR 548CR 550CR 552CR 554CR 556CR

CR+60.80
0.2' RT

W. O'CONNOR STREET

EW+00

MATCHLINE 257EW+00

256EW

254EW

252EW

250EW

248EW

246EW

244EW

242EW+00

IH 94 WB

IH 94 EB

EW+95

18FBA

16FBA

14FBA

W. KEARNEY STREET

MATCHLINE 104K+00

118K 116K 114K 112K 110K 108K 106K 104K

END
ROAD WORK
G20-2A
48" X 24"

K+48.50
46.20' LT

ROAD
CLOSED
R11-2
48" X 30"

TLE

R/W

PLE

K+43.05
35.58' RT

K+42.88
35.60' RT

FENCE TEMPORARY

EDGE LINE JOINT REPAIR
SEE CONSTRUCTION DETAIL
TO BE CONSTRUCTED DURING
NIGHTTIME HOURS
REFER TO SPECIAL PROVISIONS
AND SDD "TRAFFIC CONTROL,
LANE CLOSURE, SPEEDS GREATER
THAN 40 M.P.H." FOR DETAILS.

RAMP WILL
BE CLOSED
12 PM TO 10 PM
BEGINNING
JAN 15
R11-51
48" X 48"

1' TYP

K+81.16
138.06' RT

K+04.41
131.72' RT

ROAD
WORK
AHEAD
W20-1

WORK ZONE W21-620 48" X 30"
SPEED LIMIT 50 R2-1 48" X 60"
FINES DOUBLE W21-62R 48" X 30"

COVER EXISTING
EASTBOUND
SPEED LIMIT SIGN

SIGN

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026102_s1a.dgn PLOT DATE : 13-JUN-2013 09:53 PLOT BY : MSCSRM PLOT NAME : 026102_s1a PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

ROAD WORK AHEAD W20-1

WATERMAIN WORK IN INTERSECTION SHALL BE COMPLETED DURING NIGHT TIME CLOSURE OF INTERSECTION. REFER TO CONSTRUCTION DETAIL "76TH STREET/O'CONNOR STREET CLOSURE DETAIL" AND SPECIAL PROVISIONS FOR TIME WHEN WORK CAN BE COMPLETED.

ROAD WORK AHEAD W20-1

ROAD WORK AHEAD W20-1

S. 77TH STREET

SIDEWALK CLOSED R9-9 24" X 12" MOUNTED ON TYPE II BARRICADE

W5-52L 12" X 36"

CR+66 114 BEGIN

END ROAD WORK G20-2A 48" X 24"

+65.5 2.0' RT

+16.0 3.8' RT

CR+67 114 END +60.5 21.6' RT

26TL

24TL

CR+44 114 BEGIN +58.5 2.0' RT

CR+45 114

18' (TYP)

S. 75TH STREET

W01-6 48" X 24"

ONE WAY R6-2R 24" X 30"

N

FENCE TEMPORARY

558CR 560CR 562CR 564CR 566CR 568CR 570CR

W. O'CONNOR ST

LANE CLOSED R11-2(MOD) 48" X 30"

FENCE TEMPORARY

MATCHLINE 257EW+00

258EW 260EW 262EW 264EW 266EW 268EW 270EW 272EW

MATCHLINE 272EW+00

IH 94 WB

IH 94 EB

EW+58 EW+40 EW+10

22TL

ROAD CLOSED R11-2 48" X 30"

S. 76TH ST

20TL

18TL

120K 122K 124K 126K 128K 130K 132K 134K

W. KEARNEY STREET

TLE

TEMPORARY BUS STOP PAD SEE CONSTRUCTION DETAILS. LOCATION TO BE DETERMINED BY THE ENGINEER

SIDEWALK CLOSED R9-9 24" X 12" MOUNTED ON TYPE II BARRICADE

LANE REPAIR. SEE CONSTRUCTION DETAIL TO BE CONSTRUCTED DURING NIGHTTIME HOURS REFER TO SPECIAL PROVISIONS AND SDD "TRAFFIC CONTROL, TWO LANE CLOSURE ON FREEWAY OR EXPRESSWAY, SHORT-TERM (LESS THAN 24 HOURS)" FOR DETAILS.

ROAD WORK AHEAD W20-1

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET	E

2

2

N

ROAD WORK AHEAD W20-1

S. 74TH STREET

W01-6 48" X 24"

W5-52L 12" X 36"

ONE WAY R6-2R 24" X 30"

W04-2L

350'

LEFT LANE CLOSED AHEAD W20-5

350'

348'

ROAD WORK AHEAD W20-1

S. 70TH STREET

CR+12 114

CR+23 114 END

572CR

574CR

576CR

578CR

580CR

582CR

W. O'CONNOR ST

25' (TYP)

FENCE TEMPORARY

W01-6 48" X 24"

ONE WAY R6-2R 24" X 30"

EW+00

MATCHLINE 272EW+00

IH 94 WB

IH 94 EB

274EW

276EW

278EW

280EW

282EW

284EW

OVERHEAD PED

142K

140K

138K

136K

W. KEARNEY STREET

EDGE LINE JOINT REPAIR
SEE CONSTRUCTION DETAIL
TO BE CONSTRUCTED DURING
NIGHTTIME HOURS
REFER TO SPECIAL PROVISIONS
AND SDD "TRAFFIC CONTROL,
LANE CLOSURE, SPEEDS GREATER
THAN 40 M.P.H." FOR DETAILS.

LANE REPAIR, SEE CONSTRUCTION DETAIL
TO BE CONSTRUCTED DURING
NIGHTTIME HOURS
REFER TO SPECIAL PROVISIONS AND
SDD "TRAFFIC CONTROL, TWO LANE
CLOSURE ON FREEWAY OR EXPRESSWAY,
SHORT-TERM (LESS THAN 24 HOURS)"
FOR DETAILS.

ROAD WORK 1500 FT W20-1

ROAD WORK 1/2 MILE W20-1

ROAD WORK 1 MILE W20-1

ROAD WORK 2 MILES W20-1

W21-62O 48" X 30" WORK ZONE SPEED LIMIT 50 FINES DOUBLE

R2-1 48" X 60"

W21-62R 48" X 30"

SPEED LIMIT 50 W03-5

500'

500'

1140'

2640'

5280'

750'

PLACE SIGNS
APPROXIMATELY
140' EAST OF
S. 68TH STREET

GIVE 4SEC A BRAKE SLOW DOWN

FINES DOUBLE IN WORK ZONES

W21-62 96" X 48"

$200 MINIMUM

W21-62P 96" X 12"

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026104_s1a.dgn PLOT DATE : 07-JUN-2013 09:36 PLOT BY : MSCSRM PLOT NAME : 026104_s1a PLOT SCALE : 100:1

2

W. SCHLINGER AVENUE

HANK AARON STATE TRAIL

W. ADLER STREET

S. 84TH STREET

30F

32F

34F

36F

38F

40F

ROAD WORK AHEAD
W20-1

ROAD WORK 250 FT
W20-1

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

+46
115
BEGIN

+62
115

25' (TYP)

F+81.9
4.2' LT

F+23.3
25.2' LT

+84
114
BEGIN

+17
115
END

+84
115
BEGIN

12' (TYP)

11' (TYP)

RAMP CLOSED AHEAD
W20-1(MOD)

EAST
I 94
M03-2
24" X 12"
M1-1
24" X 24"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

ROAD WORK AHEAD
W20-1

ONLY ONLY
R3-8F
36" X 30"
COVER EXISTING LANE DESIGNATION SIGN WITH SIGN SHOWN

FCA+80.0
12.0' LT
+85
114
BEGIN

FCA+32.0
12.0' LT

F+86.0
14.9' LT

F+53.3
25.2' LT

W5-52L
12" X 36"

+95
114
END

+96
114
END

R3-2
24" X 24"

2' (TYP)

11' (TYP)

+07
115
+37
115
END

+96
115

+91
114
BEGIN

+35
X
114
BEGIN END

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED ON TYPE II BARRICADE

RAMP CLOSED
R11-2(MOD)
48" X 30"

RAMP CLOSED AHEAD
W20-1(MOD)

WEST
I 94
M03-4
24" X 12"
M1-1
24" X 24"

W. KEARNEY STREET

MATCHLINE 104K+00

MATCHLINE 41F+00

IH 94 EB

IH 94 WB

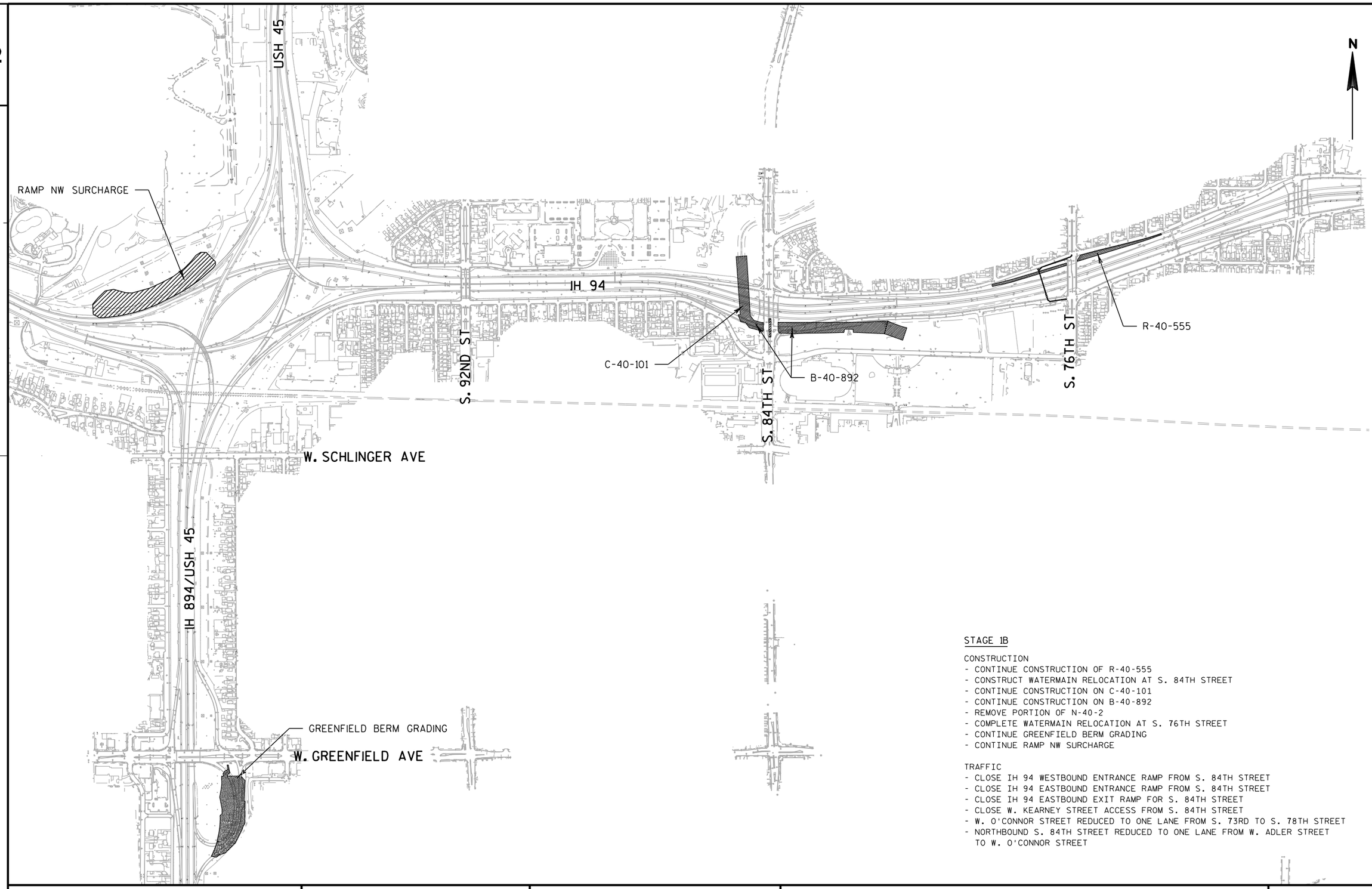
LANE CLOSED
R11-2(MOD)
48" X 30"

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET	E

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1A CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026106_s1a.dgn PLOT DATE : 30-APR-2013 00:00 PLOT BY : MSCDYB PLOT NAME : 026106_s1a PLOT SCALE : 100:1

2



STAGE 1B

CONSTRUCTION
- CONTINUE CONSTRUCTION OF R-40-555
- CONSTRUCT WATERMAIN RELOCATION AT S. 84TH STREET
- CONTINUE CONSTRUCTION ON C-40-101
- CONTINUE CONSTRUCTION ON B-40-892
- REMOVE PORTION OF N-40-2
- COMPLETE WATERMAIN RELOCATION AT S. 76TH STREET
- CONTINUE GREENFIELD BERM GRADING
- CONTINUE RAMP NW SURCHARGE

TRAFFIC
- CLOSE IH 94 WESTBOUND ENTRANCE RAMP FROM S. 84TH STREET
- CLOSE IH 94 EASTBOUND ENTRANCE RAMP FROM S. 84TH STREET
- CLOSE IH 94 EASTBOUND EXIT RAMP FOR S. 84TH STREET
- CLOSE W. KEARNEY STREET ACCESS FROM S. 84TH STREET
- W. O'CONNOR STREET REDUCED TO ONE LANE FROM S. 73RD TO S. 78TH STREET
- NORTHBOUND S. 84TH STREET REDUCED TO ONE LANE FROM W. ADLER STREET TO W. O'CONNOR STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1B OVERVIEW	SHEET	E

2

100 | 894 | 45 | 1 | 1 3/4 | 84th St | 3

COVER WITH SIGN 101

CLOSED

101

SIGN LOCATED ALONG IH 94 1500' WEST OF S. UNDERWOOD CREEK PARKWAY IN THE MEDIAN

West Allis Exits

Hwy 100 1

84th St 1 3/4

70th St DOWNTOWN 3

COVER WITH SIGN 102

CLOSED

102

SIGN LOCATED ALONG IH 94 550' WEST OF S. CURTIS ROAD ON THE RIGHT GROUND MOUNT

45 | 894 | 1/2 | 84 th St | 1 1/2 | 68 th-70 th St | 2 1/2

COVER WITH SIGN 103

CLOSED

103

SIGN LOCATED ALONG IH 94 100' WEST OF S. 108TH STREET (HWY 100) IN THE MEDIAN S-40-200

N

IH 94 WB

IH 94 EB

MATCHLINE 205EW+00

200EW

202EW

204EW

198EW

196EW

194EW

192EW

190EW

USH 45 NB

181

84TH STREET
RAMP CLOSED
USE 70TH STREET

110

W. ADLER STREET

EXIT 306

181

84th Street

COVER WITH SIGN 104

RAMP CLOSED
USE 70TH STREET

104

S. 94TH PLACE

181

84TH STREET
RAMP CLOSED
USE 70TH STREET

111

ROAD WORK AHEAD W20-1

38NSA

R/W

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1B CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026201_s1b.dgn PLOT DATE : 30-APR-2013 00:06 PLOT BY : MSCDYB PLOT NAME : 026201_s1b PLOT SCALE : 100:1

2

COVER WITH SIGN 106

84 th St	2	CLOSED
68 th-70 th St	1 1/2	106
Hawley Rd	2 1/4	

S-40-262

W. CHESTER STREET

S. 92ND STREET

HOSPITAL
EXIT 307

COVER WITH SIGN 108

307A
108

MATCHLINE 205EW+00

206EW 208EW 210EW 212EW 214EW 216EW 218EW

IH 94 WB

IH 94 EB

MATCHLINE 219EW+00

12' 12' 12' 12'

10' (TYP)

50' (TYP)

500'

RAMP CLOSED AHEAD
W20-3(MOD)

W04-2R

W. ADLER STREET

EXIT 306
181
84th Street
EXIT ONLY

S-40-311

COVER WITH SIGN 105

RAMP CLOSED
105

S. 94TH STREET

S. 93RD STREET

S. 92ND STREET

S. 91ST PLACE

S. 91ST STREET

S. 90TH STREET

WORK ZONE	W21-620 48" X 30"
SPEED LIMIT 50	R2-1 48" X 60"
FINES DOUBLE	W21-62R 48" X 30"

PKNG

PKNG

N

R/W

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1B CONSTRUCTION	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026202_s1B.dgn PLOT DATE : 13-JUN-2013 09:54 PLOT BY : MSCSRM PLOT NAME : 026202_s1B PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

COVER EXISTING WESTBOUND SPEED LIMIT SIGN

WORK ZONE W21-620 48" X 30"
SPEED LIMIT 50 R2-1 48" X 60"
FINES DOUBLE W21-62R 48" X 30"

EXIT 306
181
84th Street
EXIT ONLY

COVER WITH SIGN 107

S-40-310
RAMP CLOSED

MATCHLINE 219EW+00

220EW 222EW 224EW 226EW 228EW 230EW 232EW

107

IH 94 WB
IH 94 EB

25' (TYP)

+01
11
BEGIN

+61
11
END

RAMP CLOSED
R11-2(MOD)
48" X 30"

RAMP CLOSED
R11-2(MOD)
48" X 30"

RAMP CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

MATCHLINE 234EW+00

10FDA

N

PLAYGROUND

RIP RAP

R/W

W. ADLER STREET

Pettit Nat'l Ice Center

State Fair Park

Milwaukee Mile Speedway

EXIT 306

307A

109

COVER WITH SIGN 109

EXIT 306

COVER SIGN

S. 89TH STREET

S. 88TH STREET

S. 87TH PLACE

S. 87TH STREET

PARKING

FP

SCALE

2

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1B CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026203_s1B.dgn PLOT DATE : 13-JUN-2013 09:55 PLOT BY : MSCSRM PLOT NAME : 026203_s1B PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

W. SCHLINGER AVENUE

HANK AARON STATE TRAIL

S. 84TH STREET

W. ADLER STREET

W. KEARNEY STREET

IH 94 EB

IH 94 WB

MATCHLINE 41F+00

30F

32F

34F

36F

38F

40F

+64 114 BEGIN

+84 114 BEGIN

+13 114

+23 114

25' (TYP)

150' TAPER

350'

11' (TYP)

F+78.0 13.5' RT

F+90.0 12.8' LT

F+33.2 24.5' RT

F+61.6 16.0' LT

F+23.2 25.3' LT

RAMP WILL BE CLOSED 12PM TO 10PM BEGINNING JAN 15
R11-51 48" X 48"

RAMP CLOSED AHEAD W20-1(MOD)

END ROAD WORK G20-2A 48" X 24"

LANE CLOSED R11-2(MOD) 48" X 30"

MO3-4 24" X 12"
M1-1 24" X 24"
WEST INTERSTATE 94

EAST INTERSTATE 94

ROAD WORK AHEAD W20-1

LEFT LANE CLOSED AHEAD W20-5

W04-2L

ROAD CLOSED TO THRU TRAFFIC R11-4 60" X 30"

W5-52L 12" X 36"

R3-2 24" X 24"

12FBA

14FBA

10BK

NOTE

1. ANCHOR CONCRETE BARRIER TEMPORARY PRECAST ALONG NORTHBOUND 84TH STREET FROM STA 38F+33 TO STA 40F+23

R/L
84TH ST.
35'± WORK ZONE
10'
11'
1'

SECTION A-A
84TH STREET
LOOKING NORTH

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1B CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026204_s1B.dgn PLOT DATE : 30-APR-2013 14:57 PLOT BY : MSCSRM PLOT NAME : 026204_s1B PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

MATCHLINE 234EW+00

234EW

I-94 WB

HONEY CREEK

W5-52R
12" X 36"

RAMP CLOSED AHEAD
W20-1 (MOD)

EAST M03-2
24" X 12"
INTERSTATE 94 M1-1
24" X 24"

RIGHT SHOULDER CLOSED
W21-5A

RIGHT SHOULDER CLOSED AHEAD
W21-5B

ROAD WORK AHEAD
W20-1

W. DANA COURT

N

LANE CLOSED
R11-2(MOD)
48" X 30"

RAMP CLOSED
R11-2(MOD)
48" X 30"

MAINTAIN EXISTING BUS STOP

350'

150'
LANE TAPER

PLE

TLE

R/W

CONC

+69
114
BEGIN

+42
114
END

+93
114
END

+23
114

MATCHLINE 41F+00

42F

44F

46F

48F

50F

52F

54F

56F

S. 84TH STREET

RAMP CLOSED AHEAD
W20-1 (MOD)

LANE CLOSED
R11-2(MOD)
48" X 30"

END ROAD WORK
G20-2A
48" X 24"

MAINTAIN EXISTING BUS STOP

EAST M03-2
24" X 12"
INTERSTATE 94 M1-1
24" X 24"

240EW

242EW

W. O'CONNOR STREET

W. HONEY CREEK PARKWAY

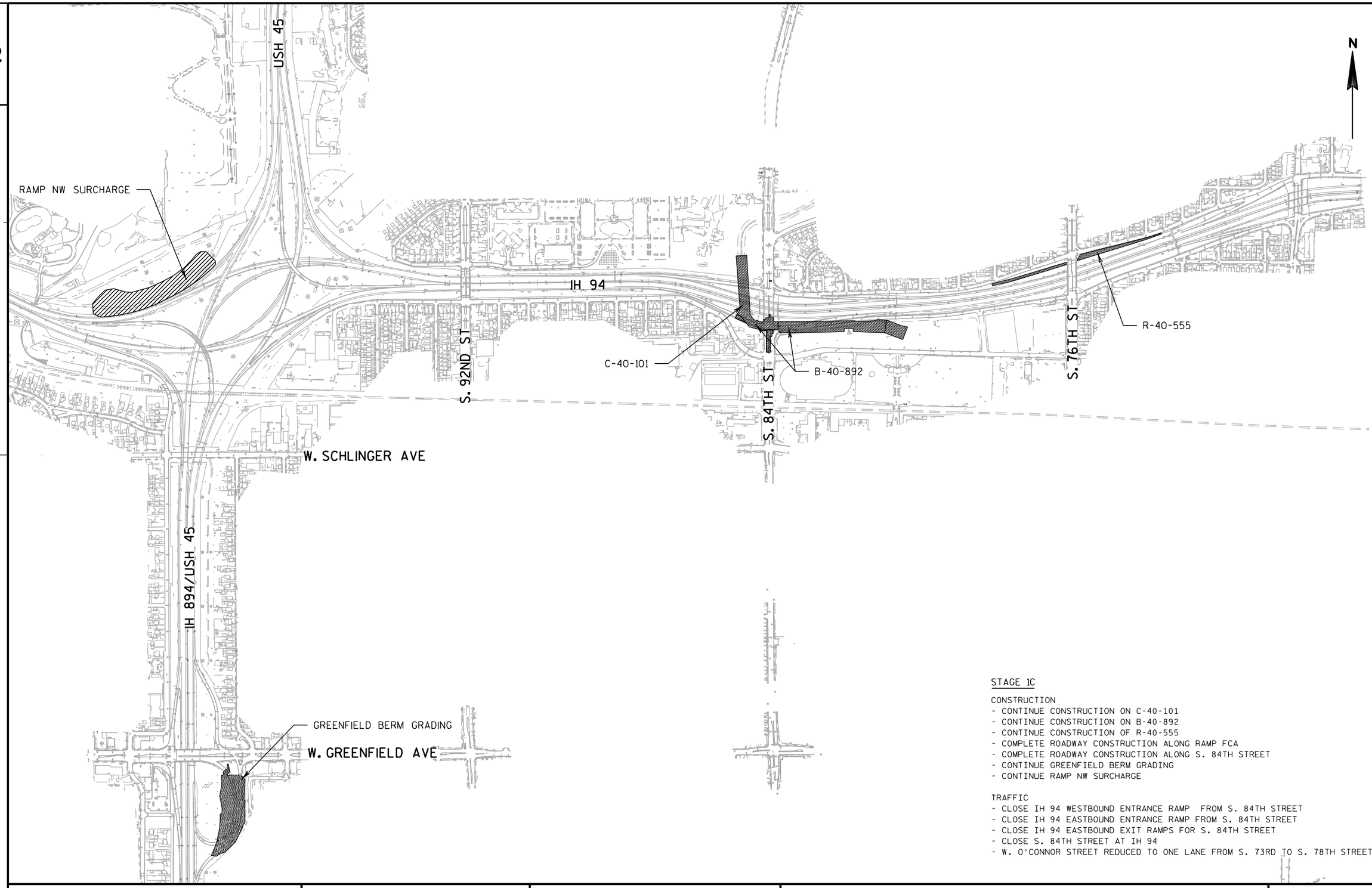
PKNG

PARKING

WATER TANK

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1B CONSTRUCTION	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026205_s1b.dgn PLOT DATE : 30-APR-2013 00:08 PLOT BY : MSCDYB PLOT NAME : 026205_s1b PLOT SCALE : 100:1



STAGE 1C

CONSTRUCTION
- CONTINUE CONSTRUCTION ON C-40-101
- CONTINUE CONSTRUCTION ON B-40-892
- CONTINUE CONSTRUCTION OF R-40-555
- COMPLETE ROADWAY CONSTRUCTION ALONG RAMP FCA
- COMPLETE ROADWAY CONSTRUCTION ALONG S. 84TH STREET
- CONTINUE GREENFIELD BERM GRADING
- CONTINUE RAMP NW SURCHARGE

TRAFFIC
- CLOSE IH 94 WESTBOUND ENTRANCE RAMP FROM S. 84TH STREET
- CLOSE IH 94 EASTBOUND ENTRANCE RAMP FROM S. 84TH STREET
- CLOSE IH 94 EASTBOUND EXIT RAMPS FOR S. 84TH STREET
- CLOSE S. 84TH STREET AT IH 94
- W. O'CONNOR STREET REDUCED TO ONE LANE FROM S. 73RD TO S. 78TH STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1C OVERVIEW	SHEET	E

2

W. SCHLINGER AVENUE

HANK AARON STATE TRAIL

W. ADLER STREET

S. 84TH STREET

ROAD WORK AHEAD
W20-1
350'

END ROAD WORK
G20-2A
48" X 24"

STOP
R3-2
24" X 24"

BRIDGE OUT
R11-2B
48" X 30"

ROAD WORK AHEAD
W20-1
SIGN PLACED 350' FROM INTERSECTION

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED ON TYPE II BARRICADE

ROAD CLOSED AHEAD
W20-3

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

ROAD CLOSED 500 FT
W20-3

ROAD WORK AHEAD
W20-1
SIGN PLACED 150' FROM INTERSECTION

FOR ADDITIONAL SIGNING, REFER TO "DETOUR - 84TH STREET"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

STOP
R3-1
24" X 24"

ROAD WORK AHEAD
W20-1
SIGN PLACED 150' FROM INTERSECTION

W. KEARNEY STREET

IH 94 EB

IH 94 WB

MATCHLINE 41F+00

MATCHLINE 242EW+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1C CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026301_s1c.dgn PLOT DATE : 30-APR-2013 00:13 PLOT BY : MSCDYB PLOT NAME : 026301_s1c PLOT SCALE : 100:1

2

W. DANA COURT

N

IH 94 WB

MATCHLINE 41F+00

MATCHLINE 242EW+00

S. 84TH STREET

W. HONEY CREEK PARKWAY

234EW

236EW

238E

242EW

10FDA

12FDA

W5-52R
12" X 36"

BRIDGE OUT
R11-2B
48" X 30"

ROAD CLOSED
R11-2
48" X 30"

W01-6
48" X 24"

ROAD CLOSED
R11-2
48" X 30"

W01-6
48" X 24"

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

ROAD CLOSED
500 FT
W20-3

ROAD CLOSED
R11-2
48" X 30"

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED
ON TYPE II
BARRICADE

END
ROAD WORK
G20-2A
48" X 24"

STOP

R3-2
24" X 24"
MOUNT SIGN
ON EXISTING POST

ROAD
WORK
AHEAD
W20-1

W01-6
48" X 24"

CR+31.10
35.69' RT

CR+16
114
END BEGIN

CR+88
115
END

CR+45
114
BEGIN

R1-2
36" X 31"

YIELD

25' (TYP)

12' (TYP)

50'

42F

44F

46F

48F

50F

52F

54F

56F

PLE

TLE

R/W

CONC

INL

PKNG

PARKING

WATER TANK

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1C CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026302_s1c.dgn PLOT DATE : 30-APR-2013 00:14 PLOT BY : MSCDYB PLOT NAME : 026302_s1c PLOT SCALE : 100:1

2

ROAD WORK AHEAD W20-1

S. 82ND STREET

ROAD WORK AHEAD W20-1

S. HONEY CREEK DR

EXIT 306

181

84th Street

ROAD WORK AHEAD W20-1

ROAD WORK AHEAD W20-1

S. 79TH STREET

N

NORTHBOUND ONLY

112

ATTACH SIGN TO BOTTOM OF EXISTING SIGN ON S-40-164

W03-2

W04-2L

LEFT LANE CLOSED AHEAD W20-5

ROAD WORK AHEAD W20-1

25' (TYP)

12' (TYP)

180' TAPER

544CR

546CR

548CR

550CR

552CR

554CR

556CR

W. O'CONNOR STREET

CR+39

115

BEGIN

CR+75

114

BEGIN

W01-6

48" X 24"

IH 94 WB

IH 94 EB

242EW+00

MATCHLINE

244EW

246EW

248EW

250EW

252EW

254EW

256EW

18FBA

16FBA

4FBA

W. KEARNEY STREET

106K

108K

110K

112K

114K

116K

118K

END ROAD WORK

G20-2A

48" X 24"

R/W

PLE

TLE

TLE

ROAD CLOSED

R11-2

48" X 30"

WORK ZONE W21-620 48" X 30"

SPEED LIMIT 50 R2-1 48" X 60"

FINES DOUBLE W21-62R 48" X 30"

ROAD WORK AHEAD W20-1

W01-4R

25 M.P.H.

W013-1

24" X 24"

EXIT 306

181

84th Street

1/2 MILE

NORTHBOUND ONLY

113

ATTACH SIGN TO BOTTOM OF EXISTING SIGN

SIGN LOCATED ALONG IH 94 1000' EAST OF S. 76TH STREET ON THE RIGHT SHOULDER GROUND MOUNT

State Fair Park

Pettit Nat'l Ice Ctr

NEXT 2 EXITS

COVER WITH SIGN 114

EXIT

114

SIGN LOCATED ALONG IH 94 WB 2375' EAST OF S. 68TH STREET ON THE RIGHT SHOULDER GROUND MOUNT

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1C CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026303_s1C.dgn PLOT DATE : 13-JUN-2013 09:56 PLOT BY : MSCSRM PLOT NAME : 026303_s1C PLOT SCALE : 100:1

2

2

N

85TH STREET

ROAD CLOSED AHEAD
W20-3

500'

PARKING

W. BLUEMOUND ROAD

R/W

PARKING

PARKING

N. HONEY CREEK PARKWAY

CONCRETE

CONCRETE

FP

POST

ROAD CLOSED TO THRU TRAFFIC
R11-4
60" X 30"

50'

72F

TLE

SIGN

181
84TH STREET
CLOSED AT 94
FOLLOW DETOUR

115

70F

N. GLENVIEW AVENUE (STH 181)

68F

PARKING

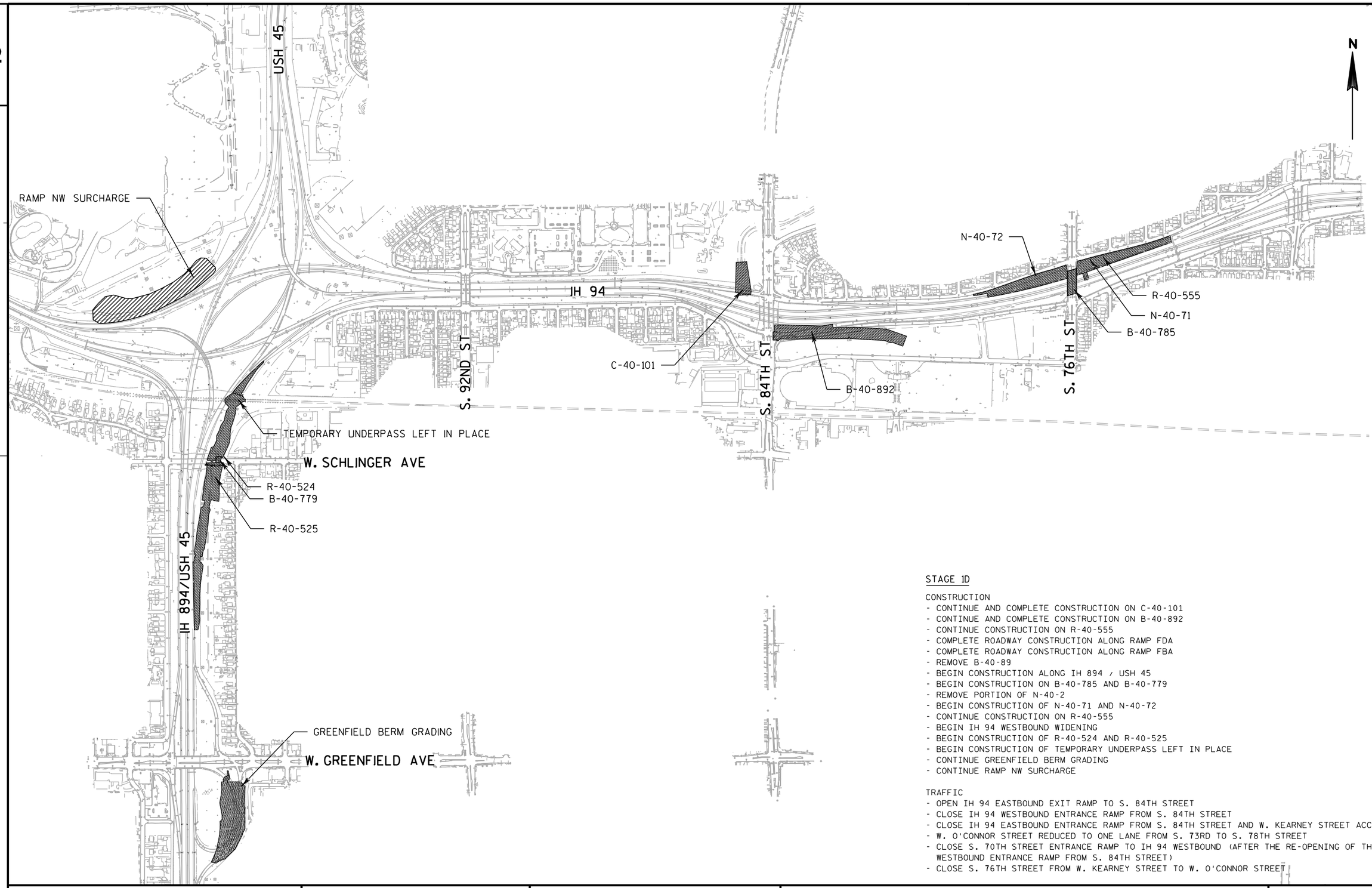
PKNG

181
84TH STREET
CLOSED AT 94
USE ALT ROUTE

116

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1C CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026304_s1c.dgn PLOT DATE : 30-APR-2013 00:14 PLOT BY : MSCDYB PLOT NAME : 026304_s1c PLOT SCALE : 100:1



STAGE 1D

CONSTRUCTION
- CONTINUE AND COMPLETE CONSTRUCTION ON C-40-101
- CONTINUE AND COMPLETE CONSTRUCTION ON B-40-892
- CONTINUE CONSTRUCTION ON R-40-555
- COMPLETE ROADWAY CONSTRUCTION ALONG RAMP FDA
- COMPLETE ROADWAY CONSTRUCTION ALONG RAMP FBA
- REMOVE B-40-89
- BEGIN CONSTRUCTION ALONG IH 894 / USH 45
- BEGIN CONSTRUCTION ON B-40-785 AND B-40-779
- REMOVE PORTION OF N-40-2
- BEGIN CONSTRUCTION OF N-40-71 AND N-40-72
- CONTINUE CONSTRUCTION ON R-40-555
- BEGIN IH 94 WESTBOUND WIDENING
- BEGIN CONSTRUCTION OF R-40-524 AND R-40-525
- BEGIN CONSTRUCTION OF TEMPORARY UNDERPASS LEFT IN PLACE
- CONTINUE GREENFIELD BERM GRADING
- CONTINUE RAMP NW SURCHARGE

TRAFFIC
- OPEN IH 94 EASTBOUND EXIT RAMP TO S. 84TH STREET
- CLOSE IH 94 WESTBOUND ENTRANCE RAMP FROM S. 84TH STREET
- CLOSE IH 94 EASTBOUND ENTRANCE RAMP FROM S. 84TH STREET AND W. KEARNEY STREET ACCESS
- W. O'CONNOR STREET REDUCED TO ONE LANE FROM S. 73RD TO S. 78TH STREET
- CLOSE S. 70TH STREET ENTRANCE RAMP TO IH 94 WESTBOUND (AFTER THE RE-OPENING OF THE WESTBOUND ENTRANCE RAMP FROM S. 84TH STREET)
- CLOSE S. 76TH STREET FROM W. KEARNEY STREET TO W. O'CONNOR STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 1D OVERVIEW	SHEET	E

2

ACCESS TO
94 EB ONLY
KEARNEY STREET
CLOSED AHEAD

201 202 203

PLACE SIGN 500' FROM KEARNEY STREET AND S. 84TH STREET INTERSECTION. ONE SIGN NORTH OF INTERSECTION FOR SB TRAFFIC, ONE SIGN SOUTH OF INTERSECTION FOR NB TRAFFIC, AND ONE SIGN ON IH 94 EB EXIT RAMP

S. 82ND STREET

HONEY CREEK DRIVE

S. 80TH STREET

N

544CR W. O'CONNOR STREET 546CR

548CR

550CR

552CR

500'

200'

END ROAD WORK
G20-2A
48" X 24"

D9-2
36" X 36"

M6-2
30" X 30"

+98
115 X
BEGIN END

+98
115 X
BEGIN END

+98
114 X
BEGIN END

12' (TYP)

MATCHLINE 240EW+00

242EW

IH 94 WB

244EW

246EW

248EW

250EW

252EW

MATCHLINE 259EW+00

IH 94 EB

18FBA

16FBA

14FBA

12FBA

104K

106K

108K

110K

112K

114K

116K

W. KEARNEY STREET

PLE

TLE

R/W

WORK ZONE W21-620 48" X 30"

SPEED LIMIT 50 R2-1 48" X 60"

FINES DOUBLE W21-62R 48" X 30"

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026401_s1d.dgn PLOT DATE : 13-JUN-2013 09:57 PLOT BY : MSCSRM PLOT NAME : 026401_s1d PLOT SCALE : 100:1

2

ROAD WORK AHEAD W20-1

ROAD WORK AHEAD W20-1

S. 79TH STREET

S. 78TH STREET

S. 76TH STREET

ONE WAY R6-2R 24" X 30"

W01-6 48" X 24"

W5-52R 18" X 54"

LANE CLOSED R11-2(MOD) 48" X 30"

W01-6 48" X 24"

N

PKNG

566CR W. O'CONNOR ST 568CR

564CR

562CR

560CR

558CR

556CR

554CR

FENCE TEMPORARY

200' LANE SHIFT

200'

300'

50' (TYP)

12' (TYP)

+02.41 60.4' LT

2' (TYP)

5' (TYP)

+01 116 115 BEGIN END

115

116

114

IH 94 WB

IH 94 EB

256EW

258EW

260EW

262EW

264EW

266EW

268EW

MATCHLINE 269EW+00

MATCHLINE 269EW+00

24TL

20TL

22' (TYP)

W01-6 48" X 24"

ONE WAY R6-2R 24" X 30"

D9-2 36" X 36"

M6-1 30" X 30"

D9-2 36" X 36"

M5-2R 30" X 30"

FENCE TEMPORARY

FENCE TEMPORARY

204

WISCONSIN LUTHERAN COLLEGE NEXT EXIT

118K

120K

122K

124K

126K

128K

W. KEARNEY STREET

R/W

TLE

ROAD CLOSED R11-2 48" X 30"

W1-4C

50 M.P.H. W013-1 36" X 36"

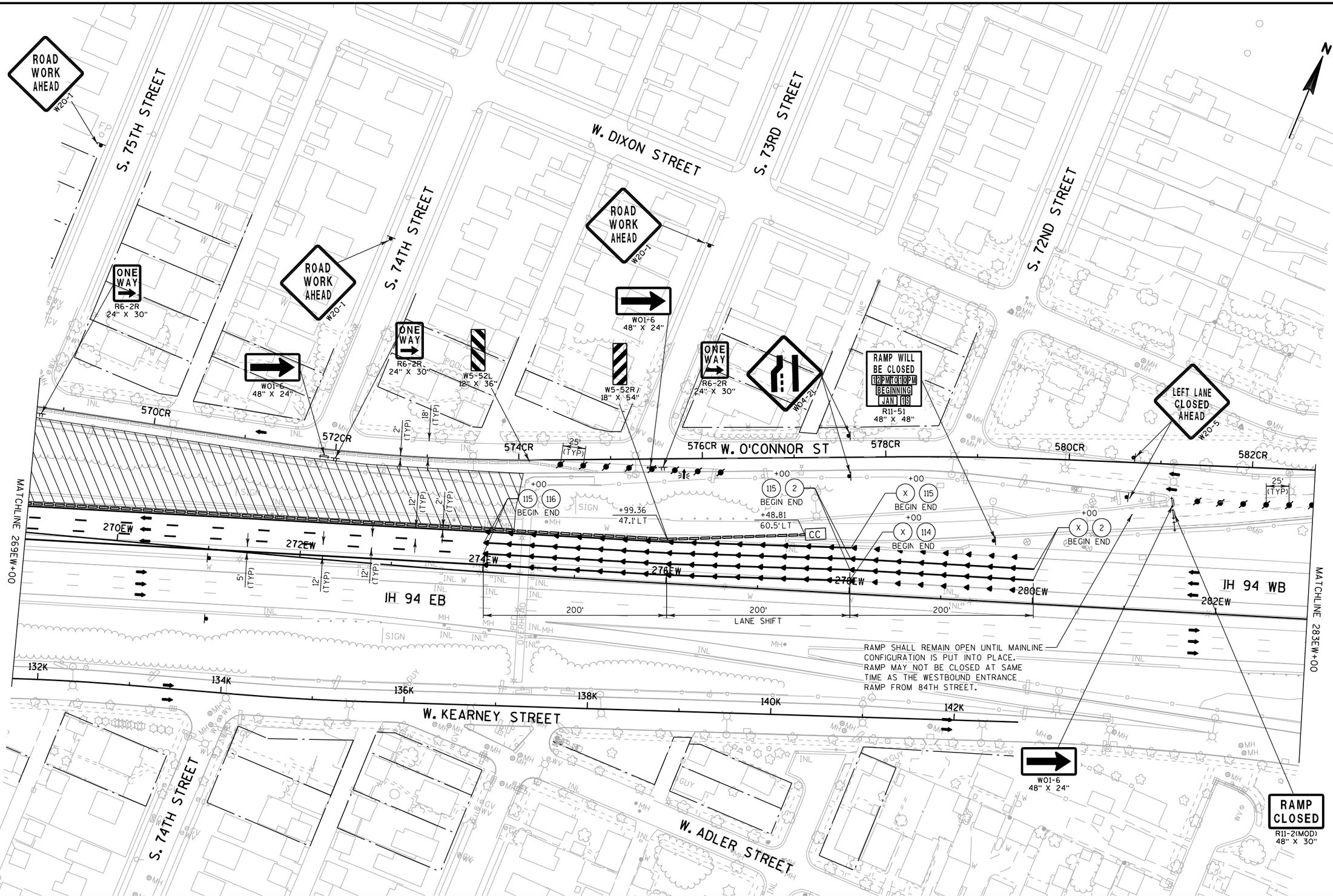
CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE SEE PLAN DETAILS

CLOSE IH 94 WB AND MEDIAN LANE AT IH 94 EB TO FACILITATE STORM SEWER CONSTRUCTION. REFER TO SPECIAL PROVISIONS, DETOUR-FULL FREEWAY CLOSURE IH 94 WB, AND SDD "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40M.P.H." FOR ADDITIONAL DETAILS.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026402_s1d.dgn PLOT DATE : 30-APR-2013 00:21 PLOT BY : MSCDYB PLOT NAME : 026402_s1d PLOT SCALE : 100:1

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026403_s1d.dgn PLOT DATE : 30-APR-2013 00:21 PLOT BY : MSCDYB PLOT NAME : 026403_s1d PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

2

2

S. 76TH STREET

W. MAIN STREET

W. KEARNEY STREET

IH 94 EB

IH 94 WB

W04-2L

ROAD CLOSED 500 FT
W20-3

ROAD WORK AHEAD
W20-1

LEFT LANE CLOSED AHEAD
W20-5

350'

175'

LANE CLOSED
R11-2(MOD)
48" X 30"

BRIDGE OUT
R11-2B
48" X 30"

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED ON TYPE II BARRICADE

16TL

18TL

20TL

25' (TYP)

25' (TYP)

175'

180' TAPER

500'

W01-6
48" X 24"

TL+32

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED ON TYPE II BARRICADE

MATCHLINE 22TL+00

124K

126K

128K

130K

132K

262EW

260EW

264EW

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

2

2

N

W. DIXON STREET

S. 77TH STREET

S. 76TH STREET

S. 75TH STREET

W. STEVENSON STREET

562CR W. O'CONNOR ST

564CR

566CR

568CR

570CR

IH 94 EB

IH 94 WB

MATCHLINE 21TL+00

MATCHLINE 22TL+00

TL+35

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED
ON TYPE II
BARRICADE

W01-6
48" X 24"

500'

180'
TAPER

25'
(TYP)

25'
(TYP)

24TL

26TL

175'

LEFT LANE
CLOSED
AHEAD
W20-5

1000'

ROAD
WORK
AHEAD
W20-1

BRIDGE
OUT
R11-2B
48" X 30"

SIDEWALK CLOSED
R9-9
24" X 12"
MOUNTED
ON TYPE II
BARRICADE

LANE
CLOSED
R11-2(MOD)
48" X 30"

ROAD
CLOSED
500 FT
W20-3

W04-2L

UTILIZE NIGHTTIME CLOSURES
FOR SHOULDER REPAIR AND
BRIDGE REMOVAL

PARKING

PKNG

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026406_s1d.dgn PLOT DATE : 30-APR-2013 00:25 PLOT BY : MSCDYB PLOT NAME : 026406_s1d PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

2

N

HANK AARON STATE TRAIL

W. ADLER STREET

S. 84TH STREET

30F 32F 34F 36F 38F 40F

MATCHLINE 41F+00

IH 94 EB

IH 94 WB

12FBA

PKNG

DOCK

WALLS

SCALE

SIGN

GUY

MH

INL

W

RIPRAP

25' (TYP)

12' (TYP)

350' 350' 350'

ROAD WORK AHEAD W20-1

RIGHT SHOULDER CLOSED AHEAD W21-5B

RIGHT SHOULDER CLOSED W21-5A

LANE CLOSED R11-2(MOD) 48" X 30"

RAMP CLOSED AHEAD W20-1(MOD)

EAST M03-2 24" X 12" 94 M1-1 24" X 24"

WEST M03-4 24" X 12" 94 M1-1 24" X 24"

RAMP CLOSED R11-2(MOD) 48" X 30"

ROAD CLOSED TO THRU TRAFFIC R11-4 60" X 30"

R3-2 24" X 24"

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026407_s1d.dgn PLOT DATE : 30-APR-2013 15:01 PLOT BY : MSCSRM PLOT NAME : 026407_s1d PLOT SCALE : 100:1

2

2

N

RAMP CLOSED AHEAD
W20-1(MOD)

WEST
M03-4
24" X 12"

94
M1-1
24" X 24"

350'

350'

RIGHT SHOULDER CLOSED
W21-5A

350'

RIGHT SHOULDER CLOSED AHEAD
W21-5B

ROAD WORK AHEAD
W20-1

RAMP CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

LANE CLOSED
R11-2(MOD)
48" X 30"

25' (TYP)

25' (TYP)

232EW

234EW

236EW

238EW

240EW

10EDA

12EDA

MATCHLINE 41F+00

42F

44F

46F

48F

50F

52F

54F

S. 84TH STREET

MAINTAIN EXISTING BUS STOP

R3-2
24" X 24"

MAINTAIN EXISTING BUS STOP

W. O'CONNOR STREET

RAMP CLOSED AHEAD
W20-1(MOD)

EAST
M03-2
24" X 12"

94
M1-1
24" X 24"

MATCHLINE 240EW+00

PKNG

PARKING

CONC

SIGN

INL

MH

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026408_s1d.dgn PLOT DATE : 30-APR-2013 00:25 PLOT BY : MSCDYB PLOT NAME : 026408_s1d PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2

S. 100TH STREET

ROAD WORK AHEAD W20-1

RIGHT SHOULDER CLOSED AHEAD W21-5B

RIGHT SHOULDER CLOSED W21-5A

1600' 1000' 500'

IH 894 EB/USH 45 SB

IH 894 WB/
USH 45 NB

260NS 262NS 10NSA 264NS 12NSA 266NS 14NSA 268NS 16NSA 270NS 18NSA 272NS 20NSA 274NS 22NSA+00

MATCHLINE 22NSA+00

TRAFFIC CONTROL BARRICADES TYPE III LEFT IN PLACE, AND TRAFFIC CONTROL WARNING LIGHTS TYPE A LEFT IN PLACE SHALL BE PLACED AT THE END OF THE CONTRACT.

S-40-37
TO REMAIN

25'
(TYP)

CRASH CUSHION PERMANENT
LOW MAINTENANCE

NSA+04.70
61.00' RT

CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE SHALL BE PLACED AT THE END OF THE CONTRACT. SEE PLAN DETAILS. DRUMS AND BARRICADES CAN BE REMOVED AT THAT TIME.

ROAD CLOSED
R11-2
48" X 30"

NSA+50.00
61.80' RT

NSA+75.40
40.50' RT

NSA+26.80
41.80' RT

NSA+01.00
51.60' RT

FENCE TEMPORARY

FENCE TEMPORARY

500' 250' 250'

ROAD WORK AHEAD W20-1

RIGHT SHOULDER CLOSED AHEAD W21-5B

RIGHT SHOULDER CLOSED W21-5A

COUNTY ZOO
FOLLOW 45 NB
EXIT BLUEMOUND RD

205

S. 98TH STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026409_s1d.dgn PLOT DATE : 07-JUN-2013 09:48 PLOT BY : MSCSRM PLOT NAME : 026409_s1d PLOT SCALE : 100:1

S. 100TH STREET

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

HANK AARON STATE TRAIL

W. SCHLINGER AVENUE

S. 98TH STREET

ROAD WORK AHEAD W20-1

RIGHT SHOULDER CLOSED W21-5A

END ROAD WORK G20-2A 48" X 24"

276NS

278NS

280NS

282NS

284NS

286NS

288NS

MATCHLINE 22NSA+00

NSA+49.40 40.50' RT

R-40-525

24NSA

26NSA

28NSA

30NSA

32NSA

34NSA

36NSA

38NSA

24XM

26XM

FENCE TEMPORARY

W. SCHLINGER AVENUE MAY BE CLOSED TO FACILITATE STORM SEWER AND BRIDGE CONSTRUCTION. REFER TO SPECIAL PROVISIONS, SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" AND "DETOUR - SCHLINGER AVENUE" FOR DETAILS

B-40-799

R-40-524

MOVE S-40-133 TO STA 32NSA+30, 86.3' LT

NSA+42.00 50.50' RT

NSA+97.20 36.50' RT

NSA+32.60 37.40' RT

NSA+87.50 25.10' RT

NSA+42.90 67.80' RT

TLE

R/W

350'

200'

500'

50' (TYP)

528SCH

530SCH

532SCH

534SCH

536SCH

EXIT 1 A

EAST

94

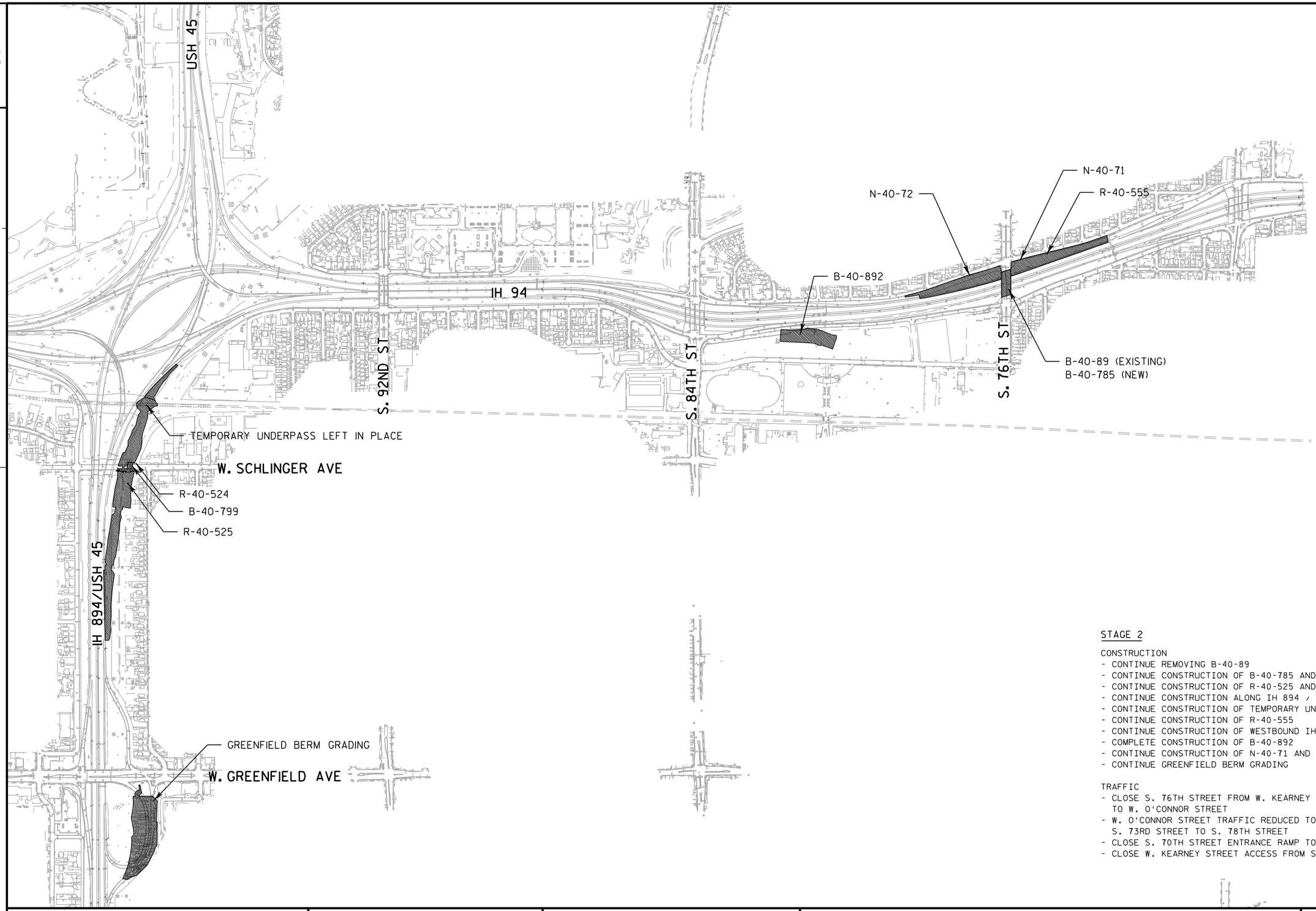
Milwaukee

EXIT ONLY

MOVE EXISTING SIGN AND SIGN BRIDGE TO NEW SIGN BRIDGE LOCATION. UTILIZE NIGHTTIME LANE CLOSURES. REFER TO SDD "TRAFFIC CONTORL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

FOR ADDITIONAL TRAFFIC CONTROL DEVICES AND SIGNS, REFER TO S.D.D. "TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAYS, SPEEDS GREATER THAN 40 M.P.H."

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 1D CONSTRUCTION	SHEET	E



2

STAGE 2

CONSTRUCTION
- CONTINUE REMOVING B-40-89
- CONTINUE CONSTRUCTION OF B-40-785 AND B-40-799
- CONTINUE CONSTRUCTION OF R-40-525 AND R-40-524
- CONTINUE CONSTRUCTION ALONG IH 894 / USH 45
- CONTINUE CONSTRUCTION OF TEMPORARY UNDERPASS LEFT IN PLACE
- CONTINUE CONSTRUCTION OF R-40-555
- CONTINUE CONSTRUCTION OF WESTBOUND IH 94 WIDENING
- COMPLETE CONSTRUCTION OF B-40-892
- CONTINUE CONSTRUCTION OF N-40-71 AND N-40-72
- CONTINUE GREENFIELD BERM GRADING

TRAFFIC
- CLOSE S. 76TH STREET FROM W. KEARNEY STREET TO W. O'CONNOR STREET
- W. O'CONNOR STREET TRAFFIC REDUCED TO ONE LANE FROM S. 73RD STREET TO S. 78TH STREET
- CLOSE S. 70TH STREET ENTRANCE RAMP TO IH 94 WB
- CLOSE W. KEARNEY STREET ACCESS FROM S. 84TH STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 2 OVERVIEW	SHEET	E

2

ACCESS TO
94 EB ONLY
KEARNEY STREET
CLOSED AHEAD

201 202 203

PLACE SIGN 500' FROM W. KEARNEY STREET AND S. 84TH STREET INTERSECTION.
ONE SIGN NORTH OF INTERSECTION FOR SB TRAFFIC,
ONE SIGN SOUTH OF INTERSECTION FOR NB TRAFFIC,
AND ONE SIGN ON IH 94 EB EXIT RAMP

S. 82ND STREET

HONEY CREEK DRIVE

S. 80TH STREET

N

WORK ZONE W21-62Q 48" X 30"
SPEED LIMIT 50 R2-1 48" X 60"
FINES DOUBLE W21-62R 48" X 30"

544CR W. O'CONNOR STREET 546CR 548CR 550CR 552CR 554CR

END ROAD WORK
G20-2A
48" X 24"

D9-2
36" X 36"

M6-2
30" X 30"

240EW 242EW 244EW 246EW 248EW 250EW 252EW 254EW

IH 94 WB

IH 94 EB

FBA+72
46
BEGIN

25' (TYP)

12FBA 14FBA 18FBA

104K 106K 108K 110K 112K 114K 116K

K+25

+76
46
L. END

12' (TYP)

W. KEARNEY STREET

R/W

PLE

TLE

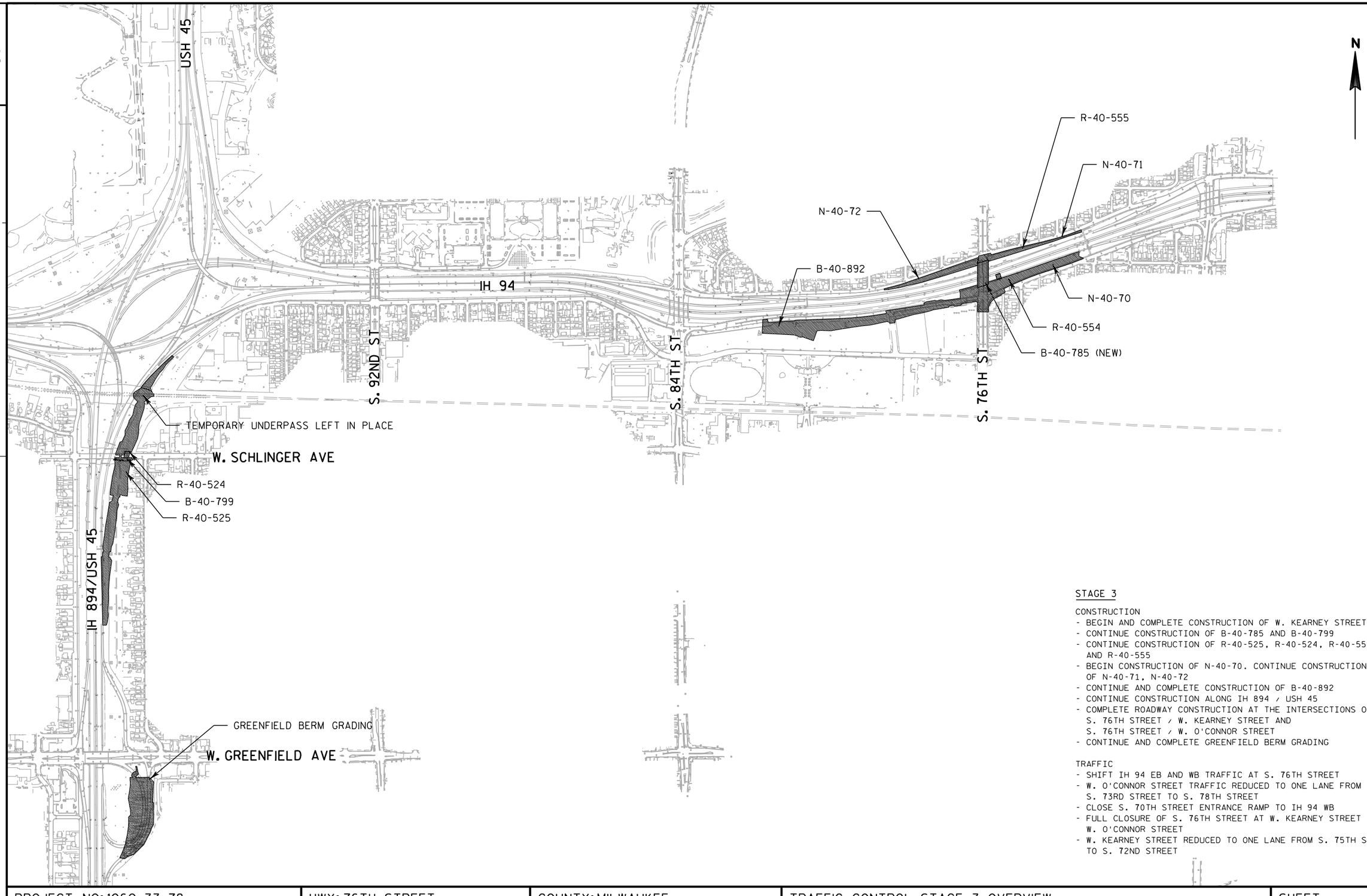
W01-6
48" X 24"

ROAD CLOSED
R11-2
48" X 30"

R3-4
24" X 24"

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 2 CONSTRUCTION	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026501_s2.dgn PLOT DATE : 13-JUN-2013 09:58 PLOT BY : MSCSRM PLOT NAME : 026501_s2 PLOT SCALE : 100:1



STAGE 3

CONSTRUCTION
- BEGIN AND COMPLETE CONSTRUCTION OF W. KEARNEY STREET
- CONTINUE CONSTRUCTION OF B-40-785 AND B-40-799
- CONTINUE CONSTRUCTION OF R-40-525, R-40-524, R-40-554 AND R-40-555
- BEGIN CONSTRUCTION OF N-40-70. CONTINUE CONSTRUCTION OF N-40-71, N-40-72
- CONTINUE AND COMPLETE CONSTRUCTION OF B-40-892
- CONTINUE CONSTRUCTION ALONG IH 894 / USH 45
- COMPLETE ROADWAY CONSTRUCTION AT THE INTERSECTIONS OF S. 76TH STREET / W. KEARNEY STREET AND S. 76TH STREET / W. O'CONNOR STREET
- CONTINUE AND COMPLETE GREENFIELD BERM GRADING

TRAFFIC
- SHIFT IH 94 EB AND WB TRAFFIC AT S. 76TH STREET
- W. O'CONNOR STREET TRAFFIC REDUCED TO ONE LANE FROM S. 73RD STREET TO S. 78TH STREET
- CLOSE S. 70TH STREET ENTRANCE RAMP TO IH 94 WB
- FULL CLOSURE OF S. 76TH STREET AT W. KEARNEY STREET AND W. O'CONNOR STREET
- W. KEARNEY STREET REDUCED TO ONE LANE FROM S. 75TH STREET TO S. 72ND STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 3 OVERVIEW	SHEET	E

2

S. 82ND STREET

HONEY CREEK DRIVE

S. 80TH STREET

S. 79TH STREET

N

2140'

MAX. 11' WIDTH W12-52

W24-1BL

50 M.P.H. W013-1 36" X 36"

SIGNS TO BE LEFT IN PLACE

END ROAD WORK G20-2A 48" X 24"

544CR 546CR W. O'CONNOR STREET 548CR 550CR 552CR 554CR 556CR

+00 115 X BEGIN END

+99 115 X BEGIN END

+98 114 X BEGIN END

R = 2464.00'

MATCHLINE 257EW+00

12' (TYP)

242EW 244EW 246EW 248EW 250EW 252EW 254EW 256EW

50' (TYP)

IH 94 WB

IH 94 EB

R = 6064.50'

P

25' (TYP)

16FBA 18FBA 14FBA

W. KEARNEY STREET

104K 106K 108K 110K 112K 114K 116K 118K

PLE

RXW

TLE

W01-6 48" X 24"

ROAD CLOSED R11-2 48" X 30"

R3-4 24" X 24"

WORK ZONE W21-62Q 48" X 30"

SPEED LIMIT 50 R2-1 48" X 60"

FINES DOUBLE W21-62R 48" X 30"

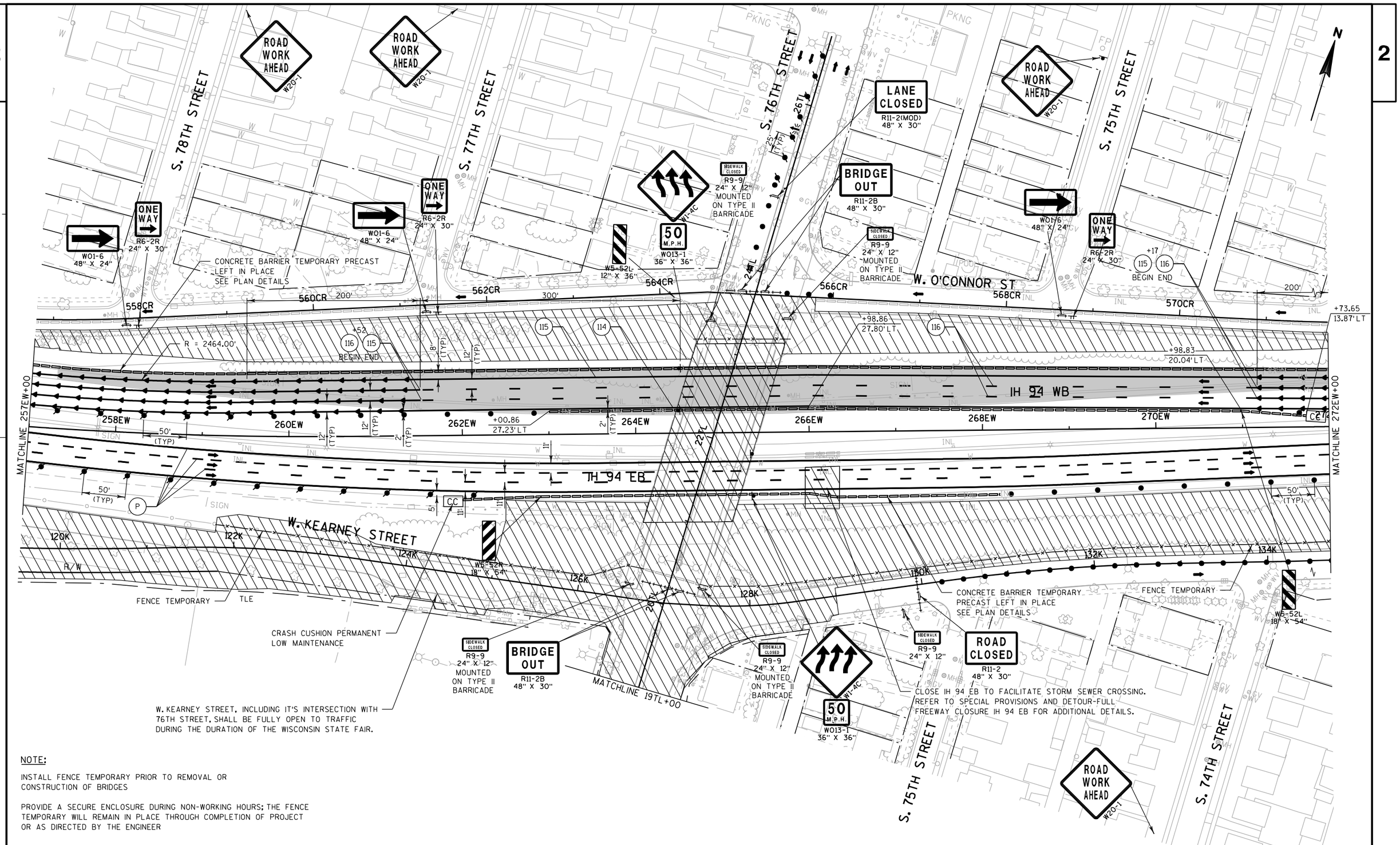
ROAD CLOSED R11-2 48" X 30"

ROAD WORK AHEAD W20-1

SIGN

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 3 CONSTRUCTION	SHEET	E

2



NOTE:

INSTALL FENCE TEMPORARY PRIOR TO REMOVAL OR CONSTRUCTION OF BRIDGES

PROVIDE A SECURE ENCLOSURE DURING NON-WORKING HOURS; THE FENCE TEMPORARY WILL REMAIN IN PLACE THROUGH COMPLETION OF PROJECT OR AS DIRECTED BY THE ENGINEER

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 3 CONSTRUCTION	SHEET	E

2

S. 74TH ST
W. DIXON ST
S. 73RD ST
S. 72ND STREET
S. 71ST STREET
S. 70TH STREET
W. O'CONNOR ST
W. KEARNEY STREET
W. ADLER STREET
IH 94 WB
IH 94 EB
PKNG
N

ROAD WORK AHEAD W20-1
ROAD WORK AHEAD W20-1
W04-2L
LEFT LANE CLOSED AHEAD W20-5
ROAD WORK AHEAD W20-1
RAMP CLOSED AHEAD W20-1(MOD)
350'
350'
350'
M3-4 24" X 12"
M1-1 24" X 24"
WEST
94

W01-6 48" X 24"
ONE WAY R6-2R 24" X 30"
W5-52L 12" X 36"
W01-6 48" X 24"
ONE WAY R6-2R 24" X 30"
W01-6 48" X 24"
RAMP CLOSED R11-2(MOD) 48" X 30"

572CR
574CR
576CR
578CR
580CR
582CR
200'
25' (TYP)
480'
LANE SHIFT
R = 4964.00'
+68.69
50.15'LT
+00
X 114
BEGIN END
+00
115 X
BEGIN END
25' (TYP)
50' (TYP)
MATCHLINE 272EW+00
272EW
274EW
276EW
278EW
280EW
282EW
284EW
130K
138K
140K
142K
SIGN
P
OVERHEAD
INL
MH
GUY
W

CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE SEE PLAN DETAILS

W11-4C
50 M.P.H. W013-1 36" X 36"
END ROAD WORK G20-2A 48" X 24"
RAMP CLOSED AHEAD W20-1(MOD)
M3-4 24" X 12"
M1-1 24" X 24"
WEST
94
ROAD WORK AHEAD W20-1

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 3 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026603_s3.dgn PLOT DATE : 07-JUN-2013 10:02 PLOT BY : MSCSRM PLOT NAME : 026603_s3 PLOT SCALE : 100:1

2

N

ROAD WORK AHEAD W20-1

W. KEARNEY STREET, INCLUDING ITS INTERSECTION WITH S. 76TH STREET, SHALL BE FULLY OPEN TO TRAFFIC DURING THE DURATION OF THE WISCONSIN STATE FAIR.

FOR ADDITIONAL DETOUR SIGNING, REFER TO "DETOUR - 76TH STREET NB/SB" PLAN SHEETS.

LANE CLOSED R11-2(MOD) 48" X 30"

ROAD CLOSED R11-2 48" X 30"

250'

SIDEWALK CLOSED R9-9 24" X 12" MOUNTED ON TYPE II BARRICADE

SIDEWALK CLOSED R9-9 24" X 12" MOUNTED ON TYPE II BARRICADE

16TL

18TL

50'

MATCHLINE 19TL+00

S. 76TH STREET

25' (TYP)

ROAD CLOSED TO THRU TRAFFIC R11-4 60" X 30"

SIDEWALK CLOSED R9-9 24" X 12" MOUNTED ON TYPE II BARRICADE

SIDEWALK CLOSED R9-9 24" X 12" MOUNTED ON TYPE II BARRICADE

ROAD CLOSED R11-2 48" X 30"

ROAD WORK AHEAD W20-1

LEFT LANE CLOSED AHEAD W20-5

350'

W04-2L

W. MAIN STREET

250'

S. 75TH STREET

ROAD WORK AHEAD W20-1

ROAD WORK AHEAD W20-1

KOPPERUD PARK

ANTENNA PKNG

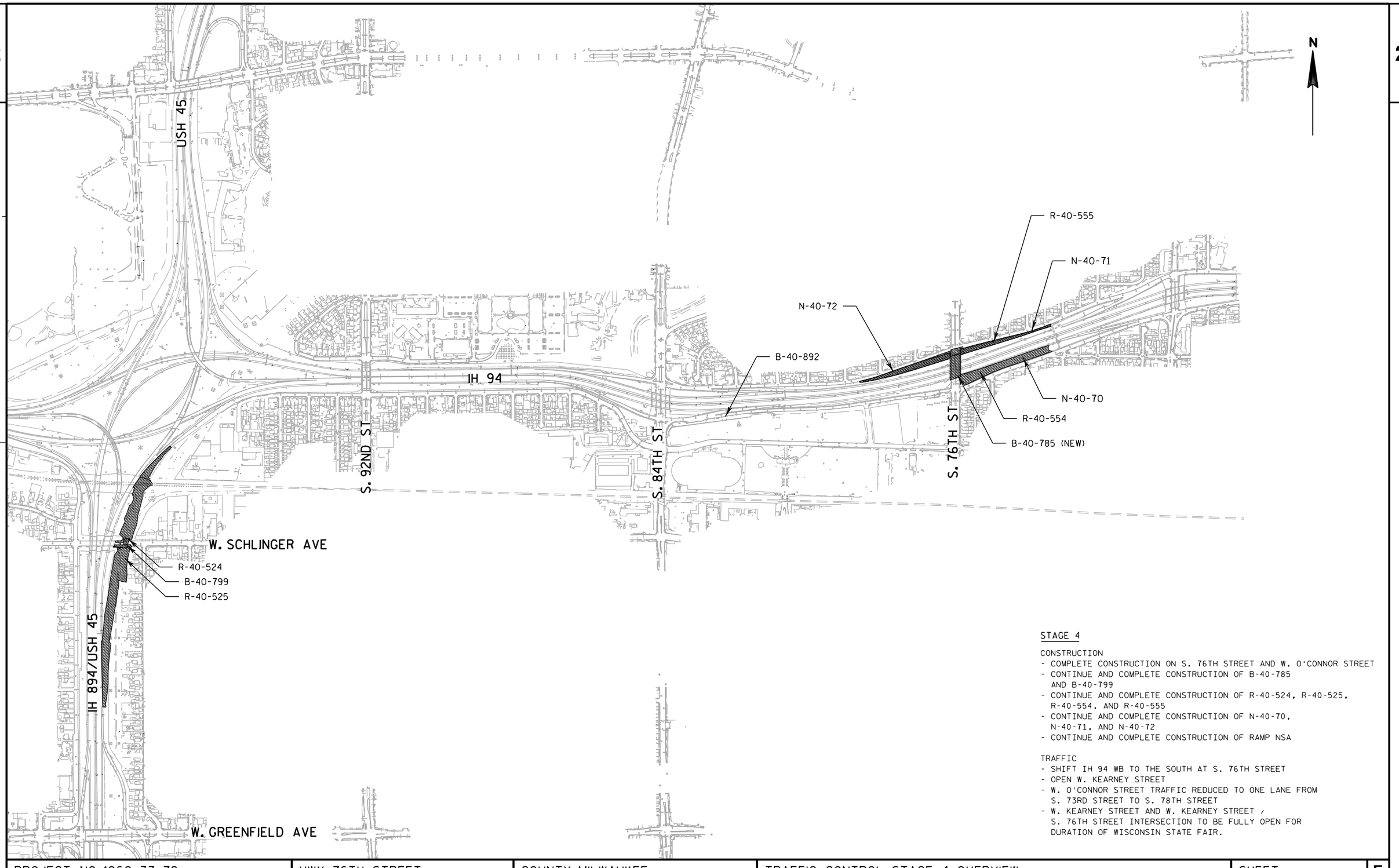
PILE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 3 CONSTRUCTION	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026604_s3.dgn PLOT DATE : 30-APR-2013 00:41 PLOT BY : MSCDYB PLOT NAME : 026604_s3 PLOT SCALE : 100:1

WISDOT/CADDS SHEET 42

2



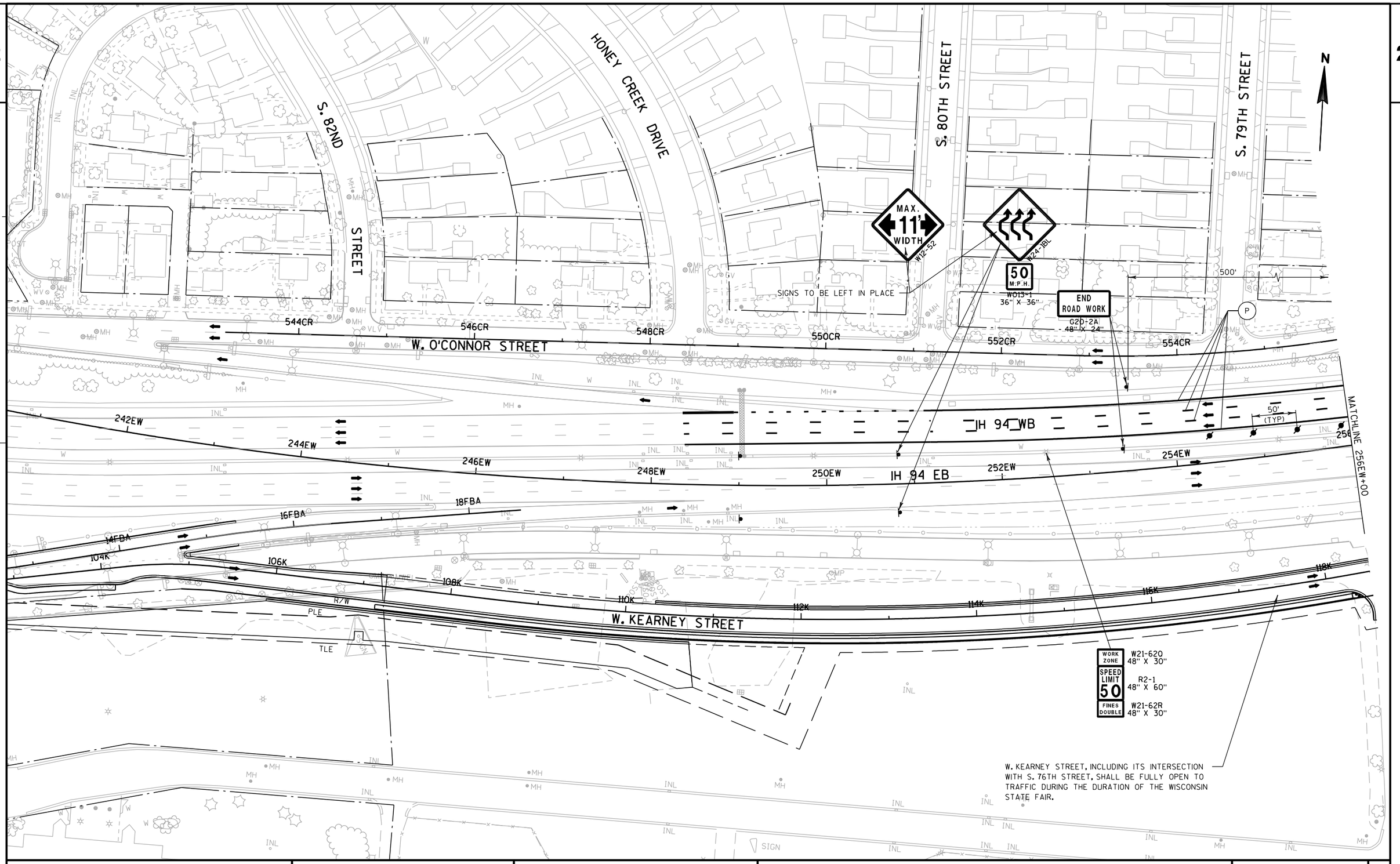
STAGE 4

CONSTRUCTION
- COMPLETE CONSTRUCTION ON S. 76TH STREET AND W. O'CONNOR STREET
- CONTINUE AND COMPLETE CONSTRUCTION OF B-40-785 AND B-40-799
- CONTINUE AND COMPLETE CONSTRUCTION OF R-40-524, R-40-525, R-40-554, AND R-40-555
- CONTINUE AND COMPLETE CONSTRUCTION OF N-40-70, N-40-71, AND N-40-72
- CONTINUE AND COMPLETE CONSTRUCTION OF RAMP NSA

TRAFFIC
- SHIFT IH 94 WB TO THE SOUTH AT S. 76TH STREET
- OPEN W. KEARNEY STREET
- W. O'CONNOR STREET TRAFFIC REDUCED TO ONE LANE FROM S. 73RD STREET TO S. 78TH STREET
- W. KEARNEY STREET AND W. KEARNEY STREET / S. 76TH STREET INTERSECTION TO BE FULLY OPEN FOR DURATION OF WISCONSIN STATE FAIR.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	TRAFFIC CONTROL STAGE 4 OVERVIEW	SHEET	E

2



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 4 CONSTRUCTION	SHEET	E

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 4 CONSTRUCTION	SHEET	E

2

S. 74TH ST

S. 73RD STREET

W. DIXON STREET

S. 72ND STREET

S. 71ST STREET

PKNG

N

ROAD WORK AHEAD W20-1

ROAD WORK AHEAD W20-1

W04-2

LEFT LANE CLOSED AHEAD W20-5

ROAD WORK AHEAD W20-1

350'

350'

350'

ONE WAY R6-2R 24" X 30"

W5-52L 12" X 36"

W01-6 48" X 24"

W01-6 48" X 24"

ONE WAY R6-2R 24" X 30"

LEFT SHOULDER CLOSED W21-5A

572CR

574CR

576CR

578CR

580CR

582CR

W. O'CONNOR ST

50' (TYP)

25' (TYP)

12'

12'

MATCHLINE 271EW+00

272EW

274EW

276EW

278EW

280EW

282EW

284EW

50' (TYP)

50' (TYP)

10' (TYP)

CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE SEE PLAN DETAILS

IH 94 WB

IH 94 EB

134K

136K

138K

140K

142K

W. KEARNEY STREET

END ROAD WORK G20-2A 48" X 24"

W04-1

W01-6 48" X 24"

W. ADLER STREET

S. 70TH STREET

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	STAGE 4 CONSTRUCTION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\026703_s4.dgn PLOT DATE : 07-JUN-2013 10:06 PLOT BY : MSCSRM PLOT NAME : 026703_s4 PLOT SCALE : 100:1

2

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

LEGEND

- EXISTING SIGN POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- FIXED MESSAGE SIGN NUMBER
- DETOUR ROUTE
- WEST — EXISTING SIGN
- COVER SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- WORK ZONE

N

S. 84TH STREET

GLENVIEW AVENUE

W. BLUEMOUND ROAD

W. NATIONAL AVENUE

W. GREENFIELD AVENUE

IH 94

SEE STAGING PLANS FOR ROAD CLOSURE DETAILS

S. 76TH STREET

ROAD CLOSED

W. MAIN STREET

W. KEARNEY STREET

W. O'CONNOR STREET

W. WISCONSIN AVENUE

S. 70TH STREET

S. 68TH STREET

1 — M4-8 24" X 12" DETOUR / M03-1 24" X 12" NORTH / 76TH ST / 902

2 — M4-8A 24" X 18" END DETOUR / M03-1 24" X 12" NORTH / 76TH ST / 902

3 — M4-8 24" X 12" DETOUR / M03-3 24" X 12" SOUTH / 76TH ST / 902

4 — M4-8A 24" X 18" END DETOUR / M03-3 24" X 12" SOUTH / 76TH ST / 902

5 — DETOUR AHEAD W20-2 / 76TH ST / 902

A — M06-1 21" X 21"

B — M05-1R 21" X 21"

C — M06-1 21" X 21"

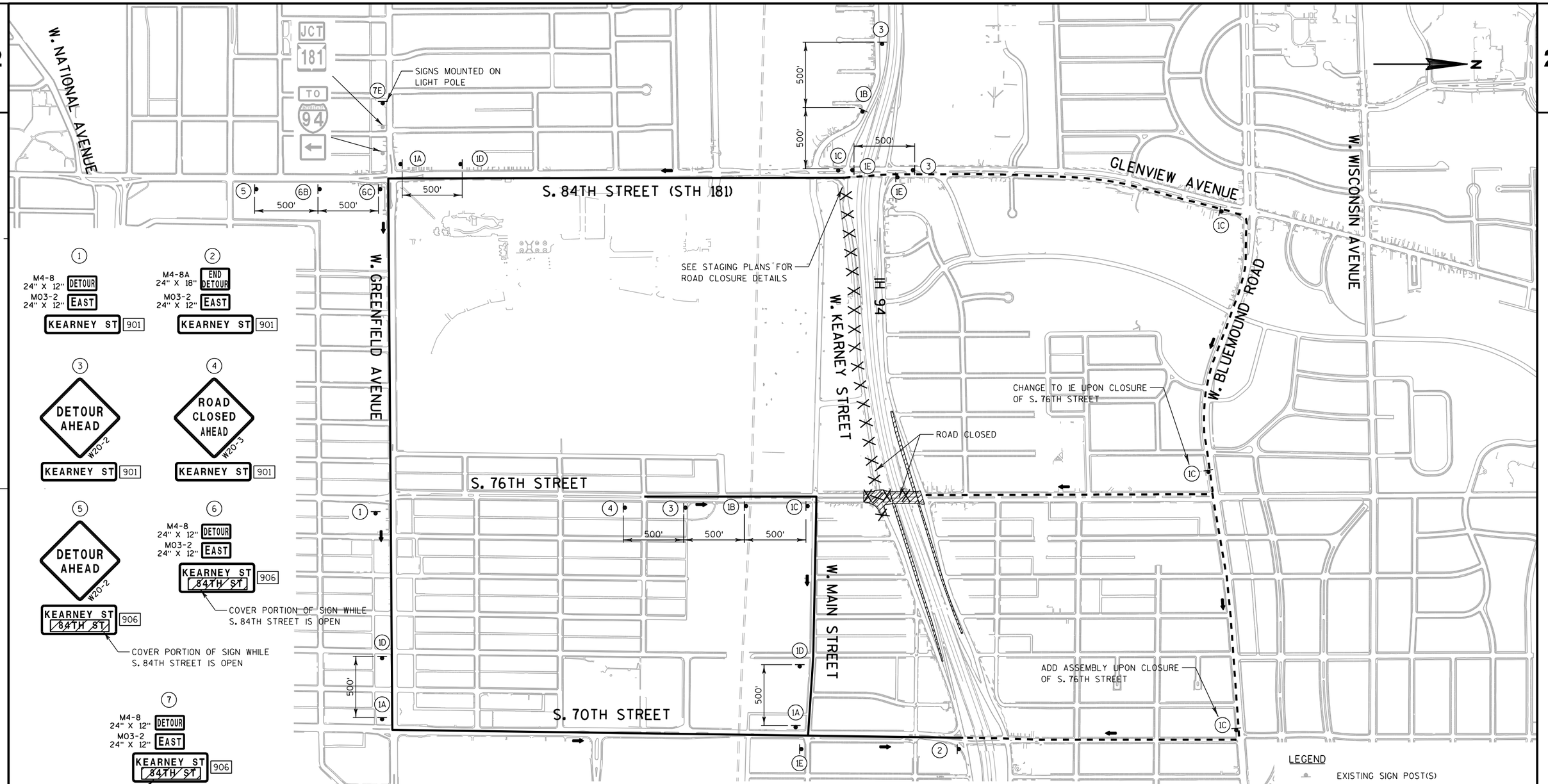
D — M05-1L 21" X 21"

E — M06-1 21" X 21"

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - 76TH STREET NB/SB (STAGES 1D - 4)	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\027001_dt.dgn PLOT DATE : 30-APR-2013 00:52 PLOT BY : MSCDYB PLOT NAME : 027001_dt PLOT SCALE : 800:1

WISDOT/CADDS SHEET 42



GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

LEGEND

- EXISTING SIGN POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- FIXED MESSAGE SIGN NUMBER
- DETOUR ROUTE
- WEST EXISTING SIGN
- COVER SIGN
- XXX CLOSURE
- TRAFFIC FLOW ARROW
- WORK ZONE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - KEARNEY STREET (STAGES 1A - 3)	SHEET E

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

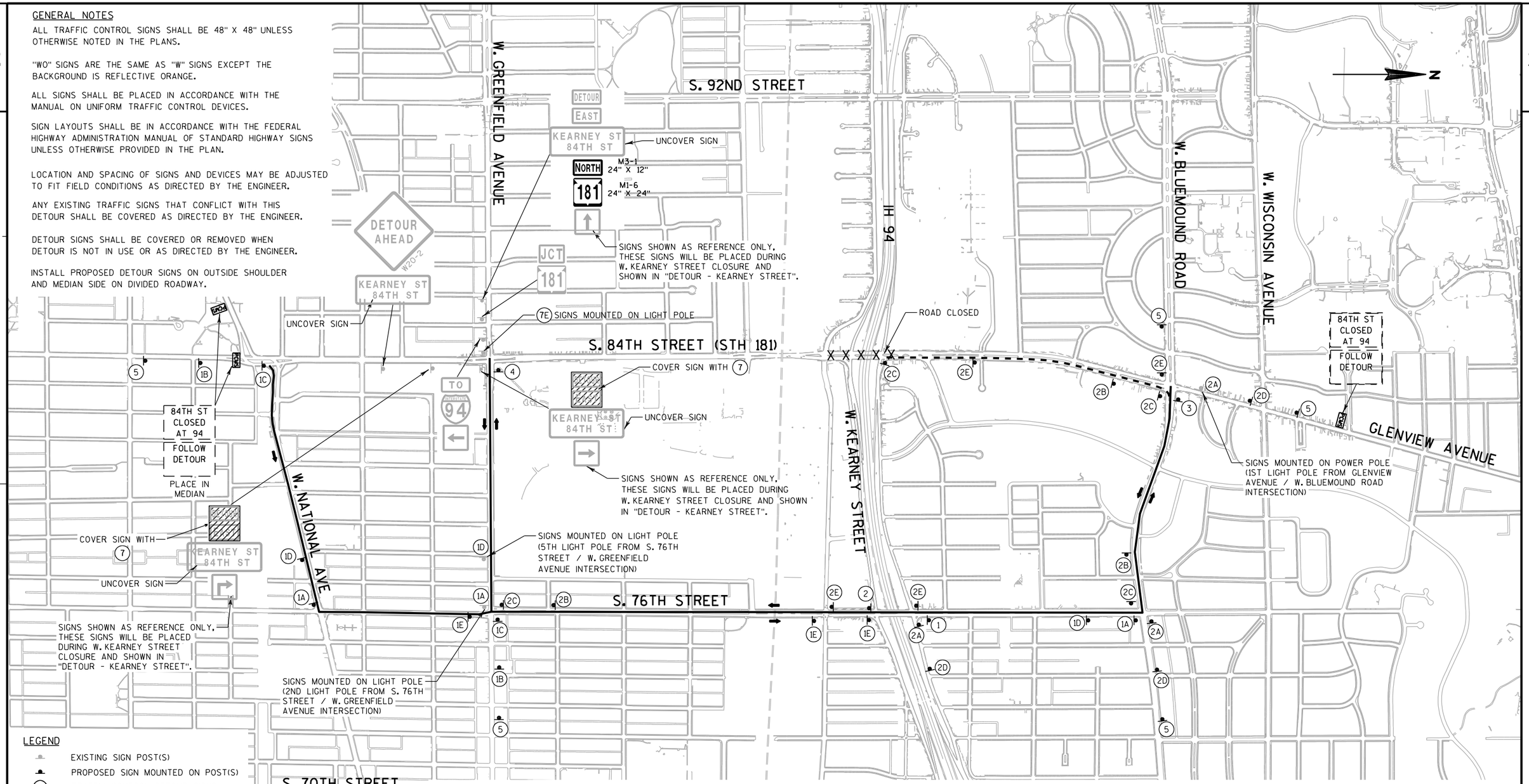
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.



LEGEND

- EXISTING SIGN POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- FIXED MESSAGE SIGN NUMBER
- DETOUR ROUTE
- WEST — EXISTING SIGN
- COVER SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- WORK ZONE
- PCMS — TRAFFIC CONTROL SIGNS PCMS

(1) M4-8 24" X 12" DETOUR; M3-1 24" X 12" NORTH; M1-6 24" X 24" 181; 84TH ST 903

(2) M4-8 24" X 12" DETOUR; M3-3 24" X 12" SOUTH; M1-6 24" X 24" 181; 84TH ST 903; STATE FAIR PETIT CTR 907

(3) M4-8A 24" X 18" END DETOUR; M3-1 24" X 12" NORTH; M1-6 24" X 24" 181; 84TH ST 903

(4) M4-8A 24" X 18" END DETOUR; M3-3 24" X 12" SOUTH; M1-6 24" X 24" 181; 84TH ST 903

(5) DETOUR AHEAD W20-2; 84TH ST 903

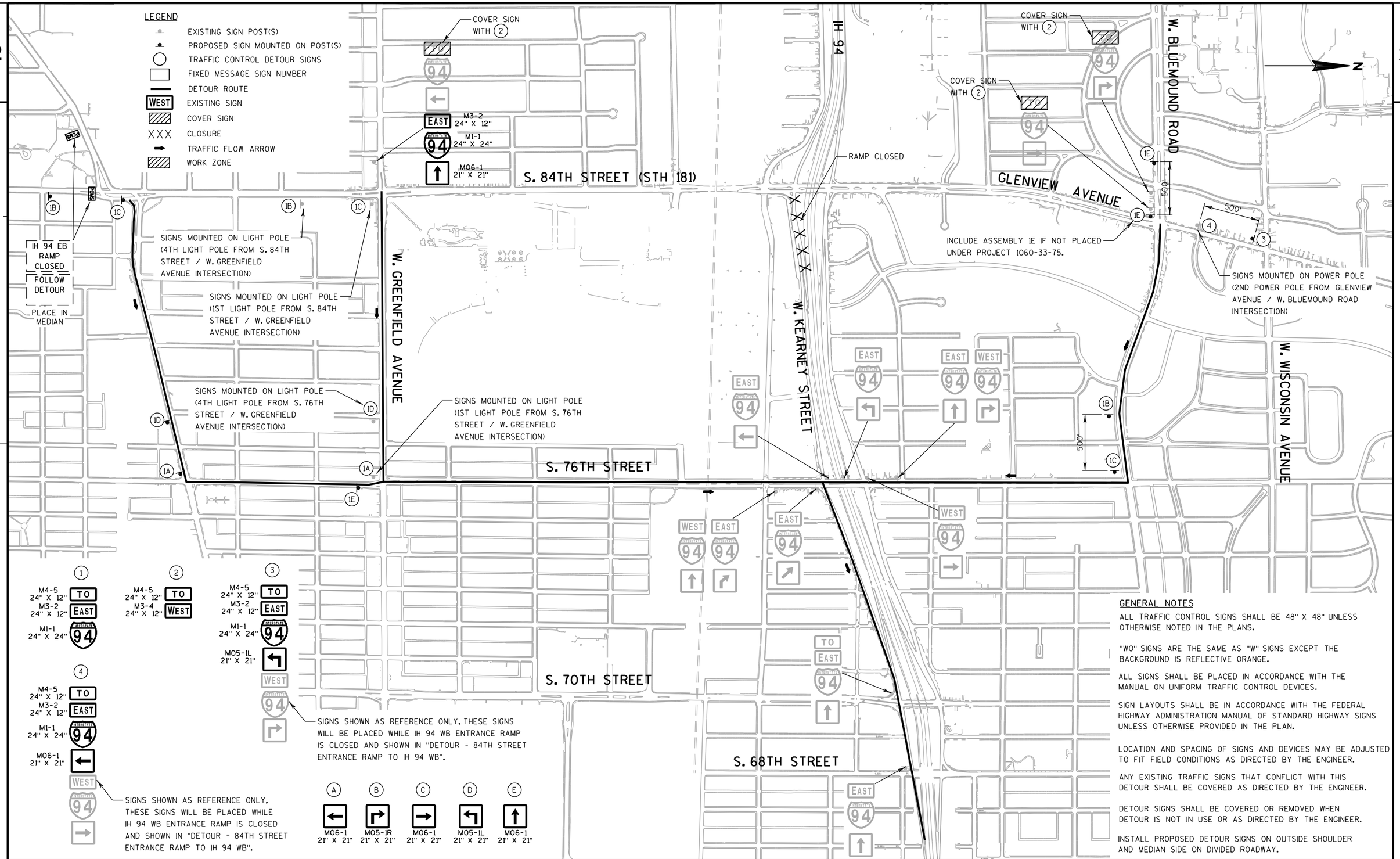
(7) M4-8 24" X 12" DETOUR; M3-1 24" X 12" NORTH; M1-6 24" X 24" 181

(A) M06-1 21" X 21"; (B) M05-1R 21" X 21"; (C) M06-1 21" X 21"; (D) M05-1L 21" X 21"; (E) M06-1 21" X 21"

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - 84TH STREET (STAGE 1C)	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\027003_dt.dgn PLOT DATE : 30-APR-2013 01:04 PLOT BY : MSCDYB PLOT NAME : 027003_dt PLOT SCALE : 1000:1

WISDOT/CADDS SHEET 42



GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - 84TH ST ENTRANCE RAMP TO IH 94 EB (STAGES 1A - 1D)	SHEET	E

LEGEND

- EXISTING SIGN POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- FIXED MESSAGE SIGN NUMBER
- DETOUR ROUTE
- WEST — EXISTING SIGN
- COVER SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- WORK ZONE

M4-5 24" X 12" TO / M3-4 24" X 12" WEST / M1-1 24" X 24" INTERSTATE 94 / M06-1 21" X 21"

M4-5 24" X 12" TO / M3-4 24" X 12" WEST / M1-1 24" X 24" INTERSTATE 94 / M05-1R 21" X 21"

M4-5 24" X 12" TO / M3-4 24" X 12" WEST / M1-1 24" X 24" INTERSTATE 94 / M06-1 21" X 21"

SIGNS SHOWN AS REFERENCE ONLY, THESE SIGNS WILL BE PLACED WHILE IH 94 EB ENTRANCE RAMP IS CLOSED AND SHOWN IN "DETOUR - 84TH STREET ENTRANCE RAMP TO IH 94 EB".

TO EAST / INTERSTATE 94

M3-4 24" X 12" WEST / M1-1 24" X 24" / M05-1R 21" X 21"

M3-4 24" X 12" WEST / M1-1 24" X 24" / M06-1 21" X 21"

SIGNS SHOWN AS REFERENCE ONLY, THESE SIGNS WILL BE PLACED WHILE IH 94 EB ENTRANCE RAMP IS CLOSED AND SHOWN IN "DETOUR - 84TH STREET ENTRANCE RAMP TO IH 94 EB".

N

W. WISCONSIN AVENUE

W. BLUEMOUND ROAD

GLENVIEW AVENUE

500'

500'

S. 108TH STREET (STH 100)

USH 45

S. 76TH STREET

COVER SIGN

RAMP CLOSED

S. 84TH STREET

IH 94

S. 92ND STREET

W. SCHLINGER AVENUE

COVER SIGN WITH (E)

COVER SIGN WITH (E)

IH 894 / USH 45

(1) M4-5 24" X 12" TO / M3-4 24" X 12" WEST / M1-1 24" X 24" INTERSTATE 94

(2) M4-5 36" X 18" TO / M3-4 36" X 18" WEST / M1-1 36" X 36" INTERSTATE 94

(A) M06-1 21" X 21"

(B) M05-1R 21" X 21"

(C) M06-1 21" X 21"

(D) M05-1L 21" X 21"

(E) M06-1 21" X 21"

(F) M5-2R 30" X 30"

(G) M6-2 30" X 30"

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - 84TH ST ENTRANCE RAMP TO IH 94 WB (STAGES 1A - 1D)	SHEET	E

2

LEGEND

- EXISTING SIGN POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- FIXED MESSAGE SIGN NUMBER
- DETOUR ROUTE
- WEST — EXISTING SIGN
- COVER SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- WORK ZONE

N

GLENVIEW AVENUE

W. BLUEMOUND ROAD

S. 84TH STREET

S. 76TH STREET

S. 70TH STREET

S. 68TH STREET

W. O'CONNOR STREET

IH 94

W. KEARNEY ST

W. MAIN STREET

W. SCHLINGER AVENUE

RAMP CLOSED

M4-5 24" X 12"
M3-4 24" X 12"
M1-1 24" X 24"
M06-1 21" X 21"
TO WEST
WEST
94

M3-4 24" X 12"
M1-1 24" X 24"
M06-1 21" X 21"
WEST
94

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - 70TH ST ENTRANCE RAMP TO IH 94 WB (STAGES 2-4)	SHEET	E

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

(1)
M4-5 36" X 18" TO
M1-6 36" X 36" 181
84TH ST 904
STATE FAIR PETTIT CTR 908

(2)
M4-5 24" X 12" TO
M1-6 24" X 24" 181
84TH ST 903
STATE FAIR PETTIT CTR 907

(3)
M4-5 36" X 18" TO
M3-1 36" X 18" NORTH
M1-6 36" X 36" 181
84TH ST 904

(4)
M4-5 24" X 12" TO
M3-1 24" X 12" NORTH
M1-6 24" X 24" 181
84TH ST 903

(5)
M4-5 24" X 12" TO
M3-3 24" X 12" SOUTH
M1-6 24" X 24" 181
84TH ST 903
STATE FAIR PETTIT CTR 907

* D9-2 24" X 24"
** D9-2 36" X 36"
ADD D9-2 SIGN TO ASSEMBLY SHOWN

(A) M06-1 21" X 21"
(B) M05-1R 21" X 21"
(C) M06-1 21" X 21"
(D) M05-1L 21" X 21"
(E) M06-1 21" X 21"
(F) M05-2R 21" X 21"
(G) M06-2 21" X 21"
(H) M05-2L 21" X 21"
(I) M06-1 30" X 30"
(J) M05-1R 30" X 30"
(K) M06-1 30" X 30"
(L) M05-1L 30" X 30"
(M) M06-1 30" X 30"
(N) M05-2R 30" X 30"
(R) M06-2 30" X 30"
(P) M05-2L 30" X 30"

LEGEND
- EXISTING SIGN POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- FIXED MESSAGE SIGN NUMBER
- DETOUR ROUTE
- WEST EXISTING SIGN
- COVER SIGN
- XXX CLOSURE
- TRAFFIC FLOW ARROW
- WORK ZONE
- PCMS TRAFFIC CONTROL SIGNS PCMS

N

W. WISCONSIN AVENUE
W. BLUEMOUND ROAD
USH 45
S. 108TH STREET (STH 100)
GLENVIEW AVENUE
JCT 181
S. 76TH STREET
S. 70TH STREET
84TH ST EXIT CLOSED FOLLOW USH 45 SOUTH
EXISTING SIGNING IN PLACE (NOT SHOWN)
IH 94
RAMP CLOSED
W. SCHLINGER AVENUE
S. 92ND STREET
S. 84TH STREET (STH 181)
W. GREENFIELD AVENUE
IH 894/ USH 45
500'

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - IH 94 EB EXIT RAMP TO 84TH STREET (STAGES 1B/1C)	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\027007_dt.dgn PLOT DATE : 30-APR-2013 01:25 PLOT BY : MSCDYB PLOT NAME : 027007_dt PLOT SCALE : 1250:1

GENERAL NOTES

ALL TRAFFIC CONTROL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED IN THE PLANS.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS REFLECTIVE ORANGE.

ALL SIGNS SHALL BE PLACED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION MANUAL OF STANDARD HIGHWAY SIGNS UNLESS OTHERWISE PROVIDED IN THE PLAN.

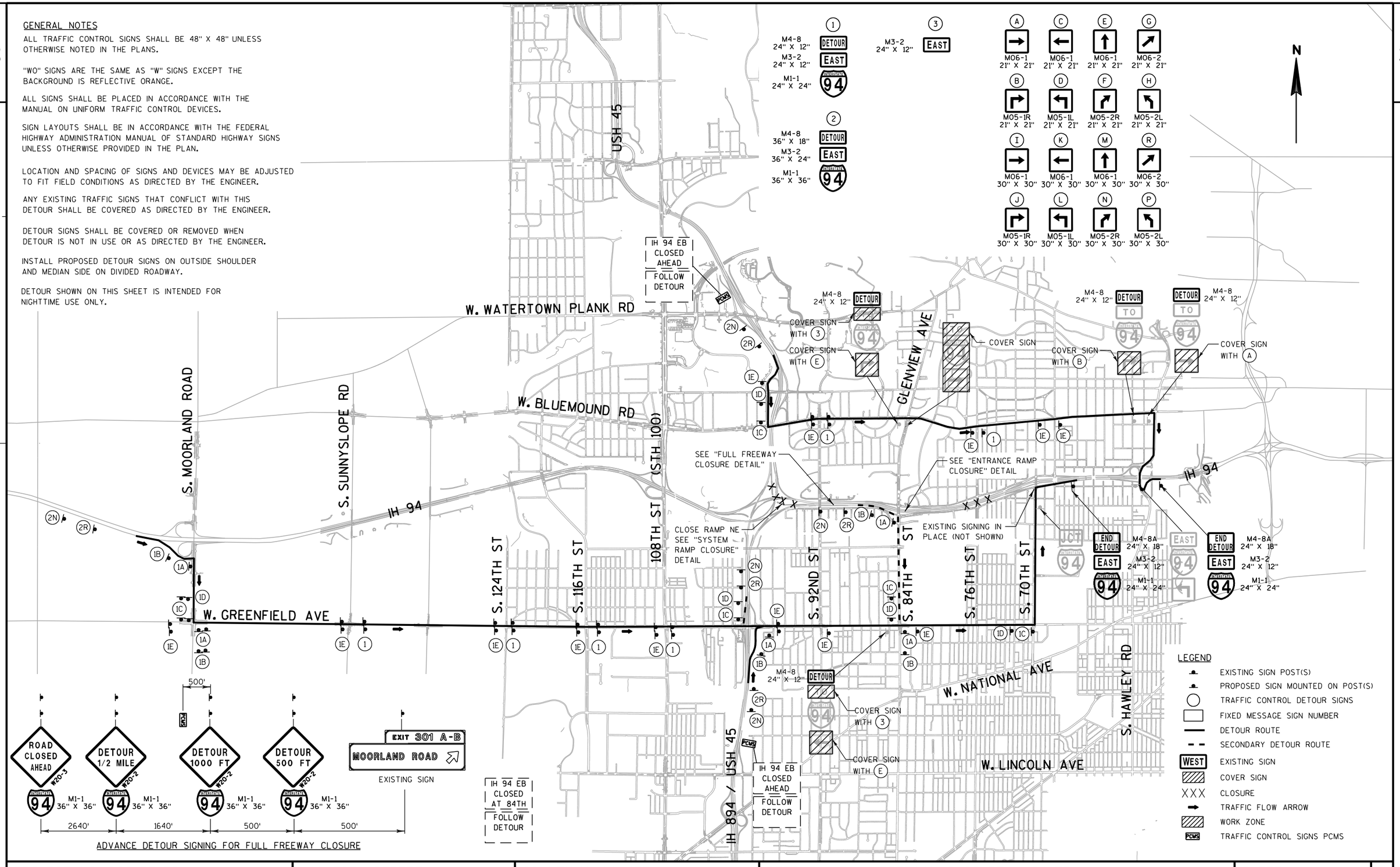
LOCATION AND SPACING OF SIGNS AND DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS DETOUR SHALL BE COVERED AS DIRECTED BY THE ENGINEER.

DETOUR SIGNS SHALL BE COVERED OR REMOVED WHEN DETOUR IS NOT IN USE OR AS DIRECTED BY THE ENGINEER.

INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

DETOUR SHOWN ON THIS SHEET IS INTENDED FOR NIGHTTIME USE ONLY.



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - FULL FREEWAY CLOSURE IH 94 EB	SHEET	E

2

GENERAL NOTES

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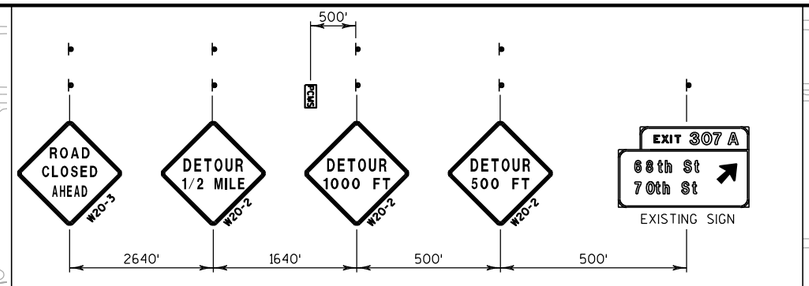
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DETOUR SHOWN ON THIS SHEET IS INTENDED FOR NIGHTTIME USE ONLY.



ADVANCE DETOUR SIGNING FOR FULL FREEWAY CLOSURE

N

W. WISCONSIN AVENUE

W. BLUEMOUND ROAD

M4-8A 24" X 18" END DETOUR
M3-4 24" X 12" WEST
M1-1 24" X 24" 94

M06-1 21" X 21"

SEE "ENTRANCE RAMP CLOSURE" DETAIL

SEE "ADVANCE DETOUR SIGNING FOR FULL FREEWAY CLOSURE" DETAIL ABOVE

SEE "ENTRANCE RAMP CLOSURE" DETAIL

SEE "FULL FREEWAY CLOSURE DETAIL"

SEE "ENTRANCE RAMP CLOSURE" DETAIL

IH 94

W. O'CONNOR ST

W. KEARNEY ST

XXXXXX

ROAD CLOSED

S. 84TH ST

S. 76TH ST

S. 70TH ST

S. 68TH ST

S. 64TH ST

S. HAWLEY RD

N. MITCHELL BLVD

1E 1E 1E 2R 2N

LEGEND

- EXISTING SIGN POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- FIXED MESSAGE SIGN NUMBER
- DETOUR ROUTE
- WEST — EXISTING SIGN
- COVER SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- WORK ZONE
- PCMS — TRAFFIC CONTROL SIGNS PCMS

(1)
M4-8 24" X 12" DETOUR
M3-4 24" X 12" WEST
M1-1 24" X 24" 94

(2)
M4-8 36" X 18" DETOUR
M3-4 36" X 24" WEST
M1-1 36" X 36" 94

(A) M06-1 21" X 21"
(C) M06-1 21" X 21"
(E) M06-1 21" X 21"
(G) M06-2 21" X 21"
(B) M05-1R 21" X 21"
(D) M05-1L 21" X 21"
(F) M05-2R 21" X 21"
(H) M05-2L 21" X 21"
(I) M06-1 30" X 30"
(K) M06-1 30" X 30"
(M) M06-1 30" X 30"
(R) M06-2 30" X 30"
(J) M05-1R 30" X 30"
(L) M05-1L 30" X 30"
(N) M05-2R 30" X 30"
(P) M05-2L 30" X 30"

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - FULL FREEWAY CLOSURE IH 94 WB	SHEET	E

2

(1) M4-8 24" X 12" DETOUR SCHLINGER AVE 905

(2) M4-8A 24" X 18" END DETOUR SCHLINGER AVE 905

(3) DETOUR AHEAD W20-2

(4) ROAD CLOSED AHEAD W20-3

(A) M06-1 21" X 21"

(B) M05-1R 21" X 21"

(C) M06-1 21" X 21"

(D) M05-1L 21" X 21"

(E) M06-1 21" X 21"

S. 103RD STREET

S. 101ST STREET

S. 100TH STREET

ROAD CLOSED

IH 894 / USH 45

S. 98TH STREET

S. 97TH STREET

S. 96TH STREET

W. SCHLINGER AVENUE

W. GREENFIELD AVENUE

IH 94

N

500'

300'

500'

REFER TO S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR ADDITIONAL SIGNING AND TRAFFIC CONTROL DEVICES.

REFER TO S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR ADDITIONAL SIGNING AND TRAFFIC CONTROL DEVICES.

LEGEND

- EXISTING SIGN POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- FIXED MESSAGE SIGN NUMBER
- DETOUR ROUTE
- WEST EXISTING SIGN
- COVER SIGN
- XXX CLOSURE
- TRAFFIC FLOW ARROW
- WORK ZONE

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INSTALL PROPOSED DETOUR SIGNS ON OUTSIDE SHOULDER AND MEDIAN SIDE ON DIVIDED ROADWAY.

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - SCHLINGER AVENUE	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\027010_dt.dgn PLOT DATE : 30-APR-2013 01:56 PLOT BY : MSCDYB PLOT NAME : 027010_dt PLOT SCALE : 400:1

LEGEND

- EXISTING SIGN POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- TRAFFIC CONTROL DETOUR SIGNS
- FIXED MESSAGE SIGN NUMBER
- DETOUR ROUTE
- WEST — EXISTING SIGN
- COVER SIGN
- XXX — CLOSURE
- TRAFFIC FLOW ARROW
- WORK ZONE

W. BLUEMOUND ROAD

GLENVIEW AVENUE

HONEY CREEK PKWY

S. 84TH ST

S. 76TH STREET

S. 70TH STREET

S. 68TH STREET

W. DANA STREET

W. O'CONNOR STREET

IH 94

W. KEARNEY ST

W. MAIN STREET

1A 1D 1A 1D 1B 1C

EAST 94 INTERSTATE | NORTH 181 | WEST 94 INTERSTATE

ROAD CLOSED

DETOUR AHEAD W20-2

ROAD CLOSED AHEAD W20-3

WEST 94 INTERSTATE — M06-1 21" X 21"

(1)
M4-8 24" X 12" DETOUR
M3-4 24" X 12" WEST
M1-1 24" X 24" 94 INTERSTATE
909 O'CONNOR ST

(2)
M4-8A 24" X 18" END DETOUR
909 O'CONNOR ST

(A) M06-1 21" X 21"
(B) M05-1R 21" X 21"
(C) M06-1 21" X 21"
(D) M05-1L 21" X 21"
(E) M06-1 21" X 21"

GENERAL NOTES

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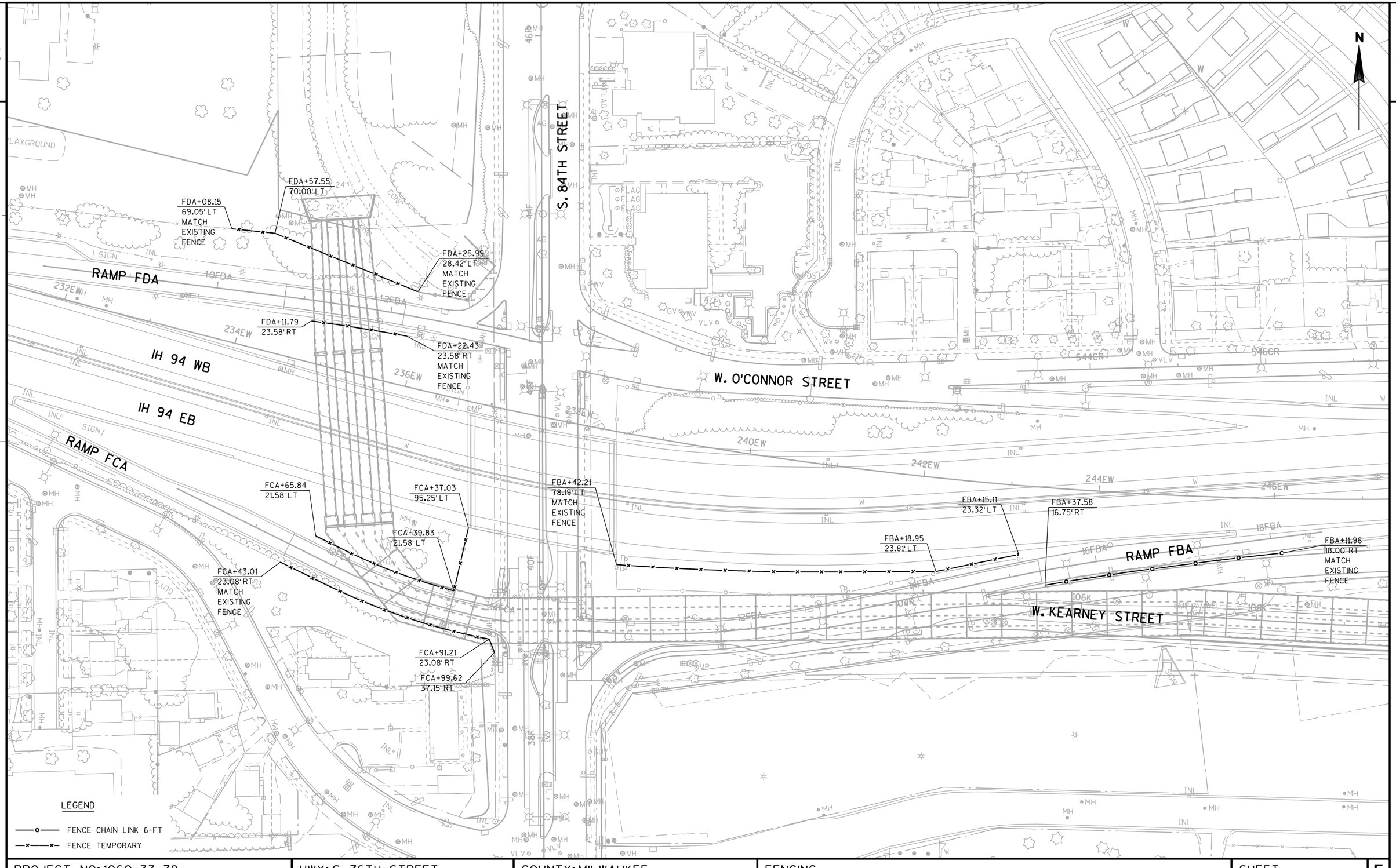
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	DETOUR - W. O'CONNOR STREET (STAGE 1)	SHEET E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\027011_dt.dgn PLOT DATE : 07-JUN-2013 10:09 PLOT BY : MSCSRM PLOT NAME : 027011_dt PLOT SCALE : 500:1

2



PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	FENCING	SHEET 331	E

2

2

N

S. 78TH STREET

S. 77TH STREET

S. 76TH STREET

S. 75TH STREET

W. O'CONNOR STREET

W. KEARNEY STREET

K+78.98
325.04' LT
MATCH PROPOSED
NOISE BARRIER

CR+31.00
47.11' RT
GATES CHAIN
LINK 8-FT

CR+33.18
58.46' RT

K+20.88
301.24' LT
MATCH PROPOSED
STRUCTURE

K+63.49
88.27' LT
MATCH
PROPOSED
STRUCTURE

K+58.55
87.50' LT

K+81.36
19.00' LT

K+75.79
27.38' LT
MATCH
EXISTING
FENCE

K+75.14
19.00' LT

CR+88.00
21.00' RT

CR+86.32
40.26' RT

CR+27.29
23.44' RT
MATCH PROPOSED
NOISE BARRIER

CR+83.59
24.90' RT

CR+75.00
33.90' RT
GATES CHAIN
LINK 8-FT

CR+56.52
53.25' RT

CR+49.19
53.69' RT
MATCH PROPOSED
STRUCTURE

K+80.03
97.03' LT
MATCH PROPOSED
STRUCTURE

K+86.85
95.27' LT

K+78.63
54.95' LT

K+94.36
20.00' LT
MATCH PROPOSED
NOISE BARRIER

K+90.00
30.21' LT
GATES CHAIN
LINK 8-FT

MATCHLINE 269EW+00

LEGEND

FENCE CHAIN LINK 6-FT

FENCE TEMPORARY

PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	FENCING	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\027102_fn.dgn PLOT DATE : 30-APR-2013 01:59 PLOT BY : MSCDYB PLOT NAME : 027102_fn PLOT SCALE : 100:1

2

2

S. 75TH STREET

S. 74TH STREET

S. 73RD STREET

S. 72ND STREET

S. 71ST STREET

W. DIXON STREET

W. O'CONNOR STREET

W. KEARNEY STREET

W. ADLER STREET

IH 94 WB

IH 94 EB

CR+20.00
16.91' RT
MATCH EXISTING
BARRIER

CR+19.66
23.47' RT

CR+06.11
29.83' RT
MATCH EXISTING
FENCE

MATCHLINE 269EW+00

570CR 572CR 574CR 576CR 578CR 580CR 582CR

270EW 272EW 274EW 276EW 278EW 280EW 282EW 284EW

138K 140K 142K

LEGEND

FENCE CHAIN LINK 6-FT

FENCE TEMPORARY

PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	FENCING	SHEET	E

2

S. 100TH STREET

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

RAMP NSA

MATCHLINE 20NSA+00

NSA+36.95
30.36' RT

NSA+37.50
57.86' RT
MATCH
EXISTING
FENCE

S. 98TH STREET

LEGEND

FENCE CHAIN LINK 6-FT

FENCE TEMPORARY

PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	FENCING	SHEET	E

2

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

MATCHLINE 20NSA+00

RAMP NSA

22NSA

24NSA

26NSA

28NSA

30NSA

32NSA

34NSA

24XM

26XM

274NS

276NS

278NS

280NS

282NS

284NS

286NS

NSA+40.55
13.95' RT
MATCH
PROPOSED
RETAINING
WALL

SCH+02.37
34.58' RT

SCH+02.37
65.68' RT
MATCH
EXISTING
FENCE

SCH+74.56
34.58' RT
MATCH
EXISTING
RETAINING
WALL

SCH+15.11
35.58' RT
MATCH
PROPOSED
RETAINING
WALL

SCH+35.48
34.58' RT
GATES CHAIN
LINK 22-FT

SCH+02.79
70.38' LT
MATCH EXISTING
FENCE

SCH+96.59
34.58' LT

SCH+84.34
34.58' LT
MATCH EXISTING
RETAINING WALL

SCH+68.96
68.96' LT
MATCH EXISTING
RETAINING WALL

SCH+83.67
68.90' LT
GATES CHAIN
LINK 22-FT

SCH+98.38
68.85' LT
MATCH EXISTING
FENCE

NSA+91.25
102.38' RT
MATCH EXISTING
FENCE

NSA+38.44
85.18' LT

NSA+38.44
27.00' LT

NSA+95.63
16.04' RT

NSA+13.03
88.53' RT

NSA+13.64
32.88' LT

NSA+14.94
27.00' LT

NSA+27.41
23.51' RT

NSA+35.97
51.51' RT
MATCH EXISTING
FENCE

5285CH

5305CH

5325CH

5345CH

5365CH

S. 98TH STREET

W. SCHLINGER AVENUE

HANK AARON STATE TRAIL

TILE 4663

LEGEND

FENCE CHAIN LINK 6-FT

FENCE TEMPORARY

PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	FENCING	SHEET	E

2

N

T 7 N
28 28
33 33
R 21 E

X = 577144.57
Y = 296937.87

50F

N0°11'27"W

2689'

S00°11'27"E

45F

1/4 LINE

R/L F

543CR+16.31 W. O'CONNOR STREET =
242EW+94.75 IH 94, 129.29' LT
X = 577689.21
Y = 295613.09

N88°20'03"E

545CR

550CR

R/L CR

PC
CR1

555CR

CURVE CR1

PI
CR1

PT
CR1

560CR

N70°44'52"E

240EW

245EW

250EW

CURVE EW5

R/L EW

255EW

PT
EW5

260EW

N72°47'04"E

39F+89.50.14 S. 84TH STREET =
237EW+59.96 IH 94, 0.00' RT
X = 577149.16
Y = 295561.05

PI
K1

PC
K1

105K

PT
K1

S86°28'56"E

110K

CURVE K1

N80°40'59"E

PC
K2

PI
EW5

PI
K2

115K

CURVE K2

R/L K

120K

PT
K2

N72°21'14"E

PC
K3

PI
K3

CURVE K3

PT
K3

N81°36'21"E

125K

22TL+06.43 S. 76TH STREET =
264EW+90.52 IH 94
X = 579833.95
Y = 295797.05

20TL

CURVE
K4

PC
K4

PI
K4

PT
K4

N76°36'21"E

N65°29'35"E

130K

26TL+83.75 S. 76TH STREET
X = 579832.93
Y = 296274.37

T 7 N
28 27
33 34
R 21 E

X = 579831.37
Y = 296998.79

S00°07'23"E

2654.65'

SECTION LINE

N0°07'23"W

25TL

END PROJECT 1060-33-78
23TL+53.00
X = 579833.64
Y = 295943.61

PI 564CR+55.14
X = 579780.35
Y = 295950.42

565CR

N76°12'10"E

PI 127K+00.26 W. KEARNEY STREET =
20TL+01.35 S. 76TH STREET
X = 579834.39
Y = 295591.96

N0°07'23"W

R/L TL

BEGIN PROJECT 1060-33-78
18TL+70.00
X = 579834.67
Y = 295460.62

15TL+09.76 S. 76TH STREET
X = 579835.45
Y = 295100.38

102K+68.14 W. KEARNEY STREET =
240EW+74.78 IH 94, 195.61' RT
X = 577433.38
Y = 295314.54

40F

35F

T 7 N
33 33
33 33
R 21 E

X = 577153.53
Y = 294248.88

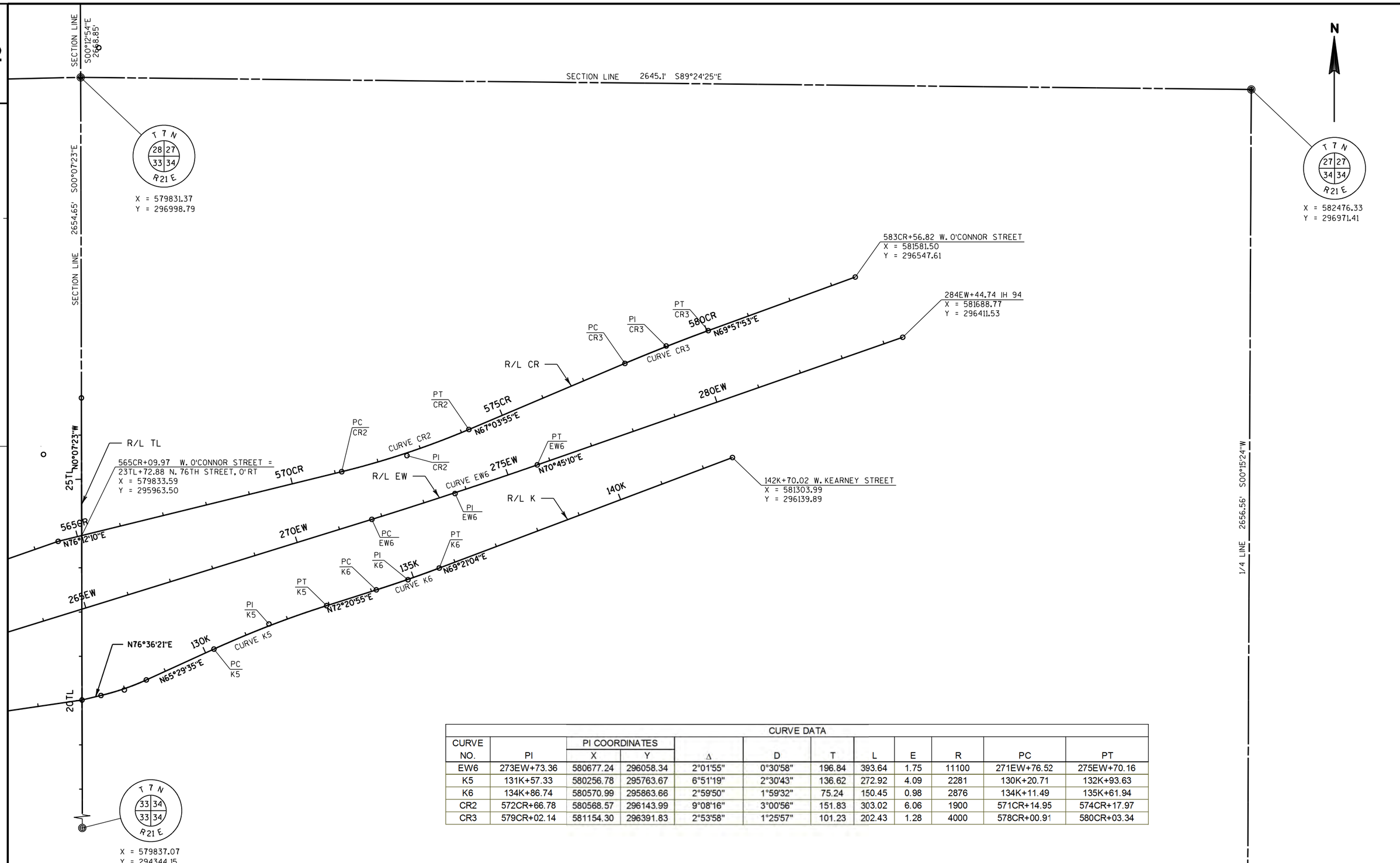
T 7 N
33 34
33 34
R 21 E

X = 579837.07
Y = 294344.15

CURVE DATA

CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
EW5	248EW+40.53	578195.08	295289.25	31°30'38"	1°14'44"	1297.79	2529.83	179.57	4600	235EW+42.74	260EW+72.57
K1	104K+82.10	577644.51	295349.18	12°50'05"	11°57'42"	53.88	107.3	3.02	479	104K+28.22	105K+35.52
K2	114K+74.34	578635.34	295288.27	21°09'50"	1°42'04"	629.21	1244.07	58.27	3368	108K+45.13	120K+89.20
K3	122K+39.94	579378.58	295524.70	9°15'07"	4°46'29"	97.1	193.78	3.92	1200	121K+42.84	123K+36.61
K4	127K+98.68	579930.13	295614.76	11°06'46"	10°13'53"	54.48	108.61	2.64	560	127K+44.20	128K+52.82
CR1	555CR+44.32	578916.70	295648.79	17°35'11"	3°29'37"	253.68	503.38	19.50	1640	552CR+90.64	557CR+94.02

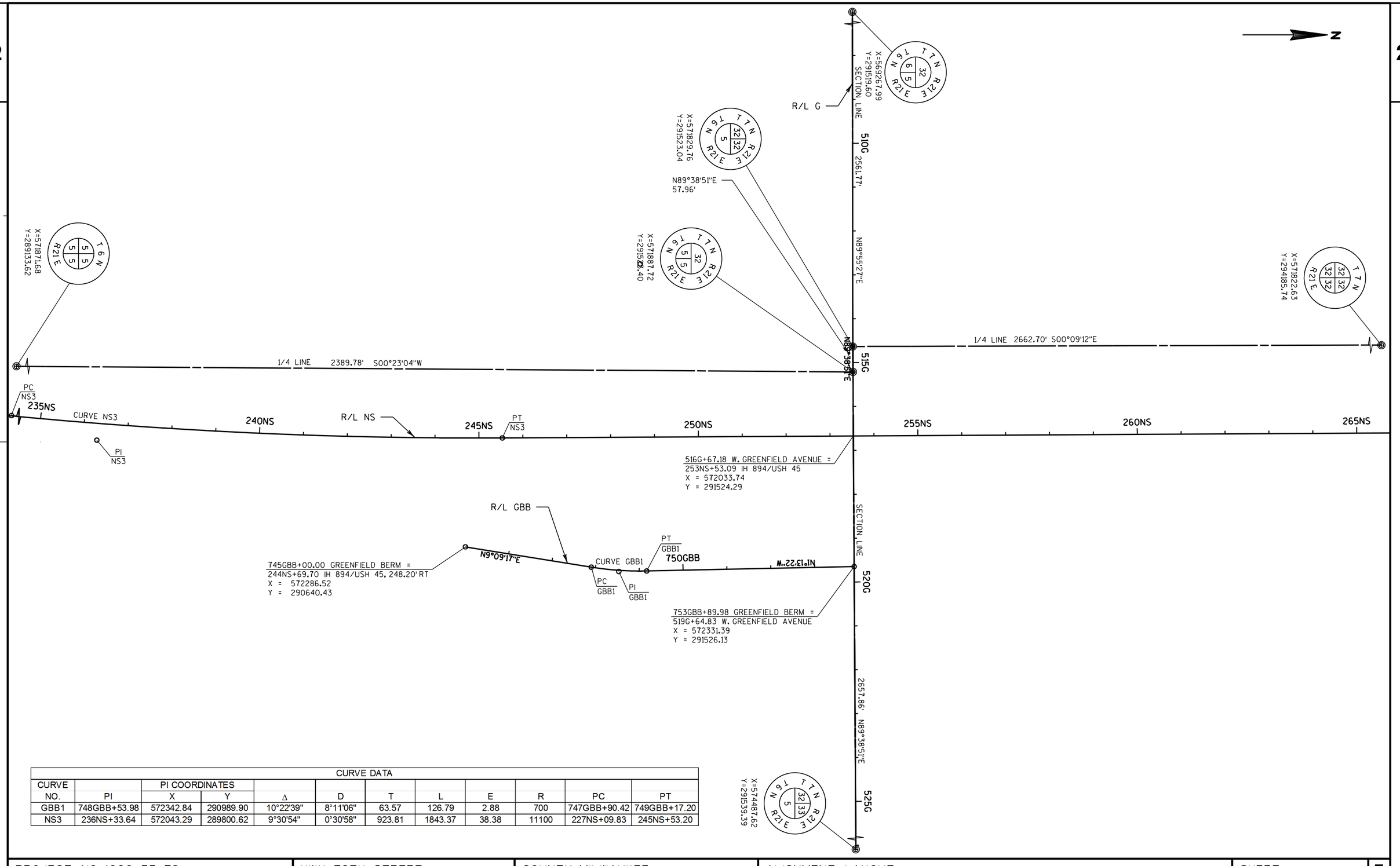
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E



CURVE DATA

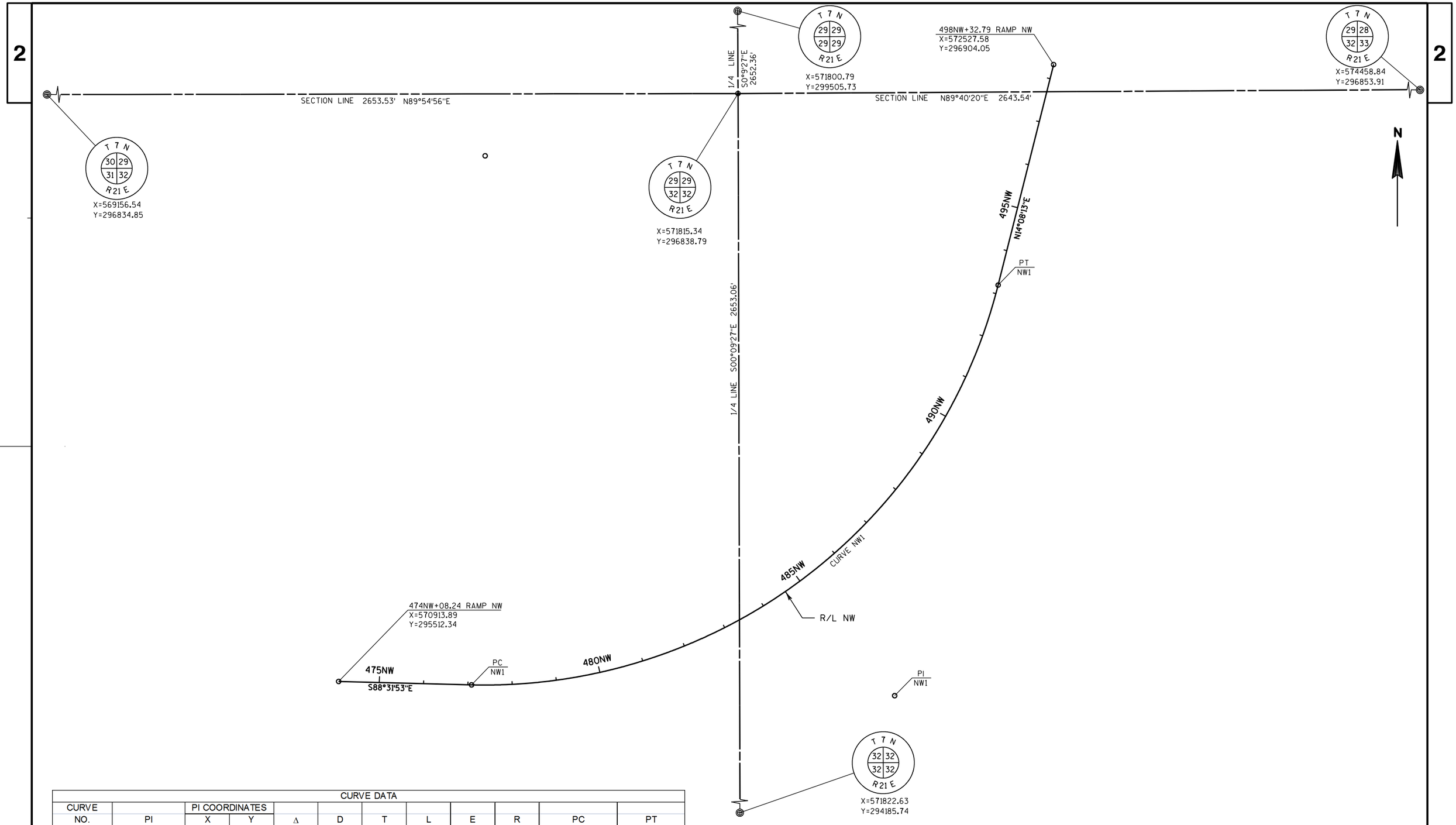
CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
EW6	273EW+73.36	580677.24	296058.34	2°01'55"	0°30'58"	196.84	393.64	1.75	11100	271EW+76.52	275EW+70.16
K5	131K+57.33	580256.78	295763.67	6°51'19"	2°30'43"	136.62	272.92	4.09	2281	130K+20.71	132K+93.63
K6	134K+86.74	580570.99	295863.66	2°59'50"	1°59'32"	75.24	150.45	0.98	2876	134K+11.49	135K+61.94
CR2	572CR+66.78	580568.57	296143.99	9°08'16"	3°00'56"	151.83	303.02	6.06	1900	571CR+14.95	574CR+17.97
CR3	579CR+02.14	581154.30	296391.83	2°53'58"	1°25'57"	101.23	202.43	1.28	4000	578CR+00.91	580CR+03.34

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E



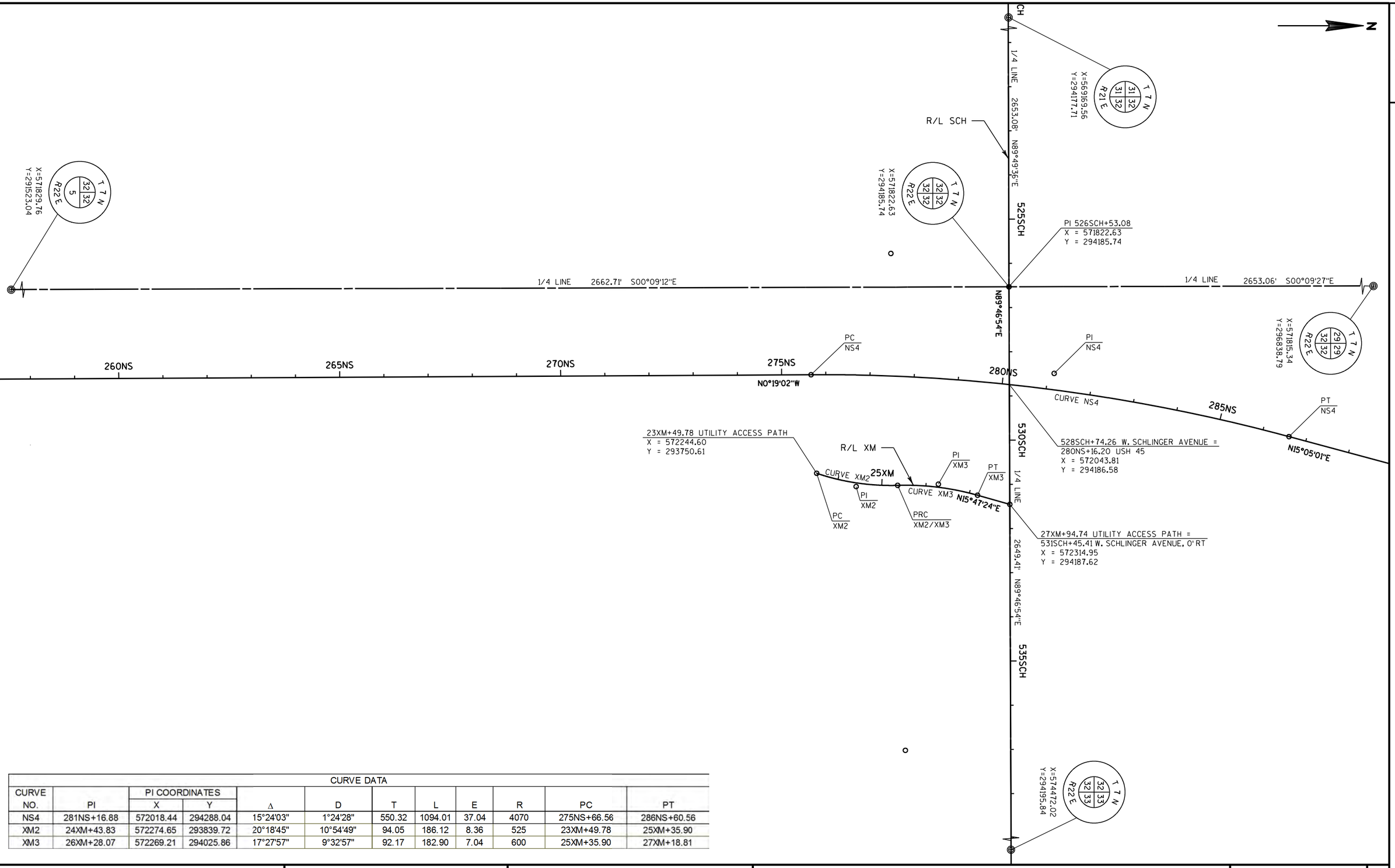
CURVE DATA											
CURVE		PI COORDINATES									
NO.	PI	X	Y	Δ	D	T	L	E	R	PC	PT
GBB1	748GBB+53.98	572342.84	290989.90	10°22'39"	8°11'06"	63.57	126.79	2.88	700	747GBB+90.42	749GBB+17.20
NS3	236NS+33.64	572043.29	289800.62	9°30'54"	0°30'58"	923.81	1843.37	38.38	11100	227NS+09.83	245NS+53.20

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E



CURVE DATA											
CURVE		PI COORDINATES									
NO.	PI	X	Y	Δ	D	T	L	E	R	PC	PT
NW1	486NW+63.71	572169	295480.2	77°19'55"	4°47'55"	955.41	1611.54	335.2	1194	477NW+08.30	493NW+19.84

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E

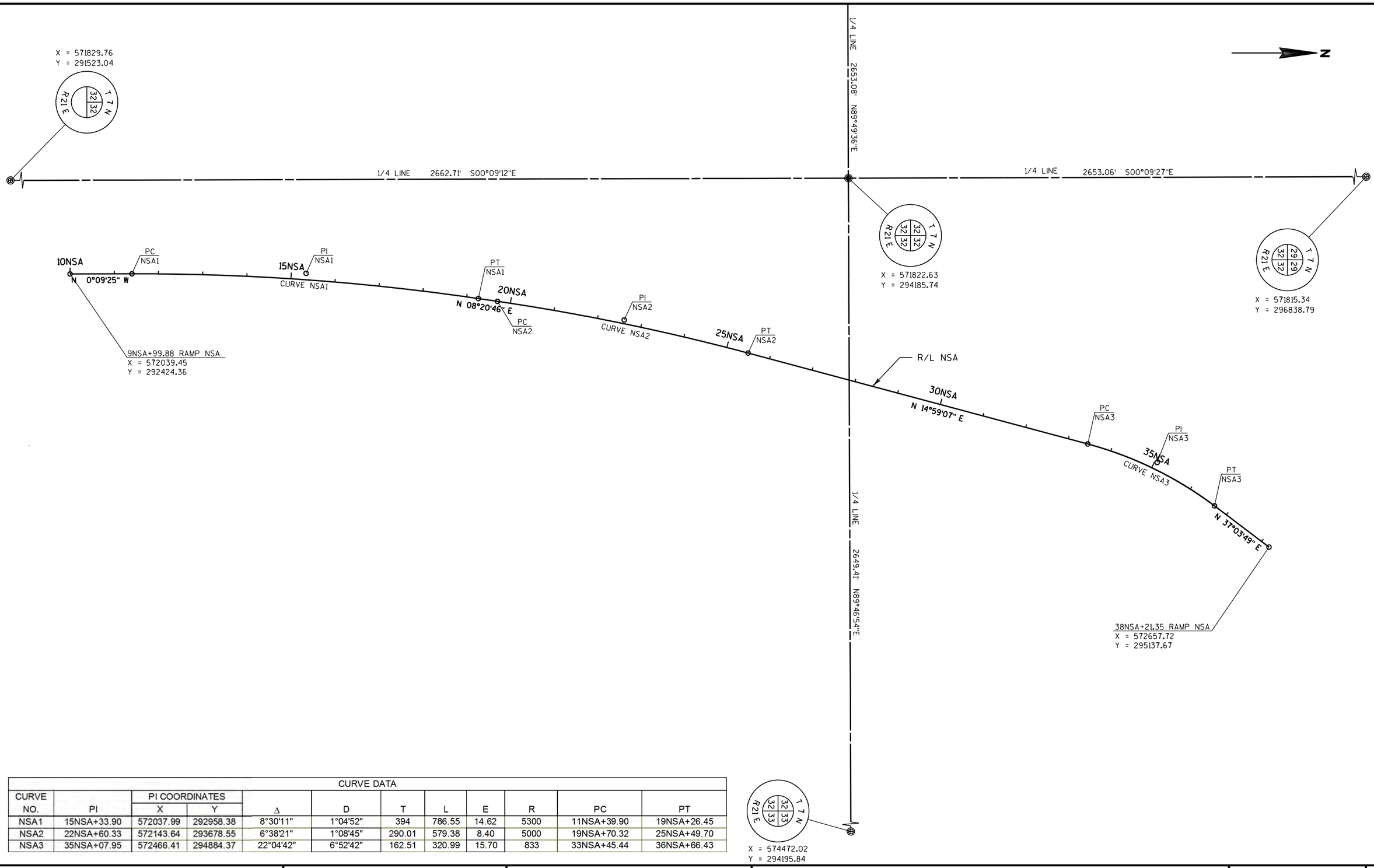


CURVE DATA

CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
NS4	281NS+16.88	572018.44	294288.04	15°24'03"	1°24'28"	550.32	1094.01	37.04	4070	275NS+66.56	286NS+60.56
XM2	24XM+43.83	572274.65	293839.72	20°18'45"	10°54'49"	94.05	186.12	8.36	525	23XM+49.78	25XM+35.90
XM3	26XM+28.07	572269.21	294025.86	17°27'57"	9°32'57"	92.17	182.90	7.04	600	25XM+35.90	27XM+18.81

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT	SHEET	E

2



CURVE DATA

CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
NSA1	15NSA+33.90	572037.99	292958.38	8°30'11"	1°04'52"	394	786.55	14.62	5300	11NSA+39.90	19NSA+26.45
NSA2	22NSA+60.33	572143.64	293678.55	6°38'21"	1°08'45"	290.01	579.38	8.40	5000	19NSA+70.32	25NSA+49.70
NSA3	35NSA+07.95	572466.41	294884.37	22°04'42"	6°52'42"	162.51	320.99	15.70	833	33NSA+45.44	36NSA+66.43

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - TEMPORARY	SHEET	E

2

N

T 7 N
28 28
33 33
R 21 E

X = 577144.57
Y = 296937.87

2689' S00°11'27"E

1/4 LINE

POB 8FDA+00.00
WB ENTRANCE RAMP FROM 84TH STREET
X = 576580.28
Y = 295733.14

R/L FDA

10FDA

S 82°48'01" E

PI
FDA1

CURVE FDA1

PT 13FDA+75.71
WB ENTRANCE RAMP FROM 84TH STREET
X = 577148.88
Y = 295645.19

10FCA

R/L FCA

S 63°40'58" E

POB 10FCA+00.00
EB EXIT RAMP TO 84TH STREET
X = 576732.69
Y = 295479.82

PC
FCA1

CURVE FCA1

PI
FCA1

PT 14FCA+10.29
EB EXIT RAMP TO 84TH STREET
X = 577111.55
Y = 295327.39

R/L FBA

PI
FBA2

15FBA

N 82°38'18" E

CURVE FBA2

PC
FBA2

PT
FBA2

POE 18FBA+59.00
EB ENTRANCE RAMP FROM 84TH STREET
X = 578036.55
Y = 295430.06

CURVE FBA1

N 77°56'16" E

PT
FBA1

PI
FBA1

PC 10FBA+00.00
EB ENTRANCE RAMP FROM 84TH STREET
X = 577187.58
Y = 295317.74

T 7 N
33 33
33 33
R 21 E

X = 577153.53
Y = 294248.88

CURVE DATA

CURVE NO.	PI	PI COORDINATES X	PI COORDINATES Y	Δ	D	T	L	E	R	PC	PT
FBA1	11FBA+46.50	577333.47	295304.32	17°19'03"	5°57'21"	146.5	290.76	11.09	962	10FBA+00.00	12FBA+90.76
FBA2	15FBA+66.60	577746.48	295392.58	4°42'03"	3°00'56"	77.99	155.88	1.6	1900	14FBA+88.61	16FBA+44.50
FCA1	13FCA+04.82	577005.91	295344.69	17°01'05"	8°00'28"	107.05	212.52	7.96	715.5	11FCA+97.77	14FCA+10.29
FDA1	12FDA+24.68	577001.60	295679.92	6°04'19"	2°00'30"	151.31	302.34	4.01	2853	10FDA+73.36	13FDA+75.71

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - TEMPORARY	SHEET	E

2

2

N

R/L TLFM
(MILWAUKEE COMMUNICATION CONDUIT)

10TLFM

N10°28'06"W

CONSTRUCTION LIMIT
13TLWM+20.00
X=578876.95
Y=295717.68

CONSTRUCTION LIMIT
10TLFM+00.00
X=578944.18
Y=295353.83

PI 14TLWM+48.24
X=579539.05
Y=295827.69

R/L TLWM
(WATER MAIN)

N26°32'04"E

PI 11TLWM+72.61
X=579620.62
Y=295564.41

PI 14TLWM+53.24
X=579541.28
Y=295832.16

N54°48'44"W

15TLWM

PI 11TLWM+54.00
X=579635.83
Y=295553.69

N17°12'56"W

N49°02'04"E

PI 10TLWM+10.00
X=579778.32
Y=295574.50

S81°41'16"W

PI 14TLWM+87.63
X=579567.25
Y=295854.71

N70°14'09"E

PI 17TLWM+55.10
X=579818.97
Y=295945.15

PI 10TLWM+05.00
X=579783.31
Y=295574.25

PI 17TLWM+71.12
X=579831.10
Y=295955.61

N87°03'44"W

N45°03'44"W

SECTION LINE

2654.65' S00°07'23"E

N49°14'09"E

N5°00'56"E

CONSTRUCTION LIMIT
10TLFM+00.00
X=579786.85
Y=295570.72

CONSTRUCTION LIMIT
17TLWM+81.12
X=579831.97
Y=295965.58

T 7 N
R 21 E
33 34
33 34

X = 579837.07
Y = 294344.15

T 7 N
R 21 E
28 27
33 34

X = 579831.37
Y = 296998.79

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - CITY OF MILWAUKEE UTILITIES	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\027210_ad.dgn PLOT DATE : 30-APR-2013 02:02 PLOT BY : MSCDYB PLOT NAME : 027210_ad PLOT SCALE : 200:1

WISDOT/CADDS SHEET 42

2

2

N

W. BLUEMOUND ROAD

N. GLENVIEW AVENUE

HONEY CREEK

USH 45

CP616

CP617

CP614

CP666

CP611

CITY OF MILWAUKEE

S. 84TH STREET

CP672

CP673

IH 94

W. O'CONNOR STREET

W. KEARNEY STREET

CP675

W. ADLER STREET

CP670

CP674

CP671

W. MAIN STREET

S. 68TH STREET

HANK AARON STATE TRAIL

CP609

W. SCHLINGER AVENUE

CP608

CP606

S. 92ND STREET

S. 84TH STREET

S. 76TH STREET

S. 70TH STREET

IH 894/USH 45

S. 98TH STREET

S. 97TH STREET

CITY OF WEST ALLIS

CP605

CP604

W. GREENFIELD AVENUE

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - SURVEY CONTROL OVERVIEW	SHEET	E

2

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

20NSA

270NS

15NSA

S. 98TH ST

CP606
BERNTSEN FENO MON. W/ ALUMINUM CAP
IN OH ELECTRIC CORRIDOR EAST OF
USH 45, 165' NORTH OF DOUBLE-POST
"COUNTY ZOO FOLLOW US 45" SIGN,
50' EAST OF R/W FENCE.
17NSA+95.30, 83.15' RT
N 293208.232
E 572160.618
ELEV. 787.820

CP608
BERNTSEN FENO MONUMENT W/ ALUMINUM CAP,
NORTHWEST QUADRANT OF S. 100TH ST. AND
W. SCHLINGER AVE., 8.5' WEST OF WEST BACK OF
CURB, 18' NORTH OF STOP SIGN
27NSA+10.65, 487.55' LT
N 294240.252
E 571789.282
ELEV. 776.080

30NSA

530SCH

535SCH

W. SCHLINGER AVENUE

280

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

275NS

25NSA

25XM

CP609
BERNTSEN FENO MONUMENT
W/ ALUMINUM CAP, NORTHWEST
QUADRANT OF S. 98TH ST. AND
W. SCHLINGER AVE., 14' NORTH OF
NORTH BACK OF CURB, 55' EAST
OF UTILITY POLE
28NSA+52.67, 108.37' RT
N 294223.352
E 572401.653
ELEV. 773.580

N

2

220EW

225EW

IH 94 WB

IH 94 EB

W. ADLER STREET

S. 90TH ST

S. 89TH ST

S. 88TH ST

S. 87TH PL

PARKING

PKNG

CP670
BERNTSEN FENO MON. W/ ALUMINUM CAP
S. SIDE OF W. ADLER STREET, 80' E. OF
S. 89TH STREET. POINT IS 2' OFF BACK OF
CURB, 35' W. OF FIRST DRIVEWAY EAST
OF S. 89TH STREET.
222EW+03.07, 225.68' RT
N 295539.381
E 575622.594
ELEV. 723.050

N

45F

S. 84TH STREET

CP672
BERNTSEN FENO MON. W/ ALUMINUM CAP E. SIDE
OF S. 84TH STREET 190' N. OF W. O CONNER
STREET, 25' E. OF BACK OF WALK, 5' S. OF FIRST
DRIVE N. OF W. O CONNER STREET.
INSERT STATON HERE (E.G. STA 551NS+44.31,
153.08' LT)
N 295821.811
E 577227.183
ELEV. 703.690

235EW

240EW

IH 94 WB

IH 94 EB

245

545C

15FBA

105K

40F

CP671
BERNTSEN FENO MON. W/ ALUMINUM CAP
NE QUADRANT OF S. 84TH STREET AND EASTBOUND
ON RAMP FOR IH 94/W. KEARNERY STREET,
40' E. OF AND 6' N. OF NW CORNER OF
PETTIT ICE CENTER PARKING LOT.
239EW+48.96, 271.07' RT
N 295259.340
E 577291.527
ELEV. 709.700

N

CP673
BERNTSEN FENO MON. W/ ALUMINUM CAP
IN SW QUADRANT OF S. 76TH STREET AND
W. O'CONNOR STREET, 18' W. OF BACK OF
WALK, 7' S. OF BACK OF CURB.
264EW+72.23, 128.94' LT
N 295914.800
E 579778.319
ELEV. 731.075

25TL

565CR

570CR

W. O'CONNOR STREET

270EW

265EW

IH 94 WB

IH 94 EB

135K

130K

W. KEARNEY STREET

25K

20TL

S. 76TH STREET

CP674
BERNTSEN FENO MON. W/ ALUMINUM CAP
IN S. 76TH STREET MEDIAN 45' S. OF
W. KEARNEY STREET. POINT IS 14' S. OF
TRAFFIC SIGNAL IN MEDIAN.
264EW+14.80, 248.27' RT
N 295537.491
E 579835.103
ELEV. 722.660

N

580CR

575CR

W. O'CONNOR STREET

280EW

275EW

IH 94 WB

IH 94 EB

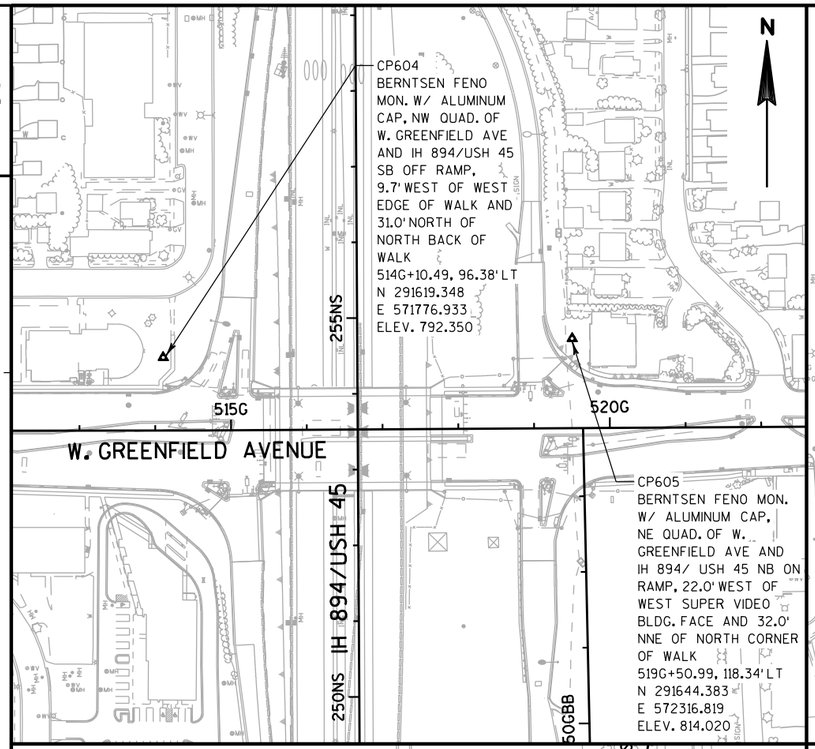
140K

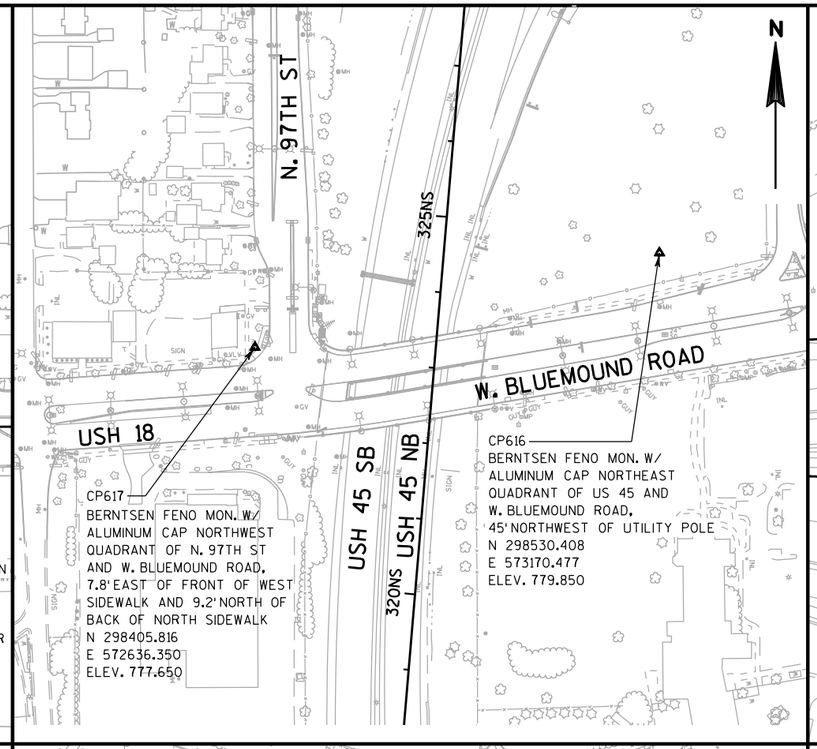
W. KEARNEY STREET

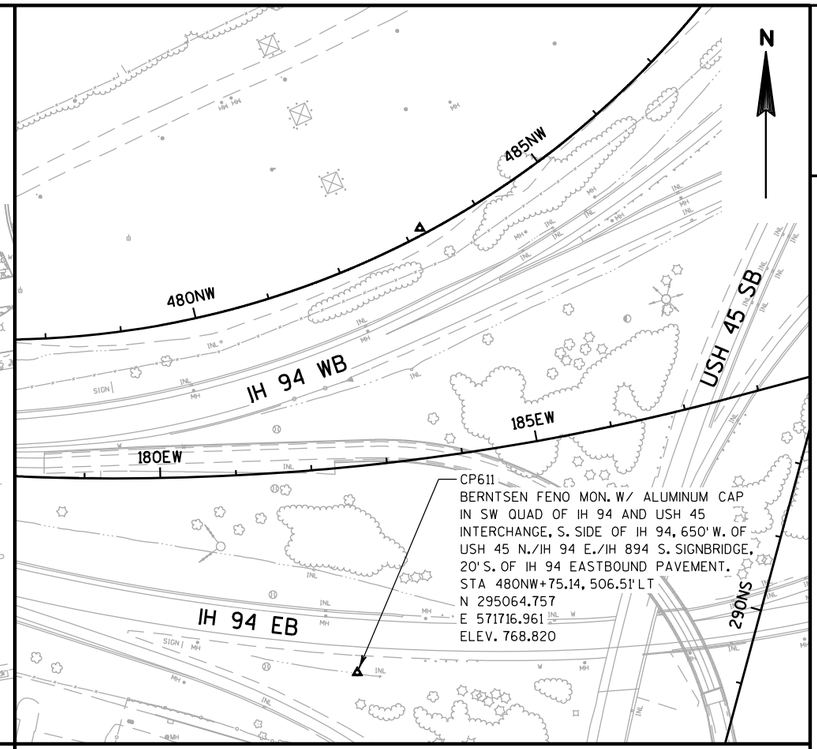
CP675
BERNTSEN FENO MON. W/ ALUMINUM CAP
N. SIDE OF W. KEARNEY STREET 300' E. OF
S. 73RD STREET, 50' W. OF LIGHTPOLE,
3' S. OF CHAINLINK FENCE.
277EW+69.85, 117.83' RT
N 296077.809
E 581090.455
ELEV. 719.625

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - SURVEY CONTROL	SHEET	E

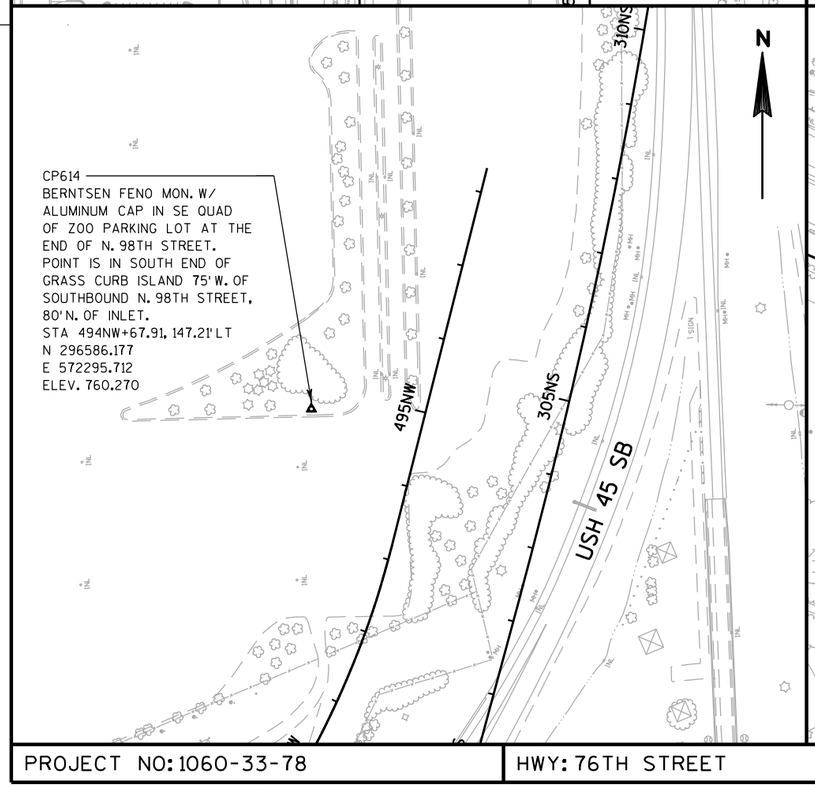
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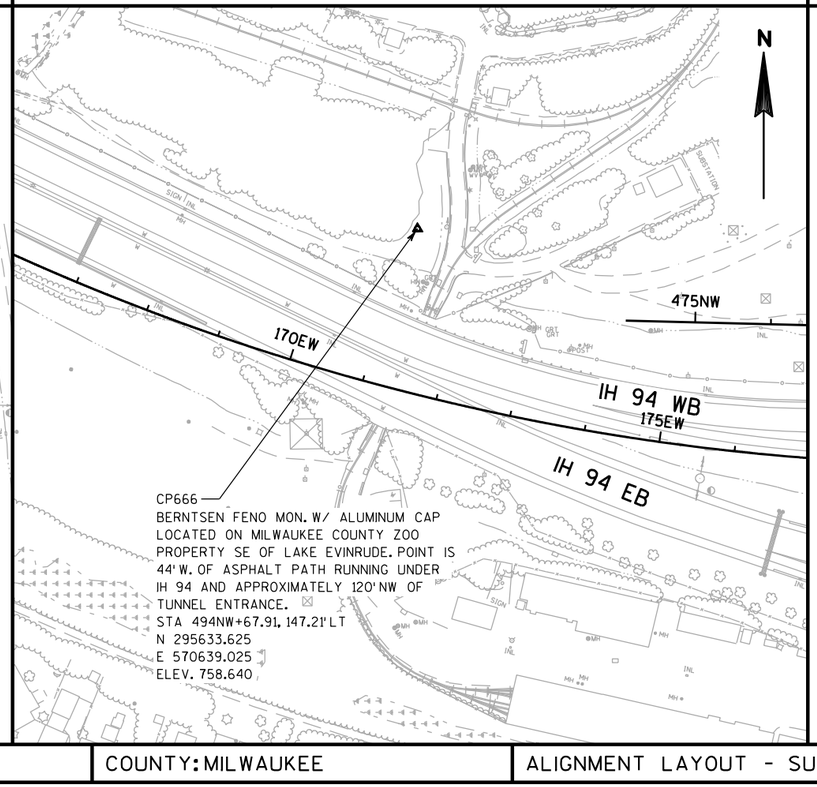






2





PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	ALIGNMENT LAYOUT - SURVEY CONTROL	SHEET	E

DATE 19JUN13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-78 QUANTITY
0010	201.0105	CLEARING	STA	83.000	83.000
0020	201.0120	CLEARING	ID	390.000	390.000
0030	201.0205	GRUBBING	STA	83.000	83.000
0040	201.0220	GRUBBING	ID	390.000	390.000
0050	203.0200	REMOVING OLD STRUCTURE (STATION) 0002. 22+00.00	LS	1.000	1.000
0060	203.0200	REMOVING OLD STRUCTURE (STATION) 0003. 40+40.00	LS	1.000	1.000
0070	203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0001. B-40-0089	LS	1.000	1.000
0080	204.0100	REMOVING PAVEMENT **P**	SY	17,011.000	17,011.000
0090	204.0120	REMOVING ASPHALTIC SURFACE MILLING **P**	SY	7,835.000	7,835.000
0100	204.0150	REMOVING CURB & GUTTER **P**	LF	3,015.000	3,015.000
0110	204.0155	REMOVING CONCRETE SIDEWALK **P**	SY	1,222.000	1,222.000
0120	204.0157	REMOVING CONCRETE BARRIER **P**	LF	1,031.000	1,031.000
0130	204.0165	REMOVING GUARDRAIL **P**	LF	275.000	275.000
0140	204.0170	REMOVING FENCE **P**	LF	5,759.000	5,759.000
0150	204.0195	REMOVING CONCRETE BASES	EACH	8.000	8.000
0160	204.0210	REMOVING MANHOLES	EACH	14.000	14.000
0170	204.0220	REMOVING INLETS	EACH	39.000	39.000
0180	204.0245	REMOVING STORM SEWER (SIZE) 0001. 12-INCH **P**	LF	1,120.000	1,120.000
0190	204.0245	REMOVING STORM SEWER (SIZE) 0002. 15-INCH **P**	LF	166.000	166.000
0200	204.0245	REMOVING STORM SEWER (SIZE) 0003. 18-INCH **P**	LF	84.000	84.000
0210	204.0245	REMOVING STORM SEWER (SIZE) 0005. 24-INCH **P**	LF	818.000	818.000
0220	204.0245	REMOVING STORM SEWER (SIZE) 0009. 48-INCH **P**	LF	98.000	98.000
0230	204.0245	REMOVING STORM SEWER (SIZE) 0013. 72-INCH **P**	LF	115.000	115.000
0240	204.0250	ABANDONING MANHOLES	EACH	2.000	2.000
0250	204.0280	SEALING PIPES	EACH	7.000	7.000
0260	204.9060.S	REMOVING (ITEM DESCRIPTION) 0001. CRASH BARRELS	EACH	1.000	1.000
0270	204.9060.S	REMOVING (ITEM DESCRIPTION) 0002. BIKE RACK	EACH	1.000	1.000
0280	204.9060.S	REMOVING (ITEM DESCRIPTION) 0003. GATE, POSTS, AND FOOTINGS	EACH	1.000	1.000
0290	204.9090.S	REMOVING (ITEM DESCRIPTION) 0001. NOISE BARRIER	LF	700.000	700.000
0300	205.0100	EXCAVATION COMMON **P**	CY	77,088.000	77,088.000
0310	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0001. B-40-785	LS	1.000	1.000
0320	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0002. B-40-799	LS	1.000	1.000
0330	206.2000	EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 0001. B-40-892	LS	1.000	1.000
0340	206.2000	EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 0002. C-40-101	LS	1.000	1.000
0350	206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 0001. R-40-524	LS	1.000	1.000
0360	206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 0002. R-40-554	LS	1.000	1.000
0370	206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 0003. R-40-555	LS	1.000	1.000

3

DATE 19JUN13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-78 QUANTITY
0380	206.6000.S	TEMPORARY SHORING	SF	4,360.000	4,360.000
0390	209.0100	BACKFILL GRANULAR **P**	CY	19,556.000	19,556.000
0400	209.0200.S	BACKFILL CONTROLLED LOW STRENGTH **P**	CY	7,884.000	7,884.000
0410	210.0100	BACKFILL STRUCTURE **P**	CY	26,172.000	26,172.000
0420	213.0100	FINISHING ROADWAY (PROJECT) 0001. 1060-33-78	EACH	1.000	1.000
0430	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH **P**	TON	25,433.000	25,433.000
0440	312.0110	SELECT CRUSHED MATERIAL **P**	TON	14,480.000	14,480.000
0450	415.0090	CONCRETE PAVEMENT 9-INCH **P**	SY	11,510.000	11,510.000
0460	415.0410	CONCRETE PAVEMENT APPROACH SLAB **P**	SY	276.000	276.000
0470	415.1090	CONCRETE PAVEMENT HES 9-INCH	SY	2,337.000	2,337.000
0480	416.0170	CONCRETE DRIVEWAY 7-INCH **P**	SY	33.000	33.000
0490	416.0610	DRILLED TIE BARS	EACH	1,586.000	1,586.000
0500	416.0620	DRILLED DOWEL BARS	EACH	460.000	460.000
0510	440.4410.S	INCENTIVE IRI RIDE	DOL	2,610.000	2,610.000
0520	455.0115	ASPHALTIC MATERIAL PG64-22	TON	68.000	68.000
0530	455.0120	ASPHALTIC MATERIAL PG64-28	TON	434.000	434.000
0540	455.0605	TACK COAT	GAL	934.000	934.000
0550	460.1101	HMA PAVEMENT TYPE E-1	TON	1,016.000	1,016.000
0560	460.1110	HMA PAVEMENT TYPE E-10	TON	7,233.000	7,233.000
0570	460.1130	HMA PAVEMENT TYPE E-30	TON	108.000	108.000
0580	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	8,249.000	8,249.000
0590	465.0105	ASPHALTIC SURFACE	TON	727.000	727.000
0600	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	135.000	135.000
0610	502.0100	CONCRETE MASONRY BRIDGES **P**	CY	508.000	508.000
0620	502.3200	PROTECTIVE SURFACE TREATMENT **P**	SY	3,159.000	3,159.000
0630	502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS **P**	EACH	63.000	63.000
0640	502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS **P**	EACH	16.000	16.000
0650	502.6102	MASONRY ANCHORS TYPE S 1/2-INCH **P**	EACH	75.000	75.000
0660	503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH **P**	LF	416.000	416.000
0670	503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH **P**	LF	2,339.000	2,339.000
0680	504.0100	CONCRETE MASONRY CULVERTS **P**	CY	9,006.000	9,006.000
0690	504.0500	CONCRETE MASONRY RETAINING WALLS **P**	CY	2,160.000	2,160.000
0700	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	15,072.000	15,072.000
0710	505.0410	BAR STEEL REINFORCEMENT HS CULVERTS	LB	1,406,430.000	1,406,430.000
0720	505.0415	BAR STEEL REINFORCEMENT HS RETAINING WALLS	LB	16,060.000	16,060.000
0730	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	281,016.000	281,016.000
0740	505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	314,009.000	314,009.000
0750	506.0605	STRUCTURAL STEEL HS	LB	640,420.000	640,420.000
0760	506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED **P**	EACH	49.000	49.000
0770	506.2610	BEARING PADS ELASTOMERIC LAMINATED **P**	EACH	5.000	5.000
0780	506.3010	WELDED STUD SHEAR CONNECTORS 7/8X5-INCH **P**	EACH	5,072.000	5,072.000
0790	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 0001. B-40-785 **P**	EACH	40.000	40.000
0800	506.4000	STEEL DIAPHRAGMS (STRUCTURE) 0002. B-40-799 **P**	EACH	8.000	8.000
0810	513.2000	RAILING PIPE (STRUCTURE) 0001. R-40-524	LS	1.000	1.000
0820	513.2000	RAILING PIPE (STRUCTURE) 0002. R-40-554	LS	1.000	1.000
0830	513.2000	RAILING PIPE (STRUCTURE) 0003. R-40-555	LS	1.000	1.000
0840	513.2000	RAILING PIPE (STRUCTURE) 0004. C-40-101	LS	1.000	1.000

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DATE 19JUN13 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-78 QUANTITY
0850	516.0500	RUBBERIZED MEMBRANE WATERPROOFING **P**	SY	739.000	739.000
0860	517.1050.S	ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 0002. R-40-525 **P**	SF	6,805.000	6,805.000
0870	517.1050.S	ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 0003. R-40-554 **P**	SF	11,995.000	11,995.000
0880	517.1050.S	ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 0004. R-40-555 **P**	SF	22,950.000	22,950.000
0890	520.8000	CONCRETE COLLARS FOR PIPE	EACH	24.000	24.000
0900	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	3.000	3.000
0910	522.1084	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 84-INCH	EACH	1.000	1.000
0920	531.0300.S	NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE (STRUCTURE) 0010. N-40-70 **P**	SF	18,770.000	18,770.000
0930	531.0300.S	NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE (STRUCTURE) 0020. N-40-71 **P**	SF	14,470.000	14,470.000
0940	531.0300.S	NOISE BARRIERS DOUBLE-SIDED SOUND ABSORPTIVE (STRUCTURE) 0030. N-40-72 **P**	SF	14,440.000	14,440.000
0950	550.0500	PILE POINTS	EACH	6.000	6.000
0960	550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	600.000	600.000
0970	550.2146	PILING CIP CONCRETE 14 X 0.375-INCH	LF	3,958.000	3,958.000
0980	601.0319	CONCRETE CURB & GUTTER 19-INCH **P**	LF	287.000	287.000
0990	601.0331	CONCRETE CURB & GUTTER 31-INCH **P**	LF	7,055.000	7,055.000
1000	601.0600	CONCRETE CURB PEDESTRIAN **P**	LF	128.000	128.000
1010	602.0410	CONCRETE SIDEWALK 5-INCH **P**	SF	22,155.000	22,155.000
1020	602.0515	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA **P**	SF	264.000	264.000
1030	603.1132	CONCRETE BARRIER TYPE S32 **P**	LF	2,622.000	2,622.000
1040	603.1142	CONCRETE BARRIER TYPE S42 **P**	LF	1,466.000	1,466.000
1050	603.3513	CONCRETE BARRIER TRANSITION TYPE S32 TO S36 **P**	EACH	1.000	1.000
1060	603.3535	CONCRETE BARRIER TRANSITION TYPE S36 TO S42 **P**	EACH	1.000	1.000
1070	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	14,337.500	14,337.500
1080	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	14,337.500	14,337.500
1090	604.0400	SLOPE PAVING CONCRETE **P**	SY	13.000	13.000
1100	604.0500	SLOPE PAVING CRUSHED AGGREGATE **P**	SY	1,247.000	1,247.000
1110	606.0200	RIPRAP MEDIUM	CY	1,145.000	1,145.000
1120	608.0312	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	344.000	344.000
1130	608.0315	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	LF	1,412.000	1,412.000
1140	608.0318	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	503.000	503.000
1150	608.0324	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	2,984.000	2,984.000
1160	608.0330	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	LF	314.000	314.000
1170	608.0336	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	LF	91.000	91.000
1180	608.0348	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH	LF	27.000	27.000

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LINE 1060-33-78

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-78 QUANTITY
1190	608.0360	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 60-INCH	LF	21.000	21.000
1200	608.0384	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 84-INCH	LF	90.000	90.000
1210	608.0396	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 96-INCH	LF	92.000	92.000
1220	608.0412	STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	68.000	68.000
1230	608.0512	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH	LF	17.000	17.000
1240	608.0515	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 15-INCH	LF	32.000	32.000
1250	608.0524	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH	LF	103.000	103.000
1260	608.0572	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 72-INCH	LF	18.000	18.000
1270	611.0535	MANHOLE COVERS TYPE J-SPECIAL	EACH	19.000	19.000
1280	611.0606	INLET COVERS TYPE B	EACH	8.000	8.000
1290	611.0624	INLET COVERS TYPE H	EACH	27.000	27.000
1300	611.0642	INLET COVERS TYPE MS	EACH	20.000	20.000
1310	611.0654	INLET COVERS TYPE V	EACH	31.000	31.000
1320	611.0663	INLET COVERS TYPE X	EACH	16.000	16.000
1330	611.2004	MANHOLES 4-FT DIAMETER	EACH	9.000	9.000
1340	611.2005	MANHOLES 5-FT DIAMETER	EACH	19.000	19.000
1350	611.2006	MANHOLES 6-FT DIAMETER	EACH	9.000	9.000
1360	611.2007	MANHOLES 7-FT DIAMETER	EACH	2.000	2.000
1370	611.2008	MANHOLES 8-FT DIAMETER	EACH	1.000	1.000
1380	611.3004	INLETS 4-FT DIAMETER	EACH	64.000	64.000
1390	611.3225	INLETS 2X2.5-FT	EACH	2.000	2.000
1400	611.3902	INLETS MEDIAN 2 GRATE	EACH	10.000	10.000
1410	611.8110	ADJUSTING MANHOLE COVERS	EACH	1.000	1.000
1420	611.8115	ADJUSTING INLET COVERS	EACH	1.000	1.000
1430	611.8120.S	COVER PLATES TEMPORARY	EACH	2.000	2.000
1440	611.9800.S	PIPE GRATES	EACH	3.000	3.000
1450	612.0106	PIPE UNDERDRAIN 6-INCH	LF	75.000	75.000
1460	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	75.000	75.000
1470	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	780.000	780.000
1480	614.0805	CRASH CUSHIONS PERMANENT LOW MAINTENANCE	EACH	3.000	3.000
1490	614.0905	CRASH CUSHIONS TEMPORARY	EACH	3.000	3.000
1500	616.0206	FENCE CHAIN LINK 6-FT	LF	1,387.000	1,387.000
1510	616.0329	GATES CHAIN LINK (WIDTH) 0001. 8-FT	EACH	4.000	4.000
1520	616.0329	GATES CHAIN LINK (WIDTH) 0002. 22-FT	EACH	2.000	2.000
1530	616.0600.S	FENCE TEMPORARY	LF	6,350.000	6,350.000
1540	616.0700.S	FENCE SAFETY	LF	1,000.000	1,000.000
1550	619.1000	MOBILIZATION	EACH	1.000	1.000
1560	620.0300	CONCRETE MEDIAN SLOPED NOSE **P**	SF	503.000	503.000
1570	623.0200	DUST CONTROL SURFACE TREATMENT	SY	31,568.000	31,568.000
1580	624.0100	WATER	MGAL	191.000	191.000
1590	625.0100	TOPSOIL **P**	SY	84,969.000	84,969.000
1600	628.1104	EROSION BALES	EACH	100.000	100.000
1610	628.1504	SILT FENCE	LF	14,444.000	14,444.000
1620	628.1520	SILT FENCE MAINTENANCE	LF	14,444.000	14,444.000
1630	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	12.000	12.000
1640	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	6.000	6.000
1650	628.2004	EROSION MAT CLASS I TYPE B	SY	72,210.000	72,210.000

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LINE 1060-33-78

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
1660	628.2027	EROSION MAT CLASS II TYPE C	SY	22,323.000	22,323.000
1670	628.7005	INLET PROTECTION TYPE A	EACH	72.000	72.000
1680	628.7010	INLET PROTECTION TYPE B	EACH	115.000	115.000
1690	628.7015	INLET PROTECTION TYPE C	EACH	71.000	71.000
1700	628.7020	INLET PROTECTION TYPE D	EACH	60.000	60.000
1710	628.7504	TEMPORARY DITCH CHECKS	LF	315.000	315.000
1720	628.7555	CULVERT PIPE CHECKS	EACH	1.000	1.000
1730	628.7560	TRACKING PADS	EACH	12.000	12.000
1740	628.7570	ROCK BAGS	EACH	15.000	15.000
1750	629.0210	FERTILIZER TYPE B	CWT	59.000	59.000
1760	630.0200	SEEDING TEMPORARY	LB	946.000	946.000
1770	630.0400	SEEDING NURSE CROP	LB	449.000	449.000
1780	631.0300	SOD WATER	MGAL	132.000	132.000
1790	631.1000	SOD LAWN	SY	5,883.000	5,883.000
1800	633.5200	MARKERS CULVERT END	EACH	1.000	1.000
1810	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	15.000	15.000
1820	634.0622	POSTS WOOD 4X6-INCH X 22-FT	EACH	17.000	17.000
1830	634.0816	POSTS TUBULAR STEEL 2X2-INCH X 16-FT	EACH	52.000	52.000
1840	634.0885	POSTS TUBULAR STEEL 2X2-INCH X 8.5-FT	EACH	1.000	1.000
1850	635.0200	SIGN SUPPORTS STRUCTURAL STEEL HS	LB	7,800.000	7,800.000
1860	635.0300	SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS	EACH	2.000	2.000
1870	636.0100	SIGN SUPPORTS CONCRETE MASONRY **P**	CY	21.600	21.600
1880	636.0500	SIGN SUPPORTS STEEL REINFORCEMENT	LB	756.000	756.000
1890	636.1000	SIGN SUPPORTS STEEL REINFORCEMENT HS	LB	715.000	715.000
1900	637.0101	SIGNS TYPE I	SF	100.000	100.000
1910	637.0202	SIGNS REFLECTIVE TYPE II	SF	1,039.060	1,039.060
1920	637.0402	SIGNS REFLECTIVE FOLDING TYPE II	SF	14.920	14.920
1930	638.2101	MOVING SIGNS TYPE I	EACH	8.000	8.000
1940	638.2102	MOVING SIGNS TYPE II	EACH	7.000	7.000
1950	638.2601	REMOVING SIGNS TYPE I	EACH	1.000	1.000
1960	638.2602	REMOVING SIGNS TYPE II	EACH	150.000	150.000
1970	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	63.000	63.000
1980	638.3100	REMOVING STRUCTURAL STEEL SIGN SUPPORTS	EACH	16.000	16.000
1990	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 0001. 1060-33-78	DAY	338.000	338.000
2000	643.0300	TRAFFIC CONTROL DRUMS	DAY	140,619.000	140,619.000
2010	643.0410	TRAFFIC CONTROL BARRICADES TYPE II	DAY	3,801.000	3,801.000
2020	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	35,146.000	35,146.000
2030	643.0500	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	EACH	25.000	25.000
2040	643.0600	TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	EACH	25.000	25.000
2050	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	70,267.000	70,267.000
2060	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	48,441.000	48,441.000
2070	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	2,806.000	2,806.000
2080	643.0900	TRAFFIC CONTROL SIGNS	DAY	112,022.000	112,022.000
2090	643.0910	TRAFFIC CONTROL COVERING SIGNS TYPE I	EACH	5.000	5.000
2100	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	26.000	26.000
2110	643.1000	TRAFFIC CONTROL SIGNS FIXED MESSAGE	SF	2,086.500	2,086.500
2120	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	3,632.000	3,632.000
2130	643.2000	TRAFFIC CONTROL DETOUR (PROJECT) 0001. 1060-33-78	EACH	1.000	1.000
2140	643.3000	TRAFFIC CONTROL DETOUR SIGNS	DAY	80,623.000	80,623.000

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LINE 1060-33-78

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
2150	645.0105	GEOTEXTILE FABRIC TYPE C **P**	SY	11,578.000	11,578.000
2160	645.0111	GEOTEXTILE FABRIC TYPE DF SCHEDULE A **P**	SY	55.000	55.000
2170	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	55.000	55.000
2180	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	72,544.000	72,544.000
2190	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	13,079.000	13,079.000
2200	646.0600	REMOVING PAVEMENT MARKINGS	LF	28,010.000	28,010.000
2210	646.0841.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH **P**	LF	809.000	809.000
2220	646.0843.S	PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH **P**	LF	315.000	315.000
2230	647.0156	PAVEMENT MARKING ARROWS EPOXY TYPE 1	EACH	1.000	1.000
2240	647.0166	PAVEMENT MARKING ARROWS EPOXY TYPE 2	EACH	6.000	6.000
2250	647.0176	PAVEMENT MARKING ARROWS EPOXY TYPE 3	EACH	2.000	2.000
2260	647.0356	PAVEMENT MARKING WORDS EPOXY	EACH	6.000	6.000
2270	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	215.000	215.000
2280	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	15.000	15.000
2290	647.0746	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	LF	857.000	857.000
2300	647.0766	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	LF	382.000	382.000
2310	649.0200	TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	LF	26,060.000	26,060.000
2320	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	305.000	305.000
2330	649.2100	TEMPORARY RAISED PAVEMENT MARKERS	EACH	445.000	445.000
2340	652.0110	CONDUIT RIGID METALLIC 1-INCH	LF	40.000	40.000
2350	652.0125	CONDUIT RIGID METALLIC 2-INCH	LF	260.000	260.000
2360	652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	68.000	68.000
2370	652.0215	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH	LF	17.000	17.000
2380	652.0220	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/2-INCH	LF	40.000	40.000
2390	652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	4,756.000	4,756.000
2400	652.0230	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	LF	40.000	40.000
2410	652.0235	CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	LF	5,327.000	5,327.000
2420	652.0405	CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH	LF	130.000	130.000
2430	652.0605	CONDUIT SPECIAL 2-INCH	LF	408.000	408.000
2440	652.0615	CONDUIT SPECIAL 3-INCH	LF	1,432.000	1,432.000
2450	652.0700.S	INSTALL CONDUIT INTO EXISTING ITEM	EACH	9.000	9.000
2460	652.0800	CONDUIT LOOP DETECTOR	LF	120.000	120.000
2470	652.0900	LOOP DETECTOR SLOTS	LF	54.000	54.000
2480	653.0135	PULL BOXES STEEL 24X36-INCH	EACH	12.000	12.000
2490	653.0140	PULL BOXES STEEL 24X42-INCH	EACH	30.000	30.000
2500	653.0222	JUNCTION BOXES 18X12X6-INCH	EACH	6.000	6.000
2510	653.0905	REMOVING PULL BOXES	EACH	13.000	13.000
2520	654.0101	CONCRETE BASES TYPE 1	EACH	8.000	8.000
2530	654.0102	CONCRETE BASES TYPE 2	EACH	12.000	12.000
2540	654.0105	CONCRETE BASES TYPE 5	EACH	19.000	19.000
2550	654.0217	CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	EACH	3.000	3.000
2560	655.0108	CABLE IN DUCT 2-8 AWG	LF	300.000	300.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-78 QUANTITY
2570	655.0128	CABLE IN DUCT 3-8 AWG	LF	814.000	814.000
2580	655.0230	CABLE TRAFFIC SIGNAL 5-14 AWG	LF	1,904.000	1,904.000
2590	655.0240	CABLE TRAFFIC SIGNAL 7-14 AWG	LF	1,944.000	1,944.000
2600	655.0260	CABLE TRAFFIC SIGNAL 12-14 AWG	LF	516.000	516.000
2610	655.0270	CABLE TRAFFIC SIGNAL 15-14 AWG	LF	1,105.000	1,105.000
2620	655.0505	ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG	LF	9,915.000	9,915.000
2630	655.0515	ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	LF	2,302.000	2,302.000
2640	655.0620	ELECTRICAL WIRE LIGHTING 8 AWG	LF	5,619.000	5,619.000
2650	655.0625	ELECTRICAL WIRE LIGHTING 6 AWG	LF	180.000	180.000
2660	655.0630	ELECTRICAL WIRE LIGHTING 4 AWG	LF	548.000	548.000
2670	655.0640	ELECTRICAL WIRE LIGHTING 1 AWG	LF	274.000	274.000
2680	655.0700	LOOP DETECTOR LEAD IN CABLE	LF	5,735.000	5,735.000
2690	655.0800	LOOP DETECTOR WIRE	LF	440.000	440.000
2700	655.0900	TRAFFIC SIGNAL EVP DETECTOR CABLE	LF	1,202.000	1,202.000
2710	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0001. CB-RM-40-0004	LS	1.000	1.000
2720	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0002. CB-CCTV-40-0009	LS	1.000	1.000
2730	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3001. IH 94 EB RAMPS & STH 181	LS	1.000	1.000
2740	656.0200	ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 3002. IH 94 WB RAMPS & STH 181	LS	1.000	1.000
2750	656.0400	ELECTRICAL SERVICE MAIN LUGS ONLY METER PEDESTAL (LOCATION) 0001. HL-40-SF	LS	1.000	1.000
2760	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 0001. CB-RM-40-0004	LS	1.000	1.000
2770	656.0500	ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 0002. CB-CCTV-40-0009	LS	1.000	1.000
2780	657.0100	PEDESTAL BASES	EACH	7.000	7.000
2790	657.0255	TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	EACH	14.000	14.000
2800	657.0305	POLES TYPE 2	EACH	6.000	6.000
2810	657.0310	POLES TYPE 3	EACH	7.000	7.000
2820	657.0321	POLES TYPE 5-STEEL	EACH	1.000	1.000
2830	657.0420	TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	EACH	1.000	1.000
2840	657.0425	TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	EACH	1.000	1.000
2850	657.0430	TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	EACH	5.000	5.000
2860	657.0585	TROMBONE ARMS 15-FT	EACH	5.000	5.000
2870	657.0590	TROMBONE ARMS 20-FT	EACH	3.000	3.000
2880	657.0595	TROMBONE ARMS 25-FT	EACH	3.000	3.000
2890	657.0609	LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT	EACH	7.000	7.000
2900	658.0110	TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	EACH	16.000	16.000
2910	658.0115	TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL	EACH	4.000	4.000
2920	658.0215	BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	EACH	16.000	16.000
2930	658.0220	BACKPLATES SIGNAL FACE 4 SECTION 12-INCH	EACH	4.000	4.000
2940	658.0416	PEDESTRIAN SIGNAL FACE 16-INCH	EACH	12.000	12.000
2950	658.0500	PEDESTRIAN PUSH BUTTONS	EACH	13.000	13.000
2960	658.0600	LED MODULES 12-INCH RED BALL	EACH	16.000	16.000
2970	658.0605	LED MODULES 12-INCH YELLOW BALL	EACH	14.000	14.000
2980	658.0610	LED MODULES 12-INCH GREEN BALL	EACH	12.000	12.000
2990	658.0615	LED MODULES 12-INCH RED ARROW	EACH	4.000	4.000
3000	658.0620	LED MODULES 12-INCH YELLOW ARROW	EACH	10.000	10.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-78 QUANTITY
3010	658.0625	LED MODULES 12-INCH GREEN ARROW	EACH	8.000	8.000
3020	658.0635	LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	EACH	12.000	12.000
3030	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3001. IH 94 EB RAMPS & STH 181	LS	1.000	1.000
3040	658.5069	SIGNAL MOUNTING HARDWARE (LOCATION) 3002. IH 94 WB RAMPS & STH 181	LS	1.000	1.000
3050	659.0802	PLAQUES SEQUENCE IDENTIFICATION	EACH	4.000	4.000
3060	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3001. IH 94 EB RAMPS & STH 181	LS	1.000	1.000
3070	661.0200	TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 3002. IH 94 WB RAMPS & STH 181	LS	1.000	1.000
3080	661.0300	GENERATORS	DAY	4.000	4.000
3090	670.0100	FIELD SYSTEM INTEGRATOR 0001. FTMS	LS	1.000	1.000
3100	670.0100	FIELD SYSTEM INTEGRATOR 3002. TRAFFIC SIGNALS	LS	1.000	1.000
3110	670.0200	ITS DOCUMENTATION 0001. FTMS	LS	1.000	1.000
3120	670.0200	ITS DOCUMENTATION 3002. TRAFFIC SIGNALS	LS	1.000	1.000
3130	671.0132	CONDUIT HDPE 3-DUCT 2-INCH	LF	2,595.000	2,595.000
3140	671.0232	CONDUIT HDPE DIRECTIONAL BORE 3-DUCT 2-IN	LF	955.000	955.000
3150	671.0244	CONDUIT HDPE DIRECTIONAL BORE 4-DUCT 4-IN	LF	270.000	270.000
3160	672.0100	BASE ITS CONTROLLER CABINET	EACH	2.000	2.000
3170	672.0250	BASE CAMERA POLE 50-FT	EACH	1.000	1.000
3180	673.0105	COMMUNICATION VAULT TYPE 1	EACH	8.000	8.000
3190	673.0200.S	INSTALL ITS FIELD CABINET	EACH	2.000	2.000
3200	674.0112	CABLE ITS COMMUNICATION 12 PAIR	LF	3,855.000	3,855.000
3210	674.0125	CABLE ITS COMMUNICATION 25 PAIR	LF	1,711.000	1,711.000
3220	674.0200	CABLE MICROWAVE DETECTOR	LF	1,320.000	1,320.000
3230	674.0300	REMOVE CABLE	LF	5,823.000	5,823.000
3240	675.0100	INSTALL CONTROLLER RAMP METER PROCESSOR ASSEMBLY	EACH	1.000	1.000
3250	675.0300	INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY	EACH	2.000	2.000
3260	675.0400.S	INSTALL ETHERNET SWITCH	EACH	2.000	2.000
3270	676.0300	SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1	EACH	3.000	3.000
3280	676.9001.S	REMOVING ADVANCE FLASHER ASSEMBLIES TYPE 1	EACH	2.000	2.000
3290	677.0100	INSTALL CAMERA POLE	EACH	1.000	1.000
3300	677.0200	INSTALL CAMERA ASSEMBLY	EACH	1.000	1.000
3310	677.0300.S	INSTALL VIDEO ENCODER	EACH	2.000	2.000
3320	677.9051.S	REMOVING 50-FOOT CAMERA POLE	EACH	1.000	1.000
3330	677.9200.S	REMOVING CCTV CAMERA	EACH	1.000	1.000
3340	678.0006	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT	LF	380.000	380.000
3350	678.0036	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 36-CT	LF	912.000	912.000
3360	678.0072	INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT	LF	13,426.000	13,426.000
3370	678.0200	FIBER OPTIC SPLICE ENCLOSURE	EACH	2.000	2.000
3380	678.0300	FIBER OPTIC SPLICE	EACH	175.000	175.000
3390	678.0400	FIBER OPTIC TERMINATION	EACH	84.000	84.000
3400	678.0500	COMMUNICATION SYSTEM TESTING 0001. FTMS	LS	1.000	1.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-78 QUANTITY
3410	678.0500	COMMUNICATION SYSTEM TESTING 3002. TRAFFIC SIGNALS	LS	1.000	1.000
3420	690.0150	SAWING ASPHALT	LF	871.000	871.000
3430	690.0250	SAWING CONCRETE	LF	8,445.000	8,445.000
3440	715.0415	INCENTIVE STRENGTH CONCRETE PAVEMENT	DOL	1,039.000	1,039.000
3450	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	74,987.000	74,987.000
3460	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5. 00/HR	HRS	800.000	800.000
3470	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	3,000.000	3,000.000
3480	SPV.0035	SPECIAL 0010. LOADING, HAULING, AND REUSE OF SOLID WASTE SOIL	CY	63,105.000	63,105.000
3490	SPV.0035	SPECIAL 4000. HPC MASONRY STRUCTURES **P**	CY	1,138.000	1,138.000
3500	SPV.0035	SPECIAL 4010. CONCRETE MASONRY SOLDIER PILE FOOTINGS **P**	CY	922.000	922.000
3510	SPV.0035	SPECIAL 4020. FILTER RIPRAP	CY	400.000	400.000
3520	SPV.0045	SPECIAL 0010. TEMPORARY CROSSWALK/SIDEWALK	DAY	224.000	224.000
3530	SPV.0045	SPECIAL 0020. TRUCK MOUNTED ATTENUATOR	DAY	200.000	200.000
3540	SPV.0055	SPECIAL 0010. LANE RENTAL ASSESSMENT	DOL	1.000	1.000
3550	SPV.0060	SPECIAL 0007. SURFACE SETTLEMENT PLATE EXTENSION	EACH	6.000	6.000
3560	SPV.0060	SPECIAL 0011. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 2 **P**	EACH	2.000	2.000
3570	SPV.0060	SPECIAL 0013. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS **P**	EACH	2.000	2.000
3580	SPV.0060	SPECIAL 0014. TRAFFIC CONTROL CLOSE-OPEN FREEWAY ENTRANCE RAMP	EACH	40.000	40.000
3590	SPV.0060	SPECIAL 0015. TRAFFIC CONTROL CLOSE-OPEN FREEWAY TO FREEWAY SYSTEM RAMP	EACH	10.000	10.000
3600	SPV.0060	SPECIAL 0016. TRAFFIC CONTROL INTERIM FREEWAY LANE CLOSURE	EACH	80.000	80.000
3610	SPV.0060	SPECIAL 0017. MOBILIZATION EMERGENCY PAVEMENT REPAIR	EACH	6.000	6.000
3620	SPV.0060	SPECIAL 0021. REMOVING PILLAR AND FOOTING	EACH	2.000	2.000
3630	SPV.0060	SPECIAL 0024. BASELINE CPM PROGRESS SCHEDULE	EACH	1.000	1.000
3640	SPV.0060	SPECIAL 0025. CPM PROGRESS SCHEDULE UPDATES AND ACCEPTED REVISIONS	EACH	12.000	12.000
3650	SPV.0060	SPECIAL 0035. TRAFFIC CONTROL BARRICADES TYPE III LEFT IN PLACE	EACH	4.000	4.000
3660	SPV.0060	SPECIAL 0036. TRAFFIC CONTROL WARNING LIGHTS TYPE A LEFT IN PLACE	EACH	4.000	4.000
3670	SPV.0060	SPECIAL 0038. 24-HOUR BASELINE VIBRATION MONITORING	EACH	32.000	32.000
3680	SPV.0060	SPECIAL 0039. DAILY VIBRATION MONITORING	EACH	16.000	16.000
3690	SPV.0060	SPECIAL 0040. TEMPORARY BUS PAD	EACH	1.000	1.000
3700	SPV.0060	SPECIAL 0043. EXPOSING EXISTING UTILITY, UNPAVED AREA	EACH	25.000	25.000
3710	SPV.0060	SPECIAL 0044. EXPOSING EXISTING UTILITY, PAVED AREA	EACH	25.000	25.000
3720	SPV.0060	SPECIAL 0045. FIXED MESSAGE SIGN PORTABLE SUPPORT	EACH	3.000	3.000

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3730	SPV.0060	SPECIAL 0050. TRAFFIC CONTROL LOCAL ROAD LANE CLOSURES	EACH	25.000	25.000
3740	SPV.0060	SPECIAL 1010. LAMP DISPOSAL HIGH INTENSITY DISCHARGE	EACH	6.000	6.000
3750	SPV.0060	SPECIAL 1020. SALVAGING LIGHT POLES LUMINAIRES AND ARMS	EACH	6.000	6.000
3760	SPV.0060	SPECIAL 1050. PULL BOXES STEEL 24X36-INCH GROUNDED	EACH	3.000	3.000
3770	SPV.0060	SPECIAL 1051. PULL BOXES STEEL 24X42-INCH GROUNDED	EACH	2.000	2.000
3780	SPV.0060	SPECIAL 1090. SALVAGE DISTRIBUTION CENTER	EACH	1.000	1.000
3790	SPV.0060	SPECIAL 1154. ELECTRIC SERVICE METER BREAKER PEDESTAL LIGHTING	EACH	1.000	1.000
3800	SPV.0060	SPECIAL 2001. INSTALLING TEMPORARY VEHICLE DETECTOR ASSEMBLY	EACH	3.000	3.000
3810	SPV.0060	SPECIAL 2002. INSTALLING PORTABLE VIDEO SURVEILLANCE SYSTEM	EACH	2.000	2.000
3820	SPV.0060	SPECIAL 2003. RELOCATING PORTABLE VIDEO SURVEILLANCE SYSTEM	EACH	1.000	1.000
3830	SPV.0060	SPECIAL 2004. GROUND ROD	EACH	4.000	4.000
3840	SPV.0060	SPECIAL 2005. REFOCUSING TEMPORARY VEHICLE DETECTOR ASSEMBLY	EACH	6.000	6.000
3850	SPV.0060	SPECIAL 2006. REMOVING CONTROLLER CABINET	EACH	2.000	2.000
3860	SPV.0060	SPECIAL 2007. REMOVING CONTROLLER CABINET BASE	EACH	2.000	2.000
3870	SPV.0060	SPECIAL 2008. REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL	EACH	2.000	2.000
3880	SPV.0060	SPECIAL 2009. REMOVING CONTROLLER RAMP METER PROCESSOR ASSEMBLY	EACH	1.000	1.000
3890	SPV.0060	SPECIAL 2010. SALVAGE HYBRID DYNAMIC MESSAGE SIGN ASSEMBLY	EACH	1.000	1.000
3900	SPV.0060	SPECIAL 2011. INSTALL SALVAGED HYBRID DYNAMIC MESSAGE SIGN ASSEMBLY	EACH	1.000	1.000
3910	SPV.0060	SPECIAL 2012. INSTALLING CONDUIT INTO EXISTING MANHOLE	EACH	4.000	4.000
3920	SPV.0060	SPECIAL 2013. 4-FT DIAMETER MANHOLE TYPE TES	EACH	4.000	4.000
3930	SPV.0060	SPECIAL 2015. ADJUSTING TES MANHOLE COVER	EACH	1.000	1.000
3940	SPV.0060	SPECIAL 3001. TRAFFIC SIGNAL INTERCONNECT VAULT	EACH	2.000	2.000
3950	SPV.0060	SPECIAL 3002. TRAFFIC POLYMER CONCRETE VAULT 13-INCH X 24-INCH X 18-INCH	EACH	8.000	8.000
3960	SPV.0060	SPECIAL 3003. TRAFFIC POLYMER CONCRETE VAULT 17-INCH X 30-INCH X 18-INCH	EACH	10.000	10.000
3970	SPV.0060	SPECIAL 3004. INSTALL TRAFFIC CABINET BASE	EACH	2.000	2.000
3980	SPV.0060	SPECIAL 3005. INSTALL TRAFFIC SIGNAL BASE	EACH	8.000	8.000
3990	SPV.0060	SPECIAL 3006. CONCRETE BASES TYPE 1 SPREAD FOOTING	EACH	1.000	1.000
4000	SPV.0060	SPECIAL 3007. CONCRETE BASES TYPE 2 SPREAD FOOTING	EACH	2.000	2.000
4010	SPV.0060	SPECIAL 4100. ANCHOR ASSEMBLY LIGHT POLES STRUCTURES	EACH	2.000	2.000
4020	SPV.0060	SPECIAL 4130. TIEBACK ANCHORS	EACH	218.000	218.000

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4030	SPV.0060	SPECIAL 4140. TIEBACK ANCHORS PERFORMANCE TEST	EACH	14.000	14.000
4040	SPV.0060	SPECIAL 4150. ANCHOR SLAB INLET COVER SPECIAL	EACH	2.000	2.000
4050	SPV.0060	SPECIAL 5010. ADJUSTING SANITARY SEWER MANHOLES	EACH	1.000	1.000
4060	SPV.0060	SPECIAL 5020. SANITARY SEWER DROP MANHOLE 48-INCH PRECAST CONCRETE WITH CASTING	EACH	1.000	1.000
4070	SPV.0060	SPECIAL 5030. SANITARY SEWER MANHOLE 48-INCH PRECAST CONCRETE WITH CASTING	EACH	2.000	2.000
4080	SPV.0060	SPECIAL 5035. GREYWOLF SANITARY SEWER MANHOLE 48-INCH PRECAST CONCRETE WITH CASTING	EACH	5.000	5.000
4090	SPV.0060	SPECIAL 5040. MMSD SANITARY SEWER MANHOLE 48-INCH PRECAST CONCRETE WITH CASTING	EACH	1.000	1.000
4100	SPV.0060	SPECIAL 5050. SANITARY MANHOLE VACUUM TEST	EACH	9.000	9.000
4110	SPV.0060	SPECIAL 5060. ADJUSTING WATER BOXES	EACH	4.000	4.000
4120	SPV.0060	SPECIAL 5080. ABANDONING SANITARY MANHOLES	EACH	4.000	4.000
4130	SPV.0060	SPECIAL 5100. EXTEND MMSD MANHOLE	EACH	3.000	3.000
4140	SPV.0060	SPECIAL 8004. INLET COVERS TYPE 57	EACH	1.000	1.000
4150	SPV.0060	SPECIAL 8006. INLET COVERS TYPE R - SPECIAL	EACH	1.000	1.000
4160	SPV.0060	SPECIAL 8007. RECONNECT STORM SEWER LATERALS	EACH	15.000	15.000
4170	SPV.0060	SPECIAL 8009. COVER PLATES LEFT IN PLACE	EACH	2.000	2.000
4180	SPV.0060	SPECIAL 8015. PIPE CONNECTION TO EXISTING STRUCTURE	EACH	14.000	14.000
4190	SPV.0060	SPECIAL 8017. SEDIMENTATION BASIN	EACH	6.000	6.000
4200	SPV.0060	SPECIAL 8050. STORM SEWER STRUCTURE TL219	EACH	1.000	1.000
4210	SPV.0060	SPECIAL 8051. STORM SEWER STRUCTURE TL220	EACH	1.000	1.000
4220	SPV.0060	SPECIAL 8052. REMOVING WELDS FROM STORM SEWER COVERS	EACH	2.000	2.000
4230	SPV.0060	SPECIAL 8061. REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE	EACH	8.000	8.000
4240	SPV.0060	SPECIAL 8075. WELDING STORM SEWER COVERS	EACH	3.000	3.000
4250	SPV.0060	SPECIAL 8100. APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 96-INCH	EACH	2.000	2.000
4260	SPV.0085	SPECIAL 0010. SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX	LB	224.000	224.000
4270	SPV.0085	SPECIAL 4300. BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	700.000	700.000
4280	SPV.0090	SPECIAL 0010. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE, 18-INCH **P**	LF	78.000	78.000
4290	SPV.0090	SPECIAL 0011. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK, 6-INCH **P**	LF	380.000	380.000
4300	SPV.0090	SPECIAL 0012. CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE **P**	LF	6,312.500	6,312.500
4310	SPV.0090	SPECIAL 0013. REMOVING PAVEMENT MARKINGS WATER BLASTING	LF	817.000	817.000

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4320	SPV.0090	SPECIAL 0014. FENCE TEMPORARY LEFT IN PLACE **P**	LF	2,649.000	2,649.000
4330	SPV.0090	SPECIAL 0015. COCONUT FIBER ROLL DELIVERED	LF	372.000	372.000
4340	SPV.0090	SPECIAL 0016. COCONUT FIBER ROLL INSTALLED	LF	372.000	372.000
4350	SPV.0090	SPECIAL 0017. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE, 24-INCH **P**	LF	146.000	146.000
4360	SPV.0090	SPECIAL 0018. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK, 12-INCH **P**	LF	304.000	304.000
4370	SPV.0090	SPECIAL 0020. CONCRETE GUTTER SPECIAL	LF	2,049.000	2,049.000
4380	SPV.0090	SPECIAL 2001. 4-DUCT CONDUIT CEMENT ENCASED 4-INCH CONDUIT DB-60	LF	1,100.000	1,100.000
4390	SPV.0090	SPECIAL 2002. 2-DUCT CONDUIT CEMENT ENCASED 4-INCH CONDUIT DB-60	LF	401.000	401.000
4400	SPV.0090	SPECIAL 2003. CONDUIT SUBDUCT 1-INCH	LF	3,511.000	3,511.000
4410	SPV.0090	SPECIAL 3001. CABLE TYPE UF 2-14 AWG	LF	1,202.000	1,202.000
4420	SPV.0090	SPECIAL 4400. FENCE DECORATIVE BRIDGE **P**	LF	432.000	432.000
4430	SPV.0090	SPECIAL 4420. FOUNDATION DRILLING **P**	LF	10,301.000	10,301.000
4440	SPV.0090	SPECIAL 4430. PILING SLEEVES	LF	126.000	126.000
4450	SPV.0090	SPECIAL 4440. CULVERT PIPE REINFORCED CONCRETE CLASS V 120-INCH	LF	656.000	656.000
4460	SPV.0090	SPECIAL 4450. TUNNELING REINFORCED CONCRETE CLASS V 120-INCH	LF	696.000	696.000
4470	SPV.0090	SPECIAL 5010. STEEL CASING WITH DUCTILE IRON 30-INCH CARRIER	LF	216.000	216.000
4480	SPV.0090	SPECIAL 5015. SANITARY SEWER PRESSURE AND DEFLECTION TESTING	LF	885.000	885.000
4490	SPV.0090	SPECIAL 5020. STEEL CASING WITH DUCTILE IRON 12-INCH CARRIER	LF	72.000	72.000
4500	SPV.0090	SPECIAL 5025. GREYWOLF SANITARY SEWER 8-INCH PVC	LF	570.000	570.000
4510	SPV.0090	SPECIAL 5027. STEEL CASING CONCRETE CAP	LF	90.000	90.000
4520	SPV.0090	SPECIAL 5030. SANITARY SEWER 8-INCH PVC	LF	130.000	130.000
4530	SPV.0090	SPECIAL 5033. ABANDONING SANITARY SEWER 8-INCH & 10-INCH	LF	842.000	842.000
4540	SPV.0090	SPECIAL 5034. ABANDONING SANITARY SEWER 12-INCH	LF	259.000	259.000
4550	SPV.0090	SPECIAL 5035. ABANDONING SANITARY SEWER 24-INCH	LF	598.000	598.000
4560	SPV.0090	SPECIAL 5040. DUCTILE IRON WATER MAIN 12-INCH	LF	105.000	105.000
4570	SPV.0090	SPECIAL 5050. DUCTILE IRON WATER MAIN 16-INCH	LF	9.000	9.000
4580	SPV.0090	SPECIAL 5060. DUCTILE IRON WATER MAIN 30-INCH	LF	581.000	581.000
4590	SPV.0090	SPECIAL 5070. STEEL CASING WITH PVC 10-INCH CARRIER	LF	185.000	185.000
4600	SPV.0090	SPECIAL 5080. SANITARY SEWER AND STEEL CASING REMOVAL	LF	15.000	15.000
4610	SPV.0090	SPECIAL 8001. PIPE UNDERDRAIN 6-INCH SPECIAL	LF	2,993.000	2,993.000
4620	SPV.0090	SPECIAL 8500. STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	686.000	686.000
4630	SPV.0105	SPECIAL 0001. SURVEY PROJECT 1060-33-78	LS	1.000	1.000

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4640	SPV.0105	SPECIAL 0002. PAVEMENT CLEANUP PROJECT. 1060-33-78	LS	1.000	1.000
4650	SPV.0105	SPECIAL 0003. MOVING SIGN BRIDGE CANTILEVERED S-40-133	LS	1.000	1.000
4660	SPV.0105	SPECIAL 0010. TEMPORARY UNDERPASS LEFT IN PLACE	LS	1.000	1.000
4670	SPV.0105	SPECIAL 0015. CONCRETE PAVEMENT JOINT LAYOUT	LS	1.000	1.000
4680	SPV.0105	SPECIAL 1005. MAINTENANCE OF LIGHTING SYSTEM	LS	1.000	1.000
4690	SPV.0105	SPECIAL 2001. SAWING CONCRETE-ENCASED DUCT PACKAGE	LS	1.000	1.000
4700	SPV.0105	SPECIAL 3001. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET IH 94 EB RAMPS & STH 181	LS	1.000	1.000
4710	SPV.0105	SPECIAL 3002. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET IH 94 WB RAMPS & STH 181	LS	1.000	1.000
4720	SPV.0105	SPECIAL 3003. TRNSPRT AND INSTALL STATE FURNSHD AUTOSCP VID DET SYS I94 EB RPS & STH 181	LS	1.000	1.000
4730	SPV.0105	SPECIAL 3004. TRNSPRT AND INSTALL STATE FURNSHD AUTOSCP VID DET SYS I94 WB RPS & STH 181	LS	1.000	1.000
4740	SPV.0105	SPECIAL 3005. INSTALL STATE FURNISHED EVP DETECTOR HEADS IH 94 EB RAMPS & STH 181	LS	1.000	1.000
4750	SPV.0105	SPECIAL 3006. INSTALL STATE FURNISHED EVP DETECTOR HEADS IH 94 WB RAMPS & STH 181	LS	1.000	1.000
4760	SPV.0105	SPECIAL 3007. TEMPORARY EVP SYSTEM IH 94 EB RAMPS & STH 181	LS	1.000	1.000
4770	SPV.0105	SPECIAL 3008. TEMPORARY EVP SYSTEM IH 94 WB RAMPS & STH 181	LS	1.000	1.000
4780	SPV.0105	SPECIAL 3009. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET IH 94 EB RAMPS & STH 181	LS	1.000	1.000
4790	SPV.0105	SPECIAL 3010. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET IH 94 WB RAMPS & STH 181	LS	1.000	1.000
4800	SPV.0105	SPECIAL 4500. TUNNELING INSTRUMENTATION	LS	1.000	1.000
4810	SPV.0105	SPECIAL 4510. GALVANIZED STEEL GRATING	LS	1.000	1.000
4820	SPV.0110	SPECIAL 4600. TIMBER LAGGING **P**	MBM	118.600	118.600
4830	SPV.0165	SPECIAL 0010. TEMPORARY SHORING LEFT IN PLACE	SF	7,295.000	7,295.000
4840	SPV.0165	SPECIAL 4700. LONGITUDINAL GROOVING BRIDGE DECK **P**	SF	3,870.000	3,870.000
4850	SPV.0165	SPECIAL 4710. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT **P**	SF	6,805.000	6,805.000
4860	SPV.0165	SPECIAL 4730. TEMP WALL WIRE FACE MECHANICALLY STABILIZED EARTH LRFD/QMP	SF	1,100.000	1,100.000
4870	SPV.0165	SPECIAL 4740. GEOCOMPOSITE DRAINBOARD	SF	39,537.000	39,537.000
4880	SPV.0165	SPECIAL 4750. PRESTRESSED PRECAST CONCRETE WALL PANEL **P**	SF	1,280.000	1,280.000
4890	SPV.0180	SPECIAL 0010. CONCRETE PAVEMENT REPAIR SPECIAL	SY	100.000	100.000
4900	SPV.0180	SPECIAL 0020. JOINT SEALING **P**	SY	1,634.000	1,634.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1060-33-78 QUANTITY
4910	SPV.0180	SPECIAL 0030. GEOGRID REINFORCEMENT	SY	692.000	692.000
4920	SPV.0180	SPECIAL 0040. GEOTEXTILE FABRIC TYPE FF	SY	200.000	200.000
4930	SPV.0195	SPECIAL 0010. ASPHALTIC PAVEMENT REPAIR SPECIAL	TON	250.000	250.000
4940	SPV.0195	SPECIAL 0020. COLD PATCH	TON	5.000	5.000
4950	SPV.0195	SPECIAL 0040. LOADING HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	TON	5,107.000	5,107.000

CLEARING AND GRUBBING ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA	201.0120 CLEARING ID	201.0220 GRUBBING ID
1000	1	RAMP FBA								
					11FBA+88	51'RT	--	--	6	6
					12FBA+43	49'RT	--	--	7	7
					12FBA+97	55'RT	--	--	4	4
					13FBA+54	58'RT	--	--	5	5
					14FBA+12	62'RT	--	--	5	5
		RAMP FCA								
			11FCA+43	-	13FCA+97	RT	3	3	--	--
					12FCA+44	47'LT	--	--	5	5
					12FCA+53	47'LT	--	--	6	6
			12FCA+67	-	12FCA+99	LT	1	1	--	--
					13FCA+09	77'LT	--	--	8	8
		RAMP FDA								
			10FDA+43	-	12FDA+94	LT	4	4	--	--
					10FDA+77	117'LT	--	--	9	9
					10FDA+90	92'LT	--	--	9	9
					10FDA+95	107'LT	--	--	9	9
		W. KEARNEY STREET								
					105K+03	41'RT	--	--	5	5
					105K+61	29'RT	--	--	5	5
					106K+17	19'RT	--	--	3	3
					106K+75	8'RT	--	--	3	3
					107K+31	7'LT	--	--	5	5
					107K+82	22'LT	--	--	16	16
					108K+27	36'LT	--	--	4	4
					108K+84	43'LT	--	--	5	5
					109K+43	49'LT	--	--	4	4
					110K+00	53'LT	--	--	4	4
					110K+59	51'LT	--	--	6	6
					111K+16	52'LT	--	--	5	5
					111K+75	52'LT	--	--	5	5
					112K+34	50'LT	--	--	4	4
					116K+99	29'LT	--	--	20	20
					117K+57	26'LT	--	--	20	20
					118K+15	22'LT	--	--	16	16
					119K+15	15'LT	--	--	14	14
					119K+61	9'LT	--	--	15	15
					120K+13	3'LT	--	--	16	16
					120K+62	4'RT	--	--	15	15
					121K+10	11'RT	--	--	18	18
					121K+62	19'RT	--	--	13	13
					122K+21	25'RT	--	--	16	16

3

CLEARING AND GRUBBING ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	201.0105 CLEARING STA	201.0205 GRUBBING STA	201.0120 CLEARING ID	201.0220 GRUBBING ID
					122K+73	28'RT	--	--	21	21
					123K+24	30'RT	--	--	20	20
			123K+37	-	126K+68	LT	4	4	--	--
					123K+73	30'RT	--	--	16	16
		W. O'CONNOR STREET								
			555CR+76	-	564CR+40	RT	9	9	--	--
			565CR+41	-	574CR+02	RT	9	9	--	--
		IH 94								
			259EW+18	-	264EW+64	LT	6	6	--	--
		GREENFIELD BERM								
			744GB+90	-	750GB+00	RT	6	6	--	--
			750GB+90	-	752GB+15	RT	2	2	--	--
		S. 83RD STREET								
							2	2	4	4
							--	--	6	6
		SUBTOTAL					46	46	377	377
1000	2	W. SCHLINGER AVE.								
					530SCH+57	26'RT	--	--	4	4
					530SCH+87	25'RT	--	--	4	4
					531SCH+20	25'RT	--	--	5	5
		RAMP NSA								
			12NSA+71	-	24NSA+21	LT/RT	12	12	--	--
			23NSA+58	-	25NSA+13	RT	2	2	--	--
			25NSA+08	-	27NSA+17	LT/RT	4	4	--	--
			28NSA+46	-	28NSA+91	LT	1	1	--	--
			30NSA+54	-	31NSA+53	RT	2	2	--	--
			31NSA+26	-	37NSA+84	LT/RT	7	7	--	--
		SUBTOTAL					28	28	13	13
1000	3	W. KEARNEY STREET								
			127K+67	-	136K+50	LT	9	9	--	--
		SUBTOTAL					9	9	--	--
		TOTALS					83	83	390	390

REMOVING PAVEMENT

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0100 REMOVING PAVEMENT SY	204.0120 REMOVING ASPHALTIC SURFACE MILLLING SY
1000	1	S. 84TH STREET	37F+51	-	40F+35	LT/RT	1,560	--
			41F+53	-	45F+27	LT/RT	365	--
		O'CONNOR WM TRENCH	562CR+21	-	565CR+11	RT	202	--
		RAMP FBA	10FBA+00	-	107K+72	LT/RT	2,666	--
		RAMP FCA	11FCA+43	-	14FCA+00	LT/RT	818	--
		RAMP FDA	11FDA+00	-	12FDA+15	LT/RT	444	--
		IH 94	256EW+03	-	274EW+31	LT/RT	2,490	--
			256EW+95	-	271EW+10	RT	--	2,900
			254EW+00	-	278EW+00	LT	--	4,935
		W. KEARNEY STREET	104K+97	-	107K+71	LT/RT	778	--
		S. 83RD STREET / FIRESTATION					65	--
		SUBTOTAL					9,388	7,835
	2	RAMP NSA	12NSA+71	-	18NSA+73	LT	755	--
		W. SCHLINGER AVE.	530SCH+00	-	531SCH+51	LT/RT	338	--
		SUBTOTAL					1,093	--
	3	W. KEARNEY STREET	118K+34	-	126K+65	LT/RT	2,538	--
			127K+35	-	129K+00	LT/RT	811	--
		IH 94	262EW+48	-	268EW+20	RT	677	--
			265EW+95	-	266EW+36	RT	159	--
		S. 76TH STREET	18TL+70	-	20TL+83	LT/RT	1,460	--
		SUBTOTAL					5,645	--
	4	S. 76TH STREET	22TL+79	-	23TL+53	LT/RT	450	--
		W. O'CONNOR STREET	561CR+26	-	565CR+81	RT	436	--
		SUBTOTAL					886	--
		UNDISTRIBUTED					--	--
		TOTAL					17,011	7,835

REMOVING CURB & GUTTER

CATEGORY	STAGE	ROADWAY	FROM STATION	FROM LOCATION	TO STATION	TO LOCATION	204.0150 REMOVING CURB AND GUTTER LF
1000	1	IH 94	234EW+52	7'RT	234EW+72	8'RT	20
		W. O'CONNOR STREET	555CR+80	14'RT	561CR+26	14'RT	539
		RAMP FBA	12FBA+50	57'RT	17FBA+86	72'RT	535
		RAMP FDA	9FDA+64	14'RT	9FDA+80	14'RT	16
		HONEY CREEK PARKING					34
		SUBTOTAL					1,144
	2	RAMP NSA	34NSA+19	31' LT	37NSA+84	52' RT	364
		SUBTOTAL					364
	4	W. KEARNEY STREET	129K+00	13'LT	136K+20	13'LT	721
		W. O'CONNOR STREET	565CR+81	18'RT	573CR+20	14'RT	741
		S. 76TH STREET	23TL+78	48' LT	23TL+92	38' LT	17
			24TL+05	43' RT	24TL+10	36' RT	10
			24TL+15	49' RT	24TL+20	42' RT	9
			24TL+28	61' RT	24TL+33	54' RT	9
		SUBTOTAL					1,507
		TOTAL					3,015

REMOVING CONCRETE SIDEWALK

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0155 REMOVING CONCRETE SIDEWALK SY
1000	1	S. 84TH STREET					
			38F+75	-	39F+18	LT	28
			39F+36	-	40F+00	RT	34
			39F+48	-	39F+93	LT	23
			41F+87	-	42F+01	MEDIAN	9
			41F+75	-	42F+75	RT	66
			41F+85	-	42F+98	LT	91
		RAMP FBA					
			10FBA+42	-	13FBA+32	RT	174
		S. 83RD STREET					90
		SUBTOTAL					515
	2	W. SCHLINGER AVE.					
			529SCH+90	-	531SCH+60	RT	108
		SUBTOTAL					108
	3	W. KEARNEY ST.					
			124K+38	-	126K+48	RT	201
			127K+46	-	128K+56	RT	68
		S. 76TH STREET					
			18TL+70	-	20TL+62	LT	119
			18TL+70	-	20TL+85	RT	97
		SUBTOTAL					485
	4	S. 76TH STREET					
			22TL+78	-	23TL+37	LT	38
			23TL+00	-	23TL+65	RT	37
			23TL+78	-	23TL+96	LT	15
			24TL+04	-	24TL+36	RT	24
		SUBTOTAL					114
		TOTAL					1,222

REMOVING CONCRETE BARRIER

CATEGORY	STAGE	ROADWAY	STATION RANGE	OFFSET	204.0157 REMOVING CONCRETE BARRIER LF
1000	1	IH 94			
			256EW+04 - 260EW+65	LT	456
			264EW+45 - 266EW+92	LT	328
		SUBTOTAL			784
	3	IH 94			
			262EW+68 - 265EW+15	RT	247
		SUBTOTAL			247
		TOTAL			1,031

REMOVING FENCE

CATEGORY	STAGE	ROADWAY	FROM STATION	OFFSET	TO STATION	OFFSET	204.0170 REMOVING FENCE LF
1000	1	IH 94	263EW+11	LT	264EW+70	LT	168
			265EW+58	LT	274EW+39	LT	897
		RAMP FBA					
			10FBA+42	LT	15FBA+18	LT	504
		RAMP FCA					
			11FCA+66	LT	13FCA+40	LT	243
			11FCA+43	RT	14FCA+00	RT	270
		RAMP FDA					
			10FDA+08	LT	12FDA+04	LT	203
			11FDA+12	RT	12FDA+22	RT	110
	2	RAMP NSA					
			16NSA+37	RT	26NSA+95	LT	1,071
			28NSA+26	LT	32NSA+37	LT	499
			34NSA+14	LT	34NSA+36	RT	86
	3	IH 94					
			259EW+15	RT	264EW+09	RT	511
			264EW+94	RT	273EW+74	RT	906
		W. KEARNEY ST.					
			119K+03	RT	121K+60	RT	291
		TOTAL					5,759

REMOVING INLETS

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	204.0220 REMOVING INLETS EACH
1000	1A	W. KEARNEY STREET			
			111K+34	84' RT	1
	1A	W. O'CONNOR STREET			
			559CR+06	11' RT	1
			561CR+25	11' RT	1
	1A	S. 84TH STREET			
			42F+76	3' LT	1
	1A	RAMP FBA			
			10FBA+62	14' LT	1
			10FBA+62	22' LT	1
			11FBA+13	15' LT	1
			12FBA+66	14' LT	1
	1A	RAMP FDA			
			11FDA+89	12' RT	1
		SUBTOTAL			9
1000	1B	RAMP FCA			
			12FCA+85	11' LT	1
			13FCA+35	20' LT	1
			13FCA+36	12' LT	1
			13FCA+38	19' RT	1
		SUBTOTAL			4
1000	1C	S. 84TH STREET			
			38F+87	4' LT	1
			39F+86	5' LT	1
		SUBTOTAL			2
1000	2	W. KEARNEY STREET			
			107K+72	28' LT	1
			107K+83	30' LT	1
			109K+43	2' LT	1
			109K+58	50' LT	1
	2	IH 94			
			263EW+21	33' LT	1
			263EW+70	39' LT	1
			264EW+20	31' LT	1
			266EW+15	94' RT	1
			266EW+17	25' LT	1
			266EW+17	41' LT	1
			266EW+18	26' RT	1
			273EW+69	58' LT	1
			274EW+15	67' LT	1
	2	RAMP NSA			
			19NSA+70	11'RT	1
			28NSA+65	88' LT	1
		SUBTOTAL			15

REMOVING INLETS (CONTINUED)

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	204.0220 REMOVING INLETS EACH
1000	3	IH 94			
			263EW+69	96' RT	1
			263EW+69	86' RT	1
			267EW+76	87' RT	1
		S. 76TH STREET			
			19TL+75	62' RT	1
			20TL+12	32' LT	1
			20TL+36	33' RT	1
		SUBTOTAL			6
1000	4	S. 76TH STREET			
			23TL+56	32' RT	1
		W. KEARNEY STREET			
			121K+73	2' RT	1
			123K+98	11' RT	1
		SUBTOTAL			3
		TOTAL			39

REMOVING MANHOLES

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	204.0210* REMOVING MANHOLES EACH
1000	1A	W. KEARNEY STREET			
			108K+56	22' LT	1
		SUBTOTAL			1
1000	1C	S. 84TH STREET			
			39F+60	5' LT	1
		SUBTOTAL			1
1000	2	RAMP NSA			
			27NBT+77	95' LT	1
		SUBTOTAL			1
		TOTAL			3

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING GUARDRAIL

CATEGORY	STAGE	ROADWAY	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	204.0165 REMOVING GUARDRAIL LF
1000	1	IH 94					
			260EW+65	48'LT	261EW+34	46'LT	68
			266EW+90	39'LT	267EW+65	43'LT	75
	2	RAMP NSA					
			28NSA+36	75'LT	28NSA+51	15'LT	62
	3	IH 94					
			261EW+98	86'RT	262EW+68	87'RT	70
		TOTAL					275

REMOVING NOISE BARRIER

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	204.9090.S.0001 LF
1000							
	1	IH 94	256EW+04	--	263EW+11	LT	700
		TOTALS					700

REMOVING STORM SEWER

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0245.0001 REMOVING STORM SEWER 12-INCH LF	204.0245.0002 REMOVING STORM SEWER 15-INCH LF	204.0245.0003 REMOVING STORM SEWER 18-INCH LF	204.0245.0005* REMOVING STORM SEWER 24-INCH LF	204.0245.0009 REMOVING STORM SEWER 48-INCH LF	204.0245.0013 REMOVING STORM SEWER 72-INCH LF
1000	1A	W. KEARNEY STREET										
			108K+21	-	108K+56	LT/RT	--	--	--	90	--	--
			108K+56	-	108K+56	LT	--	--	--	8	--	--
			111K+34	-	111K+34	RT	--	--	11	--	--	--
	1A	IH 94										
			261EW+47	-	261EW+52	LT	62	--	--	--	--	--
	1A	RAMP FBA										
			10FBA+62	-	10FBA+62	LT	8	--	--	--	--	--
			10FBA+62	-	10FBA+69	LT/RT	--	43	--	--	--	--
			10FBA+62	-	11FBA+13	LT	50	--	--	--	--	--
			11FBA+13	-	12FBA+66	LT	151	--	--	--	--	--
	1A	RAMP FDA										
			10FDA+33	-	11FDA+24	LT	--	--	--	--	--	115
			234EW+69	-	11FDA+89	RT	112	--	--	--	--	--
			11FDA+89	-	12FDA+00	RT	--	11	--	--	--	--
		SUBTOTALS					383	54	11	98	--	115
1000	1B	RAMP FCA										
			12FCA+85	-	13FCA+36	LT	--	50	--	--	--	--
			13FCA+35	-	13FCA+36	LT	8	--	--	--	--	--
			13FCA+36	-	13FCA+38	LT/RT	30	--	--	--	--	--
			13FCA+36	-	13FCA+96	LT	--	--	30	--	--	--
		SUBTOTALS					38	50	30	--	--	--
1000	1C	S. 84TH STREET										
			38F+87	-	39F+60	LT	--	--	--	--	73	--
			39F+60	-	39F+60	LT	--	--	43	--	--	--
			39F+60	-	39F+86	LT	--	--	--	--	25	--
		SUBTOTALS					--	--	43	--	98	--
1000	2	W. KEARNEY STREET										
			107K+72	-	107K+83	LT	11	--	--	--	--	--
			107K+83	-	107K+87	LT	9	--	--	--	--	--
	2	O'CONNOR STREET										
			555CR+67	-	556CR+26	RT	--	62	--	--	--	--
	2	IH 94										
			263EW+21	-	263EW+70	LT	49	--	--	--	--	--
			263EW+70	-	263EW+70	LT	8	--	--	--	--	--
			263EW+70	-	264EW+19	LT	49	--	--	--	--	--
			265EW+86	-	266EW+15	RT	32	--	--	--	--	--
			266EW+15	-	266EW+17	RT	51	--	--	--	--	--
			266EW+17	-	266EW+18	RT	11	--	--	--	--	--
			266EW+17	-	266EW+18	RT/LT	51	--	--	--	--	--
			266EW+17	-	266EW+17	LT	15	--	--	--	--	--
			273EW+69	-	274EW+15	LT	45	--	--	--	--	--
			274EW+15	-	274EW+15	LT	10	--	--	--	--	--
		SUBTOTALS					341	62	--	--	--	--

(CONTINUED ON NEXT SHEET)

3

REMOVING STORM SEWER (CONTINUED)

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	204.0245.0001 REMOVING STORM SEWER 12-INCH LF	204.0245.0002 REMOVING STORM SEWER 15-INCH LF	204.0245.0003 REMOVING STORM SEWER 18-INCH LF	204.0245.0005* REMOVING STORM SEWER 24-INCH LF	204.0245.0009 REMOVING STORM SEWER 48-INCH LF	204.0245.0013 REMOVING STORM SEWER 72-INCH LF
1000	3	IH 94										
			263EW+69	-	263EW+69	RT	7	--	--	--	--	--
			267EW+75	-	267EW+76	RT	4	--	--	--	--	--
		S. 76TH STREET										
			19TL+75	-	20TL+36	RT	68	--	--	--	--	--
			20TL+12	-	20TL+36	LT/RT	66	--	--	--	--	--
			20TL+36	-	265EW+86	RT	131	--	--	--	--	--
		SUBTOTALS					276	--	--	--	--	--
1000	4	W. KEARNEY STREET										
			121K+73	-	121K+84	LT	41	--	--	--	--	--
			123K+98	-	123K+98	LT/RT	32	--	--	--	--	--
		S. 76TH STREET										
			23TL+57	-	23TL+65	RT	9	--	--	--	--	--
		SUBTOTALS					82	--	--	--	--	--
		TOTALS					1,120	166	84	98	98	115

Division	From/To Station	Location	Excavation Common (1) Cut (2)	Item 205.0100 EBS Excavation (3)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	Reduced EBS in Fill (6) Factor 0.8	Expanded EBS Backfill (7) Factor 1.3	Unexpanded Fill	Expanded Fill (9) Factor 1.2	Mass Ordinate +/- (10)	Waste	Borrow Item 208.0100
DIVISION 1													
	263EW+50 TO 273EW+45	IH 94 WB	33,918	252	570	33,348	201	327	57	69	32,952	32,952	0
	37F+51 TO 45F+27	84TH ST	756	55	325	431	44	72	12	14	345	345	0
	104K+77 TO 107K+26	KEARNEY STREET	113	19	-	113	16	25	4,597	5,516	-5,429	-5,429	0
	10FBA+00 TO 15FBA+35	RAMP FBA	234	68	72	162	55	89	11,489	13,787	-13,714	-13,714	0
	11FCA+43 TO 14FCA+02	RAMP FCA	60	23	-	60	18	30	3,339	4,007	-3,977	-3,977	0
	11FDA+00 TO 12FDA+05	RAMP FDA	55	12	-	55	10	16	5,324	6,389	-6,349	-6,349	0
	20+53 TO 22+63	CHANNEL EXCAVATION	3,305	-	407	2,898	-	-	1,057	1,269	1,630	1,630	0
	744GBB+90 TO 752GBB+15	GREENFIELD BERM	63	-	-	63	-	-	57,645	69,174	-69,111	-69,111	0
	476NW+71 TO 488NW+23	RAMP NW SURCHARGE	169	-	-	169	-	-	20,097	24,117	-23,948	-23,948	0
Division 1 Subtotal Stage 1			38,673	430	1,374	37,299	344	559	103,618	124,341	-87,600	-87,600	-
DIVISION 2													
	12NSA+71TO 37NSA+84	RAMP NSA	12,176	16,678	189	28,665	-	-	12,100	14,520	14,145	14,145	0
Division 2 Subtotal			12,176	16,678	189	28,665	-	-	12,100	14,520	14,145	14,145	-
DIVISION 3													
	257EW+76 TO 273EW+21	IH 94 EB	2,571	-	118	2,453	-	-	1,301	1,561	892	892	0
	18TL+70 TO 23TL+55	76TH ST	657	55	382	275	44	71	807	969	-766	-766	0
	107K+26 TO 136+20	KEARNEY STREET	4,289	265	749	3,540	212	345	8,671	10,405	-7,210	-7,210	0
Division 3 Subtotal			7,517	320	1,249	6,268	256	417	10,779	12,935	-7,083	-7,083	-
DIVISION 4													
	556CR+75 TO 573CR+20	W. O'CONNOR STREET	1,254	40	236	1,018	32	52	0	0	966	966	0
Division 4 Subtotal			1,254	40	236	1,018	32	52	0	0	966	966	-
Grand Total			59,621	17,468	3,048	73,251	632	1,027	126,497	151,796	-79,572	-79,572	0
		Total Common Exc		77,088									

EARTHWORK SUMMARY NOTES:

1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unusable Pavement is included in Excavation Common. An estimated volume for Salvaged/Unusable Pavement has been removed from Structure Excavation for B-40-892 and C-40-101.
3) EBS Excavation to be backfilled with Cut. Assumed 5% of pavement area at an average depth of 2'. See also note 16.
4) Salvaged/Unusable Pavement Material - Not shown in Earthwork Data Sheets
5) Available Material = Cut - Salvaged/Unusable Pavement Material
6) Reduced EBS in Fill - Excavated EBS material is useable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
7) Expanded EBS Backfill - This is to be filled with Borrow or Cut material. EBS Backfill Factor = 1.3.
8) Expanded Fill. Factor = 1.20
   Expanded Fill = (Unexpanded Fill - Reduced EBS) * Fill Factor
   If Reduced EBS > than volume available outside of the 1:1 slope
   Subtract only available volume. Remaining volume or reduced EBS is considered waste.
9) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division. (Incl. Salv/Unusable Pavement Quantities shown in this table)
   The Mass Ordinate number will vary between the summary and individual detail sheets due to the Salvaged/Unusable Pavement Material being shown in the summary sheet only.
10) The structural backfill needed to construct R-40-525 has been estimated. The structural backfill quantity has been subtracted from the fill volume in all end area calculations.
   The width of the structural backfill off of the back of the wall has been estimated as 0.8 times the height of the retaining walls.
11) Structure Excavation, due to B-40-892 box culvert construction, (estimated 84,242 cy) is not included in this table and should be considered additional waste. See also note 2 & 15.
12) Structure excavation, due to C-40-101 construction (estimated 14,476 cy) is not included in this table and should be considered waste. See also note 2.
13) Waste due to jacked/tunneled portion of C-40-101 construction, (estimated 3,284 cy) is not included in this table and should be considered additional waste.
14) Excavation due to storm sewer construction, (estimated 7,793 cy) is not included in this table and should be considered additional waste.
15) The quantity for "Loading, Hauling and Reuse of Solid Waste Soil" shall be used as backfill as shown in B-40-892 plans and as fill for the Greenfield Berm. See also "For Information Only" Cross Sections.
16) Ramp NSA EBS Excavation to be backfilled with Backfill Granular Material. See Table "PAVEMENT SUBGRADE IMPROVEMENT" for Quantities. RAMP NSA EBS Excavation Material may be used for borrow in other Divisions.
17) The waste quantity from Structural excavation is to be used for borrow.
18) The embankment work shown for the Ramp NW Surcharge has been partially completed as part of a separate contract. The embankment shall be completed under this contract. The quantities shown to complete the embankment are only an estimate.

SAWING

CATEGORY	STAGE	ROADWAY	FROM STATION		TO STATION	OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
1000	1	S. 84TH STREET						
			37F+00	-	41F+90	LT/RT	--	545
			41F+53	-	45F+27	LT/RT	--	464
		RAMP FBA						
			10FCA+44	-	10FCA+48	RT	--	5
			15FBA+35	-	15FBA+35	LT/RT	--	29
		RAMP FCA						
			11FCA+43	-	11FCA+43	LT/RT	--	29
		RAMP FDA						
			9FDA+64	-	12FDA+15	LT/RT	--	83
		W. KEARNEY STREET						
			12FBA+52	-	110K+63	RT	803	--
			107K+67	-	107K+72	LT	--	26
		IH 94						
			234EW+52	-	234EW+72	RT	--	26
			256EW+03	-	274EW+31	LT/RT	--	1,936
		O'CONNOR WM TRENCH						
			562CR+21	-	565CR+11	LT/RT	--	366
		S. 83RD STREET						
							--	247
		HONEY CREEK PARKING						
							28	5
		SUBTOTAL					831	3,761
	2	RAMP NSA						
			12NSA+71		18NSA+73	LT/RT	--	626
			34NSA+29		37NSA+84	LT/RT	--	368
		W. SCHLINGER AVE.						
			529SCH+90	-	531SCH+60	LT/RT	--	297
		SUBTOTAL					--	1,291

SAWING

CATEGORY	STAGE	ROADWAY	FROM STATION		TO STATION	OFFSET	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
	3	W. KEARNEY STREET						
			118K+34	-	118K+36	LT	--	25
			118K+47	-	118K+87	RT	40	--
			128K+01	-	129K+00	RT	--	68
		S. 76TH STREET						
			18TL+70	-	21TL+02	LT/RT	--	87
		IH 94						
			262EW+48	-	268EW+20	RT	--	615
		SUBTOTAL					40	795
	4	W. KEARNEY STREET						
			129K+00	-	136K+20	LT	--	723
		W. O'CONNOR STREET						
			555CR+88	-	573CR+20	RT	--	1,790
		S. 76TH STREET						
			23TL+78	-	23TL+96	LT	--	35
			24TL+04	-	24TL+36	RT		50
		SUBTOTAL					--	2,598
		TOTAL					871	8,445

PAVEMENT SUBGRADE IMPROVEMENT

CATEGORY	ROADWAY	STATION		TO STATION	209.0100 BACKFILL GRANULAR CY
1000	RAMP NSA				
		29NSA+30	-	27NSA+38	19,556
	TOTAL				19,556

BASE AGGREGATE ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON
1000	1	S. 84TH STREET					
			37F+51	-	40F+35	854	--
			41F+53	-	45F+27	261	--
		RAMP FBA					
			10FBA+00	-	15FBA+35	1,553	--
		RAMP FCA					
			11FCA+43	-	14FCA+00	346	--
		RAMP FDA					
			9FDA+64	-	12FDA+05	276	--
		HONEY CREEK PARKING					
						21	--
		IH 94 WB					
			234EW+52	-	234EW+72	4	9
			265EW+03	-	274EW+31	5,680	5,992
		S. 83RD STREET					
						57	--
		W. KEARNEY STREET					
			104K+77	-	107K+25	462	849
		O'CONNOR WM TRENCH					
			562CR+21	-	565CR+11	94	--
		SUBTOTAL				9,609	6,850
1000	2	SCHLINGER					
			530SCH+00	-	531SCH+51	132	--
		SUBTOTAL				132	--

BASE AGGREGATE ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON
1000	3	S. 76TH STREET					
			18TL+70	-	21TL+02	693	--
		IH 94 EB					
			265EW+94	-	266EW+36	120	126
		W. KEARNEY STREET					
			107K+26	-	110K+18	89	--
			110K+74	-	112K+05	302	--
			107K+25	-	126K+64	3,220	--
			127K+38	-	129K+00	368	--
			129K+00	-	136K+50	175	--
		PETTIT PARKING					
			12FBA+52	-	110K+80	1,589	--
		SUBTOTAL				6,557	126
1000	4	RAMP NSA					
			12NSA+71	-	25NSA+90	4,944	4,517
			25NSA+90	-	27NSA+28	347	448
			28NSA+18	-	28NSA+45	36	--
			29NSA+00	-	29NSA+37	29	--
			29NSA+37	-	37NSA+84	2,846	2,538
		ATC ACCESS PATH					
			24XM+42	-	27XM+62	246	--
		S. 76TH STREET					
			23TL+01	-	23TL+76	114	--
			23TL+77	-	23TL+96	4	--
			24TL+04	-	24TL+36	5	--
		W. O'CONNOR STREET					
			555CR+88	-	564CR+40	371	--
			565CR+46	-	573CR+20	195	--
		SUBTOTAL				9,136	7,503
		TOTAL				25,433	14,480

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CONCRETE PAVEMENT

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	415.0090 CONCRETE PAVEMENT 9-INCH SY	415.1090 CONCRETE PAVEMENT HES 9-INCH SY
1000	1	S. 84TH STREET					
			37F+00	-	40F+35	--	1,650
		RAMP FCA					
			11FCA+43	-	14FCA+00	--	686
		S. 83RD STREET				32	
		SUBTOTAL				32	2,337
	3	W. KEARNEY STREET					
			107K+25	-	126K+64	6,894	--
			127K+39	-	129K+00	731	--
		W. SCHLINGER AVE.					
			530SCH+00	-	531SCH+51	262	--
		S. 76TH STREET					
			18TL+70	-	20TL+87	1,474	--
		SUBTOTAL				9,361	--
	4	W. O'CONNOR STREET					
			555CR+88	-	561CR+30	397	--
			562CR+04	-	565CR+80	464	--
			565CR+80	-	573CR+20	329	
		W. KEARNEY STREET					
			129K+00	-	136K+50	334	
		S. 76TH STREET					
			23TL+26	-	23TL+76	175	--
		RAMP NSA					
			25NSA+90	-	27NSA+28	419	--
		SUBTOTAL				2,118	--
		TOTAL				11,510	2,337

CONCRETE SIDEWALK

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	OFFSET	602.0410 5-INCH SF
1000	1	S. 84TH STREET					
			38F+75	-	42F+45	LT	721
			39F+36	-	42F+75	RT	882
			38F+97	-	42F+01	MEDIAN	127
		RAMP FBA					
			10FBA+00	-	13FBA+89	RT	2,327
		RAMP FDA					
			12FDA+98	-	13FDA+32	LT	536
		S. 83RD STREET					808
		SUBTOTAL					5,401
	3	W. SCHLINGER AVE.					
			529SCH+90	-	531SCH+60	RT	1,021
		W. KEARNEY ST.					
			107K+16	-	126K+42	RT	10,321
			127K+52	-	127K+89	LT	849
			127K+29	-	128K+56	RT	777
		S. 76TH STREET					
			18TL+70	-	20TL+86	LT	1,210
			18TL+70	-	21TL+13	RT	768
			19TL+71	-	19TL+77	MEDIAN	45
			20TL+54	-	21TL+01	MEDIAN	369
		SUBTOTAL					15,360
	4	S. 76TH STREET					
			23TL+00	-	23TL+33	LT	374
			23TL+12	-	23TL+27	MEDIAN	106
			23TL+78	-	23TL+96	LT	132
			24TL+04	-	24TL+36	RT	228
		W. O'CONNOR ST.					
			565CR+40	-	565CR+80	RT	554
		SUBTOTAL					1,394
		TOTALS					22,155

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STAGE	ROADWAY	LOCATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY
1000	4	S. 76TH STREET		
		NORTH	B-40-785	140
		SOUTH	B-40-785	136
		TOTALS		276

CONCRETE DRIVEWAY ITEMS

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	416.0170 CONCRETE DRIVEWAY 7-INCH SY
1000	3	W. SCHLINGER AVE.			
			531SCH+36	RT	17
		W. KEARNEY ST.			
			128K+77	RT	16
		TOTALS			33

ASPHALTIC ITEMS

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	455.0115 ASPHALTIC MATERIAL PG 64-22 TON	455.0120 ASPHALTIC MATERIAL PG 64-28 TON	455.0605 TACK COAT GAL	460.1110 HMA PAVEMENT TYPE E-10 TON	460.1101 HMA PAVEMENT TYPE E-1 TON	460.1130 HMA PAVEMENT TYPE E-30 TON	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	460.2000 INCENTIVE DENSITY HMA PAVEMENT DOL
1000	1	S. 84TH STREET												
			37F+00	-	38F+43	--	--	--	--	--	--	--	77	--
			41F+54	-	45F+27	6	--	7	--	97	--	--	--	97
		RAMP FBA												
			10FBA+00	-	15FBA+35	35	--	51	--	590	--	--	--	590
		RAMP FDA												
			9FDA+64	-	9FDA+80	--	--	--	--	2	--	--	--	2
			10FDA+78	-	12FDA+15	4	--	9	--	64	--	--	--	64
			10FDA+78	-	12FDA+15	3	--	9	--	53	--	--	--	53
		IH 94 EB												
			256EW+95	-	271EW+10	1	--	--	--	--	10	--	--	--
			256EW+95	-	271EW+10	2	--	--	--	--	31	--	--	--
		IH 94 WB												
			254EW+00	-	278EW+00	1	--	--	--	--	17	--	--	--
			254EW+00	-	278EW+00	3	--	--	--	--	52	--	--	--
			256EW+03	-	274EW+31	--	195	378	3,256	--	--	--	--	3,256
		W. KEARNEY STREET												
			104K+97	-	107K+25	10	--	15	--	168	--	--	--	168
		O'CONNOR WM TRENCH												
			562CR+21	-	565CR+11	--	--	--	--	--	--	--	58	--
		HONEY CREEK PARKING				--	--	--	--	--	--	6	--	--
		SUBTOTAL				65	195	469	3,256	974	108	6	135	4,230
	3	IH 94												
			265EW+94	-	266EW+36	--	4	8	68	--	--	--	--	68
		PETTIT PARKING												
			12FBA+52	-	110K+80	--	--	--	--	--	--	721	--	--
		SUBTOTAL				--	4	8	68	--	--	721	--	68
	4	RAMP NSA												
			12NSA+71	-	27NSA+20	--	151	292	2,514	--	--	--	--	2,514
			29NSA+37	-	37NSA+84	--	82	159	1,368	--	--	--	--	1,368
		W. O'CONNOR ST.												
			562CR+04	-	564CR+48	3	--	6	--	42	--	--	--	42
			573CR+20	-	574CR+05	--	2	--	27	--	--	--	--	27
		SUBTOTAL				3	235	457	3,909	42	--	--	--	3,951
		TOTALS				68	434	934	7,233	1,016	108	727	135	8,249

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CONCRETE CURB & GUTTER

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	601.0319 CONCRETE CURB & GUTTER 19-INCH LF	601.0331 CONCRETE CURB & GUTTER 31-INCH LF	601.0600 CONCRETE CURB PEDESTRIAN LF	SPV.0090.0020 CONCRETE GUTTER SPECIAL LF
1000	1	IH 94	234EW+52	-	234EW+72	RT	--	20	--	--
		RAMP FDA	9FDA+64	-	12FDA+15	LT/RT	--	291	--	--
		RAMP FCA	11FCA+43	-	13FCA+92	LT/RT	--	477	--	--
		RAMP FBA	10FBA+00	-	15FBA+35	LT/RT	--	931	--	--
		S. 84TH STREET	38F+97	-	40F+12	LT/RT	--	178	--	--
			37F+00	-	40F+35	MEDIAN	--	317	--	--
			42F+67	-	45F+26	MEDIAN	--	337	--	--
		W. KEARNEY STREET	102K+98	-	107K+25	LT/RT	--	653	--	--
		S. 83RD STREET / FIRESTATION					--	126	--	--
		HONEY CREEK PARKING					--	34	--	--
		SUBTOTAL					--	3,364	--	--
	3	W. SCHLINGER AVE.	530SCH+00	-	531SCH+51	RT	--	151	--	--
			530SCH+09	-	530SCH+84	LT	--	75	--	--
		W. KEARNEY STREET	105K+92	-	110K+74	RT	--	484	--	--
			107K+25	-	126K+63	RT	--	1,923	--	--
			107K+25	-	126K+63	LT	--	154	--	--
			127K+39	-	129K+00	RT	57	237	--	--
			127K+39	-	129K+00	LT	--	47	6	--
		IH 94	263EW+50	-	264EW+05	RT	--	--	--	55
			265EW+15	-	273EW+32	RT	--	--	--	819
			257EW+76	-	264EW+65	LT	--	--	--	683
			265EW+78	-	270EW+70	LT	--	--	--	492
		S. 76TH STREET	18TL+70	-	20TL+85	LT	--	206	37	--
			18TL+70	-	21TL+10	RT	--	104	58	--
			18TL+70	-	21TL+02	MEDIAN	230	104	--	--
			23TL+78	-	23TL+92	LT	--	17	14	--
			24TL+05	-	24TL+10	RT	--	10	--	--
			24TL+15	-	24TL+20	RT	--	9	--	--
			24TL+28	-	24TL+33	RT	--	9	--	--
		SUBTOTAL					287	3,530	115	2,049
	4	S. 76TH STREET	23TL+10	-	23TL+31	MEDIAN	--	40	--	--
		W. O'CONNOR STREET	564CR+34	-	565CR+80	RT	--	121	13	--
		SUBTOTAL					--	161	13	--
		TOTAL					287	7,055	128	2,049

CURB RAMP

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA SF
1000	1	S. 84TH STREET			
			39F+00	LT	8
			39F+00	MEDIAN	16
			39F+00	RT	8
			39F+05	RT	8
			39F+13	LT	8
			39F+37	RT	8
			39F+64	LT	8
			42F+15	RT	8
			42F+44	LT	8
			42F+53	RT	16
			42F+75	LT	16
		RAMP FBA			
			10FBA+21	RT	8
			10FBA+47	RT	8
		SUBTOTAL			128
	3	W. KEARNEY ST.			
			118K+31	RT	8
			119K+05	RT	8
			127K+40	RT	8
			127K+42	RT	8
			127K+53	RT	8
			127K+55	LT	8
		S. 76TH STREET			
			19TL+65	LT	8
			19TL+73	MEDIAN	8
			19TL+74	MEDIAN	8
			19TL+83	RT	8
			20TL+09	LT	8
		SUBTOTAL			88
	4	S. 76TH STREET			
			23TL+31	LT	8
			23TL+85	LT	8
			24TL+08	RT	8
			24TL+16	RT	8
			24TL+32	RT	8
		W. O'CONNOR ST.			
			565CR+57	RT	8
		SUBTOTAL			48
		TOTALS			264

CONCRETE BARRIER

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	603.1132 CONCRETE BARRIER TYPE S32 LF	603.1142 CONCRETE BARRIER TYPE S42 LF
1000	3	W. KEARNEY STREET						
			110K+33	-	125K+02	LT	--	1,466
			127K+71	-	129K+00	LT	197	--
		SUBTOTAL					197	1,466
1000	4	W. KEARNEY STREET						
			129K+00	-	136K+50	LT	753	--
		W. O'CONNOR STREET						
			555CR+88	-	564CR+40	RT	881	--
			565CR+46	-	573CR+20	RT	791	--
		SUBTOTAL					2,425	--
		TOTALS					2,622	1,466

DRILLED TIE BARS

CATEGORY	STAGE	ROADWAY	LOCATION	416.0610 DRILLED TIE BARS EACH	416.0620 DRILLED DOWEL BARS EACH
1000	1	S. 84TH STREET			
			37F+00 - 38F+90	91	34
			37F+51 - 38F+65	58	56
			39F+93 - 40F+06	12	32
			40F+12 - 40F+35	16	32
			41F+53 - 41F+59	8	--
			42F+87	3	--
			44F+15 - 44F+70	30	--
			45F+27	3	--
		IH 94	234EW+52 - 234EW+72	15	--
		RAMP FBA	15FBA+35	6	--
		RAMP FCA	11FCA+43	6	24
		RAMP FDA			
			9FDA+64 - 9FDA+80	13	--
			10FDA+78	6	--
			12FDA+15	6	--
		S. 76TH STREET	18TL+70	6	54
		S. 83RD STREET		116	--
		HONEY CREEK PARKING		6	--
		SUBTOTAL		401	232
1000	3	W. SCHLINGER AVE			
			530SCH+00 - 531SCH+51	99	80
		SUBTOTAL		99	80
1000	4	W. KEARNEY STREET			
			129K+00	3	30
			129K+00 - 136K+50	337	--
		W. O'CONNOR STREET			
			555CR+88 - 562CR+04	274	--
			562CR+04 - 564CR+55	111	--
			564CR+55 - 565CR+50	--	102
			565CR+50 - 565CR+80	13	--
			565CR+80	--	16
			565CR+80 - 573CR+20	330	--
		S. 76TH STREET			
			23TL+78 - 23TL+92	12	--
			24TL+05 - 24TL+10	8	--
			24TL+15 - 24TL+20	8	--
			24TL+28 - 24TL+33	8	--
		SUBTOTAL		1,068	148
		TOTALS		1,586	460

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TRACKING PADS

CATEGORY	STAGE	LOCATION	628.7560 EACH
1000	1	STAGE 1	6
		SUBTOTAL	6
	2	STAGE 4	6
		SUBTOTAL	6
		TOTAL	12

RIPRAP ITEMS

CATEGORY	STAGE	LOCATION	STATION	OFFSET	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE FABRIC TYPE HR SY
1000	2	RAMP NSA	21NSA+61	47' RT	25	55
		TOTALS			25	55

GEOTEXTILE FABRIC TYPE FF

CATEGORY	STAGE	LOCATION	SPV.0180.0040 SY
1000	ALL	UNDISTRIBUTED	200
		TOTAL	200

INLET PROTECTION

CATEGORY	STAGE	LOCATION	628.7005 TYPE A EACH	628.7010 TYPE B EACH	628.7015 TYPE C EACH	628.7020 TYPE D EACH
1000	1	S. 84TH STREET	--	--	8	4
		RAMP FDA	2	1	3	--
		RAMP FCA	2	1	--	1
		RAMP FBA	4	--	7	1
		IH 94	--	8	1	--
		S. 76TH STREET	5	--	6	--
		S. 83RD STREET	--	2	1	--
		RAMP NW SURCHARGE	1	26	4	--
		SUBTOTALS	14	38	30	6
	2	RAMP NSA	33	34	5	--
		IH 94	0	35	4	48
		SUBTOTALS	33	69	9	48
	4	W. KEARNEY STREET	22	7	20	5
		S. 76TH STREET	2	--	2	--
		W. O'CONNOR STREET	1	1	10	1
		SUBTOTALS	25	8	32	6
		TOTALS	72	115	71	60

3

EROSION CONTROL ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	628.1104 EROSION BALES EACH	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2004 EROSION MAT CLASS I TYPE B SY	628.2027 EROSION MAT CLASS II TYPE C SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	SPV.0090.0015 COCONUT FIBER ROLL DELIVERED LF	SPV.0090.0016 COCONUT FIBER ROLL INSTALLED LF
1000	1	S. 84TH STREET	37F+51	-	45F+32	LT/RT	--	--	--	--	--	--	--	--	--	--	--	--
		RAMP FDA	9FDA+50	-	12FDA+80	LT/RT	--	579	579	--	--	1,656	3,187	--	--	--	--	--
		RAMP FCA	11FCA+00	-	14FCA+10	LT/RT	--	--	--	--	--	1,482	--	--	--	--	--	--
		RAMP FBA	10FBA+00	-	15FBA+35	LT/RT	--	--	--	--	--	1,142	--	--	--	--	--	--
		W. KEARNEY STREET	10FBA+41	-	107K+32	LT/RT	--	448	448	--	--	--	--	--	--	--	--	--
		RAMP NW SURCHARGE	476NW+64	-	488NW+24	LT/RT	--	2,805	2,805	--	--	7,891	14,671	--	--	--	--	--
		SUBTOTALS					--	3,832	3,832	--	--	12,172	17,858	--	--	--	--	--
	2	RAMP NSA	12NSA+71	-	37NSA+90	LT/RT	--	2,293	2,293	--	--	11,357	--	144	1	--	--	--
		SUBTOTALS					--	2,293	2,293	--	--	11,357	--	144	1	--	--	--
	4	W. KEARNEY STREET	102K+68	-	136K+20	LT/RT	--	3,693	3,693	--	--	13,047	--	--	--	--	--	--
		W. O'CONNOR STREET	556CR+00	-	574CR+05	LT/RT	--	--	--	--	--	8,386	--	--	--	--	--	--
		GREENFIELD BERM	746GBB+00	-	753GBB+05		--	1,737	1,737	--	--	12,807	--	108	--	--	--	--
		SUBTOTALS					--	5,430	5,430	--	--	34,239	--	108	--	--	--	--
1000	1,2,3,4	UNDISTRIBUTED					100	2,889	2,889	12	6	14,442	4,465	63	--	15	372	372
		TOTALS					100	14,444	14,444	12	6	72,210	22,323	315	1	15	372	372

RESTORATION ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	SPV.0085.0010 SEEDING MIXTURE NATIVE SEED BUTTERFLY MIX LB	630.0200 SEEDING TEMPORARY LB	630.0400 SEEDING NURSE CROP LB	631.0300 SOD WATER MGAL	631.1000 SOD LAWN SY
1000	1	S. 84TH STREET											
			37F+51	-	45F+32	LT/RT	439	0.3	--	--	--	10	439
		RAMP FDA											
			9FDA+50	-	12FDA+80	LT/RT	1656	--	6	--	12	--	--
		RAMP FCA											
			11FCA+00	-	14FCA+10	LT/RT	1482	0.9	5	--	11	--	--
		RAMP FBA											
			10FBA+00	-	15FBA+35	LT/RT	1280	0.8	4	--	8	3	138
		S. 76TH STREET											
			18TL+00	-	20TL+90	LT/RT	425	0.3	--	--	--	10	425
		S. 83RD STREET											
							--	--	--	--	--	2	70
		W. KEARNEY STREET											
			10FBA+41	-	107K+32	LT/RT	--	1	--	--	--	37	1,643
		RAMP NW SURCHARGE											
			476NW+68	-	488NW+24		22,658	14.2	--	609	--	--	--
		SUBTOTALS					27,941	18	15	609	31	61	2,716
	2	RAMP NSA											
			13NSA+80	-	37NSA+90	LT/RT	11357	7.2	41	--	82	--	--
		SUBTOTALS					11357	7	41	--	82	--	--
	4	W. KEARNEY STREET											
			102K+68	-	136K+20	LT/RT	15013	9.5	47	--	94	44	1,967
		S. 76TH STREET											
			18TL+70	-	24TL+00	LT/RT	24	0.02	--	--	--	1	24
		W. O'CONNOR STREET											
			556CR+00	-	574CR+05	LT/RT	8386	5.3	30	--	60	--	--
		GREENFIELD BERM											
							12807	8.1	46	--	92	--	--
		SUBTOTALS					36,230	23	123	--	247	45	1,990
1000	1,2,3,4	UNDISTRIBUTED					18,882	12	45	337	90	26	1,177
		TOTALS					84,969	59	224	946	449	132	5,883

3

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION	STATION	646.0106 PAVEMENT MARKING EPOXY 4-INCH 3-FT LINE, 9-FT SKIP WHITE LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH 3-FT LINE, 9-FT SKIP YELLOW LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH 10-FT LINE, 30-FT SKIP WHITE LF	646.0106 PAVEMENT MARKING EPOXY 4-INCH 12.5-FT LINE, 37.5-FT SKIP WHITE LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH 3-FT LINE, 9-FT SKIP WHITE LF	646.0126 PAVEMENT MARKING EPOXY 8-INCH 3-FT LINE, 9-FT SKIP WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 3-FT LINE, 9-FT SKIP WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 10-FT LINE, 30-FT SKIP WHITE LF	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH 12.5-FT LINE, 37.5-FT SKIP WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 3-FT LINE, 9-FT SKIP WHITE LF	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH 3-FT LINE, 9-FT SKIP WHITE LF	647.0156 PAVEMENT MARKING ARROWS EPOXY TYPE 1 WHITE EACH	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2 WHITE EACH	647.0176 PAVEMENT MARKING ARROWS EPOXY TYPE 3 WHITE EACH	647.0356 PAVEMENT MARKING WORDS EPOXY WHITE EACH	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH WHITE LF	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY YELLOW EACH	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH WHITE LF	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH WHITE LF
1000																								
	S 76TH STREET	18TL+70	- 24TL+06	737	--	--	--	--	--	--	23	207	--	12	16	278	--	--	--	--	--	5	--	--
	S 84TH STREET	37F+50	- 45F+85	301	284	--	270	--	1,020	--	--	--	--	--	--	--	--	4	--	4	124	6	--	363
	W O'CONNOR STREET	555CR+88	- 564CR+34	--	848	--	--	217	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		565CR+80	- 573CR+20	--	741	--	--	188	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	RAMP FAA	242EW+17	- 251EW+13	876	293	54	--	--	740	--	--	--	--	--	--	--	1	--	--	--	--	--	271	--
	RAMP FBA	10FBA+11	- 248EW+38	678	178	--	--	154	837	--	--	--	--	--	--	--	--	--	--	--	24	1	--	--
	RAMP FCA	225EW+98	- 13FCA+95	892	307	--	--	--	1,383	29	--	--	--	--	--	--	--	2	2	2	31	--	176	--
	RAMP FDA	225EW+62	- 12FDA+60	1,068	656	--	--	81	811	--	--	--	--	--	--	--	--	--	--	--	24	--	--	--
	W KEARNEY STREET	104K+64	- 126K+45	2025	1,775	--	--	66	201	--	--	--	480	--	--	--	--	--	--	--	--	--	--	--
		127K+50	- 136K+50	153	862	--	--	180	--	--	--	--	37											
	IH 94 EB	168EW+53	- 284EW+45	10,392	10,714	50	--	5,060	2,682	1,095	--	--	--	--	--	--	--	--	--	--	--	--	142	--
	IH 94 WB	177EW+43	- 284EW+45	14,509	10,258	--	--	4,216	2,444	1,209	--	--	--	--	--	--	--	--	--	--	--	--	225	--
	UNDISTRIBUTED			1,582	1,348	7	16	510	509	119	4	13	29	4	4	17	--	--	--	--	12	3	43	19
	SUBTOTALS			33,213	28,263	111	286	10,671	10,627	2,452	27	221	546	16	20	295	1	6	2	6	215	15	857	382
	TOTALS					72,544			13,079			809			315		1	6	2	6	215	15	857	382

PAVEMENT MARKING ITEMS

CATEGORY	LOCATION	STATION		STATION	SPV.0060.0011 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS, TYPE 2 WHITE EACH	SPV.0060.0013 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS WHITE EACH	SPV.0090.0010 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE, 18-INCH WHITE LF	SPV.0090.0011 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK, 6-INCH WHITE LF	SPV.0090.0013 REMOVING PAVEMENT MARKINGS WATER BLASTING 10' LINE, 30' SKIP LF		SPV.0090.0018 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH WHITE LF	SPV.0090.0017 PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 24-INCH WHITE LF
1000												
	S 76TH STREET											
		18TL+70	-	24TL+06	2	2	70	361	--	--	289	135
	S 84TH STREET											
		37F+50	-	45F+85	--	--	--	--	235	582	--	--
	W O'CONNOR STREET											
		555CR+88	-	564CR+34	--	--	--	--	--	--	--	--
		565CR+80	-	573CR+20	--	--	--	--	--	--	--	--
	RAMP FAA											
		242EW+17	-	251EW+13	--	--	--	--	--	--	--	--
	RAMP FBA											
		10FBA+11	-	248EW+38	--	--	--	--	--	--	--	--
	RAMP FCA											
		225EW+98	-	13FCA+95	--	--	--	--	--	--	--	--
	RAMP FDA											
		225EW+62	-	12FDA+60	--	--	--	--	--	--	--	--
	W KEARNEY STREET											
		104K+64	-	126K+45	--	--	--	--	--	--	--	--
		127K+50	-	136K+50								
	IH 94 EB											
		168EW+53	-	284EW+45	--	--	--	--	--	--	--	--
	IH 94 WB											
		177EW+43	-	284EW+45	--	--	--	--	--	--	--	--
	UNDISTRIBUTED				--	--	8	19			15	11
	SUBTOTALS				2	2	78	380	235	582	304	146
	TOTALS				2	2	78	380	817		304	146

STORM SEWER STRUCTURES

CATEGORY	ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	DEPTH[1] FT	611.2004* MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0606 INLET COVERS TYPE B EACH	611.0624 INLET COVERS TYPE H EACH	611.0642 INLET COVERS TYPE MS EACH	611.0654 INLET COVERS TYPE V EACH	611.0663 INLET COVERS TYPE X EACH	SPV.0060.8004 INLET COVERS TYPE 57[2] EACH	SPV.0060.8006 INLET COVERS TYPE R[3]- SPECIAL EACH	COMMENTS
1000	S. 76TH STREET	TL100	3	23TL+43.03	41.0	RT	730.32	5.49	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	S. 76TH STREET	TLE101	---	23TL+67.65	28.4	RT	730.13	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	S. 76TH STREET	TL102	3	23TL+24.71	41.0	LT	730.58	4.59	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	S. 76TH STREET	TLE103	---	23TL+31.75	34.3	LT	730.65	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	S. 76TH STREET	TL104	3	19TL+63.67	55.5	RT	721.77	3.02	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	S. 76TH STREET	TL105	3	19TL+80.59	44.2	RT	722.30	3.93	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	1	---
1000	S. 76TH STREET	TL106	3	20TL+30.58	64.7	RT	724.10	3.60	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	S. 76TH STREET	TL107	3	20TL+25.56	39.9	LT	724.47	6.26	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	S. 76TH STREET	TL108A	3	20TL+44.73	41.0	RT	725.23	10.23	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	IH 94	TL108B	3	266EW+42.93	101.8	RT	712.63	3.13	---	---	---	---	---	---	1	---	---	1	---	---	---	---	---	---	---
1000	IH 94	TL109	3	266EW+13.68	101.8	RT	712.58	10.99	---	---	---	---	---	---	1	---	---	1	---	---	---	---	---	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL
1000	IH 94	TL109A	3	265EW+49.10	88.8	RT	707.76	7.92	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL, CONNECT PIPE UNDERDRAIN (2)
1000	IH 94	TL110	3	266EW+14.12	88.5	RT	708.07	8.53	---	1	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---
1000	IH 94	TL111	1D	265EW+55.00	85.5	LT	706.23	5.53	---	---	---	---	---	---	---	1	---	---	---	2	---	---	---	---	CONNECT PIPE UNDERDRAIN (2)
1000	IH 94	TL111A	1D	267EW+65.59	101.9	LT	721.09	19.72	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---
1000	IH 94	TL111B	1D	267EW+64.94	82.7	LT	708.12	6.91	---	---	---	---	---	---	---	1	---	---	---	2	---	---	---	---	---
1000	IH 94	TL112	1D	266EW+19.08	85.2	LT	706.98	6.82	---	---	---	---	---	---	---	1	---	---	---	2	---	---	---	---	---
1000	IH 94	TL113	1D	266EW+18.36	73.5	LT	708.27	8.16	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	IH 94	TL114	1D	266EW+16.54	25.0	LT	709.22	9.32	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	IH 94	TL115	1D	266EW+16.46	29.6	RT	709.43	10.04	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	IH 94	TLE116	---	266EW+16.86	36.8	RT	709.87	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL150	3	123K+98.15	28.0	RT	719.05	6.33	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL151	3	122K+09.20	31.5	RT	715.61	4.13	---	---	---	---	---	---	1	---	---	1	---	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL152	3	122K+07.71	13.0	LT	716.38	4.80	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	W. KEARNEY STREET	TL153	3	122K+08.34	18.0	RT	715.84	5.23	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL154	3	119K+17.43	31.6	RT	713.89	5.24	---	---	---	---	---	---	1	---	---	1	---	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL155	3	119K+21.31	13.0	LT	714.72	5.97	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	W. KEARNEY STREET	TL156	3	119K+20.90	18.0	RT	714.17	6.81	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL157	3	118K+16.98	18.0	RT	713.00	6.79	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL158	3	115K+92.98	13.0	LT	710.96	4.09	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION

[2] TOP SLAB OPENINGS FOR INLET COVERS TYPE 57 SHALL BE 2'-0" x 2'-0"

[3] TOP SLAB OPENINGS FOR INLET COVERS TYPE R SPECIAL SHALL BE 1'-7" x 2'-6"

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURES CONTINUED

CATEGORY	ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	DEPTH[1] FT	611.2004* MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0606 INLET COVERS TYPE B EACH	611.0624 INLET COVERS TYPE H EACH	611.0642 INLET COVERS TYPE MS EACH	611.0654 INLET COVERS TYPE V EACH	611.0663 INLET COVERS TYPE X EACH	SPV.0060.8004 INLET COVERS TYPE 57[2] EACH	SPV.0060.8006 INLET COVERS TYPE R[3]- SPECIAL EACH	COMMENTS
1000	W. KEARNEY STREET	TL158A	3	115K+92.46	30.1	RT	710.50	3.75	---	---	---	---	---	---	1	---	---	1	---	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL159	3	115K+92.46	18.0	RT	710.41	6.74	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL160	3	114K+29.66	18.0	RT	707.83	5.75	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL161	3	112K+49.75	18.0	RT	704.87	5.10	---	---	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL162	3	112K+49.98	13.0	LT	705.42	5.75	---	---	1	---	---	---	---	---	---	---	---	---	1	---	---	---	---
1000	W. KEARNEY STREET	TL163	1A	111K+80.00	18.0	RT	704.60	3.79	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL166	1A	111K+79.87	13.0	LT	705.15	5.80	---	---	1	---	---	---	---	---	---	---	---	---	1	---	---	---	---
1000	W. KEARNEY STREET	TL167	1A	110K+69.14	30.1	RT	705.21	3.39	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL168	1A	109K+98.26	18.0	RT	705.60	4.13	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL169A	1A	109K+99.34	53.4	LT	705.22	7.26	---	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---	---
1000	W. KEARNEY STREET	TL169B	1A	109K+15.84	45.2	LT	706.60	10.58	---	---	---	1	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL180	1A	106K+51.12	18.0	RT	707.09	4.91	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL181	1A	106K+99.27	30.1	RT	707.10	4.52	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL182	1A	106K+99.75	18.0	RT	706.79	4.83	---	1	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL183	1A	108K+20.09	30.1	RT	706.57	4.18	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL184	1A	107K+87.52	11.0	RT	707.08	5.53	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL185	1A	107K+86.40	35.9	LT	707.17	9.82	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	S. 84TH STREET	TL203A	1C	39F+06.46	56.0	RT	705.54	2.79	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	S. 84TH STREET	TL203C	1C	38F+71.15	56.7	RT	706.96	8.23	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	S. 84TH STREET	TL205	1C	38F+87.35	4.7	LT	708.19	17.91	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---	---	---
1000	RAMP FBA	TL206	1A	12FBA+92.90	25.4	RT	709.23	4.37	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	RAMP FBA	TL207	1A	12FBA+91.73	14.0	LT	708.95	4.72	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	RAMP FBA	TL208	1A	11FBA+30.68	14.0	LT	704.95	4.07	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	RAMP FBA	TL209	1A	10FBA+84.79	14.0	LT	704.67	4.00	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	RAMP FBA	TL209A	1A	10FBA+65.88	21.9	LT	704.19	3.61	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION

[2] TOP SLAB OPENINGS FOR INLET COVERS TYPE 57 SHALL BE 2'-0" x 2'-0"

[3] TOP SLAB OPENINGS FOR INLET COVERS TYPE R SPECIAL SHALL BE 1'-7" x 2'-6"

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURES CONTINUED

CATEGORY	ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	DEPTH[1] FT	611.2004* MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0606 INLET COVERS TYPE B EACH	611.0624 INLET COVERS TYPE H EACH	611.0642 INLET COVERS TYPE MS EACH	611.0654 INLET COVERS TYPE V EACH	611.0663 INLET COVERS TYPE X EACH	SPV.0060.8004 INLET COVERS TYPE 57[2] EACH	SPV.0060.8006 INLET COVERS TYPE R[3]- SPECIAL EACH	COMMENTS
1000	RAMP FCA	TL211	1B	12FCA+84.74	-14.0	LT	704.62	4.80	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	RAMP FCA	TL212	1B	13FCA+30.22	-14.0	LT	704.34	4.72	---	---	---	---	---	---	1	---	---	---	1	---	---	---	---	---	---
1000	RAMP FCA								---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	RAMP FCA	TL214	1B	13FCA+35.94	-19.9	LT	705.21	5.88	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---
1000	S. 84TH STREET	TL215	1B	39F+86.25	-4.5	LT	703.00	11.73	---	---	---	1	---	---	---	---	---	---	---	---	---	---	---	---	COVER PLATE, NO ADJUSTMENT ASSUMED
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	RAMP FDA	TLE217	---	10FDA+93.96	76.2	RT	715.87	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	RAMP FDA	TL217A	1A	10FDA+96.67	63.5	RT	713.91	7.76	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	RAMP FDA	TL217B	1A	9FDA+75.81	25.4	RT	705.69	7.19	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	RAMP FDA	TLE218	---	9FDA+64.55	14.3	RT	703.56	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	RAMP FDA								---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	RAMP FDA								---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	RAMP FDA	TL219	1A	10FDA+38.72	-36.8	LT	703.82	15.62	---	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---	SEE STRUCTURE GEOMETRY TABLE FOR BID ITEM
1000	RAMP FDA								---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	RAMP FDA	TL220	1A	10FDA+46.04	-101.0	LT	705.17	17.20	---	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	SEE STRUCTURE GEOMETRY TABLE FOR BID ITEM
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	RAMP FDA	TL227	1A	11FDA+98.37	14.0	RT	699.54	5.11	---	---	---	---	---	---	1	---	---	---	---	---	---	---	1	---	---
1000	IH 94	TL294	1D	257EW+78.15	-101.8	LT	709.14	6.63	---	---	---	---	---	---	1	---	---	1	---	---	---	---	---	---	---
1000	IH 94	TL295	1D	257EW+22.21	-91.5	LT	705.70	5.36	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	CONNECT PIPE UNDERDRAIN
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	IH 94	TL297	1D	256EW+42.63	-111.8	LT	704.03	4.29	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	IH 94	TL298	1D	256EW+42.39	-93.7	LT	703.86	4.26	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	IH 94	TL299	1D	255EW+85.76	-94.5	LT	706.21	7.12	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	IH 94	TL299A	1D	259EW+31.00	-126.7	LT	716.09	6.92	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	IH 94	TL300	1D	259EW+49.83	-82.7	LT	708.50	3.26	---	---	---	---	---	---	---	1	---	---	---	2	---	---	---	---	---
1000	IH 94	TL301	1D	259EW+48.78	-70.9	LT	709.88	4.75	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	IH 94	TLE302	---	259EW+47.64	-54.9	LT	707.75	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	REMOVE AND CAP
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	IH 94	TL303	1D	261EW+55.53	-136.7	LT	724.41	6.05	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	IH 94	TL304	1D	261EW+51.64	-101.8	LT	716.70	12.54	---	---	---	---	---	---	1	---	---	1	---	---	---	---	---	---	---

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION

[2] TOP SLAB OPENINGS FOR INLET COVERS TYPE 57 SHALL BE 2'-0" x 2'-0"

[3] TOP SLAB OPENINGS FOR INLET COVERS TYPE R SPECIAL SHALL BE 1'-7" x 2'-6"

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURES CONTINUED

CATEGORY	ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	DEPTH[1] FT	611.2004* MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0606 INLET COVERS TYPE B EACH	611.0624 INLET COVERS TYPE H EACH	611.0642 INLET COVERS TYPE MS EACH	611.0654 INLET COVERS TYPE V EACH	611.0663 INLET COVERS TYPE X EACH	SPV.0060.8004 INLET COVERS TYPE 57[2] EACH	SPV.0060.8006 INLET COVERS TYPE R[3]- SPECIAL EACH	COMMENTS
1000	IH 94	TL305	1D	261EW+50.08	-84.6	LT	707.01	2.99	---	---	---	---	---	---	---	1	---	---	---	2	---	---	---	---	---
1000	IH 94	TL306	1D	261EW+49.03	-72.9	LT	708.43	4.46	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	IH 94	TLE307	---	261EW+46.77	-41.6	LT	706.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	REMOVE AND CAP
1000	IH 94	TL308	1D	264EW+05.09	-85.2	LT	704.43	3.54	---	---	---	---	---	---	---	1	---	---	---	2	---	---	---	---	---
1000	IH 94	TL309	1D	263EW+69.78	-85.2	LT	704.78	4.04	---	---	---	---	---	---	---	1	---	---	---	2	---	---	---	---	---
1000	IH 94	TL310	1D	264EW+05.37	-73.4	LT	707.14	6.14	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	IH 94	TL311	1D	263EW+69.63	-73.3	LT	707.18	6.50	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	IH 94	TLE312	---	263EW+70.30	-32.9	LT	704.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	REMOVE AND CAP
1000	IH 94	TL320	1D	271EW+71.08	-76.8	LT	708.51	2.95	---	---	---	---	---	---	---	1	---	---	---	2	---	---	---	---	---
1000	IH 94	TLE322	---	271EW+71.02	-52.7	LT	708.25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	REMOVE AND CAP
1000	IH 94	TL323	1D	273EW+06.53	-74.2	LT	707.31	3.65	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---
1000	IH 94	TL324	1D	273EW+81.31	-62.0	LT	709.36	6.06	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	IH 94	TLE325	---	274EW+14.99	-57.1	LT	706.50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	REMOVE AND CAP
1000	RAMP NSA	TL400	2	14NSA+53.66	28.6	RT	788.79	4.18	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TLE401	---	14NSA+52.85	13.2	RT	787.25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	REMOVE AND CAP
1000	RAMP NSA	TL402	2	17NSA+05.35	24.0	RT	789.86	3.69	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TLE403	---	17NSA+02.29	-4.1	LT	788.75	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	REMOVE AND CAP
1000	RAMP NSA	TL404	2	18NSA+38.58	47.4	RT	782.09	4.09	---	---	---	---	---	---	---	1	---	---	---	2	---	---	---	---	---
1000	RAMP NSA	TL405	2	18NSA+49.50	47.2	RT	782.01	4.82	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---
1000	RAMP NSA	TL406	2	18NSA+49.62	20.8	RT	790.39	13.32	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL407	2	19NSA+99.77	42.3	RT	784.90	4.90	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---
1000	RAMP NSA	TL408	2	19NSA+74.02	38.5	RT	785.52	5.73	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---
1000	RAMP NSA	TL409	2	19NSA+70.83	19.0	RT	791.39	20.53	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL411	2	24NSA+36.56	-24.0	LT	795.98	6.72	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---
1000	RAMP NSA	TL412	2	24NSA+11.11	13.0	RT	795.17	6.29	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL413	2	21NSA+76.48	17.8	RT	793.69	5.96	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL414	2	25NSA+32.96	12.0	RT	795.67	7.62	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	NO ADJUSTMENT REQUIRED, SEE STRUCTURE PLANS FOR INLET COVER
1000	RAMP NSA	TL415	2	25NSA+38.87	-31.9	LT	793.00	6.25	---	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	COVER PLATE
1000	RAMP NSA	TL416	2	26NSA+52.92	12.0	RT	796.23	10.21	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---	NO ADJUSTMENT REQUIRED, SEE STRUCTURE PLANS FOR INLET COVER

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION

[2] TOP SLAB OPENINGS FOR INLET COVERS TYPE 57 SHALL BE 2'-0" x 2'-0"

[3] TOP SLAB OPENINGS FOR INLET COVERS TYPE R SPECIAL SHALL BE 1'-7" x 2'-6"

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURES CONTINUED

CATEGORY	ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	DEPTH[1] FT	611.2004* MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.2007 MANHOLES 7-FT DIAMETER EACH	611.2008 MANHOLES 8-FT DIAMETER EACH	611.3225 INLETS 2x2.5-FT EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	611.0535 MANHOLE COVERS TYPE J SPECIAL EACH	611.0606 INLET COVERS TYPE B EACH	611.0624 INLET COVERS TYPE H EACH	611.0642 INLET COVERS TYPE MS EACH	611.0654 INLET COVERS TYPE V EACH	611.0663 INLET COVERS TYPE X EACH	SPV.0060.8004 INLET COVERS TYPE 57[2] EACH	SPV.0060.8006 INLET COVERS TYPE R[3]- SPECIAL EACH	COMMENTS
1000	RAMP NSA	TL417	2	26NSA+52.62	-40.1	LT	791.52	6.95	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	RAMP NSA	TL418	2	26NSA+86.68	-24.0	LT	795.47	11.32	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL419	2	26NSA+86.07	-41.2	LT	790.68	20.19	---	1	---	---	---	---	---	---	1	---	---	---	---	---	---	---	CONNECT STR PIPE UNDERDRAIN
1000	RAMP NSA	TL422	2	27NSA+87.07	-61.8	LT	775.33	5.83	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	RAMP NSA	TL423	2	33NSA+01.01	13.1	RT	791.06	7.02	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL424	2	31NSA+99.55	23.5	RT	787.53	4.11	---	1	---	---	---	---	---	---	---	---	---	---	---	1	---	---	---
1000	RAMP NSA	TL425	2	32NSA+00.22	-24.0	LT	789.28	6.25	---	---	1	---	---	---	---	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL426	2	31NSA+49.58	-35.6	LT	786.10	2.44	---	---	---	---	---	---	---	1	---	---	---	2	---	---	---	---	---
1000	RAMP NSA	TL427	2	31NSA+50.42	-24.0	LT	789.02	6.21	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL428	2	31NSA+25.30	-24.0	LT	789.05	6.34	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL429	2	30NSA+46.90	-24.0	LT	789.49	7.15	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL430	2	30NSA+45.35	13.0	RT	790.24	8.03	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL431	2	29NSA+63.58	13.0	RT	791.57	9.74	---	1	---	---	---	---	---	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL432	2	29NSA+60.82	-24.0	LT	790.89	9.20	---	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---
1000	RAMP NSA	TL433	2	28NSA+77.10	-85.1	LT	786.87	5.68	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---
1000	RAMP NSA	TL434	2	28NSA+65.16	-86.7	LT	786.72	11.25	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	RAMP NSA	TL436	2	27NSA+77.32	-95.6	LT	775.94	6.28	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---
1000	RAMP NSA	TL450	2	25NSA+28.43	60.9	RT	770.67	6.16	---	---	---	---	---	---	1	---	---	---	---	---	---	1	---	---	---
1000	RAMP NSA	TLE451	---	25NSA+44.68	71.1	RT	769.66	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL500	1A	111K+26.22	79.8	RT	704.10	8.07	---	---	---	---	---	---	1	---	---	1	---	---	---	---	---	---	---
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
1000	W. KEARNEY STREET	TL511	1A	108K+33.35	30.1	RT	706.70	13.51	---	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---	---
									---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
								TOTALS	5	19	9	2	1	2	64	10	15	8	27	20	31	16	1	1	

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION

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[3] TOP SLAB OPENINGS FOR INLET COVERS TYPE R SPECIAL SHALL BE 1'-7" x 2'-6"

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER PIPES

ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	608.0360 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 60-INCH LF	608.0384 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 84-INCH LF	608.0396 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 96-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH LF	608.0515 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 15-INCH LF	608.0524 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH LF	608.0572 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 72-INCH LF	COMMENTS
S. 76TH STREET	P100	3	TL100	TLE101	724.83	---	1.00	23	27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
								--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S. 76TH STREET	P102	3	TL102	TLE103	725.99	---	1.00	4	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
								--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S. 76TH STREET	P104	3	TL104	TL105	718.75	718.62	1.00	13	---	---	---	---	---	---	---	---	---	---	---	17	---	---	---	---	---
S. 76TH STREET	P105	3	TL105	TL108A	718.37	717.75	1.00	62	---	66	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S. 76TH STREET	P106	3	TL106	TL108A	720.50	720.23	1.00	27	---	31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S. 76TH STREET	P107	3	TL107	TL108A	718.21	717.46	1.00	75	---	79	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S. 76TH STREET	P108A	3	TL108A	TL109	715.00	707.80	5.00	144	---	148	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P108B	3	TL108B	TL109	709.50	709.25	1.00	25	---	29	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P109	3	TL109	TL110	701.59	701.50	1.00	9	---	---	---	---	---	---	---	---	---	---	---	---	---	13	---	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL
IH 94	P109A	3	TL109A	TL110	699.84	699.54	0.50	61	---	---	---	65	---	---	---	---	---	---	---	---	---	---	---	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL
IH 94	P110	3	TL110	TLE116	699.54	---	0.50	43	---	---	---	49	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P111	1D	TL111	TL112	700.70	700.41	0.50	59	64	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL
IH 94	P111A	1D	TL111A	TL111B	701.37	701.21	1.00	16	---	---	---	---	---	---	---	---	---	---	---	---	---	19	---	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL
IH 94	P111B	1D	TL111B	TL112	701.21	700.16	0.75	141	---	146	---	---	---	---	---	---	---	---	---	---	---	---	---	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL
IH 94	P112	1D	TL112	TL113	700.16	700.11	0.50	11	---	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P113	1D	TL113	TL114	700.11	699.90	0.50	42	---	46	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P114	1D	TL114	TL115	699.90	699.64	0.50	53	---	57	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P115	1D	TL115	TLE116	699.39	---	0.50	3	---	---	8	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	PE117	---	TLE116	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
W. KEARNEY STREET	P150	3	TL150	TL153	712.72	710.61	1.15	184	---	---	---	188	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P151	3	TL151	TL153	711.48	711.36	1.00	12	---	16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P152	3	TL152	TL153	711.58	711.36	1.00	22	---	27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P153	3	TL153	TL156	710.61	707.36	1.15	282	---	---	---	287	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P154	3	TL154	TL156	708.65	708.53	1.00	12	---	17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P155	3	TL155	TL156	708.75	708.53	1.00	22	---	27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P156	3	TL156	TL157	707.36	706.21	1.15	100	---	---	---	104	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P157	3	TL157	TL159	706.21	703.67	1.15	221	---	---	---	226	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P158	3	TL158	TL159	706.87	706.65	1.00	22	---	26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.

[B] PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY

STORM SEWER PIPES CONTINUED

ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	608.0360 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 60-INCH LF	608.0384 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 84-INCH LF	608.0396 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 96-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH LF	608.0515 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 15-INCH LF	608.0524 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH LF	608.0572 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 72-INCH LF	COMMENTS
W. KEARNEY STREET	P158A	3	TL158A	TL159	706.75	706.65	1.00	10	---	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P159	3	TL159	TL160	703.67	702.08	1.00	159	---	---	---	164	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P160	3	TL160	TL161	702.08	700.27	1.03	176	---	---	---	181	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P161	3	TL161	TL162	699.77	699.67	0.50	19	---	---	---	---	25	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P162	3	TL162	TL166	699.67	699.35	0.50	64	---	---	---	---	70	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P163	1A	TL163	TL166	700.81	700.60	1.00	21	---	26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P165	1A	---	TL166	700.64	700.60	1.00	4	---	---	---	7	---	---	---	---	---	---	---	---	---	---	---	---	BULKHEAD PIPE MASONRY
W. KEARNEY STREET	P166	1A	TL166	TL169A	699.35	698.46	0.50	178	---	---	---	---	184	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P167	1A	TL167	TL168	701.82	701.47	0.50	69	---	---	73	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P168	1A	TL168	TL169A	701.47	701.15	0.50	64	---	---	69	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P169A	1A	TL169A	TL169B	697.96	697.58	0.50	76	---	---	---	---	---	83	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P169B	1A	TL169B	EXISTING BOX CULVERT	696.02	696.00	0.50	5	---	---	---	---	---	8	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P180	1A	TL180	TL182	702.18	701.96	0.50	44	---	---	---	49	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P181	1A	TL181	TL182	702.58	702.46	1.00	12	---	---	17	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P182	1A	TL182	TL184	701.96	701.55	0.50	82	---	---	---	88	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P183	1A	TL183	TL184	702.39	702.05	1.00	34	---	---	39	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P184	1A	TL184	TL185	701.55	701.13	1.00	42	---	---	---	47	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	PE185	---	TL185	EXISTING BOX CULVERT	697.35	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
S. 84TH STREET	PE200	---	---	TL205	---	698.19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
S. 84TH STREET	PE203	---	---	TL203C	---	698.77	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
S. 84TH STREET	P203B	1C	TL203A	TL203C	702.75	702.42	1.00	33	---	37	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S. 84TH STREET	PE203D	---	TL203C	TL205	698.73	698.16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
S. 84TH STREET	PE204	---	---	TL205	---	699.04	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
S. 84TH STREET	P205	1C	TL205	B-40-892	690.28	690.20	0.50	17	---	---	---	---	---	---	---	21	---	---	---	---	---	---	---	---	---
RAMP FBA	P206	1A	TL206	TL207	704.86	704.23	2.00	31	---	35	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FBA	P207	1A	TL207	TL208	704.23	701.13	2.00	155	---	159	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FBA	P208	1A	TL208	TL209	700.88	700.67	0.50	41	---	---	45	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FBA	P209	1A	TL209	TL209A	700.67	700.58	0.50	17	---	---	21	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FBA	P209A	1A	TL209A	TL215	700.58	700.00	0.50	116	---	---	121	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FCA	PE210	---	---	TL211	---	699.82	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.

[B] PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY

STORM SEWER PIPES CONTINUED

ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	608.0360 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 60-INCH LF	608.0384 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 84-INCH LF	608.0396 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 96-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH LF	608.0515 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 15-INCH LF	608.0524 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH LF	608.0572 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 72-INCH LF	COMMENTS
RAMP FCA	P211	1B	TL211	TL212	699.82	699.62	0.50	41	---	45	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FCA	P212	1B	TL212	TL214	699.62	699.59	0.50	5	---	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FCA	PE213	---	---	TL214	---	699.59	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
RAMP FCA	P214	1B	TL214	TL215	699.33	698.40	1.00	94	---	---	---	100	---	---	---	---	---	---	---	---	---	---	---	---
S. 84TH STREET	PE215	---	TL215	---	691.27	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
S. 84TH STREET	PE216	---	---	TLE217	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
RAMP FDA	P217	1A	TLE217	TL217A	710.99	708.80	20.00	11	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FDA	P217A	1A	TL217A	TL217B	706.15	701.00	4.25	121	---	---	---	126	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FDA	P217B	1A	TL217B	TLE218	698.50	---	4.25	12	---	---	---	19	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FDA	PE218	---	TLE218	TL219	---	688.57	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP FDA	P218A	1A	---	TL219	694.50	694.20	1.40	21	---	---	---	---	---	---	27	---	---	---	---	---	---	---	---	BULKHEAD PIPE MASONRY
RAMP FDA	P218B	1A	---	TL219	689.29	689.20	0.75	12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	18	BULKHEAD PIPE MASONRY
RAMP FDA	P219	1A	TL219	TL220	688.20	687.97	0.50	47	---	---	---	---	---	---	---	---	59	---	---	---	---	---	---	---
RAMP FDA	P219A	1A	---	TL220	697.00	696.95	0.50	10	---	---	---	16	---	---	---	---	---	---	---	---	---	---	---	BULKHEAD PIPE MASONRY
RAMP FDA	P220	1A	TL220	TL220A	687.97	687.85	0.50	24	---	---	---	---	---	---	---	---	31	---	---	---	---	---	---	---
RAMP FDA	P221	1A	TL221A	TL221B	688.23	688.00	0.25	92	---	---	---	---	---	---	---	---	---	92	---	---	---	---	---	---
RAMP FDA	PE227	---	TL227	---	694.43	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
IH 94	P294	1D	TL294	TL295	702.51	702.00	1.00	51	---	56	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P295	1D	TL295	TL298	700.34	699.60	1.00	74	---	78	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	PE296	---	---	TL297	---	700.33	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
IH 94	P297	1D	TL297	TL298	699.74	699.60	1.00	14	---	18	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P298	1D	TL298	TL299	699.60	699.09	1.00	51	---	55	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	PE299	---	TL299	---	699.09	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
IH 94	PE299A	---	TL299A	---	709.17	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
IH 94	P300	1D	TL300	TL301	705.24	705.13	1.00	11	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P301	1D	TL301	TLE302	705.13	---	1.00	12	16	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	PE302	---	TLE302	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
IH 94	PE302A	---	---	TL303	---	718.38	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
IH 94	PE303	1D	TL303	TL304	718.36	713.36	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
IH 94	P304	1D	TL304	TL305	704.16	704.02	1.00	14	---	---	---	---	---	---	---	---	---	---	---	---	17	---	---	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.

[B] PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY

STORM SEWER PIPES CONTINUED

ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	608.0360 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 60-INCH LF	608.0384 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 84-INCH LF	608.0396 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 96-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH LF	608.0515 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 15-INCH LF	608.0524 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH LF	608.0572 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 72-INCH LF	COMMENTS
IH 94	P305	1D	TL305	TL306	704.02	703.97	0.50	11	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P306	1D	TL306	TLE307	703.97	703.70	1.00	27	31	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	PE307	---	TLE307	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
IH 94	P308	1D	TL308	TL309	700.89	700.74	0.50	30	---	35	---	---	---	---	---	---	---	---	---	---	---	---	---	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL
IH 94	P309	1D	TL309	TL311	700.74	700.68	0.50	11	---	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P310	1D	TL310	TL311	701.00	700.68	1.00	32	---	36	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P311	1D	TL311	TLE312	700.68	700.50	0.50	36	---	40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	PE312	---	TLE312	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
IH 94	P320	1D	TL320	TLE322	705.56	705.45	0.50	23	26	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	PE322	---	TLE322	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
IH 94	P323	1D	TL323	TL324	703.66	703.30	0.50	72	76	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	P324	1D	TL324	TLE325	703.30	703.15	0.50	30	34	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
IH 94	PE325	---	TLE325	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
RAMP NSA	P400	2	TL400	TLE401	784.61	---	0.50	11	---	---	---	---	---	---	---	---	---	---	---	---	15	---	---	---	---
RAMP NSA	PE401	---	TLE401	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
RAMP NSA	P402	2	TL402	TLE403	786.17	786.05	0.50	24	---	---	---	---	---	---	---	---	---	---	---	---	28	---	---	---	---
RAMP NSA	PE403	---	TLE403	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
RAMP NSA	P404	2	TL404	TL405	778.00	777.94	1.00	6	---	11	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P405	2	TL405	TL406	777.19	777.07	0.50	24	---	---	---	29	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P406	2	TL406	TL409	777.07	776.49	0.50	116	---	---	---	121	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P407	2	TL407	TL408	780.00	779.79	1.00	21	---	---	---	26	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P408	2	TL408	TL409	779.79	779.70	0.50	17	---	---	---	22	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P409	2	TL409	PE410	770.86	770.66	3.34	6	---	---	---	---	---	---	---	---	---	---	---	---	9	---	---	---	---
RAMP NSA	PE410	---	P409	---	770.66	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
RAMP NSA	P411	2	TL411	TL412	789.26	788.88	1.00	38	---	---	---	42	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P412	2	TL412	TL413	788.88	787.73	0.50	230	---	---	---	234	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P413	2	TL413	TL413A	787.73	787.56	1.00	17	---	---	---	19	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P414	2	TL414	TL415	788.05	787.25	2.00	40	---	---	43	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P415	2	TL415	TL417	786.75	784.57	2.00	109	---	---	---	114	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P416	2	TL416	TL417	786.02	785.07	2.00	48	---	---	51	---	---	---	---	---	---	---	---	---	---	---	---	---	---

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.

[B] PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY

STORM SEWER PIPES CONTINUED

ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] LF	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH LF	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH LF	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH LF	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH LF	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH LF	608.0360 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 60-INCH LF	608.0384 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 84-INCH LF	608.0396 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 96-INCH LF	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH LF	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH LF	608.0515 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 15-INCH LF	608.0524 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 24-INCH LF	608.0572 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 72-INCH LF	COMMENTS
RAMP NSA	P417	2	TL417	TL419	784.57	784.00	2.00	28	---	---	---	33	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P418	2	TL418	TL419	784.15	784.00	1.00	15	---	---	---	19	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P419	2	TL419	TL422	770.49	770.00	0.50	98	---	---	---	---	---	---	---	---	---	---	---	---	---	103	---	---	BACKFILL CONTROLLED LOW STRENGTH BACKFILL
RAMP NSA	P422	2	TL422	TL436	769.50	769.35	0.50	29	---	---	---	---	35	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P423	2	TL423	TL425	784.04	783.03	1.00	101	---	---	---	106	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P424	2	TL424	TL425	783.42	783.03	1.00	39	---	---	---	45	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P425	2	TL425	TL427	783.03	782.81	0.50	44	---	---	---	50	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P426	2	TL426	TL427	783.66	783.56	1.00	10	---	14	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P427	2	TL427	TL428	782.81	782.71	0.50	21	---	---	---	25	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P428	2	TL428	TL429	782.71	782.34	0.50	74	---	---	---	78	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P429	2	TL429	TL430	782.34	782.21	0.50	27	---	---	---	32	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P430	2	TL430	TL431	782.21	781.83	0.50	77	---	---	---	82	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P431	2	TL431	TL432	781.83	781.69	0.50	28	---	---	---	33	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P432	2	TL432	TL433	781.69	781.19	0.50	101	---	---	---	105	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	P433	2	TL433	TL434	781.19	781.15	0.50	8	---	---	---	12	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	PE434	---	TL434	TL436	775.47	771.86	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
RAMP NSA	PE435	---	---	TL436	---	770.22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
RAMP NSA	PE437	---	TL436	---	769.66	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
RAMP NSA	P450	2	TL450	TLE451	764.51	764.21	2.00	15	19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
RAMP NSA	PE451	---	TLE451	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
W. KEARNEY STREET	P500	1A	TL500	B-40-892	696.03	695.90	1.00	13	---	---	15	---	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	PE509	---	---	P510	---	701.74	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	EXISTING PIPE INTERPOLATED ELEVATION FOR STR
W. KEARNEY STREET	P510	1A	PE509	TL511	701.74	701.40	1.14	30	---	---	---	32	---	---	---	---	---	---	---	---	---	---	---	---	---
W. KEARNEY STREET	P511	1A	TL511	B-40-892	693.19	693.10	1.00	9	---	---	---	11	---	---	---	---	---	---	---	---	---	---	---	---	---
								--	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
								TOTALS	344	1412	503	2984	314	91	27	21	90	92	68	17	32	103	18	

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE.

[B] PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY

3

GREYWOLF STORM SEWER STRUCTURES

CATEGORY	ROADWAY	STR NO.	STAGE	STATION	OFFSET FT	LOCATION	RIM OR FLOW ELEV	DEPTH FT	611.2004* MANHOLES 4-FT DIAMETER EACH	522.1024* APRON END WALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	204.0210* REMOVING MANHOLES EACH	COMMENTS
1000	RAMP FDA	FES #1	1A	228EW+07.	96.88	LT			---	1	---	
1000	RAMP FDA	MH #1	1A	228EW+40.	164.52	LT	150.40	14.30	1	---	---	
1000	RAMP FDA	MH #2	1A	229EW+87.	169.95	LT	140.50	11.07	1	---	---	
1000	RAMP FDA	MH #3	1A	232EW+00.	178.54	LT	133.20	12.64	1	---	---	
1000	RAMP FDA	MH #4	1A	233EW+85.	170.77	LT	122.60	11.50	1	---	---	
1000	RAMP FDA	FES #2	1A	234EW+18.	192.85	LT			---	1	---	
1000	RAMP FDA		1A						---	---	3	
								TOTALS	4	2	3	

[1]DEPTH = RIM OR FLOW ELEV - LOWEST PIPE INVERT ELEVATION

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

GREYWOLF STORM SEWER PIPES

CATEGORY	ROADWAY	PIPE ID	STAGE	FROM STR	TO STR	INLET ELEV	DISCH ELEV	SLOPE[A] %	PIPE LENGTH[B] LF	SPV.0090.8500 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	204.0245* REMOVING STORM SEWER 24-INCH LF	COMMENTS
1000	RAMP FDA	P1	1A	FES #1	MH #1	139.40	138.63	1.00	76.74	77	---	
	RAMP FDA	P2	1A	MH #1	MH #2	136.10	134.50	1.00	159.55	160	---	
	RAMP FDA	P3	1A	MH #2	MH #3	129.43	127.20	1.00	223.08	223	---	
	RAMP FDA	P4	1A	MH #3	MH #4	120.56	118.70	1.00	185.62	186	---	
	RAMP FDA	P5	1A	MH #4	FES #2	111.10	110.70	1.00	39.39	40	---	
	RAMP FDA		1A							---	720	
									TOTALS	686	720	

[A] SLOPE CALCULATED BASED ON PIPE LENGTH. PIPE LENGTH REPRESENTS LENGTH OF PIPE MEASURED FROM OUTSIDE OF STRUCTURE TO OUTSIDE OF STRUCTURE

[B]PIPE LENGTH SHOWN FOR SLOPE CALCULATION ONLY. NOT INTENDED FOR PAY QUANTITY.

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SEALING PIPES

CATEGORY	STAGE	ROADWAY	PIPE ID	STATION	OFFSET	204.0280 SEALING PIPES EACH
1000	1A	RAMP FDA				
			P218A	10FDA+12	46' LT	1
			P218B	10FDA+37	25' LT	1
			P219A	10FDA+44	85' LT	1
		SUBTOTAL				3
1000	3	IH 94				
			EXISTING PIPE	263EW+69	89' RT	1
		SUBTOTAL				1
1000	4	W. KEARNEY STREET				
			P165	111K+80	17' RT	1
			EXISTING PIPE	121K+84	39' LT	1
			EXISTING PIPE	123K+98	21' LT	1
		SUBTOTAL				3
		TOTAL				7

TEMPORARY SHORING

CATEGORY	STAGE	ROADWAY	STRUCTURE	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	206.6000.S TEMPORARY SHORING SF	COMMENTS
1000	1A	W. O'CONNOR STREET							
			TL111A	567CR+39	38' RT	---	---	800	---
	1A	IH 94							
			TL304	261EW+52	112' LT	---	---	600	---
	1A	RAMP FDA							
			TL219	10FDA+37	23' LT	---	---	640	---
		SUBTOTAL						2,040	
1000	2	RAMP NSA							
			---	24NSA+18	LT/RT	24NSA+26	LT/RT	970	SEE ROADWAY PLANS
		SUBTOTAL						970	
1000	3	IH 94							
			P109A	265EW+77	87' RT	---	---	630	---
			TL324	372EW+81	61' LT	---	---	210	---
		SUBTOTAL						840	
		TOTAL						3,850	

CONCRETE COLLARS FOR PIPE

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	520.8000 CONCRETE COLLARS FOR PIPE EACH
1000	1A	W. KEARNEY STREET			
			108K+21	61' RT	1
	1A	W. O'CONNOR ST.			
			561CR+25	13' RT	2
	1A	IH 94			
			261EW+52	107' LT	1
	1A	RAMP FDA			
			10FDA+33	38' LT	1
			12FDA+00	12' RT	1
	1A	GREENFIELD BERM			
			746GBB+45	0' LT/RT	1
		SUBTOTAL			7
1000	1B	RAMP FCA			
			12FCA+85	11' LT	1
			13FCA+35	20' LT	1
		SUBTOTAL			2
1000	1C	S. 84TH STREET			
			38F+71	57' RT	2
			38F+87	5' LT	3
			39F+86	5' LT	1
		SUBTOTAL			6
1000	2	W. KEARNEY STREET			
			107K+87	38' LT	1
	2	W. O'CONNOR STREET			
			555CR+67	27' RT	1
			556CR+26	10' RT	1
			559CR+03	12' RT	1
	2	RAMP NSA			
			19NSA+70	11' RT	1
			27NSA+77	96' RT	3
			28NSA+65	87' LT	1
		SUBTOTAL			9
		TOTAL			24

3

APRON ENDWALLS

CATEGORY	STAGE	ROADWAY	PIPE ID	ENDWALL ID	ENDWALL ELEVATION	ENDWALL STATION	ENDWALL OFFSET	522.1024* APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	522.1084 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 84-INCH EACH	SPV.0060.8100 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 96-INCH EACH	611.9800.S PIPE GRATES EACH	633.5200 MARKERS CULVERT END EACH
1000	1A	RAMP FDA										
			P220	TL220A	687.80	10FDA+81	121' LT	--	1	--	1	1
			P221	TL221B	679.98	11FDA+63	139' LT	--	--	1	1	--
			P221	TL221A	688.25	12FDA+50	72' LT	--	--	1	1	--
		SUBTOTALS						--	1	2	3	1
1000	2	RAMP NSA										
			P413	TL413A	787.50	21NSA+66	39' RT	1	--	--	--	--
		SUBTOTALS						1	--	--	--	--
		TOTALS						1	1	2	3	1

NOTES
1) ENDWALL ELEVATION / STATION / OFFSET ARE TO END CENTER OF ENDWALL
2) PIPE LENGTHS AND SLOPES ARE MEASURED TO THE END OF PIPE
*ADDITONAL QUANTITIES SHOWN ELSEWHERE

ADJUSTING STRUCTURES

CATEGORY	STAGE	LOCATION	STRUCTURE NUMBER	STATION	OFFSET FT	611.8110 ADJUSTING MANHOLE COVERS EACH	611.8115 ADJUSTING INLET COVERS EACH
1000	1A	RAMP FBA					
			TLE230	10FBA+69	34' RT	1	---
	2	RAMP NSA					
			TLE451	25NSA+45	71' RT	---	1
		TOTAL				1	1

COVER PLATES

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	SPV.0060.8009 COVER PLATES LEFT IN PLACE EACH
1000	1C	S. 84TH STREET			
			39F+86	8' LT	1
	2	RAMP NSA			
			25NSA+39	32' LT	1
		TOTAL			2

SEDIMENTATION BASIN

ROADWAY	SPV.0060.8017 SEDIMENTATION BASIN EACH
UNDISTRIBUTED	6
TOTAL	6

BACKFILL CONTROLLED LOW STRENGTH

CATEGORY	PIPE ID OR STRUCTURE	PIPE DIAMETER INCHES	PIPE LENGTH FT	209.0200.S BACKFILL CONTROLLED LOW STRENGTH CY
1000		12	429	158
		15	1444	732
		18	503	336
		24	3087	3259
		30	314	481
		36	91	191
		48	27	94
		60	21	114
		72	18	136
		84	90	881
		96	92	1159
1000	P109			6
	P109A			72
	P304			8
	P308			6
	P111			20
	P111B			69
	P111A			17
	P419			144
	TL185			2
TOTAL				7884

RECONNECT STORM SEWER LATERALS

ROADWAY	SPV.0060.8007 RECONNECT STORM SEWER LATERALS EACH
UNDISTRIBUTED	15
TOTAL	15

SPECIAL STRUCTURES

	SPV.0060.8050 STORM SEWER STRUCTURE TL219 EACH	SPV.0060.8051 STORM SEWER STRUCTURE TL220 EACH
TOTAL	1	1

ALL STRUCTURES TO BE CONSTRUCTED IN STAGE 1A

FOR LOCATIONS SEE STORM SEWER STRUCTURES TABLE

PIPE CONNECTION TO EXISTING STRUCTURE

CATEGORY	STAGE	ROADWAY	STRUCTURE NUMBER	STATION	OFFSET	SPV.0060.8015 PIPE CONNECTION TO EXISTING STRUCTURE EACH
1000	1A	IH 94				
			TLE217	234EW+69	8' RT	1
	1A	RAMP FDA				
			TLE218	9FDA+65	10' RT	1
		SUBTOTAL				2
1000	2	IH 94				
			TLE302	256EW+48	53' LT	1
			TLE307	261EW+47	39' LT	1
			TLE312	263EW+70	31' LT	1
			TLE322	271EW+71	50' LT	1
			TLE325	274EW+15	57' LT	1
	2	RAMP NSA				
			TLE401	14NSA+52	11' RT	1
			TLE403	17NSA+02	7' LT	1
			TLE 451	25NSA+44	71' RT	1
		SUBTOTAL				8
1000	3	IH 94				
			TLE116	266EW+17	43' RT	2
		SUBTOTAL				2
1000	4	S. 76TH STREET				
			TLE103	23TL+32	34' LT	1
			TLE101	23TL+65	29' RT	1
		SUBTOTAL				2
		TOTAL				14

WELDING STORM SEWER COVERS

CATEGORY	STAGE*	ROADWAY	STATION	OFFSET	SPV.0060.8075 WELDING STORM SEWER COVERS EACH	SPV.0060.8052 REMOVING WELDS FROM STORM SEWER COVERS EACH
1000	2	IH 94				
			261EW+43	30' RT	1	1
			263EW+69	43' RT	1	1
			266EW+17	40' RT	1	--
		TOTAL			3	2

*STAGE APPLICABLE TO WELDING STORM SEWER COVERS ONLY

REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	EXISTING RIM ELEVATION	TO	PROPOSED RIM ELEVATION	SPV.0060.8061 REMOVE AND CAP EXISTING DRAINAGE STORM SEWER STRUCTURE EACH
1000	2	IH 94						
			259EW+48	53' LT	709.89	-	707.75	1
			261EW+47	36' LT	708.83	-	706.50	1
			263EW+70	31' LT	707.64	-	704.50	1
			271EW+71	50' LT	710.33	-	708.25	1
			274EW+15	57' LT	708.99	-	706.50	1
	2	RAMP NSA						
			14NSA+52	11' RT	789.05	-	787.25	1
			17NSA+02	7' LT	790.55	-	788.75	1
			SUBTOTAL					7
1000	3	IH 94						
			267EW+76	78' RT	710.15	-	708.25	1
			SUBTOTAL					1
			TOTAL					8

TRAFFIC CONTROL ITEMS

CATEGORY	STAGE	LOCATION	STAGE DURATION	643.0200.0001 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE 1060-33-78	616.0600.S FENCE TEMPORARY	643.0300* TRAFFIC CONTROL DRUMS		643.0410 TRAFFIC CONTROL BARRICADES TYPE II		643.0420* TRAFFIC CONTROL BARRICADES TYPE III		643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715* TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800* TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I			643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II			643.1050* TRAFFIC CONTROL SIGNS PCMS		SPV.0045.0020 TRUCK MOUNTED ATTENUATOR
			DAYS	DAYS	LF	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	EACH**	DAYS	DAYS
1000	1A	**STAGE 1A**	119	119																									
		IH 94 EB			--	--	--	--	--	--	--	--	--	--	--	--	--	18	2,142	--	--	--	--	--	--	--	--	--
		IH 94 WB			--	--	--	--	--	2	238	4	476	--	--	--	--	18	2,142	--	--	--	--	--	--	--	--	--
		84TH STREET NB			--	24	2,805	--	--	10	1,190	20	2,380	5	652	--	--	21	2,499	--	--	--	--	--	--	1	119	--
		84TH STREET SB			--	28	3,305	--	--	5	595	10	1,190	7	834	--	--	17	2,023	--	--	--	--	--	--	1	119	--
		84TH STREET NW RAMP			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		84TH STREET SW RAMP			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--
		KEARNEY STREET			580	--	--	1	119	13	1,547	26	3,094	--	--	--	--	6	714	--	--	--	--	--	--	--	--	--
		O'CONNOR STREET			1,760	11	1,309	--	--	4	476	8	952	8	952	1	119	16	1,904	--	--	--	--	--	--	--	--	--
		76TH STREET NB			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--
		76TH STREET SB			--	--	--	1	119	--	--	--	--	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--
		74TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		75TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		77TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		78TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		HONEY CREEK PKWY			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		PETTIT CENTER			--	--	--	--	--	1	119	2	238	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--
		SUBTOTALS		119	2,340		7,418		238		4,165		8,330		2,438		119		13,328	--			--			2	238	--
1000	1B	**STAGE 1B**	35	35																								
		IH 94 EB			--	82	9,758	--	--	5	595	10	1,190	27	3,213	1	119	22	2,618	--	--	--	1	1	1	--	--	--
		IH 94 WB			--	--	--	--	--	2	238	4	476	--	--	--	--	18	2,142	--	--	--	--	--	--	--	--	--
		84TH STREET NB			--	46	5,474	--	--	5	595	10	1,190	11	1,309	--	--	18	2,142	--	--	--	--	--	--	1	119	--
		84TH STREET SB			--	34	4,046	--	--	3	357	6	714	7	833	--	--	19	2,261	--	--	--	--	--	--	1	119	--
		84TH STREET NW RAMP			--	--	--	--	--	2	238	4	476	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--
		84TH STREET SW RAMP			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--
		KEARNEY STREET			--	--	--	1	119	9	1,071	18	2,142	--	--	--	--	4	476	--	--	--	--	--	--	--	--	--
		O'CONNOR STREET			--	11	1,309	--	--	4	476	8	952	8	952	1	119	16	1,904	--	--	--	--	--	--	--	--	--
		76TH STREET NB			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--
		76TH STREET SB			--	--	--	1	119	--	--	--	--	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--
		74TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		75TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		77TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		78TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		HONEY CREEK PKWY			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		PETTIT CENTER			--	--	--	--	--	1	119	2	238	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--
		SUBTOTALS		35	--		20,587		238		3,689		7,378		6,307		238		13,566	--			1			2	238	--

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
**FOR INFORMATION ONLY

TRAFFIC CONTROL ITEMS (CONTINUED)

CATEGORY	STAGE	LOCATION	STAGE DURATION	643.0200.0001 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE 1060-33-78	616.0600.S FENCE TEMPORARY	643.0300* TRAFFIC CONTROL DRUMS		643.0410 TRAFFIC CONTROL BARRICADES TYPE II		643.0420* TRAFFIC CONTROL BARRICADES TYPE III		643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715* TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800* TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I			643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II			643.1050* TRAFFIC CONTROL SIGNS PCMS		SPV.0045.0020 TRUCK MOUNTED ATTENUATOR
																				EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS			
			DAYS	DAYS	LF	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS							EACH**	DAYS	DAYS
1000	1C	**STAGE 1C**	21	21																									
		IH 94 EB			--	82	9,758	--	--	5	595	10	1,190	27	3,213	1	119	22	2,618	--	--	--	--	--	--	--	--	--	--	--
		IH 94 WB			--	--	--	--	--	2	238	4	476	--	--	--	--	18	2,142	--	--	--	--	--	--	--	--	--	--	--
		84TH STREET NB			150	18	2,142	2	238	12	1,428	24	2,856	5	595	--	--	9	1,071	--	--	--	--	--	--	--	1	119	--
		84TH STREET SB			350	--	--	2	238	14	1,666	28	3,332	--	--	--	--	10	1,190	--	--	--	--	--	--	--	1	119	--
		84TH STREET NW RAMP			--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
		84TH STREET SW RAMP			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--	--
		KEARNEY STREET			--	--	--	1	119	9	1,071	18	2,142	--	--	--	--	4	476	--	--	--	--	--	--	--	--	--	--
		O'CONNOR STREET			--	33	3,927	--	--	7	833	14	1,666	8	952	1	119	12	1,428	--	--	--	--	--	--	--	--	--	--
		76TH STREET NB			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--	--
		76TH STREET SB			--	--	--	1	119	--	--	--	--	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--	--
		74TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--	--
		75TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--	--
		77TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--	--
		78TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--	--
		HONEY CREEK PKWY			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--	--
		PETTIT CENTER			--	--	--	--	--	1	119	2	238	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--	--
		GLENVIEW AVENUE			--	--	--	--	--	2	238	4	476	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--	--
		SUBTOTALS		21	500		15,827		714		6,188		12,376		4,760		238		11,067	--			--				2	238	--
1000	1D	**STAGE 1D**	49	49																									
		IH 94 EB			--	--	--	--	--	--	--	--	--	--	--	--	--	18	2,142	--	--	--	--	--	--	--	1	119	--
		IH 94 WB			--	6	714	--	--	--	--	--	--	--	--	--	--	28	3,332	--	--	--	--	--	--	--	1	119	--
		IH 894/USH 45 NB			1,015	50	5,950	--	--	4	476	8	952	4	476	1	119	10	1,190	--	--	--	--	--	--	--	--	--	--
		84TH STREET NB			--	34	4,046	--	--	4	476	8	952	5	595	--	--	17	2,023	--	--	--	--	--	--	--	--	--	--
		84TH STREET SB			--	29	3,451	--	--	3	357	6	714	--	--	--	--	15	1,785	--	--	--	--	--	--	--	--	--	--
		84TH STREET NW RAMP			--	--	--	--	--	2	238	4	476	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--	--
		KEARNEY STREET			--	--	--	1	119	9	1,071	18	2,142	--	--	--	--	4	476	--	--	--	--	--	--	--	--	--	--
		O'CONNOR STREET			--	33	3,927	--	--	6	714	12	1,428	14	1,666	1	119	27	3,213	--	--	--	--	--	--	--	--	--	--
		76TH STREET NB			115	13	1,547	2	238	7	833	14	1,666	7	833	1	119	13	1,547	--	--	--	--	--	--	--	1	119	--
		76TH STREET SB			150	12	1,428	2	238	6	714	12	1,428	8	952	1	119	13	1,547	--	--	--	--	--	--	--	1	119	--
		74TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--	--
		75TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--	--
		77TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--	--
		78TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--	--
		SCHLINGER AVENUE			--	--	--	--	--	--	--	--	--	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--	--
		PETTIT CENTER			--	--	--	--	--	1	119	2	238	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--	--
		SUBTOTALS		49	1,280		21,063		595		4,998		9,996		4,522		476		18,683	--			--				4	476	--

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
**FOR INFORMATION ONLY

TRAFFIC CONTROL ITEMS (CONTINUED)

CATEGORY	STAGE	LOCATION	STAGE DURATION	643.0200.0001 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE 1060-33-78	616.0600.S FENCE TEMPORARY	643.0300* TRAFFIC CONTROL DRUMS		643.0410 TRAFFIC CONTROL BARRICADES TYPE II		643.0420* TRAFFIC CONTROL BARRICADES TYPE III		643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715* TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800* TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I			643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II			643.1050* TRAFFIC CONTROL SIGNS PCMS		SPV.0045.0020 TRUCK MOUNTED ATTENUATOR
			DAYS	DAYS	LF	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	EACH**	DAYS	DAYS
1000	2	**STAGE 2**	16	16																								
		IH 94 EB			--	--	--	--	--	--	--	--	--	--	--	--	--	18	2,142	--	--	--	--	--	--	--	--	--
		IH 94 WB			--	6	714	--	--	--	--	--	--	--	--	--	--	28	3,332	--	--	--	--	--	--	--	--	--
		IH 894/USH 45 NB			--	50	5,950	--	--	4	476	8	952	4	476	1	119	10	1,190	--	--	--	--	--	--	--	--	--
		84TH STREET NB			--	34	4,046	--	--	4	476	8	952	5	595	--	--	17	2,023	--	--	--	--	--	--	--	--	--
		84TH STREET SB			--	29	3,451	--	--	3	357	6	714	--	--	--	--	15	1,785	--	--	--	--	--	--	--	--	--
		84TH STREET NW RAMP			--	--	--	--	--	2	238	4	476	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--
		KEARNEY STREET			--	8	952	1	119	12	1,428	24	2,856	--	--	--	--	7	833	--	--	--	--	--	--	--	--	--
		O'CONNOR STREET			--	22	2,618	--	--	8	952	16	1,904	22	2,618	1	119	20	2,380	--	--	--	--	--	--	--	--	--
		76TH STREET NB			--	13	1,547	2	238	7	833	14	1,666	7	833	1	119	13	1,547	--	--	--	--	--	--	1	119	--
		76TH STREET SB			--	12	1,428	2	238	6	714	12	1,428	8	952	1	119	13	1,547	--	--	--	--	--	--	1	119	--
		74TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		75TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		77TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		78TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		SCHLINGER AVENUE			--	--	--	--	--	--	--	--	--	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--
		PETTIT CENTER			--	--	--	--	--	1	119	2	238	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--
		SUBTOTALS		16	--		20,706		595		5,593		11,186		5,474		476		18,207	--			--			2	238	--
1000	3	**STAGE 3**	63	63																								
		IH 94 EB			--	22	2,618	--	--	--	--	--	--	23	2,737	--	--	19	2,261	--	--	--	--	--	--	--	--	--
		IH 94 WB			--	29	3,451	--	--	--	--	--	--	21	2,499	--	--	20	2,380	--	--	--	--	--	--	--	--	--
		IH 894/USH 45 NB			--	50	5,950	--	--	4	476	8	952	4	476	1	119	10	1,190	--	--	--	--	--	--	--	--	--
		KEARNEY STREET			1,400	47	5,593	1	119	7	833	14	1,666	--	--	--	--	5	595	--	--	--	--	--	--	--	--	--
		O'CONNOR STREET			--	22	2,618	--	--	8	952	16	1,904	22	2,618	1	119	20	2,380	--	--	--	--	--	--	--	--	--
		76TH STREET NB			--	14	1,666	2	238	7	833	14	1,666	7	833	1	119	13	1,547	--	--	--	--	--	--	--	--	--
		76TH STREET SB			--	12	1,428	2	238	6	714	12	1,428	8	952	1	119	13	1,547	--	--	--	--	--	--	--	--	--
		74TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--
		75TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--
		77TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		78TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--
		MAIN STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--
		SCHLINGER AVENUE			--	--	--	--	--	--	--	--	--	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--
		PETTIT CENTER			--	--	--	--	--	1	119	2	238	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--
		SUBTOTALS		63	1,400		23,324		595		3,927		7,854		10,115		476		13,447	--			--			--	--	--

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
**FOR INFORMATION ONLY

TRAFFIC CONTROL ITEMS (CONTINUED)

CATEGORY	STAGE	LOCATION	STAGE DURATION	643.0200.0001 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE 1060-33-78	616.0600.S FENCE TEMPORARY	643.0300* TRAFFIC CONTROL DRUMS		643.0410 TRAFFIC CONTROL BARRICADES TYPE II		643.0420* TRAFFIC CONTROL BARRICADES TYPE III		643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715* TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800* TRAFFIC CONTROL ARROW BOARDS		643.0900 TRAFFIC CONTROL SIGNS		643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I			643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II			643.1050* TRAFFIC CONTROL SIGNS PCMS		SPV.0045.0020 TRUCK MOUNTED ATTENUATOR
			DAYS	DAYS	LF	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	EACH**	DAYS	DAYS
1000	4	**STAGE 4**	35	35																									
		IH 94 EB			--	22	2,618	--	--	--	--	--	--	23	2,737	--	--	19	2,261	--	--	--	--	--	--	--	--	--	--
		IH 94 WB			--	29	3,451	--	--	--	--	--	--	21	2,499	--	--	20	2,380	--	--	--	--	--	--	--	--	--	--
		IH 894/USH 45 NB			--	50	5,950	--	--	4	476	8	952	4	476	1	119	10	1,190	--	--	--	--	--	--	--	--	--	--
		O'CONNOR STREET			--	22	2,618	--	--	8	952	16	1,904	22	2,618	1	119	20	2,380	--	--	--	--	--	--	--	--	--	--
		76TH STREET NB			--	14	1,666	2	238	7	833	14	1,666	7	833	1	119	13	1,547	--	--	--	--	--	--	--	--	--	--
		76TH STREET SB			--	12	1,428	2	238	6	714	12	1,428	8	952	1	119	13	1,547	--	--	--	--	--	--	--	--	--	--
		74TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--	--
		75TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--	--
		77TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--	--
		78TH STREET			--	--	--	--	--	--	--	--	--	--	--	--	--	1	119	--	--	--	--	--	--	--	--	--	--
		SCHLINGER AVENUE			--	--	--	--	--	--	--	--	--	--	--	--	--	3	357	--	--	--	--	--	--	--	--	--	--
		PETTIT CENTER			--	--	--	--	--	1	119	2	238	--	--	--	--	2	238	--	--	--	--	--	--	--	--	--	--
		SUBTOTALS		35	--		17,731		476		3,094		6,188		10,115		476		12,614	--			--			--	--	--
		UNDISTRIBUTED		--	830		12,670		350		3,170		6,340		4,380		250		11,110	5			7				1,350	200
		TOTALS		338	6,350		139,326		3,801		34,824		69,648		48,111		2,749		112,022	5			8				2,778	200

*ADDITIONAL QUANTITIES FOUND ELSEWHERE
**FOR INFORMATION ONLY

TRAFFIC CONTROL ITEMS (DETOUR)

CATEGORY	STAGE	LOCATION	STAGE DURATION	643.0300* TRAFFIC CONTROL DRUMS		643.0420* TRAFFIC CONTROL BARRICADES TYPE III		643.0705* TRAFFIC CONTROL WARNING LIGHTS TYPE A		643.0715* TRAFFIC CONTROL WARNING LIGHTS TYPE C		643.0800* TRAFFIC CONTROL ARROW BOARDS		643.0920* TRAFFIC CONTROL COVERING SIGNS TYPE II			643.1050* TRAFFIC CONTROL SIGNS PCMS		643.2000.0001 TRAFFIC CONTROL DETOUR 1060-33-78	643.3000 TRAFFIC CONTROL DETOUR SIGNS	
			DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH**	DAYS	EACH	NUMBER OF CYCLES	NUMBER OF SIGNS	EACH**	DAYS	EACH	EACH**	DAYS
1000	1A	**STAGE 1A**	119																		
		KEARNEY STREET		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	8,330
		84TH ST ENTRANCE RAMP TO IH 94 EB		--	--	--	--	--	--	--	--	--	--	--	--	--	2	238	--	69	8,211
		84TH ST ENTRANCE RAMP TO IH 94 WB		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	67	7,973
		O'CONNOR STREET	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	28	56
		SUBTOTALS			--		--		--		--		--	--				238	--		24,570
1000	1B	**STAGE 1B**	35																		
		KEARNEY STREET		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	2,450
		84TH ST ENTRANCE RAMP TO IH 94 EB		--	--	--	--	--	--	--	--	--	--	--	--	--	2	70	--	69	2,415
		84TH ST ENTRANCE RAMP TO IH 94 WB		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	67	2,345
		IH 94 EB EXIT RAMP TO 84TH STREET		--	--	--	--	--	--	--	--	--	--	--	--	--	2	--	--	129	4,515
		SUBTOTALS			--		--		--		--		--	--				70	--		11,725
1000	1C	**STAGE 1C**	21																		
		KEARNEY STREET		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	1,470
		84TH STREET		--	--	--	--	--	--	--	--	--	--	4	1	4	3	63	--	145	3,045
		84TH ST ENTRANCE RAMP TO IH 94 EB		--	--	--	--	--	--	--	--	--	--	--	--	--	2	42	--	69	1,449
		84TH ST ENTRANCE RAMP TO IH 94 WB		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	67	1,407
		IH 94 EB EXIT RAMP TO 84TH STREET		--	--	--	--	--	--	--	--	--	--	--	--	--	2	42	--	129	2,709
		SUBTOTALS			--		--		--		--		--	4				147	--		10,080
1000	1D	**STAGE 1D**	49																		
		KEARNEY STREET		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	3,430
		84TH ST ENTRANCE RAMP TO IH 94 EB		--	--	--	--	--	--	--	--	--	--	--	--	--	2	98	--	69	3,381
		84TH ST ENTRANCE RAMP TO IH 94 WB		--	--	--	--	--	--	--	--	--	--	1	1	1	--	--	--	61	67
		SUBTOTALS			--		--		--		--		--	1				98	--		6,878
1000	2	**STAGE 2**	16																		
		76TH STREET NB/SB		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	90	1,440
		KEARNEY STREET		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	1,120
		SCHLINGER AVENUE		--	--	10	160	20	320	--	--	--	--	--	--	--	--	--	--	32	512
		70TH ST ENTRANCE RAMP TO IH 94 WB		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	304
		FULL FREEWAY CLOSURE IH 94 EB	2	94	188	7	14	14	28	28	56	3	6	2	2	1	3	6	--	292	584
		RAMP NE		57	114	4	8	8	16	14	28	2	4	--	--	--	--	--	--	15	30
		84TH ST ENTRANCE RAMP TO IH 94 EB		18	36	2	4	4	8	--	--	--	--	--	--	--	--	--	--	5	10
		FULL FREEWAY CLOSURE IH 94 WB	2	96	192	7	14	14	28	28	56	3	6	--	--	--	1	2	--	59	118
		70TH ST ENTRANCE RAMP TO IH 94 WB		16	32	3	6	6	12	--	--	--	--	--	--	--	--	--	--	7	14
		HAWLEY RD ENTRANCE RAMP TO IH 94 WB		11	22	3	6	6	12	--	--	--	--	--	--	--	--	--	--	7	14
		MITCHELL BLVD ENTRANCE RAMP TO IH 94 WB		--	--	2	4	4	8	--	--	--	--	--	--	--	--	--	--	3	6
		SUBTOTALS			584		216		432		140		16	2				8	--		4,152
1000	3	**STAGE 3**	63																		
		76TH STREET NB/SB		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	90	5,670
		KEARNEY STREET		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	70	4,410
		70TH ST ENTRANCE RAMP TO IH 94 WB		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	1,197
		FULL FREEWAY CLOSURE IH 94 EB	2	94	188	7	14	14	28	28	56	3	6	2	2	1	3	6	--	292	584
		RAMP NE		57	114	4	8	8	16	14	28	2	4	--	--	--	--	--	--	15	30
		84TH ST ENTRANCE RAMP TO IH 94 EB		18	36	2	4	4	8	--	--	--	--	--	--	--	--	--	--	5	10
		FULL FREEWAY CLOSURE IH 94 WB	2	96	192	7	14	14	28	28	56	3	6	--	--	--	1	2	--	59	118
		70TH ST ENTRANCE RAMP TO IH 94 WB		16	32	3	6	6	12	--	--	--	--	--	--	--	--	--	--	7	14
		HAWLEY RD ENTRANCE RAMP TO IH 94 WB		11	22	3	6	6	12	--	--	--	--	--	--	--	--	--	--	7	14
		MITCHELL BLVD ENTRANCE RAMP TO IH 94 WB		--	--	2	4	4	8	--	--	--	--	--	--	--	--	--	--	3	6
		SUBTOTALS			584		56		112		140		16	2				8	--		12,053
1000	4	**STAGE 4**	35																		
		76TH STREET NB/SB		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	90	3,150
		70TH ST ENTRANCE RAMP TO IH 94 WB		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	665
		SUBTOTALS			--		--		--		--		--	--				--	--		3,815
		UNDISTRIBUTED			125		50		75		50		25	9				285	1		7,350
		TOTALS			1,293		322		619		330		57	18				854	1		80,623

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

**FOR INFORMATION ONLY

TRAFFIC CONTROL SIGNS FIXED MESSAGE

CATEGORY	STAGE	LOCATION	SIGN NO.	NUMBER REQUIRED	SIGN SIZE W X H FT X FT	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	SPV.0060.0045 FIXED MESSAGE SIGN PORTABLE SUPPORT EACH	SIGN MESSAGE
1000	1B	**STAGE 1B**						
		IH 94 EB	101	1	6.0' X 1.5'	9.00	--	CLOSED
			102	1	6.0' X 1.5'	9.00	--	CLOSED
			103	1	6.0' X 1.5'	9.00	--	CLOSED
			104	1	12.5' X 3.5'	43.75	--	RAMP CLOSED USE 70TH STREET
			105	1	10.0' X 2.0'	20.00	--	RAMP CLOSED
			106	1	6.0' X 1.5'	9.00	--	CLOSED
			107	1	10.0' X 2.0'	20.00	--	RAMP CLOSED
			108	1	4.5' X 2.0'	9.00	--	307A
			109	1	4.5' X 2.0'	9.00	--	307A
		S-E RAMP						
			110	1	12.5' X 8.5'	106.25	--	STH 181 84TH STREET RAMP CLOSED USE 70TH STREET
		N-E RAMP						
			111	1	12.5' X 8.5'	106.25	--	STH 181 84TH STREET RAMP CLOSED USE 70TH STREET
		STAGE 1B SUBTOTALS				350.25	--	
1000	1C	**STAGE 1C**						
		IH 94 WB	112	1	13.5' X 2.0'	27.00	--	NORTHBOUND ONLY
			113	1	13.5' X 2.0'	27.00	--	NORTHBOUND ONLY
			114	1	4.0' X 2.0'	8.00	--	EXIT
		W. BLUEMOUND ROAD						
			115	1	6.0' X 6.5'	39.00	--	STH 181 84TH STREET CLOSED AT 94 FOLLOW DETOUR
			116	1	6.0' X 6.5'	39.00	--	STH 181 84TH STREET CLOSED AT 94 USE ALT ROUTE
		STAGE 1C SUBTOTALS				140.00	--	
1000	2	**STAGE 2**						
		IH 94 EB	201	1	5.5' X 5.0'	27.50	--	KEARNEY STREET CLOSED AHEAD ACCESS TO 94 EB ONLY
			202	1	5.5' X 5.0'	27.50	--	KEARNEY STREET CLOSED AHEAD ACCESS TO 94 EB ONLY
			203	1	5.5' X 5.0'	27.50	--	KEARNEY STREET CLOSED AHEAD ACCESS TO 94 EB ONLY
			204	1	8.0' X 6.5'	52.00	1	WISCONSIN LUTHERAN COLLEGE NEXT EXIT
			205	1	14.0' X 7.0'	98.00	1	COUNTY ZOO FOLLOW 45 NB EXIT BLUEMOUND AVE
		STAGE 2 SUBTOTALS				232.50	2	
1000		**DETOUR**						
			901	21	4.5' X 1.0'	94.50	--	KEARNEY ST
			902	32	3.0' X 1.0'	96.00	--	76TH ST
			903	59	3.0' X 1.0'	177.00	--	84TH ST
			904	13	6.5' X 2.0'	169.00	--	84TH ST
			905	14	5.0' X 1.0'	70.00	--	SCHLINGER AVE
			906	4	4.5' X 2.0'	36.00	--	KEARNEY ST 84TH ST
			907	29	4.0' X 2.0'	232.00	--	STATE FAIR PETTIT CTR
			908	9	8.5' X 3.5'	267.75	--	STATE FAIR PETTIT CTR
			909	7	4.5' X 1.0'	31.50	--	O'CONNOR ST
		DETOUR SUBTOTALS				1,173.75	--	
		UNDISTRIBUTED				190.00	1	
		TOTALS				2,086.50	3	

TEMPORARY CONCRETE BARRIER ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF
1000	1A	IH 94 WB						
			233EW+84		236EW+75	RT	300.0	300.0
		84TH STREET SB						
			36F+82		38F+86	RT	225.0	225.0
		RAMP FCA						
			10FCA+78		13FCA+32	LT	262.5	262.5
		KEARNEY STREET						
			102K+68		112K+44	RT	1,087.5	1,087.5
		O'CONNOR STREET						
			556CR+61		564CR+61	RT	800.0	800.0
			565CR+58		574CR+87	RT	937.5	937.5
		SUBTOTALS					3,612.5	3,612.5
1000	1B	84TH STREET NB						
			37F+78		40F+24	RT	250.0	250.0
		84TH STREET SB						
			38F+89		39F+95	LT	112.5	112.5
		SUBTOTALS					362.5	362.5
1000	1C	84TH STREET NB						
			38F+50		38F+50	RT	50.0	50.0
			40F+10		40F+10	RT	37.5	37.5
		84TH STREET SB						
			38F+50		38F+50	LT	37.5	37.5
			40F+10		40F+10	LT	37.5	37.5
		SUBTOTALS					162.5	162.5
1000	1D	IH 94 WB						
			256EW+02		277EW+49	LT	2,150.0	2,150.0
		IH 94 EB & WB MEDIAN						
			265EW+95		266EW+35	RT	87.5	87.5
		76TH STREET						
			20TL+33		20TL+34	LT / RT	62.5	62.5
			23TL+28		23TL+42	LT / RT	62.5	62.5
		IH 894 / USH 45 NB						
			14NSA+12		19NSA+10	LT/RT	512.5	512.5
			19NSA+19		24NSA+41	RT	525.0	525.0
			19NSA+38		27NSA+18	LT	787.5	787.5
			28NSA+38		34NSA+47	LT	512.5	512.5
			29NSA+38		37NSA+84	RT	850.0	850.0
		SUBTOTALS					5,550.0	5,550.0

TEMPORARY CONCRETE BARRIER ITEMS (CONTINUED)

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED LF	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED LF
1000	2	KEARNEY						
			105K+27		105K+27	RT/LT	25.0	25.0
		SUBTOTALS					25.0	25.0
1000	3	IH 94 EB						
			262EW+00		268EW+20	RT	625.0	625.0
		IH 94 WB						
			256EW+03		274EW+31	LT	1,825.0	1,825.0
			263EW+00		271EW+75	LT	875.0	875.0
		SUBTOTALS					3,325.0	3,325.0
1000	4	IH 94 WB						
			264EW+00		269EW+26	LT	525.0	525.0
		W. O'CONNOR ST.						
			573CR+20		574CR+04	RT	87.5	87.5
		SUBTOTALS					612.5	612.5
		UNDISTRIBUTED					687.5	687.5
		TOTALS					14,337.5	14,337.5

TRAFFIC CONTROL FLEXIBLE TUBULAR MARKERS

CATEGORY	STAGE	LOCATION	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS EACH	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES EACH
1000		UNDISTRIBUTED	25	25
		TOTALS	25	25

3

TRAFFIC CONTROL PAVEMENT MARKING

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	646.0600 REMOVING PAVEMENT MARKINGS LF	649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH DASHED WHITE[1] LF	WHITE LF	YELLOW LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH DOT WHITE[2] LF	WHITE LF	YELLOW LF	649.2100 TEMPORARY RAISED PAVEMENT MARKERS WHITE EACH	YELLOW EACH
1000	1A	84TH STREET NB	33F+00		50F+25	--	--	960	475	--	--	--	--	--
		84TH STREET SB	33F+45		40F+35	--	--	430	250	--	--	--	--	--
		O'CONNOR STREET	561CR+00		576CR+25	--	--	--	1,990	--	--	--	--	--
		RAMP FCA	10FCA+50		14FCA+00	--	--	--	310	--	--	--	--	--
		SUBTOTALS				--	--	1,390	3,025	--	--	--	--	--
1000	1B	84TH STREET NB	30F+00		45F+00	665	--	--	660	--	--	--	--	--
		84TH STREET SB	43F+80		44F+30	--	--	--	175	--	--	--	--	--
		RAMP FCA	10FCA+50		11FCA+50	60	--	--	--	--	--	--	--	--
		IH 94 EB	219EW+00		226EW+00	--	--	665	--	--	--	--	--	--
		SUBTOTALS				725	--	665	835	--	--	--	--	--
1000	1C	84TH STREET NB	36F+50		42F+00	340	--	--	--	--	--	--	--	--
		84TH STREET NE RAMP	238EW+85		545CR+75	--	--	160	690	--	--	--	--	--
		SUBTOTALS				340	--	160	690	--	--	--	--	--

TRAFFIC CONTROL PAVEMENT MARKING (CONTINUED)

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	646.0600 REMOVING PAVEMENT MARKINGS LF	649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH DASHED WHITE[1] LF	WHITE LF	YELLOW LF	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH DOT WHITE[2] LF	WHITE LF	YELLOW LF	649.2100 TEMPORARY RAISED PAVEMENT MARKERS WHITE EACH	YELLOW EACH
1000	1D	84TH STREET NB	32F+00		40F+00	485	--	--	--	--	--	--	--	--
		84TH STREET SB	42F+00		48F+00	365	--	--	--	--	--	--	--	--
		IH 94 WB	251EW+90		280EW+00	6,035	800	7,200	2,410	--	--	--	145	50
		84TH STREET NE RAMP	238EW+85		545CR+75	865	--	--	--	--	--	--	--	--
		SUBTOTALS				7,750	800	7,200	2,410	--	--	--	145	50
1000	2	RAMP FBA	12FBA+00		15FBA+60	--	--	--	--	--	290	--	--	--
		SUBTOTALS				--	--	--	--	--	290	--	--	--
1000	3	IH 94 WB	254EW+00		278EW+00	8,000	485	5,250	2,400	--	--	--	175	60
		RAMP FBA	12FBA+00		15FBA+60	290	--	--	--	--	--	--	--	--
		SUBTOTALS				8,290	485	5,250	2,400	--	--	--	175	60
1000	4	IH 94 WB	254EW+00		278EW+00	8,125	--	--	--	--	--	--	--	--
		O'CONNOR STREET	555CR+50		576CR+25	1,815	--	--	--	--	--	--	--	--
		SUBTOTALS				9,940	--	--	--	--	--	--	--	--
		UNDISTRIBUTED				965	25	375	350	--	15	--	10	5
		SUBTOTALS				28,010	1,310	15,040	9,710	--	305	--	330	115
		TOTALS				28,010		26,060			305		445	

[1] DASHED WHITE = 12.5-FT DASH, 37.5-FT SKIP
[2] DOT WHITE = 3-FT DASH, 9-FT SKIP

3

CRASH CUSHIONS TEMPORARY

CATEGORY	STAGE	LOCATION	STATION	OFFSET	614.0905 CRASH CUSHIONS TEMPORARY EACH
1000	1A	RAMP FCA			
			10FCA+79	13.4' LT	1
		SUBTOTALS			1
1000	1D	IH 94 WB			
			277EW+49	61.5' LT	1
		SUBTOTALS			1
1000	3	IH 94 WB			
			271EW+74	12.9' LT	1
		SUBTOTALS			1
		TOTALS			3

TRAFFIC CONTROL ITEMS

CATEGORY	ROADWAY	SPV.0060.0014 TRAFFIC CONTROL CLOSE-OPEN FREEWAY ENTRANCE RAMP EACH	SPV.0060.0015 TRAFFIC CONTROL CLOSE-OPEN FREEWAY TO FREEWAY SYSTEM RAMP EACH	SPV.0060.0016 TRAFFIC CONTROL INTERIM FREEWAY LANE CLOSURE EACH	SPV.0060.0050 TRAFFIC CONTROL LOCAL ROAD LANE CLOSURES EACH
1000	VARIOUS	40	10	80	25
	TOTALS	40	10	80	25

SAFETY FENCE

CATEGORY	ROADWAY	616.0700.S FENCE SAFETY LF
1000	VARIOUS	1,000
	TOTALS	1,000

TRAFFIC CONTROL LEFT IN PLACE ITEMS

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	614.0805 CRASH CUSHION PERMANENT LOW MAINTENANCE EA	SPV.0060.0035 TRAFFIC CONTROL BARRICADES TYPE III LEFT IN PLACE EA	SPV.0060.0036 TRAFFIC CONTROL WARNING LIGHTS TYPE A LEFT IN PLACE EA	SPV.0090.0012 CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE LF
1000	1D	IH 94 EB & WB MEDIAN								
			265EW+95	-	266EW+35	LT/RT	--	--	--	87.50
		IH 894 / USH 45 NB								
			13NSA+75			30.3' RT	1	--	--	--
			14NSA+12	-	19NSA+55	RT/LT	--	--	--	562.5
			19NSA+19	-	24NSA+41	LT	--	4	4	525.0
			19NSA+38	-	27NSA+18	RT	--	--	--	787.5
			28NSA+38	-	34NSA+47	RT	--	--	--	512.5
			29NSA+38	-	37NSA+84	RT	--	--	--	850.0
		SUBTOTALS					1	4	4	3,325
1000	3	IH 94 EB								
			262EW+00			73.5' RT	1	--	--	--
			262EW+00	-	268EW+20	RT		--	--	625.0
		IH 94 WB								
			256EW+04	-	274EW+31	LT	--	--	--	1,825.0
		SUBTOTALS					1	--	--	2,450
1000	4	IH 94 WB								
			264EW+00	-	269EW+26	LT	--	--	--	537.5
			269EW+25			1.60' LT	1	--	--	--
		SUBTOTALS					1	--	--	538
		TOTALS					3	4	4	6,312.5

SIGN STRUCTURES

CATEGORY	STAGE	LOCATION	STATION	OFFSET	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.1000 SIGN SUPPORTS STEEL REINFORCEMENT HS LB	SPV.0105.0003 MOVING SIGN BRIDGE CANTILEVERED S-40-133 LS	NOTES
1000	1	IH 894/USH 45 NB	32NSA+30	LT	9	715	1	MOVED FROM STA 34NSA+45
		TOTALS			9	715	1	

CPM PROGRESS SCHEDULE

CATEGORY	STAGE	LOCATION	SPV.0060.0024 BASELINE CPM PROGRESS SCHEDULE EACH	SPV.0060.0025 CPM PROGRESS SCHEDULE UPDATES AND ACCEPTED REVISIONS EACH
1000	ALL	PROJECT	1	12
		TOTAL	1	12

FINISHING ROADWAY

CATEGORY	STAGE	LOCATION	213.0100.0001 1060-33-78 EACH
1000	ALL	PROJECT	1
		TOTALS	1

INCENTIVE IRI RIDE

CATEGORY	LOCATION	440.4410.S DOL
1000	RAMP NSA	2610
	TOTAL	2610

MOBILIZATION

CATEGORY	STAGE	LOCATION	619.1000 EACH
1000	ALL	PROJECT	1
		TOTAL	1

FENCING ITEMS

CATEGORY	STAGE	ROADWAY	FROM STATION	OFFSET		TO STATION	OFFSET		616.0206 FENCE CHAIN LINK 6-FT LF	SPV.0090.0014 FENCE TEMPORARY LEFT IN PLACE LF	616.0329.0001 GATES CHAIN LINK 8-FT EACH	616.0329.0002 GATES CHAIN LINK 22-FT EACH
1000	1	TEMPORARY USH 45										
			26NSA+95	87'	LT -	27NSA+44	25'	LT	--	103	--	--
			27NSA+53	14'	RT -	27NSA+88	140'	RT	131	--	--	1
			16NSA+37	58'	RT -	24NSA+41	16'	RT	--	832	--	--
			28NSA+13	34'	LT -	28NSA+26	122'	LT	--	124	--	--
			28NSA+68	39'	RT -	28NSA+76	67'	RT	29	--	--	1
			30NSA+91	102'	RT -	33NSA+13	89'	RT	222	--	--	--
			32NSA+38	27'	LT -	32NSA+38	85'	LT	--	58	--	--
			32NSA+96	16'	RT -	33NSA+13	89'	RT	--	75	--	--
			34NSA+14	33'	LT -	34NSA+15	27'	LT	--	6	--	--
			34NSA+28	24'	RT -	34NSA+36	52'	RT	--	29	--	--
		RAMP FBA										
			10FBA+42	78'	LT -	15FBA+15	23'	LT	--	460	--	--
			15FBA+37	17'	RT -	18FBA+12	18'	RT	273	--	--	--
		RAMP FCA										
			11FCA+65	22'	LT -	13FCA+37	95'	LT	--	243	--	--
			11FCA+43	23'	RT -	14FCA+00	37'	RT	--	271	--	--
		RAMP FDA										
			10FDA+08	69'	LT -	12FDA+26	28'	LT	--	225	--	--
			11FDA+12	24'	RT -	12FDA+22	24'	RT	--	110	--	--
3		S. 76TH STREET										
			20TL+44	85'	RT -	21TL+14	49'	RT	85	--	1	--
4		S. 76TH STREET										
			22TL+99	49'	LT -	23TL+20	68'	LT	32	--	1	--
		W. KEARNEY STREET										
			121K+75	27'	LT -	126K+63	88'	LT	525	--	1	--
		W. O'CONNOR STREET										
			555CR+86	40'	RT -	555CR+88	21'	RT	--	19	--	--
			565CR+49	54'	RT -	566CR+27	23'	RT	90	--	1	--
			573CR+20	17'	RT -	574CR+06	30'	RT	--	94	--	--
		TOTALS							1,387	2,649	4	2

CONCRETE MEDIAN SLOPED NOSE

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	620.0300 CONCRETE MEDIAN SLOPED NOSE TYPE 1 SF	620.0300 CONCRETE MEDIAN SLOPED NOSE TYPE 2 SF
1000	1	S. 84TH STREET				
			38F+53	MEDIAN	53	--
			38F+82	RT	54	--
			39F+09	MEDIAN	54	--
			39F+68	MEDIAN	51	--
			42F+70	MEDIAN	82	--
		RAMP FBA				
			14FBA+75	RT	50	--
		SUBTOTAL			344	--
3		S. 76TH STREET				
			19TL+81	MEDIAN	--	12
			19TL+72	RT	31	--
			19TL+91	RT	--	10
			20TL+49	MEDIAN	52	--
		SUBTOTAL			83	22
4		S. 76TH STREET				
			23TL+30	MEDIAN	54	--
		SUBTOTAL			54	--
		TOTALS			503	

DUST CONTROL SURFACE TREATMENT

CATEGORY	STAGE	LOCATION	623.0200 SY
1000	ALL	PROJECT	31,568
		TOTAL	31,568

WATER

CATEGORY	STAGE	LOCATION	624.0100 MGAL
1000	ALL	PROJECT - BASE AGGREGATE	40
		PROJECT - EXCAVATION	151
		TOTAL	191

MOBILIZATION EMERGENCY PAVEMENT REPAIR

CATEGORY	STAGE	LOCATION	SPV.0060.0017 EACH
1000	VARIOUS	UNDISTRIBUTED	6
		TOTAL	6

VIBRATION MONITORING

CATEGORY	STAGE	LOCATION	SPV.0060.0038 24-HOUR BASELINE VIBRATION MONITORING EACH	SPV.0060.0039 DAILY VIBRATION MONITORING EACH
1000	ALL	PROJECT UNDISTRIBUTED	32	16
		TOTAL	32	16

EXPOSING EXISTING UTILITY

CATEGORY	LOCATION	SPV.0060.0043 EXPOSING EXISTING UTILITY, UNPAVED AREA EA	SPV.0060.0044 EXPOSING EXISTING UTILITY, PAVED AREA EA
1000	UNDISTRIBUTED	25	25
	TOTALS	25	25

PIPE UNDERDRAIN

CATEGORY	LOCATION	BEGIN STATION	CONNECT TO STRUCTURE	OFFSET	SPV.0090.8001 PIPE UNDERDRAIN 6-INCH SPECIAL LF
1000	IH 94				
		263EW+50	TL109A	RT	195
		273EW+45	TL109A	RT	805
		261EW+95	TL295	LT	550
		261EW+95	TL111	LT	370
		273EW+47	TL111	LT	800
	W. KEARNEY STREET				
		107K+25	TL168	RT	273
	TOTAL				2,993

SURVEY PROJECT

CATEGORY	STAGE	LOCATION	SPV.0105.0001 SURVEY PROJECT 1060-33-78 LS
1000	ALL	PROJECT	1
		TOTAL	1

PAVEMENT CLEANUP

CATEGORY	STAGE	LOCATION	SPV.0105.0002 LS
1000	ALL	PROJECT	1
		TOTAL	1

RAMP NW SURCHARGE

CATEGORY	STAGE	LOCATION	STATION	SPV.0060.0007 SURFACE SETTLEMENT PLATE EXTENSION EACH
1000	1	RAMP NW FILL		
		SP-1	477NW+00	1
		SP-2	479NW+00	1
		SP-3	481NW+00	1
		SP-4	483NW+00	1
		SP-5	485NW+00	1
		SP-6	487NW+00	1
		SUBTOTAL		6
		TOTAL		6

RAMP NW SURCHARGE

CATEGORY	STAGE	ROADWAY	FROM STATION	OFFSET	611.8120.S COVER PLATE TEMPORARY EA
1000	1	RAMP NW			
			483NW+60	RT	2
		TOTAL			2

3

COLD PATCH

CATEGORY	STAGE	LOCATION	SPV.0195.0020 TON
1000	ALL	UNDISTRIBUTED	5
		TOTAL	5

PAVEMENT REPAIR

CATEGORY	STAGE	ROADWAY	STATION	TO	STATION	SPV.0180.0010 CONCRETE PAVEMENT REPAIR SPECIAL SY	SPV.0195.0010 ASPHALTIC PAVEMENT REPAIR SPECIAL TON
1000	1,2,3,4	UNDISTRIBUTED				100	250
		TOTALS				100	250

TEMPORARY UNDERPASS LEFT IN PLACE

CATEGORY	STAGE	LOCATION	SPV.0105.0010 LS
1000	3	RAMP NSA	1
		TOTAL	1

3

JOINT SEALING

CATEGORY	STAGE	LOCATION	SPV.0180.0020 SY
1000	4	S. 76TH STREET	1634
		TOTAL	1634

REMOVING CRASH BARRELS

CATEGORY	STAGE	LOCATION	STATION	OFFSET	204.9060.S.0001 EACH
1000	1	RAMP NSA	19NSA+23	LT	1
		TOTALS			1

TEMPORARY SHORING LEFT IN PLACE

CATEGORY	STAGE	LOCATION	STATION	TO	STATION	OFFSET	SPV.0165.0010 SF
1000	1	RAMP NW					
			479NW+87	-	483NW+44	RT	2200
1000	2	RAMP NSA					
			18NSA+77	-	19NSA+26	RT	365
			23NSA+50	-	24NSA+18	RT	420
			23NSA+50	-	24NSA+18	LT	740
		TOTAL					3725

CONCRETE BARRIER TRANSITION TYPE S32 TO S36

CATEGORY	STAGE	LOCATION	603.3513 EACH
1000	3	110K+33.45	1
		TOTAL	1

CONCRETE BARRIER TRANSITION TYPE S36 TO S42

CATEGORY	STAGE	LOCATION	603.3535 EACH
1000	3	110K+43.95	1
		TOTAL	1

RAMP NW SURCHARGE

CATEGORY	STAGE	LOCATION	STATION	OFFSET	SPV.0060.5100 EXTEND MMSD MANHOLE EACH
7040	1	RAMP NW			
			480NW+25	40.6' RT	1
			481NW+83	31.0' RT	1
			483NW+43	35.6' RT	1
		SUBTOTAL			3
		TOTAL			3

WATER MAIN ITEMS

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	210.0100* STRUCTURE BACKFILL CY	SPV.0060.5060 ADJUSTING WATER BOXES EACH	SPV.0090.5010 STEEL CASING W/ DUCTILE IRON 30-INCH CARRIER LF	SPV.0090.5020 STEEL CASING W/ DUCTILE IRON 12-INCH CARRIER LF	SPV.0090.5040 DUCTILE IRON WATER MAIN 12-INCH LF	SPV.0090.5050 DUCTILE IRON WATER MAIN 16-INCH LF	SPV.0090.5060 DUCTILE IRON WATER MAIN 30-INCH LF
7060	1													
		W. KEARNEY ST.	10TLWM+00	--		12TLWM+27	--	--	--	--	--	--	--	232
		IH 94	12TLWM+27	--		14TLWM+42	--	--	--	216	--	--	--	--
		W. O'CONNOR ST.	14TLWM+42	--		17TLWM+81	--	--	--	--	--	--	--	349
		W. O'CONNOR ST.	17TLWM+38	--		564CR+72	5' RT	--	--	--	--	--	9	--
		S 84TH ST.	38F+45	18' RT		38F+98	9'RT	--	--	--	--	64	--	--
		S 84TH ST.	38F+98	9' RT		39F+70	9' RT	50	--	--	72	--	--	--
		S 84TH ST.	39F+70	9' RT		40F+05	8' RT	--	--	--	--	41	--	--
		S 76TH ST.	19TL+21	36' RT		--	--	--	1	--	--	--	--	--
		S 76TH ST.	19TL+26	3' RT		--	--	--	1	--	--	--	--	--
		S 76TH ST.	19TL+71	58' RT		--	--	--	1	--	--	--	--	--
		S 76TH ST.	19TL+75	58' RT		--	--	--	1					
		S 76TH ST.	20TL+10	58' LT		--	--	--	--	--	--	--	--	--
							TOTAL	50	4	216	72	105	9	581

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

SANITARY SEWER ITEMS

CATEGORY	STAGE	ROADWAY	STATION	OFFSET	TO	STATION	OFFSET	SPV.0060.5010 ADJUSTING SANITARY SEWER MANHOLES EA	SPV.0060.5020 SANITARY SEWER DROP MANHOLE 48-INCH PRECAST CONCRETE W/ CASTING EA	SPV.0060.5030 SANITARY SEWER MANHOLE 48-INCH PRECAST CONCRETE W/ CASTING EA	SPV.0060.5035 GREYWOLF SANITARY SEWER MANHOLE 48-INCH PRECAST CONCRETE W/ CASTING EA	SPV.0060.5040 MMSD SANITARY SEWER MANHOLE 48-INCH PRECAST CONCRETE W/ CASTING EA	SPV.0060.5050 SANITARY MANHOLE VACUUM TEST EA	SPV.0060.5080 ABANDONING SANITARY MANHOLES EA	SPV.0090.5025 GREYWOLF SANITARY SEWER 8-INCH PVC LF	SPV.0090.5027 STEEL CASING CONCRETE CAP LF	SPV.0090.5030 SANITARY SEWER 8-INCH PVC LF	SPV.0090.5015 SANITARY SEWER PRESSURE AND DEFLECTION TESTING LF	SPV.0090.5034 ABANDONING SANITARY SEWER 12-INCH LF	SPV.0090.5033 ABANDONING SANITARY SEWER 8-INCH & 10-INCH LF	SPV.0090.5035 ABANDONING SANITARY SEWER 24-INCH LF	SPV.0090.5070 STEEL CASING W / PVC 10-INCH CARRIER LF	SPV.0090.5080 SANITARY SEWER AND STEEL CASING REMOVAL LF
7040	1																						
		S 84TH ST.	41F+57	13' RT		--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
		S 84TH ST.	37F+33	13' RT		43F+32	13' RT	--	--	--	--	--	--	--	--	--	--	--	--	--	598	--	--
		S 84TH ST.	43F+32	13' RT		--	--	--	--	--	--	1	1	--	--	--	--	--	--	--	--	--	--
							SUBTOTAL	0	0	0	0	1	1	1	0	0	0	0	0	0	598	0	0
7050	1																						
		S 84TH ST.	37F+02	2' RT		--	--	--	1	--	--	--	1	--	--	--	--	--	--	--	--	--	--
		S 84TH ST.	37F+25	15' LT		--	--	--	--	1	--	--	1	--	--	--	--	--	--	--	--	--	--
		S 84TH ST.	37F+02	2' RT		38F+26	17' LT	--	--	--	--	--	--	--	--	--	130	130	--	--	--	--	--
		S 84TH ST.	38F+26	17' LT		--	--	--	--	1	--	--	1	--	--	--	--	--	--	--	--	--	--
		S 84TH ST.	37F+02	2' RT		39F+58	12' RT	--	--	--	--	--	--	--	--	--	--	--	259	--	--	--	--
		S 76TH ST.	19TL+73	41' RT		--	--	1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
							SUBTOTAL	1	1	2	0	0	3	0	0	0	130	130	259	0	0	0	0
7140	1																						
		HONEY CREEK	228EW+27	174' LT		--	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--
		HONEY CREEK	229EW+81	181' LT		--	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--
		HONEY CREEK	232EW+00	178' LT		--	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--
		HONEY CREEK	233EW+86	180' LT		--	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--
		HONEY CREEK	235EW+37	264' LT		--	--	--	--	--	1	--	1	--	--	--	--	--	--	--	--	--	--
		HONEY CREEK	228EW+27	174' LT		233EW+86	180' LT	--	--	--	--	--	--	--	570	--	--	570	--	--	--	--	--
		HONEY CREEK	233EW+86	181' LT		235EW+37	264' LT	--	--	--	--	--	--	--	--	--	--	185	--	--	--	185	--
		HONEY CREEK	234EW+19	205' LT		235EW+00	245' LT	--	--	--	--	--	--	--	--	90	--	--	--	--	--	--	--
		HONEY CREEK	228EW+37	90' LT		--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
		HONEY CREEK	231EW+22	111' LT		--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
		HONEY CREEK	234EW+12	152' LT		--	--	--	--	--	--	--	--	1	--	--	--	--	--	--	--	--	--
		HONEY CREEK	228EW+27	174' LT		235EW+37	264' LT	--	--	--	--	--	--	--	--	--	--	--	--	842	--	--	--
		HONEY CREEK	235EW+31	259' LT		235EW+43	269' LT	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	15
							SUBTOTAL	0	0	0	5	0	5	3	570	90	0	755	0	842	0	185	15
							TOTAL	1	1	2	5	1	9	4	570	90	130	885	259	842	598	185	15

SLOPE PAVING CRUSHED AGGREGATE

CATEGORY	STAGE	LOCATION	604.0500 SY
1000	4	W. KEARNEY STREET	476
		W. OCONNOR STREET	771
		TOTAL	1247

GEOGRID REINFORCEMENT

CATEGORY	STAGE	LOCATION	SPV.0180.0030 SY
1000		UNDISTRIBUTED	692
		TOTAL	692

REMOVING GATE, POSTS AND FOOTINGS

CATEGORY	STAGE	LOCATION	204.9060.S.0003 EACH
1000	3	118K+74	1
		TOTAL	1

TEMPORARY CROSSWALK/SIDEWALK

CATEGORY	STAGE	LOCATION	SPV.0045.0010 DAYS
1000	1	S. 84TH STREET	224
		TOTAL	224

REMOVING BIKE RACK

CATEGORY	STAGE	LOCATION	204.9060.S.0002 EACH
1000	3	121K+65, 35' RT	1
		TOTAL	1

REMOVING PILLAR AND FOOTING

CATEGORY	STAGE	LOCATION	SPV.0060.0021 EACH
1000	3	114K+60, 7' RT	1
		114K+64, 24' LT	1
			2

TEMPORARY BUS PAD

CATEGORY	STAGE	LOCATION	SPV.0060.0040 EACH
1000	1	S. 84TH STREET	1
		TOTAL	1

LOADING, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL

CATEGORY	STAGE	LOCATION	SPV.0195.0040 TON
1000	1 - 3	B-40-892 STRUCTURE EXCAVATION	2,727
		W. KEARNEY STREET STORM SEWER EXCAVATION	2,380
		TOTAL	5,107

LOADING, HAULING, AND REUSE OF SOLID WASTE SOIL

CATEGORY	STAGE	LOCATION	SPV.0035.0010 CY
1000	1 - 3	B-40-892 STRUCTURE EXCAVATION	63,105
		TOTAL	63,105

3

FTMS PULL BOXES & COMMUNICATION VAULTS

CATEGORY	ROADWAY	ITEM ID	LOCATION STATION	OFFSET	X	Y	653.0135* PULL BOXES STEEL 24 X 36 - INCH EACH	673.0105 COMMUNICATION VAULT TYPE 1 EACH	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM EACH
1300	IH 94								
		EXPB10FDA-1	9FDA+30	19.7'RT	--	--	--	--	1
		EXPB12FDA	12FDA+49	19.5'RT	--	--	--	--	2
		PB12FDA	12FDA+49	19.6'RT	--	--	1	--	--
		EXCV38F	38FBA+20	60.0'RT	--	--	--	--	1
		PB10FBA-1	10FBA+53	41.9'RT	--	--	1	--	--
		PB10FBA-2	10FBA+26	18.6'LT	--	--	1	--	--
		PB10FBA	11FBA+00	41.8'RT	--	--	1	--	--
		EXPB11FBA	11FBA+00	72.4'LT	--	--	--	--	1
		PB13FBA	13FBA+37	18.9'LT	--	--	1	--	--
		EXPB16FBA	16FBA+15	16.3'RT	--	--	--	--	1
		EXMH250EW	250EW+11	106.7'LT	--	--	--	--	1
		CV250EW	252EW+05	119.3'LT	--	--	--	1	--
		CV258EW	257EW+84	110.7'LT	--	--	--	1	--
		CV23TL-1	23TL+00	133.7'LT	--	--	--	1	--
		CV23TL-2	23TL+59	92.9'RT	--	--	--	1	--
		CV21TL	20TL+93	71.1'RT	--	--	--	1	--
		PB20TL	20TL+32	66.9'LT	--	--	1	--	--
		PB21TL	20TL+38	94.5'LT	--	--	1	--	--
		CV277EW	276EW+97	112.3'RT	--	--	--	1	--
		EXMH284EW	284EW+70	72.9'RT	--	--	--	--	1
		CV4001	--	--	573290.33	298516.34	--	1	--
		CV4002	--	--	573402.36	298525.14	--	1	--
		EXCMH4001	--	--	298525.14	298525.14	--	--	1
TOTALS							7	8	9

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

3

FTMS CONDUIT AND TRACER WIRE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUITS SPECIAL 3-INCH LF	655.0505* ELECTRICAL WIRE TRAFFIC SIGNAL SIGNAL 14 AWG LF	671.0132 CONDUIT HDPE 3-DUCT 2-INCH LF	671.0232 CONDUIT HDPE DIRECTIONAL BORE 3-DUCT 2-INCH LF
1300	IH 94								
		EXPB10FDA-1 - EXPB12FDA	325	--	975	--	--	--	--
		EXPB12FDA - PB12FDA	40	--	--	80	--	--	--
		PB12FDA - FY12FDA	10	20	--	--	--	--	--
		EXCV38F - PB10FBA-1	65	130	--	--	65	--	--
		PB10FBA-1 - FY10FBA-1	55	110	--	--	--	--	--
		PB10FBA-1 - PB10FBA	35	--	140	--	--	--	--
		PB10FBA - CB-RM-40-0004	20	--	120	--	--	--	--
		CB-RM-40-0004 - MB10FBA	20	20	--	--	--	--	--
		PB10FBA-2 - EXPB11FBA	90	180	--	--	--	--	--
		PB10FBA-1 - PB10FBA-2	70	--	210	--	--	--	--
		PB10FBA-2 - FY10FBA-2	10	20	--	--	--	--	--
		PB10FBA-2 - PB13FBA	300	--	900	--	--	--	--
		PB13FBA - EXPB16FBA	295	--	885	--	--	--	--
		EXMH250EW - CV250EW	195	--	--	--	195	--	195
		CV250EW - CV258EW	570	--	--	--	570	570	--
		CV258EW - CV23TL-1	600	--	--	--	600	600	--
		CV23TL-1 - CV23TL-2	240	--	--	--	240	240	--
		CV23TL-2 - CV21TL	90	180	--	--	90	--	--
		CV21TL - PB20TL	160	320	--	--	160	--	--
		PB20TL - PB21TL	30	--	90	--	--	--	--
		PB21TL - MD20TL	20	40	--	--	--	--	--
		PB20TL - CCTV-40-0009	40	80	--	--	--	--	--
		PB20TL - CB-CCTV-40-0009	15	--	90	--	--	--	--
		PB20TL - LDMS-40-0051	45	90	--	--	--	--	--
		CB-CCTV-40-0009 - MB20TL	20	20	--	--	--	--	--
		CV21TL - CV277EW	1185	--	--	--	1,185	1,185	--
		CV277EW - EXMH284EW	760	--	--	--	760	--	760
		CV4001 - CV4002	125	--	--	375	125	--	--
		CV4002 - EXCMH4001	105	--	--	315	105	--	--
		EXCMH4001 - EXCMH4101	520	--	--	--	520	--	--
		EXCMH4101 - EXCMH4201	480	--	--	--	480	--	--
		EXCMH4201 - EXCV4201	35	--	--	--	35	--	--
		EXCV4201 - EXCMH4301	635	--	--	--	635	--	--
		EXCMH4301 - EXCMH4401	630	--	--	--	630	--	--
		EXCMH4401 - EXCMH4501	610	--	--	--	610	--	--
		EXCMH4501 - EXCMH4601	600	--	--	--	600	--	--
		EXCMH4601 - EXCV4601	25	--	--	--	25	--	--
		EXCV4601 - EXCV4701	615	--	--	--	615	--	--
		TOTALS		1,210	3,410	770	8,245	2,595	955

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FTMS CABLE AND WIRE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0505* ELECTRICAL WIRE TRAFFIC SIGNAL 14 AWG LF	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG LF	655.0700 LOOP DETECTOR LEAD IN CABLE LF	674.0200 CABLE MICROWAVE DETECTOR LF
1300	IH 94								
		EXPB10FDA-1 - EXMD01	65	--	--	65	--	--	160
		EXPB10FDA-1 - EXSB10FDA-1	5	--	20	5	--	--	--
		EXPB10FDA-1 - EXPB10FDA-2	40	40	50	40	--	--	--
		EXPB10FDA-2 - EXSB10FDA-2	5	--	40	5	--	--	--
		EXPB10FDA-2 - EXPB10FDA	75	85	--	75	--	--	--
		EXPB10FDA - EXSB10FDA	5	15	--	5	--	--	--
		EXPB10FDA-1 - EXPB12FDA	325	335	335	325	--	1,340	670
		EXPB12FDA - EXFY12FDA	5	15	--	5	--	--	--
		EXPB12FDA - PB12FDA	40	50	--	40	--	--	--
		PB12FDA - FY12FDA	10	20	--	10	--	--	--
		EXPB12FDA - EXPB13FDA	60	140	70	60	--	350	140
		EXPB13FDA - EXCB-RM-40-0010	15	50	25	15	--	125	50
		PB10FBA-1 - FY10FBA-1	55	70	--	55	--	--	--
		PB10FBA-1 - PB10FBA	35	45	45	35	--	270	--
		PB10FBA - CB-RM-40-0004	20	30	30	20	--	180	--
		CB-RM-40-0004 - MB10FBA	20	--	--	--	90	--	--
		PB10FBA - CCTV-40-0141	45	--	--	45	--	--	--
		PB10FBA-1 - PB10FBA-2	70	80	80	70	--	400	--
		PB10FBA-2 - FY10FBA-2	10	25	--	10	--	--	--
		PB10FBA-2 - PB13FBA	300	--	310	300	--	1,240	--
		PB13FBA - EXPB16FBA	295	--	305	295	--	1,220	--
		EXPB16FBA - EXSB01	35	--	50	35	--	--	--
		EXPB16FBA - EXSB02	5	--	20	5	--	--	--
		PB20TL - PB21TL	30	--	--	30	--	--	120
		PB21TL - MD20TL	20	--	--	20	--	--	105
		PB20TL - CCTV-40-0009	40	--	--	40	--	--	--
		PB20TL - CB-CCTV-40-0009	15	--	--	15	--	--	75
		PB20TL - LDMS-40-0051	45	--	--	45	--	--	--
		CB-CCTV-40-0009 - MB20TL	20	--	--	--	90	--	--
		TOTALS		1,000	1,380	1,670	180	5,125	1,320

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

FTMS CABLE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT LF	678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT LF
1300	IH 94				
		EXCV38F - PB10FBA-1	65	90	--
		PB10FBA-1 - PB10FBA	35	60	--
		PB10FBA - CB-RM-40-0004	20	45	--
		EXMH250EW - CV250EW	195	--	245
		CV250EW - CV258EW	570	--	595
		CV258EW - CV23TL-1	600	--	625
		CV23TL-1 - CV23TL-2	240	--	265
		CV23TL-2 - CV21TL	300	--	325
		CV21TL - PB20TL	160	185	--
		CV21TL - CV277EW	1185	--	1,210
		CV277EW - EXMH284EW	760	--	810
		CV4001 - CV4002	125	--	175
		CV4002 - EXCMH4001	105	--	130
		EXCMH4001 - EXCMH4101	520	--	545
		EXCMH4101 - EXCMH4201	480	--	505
		EXCMH4201 - EXCV4201	35	--	60
		EXCV4201 - EXCMH4301	635	--	1,320
		EXCMH4301 - EXCMH4401	630	--	655
		EXCMH4401 - EXCMH4501	610	--	635
		EXCMH4501 - EXCMH4601	600	--	625
		EXCMH4601 - EXCV4601	25	--	50
		EXCV4601 - EXCV4701	615	--	640
				380	9,415

FTMS ELECTRICAL SERVICE

CATEGORY	ROADWAY	ITEM ID	STATION	OFFSET	656.0200.0001 ELECTRICAL SERVICE METER BREAKER PEDESTAL (CB-RM-40-0004) LS	656.0200.0002 ELECTRICAL SERVICE METER BREAKER PEDESTAL (CB-CCTV-40-0009) LS	656.0500.0001 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CB-RM-40-0004) LS	656.0500.0002 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (CB-CCTV-40-0009) LS
1300	IH 94							
		MB10FBA	11FBA+17	39.6' LT	1	--	--	--
		MB20TL	20TL+18	84.0' LT	--	1	--	--
		CB-RM-40-0004	11FBA+00	41.7' LT	--	--	1	--
		CB-CCTV-40-0009	20TL+21	66.2' LT	--	--	--	1
							--	
		TOTALS			1	1	1	1

FTMS COMMUNICATIONS (CABINETS)

CATEGORY	ROADWAY	ITEM ID	LOCATION STATION	LOCATION OFFSET	LOCATION X	LOCATION Y	675.0100 INSTALL CONTROLLER RAMP METER PROCESSOR ASSEMBLY EACH	675.0400.S INSTALL ETHERNET SWITCH EACH	677.0300.S INSTALL VIDEO ENCODER EACH	678.0300 FIBER OPTIC SPLICE EACH	678.0400 FIBER OPTIC TERMINATION EACH
1300	IH 94										
		EXMH250EW	250EW+11	106.7' LT	--	--	--	--	--	72	--
		CV21TL	21TL+07.0	55.1' RT	--	--	--	--	--	15	--
		EXMH284EW	284EW+53	72.9' RT	--	--	--	--	--	72	--
		CB-RM-40-0004	11FBA+00	41.7' LT	--	--	1	1	1	--	6
		CB-CCTV-40-0009	20TL+21	66.2' LT	--	--	--	1	1	--	6
		EXCV4701	--	--	577515.34	298654.33	--	--	--	--	72
		TOTALS					1	2	2	159	84

FTMS BASES, POLES AND EQUIPMENT

CATEGORY	ROADWAY	ITEM ID	LOCATION	OFFSET	654.0105 CONCRETE BASES TYPE 5 EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0321 POLE TYPE 5 STEEL EACH	659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	672.0100 BASE ITS CONTROLLER CABINET EACH	672.0250 BASE CAMERA POLE 50-FT EACH	673.0200.S INSTALL ITS FIELD CABINET EACH	675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY EACH	677.0100 INSTALL CAMERA POLE EACH	677.0200 INSTALL CAMERA ASSEMBLY EACH	SPV.0060.2004 GROUND ROD EACH	SPV.0060.2010 SALVAGE HYBRID DYNAMIC MESSAGE SIGN ASSEMBLY EACH	SPV.0060.2011 INSTALL SALVAGED HYBRID DYNAMIC MESSAGE SIGN ASSEMBLY EACH
1300	IH 94																
		CB-RM-40-0004	11FBA+00	41.8' LT	--	--	--	1	1	--	1	--	--	--	1	--	--
		CCTV-40-0009	20TL+72	58.0' LT	--	--	--	1	--	1	--	--	1	1	1	--	--
		CB-CCTV-40-0009	20TL+21	66.2' LT	--	--	--	1	1	--	1	--	--	--	1	--	--
		MD20TL	20TL+52	104.9' LT	1	1	1	--	--	--	--	2	--	--	1	--	--
		EXDMS-40-0051	263EW+71	103.9' RT	--	--	--	--	--	--	--	--	--	--	--	1	--
		DMS-40-0051	263EW+39	107.1'RT	--	--	--	--	--	--	--	--	--	--	--	--	1
		TOTALS			1	1	1	3	2	1	2	2	1	1	4	1	1

FTMS FLASHER ASSEMBLY

CATEGORY	ROADWAY	ITEM ID	LOCATION	OFFSET	654.0101 CONCRETE BASES TYPE 1 EACH	676.0300 SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1 EACH
1300	IH 94					
		FY12FDA	12FDA+39	18.9' LT	1	1
		FY10FBA-1	10FBA+34	88.5' RT	1	1
		FY10FBA-2	10FBA+16.0	17.6' LT	1	1
		TOTALS			3	3

TEMPORARY ITEMS

CATEGORY	ROADWAY	ITEM ID	SPV.0060.2002 INSTALLING PORTABLE VIDEO SURVEILLANCE SYSTEM EACH	SPV.0060.2003 RELOCATING PORTABLE VIDEO SURVEILLANCE SYSTEM EACH	SPV.0060.2001 INSTALLING TEMPORARY VEHICLE DETECTOR ASSEMBLY EACH	SPV.0060.2005 REFOCUSING TEMPORARY VEHICLE DETECTOR ASSEMBLY EACH
1300	IH 94					
		TCCTV-40-0141	1	--	--	--
		TCCTV-40-0009	1	1	--	--
		TMDO1	--	--	1	2
		TMDO2	--	--	1	2
		TMDO3	--	--	1	2
		TOTALS	2	1	3	6

ITS REMOVALS

CATEGORY	ROADWAY	ITEM ID			674.0300 REMOVE CABLE LF
1300	IH 94				
		EXMD01	-	EXPBFDA-1	65
		EXPB10FDA-1	-	EXSB10FDA-1	3
		EXPB10FDA-1	-	EXPB10FDA-2	39
		EXPB10FDA-2	-	EXSB10FDA-2	4
		EXPB10FDA-2	-	EXSB10FDA	76
		EXPB10FDA-1	-	EXPB11FDA-2	213
		EXPB11FDA-1	-	EXFY11FDA	5
		EXPB11FDA-1	-	EXPB11FDA-2	40
		EXPB11FDA-2	-	EXPB12FDA	105
		EXPB12FDA	-	EXFY12FDA	4
		EXPB12FDA	-	EXPB13FDA	58
		EXPB13FDA	-	EXCB-RM-40-0010	11
		EXMH10FBA	-	EXPB12FBA	152
		EXFY12FBA	-	EXPB12FBA	32
		EXPB12FBA	-	EXPB14FBA	283
		EXCCTV239EW	-	EXPB239EW	14
		EXPB239EW	-	EXPB14FBA	352
		EXPB241EW	-	EXPB14FBA	122
		EXPB14FBA	-	EXPB105K	68
		EXPB105K	-	EXPB105K-1	20
		EXPB105K1	-	EXCB-RM-40-0004	11
		EXPB105K-1	-	EXPB106K	150
		EXPB106K	-	EXPB106FBA	32
		EXMH250EW	-	EXMH264EW	1399
		EXMH264EW	-	EXMH266EW-1	151
		EXMH266EW-1	-	EXPB266EW-1	15
		EXMH266EW-1	-	EXMH266EW-2	137
		EXMH266EW-2	-	EXPB266EW-2	14
		EXMB264EW	-	EXPB264EW	49
		EXPB264EW	-	EXMH264EW	12
		EXMH264EW	-	EXMH266EW-2	180
		EXMB128K	-	EXCB-CCTV-40-0009	2
		EXCB-CCTV-40-0009	-	EXPB128K	6
		EXPB128K	-	EXCCTV-40-0009	15
		EXPB128K	-	EXMH266EW-2	98
		EXMH266EW-2	-	EXMH279EW	1317
		EXMH279EW	-	EXMH284EW	569
				TOTAL	5,823

3

FTMS LUMP SUM ITEMS

CATEGORY	ROADWAY	670.0100.0001 FIELD SYSTEM INTEGRATOR LS	670.0200.0001 ITS DOCUMENTATION LS	678.0500.0001 COMMUNICATION SYSTEM TESTING LS
1300				
	IH 94	1	1	1
	TOTALS	1	1	1

ITS REMOVALS

CATEGORY	ROADWAY	ITEM	LOCATION STATION	LOCATION OFFSET	DESCRIPTION	204.0195* REMOVING CONCRETE BASES EACH	204.0210 REMOVING MANHOLES EACH	653.0905 REMOVING PULL BOXES EACH	676.9001.S REMOVING ADVANCE FLASHER ASSEMBLIES TYPE 1 EACH	677.9051.S REMOVING 50-FT CAMERA POLE EACH	677.9200.S REMOVING CCTV CAMERA EACH	SPV.0060.2006 REMOVING CONTROLLER CABINET EACH	SPV.0060.2007 REMOVING CONTROLLER CABINET BASE EACH	SPV.0060.2008 REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL EACH	SPV.0060.2009 REMOVING CONTROLLER RAMP METER PROCESSOR ASSEMBLY EACH
1300	IH 94														
		EXPB11FDA-1	11FDA+46	19 'LT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXPB11FDA-2	11FDA+44	20 'RT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXFY11FDA	11FDA+51	19 'LT	ADVANCE FLASHER	1	--	--	1	--	--	--	--	--	--
		EXMH10FBA	10FBA+18	22 'LT	MANHOLE	--	1	--	--	--	--	--	--	--	--
		EXFY12FBA	11FBA+36	18 'LT	ADVANCE FLASHER	--	--	--	1	--	--	--	--	--	--
		EXPB12FBA	11FBA+71	20 'LT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXPB14FBA	14FBA+56	25 'LT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXPB105K	104K+92	18 'LT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXMB105K	105K+02	18 'RT	METER BREAKER	--	--	--	--	--	--	--	--	1	--
		EXCB-RM-40-0004	105K+02	20 'RT	CONTROL CABINET	--	--	--	--	--	--	1	1	--	1
		EXPB105K-1	105K+12	20 'LT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXPB106K	106K+40	12 'LT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXPB239EW	239EW+24	146 'RT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXPB241EW	241EW+40	112 'RT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXMH250EW	250EW+11	107 'LT	MANHOLE	--	1	--	--	--	--	--	--	--	--
		EXMH264EW	264EW+26	39 'LT	MANHOLE	--	1	--	--	--	--	--	--	--	--
		EXMH266EW-1	265EW+77	42 'LT	MANHOLE	--	1	--	--	--	--	--	--	--	--
		EXMH266EW-2	265EW+74	94 'RT	MANHOLE	--	1	--	--	--	--	--	--	--	--
		EXPB266EW-1	265EW+91	38 'LT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXPB266EW-2	265EW+88	94 'RT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXPB128K	127K+79	35 'LT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXMB128K	127K+82	28 'LT	METER BREAKER	--	--	--	--	--	--	--	--	1	--
		EXCCTV-40-0009	127K+83	30 'LT	CCTV	1	--	--	--	1	1	--	--	--	--
		EXCB-CCTV-40-0009	127K+62	33 'LT	CONTROL CABINET	--	--	--	--	--	--	1	1	--	--
		EXMH279EW	278EW+84	70 'RT	MANHOLE	--	1	--	--	--	--	--	--	--	--
		EXMB264EW	264EW+81	148 'RT	MANHOLE	--	1	--	--	--	--	--	--	--	--
		EXPB264EW	264EW+84	100 'RT	PULL BOX	--	--	1	--	--	--	--	--	--	--
		EXMH264EW-1	263EW+95	98 'RT	MANHOLE	--	1	--	--	--	--	--	--	--	--
		TOTALS				2	8	13	2	1	1	2	2	2	1

*ADDITIONAL QUANTITIES FOUND ELSEWHERE

CITY MANHOLES

CATEGORY	ROADWAY	ITEM ID	LOCATION STATION	OFFSET	X	Y	204.0250 ABANDONING MANHOLES EACH	SPV.0060.2012 INSTALLING CONDUIT INTO EXISTING MANHOLE EACH	SPV.0060.2013 4' DIAMETER MANHOLE TYPE TES EACH	SPV.0060.2015 ADJUSTING TES MANHOLE COVER EACH	SPV.0105.2001 SAWING CONCRETE-ENCASED DUCT PACKAGE LS
7070											
	S. 84TH ST.	EXCMH3001	38F+93	21' LT	--	--	--	1	--	--	--
	S. 84TH ST.	CMH3002	39F+00	27' LT	--	--	--	--	1	--	--
	S. 84TH ST.	--	40F+06	21' LT	--	--	--	--	--	--	1
	S. 83RD ST.	EXCMH3101	--	--	577479.23	295635.42	--	1	--	--	--
	S. 83RD ST.	CMH3102	--	--	577469.14	295879.69	--	--	1	--	--
	W. O'CONNOR ST.	EXCMH3401	555CR+16	5' LT	--	--	--	1	--	--	--
	W. KEARNEY ST.	CMH3402	117K+80	24' LT	--	--	--	--	1	--	--
	W. KEARNEY ST.	CMH3501	122K+51	7' LT	--	--	--	--	1	--	--
	W. KEARNEY ST.	EXCMH3601	126K+59	4' LT	--	--	1	1	--	1	--
	W. O'CONNOR ST.	EXCMH3602	564CR+60	6' LT	--	--	1	--	--	--	--
	TOTALS						2	4	4	1	1

CITY CONDUIT, CABLE

CATEGORY	ROADWAY	ITEM ID	LINEAR DISTANCE	671.0244 CONDUIT HDPE DIRECTIONAL BORE 4-DUCT 4-IN LF	674.0112 CABLE ITS COMMUNICATION 12 PAIR LF	674.0125 CABLE ITS COMMUNICATION 25 PAIR LF	678.0072 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 72-CT LF	SPV.0090.2001 4-DUCT CONDUIT CEMENT ENCASED 4-INCH CONDUIT DB-60 LF	SPV.0090.2002 2-DUCT CONDUIT CEMENT ENCASED 4-INCH CONDUIT DB-60 LF	SPV.0090.2003 CONDUIT SUBDUCT 1-INCH LF
7070										
	S. 84TH ST.	EXCMH3001 - 40F+06, 21'LT	113	--	--	--	--	113	--	--
	S. 84TH ST.	CMH3002 - 40F+06, 21'LT	107	--	--	--	--	107	--	--
	S. 84TH ST.	EXCMH3001 - EXCMH3003	251	--	266	--	--	--	--	--
	S. 83RD ST.	EXCMH3101 - CMH3102	251	--	--	266	276	--	251	251
	S. 83RD ST.	CMH3102 - FIRE HOUSE	150	--	--	250	250	--	150	150
	W. O'CONNOR ST.	EXCMH3101 - EXCMH3201	360	--	--	--	460	--	--	360
	W. O'CONNOR ST.	EXCMH3201 - EXCMH3202	365	--	--	--	390	--	--	365
	W. O'CONNOR ST.	EXCMH3202 - EXCMH3301	295	--	--	--	320	--	--	295
	W. O'CONNOR ST.	EXCMH3301 - EXCMH3401	425	--	--	--	450	--	--	425
	IH 94	EXCMH3401 - CHM3402	270	270	--	285	295	--	--	270
	W. KEARNEY ST.	CMH3402 - CMH3501	470	--	--	485	495	470	--	470
	W. KEARNEY ST.	CMH3501 - EXCMH3601	410	--	--	425	435	410	--	410
	S. 76TH ST.	EXCMH3601 - EXCMH3701	225	--	--	--	250	--	--	225
	S. 76TH ST.	EXCMH3701 - EXCMH3702	290	--	--	--	390	--	--	290
	W. BLUEMOUND RD.	EXCMH4201 - EXCMH4301	633	--	648	--	--	--	--	--
	W. BLUEMOUND RD.	EXCMH4301 - EXCMH4401	628	--	643	--	--	--	--	--
	W. BLUEMOUND RD.	EXCMH4401 - EXCMH4402	38	--	53	--	--	--	--	--
	W. BLUEMOUND RD.	EXCMH4401 - EXCMH4501	608	--	623	--	--	--	--	--
	W. BLUEMOUND RD.	EXCMH4501 - EXCMH4601	600	--	615	--	--	--	--	--
	W. BLUEMOUND RD.	EXCMH4601 - EXCMH4701	585	--	600	--	--	--	--	--
	W. BLUEMOUND RD.	EXCMH4701 - EXISTING POLICE CALL BOX	50	--	65	--	--	--	--	--
	W. BLUEMOUND RD.	EXCMH4701 - EXCMH4702	327	--	342	--	--	--	--	--
		TOTALS		270	3,855	1,711	4,011	1,100	401	3,511

TYPE I&II PERMANENT SIGNING -

CATEGORY CODE 1000

1060-33-78 76TH STREET

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	637.0402 SIGNS REFLC FOLDING TYPE II [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT [EA]	634.0816 POSTS TUBULAR STEEL 2 X 2 INCH X 16 FT [EA]	MOUNT ON SAME POST AS SIGN#	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.0101 SIGNS TYPE I [SF]	638.2601 REM SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR			
																										POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
1	S1-1(2S)		36 X 36	6.750		1	1	1						PENTAGON SCHOOL SIGN															
2	WF16-9P (2M)		30 X 18	3.750		1							1																
3	S1-1(2S)		36 X 36	6.750		1								MOUNT ON LIGHT POLE															
4	WF16-9P (2M)		30 X 18	3.750		1								MOUNT UNDER SIGN 3															
5	R3-8		36 X 30	7.500		1								MOUNT ON LIGHT POLE															
6	R3-8		36 X 30	7.500		1							1																
7	E1-1A	68TH -70TH STREET 3/4 MILE EXIT 307A							4					MOVE EXIST. SIGN - NEW STEEL POSTS. TEMP WOOD POSTS UNTIL SIGN IS PLACED ON STEEL POSTS.	24 X 7			1	2	B	1.6	98	1000				SAME	14.4
8	R7-1D					1								FROM LIGHT POLE															
9	R7-1D					1								FROM LIGHT POLE															
10	W3-8(5)		48 X 48	16.000		1								MOUNTED ON SIGNAL POLE															
11	R10-6 (2S)		24 X 36	6.000		1								MOUNTED ON SIGNAL POLE															
12	R10-65R (2S)		24 X 30	5.000		1								MOUNTED ON SIGNAL POLE															
13	R10-65L (2S)		24 X 30	5.000		1								MOUNTED ON SIGNAL POLE															
14	R10-6 MOD	ARROW OPPOSITE	24 X 36	6.000		1								MOUNTED ON SIGNAL POLE															
15	W4-2L (2S)		36 X 36	9.000		1	1	1																					
16	J3-2 (2S)		48 X 57	19.000		1	1	1																					
	MB3-2		24 X 12																										
	M1-1	IH 94	24 X 24																										
	MB6-1		21 X 21																										
	MB3-4		24 X 12																										
	M1-1	IH 94	24 X 24																										
	MB4-20L		24 X 21																										
17	J3-1(2S)		24 X 57	9.500		1	1	1																					
	MB3-2		24 X 12																										
	M1-1	IH 94	24 X 24																										
	MB6-1		21 X 21																										
18	R1-2(2S)		36 X 31	3.875		1	1	1																					
19	W12-1D (2S)		24 X 24	4.000							1			2 FOOT MOUNTING HEIGHT															
20	R10-3E (MOD)	PUSH BUTTON TO ACTIVATE SIGNAL	9 X 15	0.938		1								MOUNT ON SIGNAL POLE															
21	R10-3E (MOD)	PUSH BUTTON TO ACTIVATE SIGNAL	9 X 15	0.938		1								MOUNT ON SIGNAL POLE															
22	W3-8 (5)		48 X 48	16.000		1								MOUNT ON SIGNAL POLE															
23		NO ENGINE BRAKING								1		1																	
24	R3-1(2S)		24 X 24	4.000								1																	
25	R5-1(3)		36 X 36	9.000		1	1	1						3 FT MOUNT HEIGHT															
26	R5-1(3)		36 X 36	9.000									25	7 FT HEIGHT MOUNT ABOVE # 25															
27	R5-1(3)		36 X 36	9.000		1								MOUNT ON SIGNAL POLE															
28	R5-1(3)		36 X 36	9.000									27	MOUNT 3 FT HEIGHT BELOW SIGN 27															
29	D9-2(2S)		24 X 24	4.000		1								MOUNT ON LIGHT POLE															
29A	MB6-1(2S)		21 X 21	3.060		1							29	MOUNT ON LIGHT POLE UNDER # 29															
30	S1-1(2S)		36 X 36	6.750		1								MOUNT ON SIGNAL POLE															
31	WF16-7L (2M)		30 X 18	3.750		1							30																
32	J3-2 (2S)		48 X 57	19.000		1								MOUNT ON LIGHT POLE															
	M3-3		24 X 12																										
	M1-6	STH 181	24 X 24																										
	M6-1		21 X 21																										
	M3-1		24 X 12																										
	M1-6	STH 181	24 X 24																										
	M6-1		21 X 21																										
33		CRASH INVESTIGATION SITE	36 X 36	9.000		1	1	1																					
34	R6-2L (2S)		24 X 30	5.000		1								SIGNAL POLE															
35	R4-7 (2S)		24 X 30	5.000		1								SIGNAL POLE															
36	R3-18(2S)		24 X 24	4.000		1								SIGNAL POLE															
37	S1-1(2S)		36 X 36	6.750		1							25																
38	WF16-7R (2M)		30 X 18	3.750		1							37																
39	J3-1		X	--						1				MOUNT ON SIGNAL POLE															
40	R3-18(2S)		24 X 24	4.000		1								MOUNT ON SIGNAL POLE															
41	W11-8(2S)		30 X 30	6.250		1								MOUNT ON LIGHT POLE															
42		BUS STOP MOVED TO 76TH STREET PARK AND RIDE LOT					1	1		1																			

TYPE I&II PERMANENT SIGNING -

CATEGORY CODE 1000

1060-33-78 76TH STREET

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	637.0402 SIGNS REFLC FOLDING TYPE II [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT [EA]	634.0816 POSTS TUBULAR STEEL 2 X 2 INCH X 16 FT [EA]	MOUNT ON SAME POST AS SIGN#	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.0101 SIGNS TYPE I [SF]	638.2601 REM SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR			
																										POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
43	R7-1D (2S)		18 X 24	3.000		1								MOUNT ON LIGHT POLE															
44	R2-1	SPEED LIMIT 30				1	1																						
45	R7-1D (2S)		18 X 24	3.000		1	1					1																	
46	D4-2A		30 X 36	7.500		1								MOUNT ON LIGHT POLE															
47	R7-1D (2S)					1								LIGHT POLE															
48	R7-1D (2S)					1								LIGHT POLE															
49	R2-1 (2S)		24 X 30	5.000								1																	
50	R7-1D (2S)		18 X 24	3.000								1																	
51	R7-1D (2S)		18 X 24	3.000								1																	
52	R7-1D (2S)		18 X 24	3.000								1																	
53	R7-1D (2S)		18 X 24	3.000								1																	
54	R7-1D (2S)		18 X 24	3.000								1																	
55	R7-1D (2S)		18 X 24	3.000								1																	
56	R5-1 (2S)		30 X 30	5.000								1																	
57	R7-1D (2S)		18 X 24	3.000									56																
58	R7-1D (2S)					1	1																						
59	R5-1					1																							
60	R7-1D (2S)					1								LIGHT POLE															
61	R7-1D (2S)					1								LIGHT POLE															
62	R7-1D (2S)					1								LIGHT POLE															
63	R7-1D (2S)					1								LIGHT POLE															
64	W4-2R (2S)		36 X 36	9.000		1								LIGHT POLE															
65	R7-1D (2S)					1								LIGHT POLE															
66	R7-1D (2S)					1								LIGHT POLE															
67	J3-1 (2S)		24 X 57	9.500		1	1	1																					
	MB3-2		24 X 12																										
	M1-1	IH 94	24 X 24																										
	MB6-2		21 X 21																										
68	R3-51R		48 X 78	26.000		1	2		2																				
69	R3-51R		48 X 78	26.000		1	2		2																				
70	R10-65R(2S)		24 X 30	5.000		1								SIGNAL POLE															
71	R10-6 (2S)		24 X 36	6.000		1								SIGNAL POLE															
72	R5-57 (4)		36 X 36	9.000		1	1	1																					
73	R7-1D (2S)		18 X 24	3.000		1	1					1																	
74	R6-2R (2S)		24 X 30	5.000								1																	
75	R3-2 (2S)		24 X 24	4.000									74																
76	R7-1D (2S)					1								LIGHT POLE															
77	R7-1D (2S)					1								LIGHT POLE															
78	R7-1D (2S)		18 X 24	3.000								1																	
79	R7-1D (2S)					1								LIGHT POLE															
80	R7-1D (2S)		18 X 24	3.000								1																	
81		STATE FAIR PARK AND RIDE												SAME LOCATION				1	2	B	1.6	98	1000						
82	D4-2R (2S)		30 X 36	7.500		1								UP HIGH ON LIGHT POLE															
83	R3-2 (2S)		24 X 24	4.000		1	1					1																	
84	R6-2R (2S)		24 X 30	5.000		1								LIGHT POLE															
85	R5-1A (2S)		36 X 24	6.000		1	1					1																	
86	R6-2R (2S)		24 X 30	5.000		1	1					1																	
87	R7-1D (2S)		18 X 24	3.000		1								LIGHT POLE															
88	R5-1 (2S)		30 X 30	6.250		1	1					1																	
89	R5-1 (2S)		30 X 30	6.250		1								LIGHT POLE															
90		CRASH INVESTIGATION SITE	36 X 36	9.000		1	2					1																	
91	R6-2R (2S)		24 X 30	5.000										LIGHT POLE															
92		STATE FAIR WITH ARROW					1			1		1																	
93		WISCONSIN LUTHERAN COLLEGE EXIT 306												MOVE TYPE I SIGN . NEW STEEL POSTS				1	2	B	1.6	98	1000						
94	M1-94	76TH STREET	90 X 21	13.125		1			2																				
95	M1-94	76TH STREET	90 X 21	13.125		1			2																				
96	R2-1 (2S)	30 MPH	24 X 30	5.000										MOUNT ON LIGHT POLE															
97	R5-1 (2S)		30 X 30	6.250		1	1					1																	
98	R7-1D (2S)		18 X 24	3.000		1	1					1																	
99	R6-2R (2S)		24 X 30	5.000		1								MOUNT ON LIGHT POLE															
100		MILLER PARK EXIT 308B												MOVE TYPE I SIGN , NEW STEEL POSTS				1	2	C	1.8	100	1200						

TYPE I&II PERMANENT SIGNING -

CATEGORY CODE 1000

1060-33-78 76TH STREET

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	637.0402 SIGNS REFLC FOLDING TYPE II [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT [EA]	634.0816 POSTS TUBULAR STEEL 2 X 2 INCH X 16 FT [EA]	MOUNT ON SAME POST AS SIGN#	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.0101 SIGNS TYPE I [SF]	638.2601 REM SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR			
																											POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
101	J2-1(2S)		24 X 69	11.500		1	1		1					SEE FTMS PLAN FOR ELECTRONIC															
	MB4-5		24 X 12											PORTION. REUSE MOUNTING I BEAMS															
	MB3-4		24 X 12											FOR ELECTRONIC SIGN															
	M1-1	IH 94	24 X 24																										
	MB5-1L		21 X 21																										
102	R3-2					1								LIGHT POLE															
103	R6-2R (2S)					1								LIGHT POLE															
104	R2-1(2S)	30 MPH	24 X 30	5.000		1	1					1																	
105	R6-2R (2S)		24 X 30	5.000		1								LIGHT POLE															
106		HOSPITAL EXIT 306												MOVE TYPE I SIGN NEW STEEL POSTS				1	2	A	1.2	68	600						
107	R5-1(2S)		30 X 30	5.000		1	1					1																	
108	R7-1D (2S)					1								LIGHT POLE															
109	R6-2R (2S)		24 X 30	5.000		1								LIGHT POLE															
110	R5-1(2S)		30 X 30	5.000		1	1					1																	
111	S4-51		24 X 48	8.000		1	1					1																	
112	R6-2R (2S)		24 X 30	5.000		1	1					1																	
113	S1-1(2S)		36 X 36	6.750		1	1					1		PENTAGON SCHOOL SIGN															
114	WF16-9P (2M)		30 X 18	3.750		1							113																
115		181 84TH STREET 1/2 MILE EXIT XX												MOVE TYPE I SIGN . NEW STEEL POSTS				1	2	B	1.6	98	1000						
116	R2-1(2S)	SPEED LIMIT 30	24 X 30	5.000		1								LIGHT POLE															
117	R6-2R (2S)		24 X 30	5.000		1	1					1																	
118	R7-1D (2S)		18 X 24	3.000		1								LIGHT POLE															
119	R7-1D (2S)		18 X 24	3.000		1								LIGHT POLE															
120	W3-3 (2S)		36 X 36	9.000		1								LIGHT POLE															
121		68TH - 70TH STREET ARROW RIGHT EXIT 307A												MOVE TYPE I SIGN , NEW STEEL POSTS				1	2	B	1.6	98	1000						
122	R5-1A (2S)		36 X 24	6.000		1	1					1																	
123	R5-1(2S)		30 X 30	6.250		1	1					1																	
124	S4-51(2S)		24 X 48	8.000		1	1					1																	
125	R2-1(2S)	SPEED LIMIT 30	24 X 30	5.000		1	1					1																	
126	R5-1(2S)		30 X 30	6.250		1	1					1																	
127	S1-1(2S)		36 X 36	6.250		1	1	1						PENTAGON SIGN															
128	WF16-9P		30 X 18	3.750		1							127																
129	R6-2R (2S)		24 X 30	5.000		1	1					1																	
130	R6-2R (2S)		24 X 30	5.000		1	1					1																	
131	R7-1D(2S)		18 X 24	3.000		1								LIGHT POLE															
132	R5-1(2S)		30 X 30	6.250		1	1					1																	
133	R7-1D(2S)		18 X 24	3.000		1								LIGHT POLE															
134	R6-2R (2S)		24 X 30	5.000		1	1					1																	
135	R7-1D(2S)		18 X 24	3.000		1								LIGHT POLE															
136	S1-1(2S)		36 X 36	6.750		1								LIGHT POLE, PENTAGON SIGN															
137	WF16-7R (2M)		30 X 18	3.750		1							136	LIGHT POLE															
138	R6-2R (2S)		24 X 30	5.000		1	1					1																	
139	R7-1D(2S)		18 X 24	3.000		1								LIGHT POLE															
140	R6-2R (2S)		24 X 30	5.000		1								LIGHT POLE															
141	W12-1D (2S)		24 X 24	4.000		1								SIGNAL POLE, 2 FOOT HEIGHT															
142	R7-1R(2S)		18 X 24	3.000		1	1					1																	
143	J3-1(2S)		24 X 69	11.500		1								SIGNAL POLE															
	MB4-5		24 X 12																										
	MB3-4		24 X 12																										
	M1-1	IH 94	24 X 24																										
	MB6-1		21 X 21																										
144	R5-1(2S)		30 X 30	6.250								1																	
145	R6-2R (2S)		24 X 30	5.000		1	1					1																	
146	J2-1(2S)		24 X 69	11.500		1								UP HIGH ON LIGHT POLE															
	MB4-5		24 X 12																										
	MB3-4		24 X 12																										
	M1-1	IH 94	24 X 24																										
	MB5-1L		21 X 21																										
147	R3-1(2S)		24 X 24	4.000		1								SIGNAL POLE															
148	R6-2L (2S)		24 X 30	5.000		1								SIGNAL POLE															

TYPE I&II PERMANENT SIGNING -

CATEGORY CODE 1000

1060-33-78 76TH STREET

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W [IN.] x H [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	637.0402 SIGNS REFLC FOLDING TYPE II [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT [EA]	634.0816 POSTS TUBULAR STEEL 2 X 2 INCH X 16 FT [EA]	MOUNT ON SAME POST AS SIGN#	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.0101 SIGNS TYPE I [SF]	638.2601 REM SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR			
																										POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
149	R5-1(2S)		30 X 30	5.000		1	1					1																
150	R7-1D(2S)		18 X 24	3.000		1							149															
151	R5-1A (2S)		36 X 24	6.000		1	1					1																
152	R6-2R (2S)		24 X 30	5.000		1	1					1																
153	R4-7 (2S)		24 X 30	5.000		1								SIGNAL POLE														
154	R3-18(2S)		24 X 24	4.000		1								SIGNAL POLE														
155	W5-52L (2S)		12 X 36	3.000		1								SIGNAL POLE														
156	R7-1R(2S)		18 X 24	3.000		1	1					1																
157	R7-1D (2S)		18 X 24	3.000		1	1					1																
158	J2-1(2S)		24 X 57	9.500		1								UP HIGH ON LIGHT POLE														
	MB3-2		24 X 12																									
	M1-1	IH 94	24 X 24																									
	MB5-1L		21 X 21																									
159	R6-2R (2S)		24 X 30	5.000		1								SIGNAL POLE														
160	R4-7 (2S)		24 X 30	5.000		1								SIGNAL POLE														
161	R3-18(2S)		24 X 24	4.000		1								SIGNAL POLE														
162	W5-52L (2S)		12 X 36	3.000		1								SIGNAL POLE														
163	R7-1D (2S)		18 X 24	3.000		1	1					1																
164	R4-7 (2S)		24 X 30	5.000		1								SIGNAL POLE														
165	W5-52L (2S)		12 X 36	3.000		1								SIGNAL POLE														
166	R5-1 (3)		36 X 36	9.000		1								LIGHT POLE , 3 FT MOUNT HEIGHT														
167	J3-1(2S)		24 X 69	11.500		1								LIGHT POLE														
	MB4-5		24 X 12																									
	MB3-2		24 X 12																									
	M1-1	IH 94	24 X 24																									
	MB6-1		21 X 21																									
168	R5-1A (3)		42 X 30	8.750		1	1	1																				
169	R5-1A (3)		42 X 30	8.750		1	1	1																				
170	R7-1D (2S)		18 X 24	3.000		1	1					1																
171	R7-1R (2S)		18 X 24	3.000		1	1					1																
172		CRASH INVESTIGATION SITE	36 X 36	9.000		1	1	1																				
173	R1-1F (3)		36 X 36		7.460	1								LIGHT POLE														
174	R1-1F (3)		36 X 36		7.460	1								SIGNAL POLE														
175	R5-1 (3)		36 X 36	9.000		1								SIGNAL POLE , 3 FT MOUNT HEIGHT														
176	R3-18(2S)		24 X 24	4.000		1								SIGNAL POLE,														
177	J3-1		24 X 57	9.500		1								UP HIGH SIGNAL POLE														
	MB3-4		24 X 12																									
	M1-1	IH 94	24 X 24																									
	MB6-1		21 X 21																									
178	R6-2R (2S)		24 X 30	5.000		1								SIGNAL POLE														
179		RIDESHARE SIGN					2		2	1																		
180		COUNTY ZOO NORTH ON 45 EXIT 39												MOVE TYPE I SIGN , NEW STEEL POSTS				1	2	B	1.6	98	1000					
181	R11-2R (5)		48 X 30	10.000										MOUNT ON BARRICADES														
182	R11-2R (5)		48 X 30	10.000										MOUNT ON BARRICADES SEE WORK ZONE PLAN FOR BARRICADES														
183	R2-1 (5)		48 X 60	20.000		1	1		1																			
184	R11-2R (5)		48 X 30	10.000										MOUNT ON BARRICADES SEE WORK ZONE PLAN FOR BARRICADES														
185	R11-2R(5)		48 X 30	10.000										MOUNT ON BARRICADES SEE WORK ZONE PLAN FOR BARRICADES														
186	NOT USED																											
187	NOT USED																											
188	W1-13(5)									1				MOVE TO NEW LOCATION ON SIGN BRIDGE UPRIGHT														
189	W13-1									1				MOVE TO NEW LOCATION ON SIGN BRIDGE UPRIGHT														
190	R5-1(3)		36 X 36	9.000				1																				
191		CRASH INVEST. SITE	36 X 36	9.000		1							46															
192	R6-2R (2S)		24 X 30	5.000										ON LIGHT POLE SHEET 5														
193	R3-18(2S)		24 X 24	4.000										ON LIGHT POLE SHEET 2														
194	W5-1(5)		48 X 48	16.000					1					SHEET 1														
194A	W13-1(5)		36 X 36	9.000										UNDER SIGN #194														

TYPE I&II PERMANENT SIGNING -

CATEGORY CODE 1000

1060-33-78 76TH STREET

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	SIGN SIZE W x H [IN.] x [IN.]	637.0202 SIGNS REFLC TYPE II [SF]	637.0402 SIGNS REFLC FOLDING TYPE II [SF]	638.2602 REM SIGNS TYPE II [EA]	638.3000 REM SMALL SIGN SUP [EA]	634.0618 WOOD POSTS 4"X 6"x18' [EA]	634.0622 WOOD POSTS 4" X 6" X 22' [EA]	638.2102 MOVING SIGNS TYPE II [EA]	634.0885 POSTS TUBULAR STEEL 2 X 2 INCH X 8.5 FT [EA]	634.0816 POSTS TUBULAR STEEL 2 X 2 INCH X 16 FT [EA]	MOUNT ON SAME POST AS SIGN#	REMARKS / NEW SIGN LOCATION	TYPE I SIGN SIZE W x H [FT.] x [FT.]	637.0101 SIGNS TYPE I [SF]	638.2601 REM SIGNS TYPE I [EA]	638.2101 MOVING SIGNS TYPE I [EA]	638.3100 REM STR STEEL SIGN SUP [EA]	STEEL POST TYPE	636.0100 SIGN NO. SUPPORTS CONCRETE MASONRY [CY]	636.0500 SIGN SUPPORTS STEEL REINF. [LBS]	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS [EST.LBS]	635.0300 SIGN SUPPORTS REPLACING BASE CONN. BOLTS [EA]	INFO ONLY-POST LENGTHS TO BE VERIFIED BY CONTRACTOR			
																										POST NO 1 LENGTH [FT]	POST NO 2 LENGTH [FT]	OFF SET DISTANCE [FT]	DIST BTWN POSTS "S" [FT]
195	J3-1(2S)		24 X 57	9.500										ON SIGNAL ARM															
	MB3-4		24 X 12																										
	M1-1	IH 94	24 X 24																										
	MB6-1		21 X 21																										
196	J3-1(2S)		24 X 57	9.500										ON SIGNAL ARM															
	MB3-2		24 X 12																										
	M1-1	IH 94	24 X 24																										
	MB6-1		21 X 21																										
197	J2-1(2S)		24 X 57	9.500			1					1																	
	MB3-2		24 X 12																										
	M1-1	IH 94	24 X 24																										
	M4-20L		24 X 21																										
UNDISTRIBUTED																100.00	1							2					
TOTALS				1039.060	14.920	150	63	15	17	7	1	52				100.00	1	8	16		12.6	756	7800	2					

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3

SHEET 5 OF 5

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	PERMANENT SIGNING QUANTITIES	SHEET 420	E

LIGHTING AND MISCELLANEOUS - FINAL

CATEGORY	STAGE	DESCRIPTION	LOCATION	** 204.0195 REMOVING CONCRETE BASES EACH	653.0135 PULL BOXES STEEL 24x36-INCH EACH	653.0140 PULL BOXES STEEL 24x42-INCH EACH	653.0222 JUNCTION BOXES 18X12X6-INCH EACH	654.0105 CONCRETE BASES TYPE 5 EACH	SPV.0060.1010 LAMP DISPOSAL HIGH INTENSITY DISCHARGE EACH	SPV.0060.1020 SALVAGING LIGHT POLES LUMINAIRES AND ARMS EACH	SPV.0060.1050 PULL BOXES STEEL 24X36-INCH GROUNDED EACH	SPV.0060.1051 PULL BOXES STEEL 24X42-INCH GROUNDED EACH	SPV.0105.1005 MAINTENANCE OF LIGHTING SYSTEM LS	REMARKS
1100	1	MAINTENANCE	LIGHTING SYSTEM	--	--	--	--	--	--	--	--	--	1	
		PB-KT-1	STA. 13FCA+42.3, 63.2' LT	--	--	--	--	--	--	--	--	1	--	
		AKT-13	STA. 13FCA+10.1, 39.5' LT	1	--	--	--	1	1	1	--	--	--	
		AKT-14	STA. 11FCA+89.3, 18.7' RT	--	--	--	--	--	1	1	--	--	--	
		PB-KT-2	STA. 12FCA+09.0, 20.4' RT	--	--	--	--	--	--	--	--	1	--	
		AKT7	STA. 13FBA+79.9, 19.3' LT	1	--	--	--	1	1	1	--	--	--	
		PB-KT-3	STA. 14FBA+10.2, 28.7' LT	--	--	--	--	--	--	--	1	--	--	
		PB-KT-4	STA. 10FDA+57.4, 26.8' LT	--	--	--	--	--	--	--	1	--	--	
		PB-KT-5	STA. 16FBA+46.8, 16.2' RT	--	--	--	--	--	--	--	1	--	--	
		ATK8	STA.15FBA+67.8, 16.7' RT	1	--	--	--	1	1	1	--	--	--	
		PB-WA-1	STA. 28NSA+5, 5' LT	1	1	--	--	--	1	1	--	--	--	NOTE 1
		JB-KT1	STA. 263EW+96.5, 28.7' RT	--	--	--	1	--	--	--	--	--	--	
		JB-KT2	STA. 265EW+67.1, 26.8' RT	--	--	--	1	--	--	--	--	--	--	
		JB-KT3	STA. 266EW+42.1, 25.6' RT	--	--	--	1	--	--	--	--	--	--	
		CKT3/DKT3	STA. 266EW+4.1, 26.7' RT	1	--	--	--	1	1	1	--	--	--	
1100	1		SUBTOTAL	5	1	0	3	4	6	6	3	2	1	
1100	4	ATA1	STA. 15NSA+97.2, 35.0' RT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		ATA2	STA. 17NSA+50.5, 29.1' RT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		ATA3	STA. 19NSA+00.4, 25.3' RT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		ATA4	STA. 20NSA+53.6, 25.3' RT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		ATA5	STA. 22NSA+01.8, 22.9' RT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		ATA6	STA. 23NSA+54.4, 19.9' RT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		PB-TA-09	STA. 23NSA+65.4, 21.2' RT	--	--	1	--	--	--	--	--	--	--	
		PB-TA-08	STA. 23NSA+69.6, 32.5' LT	--	--	1	--	--	--	--	--	--	--	
		ATA7	STA. 25NSA+04.3, 32.2' LT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		ATA8	STA. 26NSA+56.9, 34.7' RT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		PB-TA-04	STA. 27NSA+02.9, 33.1' LT	--	--	1	--	--	--	--	--	--	--	
		PB-TA-03	STA. 28NSA+51.4, 34.0' LT	--	--	1	--	--	--	--	--	--	--	
		ATA9	STA. 28NSA+64.6, 32.2' LT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		PB-TA-02	STA. 29NSA+31.7, 31.2' LT	--	--	1	--	--	--	--	--	--	--	
		PB-TA-01	STA. 29NSA+31.1, 18.7' RT	--	--	1	--	--	--	--	--	--	--	
		BTA1	STA. 29NSA+53.5, 35.2' RT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		BTA2	STA. 31NSA+15.9, 33.7' LT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		BTA3	STA. 32NSA+53.7, 33.9' LT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		PB-TA-05	STA. 32NSA+64.4, 35.1' LT	--	--	1	--	--	--	--	--	--	--	
		PB-TA-06	STA. 32NSA+86.0, 20.4' RT	--	--	1	--	--	--	--	--	--	--	

(CONTINUED ON NEXT SHEET)

3

LIGHTING AND MISCELLANEOUS - FINAL (CONTINUED)

CATEGORY	STAGE	DESCRIPTION	LOCATION	** 204.0195 REMOVING CONCRETE BASES EACH	653.0135 PULL BOXES STEEL 24x36-INCH EACH	653.0140 PULL BOXES STEEL 24x42-INCH EACH	653.0222 JUNCTION BOXES 18X12X6-INCH EACH	654.0105 CONCRETE BASES TYPE 5 EACH	SPV.0060.1010 LAMP DISPOSAL HIGH INTENSITY DISCHARGE EACH	SPV.0060.1020 SALVAGING LIGHT POLES LUMINAIRES AND ARMS EACH	SPV.0060.1050 PULL BOXES STEEL 24X36-INCH GROUNDED EACH	SPV.0060.1051 PULL BOXES STEEL 24X42-INCH GROUNDED EACH	SPV.0105.1005 MAINTENANCE OF LIGHTING SYSTEM LS	REMARKS
1100	4	PB-TA-07	STA. 34NSA+30.7, 28.9' RT	--	--	1	--	--	--	--	--	--	--	
		BTA4	STA. 34NSA+38.5, 30.9' RT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		BTA5	STA. 35NSA+57.0, 35.4' RT	--	--	--	--	1	--	--	--	--	--	NOTE 2
		PB-SF-1	STA. 125K+70.8, 38.5' RT	--	1	--	--	--	--	--	--	--	--	
1100	4		SUBTOTAL	0	1	9	0	14	0	0	0	0	0	
1100			TOTAL	5	2	9	3	18	6	6	3	2	1	

NOTES

1. RETURN LIGHTING UNIT TO THE CITY OF WEST ALLIS. PULL BOX IN LOCATION OF REMOVED POLE TO FACILITATE CIRCUIT(S) RECONNECTION.
2. POLES, ARMS AND LUMINAIRES WILL BE PROVIDED UNDER A FUTURE CONTRACT DUE TO ATC HV LINE RELOCATION SCHEDULE.
3. REPLACING LUMINAIRES ONLY. REUSE EXISTING WIRING.

** = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

LIGHTING - WIRE AND CONDUIT - FINAL

CAT.	STAGE	FROM	TO	652.0110 CONDUIT RIGID METALLIC 1 -INCH LF	652.0125 CONDUIT RIGID METALLIC 2 -INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 -INCH LF	655.0108 CABLE IN DUCT 2-8 AWG LF	655.0128 CABLE IN DUCT 3-8 AWG LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF	655.0640 ELECTRICAL WIRE LIGHTING 1 AWG LF	REMARKS
1100	1	PB-KT-01	AKT13	--	--	50	--	--	114	--	--	
		AKT13	PB-KT-2	--	--	120	--	--	254	--	--	
		PB-KT-03	AKT7	--	--	43	--	--	100	--	--	
		PB-KT-4	BKT14	--	--	--	200	--	--	--	--	
		PB-KT-5	ATK8	--	--	--	100	--	--	--	--	
		JB-KT1	JB-KT2	--	175	--	--	--	--	364	182	
		JB-KT2	JB-KT3	--	85	--	--	--	--	184	92	
		JB-KT2	CKT3/DKT3	40	--	--	--	--	141	--	--	
1100	1		SUBTOTAL	40	260	213	300	0	609	548	274	
1100	4	HL-40-SF	PB-SF-1	--	--	31	--	--	152	--	--	
		HL-40-SF	PB-SF-1	--	--	31	--	--	--	--	--	EMPTY
		HL-40-SF	PB-SF-2	--	--	38	--	--	225	--	--	
		HL-40-SF	PB-SF-2	--	--	38	--	--	--	--	--	EMPTY
		HL-40-SF	PB-SF-2	--	--	38	--	--	225	--	--	
		HL-40-SF	PB-SF-2	--	--	38	--	--	--	--	--	EMPTY
		ATA1	STUB	--	--	10	--	--	--	--	--	
		ATA1	ATA2	--	--	--	--	164	--	--	--	
		ATA2	ATA3	--	--	--	--	162	--	--	--	
		ATA3	ATA4	--	--	--	--	164	--	--	--	
		ATA4	ATA5	--	--	--	--	160	--	--	--	
		ATA5	ATA6	--	--	--	--	164	--	--	--	
		ATA6	PB-TA-09	--	--	16	--	--	69	--	--	
		PB-TA-09	PB-TA-08	--	--	49	--	--	168	--	--	
		PB-TA-08	ATA7	--	--	143	--	--	450	--	--	
		ATA7	ATA8	--	--	159	--	--	498	--	--	
		ATA8	PB-TA-04	--	--	46	--	--	159	--	--	
		PB-TA-04	PB-TA-03	--	--	30	--	--	111	--	--	
		PB-TA-04	PB-TA-03	--	--	--	--	--	402	--	--	RACEWAY IS A STRUCTURAL BID ITEM
		PB-TA-03	ATA9	--	--	19	--	--	78	--	--	
		ATA9	PB-TA-02	--	--	95	--	--	306	--	--	
		PB-TA-02	PB-TA-01	--	--	54	--	--	366	--	--	

(CONTINUED ON NEXT SHEET)

LIGHTING - WIRE AND CONDUIT - FINAL (CONTINUED)

CAT.	STAGE	FROM	TO	652.0110 CONDUIT RIGID METALLIC 1 -INCH LF	652.0125 CONDUIT RIGID METALLIC 2 -INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 -INCH LF	655.0108 CABLE IN DUCT 2-8 AWG LF	655.0128 CABLE IN DUCT 3-8 AWG LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF	655.0640 ELECTRICAL WIRE LIGHTING 1 AWG LF	REMARKS
1100	4	PB-TA-01	HL-40-TA	--	--	22	--	--	174	--	--	
		PB-TA-02	BTA1	--	--	16	--	--	69	--	--	
		BTA1	BTA2	--	--	151	--	--	474	--	--	
		BTA2	BTA3	--	--	143	--	--	450	--	--	
		BTA3	PB-TA-05	--	--	17	--	--	72	--	--	
		PB-TA-05	PB-TA-06	--	--	65	--	--	216	--	--	
		PB-TA-06	PB-TA-07	--	--	44	--	--	153	--	--	
		PB-TA-06	PB-TA-07	--	--	--	--	--	354	--	--	RACEWAY IS A STRUCTURAL BID ITEM
		PB-TA-07	BTA4	--	--	14	--	--	63	--	--	
		BTA4	BTA5	--	--	119	--	--	378	--	--	
		BTA5	STUB	--	--	10	--	--	--	--	--	
1100	4		SUBTOTAL	0	0	1202	0	814	5010	0	0	
1100			TOTAL	40	260	1415	300	814	5619	548	274	

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LIGHTING -DISTRIBUTION CENTERS

CATEGORY	STAGE	DESCRIPTION	LOCATION	** 204.0195 REMOVING CONCRETE BASES EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	656.0400.0001 ELECTRIC SERVICE MAIN LUGS ONLY METER PEDESTAL HL-40-SF LS	659.0802 PLAQUES SEQUENCE IDENTIFICATION EACH	SPV.0060.1090 SALVAGE DISTRIBUTION CENTERS EACH	SPV.0060.1154 ELECTRIC SERVICE METER BREAKER PEDESTAL - LIGHTING EACH	REMARKS
1100	4	HL-40-TA	STA. 29NSA+27.0, 27.4' RT	--	--	--	1	--	1	120/240V, 1 PHASE, 100A, ISOLATED NEUTRAL
		HL-40-SF	STA. 125K+42.4, 39.1' RT	1	1	1	--	1	--	120/240V, 1 PHASE, 100A, ISOLATED NEUTRAL
1100	4		SUBTOTAL	1	1	1	1	1	1	
1100			TOTAL	1	1	1	1	1	1	

** = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ESTIMATE OF QUANTITIES-TRAFFIC SIGNALS

PROJECT ID. 1060-33-78

MILWAUKEE COUNTY

Std.Bid Item No.	Description	Unit	Quantity
652.0220	Conduit Rigid Nonmetallic Schedule 40 1 1/2-Inch	LF	40
652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	130
652.0230	Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	LF	40
652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	1,475
652.0615	Conduit Special 3-Inch	LF	180
SPV.0060.3002	Traffic Polymer Concrete Vault 13-Inch x 24-Inch x 18-Inch	Each	8
SPV.0060.3003	Traffic Polymer Concrete Vault 17-Inch x 30-Inch x 18-Inch	Each	10
SPV.0060.3004	Install Traffic Cabinet Base	Each	2
SPV.0060.3005	Install Traffic Signal Base	Each	8

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	EACH	VIDEO DETECTION SYSTEM
3	EACH	EVP DETECTOR HEADS



IH 94 EB RAMPS & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	15	--	--
PB1	PB2	--	--	--	43
PB2	PB3	--	28	--	--
PB3	PB4	--	42	--	--
PB4	PB5	--	--	--	54
PB5	PB6	--	20	--	--
PB6	PB7	--	71	--	--
PB7	PB8	--	20	--	--
PB8	PB9	--	--	210	--
PB8	PB10	--	42	--	--
PB10	PB11	--	--	--	50
PB11	PB3 (S1381)	12	--	--	--
PB11	PB12	--	38	--	--
PB12	CB1	--	30	--	--
PB1	SB1	11	--	--	--
PB2	SB2	9	--	--	--
PB3	SB3	13	--	--	--
PB4	SB4	12	--	--	--
PB6	SB5	12	--	--	--
PB6	SB6	9	--	--	--
PB7	SB7	10	--	--	--
PB10	SB8	11	--	--	--
PB11	SB9	11	--	--	--
	*** TOTALS	110	306	210	147

LOOP DETECTOR SCHEDULE

LOOP NUMBER	HOMERUN PB	STATION	LOCATION	SIZE (FT)X(FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR LF	652.0900 LOOP DETECTOR SLOTS LF	655.0700 LOOP DETECTOR LEAD IN CABLE LF	655.0800 LOOP DETECTOR WIRE LF
21	PB9	42F+00.3	27.5' LT	6X20	4	ASPHALT	LOOP DETECTOR INSTALLED IN EXISTING ASPHALTIC PAVEMENT	60	54	367	250
	*** TOTALS							60	54	367	250

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\030241_mq_sp.ppt PLOT DATE : 4/26/2013 2:47:39 AM PLOT BY : MSCCEJ PLOT NAME : 030241_mq_sp1 PLOT SCALE : 1:1

3

IH 94 EB RAMPS & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	39F+46.9	60.0' RT	--	1
PB2	39F+04.2	60.0' RT	--	1
PB3	38F+83.0	42.0' RT	--	1
PB4	38F+83.0	0.0'	--	1
PB5	38F+83.0	54.1' LT	--	1
PB6	39F+03.0	54.1' LT	--	1
PB7	39F+74.0	54.1' LT	--	1
PB8	39F+90.0	42.0' LT	--	1
PB9	42F+00.3	42.0' LT	1	--
PB10	39F+90.0	0.0'	--	1
PB11	39F+90.0	50.1' RT	--	1
PB12	39F+51.9	50.1' RT	--	1
		*** TOTAL	1	11

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH	SPV.0060.3006 CONCRETE BASES TYPE 1 SPREAD FOOTING EACH	SPV.0060.3007 CONCRETE BASES TYPE 2 SPREAD FOOTING EACH
SB1	39F+41.0	50.6' RT	--	--	--	--	1
SB2	39F+03.9	50.6' RT	--	--	--	--	1
SB3	38F+95.4	44.0' RT	--	1	--	--	--
SB4	38F+95.4	0.0'	--	1	--	--	--
SB5	38F+95.4	44.5' LT	--	1	--	--	--
SB6	39F+12.3	53.1' LT	--	--	--	1	--
SB7	39F+75.3	44.1' LT	1	--	--	--	--
SB8	39F+79.0	1.0' LT	--	1	--	--	--
SB9	39F+79.0	50.6' RT	--	1	--	--	--
CB1	39F+65.0	51.5' RT	--	--	1	--	--
		*** TOTALS	1	5	1	1	2

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\030241_mq_sp.ppt PLOT DATE : 4/28/2013 2:47:39 AM PLOT BY : MSCCEJ PLOT NAME : 030241_mq_sp2 PLOT SCALE : 1:1

IH 94 EB RAMPS & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG LF
CB1	SB1	--	33	--
CB1	SB3	--	--	118
SB3	SB2	70	--	--
CB1	SB4	--	165	--
CB1	SB5	--	--	251
SB5	SB6	35	--	--
CB1	SB8	--	--	138
SB8	SB7	109	--	--
CB1	SB9	--	82	--
	*** TOTALS	214	280	507

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF
SB1	HEAD 8	42
SB1	HEAD 14	14
SB2	HEAD 15	14
SB3	HEAD 6	22
SB3	HEAD 9	48
SB3	HEAD 10	14
SB4	HEAD 4	49
SB4	HEAD 7	22
SB5	HEAD 5	40
SB5	HEAD 11	14
SB6	HEAD 12	14
SB7	HEAD 13	14
SB8	HEAD 1	39
SB8	HEAD 2	50
SB9	HEAD 3	47
	*** TOTALS	443

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	33
SB1	SB2	83
SB2	SB3	70
SB3	SB4	87
SB4	SB5	124
SB5	SB6	35
SB6	SB7	110
SB7	SB8	109
SB8	SB9	92
SB9	CB1	82
PB1	CB1	18
PB2	SB2	19
PB3	SB3	23
PB4	SB4	22
PB5	SB6	45
PB6	SB6	19
PB7	SB7	20
PB8	SB7	46
PB10	SB8	21
PB11	SB9	21
PB12	CB1	23
	*** TOTAL	1102

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB4 (HEAD A)	220	220
CB1	SB8 (HEAD B)	193	193
CB1	SB1 (HEAD C)	78	78
	*** TOTAL	491	491

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
IH 94 EB RAMPS & STH 181

BASE NO.	656.0200.3001 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\030241_mq_sp.ppt PLOT DATE : 6/10/2013 10:50:13 AM PLOT BY : MSCCEJ PLOT NAME : 030241_mq_sp3 PLOT SCALE : 1:1

3

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0310 POLES TYPE 3 EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0585 TROMBONE ARMS 15-FT EACH	657.0590 TROMBONE ARMS 20-FT EACH	657.0595 TROMBONE ARMS 25-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH
SB1	--	1	1	--	--	1	--	--	--	1
SB2	1	--	--	--	1	--	--	--	--	1
SB3	--	1	--	1	--	--	1	--	1	1
SB4	--	1	--	1	--	--	--	1	1	1
SB5	--	1	1	--	--	1	--	--	--	1
SB6	1	--	--	--	1	--	--	--	--	1
SB7	1	--	--	--	1	--	--	--	--	1
SB8	--	1	--	1	--	--	--	1	1	--
SB9	--	1	1	--	--	--	1	--	--	--
*** TOTALS	3	6	3	3	3	2	2	2	3	7

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB8	1	--	1	--	--	1	1	--	--	--	1	--
2	SB8	1	--	1	--	--	1	1	1	--	--	--	--
3	SB9	1	--	1	--	--	1	1	1	--	--	--	--
4	SB4	1	--	1	--	--	1	1	1	--	--	--	--
5	SB5	1	--	1	--	--	1	1	1	--	--	--	--
6	SB3	--	1	--	1	--	--	--	--	1	2	1	--
7	SB4	--	1	--	1	--	--	--	--	1	2	1	--
8	SB1	1	--	1	--	--	1	1	1	--	--	--	--
9	SB3	1	--	1	--	--	1	1	1	--	--	--	--
10	SB3	--	--	--	--	1	--	--	--	--	--	--	1
11	SB5	--	--	--	--	1	--	--	--	--	--	--	1
12	SB6	--	--	--	--	1	--	--	--	--	--	--	1
13	SB7	--	--	--	--	1	--	--	--	--	--	--	1
14	SB1	--	--	--	--	1	--	--	--	--	--	--	1
15	SB2	--	--	--	--	1	--	--	--	--	--	--	1
*** TOTALS		7	2	7	2	6	7	7	6	2	4	3	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

IH 94 EB RAMPS & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

SIGNAL MOUNTING HARDWARE
IH 94 EB RAMPS & STH 181

LOCATION	658.5069.3001 SIGNAL MOUNTING HARDWARE LS
IH 94 EB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

TRANSPORTING AND INSTALLING STATE FURNISHED AUTOSCOPE VIDEO DETECTION SYSTEM
IH 94 EB RAMPS & STH 181

LOCATION	SPV.0105.3003 TRANSPORTING AND INSTALLING STATE FURNISHED AUTOSCOPE VIDEO DETECTION SYSTEM LS
IH 94 EB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

3

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
IH 94 EB RAMPS & STH 181

LOCATION	661.0200.3001 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAY
IH 94 EB RAMPS & STH 181 (S. 84TH STREET)	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE FURNISHED EVP DETECTOR HEADS
IH 94 EB RAMPS & STH 181

LOCATION	SPV.0105.3005 INSTALL STATE FURNISHED EVP DETECTOR HEADS LS
IH 94 EB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET
IH 94 EB RAMPS & STH 181

LOCATION	SPV.0105.3001 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET LS
IH 94 EB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

TEMPORARY EVP SYSTEM
IH 94 EB RAMPS & STH 181

LOCATION	SPV.0105.3007 TEMPORARY EVP SYSTEM LS
IH 94 EB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

IH 94 WB RAMPS & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

SUMMARY OF STATE FURNISHED MATERIALS - FOR INFORMATION ONLY

QUANTITY	UNIT	DESCRIPTION
1	EACH	TRAFFIC SIGNAL CONTROLLER AND CABINET
1	EACH	VIDEO DETECTION SYSTEM
3	EACH	EVP DETECTOR HEADS



CONDUIT

FROM	TO	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0605 CONDUIT SPECIAL 2-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	27	--	--
PB1	PB2	--	15	--	--
PB1	PB4	--	--	--	53
PB2	PB3	--	--	198	--
PB4	PB5	--	--	--	50
PB5	PB6	--	56	--	--
PB6	PB7	--	--	--	36
PB7	PB8	--	20	--	--
PB8	PB9	--	--	--	47
PB9	PB10	--	--	--	55
PB10	PB11	--	--	--	34
PB11	PB12	--	--	--	60
PB12	CB1	--	18	--	--
PB1	SB1	24	--	--	--
PB4	SB2	5	--	--	--
PB5	SB3	5	--	--	--
PB6	SB4	10	--	--	--
PB7	SB5	12	--	--	--
PB8	SB6	17	--	--	--
PB9	SB7	19	--	--	--
PB9	SB8	12	--	--	--
PB9	SB9	26	--	--	--
PB11	SB10	12	--	--	--
PB11	SB11	10	--	--	--
	*** TOTALS	152	136	198	335

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

LOOP DETECTOR SCHEDULE

LOOP NUMBER	HOMERUN PB	STATION	LOCATION	SIZE (FT)X(FT)	NO. OF TURNS	PAVEMENT TYPE	SDD INSTALLATION REFERENCE	652.0800 CONDUIT LOOP DETECTOR LF	655.0700 LOOP DETECTOR LEAD IN CABLE LF	655.0800 LOOP DETECTOR WIRE LF
61	PB3	39F+81.6	27.0' RT	6X20	3	ASPHALT	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)	60	243	190
	*** TOTALS							60	243	190

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 432	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\030242_mq_sp.ppt PLOT DATE : 4/28/2013 3:20:03 PM PLOT BY : MSCCEJ PLOT NAME : 030242_mq_sp1 PLOT SCALE : 1:1

PULL BOXES STEEL

PULL BOX NO.	STATION	LOCATION	653.0135 PULL BOXES STEEL 24X36-INCH EACH	653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	41F+90.0	52.5' RT	--	1
PB2	41F+80.0	42.0' RT	1	--
PB3	39F+81.6	42.0' RT	1	--
PB4	41F+90.0	0.0'	--	1
PB5	41F+90.0	50.0' LT	--	1
PB6	42F+43.9	58.0' LT	--	1
PB7	42F+80.0	58.0' LT	--	1
PB8	42F+94.1	44.5' LT	--	1
PB9	42F+94.1	2.0' RT	--	1
PB10	42F+94.1	57.0' RT	--	1
PB11	42F+60.0	57.0' RT	--	1
PB12	42F+00.0	57.0' RT	--	1
		*** TOTAL	2	10

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE BASES

BASE NO.	STATION	LOCATION	654.0101 CONCRETE BASES TYPE 1 EACH	654.0102 CONCRETE BASES TYPE 2 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	42F+11.9	43.5' RT	1	--	--
SB2	41F+95.0	0.0'	--	1	--
SB3	41F+95.0	51.0' LT	--	1	--
SB4	42F+39.8	49.0' LT	1	--	--
SB5	42F+70.6	51.0' LT	--	1	--
SB6	42F+76.8	44.5' LT	1	--	--
SB7	42F+75.0	3.5' RT	--	1	--
SB8	43F+06.5	2.0' RT	--	1	--
SB9	43F+20.3	2.0' RT	--	1	--
SB10	42F+60.9	45.5' RT	--	1	--
SB11	42F+50.1	54.4' RT	1	--	--
CB1	42F+00.0	55.0' RT	--	--	1
		*** TOTALS	4	7	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD
*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

IH 94 WB RAMPS & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

UNDERGROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG LF
CB1	SB1	50	--	--
CB1	SB2	--	90	--
CB1	SB3	--	146	--
SB3	SB4	91	--	--
CB1	SB6	--	--	288
SB6	SB5	69	--	--
CB1	SB7	--	--	209
SB7	SB8	45	--	--
SB7	SB9	59	--	--
CB1	SB10	--	--	101
SB10	SB11	36	--	--
	*** TOTALS	350	236	598

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ABOVE GROUND TRAFFIC SIGNAL CABLE NO. 14

FROM	TO	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF
SB1	HEAD 17	14
SB2	HEAD 5	38
SB2	HEAD 6	49
SB3	HEAD 7	47
SB4	HEAD 8	19
SB4	HEAD 12	14
SB5	HEAD 9	42
SB5	HEAD 13	14
SB6	HEAD 3	22
SB6	HEAD 14	14
SB7	HEAD 1	39
SB7	HEAD 4	22
SB8	HEAD 10	26
SB9	HEAD 11	26
SB10	HEAD 2	47
SB10	HEAD 15	14
SB11	HEAD 16	14
	*** TOTALS	461

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	50
SB1	SB2	102
SB2	SB3	80
SB3	SB4	91
SB4	SB5	78
SB5	SB6	69
SB6	SB7	103
SB7	SB8	45
SB8	SB9	52
SB9	SB10	153
SB10	SB11	36
SB11	CB1	99
PB1	CB1	22
PB4	SB2	15
PB5	SB3	15
PB6	SB4	20
PB7	SB5	22
PB8	SB6	27
PB9	SB8	22
PB10	SB11	60
PB11	SB11	20
PB12	CB1	19
	*** TOTAL	1200

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL EVP DETECTOR CABLE

FROM	TO	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF	SPV.0090.3001 CABLE TYPE UF 2-14 AWG LF
CB1	SB2 (HEAD A)	254	254
CB1	SB7 (HEAD B)	145	145
CB1	SB5 (HEAD D)	312	312
	*** TOTAL	711	711

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ELECTRICAL SERVICE METER BREAKER PEDESTAL
IH 94 WB RAMPS & STH 181

BASE NO.	656.0200.3002 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS
CB1	1
TOTAL	1

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 434	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\030242_mq_sp.ppt PLOT DATE : 6/10/2013 10:45:48 AM PLOT BY : MSCCEJ PLOT NAME : 030242_mq_sp3 PLOT SCALE : 1:1

3

CAST BASES, POLES, MONOTUBE ARMS, PUSH BUTTONS, AND LUMINAIRES

SIGNAL BASE NO.	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0305 POLES TYPE 2 EACH	657.0310 POLES TYPE 3 EACH	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT EACH	657.0585 TROMBONE ARMS 15-FT EACH	657.0590 TROMBONE ARMS 20-FT EACH	657.0595 TROMBONE ARMS 25-FT EACH	657.0609 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT EACH	658.0500 PEDESTRIAN PUSH BUTTONS EACH
SB1	1	--	--	--	--	--	1	--	--	--	--	1
SB2	--	1	--	1	--	--	--	--	--	1	1	--
SB3	--	1	1	--	--	--	--	--	1	--	--	--
SB4	1	--	--	--	1	--	--	--	--	--	--	1
SB5	--	1	--	1	--	--	--	1	--	--	1	1
SB6	1	--	--	--	--	1	--	--	--	--	--	1
SB7	--	1	--	1	--	--	--	1	--	--	1	--
SB8	--	1	--	1	--	--	--	--	--	--	1	--
SB9	--	1	1	--	--	--	--	--	--	--	--	--
SB10	--	1	1	--	--	--	--	1	--	--	--	1
SB11	1	--	--	--	--	--	1	--	--	--	--	1
*** TOTALS	4	7	3	4	1	1	2	3	1	1	4	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

TRAFFIC SIGNAL AND PEDESTRIAN FACES, AND BACKPLATES

SIGNAL HEAD NO.	SIGNAL BASE NO.	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL EACH	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL EACH	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH EACH	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH EACH	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH EACH	658.0600 LED MODULES 12-INCH RED BALL EACH	658.0605 LED MODULES 12-INCH YELLOW BALL EACH	658.0610 LED MODULES 12-INCH GREEN BALL EACH	658.0615 LED MODULES 12-INCH RED ARROW EACH	658.0620 LED MODULES 12-INCH YELLOW ARROW EACH	658.0625 LED MODULES 12-INCH GREEN ARROW EACH	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH EACH
1	SB7	1	--	1	--	--	1	1	1	--	--	--	--
2	SB10	1	--	1	--	--	1	1	1	--	--	--	--
3	SB6	--	1	--	1	--	--	--	--	1	2	1	--
4	SB7	--	1	--	1	--	--	--	--	1	2	1	--
5	SB2	1	--	1	--	--	1	1	--	--	--	1	--
6	SB2	1	--	1	--	--	1	1	1	--	--	--	--
7	SB3	1	--	1	--	--	1	1	1	--	--	--	--
8	SB4	1	--	1	--	--	1	1	1	--	--	--	--
9	SB5	1	--	1	--	--	1	1	1	--	--	--	--
10	SB8	1	--	1	--	--	1	--	--	--	1	1	--
11	SB9	1	--	1	--	--	1	--	--	--	1	1	--
12	SB4	--	--	--	--	1	--	--	--	--	--	--	1
13	SB5	--	--	--	--	1	--	--	--	--	--	--	1
14	SB6	--	--	--	--	1	--	--	--	--	--	--	1
15	SB10	--	--	--	--	1	--	--	--	--	--	--	1
16	SB11	--	--	--	--	1	--	--	--	--	--	--	1
17	SB1	--	--	--	--	1	--	--	--	--	--	--	1
							--	--	--	--	--	--	--
	*** TOTALS	9	2	9	2	6	9	7	6	2	6	5	6

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

IH 94 WB RAMPS & STH 181 (S. 84TH STREET)

ALL ITEMS ARE CATEGORY 1500 UNLESS OTHERWISE NOTED

3

SIGNAL MOUNTING HARDWARE
IH 94 WB RAMPS & STH 181

LOCATION	658.5069.3002 SIGNAL MOUNTING HARDWARE LS
IH 94 WB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

TRANSPORTING AND INSTALLING STATE FURNISHED AUTOSCOPE VIDEO DETECTION SYSTEM
IH 94 WB RAMPS & STH 181

LOCATION	SPV.0105.3004 TRANSPORTING AND INSTALLING STATE FURNISHED AUTOSCOPE VIDEO DETECTION SYSTEM LS
IH 94 WB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

3

TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS
IH 94 WB RAMPS & STH 181

LOCATION	661.0200.3002 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS LS	661.0300 GENERATORS DAY
IH 94 WB RAMPS & STH 181 (S. 84TH STREET)	1	2
*** TOTALS	1	2

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL STATE FURNISHED EVP DETECTOR HEADS
IH 94 WB RAMPS & STH 181

LOCATION	SPV.0105.3006 INSTALL STATE FURNISHED EVP DETECTOR HEADS LS
IH 94 WB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

INSTALLSTATE FURNISHED TRAFFIC SIGNAL CABINET
IH 94 WB RAMPS & STH 181

LOCATION	SPV.0105.3002 INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET LS
IH 94 WB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

TEMPORARY EVP SYSTEM
IH 94 WB RAMPS & STH 181

LOCATION	SPV.0105.3008 TEMPORARY EVP SYSTEM LS
IH 94 WB RAMPS & STH 181 (S. 84TH STREET)	1
TOTAL	1

PROJECT NO: 1060-33-78	HWY: IH 94	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET: 436	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\030242_mq_sp.ppt PLOT DATE : 6/5/2013 9:50:28 AM PLOT BY : MSCCEJ PLOT NAME : 030242_mq_sp5 PLOT SCALE : 1:1

STH 181 TRAFFIC SIGNAL INTERCONNECT

ALL ITEMS ARE CATEGORY 1500

CONDUIT

FROM	TO	652.0215 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH LF	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF
PB40F-2	I/C CV1001	--	18
I/C CV1001	CB1 (S1380)	7	--
I/C CV1001	PB12 (S1380)	--	16
PB2 (S1381)	I/C CV1002	--	16
I/C CV1002	CB1 (S1381)	10	--
	*** TOTALS	17	50

*** QUANTITIES LISTED ELSEWHERE ON PLAN

TRAFFIC SIGNAL INTERCONNECT

LOCATION	670.0100.3002 FIELD SYSTEM INTEGRATOR LS	670.0200.3002 ITS DOCUMENTATION LS	678.0500.3002 COMMUNICATION SYSTEM TESTING LS
1060-33-78 CATEGORY 1500	1	1	1
*** TOTALS	1	1	1

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 36-CT

FROM	TO	678.0036 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 36-CT LF
CV38F	I/C CV1001	362
I/C CV1001	I/C CV1002	550
	TOTAL	912

FIBER OPTIC

LOCATION	678.0200 FIBER OPTIC SPLICE ENCLOSURE EACH	678.0300 FIBER OPTIC SPLICE EACH
CV38F	--	6
I/C CV1001	1	8
I/C CV1002	1	2
*** TOTALS	2	16

*** ADDITIONAL QUANTITIES SHOWN ELSEWHERE

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\030243_mq_co.ppt PLOT DATE : 4/28/2013 2:48:22 AM PLOT BY : MSCCEJ PLOT NAME : 030243_mq_co1 PLOT SCALE : 1:1

3

3

VAULTS

PULL BOX NO.	STATION	LOCATION	SPV.0060.3001 TRAFFIC SIGNAL INTERCONNECT VAULT EACH
I/C CV1001	39F+56.9	64.7' RT	1
I/C CV1002	41F+85.0	57.0' RT	1
		TOTAL	2

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIELD

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET
IH 94 EB RAMPS & STH 181

LOCATION	*** SPV.0105.3009 LS
CB1 (S1380)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
107	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
20	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET
IH 94 WB RAMPS & STH 181

LOCATION	*** SPV.0105.3010 LS
CB1 (S1381)	1
TOTAL	1

*** PAY ITEM INCLUDES INSTALLATION OF BOTH CONTRACTOR FURNISHED AND STATE FURNISHED MATERIALS

SUMMARY OF STATE FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
110	LF	PATCH PANEL WITH FIBER OPTIC CABLE PIGTAIL 8-CT
1	EACH	ETHERNET SWITCH

SUMMARY OF CONTRACTOR FURNISHED MATERIALS

QUANTITY	UNIT	DESCRIPTION
2	LF	ST-ST SINGLE MODE FIBER OPTIC JUMPER 2-CT
23	LF	TRACER WIRE
2	EACH	CAT-5E CABLE 1-METER

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
1060-33-24		
FEDERAL PROJECT NUMBER	4.01	

PLAT OF RIGHT-OF-WAY REQUIRED FOR

IH 94

(S. 124TH STREET - S. 70TH STREET)

IH 94 MILWAUKEE CO.

CONSTRUCTION PROJECT NUMBER
1060-33-75, 1060-33-78, 1060-33-81, 1060-33-86, 1060-33-88, 1060-33-89

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
BUILDING	B	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.	**CURVE DATA**	
EASEMENT	EASE.	LONG CHORD	LCH
HIGHWAY EASEMENT	H.E.	LONG CHORD BEARING	LCB
IMAGE	I	RADIUS	R
LAND CONTRACT	LC	DEGREE OF CURVE	D
MONUMENT	MON.	CENTRAL ANGLE OR DELTA	DELTA
PAGE	P.	LENGTH OF CURVE	L
PERMANENT LIMITED EASEMENT	PLE	TANGENT	TAN
PROPERTY LINE	PL		
RECORDED AS	(100')		
REEL	R		

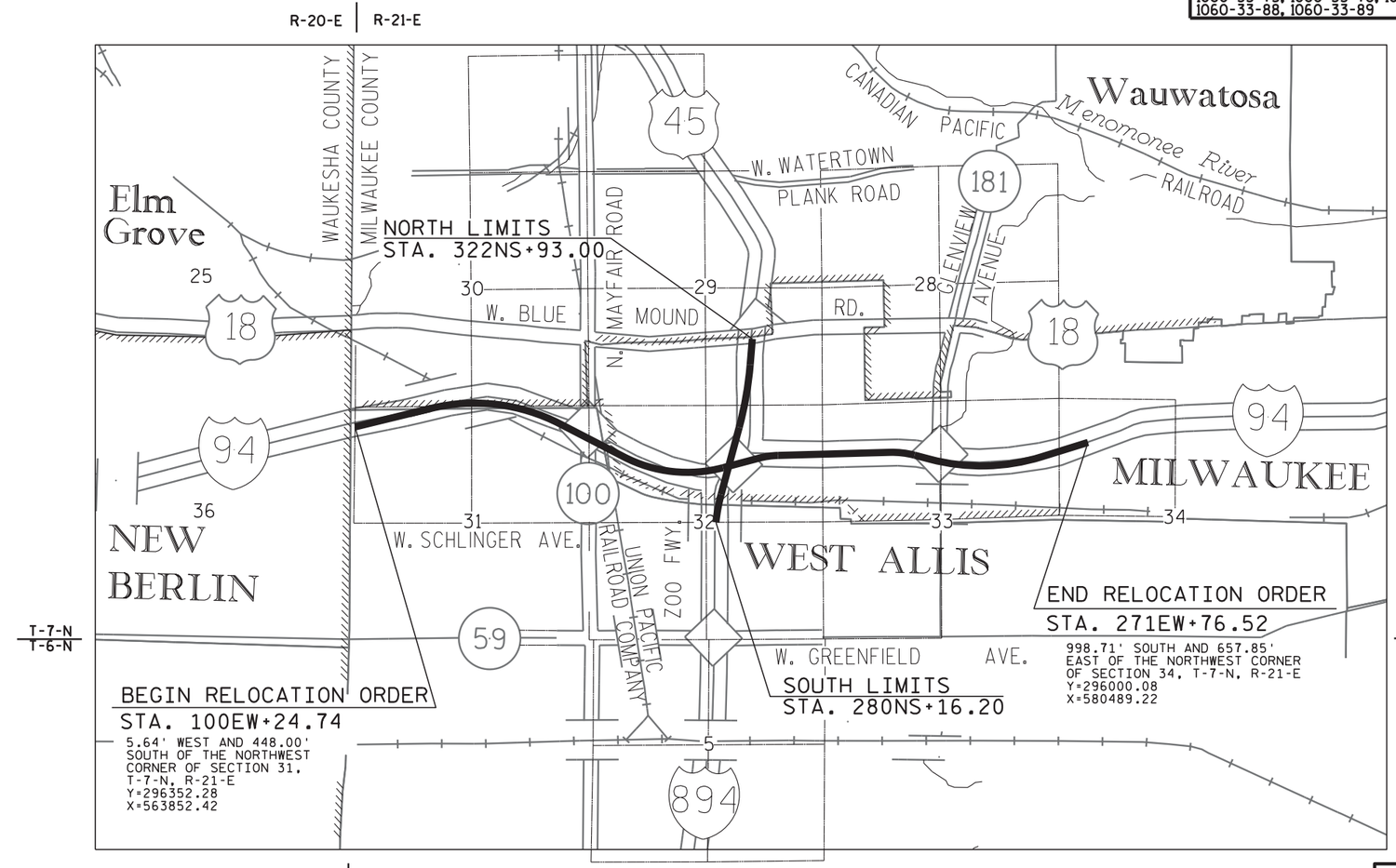
CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LS (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	●(SET)	PROPERTY LINE	
R/W STANDARD	▲(SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		ACCESS RESTRICTED (BY ACQUISTION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	92	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

WATER	W
GAS	G
TELEPHONE	T
OVERHEAD TRANSMISSION LINES	OH
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS

	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		



NOTES:

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4 " REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.
RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

THE HIGH ACCURACY REFERENCE NETWORK (HARN) POINTS USED ON PROJECT WERE:
1) MILWAUKEE GPS
2) WAUWATOSA W. GPS

N

LAYOUT
SCALE 0 0.5 MI. 1 MI.

TOTAL NET LENGTH OF REFERENCE LINE= 3.248 MI.

ORIGINAL PLAT PREPARED BY:

WISCONSIN LAND SURVEYOR
KURT E. KRUGER
S-1946
CASCADE, WI

February 29, 2012

REVISION DATE
MAY 23 2012
JULY 11, 2012
SEPTEMBER 28, 2012
DECEMBER 17, 2012
APRIL 17, 2013

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT
DATE: Feb. 29, 2012 (Signature)

439 E

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

* DENOTES AREA COMPUTED

PROJECT FUNDING I.D.	PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED (ACRES) NEW	EXISTING	TOTAL	TOTAL REMAINING ACRES	TLE ACRES	PLE ACRES	HE ACRES	PARCEL NUMBER
1060-33-24	1	4.18	JOSEPH R. McGAVER	FEE	0.446	0.446		0.446	0.000				1
1060-33-24	2(4)	4.13,4.14	UNION PACIFIC RAILROAD COMPANY	HE,TLE	VAST				VAST	10.262		1.329	2(4)
1060-33-24	3(2)	4.13	MILWAUKEE COUNTY	FEE	0.468	0.468		0.468	0.000				3(2)
1060-33-24	4(2)	4.13,4.14	MILWAUKEE COUNTY	TLE	VAST				VAST	0.170			4(2)
1060-33-24	5(6)	4.11-4.15	WISCONSIN DEPARTMENT OF NATURAL RESOURCES	HE,PLE,TLE	VAST				VAST	0.375	1.843	1.036	5(6)
1060-33-24	6(2)	4.14	GUIFFRE V, LLC	PLE	4.930				4.930		0.223		6(2)
1060-33-24	7(2)	4.14	FMC610, LLC	PLE	1.806*				1.806		0.079		7(2)
1060-33-24	8(2)	4.14	WAREHOUSE INVESTMENTS, CO.	PLE	4.651				4.651		0.112		8(2)
1060-33-24	10(4)	4.20,4.21	PETTIT NATIONAL ICE CENTER	FEE,PLE,TLE	9.586	0.111		0.111	9.475	0.374	0.146		10(4)
1060-33-24	11(4)	4.21-4.23	WISCONSIN STATE FAIR BOARD	FEE,PLE,TLE	36.210	1.945		1.945	34.265	0.986	0.125		11(4)
1060-33-24	12(4)	4.23	KEITH C. VOGEL	TLE	0.078				0.078	0.003			12(4)
1060-33-24	13(4)	4.23	NICHOLAS R. JULGA	TLE	0.158				0.158	0.008			13(4)
1060-33-24	14(4)	4.23	FEDERAL HOME LOAN MORTGAGE CORPORATION	TLE	0.090				0.090	0.014			14(4)
1060-33-24	15(4)	4.20	MILWAUKEE COUNTY	FEE,PLE,TLE	3.468	0.178		0.178	3.290	0.203	0.731		15(4)
1060-33-24	16(6)	4.19,4.20	THE ESTATE OF THE ARCHDIOCESE OF MILWAUKEE	FEE	15.839	1.251		1.251	14.588				16(6)
1060-33-24	17(6)	4.17	MARY E. DUNLAP	FEE	0.184	0.007		0.007	0.177				17(6)
1060-33-24	18(6)	4.17	HYAESUNG MIN KIM	FEE,TLE	0.309	0.001		0.001	0.308	0.018			18(6)
1060-33-24	19(6)	4.17	KEITH L. STAMM &SHARON L. STAMM HW	FEE,TLE	0.096	0.001		0.001	0.095	0.004			19(6)
1060-33-24	20(6)	4.17	THE BANK OF NEW YORK, MELLON ET AL.	FEE,TLE	0.091	14SqFt		14SqFt	0.091	0.003			20(6)
1060-33-24	21(6)	4.17	AGNES & CHARLES F BURKHALTER	TLE	0.088				0.088	0.004			21(6)
1060-33-24	22(6)	4.17,4.18	JACQUELINE L. SYDLO	TLE	0.085				0.085	0.004			22(6)
1060-33-24	23(6)	4.18	PAUL E. & LISA M. REGALADO	TLE	0.099				0.099	0.004			23(6)
1060-33-24	24(6)	4.18	JESSICA M. THIELEN	TLE	0.088				0.088	0.005			24(6)
1060-33-24	25(6)	4.18	MEGAN HANSBURG	TLE	0.096				0.096	0.003			25(6)
1060-33-24	29(6)	4.18	FRANCISCA GARZA-KRAUSE	TLE	0.076				0.076	0.005			29(6)
1060-33-24	30(3)	4.12-4.17	WISCONSIN ELECTRIC POWER COMPANY (WEPCO)	FEE,TLE	VAST	17.689	14.558	32.247	VAST	0.192			30(3)
1060-33-24	31(6)	4.18	JAMES J. & KIMBERLY R. ZEMAN	TLE	0.096				0.096	0.003			31(6)
1060-33-24	33(6)	4.18	KOSTA PAGOULATOS	TLE	0.127				0.127	0.002			33(6)
1060-33-24	34(6)	4.18	ROCCO J ADORNATO ET AL	TLE	0.241				0.241	0.013			34(6)
1060-33-24	35(6)	4.18	MELINDA & ELLY SMYCZEK	TLE	0.182				0.182	0.009			35(6)
1060-33-24	36(6)	4.18	JESSE J. HOUTLER	TLE	0.200				0.200	0.009			36(6)
1060-33-24	37(6)	4.18	BENJAMIN R. KOEHLER	TLE	0.200				0.200	0.003			37(6)

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REVISION DATE
MAY 23, 2012
JULY 11, 2012
SEP. 28, 2012
DEC. 17, 2012
APR. 17, 2013

DATE FEB. 29, 2012

HWY: IH 94
COUNTY: MILWAUKEE

STATE R/W PROJECT NUMBER 1060-33-24
CONSTRUCTION PROJECT NUMBER 1060-33-81

PLAT SHEET 4.02
PS&E SHEET

E

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

* DENOTES AREA COMPUTED

PROJECT FUNDING I.D.	PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED (ACRES) NEW	EXISTING	TOTAL	TOTAL REMAINING ACRES	TLE ACRES	PLE ACRES	HE ACRES	PARCEL NUMBER
1060-33-24	39(6)	4.18	FAITH UNITED METHODIST CHURCH, INC	TLE	0.201				0.201	0.003			39(6)
1060-33-25	40(6)	4.18	FAITH UNITED METHODIST CHURCH, INC	TLE	0.294				0.294	0.003			40(6)
1060-33-24	41(6)	4.18	DANIEL J GLEASON	FEE, TLE	0.161	0.007		0.007	0.154	0.011			41(6)
1060-33-24	42(6)	4.18	JACOB & KATHLEEN E SCEPANSKI	FEE, TLE	0.121	0.009		0.009	0.112	0.012			42(6)
1060-33-24	43(6)	4.18	JENNIFER L FEATHER	FEE, TLE	0.121	0.005		0.005	0.116	0.005			43(6)
1060-33-24	44(6)	4.18	PETER A KORNACKI & CRYSTAL GANS	TLE	0.121	0.002		0.002	0.119	0.006			44(6)
1060-33-24	45(6)	4.18	ZELDA JERVAN TRUST D 4-20-06	TLE	0.121				0.121	0.006			45(6)
1060-33-24	46(6)	4.18	JAYESHKUMAR B PATEL	TLE	0.143				0.143	0.003			46(6)
1060-33-24	47(6)	4.18	KEVIN W & ANGELA GLASESKE	TLE	0.143				0.143	0.011			47(6)
1060-33-24	48(6)	4.18	PRESTON L & RUTH S MCLEAN	TLE	0.337				0.337	0.034			48(6)
1060-33-24	49(6)	4.18	RUSSELL & MARYLIN J STEINKE	TLE	0.141				0.141	0.047			49(6)
1060-33-24	50(6)	4.18	RICHARD J BATTIOLA & DANIEL J BATTIOLA	FEE, TLE	0.460	0.039		0.039	0.421	0.029			50(6)
1060-33-24	51(6)	4.18, 4.19	GENEVA EXCHANGE FUND I, LLC	FEE,PLE,TLE	3.161	0.145		0.145	3.016	0.090	0.280		51(6)
1060-33-24	52(6)	4.19	GENEVA OFFICE EXCHANGE V, LLC, ET AL	FEE,PLE	6.945	0.518		0.518	6.427		0.252		52(6)
1060-33-24	53(6)	4.19	GENEVA HC2X XXII LLC	FEE,PLE	7.662	0.895		0.895	6.767		0.374		53(6)
1060-33-24	54(6)	4.18, 4.19	JAMES BLACK	TLE	0.176				0.176	0.003			54(6)
1060-33-24	55(6)	4.19	ROBERT M. & SABINE M. KOSANKE	TLE	0.200				0.200	0.003			55(6)
1060-33-24	57(6)	4.19	JOHN M. HUBATCH	TLE	0.130				0.130	0.003			57(6)
1060-33-24	58(6)	4.19	AUGUST F. & JUDITH R. DASCENZO	TLE	0.115				0.115	0.003			58(6)
1060-33-24	61(6)	4.19	BRANDON T LINDEMAN	TLE	0.103				0.103	18SqFt			61(6)
1060-33-24	62(6)	4.19	MARK R. MONTY	TLE	0.200				0.200	0.002			62(6)
1060-33-24	64(6)	4.19	GREG S .MATZEK	TLE	0.093				0.093	0.002			64(6)
1060-33-24	65(6)	4.19	DEBORAH A. WILLIAMS	TLE	0.093				0.093	0.002			65(6)
1060-33-24	67(6)	4.20	ANNA A LACKOVIC, C/O JAMES J LACKOVIC	TLE	0.080				0.080	12Sqft			67(6)
1060-33-24	68(6)	4.19	DAWN SCHLECHTA	TLE	0.103				0.103	0.002			68(6)
1060-33-24	69(6)	4.17	WISCONSIN BELL INC	TLE	7.554				7.554	0.043			69(6)
1060-33-24	70(6)	4.20,4.21	TRUSTEES OF MILWAUKEE BOY SCOUT FUND	FEE,TLE	1.227	0.177		0.177	1.050	0.058			70(6)
1060-33-24	71(6)	4.20	CITY OF MILWAUKEE, FIRE-HOUSE	TLE	0.799				0.799	0.024			71(6)
1060-33-24	72(6)	4.21	GEBHARD LIMITED PARTNERSHIP	TLE	0.115				0.115	0.006			72(6)
1060-33-24	73(6)	4.09	JHF INVESTMENTS II, LLC	PLE	1.182				1.182		0.193		73(6)

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REVISION DATE	DATE APR. 17, 2013		HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.03	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET	E

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

* DENOTES AREA COMPUTED

PROJECT FUNDING I.D.	PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED (ACRES) NEW	EXISTING	TOTAL	TOTAL REMAINING ACRES	TLE ACRES	PLE ACRES	HE ACRES	PARCEL NUMBER
1060-33-24	74(6)	4.12	AMERICAN TRANSMISSION COMPANY	FEE	16.797	0.329		0.329	16.468				74(6)
1060-33-24	75(6)	4.16	MOTHS FAMILY LTD PTN	FEE, PLE	6.399	0.029		0.029	6.370		0.235		75(6)
1060-33-24	76(6)	4.16	WISCONSIN MONTESSORI SOCIETY INC	FEE, PLE	4.729	0.452		0.452	4.277		0.095		76(6)
1060-33-24	77(6)	4.16	ST THERESE CONGREGATION	FEE, TLE	4.231	0.945		0.945	3.286	0.131			77(6)
1060-33-24	78(6)	4.15	SHIRLEY KEWAN	FEE, TLE	1.819	0.012		0.012	1.807	0.086			78(6)
1060-33-24	79(6)	4.09	MILWAUKEE COUNTY	PLE	39.558				39.558		0.346		79(6)
1060-33-24	104(6)	4.13-4.16	MILWAUKEE COUNTY	FEE,HE, PLE, TLE	VAST	8.056		8.056	VAST	3.790	0.065	0.037	104(6)
1060-33-24	130(5)	4.14,4.15	WISCONSIN ELECTRIC POWER COMPANY (WEPCO)	FEE,TLE	VAST	1.246		1.246	VAST	5.350			130(5)
1060-33-24	500(4)	4.13,4.14,4.15,4.18,4.21,4.22	WE ENERGIES - ELECTRIC	ROR									500(4)
1060-33-24	501(2)	4.14, 4.20, 4.21	WE ENERGIES - GAS	ROR									501(2)
1060-33-24	504(4)	4.14,4.18,4.21,4.22	AT&T WISCONSIN	ROR									504(4)
1060-33-24	505(5)	4.12-4.17	AMERICAN TRANSMISSION COMPANY	ROR									505(5)
1060-33-24	506(6)	4.09, 4.21	MILWAUKEE METROPOLITAN SEWERAGE DISTRICT	ROR									506(6)
1060-33-24	508(2)	4.13, 4.14	US SPRINT	ROR									508(2)
1060-33-24	521(6)	4.18 - 4.21	CITY OF MILWAUKEE - SEWER	ROR									521(6)
1060-33-24	522(4)	4.19, 4.20	CITY OF MILWAUKEE - WATER	ROR									522(4)
1060-33-24	523(4)	4.20	CITY OF MILWAUKEE - CABLE	ROR									523(4)
1060-33-24	524(4)	4.20	CITY OF MILWAUKEE - CONDUIT	ROR									524(4)
1060-33-24	553(3)	4.14	CITY OF WEST ALLIS - STORM	ROR									553(3)
1060-33-24	UA641(2)	4.14	ELIMINATED										UA641(2)

REVISION DATE	DATE APR. 17, 2013		HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.04	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET	E

CITY

OF

WAUKESHAKE COUNTY

MILWAUKEE COUNTY

SECTION 30

SECTION 25

SE-SE

SW-SW

SE-SW

SW-SE

NE-NE

NW-NW

NW-NE

NE-NW

SE-NE

SW-NW

SE-NW

SW-NE

SE-NE

N. 116TH STREET

N. 115TH STREET

N. 114TH STREET

N. 113TH STREET

N. 112TH STREET

N. 111TH STREET

N. 110TH PLACE

N. 110TH STREET

N. 12TH STREET

N. 120TH STREET

S. CURTIS ROAD

S. 118TH STREET

S. 116TH STREET

UNDERWOOD PARKWAY

W. RIPLEY AVENUE

W. PARK HILL AVENUE

W. FAIRVIEW AVENUE

WAUWATOSA

CITY OF WAUWATOSA

CITY OF WEST ALLIS

WEST ALLIS

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

R/L IH 94

90EW

100EW

110EW

120EW

130EW

140EW

150EW

BEGIN RELOCATION ORDER
STA 100EW+24.74

SHEET 4.09

SHEET 4.10

SHEET 4.11

SHEET 4.12

SHEET 4.13

BROOKFIELD

T-7-N

R-20-E

R-21-E

4

4

REVISION DATE APR. 17, 2013 JULY 11, 2012 SEP. 28, 2012 DEC. 17, 2012	DATE MAY 23, 2012	SCALE, FEET 0 200 400	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.05
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040405_RL.dgn PLOT DATE : 18-APR-2013 07:15 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 400:1

4

4

R-21-E

CITY OF WAUWATOSA

CITY OF MILWAUKEE

CITY OF MILWAUKEE

CITY OF WEST ALLIS

CITY OF MILWAUKEE

NW-NW

NE-NW

NW-NE

T-7-N

N. MAYFAIR ROAD

STH 100

UNION PACIFIC RAILROAD

CITY OF MILWAUKEE

CITY OF WEST ALLIS

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

SE-NW

SW-NE

SW-NW

NW-SW

NE-SW

S. 105TH STREET

W. BUNGALOW PARKWAY

W. SCHLINGER AVENUE

SECTION 32

W. DIXON STREET

W. CHESTER STREET

W. ADLER STREET

S. 94TH STREET

S. 93RD STREET

S. 92ND STREET

S. 91ST PLACE

S. 91ST STREET

S. 98TH STREET

S. 97TH STREET

S. 100TH STREET

R/L IH 94

R/L USH 45

160EW

170EW

180EW

190EW

200EW

210EW

285NS

290NS

295NS

300NS

305NS

310NS

MILWAUKEE COUNTY ZOO

CITY OF MILWAUKEE

CITY OF WEST ALLIS

CITY OF MILWAUKEE

CITY OF WEST ALLIS

CITY OF MILWAUKEE

CITY OF WEST ALLIS

R-21-E

CITY OF WAUWATOSA
CITY OF MILWAUKEE

W. WISCONSIN AVENUE

CITY OF WAUWATOSA
CITY OF MILWAUKEE

N. 95TH STREET

330NS

FRONTAGE ROAD

CITY OF WAUWATOSA

SECTION 29

NW-SE

NE-SE

W. BLUE MOUND ROAD

USH 18

CITY OF WAUWATOSA
CITY OF MILWAUKEE

320NS

W. ST. PAUL AVE.

77

76

R/L USH 45

SE-SW

SW-SE

SE-SE

SW-SW

SHEET 4.13

104

75

SHEET 4.16

310NS

MILWAUKEE

SHEET 4.17

NW-NE

NE-NW

SECTION 32

30

NE-NE

NW-NW

SHEET 4.15

W. DIXON ST.

SHEET 4.18

48

50

1

300NS

R-21-E

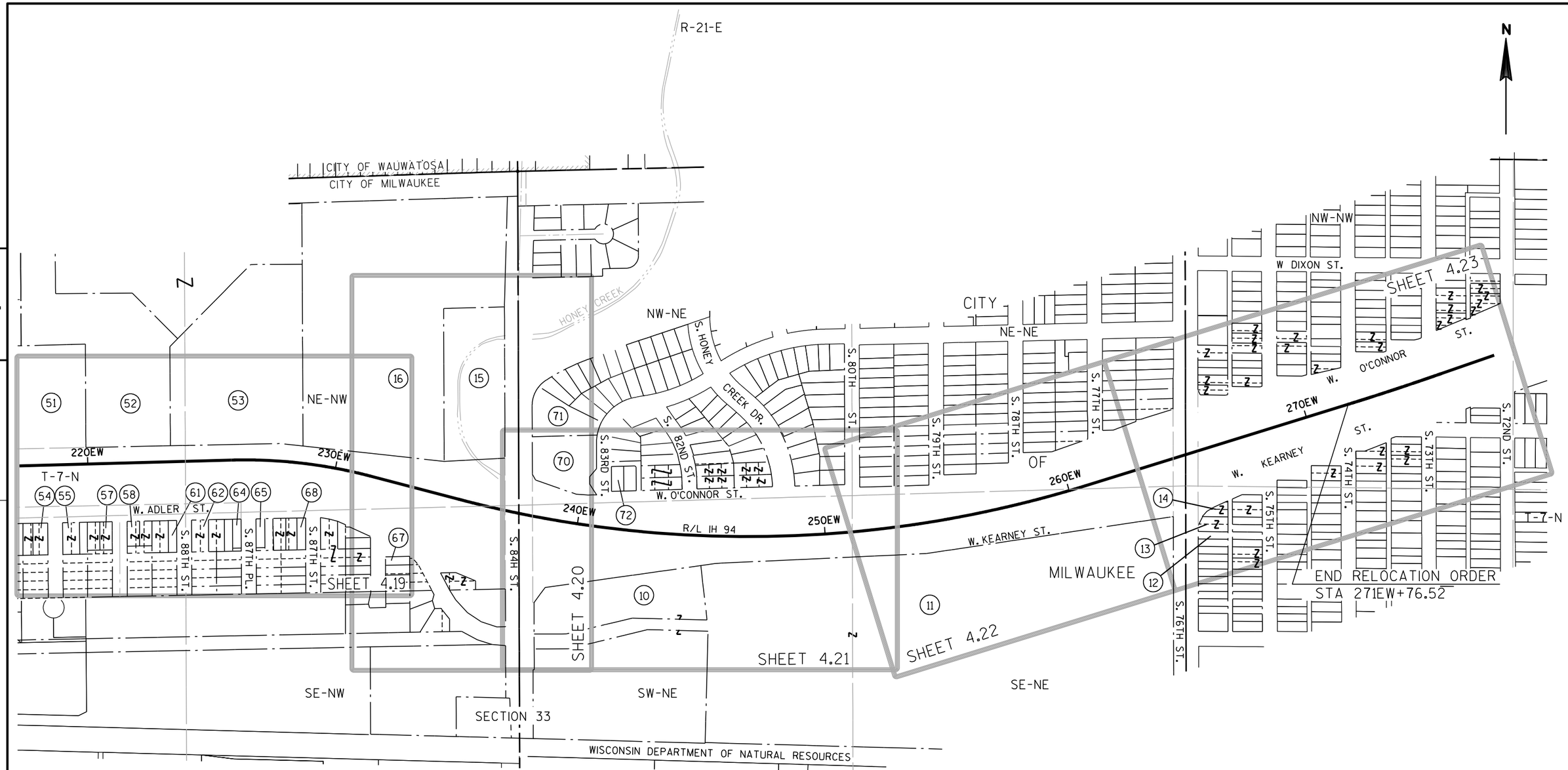
4

4

N

REVISION DATE DEC. 17, 2012 MAY 23, 2012 APR. 17, 2013 JULY 11, 2012 SEP. 28, 2012	DATE FEB. 29, 2012	SCALE, FEET 0 200 400	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.07
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040407_RL.dgn PLOT DATE : 15-APR-2013 15:10 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 400:1



R-21-E

REVISION DATE DEC. 17, 2012 MAY 23, 2012 APR. 17, 2013 JULY 11, 2012 SEP. 28, 2012	DATE FEB. 29, 2012	SCALE, FEET 0 200 400	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.08
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040408_RL.dgn PLOT DATE : 15-APR-2013 15:11 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 400:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	194-4(25)301	1956	VARIES
UNDERWOOD PARKWAY	--	--	NONE
S. CURTIS ROAD	CSM 2099	--	45'
S. CURTIS ROAD	CSM 3085	1977	45'

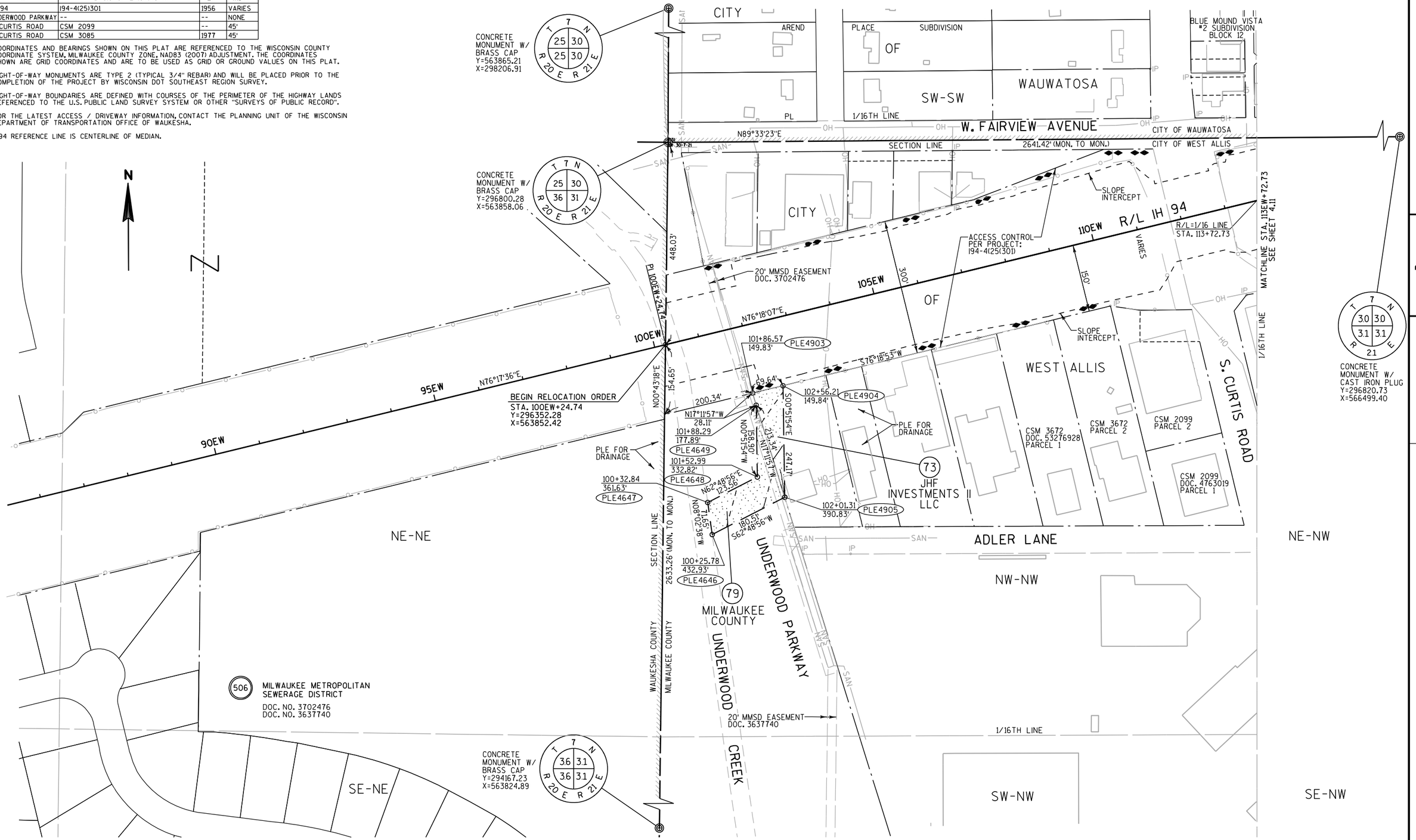
COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.



REVISION DATE	DATE APR. 17, 2013	SCALE, FEET 0 100 200	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.09	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040409_RP.dgn PLOT DATE : 15-APR-2013 15:12 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 200:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	194-4(25)301	1956	VARIES
RIPLEY STREET	BLUE MOUND VISTA	UNRECORDED	70'
116TH STREET	CSM 6954	2001	45' EAST
116TH STREET	PLAT OF SURVEY	1992	30' WEST
118TH STREET	CSM 3085	1977	60'
120TH STREET	CSM 4049	1980	60'
FAIRVIEW	BLUE MOUND VISTA 2	UNRECORDED	45' NORTH
FAIRVIEW	194-4-(25) 301	1956	VARIES

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I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

RL IH-94
PI STA. 133+71.51
Y : 297144.82
X : 567103.99
DELTA = 41°01'00"
D = 1°19'57"
T = 1608.42'
L = 3078.28'
R = 4300.00'

C1
L = 193.46
R = 3889.72
LC = 193.44
LCB = S85°28'41"W

4

N

CONCRETE MONUMENT W/ BRASS CAP
Y=296800.28
X=563858.06

T 7 N
R 20 E R 21 E
25 30
36 31

N. 120TH ST.

60'

W. FAIRVIEW AVENUE

VARIES

SECTION LINE

N89°33'23"E

1/16TH LINE

R/L IH 94

115EW

N76°18'07"E

PC 117EW+63.09

R/L=1/16 LINE
STA. 113+72.73

SEE SHEET 4.09
MATCHLINE STA. 113EW+72.73

SLOPE INTERCEPT

ACCESS CONTROL PER PROJECT: 194-4(25(301)

CITY

CSM 3085
PARCEL 1

CSM 3085
PARCEL 2

60'

S. 118TH ST.

CSM 4049
DOC. 05483749
PARCEL 1

CSM 4049
PARCEL 2

BLOCK 11

20 19 18 17 16 15

W. RIPLEY AVENUE

70'

BLUE MOUND VISTA
#2 SUBDIVISION
BLOCK 9

SE-SW

OF

SLOPE INTERCEPT

WAUWATOSA

120EW

2641.42' (MON. TO MON.)

CITY OF WAUWATOSA
CITY OF WEST ALLIS

125EW

R/L=1/4 LINE
STA. 127+30.62

63.90'
65.08'

MATCHLINE
SEE SHEET 4.12

1/4 LINE
S00°16'22"E
2645.75' (MON. TO MON.)

CONCRETE MONUMENT W/ BRASS CAP
Y=299466.45
X=566486.80

T 7 N
R 21 E
30 30
30 30

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

100'

S63°23'39"E

HIGHWAY EASEMENT

5

HE4608 126+58.48 150.81'

N63°23'39"W 78.25'

164.66'

N79°12'38"E

HE4607 125+00.52 127.97'

43.47'

S63°23'39"E

C1

ERW4605 127+25.55 114.16'

ERW4606 125+37.08 106.08'

223.31'

W. FAIRVIEW AVENUE

OF

NE-NW

WEST ALLIS

5 R/L IH 94

1/4 LINE

S. 116TH STREET

1/4 LINE
S00°00'23"E
2652.51' (MON. TO MON.)

CONCRETE MONUMENT W/ CAST IRON PLUG
Y=296820.73
X=566499.40

T 7 N
R 21 E
30 30
31 31

CONCRETE MONUMENT W/ BRASS CAP
Y=294168.22
X=566499.70

T 7 N
R 21 E
31 31
31 31

505 AMERICAN TRANSMISSION COMPANY
PARCEL 30 - DOC. NO. 8013173

SHEET 4.10 OMITTED

4

REVISION DATE	DATE APR. 17, 2013	SCALE, FEET 0 50 100	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.11	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040411_RP.dgn PLOT DATE : 18-APR-2013 07:50 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	I 94-4(25)301	1960	VARIES
116TH STREET	I 94-4(25)301	1960	45'(EAST)

505 AMERICAN TRANSMISSION COMPANY
PARCEL 30 - DOC. NO. 8013173

RL IH-94
PI STA. 133+71.51
Y : 297144.82
X : 567103.99
DELTA = 41°01'00"
D = 1°19'57"
T = 1608.42'
L = 3078.28'
R = 4300.00'

C1
L = 217.57
R = 3749.72
LC = 217.53
LCB = N89°14'18"E

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

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FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

CONCRETE MONUMENT W/ BRASS CAP
Y=299466.45
X=566486.80

PI

UNPLATTED LANDS "CHIPPEWA PARK"

ACCESS CONTROL PER PROJECT: I-94-4(25)301

N89°41'44"E 380.00'

CITY OF WAUWATOSA

S73°03'11"E 1146.46'

1/16TH LINE

SEE SHEET 4.13 MATCHLINE

SLOPE INTERCEPT PROJ. ID# 1060-33-80

SLOPE INTERCEPT PROJ. ID# 1060-33-75

S00°16'22"E 1/4 LINE 2645.75' (MON. TO MON.)

SW-SE OF

VARIES

WAUWATOSA

CITY OF WEST ALLIS

1331.22'

133.77'

R/L IH 94

R/L=1/4 LINE STA. 127+30.62

R/L=1/16TH LINE STA. 140+81.63

R/L=SECTION LINE STA. 135+18.31

S89°41'44"W 2662.45' (MON. TO MON.)

130EW

135EW

140EW

129+93.74 ERW4601 16.38'

128+57.86 ERW4604 64.33'

127+75.29 ERW4600 24.00'

ERW4093 140+02.36 14.66'

S66°27'27"E 87.32'

140+89.46 25.04' ERW4094

753.60'

C1

SECTION LINE

132+43.08 PRW4092 116.81'

S86°40'44"E

91.13'

125.92'

124.71'

170.22'

482.13'

216.95'

470.23'

S75°40'21"E

ACCESS CONTROL PER PROJECT: I-94-4(25)301

30 WEPCO

UNPLATTED LANDS

CONCRETE MONUMENT W/ CAST IRON PLUG
Y=296820.73
X=566499.40

7182 30-7-21

S62°01'54"W 91.62'

SLOPE INTERCEPT PROJ. ID# 1060-33-80

MATCH LINE SEE SHEET 4.11

65.08'

100.38'

211.37'

S65°32'51"W

129+73.37 PRW4599 116.93'

S63°23'39"E

HE4598 134+55.55 188.07'

HIGHWAY EASEMENT

5

100'

S63°23'39"E

PL

SLOPE INTERCEPT PROJ. ID# 1060-33-80

SLOPE INTERCEPT PROJ. ID# 1060-33-75

SEE SHEET 4.13 MATCHLINE

CITY

NW-NE OF

74 ATC

ERW4603 127+75.55 107.78'

1/4 LINE

45'

127+75.18 PRW4602 208.16'

S00°00'23"E 2652.51' (MON. TO MON.)

S. 116TH ST.

CSM 6954 PARCEL 2 DOC. 8074804 R. 5084 - I. 903-908

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

1613.39'

WEST ALLIS

CSM 6954 PARCEL 1

SUB STATION

CONCRETE MONUMENT W/ BRASS CAP
Y=294168.22
X=566499.70

CONCRETE MONUMENT W/ BRASS CAP
Y=296834.88
X=569161.81

REVISION DATE APR. 17, 2013 JULY 11, 2012 SEP. 28, 2012 DEC. 17, 2012	DATE MAY 23, 2012	SCALE, FEET 0 50 100	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.12	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040412_RP.dgn PLOT DATE : 18-APR-2013 13:28 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	I 94-4(25)301	1960	VARIES
STH 100	MILWAUKEE COUNTY CODE 41.02	-	120'
STH 100	I 94-4(25)301	1960	VARIES

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

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I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

RAILROAD REFERENCE LINE IS CENTERLINE OF WEST RAILS.

SIGN	OWNER	DOCUMENT NO.
2-1	LAMAR	NO RECORD
2-2	CLEAR CHANNEL	NO RECORD
2-3	CLEAR CHANNEL	NO RECORD

500 WE-ENERGIES ELECTRIC
EXISTING RIGHTS IN FEE R/W - DOC. NO. 3852603

505 AMERICAN TRANSMISSION COMPANY
PARCEL 30 - DOC. NO. 8013173
EXISTING RIGHTS IN FEE R/W - DOC. NO. 10050216

508 US SPRINT
PARCEL 2 - DOC. NO. 6463414 (BLANKET)

RL IH-94
PI STA. 133+71.51
Y : 297144.82
X : 567103.99
DELTA = 41°01'00"
D = 1°19'57"
T = 1608.42'
L = 3078.28'
R = 4300.00'

RL RR
PI STA. 4754+09.89
Y : 296455.31
X : 569403.52
DELTA = 1°52'39"
D = 1°00'00"
T = 93.89'
L = 187.76
R = 5729.65
SC STA. 4753+16.00
Y : 296362.56
X : 569418.08
CS STA. 4755+03.75
Y : 296548.48
X : 569392.01

CONCRETE MONUMENT W/ BRASS CAP
Y=296838.79
X=571815.34

CONCRETE MONUMENT W/ BRASS CAP
Y=296834.88
X=569161.81

CONCRETE MONUMENT W/ ALUMINUM CAP
Y=294177.71
X=569169.56

REVISION DATE APR. 17, 2013 JULY 11, 2012 SEP. 28, 2012 DEC. 17, 2012	DATE MAY 23, 2012	SCALE, FEET 0 100 200	HWY: IH-94
COUNTY: MILWAUKEE	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.13	
CONSTRUCTION PROJECT NUMBER 1060-33-81 1060-33-75	PS&E SHEET	E	

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040413_RP.dgn PLOT DATE : 18-APR-2013 13:31 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 200:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	I 94-4(25)301	1960	VARIES
STH 100	I 94-4(25)301	1960	VARIES
STH 100	MILWAUKEE COUNTY CODE 41.02	-	120'

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I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

RAILROAD REFERENCE LINE IS CENTERLINE OF WEST RAILS.

RL IH-94
PI STA. 176+55.69
Y : 295115.04
X : 571033.47
DELTA = 42°11'33"
D = 1°49'18"
T = 1213.32'
L = 2315.97
R = 3145.00

RL RR
PI STA. 4739+82.06
Y : 295046.94
X : 569638.50
DELTA = 1°52'39"
D = 1°00'00"
T = 93.89'
L = 187.76
R = 5729.65
SC STA. 4738+88.18
Y : 294955.07
X : 569657.86
CS STA. 4740+75.93
Y : 295139.40
X : 569622.17

RL RR
PI STA. 4729+36.11
Y : 294025.03
X : 569861.56
DELTA = 1°51'37"
D = 1°00'00"
T = 93.03'
L = 186.04
R = 5729.65
SC STA. 4728+43.07
Y : 293933.43
X : 569877.78
CS STA. 4730+29.12
Y : 294116.07
X : 569842.38

C4 L = 241.52 R = 1164.00 LC = 241.09 LCB = N84°24'41"E
C5 L = 944.26 R = 1104.00 LC = 915.74 LCB = N61°10'09"E
C6 L = 520.07 R = 1104.00 LC = 515.27 LCB = N72°10'35"E
C7 L = 89.21 R = 892.20 LC = 89.18 LCB = N57°00'01"W
C8 L = 120.98 R = 804.55 LC = 120.87 LCB = N38°18'12"W
C9 L = 116.12 R = 804.55 LC = 116.02 LCB = N27°14'24"W
C10 L = 25.26 R = 5558.16 LC = 25.26 LCB = S86°35'53"E

REVISION DATE JULY 11, 2012 SEP. 28, 2012 DEC. 17, 2012 APR. 17, 2013	DATE MAY 23, 2012	SCALE, FEET 0 100 200	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.14
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81 1060-33-75	PS&E SHEET E

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	I 94-4(41)301	1960	VARIES
IH 94	I 94-4(25)301	1956	VARIES
W. SCHLINGER AVE.	RESOLUTION #17977 (DOC. 4837728)	1974	66'

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

500 WE ENERGIES - ELECTRIC
DOC. NO. 3883023

505 AMERICAN TRANSMISSION COMPANY
PARCEL 30 - DOC. NO. 8013173
- DOC. NO. 8013174
EXISTING RIGHTS IN FEE R/W
- DOC. NO. 10071585

506 MMSD SANITARY
PARCEL 130 - RESOLUTION 66-204

522 CITY OF MILWAUKEE - WATER
DOC. NO. 4554365

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

S. 100TH ST.

CITY

WEPCO

MILWAUKEE COUNTY

MILWAUKEE

WEST ALLIS

W. SCHLINGER AVENUE

VACATED BARNEKOW AVENUE DOC. 3821671

VACATED 100TH STREET DOC. 4116000

VACATED 99TH ST. DOC. 4116000

VACATED 98TH ST. DOC. 4116000

VACATED DIXON STREET DOC. 4116000

MIDWAY PARK SUBDIVISION

CSM 6198 DOC. 7187062 PARCEL 1

CSM 6198 PARCEL 2

UNPLATTED LANDS

UNPLATTED LANDS

CITY OF MILWAUKEE WATER EASEMENT DOC. 4454365

MMSD BY COUNTY RESOLUTION FILE 66-204

ACCESS CONTROL ACQUIRED PER I-94-4(25)301

HIGHWAY EASEMENT DOC. 3939730

HIGHWAY EASEMENT DOC. 3939729

ATC TRANSMISSION RIGHTS DOC. 8013173

ATC TRANSMISSION RIGHTS DOC. 8013174

WEPCO ELECTRIC RIGHTS DOC. 3883023
ATC TRANSMISSION RIGHTS DOC. 10071585

TLE FOR SLOPES & UTILITIES

TLE FOR UTILITIES DOC. 4116000

TLE FOR SLOPES AND DRIVE

SLOPE INTERCEPT PROJ. ID# 1060-33-78

SLOPE INTERCEPT PROJ. ID# 1060-33-81

SLOPE INTERCEPT PROJ. ID# 1060-33-88

SEE SHEET 4.14 MATCHLINE

SEE SHEET 4.16 MATCHLINE STA. 305NS+00.00

SEE SHEET 4.17

SOUTH LIMITS=SECTION LINE STA. 280NS+16.20

CONCRETE MONUMENT W/ BRASS CAP Y=294186.58 X=571043.81

CONCRETE MONUMENT W/ BRASS CAP Y=294185.74 X=571822.63

CONCRETE MONUMENT W/ BRASS CAP W/ MONUMENT Y=296838.79 X=571815.34

CONCRETE MONUMENT W/ BRASS CAP Y=294195.84 X=571472.02

R/L=SECTION LINE STA. 183EW+63.77

R/L IH 894/USH 45

PT 286NS+60.56

PT 187EW+58.35

STA. 188EW+91.11= 293NS+24.61

STA. 197EW+25.25

PC 195EW+98.85

PC 302NS+37.22

185EW

190EW

195EW

1/16TH LINE

1/4 LINE

SECTION LINE

MATCHLINE STA. 305NS+00.00

2653.06' (MON. TO MON.)

2649.41' (MON. TO MON.)

2323.22'

2428.23'

	RL IH-94	RL IH-94	RL IH-894/USH 45	RL IH-894/USH 45
PI STA.	176+55.69	198+20.19	281+16.88	309+62.35
Y :	295115.04	295699.05	294288.04	297041.88
X :	571033.47	573232.40	572018.44	572760.64
DELTA =	42°11'33"	13°17'23"	15°24'03"	10°16'54"
D =	1°49'18"	3°00'56"	1°24'28"	0°42'39"
T =	1213.32'	221.34'	550.32'	725.12'
L =	2313.97'	440.70	1094.01	1446.35
R =	3145.00	1900.00	4070.00	8060.00

C4	C8	C11	C12
L = 764.60	L = 173.09	L = 221.70	L = 158.39
R = 1164.00	R = 5558.16	R = 1164.00	R = 1164.00
LC = 750.93	LC = 173.08	LC = 221.37	LC = 158.27
LCB = N32°57'18"E	LCB = S87°37'13"E	LCB = N27°23'24"E	LCB = N18°02'07"E

C5	C9	C13	C14
L = 944.26	L = 116.12	L = 24.79	L = 17.42
R = 1104.00	R = 804.55	R = 5558.16	R = 5658.16
LC = 915.74	LC = 116.02	LC = 24.79	LC = 17.42
LCB = N61°10'09"E	LCB = N27°14'24"W	LCB = S86°51'22"E	LCB = N87°09'25"W

C7	C10	C15
L = 424.19	L = 384.50	L = 132.54
R = 1104.00	R = 1164.00	R = 1164.00
LC = 421.58	LC = 382.76	LC = 132.47
LCB = N47°40'26"E	LCB = N42°18'35"E	LCB = S17°23'56"W

REVISION DATE SEP. 28, 2012 DEC. 17, 2012 APR. 17, 2013	DATE JULY 11, 2012	SCALE, FEET 0 100 200	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.15	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-78, 1060-33-81 1060-33-88	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040415_RP.dgn PLOT DATE : 18-APR-2013 13:34 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 200:1

R/W 1060-33-24 4.15

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	I 94-4(41)301	1959	VARIES
USH 45	U 03-I(75)	1959	VARIES
W. BLUE MOUND RD.	U 03-I(75)	1959	120'
N. 95TH ST.	BLUE MOUND RIDGE	1927	VARIES
N. 97TH ST.	AVONDALE	1924	60'
N. 98TH ST.	AVONDALE	1924	60'

CONCRETE MONUMENT W/ BRASS CAP Y=296838.79 X=571815.34

RL USH 45
PI STA. 309+62.35
Y : 297041.88
X : 572760.64
DELTA = 10°16'54"
D = 0°42'39"
T = 725.12
L = 1446.35
R = 8060.00

RL W. BLUE MOUND RD.
PI STA. 195+12.07
Y : 298336.33
X : 572646.14
DELTA = 4°49'23"
D = 3°47'04"
T = 63.76
L = 127.44
R = 1514.00

S00°18'45"E 2666.98' (MON. TO MON.) 716.48' 1377.67' 35.07'

874.83'

2643.54' (MON. TO MON.)

C1 L = 153.73 R = 863.90 LC = 153.52 LCB = N00°53'59"W
C2 L = 84.78 R = 60.42 LC = 78.00 LCB = N51°37'24"W
C3 L = 424.26 R = 1969.25 LC = 423.44 LCB = N00°22'12"E
C4 L = 113.85 R = 1969.25 LC = 113.83 LCB = S04°08'44"E
C5 L = 218.26 R = 1969.25 LC = 218.15 LCB = N00°41'09"E
C6 L = 92.15 R = 1969.25 LC = 92.14 LCB = N05°12'05"E
C7 L = 129.27 R = 1959.25 LC = 129.25 LCB = S01°57'53"W
C8 L = 167.24 R = 1461.48 LC = 167.15 LCB = S03°29'38"E
C9 L = 310.41 R = 1969.25 LC = 310.09 LCB = S02°01'35"W

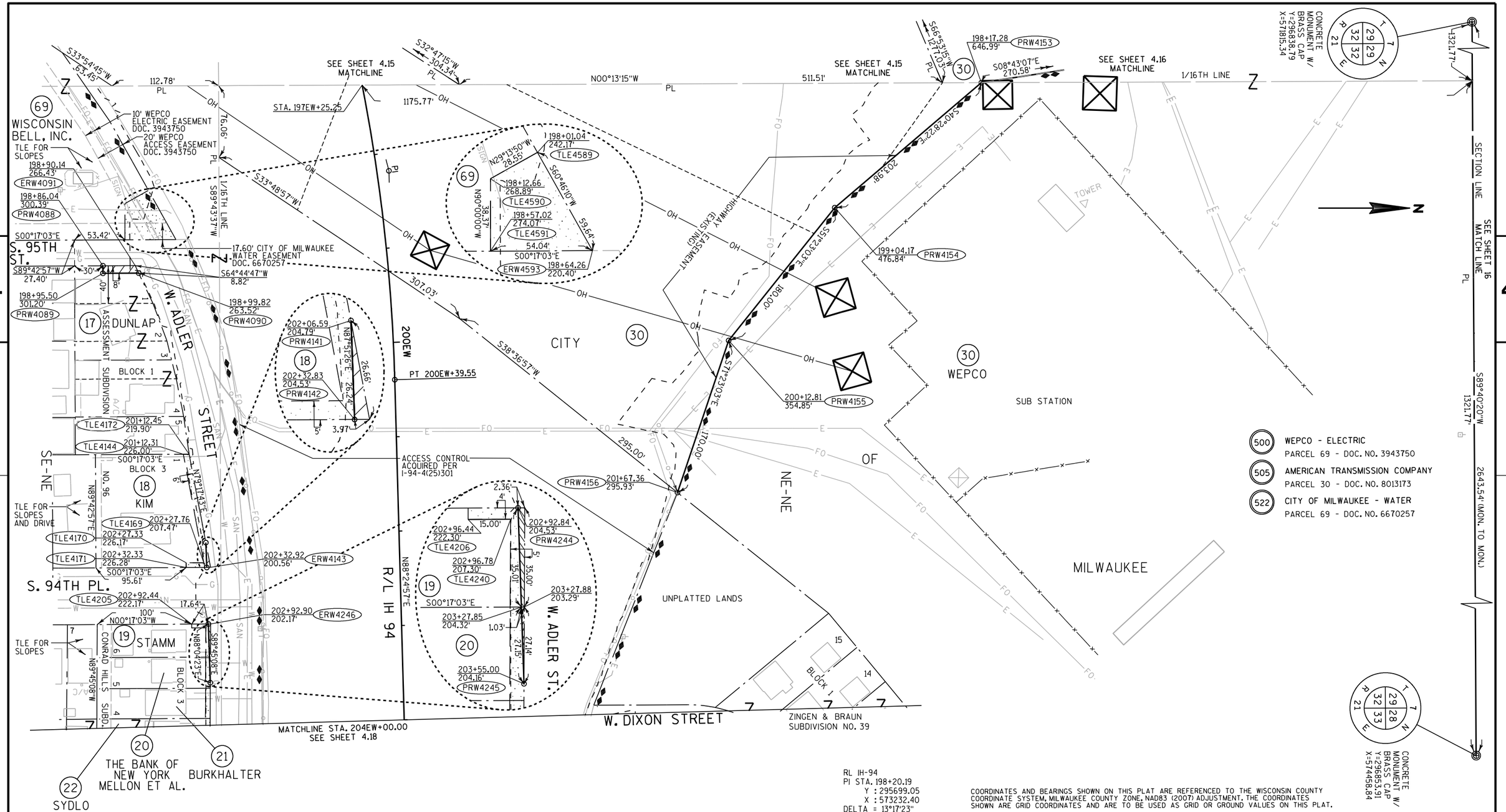
1/4 LINE
SANITARY EASEMENT DOC. 4130478
MMSD BY COUNTY RESOLUTION FILE 66-204
VACATED 100TH STREET DOC. 4116000
1/16TH LINE
TLE FOR UTILITIES
25' CITY OF MILWAUKEE SEWER EASEMENT DOC. 3928124
TLE FOR SLOPES AND UTILITIES
UNPLATTED LANDS
7' WE ENERGIES ELECTRIC EASEMENT DOC. 3352525
CITY OF MILWAUKEE
CITY OF WAUWATOSA
CITY OF MILWAUKEE WATER EASEMENT DOC. 3889179
10' WEPCO/AT&T WISCONSIN EASEMENT DOC. 3532880
10' WEPCO EASEMENT DOC. 5029286
10' WE ENERGIES ELECTRIC/ COMMUNICATION EASEMENT DOC. 8720257
20' CITY OF MILWAUKEE WATER EASEMENT DOC. 4454365
ACCESS CONTROL ACQUIRED PER PROJECT U 03-I(75)
ACCESS CONTROL ACQUIRED PER I-94-4(25)301
ATC TRANSMISSION RIGHTS DOC. 8013173
10' WE ENERGIES ELECTRIC EASEMENT DOC. 5075226
HIGHWAY EASEMENT DOC. 3939730
PLE FOR WALL TIEBACKS AND ACCESS
20' CITY OF MILWAUKEE SANITARY EASEMENT DOC. 3928123
25' CITY OF MILWAUKEE WATER EASEMENT DOC. 4441561
CSM 1375 PARCEL B
CSM 1375 DOC. 4549454 PARCEL A
TLE FOR SLOPES
1/16TH LINE MATCHLINE SEE SHEET 4.17
SEE SHEET 4.17 MATCHLINE
SEE STA. 305NS+00.00 SHEET 4.15

CITY
MILWAUKEE
OF
MILWAUKEE COUNTY
WAUWATOSA
MONTESSORI SOCIETY
ST. THERESE CONGREGATION
MOTHS FAMILY LTD PTN
WEPCO

NW-NE
NE-NE
SE-SE
SW-SE
NW-SE
NE-SE

VACATED 99TH ST. DOC. 4116000
VACATED FAIRVIEW AVE. DOC. 4116000
SECTION LINE
MIDWAY PARK SUBDIVISION
BLOCK 1
BLOCK 2
AVONDALE BLOCK 2

N. 98TH STREET
N. 97TH STREET
N. 95TH ST.
N. 95TH STREET
W. BLUE MOUND ROAD
R/L USH 45
BLUE MOUND RIDGE
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7272ND ST.



HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	194 - 4 (41) 301	1960	VARIES
IH 94	194 - 4 (25) 301	1959	VARIES
W. ADLER STREET	194 - 4 (25) 301	1959	VARIES
IH 94	T 5725 (3)	1953	VARIES

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

REVISION DATE
SEP. 28, 2012
DEC. 17, 2012
APR. 17, 2013

DATE JULY 11, 2012

SCALE, FEET 0 50 100

HWY: IH 94

COUNTY: MILWAUKEE

STATE R/W PROJECT NUMBER 1060-33-24

CONSTRUCTION PROJECT NUMBER 1060-33-81

PLAT SHEET 4.17

PS&E SHEET E

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

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I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

CONCRETE MONUMENT W/ BRASS CAP Y=296853.91 X=574458.84

CONCRETE MONUMENT W/ BRASS CAP Y=294195.84 X=574472.02

TOWNE SUBDIVISION NO. 51 BLOCK 1

ZINGEN & BRAUN SUBD. NO. 39 BLOCK 2

KONEN HEIGHTS BLOCK 1

UNPLATTED

CITY OF MILWAUKEE

MILWAUKEE

W. DIXON ST

S. 92ND STREET

W. CHESTER STREET

R/L IH 94

ACCESS CONTROL ACQUIRED PER PROJECT: 194-4(25)301

ACCESS CONTROL ACQUIRED PER PROJECT: 194-4(26)303 (1060-1-22)

R/L=SECTION LINE STA. 210EW+50.68

SECTION LINE 2658.10' (MON. TO MON.) S00°17'03"E

WEPCO & AT&T WISCONSIN EASEMENT DOC. 4126129

COMMON DRIVE EASEMENT BENEFIT LOT 2 DOC. 4824112

CITY OF MILWAUKEE SANITARY SEWER EASEMENT DOC. 4440213

PLE FOR DRAINAGE RETAINING WALL TIE BACKS

TLE FOR SLOPES AND DRIVES

TLE FOR SLOPES

TLE FOR DRIVE

1/16TH LINE

MATCHLINE STA. 218EW+00.00 SEE SHEET 4.19

MATCHLINE STA. 204EW+00.00 SEE SHEET 4.17

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	I94-4(25)301	1956	VARIES
IH 94	T 5725 (3)	1953	VARIES
IH 94	I94-4(26)303	1960	VARIES
IH 94	T 5725 (5)	1955	VARIES
S. 92ND STREET	I94-4(26)303	1960	VARIES
S. 92ND STREET	I94-4(25)301	1960	VARIES
W. ADLER STREET	I94-4(25)301	1960	VARIES
W. CHESTER STREET	I94-4(25)301	1959	VARIES

500 WE ENERGIES - ELECTRIC PARCEL 1 - DOC. NO. 4126129

504 AT&T WISCONSIN PARCEL 1 - DOC. NO. 4126129

521 CITY OF MILWAUKEE - SEWER DOC. NO. 4440213

REVISION DATE
MAY 23, 2012
JULY 11, 2012
SEP. 28, 2012
DEC. 17, 2012
APR. 17, 2013

DATE FEB. 29, 2012

SCALE, FEET 0 50 100

HWY: IH 94 | STATE R/W PROJECT NUMBER 1060-33-24 | PLAT SHEET 4.18

COUNTY: MILWAUKEE | CONSTRUCTION PROJECT NUMBER 1060-33-81 | PS&E SHEET E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040418_RP.dgn PLOT DATE : 18-APR-2013 14:02 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1

R/W 1060-33-24 4.18

CONCRETE MONUMENT W/ BRASS CAP
Y=296853.91
X=574458.84

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FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

RL IH-94
PI STA. 228+45.35
Y : 295782.73
X : 576258.38
DELTA = 15°52'45"
D = 3°00'56"
T = 264.99'
L = 526.58
R = 1900.00

C2
L = 221.20
R = 1531.00
LC = 221.01
LCB = S 80°31'53" E

C3
L = 228.49
R = 1561.00
LC = 228.29
LCB = S 80°35'08" E

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
S. 86TH STREET	CONRAD'S STATE FAIR HEIGHTS	1913	60'
S. 87TH STREET	CONRAD'S STATE FAIR HEIGHTS	1913	60'
S. 88TH STREET	CONRAD'S STATE FAIR HEIGHTS	1913	60'
S. 89TH STREET	CONRAD'S STATE FAIR HEIGHTS	1913	60'
W. ADLER STREET	CONRAD'S STATE FAIR HEIGHTS	1913	33' SOUTH
W. ADLER STREET	I94-4(26)303	1960	VARIES
S. 90TH STREET	VILLA MARCONI SUBDIVISION	1916	60'

CITY MILWAUKEE PARCEL "A" WATER MAIN EASEMENT DOC. 7465555
12' WE ENERGIES - ELECTRIC/ AT&T WISCONSIN EASEMENT DOC. 7889937
PLE FOR RETAINING WALL TIEBACKS AND DRAINAGE
CITY MILWAUKEE PARCEL "B" WATER MAIN EASEMENT DOC. 7465555
CITY MILWAUKEE SEWER EASEMENT DOC. 3907622
30' PRIVATE UTILITY EASEMENT DOC. 7413715
ACCESS CONTROL PER PROJECT: I94-4(26)303 (1060-1-22)
SLOPE INTERCEPT
TLE FOR SLOPES
HIGHWAY EASEMENT
1/16TH LINE
SECTION LINE
SEE MATCHLINE
SEE SHEET 4.18 MATCHLINE STA. 218EW+00.00
SEE SHEET 4.20 MATCHLINE STA. 232EW+00.00
PT 231EW+06.94
PC 225EW+80.36
PI
OF MILWAUKEE
VARIES

51 GENEVA EXCHANGE FUND I, LLC
CSM 7211 R. 5546 I. 1292 DOC. 8482668 LOT 1
52 GENEVA EXCHANGE FUND V, LLC ET AL.
CSM 6544 PARCEL 3 R.4368, I.2529 DOC. 7579853
NW-NW
53 GENEVA HC2X XXII, LLC
NE-NW
CSM 6544 PARCEL 2 R.4368, I.2529 DOC. 7579853
CSM 6360 PARCEL 2 R.4076, I.594 DOC. 7380455
16 ARCHDIOCESE OF MILWAUKEE
CITY
W. CHESTER STREET
W. ADLER STREET
SW-NW
SE-NW

S. 90TH STREET
S. 89TH STREET
S. 88TH STREET
S. 87TH PLACE
KOSANKE
HUBATCH
DASCENZO
LINDEMAN
MONTY
MATZEK
WILLIAMS
SCHLECHTA
VILLA MARCONI SUBDIVISION
CONRAD'S STATE FAIR HEIGHTS
BLOCK 1
BLOCK 2
BLOCK 3
BLOCK 4
BLOCK 5
BLOCK 6
BLOCK 7

500 WE ENERGIES - ELECTRIC
PARCEL 52 - DOC. NO. 7889937
PARCEL 52 - DOC. NO. 7453956
504 AT&T WISCONSIN
PARCEL 52 - DOC. NO. 7889937
521 CITY OF MILWAUKEE - SEWER
PARCEL 53 - DOC. NO. 3907622
522 CITY OF MILWAUKEE - WATER
PARCEL 52 - DOC. NO. 7465555
PARCEL 53 - DOC. NO. 7465555

CONCRETE MONUMENT W/ BRASS CAP
Y=294195.84
X=574472.02

REVISION DATE DEC. 17, 2012 APR. 17, 2013	DATE SEPT 28, 2012	SCALE. FEET 0 50 100	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.19
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040419_RP.dgn PLOT DATE : 15-APR-2013 15:21 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	I94-4(26)303 (1060-1-22)	1970	VARIES
S. 84TH STREET	I94-4(26)303 (1060-1-22)	1970	VARIES
S. 86TH STREET	CONRADS STATE FAIR HEIGHTS	1913	60'
W. ADLER STREET	I94-4(26)303 (1060-1-22)	1970	VARIES
S. 84TH STREET	CITY RESOLUTION #47-21-b (DOC. 3313218)	1954	55'EAST

RL IH-94
PI STA. 248+40.53
Y : 295289.25
X : 578195.08
DELTA = 31°30'38"
D = 1°14'44"
T = 1297.79'
L = 2529.83
R = 4600.00

C1
L = 47.37
R = 46.42
LC = 45.35
LCB = S37°06'47"E

C2
L = 27.14
R = 122.25
LC = 27.08
LCB = N06°10'10"E

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FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

501 WE ENERGIES - GAS
PARCEL 70 - DOC. NO. 3953615

521 CITY OF MILWAUKEE - SEWER
PARCEL 10 - DOC. NO. 2105254

522 CITY OF MILWAUKEE - WATER
PARCEL 10 - DOC. NO. 2105254
PARCEL 70 - DOC. NO. 5522876
PARCEL 70 - DOC. NO. 4614176

523 CITY OF MILWAUKEE - CABLE
PARCEL 10 - DOC. NO. 2105254

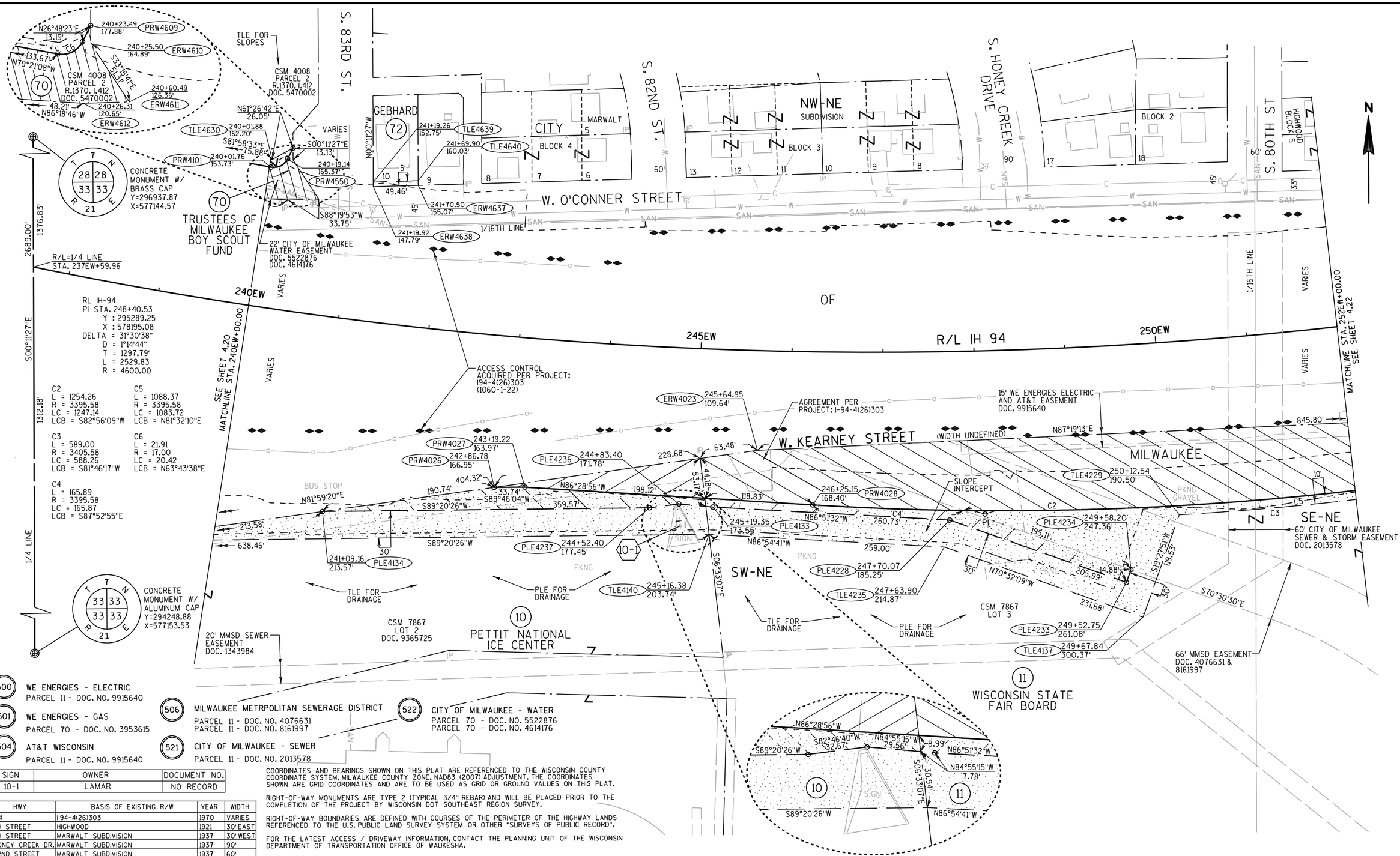
524 CITY OF MILWAUKEE - CONDUIT
PARCEL 10 - DOC. NO. 2105254

CONCRETE MONUMENT W/ BRASS CAP Y=296937.87 X=577144.57

CONCRETE MONUMENT W/ ALUMINUM CAP Y=294248.88 X=577153.53

REVISION DATE DEC. 17, 2012 APR. 17, 2013	DATE SEP. 28, 2012	SCALE. FEET 0 50 100	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.20
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81, 1060-33-89 1060-33-75	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040420_RP.dgn PLOT DATE : 18-APR-2013 14:06 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1



SIGN	OWNER	DOCUMENT NO.
10-1	LAMAR	NO RECORD

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	I94-4(26)303	1970	VARIES
80TH STREET	HIGHWOOD	1921	30' EAST
80TH STREET	MARWALT SUBDIVISION	1937	30' WEST
S. HONEY CREEK DR.	MARWALT SUBDIVISION	1937	90'
S. 82ND STREET	MARWALT SUBDIVISION	1937	60'
S. 83RD STREET	CSM 4008	1980	VARIES

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I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.

REVISION DATE	DATE SEP. 28, 2012	SCALE. FEET 0 50 100	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.21	
DEC. 17, 2012 APR. 17, 2013			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81 1060-33-79	PS&E SHEET	E

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	I 94-4(26)303 (1060-1-22)	1970	VARIES
77TH STREET	HIGHWOOD	1921	60'
78TH STREET	HIGHWOOD	1921	60'
79TH STREET	HIGHWOOD	1921	60'

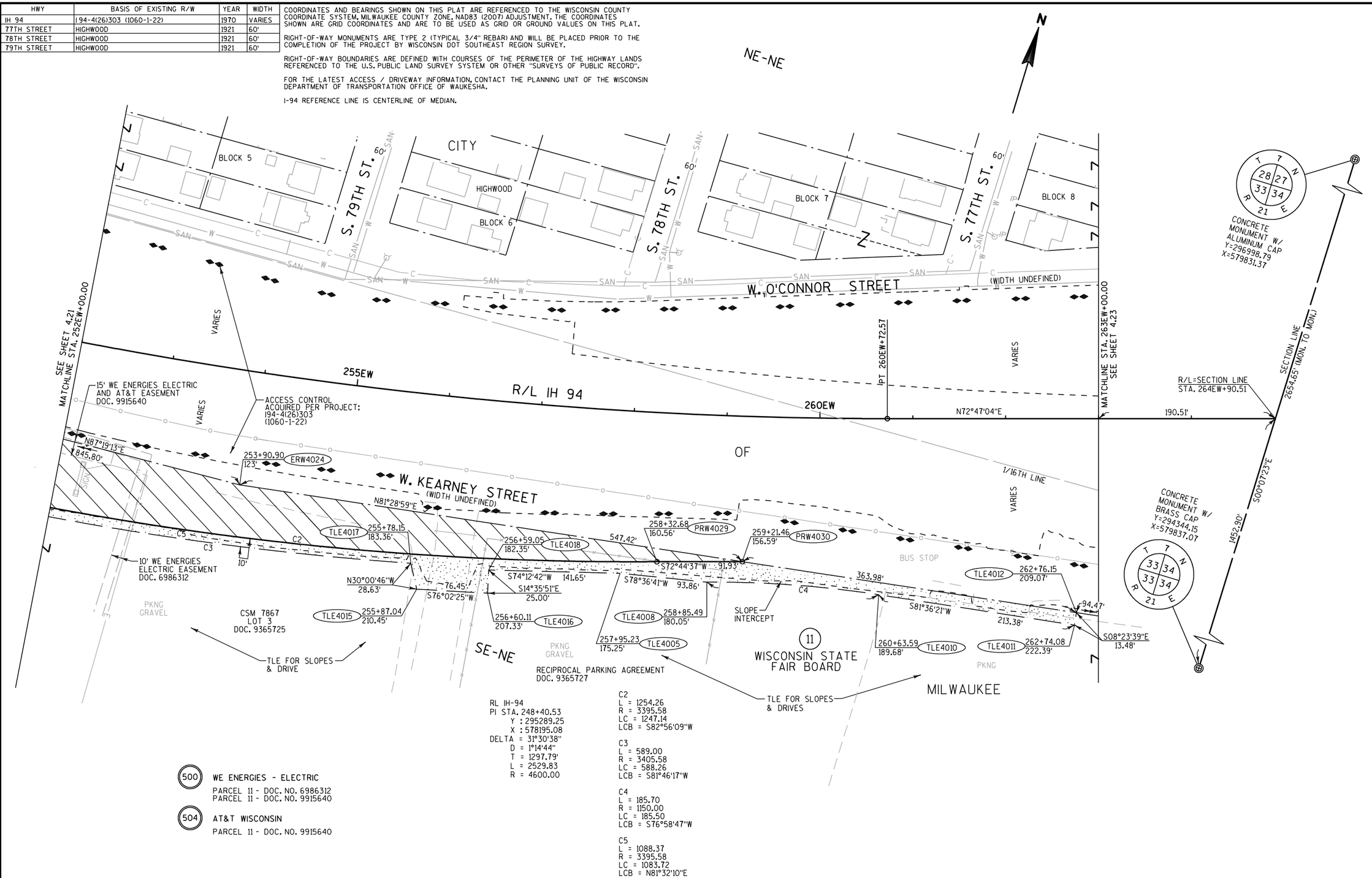
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500 WE ENERGIES - ELECTRIC
PARCEL 11 - DOC. NO. 6986312
PARCEL 11 - DOC. NO. 9915640

504 AT&T WISCONSIN
PARCEL 11 - DOC. NO. 9915640

REVISION DATE	DATE	SCALE: FEET	HWY: IH 94	STATE R/W PROJECT NUMBER 1060-33-24	PLAT SHEET 4.22	
DEC. 17, 2012 APR. 17, 2013	SEP. 28, 2012	0 50 100	COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81 1060-33-79	PS&E SHEET	E

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 94	I94-4(26)303 (1060-1-22)	1970	VARIES
S. 76TH STREET	I94-4(26)303 (1060-1-22)	1970	50' EAST
S. 76TH STREET	WD DOC. 2558768	1945	50' WEST
S. 76TH STREET	RELIANCE LAND COMPANY'S SUBDIVISION	1901	100'
S. 76TH STREET	CITY RESOLUTION #67475-a (DOC. 3164714)	1952	50' WEST

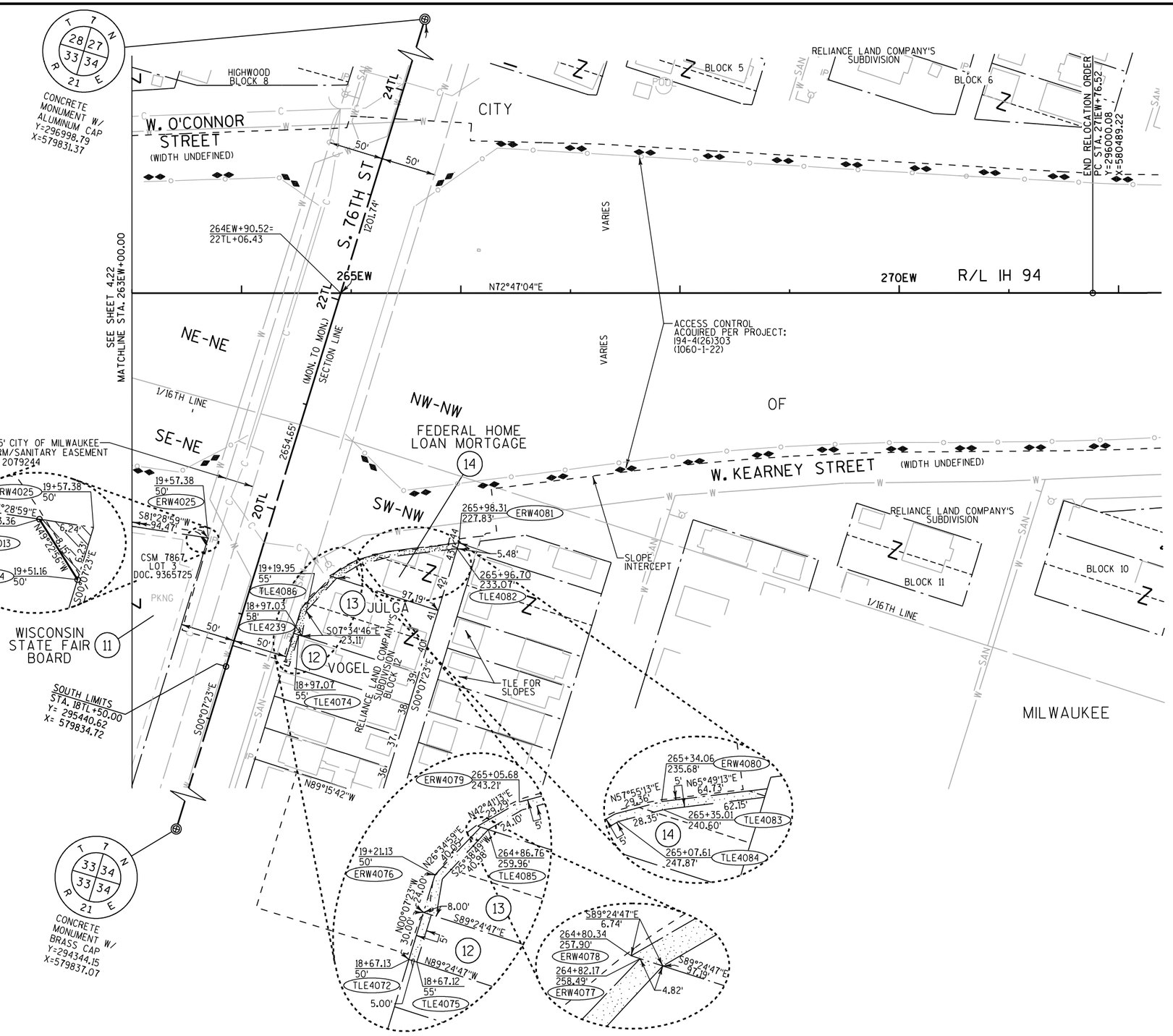
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I-94 REFERENCE LINE IS CENTERLINE OF MEDIAN.



REVISION DATE	DATE	SCALE, FEET	HWY:	STATE R/W PROJECT NUMBER	PLAT SHEET	
DEC. 17, 2012 APR. 17, 2013	SEP. 28, 2012	0 50 100	IH 94	1060-33-24	4.23	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81 1060-33-79	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-24 (IH 94)\cds\040423_RP.dgn PLOT DATE : 15-APR-2013 15:25 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
1060-33-25		
FEDERAL PROJECT NUMBER	4.01	

PLAT OF RIGHT-OF-WAY REQUIRED FOR

IH 894/ USH 45

(W. LINCOLN AVE. - STH 100)

IH 894/ USH 45 — MILWAUKEE CO.

CONSTRUCTION PROJECT NUMBER

1060-33-81 1060-33-72 1060-33-77

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RECORDED AS	(100')
ACCESS RIGHTS	AR	REEL	R.
ACRES	AC.	REFERENCE LINE	R/L
AND OTHERS	ET AL.	RELEASE OF RIGHTS	ROR
BUILDING	B	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CORNER	COR.	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
HIGHWAY EASEMENT	H.E.	**CURVE DATA**	
IMAGE	I.	LONG CHORD	LCH
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PARKING LOT	PKNG	LENGTH OF CURVE	L
PROPERTY LINE	PL	TANGENT	TAN
PROPOSED RIGHT-OF-WAY	PRW		

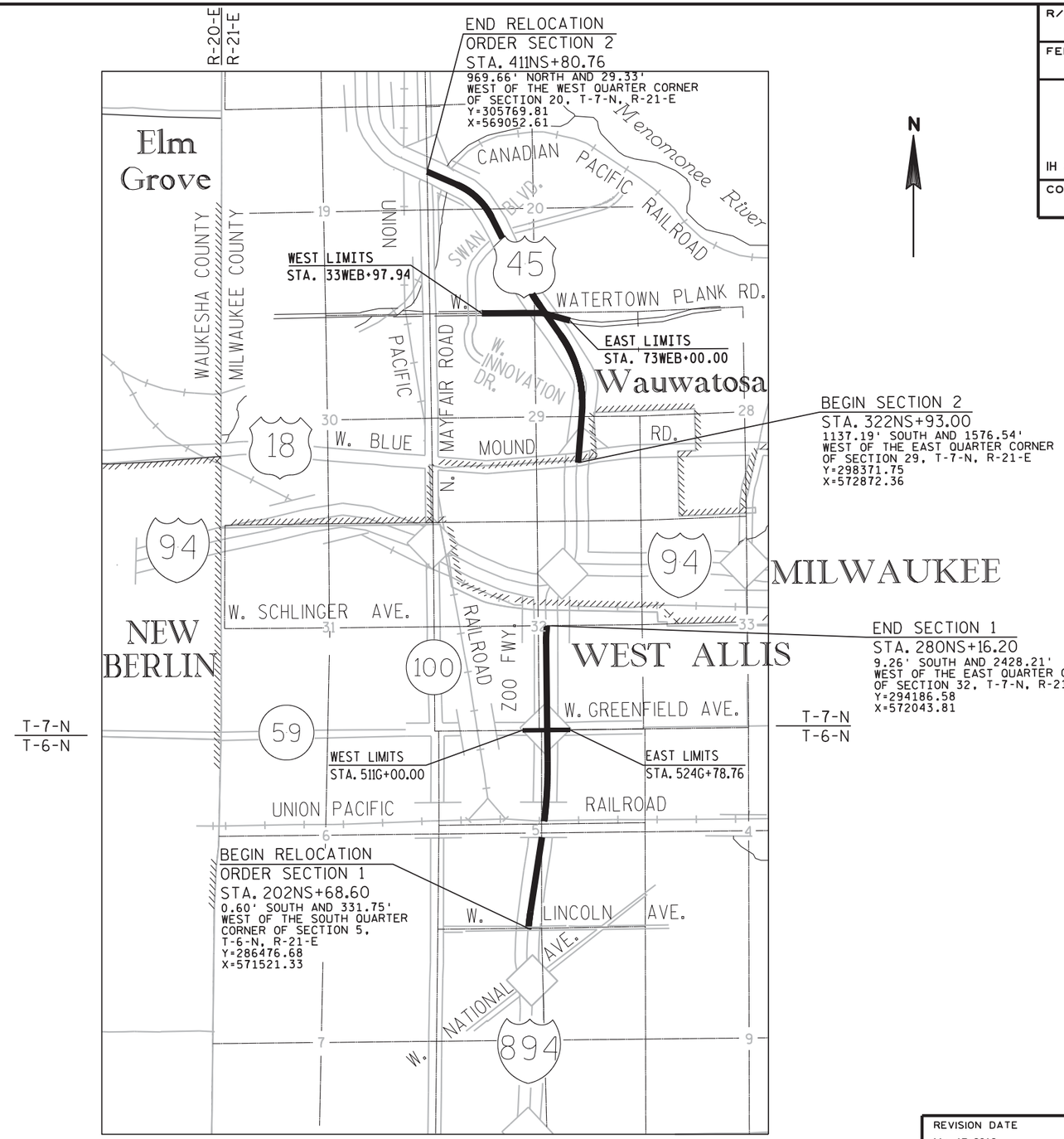
CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LS (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	●(SET)	PROPERTY LINE	
R/W STANDARD	▲(SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT		CORPORATE LIMITS	
SECTION CORNER SYMBOL		ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		ACCESS RESTRICTED (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT	RWB20	QUARTER LINE	
PARCEL NUMBER	102	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	92	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	21-1	PROPOSED REFERENCE LINE	
BUILDING		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

WATER	W
GAS	G
TELEPHONE	T
OVERHEAD	OH
TRANSMISSION LINES ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS

	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
ELECTRIC TOWER		



TOTAL NET LENGTH OF REFERENCE LINE= 3.151 MI.

NOTES:

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PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

THE HIGH ACCURACY REFERENCE NETWORK (HARN) POINTS USED ON PROJECT WERE:
1) MILWAUKEE GPS
2) WAUWATOSA W. GPS

FOR CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE WISCONSIN DEPARTMENT OF TRANSPORTATION SOUTHEAST REGION OFFICE IN THE CITY OF WAUKESHA.

ORIGINAL PLAT PREPARED BY:

WISCONSIN FORWARD 45 — KURT E. KRUGER S-1946 CASCADE, WI — LAND SURVEYOR

February 13, 2012

REVISION DATE
May 17, 2012
July 11, 2012
Aug. 15, 2012
Oct. 15, 2012
Dec. 17, 2012

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT

DATE: Feb. 13, 2012 (Signature)

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040401_RT.dgn PLOT DATE : 06-JUL-2012 13:02 PLOT BY : msckek PLOT NAME : PLOT SCALE : 1600:1

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

* DENOTES AREA COMPUTED

PROJECT FUNDING I.D.	PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED (ACRES) NEW	EXISTING	TOTAL	TOTAL REMAINING ACRES	TLE ACRES	PLE ACRES	PARCEL NUMBER
1060-33-25	1(2)	4.11,4.12	SUMMIT CREDIT UNION	FEE, PLE,TLE	2.248	0.133		0.133	2.115	0.110	0.052	1(2)
1060-33-25	2	4.12	WELLNESS DOCTORS, LLC	FEE,TLE	0.613	0.047		0.047	0.566	0.184		2
1060-33-25	3	4.12	BAKERY SALES DRIVERS UNION LOCAL NO. 344	FEE, TLE	0.618	0.012		0.012	0.606	0.062		3
1060-33-25	4	4.12	DENNIS J. RODY	FEE, TLE	0.230	0.018		0.018	0.212	0.038		4
1060-33-25	5	4.12	DANIEL BISHOP	TLE	0.102				0.102	0.031		5
1060-33-25	6	4.12	FOREST PARK REAL ESTATE CO., LLC	TLE	0.116				0.116	0.007		6
1060-33-25	7	4.12	SHERYL GROENEWOUD & WENDY PETERSON	TLE	0.155				0.155	0.008		7
1060-33-25	8	4.12	STEIGERWALD TRUST	TLE	0.231				0.231	0.009		8
1060-33-25	9	4.12	T & C HOLDINGS, LLC	TLE	0.277				0.277	0.019		9
1060-33-25	10	4.12	PROBUCOLIS ASSOCIATION OF WISCONSIN, ET AL.	TLE	0.591				0.591	0.038		10
1060-33-25	11	4.19	MILWAUKEE COUNTY	FEE, TLE	14.611	6.346		6.346	8.265	0.043		11
1060-33-25	12(2)	4.19	INNOVATION PARTNERS LLC	FEE, TLE	14.350	0.135		0.135	14.215	0.408		12(2)
1060-33-25	13(2)	4.19	MILWAUKEE COUNTY	FEE,PLE,TLE	16.055	0.168		0.168	15.887	0.227	0.001	13(2)
1060-33-25	14(2)	4.19	MILWAUKEE COUNTY	TLE	1.583				1.583	0.058		14(2)
1060-33-25	15(4)	4.20	MILWAUKEE COUNTY	FEE, PLE, TLE	224.820	3.847		3.847	220.973	3.257	0.002	15(4)
1060-33-25	16(4)	4.20,4.21,4.22	UWM INNOVATION PARK LLC	FEE,PLE, TLE	85.643	11.794		11.794	73.849	1.589	0.012	16(4)
1060-33-25	17(6)	4.14	MATHEW RIBBECK	FEE	0.150	0.038		0.038	0.112			17(6)
1060-33-25	18(6)	4.14	DANIEL J. MILTON	FEE	0.174	0.073		0.073	0.101			18(6)
1060-33-25	19(6)	4.14	ZACHARY P. LISKA	FEE	0.138	0.020		0.020	0.118			19(6)
1060-33-25	20(6)	4.14	JOSEPH & SUE ZUNAC	FEE	0.138	0.006		0.006	0.132			20(6)
1060-33-25	21(6)	4.13	RICKY H. & ROSE M. JENSEN	FEE	0.335	0.026		0.026	0.309			21(6)
1060-33-25	22(6)	4.13	GABRIEL & ERENDIRA VIDAL	FEE	0.147	0.012		0.012	0.135			22(6)
1060-33-25	23(3)	4.13	JACOB A. WEST	FEE	0.141	0.009		0.009	0.132			23(3)
1060-33-25	24(3)	4.13	GEORGE D. & EVELYN E. BIEGEL	FEE	0.180	0.004		0.004	0.176			24(3)
1060-33-25	25(3)	4.09	KINLOW, LLC	PLE	3.624				3.624		0.030	25(3)
1060-33-25	26(5)	4.09,4.10	UNION PACIFIC RAILROAD COMPANY	PLE	VAST				VAST		0.110	26(5)
1060-33-25	27(6)	4.13	SUSAN C ROWINSKI	FEE	0.357	0.027		0.027	0.330			27(6)
1060-33-25	28(6)	4.13	STEPHEN C & DAWN M MUFFLER	FEE	0.189	0.014		0.014	0.175			28(6)
1060-33-25	29(6)	4.13	BRIAN D BALL	FEE	0.251	0.019		0.019	0.232			29(6)
1060-33-25	30(3)	4.08-4.14	WISCONSIN ELECTRIC POWER COMPANY (WEPCO)	FEE,PLE,TLE	VAST	5.232	2.748	7.980	VAST	3.629	1.133	30(3)
1060-33-25	31(6)	4.13	STEPHEN L SOIK	FEE	0.189	0.014		0.014	0.175			31(6)
1060-33-25	32(6)	4.13	GERALD W SCHMIDT	FEE	0.230	0.018		0.018	0.212			32(6)
1060-33-25	33(6)	4.13	DOLORES R SCHUEPFERLING	FEE	0.210	0.016		0.016	0.194			33(6)
1060-33-25	34(6)	4.13	ALEJANDRO & GRACIELA RODRIGUZ	FEE	0.220	0.017		0.017	0.203			34(6)
1060-33-25	35(6)	4.13	JOSEPH F JANSKY	FEE	0.220	0.017		0.017	0.203			35(6)

4

4

REVISION DATE
MAY 17, 2012
JULY 11, 2012
AUG. 15, 2012
OCT. 15, 2012
DEC. 17, 2012

DATE FEB. 13, 2012

HWY: IH 894/USH 45

COUNTY: MILWAUKEE

STATE R/W PROJECT NUMBER 1060-33-25

CONSTRUCTION PROJECT NUMBER 1060-33-72 1060-33-81 1060-33-77

PLAT SHEET 4.02

PS&E SHEET

E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040402_RS.dgn PLOT DATE : 17-DEC-2012 12:08 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 200:1

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

* DENOTES AREA COMPUTED

PROJECT FUNDING I.D.	PARCEL NUMBER	SHEET NUMBER	OWNER	INTEREST REQUIRED	TOTAL ACRES	R/W REQUIRED (ACRES) NEW	EXISTING	TOTAL	TOTAL REMAINING ACRES	TLE ACRES	PLE ACRES	PARCEL NUMBER
1060-33-25	36(6)	4.13	SCOTT KUEHN SR	FEE	0.230	0.018		0.018	0.212			36(6)
1060-33-25	37(6)	4.13	TROY D & CHIHO BENNETT	FEE	0.209	0.016		0.016	0.193			37(6)
1060-33-25	38(6)	4.13	SUSAN M LAUDON	FEE	0.209	0.016		0.016	0.193			38(6)
1060-33-25	39(6)	4.13,4.14	CHRISTOPHER L. MANCHESTER & SHELLY L. ERMI	FEE	0.227	0.018		0.018	0.209			39(6)
1060-33-25	40(6)	4.14	MAYEK TRUST	FEE	0.207	0.016		0.016	0.191			40(6)
1060-33-25	41(6)	4.14	FREDDIE J SIZEMORE	FEE	0.227	0.018		0.018	0.209			41(6)
1060-33-25	42(6)	4.14	RAJESH & BHAVNI PATEL	FEE	0.293	0.022		0.022	0.271			42(6)
1060-33-25	43(6)	4.14	JAYANTIBHAI S & MANGU PATEL	FEE	0.292	0.022		0.022	0.270			43(6)
1060-33-25	44(6)	4.14	JASON D & ERIN S STRANKOWSKI	FEE	0.291	0.022		0.022	0.269			44(6)
1060-33-25	45(6)	4.14	THOMAS J & ANGELA MORRIS	FEE	0.362	0.028		0.028	0.334			45(6)
1060-33-25	46(6)	4.14	HEATHER LEIGH SMITH	FEE	0.170	0.014		0.014	0.156			46(6)
1060-33-25	47(6)	4.14	RICHARD H KAEBISCH	FEE	0.171	0.016		0.016	0.155			47(6)
1060-33-25	48(6)	4.14	BEDRASE MOURADIAN	FEE	0.171	0.018		0.018	0.153			48(6)
1060-33-25	49(6)	4.14	DONALD L LESLIE	FEE	0.218	0.026		0.026	0.192			49(6)
1060-33-25	50(6)	4.14	ANTHONY A & PATRICIA A KNAPP	FEE	0.218	0.029		0.029	0.189			50(6)
1060-33-25	51(6)	4.14	DANIEL & LORETTA BUSHEK	FEE	0.207	0.030		0.030	0.177			51(6)
1060-33-25	52(6)	4.14	JULIUS F KALAMARZ	FEE	0.228	0.037		0.037	0.191			52(6)
1060-33-25	53(6)	4.14	WALTER KALAMARZ	FEE	0.218	0.038		0.038	0.180			53(6)
1060-33-25	54(6)	4.14	R & R REALTY LLC	FEE	0.218	0.042		0.042	0.176			54(6)
1060-33-25	130(6)	4.11	WISCONSIN ELECTRIC POWER COMPANY (WEPCO)	TLE	VAST				VAST	0.287		130(6)
1060-33-25	500(4)	4.08-4.14,4.19,4.20	WE ENERGIES - ELECTRIC	ROR								500(4)
1060-33-25	502	4.19,4.21	WE ENERGIES - STEAM	ROR								502
1060-33-25	505(6)	4.08-4.14	AMERICAN TRANSMISSION COMPANY	ROR								505(6)
1060-33-25	509(2)	4.19	VOICESTREAM	ROR								509(2)
1060-33-25	540(4)	4.19,4.20	CITY OF MILWAUKEE - SEWER	ROR								540(4)
1060-33-25	541(4)	4.19,4.20,4.22	CITY OF MILWAUKEE- WATER	ROR								541(4)
1060-33-25	542(4)	4.19,4.20	CITY OF MILWAUKEE- CABLE	ROR								542(4)
1060-33-25	543(4)	4.19,4.20	CITY OF MILWAUKEE- CONDIUT	ROR								543(4)
1060-33-25	551	4.11,4.12	CITY OF WEST ALLIS - WATER	ROR								551
1060-33-25	552	4.11,4.12	CITY OF WEST ALLIS - SEWER	ROR								552
1060-33-25	UA651	4.11,4.12	CITY OF WEST ALLIS - WATER	MUNICIPAL UTILITY AGREEMENT								UA651

4

4

REVISION DATE
DEC. 17, 2012

DATE OCT. 15, 2012

HWY: IH 894/USH 45

COUNTY: MILWAUKEE

STATE R/W PROJECT NUMBER 1060-33-25

CONSTRUCTION PROJECT NUMBER 1060-33-72 1060-33-81 1060-33-77

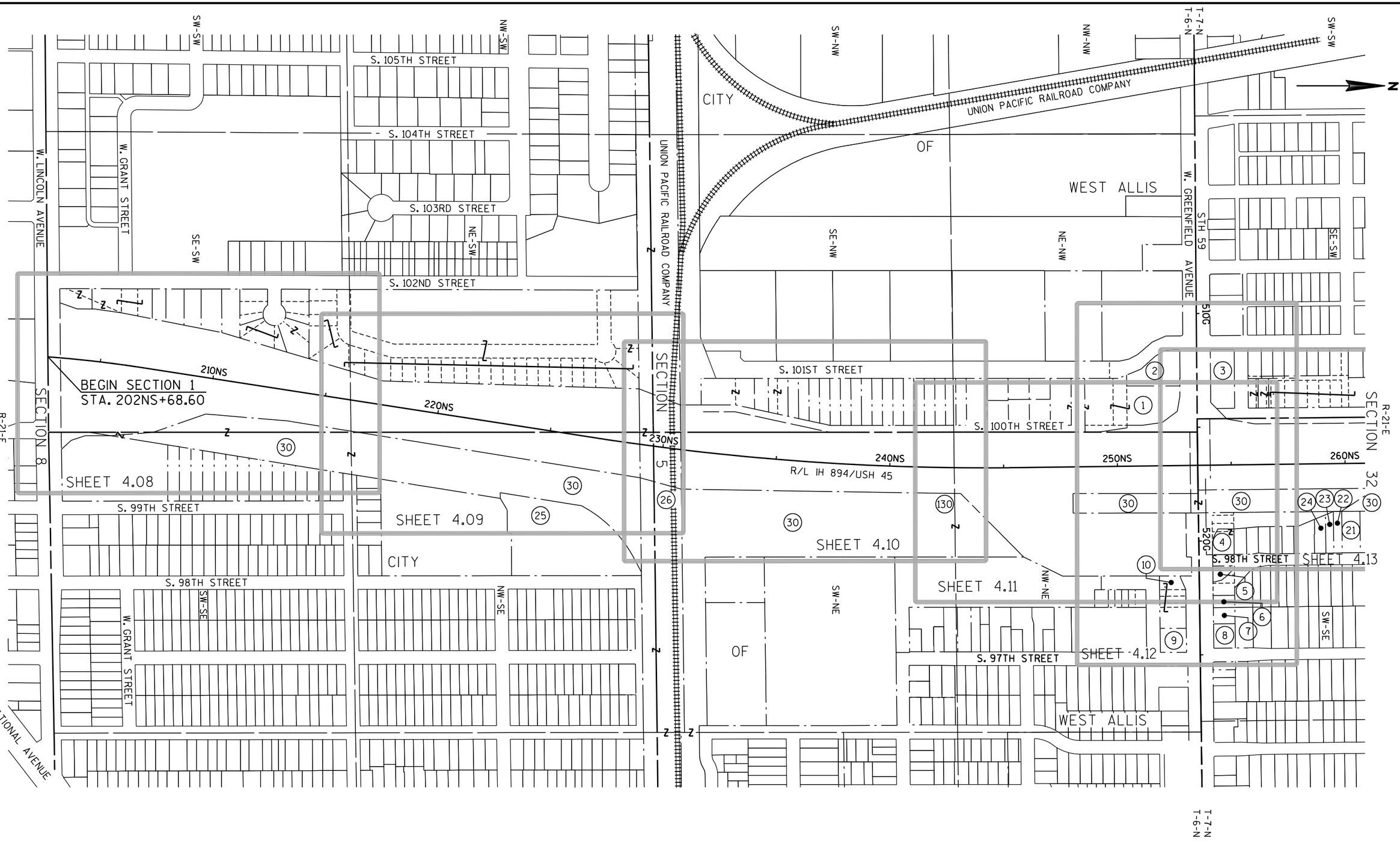
PLAT SHEET 4.03

PS&E SHEET

E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040403_RS.dgn PLOT DATE : 17-DEC-2012 12:09 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 200:1

4



REVISION DATE DEC. 17, 2012 MAY 17, 2012 JULY 11, 2012 OCT. 15, 2012	DATE FEB. 13, 2012	SCALE. FEET 0 200 400	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.04
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81 1060-33-77	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040404_RL.dgn PLOT DATE : 17-DEC-2012 12:09 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 400:1

4

4

SW-SW

NW-SW

S. 104TH STREET

CITY

S. 103RD STREET

OF

SE-SW

NE-SW

W. WASHINGTON STREET

S. 102ND STREET

WEST ALLIS

W. WALKER STREET

W. BUNGALOW PARKWAY

CITY OF MILWAUKEE
CITY OF WEST ALLIS

S. 101ST STREET

S. 100TH STREET

R-21-E

SW-NW

T-7-N

NW-NW

SW-SW

N

CITY

NE-NW

SE-NW

OF

SE-SW

SECTION 32

MILWAUKEE

SECTION 29

R-21-E

260NS

270NS

R/L IH 894/ USH 45

280NS

290NS

END SECTION 1
STA. 280NS+16.20

300NS

310NS

320NS

SW-SE

CITY

NW-SE

SHEET 4.13

SHEET 4.14

S. 98TH STREET

W. SCHLINGER AVENUE

SW-NE

CITY

NW-NE

S. 97TH STREET

OF

WEST ALLIS

MILWAUKEE

SE-SE

NE-SE

SE-NE

NE-NE

S. 95TH STREET

SE-SE

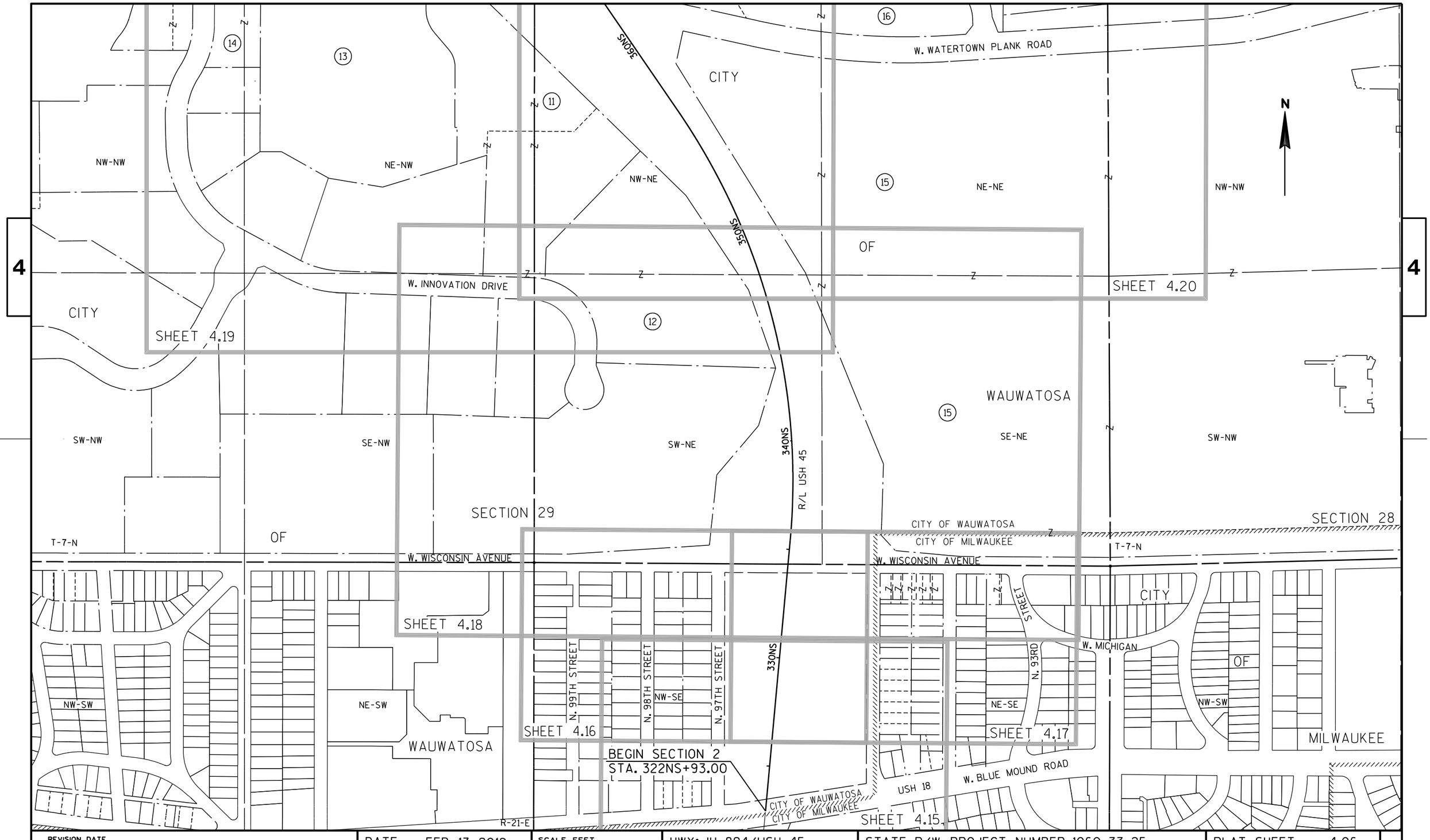
S. 94TH STREET

T-7-N

REVISION DATE JULY 11, 2012 OCT. 15, 2012	DATE MAY 16, 2012	SCALE. FEET 0 200 400	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.05
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040405_RL.dgn PLOT DATE : 15-OCT-2012 07:37 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 400:1

R/W 1060-33-25 4.05



REVISION DATE MAY 17, 2012 JULY 11, 2012	DATE FEB. 13, 2012	SCALE, FEET 0 200 400	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.06
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-72	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040406_RL.dgn PLOT DATE : 10-JUL-2012 10:02 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 400.000024:1

END SECTION 2
STA. 411NS+80.76

410NS

400NS

390NS

380NS

370NS

R/L USH 45

N. MAYFAIR ROAD

CANADIAN PACIFIC RAILROAD

STH 100

SECTION 19

SECTION 20

T-7-N

T-7-N

SE-NE

SW-NW

SE-NW

NE-SW

NE-SE

NW-SW

NW-SE

NE-SE

SE-SE

SW-SW

SE-SW

SW-SE

SE-SE

CITY OF WAUWATOSA

CITY OF WAUWATOSA

SWAN BOULEVARD

W. WATERTOWN PLANK ROAD

16

SHEET 4.22

SHEET 4.21

SHEET 4.20

N

4

4

REVISION DATE	DATE MAY 17, 2012	SCALE. FEET 0 200 400	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.07	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-72	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040407_RL.dgn PLOT DATE : 17-MAY-2012 14:40 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 400:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 894	I-894-7(3)303	1960	VARIES
W. LINCOLN AVE.	MILWAUKEE COUNTY ORDER NO. 147055	1926	110'

(500) WE ENERGIES - ELECTRIC
EXISTING RIGHTS IN FEE R/W - DOC. NO. 3867156

(505) ATC TRANSMISSION COMPANY
EXISTING RIGHTS IN FEE R/W - DOC. NO. 10050216
PARCEL 30 - DOC. NO. 8013173

CONCRETE MONUMENT W/ ALUMINUM CAP Y=286202.45 X=569208.89

S89°53'43"W 2644.19' (MON. TO MON.) SECTION LINE

W. LINCOLN AVENUE

S. 102ND STREET

W. GRANT COURT

CITY OF WEST ALLIS

LINCOLN CREST

BLOCK 1

ENCROACHMENT

HIGHWAY EASEMENT

VARIES

SE-SW

OH

RL IH-894/USH 45
PI STA. 199+51.43
Y : 286157.22
X : 571453.33
DELTA = 15°00'44"
D = 1°00'00"
T = 754.93'
L = 1501.21
R = 5729.58

11/16TH LINE

204NS 206NS 208NS R/L IH 894/USH 45 210NS 212NS 214NS 216NS

BEGIN RELOCATION ORDER
STA. 202NS+68.60
Y=286476.67
X=571521.33

PT 206NS+97.71

SLOPE INTERCEPT

ACCESS CONTROL PER PROJECT: I-894-7(3)303

N09°11'52"E

STA. 216NS+11.95 MATCHLINE SEE SHEET 4.09

331.76'

PLE FOR WALL

209+92.27 158.88' ERW5819

211+04.61 150.96' PLE5817

PLE5818 209+67.56 172.00'

TLE5825 208+73.70 221.86'

WEPCO ELECTRIC RIGHTS DOC. 3867156
ATC TRANSMISSION RIGHTS DOC. 10050216

SLOPE INTERCEPT

WEPCO 30

ERW5816 204+87.02 312.57'

178.03'

S9°32'40"W 96.00'

S4°15'28"E 187.81'

PRW5815 205+88.53 315.83'

281.97'

PL

460.00'

207+77.21 273.11' PRW5814

S00°24'04"W

2656.41' (MON. TO MON.) 1/4 LINE

S18°46'40"E 109.25'

215.54'

105.29'

27.98'

112.62'

138.65'

S00°28'04"W

S05°09'53"W 248.63'

213+52.63 133.47' ERW5826

S09°34'08"W 491.92'

262.21'

213+57.69 183.28' TLE5824

485.53'

S04°38'25"W

216+16.82 143.18' TLE5823

S09°34'08"W 227.67'

HIGHWAY EASEMENT (EXISTING)

TLE FOR SLOPES

CONCRETE MONUMENT W/ BRASS CAP Y=286477.28 X=571853.08

N89°22'10"E 2644.90' (MON. TO MON.) SECTION LINE

55'

CONCRETE MONUMENT W/ BRASS CAP Y=286506.39 X=574497.82

CONCRETE MONUMENT W/ BRASS CAP Y=289133.62 X=571871.68

CITY OF WEST ALLIS

PARK

REALTY SUBDIVISION NO. 3

W. BECHER STREET

SW-SE

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

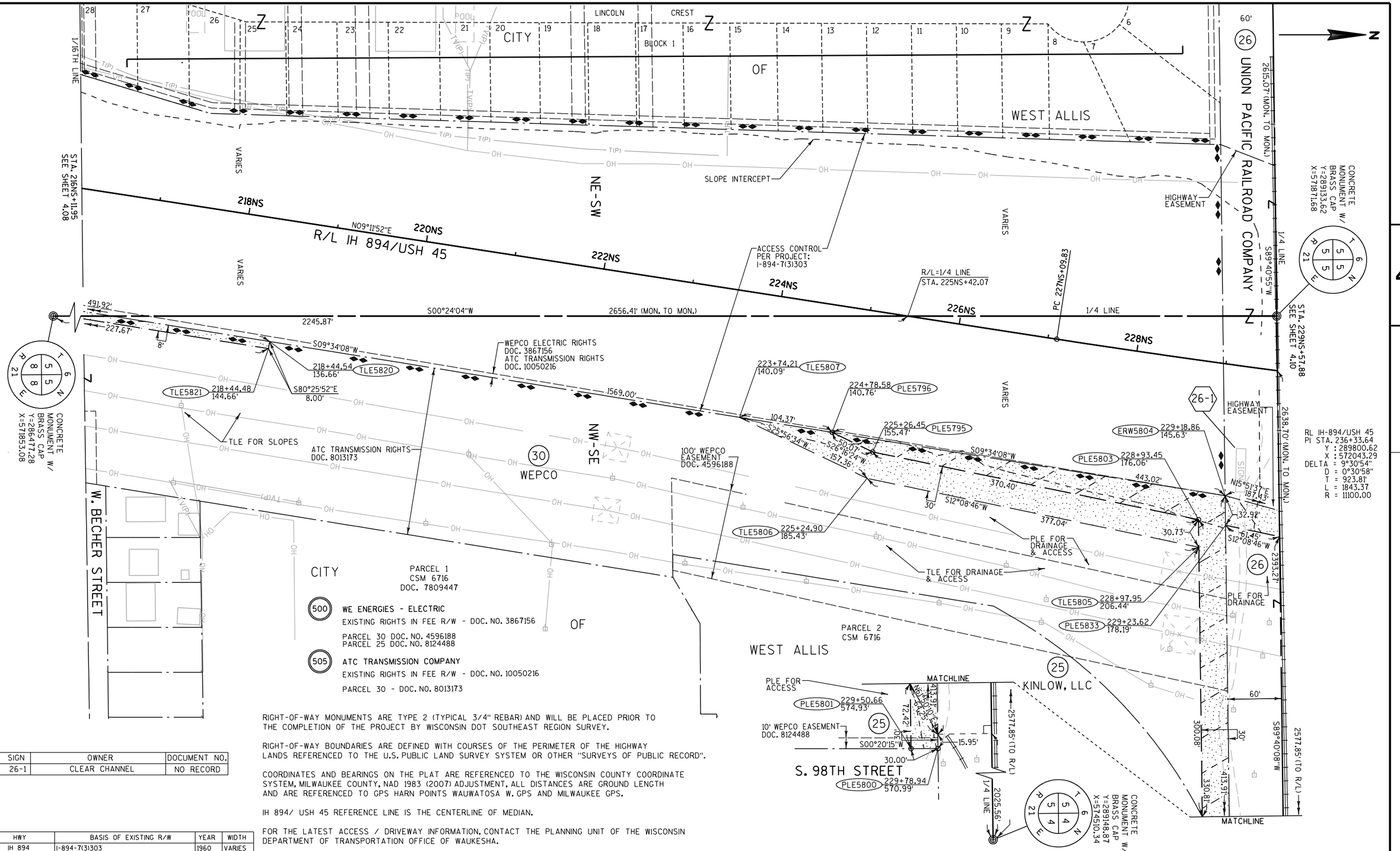
COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT, ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

IH 894/ USH 45 REFERENCE LINE IS THE CENTERLINE OF MEDIAN.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

REVISION DATE	DATE JULY 11, 2012	SCALE. FEET	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.08	
AUG. 15, 2012 DEC. 17, 2012		0 50 100	COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040408_RP.dgn PLOT DATE : 17-DEC-2012 12:10 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1



SIGN	OWNER	DOCUMENT NO.
26-1	CLEAR CHANNEL	NO RECORD

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT, ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

IH 894/ USH 45 REFERENCE LINE IS THE CENTERLINE OF MEDIAN.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 894	I-894-7(3)303	1960	VARIES

REVISION DATE
AUG. 15, 2012
OCT. 15, 2012
DEC. 17, 2012

DATE JULY 11, 2012

SCALE. FEET
0 50 100

HWY: IH 894/ USH 45

COUNTY: MILWAUKEE

STATE R/W PROJECT NUMBER 1060-33-25

CONSTRUCTION PROJECT NUMBER 1060-33-81 1060-33-85

PLAT SHEET 4.09

PS&E SHEET E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040409_RP.dgn PLOT DATE : 17-DEC-2012 12:11 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 894	I-894-7(3)303	1960	VARIES

(500) WE ENERGIES - ELECTRIC
EXISTING RIGHTS IN FEE R/W - DOC. NO. 3867156

(505) ATC TRANSMISSION COMPANY
EXISTING RIGHTS IN FEE R/W - DOC. NO. 10050216
PARCEL 30 - DOC. NO. 8013173

RL IH-894/USH 45
PI STA. 236+33.64
Y : 289800.62
X : 572043.29
DELTA = 9°30'54"
D = 0°30'58"
T = 923.81'
L = 1843.37
R = 11100.00

CONCRETE MONUMENT W/ BRASS CAP Y=289133.62 X=571871.68

STA. 229NS+57.88 SEE SHEET 4.09

STA. 240NS+00.00 SEE SHEET 4.11

MATCHLINE

MATCHLINE

1/16 LINE

1/4 LINE

R/L=1/4 LINE STA. 229NS+57.88

230NS

232NS

234NS

236NS

238NS

R/L IH 894/USH 45

S89°40'55"W

S00°23'04"W

2389.83' (MON. TO MON.)

2638.70' (MON. TO MON.)

2577.85'
2413.76'

1048.83'

928.61'

120'

30'

65.00'

20'

20.48'

122.90'

60.73'

616.45'

537.21'

N01°19'10"E

279.42'

838.65'

388.38'

446.30'

S08°10'24"W

639.89'

691.23'

S04°37'06"E

567.42'

599.76'

22.02'

129.14'

117.92'

130.32'

127.16'

124.03'

241.84'

262.89'

255.45'

316.24'

240.13'

256.10'

198.15'

37.56'

225.18'

49.03'

50.00'

78.58'

S46°44'25"E

S55°20'24"W

N15°51'37"E 187.43'

N12°08'46"E

S39°05'33"E

N37°43'22"E 88.90'

N00°21'57"E 35.00'

N89°40'08"E 30.00'

N89°40'08"E

S89°40'08"W

HIGHWAY EASEMENT

SLOPE INTERCEPT PROJ. ID# 1060-33-81

16' ACCESS EASEMENT DOC. 3838078

WEPCO ELECTRIC RIGHTS DOC. 3867156
ATC TRANSMISSION RIGHTS DOC. 10050216

ACCESS CONTROL PER PROJECT: I-894-7(3)303

TLE FOR DRAINAGE

PLE FOR DRAINAGE

TLE FOR ACCESS

ATC TRANSMISSION RIGHTS DOC. 8013173

SUB-STATION

CITY

OF

HIGH RIDGE SUBDIVISION BLOCK 1

W. MAPLE STREET

S. 100TH STREET

S. 96TH STREET

WEST ALLIS

SE-NW

SW-NE

VARIES

(26) UNION PACIFIC RAILROAD COMPANY

(30) WEPCO

PLE4199 231+01.76 172.41'
PLE5827 231+04.39 192.72'
TLE5788 231+63.82 198.15'
TLE5808 231+38.22 225.18'
PLE5792 236+30.16 130.32'
PLE5791 236+86.88 240.13'
TLE5787 236+57.14 256.10'
TLE5786 237+04.36 316.24'
PRW5777 239+28.02 117.92'
PLE5782 236+51.89 129.14'
PLE5783 237+09.82 241.84'
PLE5785 237+04.59 262.89'
TLE5784 237+52.90 255.45'
TLE5809 232+45.42 1146.80'
TLE5811 232+82.58 1196.74'
TLE5813 232+27.47 1233.35'
TLE5810 233+14.02 1193.20'
TLE5812 232+85.67 1226.54'

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT. ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

IH 894/ USH 45 REFERENCE LINE IS THE CENTERLINE OF MEDIAN.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

REVISION DATE	DATE JULY 11, 2012	SCALE, FEET 0 50 100	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.10	
AUG. 15, 2012 OCT. 15, 2012 DEC. 17, 2012			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81 1060-33-85	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040410_RP.dgn PLOT DATE : 17-DEC-2012 12:12 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 894	I-894-7(3)303	1960	VARIES
IH 894	I-894-7(1)303	1969	VARIES
S. 100TH STREET	HIGH RIDGE SUBDIVISION	1917	30'
W. ORCHARD PLACE	QUIT CLAIM DOC. 5505168	1981	60'
S. 98TH STREET	MOUNT TANNER SUBDIVISION	1893	60'

4

SEE SHEET 4.10
STA. 240NS+00.00

HIGH RIDGE SUBDIVISION

CITY

SE-NW

NE-NW

OF

S. 100TH STREET

30'

W. ORCHARD PLACE

60'

HIGH RIDGE SUBDIVISION
LOT 4

HIGH RIDGE SUBDIVISION

SUMMIT CREDIT UNION

PKNG

LOT 2

LOT 3

CSM 5148
PARCEL 2
R.233,I.810
DOC. 6190174

CSM 6046
PARCEL 2
R.3425,I.899
DOC. 7029286

CSM 5687
PARCEL 2
R.2782,I.495
DOC. 6612361

SLOPE INTERCEPT
PROJ. ID# 1060-33-81

TLE FOR SLOPES

PLE FOR WALL AND DRIVE

TO BE ACQUIRED UNDER PROJ. ID# 1060-33-25

247+08.01
193.93'
PRW5218

247+08.05
203.93'
TLE5220

248+00.18
202.80'
TLE5221

248+00.13
192.80'
PRW5219

248+60.03
168.55'
PRW5222

247+07.97
183.93'
ERW5216

248+00.09
182.80'
ERW5217

248+59.96
152.06'
ERW5056

92.13'
92.13'
20'
10'
30'

S89°55'27"W

S00°23'04"W
2389.83' (MON. TO MON.)

1/4 LINE

1069.83'

400.93'

1/16TH LINE

N89°40'07"E

PT 245NS+53.20

16.48'
58.78'
127.03'

N02°19'42"W
184.67'

ACCESS ACQUIRED BY I-894-7(3)303

ACCESS CONTROL PER PROJECT: I-894-7(3)303

SLOPE INTERCEPT PROJ. ID# 1060-33-77

WEST ALLIS

VARIES

SW-NE

NW-NE

242NS

244NS

246NS

248NS

250NS

N00°19'02"W
3013.36'

R/L IH 894/USH 45

SLOPE INTERCEPT PROJ. ID# 1060-33-81

CONCRETE MONUMENT W/ BRASS CAP
Y=291519.60
X=569267.99
CLOSING CORNER

S89°55'27"W
2561.77

CONCRETE MONUMENT W/ CAST IRON PLUG
Y=291523.04
X=571829.76
STANDARD CORNER

S89°38'51"W
57.96'

CONCRETE MONUMENT W/ CAST IRON PLUG
Y=291523.40
X=571887.72
CLOSING CORNER

146.02'

514G

516G

518G

520G

R/L W. GREENFIELD AVENUE

2657.91' (MON. TO MON.)

2599.95'

S89°38'51"W

RL IH-894/USH 45
PI STA. 236+33.64
Y : 289800.62
X : 572043.29
DELTA = 9°30'54"
D = 0°30'58"
T = 923.81'
L = 1843.37
R = 11100.00

LOT 3

LOT 2

MATCHLINE

PLE5735
250+44.64
187.29'

248+60.08
180.80'
PLE5736

353.09'

STA. 253NS+53.09=
STA. 516G+67.18

N02°07'01"W
106.80'

12.26'

12.25'

184.67'

VACATED STREET

S08°14'10"E

S00°23'04"W

PL

SANITARY & WATERMAIN EASEMENT (WIDTH VARIES)
DOC. 5510568

249+18.74
151.34'
ERW5055

STA. 250NS+00.00 MATCHLINE
SEE SHEET 4.12

388.38'

N01°19'10"E
446.30'

S08°10'24"W

ATC TRANSMISSION RIGHTS
DOC. 8013173

639.89'

691.23'

S04°37'06"E

20'

TLE5389

241+78.62
199.53'

S23°17'53"W

121.58'

S07°22'53"W

178.09'

PLE FOR DRAINAGE

TLE5390

242+89.15
245.01'

TLE FOR SLOPES

243+12.39
113.86'
ERW5778

76.37'

33.13'

243+65.95
167.63'
PRW5776

16.49'

243+77.45
179.27'
PLE5780

203.23'

243+33.58
163.33'
PLE5781

122.35'

244+62.01
266.04'
TLE5391

N45°32'22"E

WEPCO ELECTRIC RIGHTS
DOC. 3867156
ATC TRANSMISSION RIGHTS
DOC. 10050216

N00°23'04"E
550.00'

S89°38'51"W
85.58'

S00°23'04"W
550.00'

WEPCO ELECTRIC RIGHTS AND HIGHWAY EASEMENT
DOC. 3925942
ATC TRANSMISSION RIGHTS
DOC. 10071585

30
WEPCO

130

1

SLOPE INTERCEPT
PROJ. ID# 1060-33-77

ACCESS ACQUIRED BY I-894-7(3)303 & I-894-7(1)303

60'

S. 98TH STREET

MOUNT TANNER SUBDIVISION
BLOCK 2

CONCRETE MONUMENT W/ BRASS CAP
Y=291539.59
X=574487.62
STANDARD CORNER

CONCRETE MONUMENT W/ BRASS CAP
Y=291539.59
X=574524.82
CLOSING CORNER

S89°41'31"W
37.20'

500	WE ENERGIES - ELECTRIC EXISTING RIGHTS IN FEE R/W - DOC. NO. 3867156 PARCEL 30 - DOC. NO. 3925942
505	AMERICAN TRANSMISSION COMPANY EXISTING RIGHTS IN FEE R/W - DOC. NO. 10050216 PARCEL 30 - DOC. NO. 8103173 PARCEL 30 - DOC. NO. 10071585
551	CITY OF WEST ALLIS WATER PARCEL 1 - DOC. NO. 5510568
552	CITY OF WEST ALLIS SEWER PARCEL 1 - DOC. NO. 5510568
UA651	CITY OF WEST ALLIS WATER
UA652	CITY OF WEST ALLIS SEWER

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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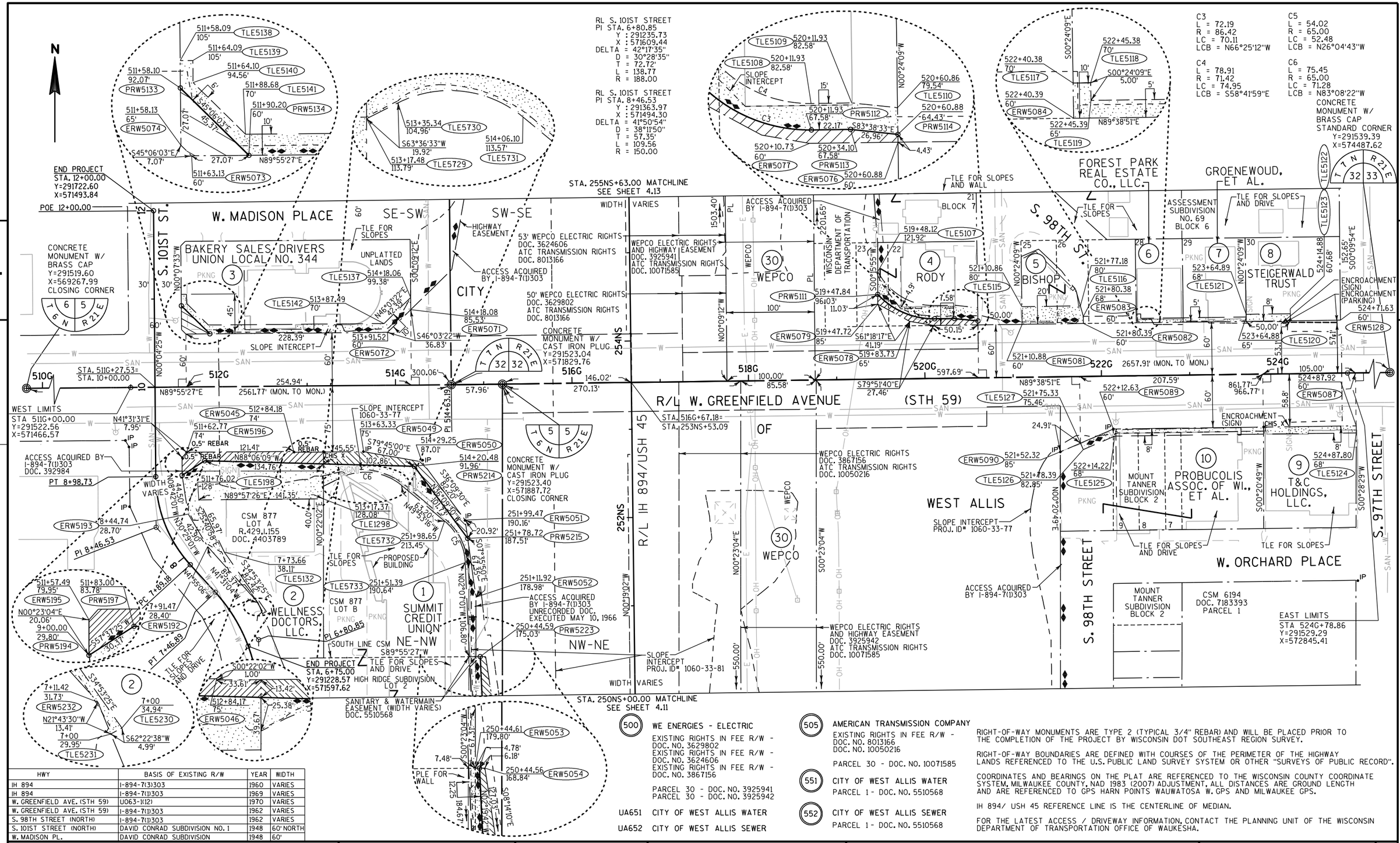
COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT, ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

IH 894/ USH 45 REFERENCE LINE IS THE CENTERLINE OF MEDIAN.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

REVISION DATE DEC. 17, 2012 MAY 17, 2012 JULY 11, 2012 AUG. 15, 2012	DATE FEB. 13, 2012	SCALE. FEET 0 50 100	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.11
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-77 1060-33-81	PS&E SHEET E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040411_RP.dgn PLOT DATE : 17-DEC-2012 12:13 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1



HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 894	I-894-7(3)303	1960	VARIES
IH 894	I-894-7(1)303	1969	VARIES
W. GREENFIELD AVE. (STH 59)	U063-1(12)	1970	VARIES
W. GREENFIELD AVE. (STH 59)	I-894-7(1)303	1962	VARIES
S. 98TH STREET (NORTH)	I-894-7(1)303	1962	VARIES
S. 101ST STREET (NORTH)	DAVID CONRAD SUBDIVISION NO. 1	1948	60' NORTH
W. MADISON PL.	DAVID CONRAD SUBDIVISION	1948	60'

(500) WE ENERGIES - ELECTRIC
EXISTING RIGHTS IN FEE R/W - DOC. NO. 3629802
EXISTING RIGHTS IN FEE R/W - DOC. NO. 3624606
EXISTING RIGHTS IN FEE R/W - DOC. NO. 3867156
PARCEL 30 - DOC. NO. 3925941
PARCEL 30 - DOC. NO. 3925942

UA651 CITY OF WEST ALLIS WATER
UA652 CITY OF WEST ALLIS SEWER

(505) AMERICAN TRANSMISSION COMPANY
EXISTING RIGHTS IN FEE R/W - DOC. NO. 8013166 DOC. NO. 10050216
PARCEL 30 - DOC. NO. 10071585

(551) CITY OF WEST ALLIS WATER
PARCEL 1 - DOC. NO. 5510568

(552) CITY OF WEST ALLIS SEWER
PARCEL 1 - DOC. NO. 5510568

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

REVISION DATE	DATE FEB. 13, 2012	SCALE. FEET 0 50 100	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.12	
MAY 17, 2012 JULY 11, 2012 DEC. 17, 2012			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-77 1060-33-81	PS&E SHEET	E

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 894	I-894-7(1)303	1969	VARIES
W. WASHINGTON ST.	ROSE HILL SUBDIVISION	1929	60'
W. MADISON PL.	DAVID CONRAD SUBDIVISION	1948	60'

(500) WE ENERGIES - ELECTRIC
EXISTING RIGHTS IN FEE R/W - DOC. NO. 3624606

PARCEL 30 - DOC. NO. 3925941
PARCEL 24 - DOC. NO. 3927620
PARCEL 23 - DOC. NO. 3927621
PARCEL 22 - DOC. NO. 3927622

(505) AMERICAN TRANSMISSION COMPANY
EXISTING RIGHTS IN FEE R/W - DOC. NO. 8013166

PARCEL 30 - DOC. NO. 8013173
PARCEL 30 - DOC. NO. 10071585

N

CITY OF WEST ALLIS

W. MADISON PLACE

DAVID CONRAD SUBDIVISION NO. 1

UNPLATTED LANDS

UNPLATTED LANDS

CSM 1887

PARCEL 2

PARCEL 1

UNPLATTED LANDS

W. WASHINGTON STREET

1/16TH LINE

S. 100TH STREET

S00°09'12"E 2662.71' (MON. TO MON.)

1/4 LINE

SE-SW

SW-SE

45'

30'

24.75'

ACCESS ACQUIRED BY I-894-7(1)303

HIGHWAY EASEMENT

24.75'

CONCRETE MONUMENT W/ BRASS CAP
Y=291519.60
X=569267.99
CLOSING CORNER

S89°55'27"W 2662.75'

CONCRETE MONUMENT W/ CAST IRON PLUG
Y=291523.04
X=571829.76
STANDARD CORNER

S89°38'51"W 57.96'

CONCRETE MONUMENT W/ CAST IRON PLUG
Y=291522.40
X=571887.72
CLOSING CORNER

146.02'

R/L W. GREENFIELD AVENUE

R/L=SECTION LINE
STA. 253NS+53.09

S89°38'51"W 2657.91' (MON. TO MON.)

S89°38'51"W 2599.95' (MON. TO MON.)

CONCRETE MONUMENT W/ BRASS CAP
Y=291539.59
X=574524.82
CLOSING CORNER

CONCRETE MONUMENT W/ CAST IRON PLUG
Y=291539.04
X=574487.62
STANDARD CORNER

S89°41'31"W 37.20'

STA. 255NS+63.00 MATCHLINE SEE SHEET 4.12

STA. 266NS+84.20 MATCHLINE SEE SHEET 4.14

254NS 256NS 258NS 260NS 262NS 264NS 266NS

287.75' VARIES 287.75'

N00°19'02"W

R/L IH 894/USH 45

53' WEPCO ELECTRIC RIGHTS
DOC. 3624606
ATC TRANSMISSION RIGHTS
DOC. 8013166

ERW5096 261+35.15 110.75'

1503.40'

N00°09'12"W 1503.40'

WEPCO ELECTRIC RIGHTS AND HIGHWAY EASEMENT
DOC. 3925941
ATC TRANSMISSION RIGHTS
DOC. 10071585

UNPLATTED LANDS

ERW5093 259+81.38 210.31'

100'

30

WEPCO

SLOPE INTERCEPT

S00°09'12"E 36.70'

S22°22'28"E 37.73'

2201.65'

S00°09'12"E 2201.65'

SLOPE INTERCEPT

S22°25'24"E 52.34'

ACCESS ACQUIRED BY I-894-7(1)303
WI DOT

PRW5769 258+62.47 244.08'

S13°59'16"E 9.71'

S00°13'49"E 23.17'

259+29.31 227.82'

PRW5768

79.75'

S00°09'12"E

CITY

BALL

SOIK

SCHMIDT

SCHUEPFERLING

OF

RODRIGUEZ

JANSKY

KUEHN

BENNETT

LAUDON

ERMI

POOL

ASSESSMENT SUBDIVISION NO. 69
BLOCK 7

N89°38'51"E

21 20 19 18 17 16 15 14 14 14 13 12

11 11 9 9 8 8

34.8' 160.65' 77.3' 71.1' 68.7' 56.7' 59.8'

23 22 WEST VIDAL

24 BIEGEL

21 JENSEN

27 ROWINSKI

28 MUFFLER

29

31

32

33

34 CSM 4497 LOT 2

35 CSM 4497 LOT 1 R.1665, I.1062 DOC. 5738951

36

37

38

39

ERW5772 259+45.93 210.21'

6.34' SHED

15.00'

7.90'

30.44'

18.88'

16.83'

259+52.20 224.23'

PRW5064

49.91'

14'

WEST PART ELECTRIC EASEMENT DOC. 3927622

6' ELECTRIC EASEMENT DOC. 3927621

6' ELECTRIC EASEMENT DOC. 3927620

S. 98TH STREET

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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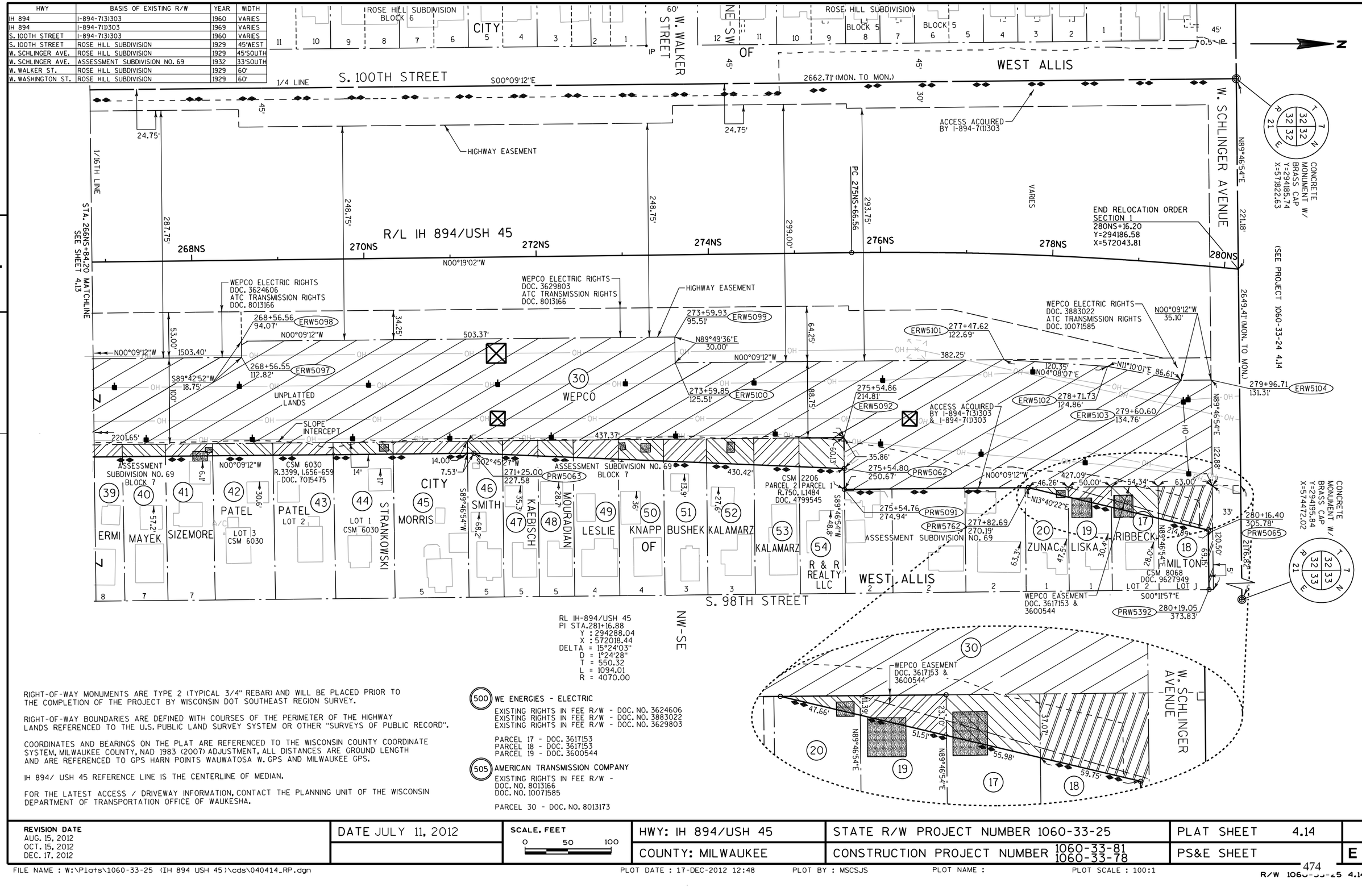
IH 894/ USH 45 REFERENCE LINE IS THE CENTERLINE OF MEDIAN.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

REVISION DATE	DATE JULY 11, 2012	SCALE. FEET 0 50 100	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.13	
AUG. 15, 2012 OCT. 15, 2012 DEC. 17, 2012			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-81	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040413_RP.dgn PLOT DATE : 17-DEC-2012 13:00 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
IH 894	I-894-7(3)303	1960	VARIES
IH 894	I-894-7(1)303	1969	VARIES
S. 100TH STREET	I-894-7(3)303	1960	VARIES
S. 100TH STREET	ROSE HILL SUBDIVISION	1929	45'WEST
W. SCHLINGER AVE.	ROSE HILL SUBDIVISION	1929	45'SOUTH
W. SCHLINGER AVE.	ASSESSMENT SUBDIVISION NO. 69	1932	33'SOUTH
W. WALKER ST.	ROSE HILL SUBDIVISION	1929	60'
W. WASHINGTON ST.	ROSE HILL SUBDIVISION	1929	60'



RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

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IH 894/ USH 45 REFERENCE LINE IS THE CENTERLINE OF MEDIAN.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

(500) **WE ENERGIES - ELECTRIC**

EXISTING RIGHTS IN FEE R/W - DOC. NO. 3624606
EXISTING RIGHTS IN FEE R/W - DOC. NO. 3883022
EXISTING RIGHTS IN FEE R/W - DOC. NO. 3629803

PARCEL 17 - DOC. 3617153
PARCEL 18 - DOC. 3617153
PARCEL 19 - DOC. 3600544

(505) **AMERICAN TRANSMISSION COMPANY**

EXISTING RIGHTS IN FEE R/W - DOC. NO. 8013166
DOC. NO. 10071585

PARCEL 30 - DOC. NO. 8013173

REVISION DATE
AUG. 15, 2012
OCT. 15, 2012
DEC. 17, 2012

DATE JULY 11, 2012

SCALE. FEET 0 50 100

HWY: IH 894/USH 45

COUNTY: MILWAUKEE

STATE R/W PROJECT NUMBER 1060-33-25

CONSTRUCTION PROJECT NUMBER 1060-33-81 1060-33-78

PLAT SHEET 4.14

PS&E SHEET E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040414_RP.dgn PLOT DATE : 17-DEC-2012 12:48 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 100:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 45	1100-1-23 U03-1(75)	1969	VARIES
WATERTOWN PLANK RD	CT-03-1(73)	1967	VARIES
WATERTOWN PLANK RD	O.C. DOC. 3745778	1959	55' SOUTH

CONCRETE MONUMENT W/ ALUMINUM CAP Y=302148.00 X=569115.57

R/W ACQUIRED BY 1060-33-22

35WEB

R/L W. WATERTOWN PLANK ROAD

SECTION LINE 40WEB

2667.48' (MON. TO MON.) N89°44'51"E

45WEB

CONCRETE MONUMENT W/ CAST IRON PLUG Y=302159.76 X=571783.02

PC 47WEB+74.01

PI 48WEB+87.08

PT 49WEB+99.28

N89°42'13"E 263.04'

50WEB

SEE SHEET 4.21 MATCH LINE 2633.82' (MON. TO MON.) SECTION LINE

CONCRETE MONUMENT W/ BRASS CAP Y=302173.39 X=574416.80

R/L=SECTION LINE STA. 363NS+24.13

362NS+30.17= 51WEB+92.13

N34°51'19"W

VARIES

360NS

R/L USH 45

SEE SHEET 4.20 MATCH LINE 919.37'

355NS

350NS

RL USH 45
PI STA. 346+23.95
Y : 300694.51
X : 573067.49
DELTA = 39°39'27"
D = 1°54'35"
T = 1081.77'
L = 2076.46
R = 3000.00

RL W. WATERTOWN PLANK RD.
PI STA. 48+87.08
Y : 302147.84
X : 571800.56
DELTA = 12°17'33"
D = 5°27'24"
T = 113.07'
L = 225.27
R = 1050.00

C3
L = 182.59
R = 318.45
LC = 180.09
LCB = N52°03'32"W

C4
L = 86.75
R = 123.00
LC = 84.96
LCB = N20°26'33"W

C5
L = 115.68
R = 164.00
LC = 113.30
LCB = N20°26'20"W

N

20' MILWAUKEE COUNTY SANITARY SEWER EASEMENT DOC. 7503707

10' WE ENERGIES ELECTRIC EASEMENT DOC. 5061222

CHIS X

259.04'

365+63.91 444.76' 1295

366+93.30 665.72' PRW5149

366+86.57 670.77' TLE5271

20' MILWAUKEE COUNTY ELECTRIC EASEMENT DOC. 7503707

NE-NW

NW-NE

LOT 9 CSM 7648 DOC. 9075806

S46°07'27"E

11

MILWAUKEE COUNTY

20' MILWAUKEE COUNTY WATERMAIN EASEMENT DOC. 7503707

S41°04'37"E 120.66'

362+93.64 722.30' TLE5155

1014.08'

PT 356NS+18.64

20' MILWAUKEE COUNTY WATERMAIN EASEMENT DOC. 7503707

355+64.98 246.16' PRW1289

15' CHILLED WATER EASEMENT DOC. 7298264

355+47.69 315.97' PRW1291

N45°07'27"W 130.05'

130.22'

352+61.82 169.49' ERW5267

ACCESS ACQUIRED BY U-03-1(75)/1100-1-23

N31°04'27"W

S33°58'13"E

342.92'

520.51'

20' MILWAUKEE COUNTY ELECTRIC & COMMUNICATION EASEMENT DOC. 7503707

N58°21'34"W 90.68'

348+12.96 95.42' TLE5240

347+28.60 69.51' ERW5266

S19°35'13"E 55.94'

N29°38'27"W 324.

346+71.41 67.29' TLE5297

20' MILWAUKEE COUNTY ELECTRIC & COMMUNICATION EASEMENT DOC. 7503707

353+94.66 207.12' PRW5262

60.82'

355+11.08 292.65' PRW5263

354+45.55 245.67' TLE5239

S46°07'27"E 71.55'

S68°29'04"E 40.33'

S10°23'37"E 136.76'

162.19'

SLOPE INTERCEPT

15' CHILLED WATER EASEMENT DOC. 7298264

20' MILWAUKEE COUNTY WATERMAIN EASEMENT DOC. 7503707

LOT 8 CSM 7648

20' WE ENERGIES ELECTRIC EASEMENT DOC. 8919688

TLE5247 352+48.74 191.76'

LOT 1 CSM 7649 DOC. 9075807

TLE FOR SLOPES AND DRAINAGE

WAUWATOSA

12

INNOVATION PARTNERS, LLC

TLE5241 348+87.30 151.47'

1/16 LINE

NE-NW

NW-NE

SW-NE

SE-NW

PL

CONCRETE MONUMENT W/ SEWRPC BRASS CAP Y=299505.73 X=571800.79

2654.09' (MON. TO MON.)

1/4 LINE

S00°23'01"E

CONCRETE MONUMENT W/ ALUMINUM CAP Y=302141.27 X= 570311.44

WEST LIMIT STA. 33WEB+97.94

100'X60' RETAINING WALL EASEMENT DOC. 7503707

INGRESS EGRESS DOC. 07298264

TLE FOR SLOPES

14

MILWAUKEE COUNTY

LOT 10 CSM 7908 DOC. 9419817

NW-NW

1/16TH LINE

S00°10'38"E

N00°10'38"W 9.50' 760.46' 716.99' 731.34' 10' 27.56' 29.17' 37'

13

36+10.88 43' ERW1176

36+10.87 52.50' PRW2300

12.50' 22'

34+12.62 65' TLE5273

20' MILWAUKEE COUNTY ELECTRIC & COMMUNICATION EASEMENT DOC. 7503707

716.99'

731.34'

15' ACCESS & 8' UTILITY EASEMENT VOICESTREAM DOC. 8003101

TLE FOR SLOPES AND DRIVE

SLOPE INTERCEPT

PRW5150 43+27.85 52.50'

PRW5143 366+59.10 691.54'

20' MILWAUKEE COUNTY SANITARY SEWER EASEMENT DOC. 7503707

PRW5144 365+52.76 719.67'

PLE FOR SIGN BRIDGE

STEAM MAIN

36+00.84 80.60' TLE5270

36+40.00 80.65'

TLE5269

TLE5272

TLE5268

20' WISVEST STEAM AND CONDENSATE EASEMENT DOC. 7298264

N40°38'48"W 101.34'

PRW5145 364+51.94 709.44'

20' MILWAUKEE COUNTY ELECTRIC EASEMENT DOC. 7503707

PRW5146 363+69.65 730.59'

76.46'

50'

TLE5154 362+83.57 729.25'

PRW5147 362+49.70 717.51'

TLE5153 362+49.59 725.51'

UNPLATTED LANDS

CITY

TLE FOR SLOPES

20' MILWAUKEE COUNTY ELECTRIC & COMMUNICATION EASEMENT DOC. 7503707

360+73.92 671.36' TLE5152

360+61.65 653.60' TLE5151

S68°29'04"E

627.51'

PKNG

20' MILWAUKEE COUNTY STORM SEWER EASEMENT DOC. 7503707

360+77.67 664.25' PRW5148

OF

LOT 3 CSM 6650 DOC. 7731650

41+65.00 517.50'52.50" PLE5723 PLE5722

41+75.00 517.50'52.50" PLE5720 PLE5721

10.00'

5.00' 5.00'

12.98' S85°40'43"E 43.62' 9.02' 36.96' N00°15'03"W 58.96'

500 WE ENERGIES - ELECTRIC
PARCEL 11 - DOC. NO. 5061222 (10' ELEC)
PARCEL 12 - DOC. NO. 8919688 (20' ELEC)

502 WE ENERGIES - STEAM
PARCEL 11 - DOC. NO. 7298264 (20' STEAM)

509 VOICESTREAM
PARCEL 13 - DOC. NO. 8003101 (8' UTIL)

540 MILWAUKEE COUNTY - STORM
PARCEL 11 - DOC. NO. 7503707 (20' STO)

541 MILWAUKEE COUNTY - WATER
PARCEL 11 - DOC. NO. 7503707 (20' WAT)
PARCEL 11 - DOC. NO. 7503707 (VARIABLE WIDTH WAT)
PARCEL 12 - DOC. NO. 7503707 (VARIABLE WIDTH WAT)

542 MILWAUKEE COUNTY - SANITARY
PARCEL 11 - DOC. NO. 7503707 (20' SAN)
PARCEL 13 - DOC. NO. 7503707 (20' SAN)

543 MILWAUKEE COUNTY - ELECTRIC & COMMUNICATIONS
PARCEL 11 - DOC. NO. 7503707 (20' ELEC)
PARCEL 11 - DOC. NO. 7503707 (20' ELEC & COMM)
PARCEL 12 - DOC. NO. 7503707 (20' ELEC & COMM)
PARCEL 14 - DOC. NO. 7503707 (20' ELEC & COMM)

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT, ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

IH 894/ USH 45 REFERENCE LINE IS THE CENTERLINE OF MEDIAN.

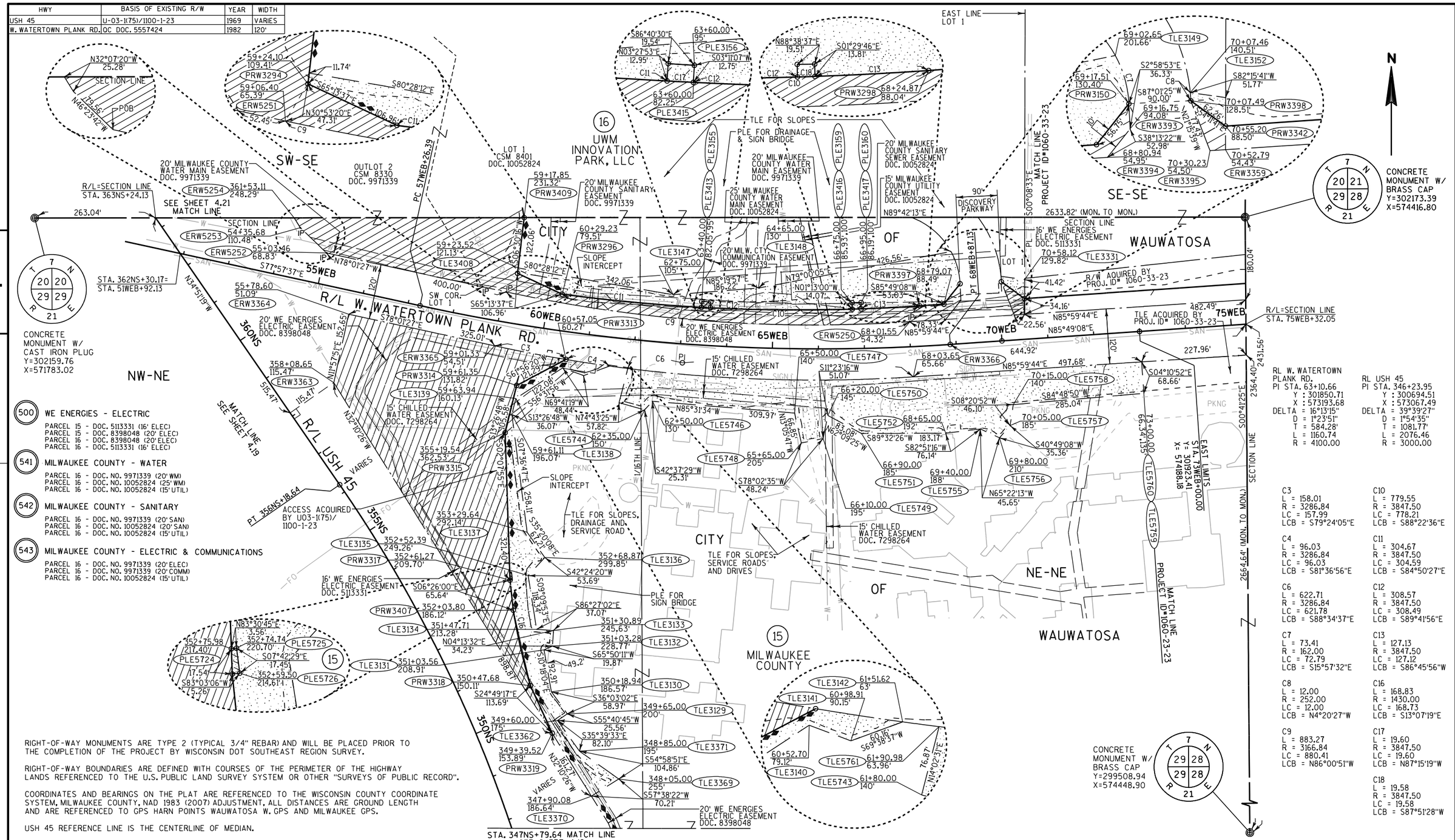
FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

SHEETS 4.15-4.18 OMITTED

REVISION DATE	DATE	SCALE. FEET	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.19	
MAY 17, 2012 AUG. 15, 2012	FEB. 13, 2012	0 100 200	COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-72	PS&E SHEET	E

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040419_RP.dgn PLOT DATE : 17-DEC-2012 12:16 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 200:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 45	U-03-1(75)/1100-1-23	1969	VARIES
W. WATERTOWN PLANK RD.	OC DOC. 5557424	1982	120'



(500) WE ENERGIES - ELECTRIC
PARCEL 15 - DOC. 5113331 (16' ELEC)
PARCEL 15 - DOC. 8398048 (20' ELEC)
PARCEL 16 - DOC. 8398048 (20' ELEC)
PARCEL 16 - DOC. 5113331 (16' ELEC)

(541) MILWAUKEE COUNTY - WATER
PARCEL 16 - DOC. NO. 9971339 (20' WM)
PARCEL 16 - DOC. NO. 10052824 (25' WM)
PARCEL 16 - DOC. NO. 10052824 (15' UTIL)

(542) MILWAUKEE COUNTY - SANITARY
PARCEL 16 - DOC. NO. 9971339 (20' SAN)
PARCEL 16 - DOC. NO. 10052824 (20' SAN)
PARCEL 16 - DOC. NO. 10052824 (15' UTIL)

(543) MILWAUKEE COUNTY - ELECTRIC & COMMUNICATIONS
PARCEL 16 - DOC. NO. 9971339 (20' ELEC)
PARCEL 16 - DOC. NO. 9971339 (20' COMM)
PARCEL 16 - DOC. NO. 10052824 (15' UTIL)

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT, ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

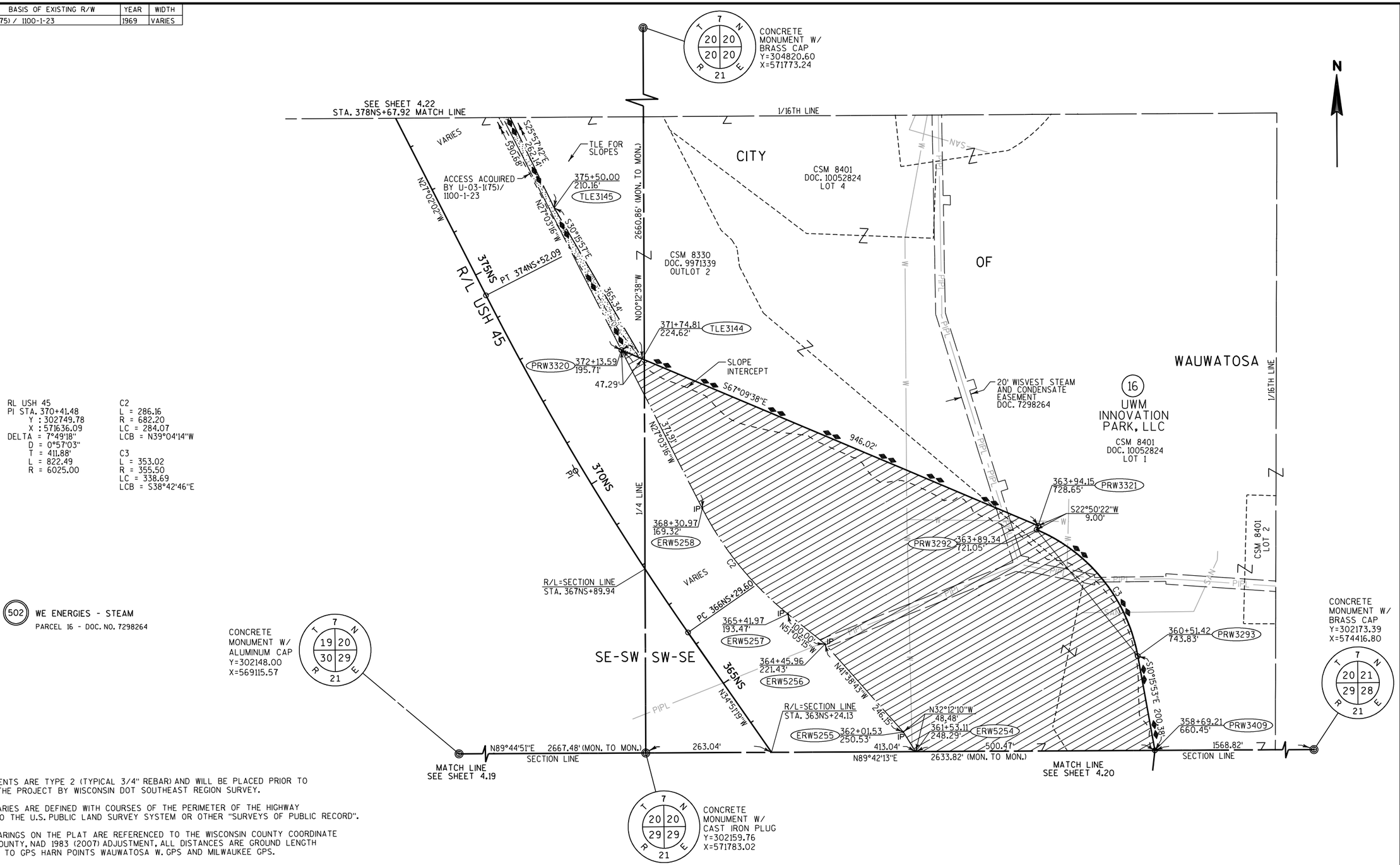
USH 45 REFERENCE LINE IS THE CENTERLINE OF MEDIAN.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

REVISION DATE AUG. 15, 2012	DATE MAY 17, 2012	SCALE, FEET 0 100 200	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.20	E
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-72	PS&E SHEET	

FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040420_RP.dgn PLOT DATE : 17-DEC-2012 12:17 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 200:1

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 45	U 03-1(75) / 1100-1-23	1969	VARIES



RL USH 45
PI STA. 370+41.48
Y : 302749.78
X : 571636.09
DELTA = 7°49'18"
D = 0°57'03"
T = 411.88'
L = 822.49
R = 6025.00

C2
L = 286.16
R = 682.20
LC = 284.07
LCB = N39°04'14"W

C3
L = 353.02
R = 355.50
LC = 338.69
LCB = S38°42'46"E

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT. ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

USH 45 REFERENCE LINE IS THE CENTERLINE OF MEDIAN.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

REVISION DATE AUG. 15, 2012	DATE MAY 17, 2012	SCALE. FEET 0 100 200	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.21	
			COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-72	PS&E SHEET	E

HWY	BASIS OF EXISTING R/W	YEAR	WIDTH
USH 45	U 03-1(75) / 1100-1-23	1969	VARIES
SWAN BLVD.	CSM 8330	2010	60' SOUTH
SWAN BLVD.	CSM 7634	2005	VARIES
SWAN BLVD.	CT-03-1(75)	1967	80'

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICAL 3/4" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT BY WISCONSIN DOT SOUTHEAST REGION SURVEY.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

COORDINATES AND BEARINGS ON THE PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY, NAD 1983 (2007) ADJUSTMENT, ALL DISTANCES ARE GROUND LENGTH AND ARE REFERENCED TO GPS HARN POINTS WAUWATOSA W. GPS AND MILWAUKEE GPS.

USH 45 REFERENCE LINE IS THE CENTERLINE OF MEDIAN.

FOR THE LATEST ACCESS / DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE OF WAUKESHA.

RL USH 45
PI STA. 397+58.57
Y : 305171.14
X : 570400.54
DELTA = 39°01'06"
D = 2°59'59"
T = 676.71'
L = 1300.71
R = 1910.00

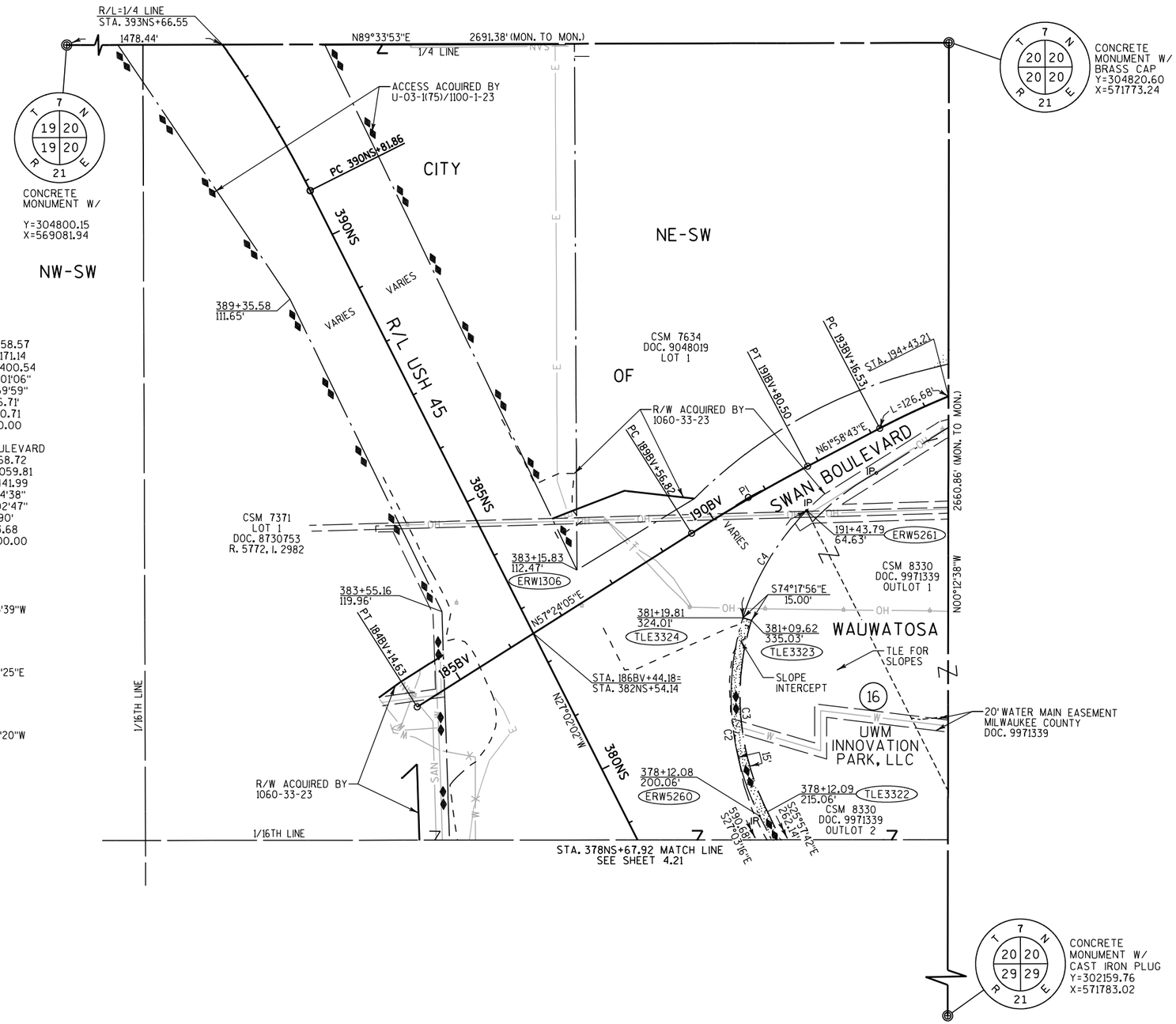
RL SWAN BOULEVARD
PI STA. 190+68.72
Y : 304059.81
X : 571441.99
DELTA = 4°34'38"
D = 2°02'47"
T = 111.90'
L = 223.68
R = 2800.00

C2
L = 340.02
R = 443.46
LC = 331.75
LCB = N05°05'39"W

C3
L = 328.82
R = 428.46
LC = 320.81
LCB = S05°04'25"E

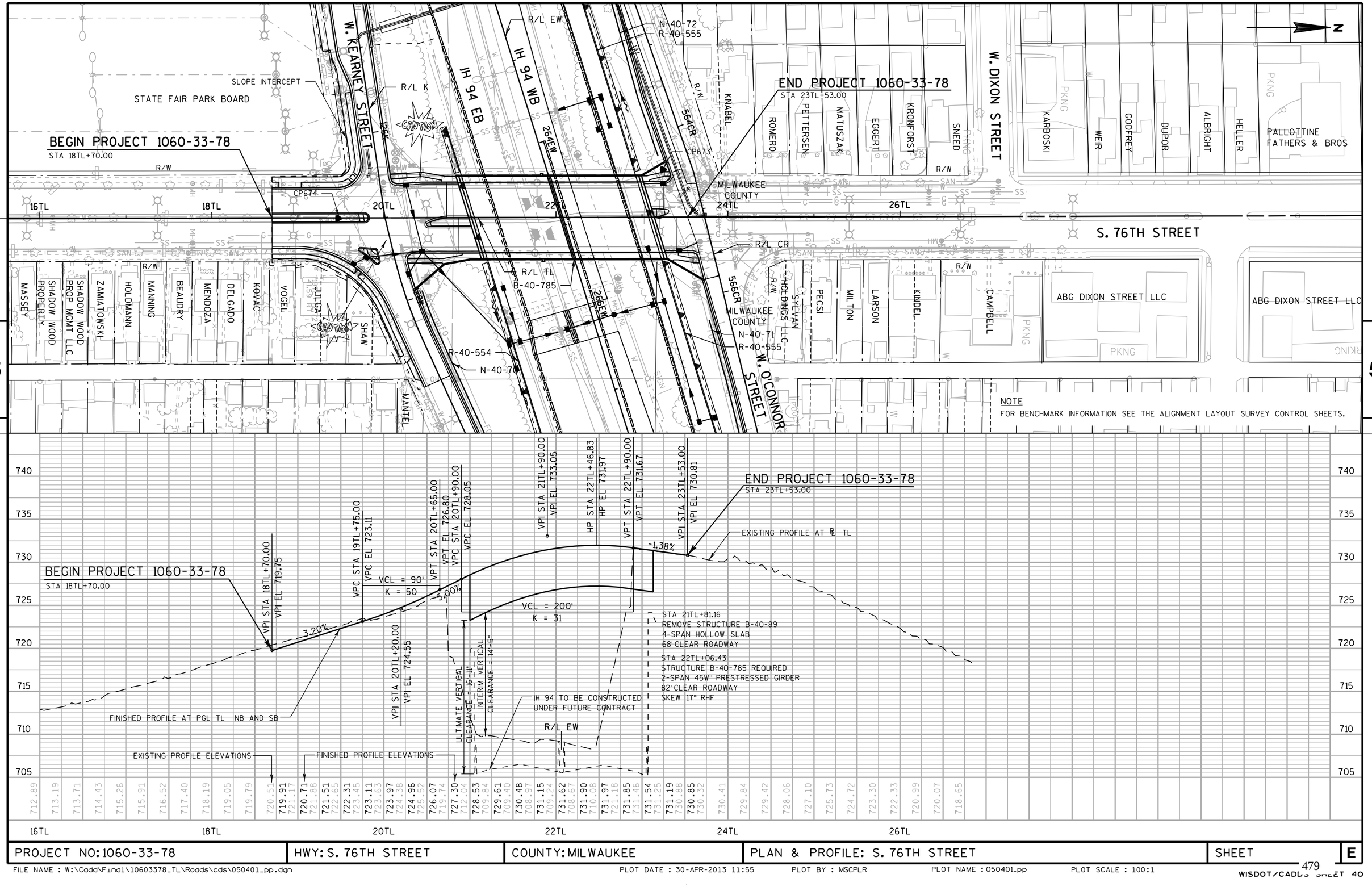
C4
L = 210.28
R = 443.46
LC = 208.32
LCB = S30°27'20"W

(541) MILWAUKEE COUNTY - WATER
PARCEL 16 - DOC. NO. 9971339 (20' WM)



REVISION DATE	DATE	SCALE, FEET	HWY: IH 894/USH 45	STATE R/W PROJECT NUMBER 1060-33-25	PLAT SHEET 4.22	
AUG. 15, 2012	MAY 17, 2012	0 100 200	COUNTY: MILWAUKEE	CONSTRUCTION PROJECT NUMBER 1060-33-72	PS&E SHEET	E

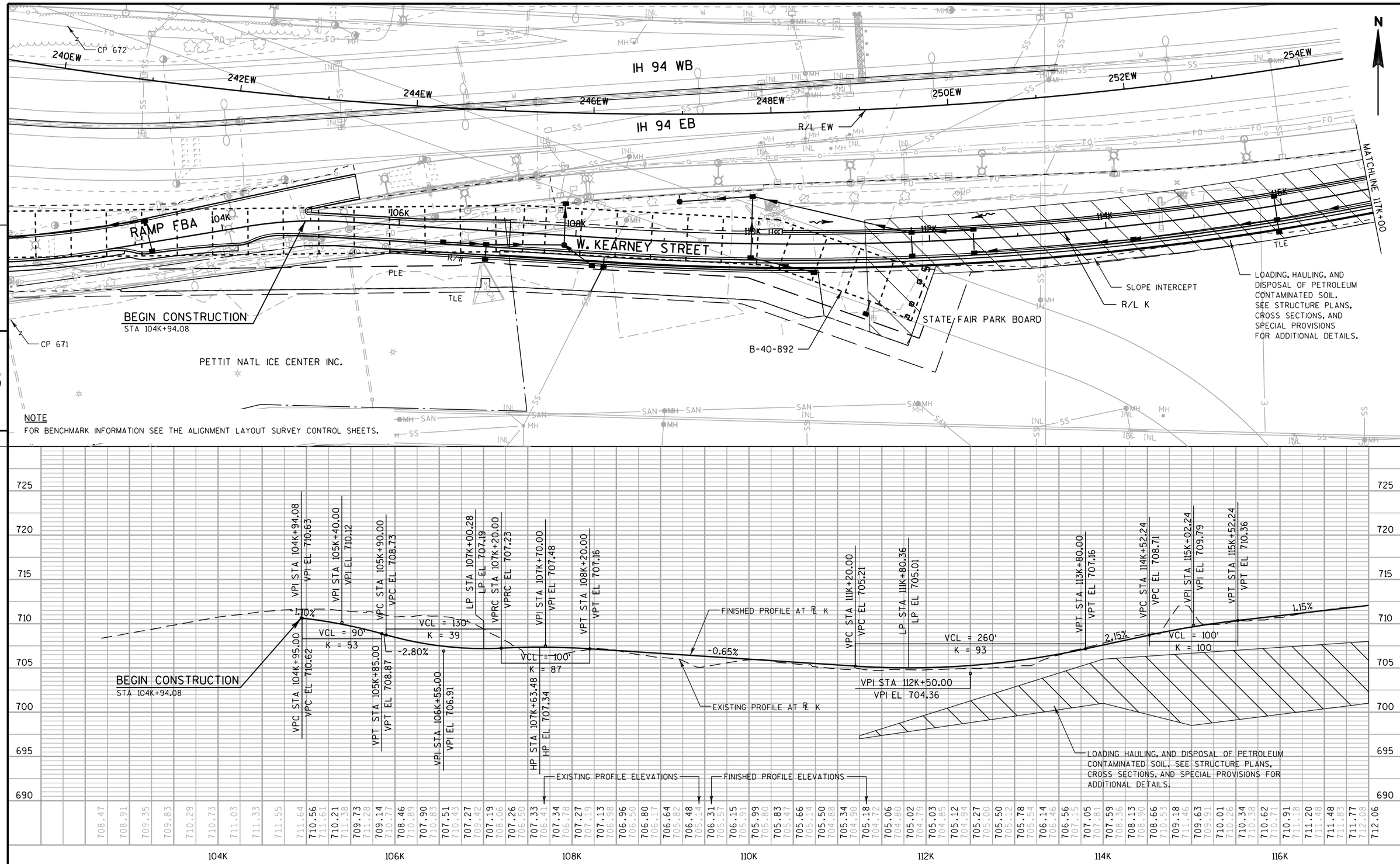
FILE NAME : W:\Plats\1060-33-25 (IH 894 USH 45)\cds\040422_RP.dgn PLOT DATE : 14-AUG-2012 10:04 PLOT BY : MSCSJS PLOT NAME : PLOT SCALE : 200:1



NOTE
FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN & PROFILE: S. 76TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\050401_pp.dgn PLOT DATE : 30-APR-2013 11:55 PLOT BY : MSCPLR PLOT NAME : 050401_pp PLOT SCALE : 100:1



PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN & PROFILE: W. KEARNEY STREET	SHEET	E

MILWAUKEE COUNTY
MILWAUKEE COUNTY
CP 673
IH 94 WB
IH 94 EB
MILWAUKEE COUNTY
256EW
258EW
260EW
262EW
264EW
266EW
R/L EW
CC
R-40-554
B-40-785
N-40-70
R/L K
MATCHLINE 117K+00
W. KEARNEY STREET
118K
120K
122K
124K
126K
128K
130K
132K
R/W
TLE
SLOPE INTERCEPT
20TL
CAUTION
CP 674
MANTEL
SHAW
TLE
JULGA
VOGEL
KOVAC
DELGADO
MENDOZA
BEAUDRY
18TH S. 76TH STREET
R/W
R/W
R/L TL
S. 75TH STREET
N
LOADING, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL. SEE STRUCTURE PLANS, CROSS SECTIONS, AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.
STATE FAIR PARK BOARD

NOTE
FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

EXISTING PROFILE AT ℄ K
FINISHED PROFILE AT ℄ K
VPC STA 119K+00.00
VPC EL 714.35
VPI STA 119K+50.00
VPI EL 714.92
VPT STA 120K+00.00
VPT EL 715.17
VPC STA 121K+90.00
VPC EL 716.12
VPT STA 123K+70.00
VPT EL 718.91
VPI STA 125K+10.00
VPI EL 722.55
VPT STA 125K+65.00
VPT EL 722.83
VPI STA 126K+40.00
VPI EL 723.20
VPI STA 126K+63.97
VPI EL 723.56
VPC STA 127K+40.00
VPC EL 723.86
VPT STA 128K+70.00
VPT EL 725.93
VPI STA 129K+00.00
VPI EL 727.03
1.15%
0.50%
2.60%
0.50%
1.50%
0.50%
3.68%
VCL = 100'
K = 155
VCL = 180'
K = 86
VCL = 110'
K = 52
VCL = 130'
K = 31
VPI STA 122K+80.00
VPI EL 716.57
VPC STA 124K+55.00
VPC EL 721.12
LP STA 127K+55.57
LP EL 723.82
VPI STA 128K+05.00
VPI EL 723.54
MATCH EXISTING PAVEMENT
LOADING HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL. SEE STRUCTURE PLANS, CROSS SECTIONS, AND SPECIAL PROVISIONS FOR ADDITIONAL DETAILS.
EXISTING PROFILE ELEVATIONS
FINISHED PROFILE ELEVATIONS

735 730 725 720 715 710 705 700

| | | |

BEGIN CONSTRUCTION
STA 555CR+88.00

S. 78TH STREET
S. 77TH STREET
S. 76TH STREET
W. O'CONNOR STREET
W. KEARNEY STREET
S. 75TH STREET

FRIGERIO
GALLEGOS
PERUSHEK
GENET
KNABEL
SYLVAN HOLDINGS LLC
TARAN
DOMAN
MANTEL
SHAW
JULGA
VOGEL
KOVAC

554CR
556CR
558CR
560CR
562CR
564CR
566CR
568CR
N-40-72
R-40-555
R-40-554
N-40-70
B-40-785

54EW
256EW
258EW
260EW
262EW
264EW
266EW
268EW

118K
120K
122K
124K
126K
128K
130K

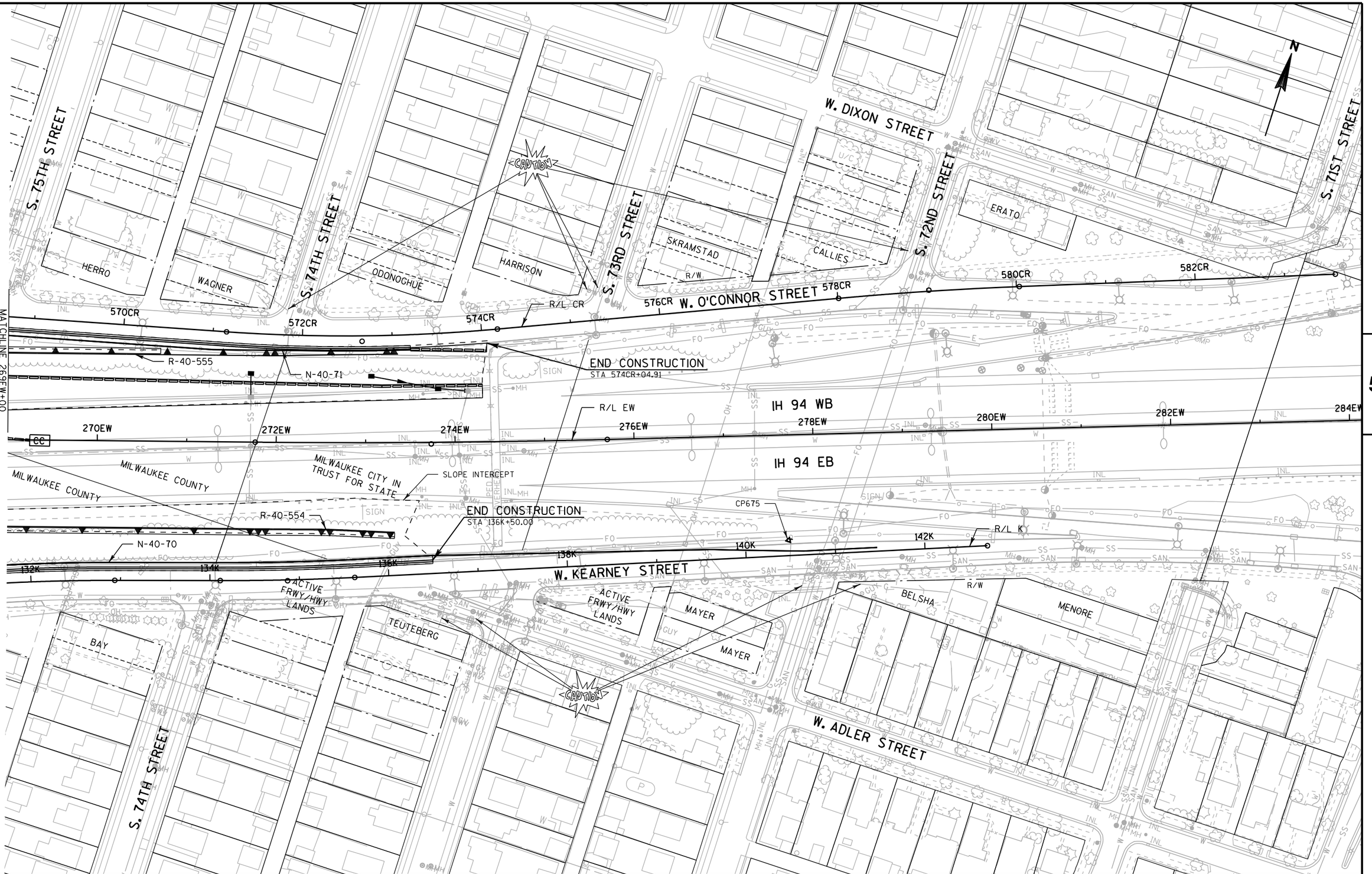
IH 94 WB
IH 94 EB
MILWAUKEE COUNTY
STATE FAIR PARK BOARD

CP673
CP674
CC
SLOPE INTERCEPT
R/L CR
R/L K
R/L TL
R/L EW
TLE
R/W
CAUTION
PKNG
MATCHLINE 269EW+00

24TL
26TL
20TL
18TL

5
5

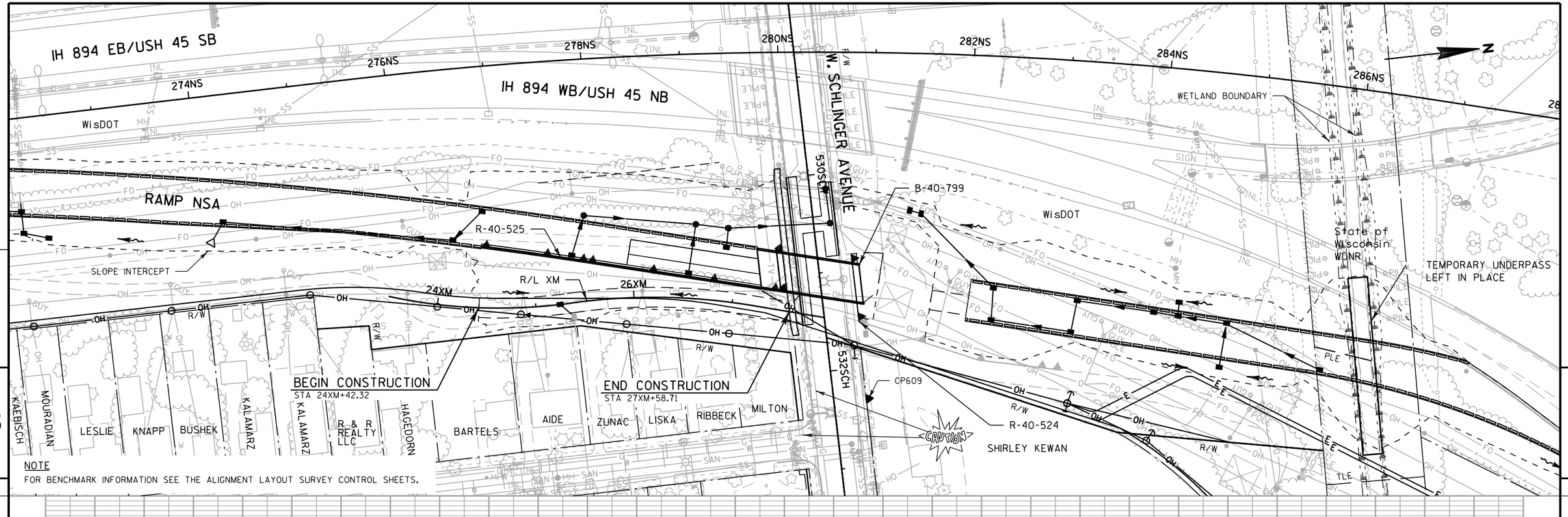
PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN: CONCRETE BARRIER (W. KEARNEY STREET/W. O'CONNOR STREET)	SHEET	E

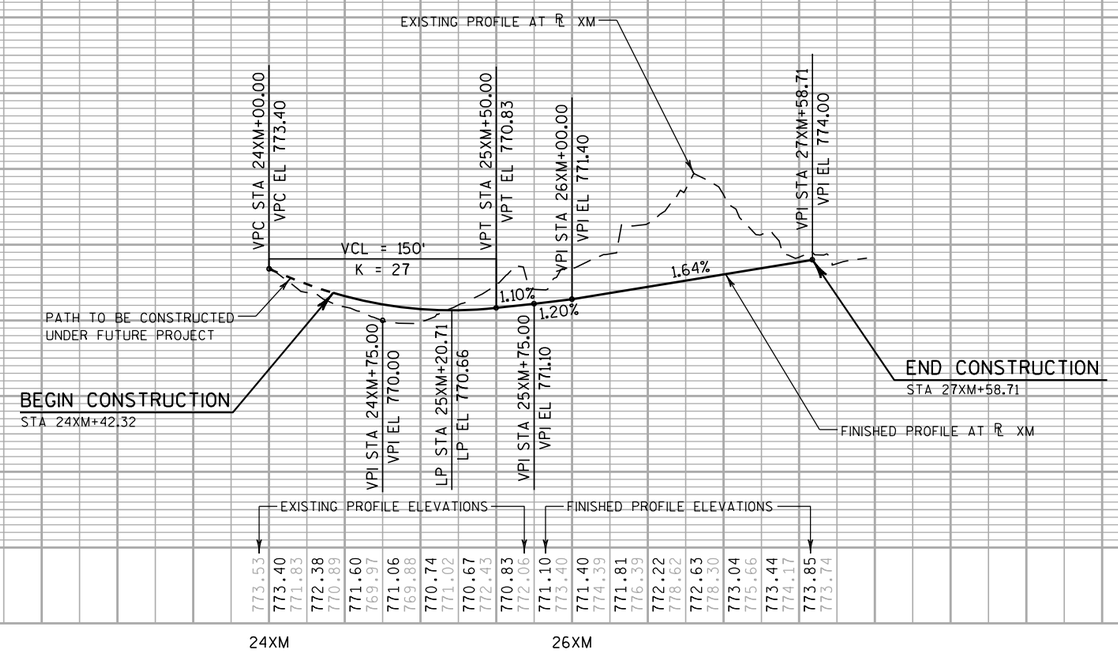


PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN: CONCRETE BARRIER (W. KEARNEY STREET/W. O'CONNOR STREET)	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\050405_pp.dgn PLOT DATE : 30-APR-2013 11:55 PLOT BY : MSCPLR PLOT NAME : 050405_pp PLOT SCALE : 100:1

WISDOT/CADDS SHEET 44





PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN & PROFILE: UTILITY ACCESS PATH	SHEET	E

S. 100TH STREET

WETLAND BOUNDARY

IH 894 EB/USH 45 SB

IH 894 WB/USH 45 NB

10NSA 12NSA 14NSA 16NSA 18NSA 20NSA 22NSA 24NSA

264NS 266NS 268NS 270NS 272NS 274NS 276NS

R/L NSA

TEMPORARY SHORING LEFT IN PLACE

TEMPORARY SHORING LEFT IN PLACE

TEMPORARY SHORING

RAMP NSA

BEGIN CONSTRUCTION
STA 12NSA+71.10, 23.32' RT

SLOPE INTERCEPT

WEPCO

CP606

R-40-525

24XM

MATCHLINE 25NSA+00

NOTE
FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

5

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GORSKI	SOIK	R/W SCHMIDT	SCHUEP-FERLING	RODRIGUZ	JANSKY	KUEHN	HOUSE	LAUDON	URBANSKI	MAYEK TRUST	SIZEMORE	PATEL	PATEL	STRANKOWSKI	MORRIS	SPATA	KAE-BISCH	MOURA-DIAN	LESLIE	KNAPP	R/W BUSHEK	KALAMARZ	KALAMARZ	R & R REALTY

805 800 795 790 785 780 775 770

VPI STA 15NSA+80.25
VPI EL 789.96

VPC STA 18NSA+09.88
VPC EL 790.64

VPI STA 19NSA+09.88
VPI EL 790.94

VPT STA 20NSA+09.88
VPT EL 792.24

VPC STA 20NSA+55.63
VPC EL 792.83

VPI STA 21NSA+30.63
VPI EL 793.81

VPT STA 22NSA+05.63
VPT EL 794.25

VPI STA 25NSA+00.00
VPI EL 795.67

ULTIMATE FINISHED PROFILE AT ℄ GE (BY OTHERS)

FINISHED PROFILE AT ℄ NSA

EXISTING PROFILE AT ℄ NSA

MATCH EXISTING ROADWAY

0.30%

VCL = 200'
K = 199

1.30%

VCL = 150'
K = 212

0.59%

0.36%

0.08%

0.32%

0.30%

VPI STA 24NSA+00.00
VPI EL 795.41

VPI STA 24NSA+34.28
VPI EL 795.51

VPI STA 24NSA+50.00
VPI EL 795.56

VPI STA 24NSA+75.00
VPI EL 795.58

BEGIN CONSTRUCTION
STA 12NSA+71.10, 23.32' RT

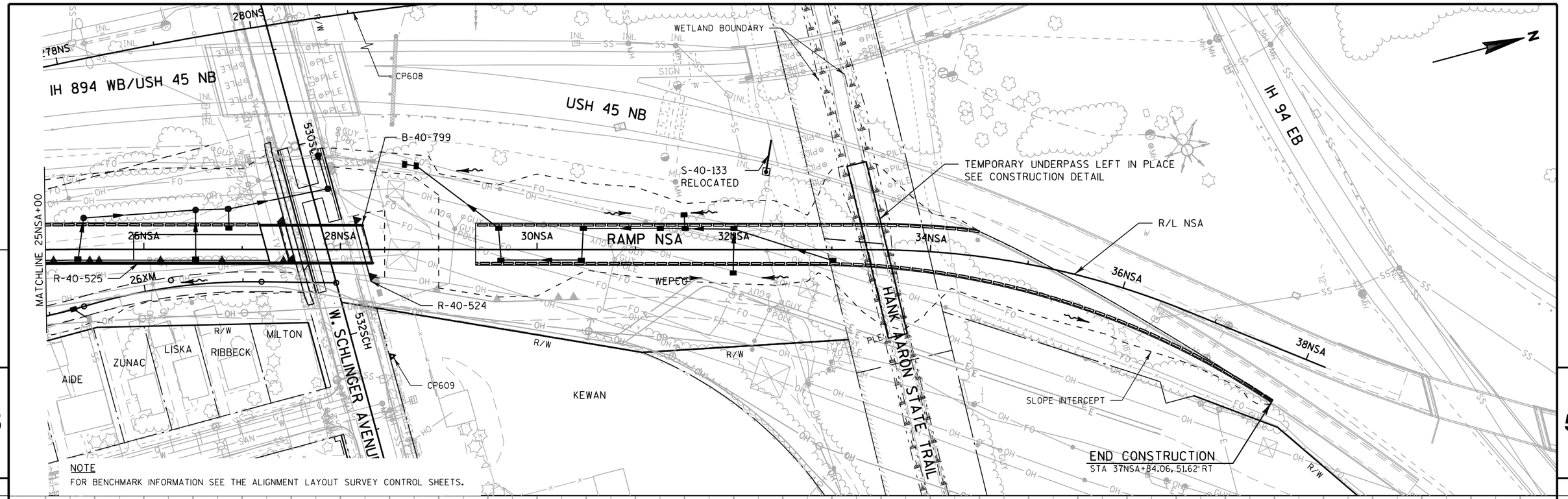
EXISTING PROFILE ELEVATIONS

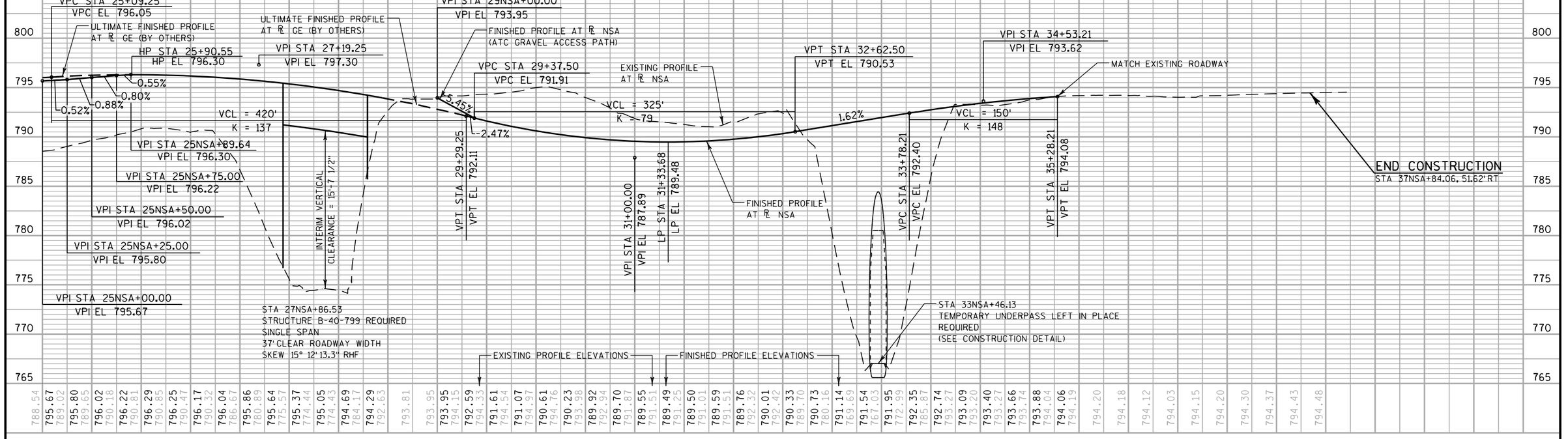
FINISHED PROFILE ELEVATIONS

14NSA	16NSA	18NSA	20NSA	22NSA	24NSA
788.35	789.95	790.94	792.83	793.81	795.67
788.53	790.00	790.17	792.43	793.85	794.37
788.70	790.02	790.24	792.76	794.05	794.52
788.84	790.09	790.32	793.08	794.22	794.66
788.95	790.11	790.39	793.36	794.37	794.81
789.02	790.17	790.46	793.62	794.52	794.96
789.16	790.30	790.54	793.85	794.66	795.11
789.34	790.24	790.61	794.05	794.81	795.26
789.42	790.63	787.33	788.54	787.73	787.96	795.41
789.58	790.32	790.69	794.22	794.96	795.48
789.74	790.18	786.67	788.69	787.59	788.08	795.56
789.81	790.39	790.80	794.37	795.11	795.29	795.58
789.87	789.45	785.93	788.65	788.00	787.96	788.54
		790.94		795.26	795.41	795.67
		785.34		787.96	788.02	
		791.11		795.41	795.48	
		784.48		788.02	788.08	
		791.31		795.48		
		783.97		788.08		
		791.55				
		784.02				
		791.81				
		785.15				
		792.11				
		786.27				
		792.43				
		787.29				
		792.76				
		787.92				
		793.08				
		788.26				
		793.36				
		788.48				
		793.62				
		788.52				
		793.85				
		788.46				
		794.05				
		788.54				
		794.22				
		788.69				
		794.37				
		788.65				
		794.52				
		788.62				
		794.66				
		788.27				
		794.81				
		787.73				
		794.96				
		787.59				
		795.11				
		788.00				
		795.26				
		787.96				
		795.41				
		788.02				
		795.48				
		788.08				
		795.56				
		788.29				
		795.58				
		788.54				
		795.67				

PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN & PROFILE: RAMP NSA	SHEET	E

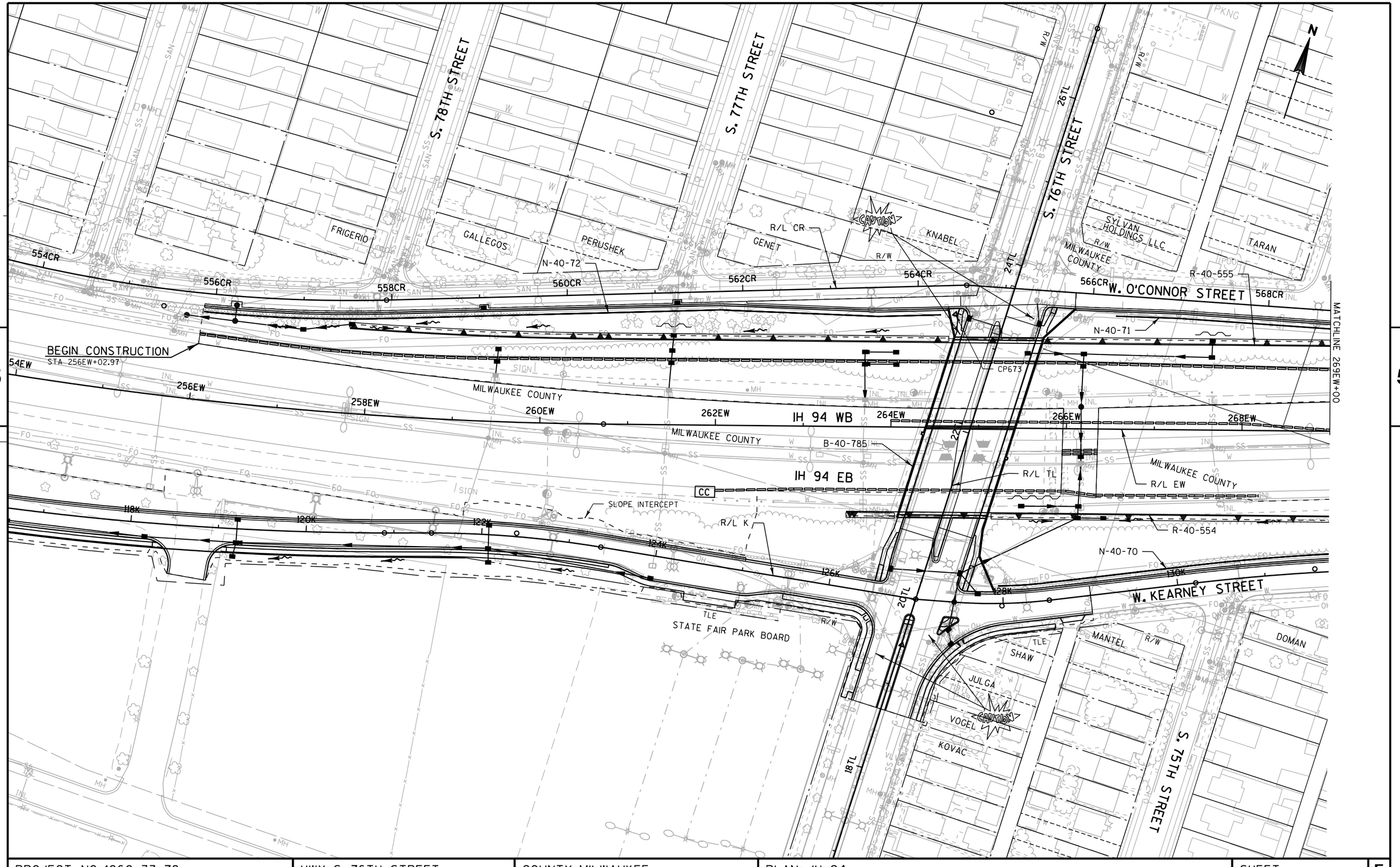
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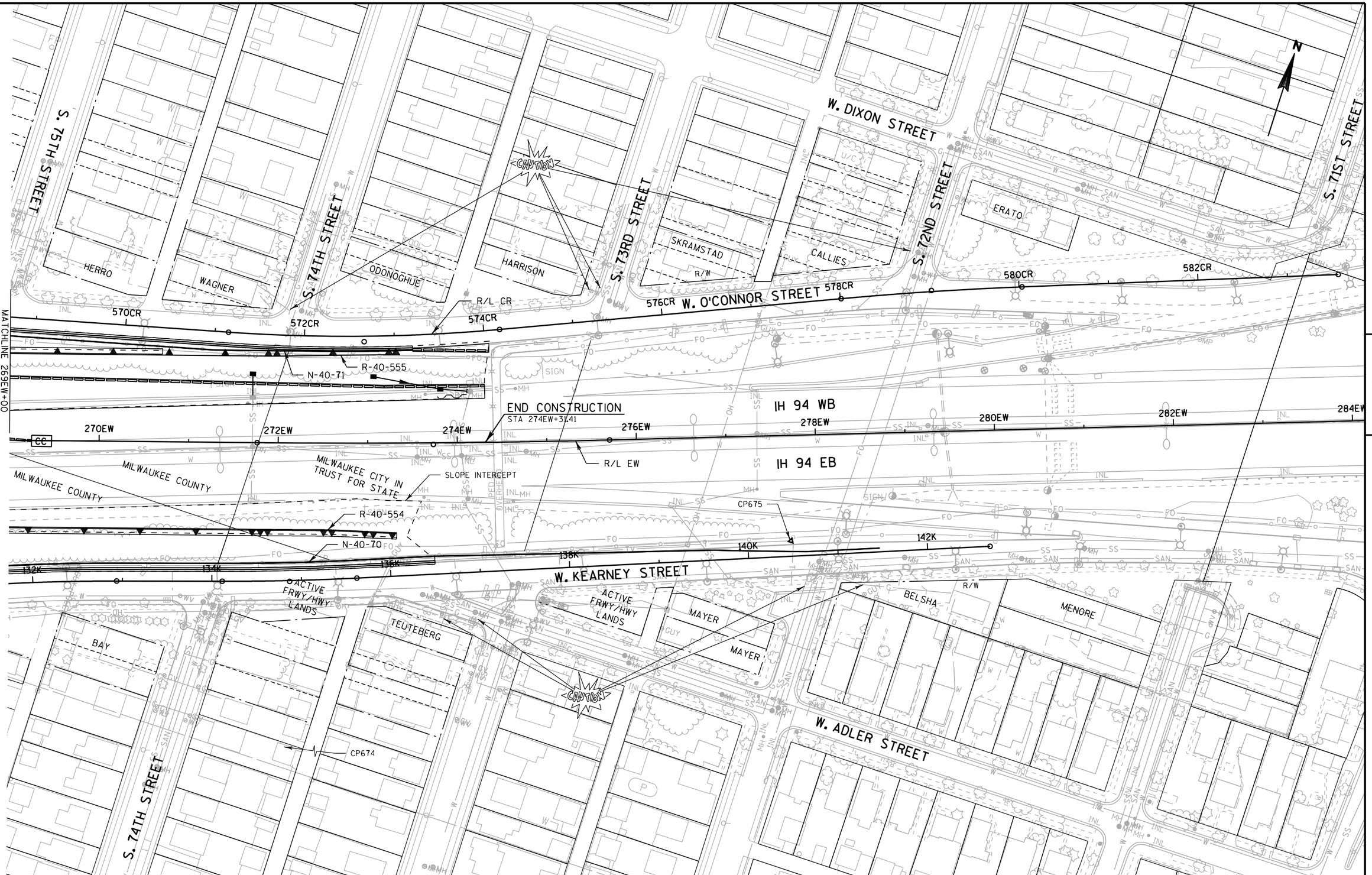


PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN & PROFILE: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\050502_pp.dgn PLOT DATE : 07-JUN-2013 13:55 PLOT BY : MSCDYB PLOT NAME : 050502_pp PLOT SCALE : 100:1



PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN: IH 94	SHEET E



PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN: IH 94	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\050504_pp.dgn PLOT DATE : 30-APR-2013 11:58 PLOT BY : MSCPLR PLOT NAME : PLOT SCALE : 100:1

WISDOT/CADDS SHEET 44

PUBLIC STORAGE INC

PUBLIC STORAGE INC

W. ADLER STREET

ROCA

CITY OF MILWAUKEE

B-40-892

CAUTION

RAMP FCA

R/L FCA

C-40-101

236EW

HONEY CREEK

SLOPE INTERCEPT

MILWAUKEE COUNTY

N

R/L FDA

RAMP FDA

PLE

TLE

R/W

CONC

END CONSTRUCTION
STA 45F+27.04

R/L F

36F

38F

40F

42F

44F

46F

48F

S. 84TH STREET

BEGIN CONSTRUCTION
STA 37F+00.00

CP672

CAUTION

PETTIT NATL
ICE CENTER INC.

STATE FAIR
PARK BOARD

PETTIT NATL
ICE CENTER INC.

CP671

R/L FBA

RAMP FBA

R/L EW

IH 94 EB

IH 94 WB

W. O'CONNOR
STREET

TRUSTEES OF
MILWAUKEE BOY
SCOUT FUND

CITY OF
MILWAUKEE

NOTE

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

5

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725
720
715
710
705
700
695
690

VPI STA 37F+51.00
VPI EL 711.60

VPI STA 37F+65.88
VPI EL 711.05

VPI STA 38F+00.00
VPI EL 709.83

VPI STA 38F+25.00
VPI EL 709.08

VPI STA 38F+50.00
VPI EL 708.38

VPI STA 39F+00.00
VPI EL 706.95

VPI STA 39F+80.00
VPI EL 704.80

VPI STA 40F+35.00
VPI EL 703.25

-3.70%
-3.59%
-2.98%
-2.80%
-2.86%
-2.69%
-2.82%

BEGIN CONSTRUCTION
STA 37F+00.00

FINISHED PROFILE AT PGL NB & SB

EXISTING PROFILE
AT ℄ F

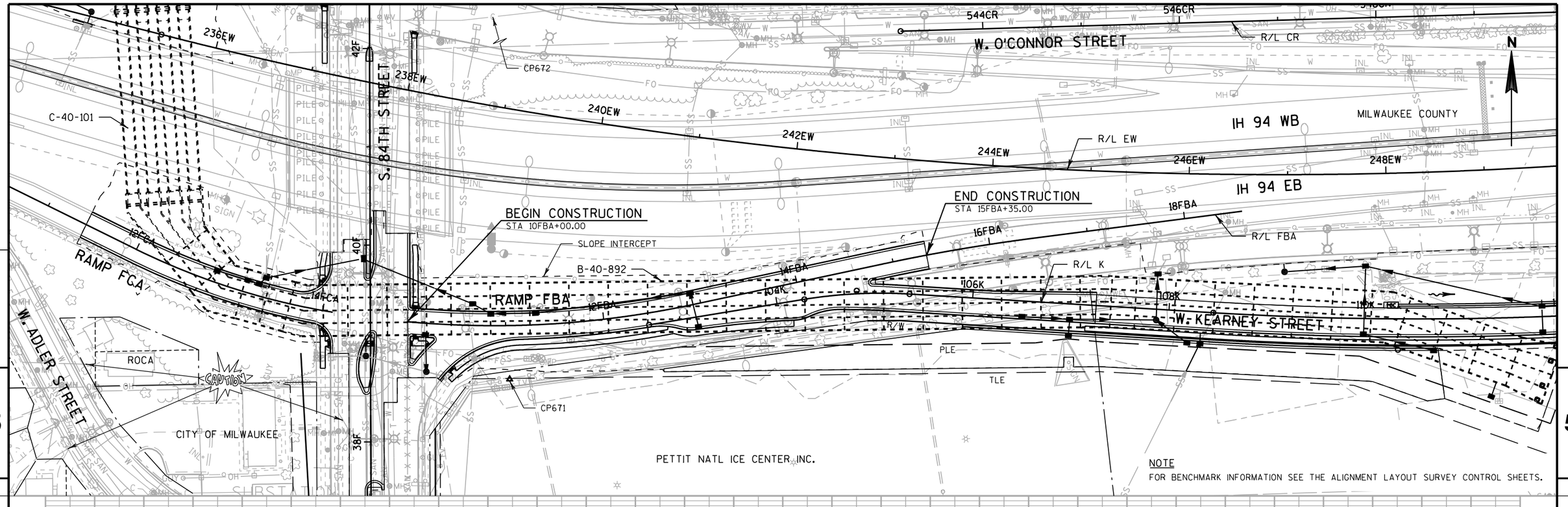
MATCH EXISTING PAVEMENT
STA 42F+51.28

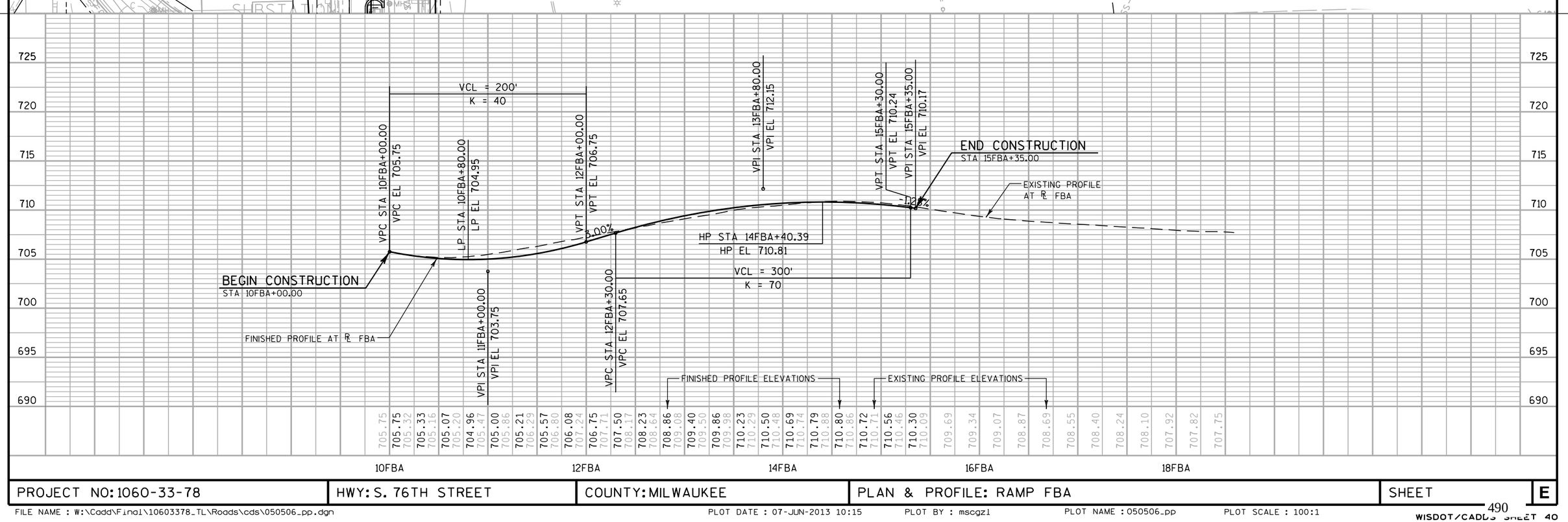
END CONSTRUCTION
STA 45F+27.04

FINISHED PROFILE ELEVATIONS	EXISTING PROFILE ELEVATIONS
707.66	707.50
706.95	706.62
706.28	705.84
705.61	705.47
704.93	704.80
704.24	703.93
703.53	703.50
703.10	702.70
702.47	702.30
702.16	702.04
701.62	701.53
701.57	701.75
701.74	702.19
702.27	702.29
702.05	702.12
702.34	702.27
701.65	701.54
701.43	701.25
701.15	701.10
700.86	700.83
700.76	700.73
701.04	701.14
700.99	701.13
701.17	701.35
701.09	701.09

36F 38F 40F 42F 44F 46F 48F 49F

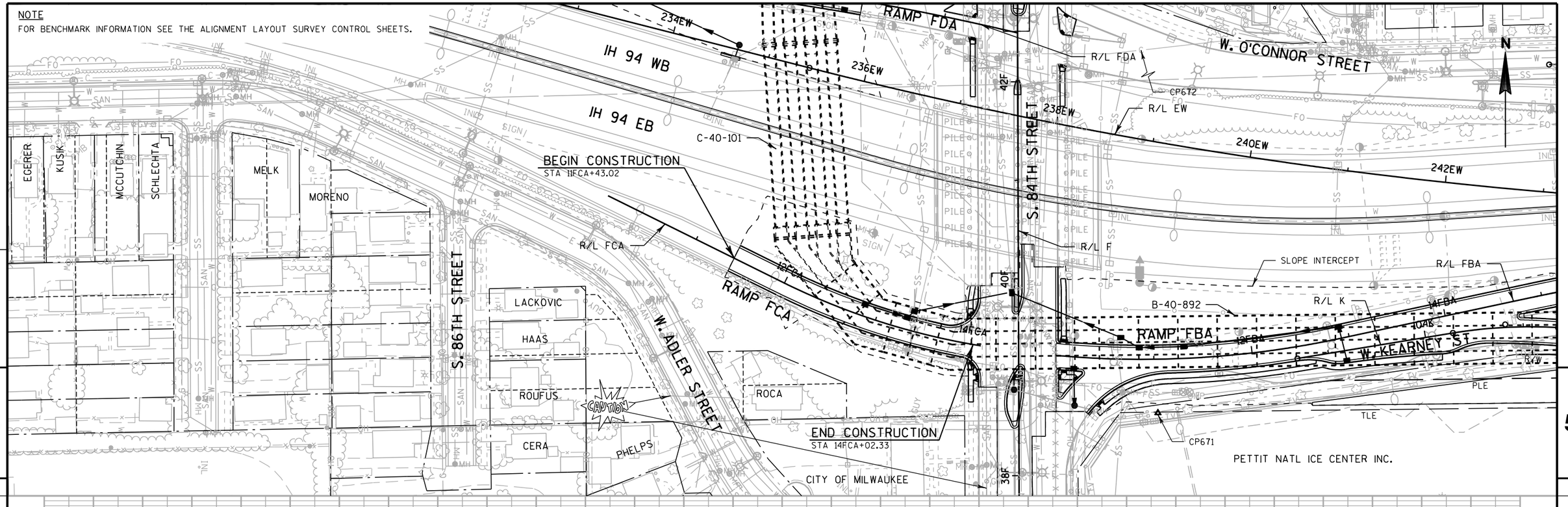
PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN & PROFILE: S. 84TH STREET	SHEET	E

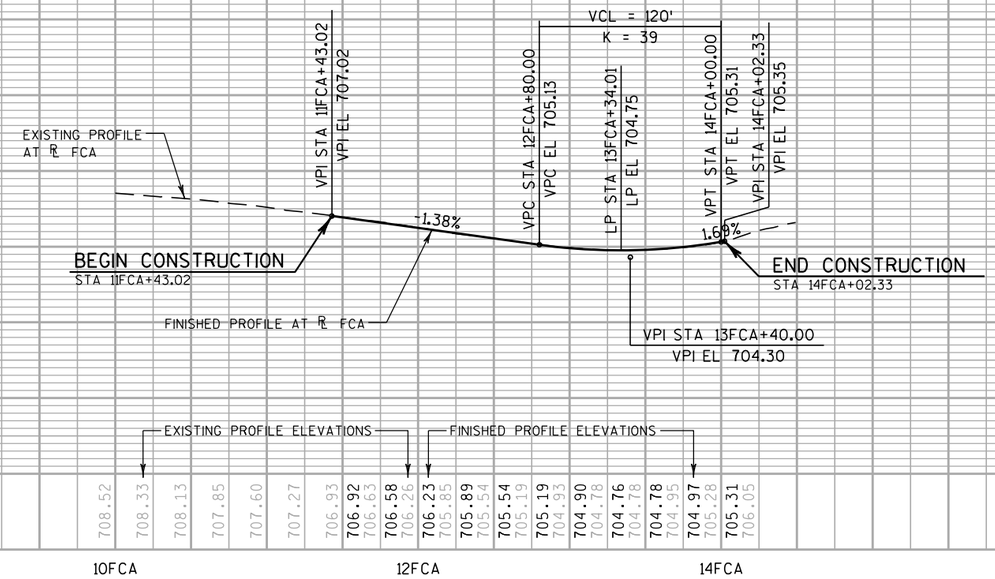




PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN & PROFILE: RAMP FBA	SHEET	E

NOTE
FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.

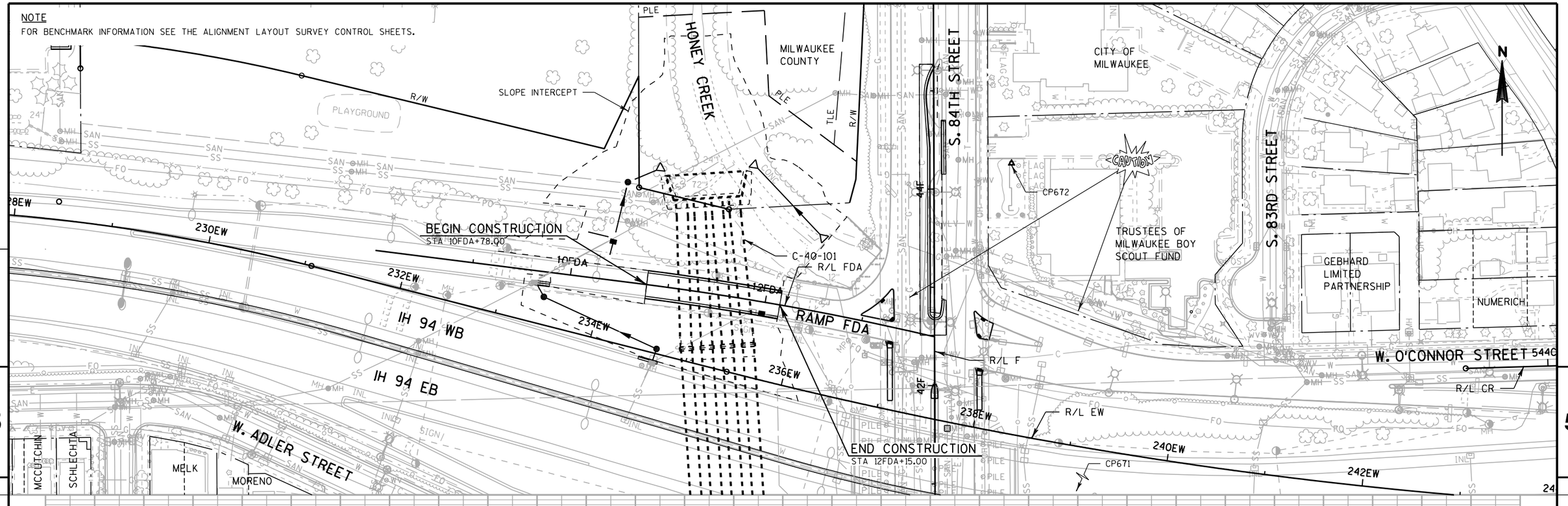


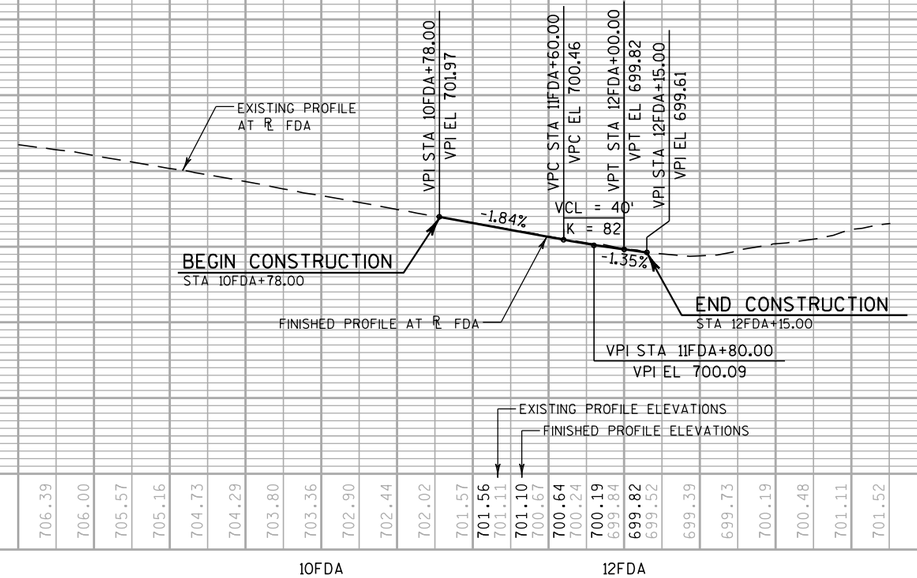


PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN & PROFILE: RAMP FCA	SHEET	E

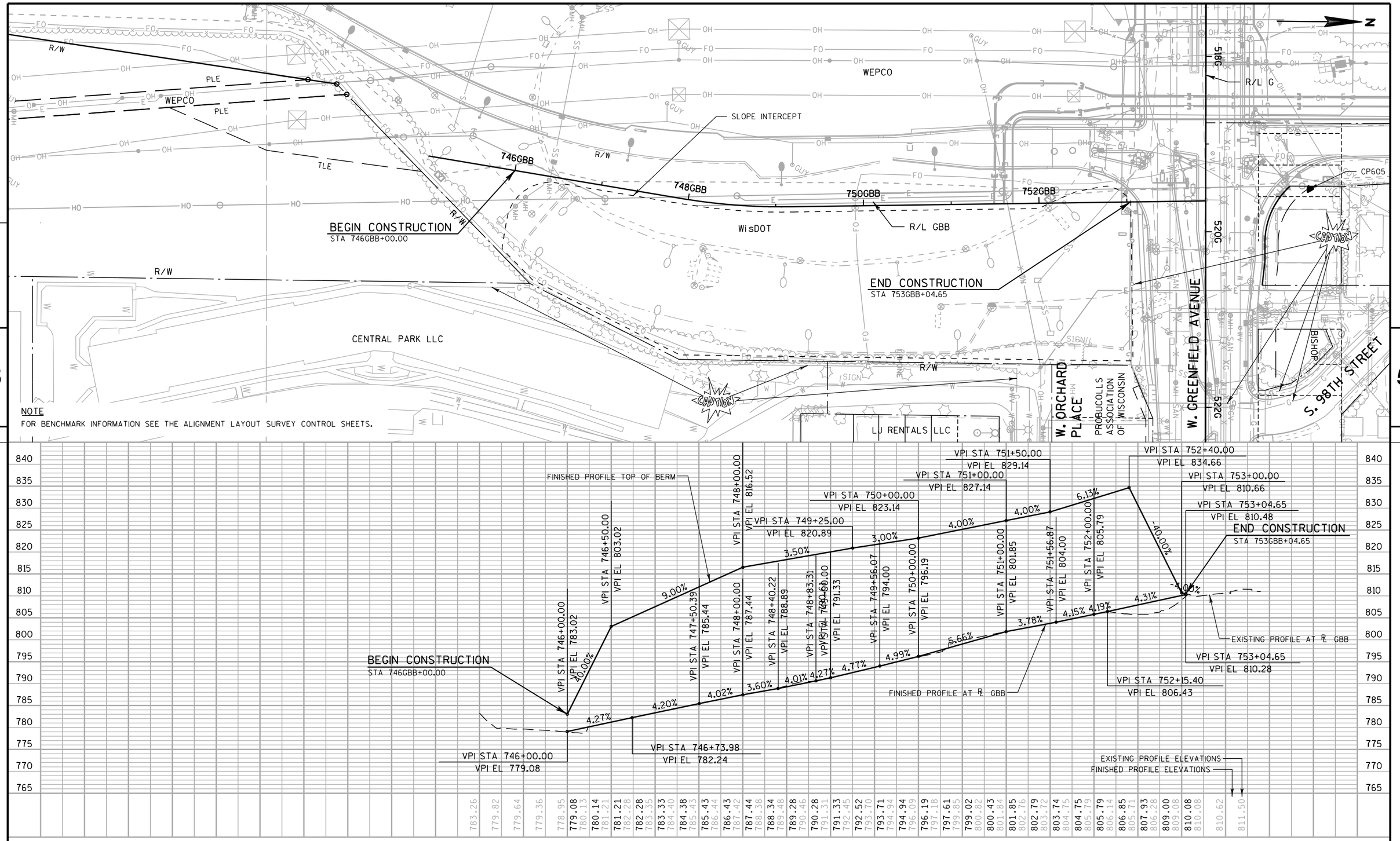
NOTE

FOR BENCHMARK INFORMATION SEE THE ALIGNMENT LAYOUT SURVEY CONTROL SHEETS.





PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN & PROFILE: RAMP FDA	SHEET	E



PROJECT NO: 1060-33-78	HWY: S. 76TH STREET	COUNTY: MILWAUKEE	PLAN & PROFILE: GREENFIELD BERM	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\050509_pp.dgn PLOT DATE : 10-JUN-2013 18:51 PLOT BY : MSCDYB PLOT NAME : 050509_pp PLOT SCALE : 100:1

WISDOT/CADDS SHEET 40

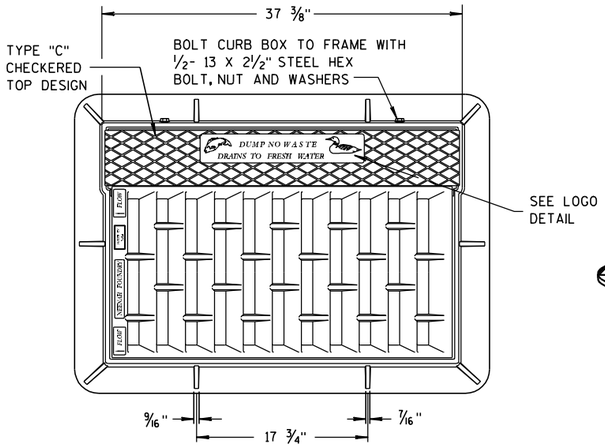
Standard Detail Drawing List

08A05-18A	INLET COVERS TYPE A, H, A-S, & H-S
08A05-18B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-18C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-18D	INLET COVER, TYPE BW, Z MANHOLE COVERS, TYPE K, J, J-S, L & M
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
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
08E04-02	SOD OR MASONRY AND SOD DITCH CHECKS
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
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F05-01	CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER
09B02-07	CONDUIT
09B04-10	PULL BOX
09C02-06	CONCRETE BASES, TYPES 1, 2 & 5
09C03-03	TRANSFORMER/PEDESTAL BASES
09C06-05	CONCRETE CONTROL CABINET BASE, TYPE 9, SPECIAL
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
09E06-04	TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.
09E07-05	TRAFFIC SIGNAL STANDARD PEDESTRIAN AND FLASHER TYPICAL MOUNTING DETAILS
09F13-03	LOOP DETECTOR INSTALLED IN EXISTING ASPHALTIC PAVEMENT
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
11B02-02	CONCRETE MEDIAN NOSE
12A03-10	NAME PLATE (STRUCTURES)
13B02-06	CONCRETE PAVEMENT APPROACH SLAB
13C01-15	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C13-07	URBAN DOWELED CONCRETE PAVEMENT
13C18-01A	CONCRETE PAVEMENT JOINTING
13C18-01B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-01C	CONCRETE PAVEMENT JOINT TIES
13C18-01D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
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"

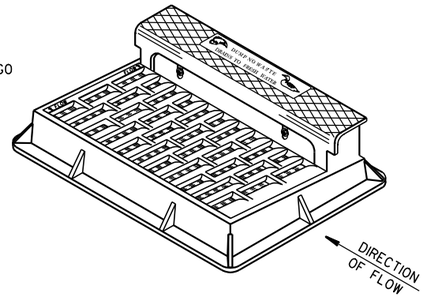
6

Standard Detail Drawing List

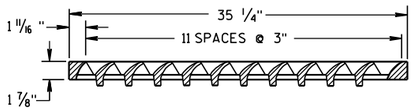
14B07-13H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-01A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-01C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
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
14B32-01A	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-01B	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-01C	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B32-01D	CONCRETE BARRIER SINGLE SLOPE (CBSS)
14B39-01A	32-INCH SSCB TO 36-INCH SSCB HEIGHT TRANSITION
14B39-01C	36-INCH SSCB TO 42-INCH SSCB HEIGHT TRANSITION
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15B03-12A	CHAIN LINK FENCE
15B03-12B	CHAIN LINK FENCE
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-01	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-12B	PAVEMENT MARKING WORDS
15C07-12C	PAVEMENT MARKING ARROWS
15C08-15A	PAVEMENT MARKING (MAINLINE)
15C08-15E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-15F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C18-03	MEDIAN ISLAND MARKING
15D12-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D14-01	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
15D16-01	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D20-01	TRAFFIC CONTROL, SINGLE LANE CLOSURE, NON-FREEWAY/EXPRESSWAY
15D21-01	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-01	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-01	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D29-02	TRAFFIC CONTROL, VEHICLE ENTRANCE/EXIT OR HAUL ROAD
15D30-01	TRAFFIC CONTROL, SIDEWALK CLOSURE

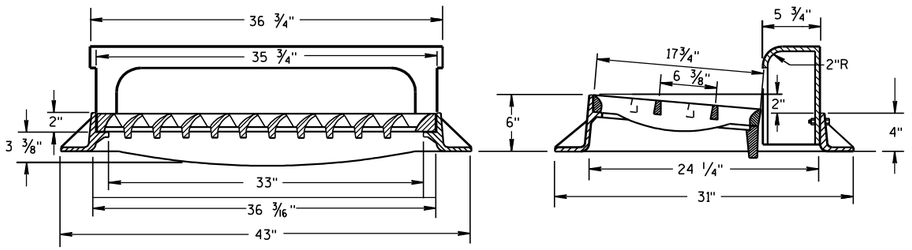


NOTE:
GRATE IS REVERSIBLE.



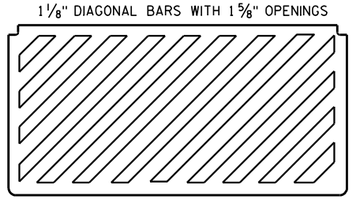
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"





TYPE "H"

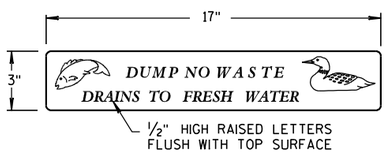
(APPROXIMATE WEIGHT 441 LBS.)
FRAME..... 181 LBS.
GRATE..... 146 LBS.
CURB BOX..... 114 LBS.



SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")
(APPROXIMATE WEIGHT 159 LBS.)
GRATE..... 159 LBS.

(NOTED AS TYPE H-S ON DRAINAGE TABLE)



LOGO DETAIL

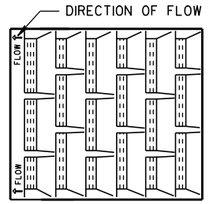
GENERAL NOTES

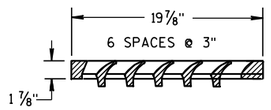
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

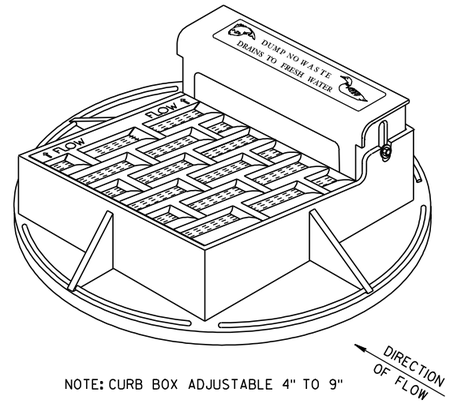
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

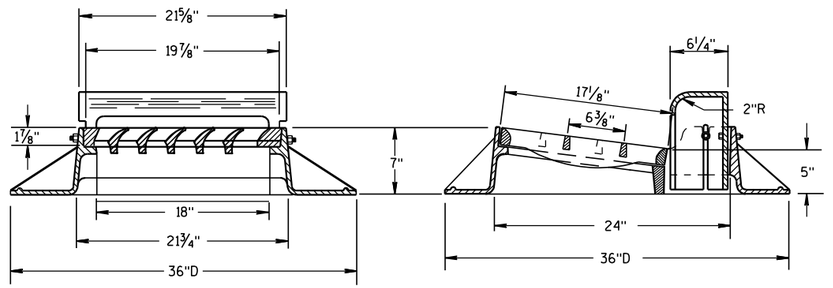
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.





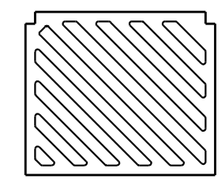


NOTE: CURB BOX ADJUSTABLE 4" TO 9"



TYPE "A"

(APPROXIMATE WEIGHT 340 LBS.)
FRAME..... 185 LBS.
GRATE..... 71 LBS.
CURB BOX..... 84 LBS.



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 3/4" X 17" X 1 7/8"
GRATE..... 84 LBS.

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

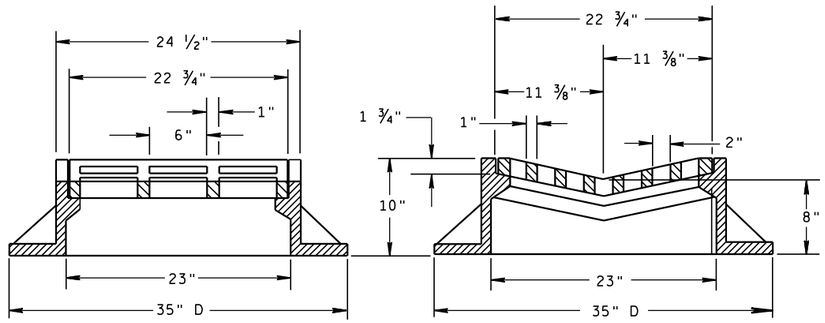
APPROVED
6/5/2012 DATE
/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
496
FHWA

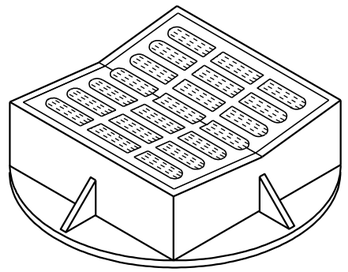
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S.D.D. 8 A 5-18a

6

S.D.D. 8 A 5-18a

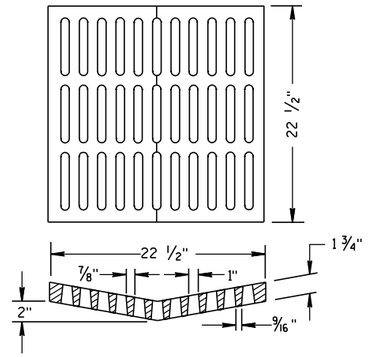




TYPE "B"

(APPROXIMATE WEIGHT 405 LBS.)

FRAME..... 294 LBS.
GRATE..... 111 LBS.

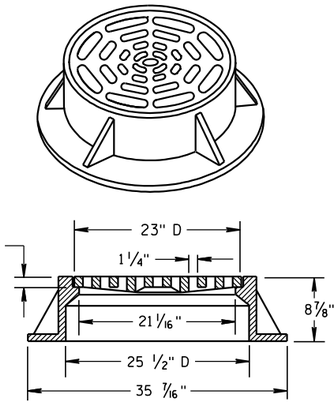


ALTERNATIVE GRATE FOR TYPE "B" COVER

(APPROXIMATE GRATE WEIGHT 134 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.

NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

(APPROXIMATE WEIGHT 259 LBS.)

FRAME..... 152 LBS.
GRATE..... 107 LBS.

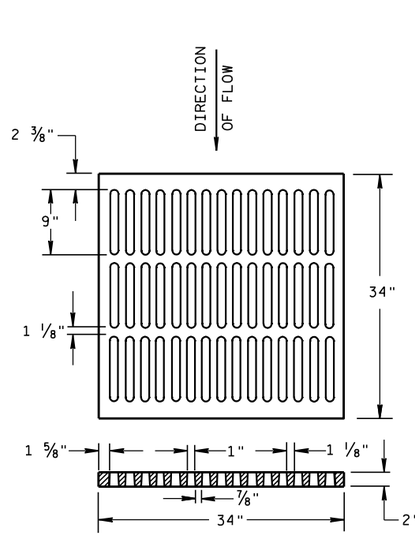
GENERAL NOTES

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.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

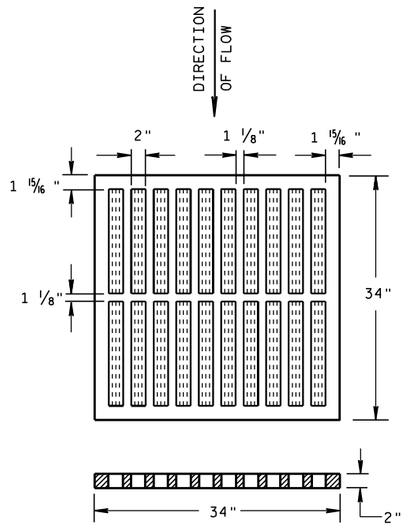


ALTERNATIVE TYPE "MS"

(APPROXIMATE GRATE WEIGHT 329 LBS.)

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED

NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

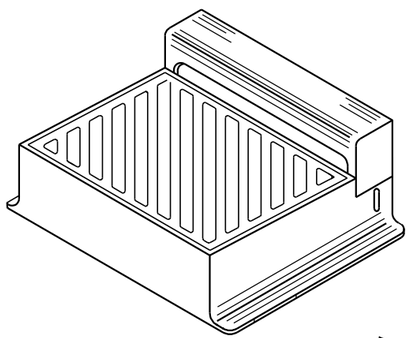


TYPE "MS"

(APPROXIMATE GRATE WEIGHT 268 LBS.)

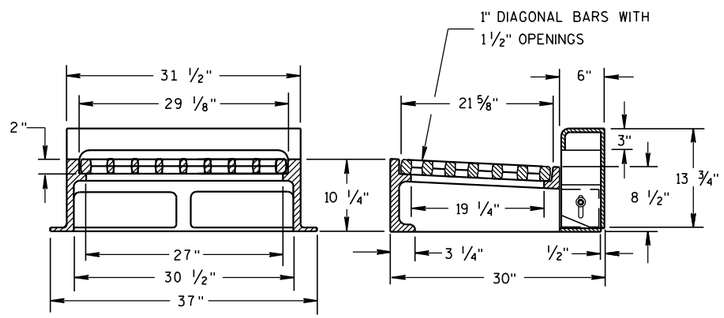
USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON DRAINAGE TABLE



DIRECTION OF FLOW

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"

(APPROXIMATE WEIGHT 648 LBS.)

FRAME..... 355 LBS.
GRATE..... 156 LBS.
CURB BOX..... 137 LBS.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012 — DATE

/S/ Jerry H. Zaas — ROADWAY STANDARDS ENGINEER

497

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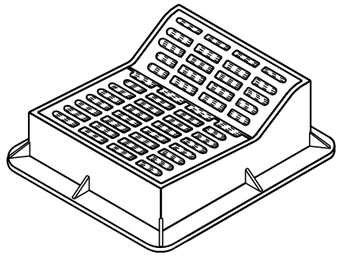
FHWA

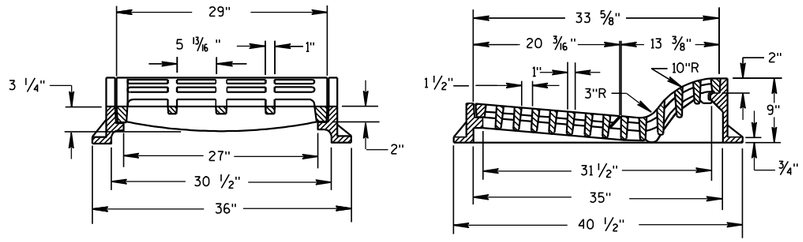
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S.D.D. 8 A 5-18b

6

S.D.D. 8 A 5-18b



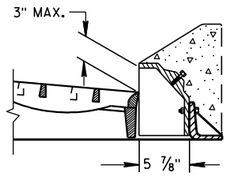


TYPE "F"

(APPROXIMATE WEIGHT 644 LBS.)

FRAME.....302 LBS.
GRATE.....160 LBS.
GRATE.....182 LBS.

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

(APPROXIMATE WEIGHT CURB BOX 68 LBS.)

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

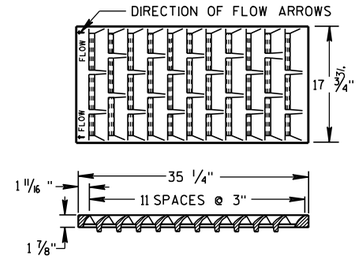
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

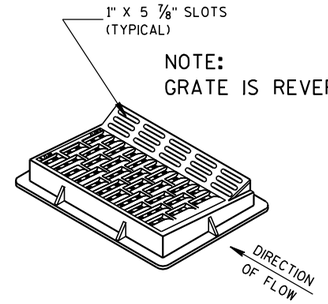
GENERAL NOTES

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.

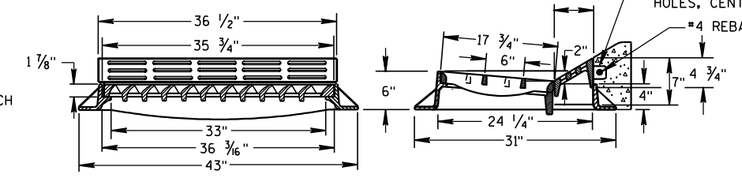
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.





NOTE:
GRATE IS REVERSIBLE.

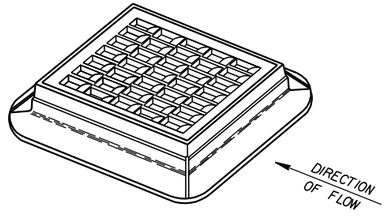


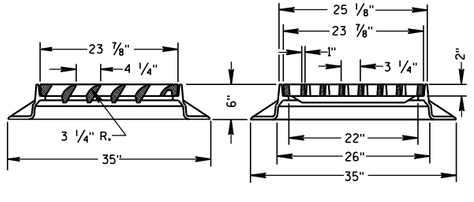
TYPE "HM"

(APPROXIMATE WEIGHT 414 LBS.)
FRAME..... 181 LBS.
GRATE..... 159 LBS.
CURB BOX..... 74 LBS.

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

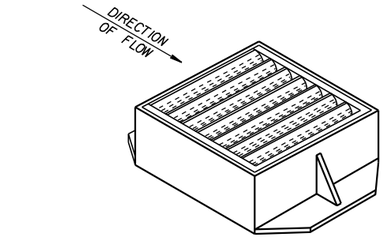


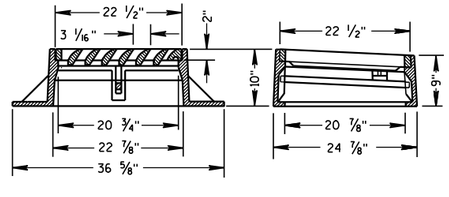


TYPE "S"

(APPROXIMATE WEIGHT 333 LBS.)

FRAME.....164 LBS.
GRATE..... 169 LBS.

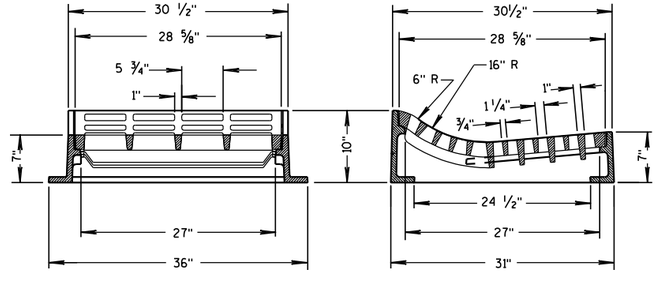




TYPE "V"

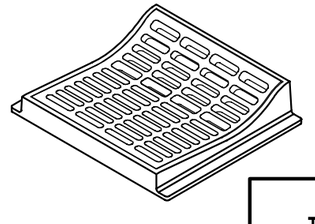
(APPROXIMATE WEIGHT 410 LBS.)

FRAME..... 269 LBS.
GRATE..... 136 LBS.
SAFETY BAR..... 5 LBS.



TYPE "T"

(APPROXIMATE WEIGHT 530 LBS.)
FRAME.....270 LBS.
GRATE.....260 LBS.
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

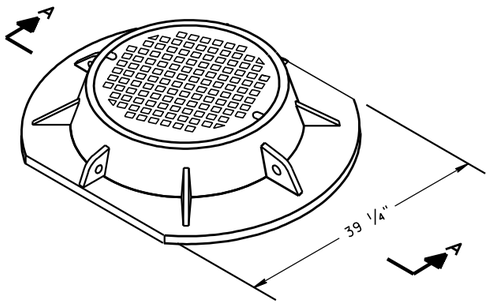
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
498
FHWA

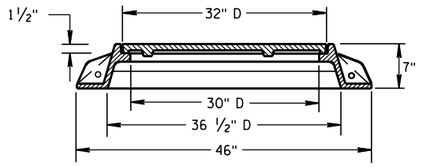
6

S.D.D. 8 A 5-18c

6

S.D.D. 8 A 5-18c



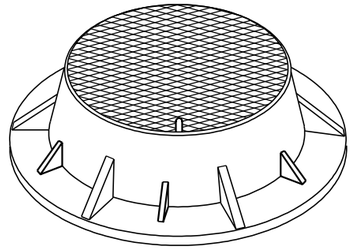


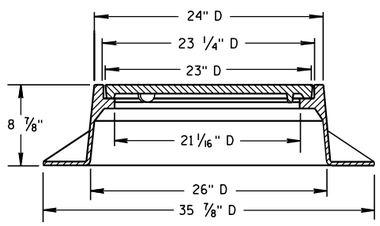
SECTION A-A

TYPE "K"

(APPROXIMATE WEIGHT 439 LBS.)

FRAME.....216 LBS.
LID.....223 LBS.

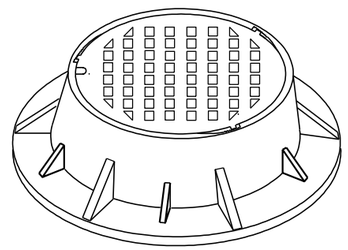


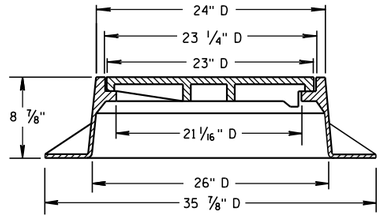


TYPE "J"

(APPROXIMATE WEIGHT 267 LBS.)

FRAME.....152 LBS.
LID.....115 LBS.





TYPE "J" SPECIAL

TYPE "B" NON-ROCKING SELF-SEAL LID

(APPROXIMATE WEIGHT 267 LBS.)

FRAME.....158 LBS.
LID.....109 LBS.

(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

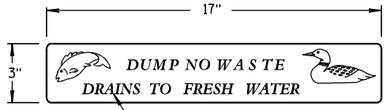
GENERAL NOTES

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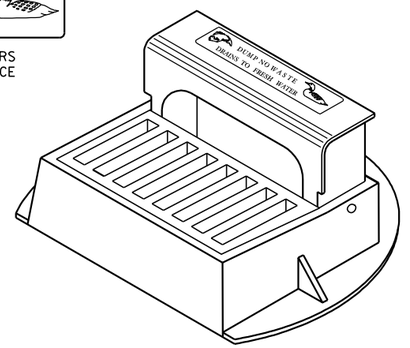
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

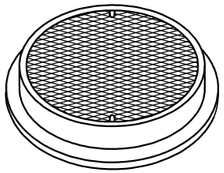
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

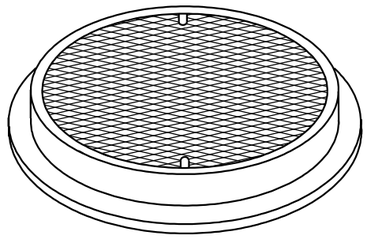
THE ACTUAL WEIGHT OF COVERS MAY VARY WITH 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

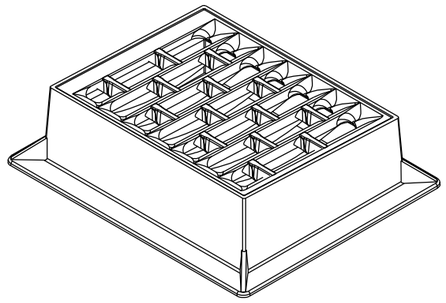


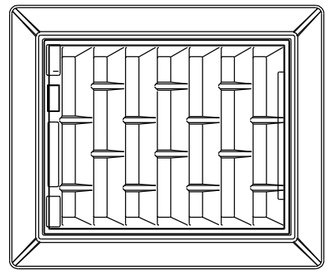
LOGO DETAIL

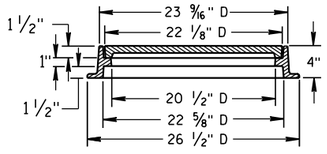








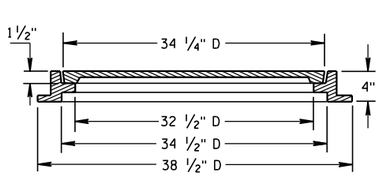




TYPE "L"

(APPROXIMATE WEIGHT 158 LBS.)

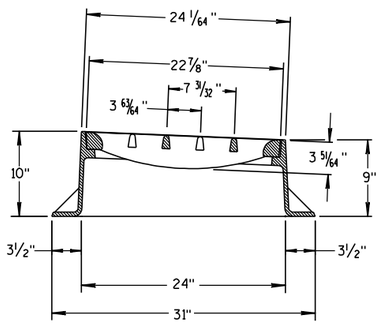
FRAME.....81 LBS.
LID.....77 LBS.

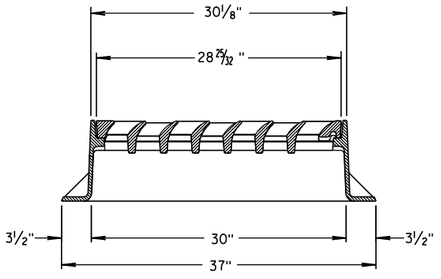


TYPE "M"

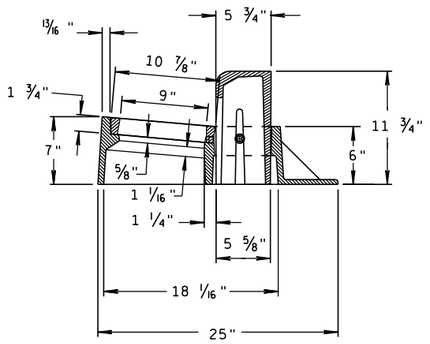
(APPROXIMATE WEIGHT 377 LBS.)

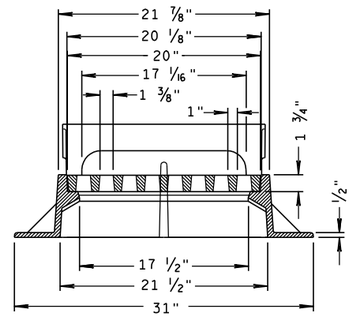
FRAME..... 125 LBS.
LID..... 252 LBS.





INLET COVER TYPE "BW"





INLET COVER TYPE "Z"

(APPROXIMATE WEIGHT 344 LBS.)

FRAME.....206 LBS.
GRATE..... 46 LBS.
CURB BOX..... 92 LBS.

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

FHWA

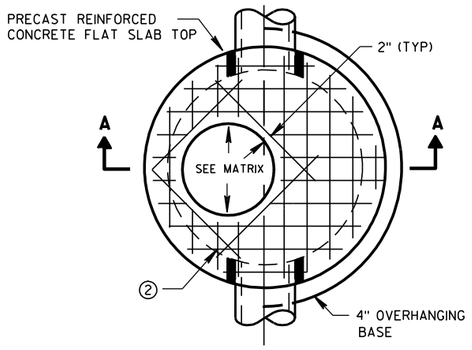
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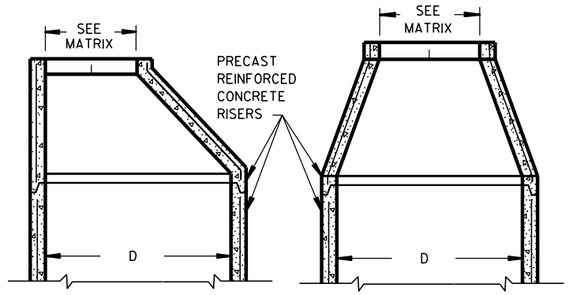
S.D.D. 8 A 5-18d

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S.D.D. 8 A 5-18d

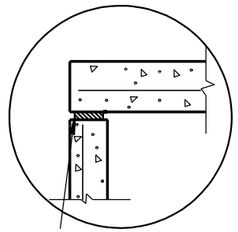


PLAN VIEW CIRCULAR OPENING

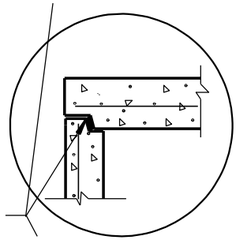


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

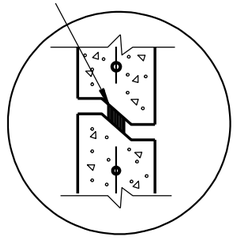


TOP WITH PLAIN END JOINT



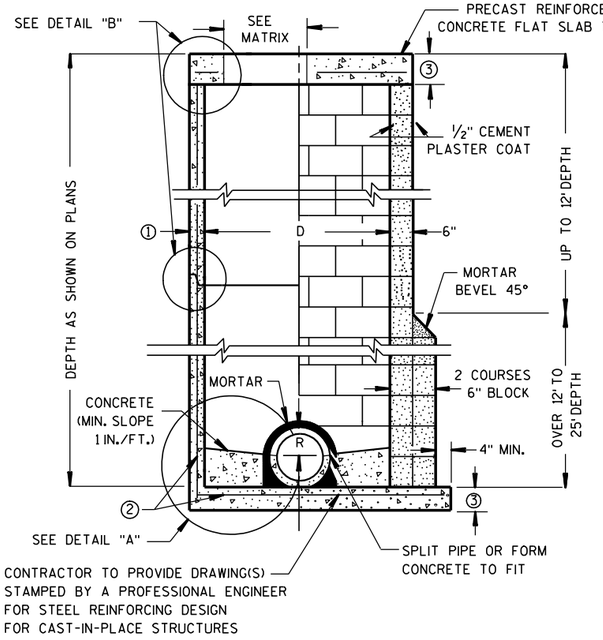
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



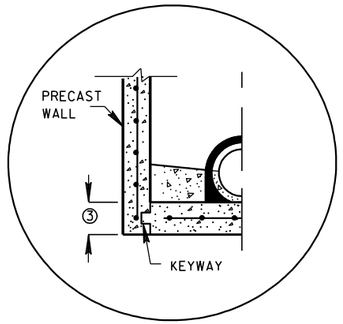
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

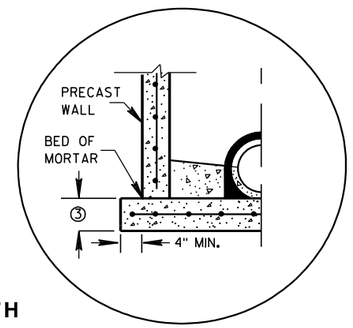


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

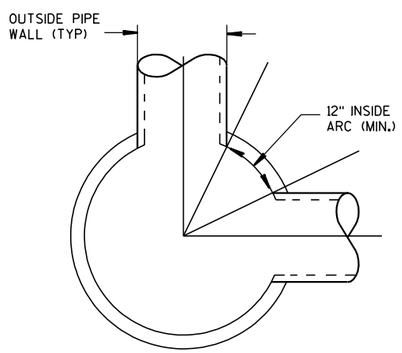


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPERATE 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 SEPERATE 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
DEPARTMENT OF TRANSPORTATION

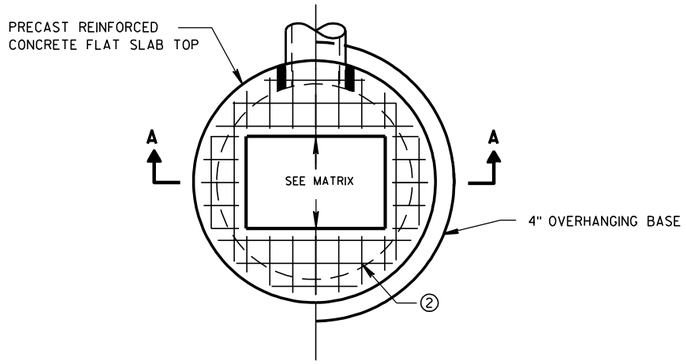
APPROVED

6/5/2012
DATE

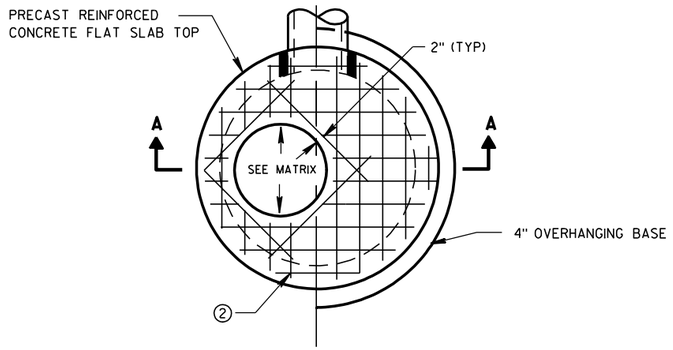
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

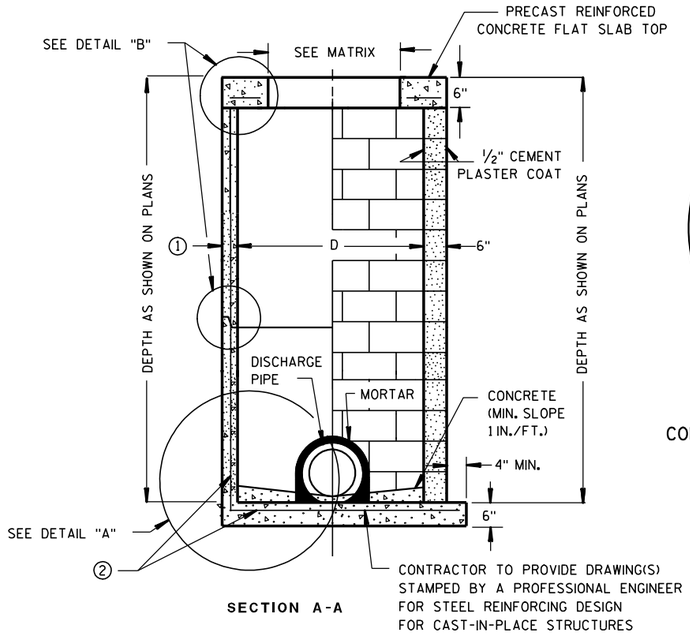
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S.D.D. 8 B 9-1



PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

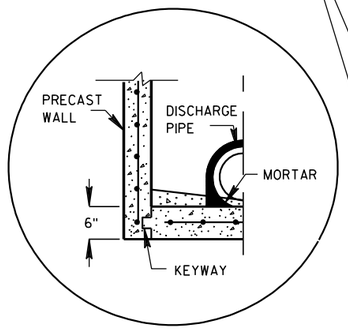


SECTION A-A

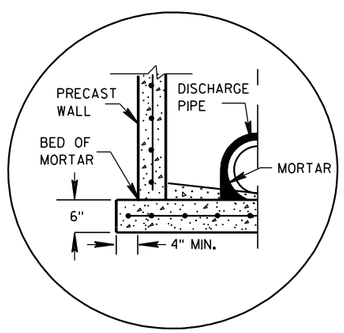
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

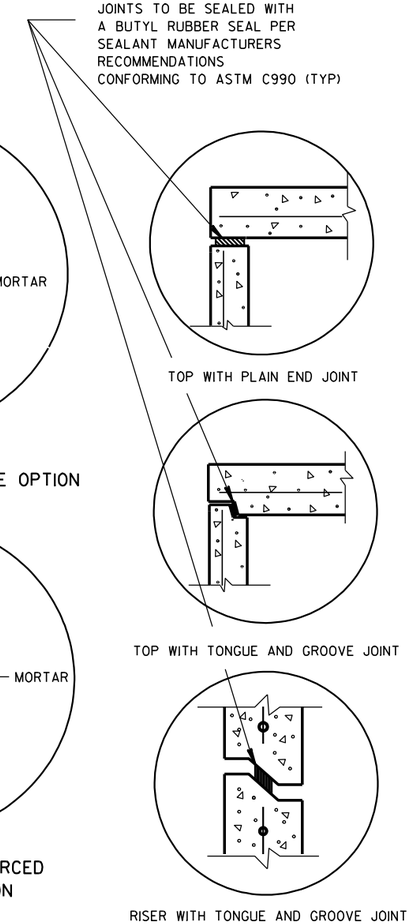


PRECAST REINFORCED
CONCRETE WITH INTEGRAL BASE OPTION



SEPERATE 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 SEPERATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

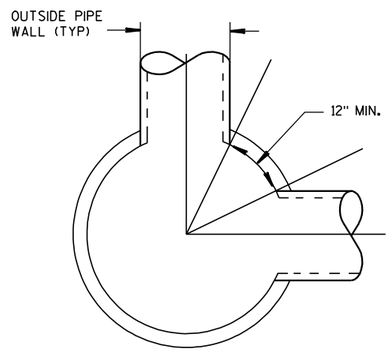
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

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

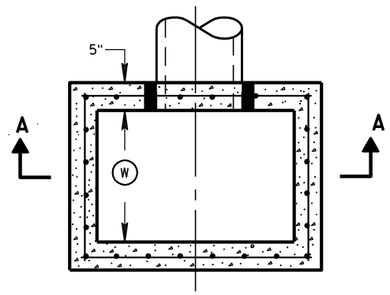
APPROVED
6/5/2012 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

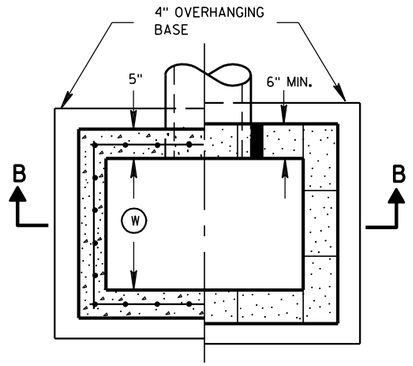
S.D.D. 8 C 6-1

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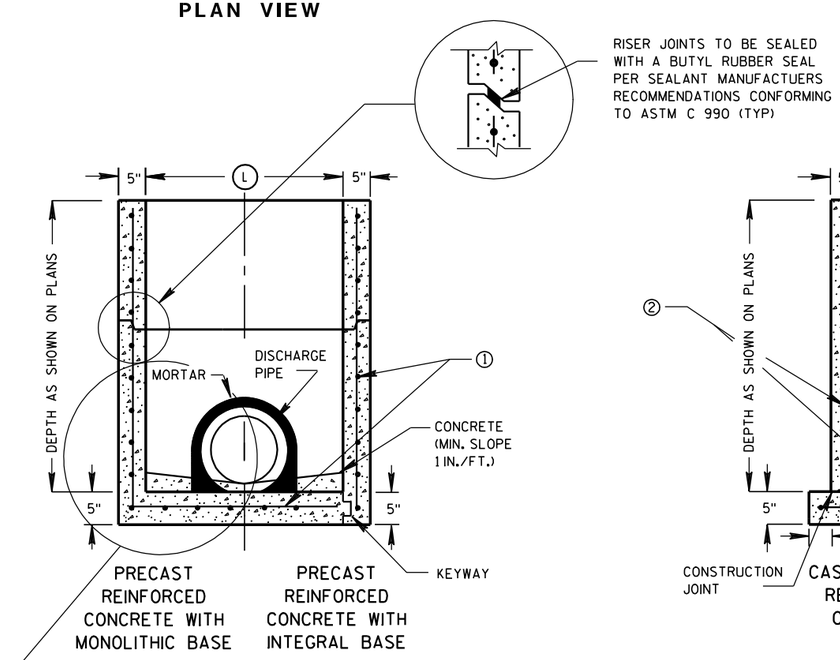
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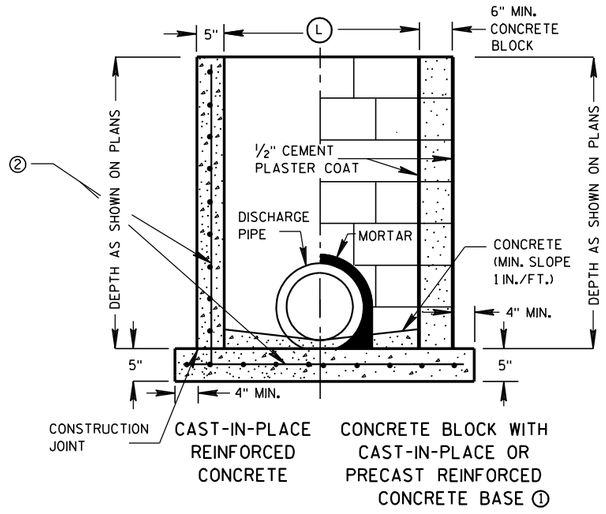
PLAN VIEW



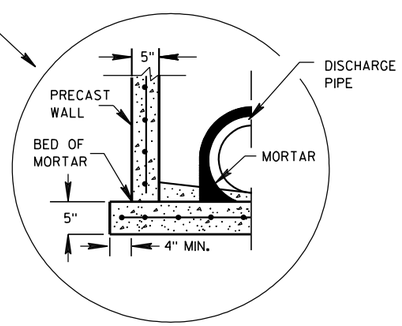
PLAN VIEW



SECTION A-A



SECTION B-B



SEPERATE 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 SEPERATE 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.

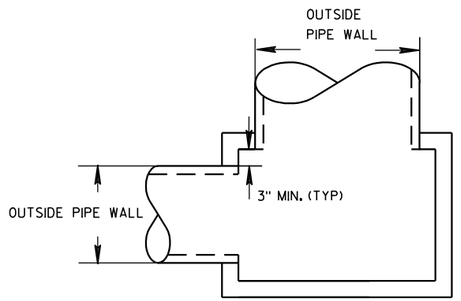
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

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

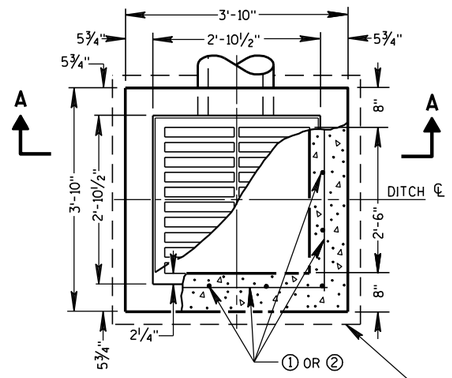
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS D 502 — ENGINEER
FHWA

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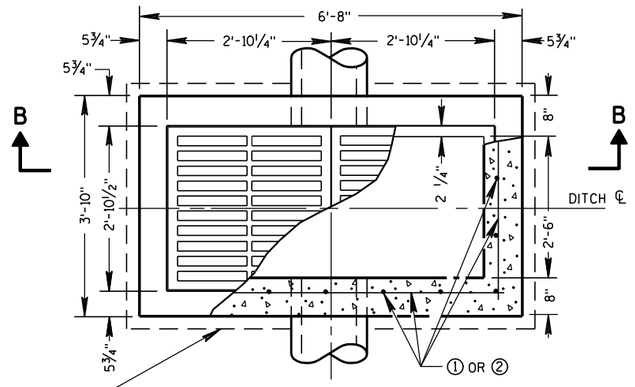
S.D.D. 8 C 7-1

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S.D.D. 8 C 7-1

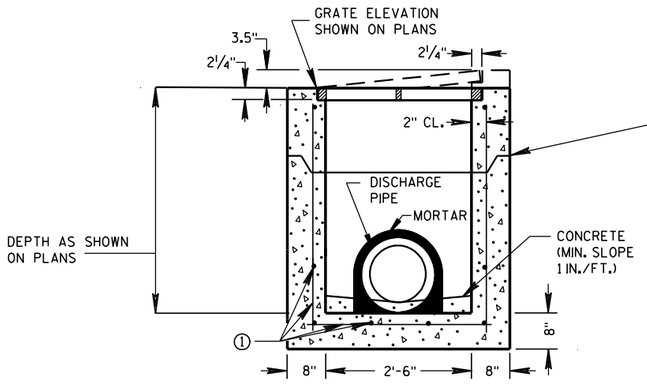


PLAN VIEW

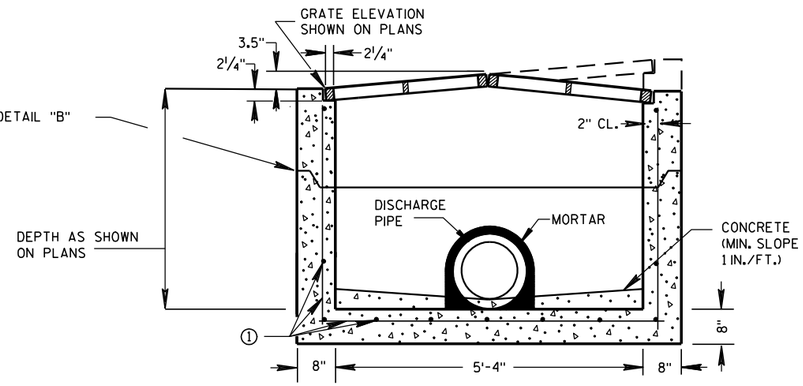


PLAN VIEW

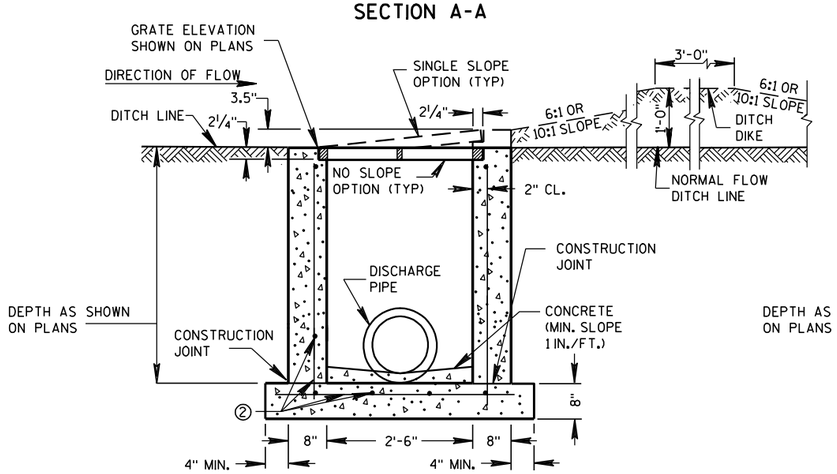
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



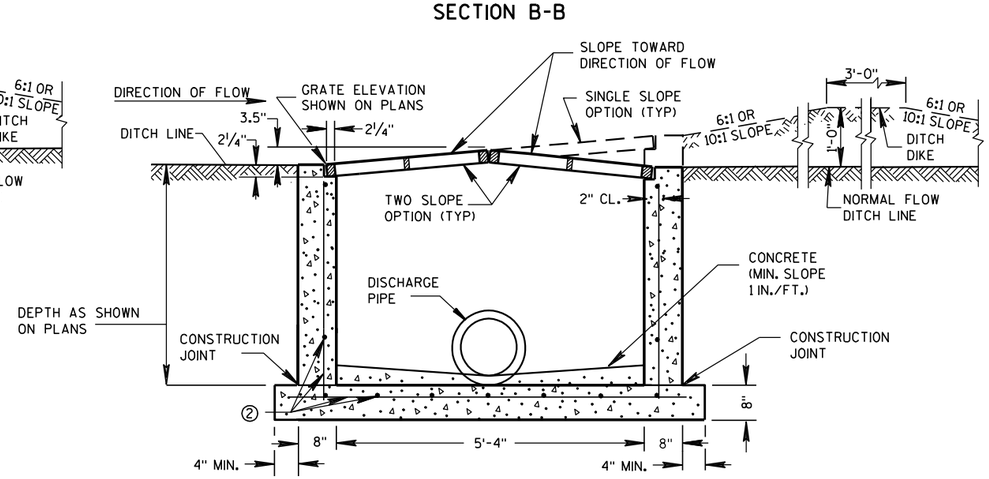
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

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.

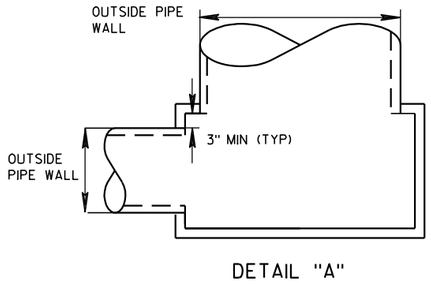
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

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.

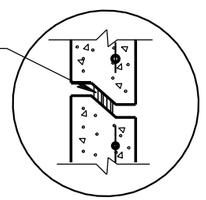
PIPE MATRIX

	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 GRATE

INLETS MEDIAN 2 GRATE

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

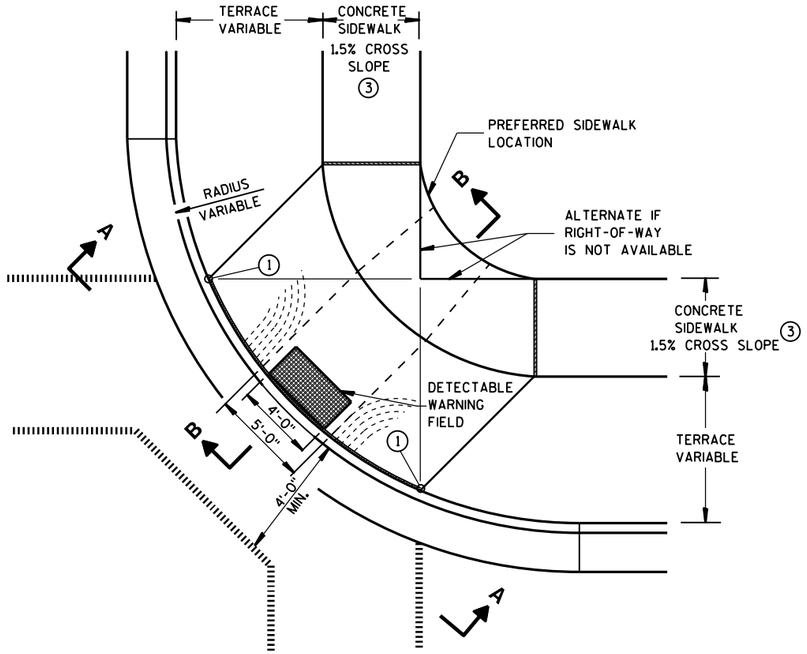
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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S.D.D. 8 C 8-1

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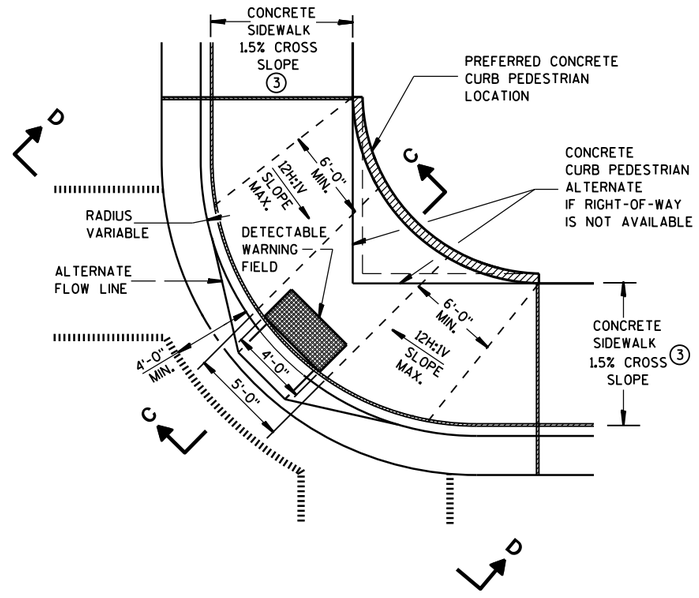
S.D.D. 8 C 8-1



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.

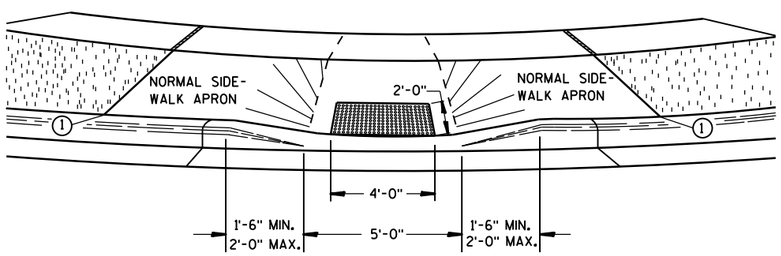
① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

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.

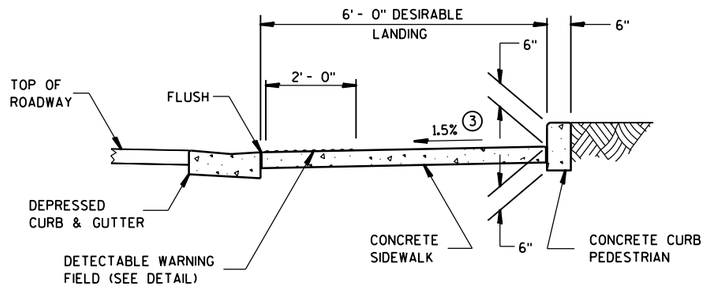
③ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

LEGEND

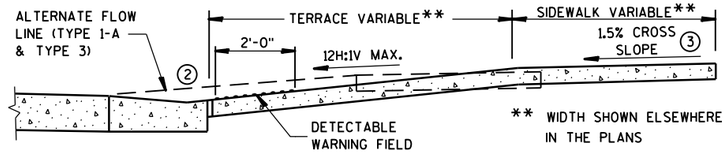
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



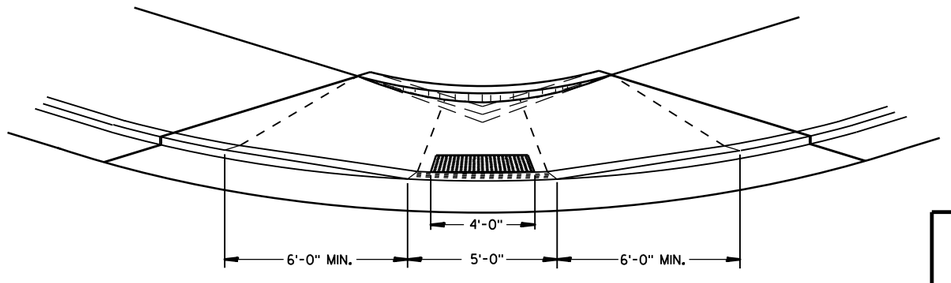
VIEW A-A



SECTION C-C



SECTION B-B



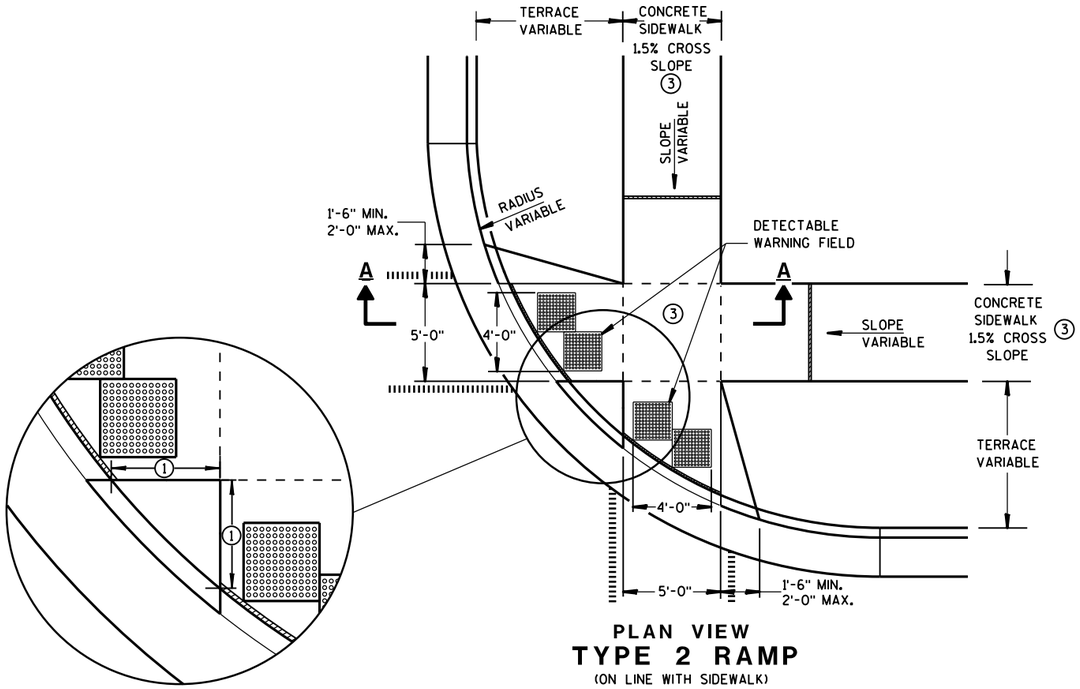
VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

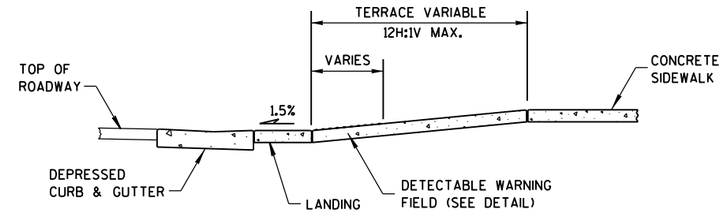
S.D.D. 8 D 5-15a



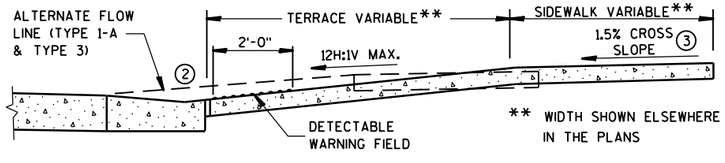
PLAN VIEW

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.

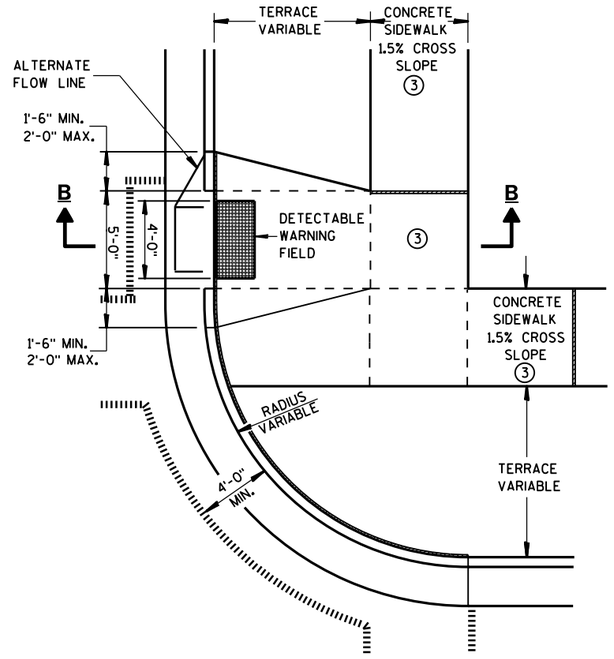
① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.

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

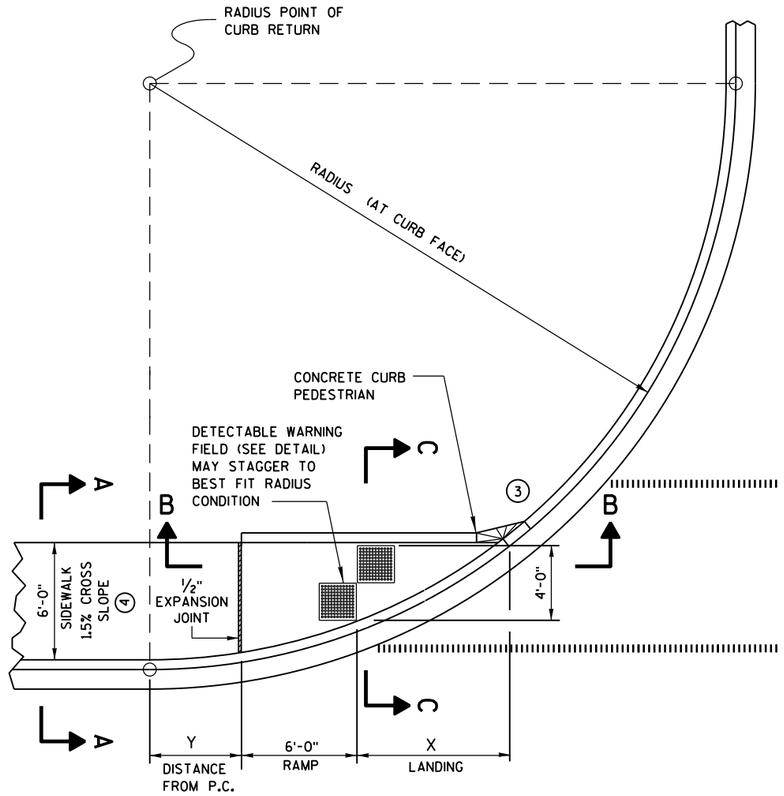
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

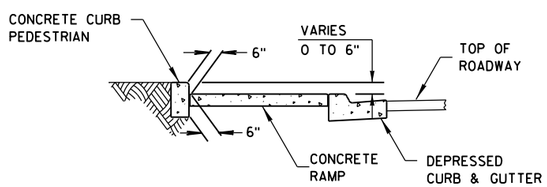
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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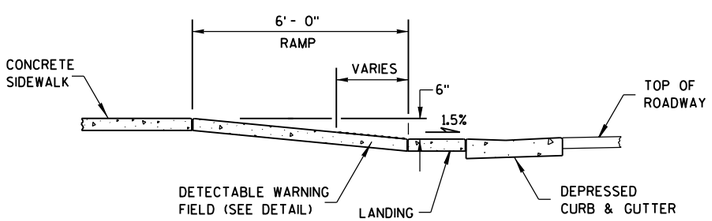
S.D.D. 8 D 5-15b



CURB RAMP TYPE 4A
PLAN VIEW



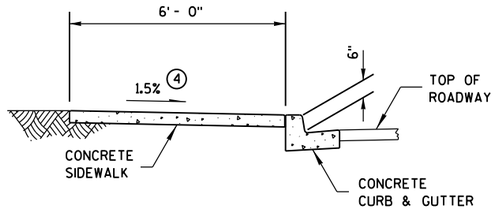
SECTION C-C FOR TYPE 4A



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

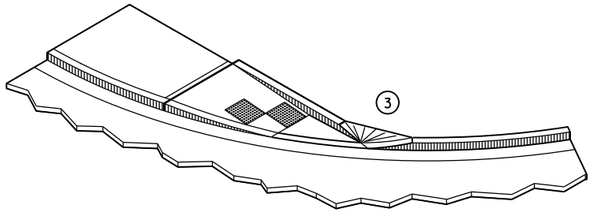
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

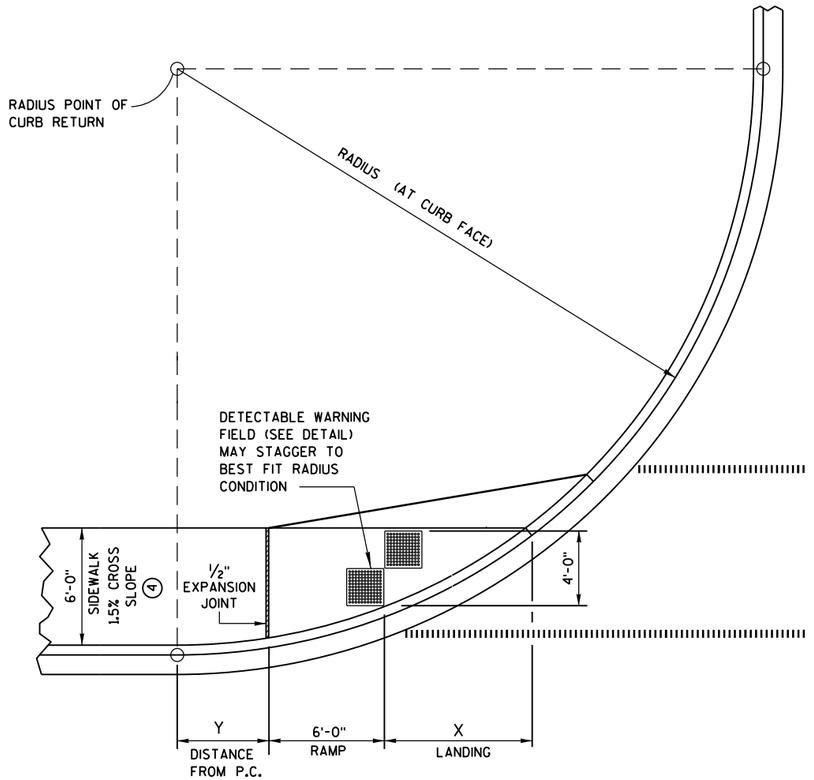
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

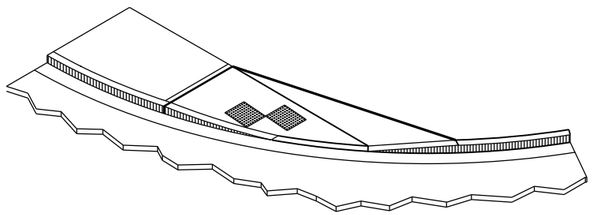
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



ISOMETRIC VIEW FOR TYPE 4A



CURB RAMP TYPE 4A1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

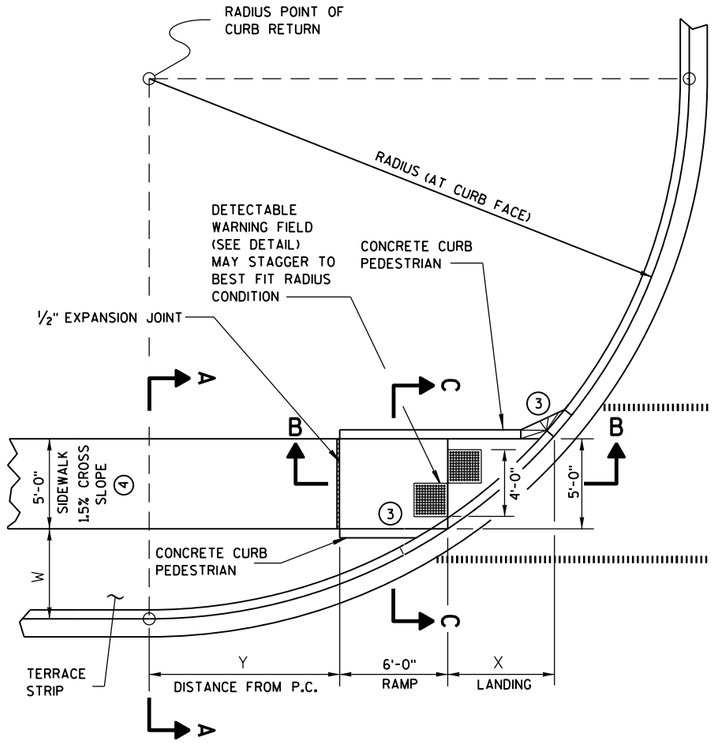
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

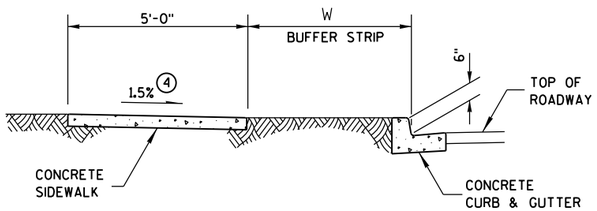
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

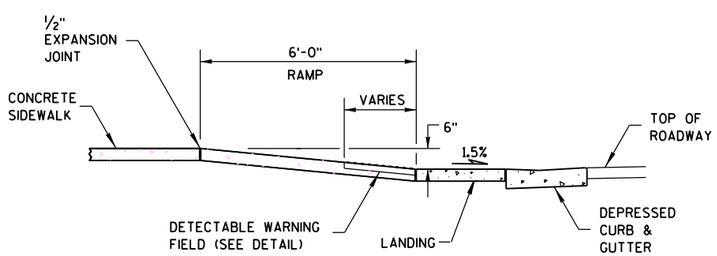
S.D.D. 8 D 5-15c



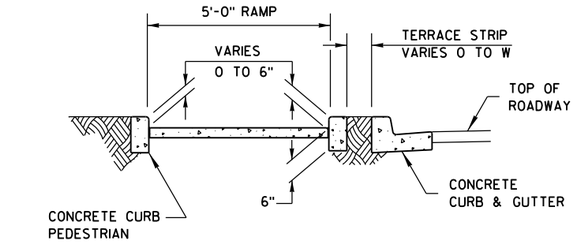
CURB RAMP TYPE 4B
PLAN VIEW



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

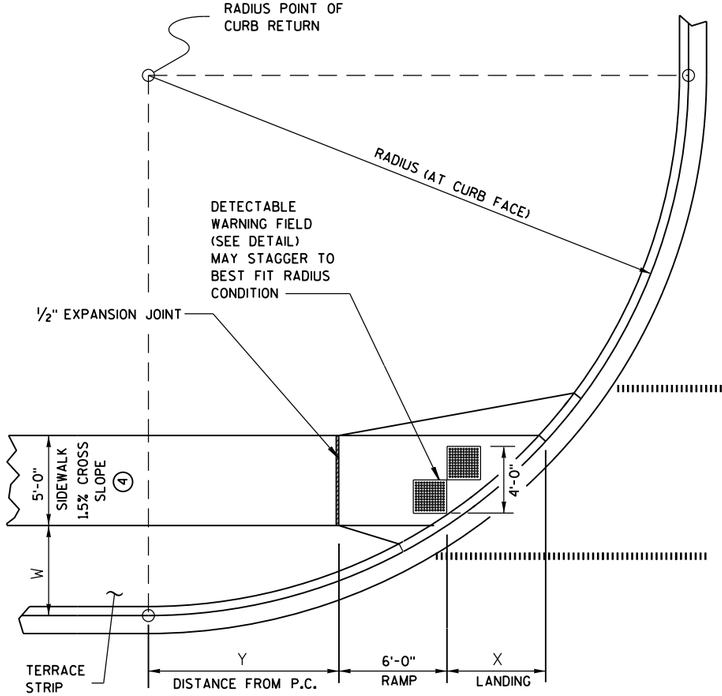
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

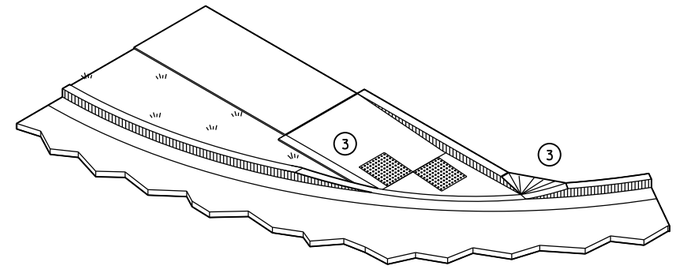
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

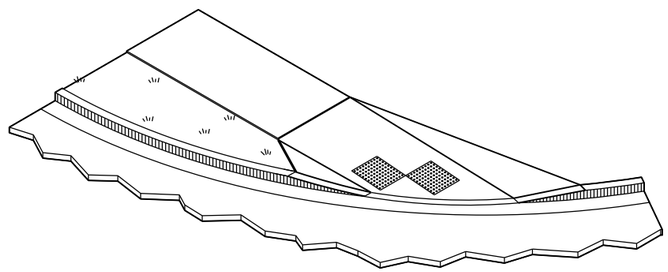
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.



CURB RAMP TYPE 4B1
PLAN VIEW



ISOMETRIC VIEW FOR TYPE 4B



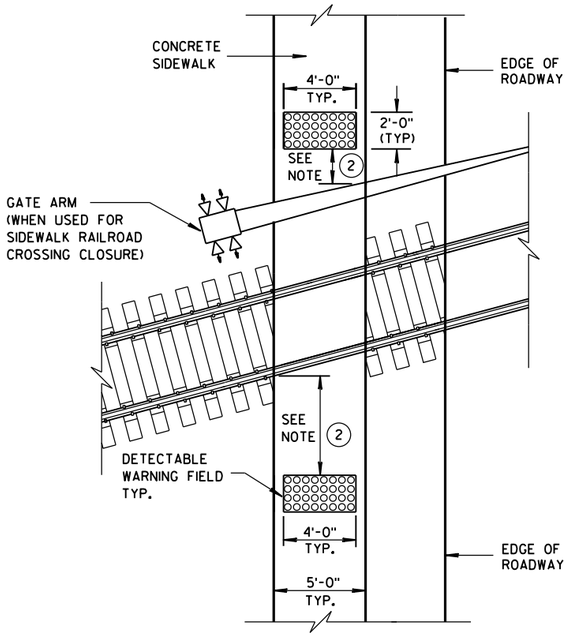
ISOMETRIC VIEW FOR TYPE 4B1

CURB RAMPS TYPE 4B AND 4B1

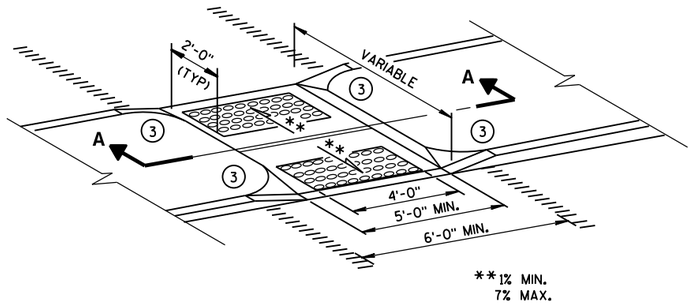
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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%.

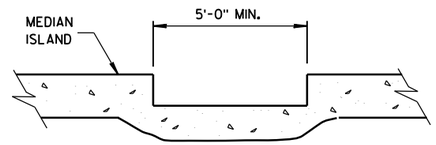
DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

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

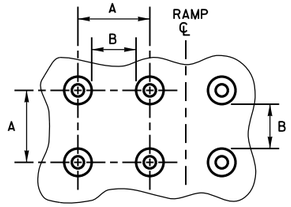
(2) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET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



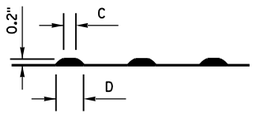
SECTION A-A



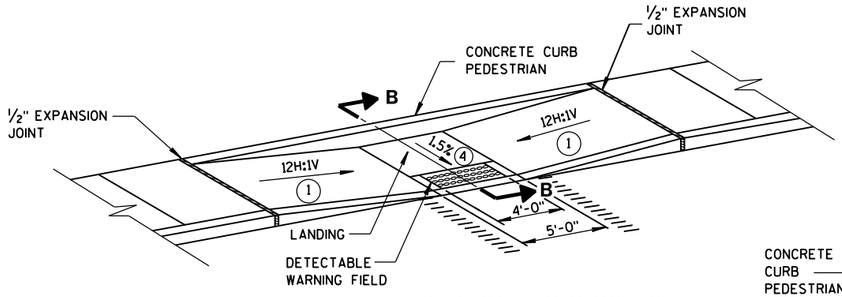
PLAN VIEW

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

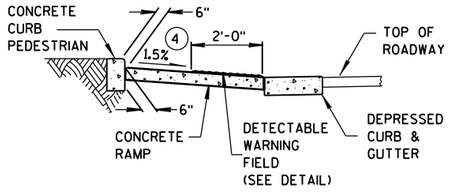
* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

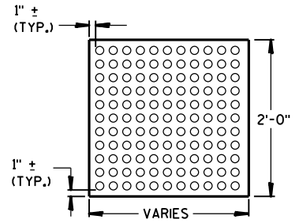


MID-BLOCK CROSSING
TYPE 7A



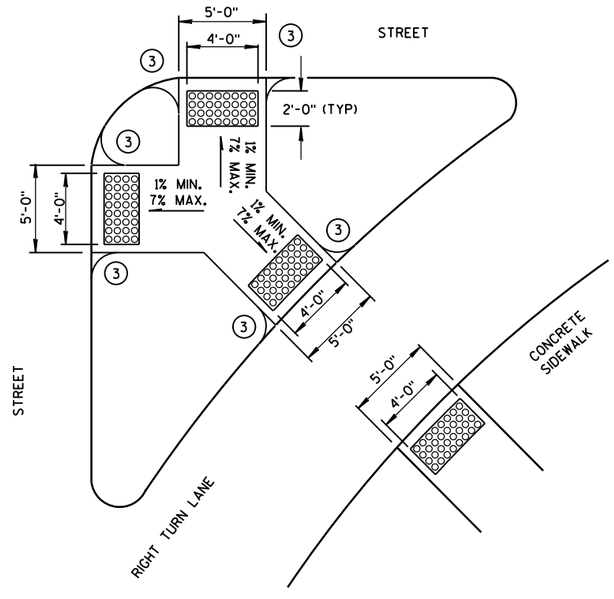
SECTION B-B

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

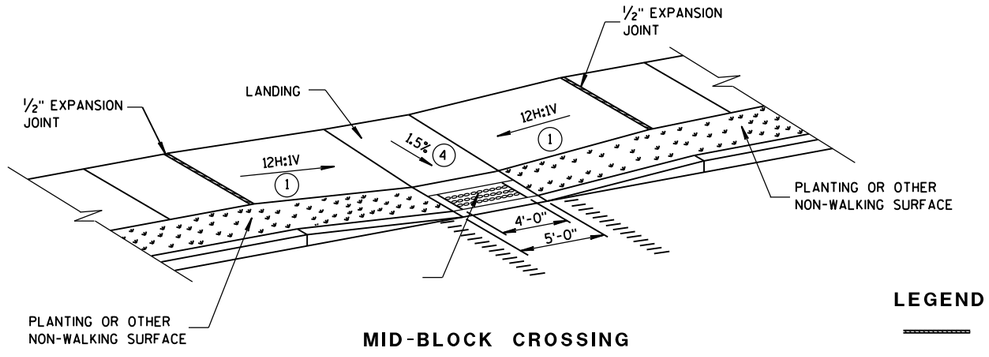


PLAN VIEW

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)

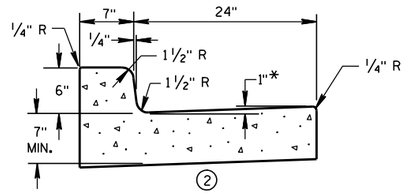
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

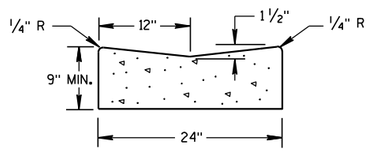
APPROVED
2-6-2013 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

6

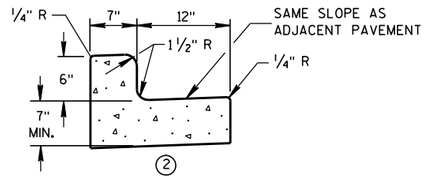
S.D.D. 8 D 5-15e



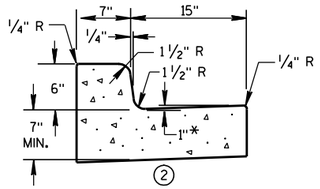
① CONCRETE CURB & GUTTER 31"



① CONCRETE GUTTER 24"

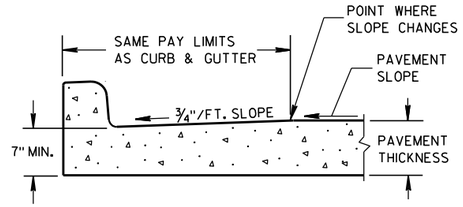


① CONCRETE CURB & GUTTER 19"



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.

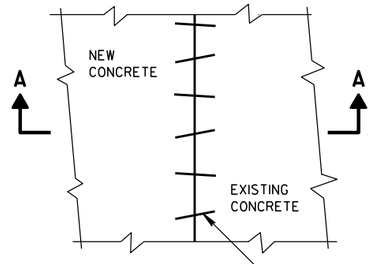
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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.

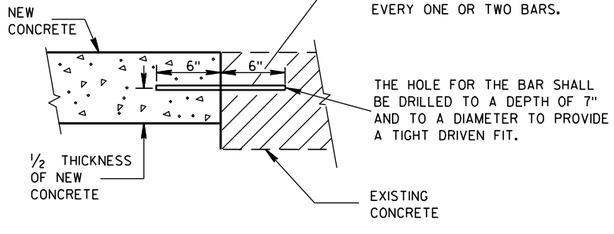
③ WHEN HIGH SIDE CURB SECTION IS REQUIRED, THE LOCATION(S) WILL BE NOTED ON THE PLAN.



PLAN VIEW

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

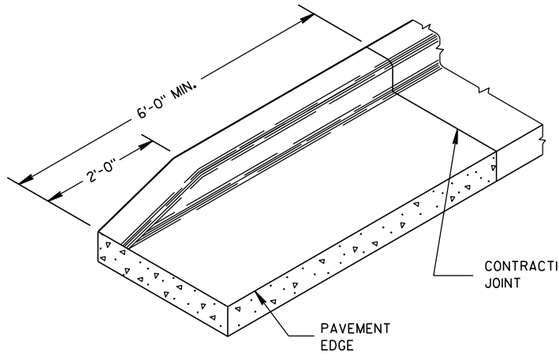
NO. 6 X 12" DEF. BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.



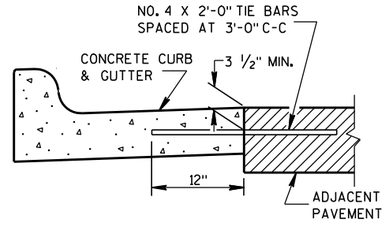
THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO A DIAMETER TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A

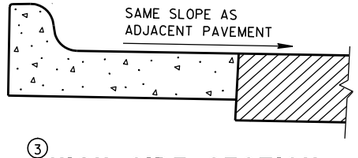
PAVEMENT TIES



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

509

ENT

FHWA

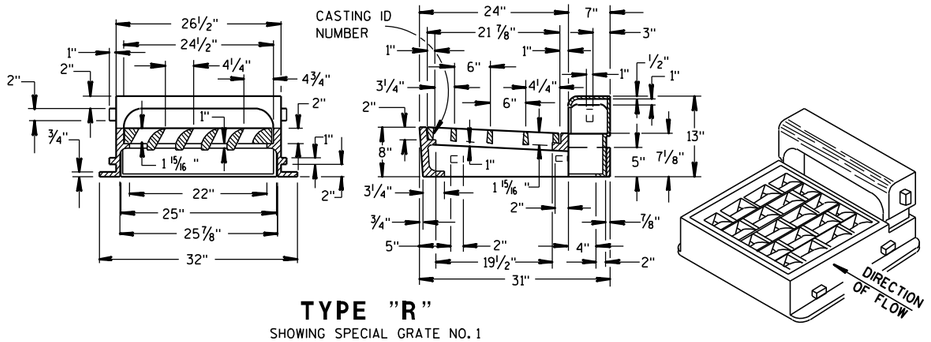
6

S.D.D. 8 D 16-10

6

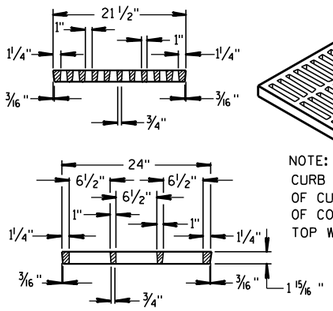
S.D.D. 8 D 16-10

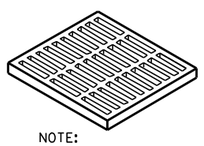
INLET COVERS



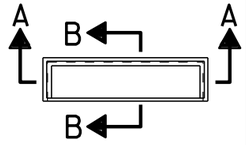
TYPE "R"

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

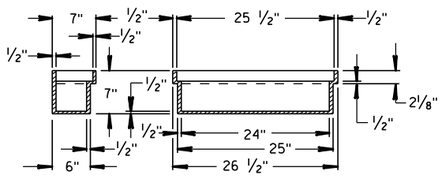




(APPROX. WEIGHT - 510 LBS.)
FRAME..... 245 LBS.
CURB..... 120 LBS.
GRATE..... 145 LBS.



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



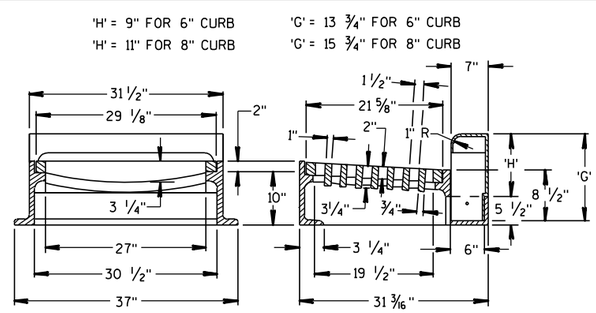
GRATE FOR TYPE "R" INLET COVER

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

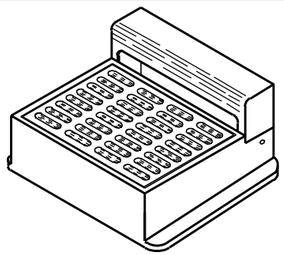
SECTION B-B SECTION A-A

SPECIAL CURB PLUG "P"

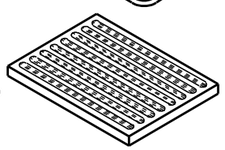
(CURB PLUG..... 85 LBS.)
(TO BE NOTED AS R-P IN DRAINAGE TABLE)



TYPE "W"

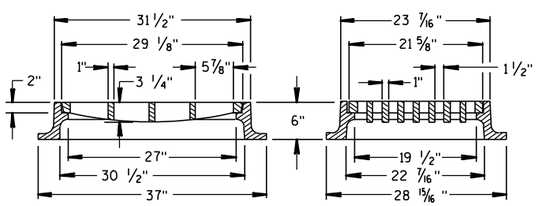


(APPROX. WEIGHT - 670 LBS.)
FRAME..... 350 LBS.
CURB BOX..... 135 LBS.
GRATE..... 185 LBS.



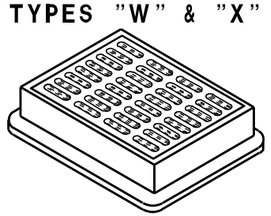
ALTERNATE GRATE
(FOR EXPRESSWAY RAMPS)

TYPES "W" & "X"

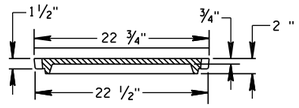


TYPE "X"

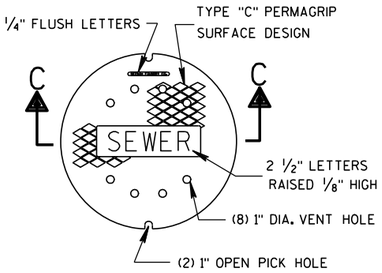
(APPROX. WEIGHT - 470 LBS.)

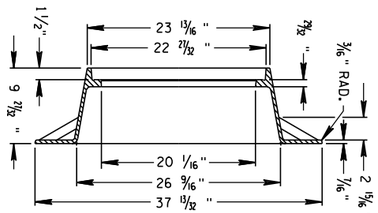


MANHOLE COVER



SECTION C-C





TYPE "Q"

(APPROX. WEIGHT - 290 LBS.)

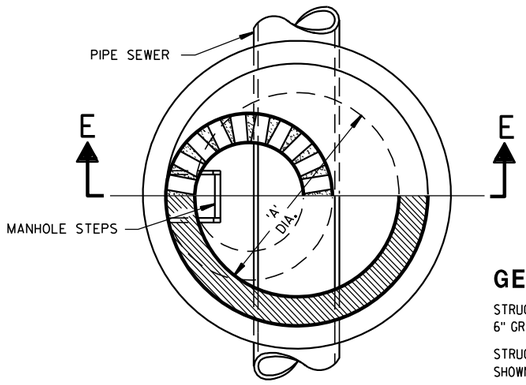
TABLE OF DIMENSIONS

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.

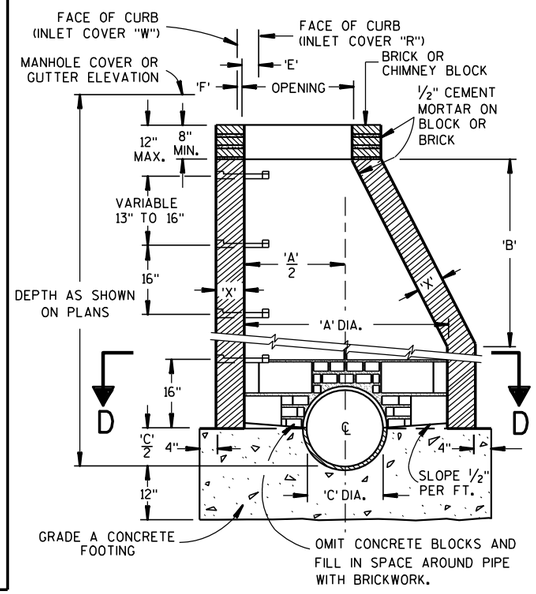
MANHOLE



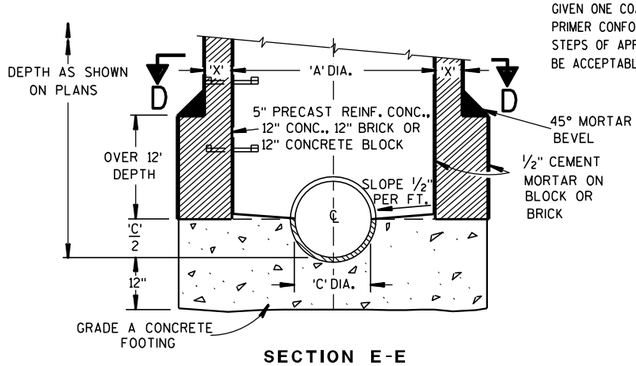
HALF SECTION D-D

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

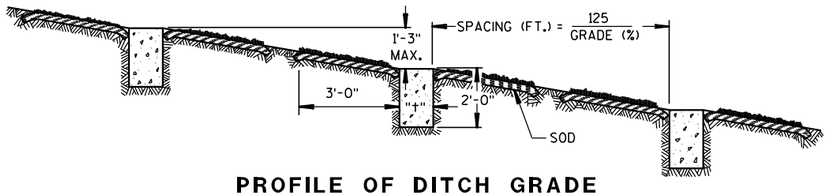
STEPS MEETING THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH; 16 INCH C-C MAX. SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM WALL EMBEDMENT OF 3 INCHES IN PRECAST MANHOLE AND 6 INCHES IN 8 INCH BRICK OR 6 INCH 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.

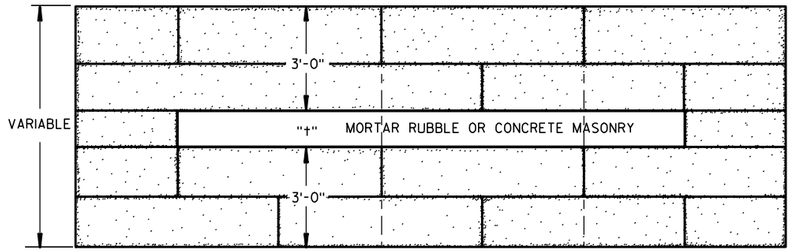
MANHOLES, MANHOLE & INLET COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

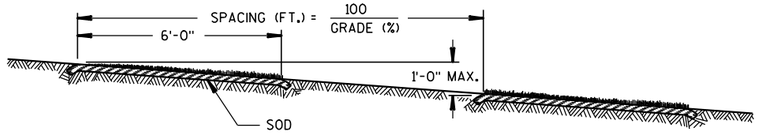


PROFILE OF DITCH GRADE

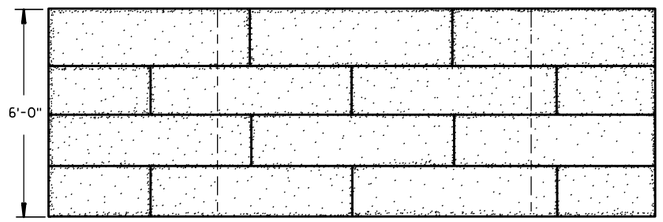


PLAN VIEW SHOWING MASONRY AND SOD

"+" - MASONRY THICKNESS SHALL BE 0'-9" FOR CONCRETE AND 1'-0" FOR MORTAR RUBBLE.



PROFILE OF DITCH GRADE



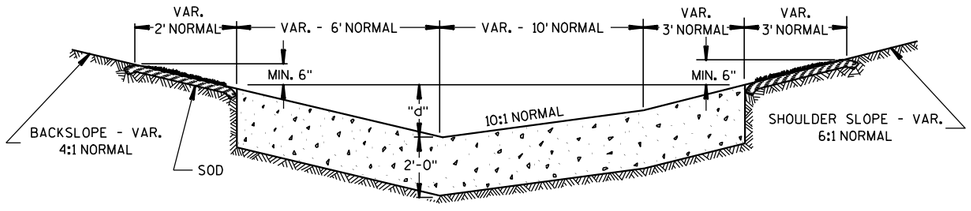
PLAN VIEW SHOWING SOD

GENERAL NOTES

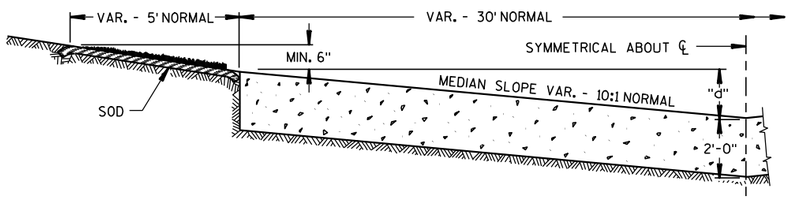
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALTERNATE DESIGNS FOR DITCH CHECKS, OF THE MATERIAL OR COMBINATION OF MATERIALS SHOWN HEREON, MAY BE USED UPON WRITTEN PERMISSION OF THE ENGINEER.

SOD STRIPS FOR DITCH CHECKS MAY BE PLACED EITHER TRANSVERSELY OR LONGITUDINALLY TO THE DIRECTION OF WATER FLOW.



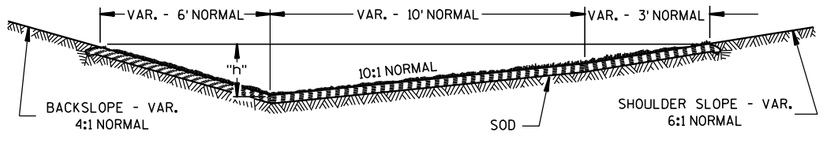
SIDE DITCH CROSS SECTION



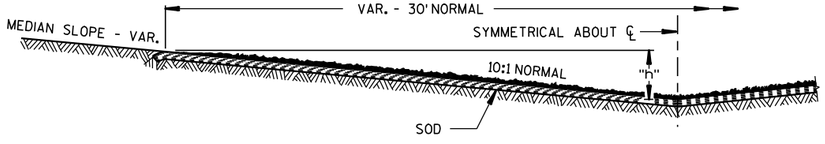
MEDIAN DITCH CROSS SECTION

"d" - THE MINIMUM DEPTH OF THE MASONRY PORTION OF THE DITCH CHECKS SHALL BE EQUAL TO THE MAXIMUM DEPTH OF FLOW. THE NORMAL "d" WILL BE 1'-6".

MASONRY AND SOD DITCH CHECKS



SIDE DITCH CROSS SECTION



MEDIAN DITCH CROSS SECTION

"h" - THE MINIMUM HEIGHT OF DITCH TO BE SODDED SHALL BE EQUAL TO THE MAXIMUM DEPTH OF FLOW PLUS 6". THE NORMAL "h" WILL BE 1'-6".

SOD DITCH CHECKS

SOD OR MASONRY AND SOD DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9/7/71 DATE

/S/ L.C. Harris ACTING CHIEF DESIG

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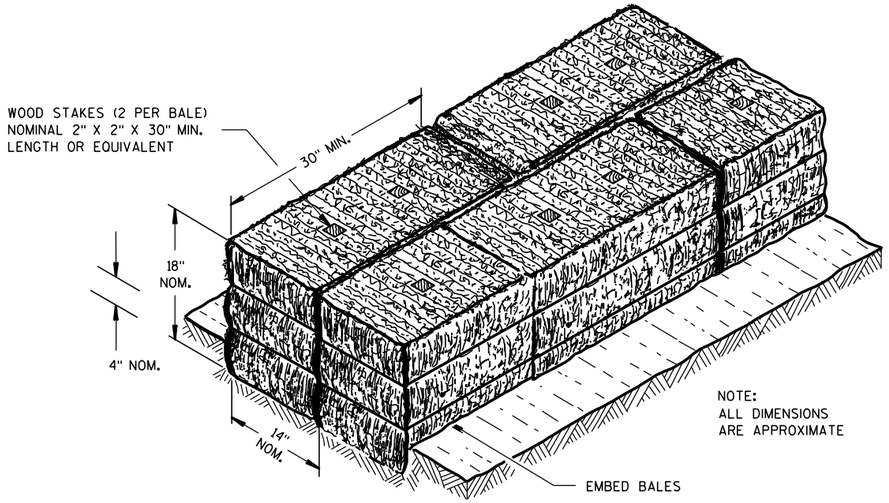
FHWA

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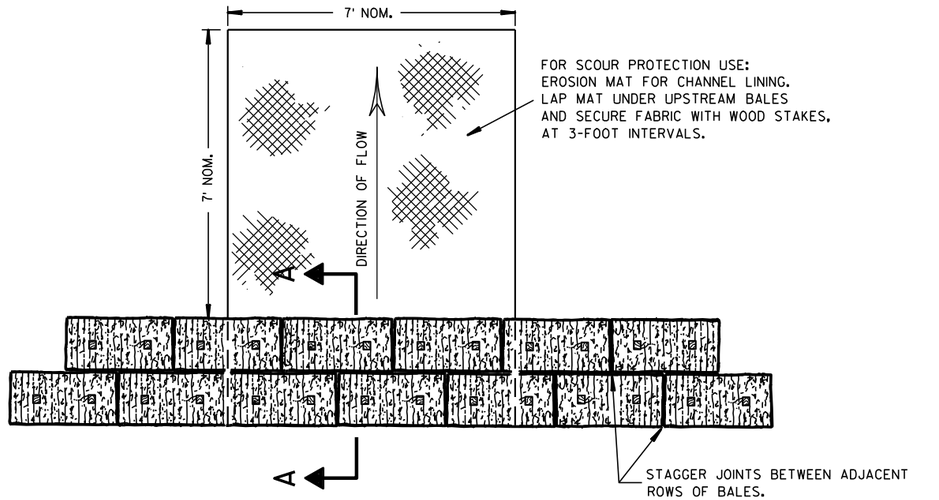
S.D.D. 8 E 4-2

6

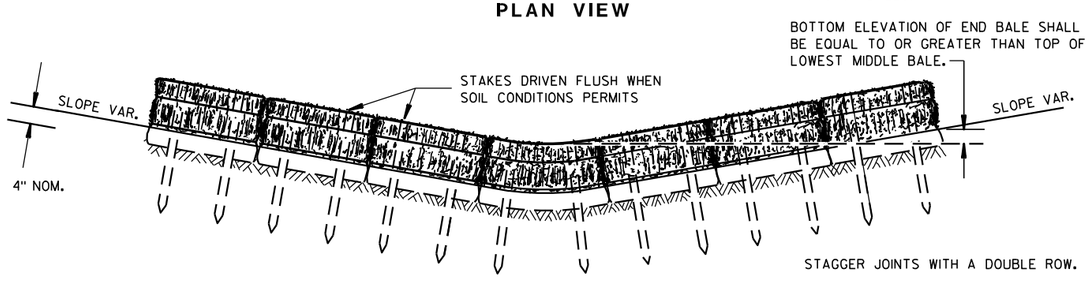
S.D.D. 8 E 4-2



SECTION A-A



PLAN VIEW



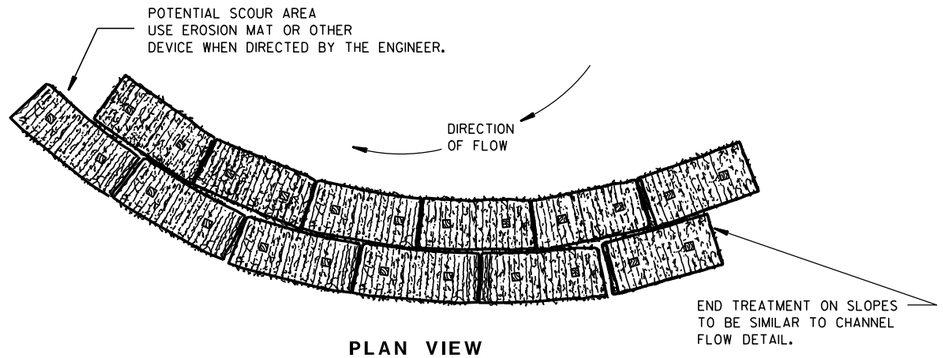
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

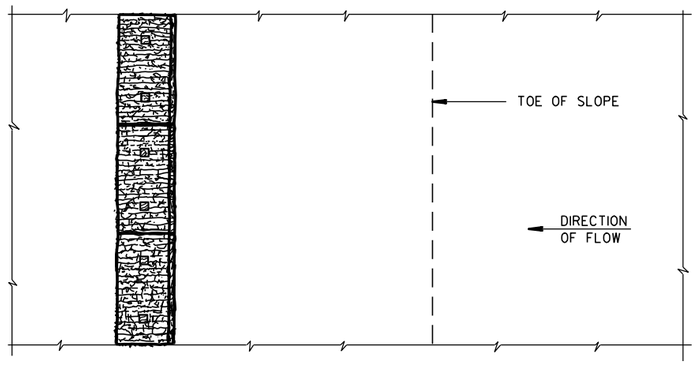
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

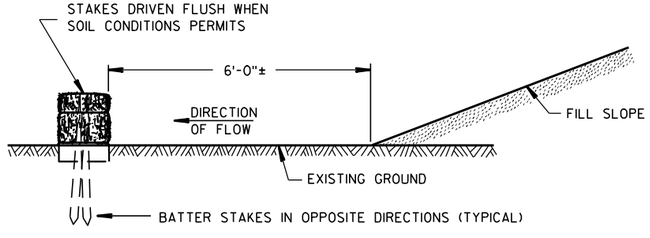


PLAN VIEW

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

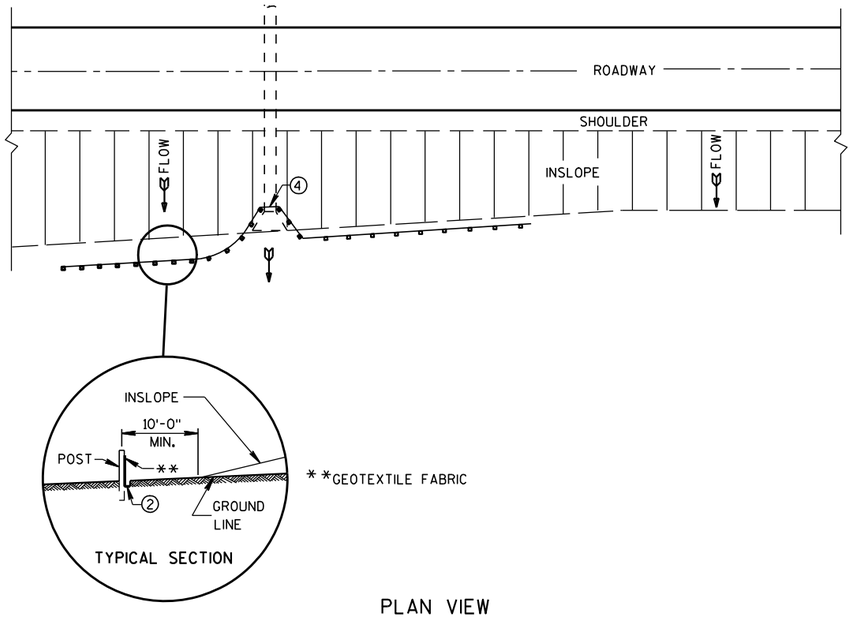
FHWA

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S.D.D. 8 E 8-3

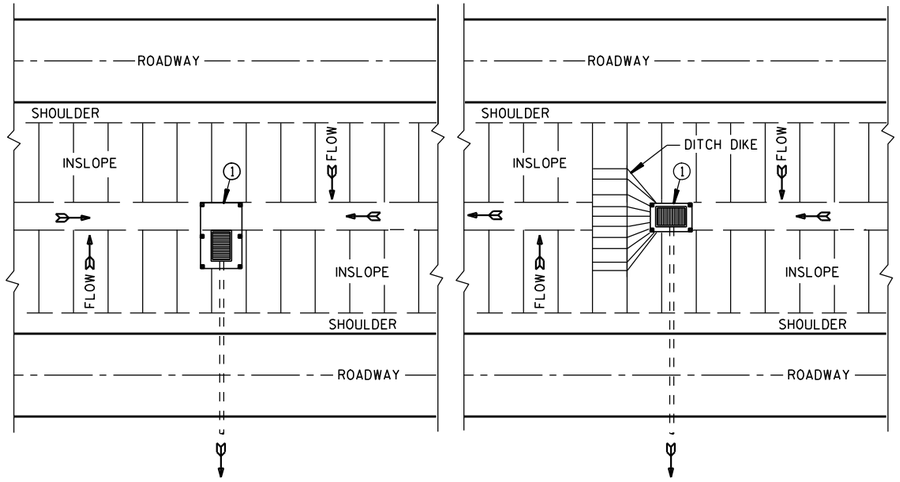
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S.D.D. 8 E 8-3



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.

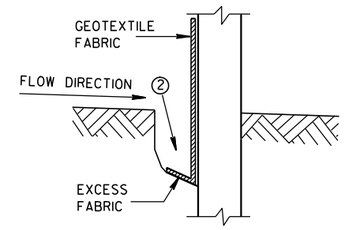
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

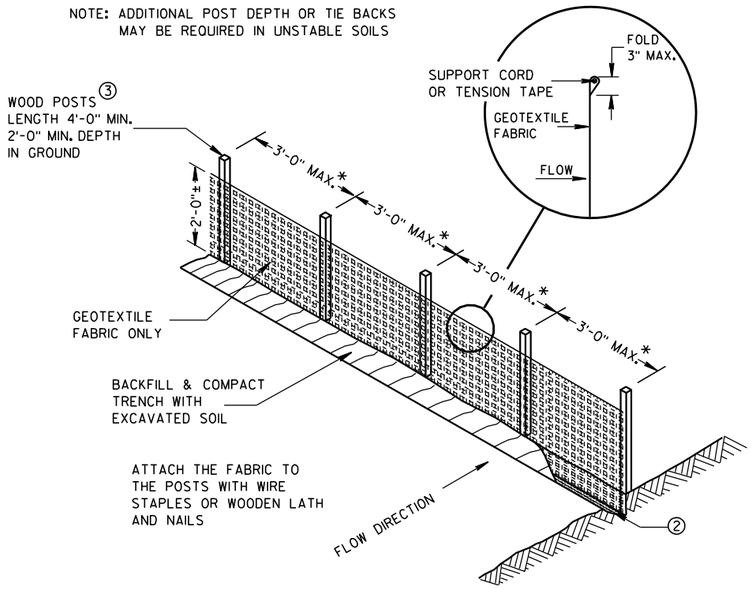
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

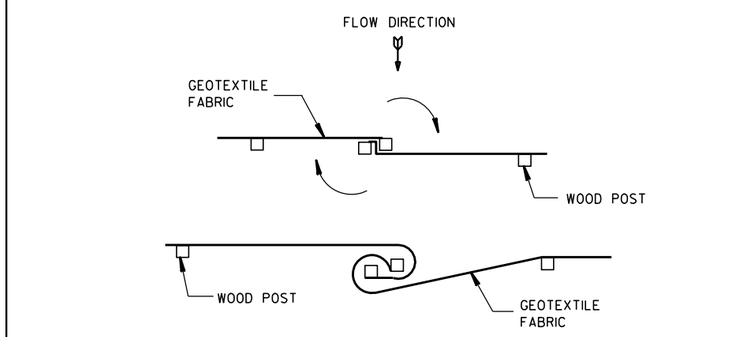
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



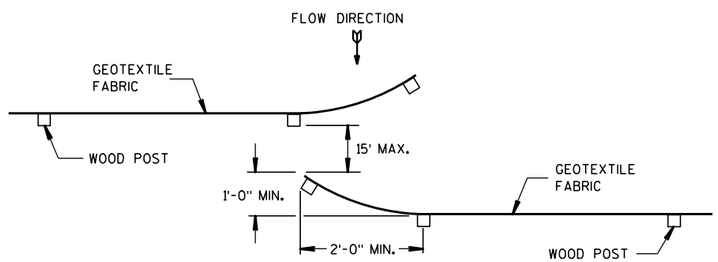
TRENCH DETAIL



SILT FENCE

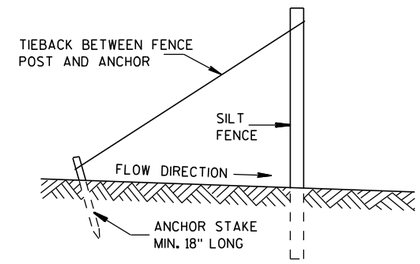


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

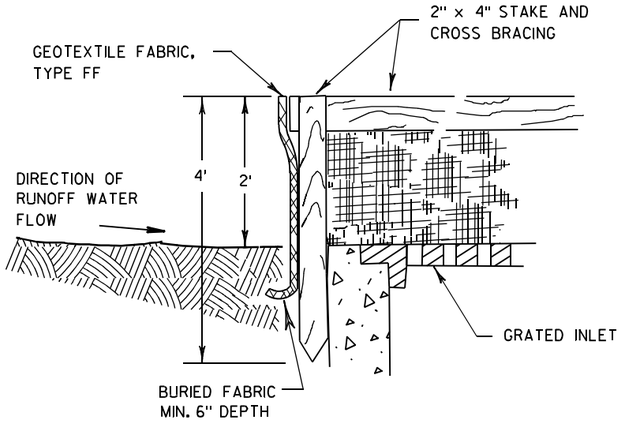
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

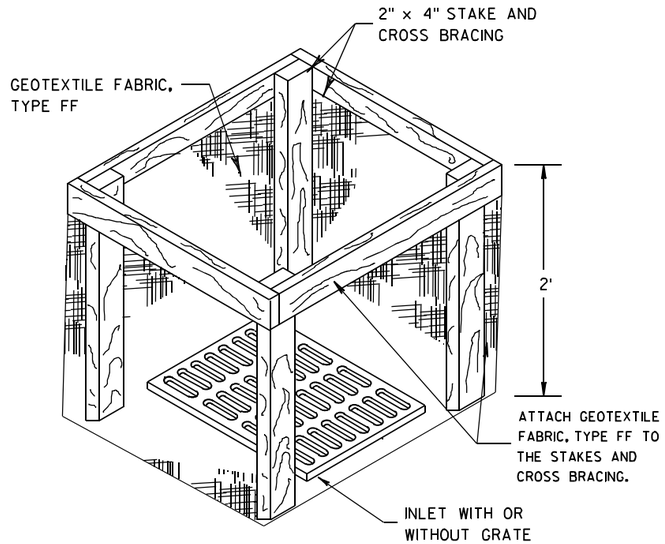
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S.D.D. 8 E 9-6

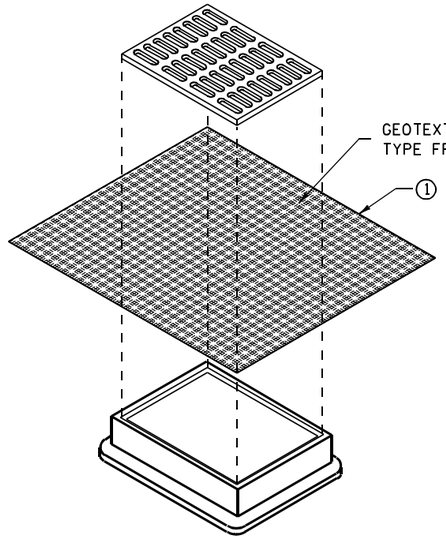
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S.D.D. 8 E 9-6



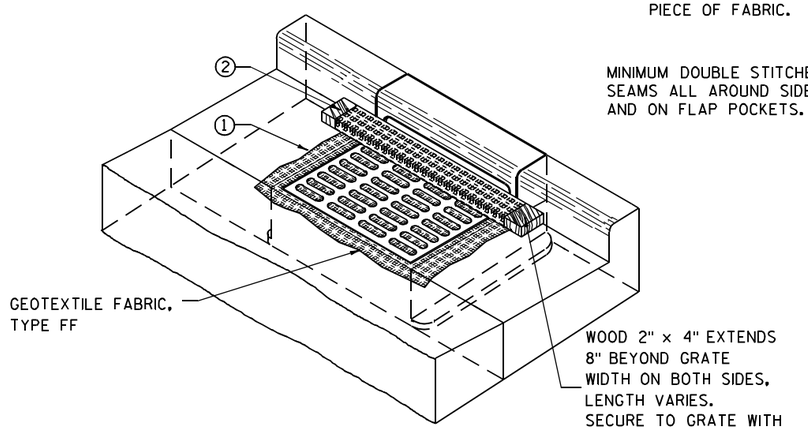


INLET PROTECTION, TYPE A

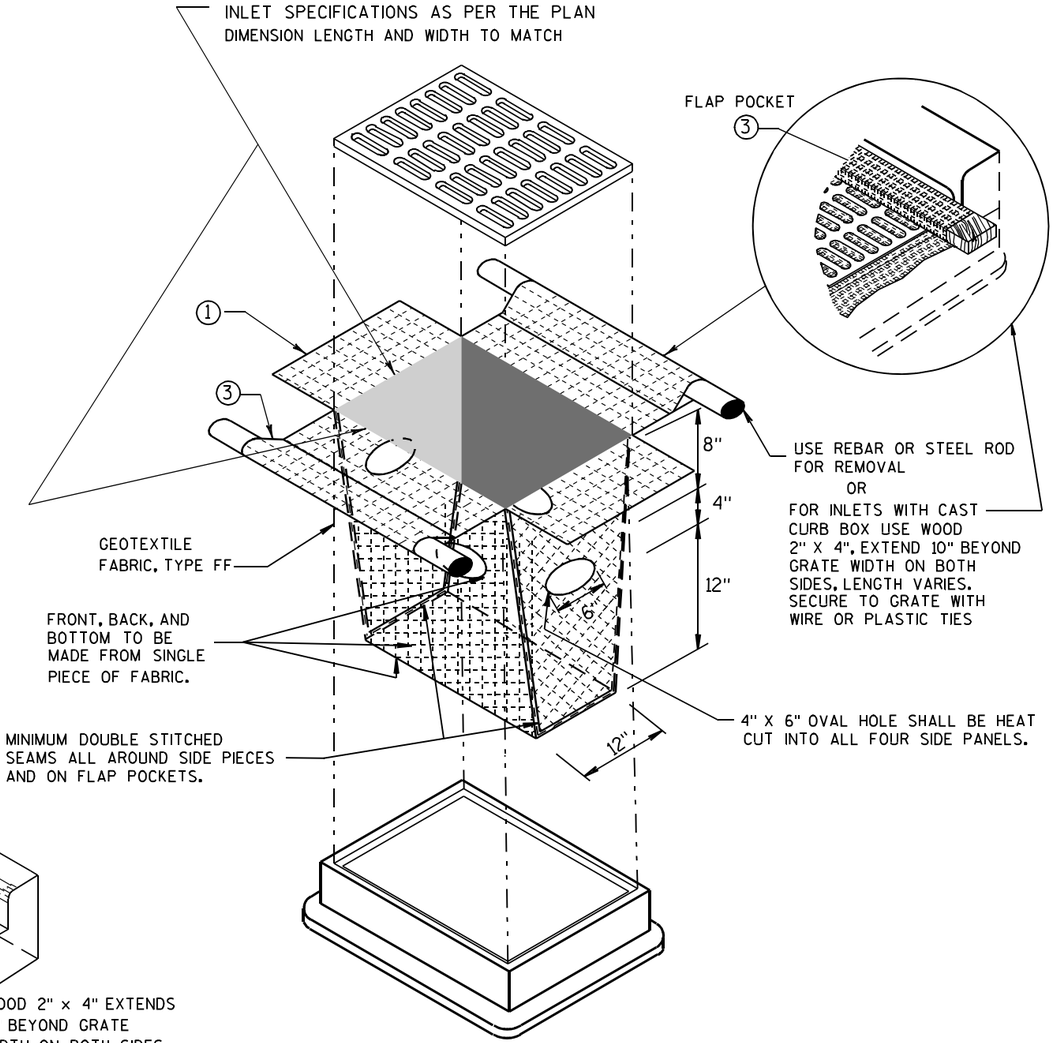


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(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

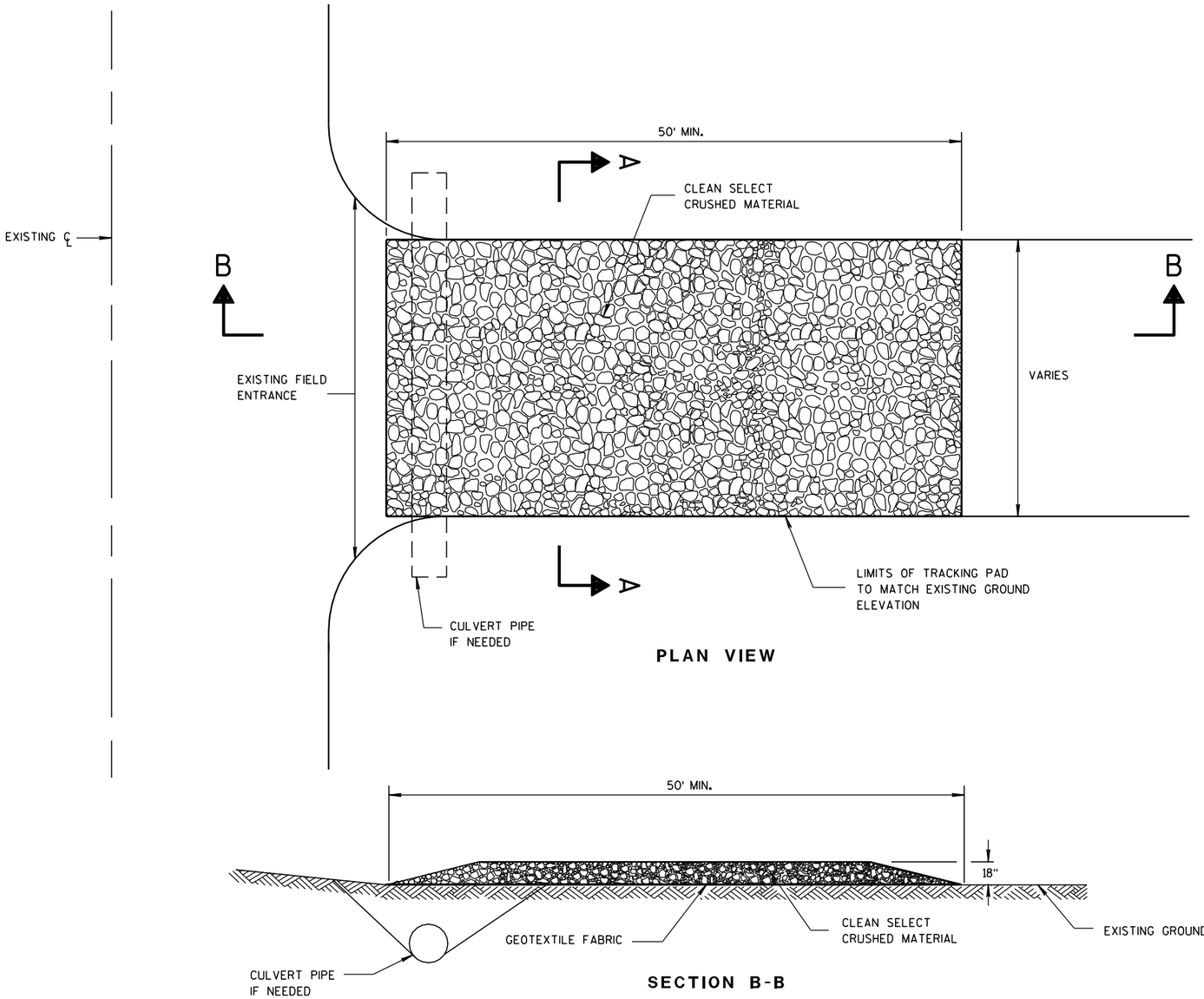
FHWA

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.

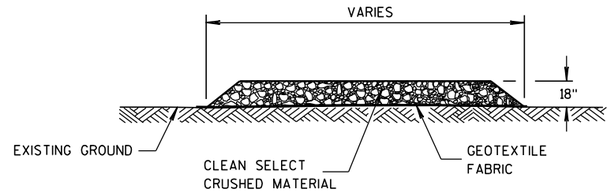
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

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

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER
	515 ENT

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

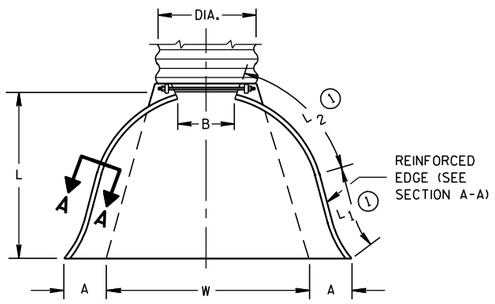
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	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

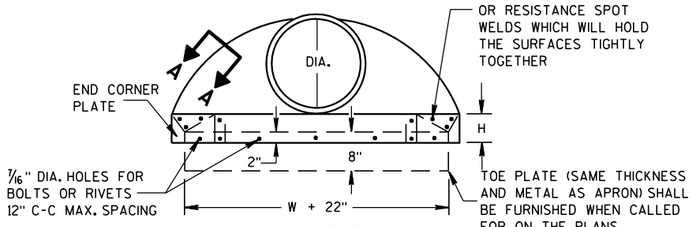
REINFORCED CONCRETE APRON ENDWALLS

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

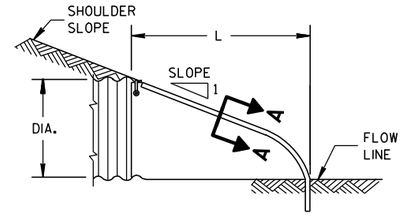
*MINIMUM
**MAXIMUM



PLAN VIEW

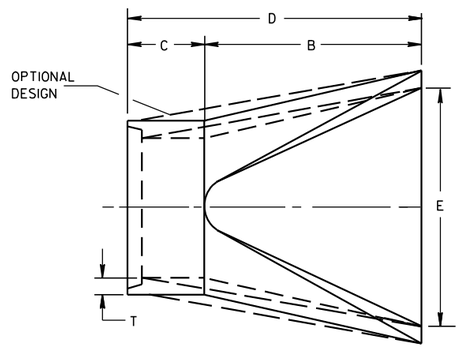


END VIEW

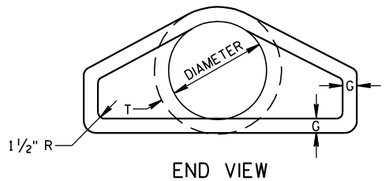


SIDE ELEVATION

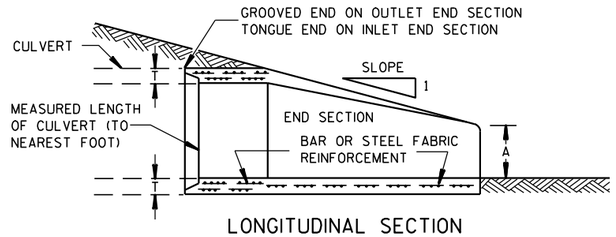
METAL ENDWALLS



PLAN

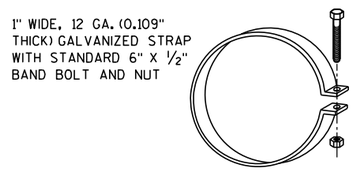


END VIEW



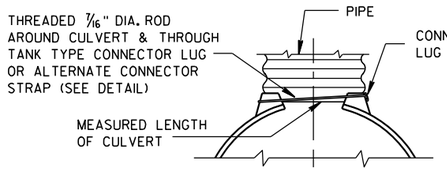
LONGITUDINAL SECTION

CONCRETE ENDWALLS

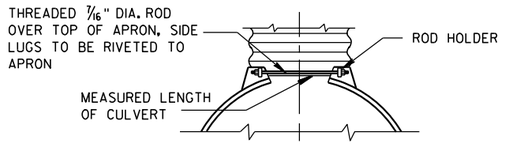


ALTERNATE FOR TYPE 1 CONNECTION

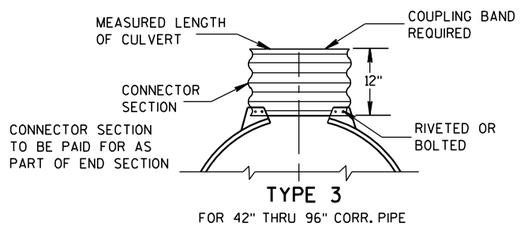
END SECTION CONNECTOR STRAP



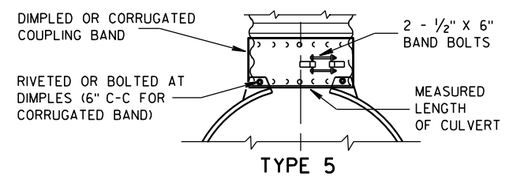
TYPE 1
FOR 12" THRU 24" CORR. PIPE



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

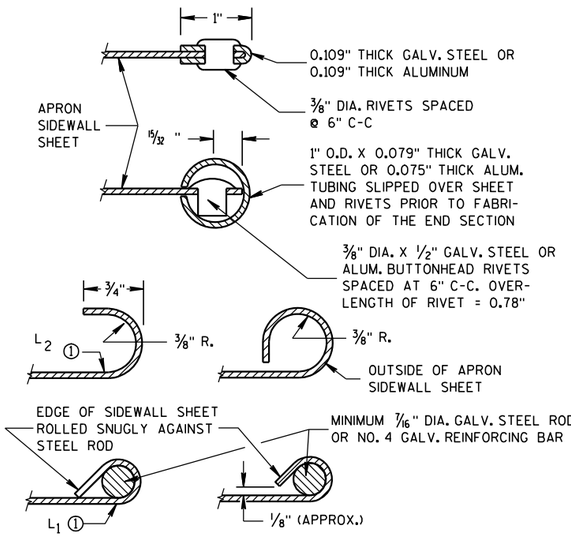
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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.

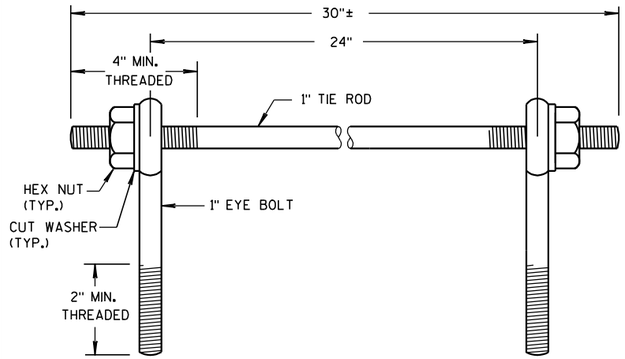
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

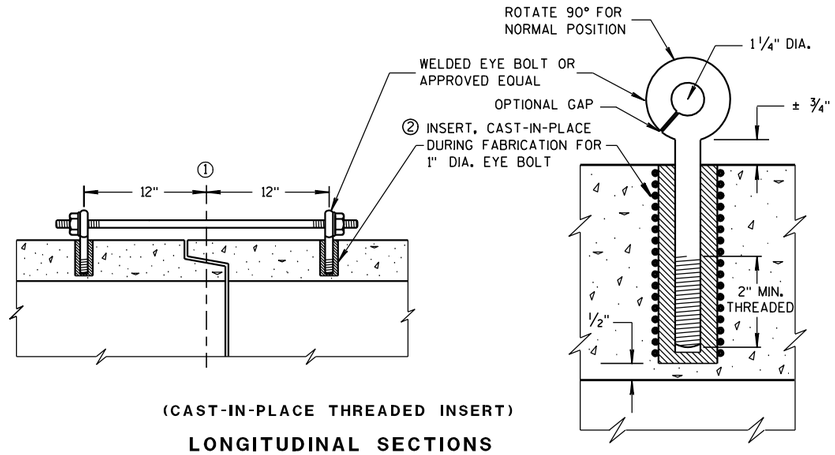
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



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.

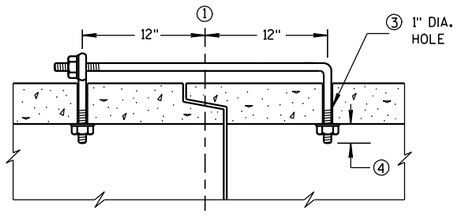
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

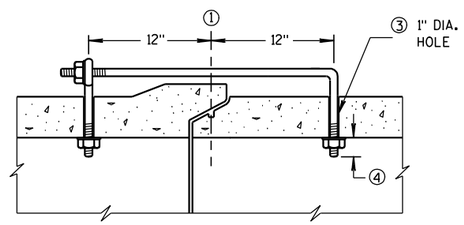
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

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)

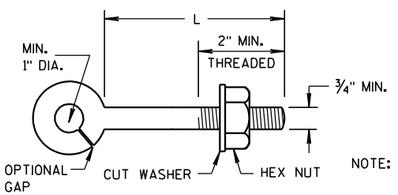


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

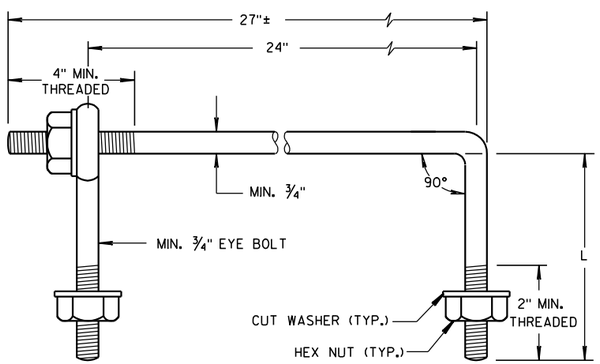
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



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

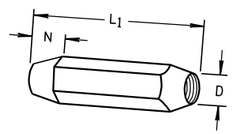
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

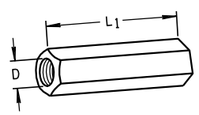
ADJUSTABLE TIE ROD TABLE

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



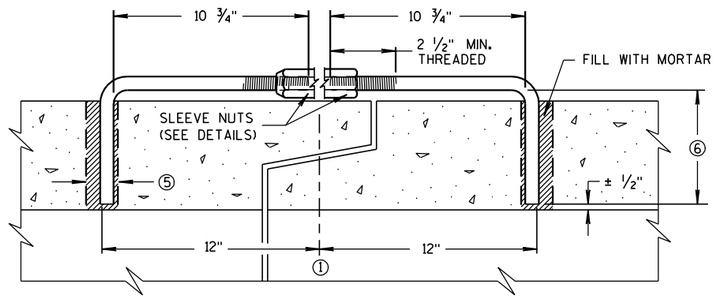
TAPERED



PLAIN

RIGHT AND LEFT THREADS

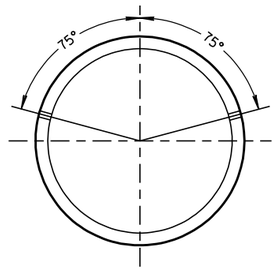
SLEEVE NUTS



LONGITUDINAL SECTION

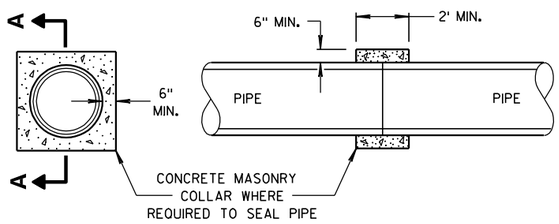
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

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 ENGINEER
517
FHWA

6

S.D.D. 8 F 4-7

6

S.D.D. 8 F 4-7

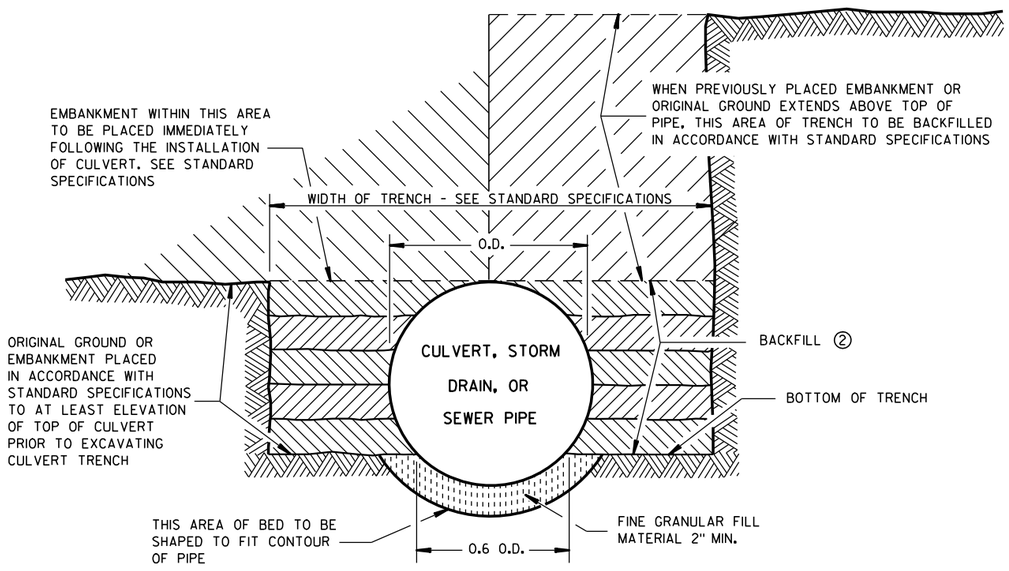
GENERAL NOTES

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

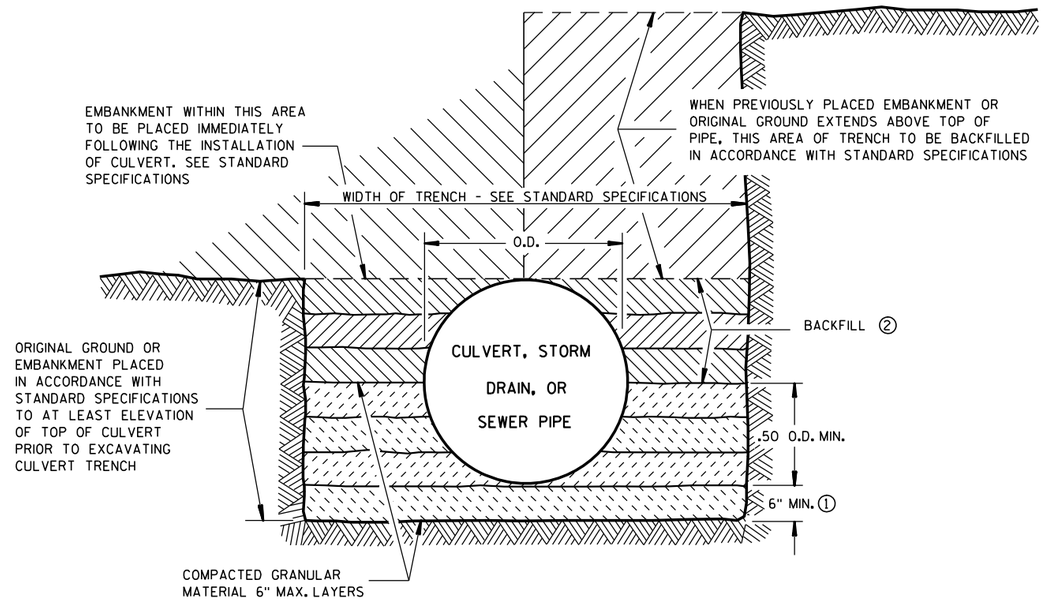
THE SHAPED SUBGRADE WITH GRANULAR FOUNDATION IS AN EQUAL ALTERNATE TO THE GRANULAR FOUNDATION EXCEPT WHERE ROCK IS ENCOUNTERED.

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

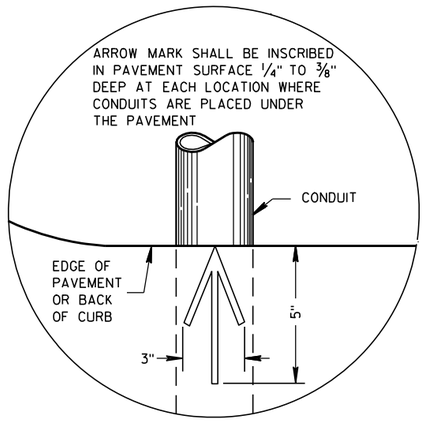


GRANULAR FOUNDATION

CLASS "B" BEDDING

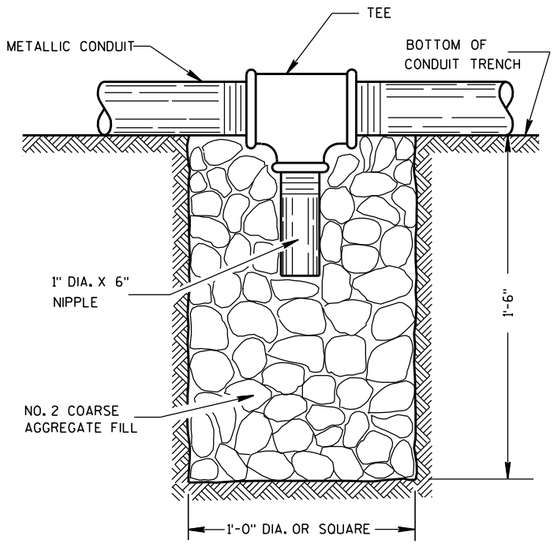
CLASS "B" BEDDING FOR CULVERT PIPE OR STORM SEWER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
4/7/83 DATE	/S/ D. L. Strand STATE DESIGN ENGINEER
FHWA	518 HWYS

6
S.D.D. 8 F 5-1



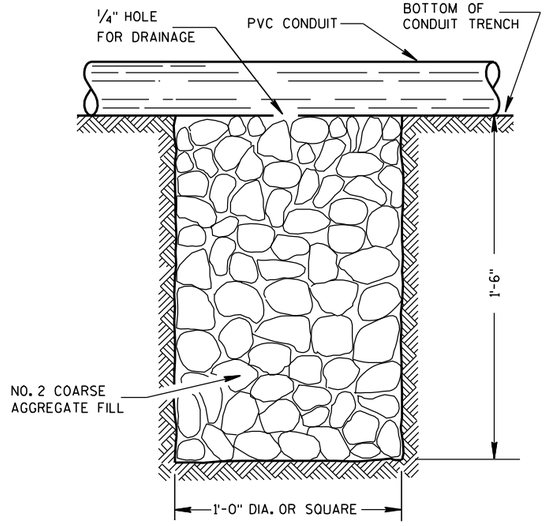
PLAN VIEW

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.

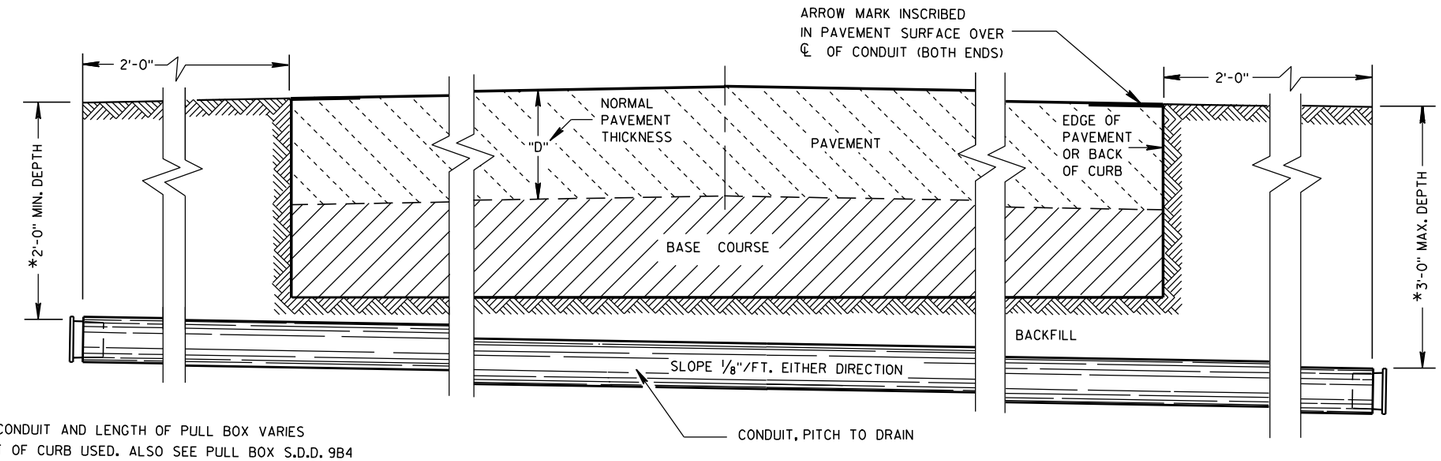
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

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 519 HWYS

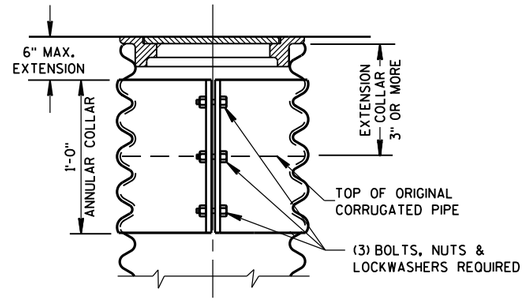
FHWA

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

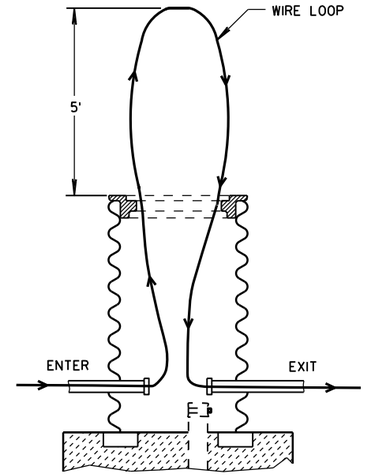
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	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.

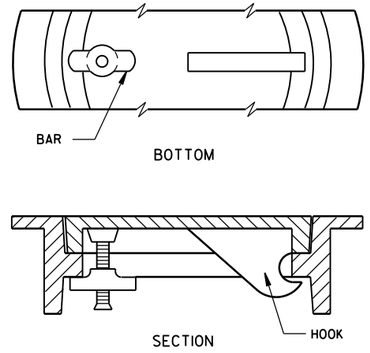
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

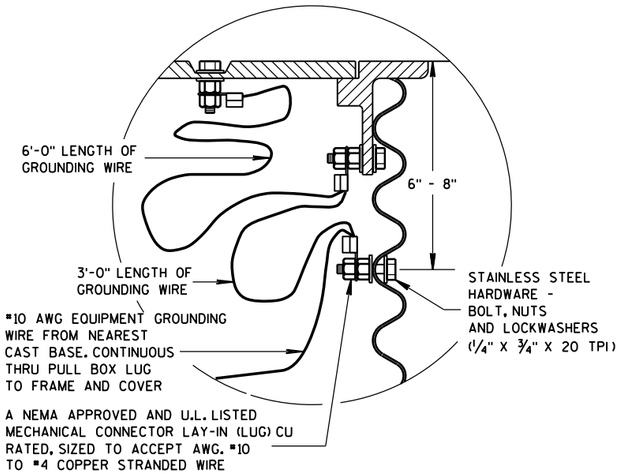


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

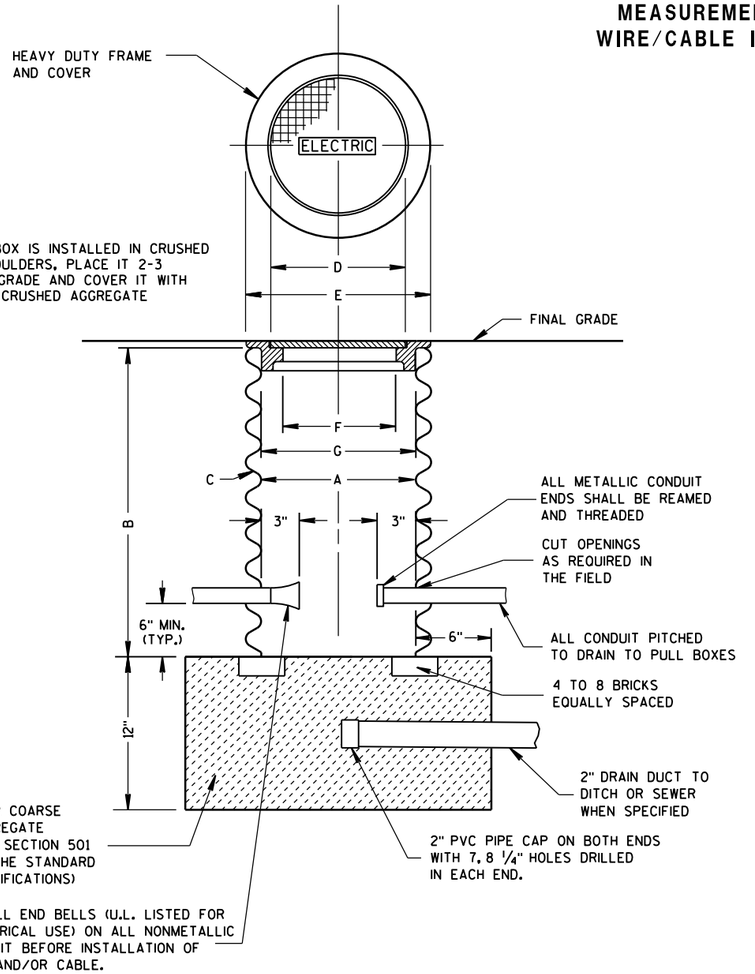


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

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.

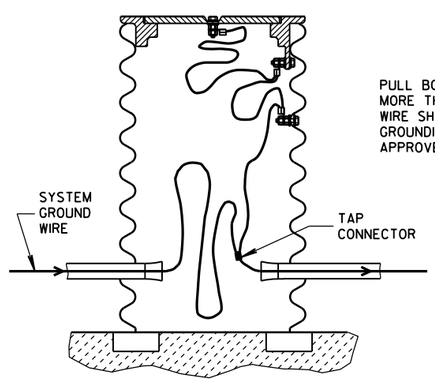
GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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 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

PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

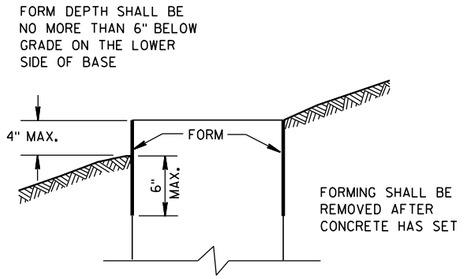
2-7-2013 DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL

FHWA

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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.

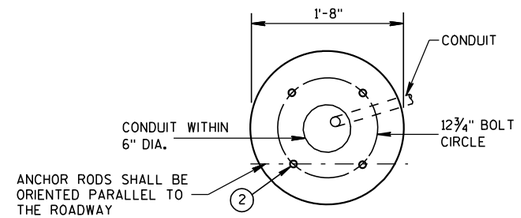
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

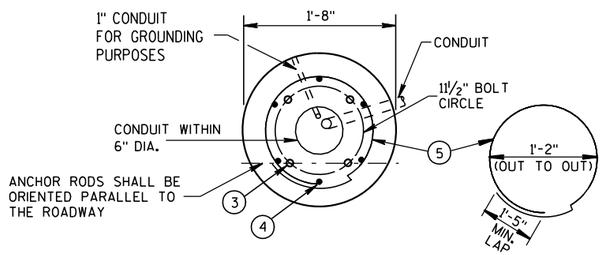
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

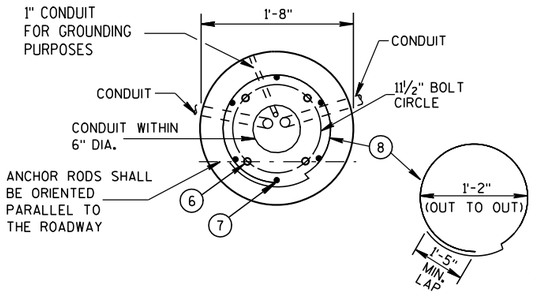
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

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

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

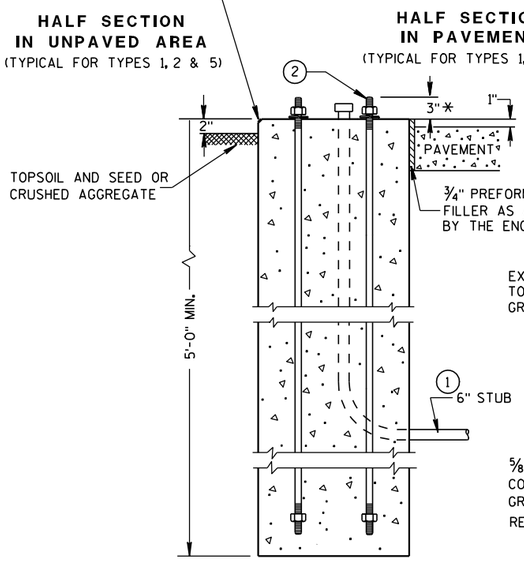






FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

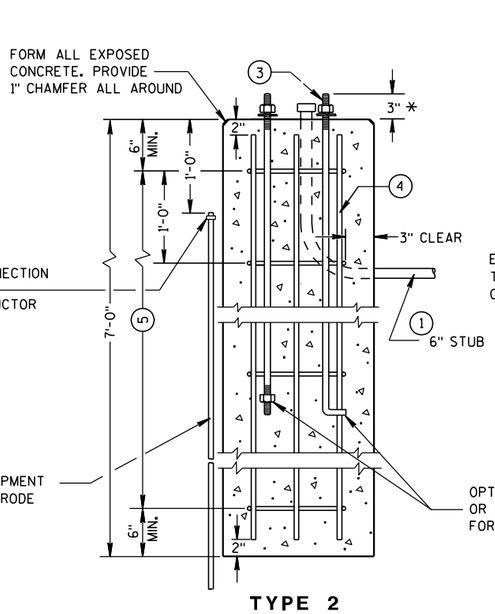
HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2 & 5)



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

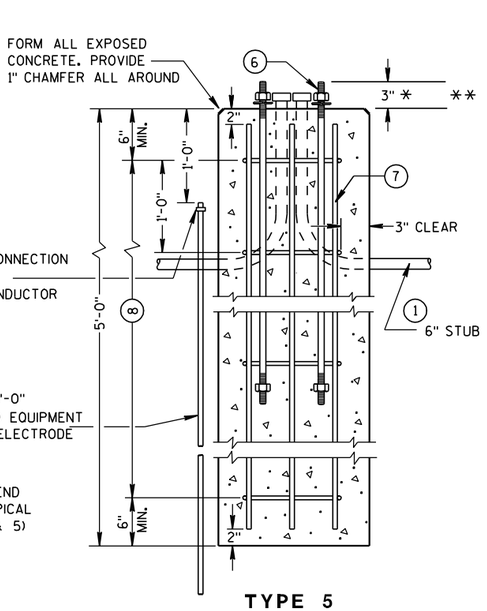
TYPE 1

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 521 — HWYS
FHWA

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S.D.D. 9 C 2-6

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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.

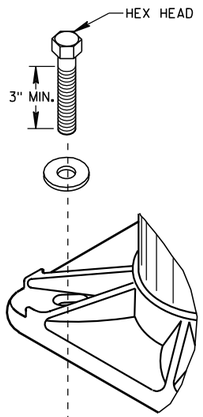
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

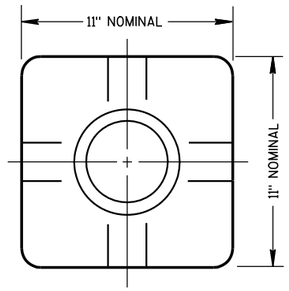
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

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

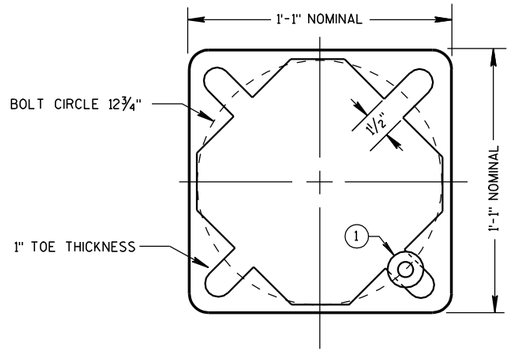
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1½", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

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

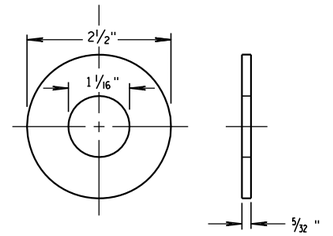




TOP VIEW
(PEDESTAL BASE)

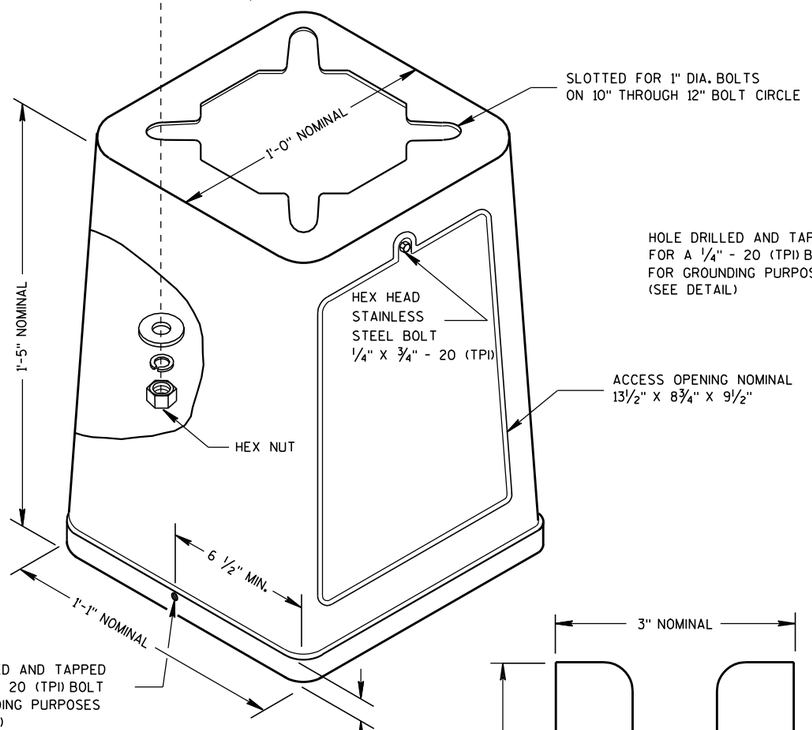


BOTTOM VIEW
(PEDESTAL BASE)

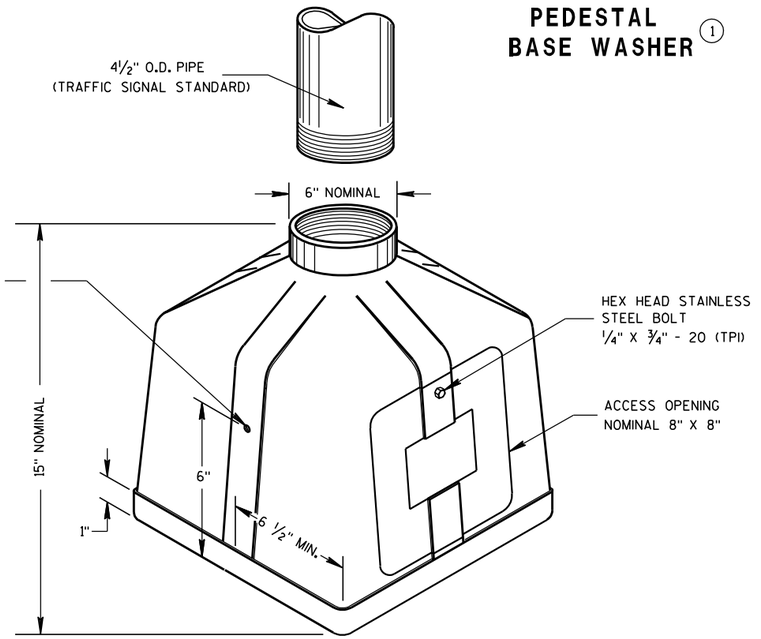


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)

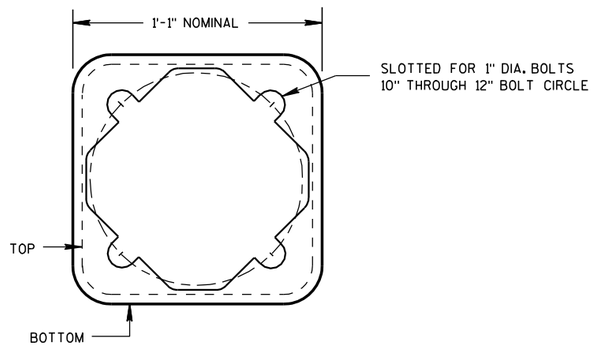


ISOMETRIC VIEW

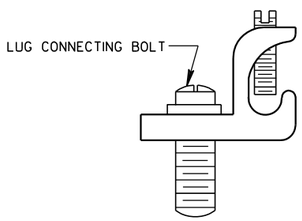


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

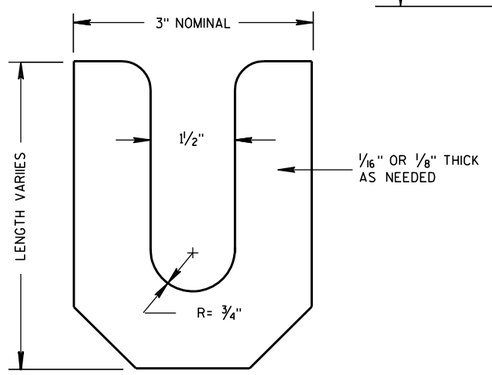


TYPICAL MECHANICAL CONNECTOR LUG

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

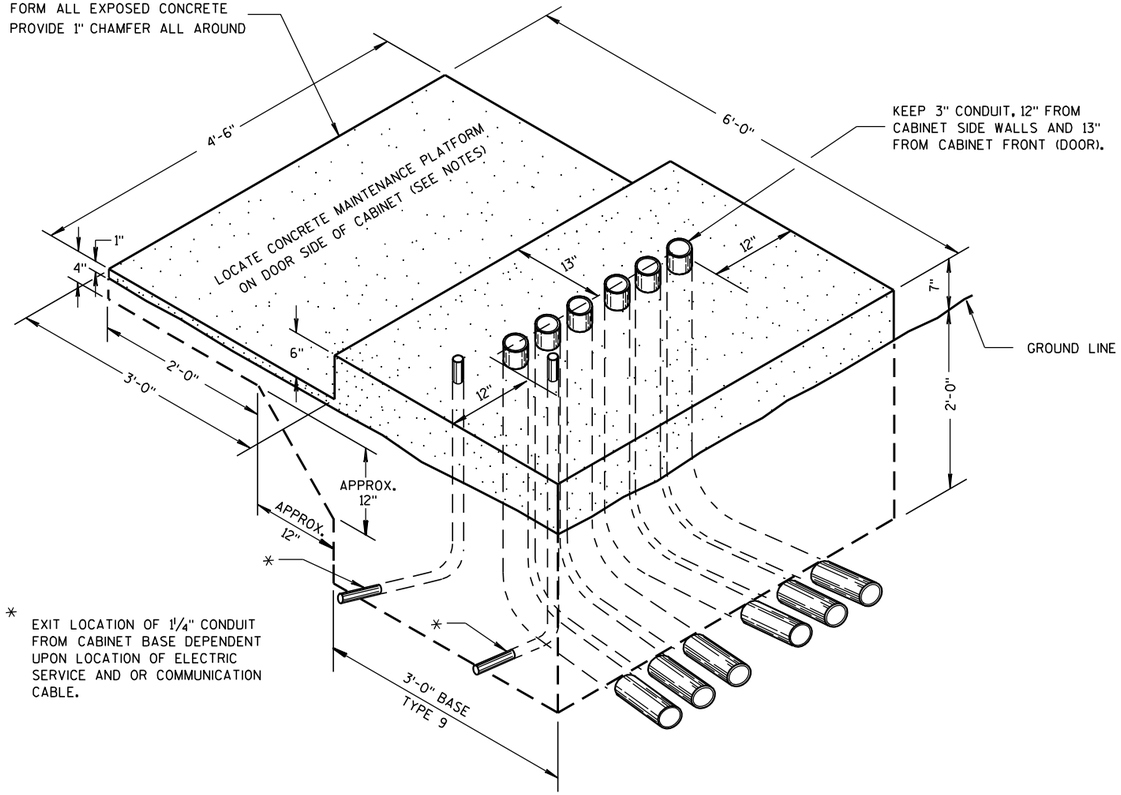
APPROVED
10/27/09 — DATE
/S/ Joanna L. Rich — STATE ELECTRICAL ENGI 522 — HWYS
FHWA

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S.D.D. 9 C 3-3

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S.D.D. 9 C 3-3

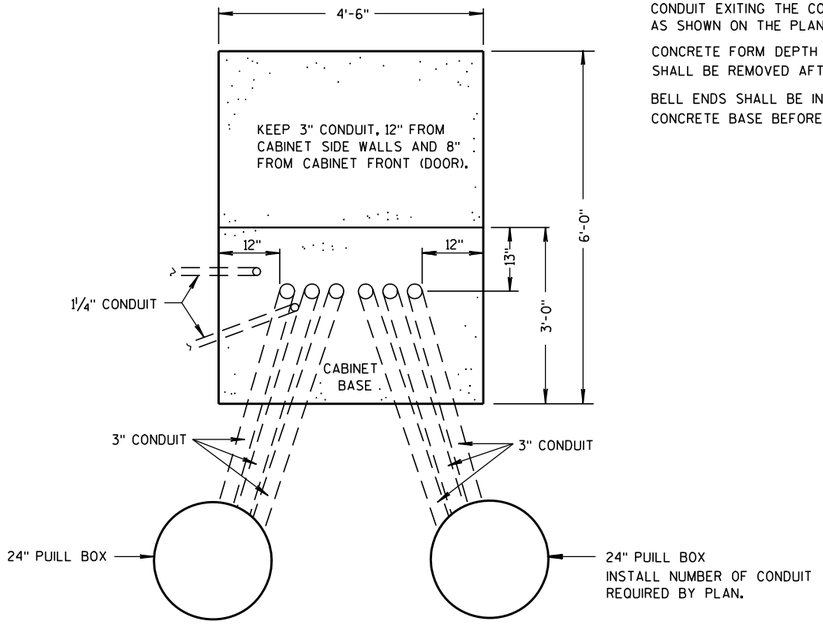


* EXIT LOCATION OF 1¼" CONDUIT FROM CABINET BASE DEPENDENT UPON LOCATION OF ELECTRIC SERVICE AND OR COMMUNICATION CABLE.

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

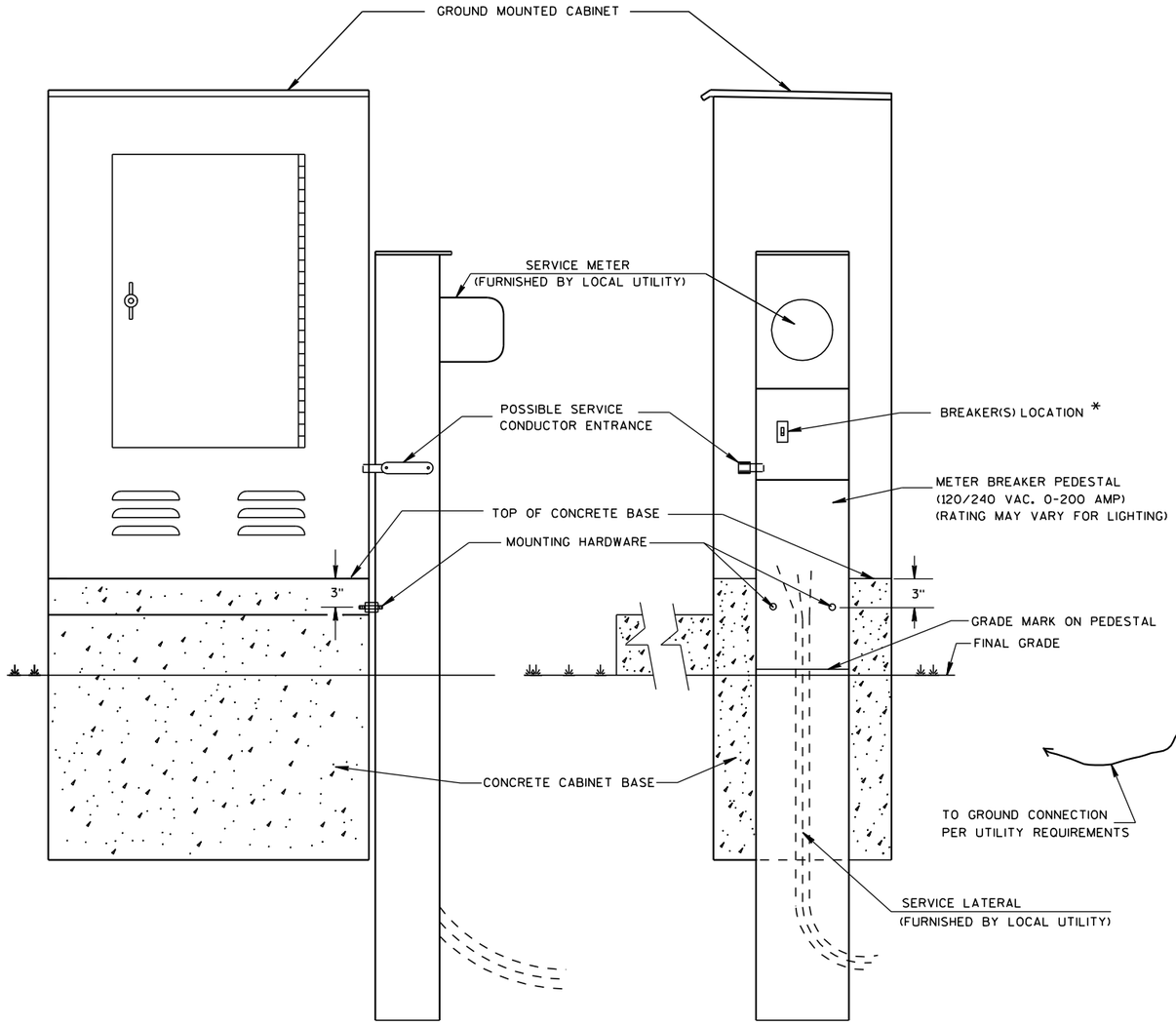
2/27/07 — DATE

/S/ Balu Ananthanarayanan — STATE ELECTRICAL ENGI

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FHWA



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

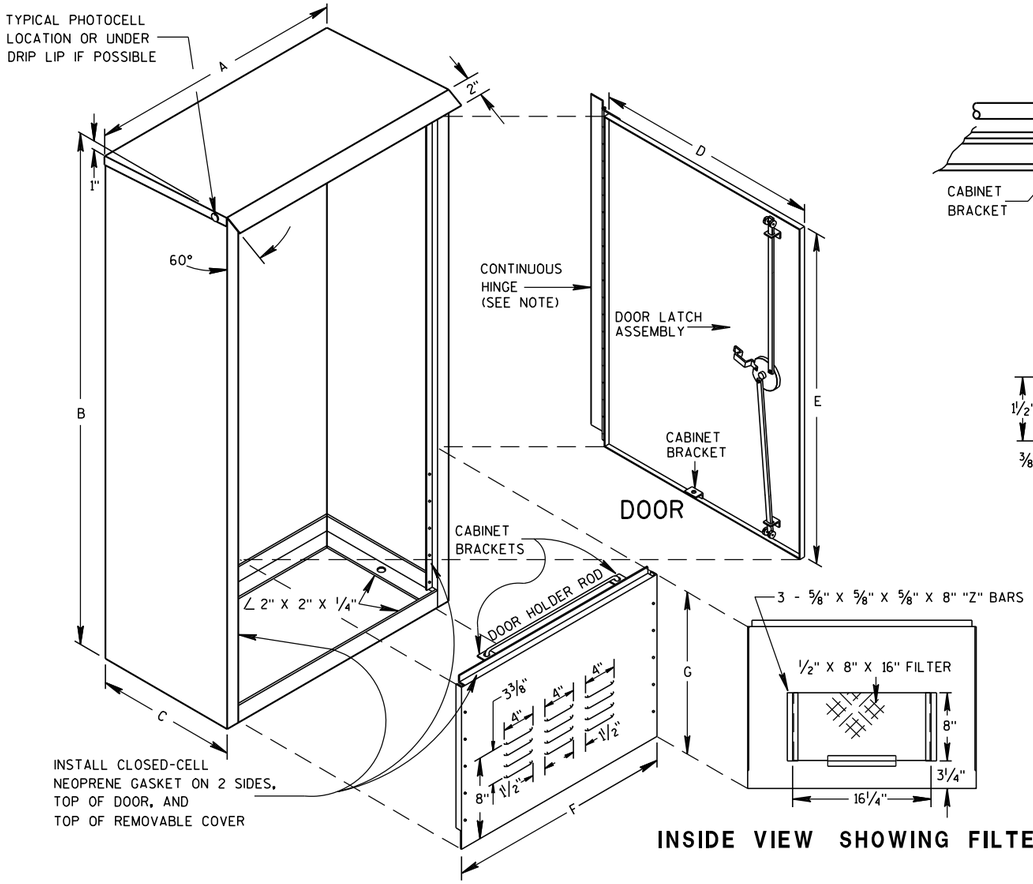
10/27/09 — DATE

/S/ Joanna L. Bush — STATE ELECTRICAL ENGI 524 — HWYS

FHWA

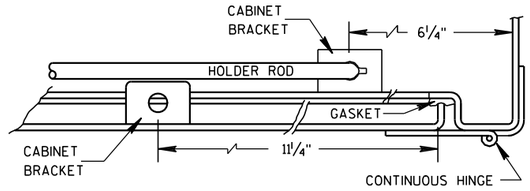
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S.D.D. 9 D 1-4

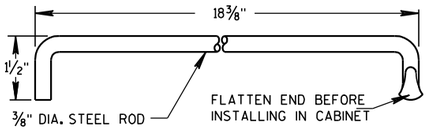


REMOVABLE COVER

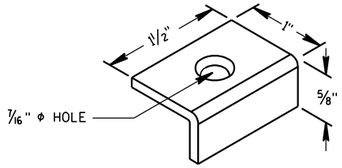
INSIDE VIEW SHOWING FILTER



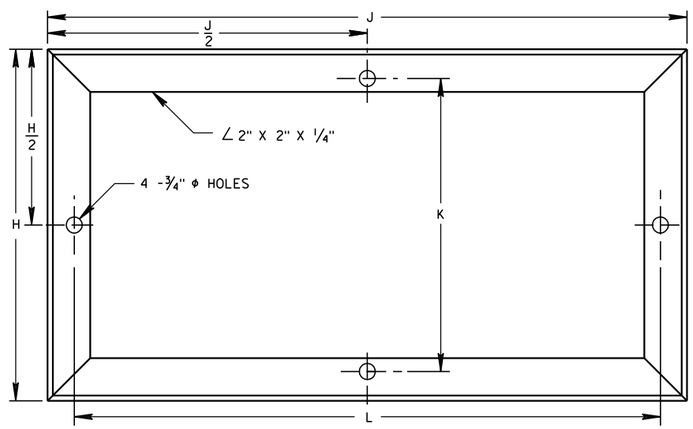
HINGE & DOOR HOLDER



HOLDER ROD



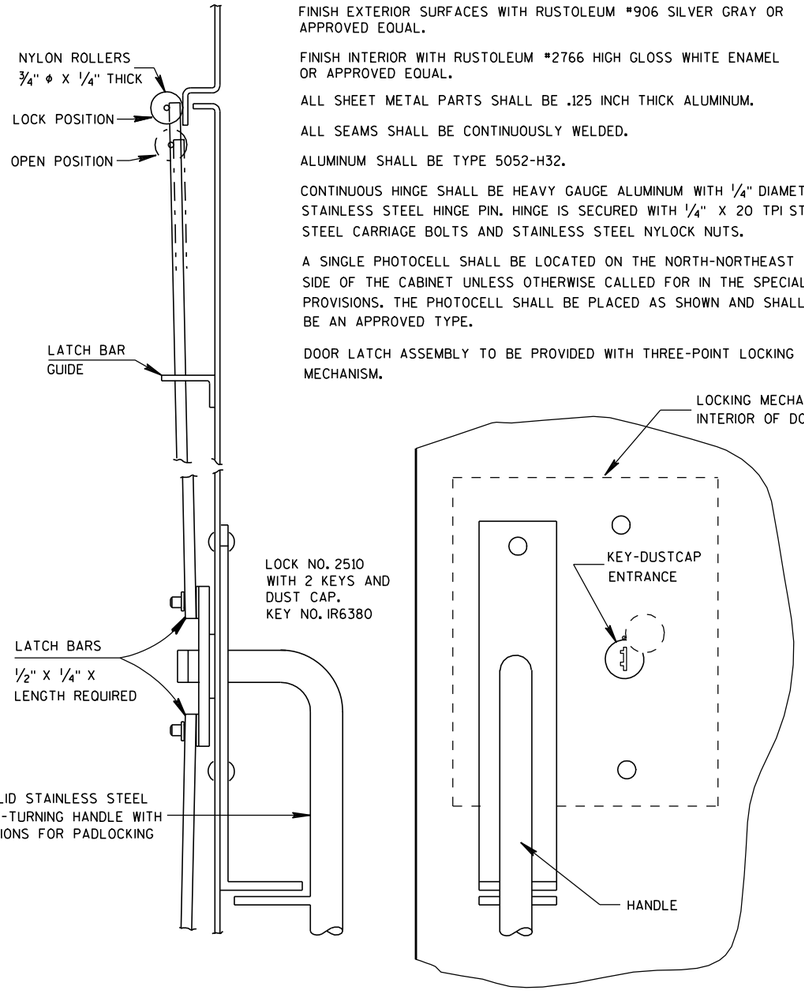
CABINET BRACKET



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

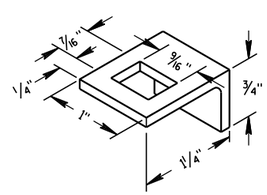
MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2



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.

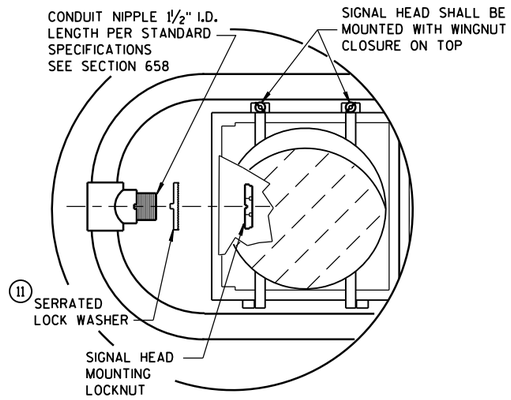
A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE AN APPROVED TYPE.

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

SIGNAL OR LIGHTING CONTROL CABINET

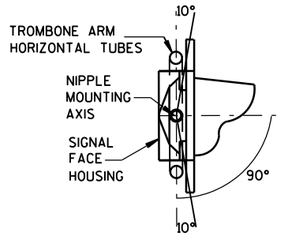
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



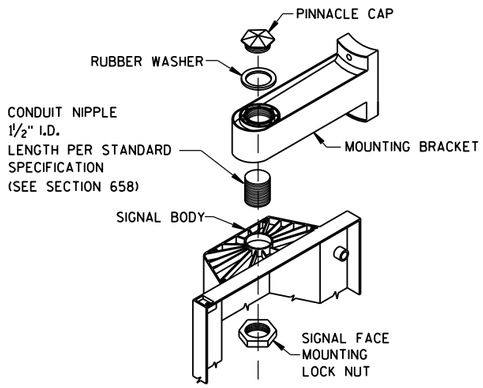
HORIZONTAL SIGNAL HEAD MOUNTING DETAIL *

* 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.

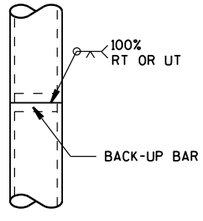
(10) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

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

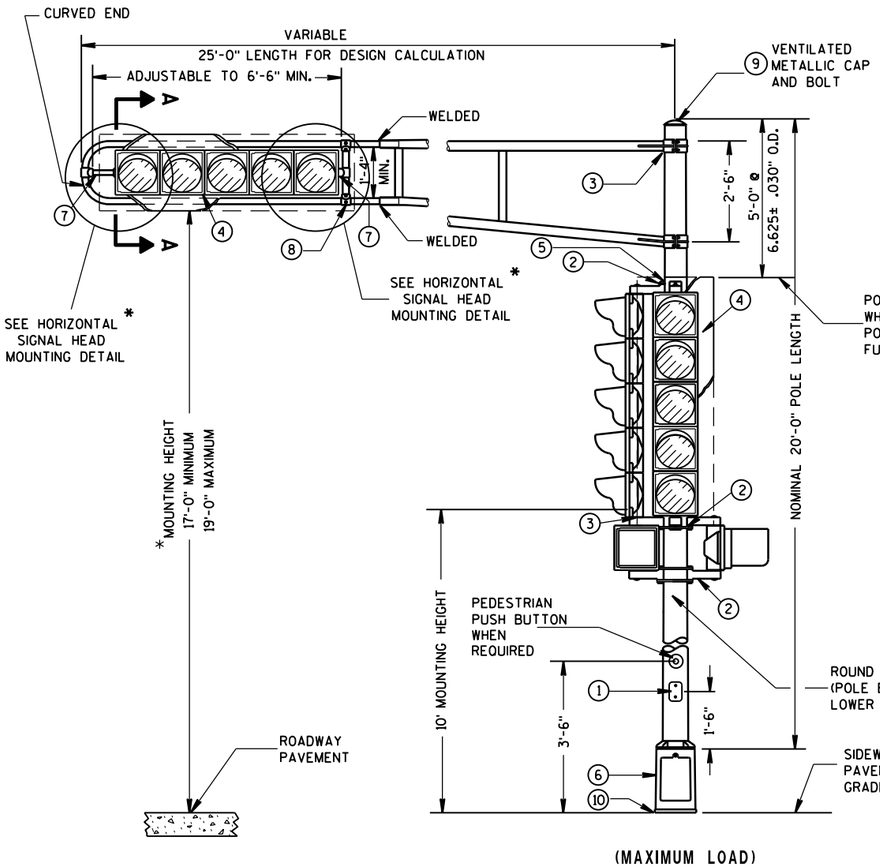
*MOUNTING HEIGHT LIMITATION DIMENSIONS OF THE TROMBONE MAST ARM WILL BE DEPENDENT UPON THE USE/NON-USE OF A TRANSFORMER BASE.

FOR MANUFACTURERS USE ONLY

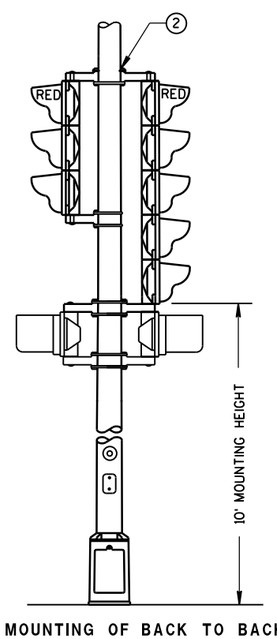
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.



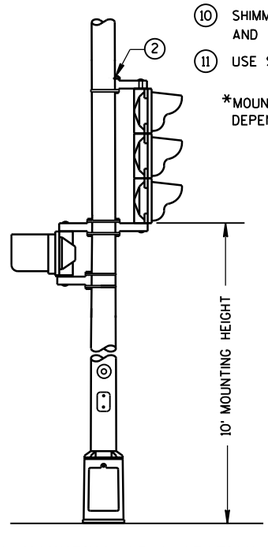
POLE SPLICE DETAIL



(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 TRANSPOR

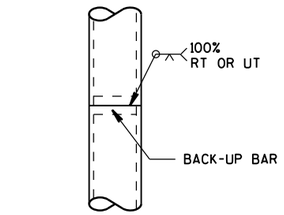
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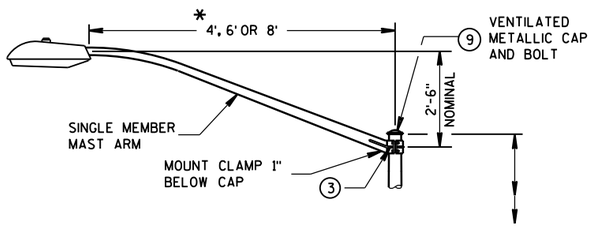
S.D.D. 9 E 1-12a

FOR MANUFACTURERS USE ONLY

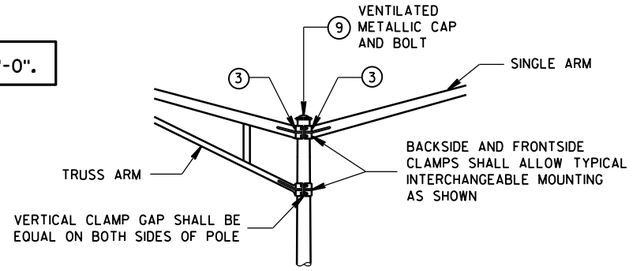
WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

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





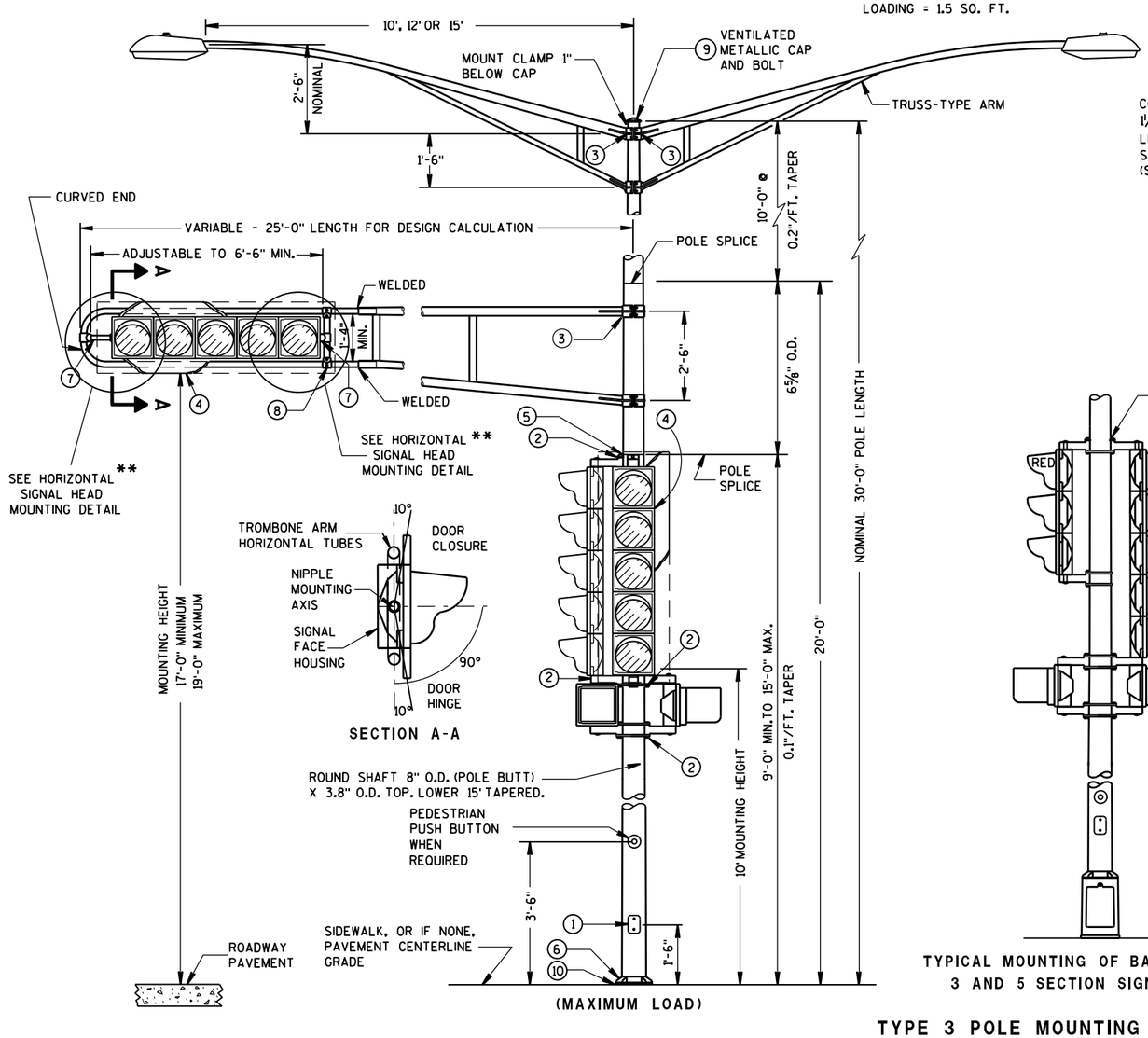
POLE SPLICE DETAIL

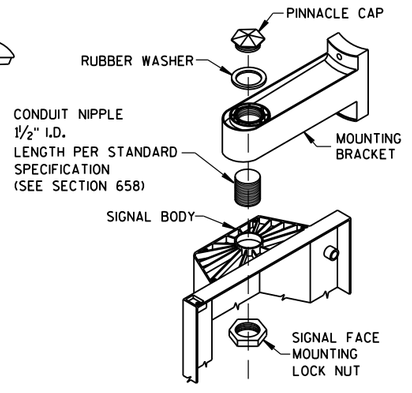


INTERCHANGEABLE MOUNTING DETAIL

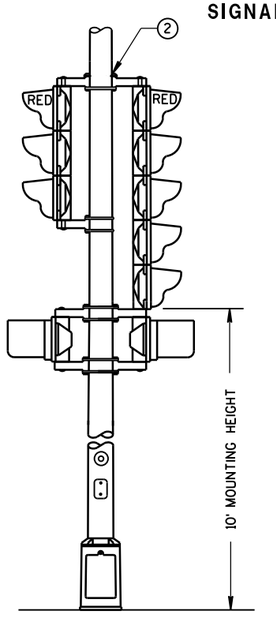
LUMINAIRE

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

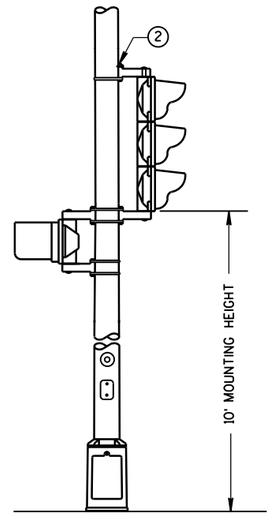




SIGNAL FACE MOUNTING DETAIL
(BANDED)



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.

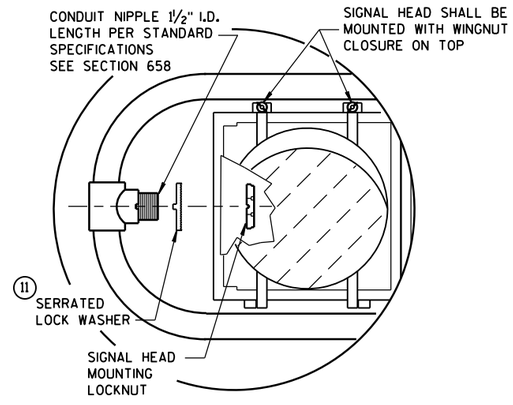
(7) MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1½ INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)

(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

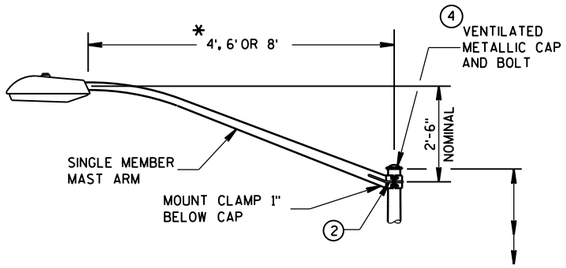
TYPE 3 POLE MOUNTING CONFIGURATION

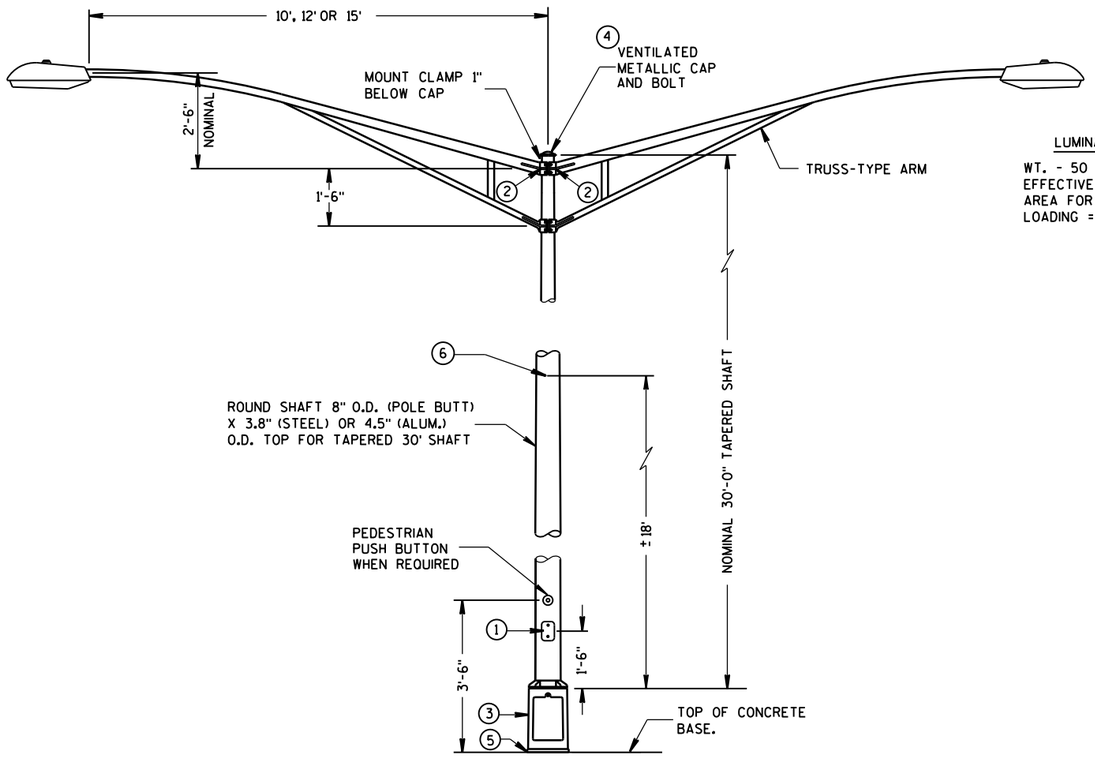
POLE MOUNTINGS FOR
TRAFFIC SIGNALS AND
LIGHTING UNITS, TYPE 3
(HEAVY DUTY)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI 527

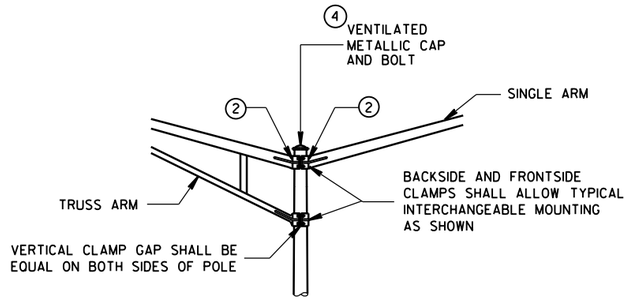
6
S.D.D. 9 E 1-12b

*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.

6

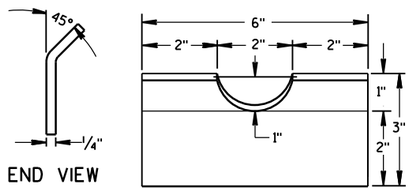
S.D.D. 9 E 1-12d

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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

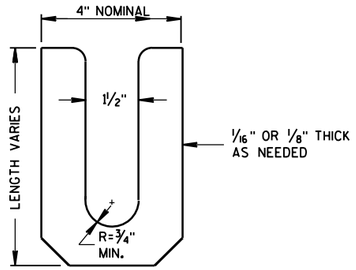


END VIEW

FRONT VIEW

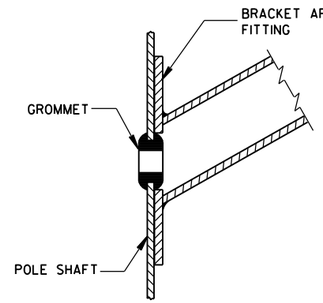
RECTANGULAR CLAMP SHIM

(4 TO A SET)

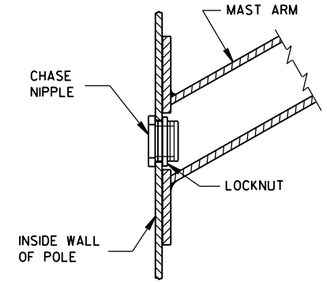


LEVELING SHIM (15)

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".

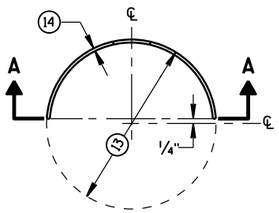
SHIM MATERIAL SHALL BE ALUMINUM ALLOY.

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

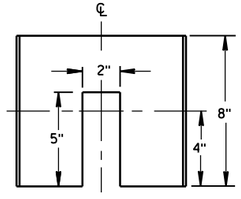
THE CONTRACTOR SHALL SUBMIT TWO COPIES OF ALL SHIM SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.

(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.



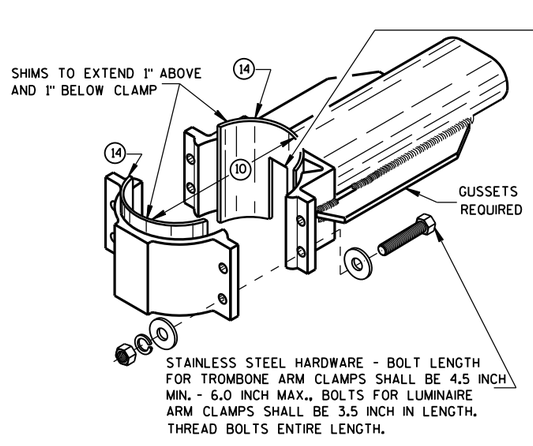
PLAN VIEW



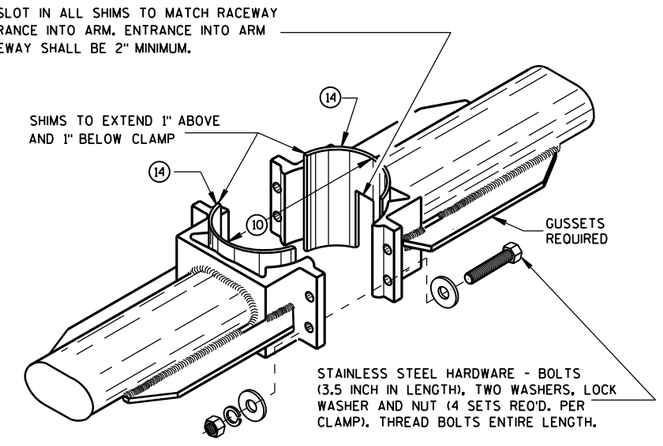
SECTION A-A

CIRCULAR CLAMP SHIM

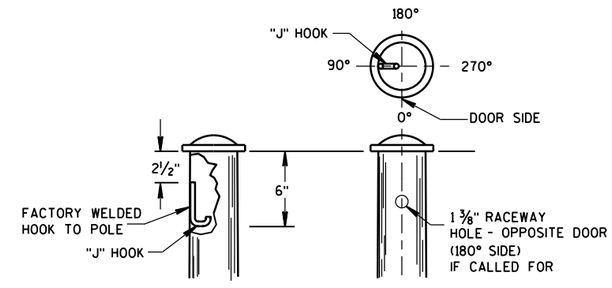
(2 TO A SET)



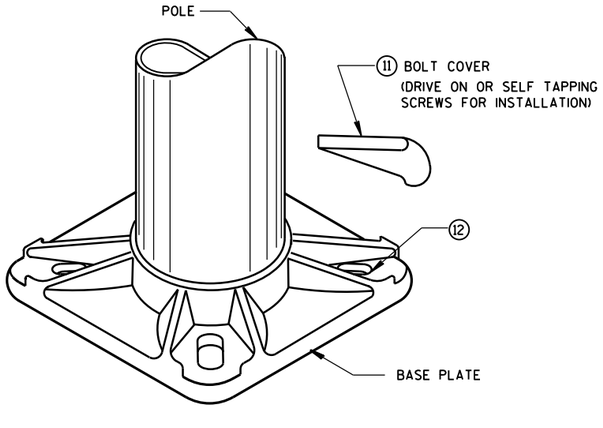
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



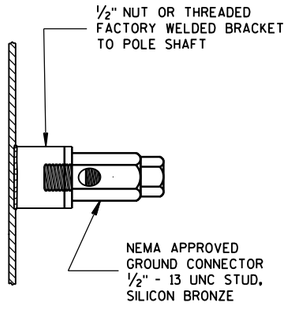
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

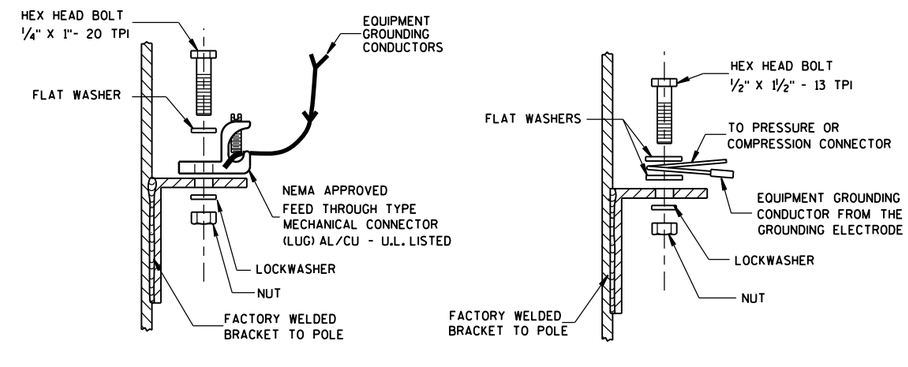


TYPICAL "J" HOOK LOCATION



BASE PLATE





TYPICAL GROUNDING CONNECTIONS

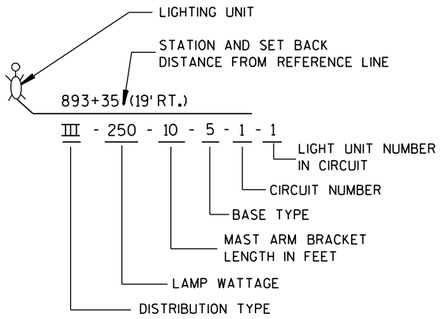
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

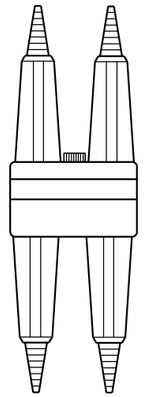
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

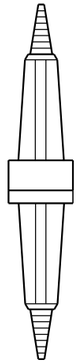
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S.D.D. 9 E 1-12g



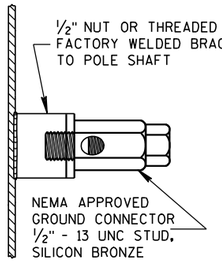
LIGHTING UNIT CODE
(TYPICAL)

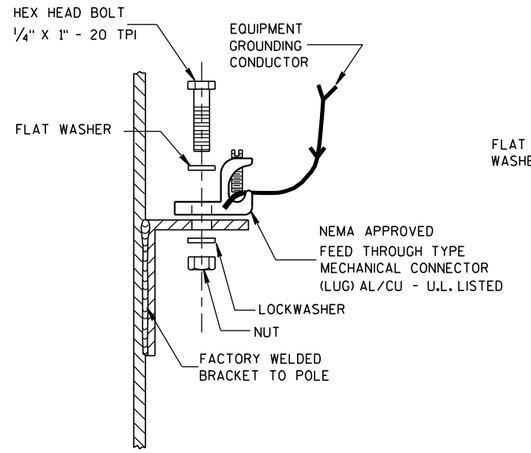


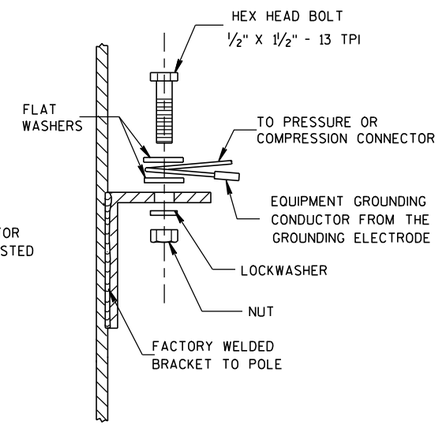
DETAIL "A"
BREAKAWY
DOUBLE POLE WITH
WATERPROOF
INSULATING BOOT



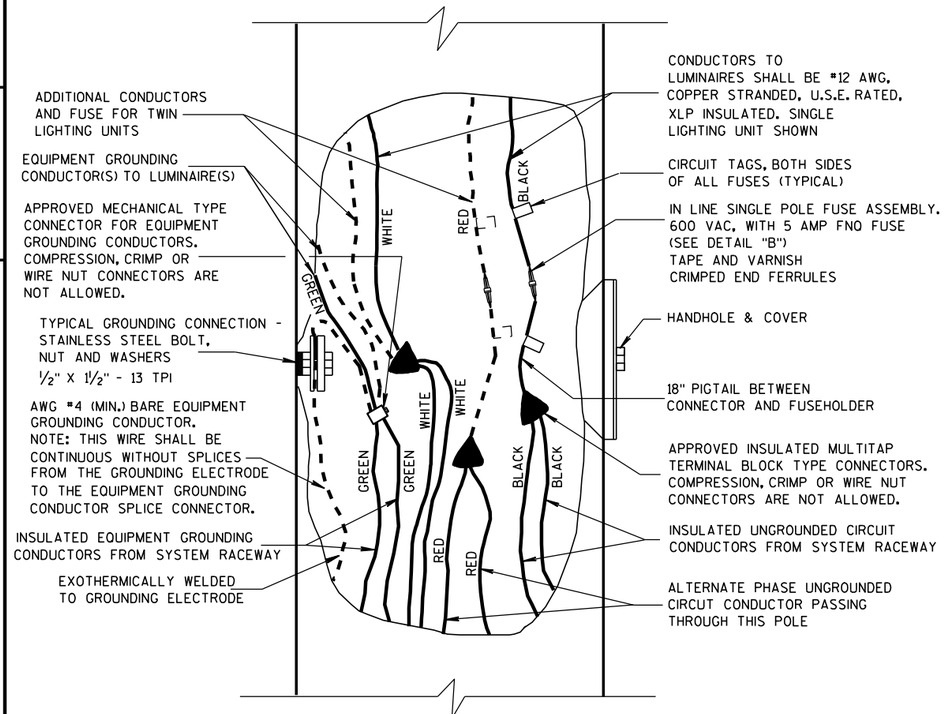
DETAIL "B"
BREAKAWY
SINGLE POLE WITH
WATERPROOF
INSULATING BOOT



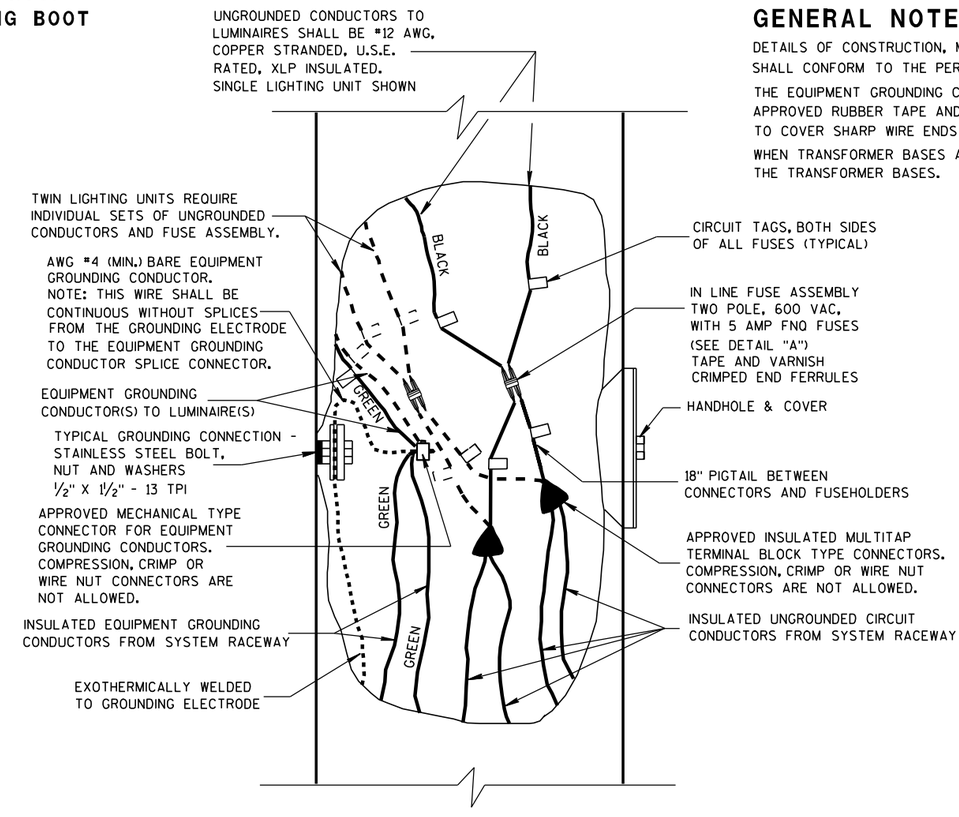




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT, WASHERS AND LOCKWASHERS SHALL BE STAINLESS STEEL



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

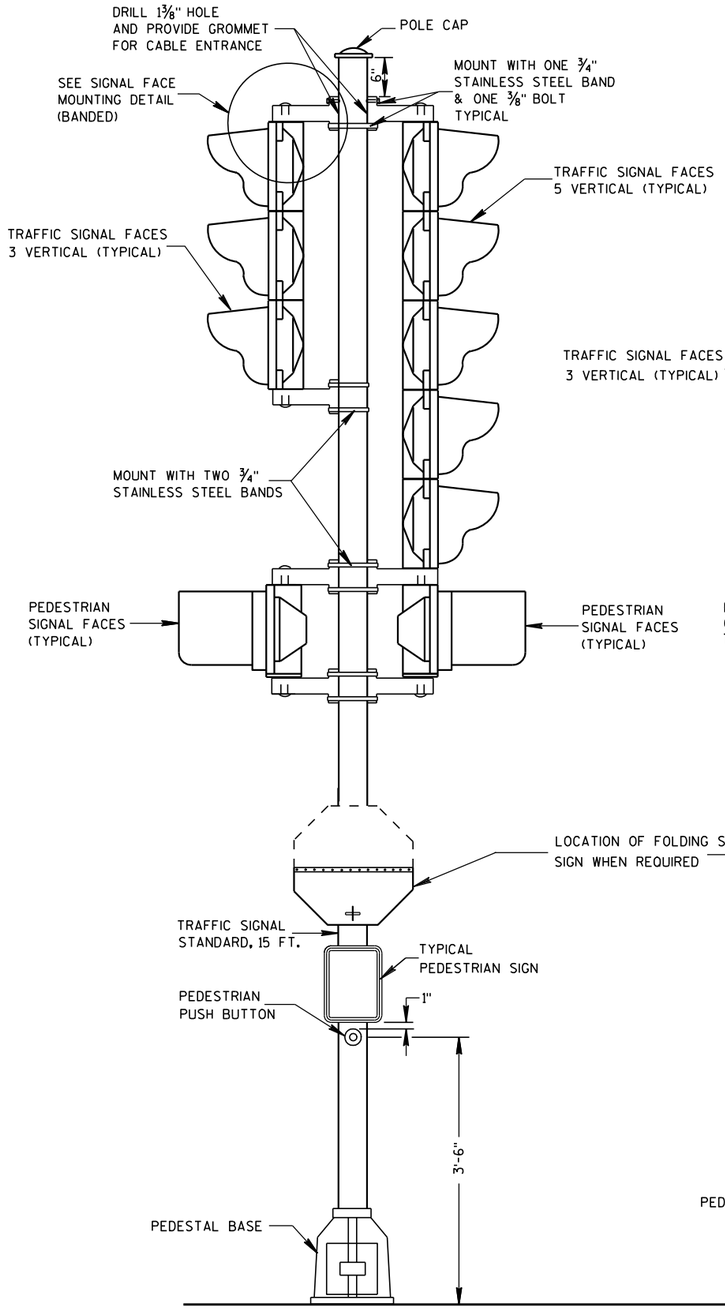
3/2/2011
DATE

/S/ Thomas J. Gosnell
STATE ELECTRICAL ENGI

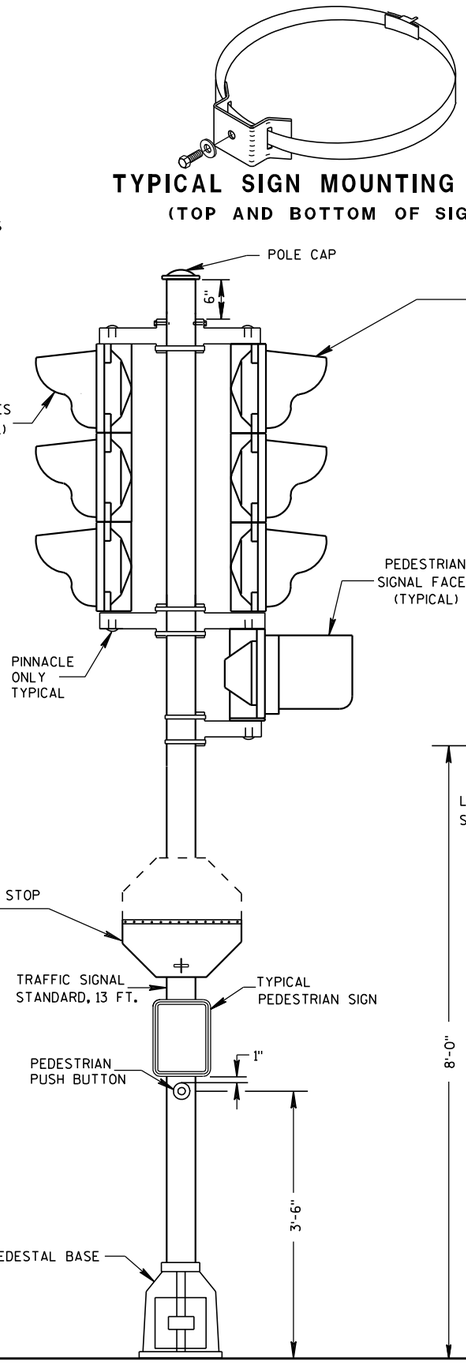
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HWYS

FHWA

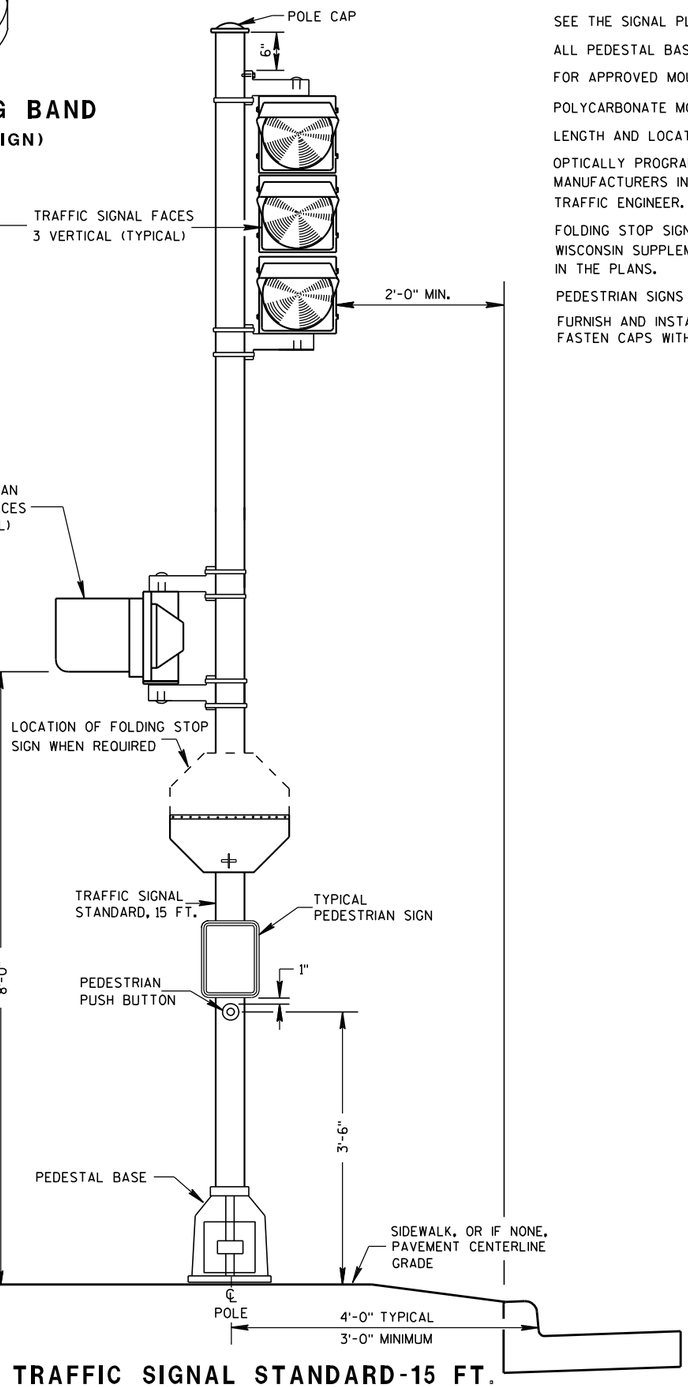
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S.D.D. 9 E 3-4



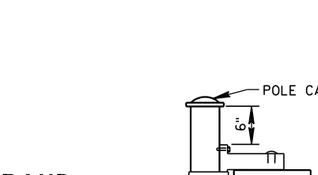
TRAFFIC SIGNAL STANDARD-15 FT.



TRAFFIC SIGNAL STANDARD-13 FT.



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



TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)

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.

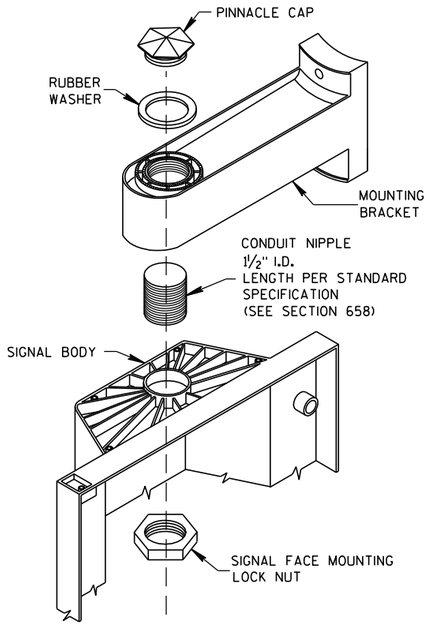
LENGTH AND LOCATION OF TRAFFIC SIGNAL STANDARDS SHALL BE AS SHOWN ON THE PLANS.

OPTICALLY PROGRAMMED SIGNAL FACES SHALL BE MASKED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS, AND UNDER THE DIRECTIONS OF THE DISTRICT 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) 1/4" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

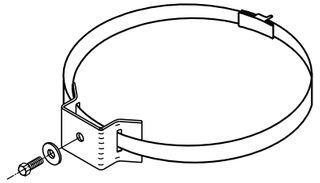


SIGNAL FACE MOUNTING DETAIL
(BANDED)

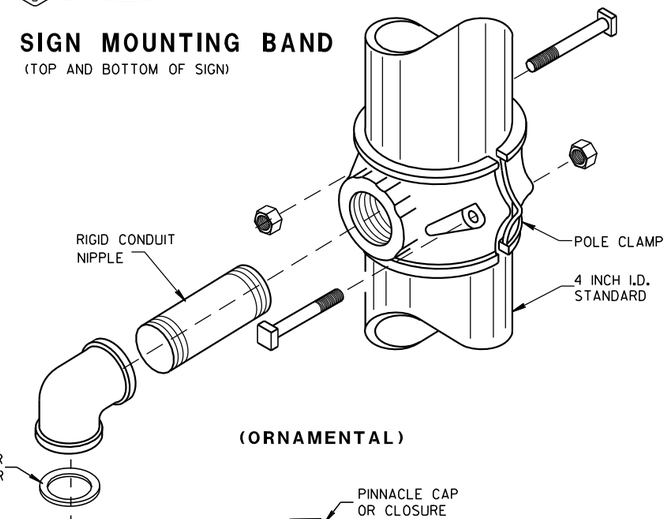
TRAFFIC SIGNAL STANDARD POLY BRACKET MOUNTINGS (TYPICAL) 13 FT. OR 15 FT.	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
5/11/10 DATE	/S/ John Corbin STATE ELECTRICAL ENGI
FHWA	HWYS

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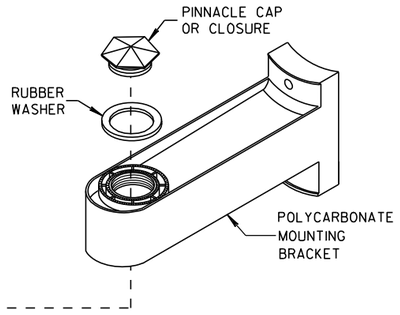
S.D.D. 9 E 6-4



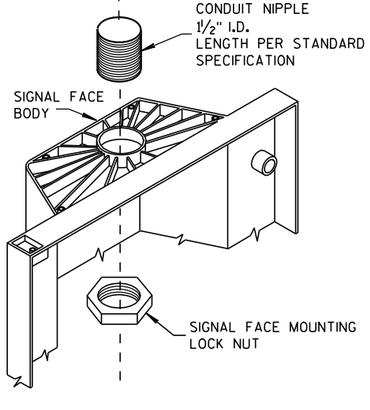
TYPICAL SIGN MOUNTING BAND
(TOP AND BOTTOM OF SIGN)



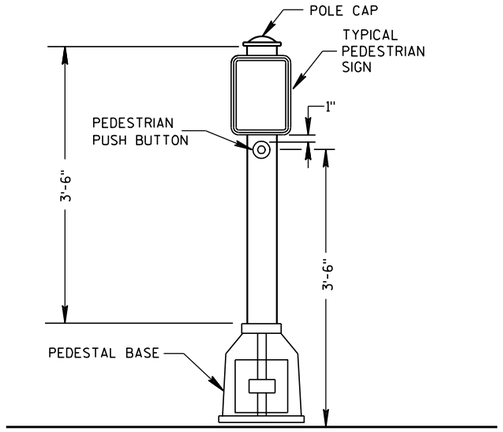
(ORNAMENTAL)



(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.

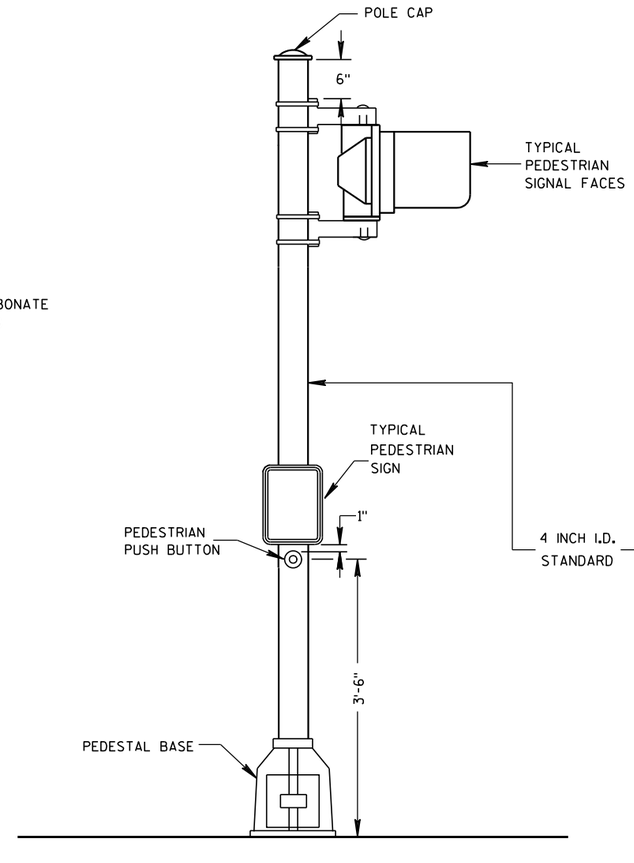
POLYCARBONATE SIGNAL FACE MOUNTING BRACKETS SHALL BE USED UNLESS ORNAMENTAL POLE CLAMPS ARE SPECIFIED.

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

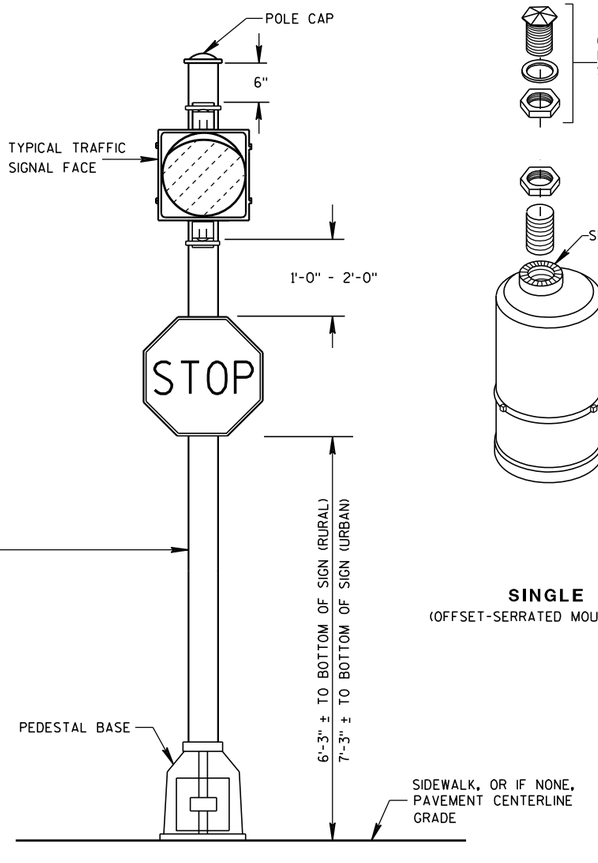
MOUNTINGS AND BRACKETS SHALL BE AS SHOWN ON THE PLANS OR DESCRIBED IN THE SPECIAL PROVISIONS (BY THE DISTRICT TRAFFIC ENGINEER).

PEDESTRIAN SIGNS SHALL BE AS DESIGNATED IN THE PLANS.

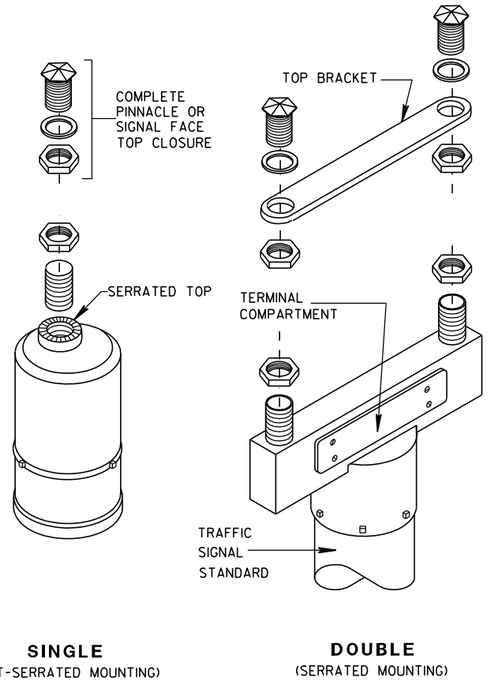
FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.



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 532

HWYS

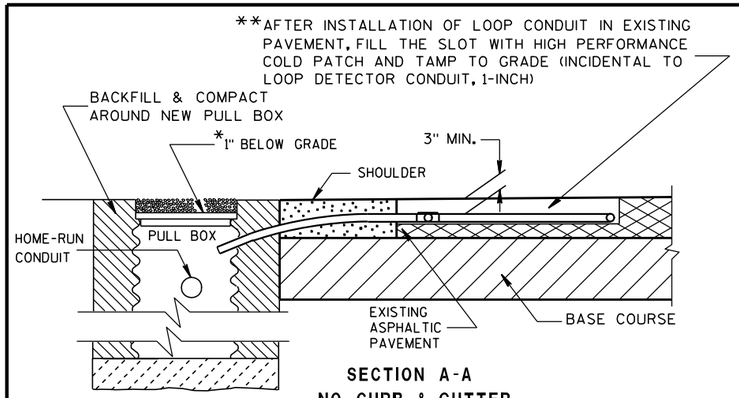
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S.D.D. 9 E 7-5

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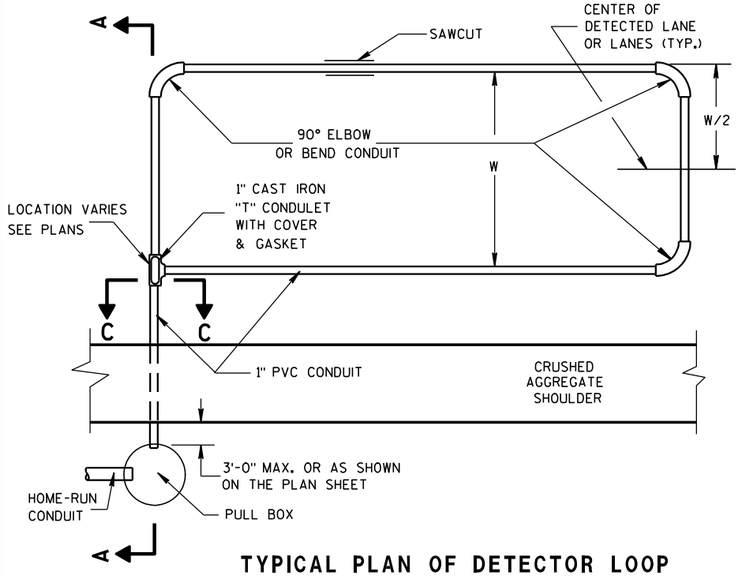
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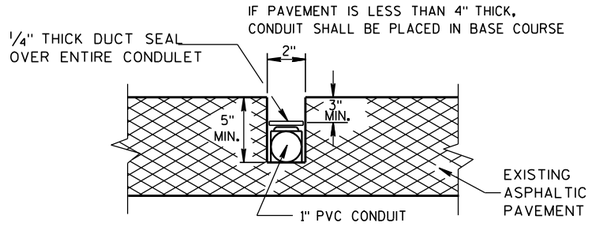
SECTION A-A
NO CURB & GUTTER

TYPICAL PLAN OF LOOP DETECTOR

*RECESS PULL 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.



TYPICAL PLAN OF DETECTOR LOOP



SIDE VIEW
SECTION C-C

LOOP DETECTOR SLOT 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, 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 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 RESISITANCE 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.

ANTI-SIEZE LUBRICATING MATERIAL SHALL BE USED ON ALL THREADS OF THREADED ASSEMBLIES BEFORE INSTALLATION.

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 FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

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

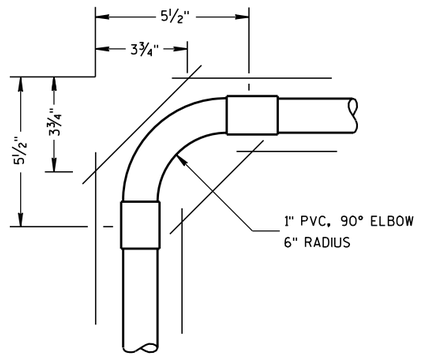
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED, CONTINUOUS LENGTH.

IN THE EVENT THAT THE EXISTING PAVEMENT IS MORE THAN 5 INCHES THICK, AND THEREFORE , THE 1 INCH CONDUIT DOES NOT REQUIRE INSTALLATION BELOW THE PAVEMENT INTO THE BASE COURSE, PLACE SOME OF THE TAR OR EPOXY SEALANT IN THE SLOT TO A DEPTH OF APPROXIMATELY 1/2 INCH BEFORE INSTALLATION OF THE CONDUIT. IF THE CONDUIT MUST BE PLACED IN THE BASE COURSE, DO NOT PLACE THE TAR OR EPOXY SEALANT IN THE SLOT.

ONCE THE 2" LOOP SLOT HAS BEEN CHIPPED OUT, THE LOOP INSTALLATION SHALL BE COMPLETED PRIOR TO OPENING THE LANE(S) TO TRAFFIC.

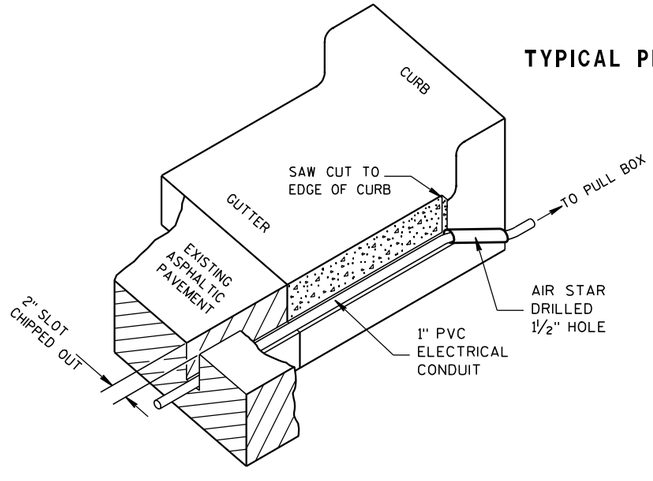
** AFTER THE HIGH PERFORMANCE COLD PATCH HAS BEEN TAMPED, SEAL THE SLOT/HIGH PERFORMANCE COLD PATCH/ PAVEMENT OPENING WITH HOT POURED ELASTIC TYPE MATERIAL CONFORMING TO THE REQUIREMENTS OF THE "SPECIFICATION FOR JOINT SEALANTS, HOT POURED, FOR CONCRETE AND ASPHALT PAVEMENTS, ASTM DESIGNATION: D3405".

IN THE EVENT HIGH PERFORMANCE COLD PATCH IS NOT AVAILABLE, AND FLEXIBLE TYPE EPOXY IS USED AS A LOOP SLOT FILLER, THE 2 INCH SLOT SHALL BE TOTALLY CLEAN AND DRY BEFORE ITS INSTALLATION. EPOXY USE SHALL BE APPROVED BY THE DISTRICT TRAFFIC ENGINEER AND THE FURNISHED EPOXY SHALL BE INSTALLED AFTER WRITTEN APPROVAL BY THE PROJECT ENGINEER.



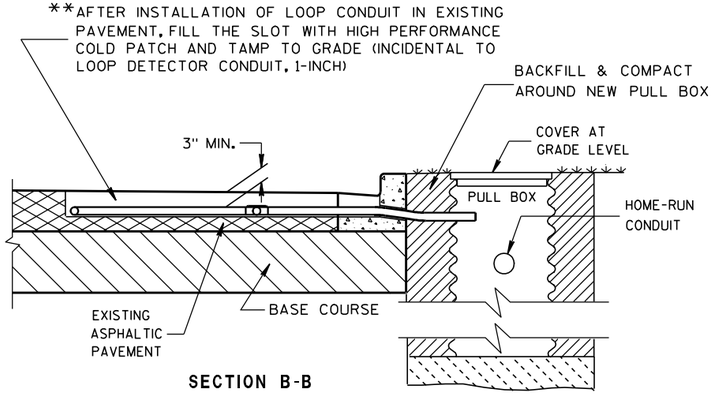
TOP VIEW

CORNER SAW SLOT DETAIL



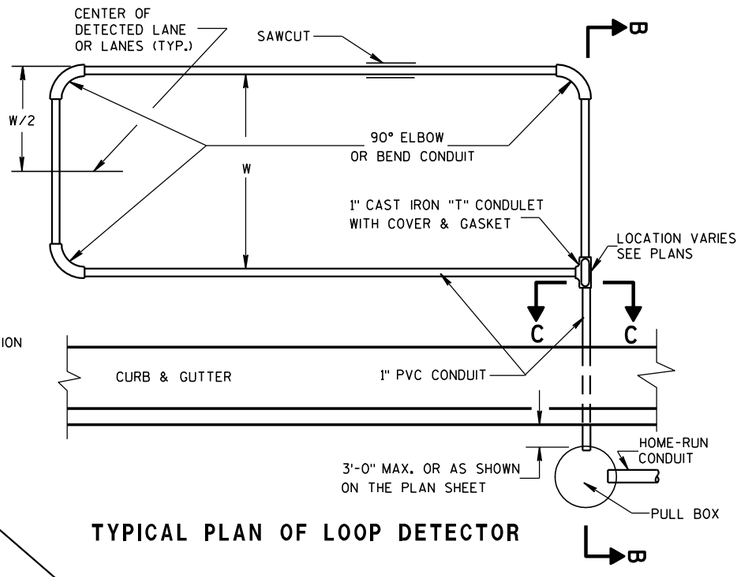
ISOMETRIC VIEW

TYPICAL SAW CUT DETAIL FOR LEAD-IN CONDUIT



SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR

LOOP DETECTOR INSTALLED IN EXISTING ASPHALTIC PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

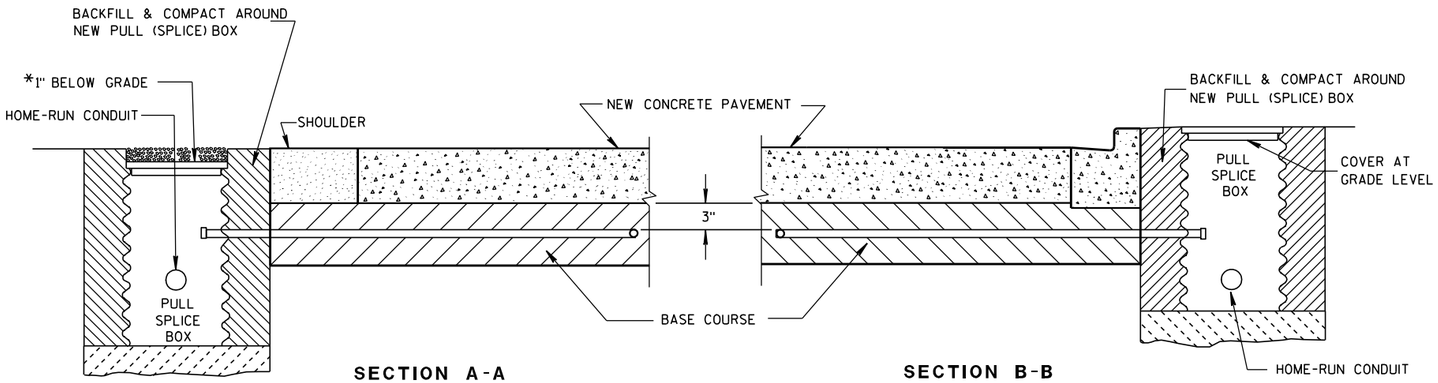
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6/7/06 DATE
/S/ Balu Ananthanarayanan
STATE ELECTRICAL ENGI 533 HWYS
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SECTION A-A
NO CURB & GUTTER

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.

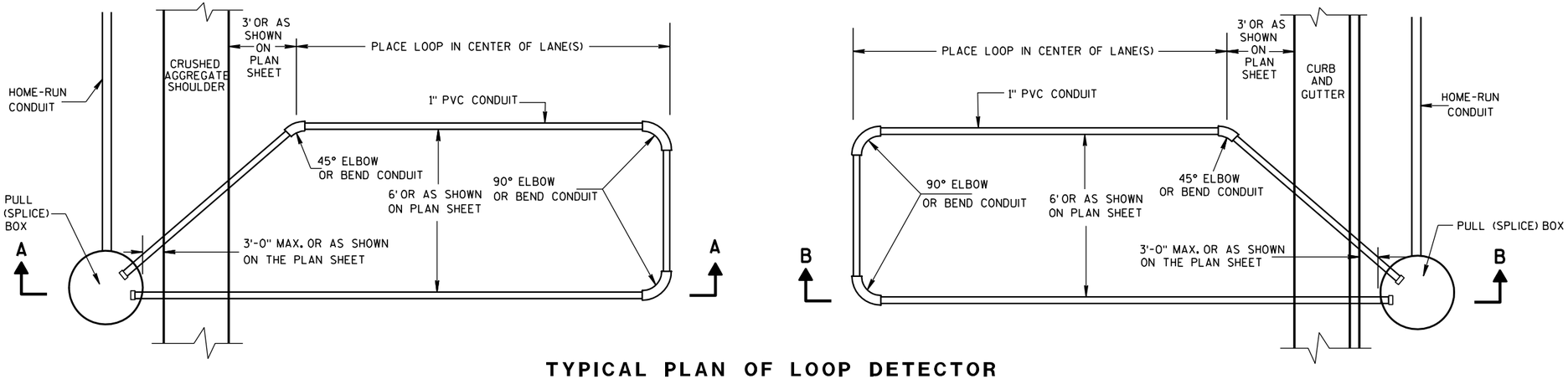
THE #12 AWG. LOOP WIRE IN THE PULL (SPLICE) BOX SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE BEING SPLICED TO THE LOOP LEAD-IN CABLE.

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

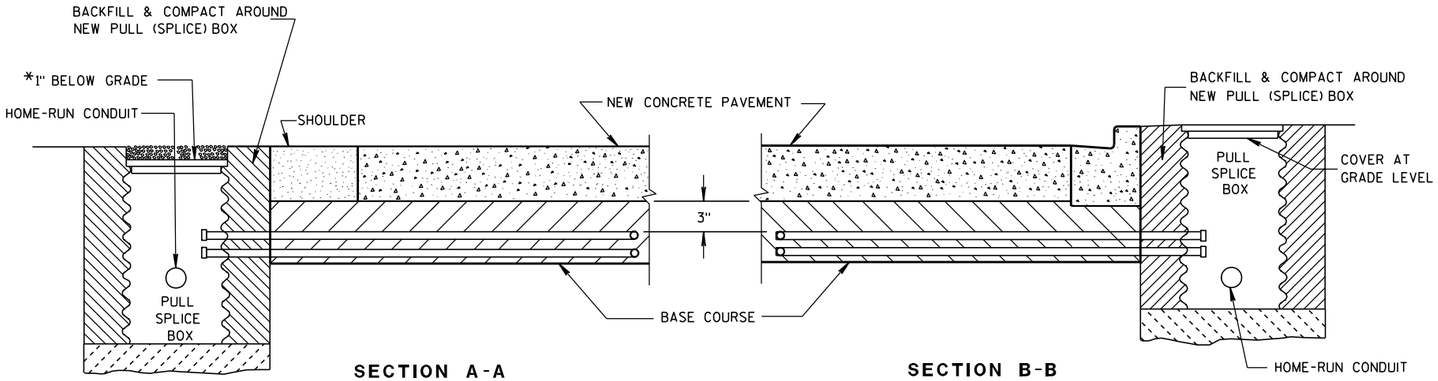
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SECTION A-A
NO CURB & GUTTER

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.

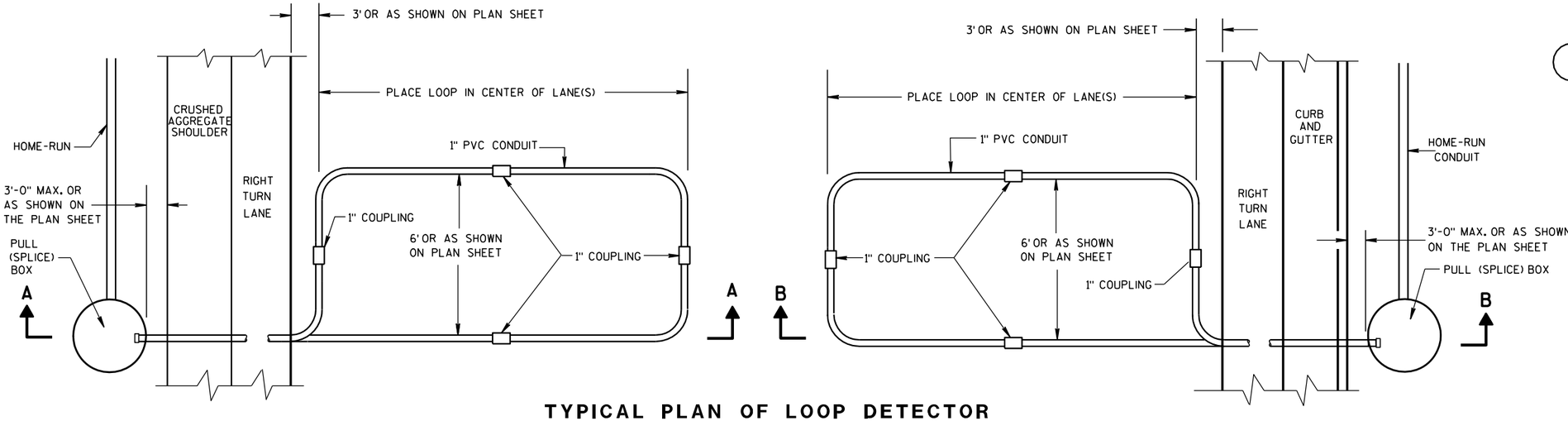
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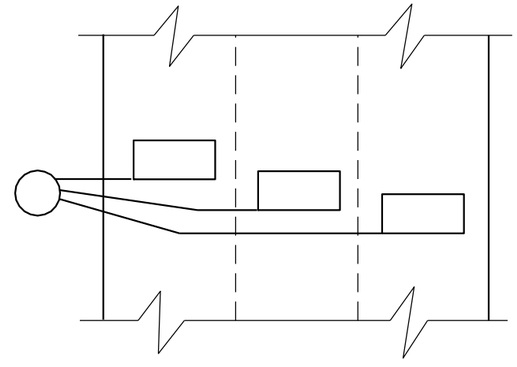
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL (SPLICE) BOX, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL (SPLICE) BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

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

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6/7/06 DATE
/S/ Balu Anantharaman
STATE ELECTRICAL ENGI 535 HWYS
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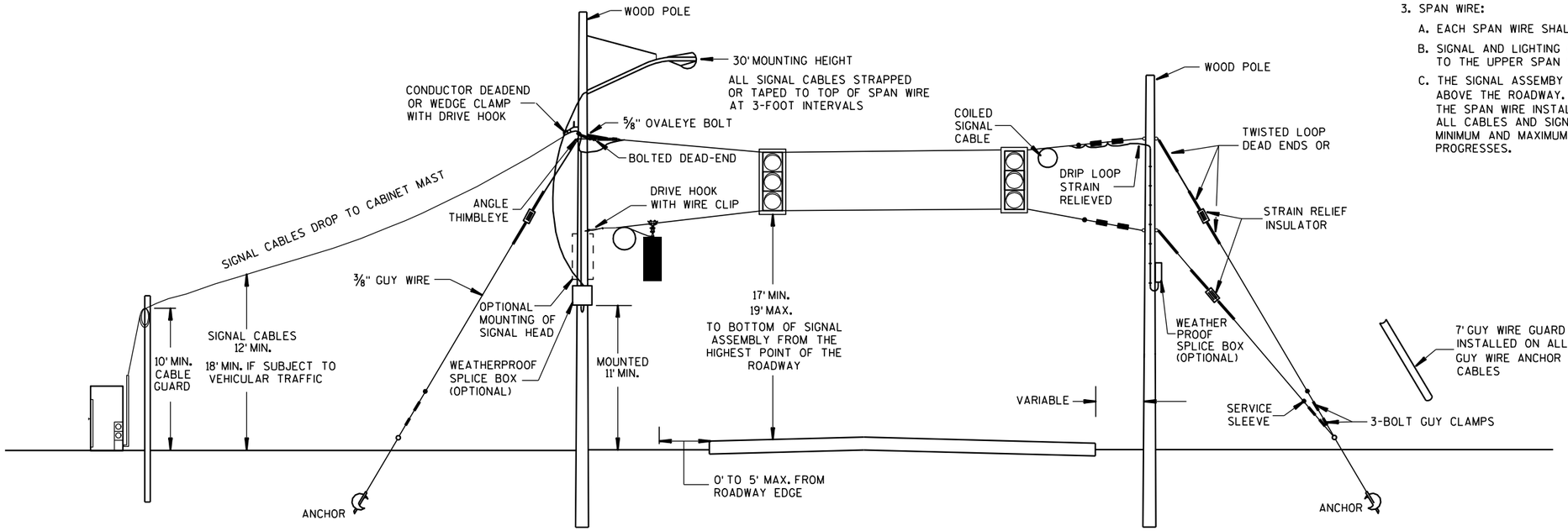
GENERAL NOTES

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

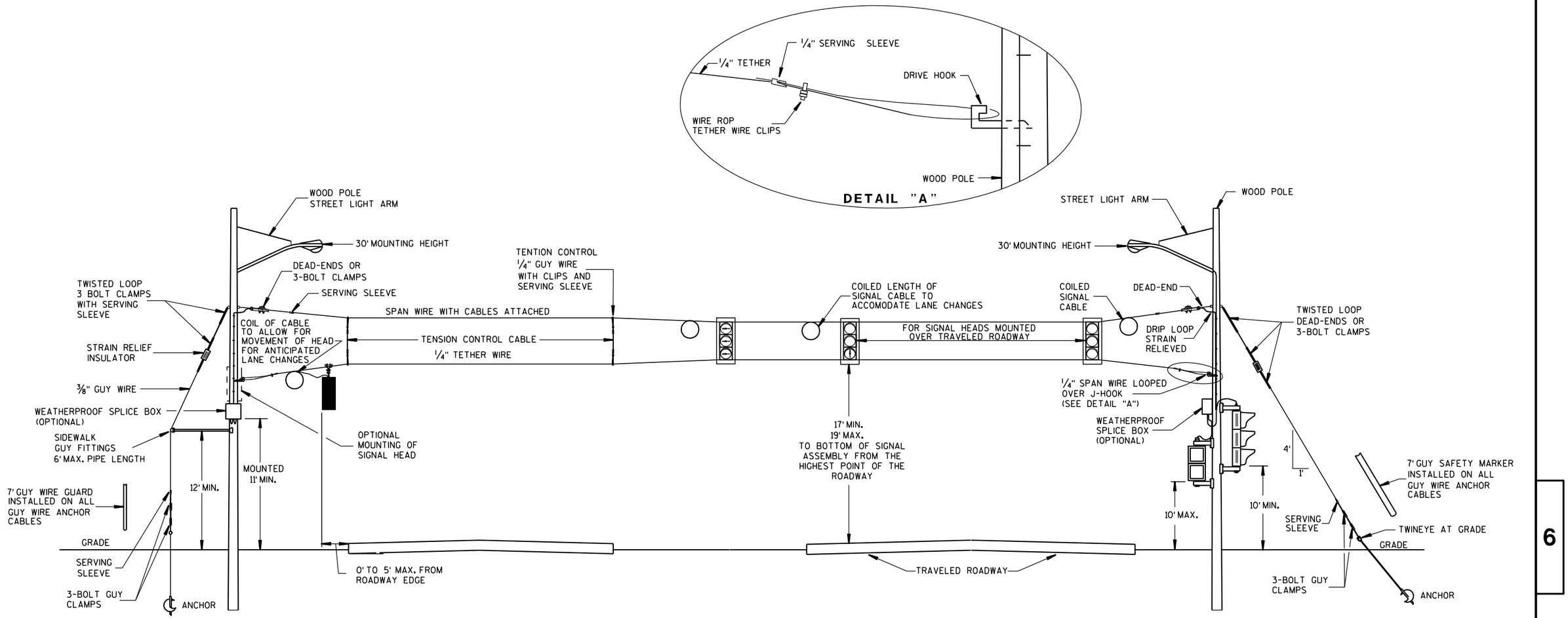
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7-14-08 DATE

/S/ Balu Ananthar [illegible] n
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GENERAL NOTES

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

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   E. FAR INDICATION SHALL BE MAINTAINED OVER CENTER OF TRAFFIC LANE.
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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

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7-14-08 DATE — /S/ Balu Ananthanarayanan, STATE ELECTRICAL ENGI 537 HWYS

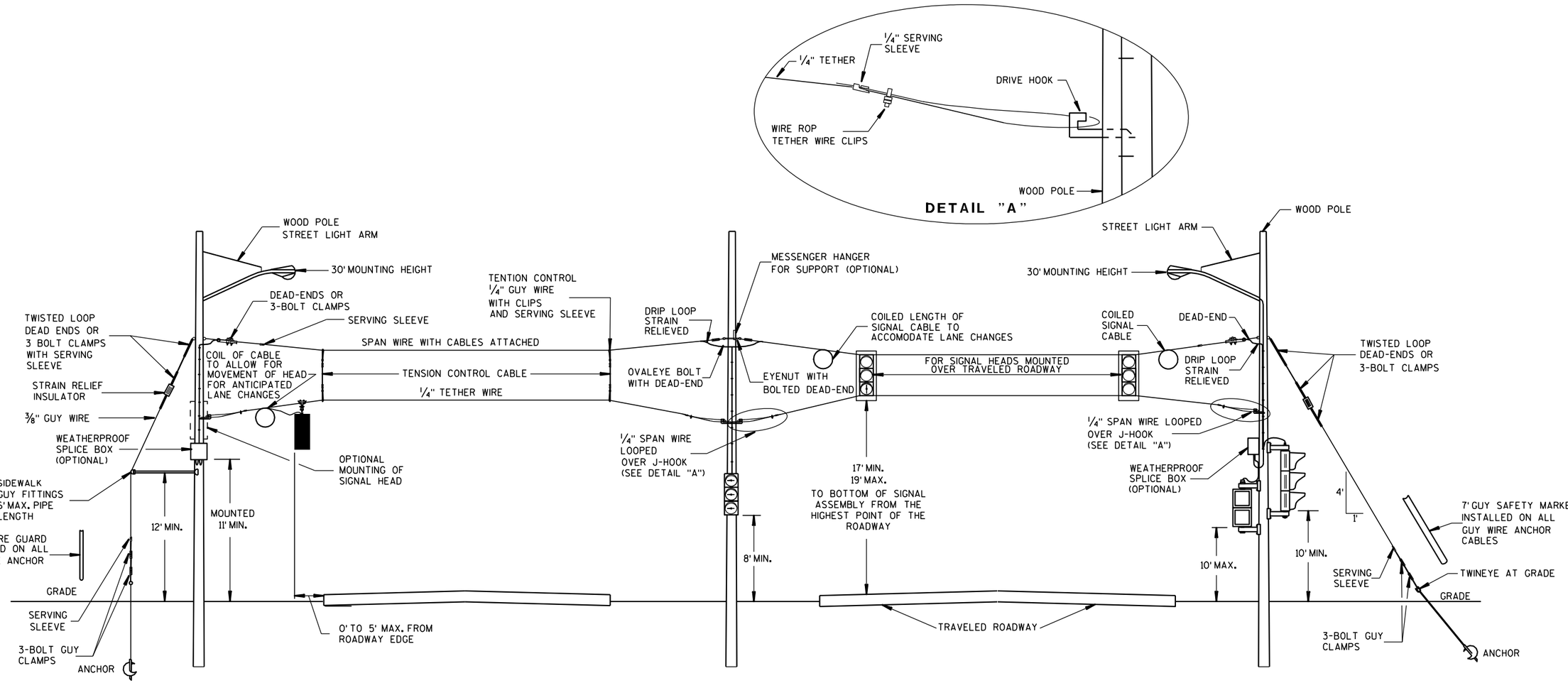
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S.D.D. 9 G 1-3b



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

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7-14-08 DATE

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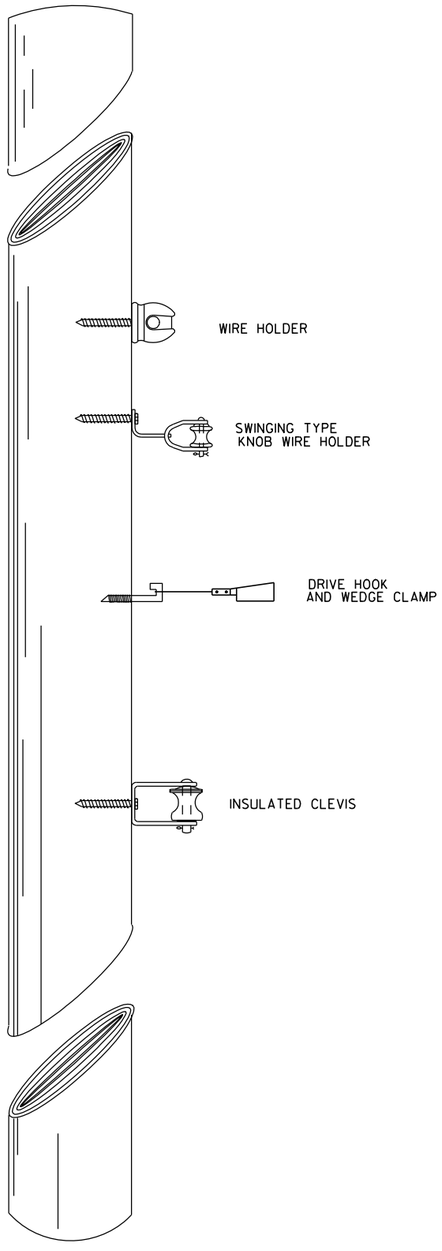
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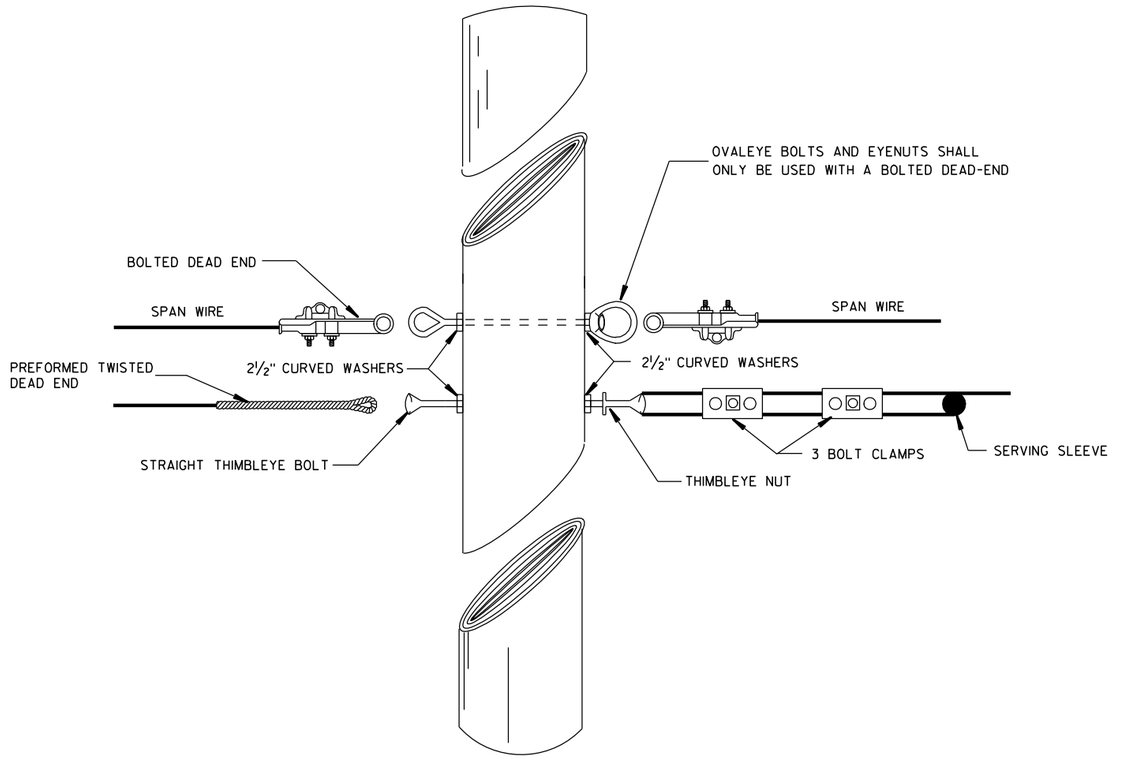
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TYPICAL CABLE HANGERS



TYPICAL DEAD-ENDING

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SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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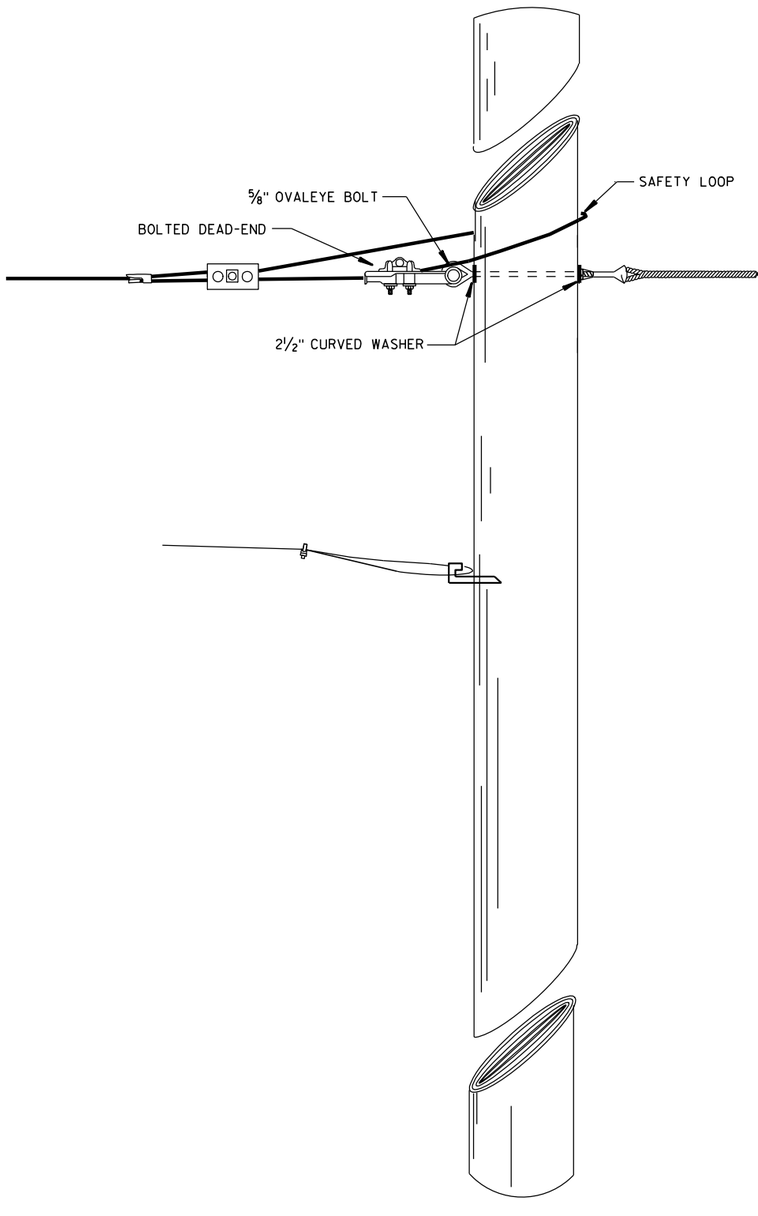
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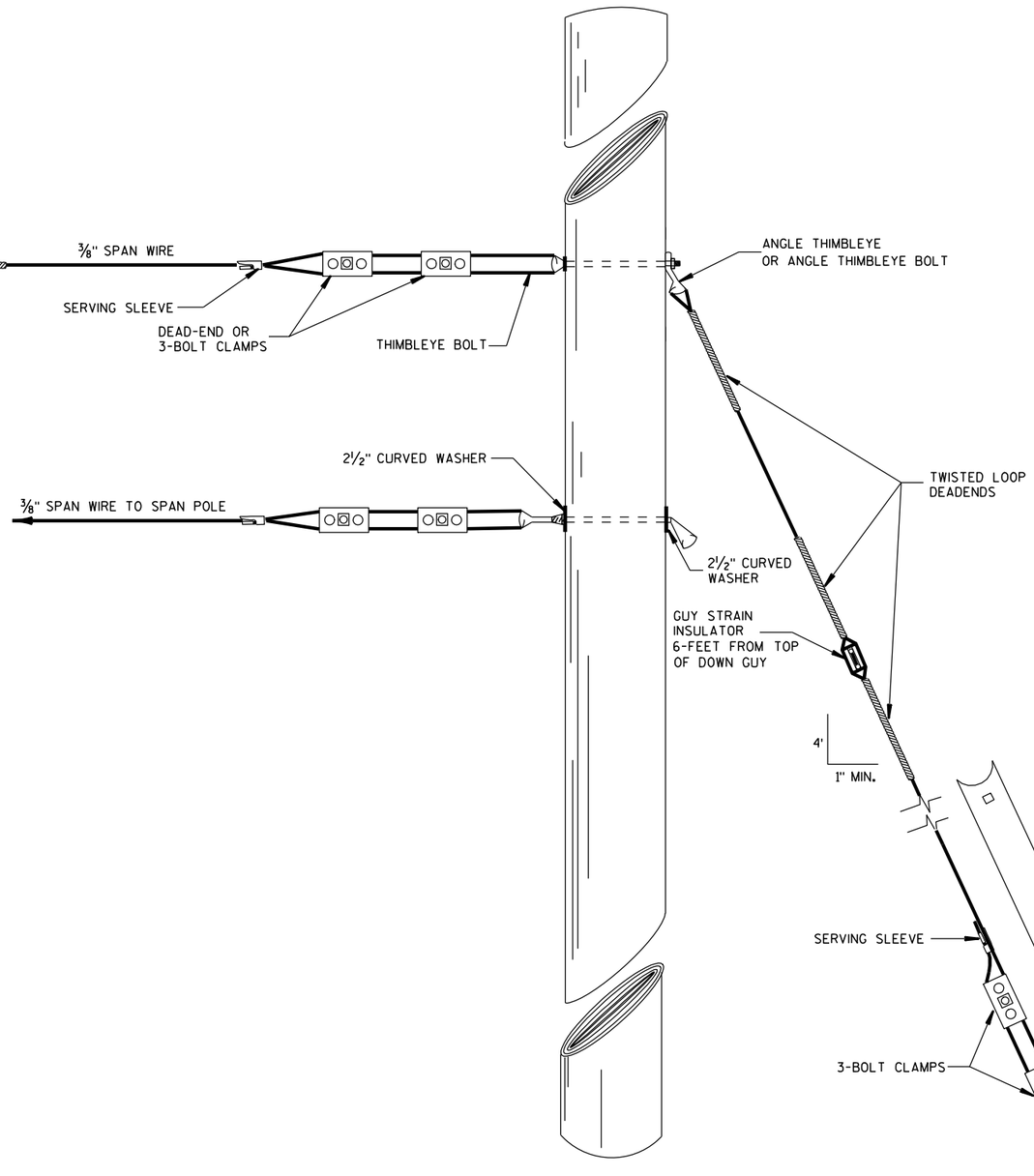
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GENERAL NOTES

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

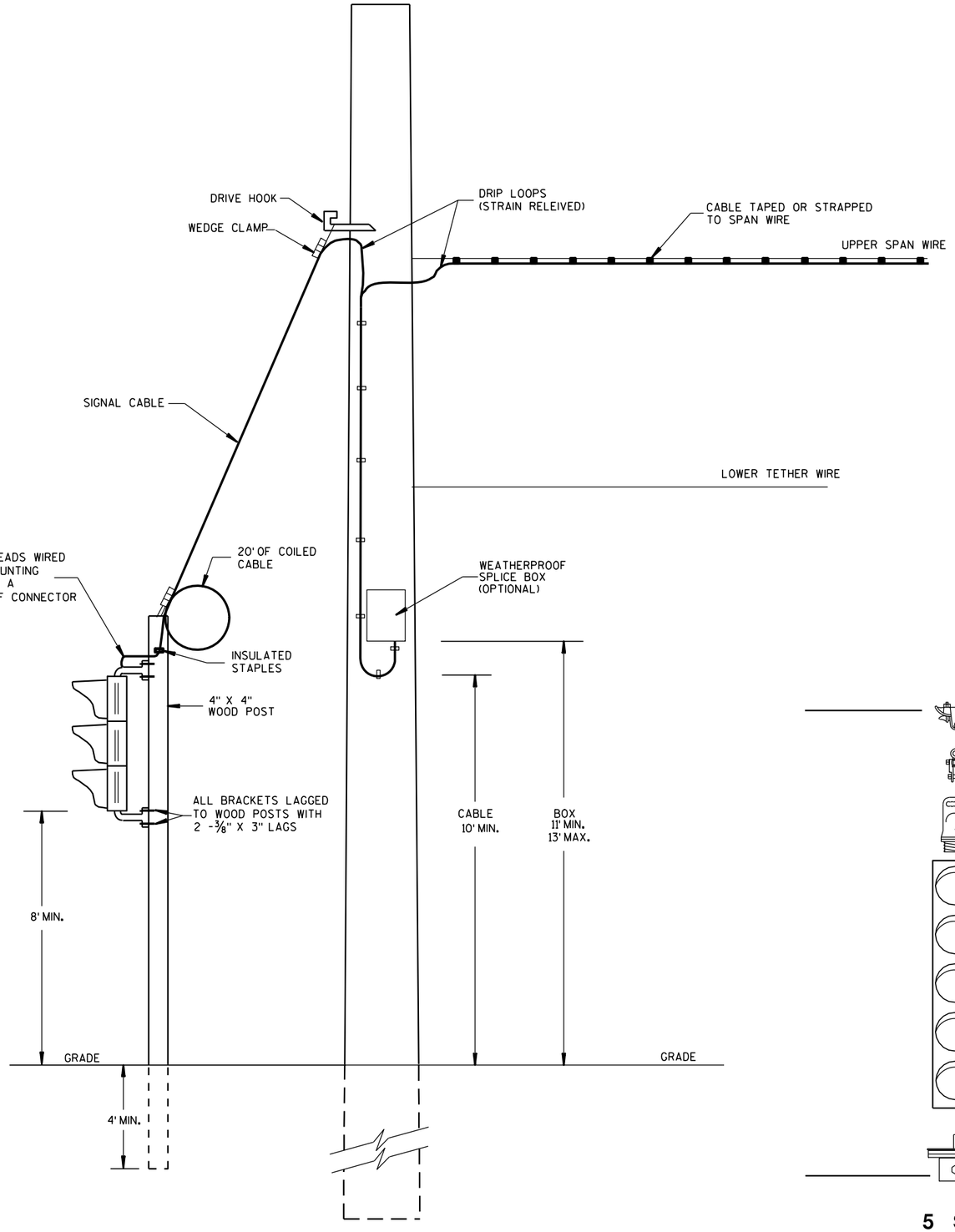
TYPICAL DEAD-ENDINGS OR GUYING

SPAN WIRE
TEMPORARY TRAFFIC SIGNAL

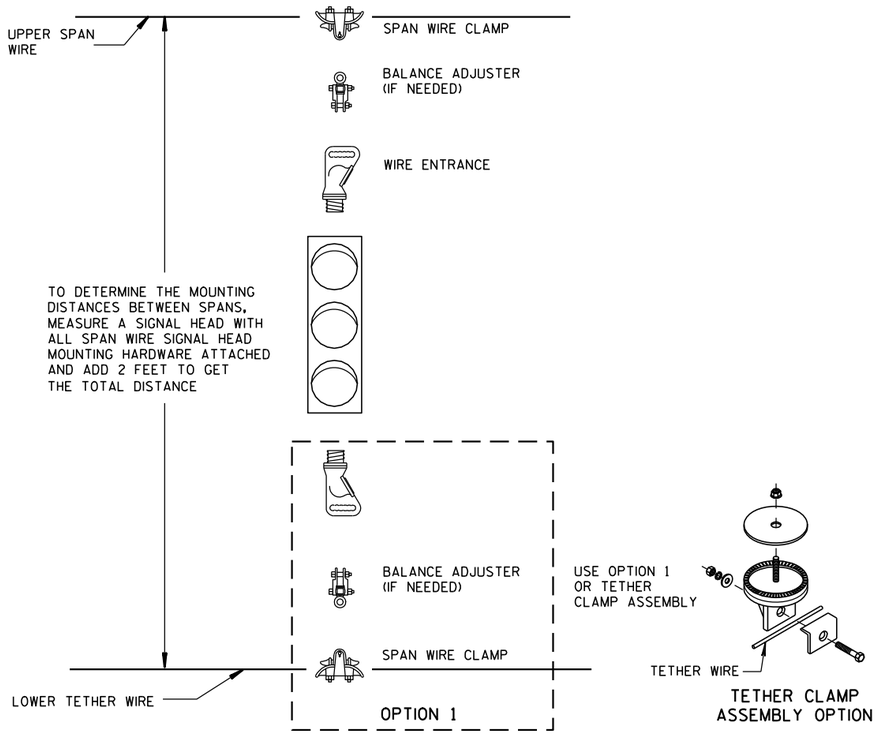
STATE OF WISCONSIN
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STATE ELECTRICAL ENGI 540 HWYS
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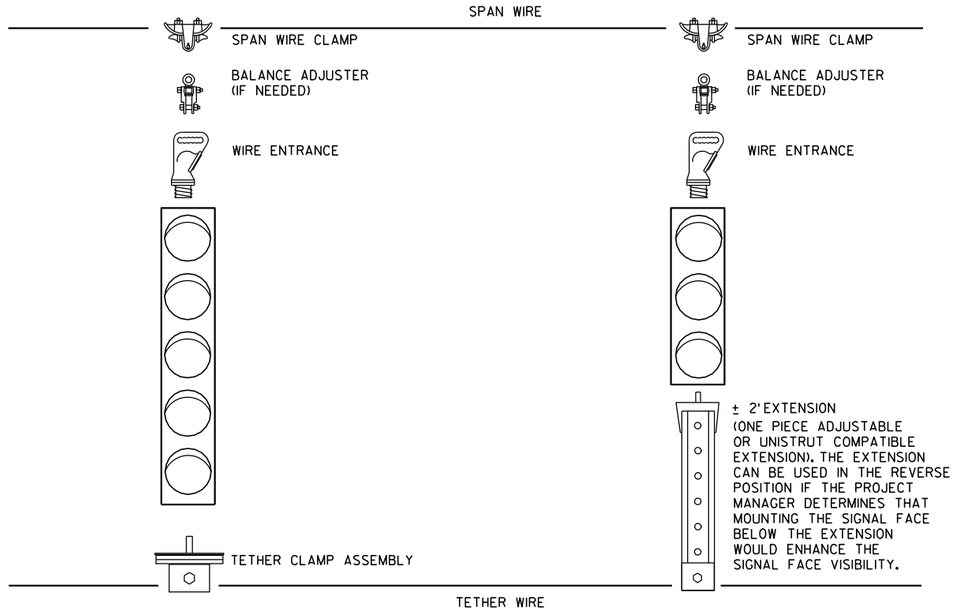
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TYPICAL DROP TO TEMPORARY MOVEABLE SIGNAL



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

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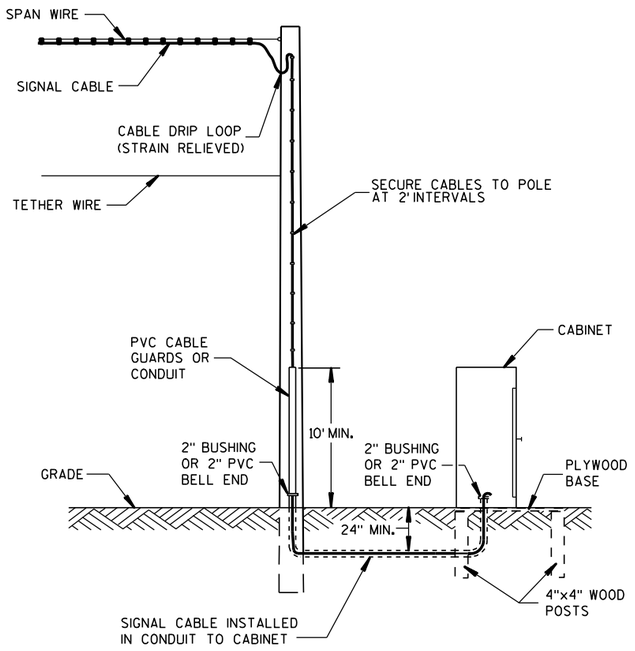
/S/ Balu Ananthanarayanan
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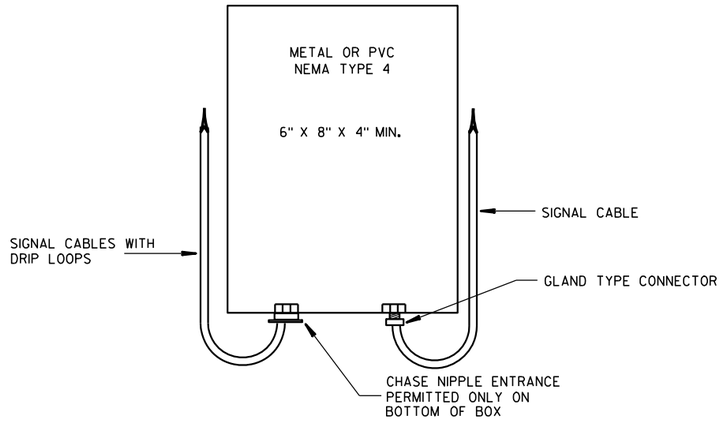
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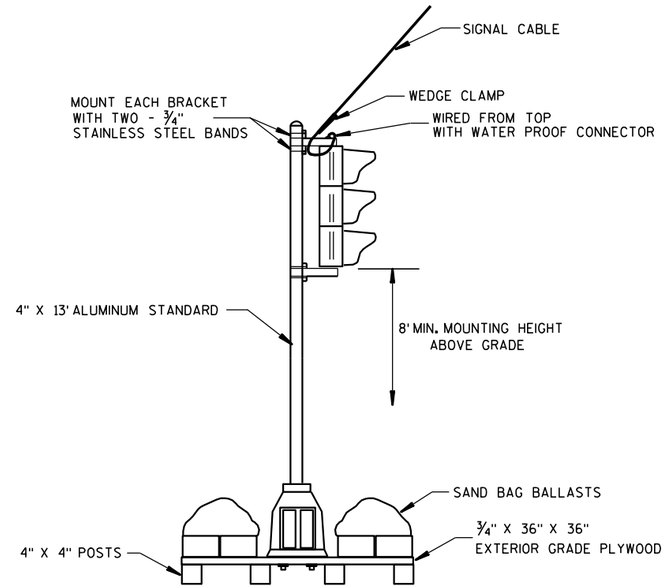
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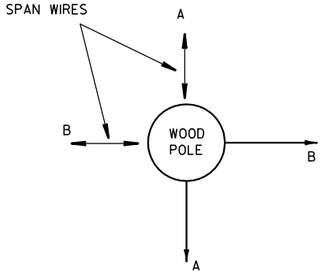




SPLICE BOX

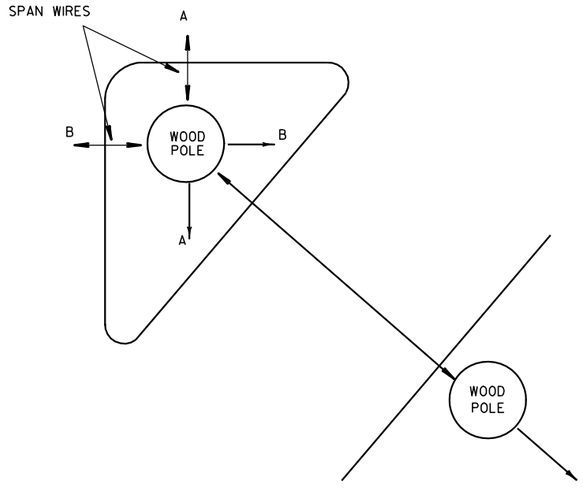


TYPICAL SKID TYPE TEMPORARY

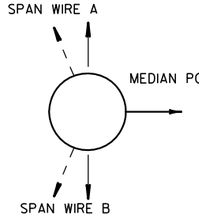


ALL DOWN OR SIDEWALK GUYS
SHALL BE INSTALLED IN THE
OPPOSITE DIRECTION OF THE
STRAIN OF THE SPAN WIRE

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

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STATE ELECTRICAL ENGI 542 HWYS

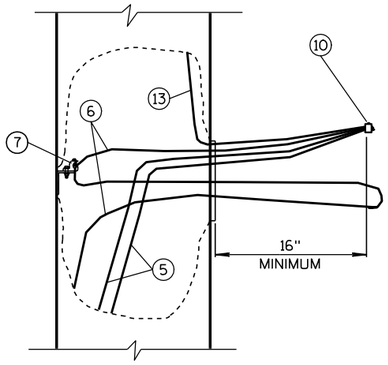
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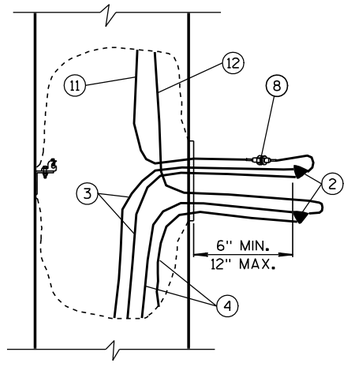
S.D.D. 9 G 1-3g

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

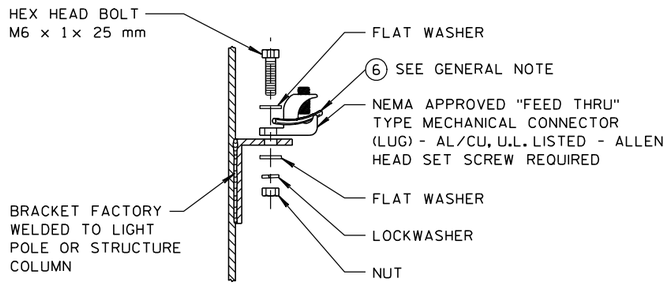


EQUIPMENT GROUNDING CONDUCTOR SLACK



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

TYPICAL CONDUCTOR SLACK AT HANDHOLES



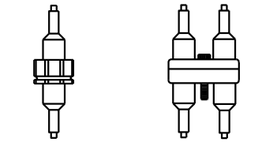
HANDHOLE GROUNDING LUG

(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.

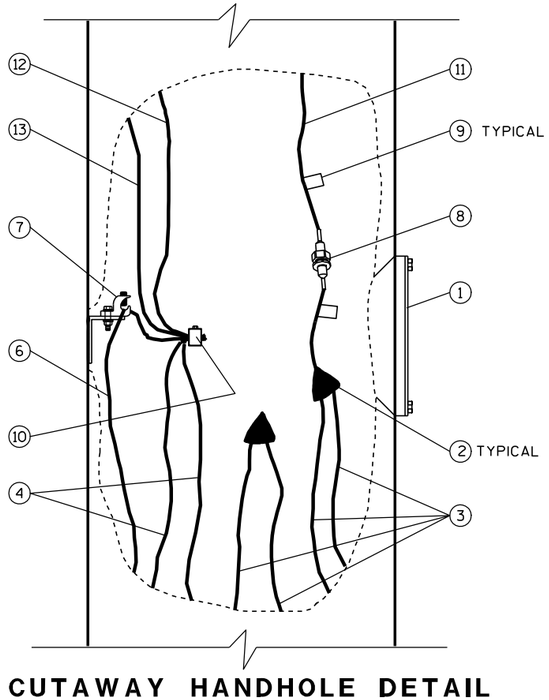
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

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

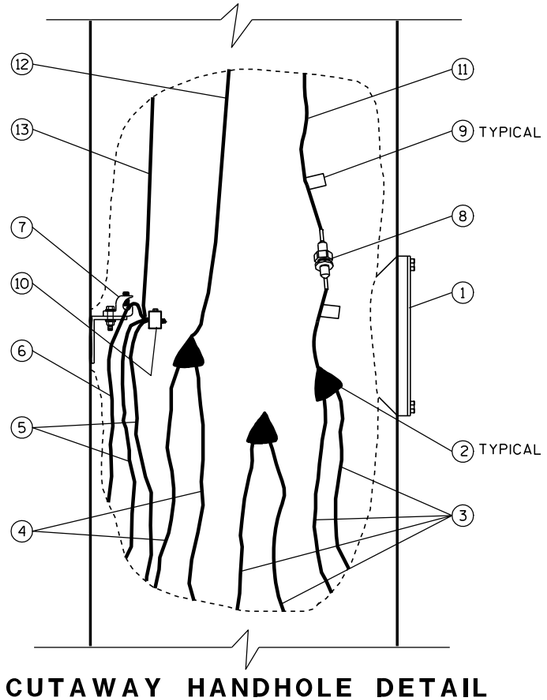
THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

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

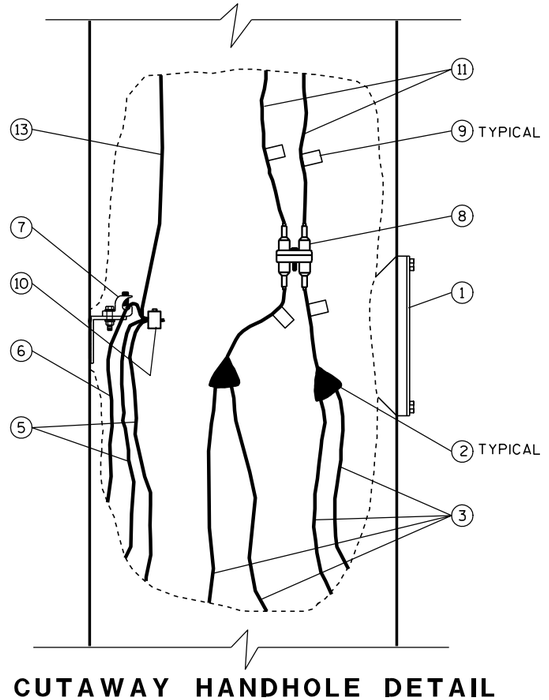
CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



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
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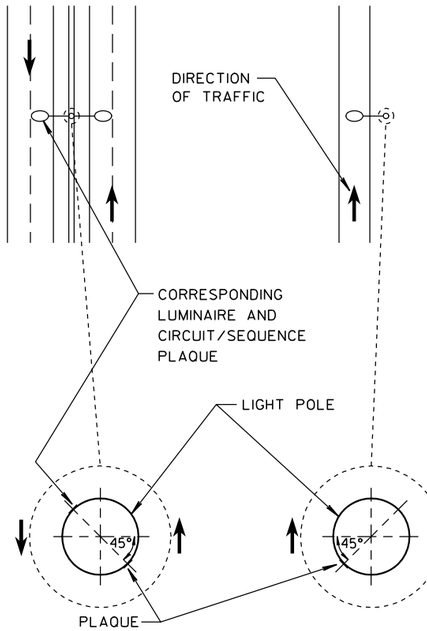
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S.D.D. 10 A 1-2

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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

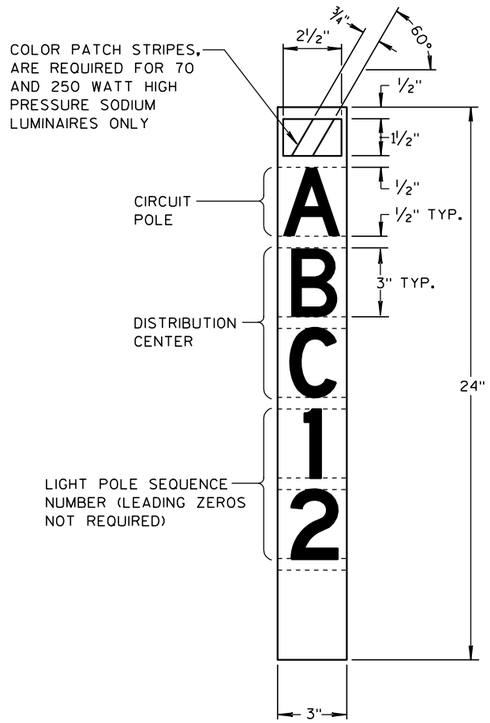
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

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

IDENTIFICATION PLAQUES LIGHT POLES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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10/25/2010 — DATE
/S/ John Corbin — STATE ELECTRICAL ENGI 544 — HWYS
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S.D.D. 10 A 2-2

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S.D.D. 10 A 2-2

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.

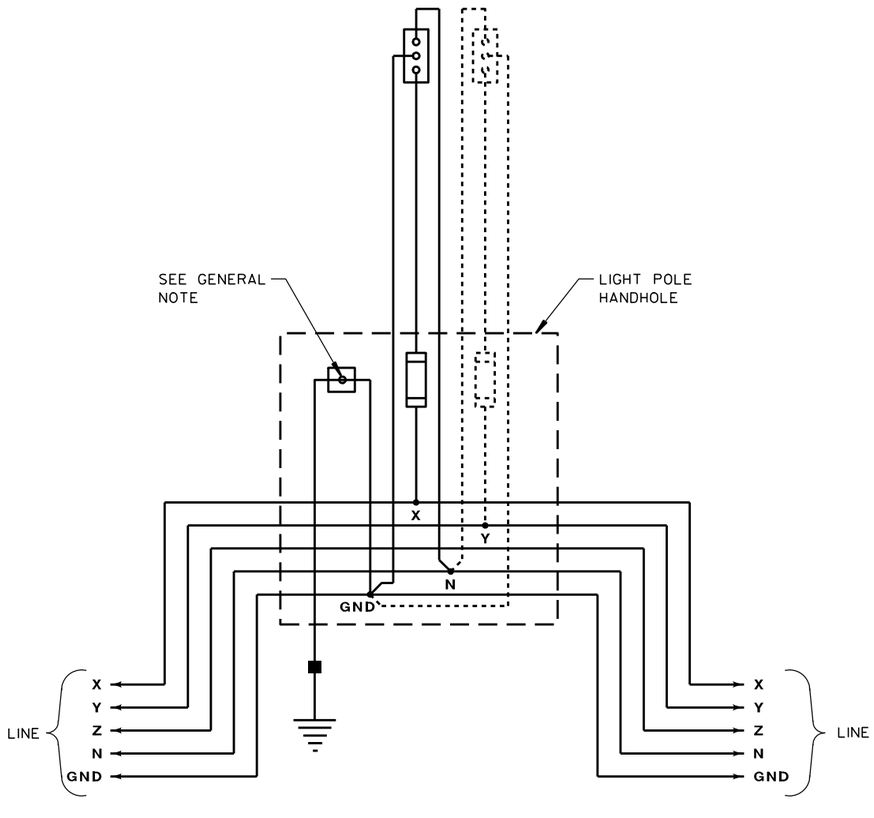
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

HANDHOLE FUSE SCHEDULES

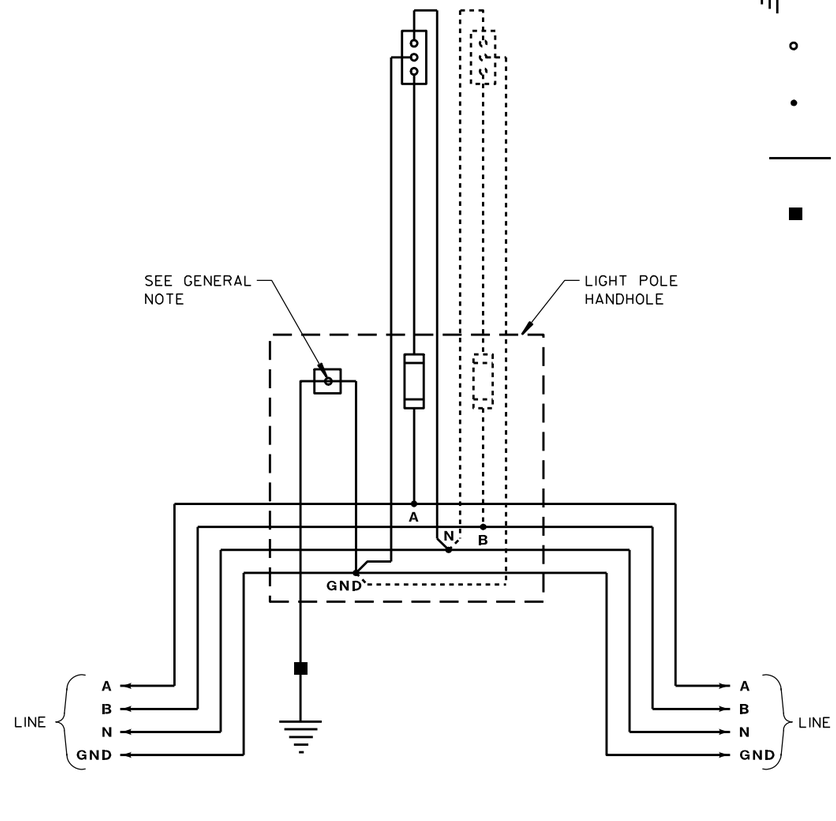
LINE VOLTAGE	BALLAST WATTAGE	
φ-GROUND	70-200 W	250-400 W
120 VAC	5 A	10 A
240 VAC	5 A	5 A
277 VAC	5 A	5 A
480 VAC	3 A	5 A

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
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S.D.D. 10 A 5-2

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S.D.D. 10 A 5-2

GENERAL NOTES

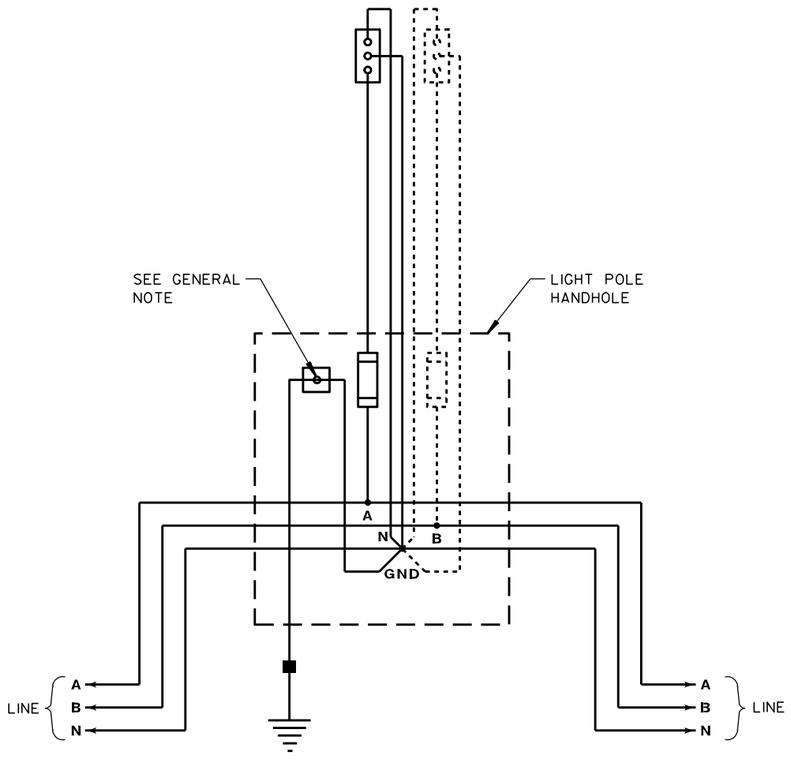
DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN IN THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

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

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

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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.

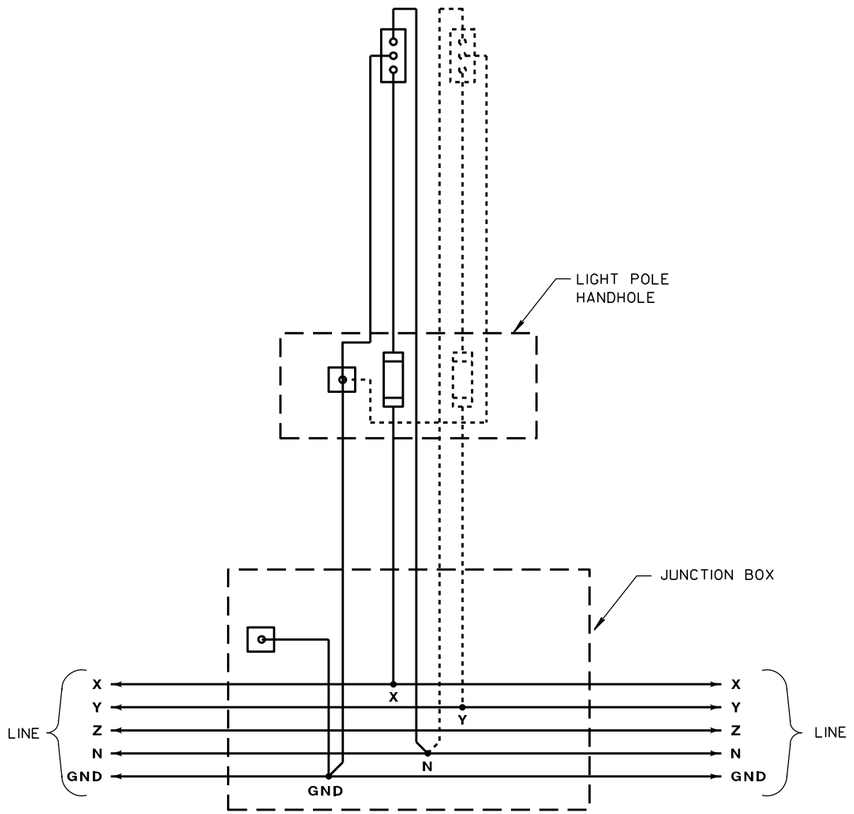
THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

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

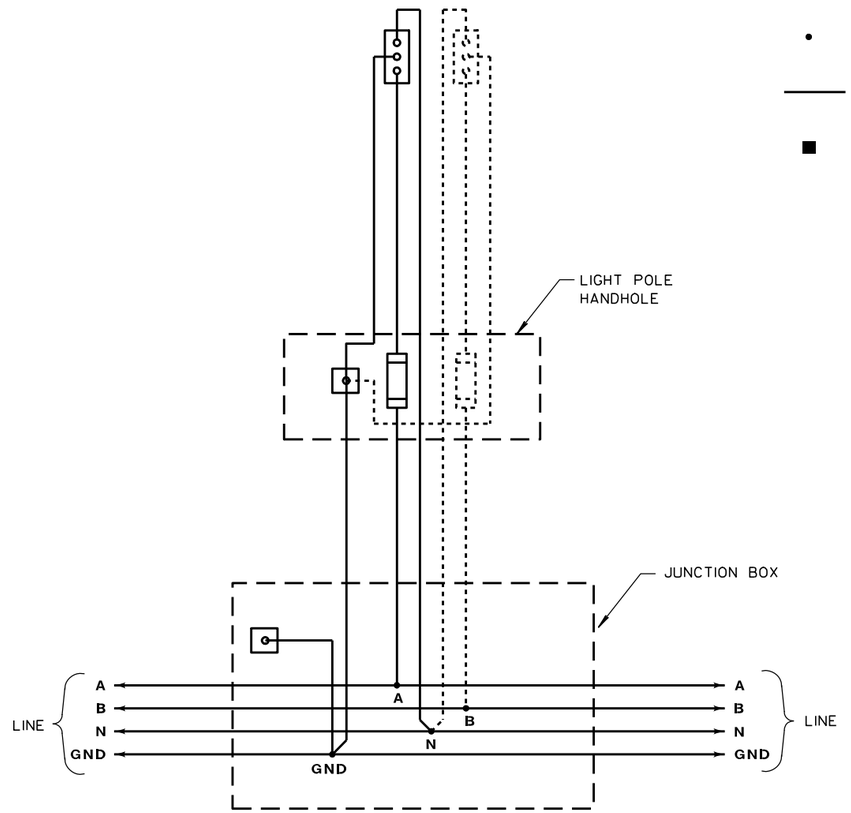
THE INTENT OF JUNCTION BOX SPLICES AS SHOWN IN THIS DETAIL IS FOR LIGHTING SYSTEMS WITH HEAVY LINE WIRE TOO LARGE TO PULL THROUGH THE CONDUIT INTO THE POLE HANDHOLE, DUE TO CONDUIT FILL REQUIREMENTS OF N.E.C., AND/OR THE STIFFNESS OF THE WIRE COMPARED TO THE NUMBER OF BENDS IN THE CONDUIT. IN CASES WHERE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

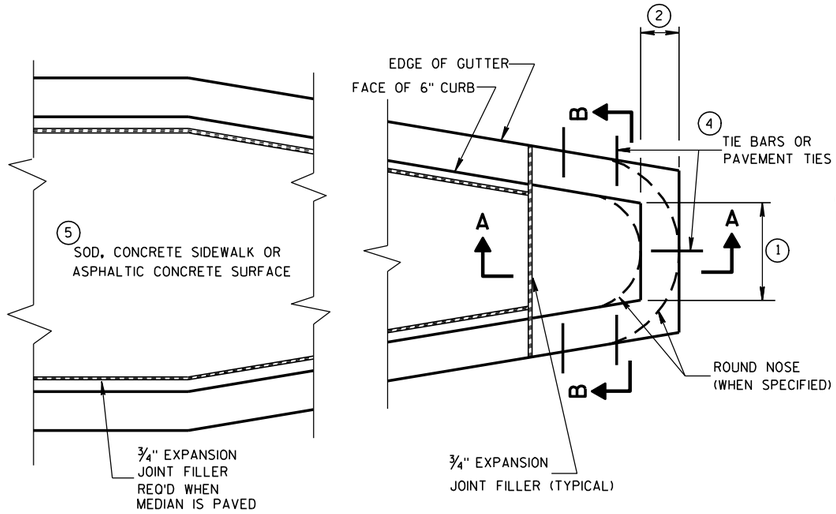
APPROVED
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/S/ John Corbin — STATE ELECTRICAL ENGI
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HWYS
FHWA

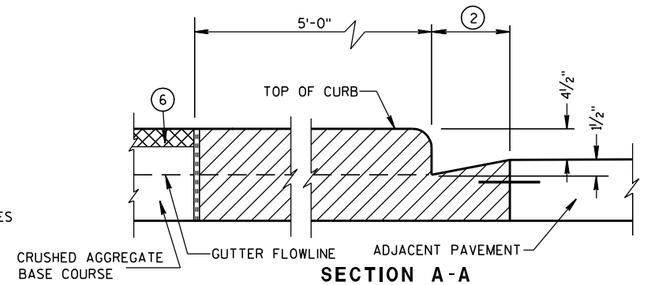
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S.D.D. 10 A 8-2

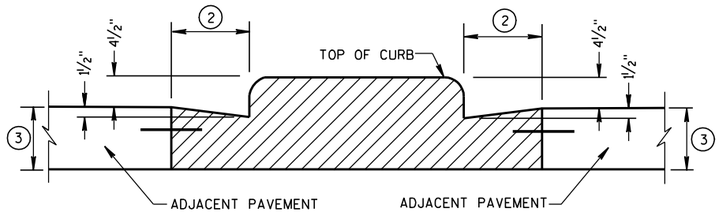
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S.D.D. 10 A 8-2





SECTION A-A



SECTION B-B

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.

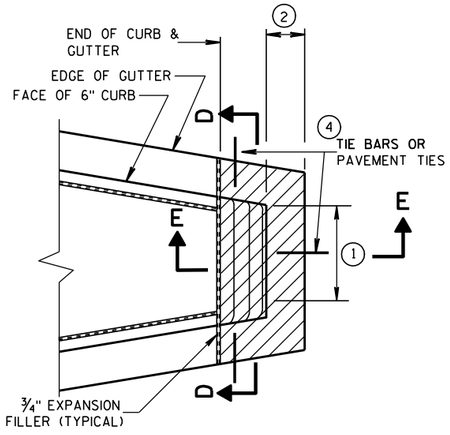
(2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.

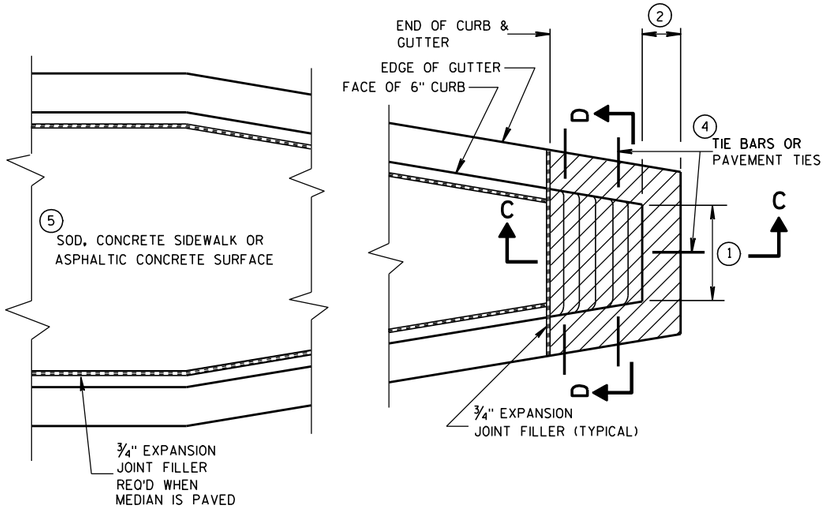
(3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

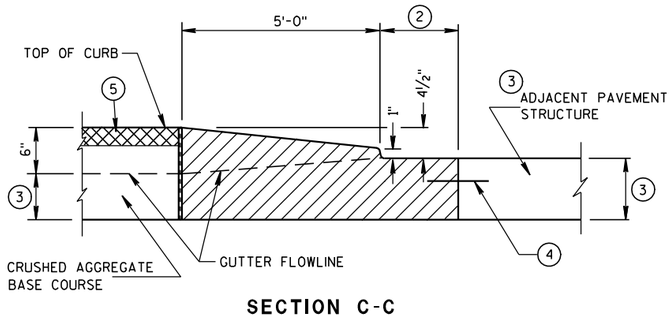
(4) TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

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.

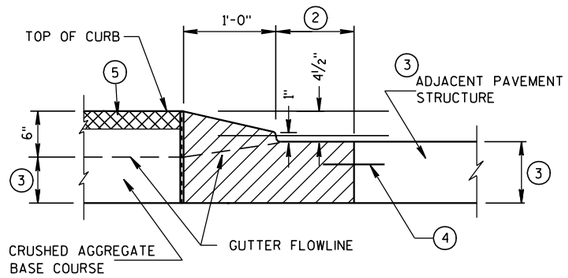
(5) SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.







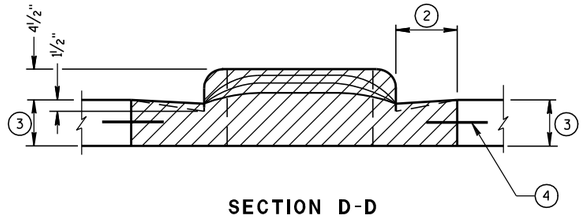
SECTION C-C



SECTION E-E

CONCRETE MEDIAN SLOPED NOSE TYPE 2

CONCRETE MEDIAN SLOPED NOSE TYPE 1



SECTION D-D

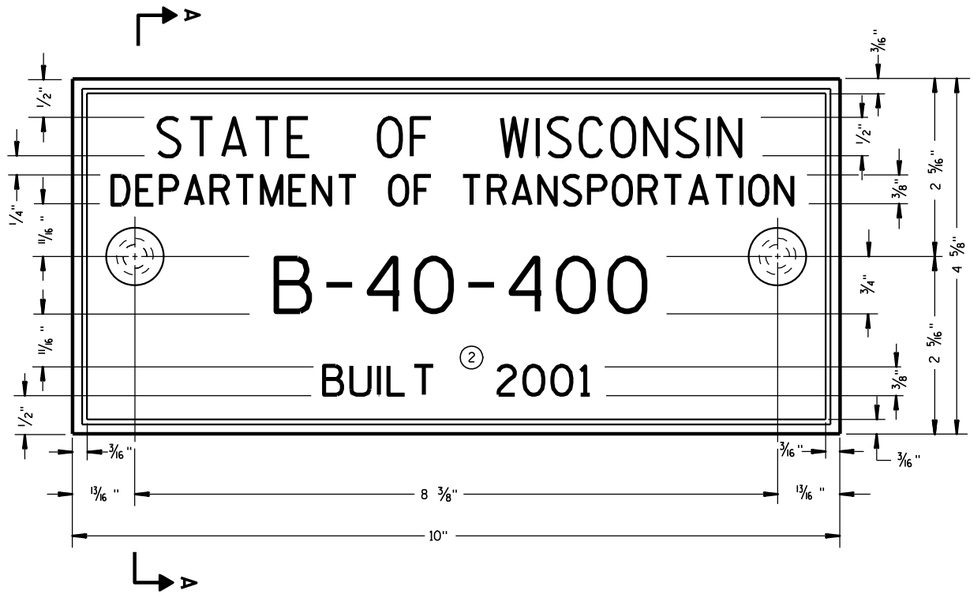
CONCRETE MEDIAN NOSE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/8/2006 DATE FHWA	/S/ Jerry H. [illegible] ROADWAY STANDARDS ENGINEER
1548	NT

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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)

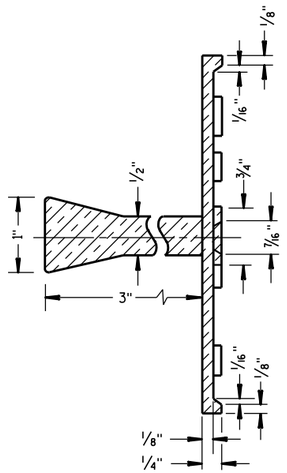
GENERAL NOTES

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.

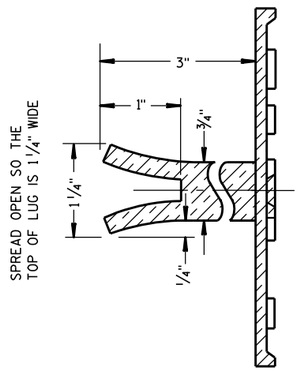
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(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

FOR MULTI-UNIT STRUCTURES LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

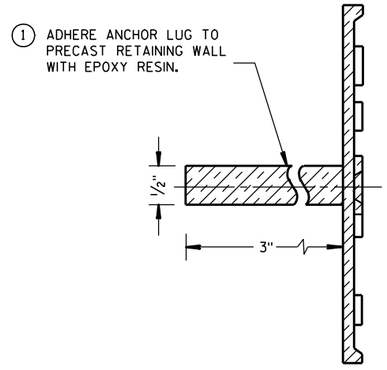
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION MULTI-UNIT STRUCTURES



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER

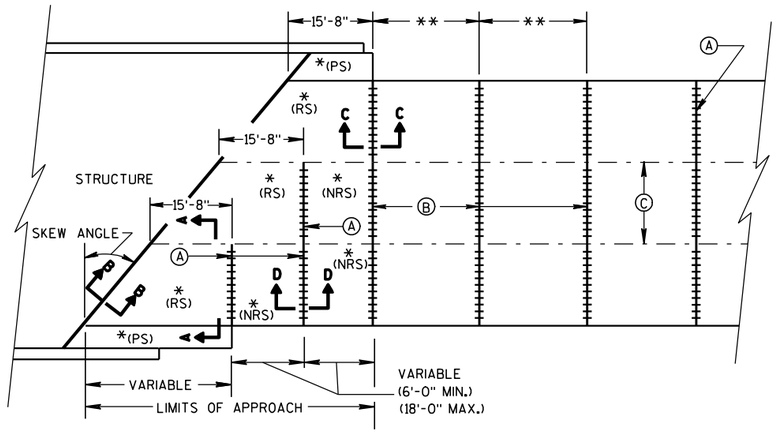
FHWA

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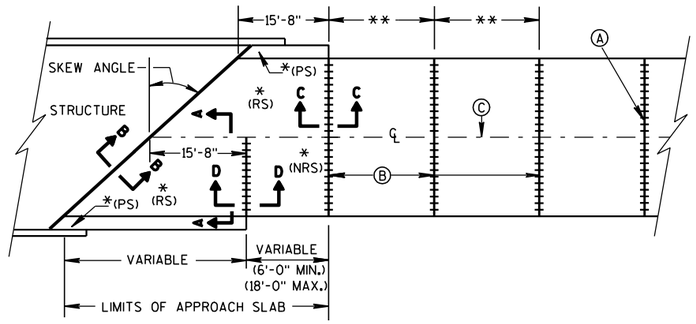
S.D.D. 12 A 3-10

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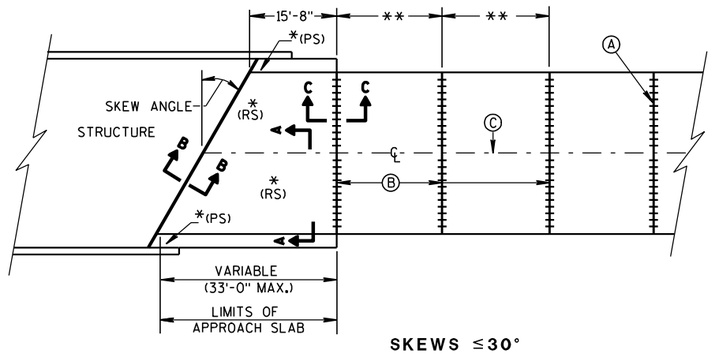
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >30°
(PAVEMENT WIDTH ≤30')



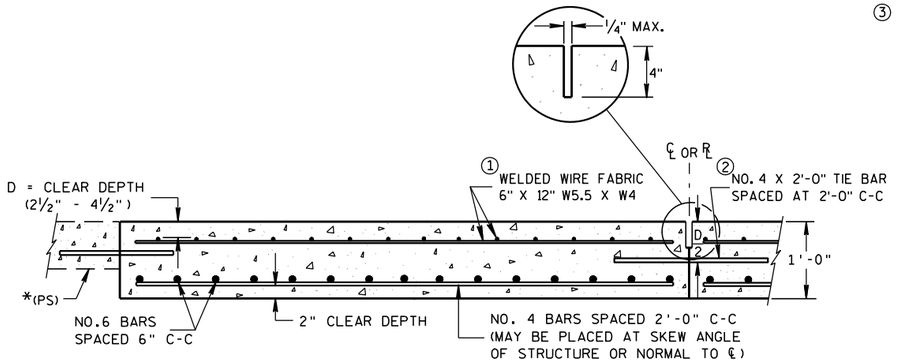
SKEWS ≤30°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

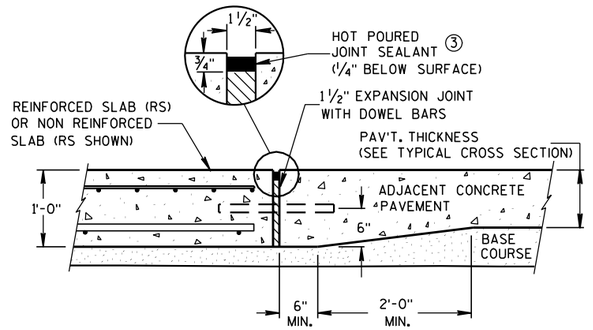
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER: CONCRETE PAVEMENT, OR CONCRETE SURFACE DRAIN
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

**STANDARD TRANSVERSE JOINT SPACING
(SEE SDD 13C4, SDD 13C11, & SDD 13C13)

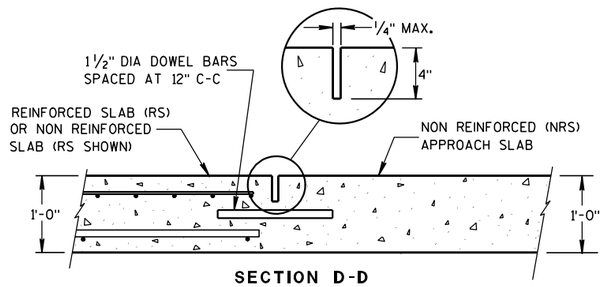
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄
(B) 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄
(C) STANDARD LONGITUDINAL JOINT AND TIE BARS.



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



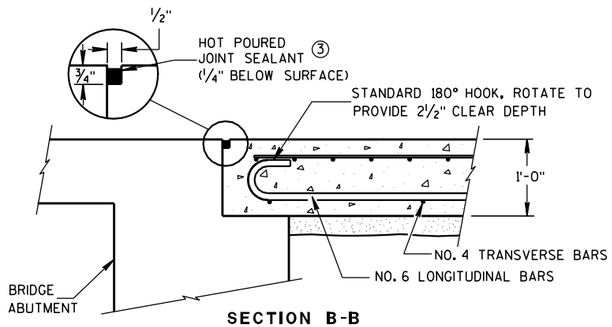
SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

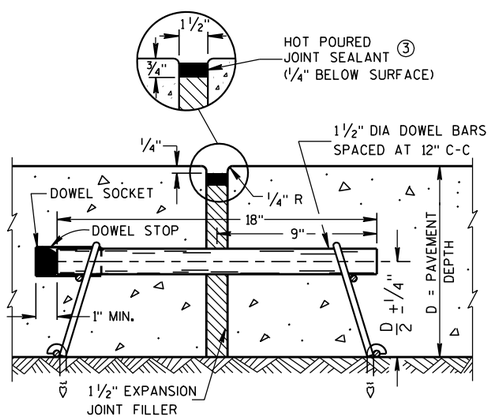
APPROACH SLABS ABUTTING AN HMA PAVEMENT OVER BASE COURSE DO NOT NEED TO BE DOWELED.

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



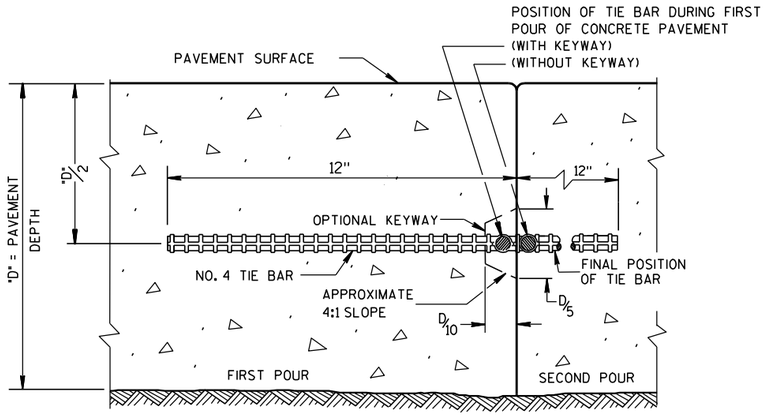
EXPANSION JOINT

CONCRETE PAVEMENT APPROACH SLAB

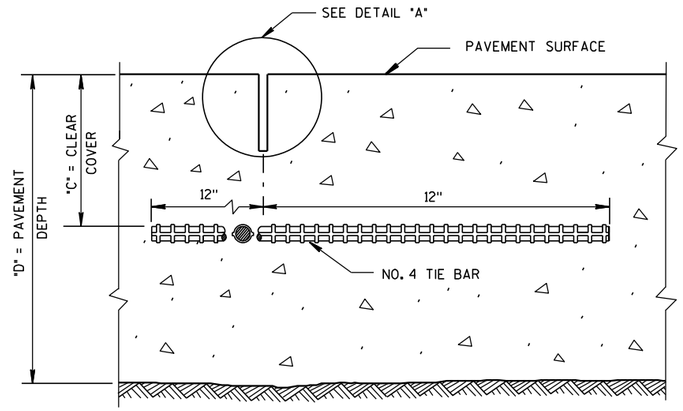
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/11/2009 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & DESIGN ENGINEER
FHWA

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S.D.D. 13 B 2-6



CONSTRUCTION JOINT



SAWED JOINT

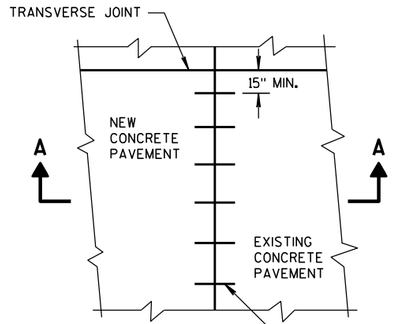
GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

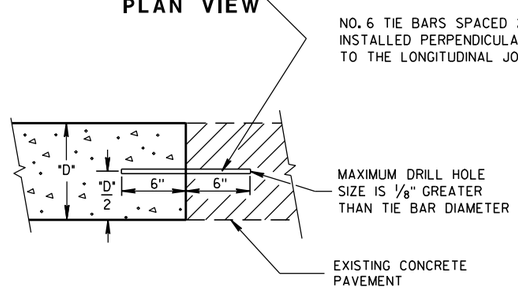
CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

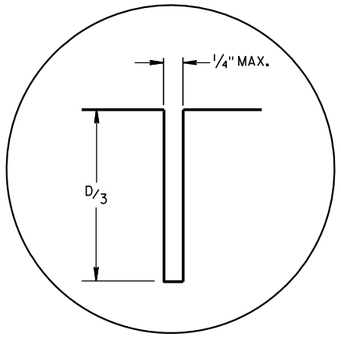
(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

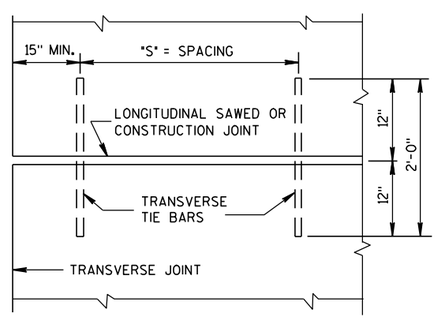


SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT



DETAIL "A"

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

10-5-2010
DATE

/S/ Deb Bischoff
PAVEMENT POLICY & DI551 INEER

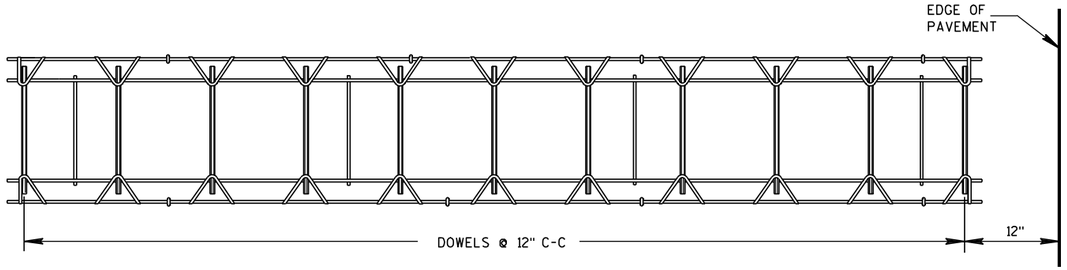
FHWA

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S.D.D. 13 C 1-15

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S.D.D. 13 C 1-15

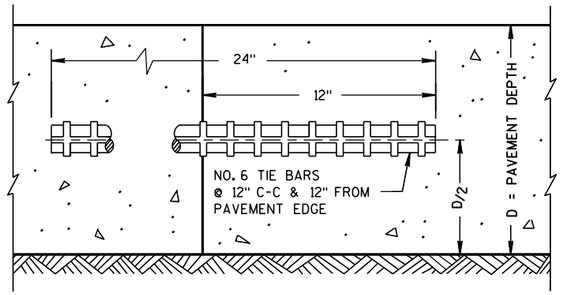


PLAN VIEW



SIDE VIEW

CONTRACTION JOINT DOWEL ASSEMBLY ①



TRANSVERSE CONSTRUCTION JOINT

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT 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, CENTER THE DOWEL ASSEMBLY ACROSS THE LANES. LOCATE THE INNER AND OUTER MOST DOWEL BARS SO THAT THE CENTER OF THE BARS ARE A MINIMUM OF 6 INCHES AND A MAXIMUM OF 12 INCHES FROM THE LONGITUDINAL JOINT AND THE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

THE CONTRACTOR MAY INSERT TIE BARS THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN PLACED.

① THE ENGINEER MAY APPROVE THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. THE CONTRACTOR MAY USE MECHANICAL DOWEL BAR INSERTERS INSTEAD OF DOWEL ASSEMBLIES.

② ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY.

③ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

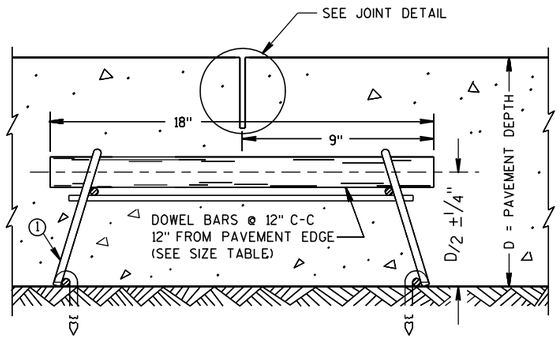
④ SPACE DOWEL BARS INSTALLED BY DRILLING 1'-3" ON CENTER. CENTER THE GROUPING OF DOWEL BARS INSIDE THE SLAB BASED ON ALL THE FOLLOWING SITUATIONS:

BETWEEN THE EDGES OF PAVEMENTS WITHOUT LONGITUDINAL JOINTS OR BETWEEN THE EDGE OF PAVEMENT AND NEAREST LONGITUDINAL JOINT OR BETWEEN TWO ADJACENT LONGITUDINAL JOINTS.

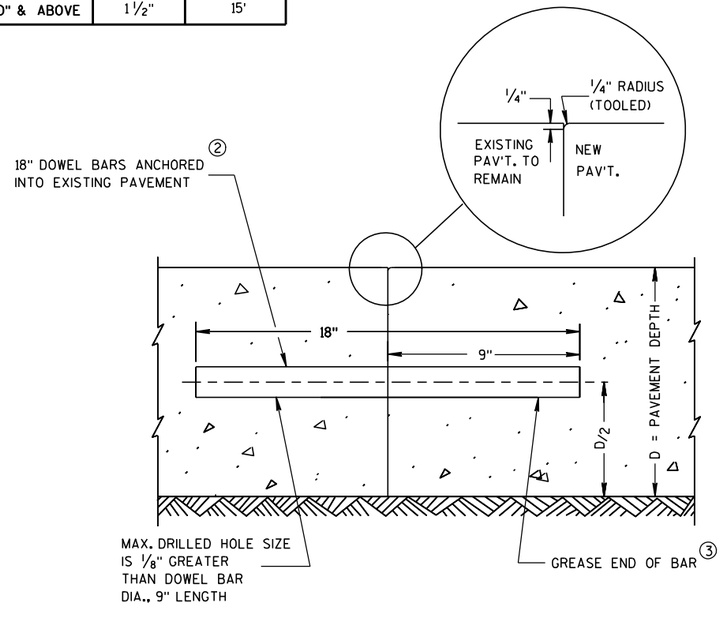
⑤ SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

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'

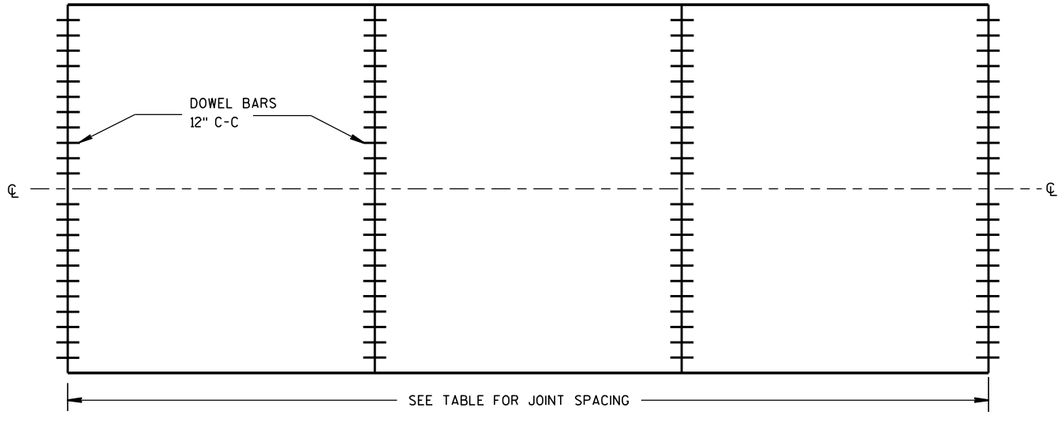


DOWELED CONTRACTION JOINT

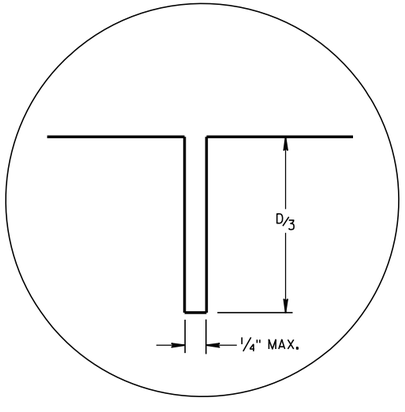


TRANSVERSE CONTRACTION JOINTS ABUTTING EXISTING PAVEMENT

④ DOWEL BAR DETAIL



CONTRACTION JOINT LOCATIONS



JOINT DETAIL

URBAN DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

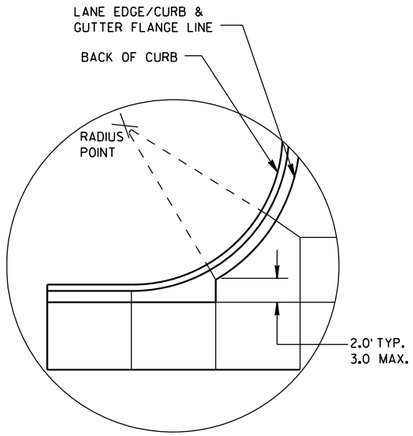
APPROVED
12/11/2009 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE
NEER
FHWA

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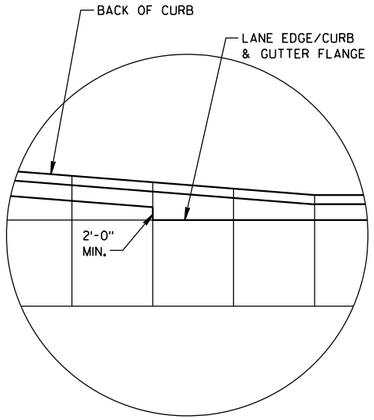
S.D.D. 13 C 13-7

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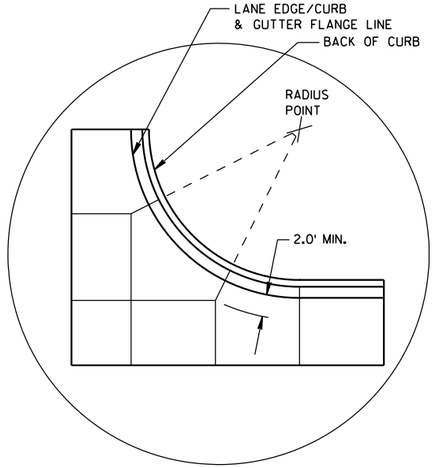
S.D.D. 13 C 13-7



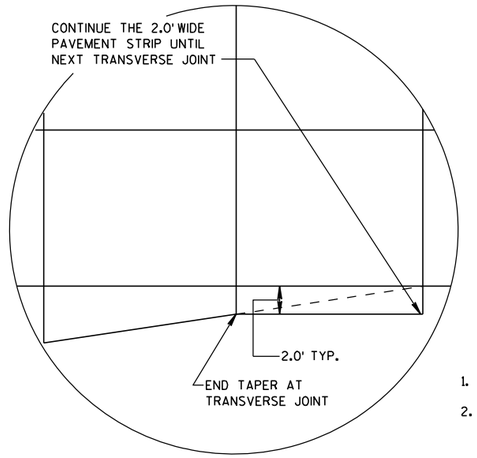
DETAIL "A"



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.

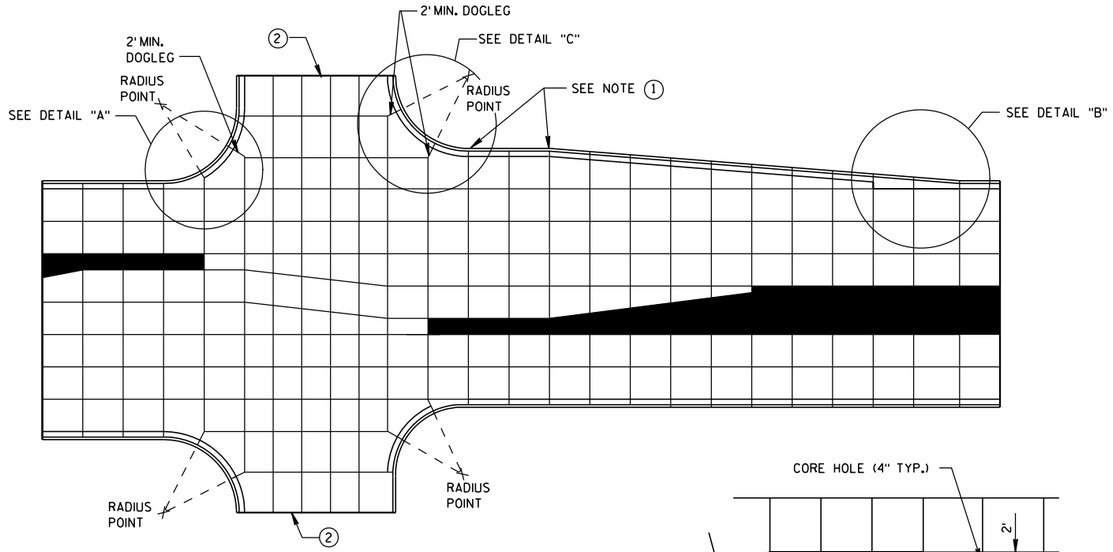
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

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.

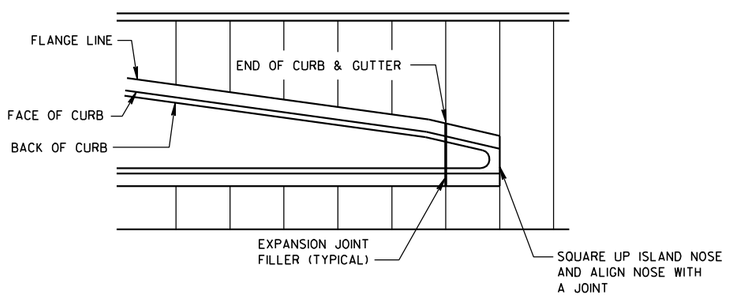
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



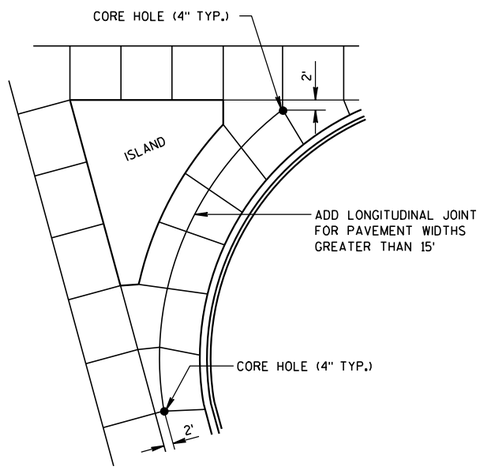
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

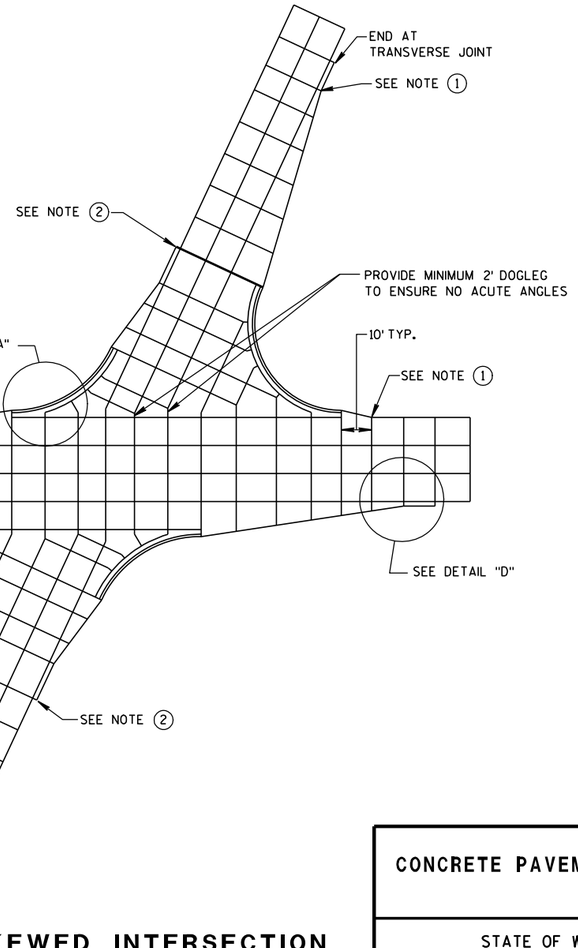
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



APPROACH TO MEDIAN



LARGE RIGHT TURN



SKEWED INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

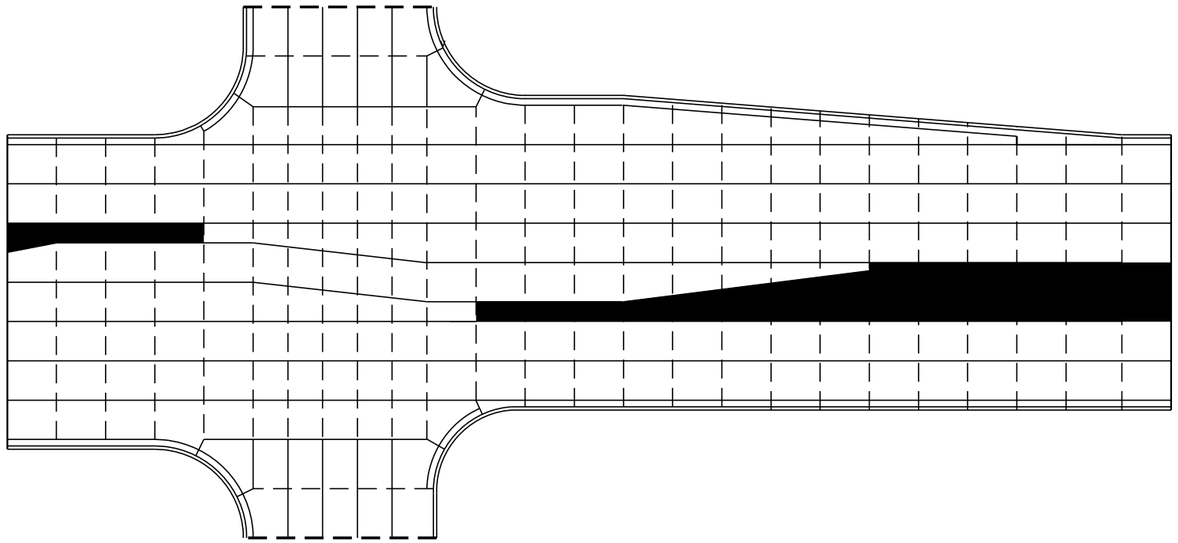
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S.D.D. 13 C 18-1a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

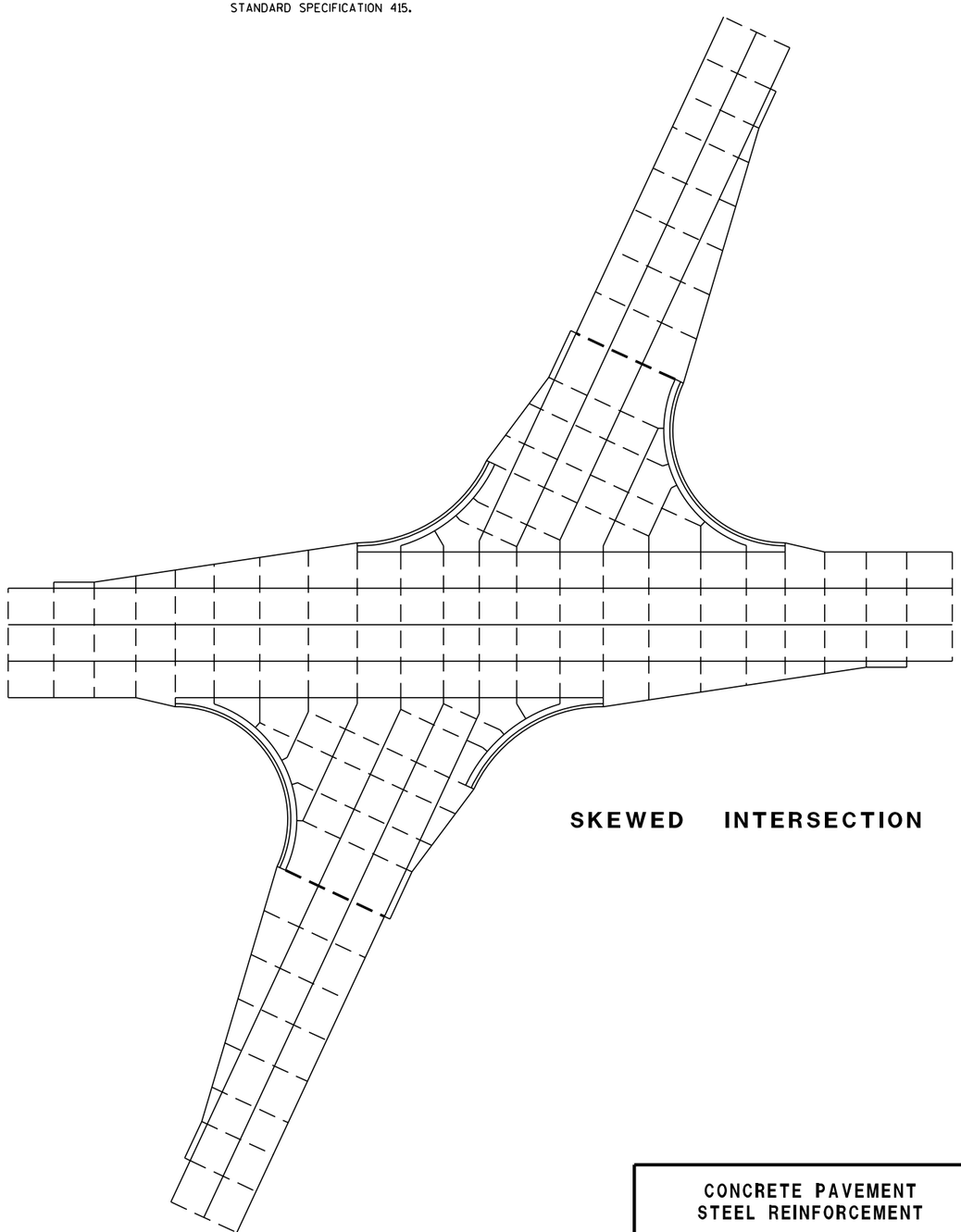
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

6

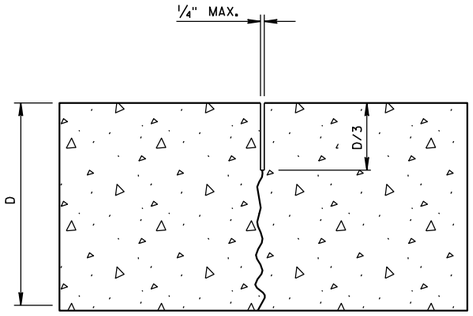
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S.D.D. 13 C 18-1b

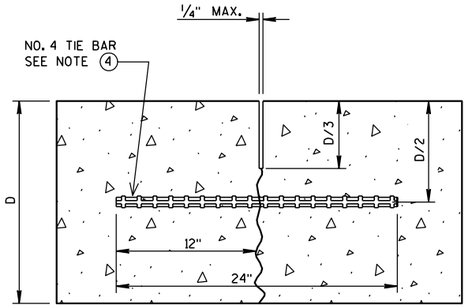
S.D.D. 13 C 18-1b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



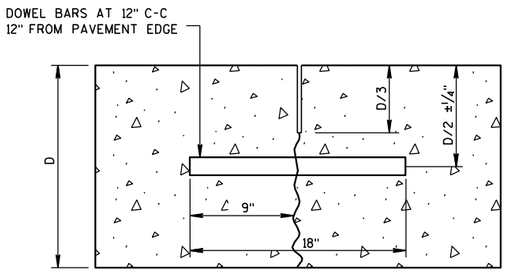
UNDOWELED-TRANSVERSE



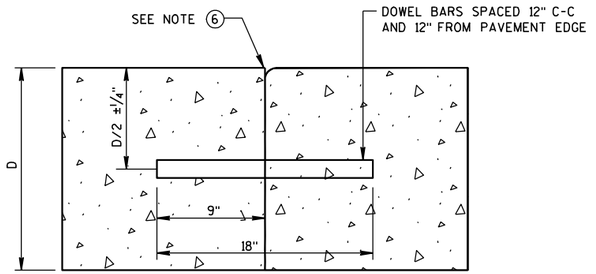
TIED LONGITUDINAL

GENERAL NOTES

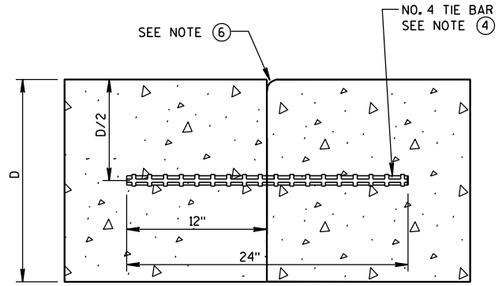
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO THE 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



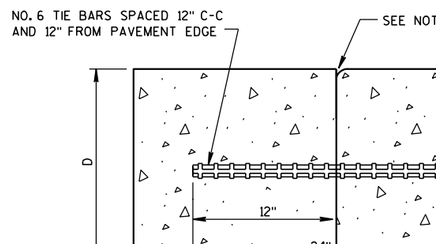
DOWELED TRANSVERSE



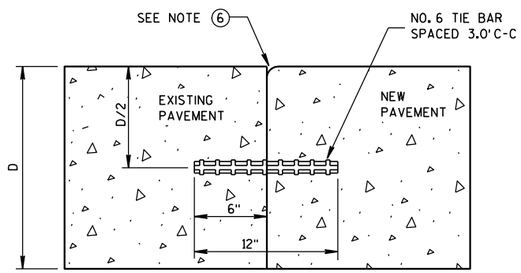
TIED LONGITUDINAL

CONTRACTION JOINTS

SEE NOTE (2)



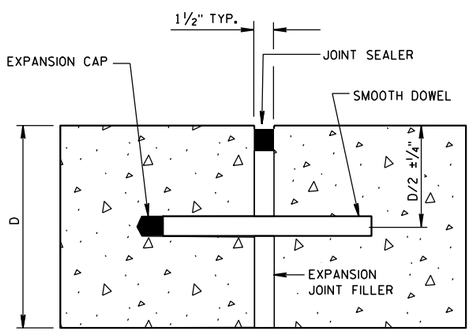
TIED TRANSVERSE
SEE NOTE (3)



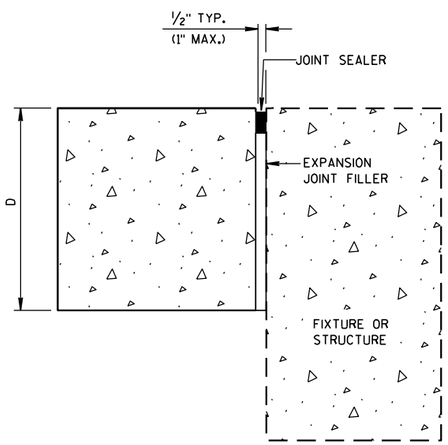
TIED LONGITUDINAL TO EXISTING

CONSTRUCTION JOINTS

SEE NOTE (5)



DOWELED-TRANSVERSE
SEE NOTE (1)



UNTIED-LONGITUDINAL

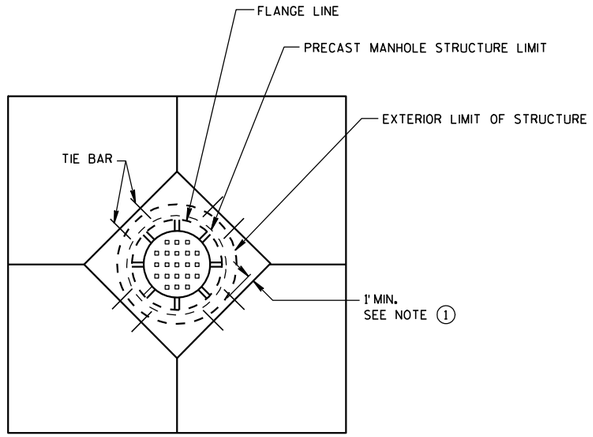
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

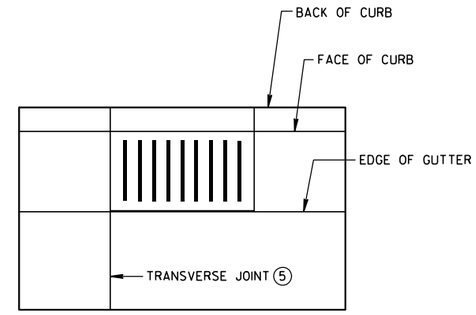
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

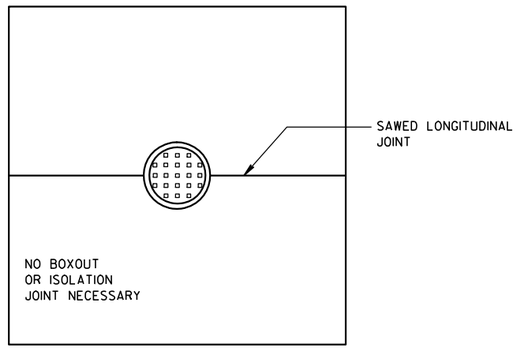
S.D.D. 13 C 18-1c



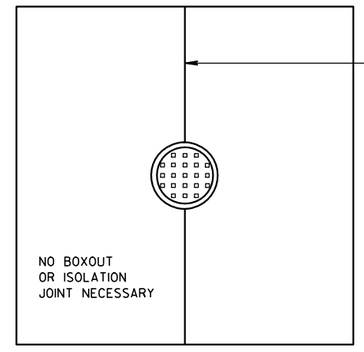
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



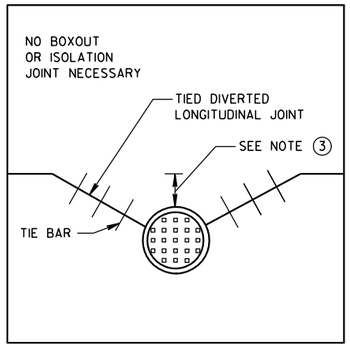
INLET WITH TRANSVERSE JOINT



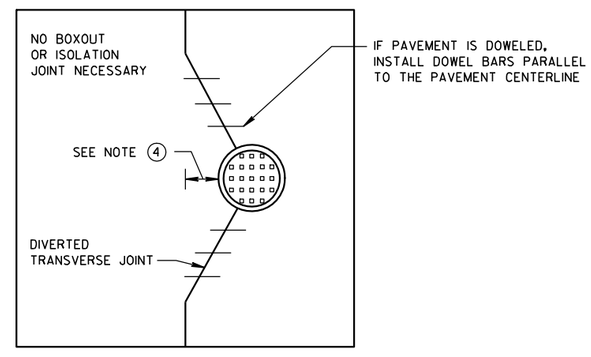
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

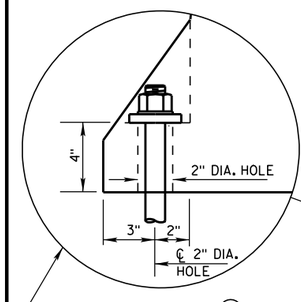
1. USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1 FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.
2. ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.
3. IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS GREATER THAN 2 FEET, DO NOT DIVERT JOINT AND SAW LONGITUDINAL JOINT AS NORMAL. IF DISTANCE IS 2 FEET OR LESS, DIVERT LONGITUDINAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE.
4. IF DISTANCE FROM THE EDGE OF MANHOLE TO THE NEAREST TRANSVERSE JOINT IS GREATER THAN 4 FEET, REDIRECT JOINT TO INTERSECT MANHOLE. IF DISTANCE IS 4 FEET OR LESS, PLACE REBAR REINFORCEMENT AROUND MANHOLE.
5. ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

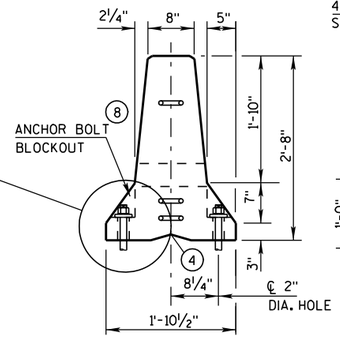
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-5-2010 — DATE
/S/ Deb Bischoff — PAVEMENT POLICY & D556 ENGINEER
FHWA

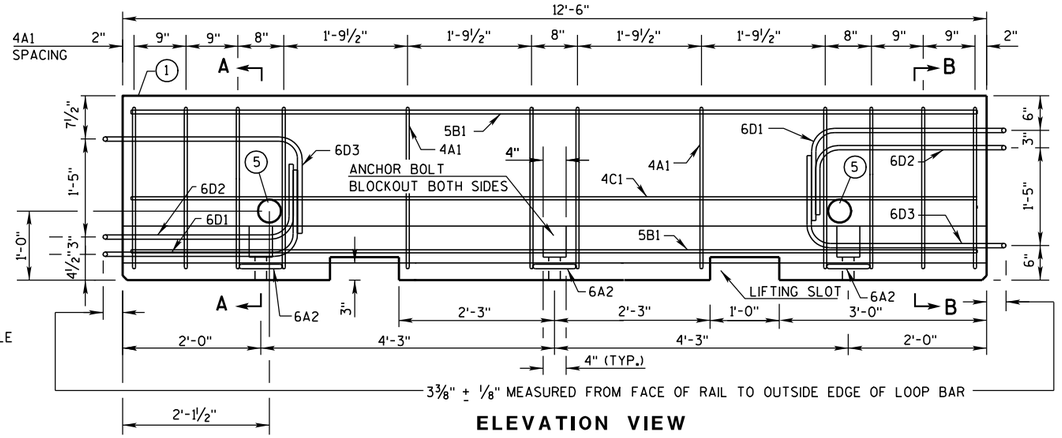
6
S.D.D. 13 C 18-1d



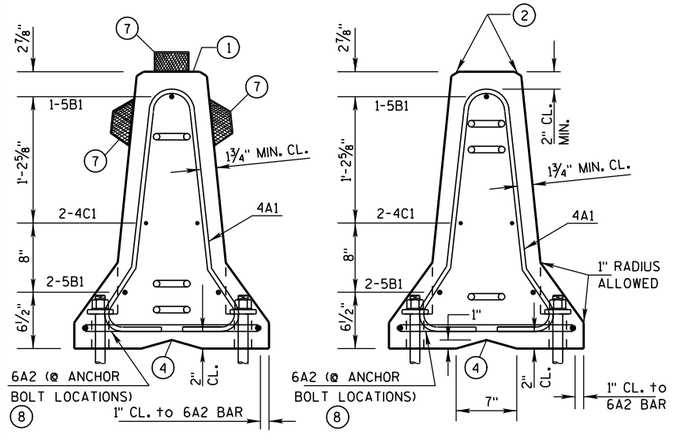
ANCHOR ON TRAFFIC SIDE (8) ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



END VIEW

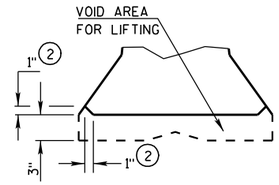


ELEVATION VIEW

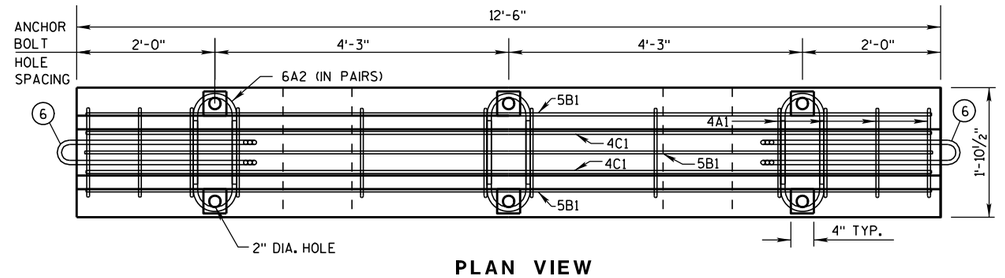


SECTION A-A
(STIRRUP PLACEMENT)

SECTION B-B
(STIRRUP PLACEMENT)

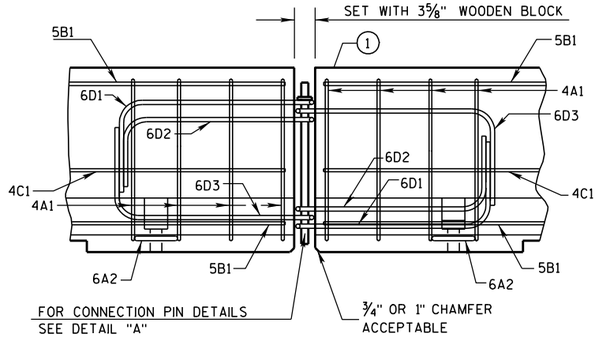


DETAIL "B"
LIFTING SLOT DETAIL

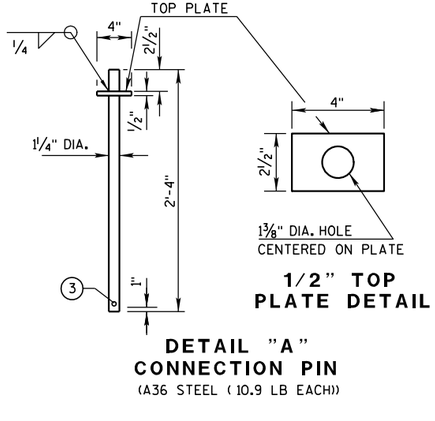


PLAN VIEW

DETAILS OF BARRIER SECTION

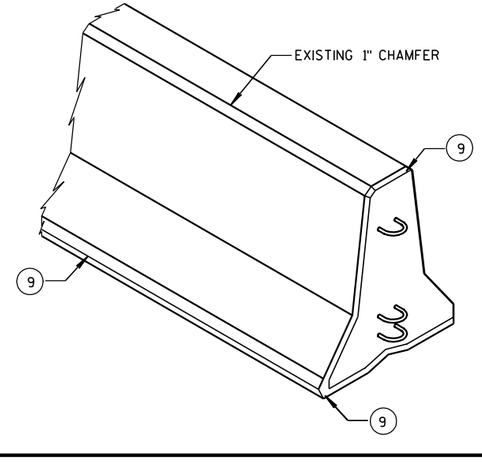


DETAILS OF BARRIER CONNECTION



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.

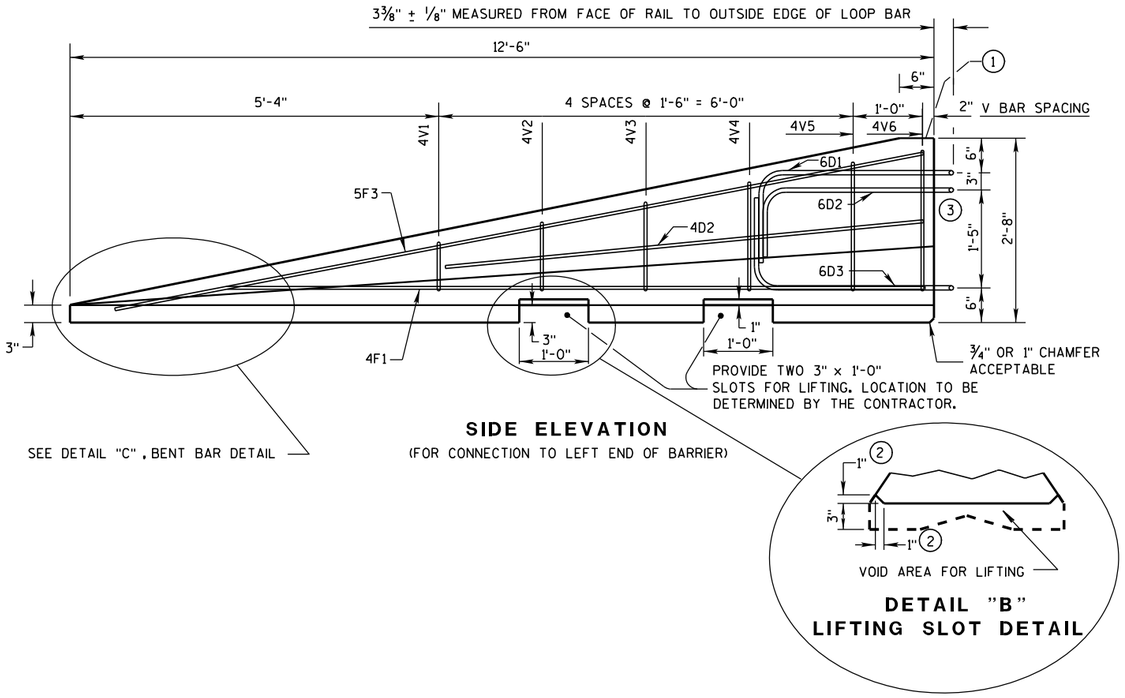
(9) 1" CHAMFER OPTIONAL.

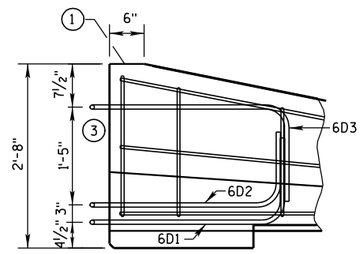
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

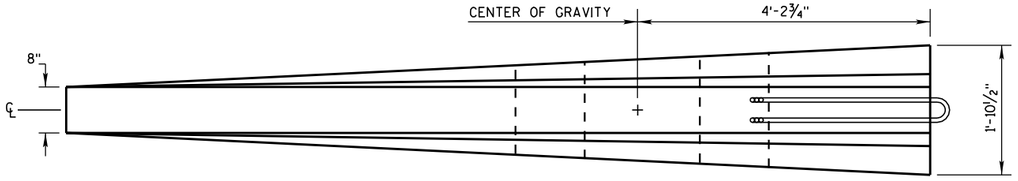
S.D.D. 14 B 7-13a

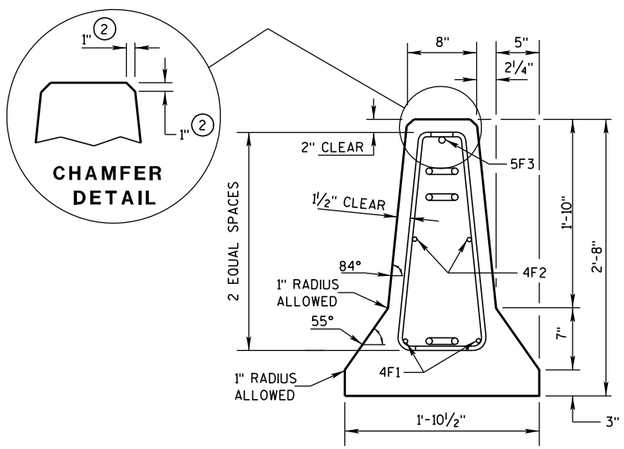


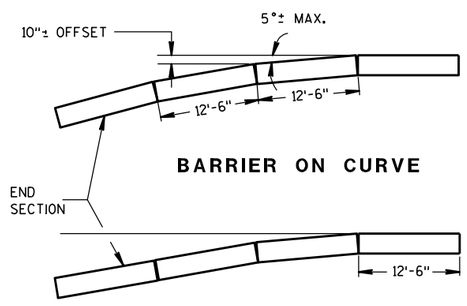


GENERAL NOTES

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.







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

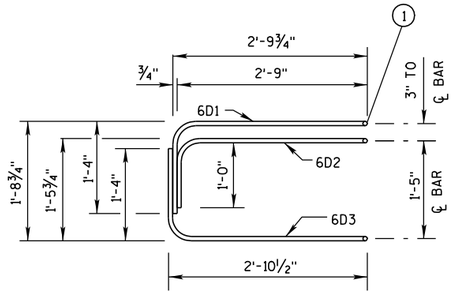
6

S.D.D. 14 B 7-13b

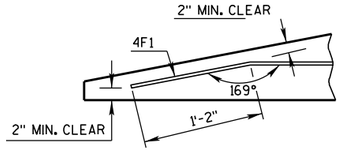
BARRIER TAPER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

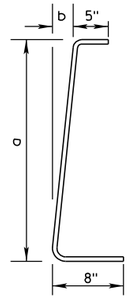
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



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

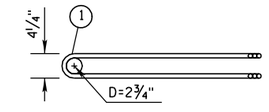
GENERAL NOTES

(1) NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

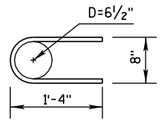
BARRIER SECTION BILL OF MATERIALS

(PER 12'-6" BARRIER SECTION)

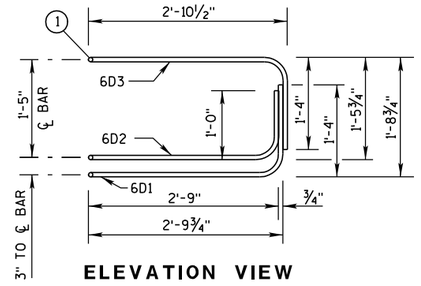
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"



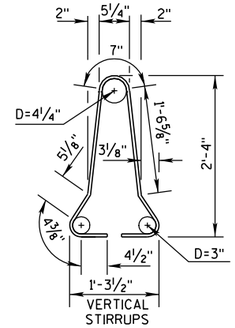
PLAN VIEW
LOOP BAR ASSEMBLY
(MARKED END SHOWN, INVERT FOR OTHER END)



6A2



ELEVATION VIEW



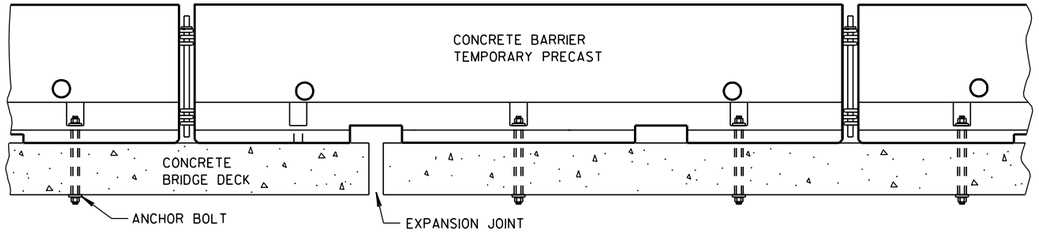
4A1

BARRIER SECTION

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

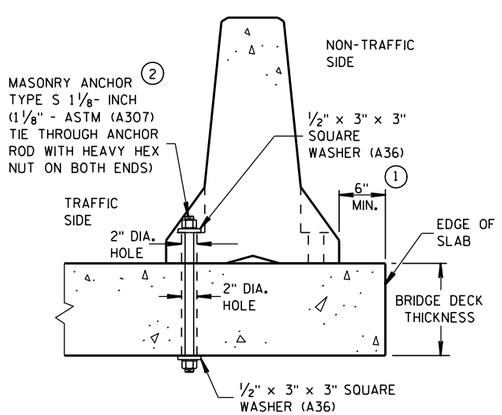
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 7-13c



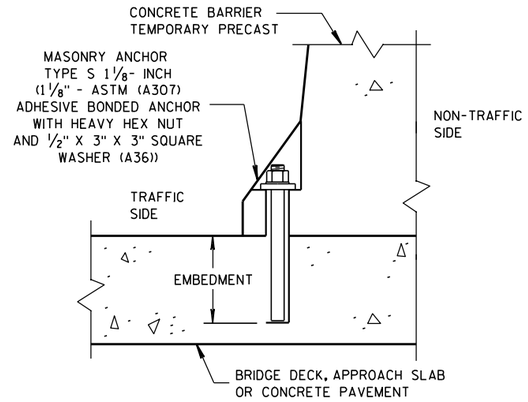
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(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 (2) INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)

GENERAL NOTES

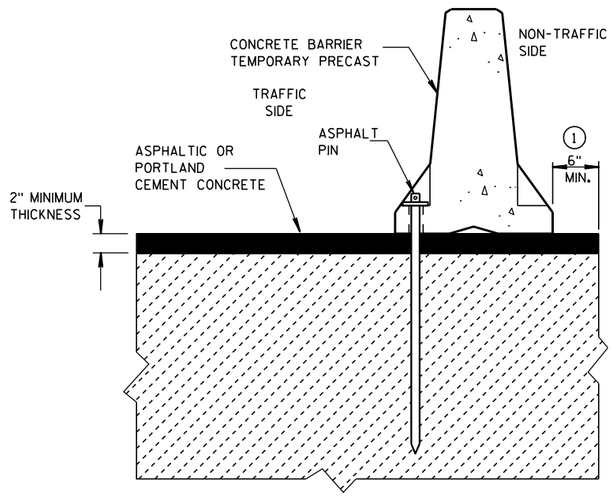
(1) CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 45 MPH OR GREATER, OR

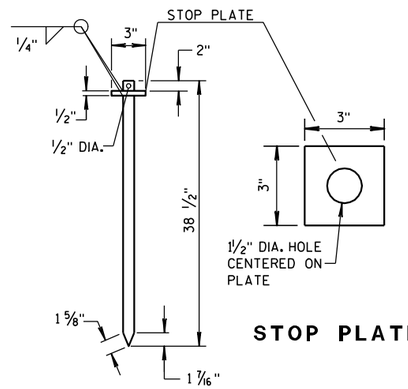
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT. IS LESS THAN 2 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED SPEED IS 40 MPH OR LESS.

(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.



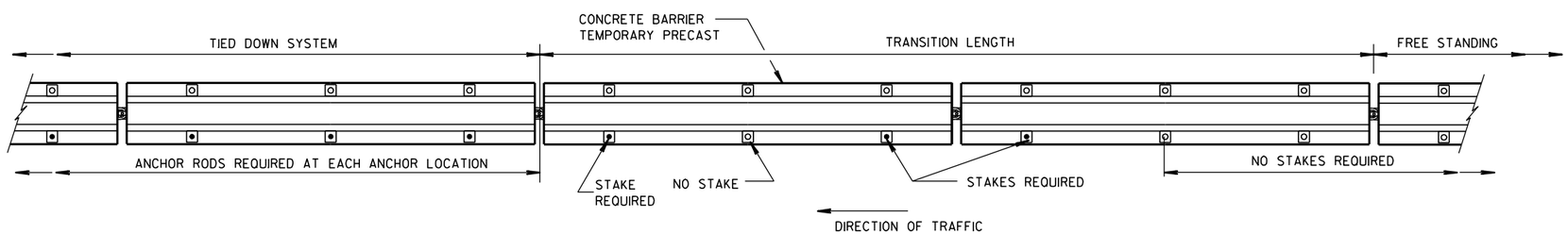


STOP PLATE

ASPHALT PIN
(ASTM A36 STEEL)

STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



PLAN VIEW

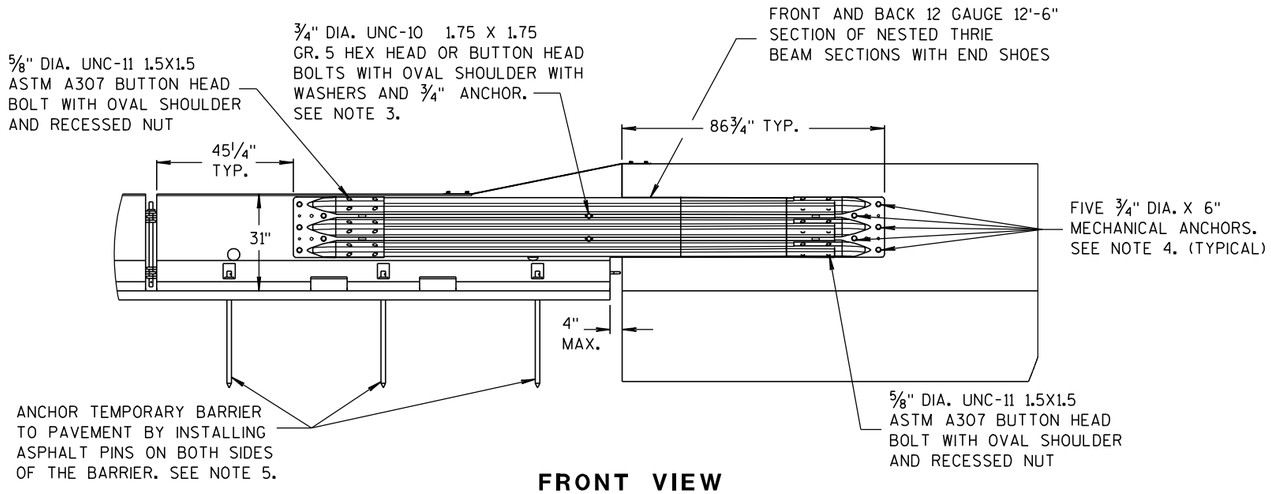
FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

(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...

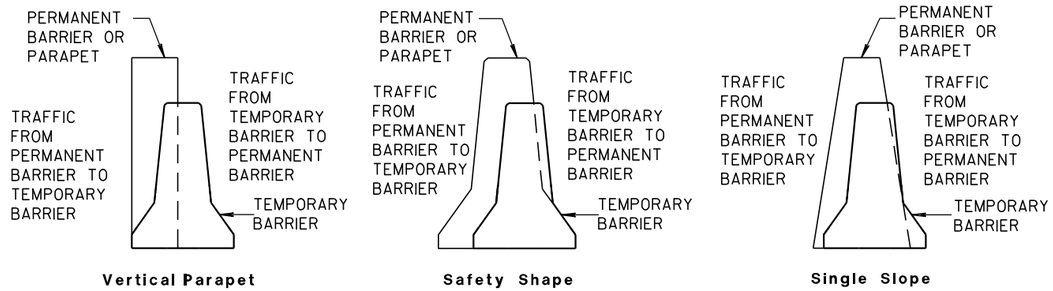
6
S.D.D. 14 B 7-13d



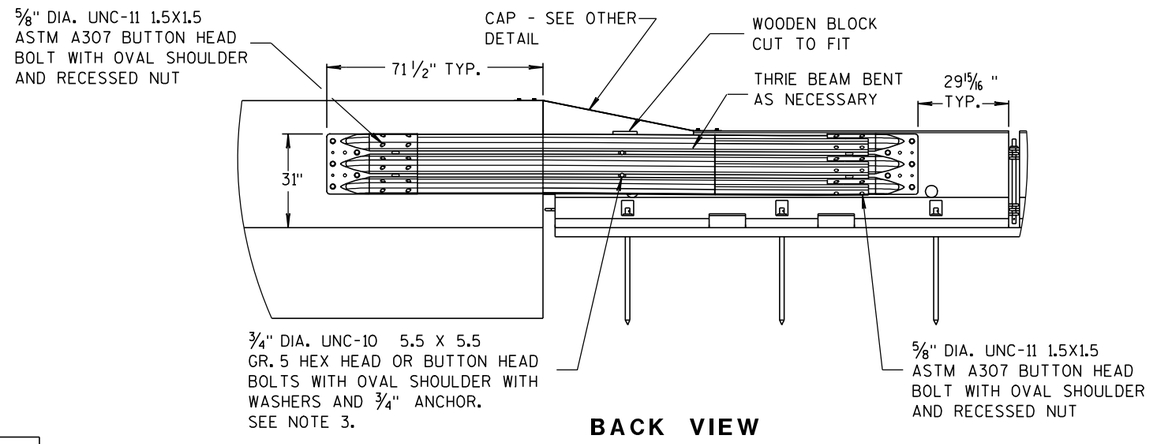
FRONT VIEW

NOTES

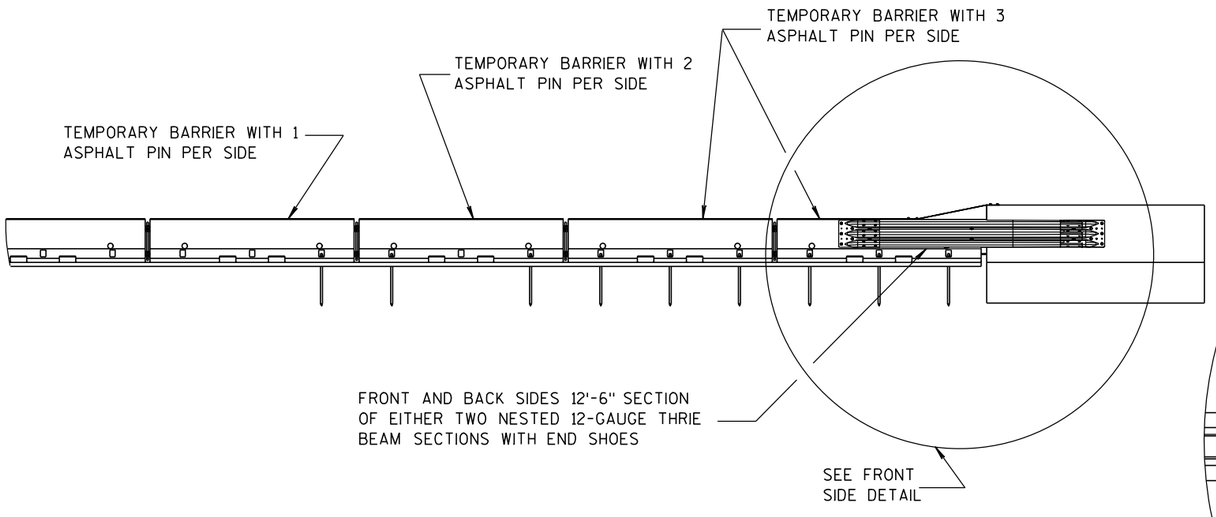
1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR EPOXY ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 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.



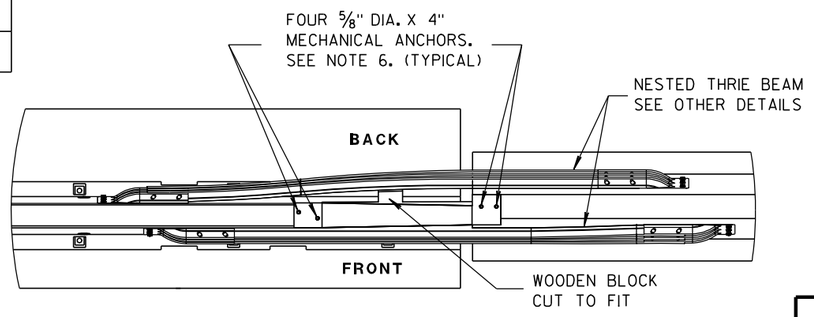
TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



BACK VIEW



FRONT VIEW



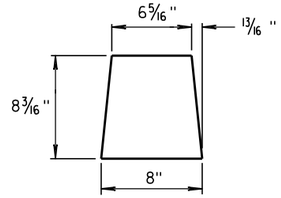
PLAN VIEW

BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM

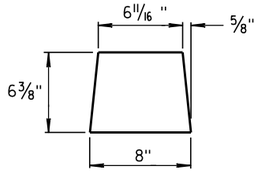
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

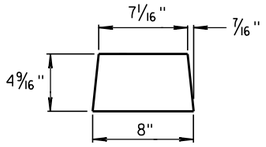
6
S.D.D. 14 B 7-13e



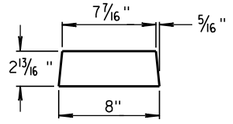
GUSSET 1



GUSSET 2

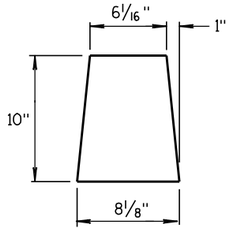


GUSSET 3

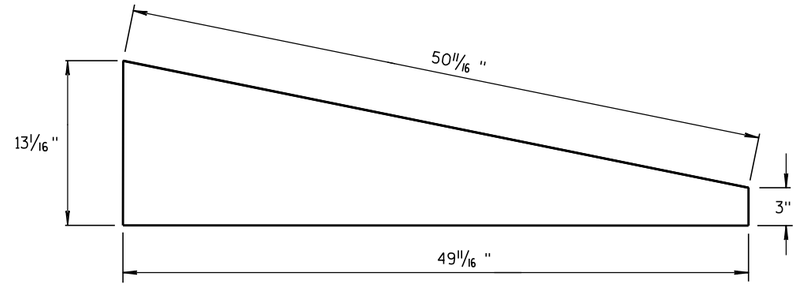


GUSSET 4

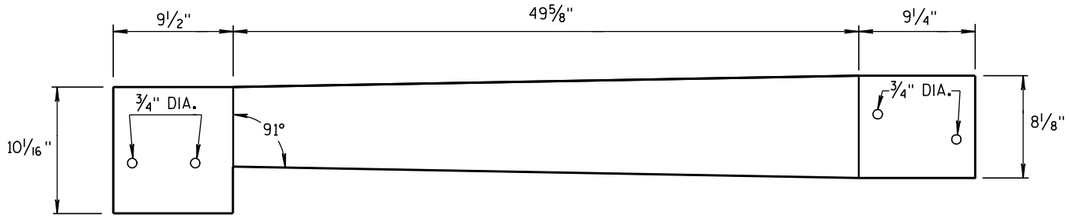
GUSSETS

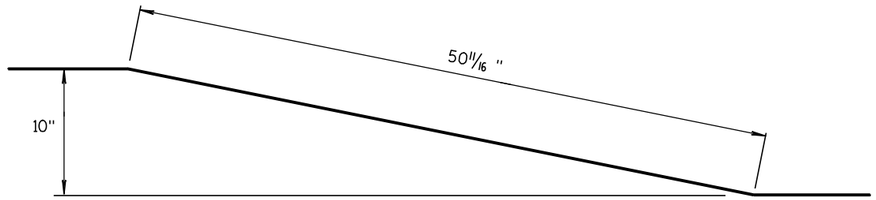


END PLATE

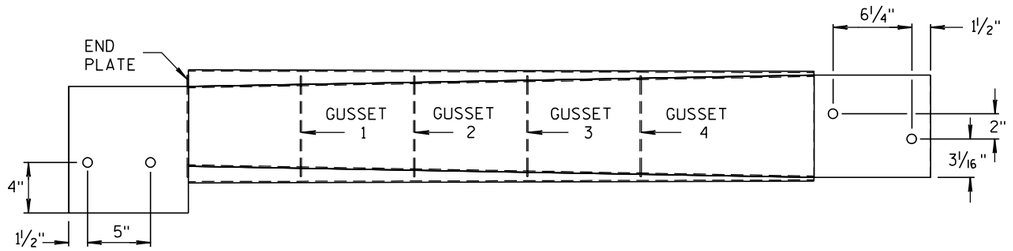


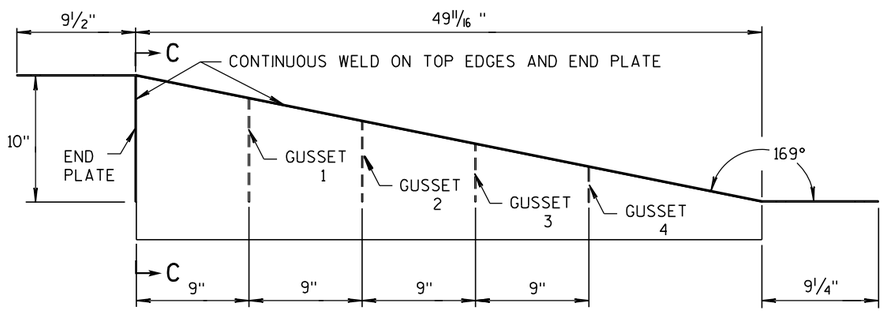
SIDE PLATE

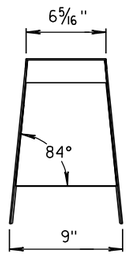




TOP PLATE







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

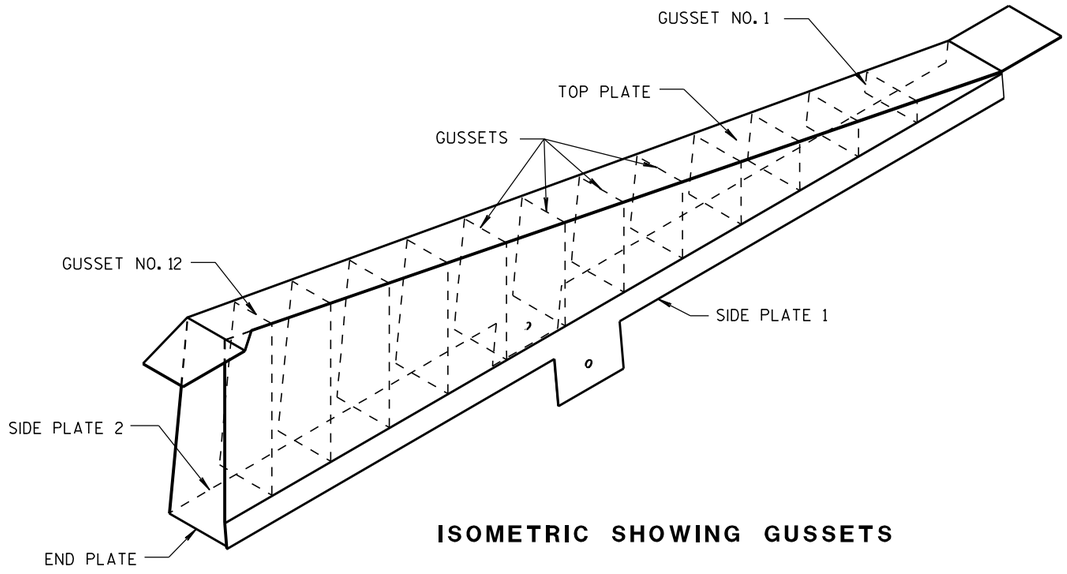
SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

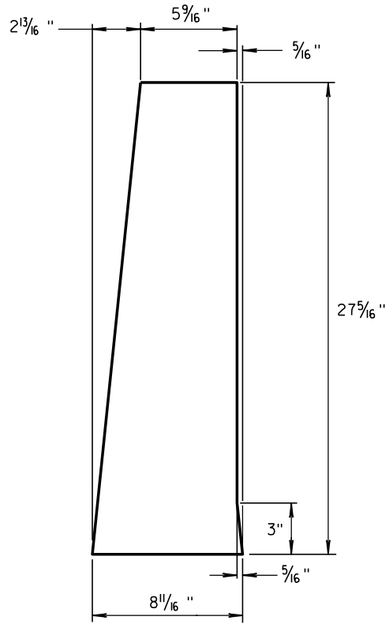
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

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S.D.D. 14 B 7-13f

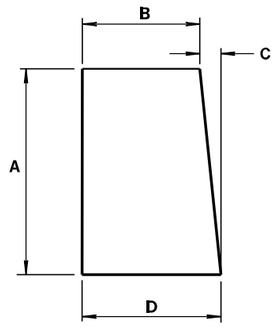


ISOMETRIC SHOWING GUSSETS



END PLATE

1/8" STEEL PLATE



GUSSETS 1 - 12

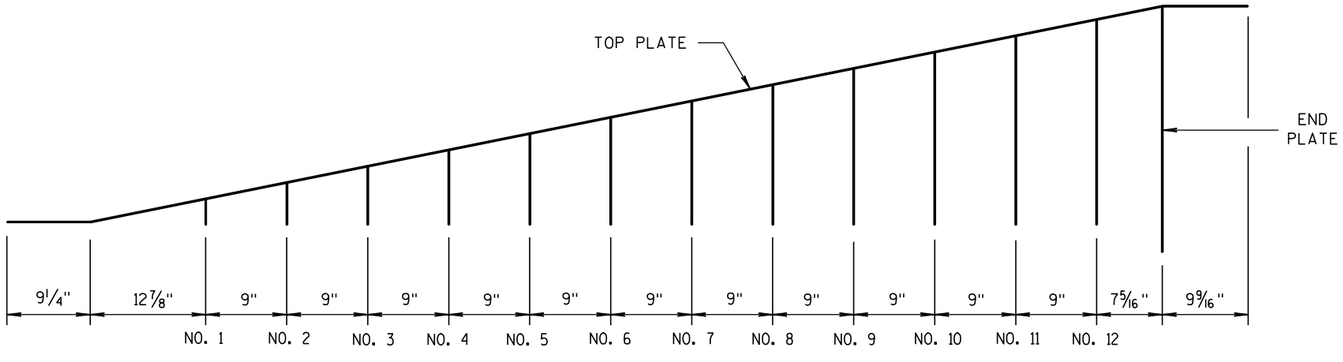
ALL GUSSETS 1/8" STEEL PLATE

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

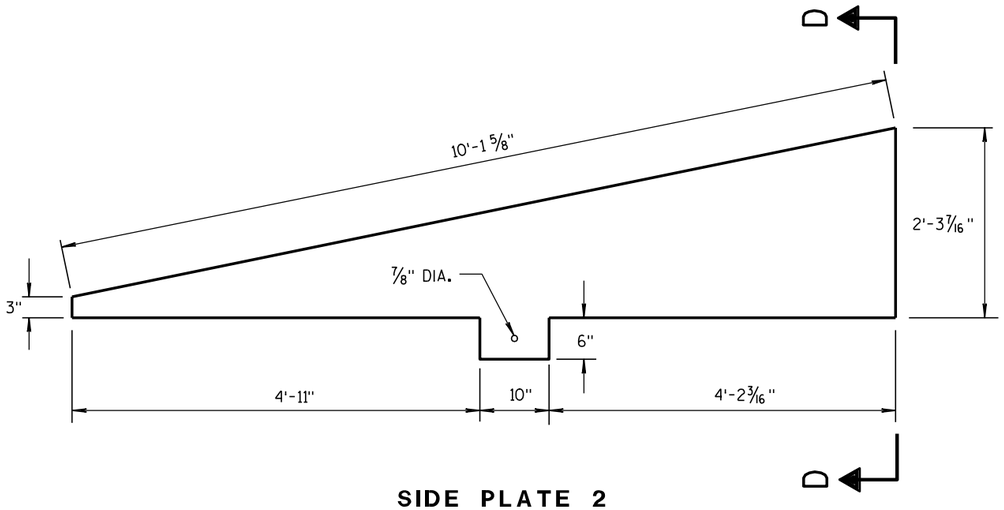
CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"

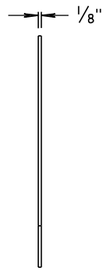
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

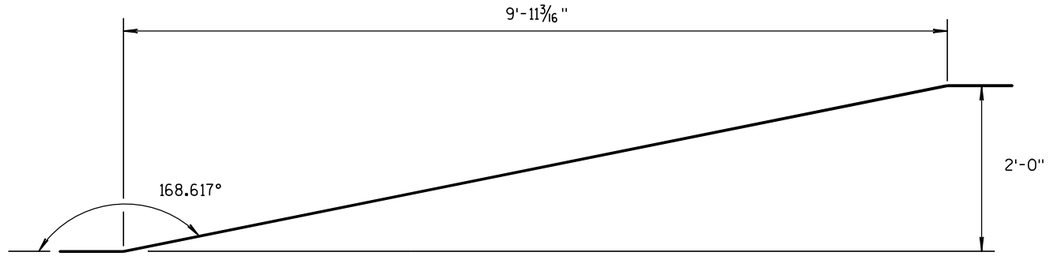
S.D.D. 14 B 7-13g



SIDE PLATE 2

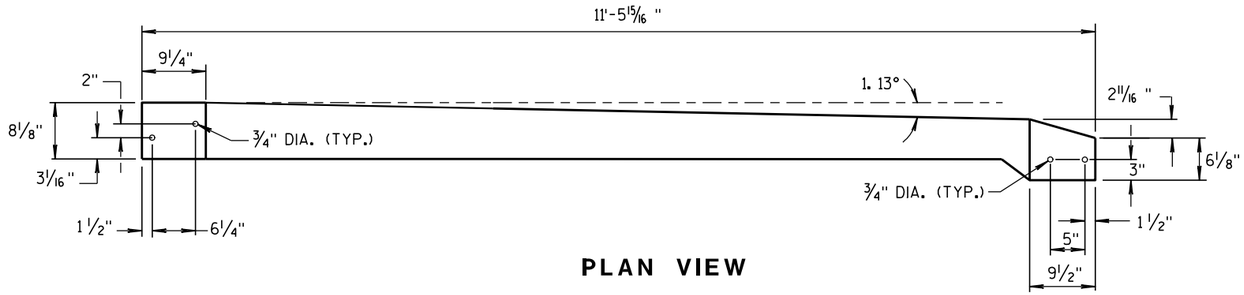


END VIEW



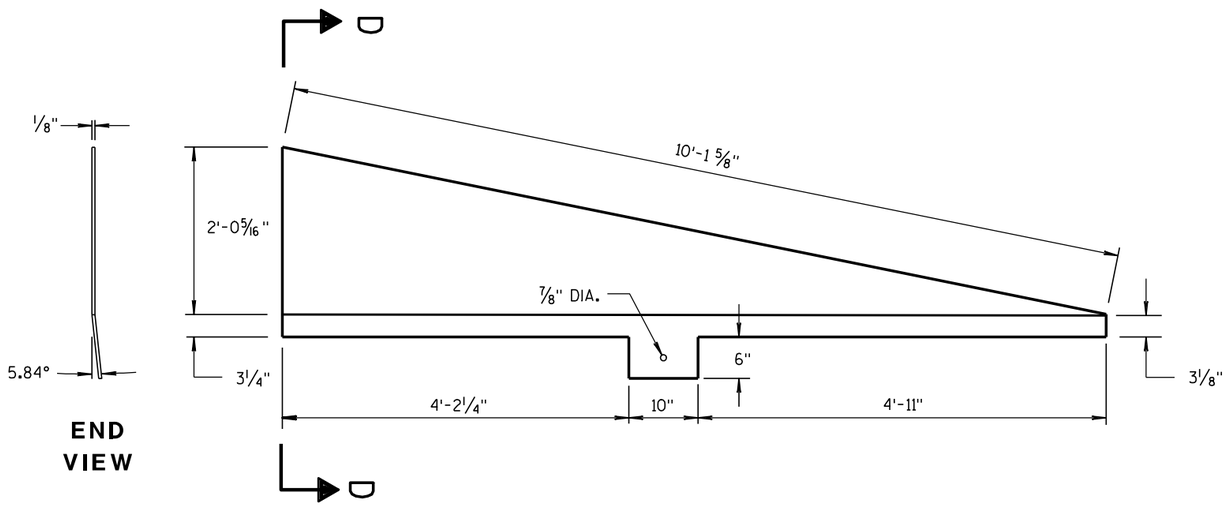
SIDE VIEW

TOP PLATE



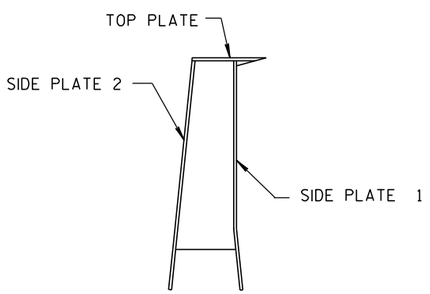
PLAN VIEW

TOP PLATE



END VIEW

SIDE PLATE 1



SECTION D-D

CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

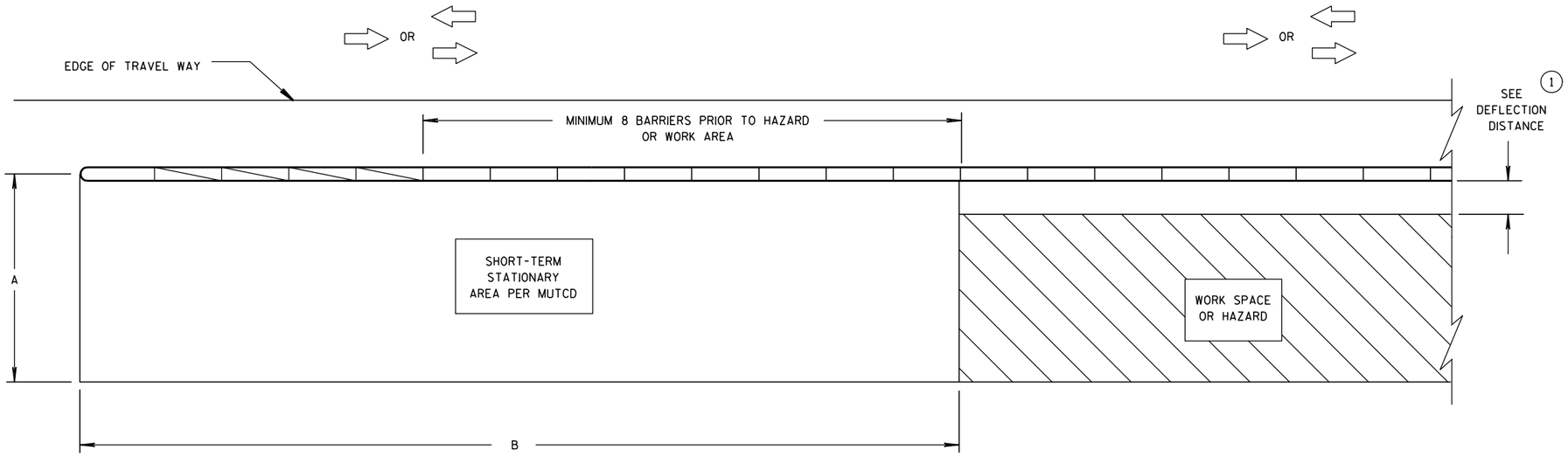
APPROVED
8/31/2012 — DATE
/S/ Jerry H. ---- — ROADWAY STANDARDS ENGINEER
564
ENT
FHWA

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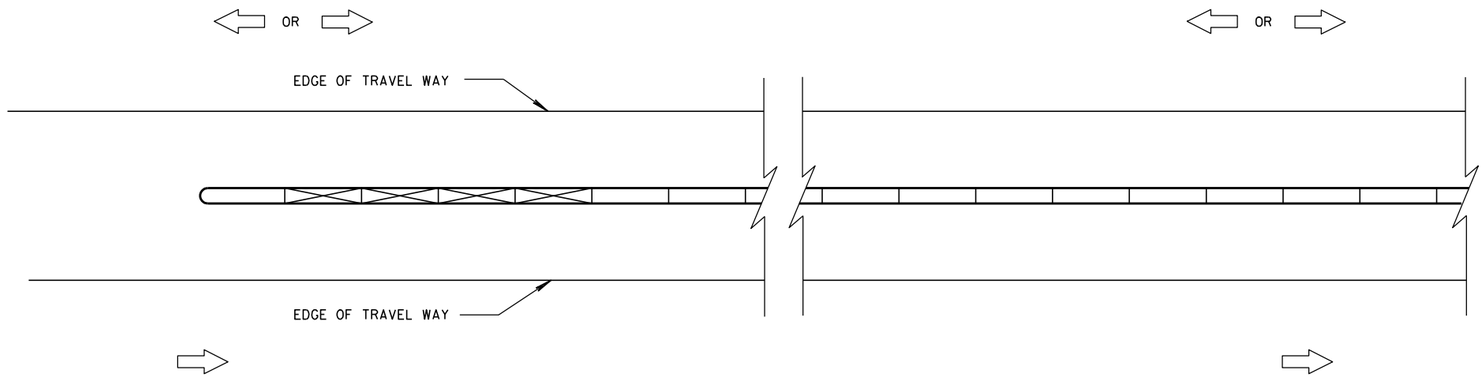
S.D.D. 14 B 7-13h

6

S.D.D. 14 B 7-13h



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER



CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER INSTALLATION FOR TRAFFIC ON BOTH SIDES 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

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.

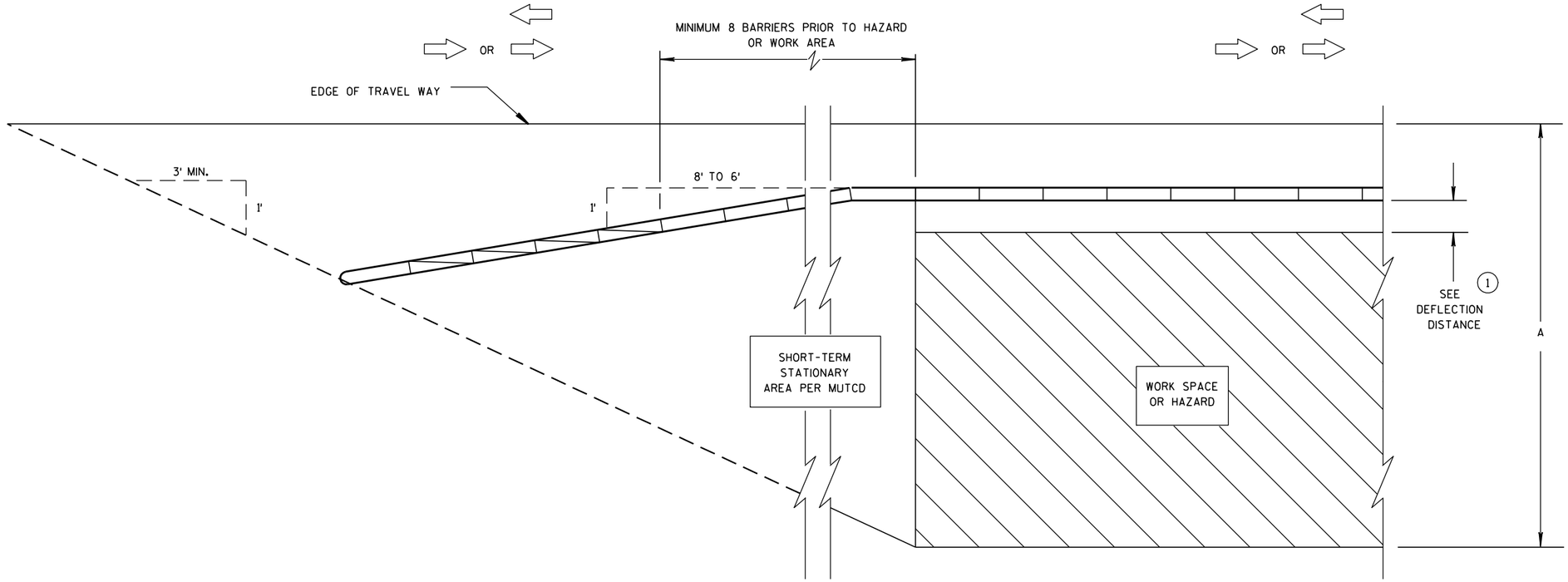
(2) VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

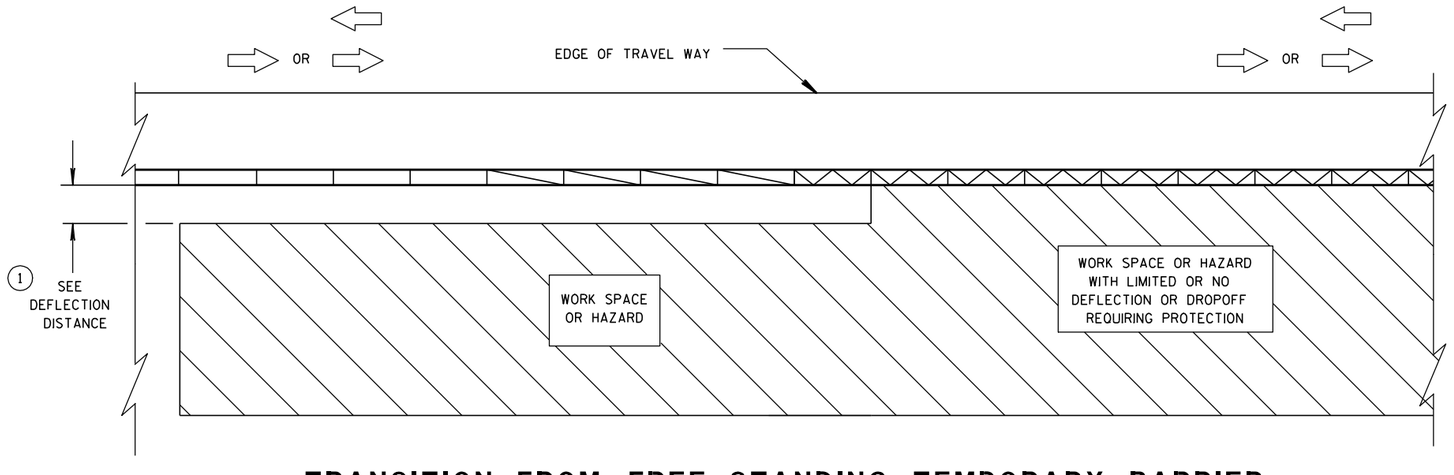
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

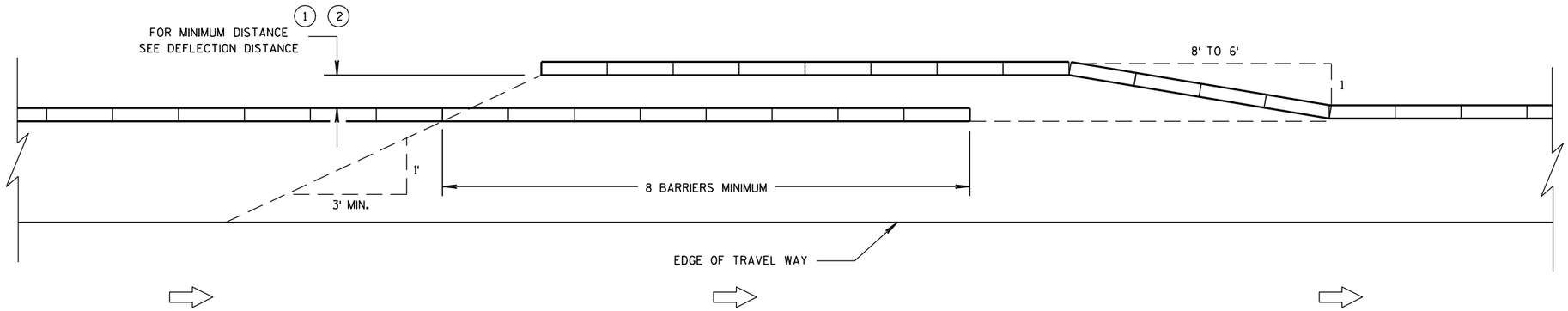
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

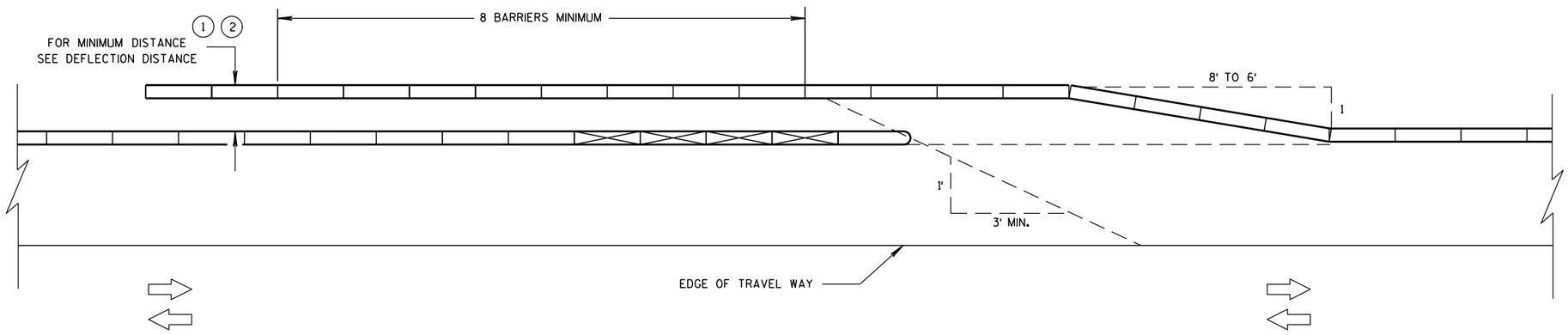
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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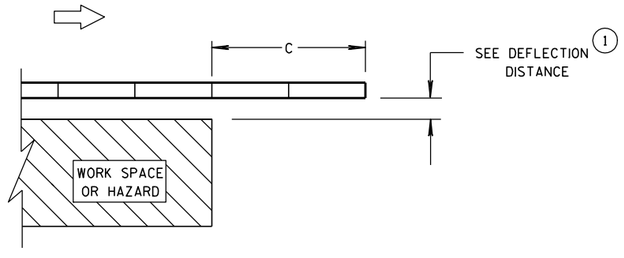
S.D.D. 14 B 8-1b



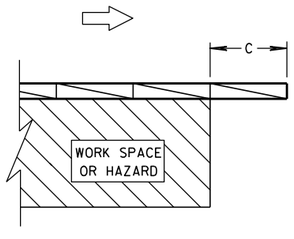
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



ENDING TEMPORARY BARRIER DOWNSTREAM - UNANCHORED



ENDING TEMPORARY BARRIER DOWNSTREAM - ANCHORED

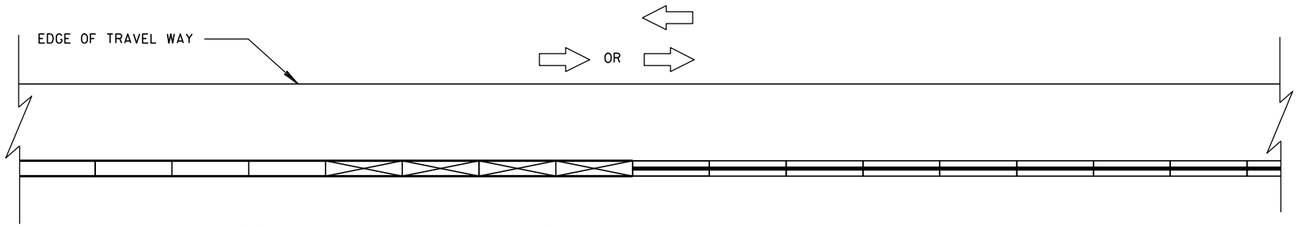
LEGEND

- 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

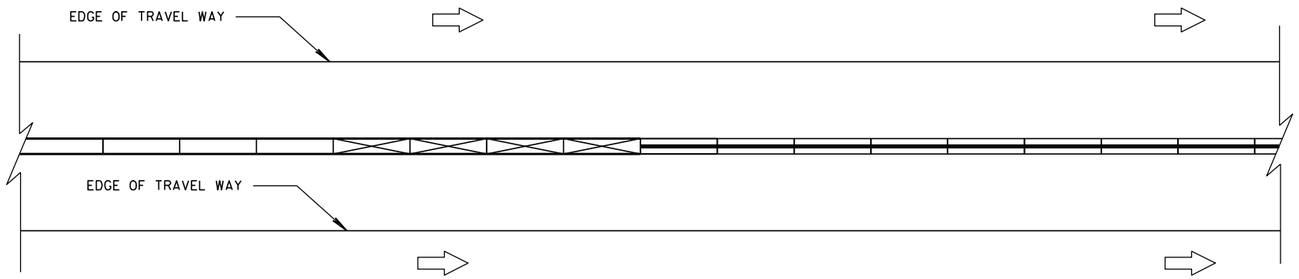
CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
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

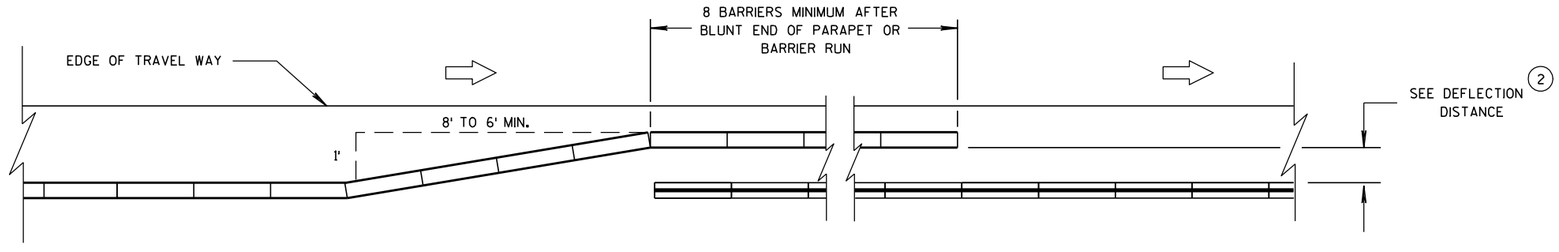
SEE FREE STANDING TRANSITION
TO TIED-DOWN SYSTEM DETAILS

SEE BI-DIRECTIONAL TRANSITION
TO TIED-DOWN SYSTEM DETAILS

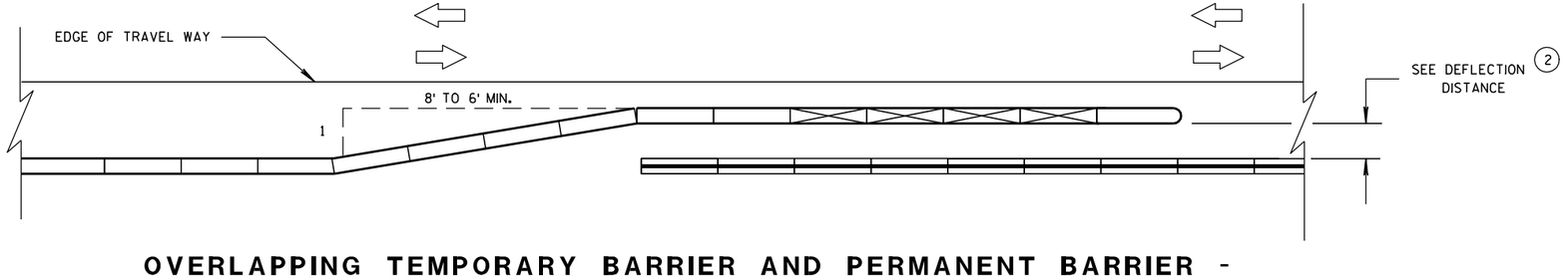
3 PINS PLACED ON
TRAFFIC SIDE OF BARRIER

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 TRANSPO...

6
S.D.D. 14 B 8-1d

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

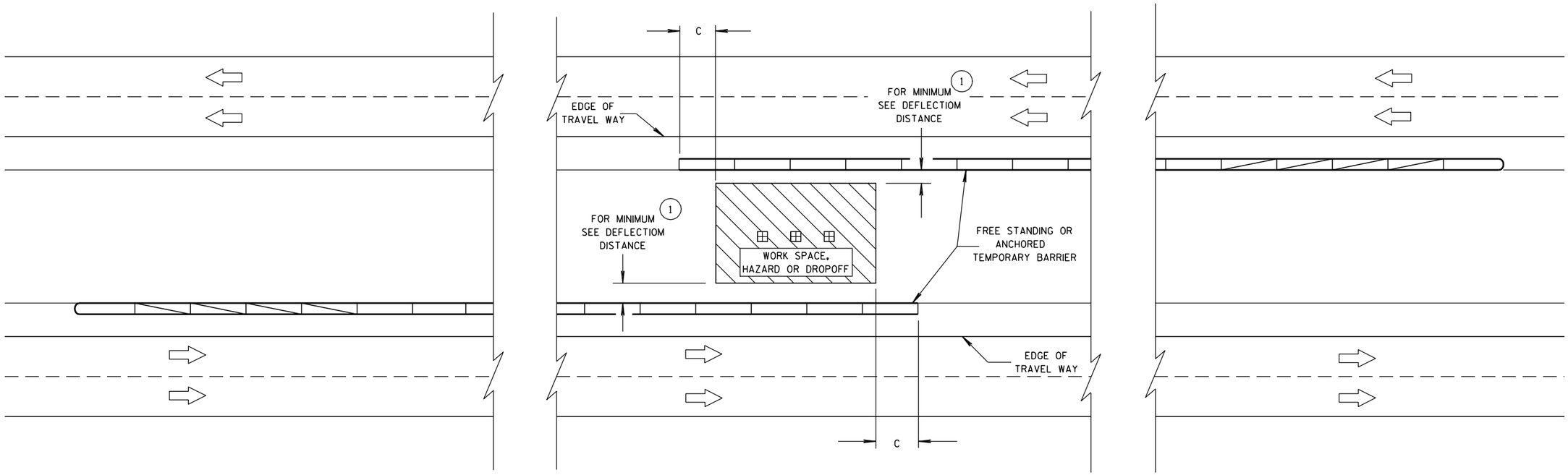
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER

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

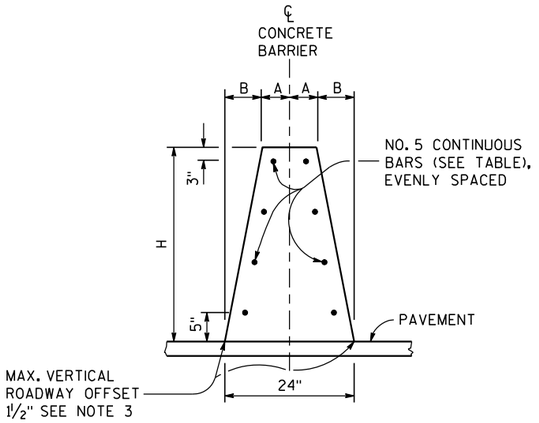
FHWA

6

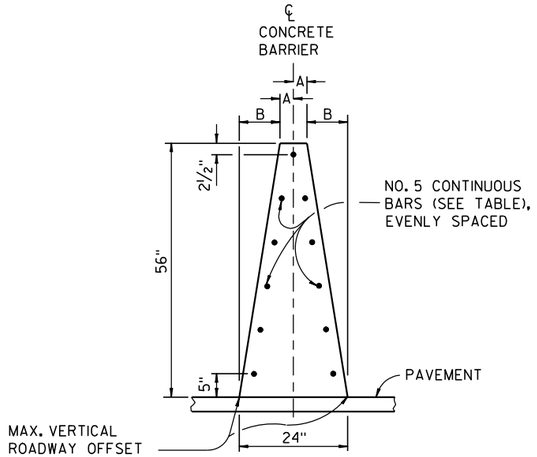
S.D.D. 14 B 8-1e

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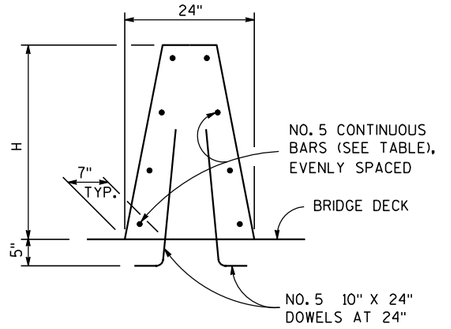
S.D.D. 14 B 8-1e



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

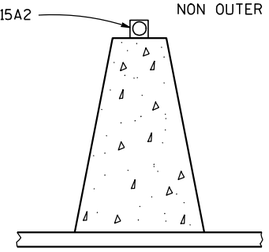
NON OUTER PARAPET APPLICATION

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.

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

SEE STANDARD DETAIL DRAWING 15A2 FOR DELINEATOR DETAILS



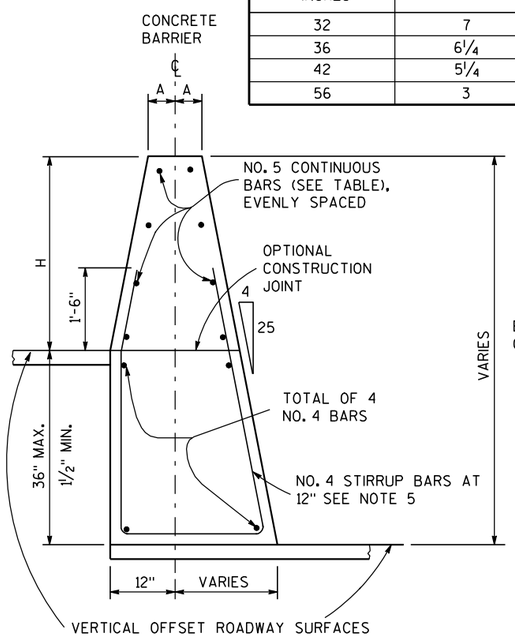
DELINEATION

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

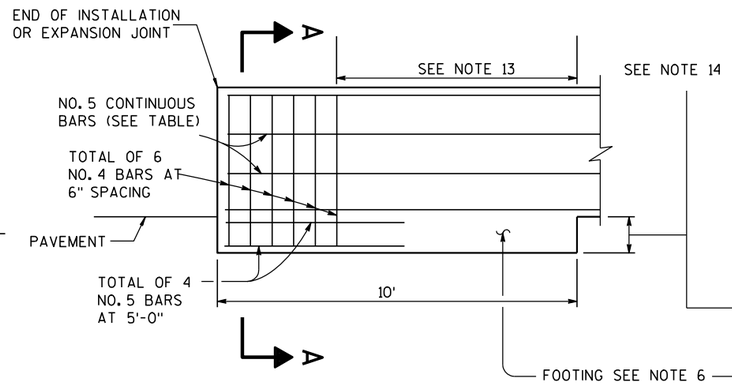
DELINEATOR SPACING ON RADIUS GREATER THAN 1000 FEET OR TANGENT SECTIONS

	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	



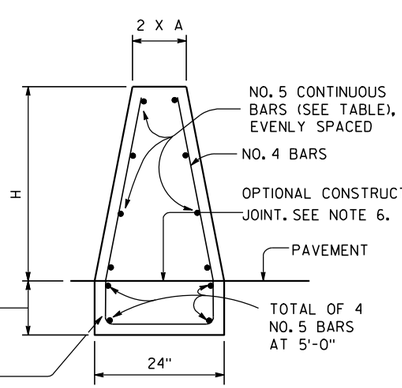
SINGLE SLOPE CONCRETE BARRIER AND RETAINING WALL (TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)

(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 TRANSPORTATION

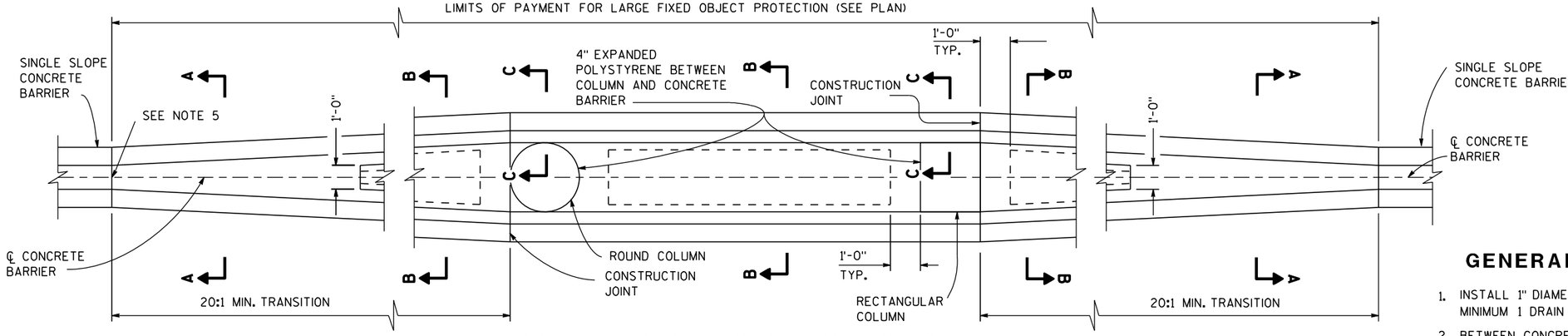
570

6

S.D.D. 14 B 32-1a

6

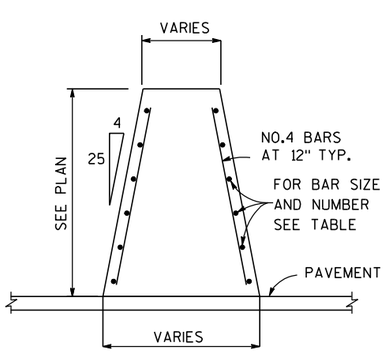
S.D.D. 14 B 32-1a



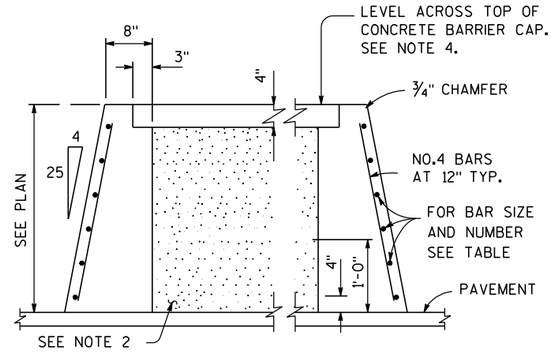
LARGE FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56

GENERAL NOTES

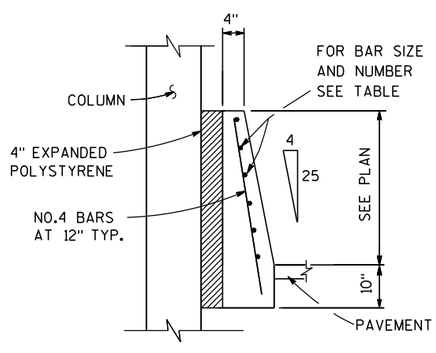
1. INSTALL 1" DIAMETER DRAIN PIPE EVERY 20' OF CROSS SECTION B-B. MINIMUM 1 DRAIN PER CAVITY.
2. BETWEEN CONCRETE BARRIER WALLS FILL WITH GRANULAR BACKFILL GRADE 2
3. REINFORCING STEEL SHALL EXTEND CONTINUOUS THROUGH CONSTRUCTION JOINTS.
4. ADJUST HEIGHT OF CONCRETE BARRIER WALL ON LOW SIDE OF OFFSET 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.



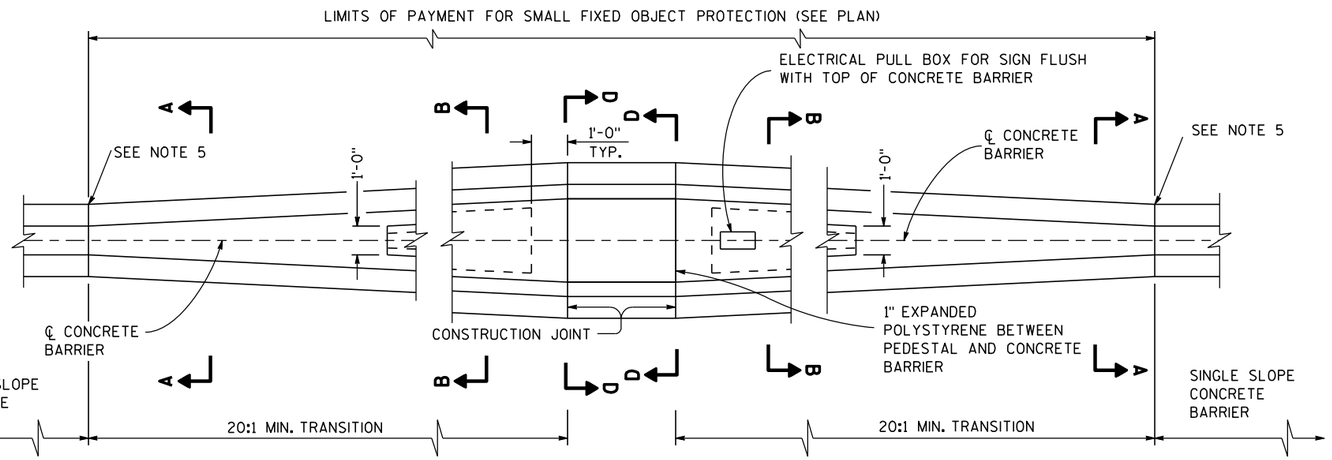
SECTION A-A



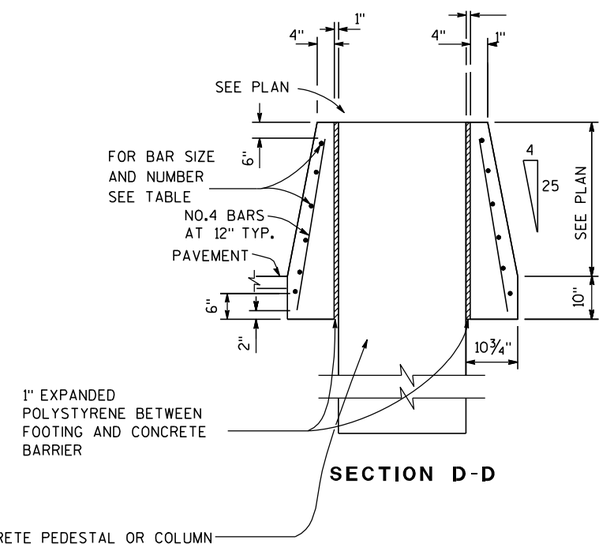
SECTION B-B



SECTION C-C



SMALL FIXED OBJECTS PROTECTION
TYPE S32, TYPE S36, TYPE S42, TYPE S56



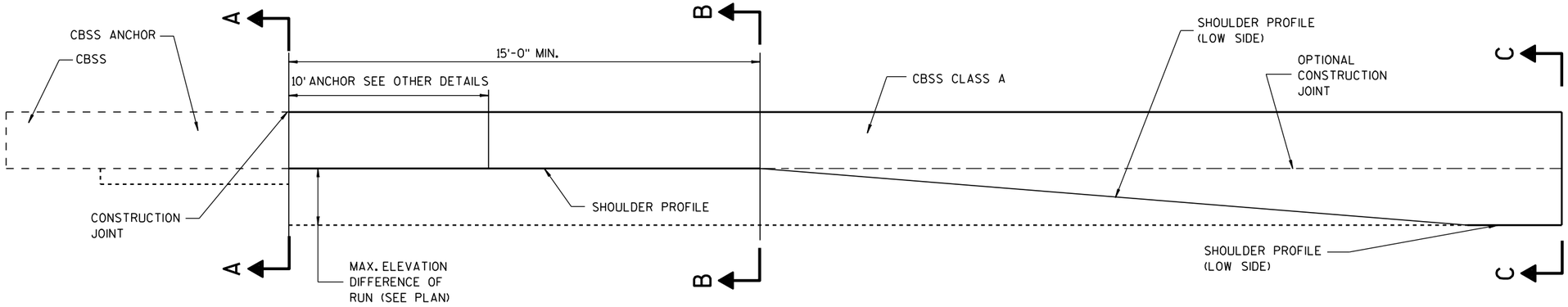
SECTION D-D

BARRIER HEIGHT H INCHES	BAR SIZE	NUMBER OF BARS EACH
32	4	6
36	4	6
42	5	6
56	5	9

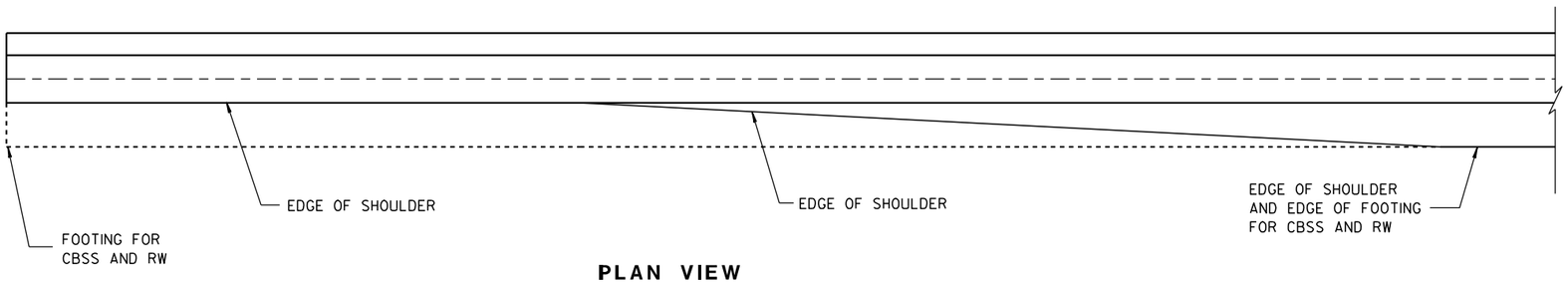
CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

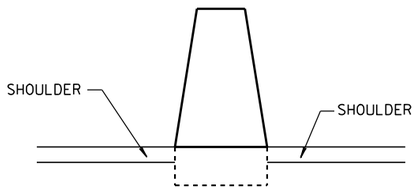
6
S.D.D. 14 B 32-1b



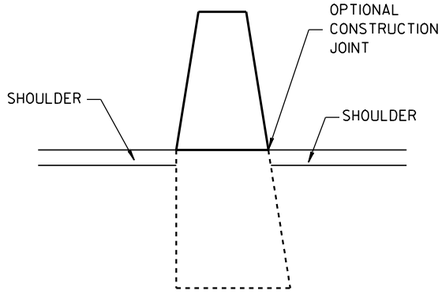
ELEVATION VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



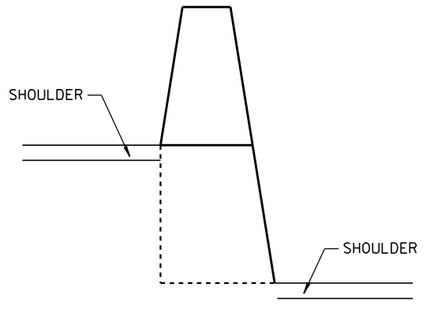
PLAN VIEW
TRANSITION TO CBSS CLASS A
(TYPE S32A, TYPE S36A, TYPE S42A, TYPE S56A)



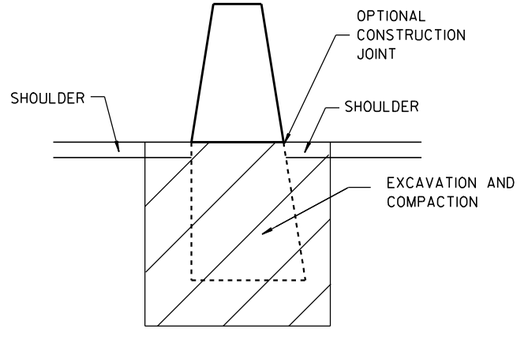
SECTION A-A



SECTION B-B



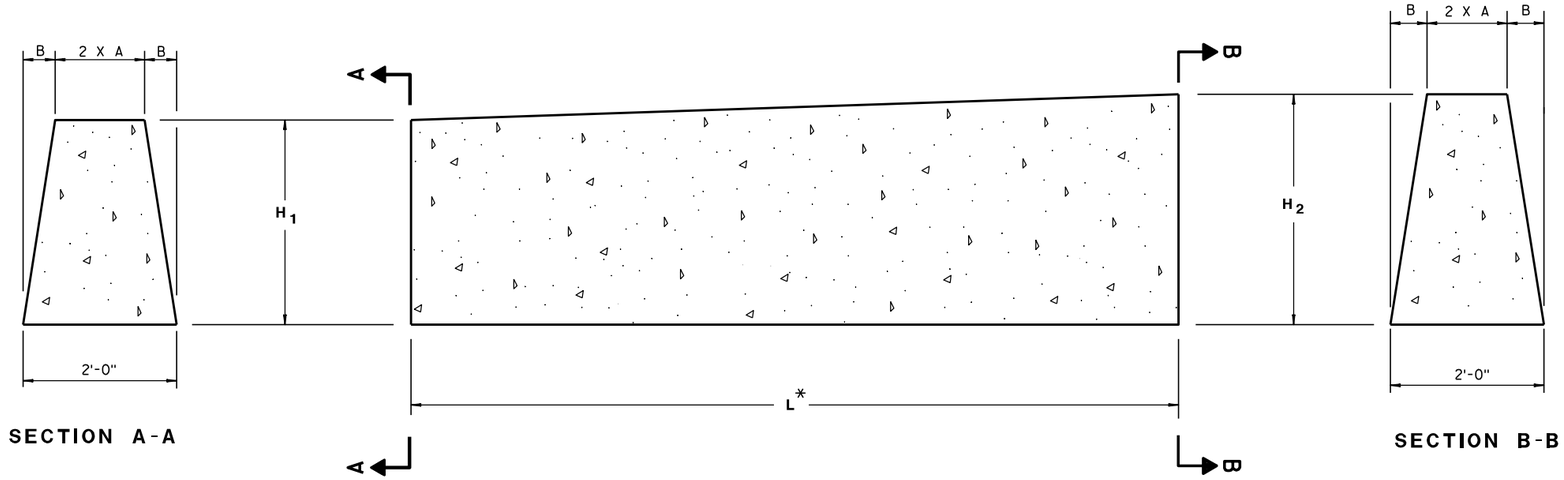
SECTION C-C



CONCRETE BARRIER SINGLE SLOPE (CBSS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 14 B 32-1c



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

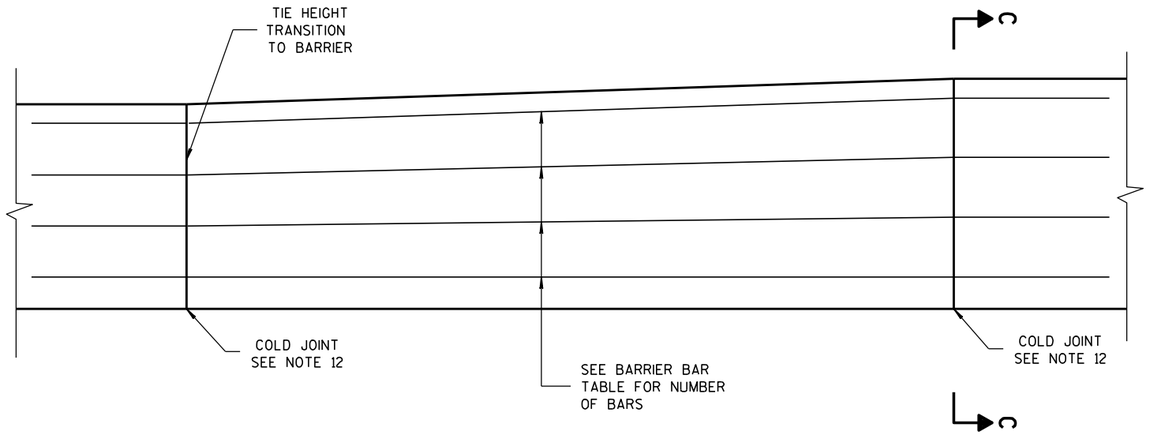
MULTIPLE HEIGHT TRANSITIONS MAY BE USED IN SEQUENCE TO GET TO APPROPRIATE HEIGHT.

USE COLD JOINT TO CONNECT MULTIPLE HEIGHT TRANSITIONS.

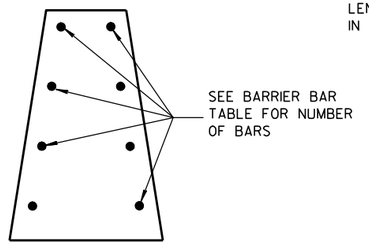
BARRIER BARS

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

6-3-2010
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

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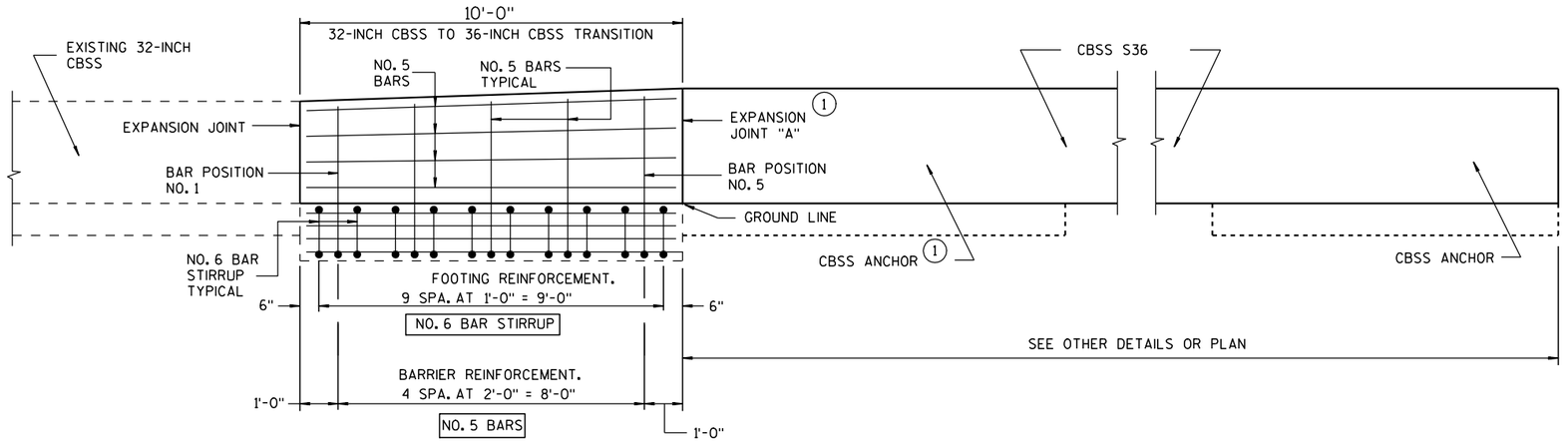
FHWA

6

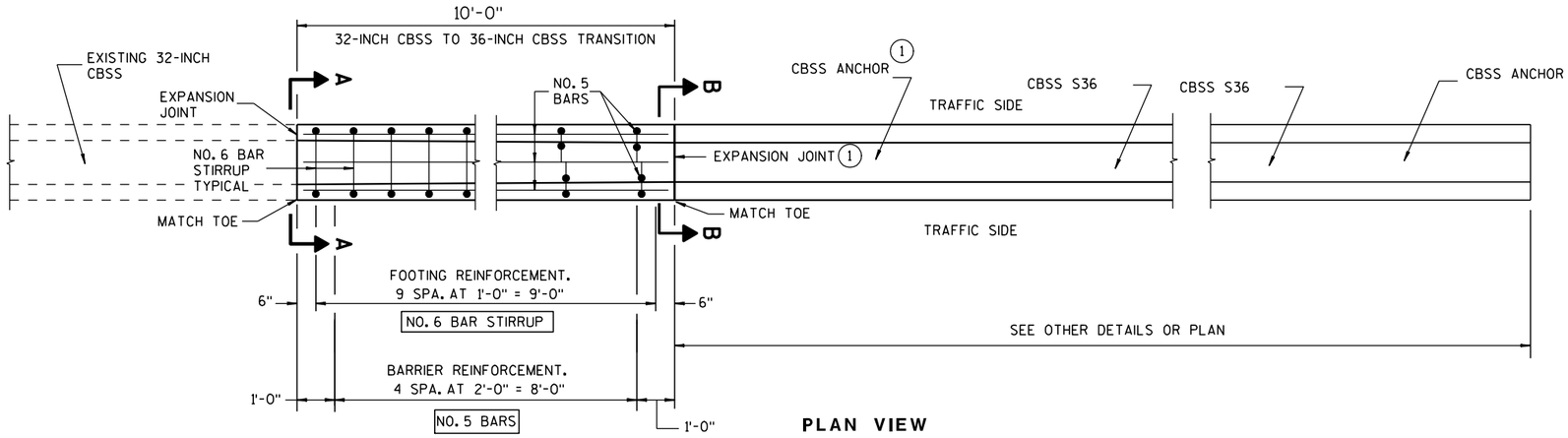
S.D.D. 14 B 32-1d

6

S.D.D. 14 B 32-1d



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.

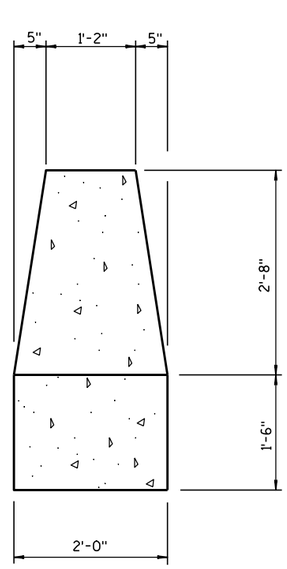
4000 PSICONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE $\frac{3}{4}$" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

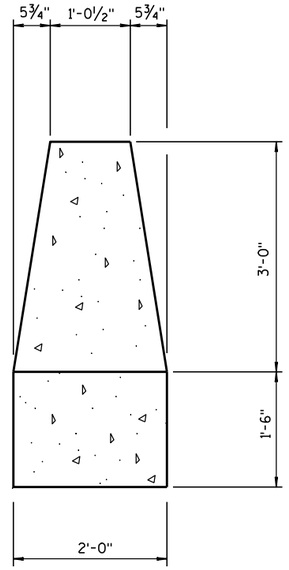
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

2" CLEAR COVER TYPICAL.

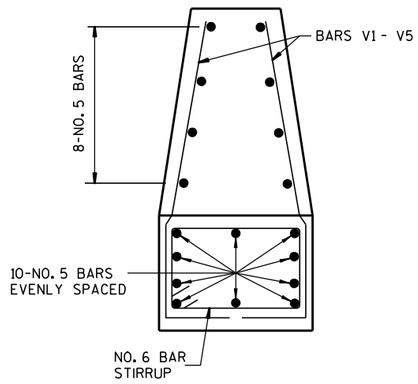
(1) EXPANSION JOINT "A" MAY BE REPLACED WITH A COLD-JOINT PROVIDED THAT 3 FEET OF LAP OF LONGITUDINAL STEEL IS PROVIDED. IF COLD-JOINT IS USED ANCHOR NOT REQUIRED.



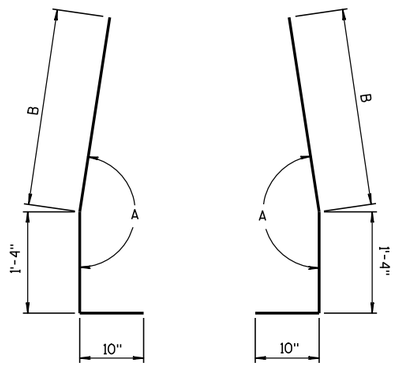
SECTION A-A



SECTION B-B



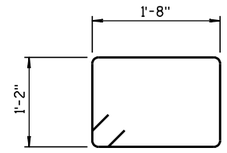
BAR DETAIL
BAR POSITION NO. 1 - NO. 5



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

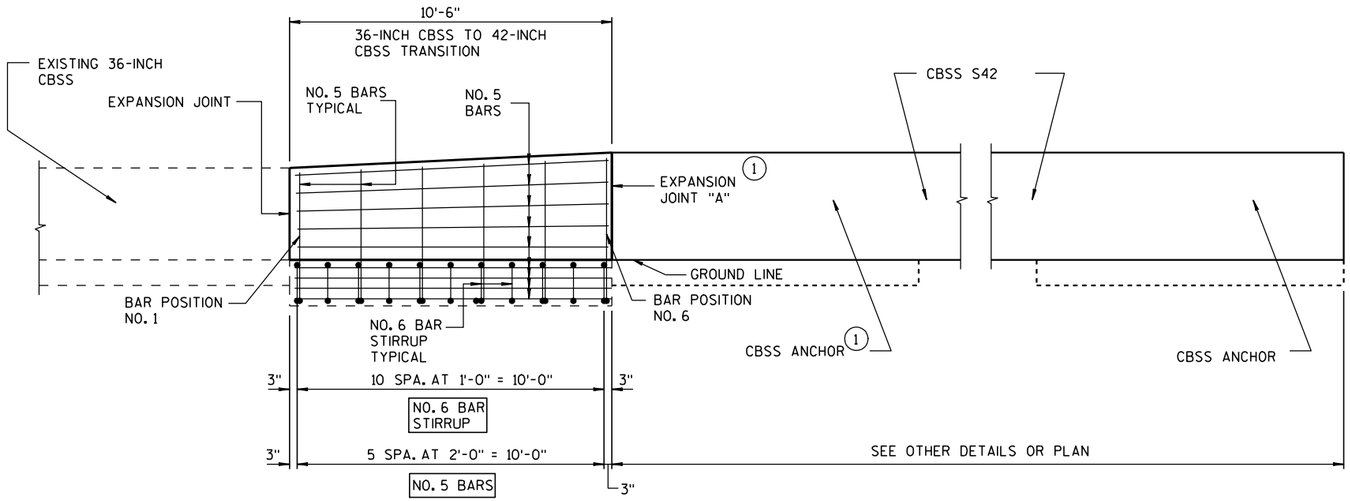
APPROVED
6-3-2010
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS I574 ENGINEER
FHWA

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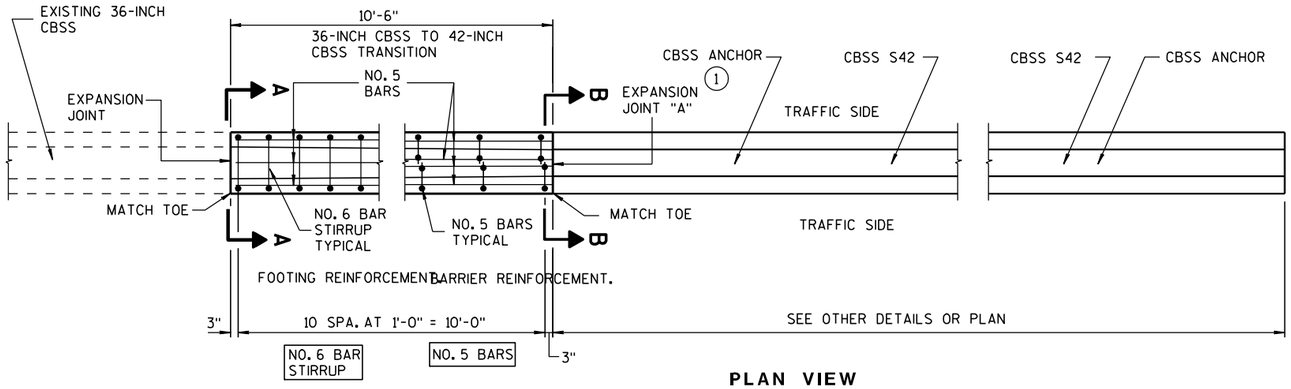
S.D.D. 14 B 39-1a

6

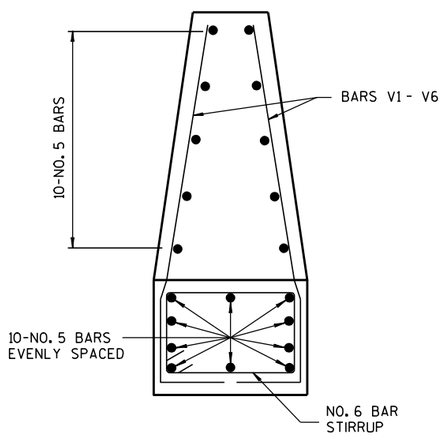
S.D.D. 14 B 39-1a



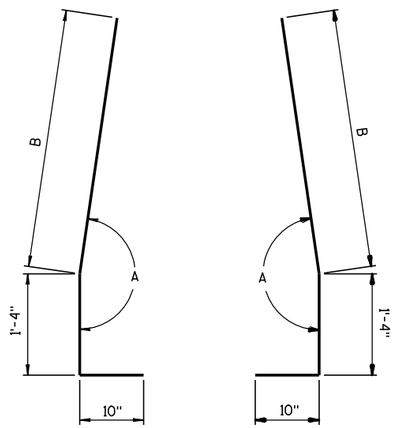
ELEVATION VIEW



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.

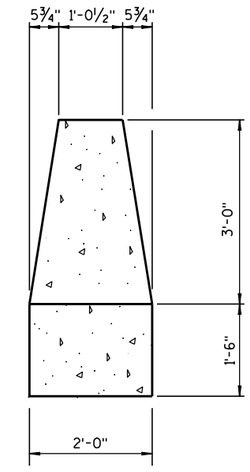
4000 PSI CONCRETE AIR ENTRAINMENT PER STANDARD SPECIFICATIONS 501.

USE ¾" BEVEL OR 1" RADIUS ON ALL EXPOSED SHARP EDGES UNLESS NOTED OTHERWISE.

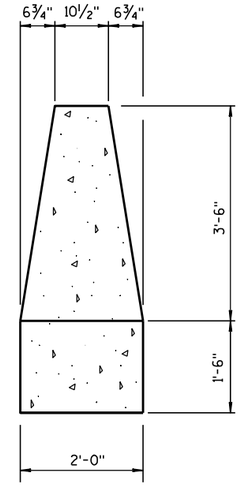
THE NUMBER IN BAR DESIGNATION REPRESENTS THE BARS LOCATION.

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.



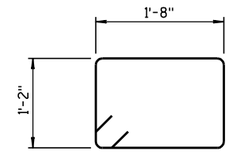
SECTION A-A



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

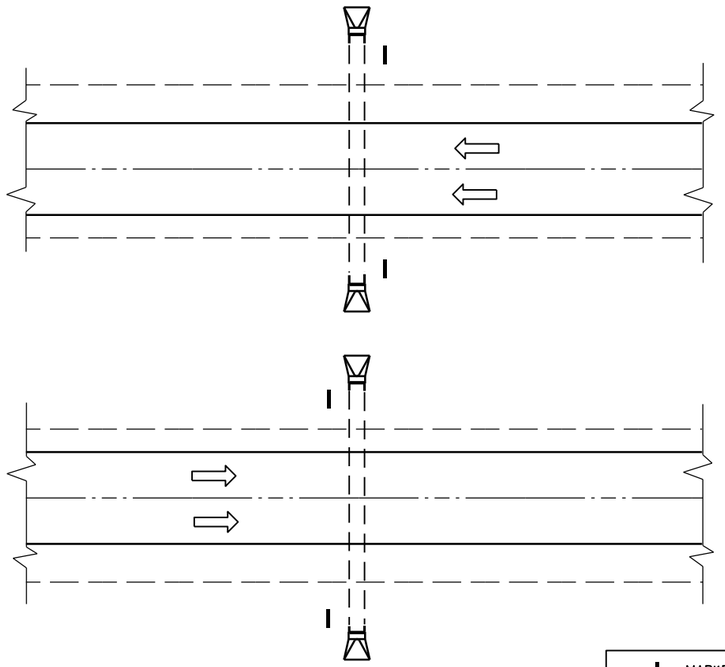
APPROVED
6-3-2010
DATE
/S/ Jerry H. Zoo
ROADWAY STANDARDS [575 ENT
ENGINEER
FHWA

6

S.D.D. 14 B 39-1c

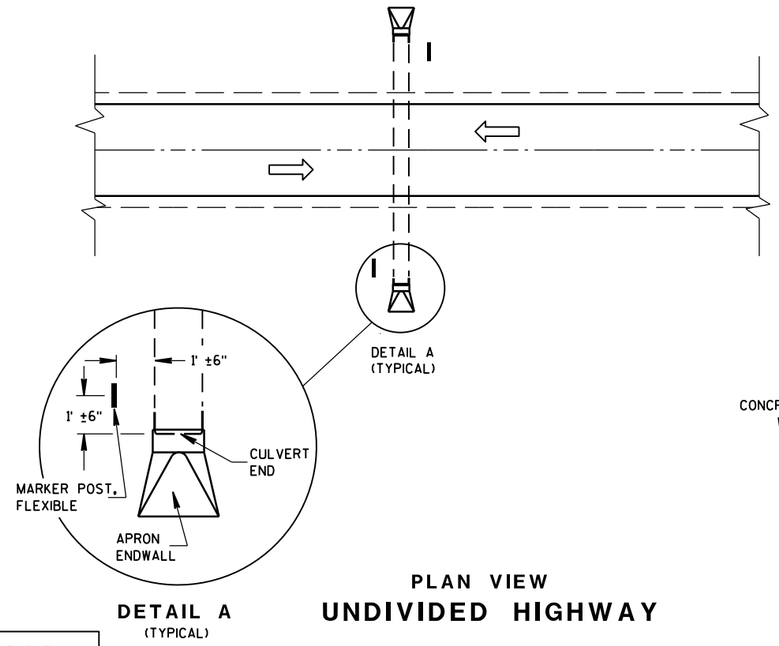
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S.D.D. 14 B 39-1c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

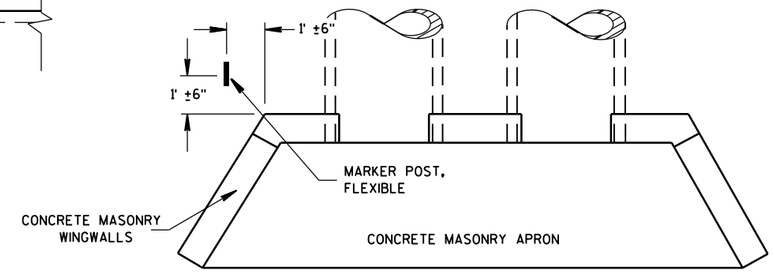
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

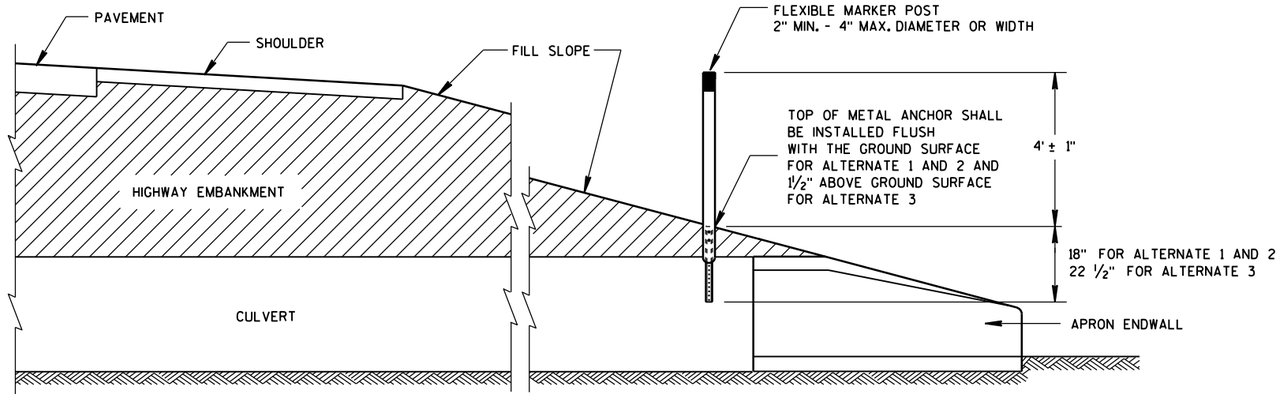
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



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

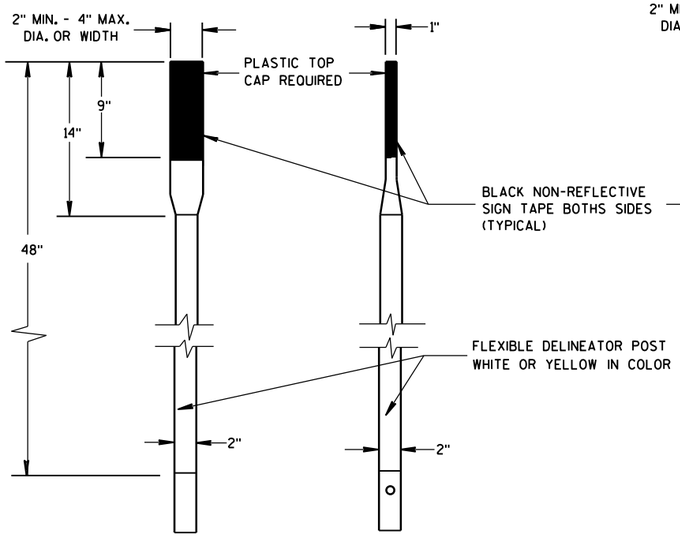
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

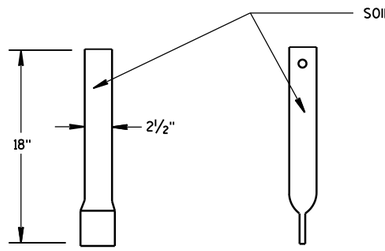
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S.D.D. 15 A 3-2a

6

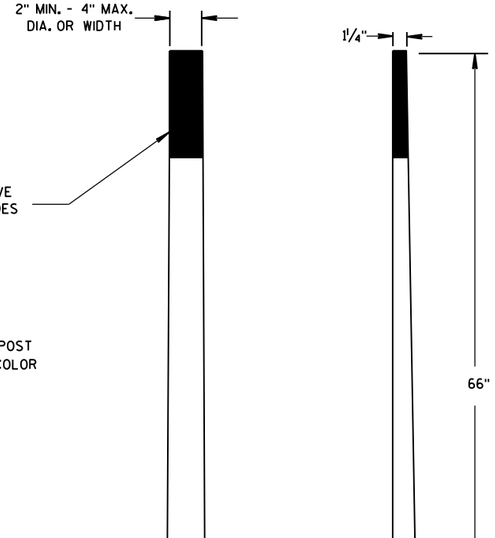
S.D.D. 15 A 3-2a





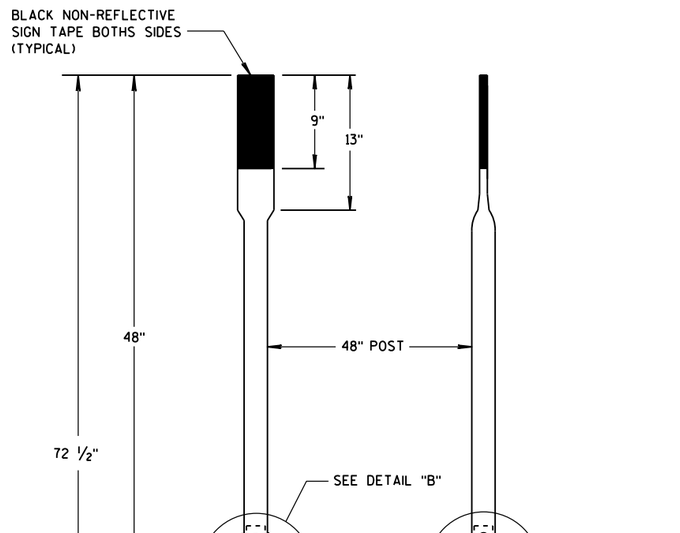
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

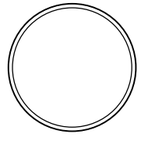
ALTERNATE 2



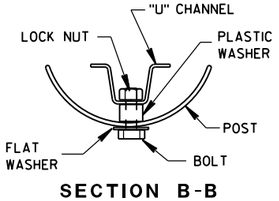
FRONT VIEW SIDE VIEW

ALTERNATE 3

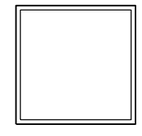
FLEXIBLE MARKER POSTS



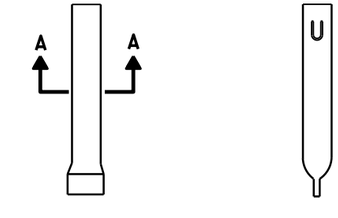
SECTION A-A



SECTION B-B

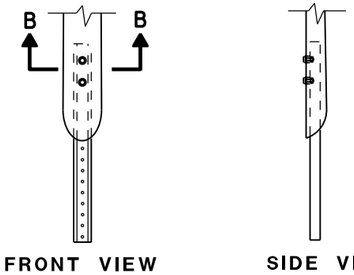


SECTION C-C



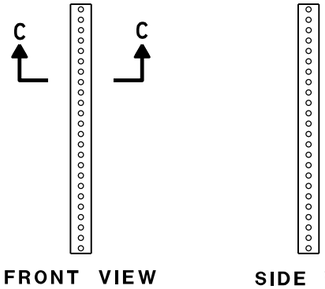
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

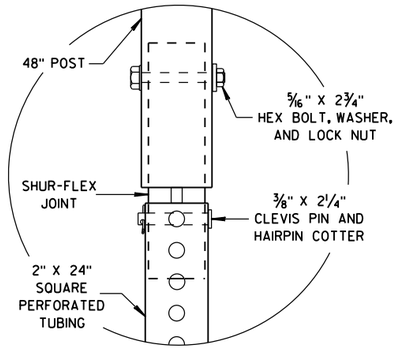
ALTERNATE 2



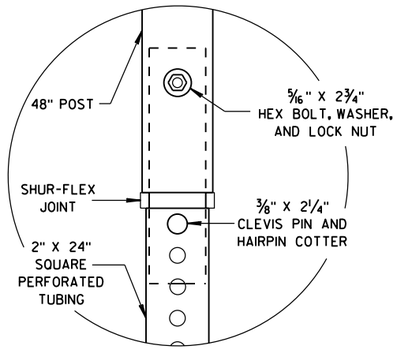
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

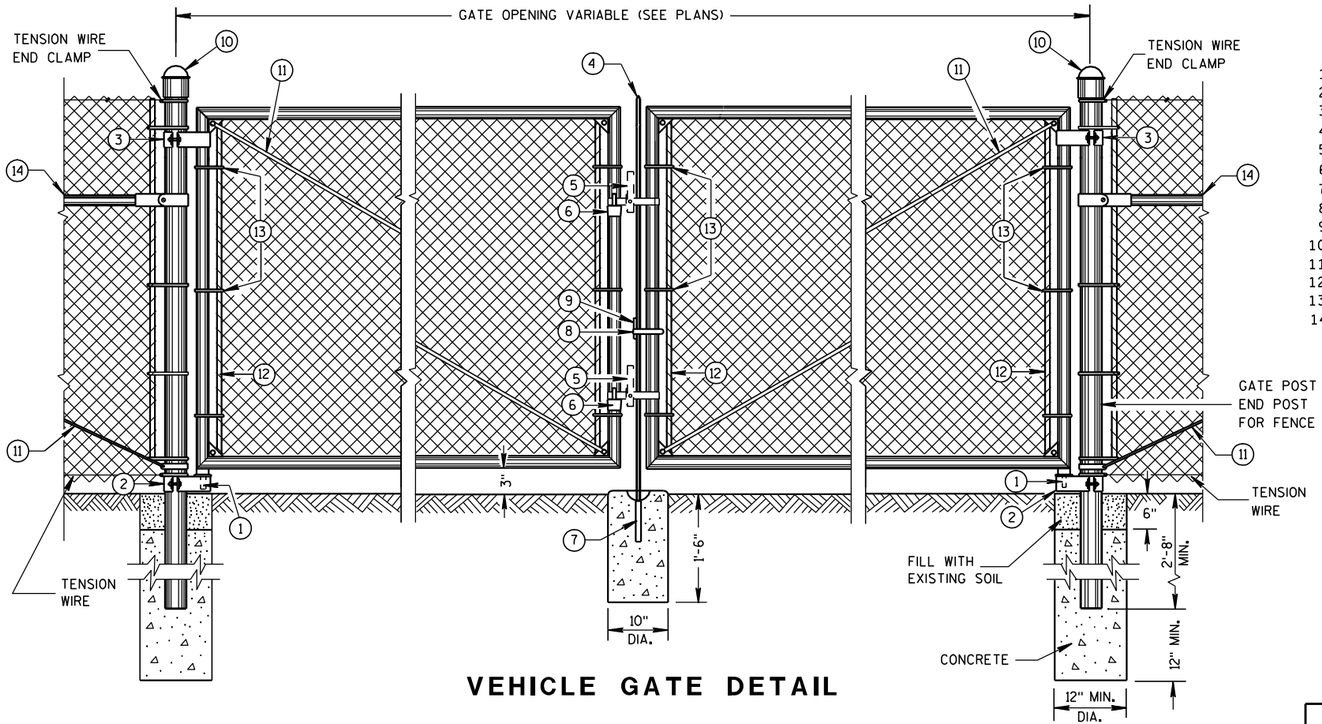
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
577
IGN
FHWA

6

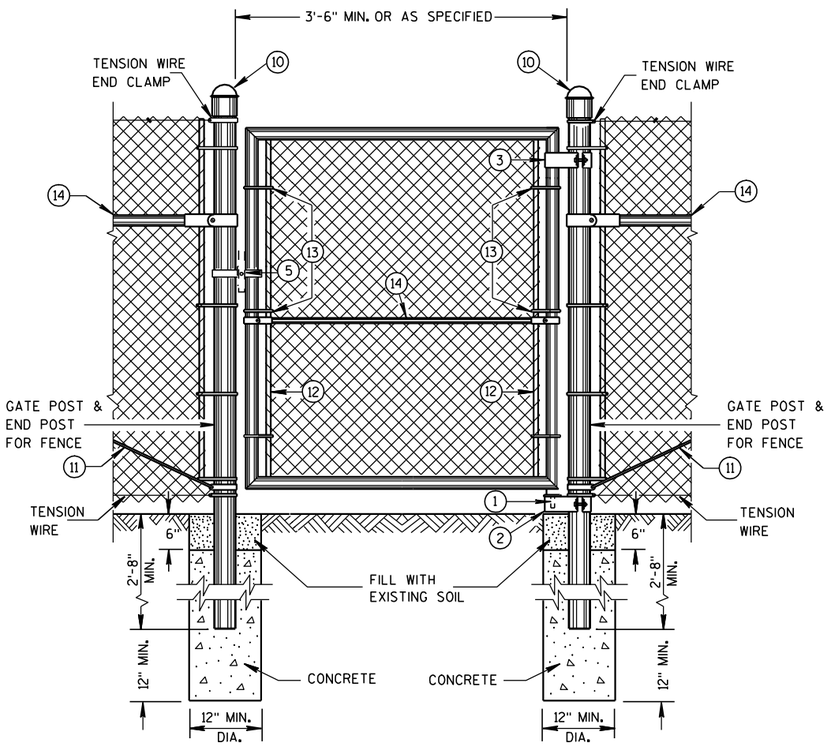
S.D.D. 15 A 3-2b

6

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

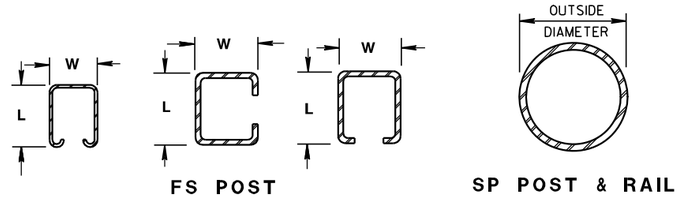
FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

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

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

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

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

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

BRACE RAIL TYPES

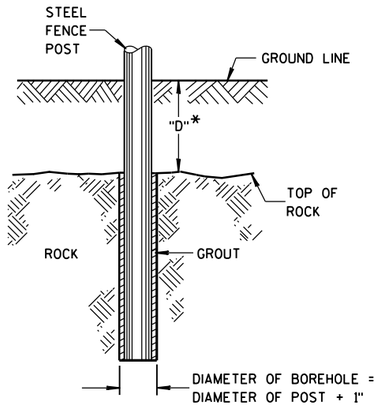
USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

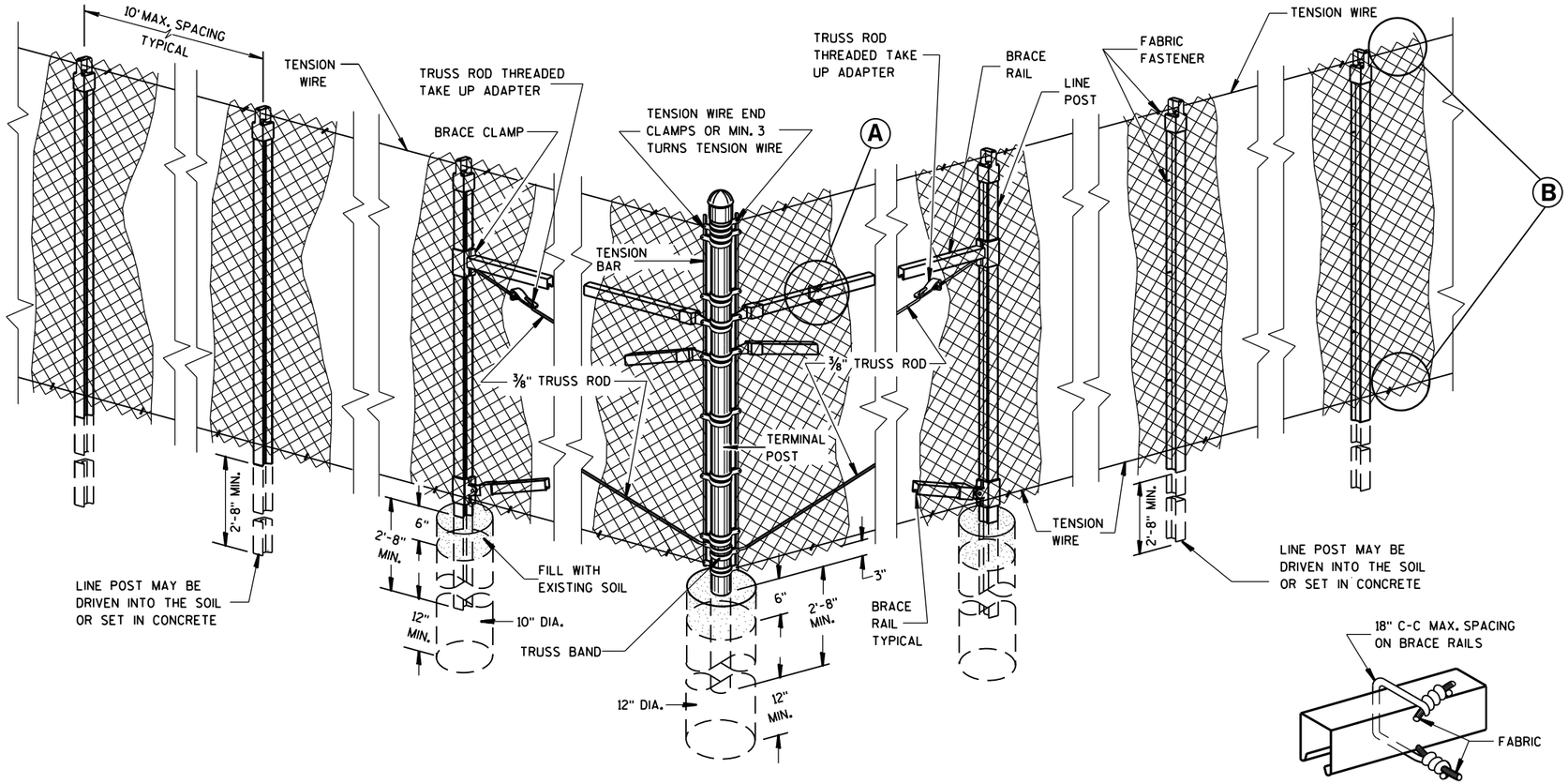
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
S.D.D. 15 B 3-12a

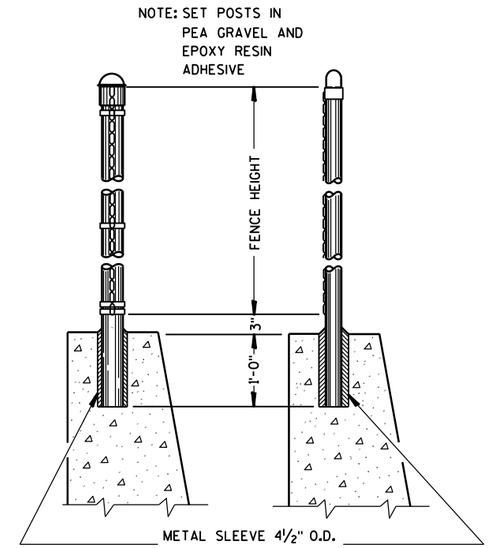


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST

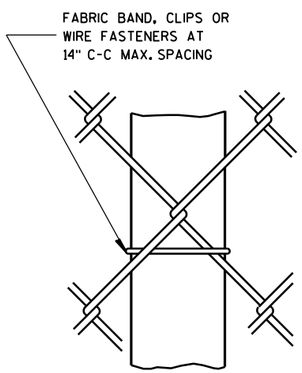


END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



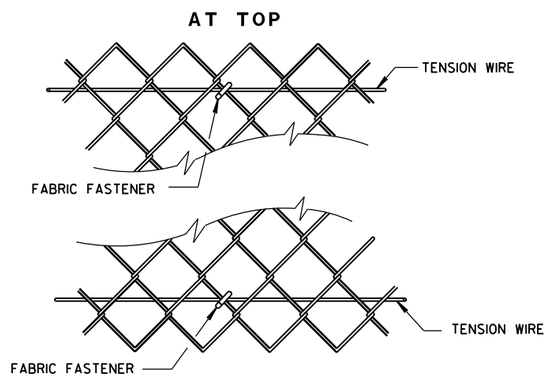
END POST & CORNER POST LINE POST

DETAILS OF FENCE ON WALL



LINE POST

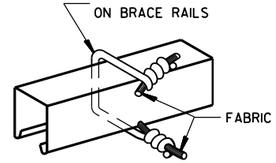
FABRIC FASTENER



AT BOTTOM

SELVAGES

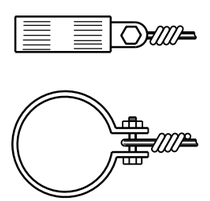
Ⓑ



BRACE RAIL

FABRIC FASTENER

Ⓐ



TENSION WIRE END CLAMP

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/19/2010 DATE
FHWA

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

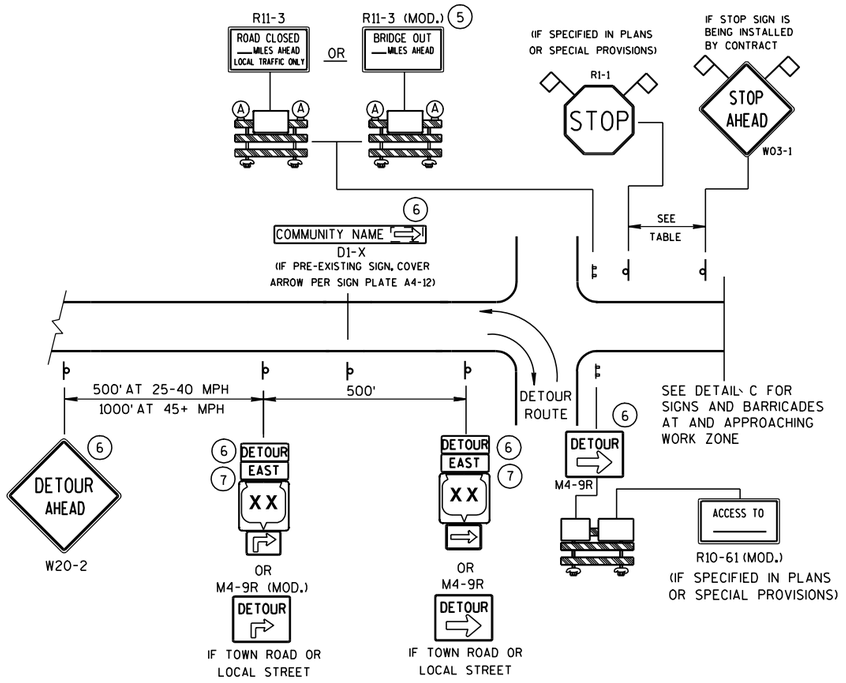
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S.D.D. 15 B 3-12b

6

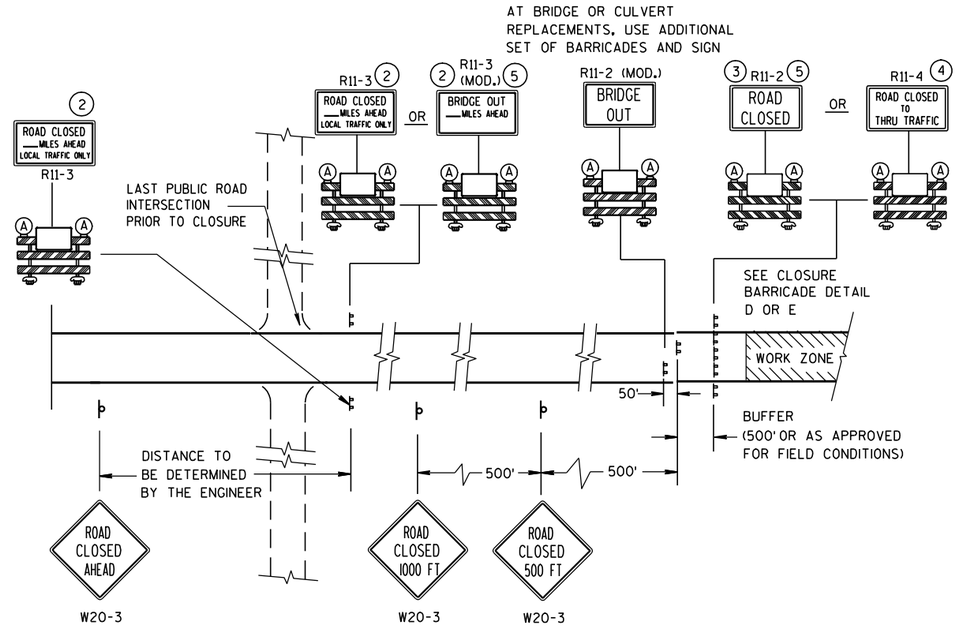
S.D.D. 15 B 3-12b



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

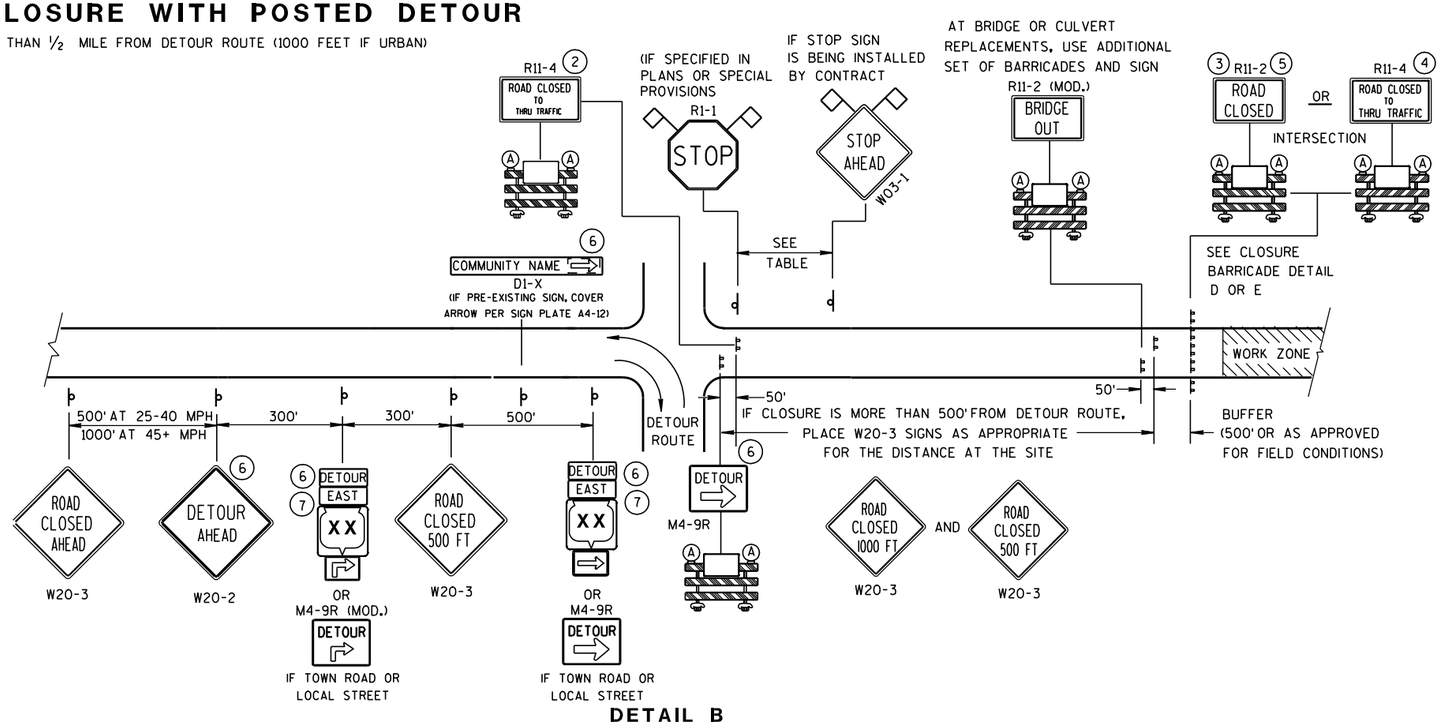


DETAIL C

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 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦



DETAIL B

MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

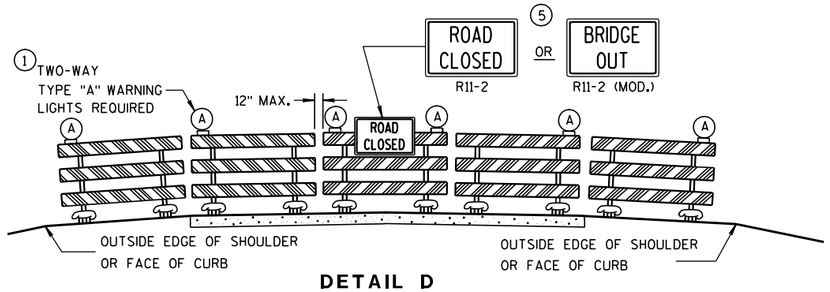
- POST MOUNTED SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1; M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

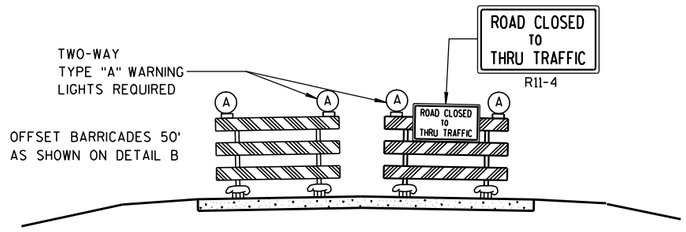
S.D.D. 15 C 2-4a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-4a 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.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

"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 AND 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

APPROVED

9/16/03
DATE

/S/ Thomas N. N[illegible]
CHIEF SIGNS AND MAR[illegible]INEER

FHWA

6

S.D.D. 15 C 2-4b

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.

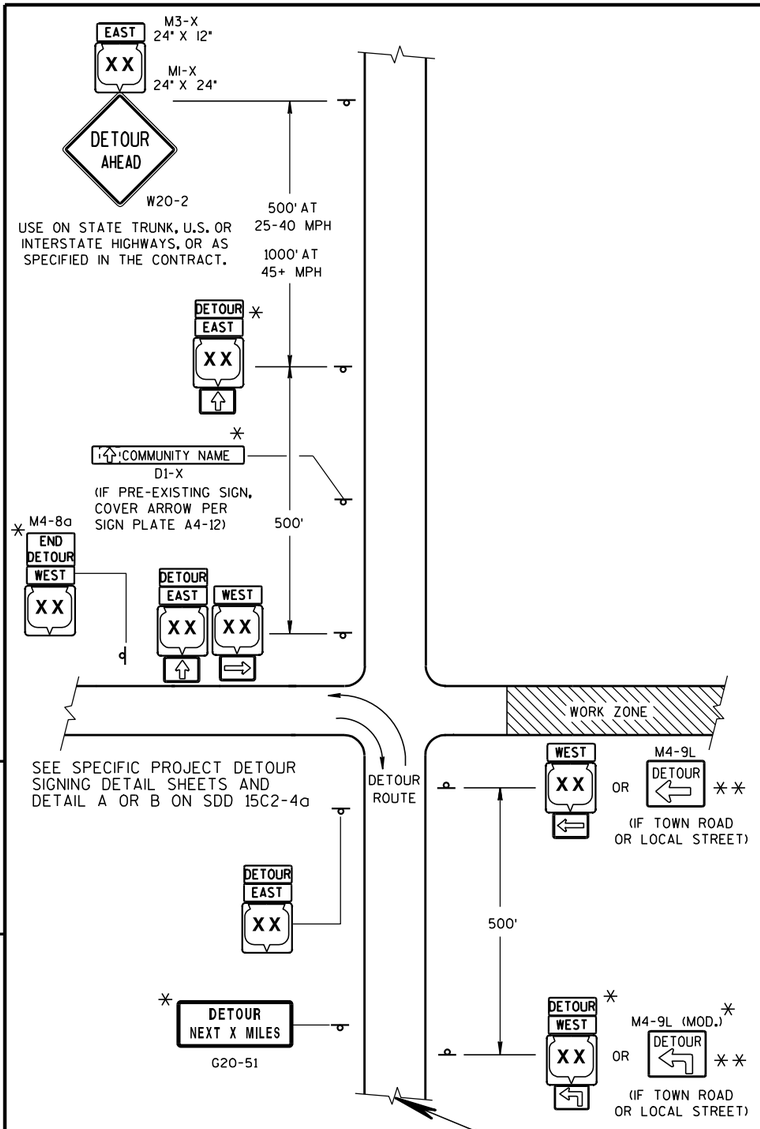
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

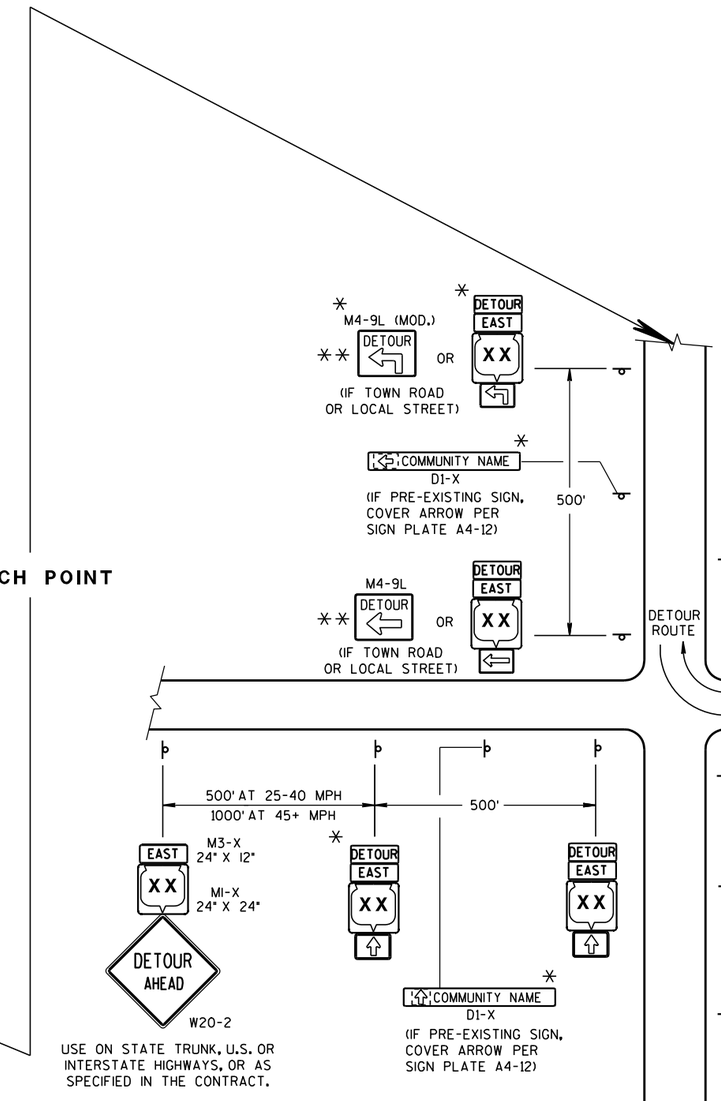
SIGN SIZES SHALL BE AS FOLLOWS:

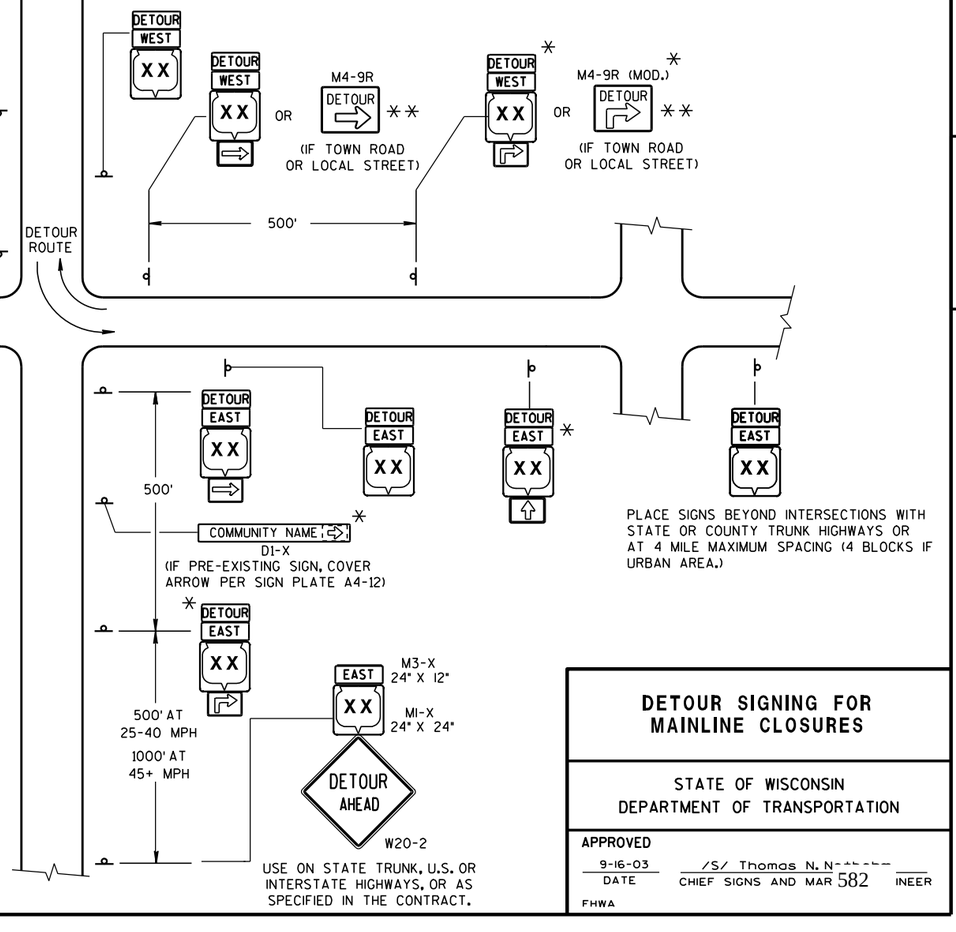
M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
M4-9 SHALL BE 30" X 24".
M4-8a SHALL BE 24" X 18".
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.







LEGEND

- POST MOUNTED SIGN
- WORK ZONE
- M4-8 / M3-X
- M1-4, M1-5A, M1-6
- M05-1, M06-1, M06-1

DETAIL F

DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

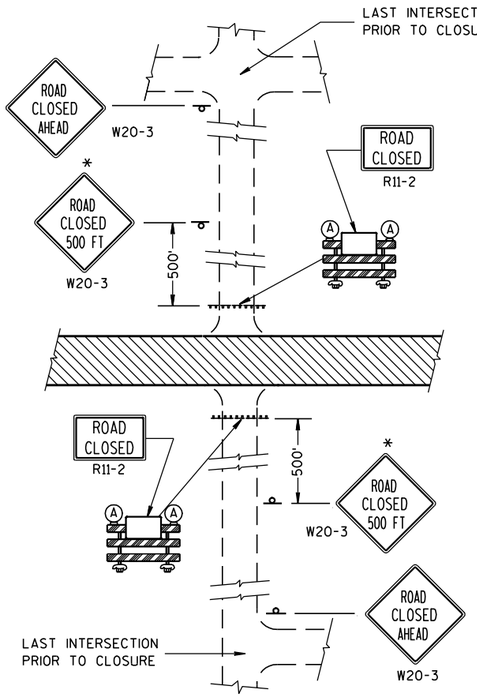
APPROVED
9-16-03 DATE
/S/ Thomas N. [illegible] CHIEF SIGNS AND MAR 582 INEER
FHWA

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S.D.D. 15 C 2-4c

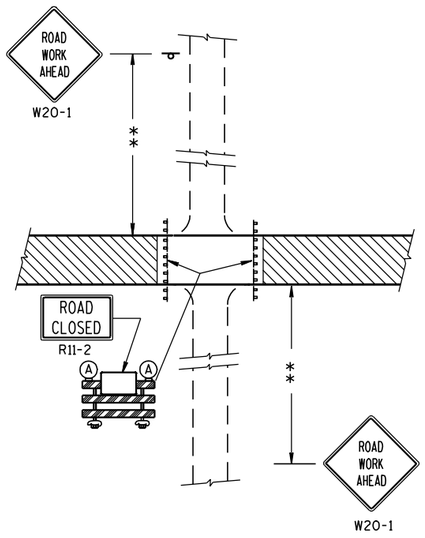
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S.D.D. 15 C 2-4c



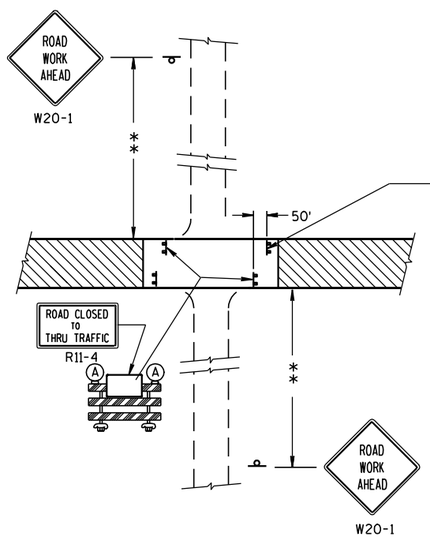
DETAIL 1

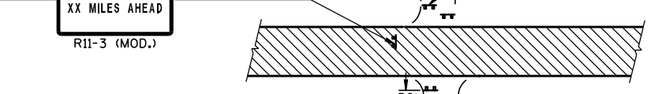
(NO ACCESS TO PROJECT)



DETAIL 2

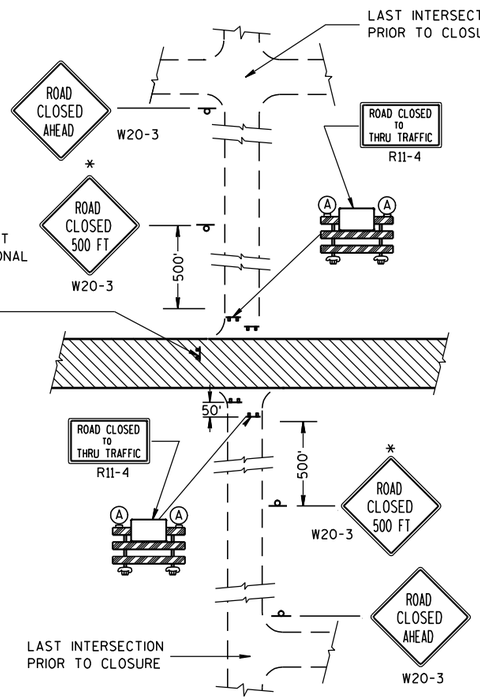
(PUBLIC CROSS-TRAFFIC MAINTAINED. NO ACCESS TO PROJECT).





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.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3 AND R11-4 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

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

- POST MOUNTED WARNING SIGN
- TYPE III BARRICADES
- (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

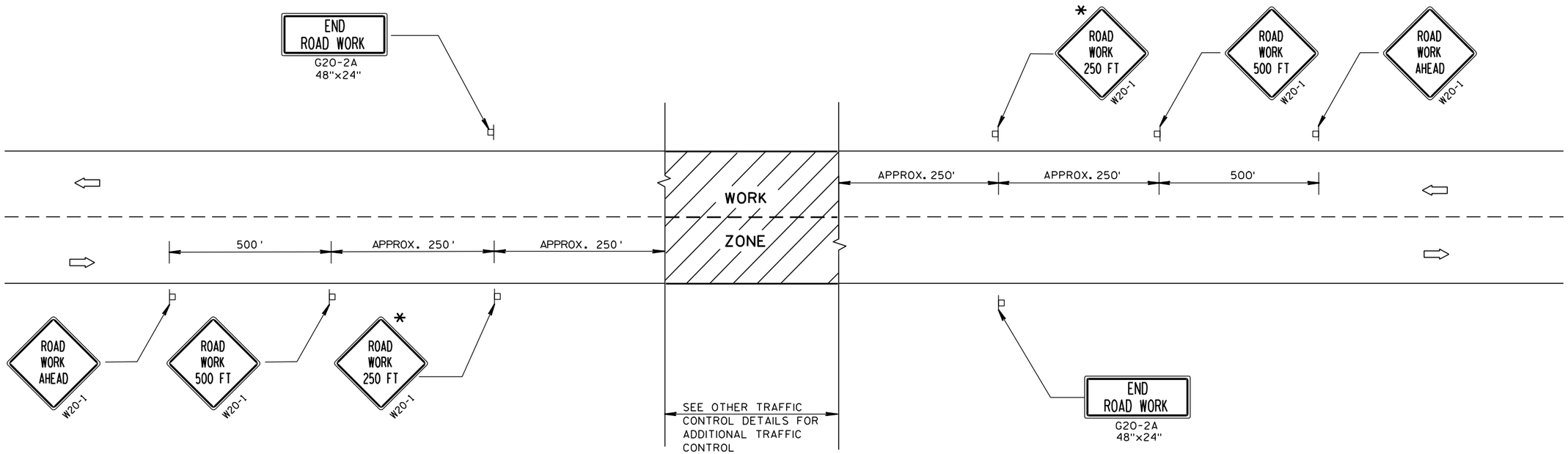
9-16-03 DATE

/S/ Thomas N. N[illegible] CHIEF SIGNS AND MAR[illegible] INEER

FHWA

6

S.D.D. 15 C 3-1



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.

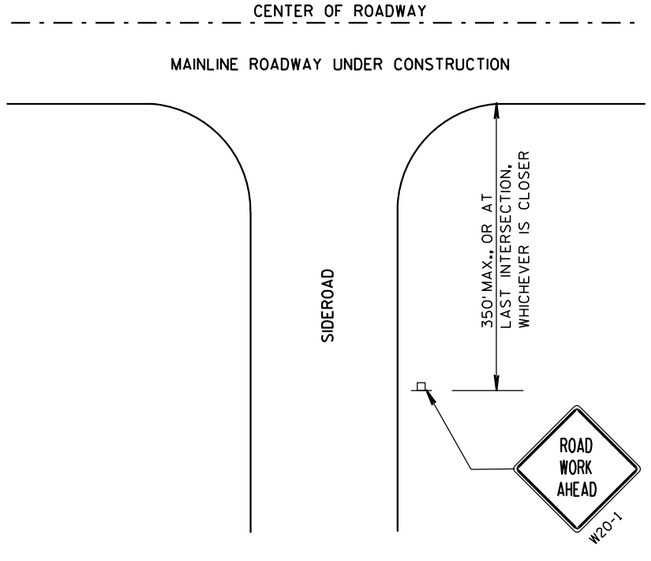
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS, IF APPROVED BY DISTRICT TRAFFIC UNIT.

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.

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



LEGEND

POST MOUNTED SIGN

DIRECTION OF TRAFFIC FLOW

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

5/23/00
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKING ENGINEER

FHWA

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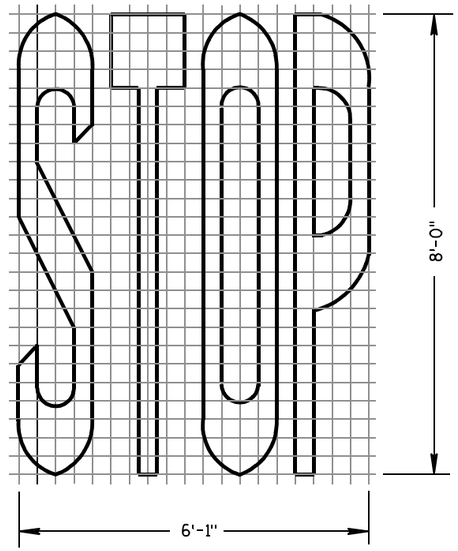
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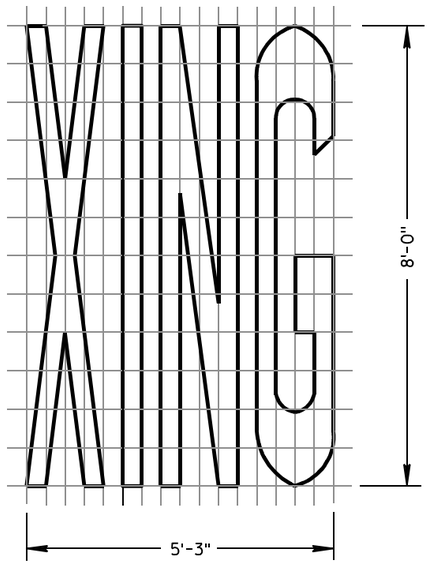
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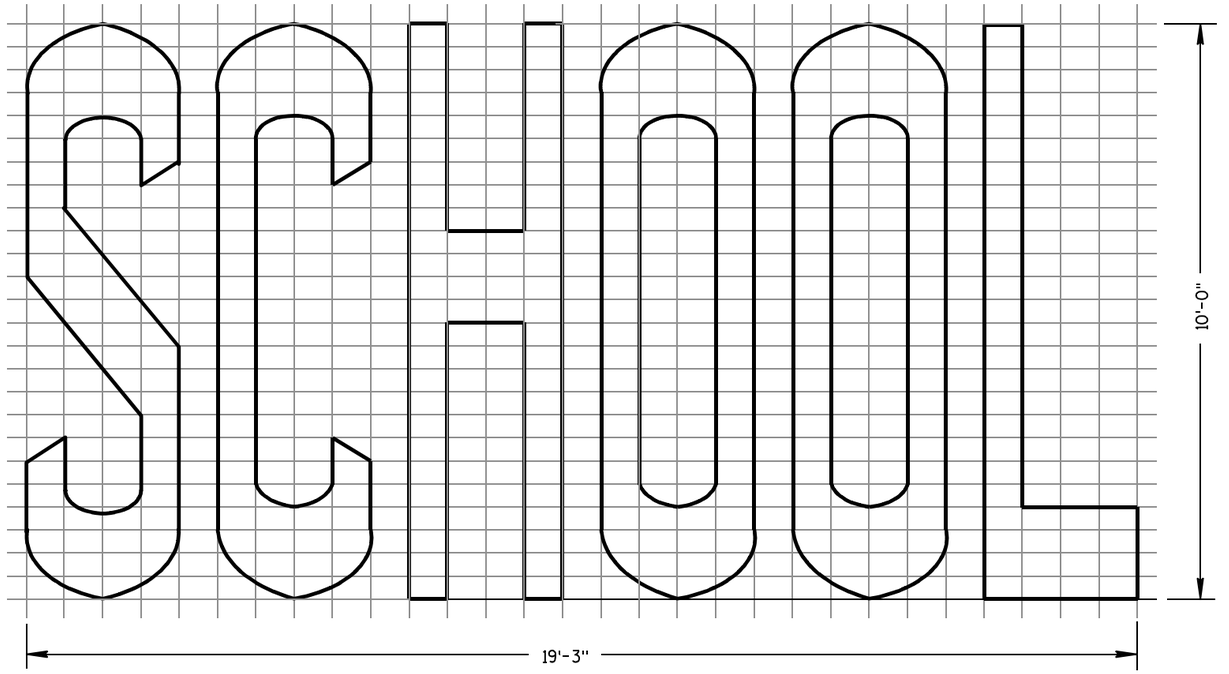
GENERAL NOTES

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.

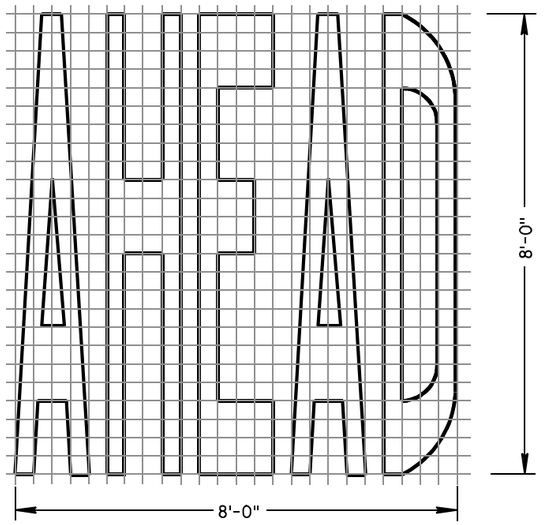
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.

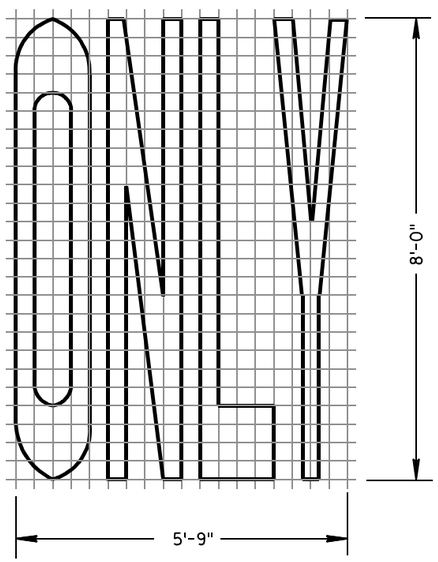


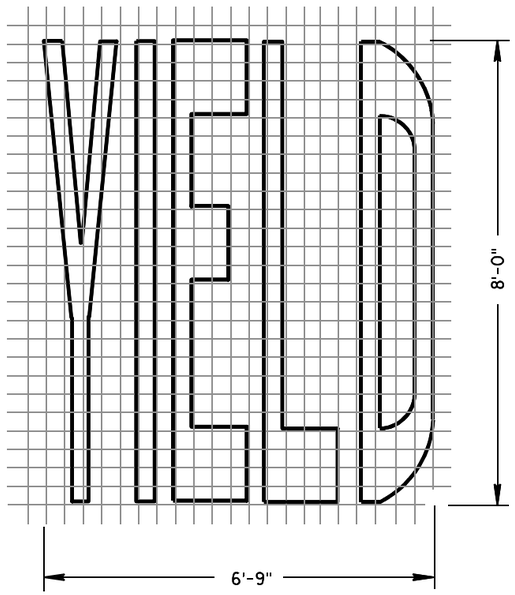


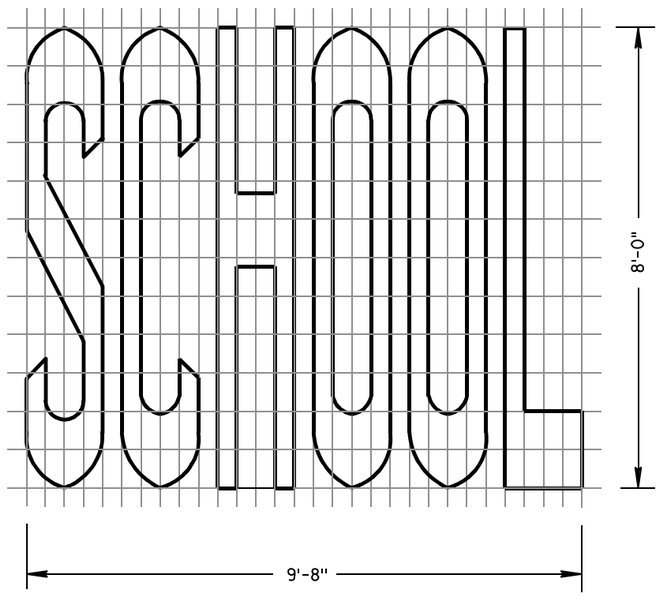


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7-1-11 DATE

/S/ Thomas N. Nottbohm
STATE TRAFFIC ENGINEER

FHWA

IGN

6

S.D.D. 15 C 7-12b

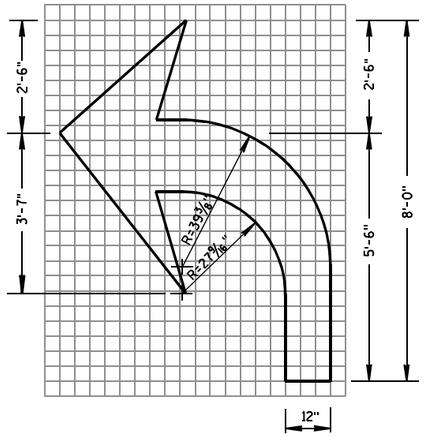
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S.D.D. 15 C 7-12b

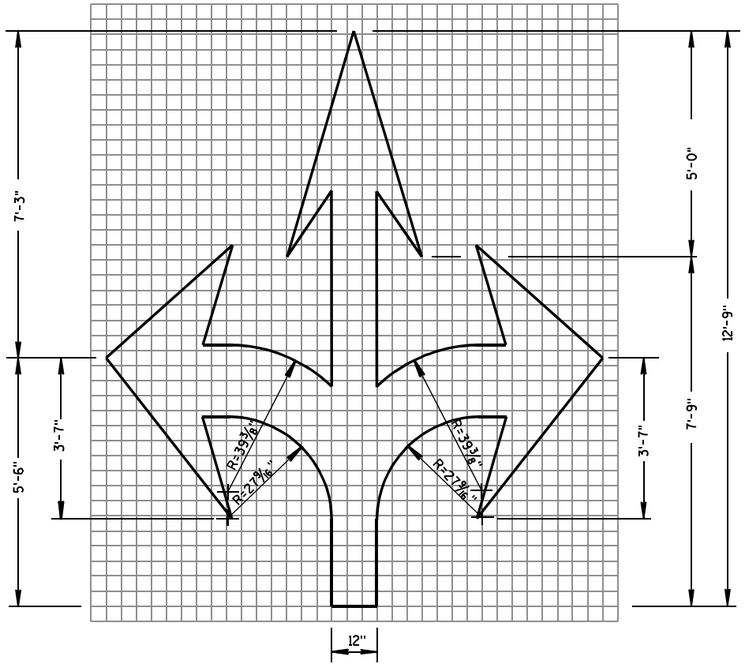
GENERAL NOTES

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.

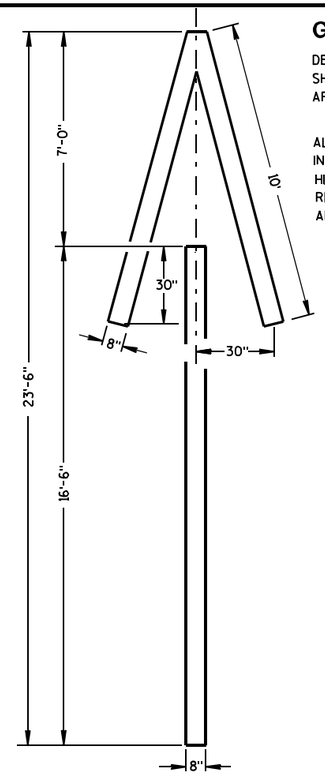
ALL LETTERS, ARROWS AND SYMBOLS SHALL BE IN CONFORMANCE WITH REQUIREMENTS INCLUDED IN "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKING" BOOK BY THE FEDERAL HIGHWAY ADMINISTRATION. ALL LETTERS, ARROWS AND SYMBOLS SHALL BE WHITE AND REFLECTORIZED. SMALL DIFFERENCES IN DIMENSIONS WITHIN THE TOLERANCES OF THAT BOOK ARE ACCEPTABLE.



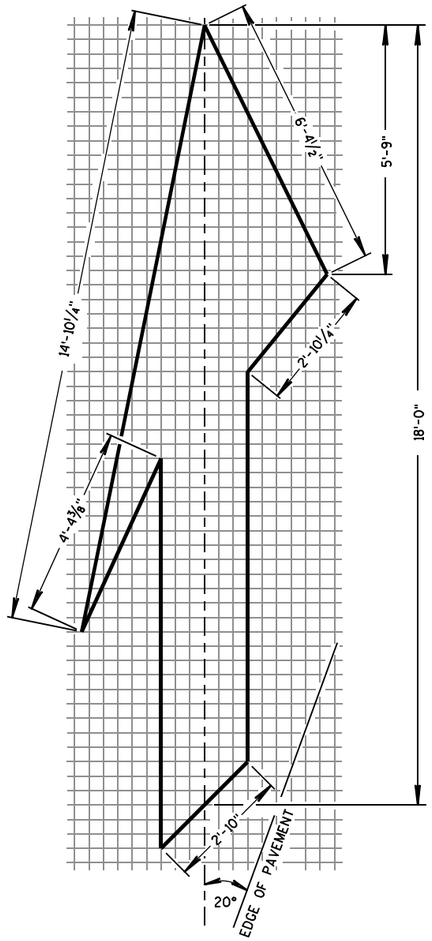
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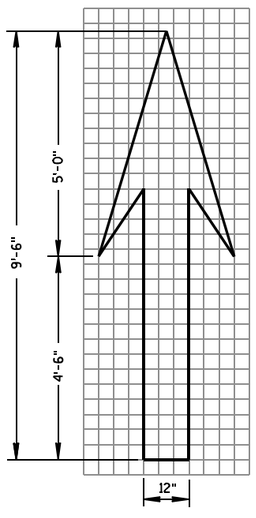
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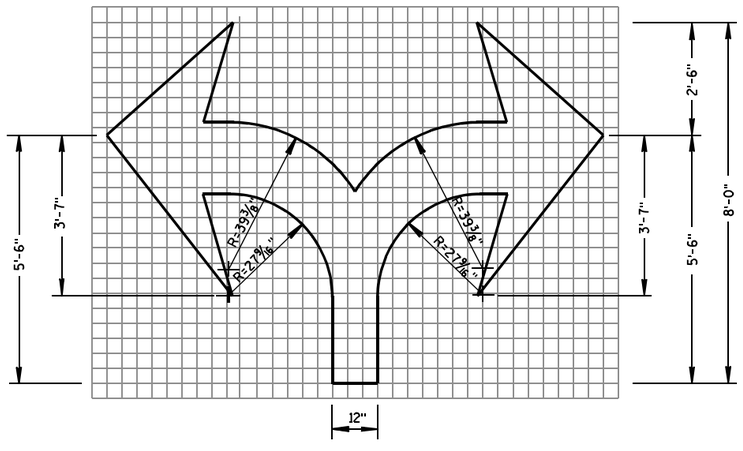
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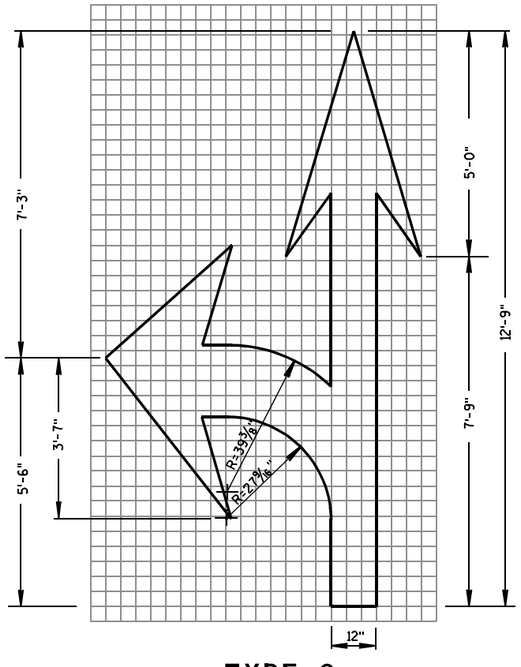
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/1/11 — DATE

/S/ Thomas N. Nothdurft — STATE TRAFFIC ENGINEER

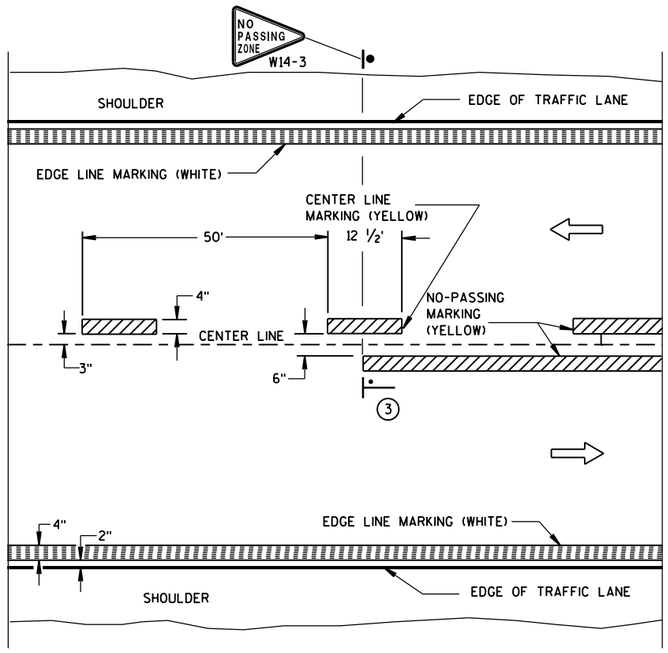
FHWA

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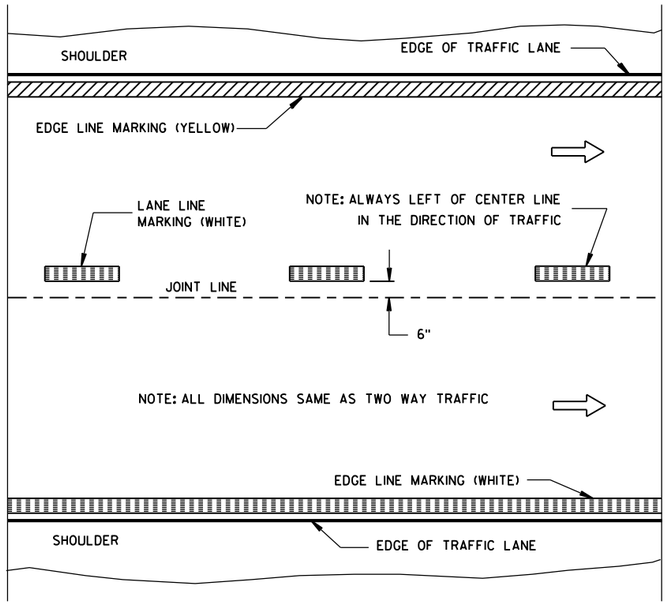
S.D.D. 15 C 7-12c

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S.D.D. 15 C 7-12c

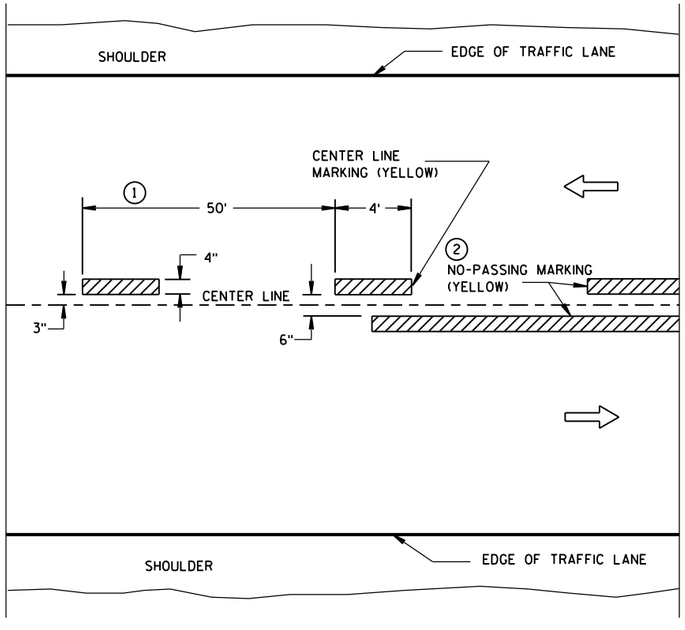


TWO WAY TRAFFIC

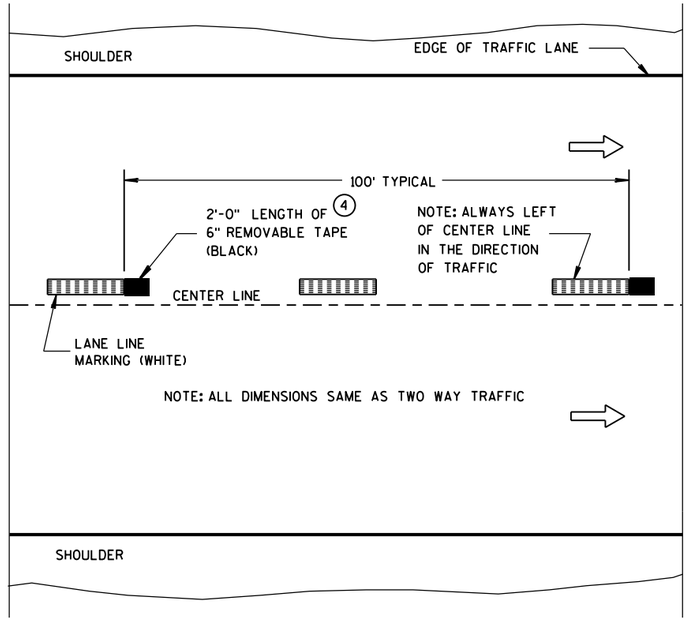


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

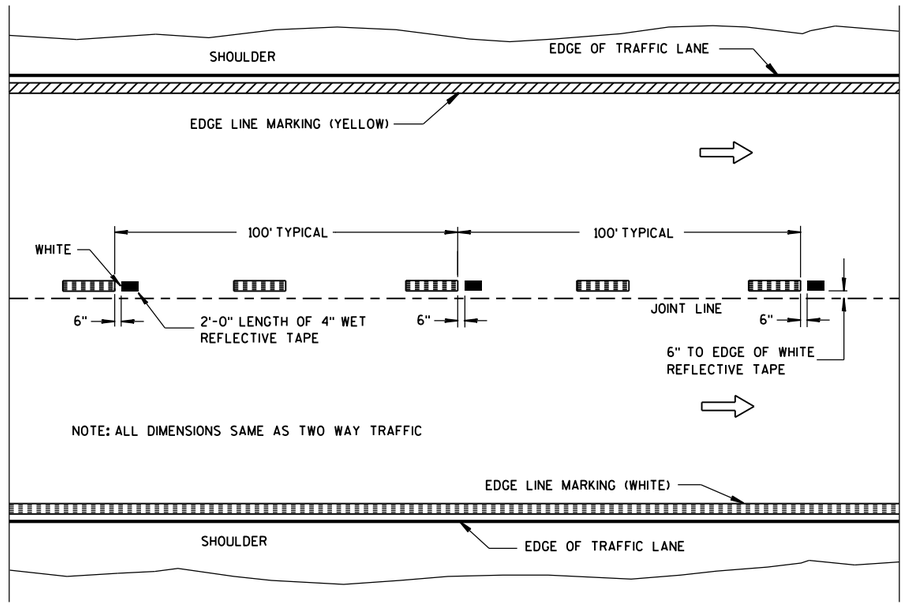
GENERAL NOTES

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

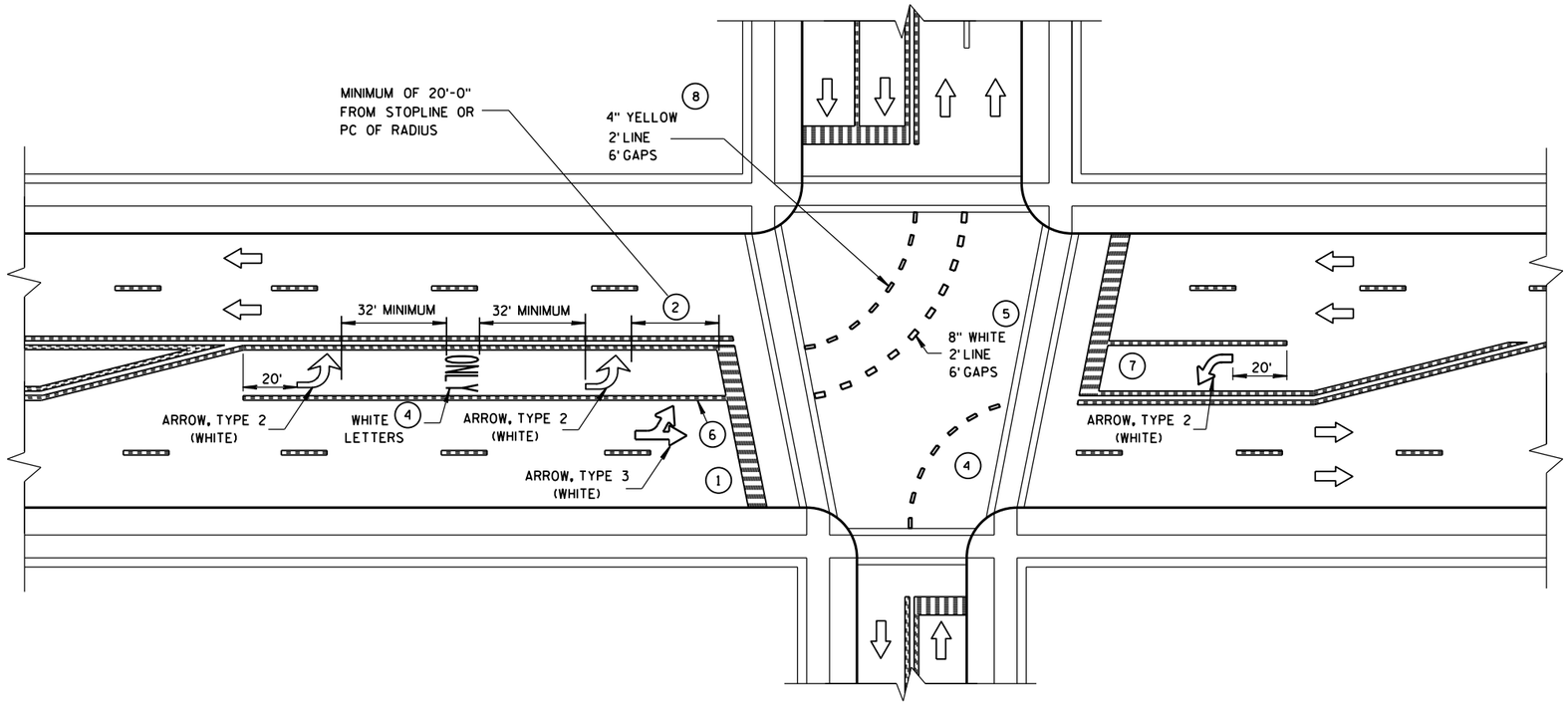
APPROVED
10-1-2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
587 — SIGN
FHWA

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S.D.D. 15 C 8-15a

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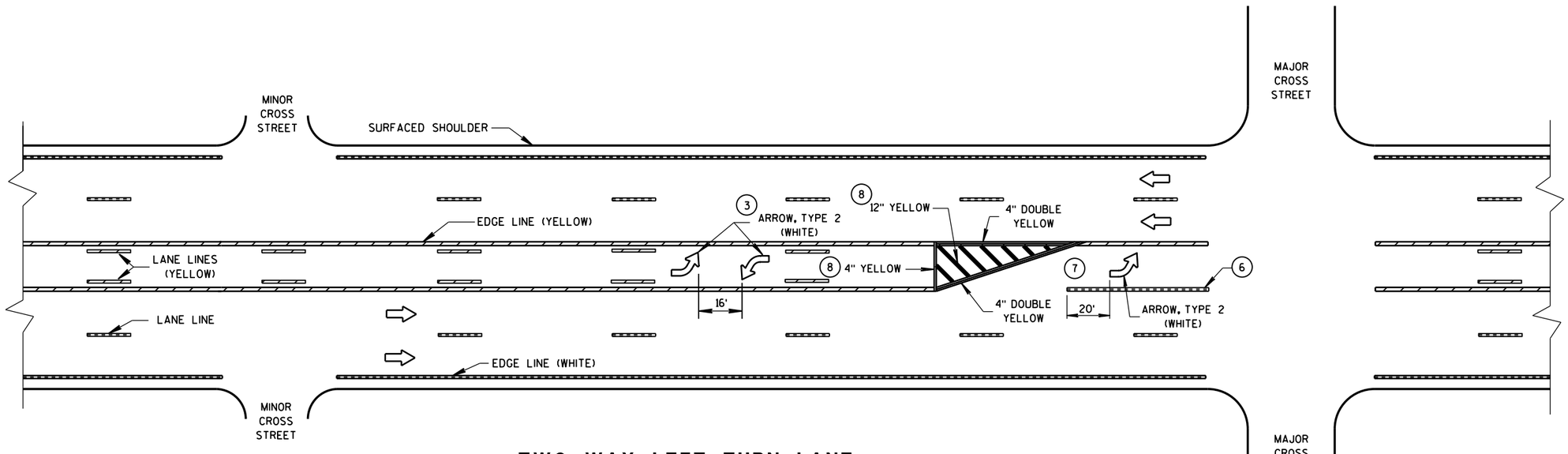
S.D.D. 15 C 8-15a



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' OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
4. ADD EXTRA ARROW AND ONLY PER 160' 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'.
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)

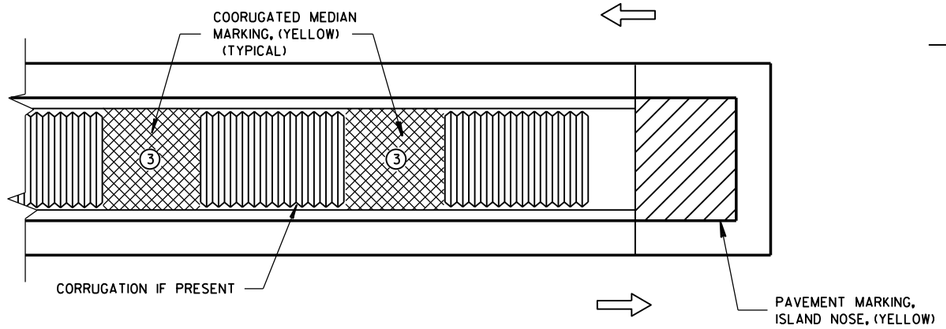
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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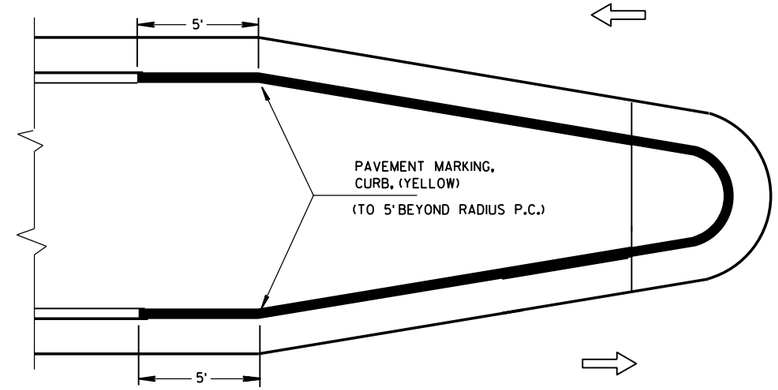
S.D.D. 15 C 8-15e

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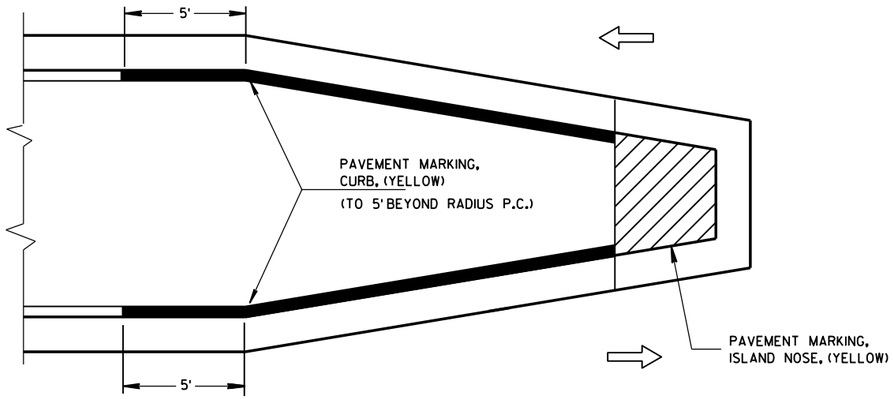
S.D.D. 15 C 8-15e



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

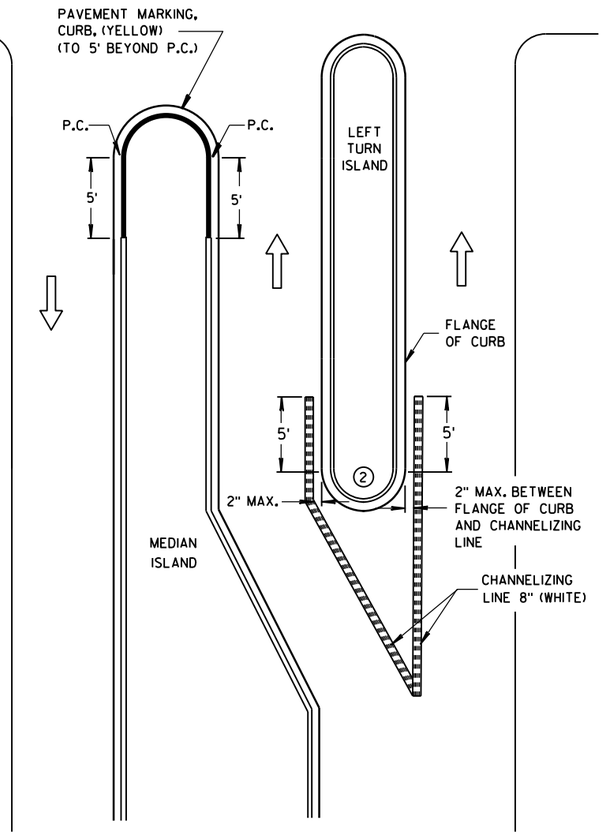


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

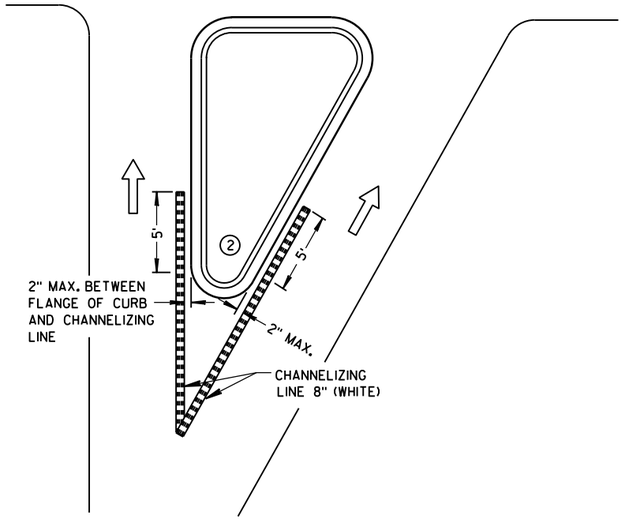
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



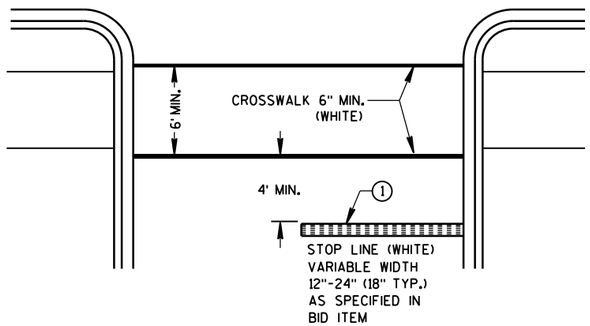
LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

1. STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
2. DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
3. 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



STOP LINE AND CROSSWALK

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS, STOP LINE &
CROSS WALK)

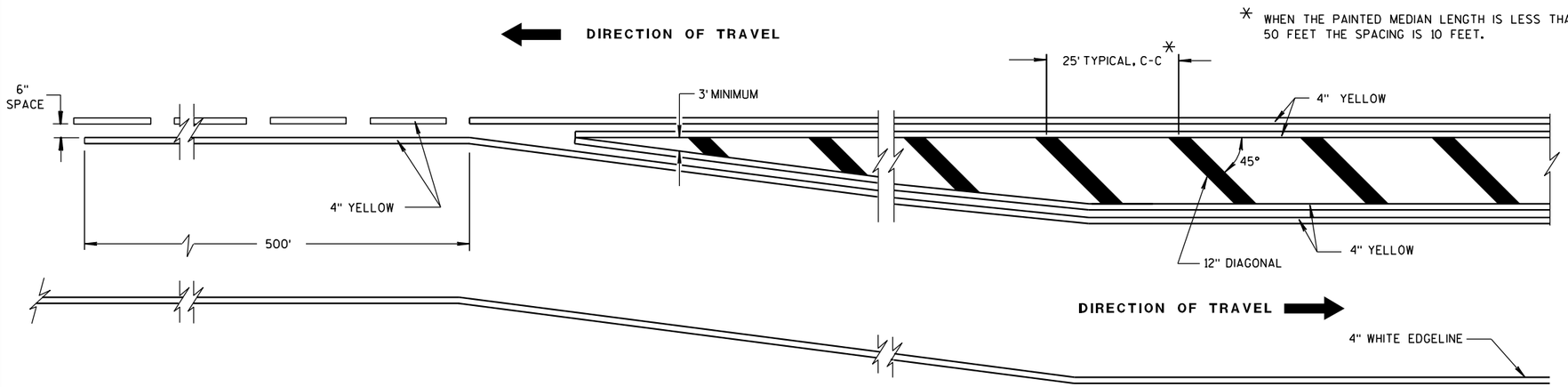
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 C 8-15f

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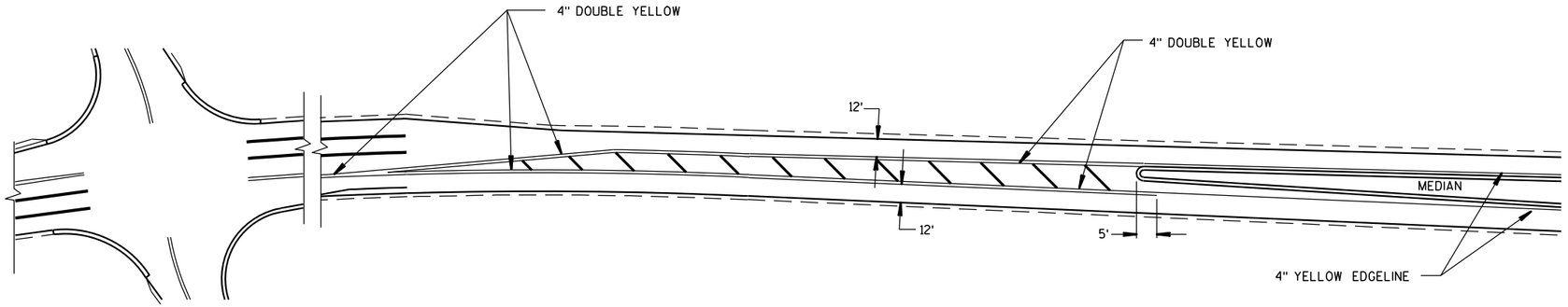
S.D.D. 15 C 8-15f



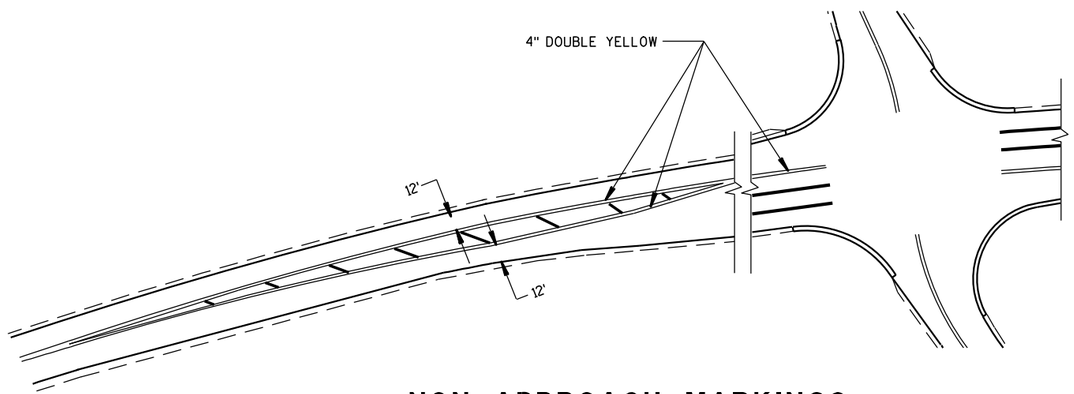
MEDIAN ISLAND DETAIL

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

MEDIAN ISLAND MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 2-5-09 DATE	/S/ Thomas N. Nothohm STATE TRAFFIC ENGINEER 590 IGN
FHWA	

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S.D.D. 15 C 18-3

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S.D.D. 15 C 18-3

LEGEND

- POST WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN IN DRUM
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- 8' TYPE III BARRICADE
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

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"x48" 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.

(1) 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.

GENERAL NOTES CONTINUED:

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

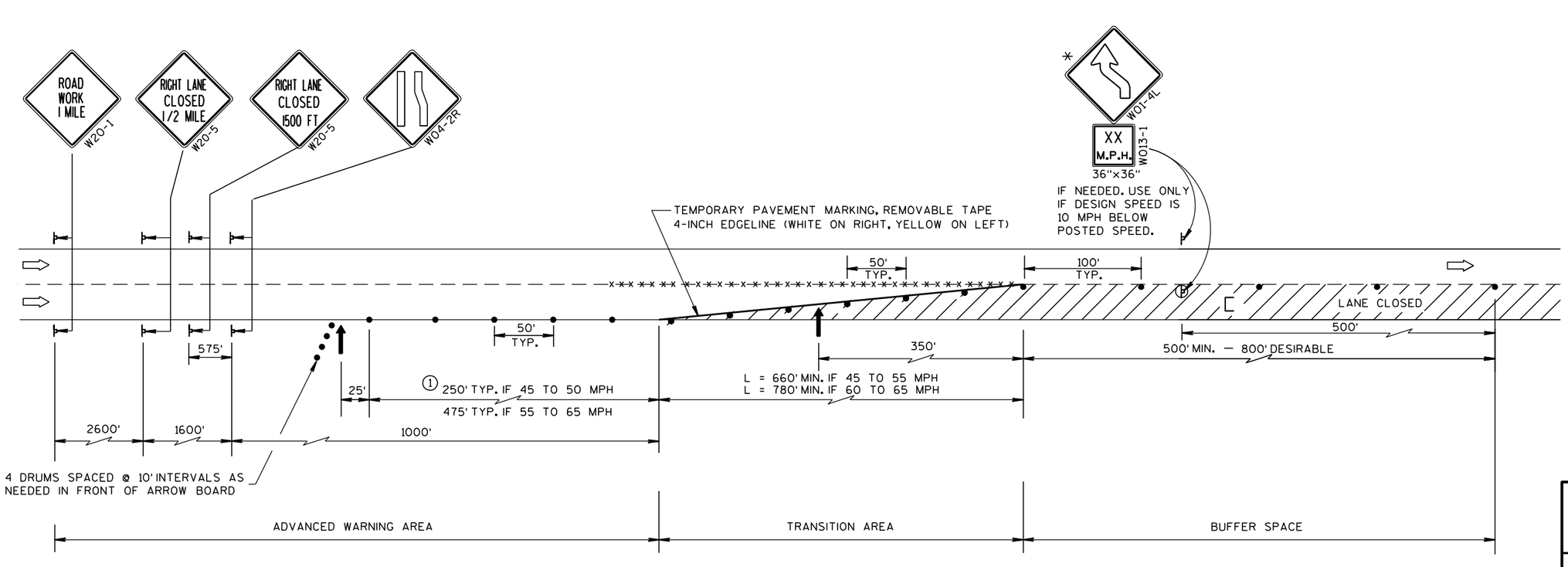
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

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 (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

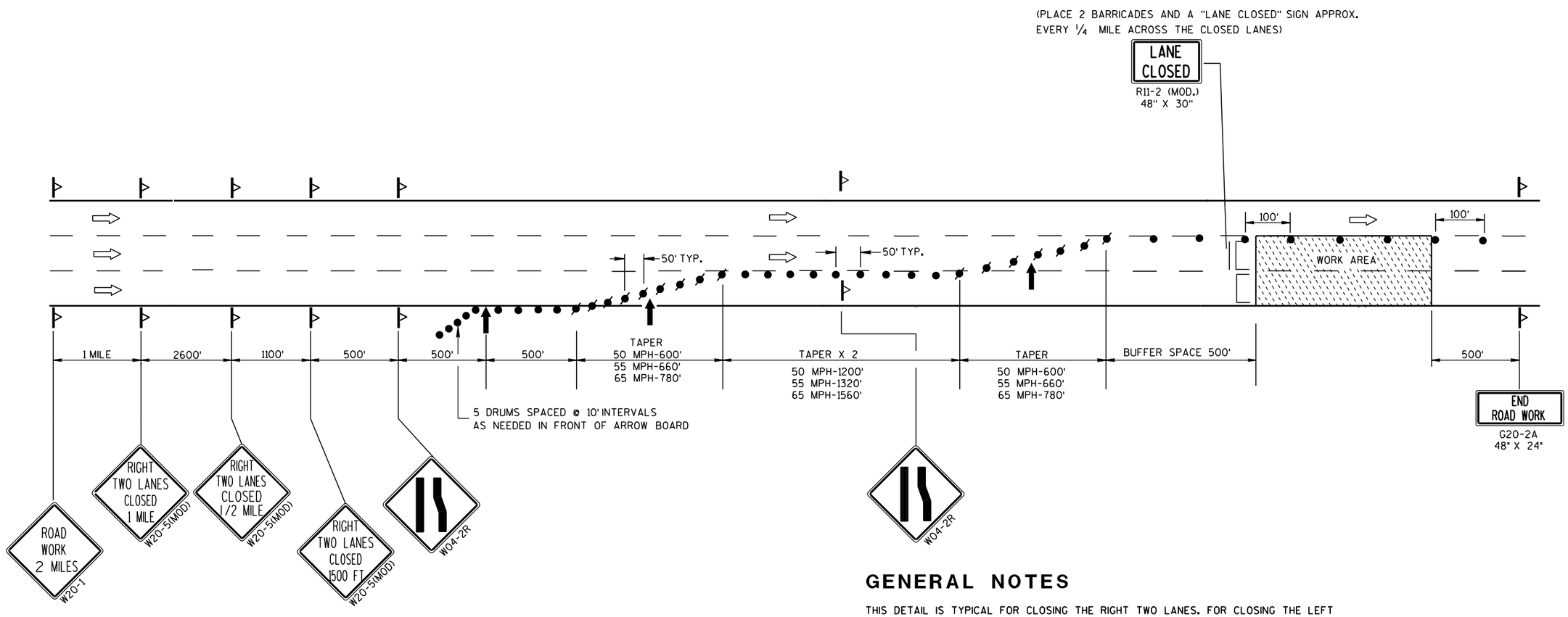
APPROVED
8-7-95
DATE
/S/ Chester J. [illegible]
DIRECTOR, OFFICE O 591 C
FHWA

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S.D.D. 15 D 12-2

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S.D.D. 15 D 12-2



LEGEND

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY BURN)
- SIGN ON POST OR PORTABLE SUPPORT
- FLASHING ARROW BOARD
- TYPE III BARRICADE (8' EQUIVALENT) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW

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

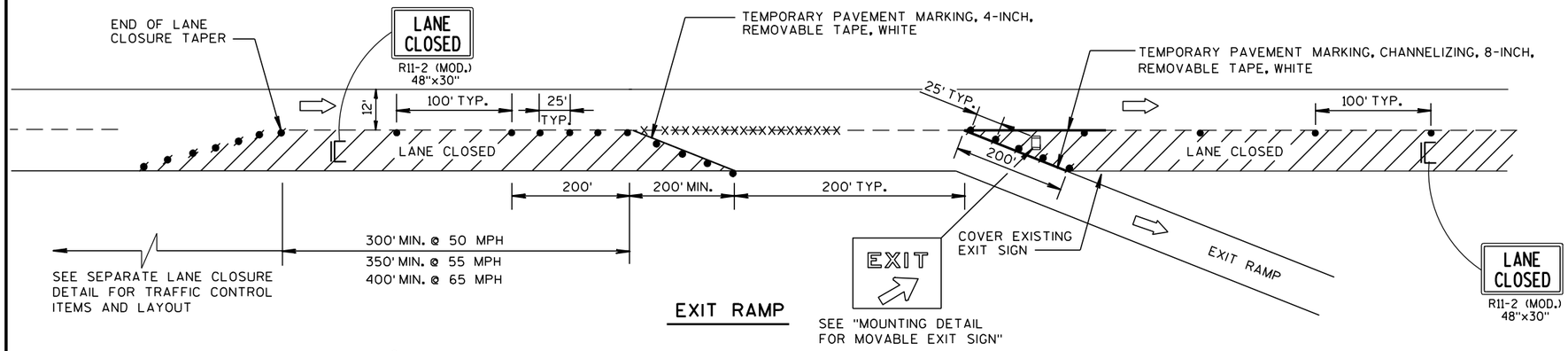
APPROVED
5/23/2000 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MAR 592 INEER
FHWA

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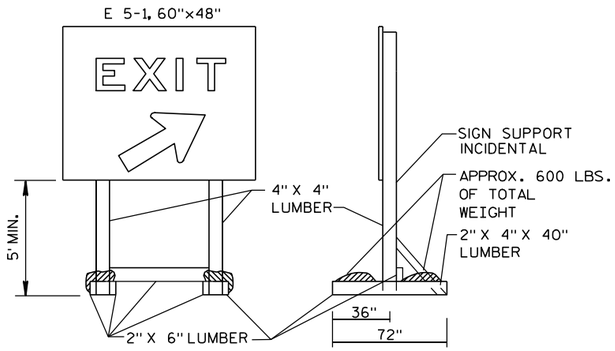
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S.D.D. 15 D 14-1

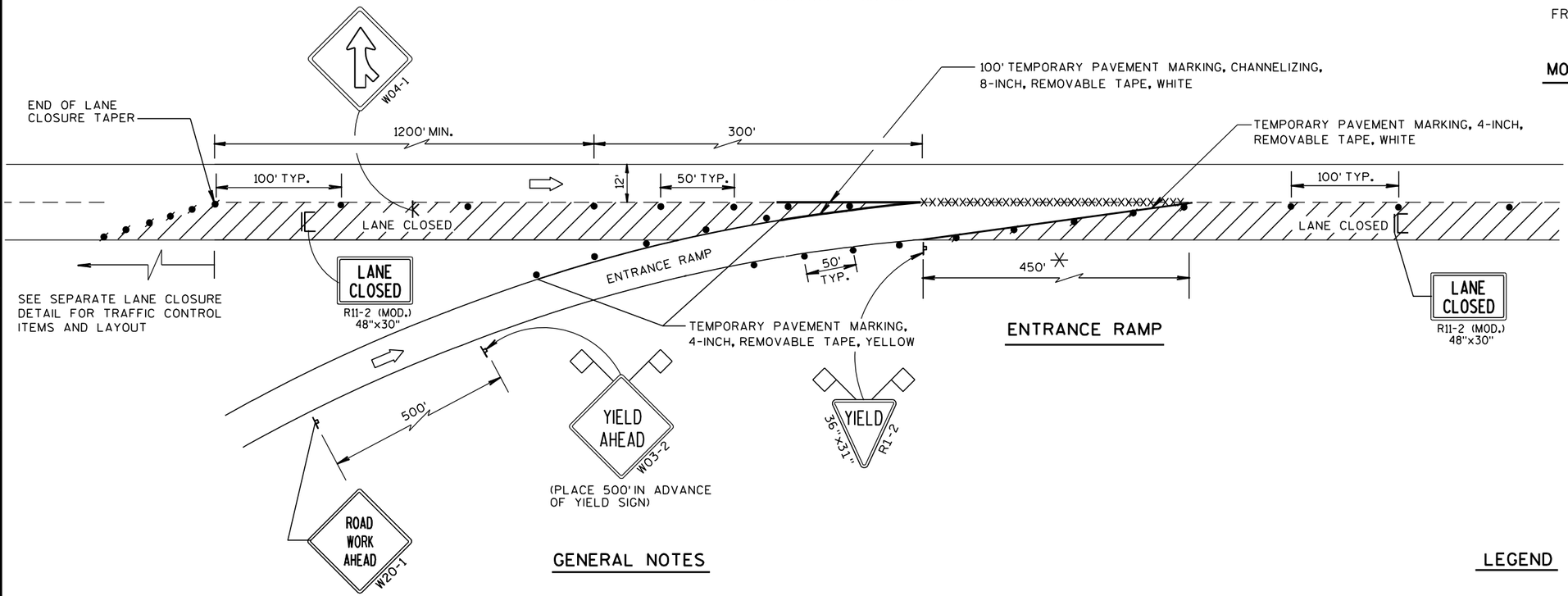


EXIT RAMP



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 MARKINGS ENGINEER
FHWA

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S.D.D. 15 D 15-1

SYMBOLS

IC/C	TYPE III BARRICADE (8' EQUIVALENT) WITH/WITHOUT SIGN
•	DRUM
⊢	POST MOUNTED SIGN
(A)	WARNING LIGHT, TYPE A (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.

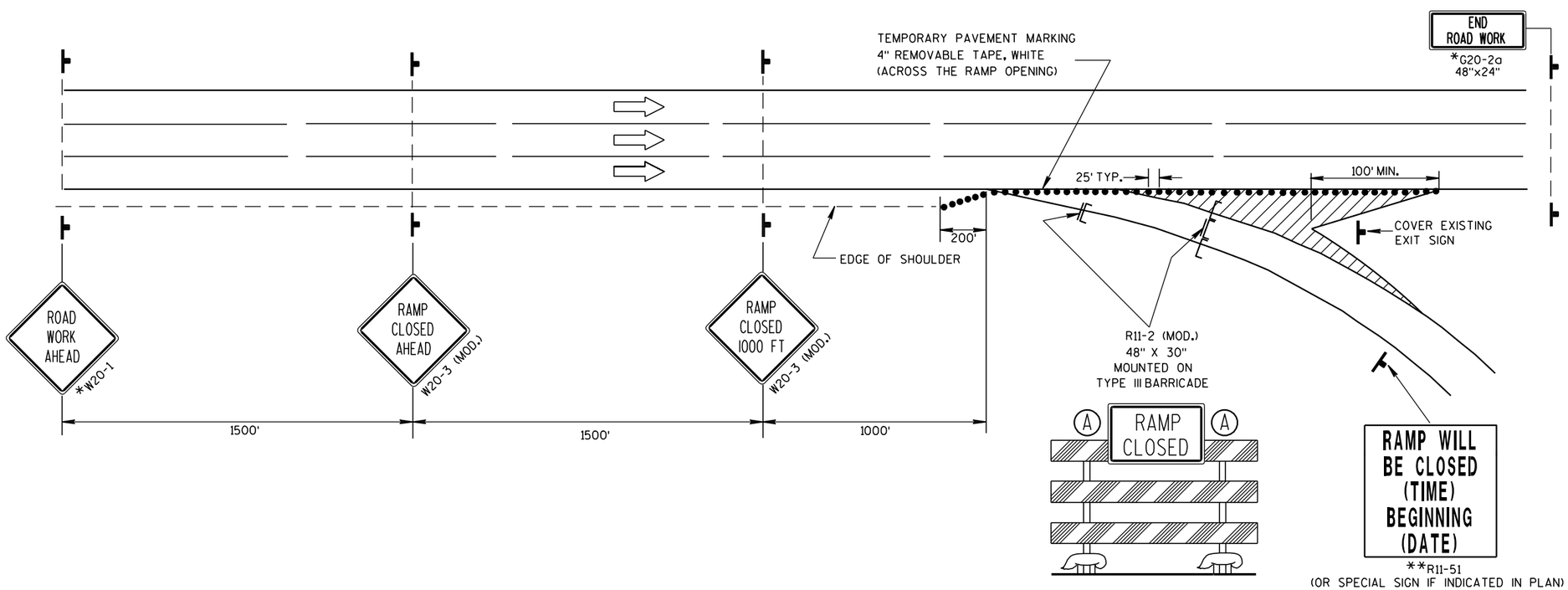
PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 7 OR MORE CONTINUOUS DAYS AND NIGHTS.

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.

**USE THE "RAMP WILL BE CLOSED" SIGN IF INDICATED IN MISCELLANEOUS QUANTITIES. PLACE 10 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.



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S.D.D. 15 D 16-1

TRAFFIC CONTROL, EXIT RAMP CLOSURE

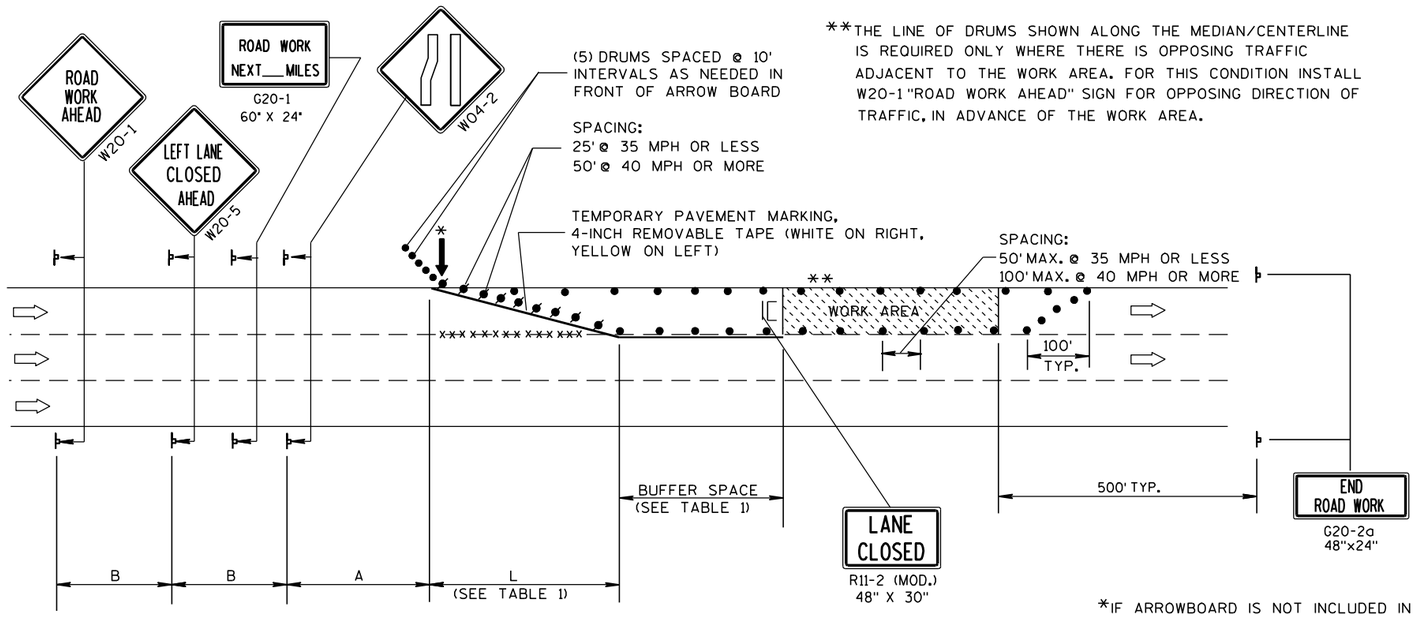
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/2000
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MAR 594 INEER

FHWA



**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"

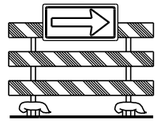


TABLE 1
TAPER AND BUFFER SPACE FOR 12' LANE WIDTH

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

- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- POST MOUNTED SIGN
- ARROW BOARD
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHTS, TYPE A (FLASHING) WITH/WITHOUT SIGN
- DIRECTION OF TRAFFIC FLOW
- xxxx REMOVING PAVEMENT MARKING (SEE GENERAL NOTES)

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 7 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

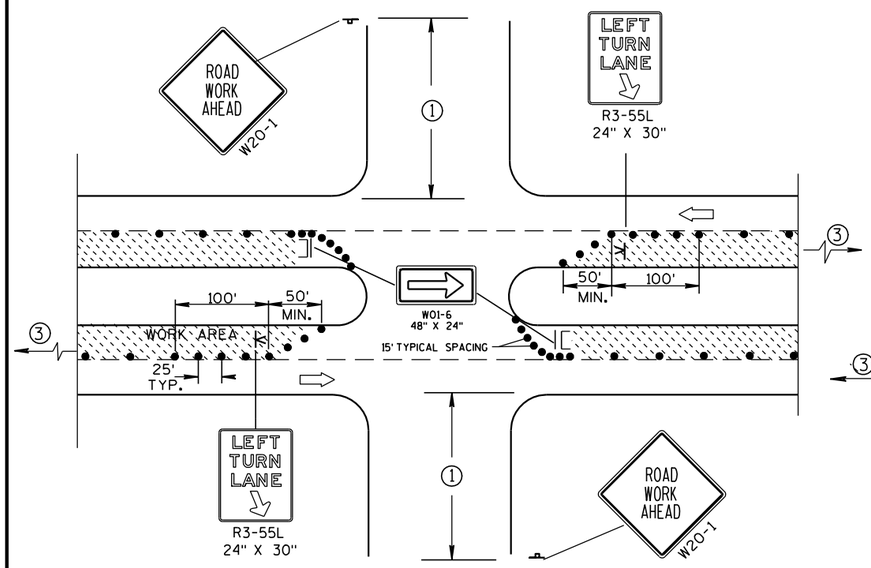
5/23/00
DATE

/S/ Chester J. [illegible]
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

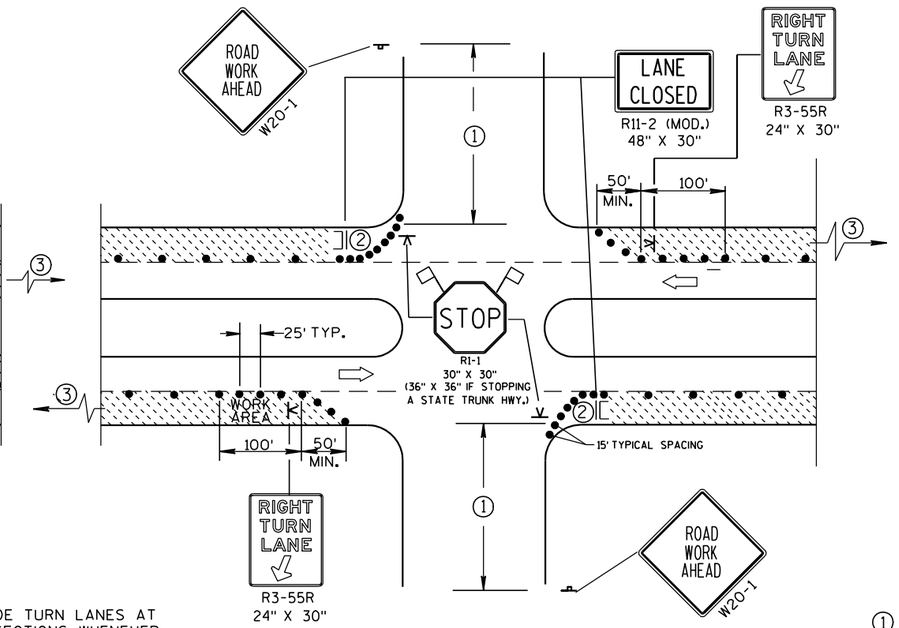
S.D.D. 15 D 20-1



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.

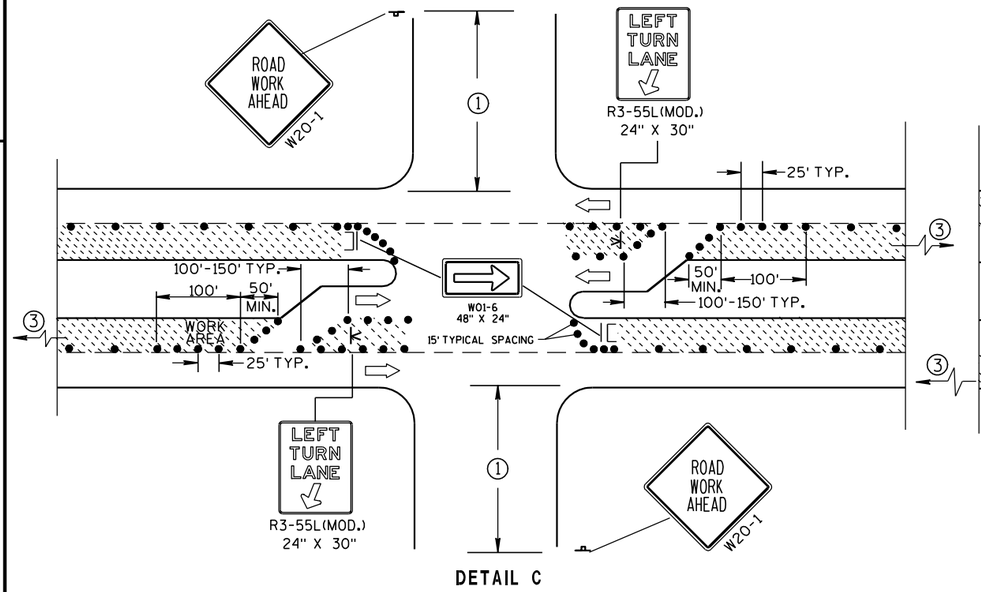
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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.

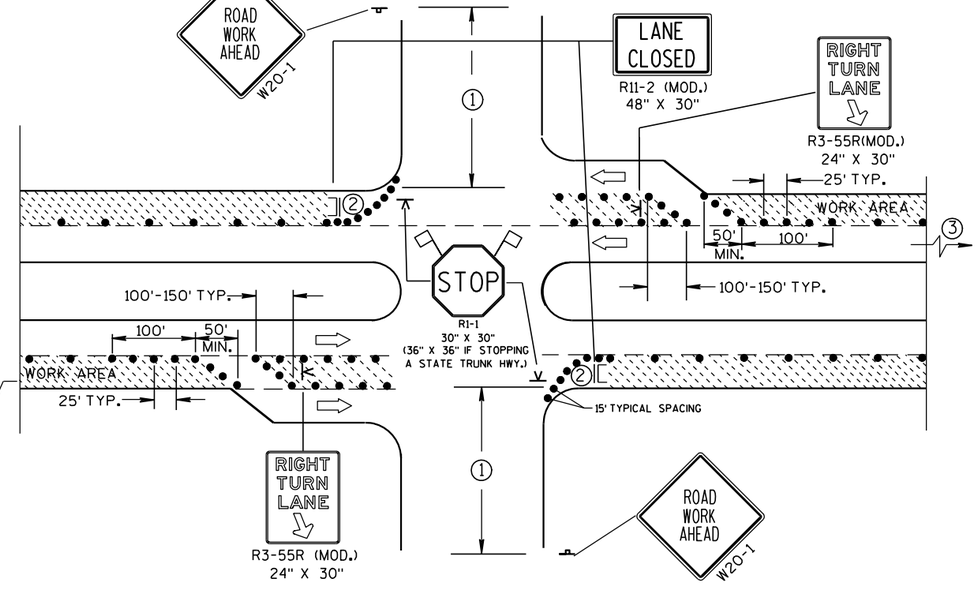
② ALSO USE BARRICADE AND 15' TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.

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

- DRUM
- POST MOUNTED SIGN
- SIGN ON PORTABLE SUPPORT (5' MIN. MOUNTING HEIGHT)
- TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHT, TYPE A (FLASHING) WITH SIGN
- DIRECTION OF TRAFFIC FLOW
- FLAGS, 16" X 16" MIN., ORANGE

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/23/00 DATE

/S/ Chester J. Spang
CHIEF SIGNS AND MARKINGS ENGINEER

FHWA

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S.D.D. 15 D 21-1
S.D.D. 15 D 21-1

SYMBOLS

- TRAFFIC CONTROL DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW
- ARROW BOARD IN CAUTION MODE

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.

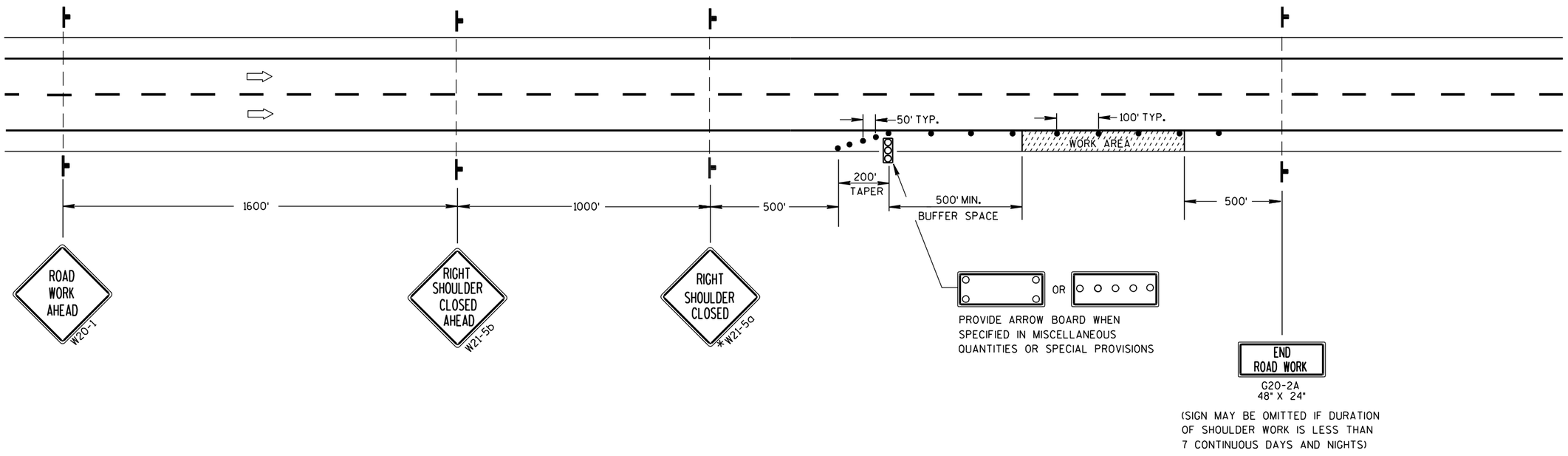
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

5/23/00
DATE

/S/ Chester J Sasse
CHIEF SIGNS AND MARKING ENGINEER

FHWA

6

S.D.D. 15 D 27-1

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.

ALL SIGNS ARE 48" X 48" 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 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.

W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

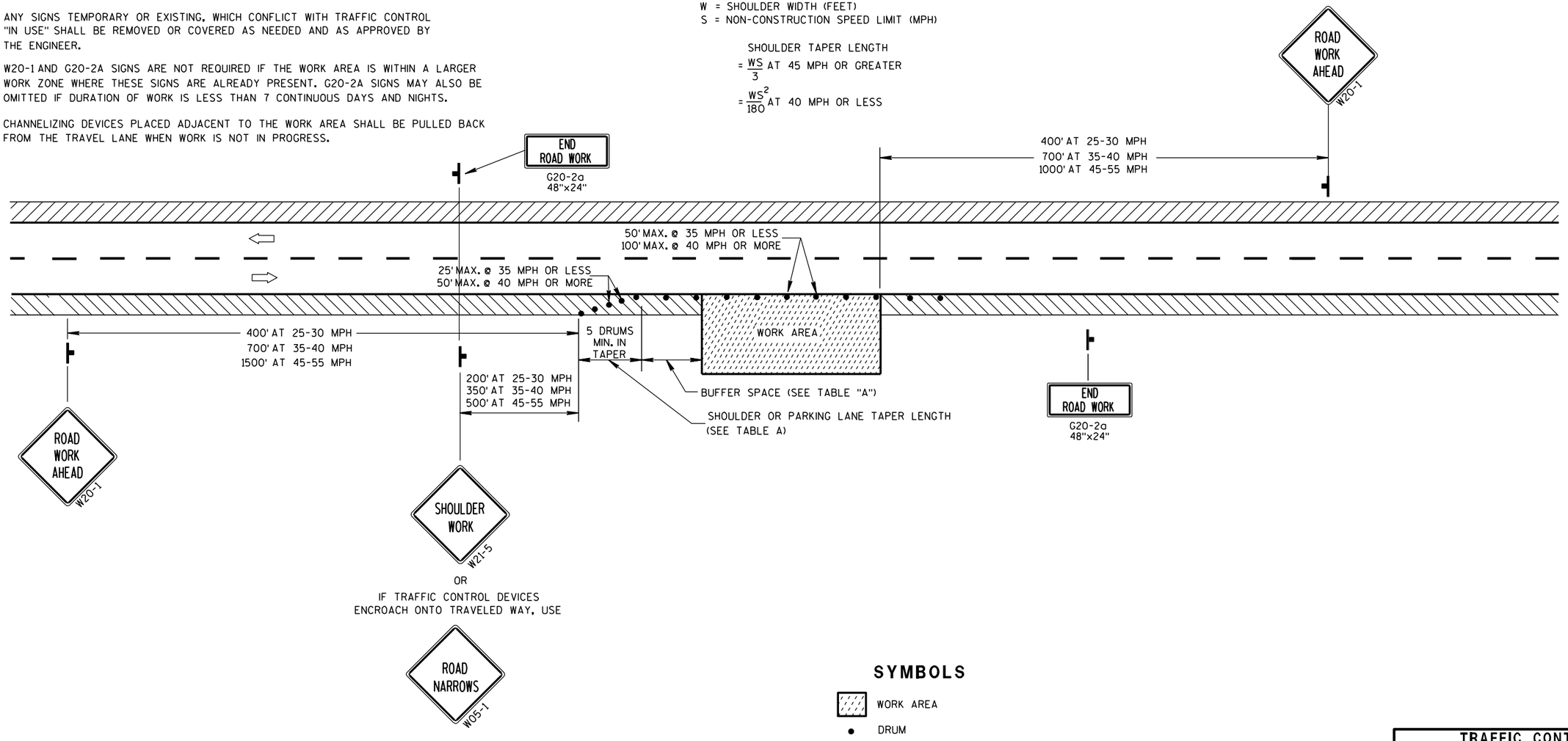
CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

S \ W	SHOULDER TAPER LENGTH (FEET) 4	6	8	10	BUFFER SPACE (FEET)
30	20	30	40	50	85
35	30	45	55	70	120
40	40	55	75	90	170
45	60	90	120	150	220
50	70	100	135	170	280
55	75	110	150	185	335

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

SHOULDER TAPER LENGTH
$= \frac{WS}{3}$ AT 45 MPH OR GREATER
$= \frac{WS^2}{180}$ AT 40 MPH OR LESS



SYMBOLS

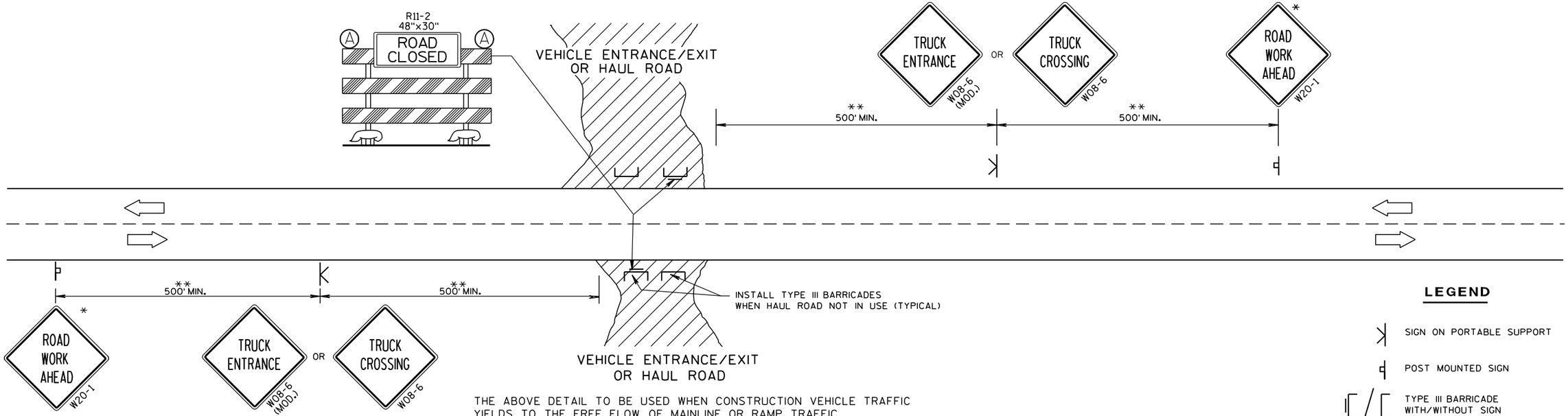
- WORK AREA
- DRUM
- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 DATE
/S/ Chester J. [illegible]
CHIEF SIGNS AND MARK[illegible] ENGINEER
FHWA

6
S.D.D. 15 D 28-1



THE ABOVE DETAIL TO BE USED WHEN CONSTRUCTION VEHICLE TRAFFIC YIELDS TO THE FREE FLOW OF MAINLINE OR RAMP 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' SHOWN IS FOR ROADWAYS WITH A NON-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350'. FOR 25-30 MPH, USE 200'. USE 1000'/1500' 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.

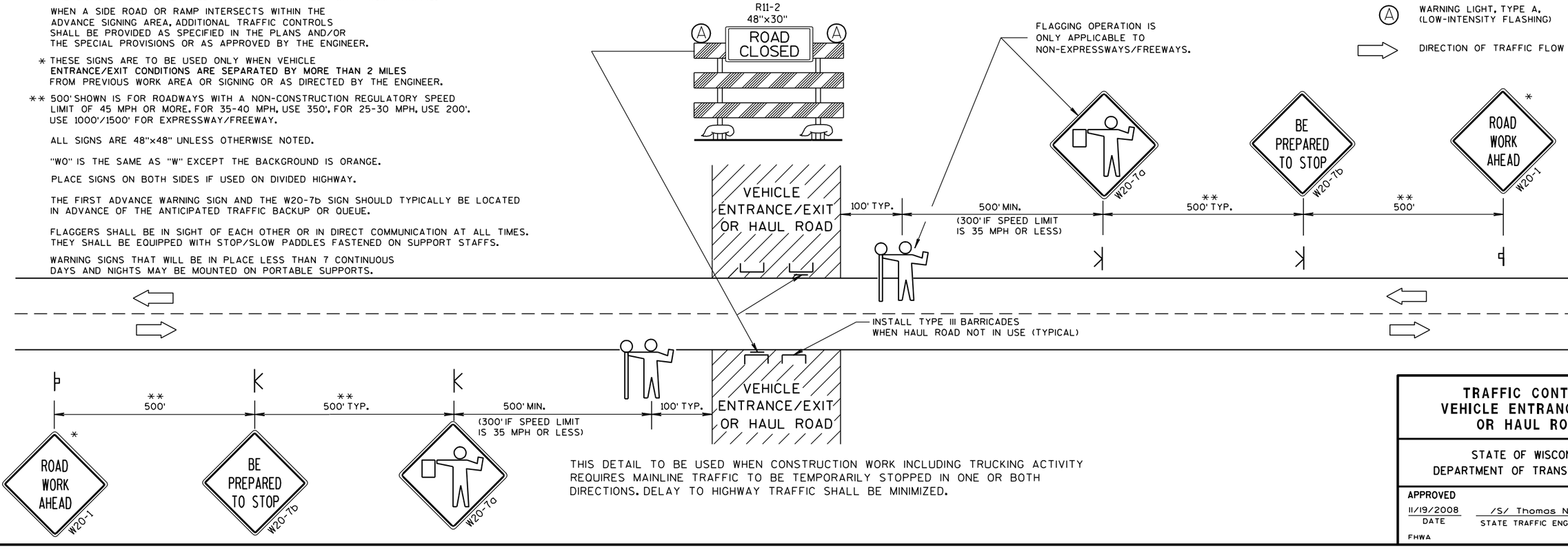
THE FIRST ADVANCE WARNING SIGN AND THE W20-7b SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

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.

LEGEND

- SIGN ON PORTABLE SUPPORT
- POST MOUNTED SIGN
- TYPE III BARRICADE WITH/WITHOUT SIGN
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF
- (A) WARNING LIGHT, TYPE A, (LOW-INTENSITY FLASHING)
- DIRECTION OF TRAFFIC FLOW



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
11/19/2008 DATE
/S/ Thomas N. N[illegible]
STATE TRAFFIC ENGINE[illegible] 599 SIGN
FHWA

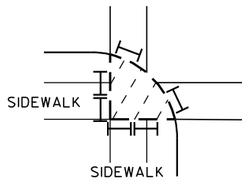
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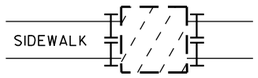
S.D.D. 15 D 29-2

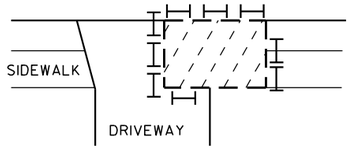
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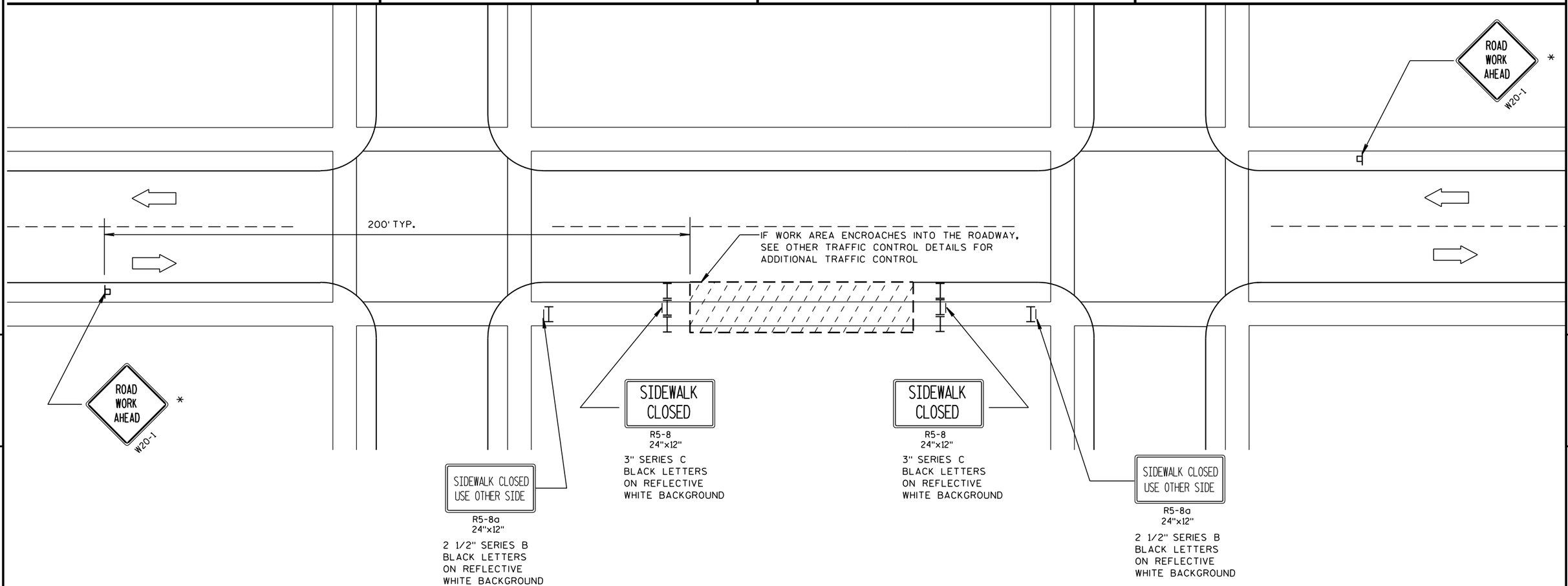
S.D.D. 15 D 29-2

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 600 [illegible]NEER

FHWA

6

S.D.D. 15 D 30-1

6

S.D.D. 15 D 30-1

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"

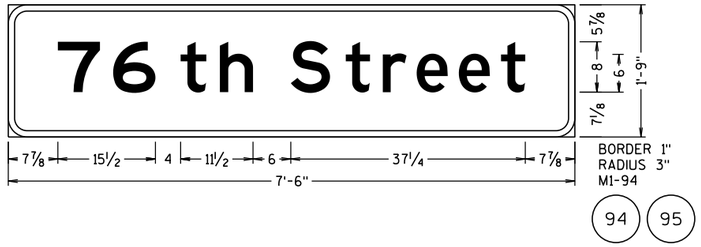
7. UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS.

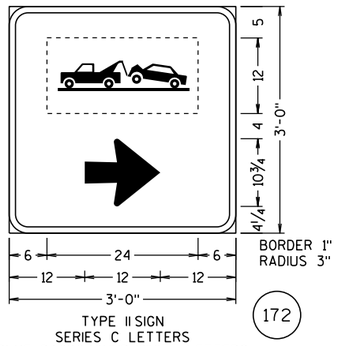
8. SEE THE STANDARD SIGN PLATES FOR FURTHER DETAILS ON ROUTE MARKER SHIELDS.

9. THE SIGN NUMBER IS DENOTED IN THE CIRCLE NEAR EACH DETAIL.

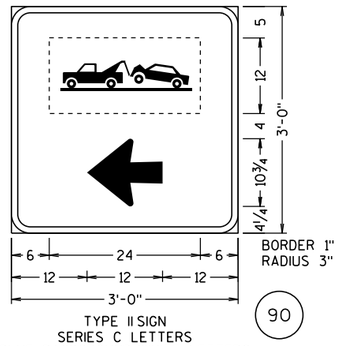
10. NUMBER FRACTIONS FOR INTERCHANGE SEQUENCE SIGNS SHALL BE SERIES "E" PER PLATES A11-7 AND A11-10

11. DO NOT SCALE.

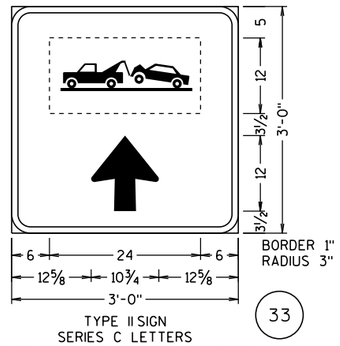




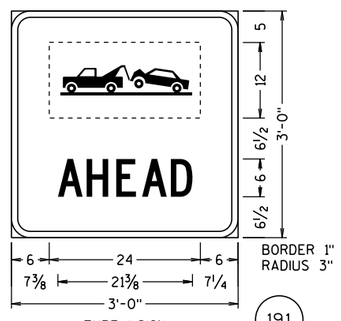
TYPE II SIGN
SERIES C LETTERS
BLUE BACKGROUND/WHITE LETTERS



TYPE II SIGN
SERIES C LETTERS
BLUE BACKGROUND/WHITE LETTERS



TYPE II SIGN
SERIES C LETTERS
BLUE BACKGROUND/WHITE LETTERS

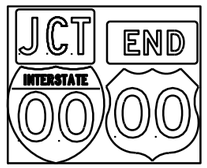


TYPE II SIGN
SERIES C LETTERS
BLUE BACKGROUND/WHITE LETTERS

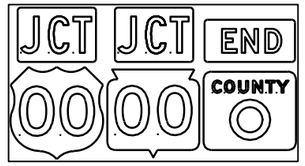
TYPICAL ASSEMBLIES



J1-1



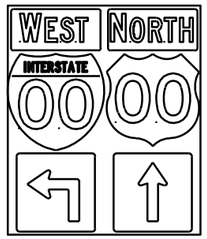
J1-2



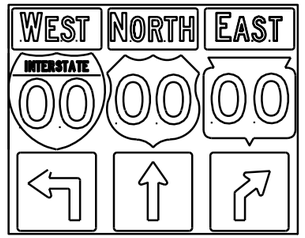
J1-3



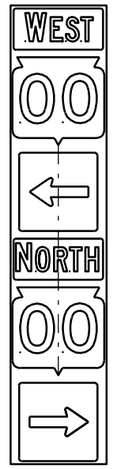
J2-1



J2-2

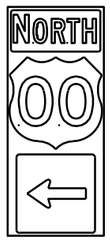


J2-3

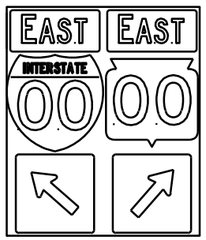


JV

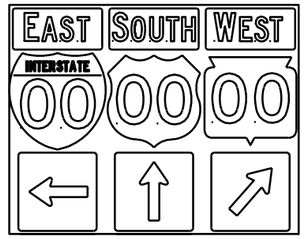
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1



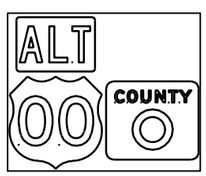
J3-2



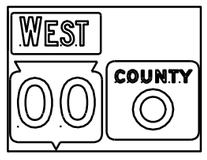
J3-3



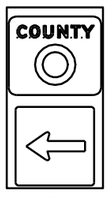
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

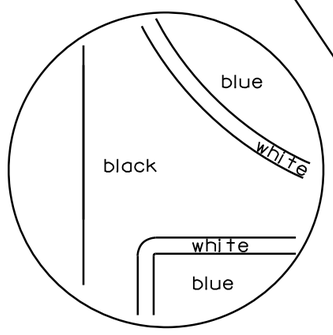


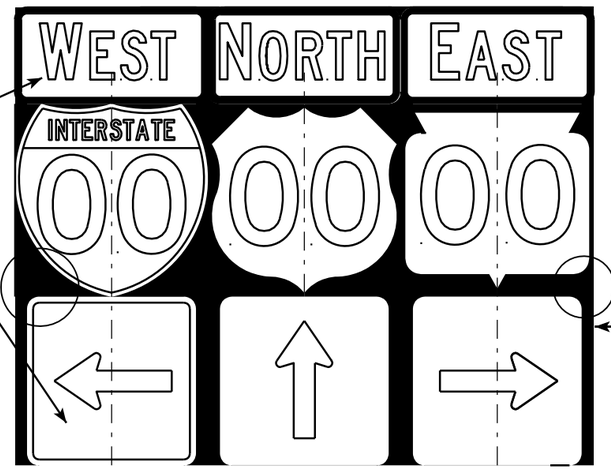
J23-1

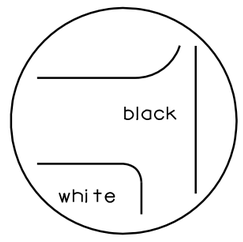


J22-1

[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

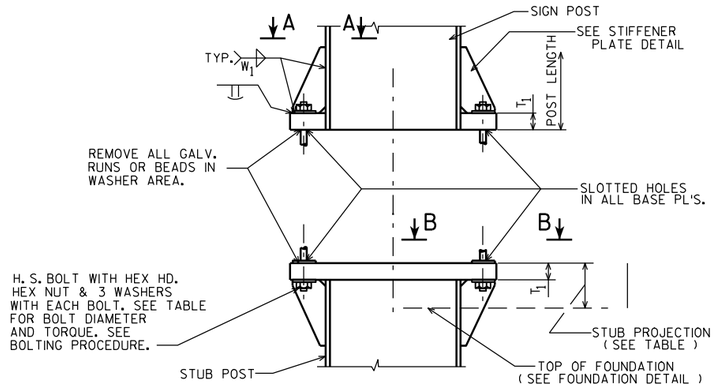
DATE 3/25/13 PLATE NO. A2-1S.7

7

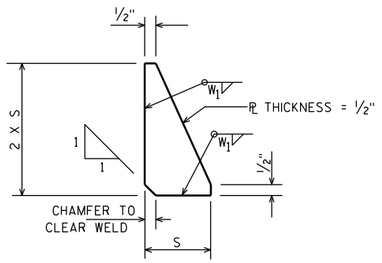
7

PROJECT NO:

SHEET NO: 602 E

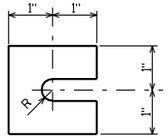


SIGN POST AND STUB POST ELEVATION



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

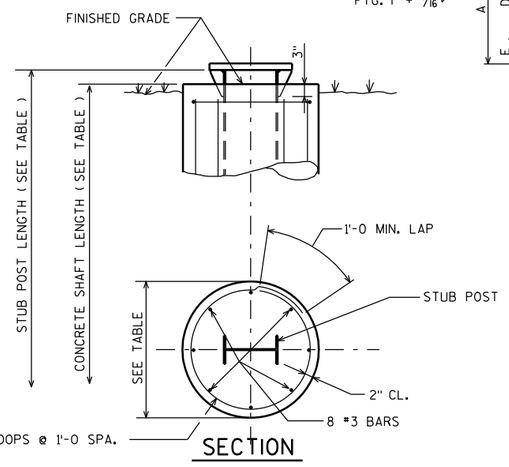
POST DETAIL

	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
E	1.0	62

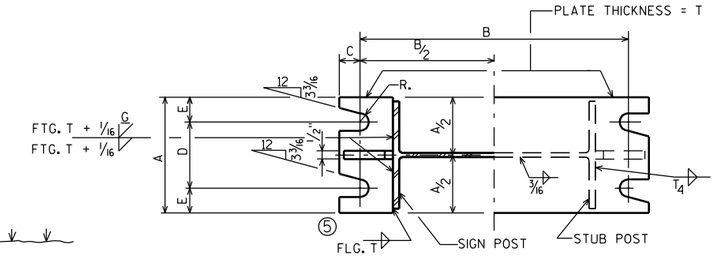
⑦

REINF.	TYPE	#3	#4
	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
	E	8 @ 7'-11	9 @ 6'-3

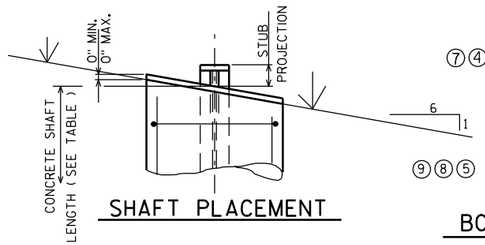
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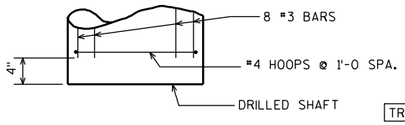
SECTION



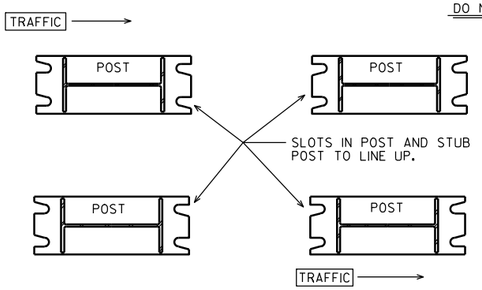
SECTION A-A SECTION B-B



SHAFT PLACEMENT



FOUNDATION DETAIL



POST SLOT ORIENTATION ⑦

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 & 1/2 WIND△	140 △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. 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)
4. 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.

	TYPE	DIMENSION / POST SIZE	BASE CONNECTION DATA TABLE: BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	FOUNDATION DATA: STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	② K
④	A	W10"X12.0 #/FT.	3/4" ϕ @ 75#-FT.	5 1/4"	1'-0 3/8	7/8"	3 1/2"	7/8"	1"	3/16"	5/16"	13/32 "	2 1/8"	3'-6	3"	2'-0 ϕ	5'-0	76.0# ④
④	B	W12"X16.0 #/FT.	7/8" ϕ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/4"	1/4"	5/16"	15/32 "	3"	5'-6	3"	2'-0 ϕ	7'-0	146.5# ④
	C	W12"X19.0 #/FT.	7/8" ϕ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	5/16"	5/16"	15/32 "	3"	6'-0	3"	2'-0 ϕ	7'-6	182.1#
	D	W12"X22.0 #/FT.	7/8" ϕ @ 85#-FT.	5 1/2"	1'-4 1/4	1"	3 1/2"	1"	1 1/2"	3/8"	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'-4 1/4	1 1/4"	4"	1 1/2"	1 1/2"	3/8"	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 4/26/11 PLATE NO. A3-1.13

NO.	DATE	REVISION
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" ③4-23-79 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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 603 | E

VERTICAL DIMENSION ⇨

HORIZONTAL DIMENSION ⇩

Type "A" (2 Posts) 1.2 CY Conc. 68 LBs Bar Steel

⇩ \ ⇨	2.5 ft.	3 ft.	3.5 ft.	4 ft.	4.5 ft.	5 ft.	5.5 ft.	6 ft.	6.5 ft.	7 ft.	7.5 ft.	8 ft.	8.5 ft.	9 ft.	9.5 ft.	10 ft.	10.5 ft.	11 ft.	11.5 ft.	12 ft.	12.5 ft.	13 ft.	13.5 ft.	14 ft.	14.5 ft.	15 ft.	15.5 ft.	16 ft.
22 ft.	55 Sq. Ft	66 Sq. Ft	77 Sq. Ft	88 Sq. Ft	99 Sq. Ft	110 Sq. Ft	121 Sq. Ft	132 Sq. Ft	143 Sq. Ft	154 Sq. Ft	165 Sq. Ft	176 Sq. Ft	187 Sq. Ft	198 Sq. Ft	209 Sq. Ft	220 Sq. Ft	231 Sq. Ft	242 Sq. Ft	253 Sq. Ft	264 Sq. Ft	275 Sq. Ft	286 Sq. Ft	297 Sq. Ft	308 Sq. Ft	319 Sq. Ft	330 Sq. Ft	341 Sq. Ft	352 Sq. Ft
23 ft.	57.5 Sq. Ft	69 Sq. Ft	80.5 Sq. Ft	92 Sq. Ft	103.5 Sq. Ft	115 Sq. Ft	126.5 Sq. Ft	138 Sq. Ft	149.5 Sq. Ft	161 Sq. Ft	172.5 Sq. Ft	184 Sq. Ft	195.5 Sq. Ft	207 Sq. Ft	218.5 Sq. Ft	230 Sq. Ft	241.5 Sq. Ft	253 Sq. Ft	264.5 Sq. Ft	276 Sq. Ft	287.5 Sq. Ft	299 Sq. Ft	310.5 Sq. Ft	322 Sq. Ft	333.5 Sq. Ft	345 Sq. Ft	356.5 Sq. Ft	368 Sq. Ft
24 ft.	60 Sq. Ft	72 Sq. Ft	84 Sq. Ft	96 Sq. Ft	108 Sq. Ft	120 Sq. Ft	132 Sq. Ft	144 Sq. Ft	156 Sq. Ft	168 Sq. Ft	180 Sq. Ft	192 Sq. Ft	204 Sq. Ft	216 Sq. Ft	228 Sq. Ft	240 Sq. Ft	252 Sq. Ft	264 Sq. Ft	276 Sq. Ft	288 Sq. Ft	300 Sq. Ft	312 Sq. Ft	324 Sq. Ft	336 Sq. Ft	348 Sq. Ft	360 Sq. Ft	372 Sq. Ft	384 Sq. Ft
25 ft.	62.5 Sq. Ft	75 Sq. Ft	87.5 Sq. Ft	100 Sq. Ft	112.5 Sq. Ft	125 Sq. Ft	137.5 Sq. Ft	150 Sq. Ft	162.5 Sq. Ft	175 Sq. Ft	187.5 Sq. Ft	200 Sq. Ft	212.5 Sq. Ft	225 Sq. Ft	237.5 Sq. Ft	250 Sq. Ft	262.5 Sq. Ft	275 Sq. Ft	287.5 Sq. Ft	300 Sq. Ft	312.5 Sq. Ft	325 Sq. Ft	337.5 Sq. Ft	350 Sq. Ft	362.5 Sq. Ft	375 Sq. Ft	387.5 Sq. Ft	400 Sq. Ft
26 ft.	65 Sq. Ft	78 Sq. Ft	91 Sq. Ft	104 Sq. Ft	117 Sq. Ft	130 Sq. Ft	143 Sq. Ft	156 Sq. Ft	169 Sq. Ft	182 Sq. Ft	195 Sq. Ft	208 Sq. Ft	221 Sq. Ft	234 Sq. Ft	247 Sq. Ft	260 Sq. Ft	273 Sq. Ft	286 Sq. Ft	299 Sq. Ft	312 Sq. Ft	325 Sq. Ft	338 Sq. Ft	351 Sq. Ft	364 Sq. Ft	377 Sq. Ft	390 Sq. Ft	403 Sq. Ft	416 Sq. Ft
27 ft.	67.5 Sq. Ft	81 Sq. Ft	94.5 Sq. Ft	108 Sq. Ft	121.5 Sq. Ft	135 Sq. Ft	148.5 Sq. Ft	162 Sq. Ft	175.5 Sq. Ft	189 Sq. Ft	202.5 Sq. Ft	216 Sq. Ft	229.5 Sq. Ft	243 Sq. Ft	256.5 Sq. Ft	270 Sq. Ft	283.5 Sq. Ft	297 Sq. Ft	310.5 Sq. Ft	324 Sq. Ft	337.5 Sq. Ft	351 Sq. Ft	364.5 Sq. Ft	378 Sq. Ft	391.5 Sq. Ft	405 Sq. Ft	418.5 Sq. Ft	432 Sq. Ft
28 ft.	70 Sq. Ft	84 Sq. Ft	98 Sq. Ft	112 Sq. Ft	126 Sq. Ft	140 Sq. Ft	154 Sq. Ft	168 Sq. Ft	182 Sq. Ft	196 Sq. Ft	210 Sq. Ft	224 Sq. Ft	238 Sq. Ft	252 Sq. Ft	266 Sq. Ft	280 Sq. Ft	294 Sq. Ft	308 Sq. Ft	322 Sq. Ft	336 Sq. Ft	350 Sq. Ft	364 Sq. Ft	378 Sq. Ft	392 Sq. Ft	406 Sq. Ft	420 Sq. Ft	434 Sq. Ft	448 Sq. Ft
29 ft.	72.5 Sq. Ft	87 Sq. Ft	101.5 Sq. Ft	116 Sq. Ft	130.5 Sq. Ft	145 Sq. Ft	159.5 Sq. Ft	174 Sq. Ft	188.5 Sq. Ft	203 Sq. Ft	217.5 Sq. Ft	232 Sq. Ft	246.5 Sq. Ft	261 Sq. Ft	275.5 Sq. Ft	290 Sq. Ft	304.5 Sq. Ft	319 Sq. Ft	333.5 Sq. Ft	348 Sq. Ft	362.5 Sq. Ft	377 Sq. Ft	391.5 Sq. Ft	406 Sq. Ft	420.5 Sq. Ft	435 Sq. Ft	449.5 Sq. Ft	464 Sq. Ft
30 ft.	75 Sq. Ft	90 Sq. Ft	105 Sq. Ft	120 Sq. Ft	135 Sq. Ft	150 Sq. Ft	165 Sq. Ft	180 Sq. Ft	195 Sq. Ft	210 Sq. Ft	225 Sq. Ft	240 Sq. Ft	255 Sq. Ft	270 Sq. Ft	285 Sq. Ft	300 Sq. Ft	315 Sq. Ft	330 Sq. Ft	345 Sq. Ft	360 Sq. Ft	375 Sq. Ft	390 Sq. Ft	405 Sq. Ft	420 Sq. Ft	435 Sq. Ft	450 Sq. Ft	465 Sq. Ft	480 Sq. Ft
31 ft.	77.5 Sq. Ft	93 Sq. Ft	108.5 Sq. Ft	124 Sq. Ft	139.5 Sq. Ft	155 Sq. Ft	170.5 Sq. Ft	186 Sq. Ft	201.5 Sq. Ft	217 Sq. Ft	232.5 Sq. Ft	248 Sq. Ft	263.5 Sq. Ft	279 Sq. Ft	294.5 Sq. Ft	310 Sq. Ft	325.5 Sq. Ft	341 Sq. Ft	356.5 Sq. Ft	372 Sq. Ft	387.5 Sq. Ft	403 Sq. Ft	418.5 Sq. Ft	434 Sq. Ft	449.5 Sq. Ft	465 Sq. Ft	480.5 Sq. Ft	496 Sq. Ft
32 ft.	80 Sq. Ft	96 Sq. Ft	112 Sq. Ft	128 Sq. Ft	144 Sq. Ft	160 Sq. Ft	176 Sq. Ft	192 Sq. Ft	208 Sq. Ft	224 Sq. Ft	240 Sq. Ft	256 Sq. Ft	272 Sq. Ft	288 Sq. Ft	304 Sq. Ft	320 Sq. Ft	336 Sq. Ft	352 Sq. Ft	368 Sq. Ft	384 Sq. Ft	400 Sq. Ft	416 Sq. Ft	432 Sq. Ft	448 Sq. Ft	464 Sq. Ft	480 Sq. Ft	496 Sq. Ft	512 Sq. Ft
33 ft.	82.5 Sq. Ft	99 Sq. Ft	115.5 Sq. Ft	132 Sq. Ft	148.5 Sq. Ft	165 Sq. Ft	181.5 Sq. Ft	198 Sq. Ft	214.5 Sq. Ft	231 Sq. Ft	247.5 Sq. Ft	264 Sq. Ft	280.5 Sq. Ft	297 Sq. Ft	313.5 Sq. Ft	330 Sq. Ft	346.5 Sq. Ft	363 Sq. Ft	379.5 Sq. Ft	396 Sq. Ft	412.5 Sq. Ft	429 Sq. Ft	445.5 Sq. Ft	462 Sq. Ft	478.5 Sq. Ft	495 Sq. Ft	511.5 Sq. Ft	528 Sq. Ft
34 ft.	85 Sq. Ft	102 Sq. Ft	119 Sq. Ft	136 Sq. Ft	153 Sq. Ft	170 Sq. Ft	187 Sq. Ft	204 Sq. Ft	221 Sq. Ft	238 Sq. Ft	255 Sq. Ft	272 Sq. Ft	289 Sq. Ft	306 Sq. Ft	323 Sq. Ft	340 Sq. Ft	357 Sq. Ft	374 Sq. Ft	391 Sq. Ft	408 Sq. Ft	425 Sq. Ft	442 Sq. Ft	459 Sq. Ft	476 Sq. Ft	493 Sq. Ft	510 Sq. Ft	527 Sq. Ft	544 Sq. Ft
35 ft.	87.5 Sq. Ft	105 Sq. Ft	122.5 Sq. Ft	140 Sq. Ft	157.5 Sq. Ft	175 Sq. Ft	192.5 Sq. Ft	210 Sq. Ft	227.5 Sq. Ft	245 Sq. Ft	262.5 Sq. Ft	280 Sq. Ft	297.5 Sq. Ft	315 Sq. Ft	332.5 Sq. Ft	350 Sq. Ft	367.5 Sq. Ft	385 Sq. Ft	402.5 Sq. Ft	420 Sq. Ft	437.5 Sq. Ft	455 Sq. Ft	472.5 Sq. Ft	490 Sq. Ft	507.5 Sq. Ft	525 Sq. Ft	542.5 Sq. Ft	560 Sq. Ft
36 ft.	90 Sq. Ft	108 Sq. Ft	126 Sq. Ft	144 Sq. Ft	162 Sq. Ft	180 Sq. Ft	198 Sq. Ft	216 Sq. Ft	234 Sq. Ft	252 Sq. Ft	270 Sq. Ft	288 Sq. Ft	306 Sq. Ft	324 Sq. Ft	342 Sq. Ft	360 Sq. Ft	378 Sq. Ft	396 Sq. Ft	414 Sq. Ft	432 Sq. Ft	450 Sq. Ft	468 Sq. Ft	486 Sq. Ft	504 Sq. Ft	522 Sq. Ft	540 Sq. Ft	558 Sq. Ft	576 Sq. Ft

Type "B" (2 Posts)
1.6 CY Conc.
98 LBs Bar Steel

Type "C" (2 Posts)
1.8 CY Conc.
100 LBs Bar Steel

Type "D" (2 Posts)
1.8 CY Conc.
112 LBs Bar Steel

Type "C" (3 Posts)
2.7 CY Conc.
150 LBs Bar Steel

Type "D" (3 Posts)
2.7 CY Conc.
168 LBs Bar Steel

STEEL POST SIZE

"A" - W10" x 12"
"B" - W12" x 16"
"C" - W12" x 19"
"D" - W12 x 22"

DETERMINATION OF HIGH STRENGTH STRUCTURAL STEEL SIGN SUPPORT TYPE

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

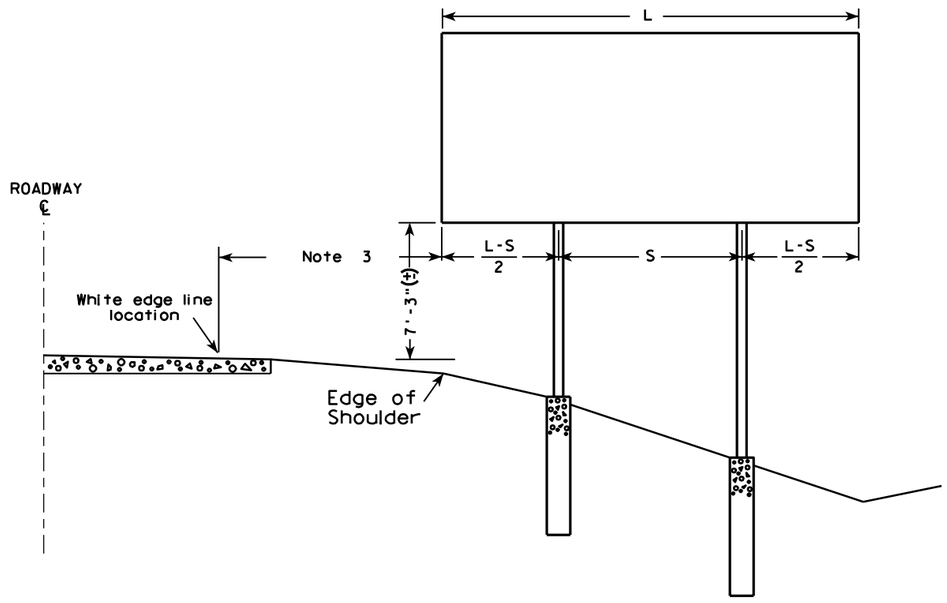
DATE 3/5/10 PLATE NO. A3-3.2

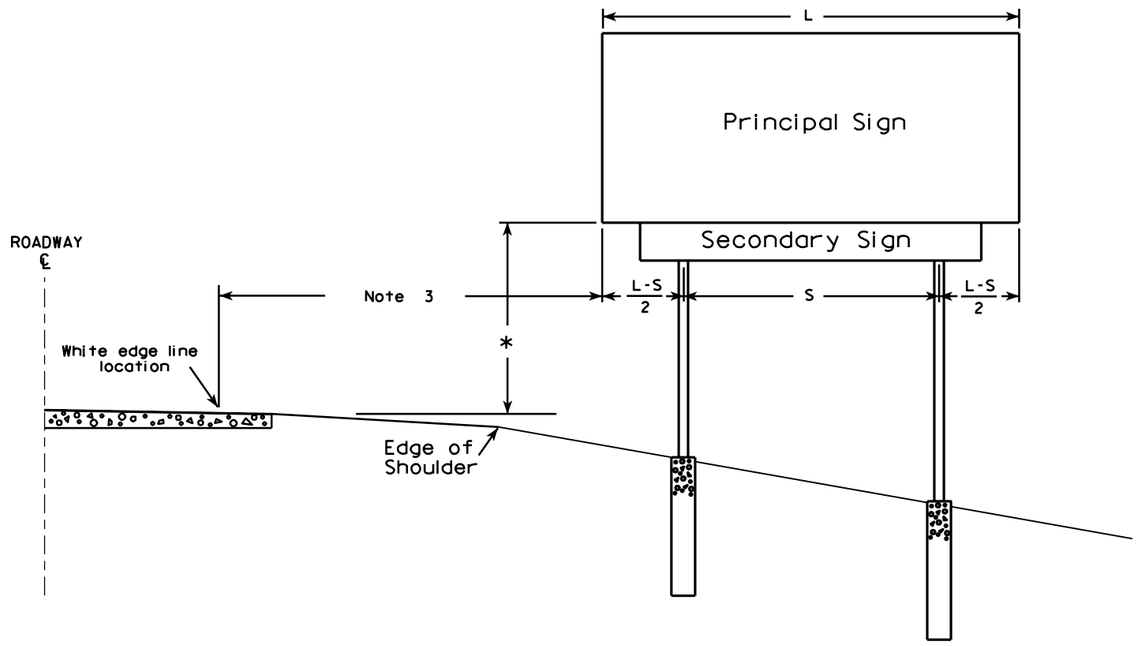
PROJECT NO: | SHEET NO: E

FILE NAME : C:\users\PROJECTS\tr_stdplate\A33.DGN PLOT DATE : 05-MAR-2010 10:07 PLOT BY : ditjph

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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"(±).

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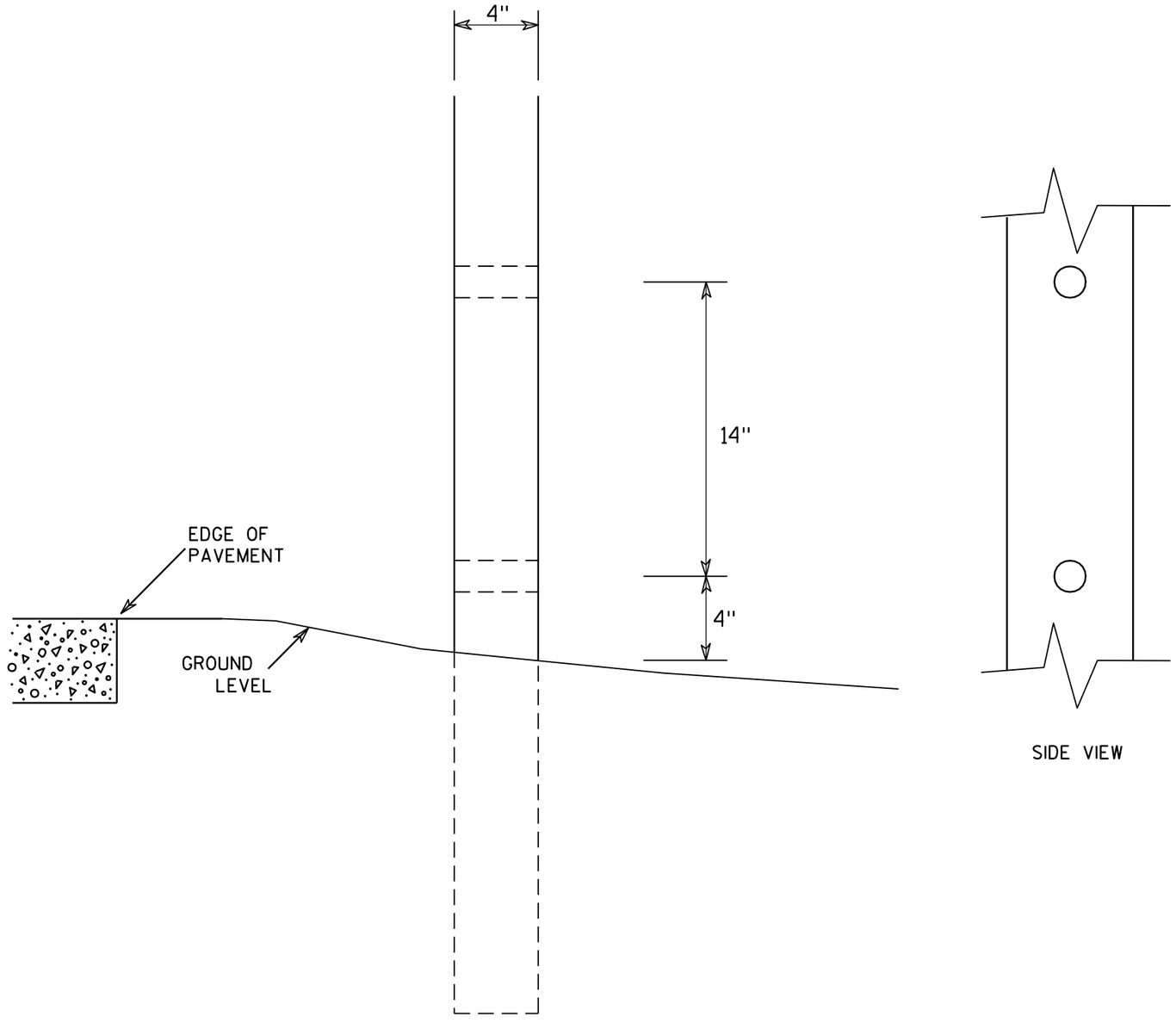
TYPICAL INSTALLATION
OF TYPE I SIGNS

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: 605	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.

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4 X 6 WOOD POST MODIFICATIONS

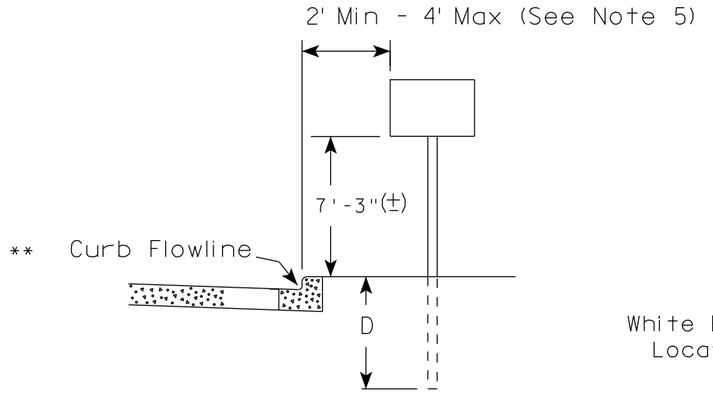
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

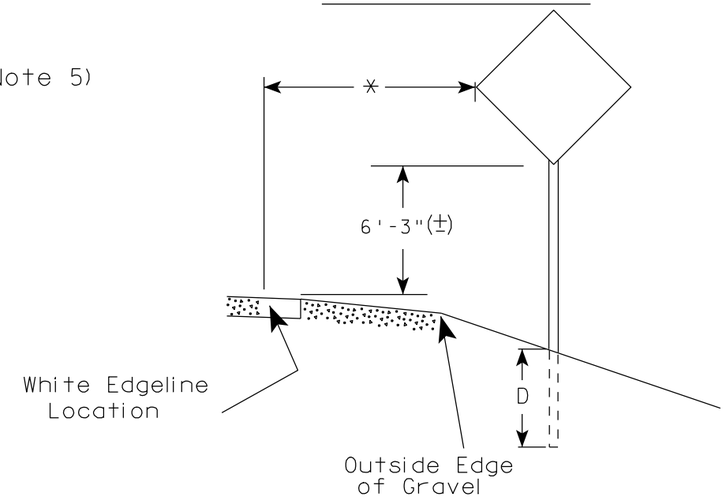
DATE 3/27/97 PLATE NO. A4-11.2

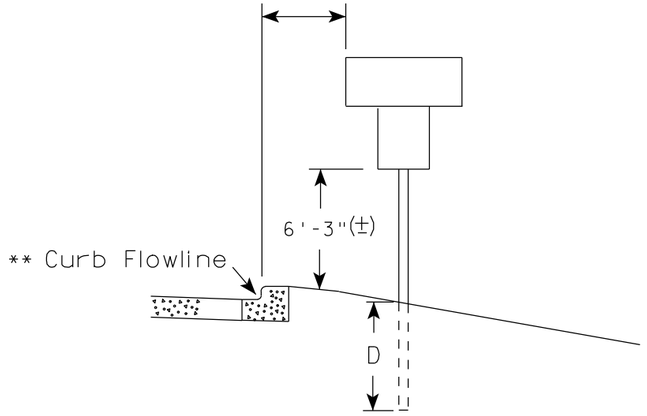
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 606	E

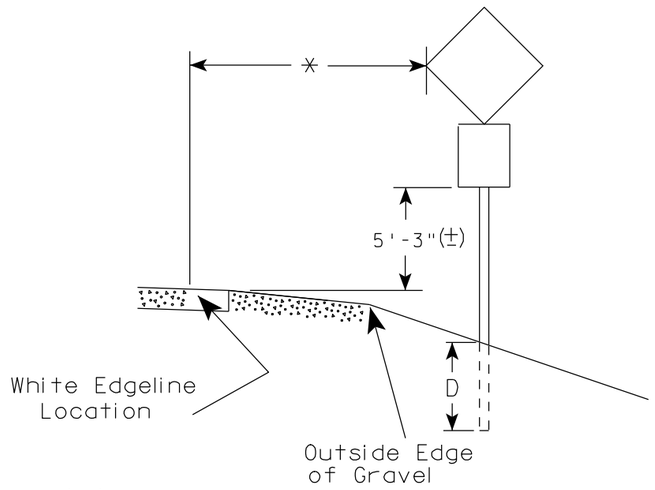
URBAN AREA



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 or larger than 20 sq. ft. 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), 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" (±).

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

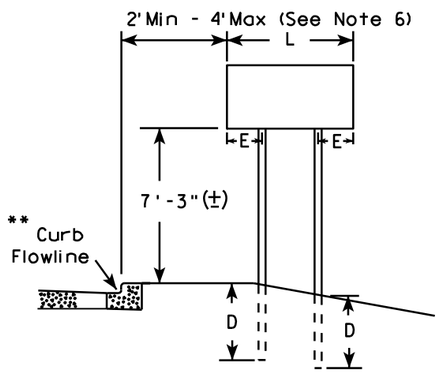
DATE 9/21/2011 PLATE NO. A4-3.16

7

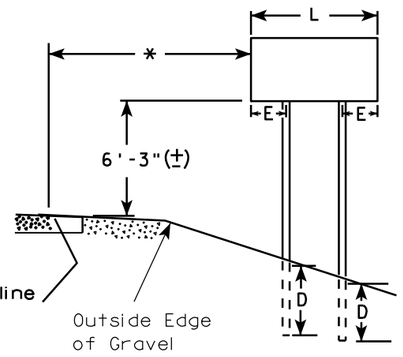
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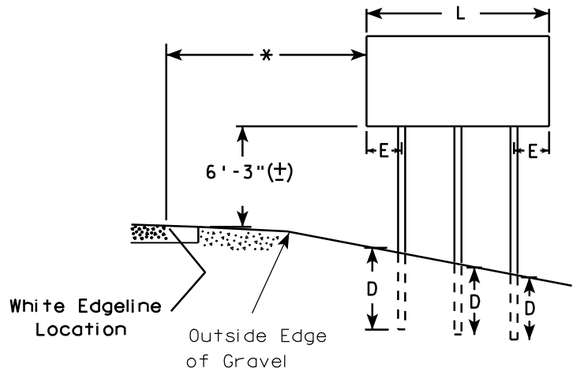
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 607	E

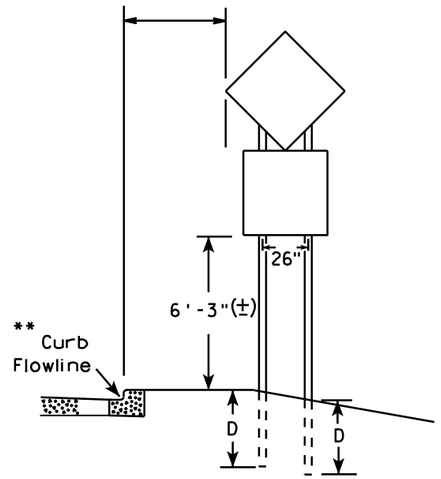
URBAN AREA



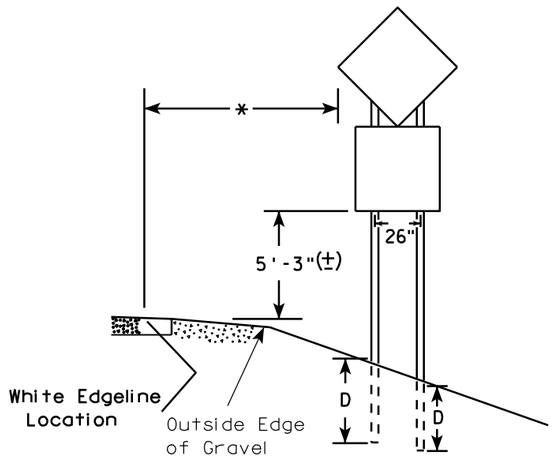
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	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'

GENERAL NOTES

1. For multiple 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 20 S.F. or less in area.

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

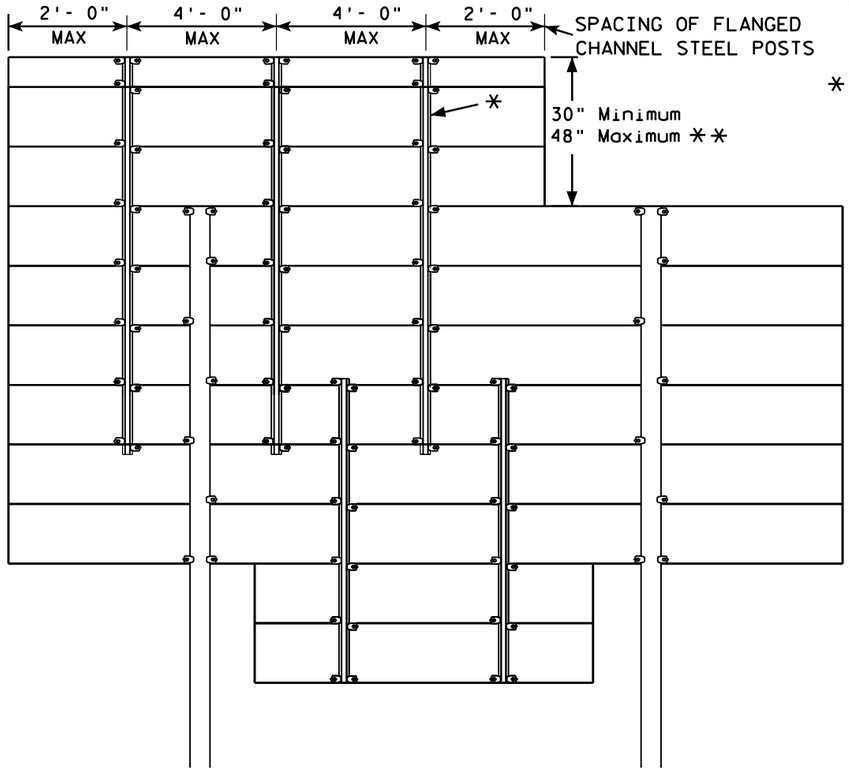
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-4.11

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 608	E

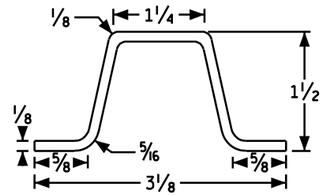
GROUND MOUNTED SIGN



*=2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

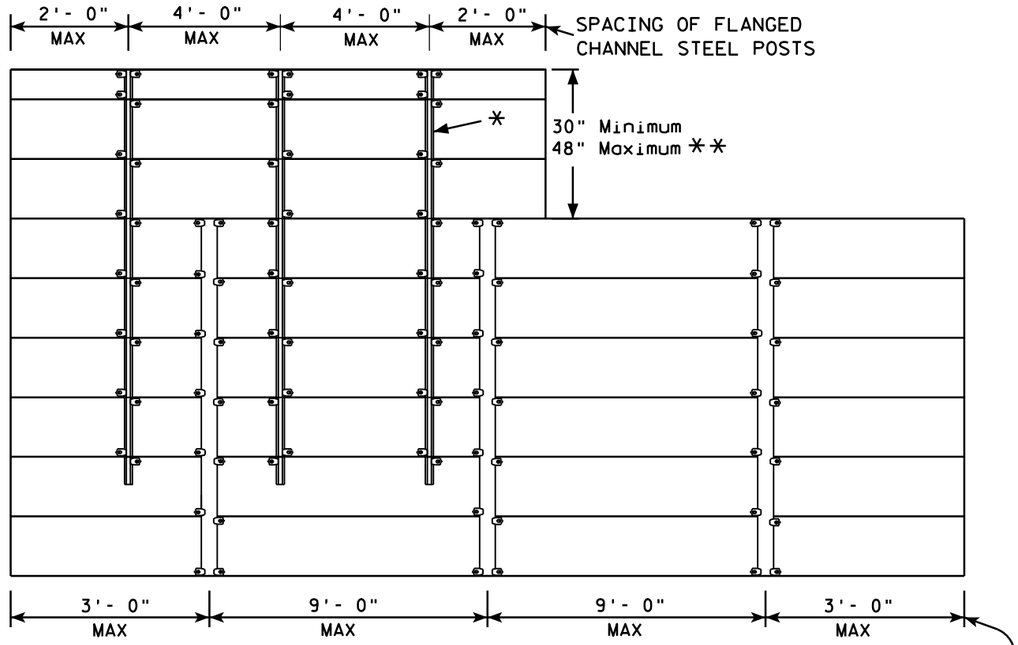
**=FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



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)

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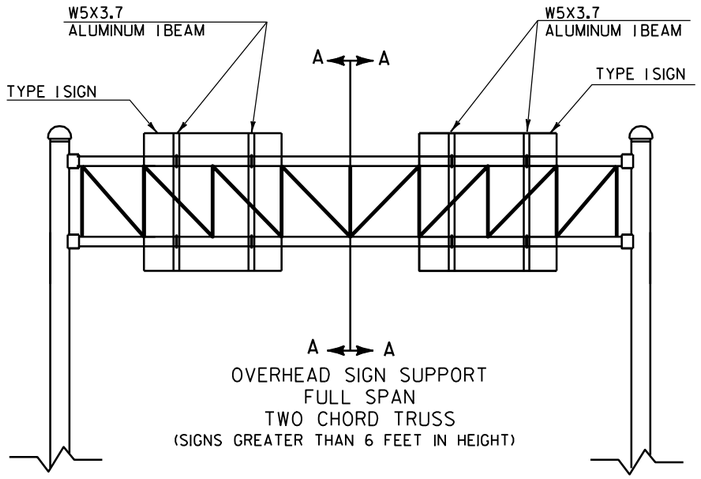
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

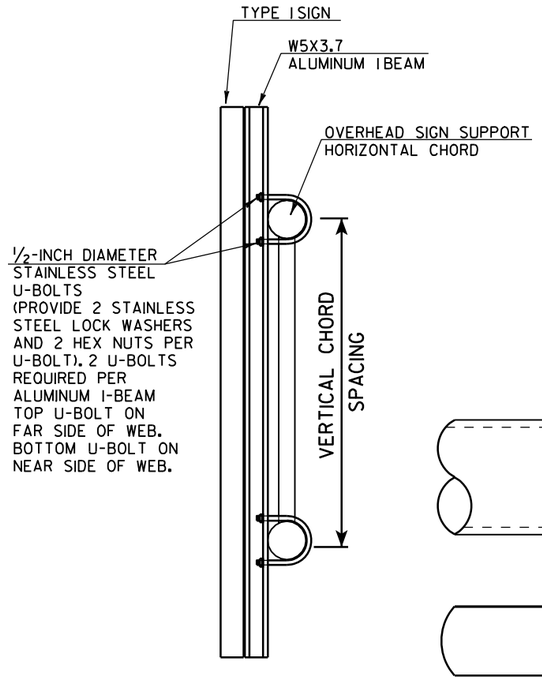
APPROVED Matthew R Rauch for State Traffic Engineer

DATE 6/7/10 PLATE NO. A4-6.11

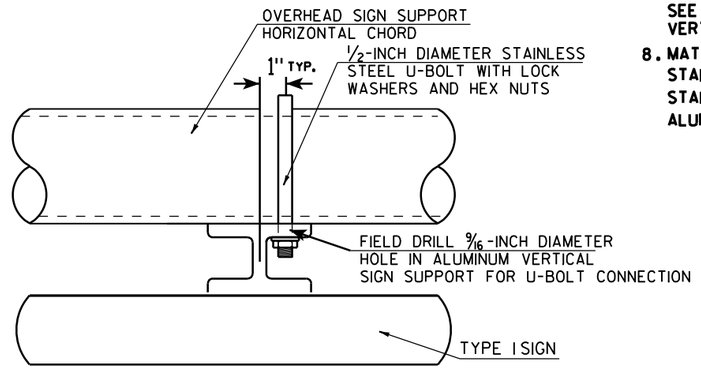
PROJECT NO:				SHEET NO: 609	E



OVERHEAD SIGN SUPPORT
FULL SPAN
TWO CHORD TRUSS
(SIGNS GREATER THAN 6 FEET IN HEIGHT)



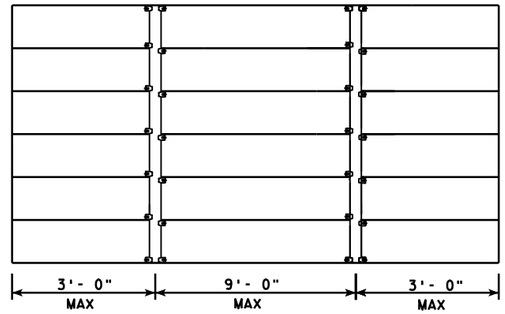
CUT SECTION A-A



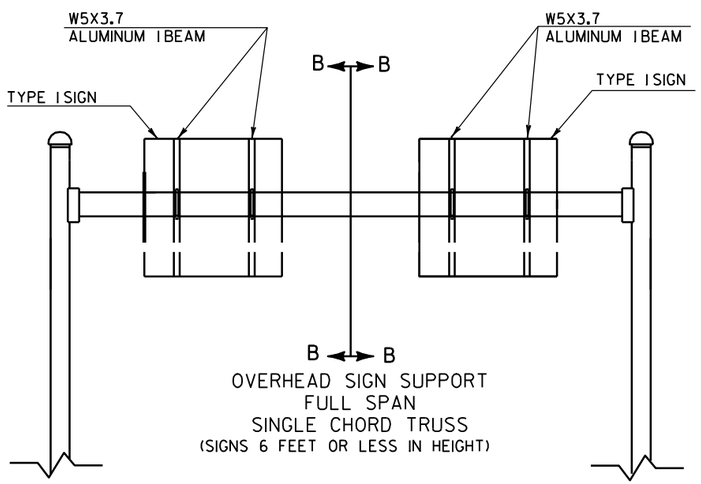
TYPICAL SIGN CONNECTION FOR
TWO CHORD TRUSS
PLAN VIEW

GENERAL NOTES

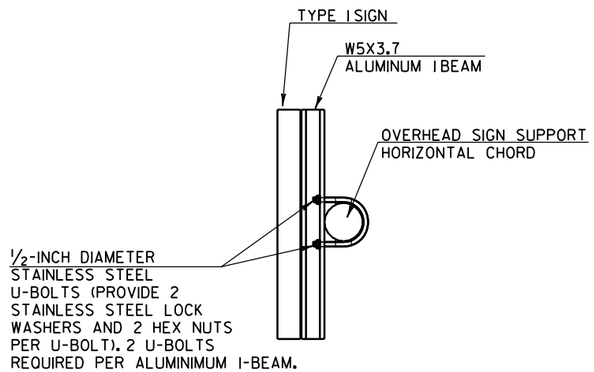
1. USE STAINLESS STEEL U-BOLTS, WASHERS, AND NUTS.
2. USE CLIPS ON EVERY EXTRUDED PANEL JOINT PER SIGN PLATE A4-6.
3. USE ALUMINUM VERTICAL SIGN SUPPORT BEAMS HAVING A 5 INCH BEAM DEPTH AND WEIGHT OF 3.7 LBS PER FOOT.
4. U-BOLTS SHALL BE STAINLESS STEEL AND MANUFACTURED TO THE PROPER SIZE TO FIT THE 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.



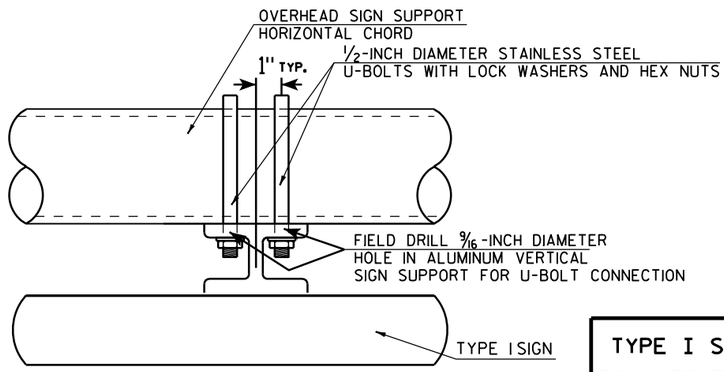
SPACING OF W5X3.7 ALUMINUM
VERTICAL SIGN SUPPORT



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

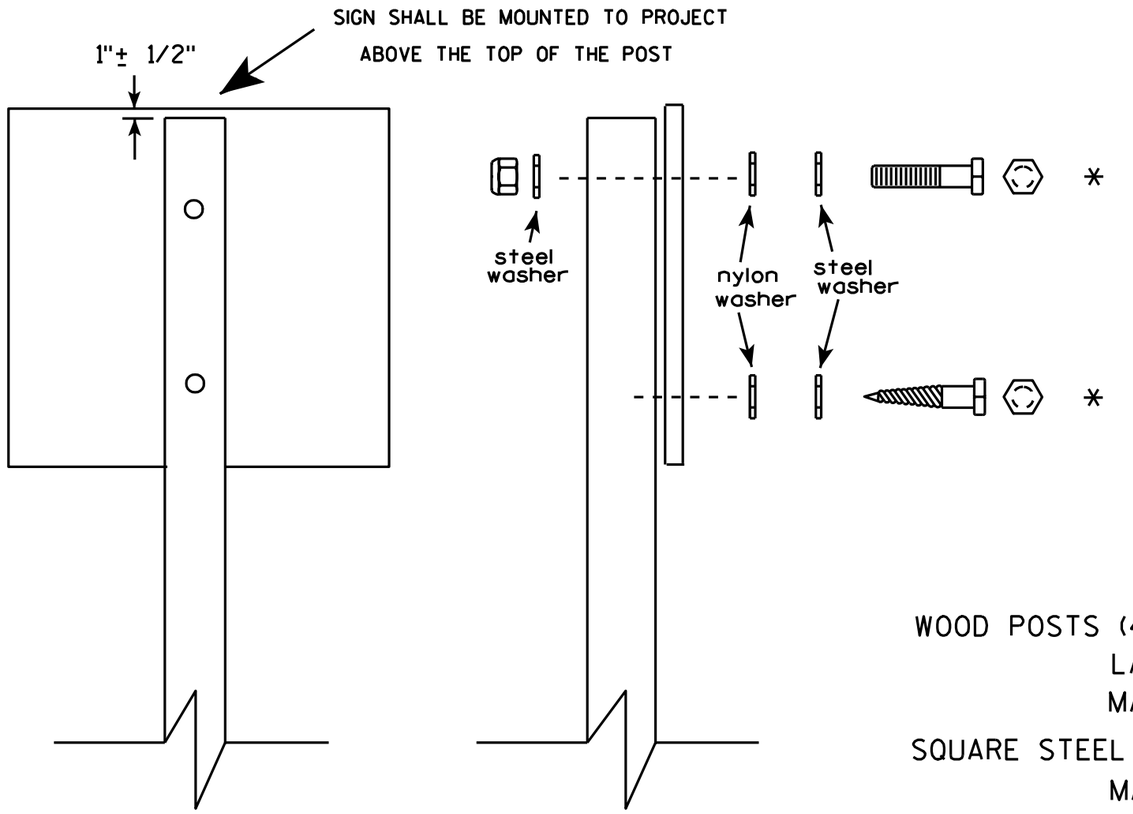
TYPE I SIGN CONNECTION TO OVERHEAD SIGN SUPPORT

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: 610	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

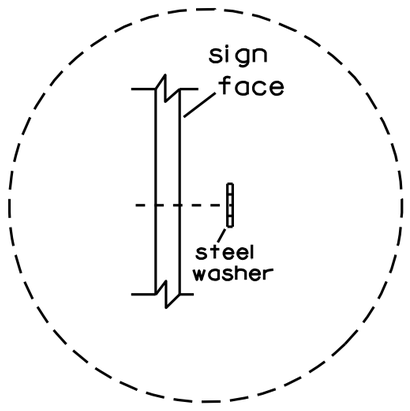
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

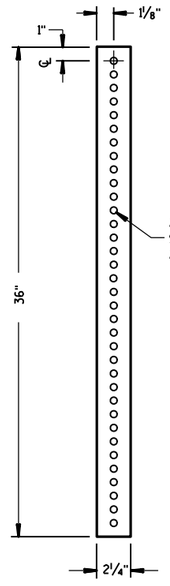
7

PROJECT NO:

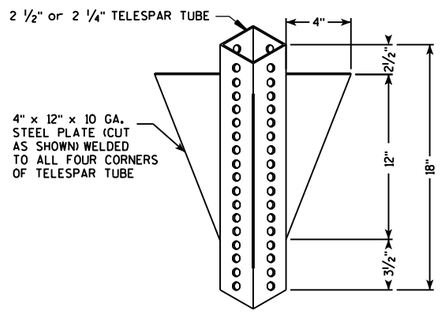
SHEET NO: 611 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

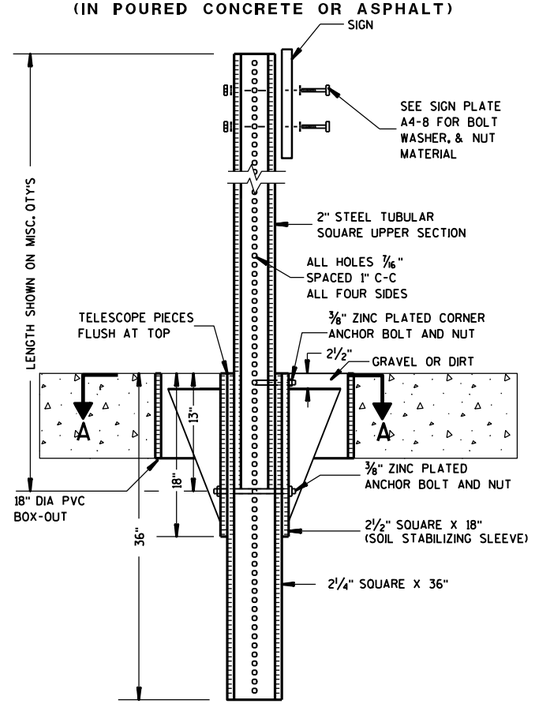
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



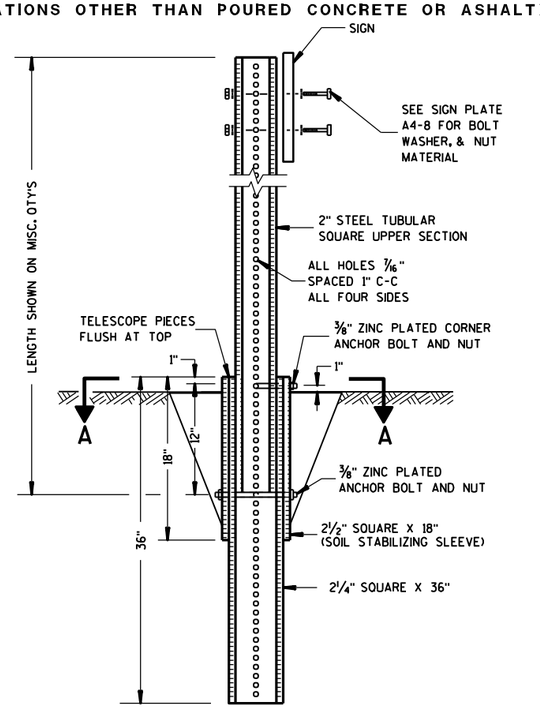
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

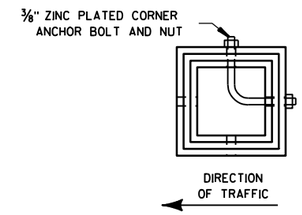


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

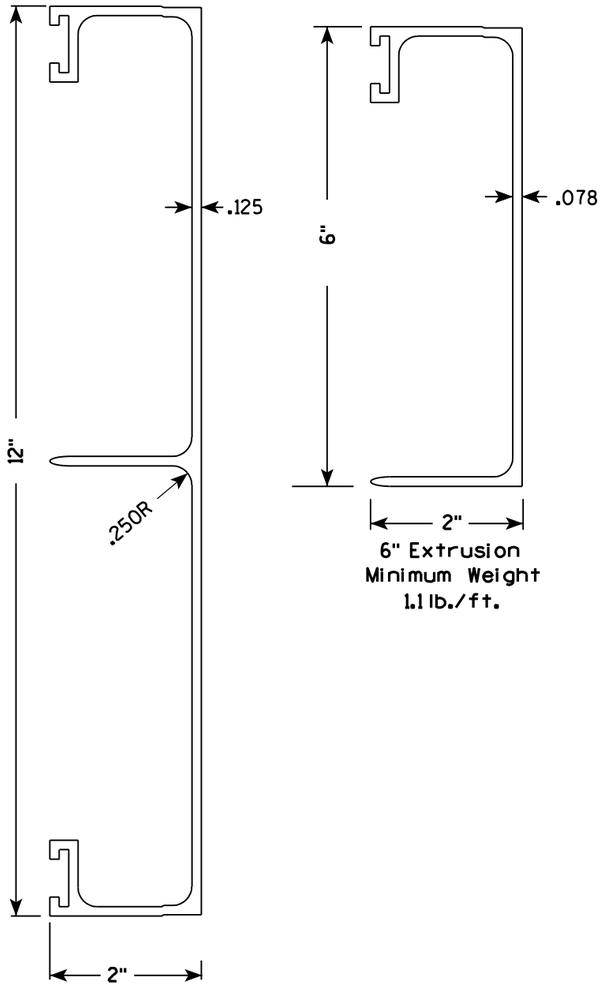
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer
DATE 5/30/12 PLATE NO. A4-9.7

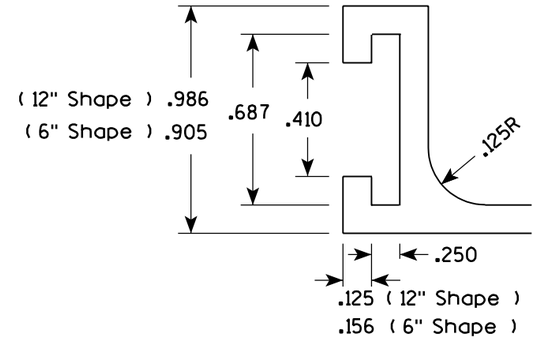
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 612	E

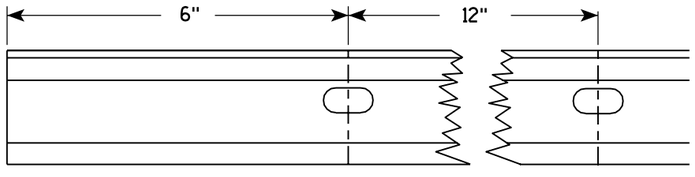
Extruded Shape



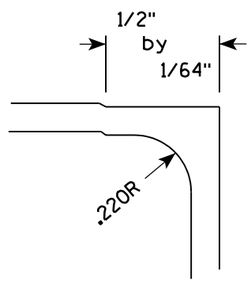
12" Extrusion
Minimum Weight
2.45 lb./ft.

6" Extrusion
Minimum Weight
1.1 lb./ft.





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.

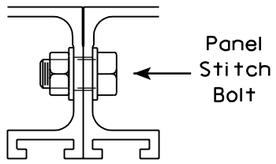


Hardware

STITCH BOLT, WASHER & NUT

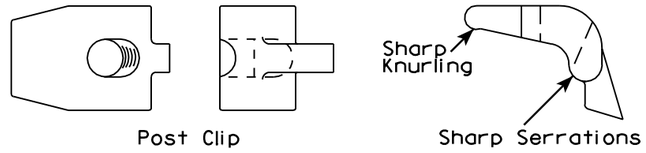
The hardware includes:

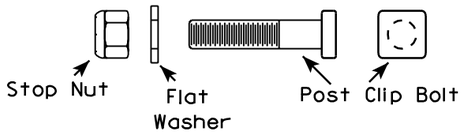
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



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

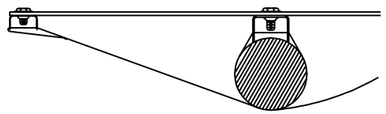
APPROVED Chester J Spagg
for State Traffic Engineer

DATE 11/18/99 PLATE NO. A5-2.9

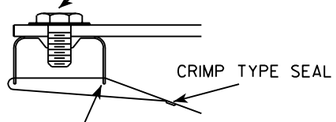
PROJECT NO:

SHEET NO: 613 E

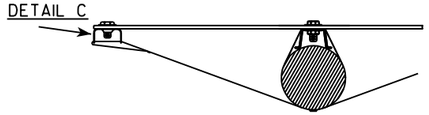
BRACE BANDING

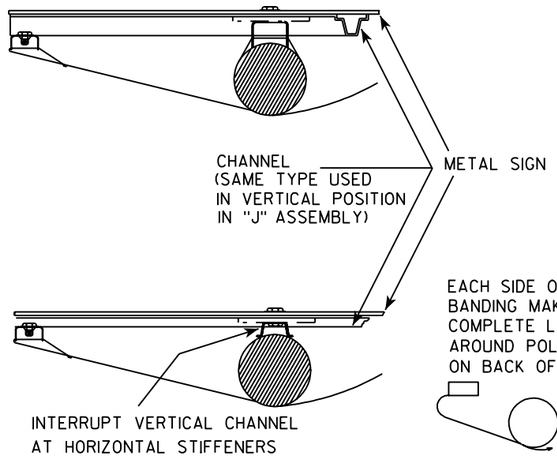


DETAIL C
CADMIUM PLATED STEEL BOLT
THROUGH BLACK BORDER



DETAIL C

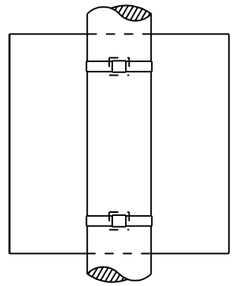


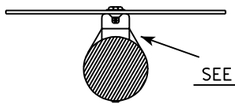


EACH SIDE OF BRACE
BANDING MAKES ONE
COMPLETE LOOP
AROUND POLE-SEAL
ON BACK OF POLE

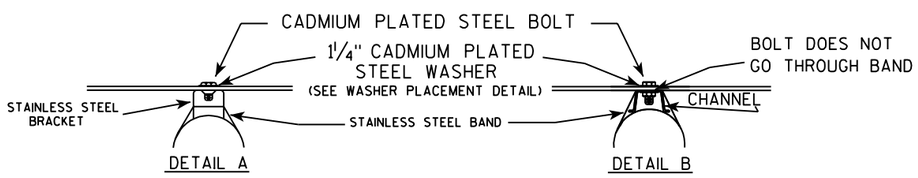
BRACKET BANDING

SINGLE SIGN





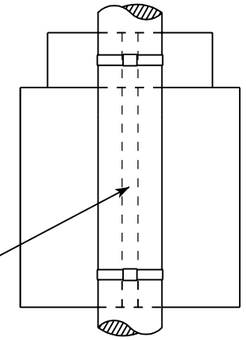
SEE DETAIL A



DETAIL A

DETAIL B

"J" ASSEMBLY

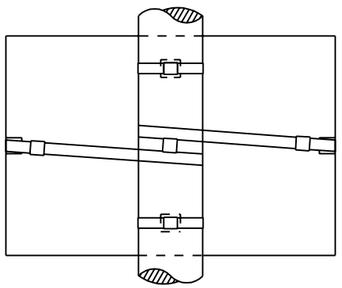


CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

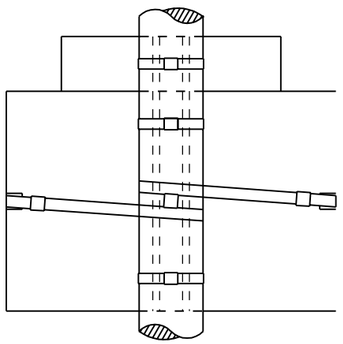
GENERAL NOTES

1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' 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.

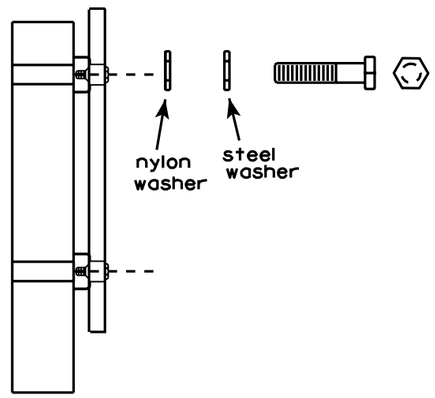


BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY BUT NOT SO TIGHT AS TO APPRECIABLY CURVE FACE OF SIGN.



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

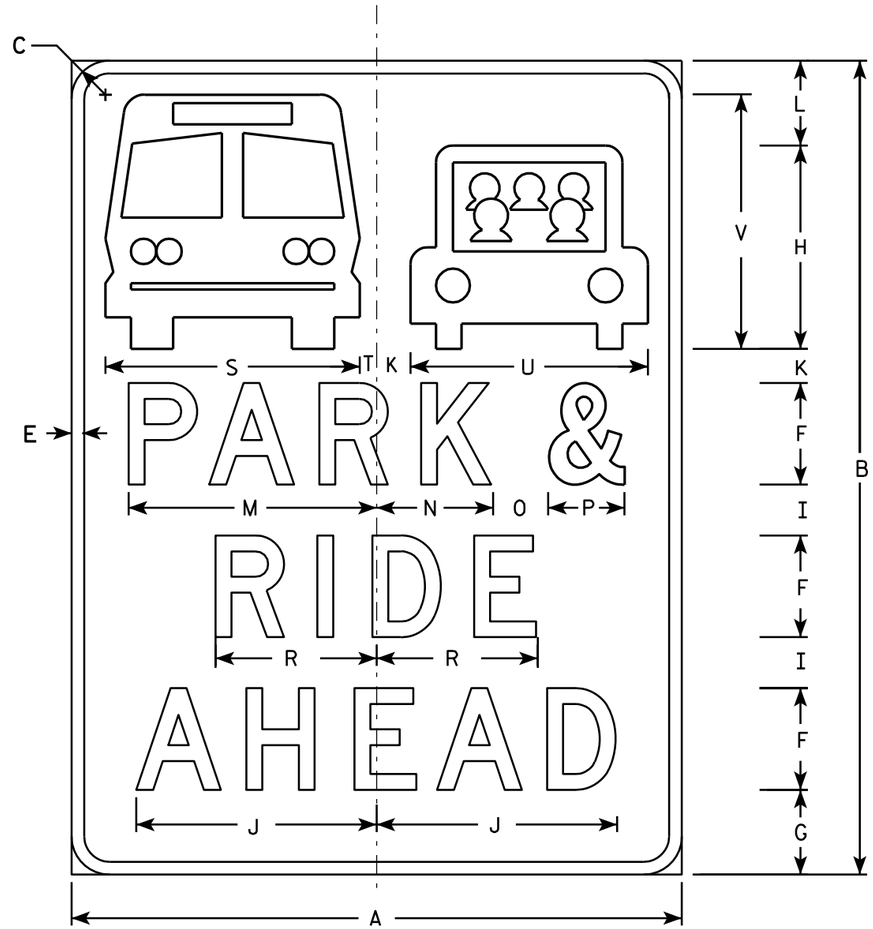
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
for State Traffic Engineer

DATE 11/08/05 PLATE NO. A5-9.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 614	E



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

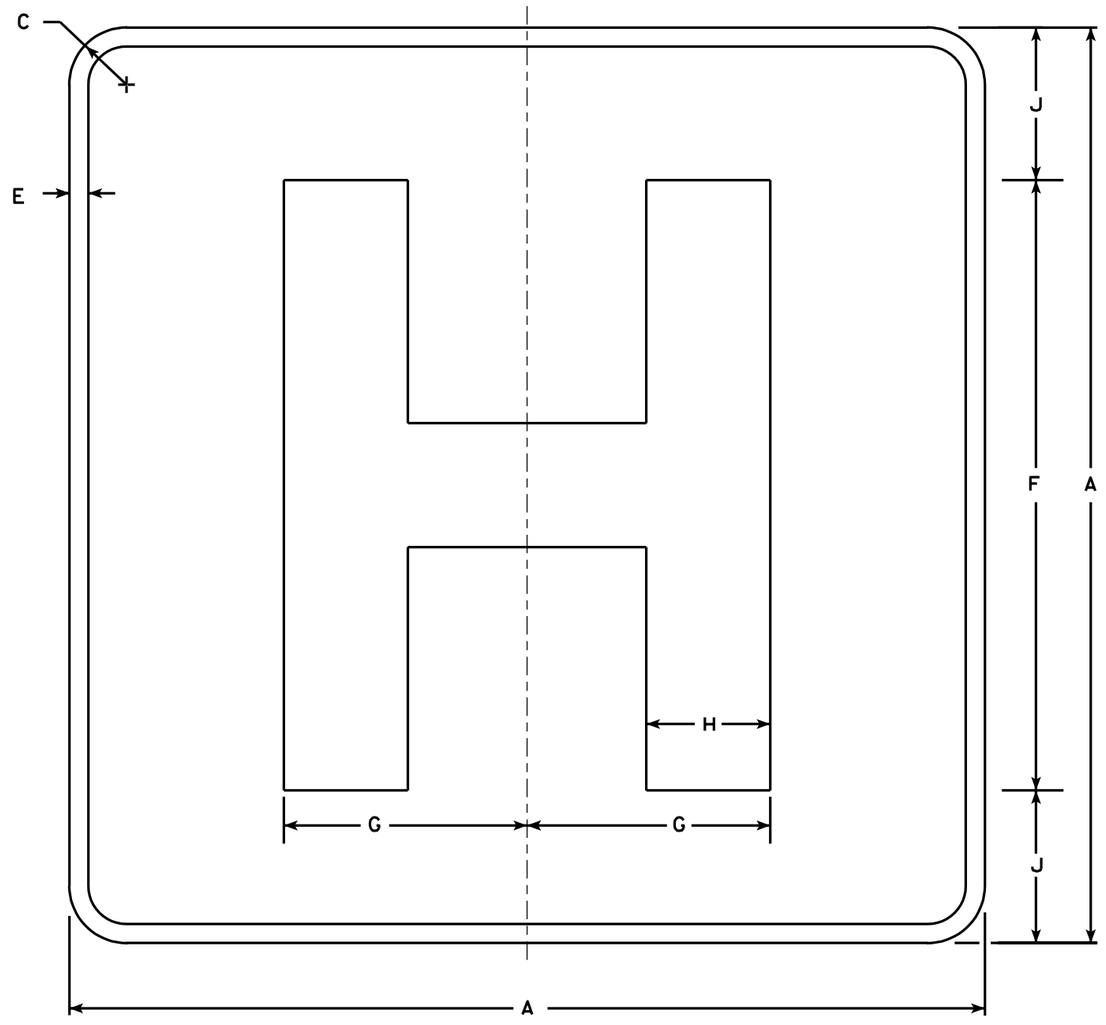
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/30/10 PLATE NO. D4-2A.2

PROJECT NO:

SHEET NO: 615 E



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

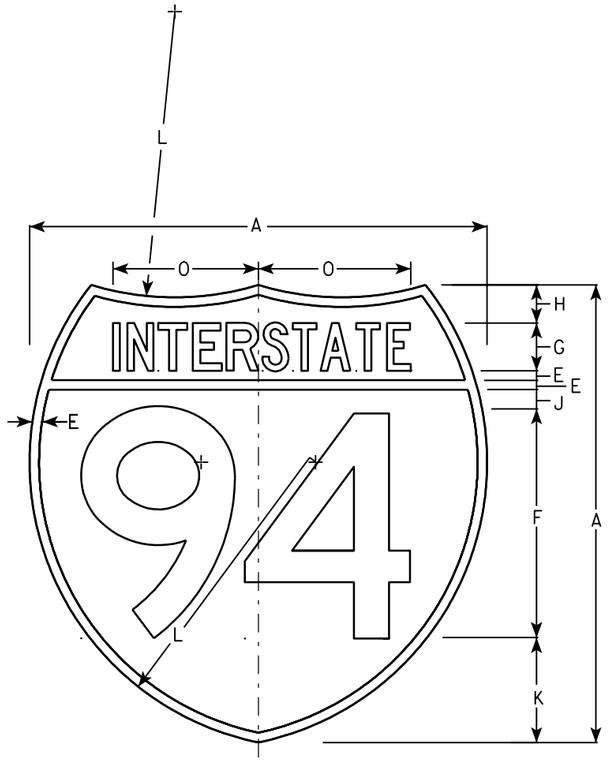
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spong
for State Traffic Engineer

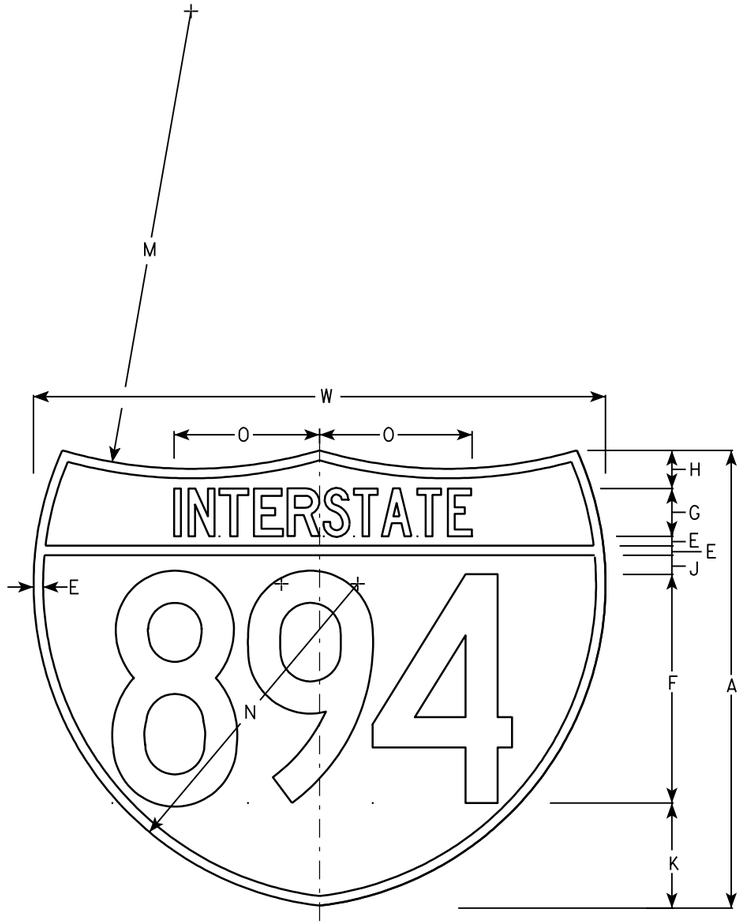
DATE 1/15/02 PLATE NO. D9-2.4

PROJECT NO:

SHEET NO: 616 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

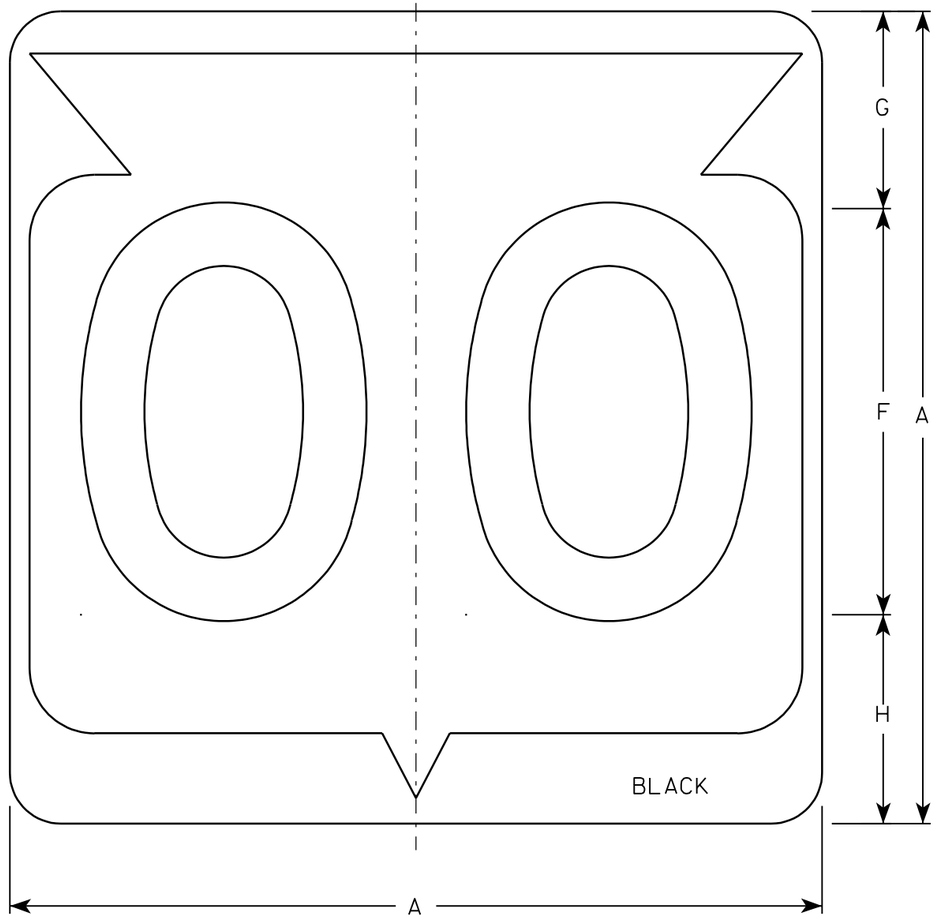
INTERSTATE ROUTE MARKER
M1-1 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 08/23/05 PLATE NO. M1-1.8

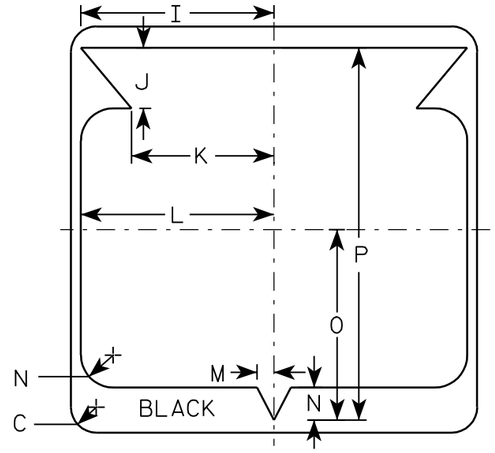
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 617	E



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

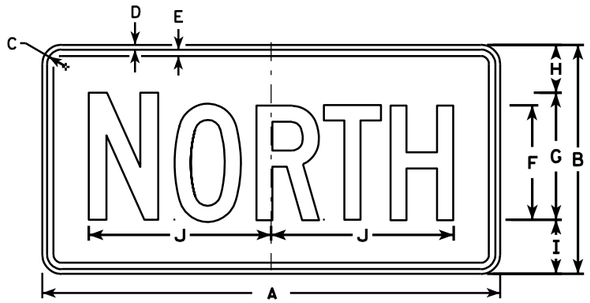
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

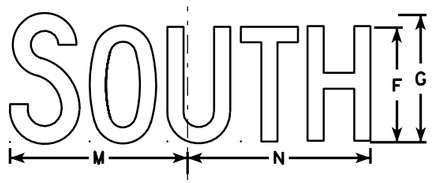
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 618	E



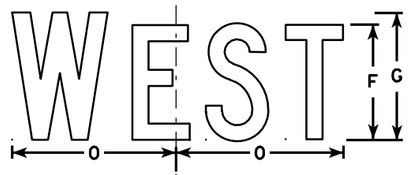
M3-1
MK3-1
MO3-1



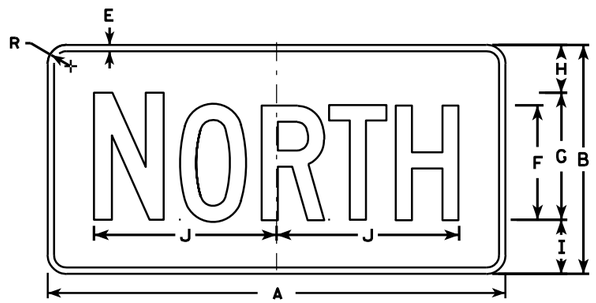
M3-2
MK3-2
MO3-2



M3-3
MK3-3
MO3-3



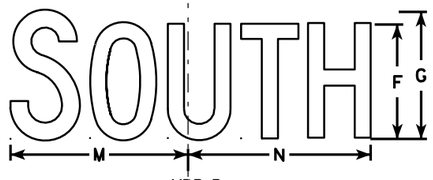
M3-4
MK3-4
MO3-4



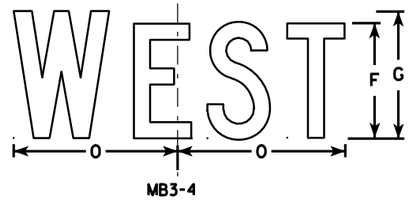
MB3-1
MG3-1
MM3-1
MN3-1



MB3-2
MG3-2
MM3-2
MN3-2



MB3-3
MG3-3
MM3-3
MN3-3



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

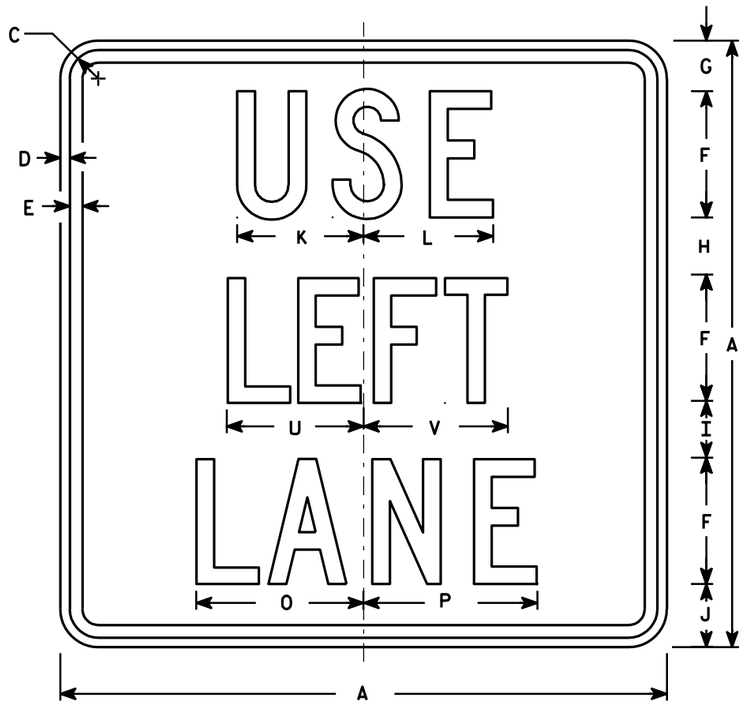
STANDARD SIGNS
M3-1 thur M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/10/10 PLATE NO. M3-1.12

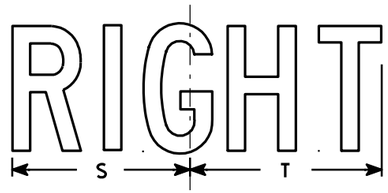
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 619	E



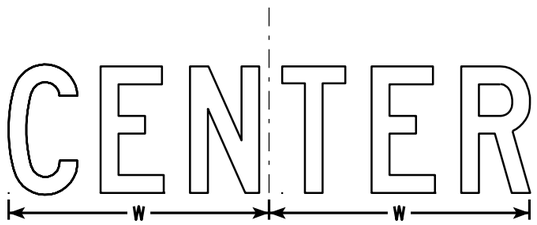
M4-20L

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 - 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.



M4-20R



M4-20C

Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 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		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	0.36
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	0.81
4																												
5																												

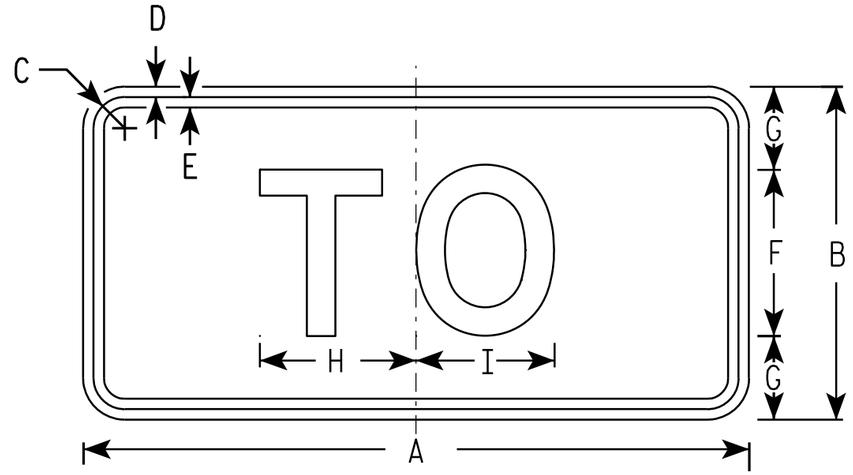
STANDARD SIGN
M4-20

WISCONSIN DEPT OF TRANSPORTATION

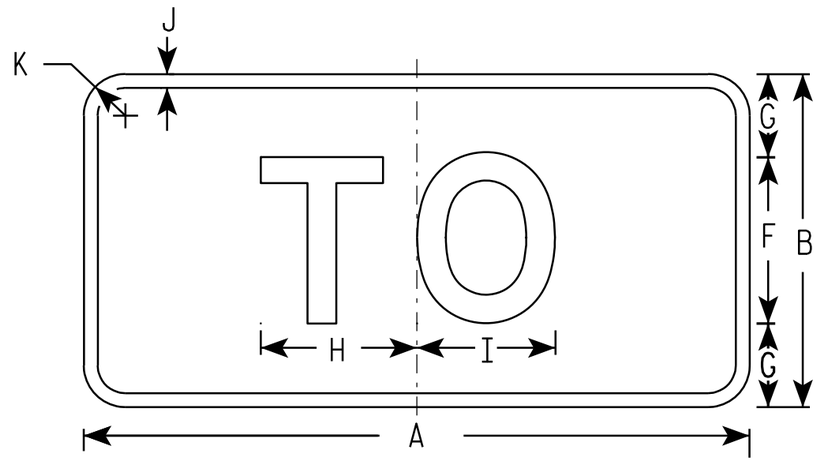
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/09 PLATE NO. M4-20.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 620	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

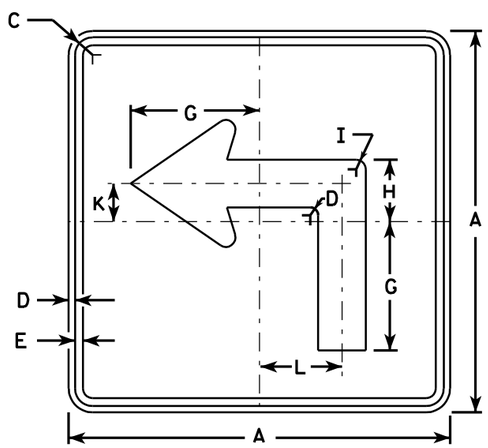
STANDARD SIGN
M4-5

WISCONSIN DEPT OF TRANSPORTATION

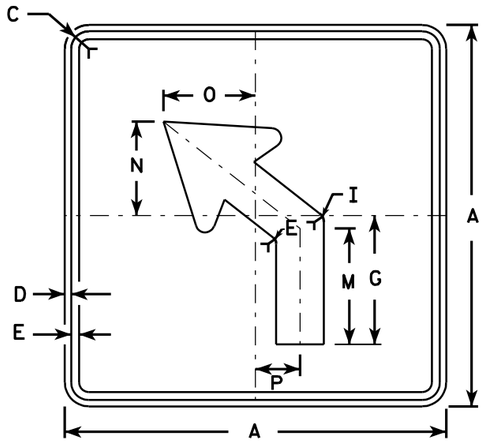
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-5.6

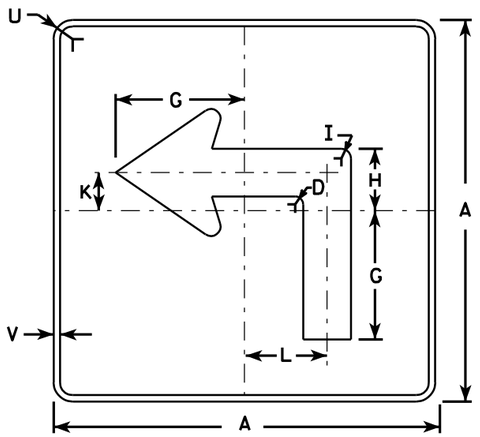
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 621 | E



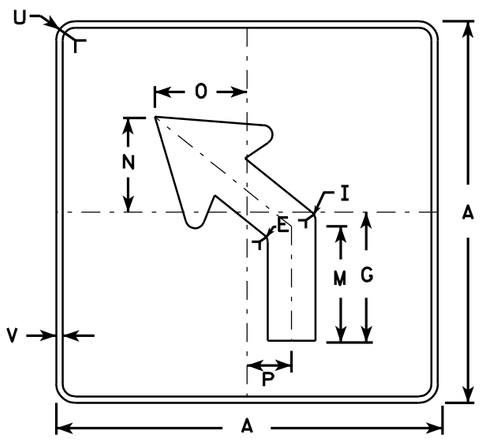
M5-1L
MK5-1L
MM5-1L
MO5-1L
MR5-1L



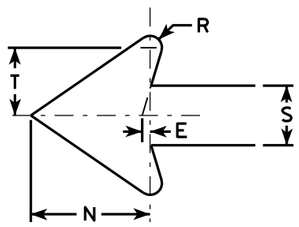
M5-2L
MK5-2L
MM5-2L
MO5-2L
MR5-2L



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 (Detour or temporary Signs - Reflective) Message - Black
   MB5-1 and MB5-2 Background - Blue Message - White - Type H Reflective (Detour or temporary Signs - 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 - Reflective Message - Black
   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.

Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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	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	0.28
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	0.56
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	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	0.56
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	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	0.56

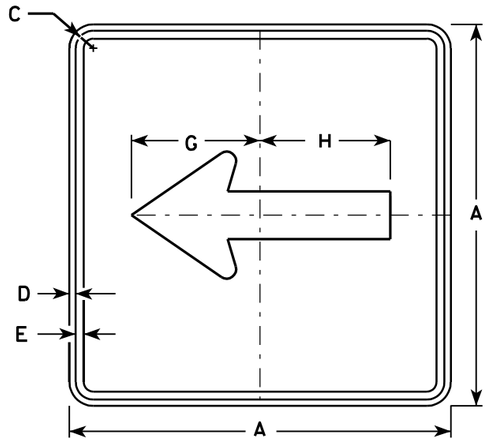
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

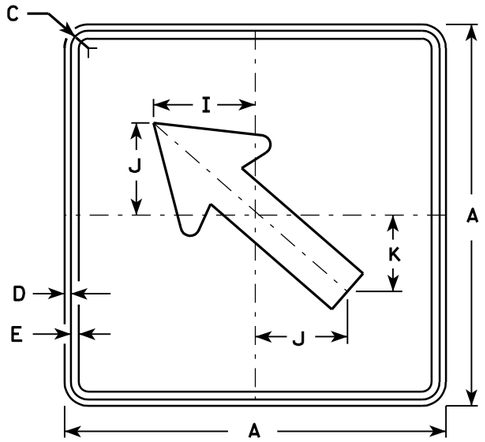
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M5-1.11

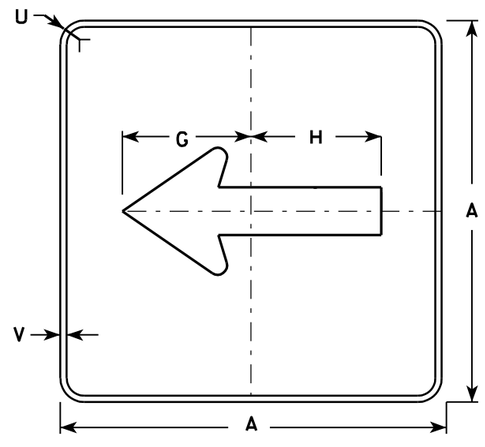
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 622	E



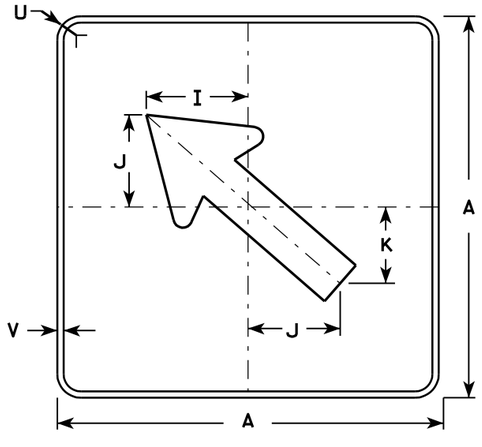
M6-1
MK6-1
MM6-1
MO6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MR6-2



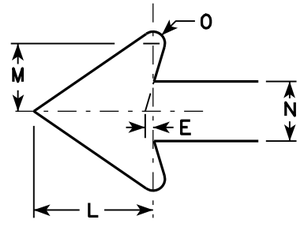
MB6-1
MG6-1
MN6-1



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 (Detour or temporary Signs - Reflective) Message - Black
   MB6-1 and MB6-2 Background - Blue Message - White - Type H Reflective (Detour or temporary Signs - 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 - Reflective Message - Black
   MR6-1 and MR6-2 Background - Brown Message - Yellow - Type H Reflective



Metric equivalent for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 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	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	0.28
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	0.56
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	0.56
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	0.56

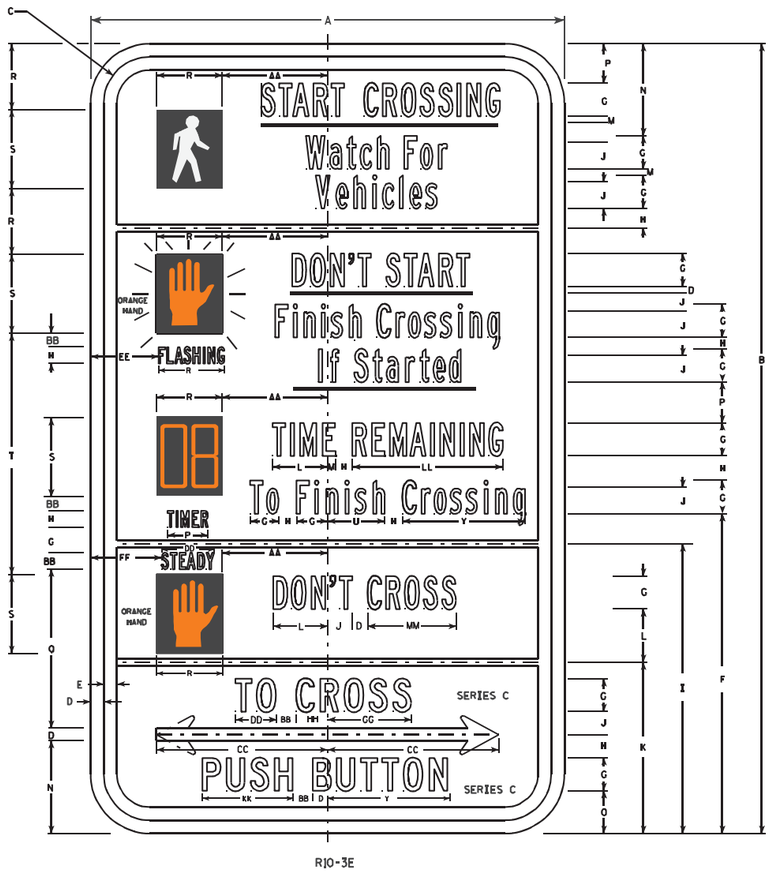
STANDARD SIGN M6-1 & M6-2 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-1.12

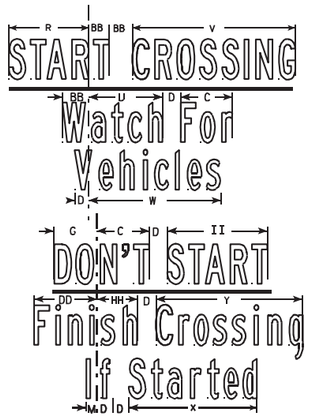
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 623	E



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. in.
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. in.
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 NO. R10-3E.2

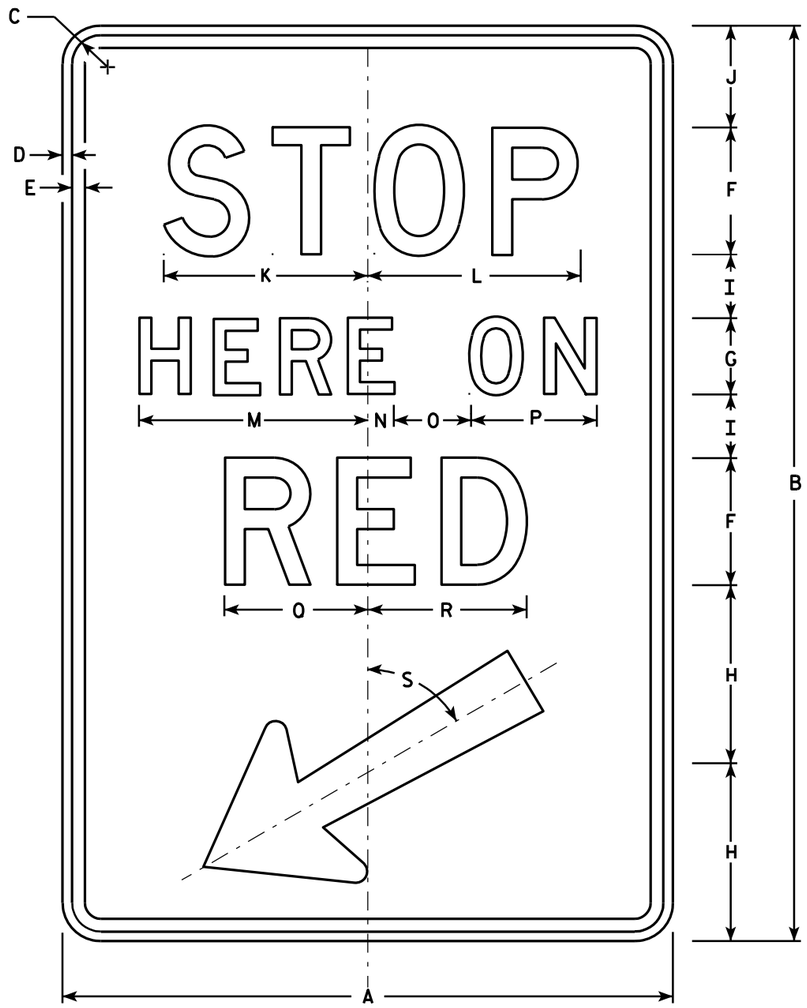
PROJECT NO: | SHEET NO: E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R103E.DGN PLOT DATE : 12-APR-2011 15:26 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

7

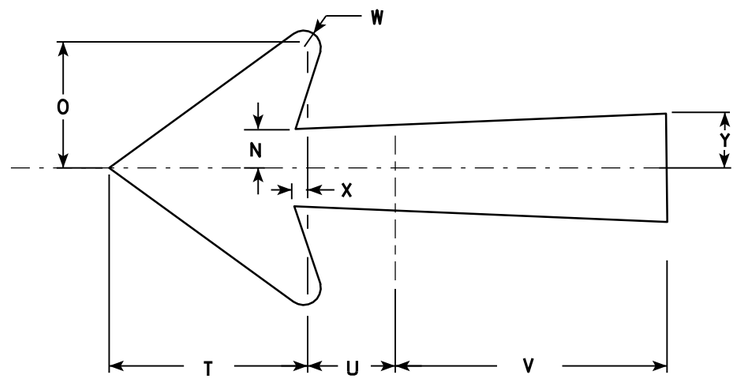
7



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																											

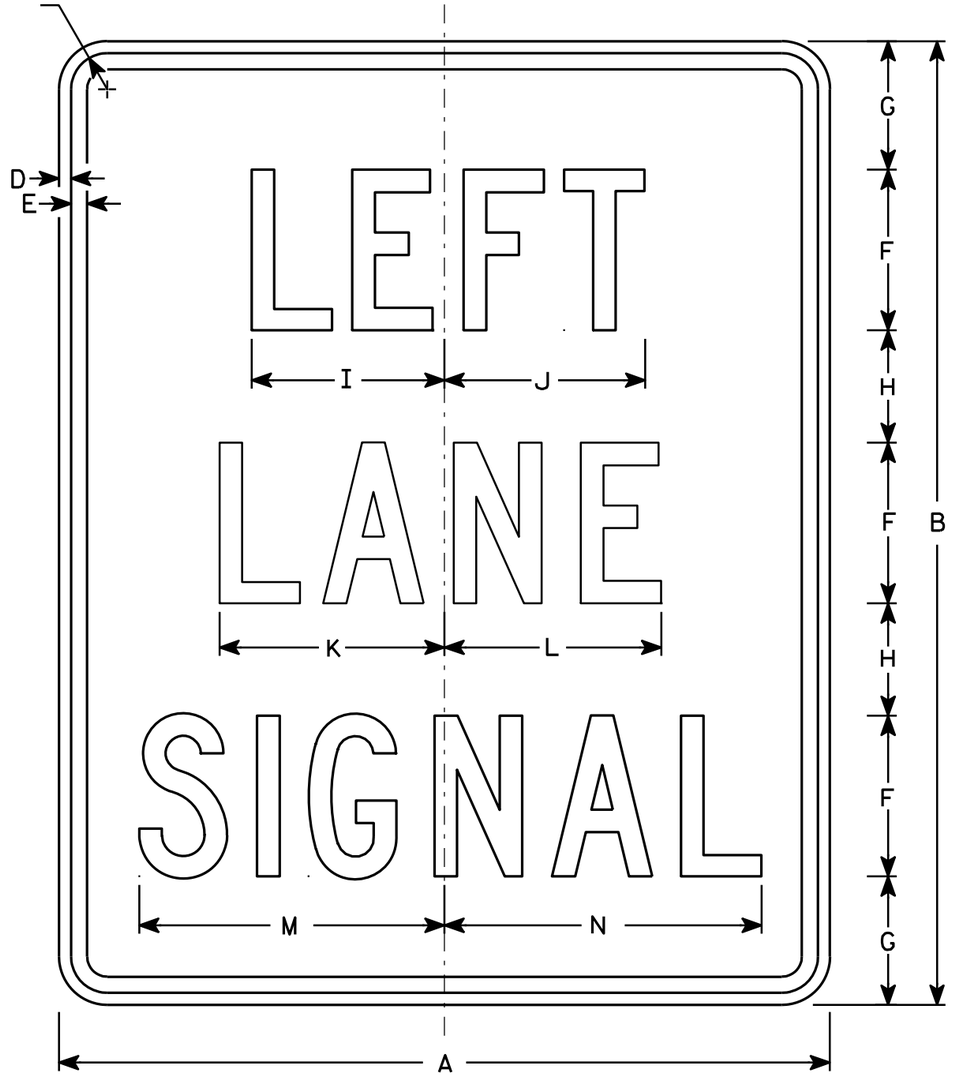
STANDARD SIGN
R10-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/11 PLATE NO. R10-6.6

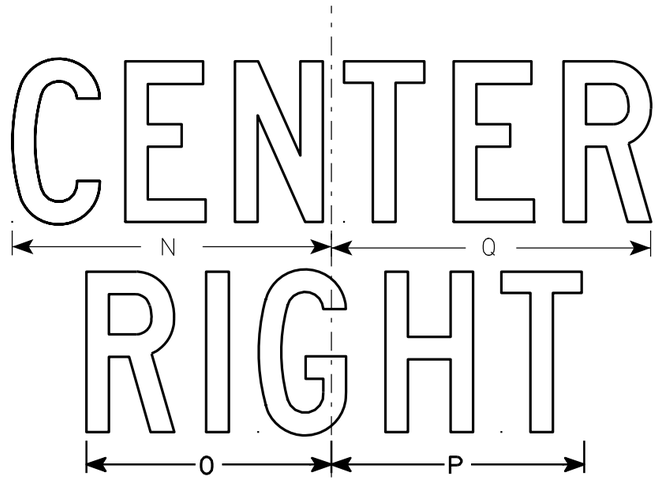
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 625	E



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																											

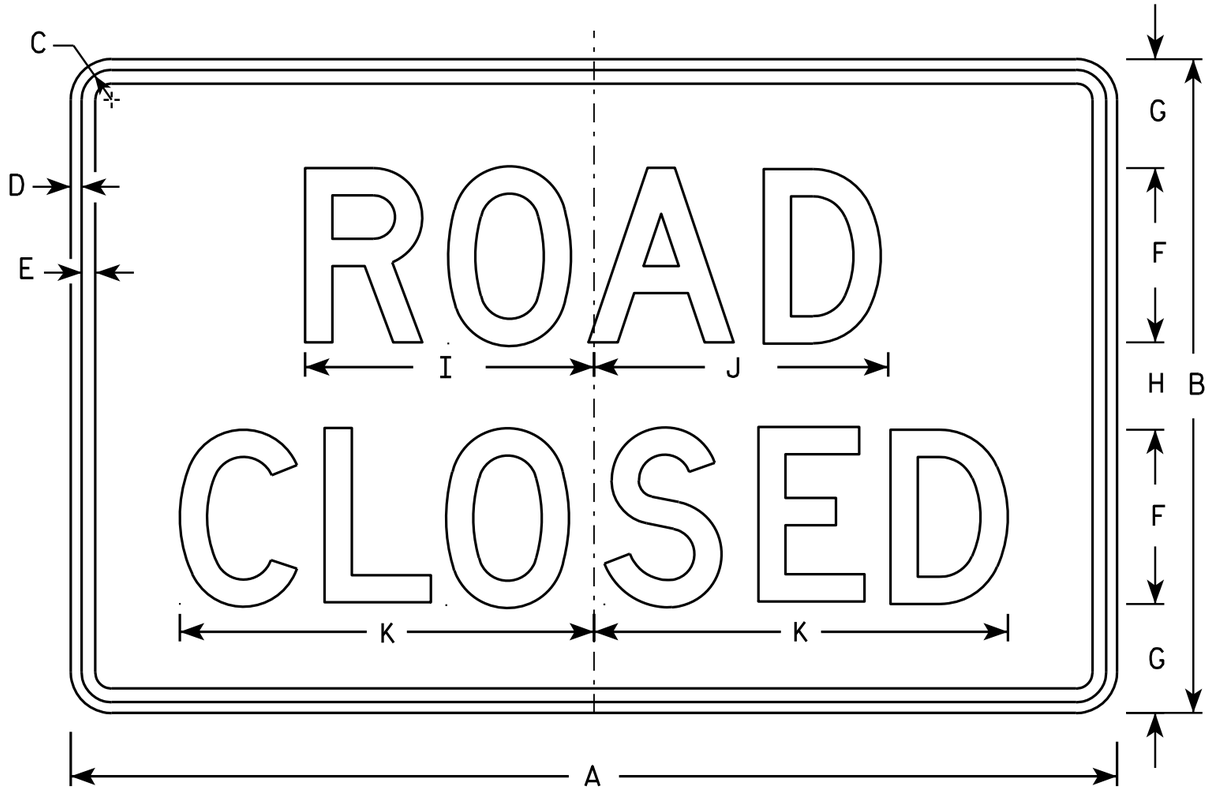
STANDARD SIGN
R10-65

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/4/11 PLATE NO. R10-65.2

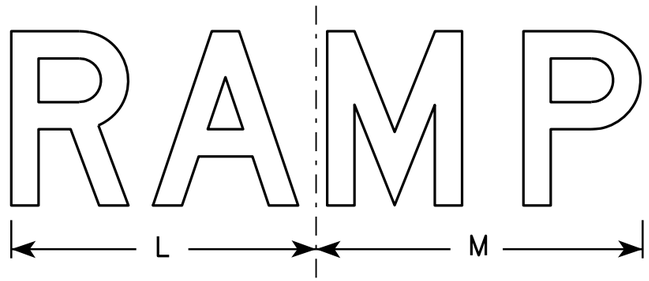
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 626 | E



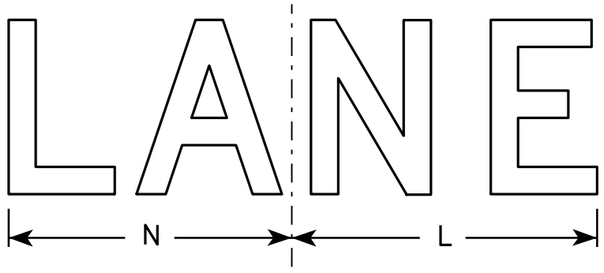
R11-2

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 - 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. Modify the message as required.



R11-2R



R11-2L

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	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

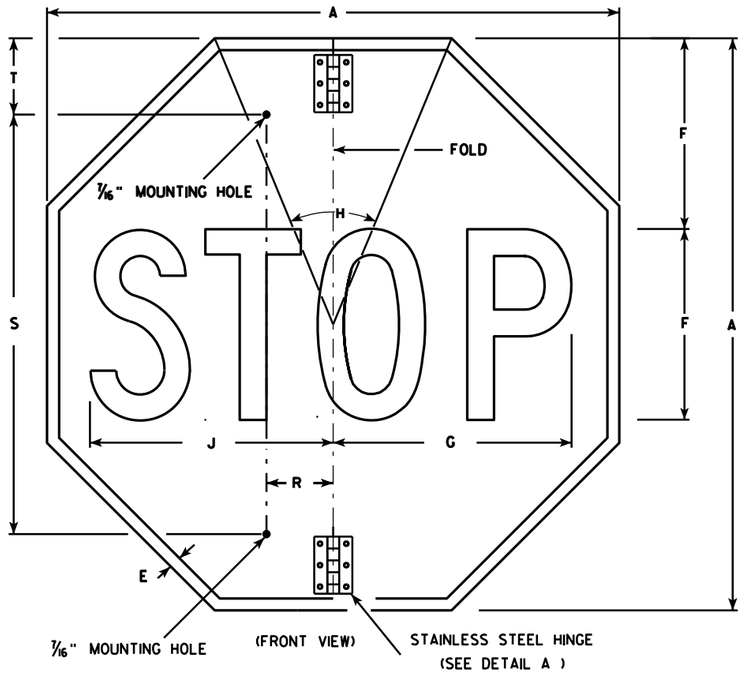
STANDARD SIGN
R11-2

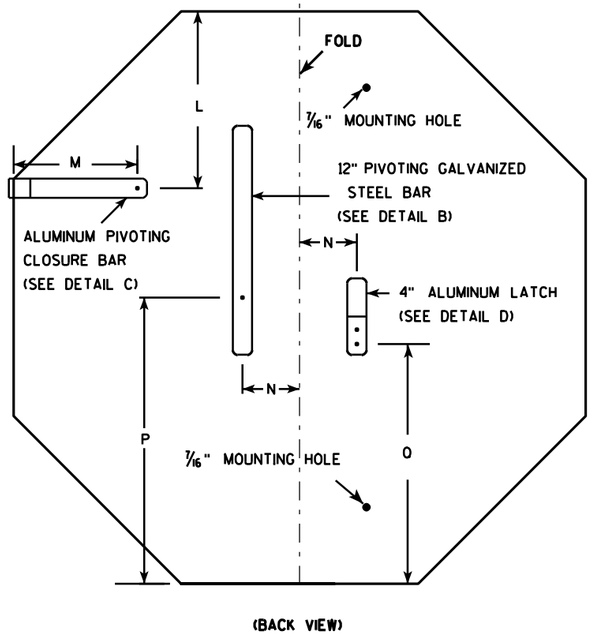
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

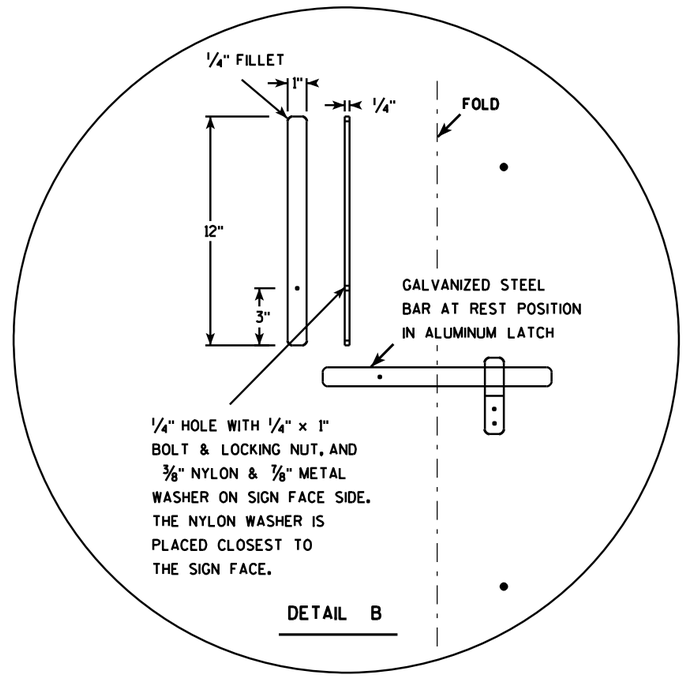
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 627	E

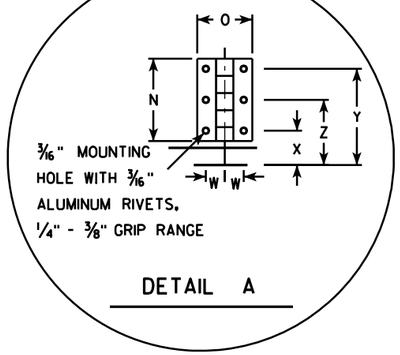


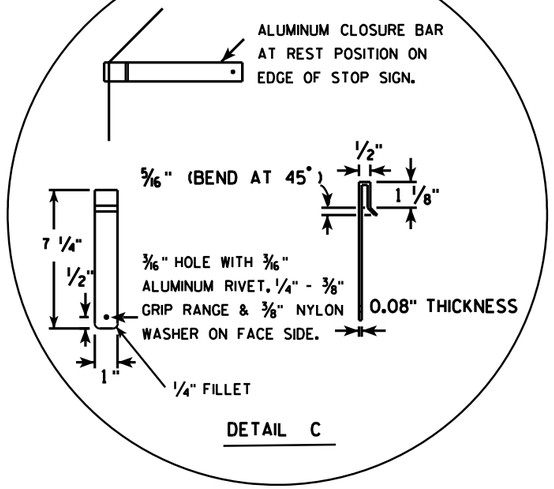


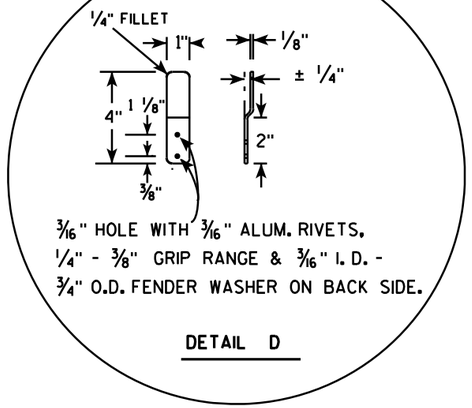
NOTES

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																											

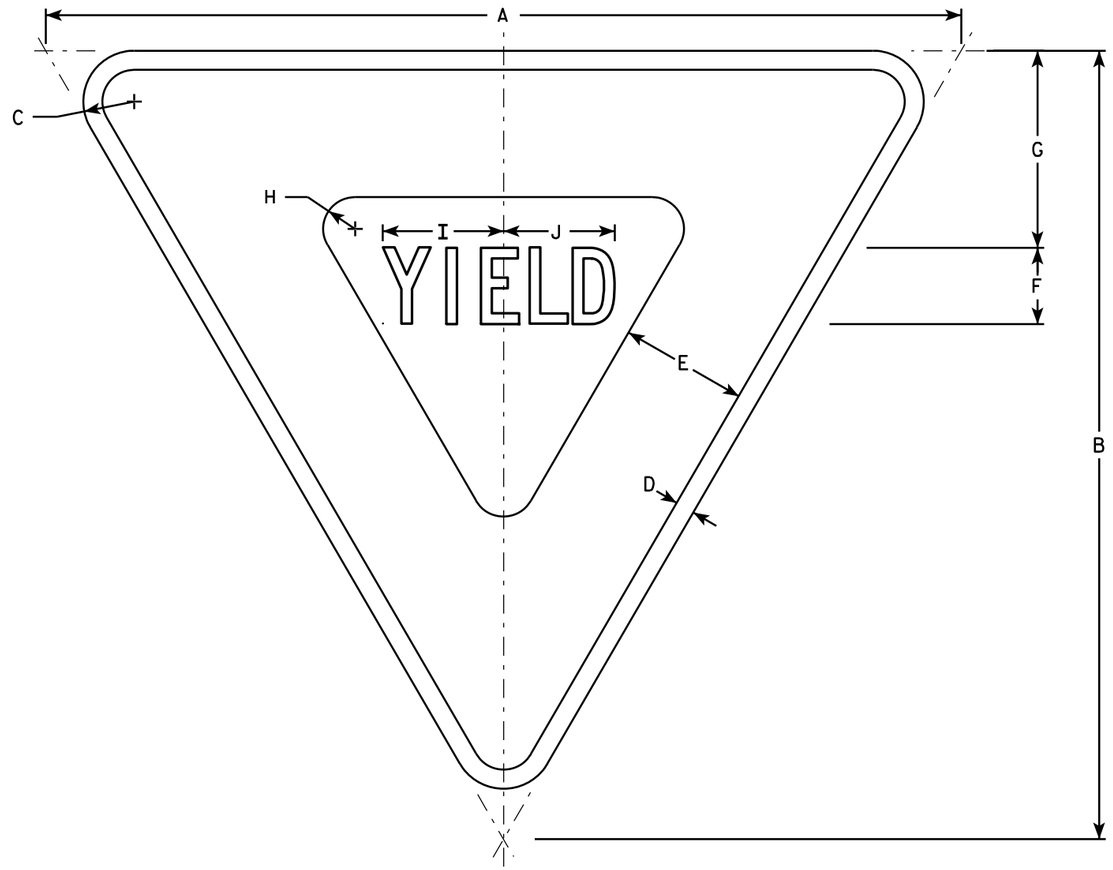
STANDARD SIGN
R1-1F

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: 628 | 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

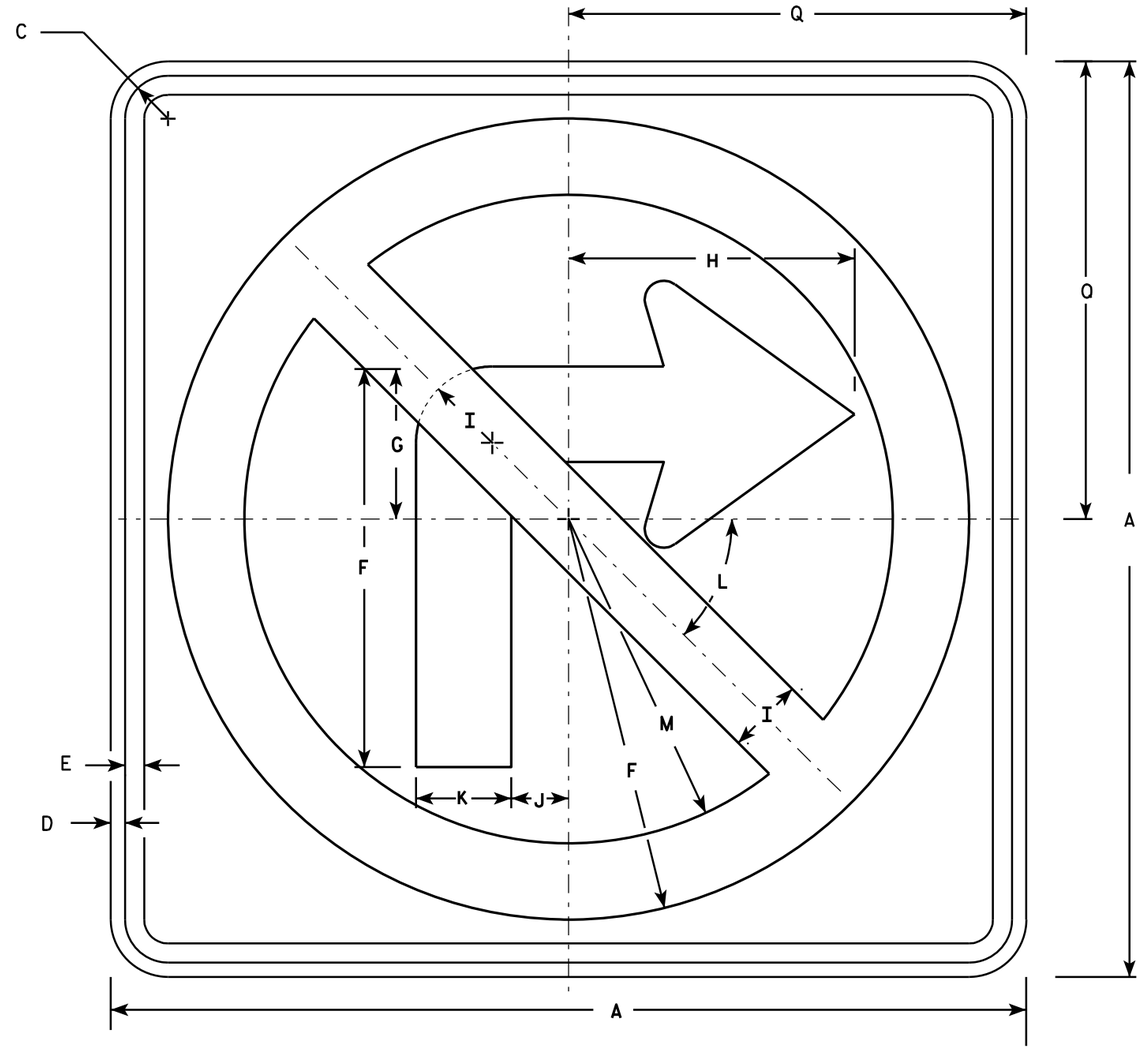
STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/02/10 PLATE NO. R1-2.11

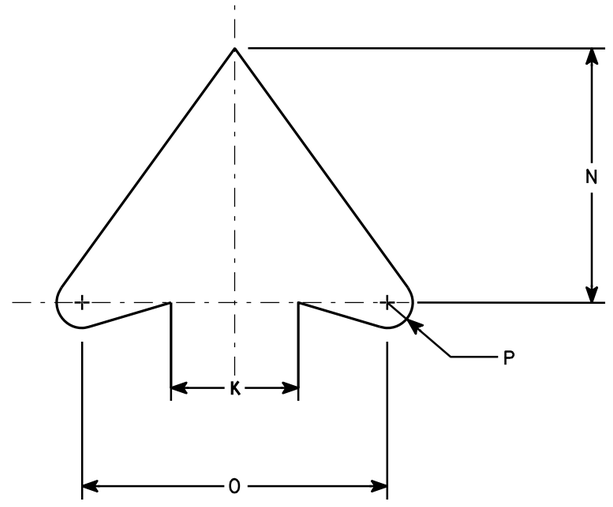
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 629 | E



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

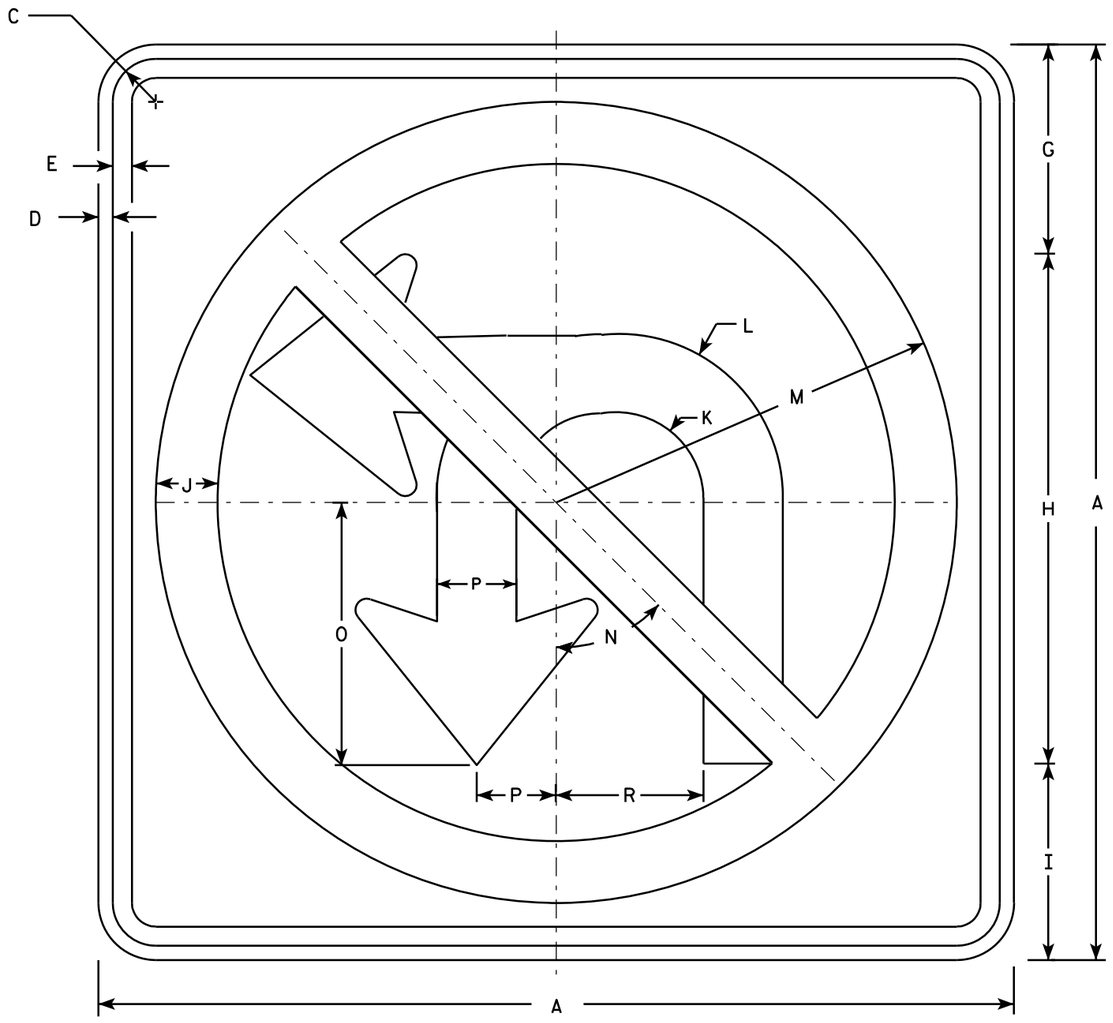
STANDARD SIGN
R3-1

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: 630	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

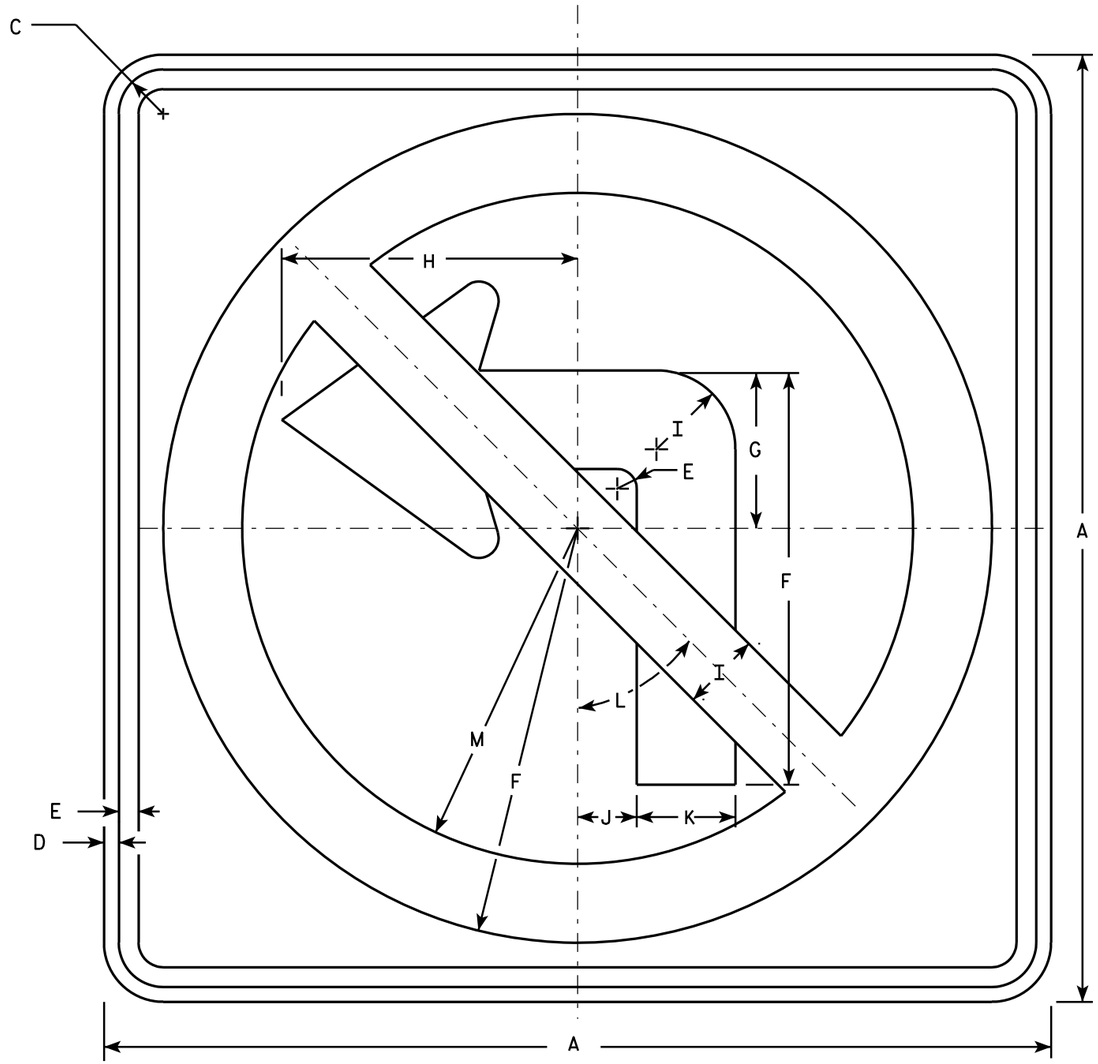
STANDARD SIGN
R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

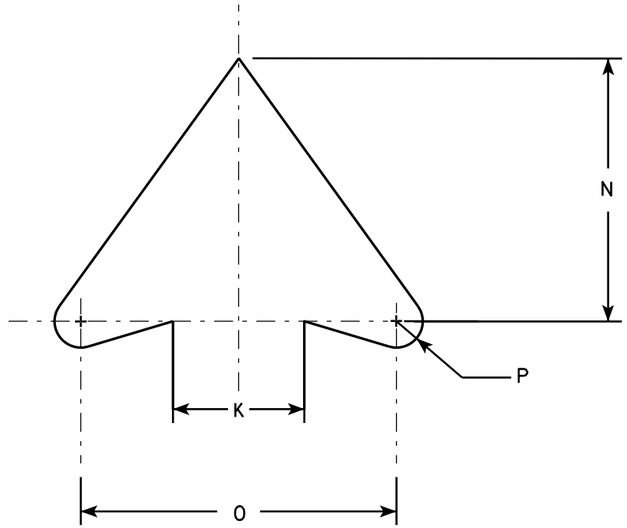
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 631	E



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

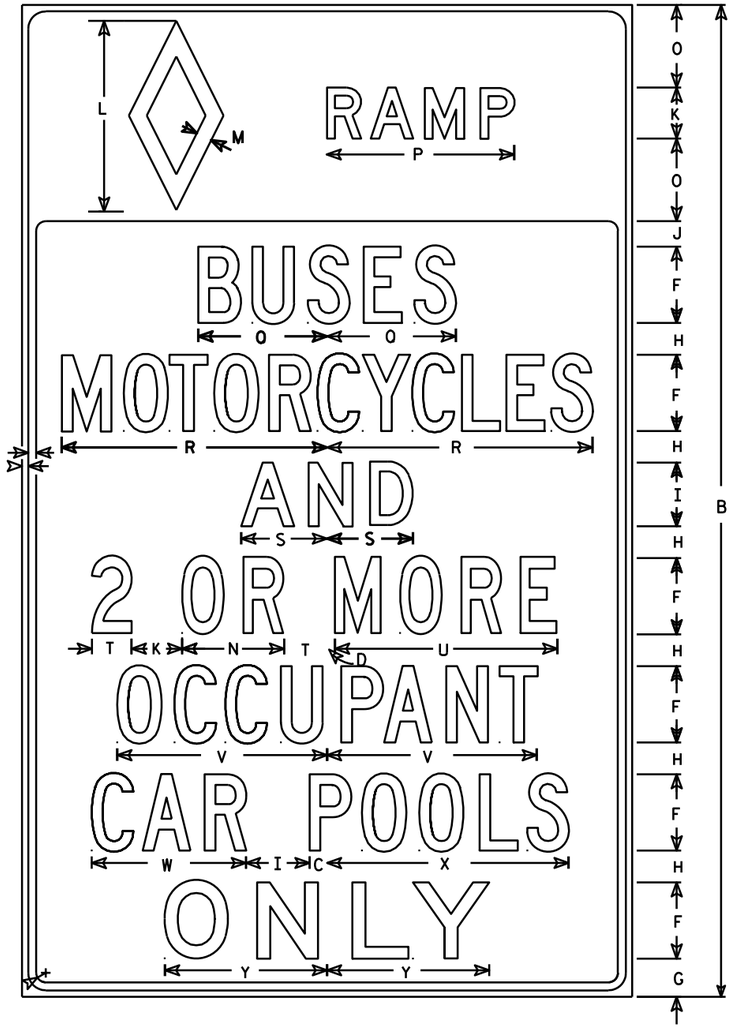
STANDARD SIGN
R3-2

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: 632	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																											

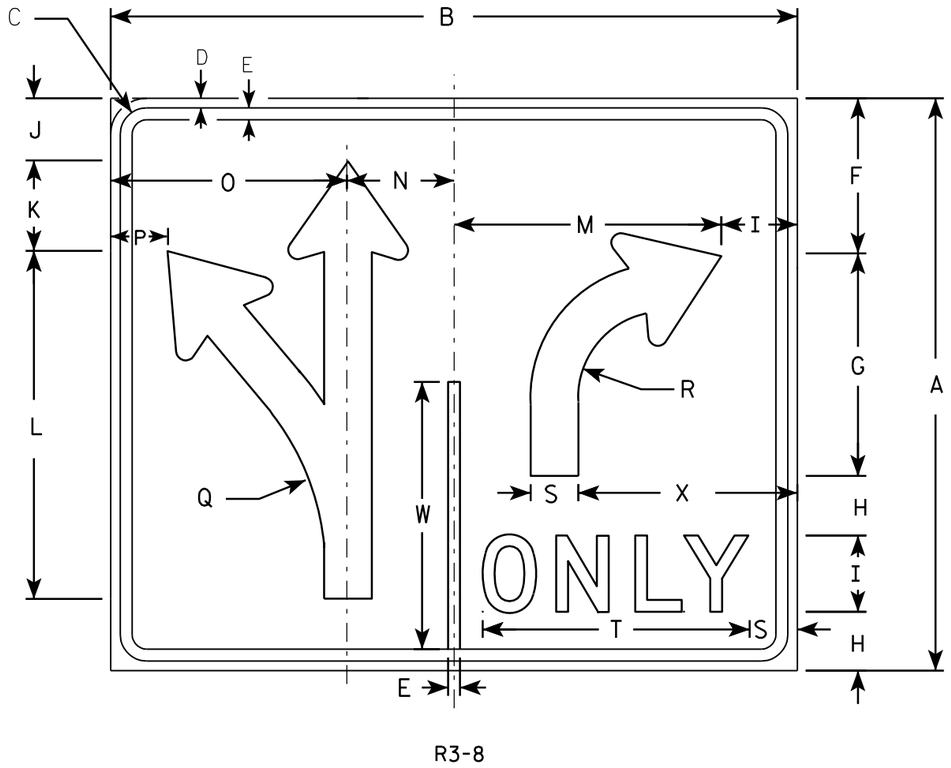
STANDARD SIGN
R3-51

WISCONSIN DEPT OF TRANSPORTATION

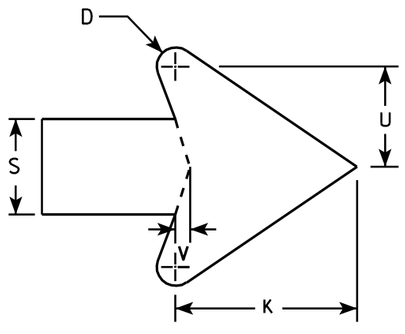
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-51.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 633



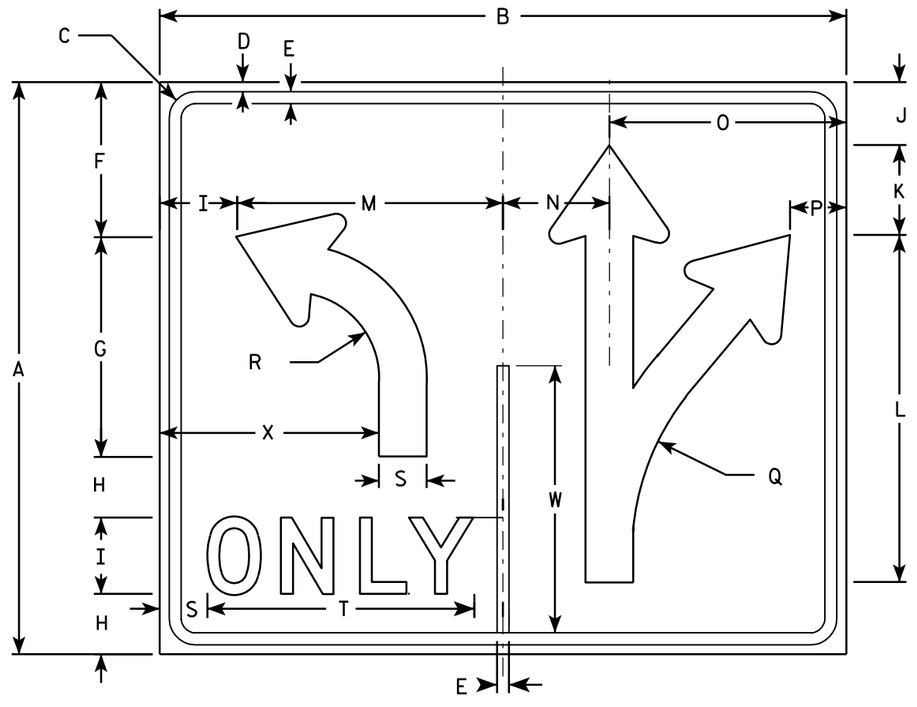
R3-8



ARROW DETAIL

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.



R3-8A

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	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	3 1/4	4 3/4	18 1/4	14	5 5/8	12 3/8	3	13 1/4	4 1/2	2 1/2	14	2 5/8	3/8	14	11 1/2			7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	5 1/4	7 1/8	29 1/8	21	8 3/8	18 5/8	4 3/8	21 7/8	7 1/4	3 3/4	20 5/8	4	5/8	22 3/8	17 1/4			18.0

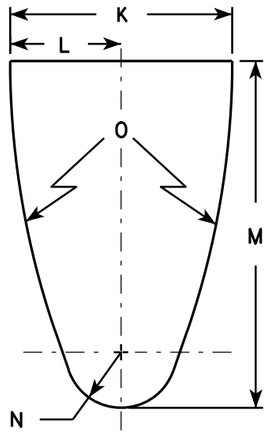
STANDARD SIGN
R3-8 & R3-8A

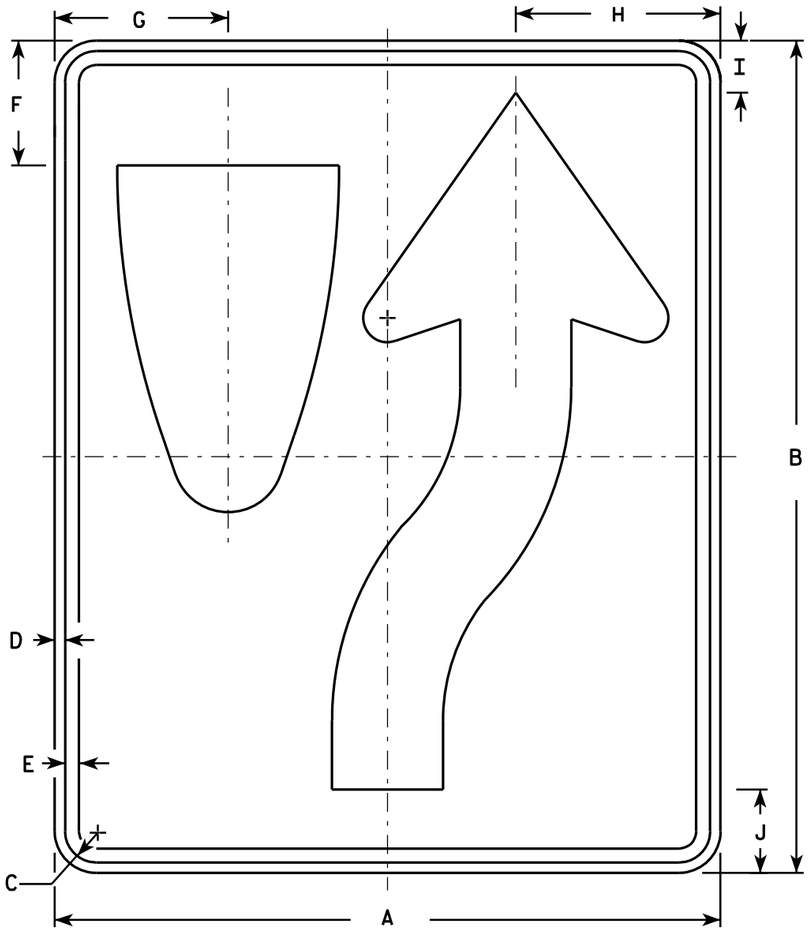
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 634	E

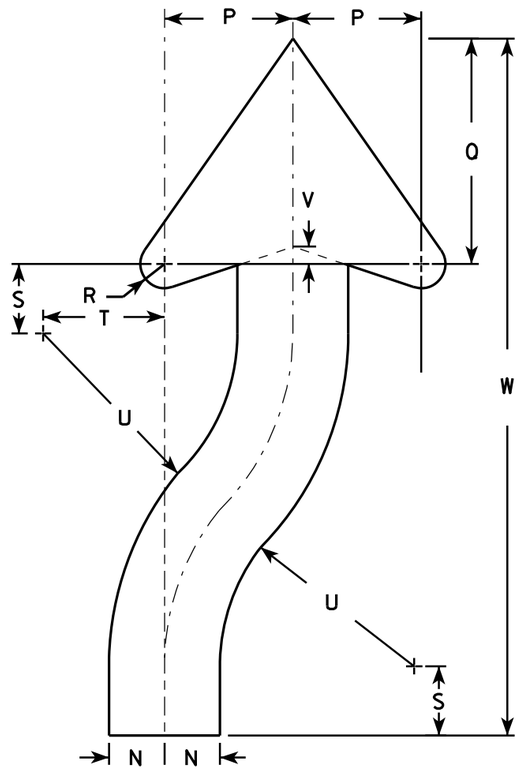




R4-7

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

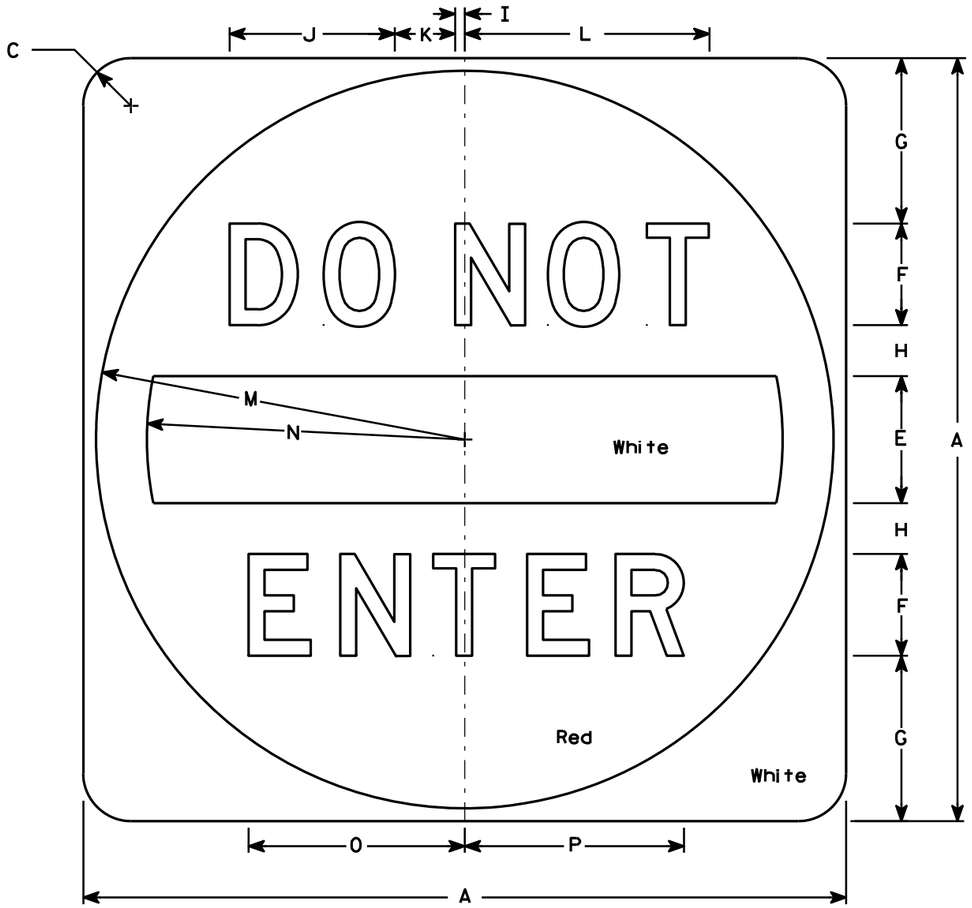
STANDARD SIGN
R4-7 & R4-8

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: 635	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

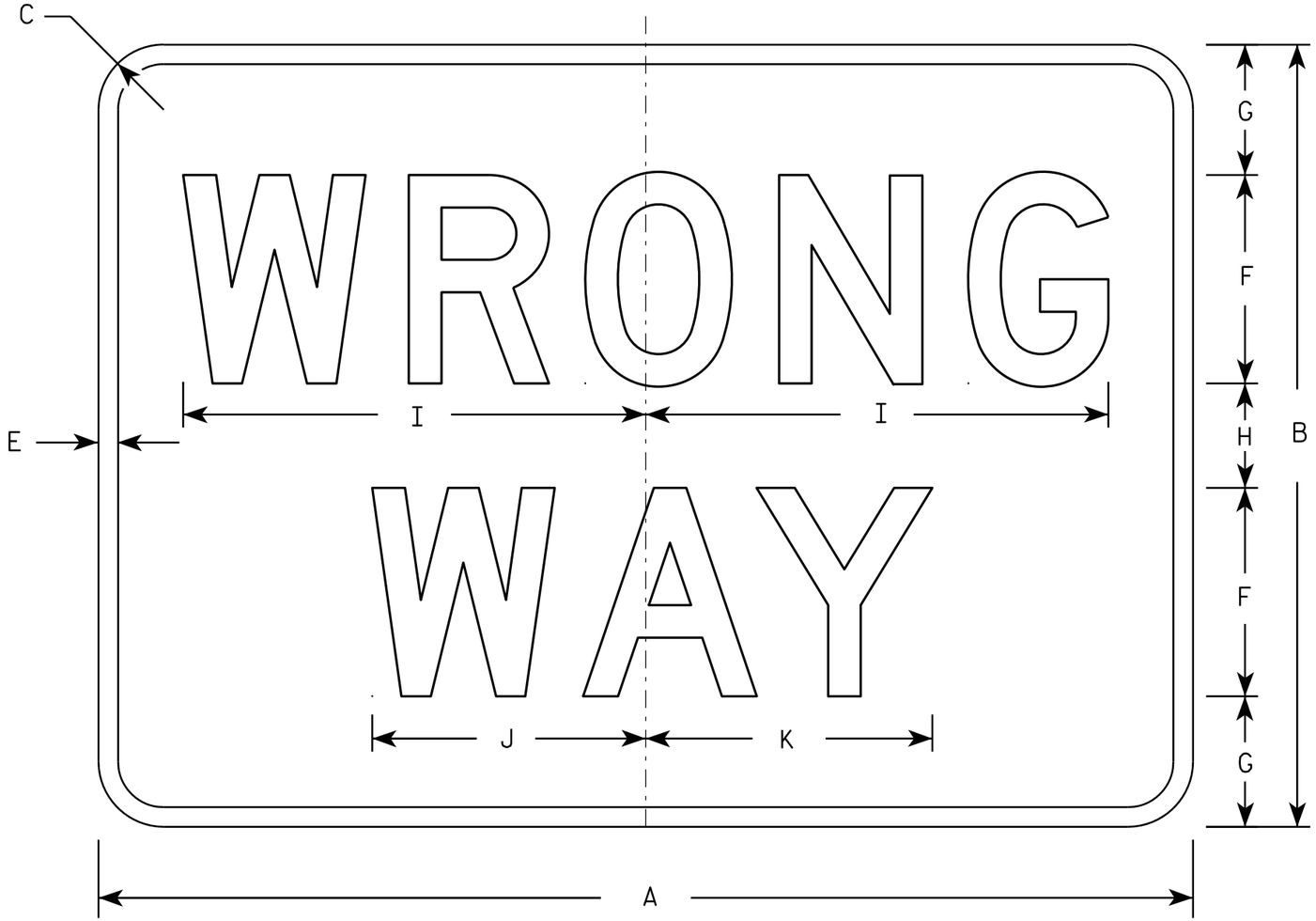
STANDARD SIGN
R5-1

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: 636 | 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: 637	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

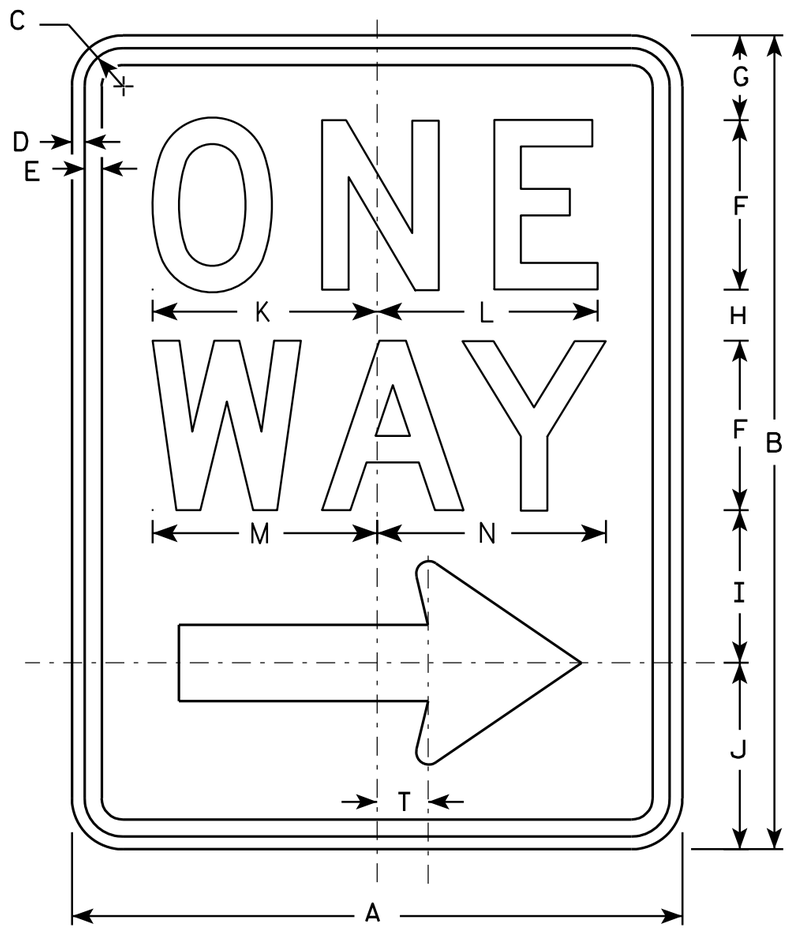
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 638 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R557.DGN PLOT DATE : 29-MAR-2011 14:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

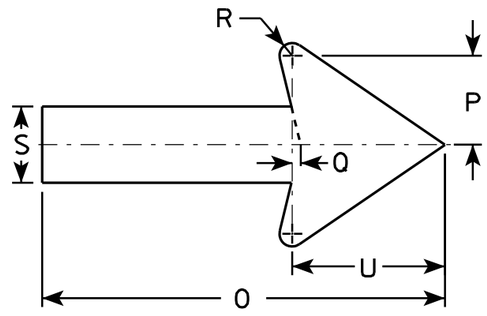
7



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																										

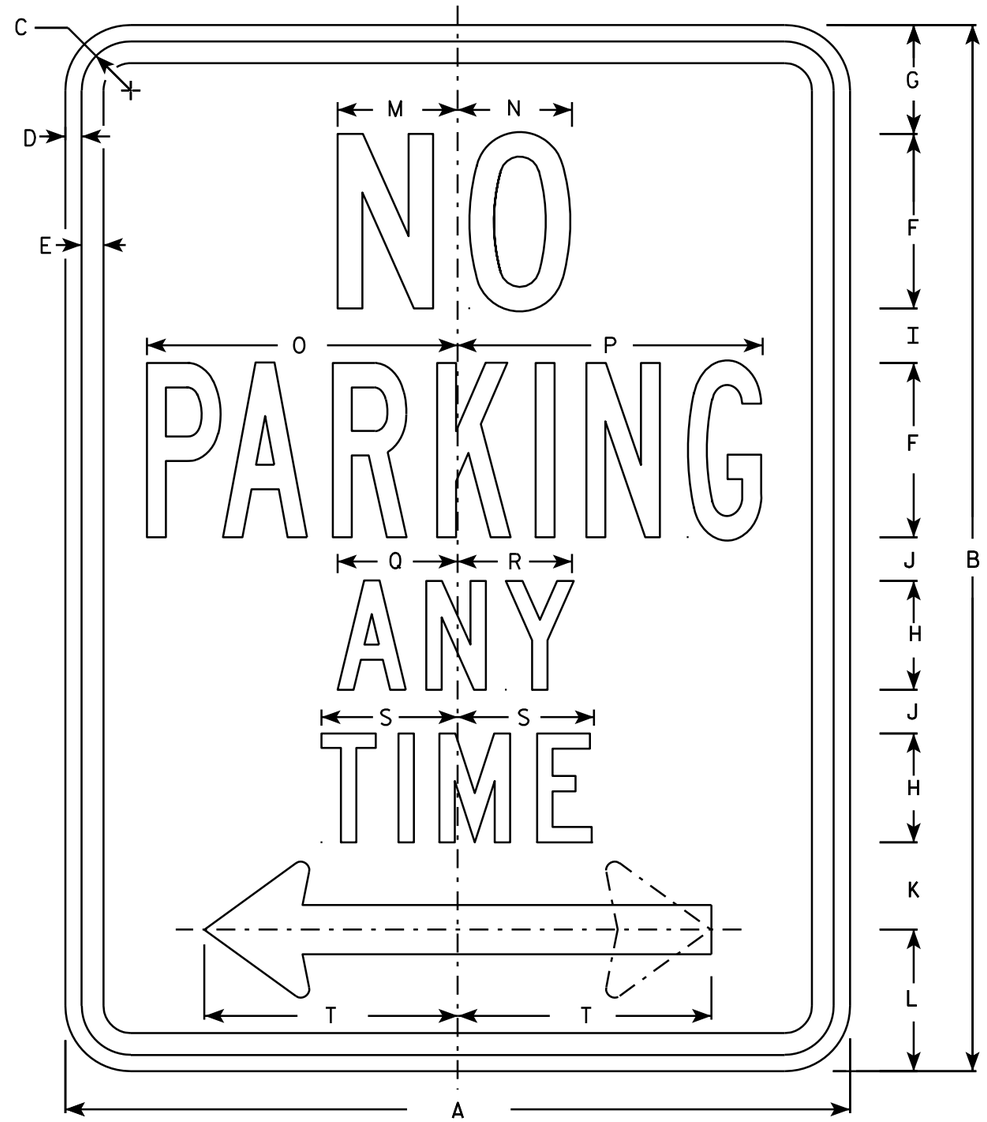
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

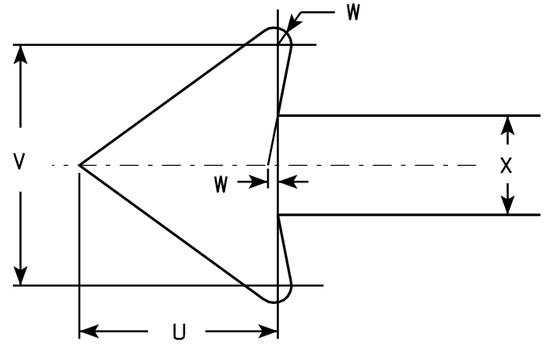
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 639	E



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																											

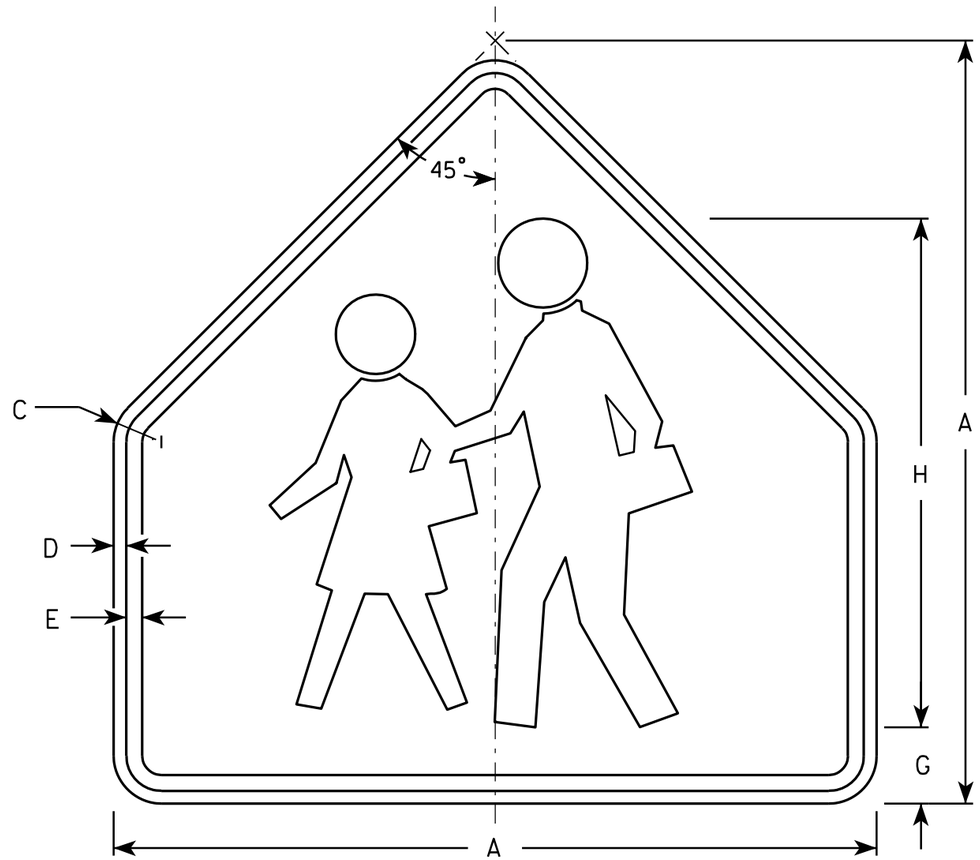
STANDARD SIGN
R7-1

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: 640	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																											

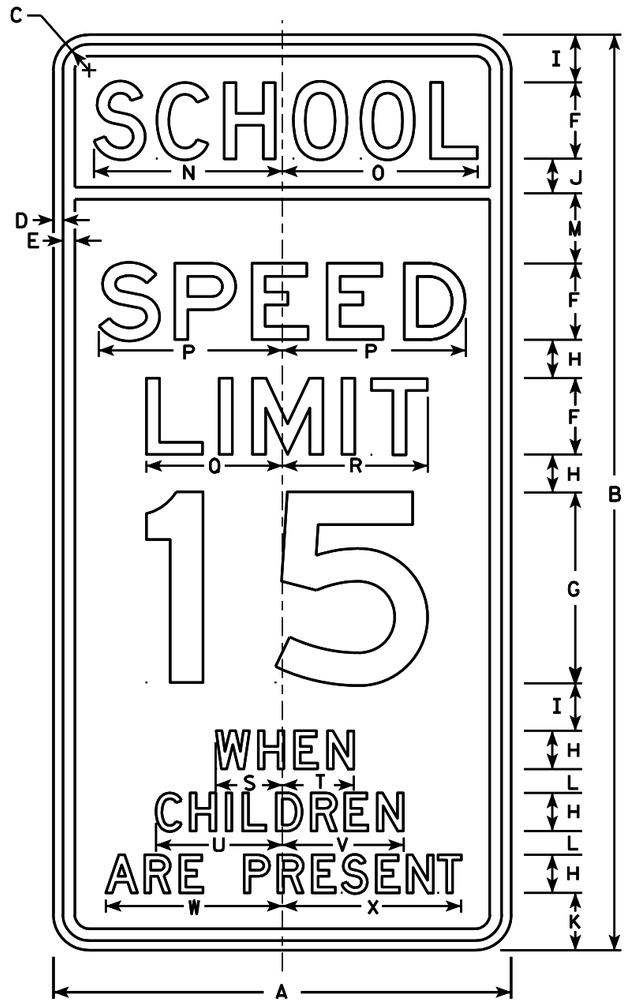
STANDARD SIGN
S1-1

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: 641	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																												

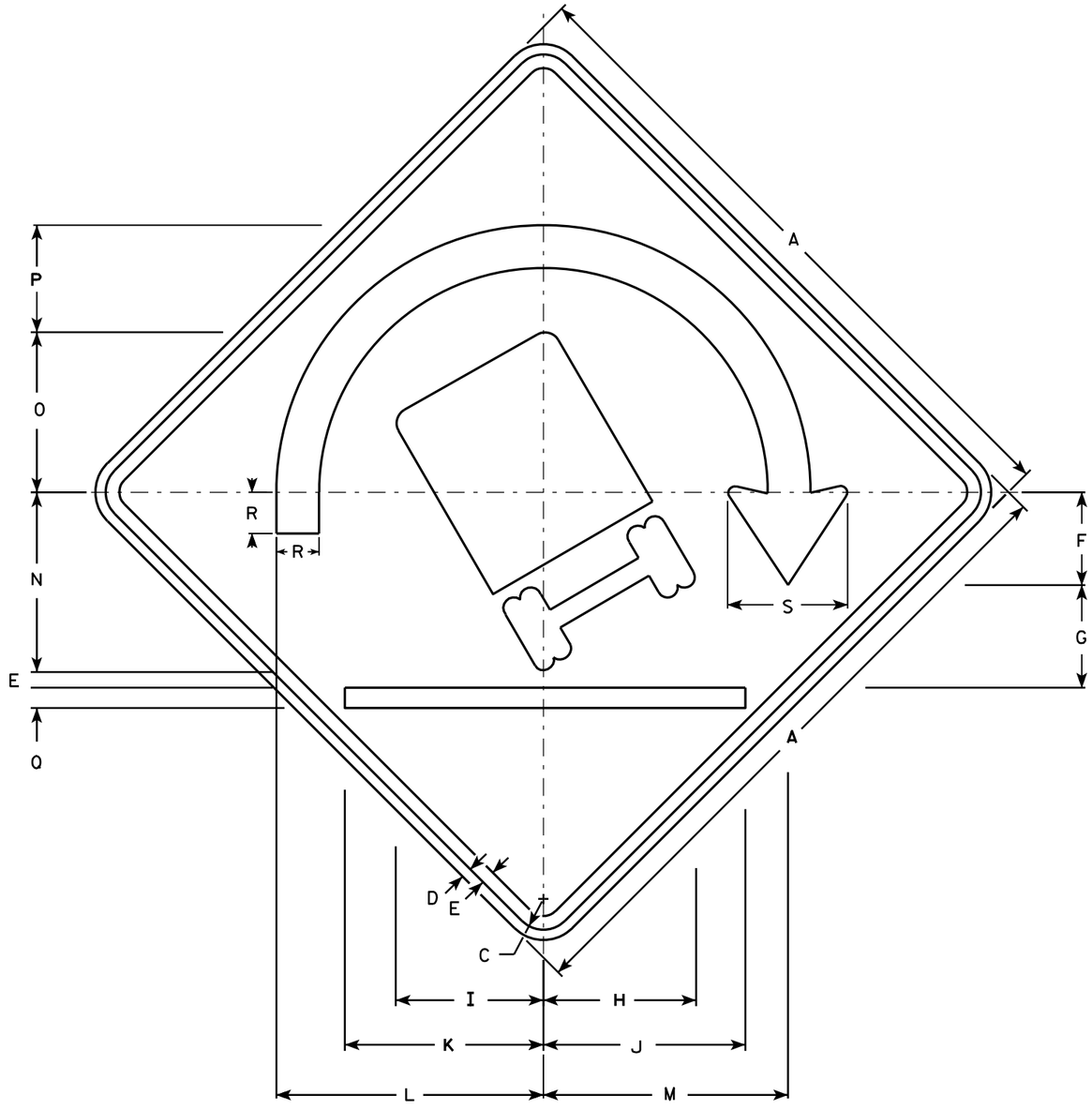
STANDARD SIGN
S4-51

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: 642 | 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

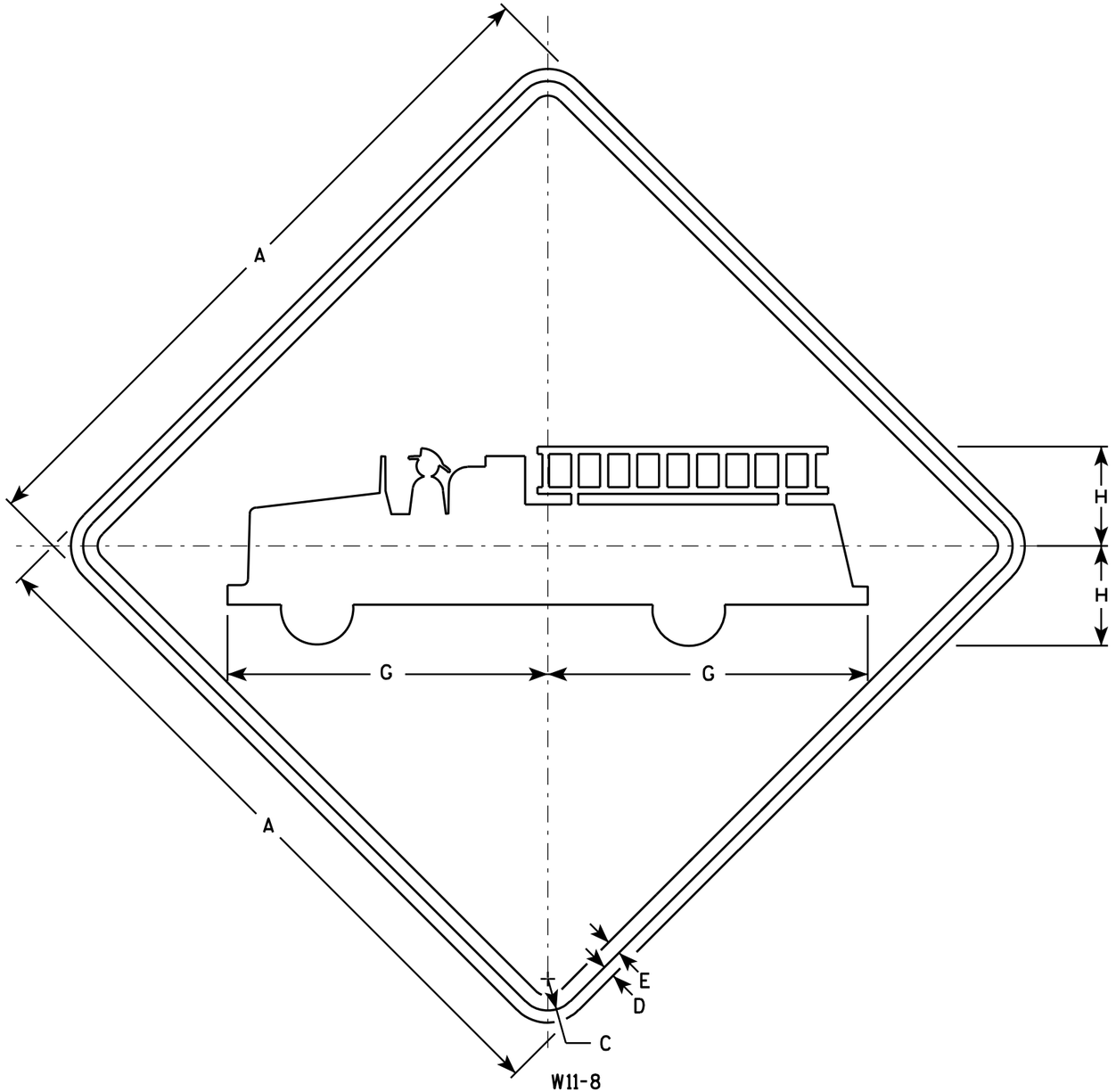
STANDARD SIGN
W1-13

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: 643	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

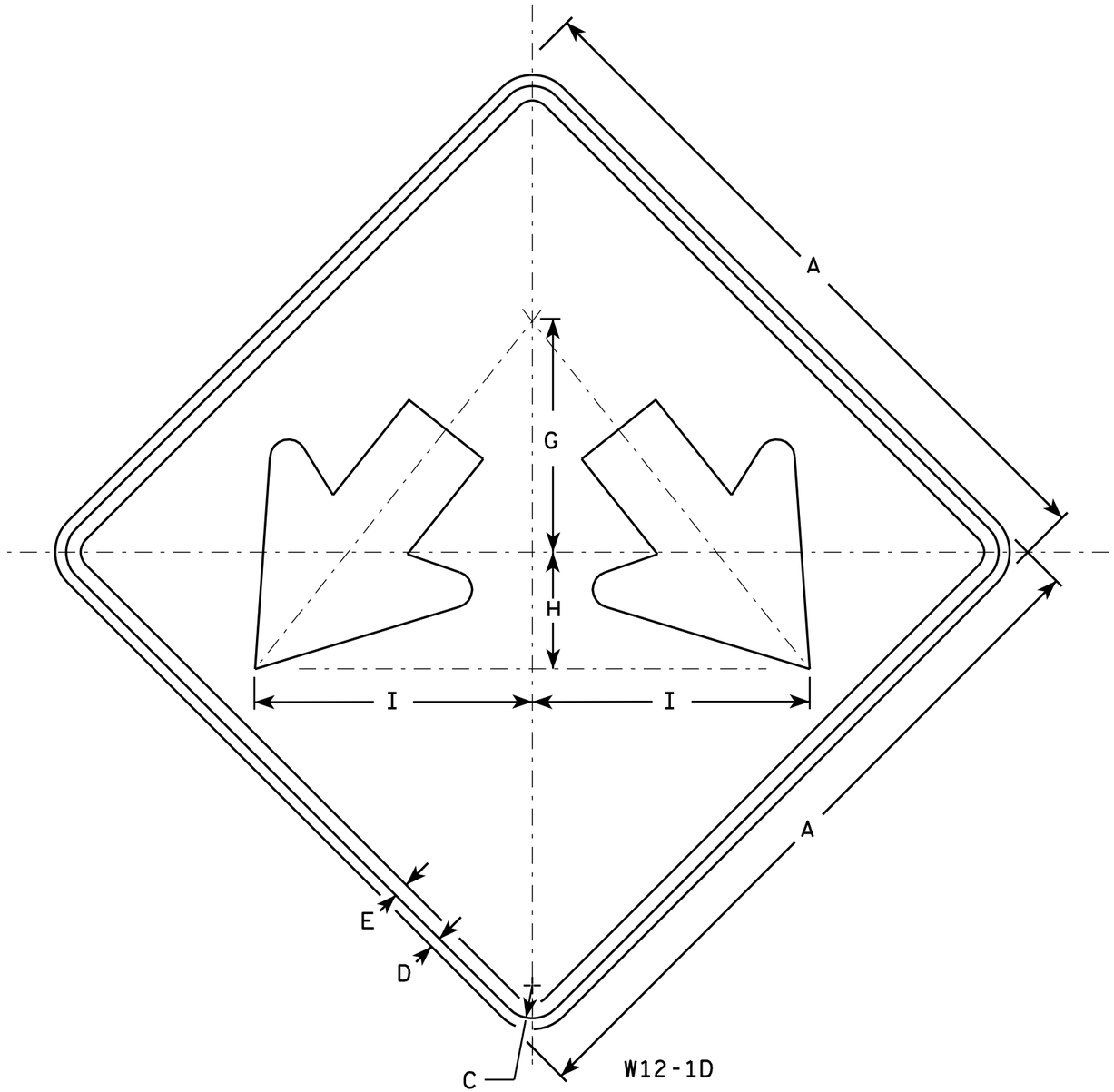
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W11-8.7

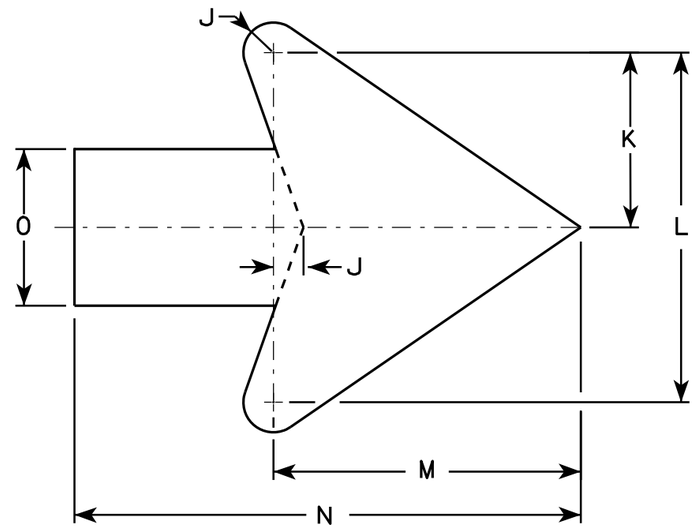
PROJECT NO:

SHEET NO: 644 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. 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

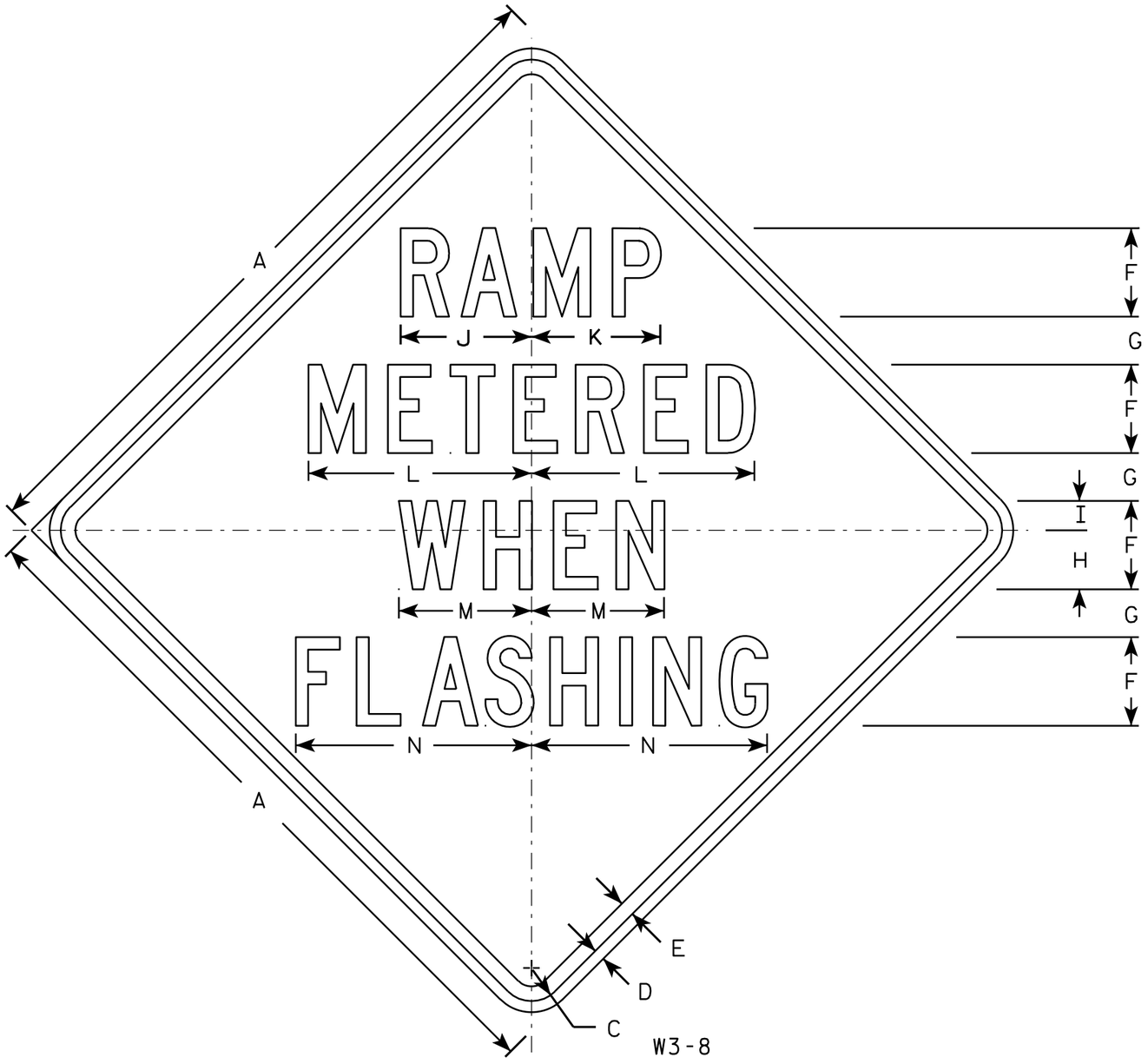
STANDARD SIGN
W12-1D

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: 645	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. 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

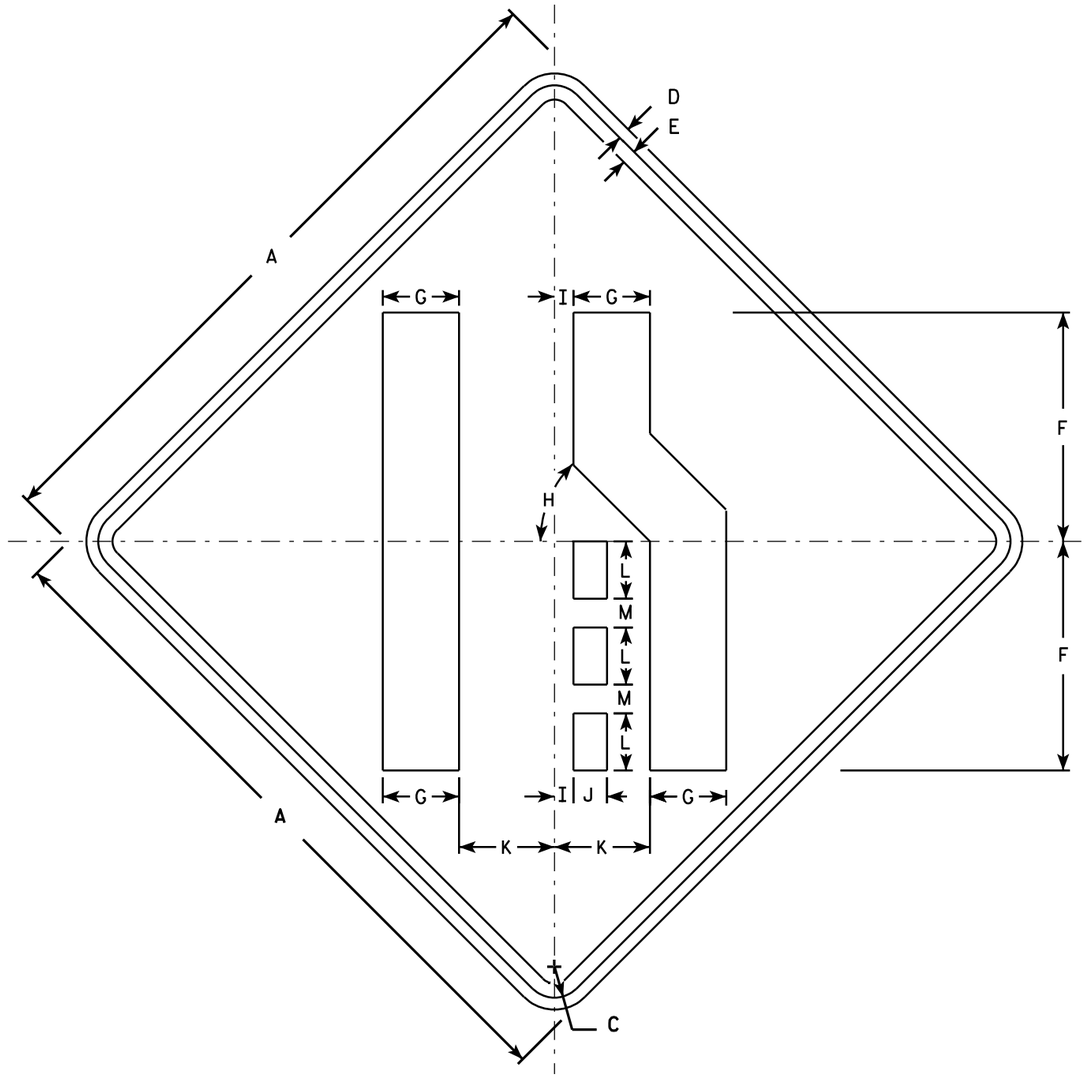
STANDARD SIGN
W3-8

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: 646	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

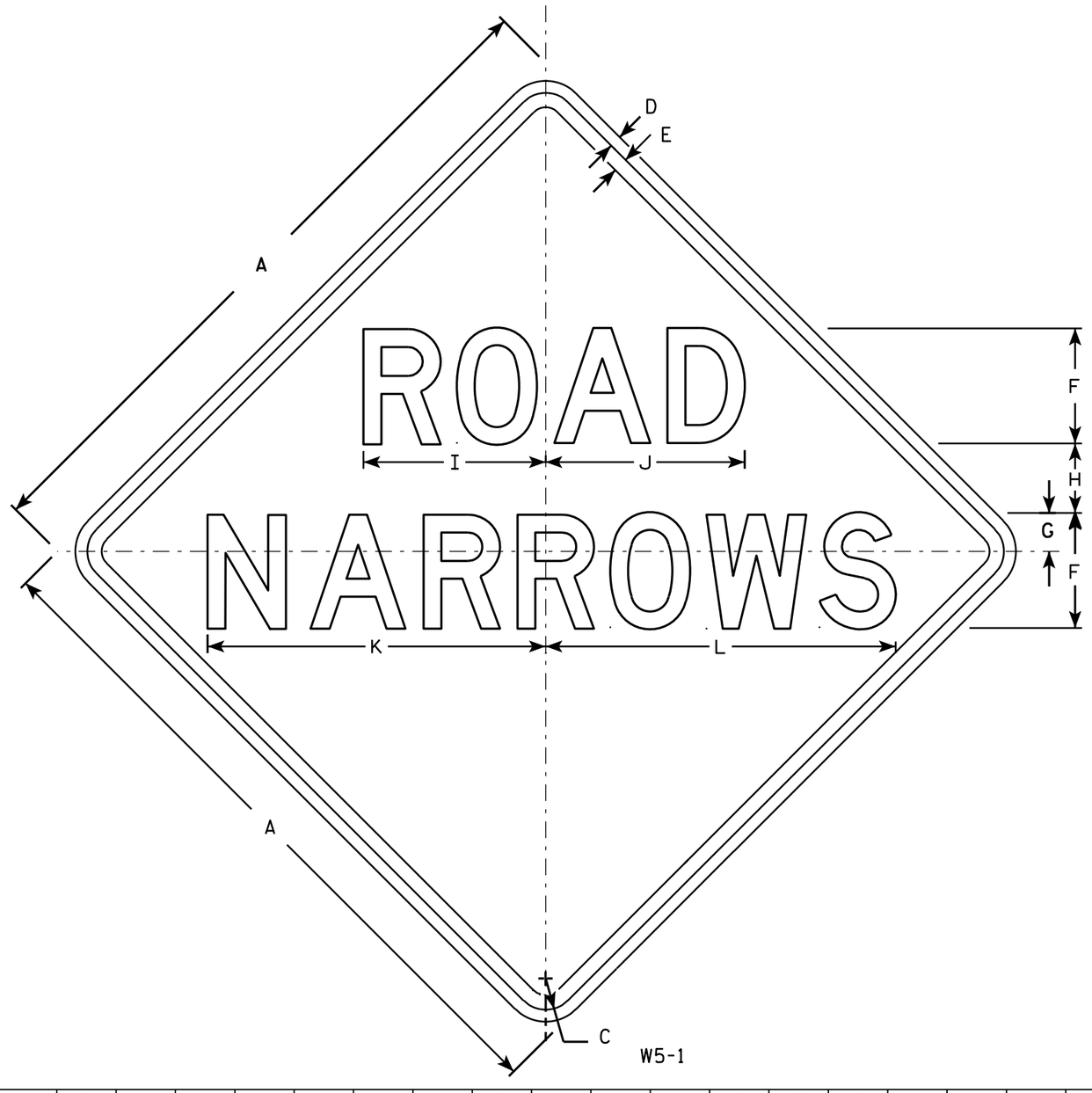
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

SHEET NO: 647 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. 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		1 3/8	1/2	5/8	5	1 3/4	3	7 7/8	8 5/8	14 3/4	15 1/8															6.25
2S	36		1 5/8	5/8	3/4	6	2	3 1/2	9 1/2	10 3/8	17 5/8	18 1/4															9.0
2M	36		1 5/8	5/8	3/4	6	2	3 1/2	9 1/2	10 3/8	17 5/8	18 1/4															9.0
3																											
4	48		2 1/4	3/4	1	8	3	4	12 3/4	13 3/4	23 1/2	24 3/8															16.0
5																											

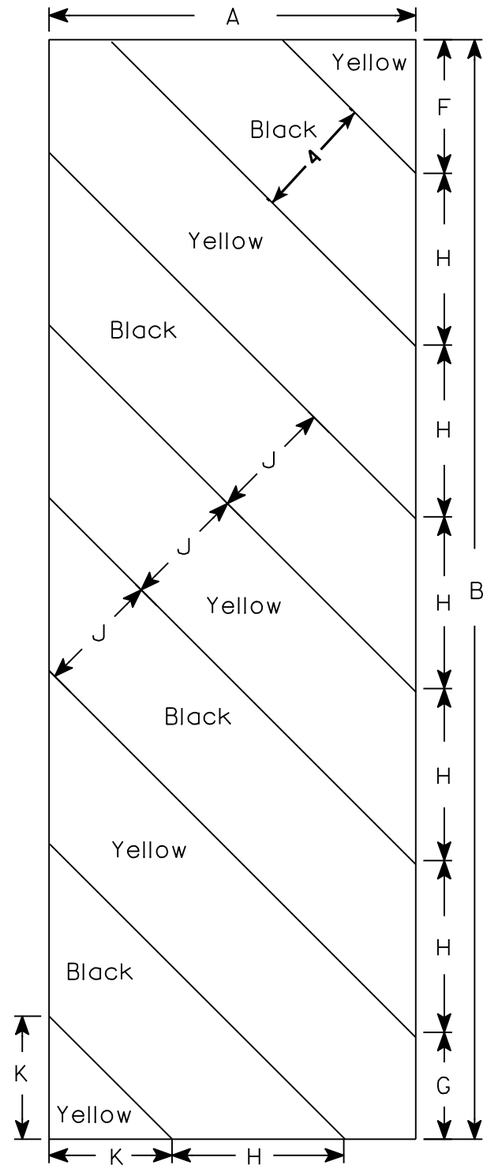
STANDARD SIGN
W5-1

WISCONSIN DEPT OF TRANSPORTATION

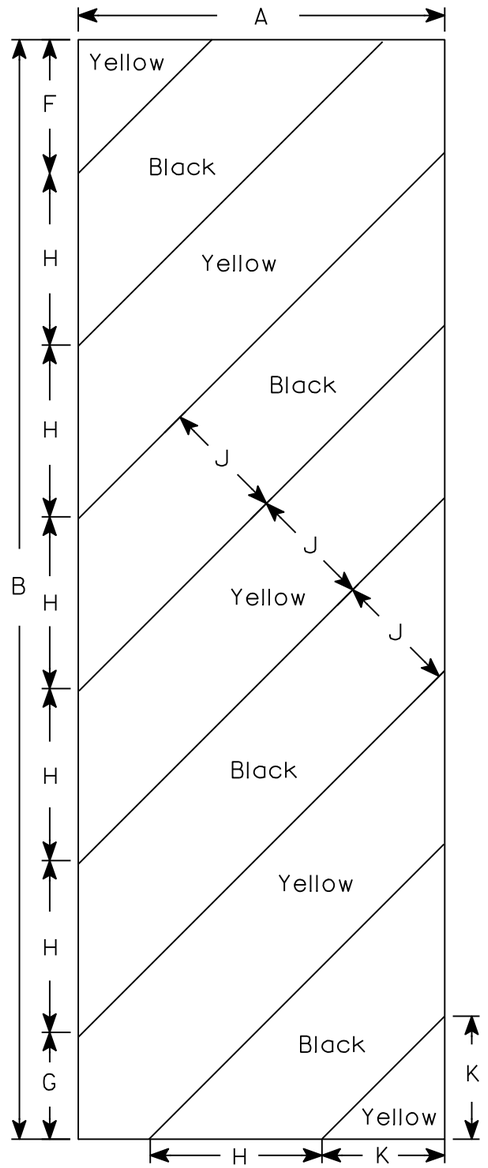
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 03/12/13 PLATE NO. W5-1.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 648 | 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

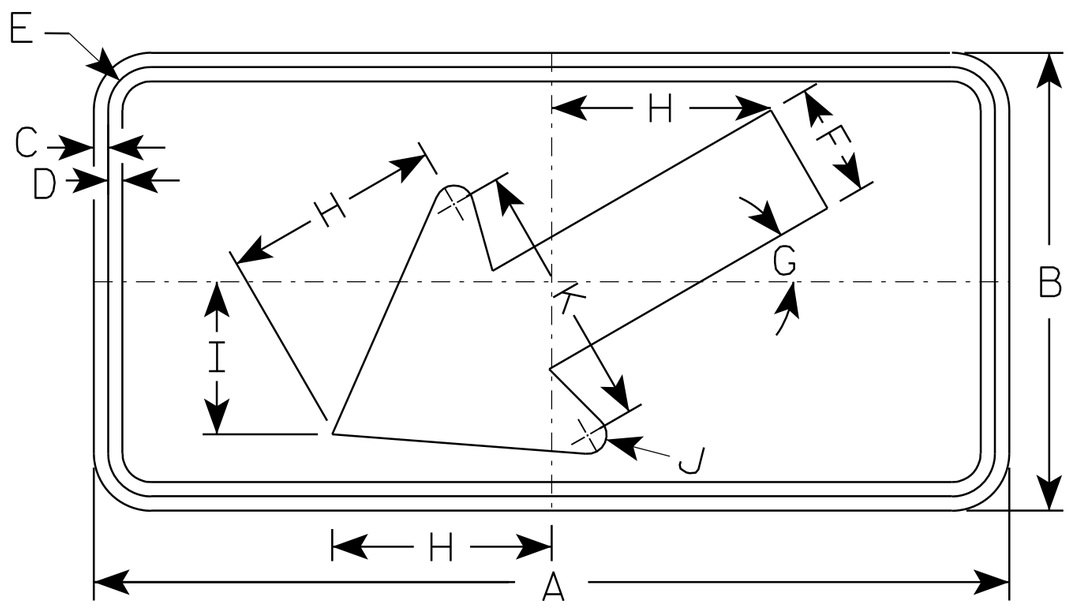
W5-52L & W5-52R

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: 649	E



WF16-7L

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. WF16-7R are the same as WF-16-7L 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																											

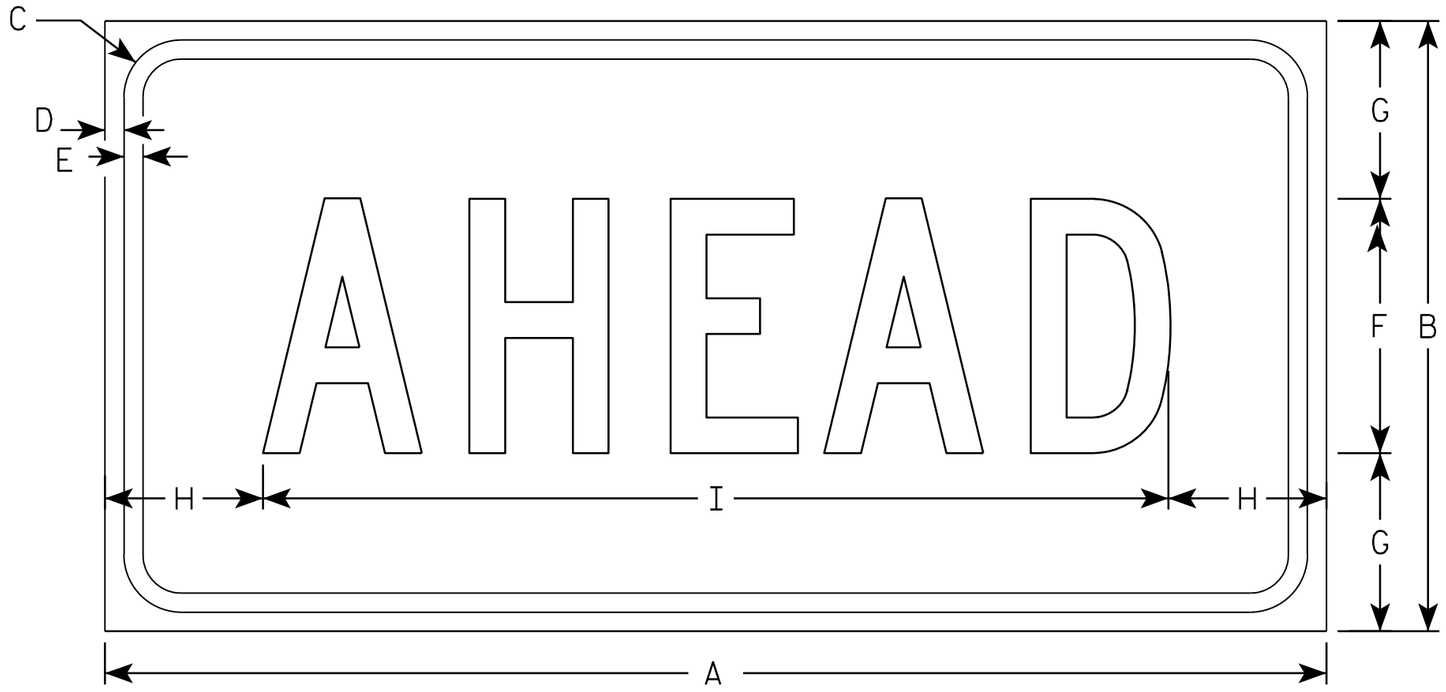
STANDARD SIGN
WF16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/21/10 PLATE NO. WF16-7.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 650 | E



WF16-9P

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
WF16-9P

WISCONSIN DEPT OF TRANSPORTATION

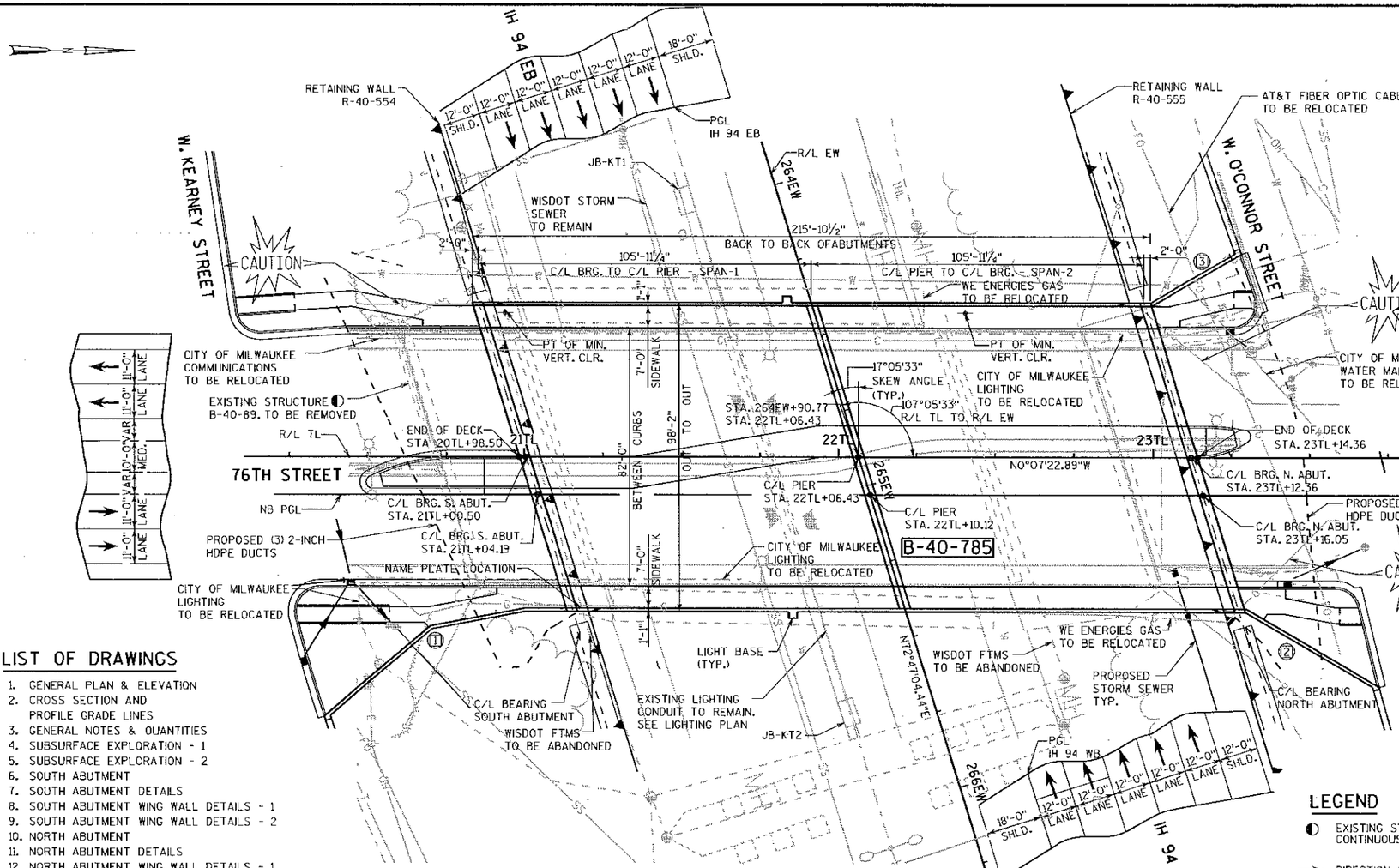
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/29/2012 PLATE NO. WF16-9P.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 651 | E

STATE PROJECT NUMBER

1060-33-78

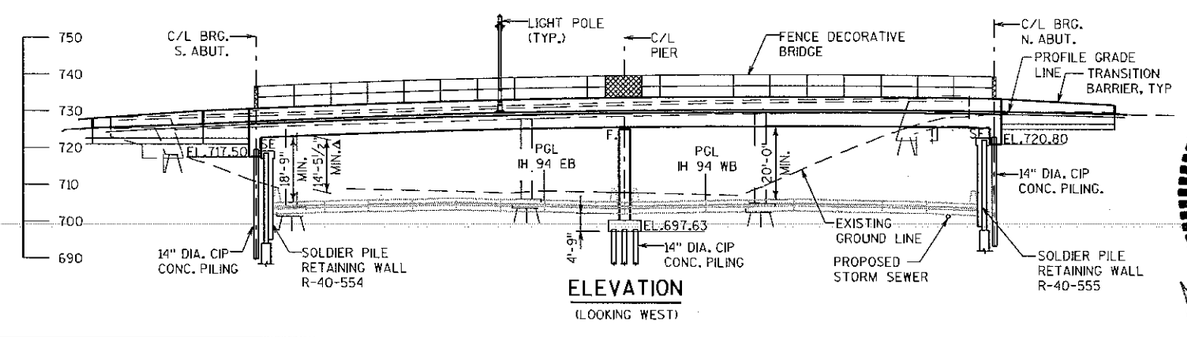


PLAN

(2-SPAN 45W-INCH PRESTRESSED GIRDER STRUCTURE)

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. CROSS SECTION AND PROFILE GRADE LINES
3. GENERAL NOTES & QUANTITIES
4. SUBSURFACE EXPLORATION - 1
5. SUBSURFACE EXPLORATION - 2
6. SOUTH ABUTMENT
7. SOUTH ABUTMENT DETAILS
8. SOUTH ABUTMENT WING WALL DETAILS - 1
9. SOUTH ABUTMENT WING WALL DETAILS - 2
10. NORTH ABUTMENT
11. NORTH ABUTMENT DETAILS
12. NORTH ABUTMENT WING WALL DETAILS - 1
13. NORTH ABUTMENT WING WALL DETAILS - 2
14. NORTH ABUTMENT WING WALL DETAILS - 3
15. ABUTMENT DETAILS
16. PIER - 1
17. PIER - 2
18. PIER - 3
19. 45W" PRESTRESSED GIRDER
20. 45W" PRESTRESSED GIRDER DETAILS
21. SUPERSTRUCTURE FRAMING PLAN & DATA
22. STEEL DIAPHRAGM
23. SUPERSTRUCTURE REINFORCEMENT
24. SUPERSTRUCTURE DETAILS - 1
25. SUPERSTRUCTURE DETAILS - 2
26. SUPERSTRUCTURE DETAILS - 3
27. VERTICAL FACE PARAPET - 1
28. VERTICAL FACE PARAPET - 2
29. VERTICAL FACE PARAPET - 3
30. LIGHT SUPPORT DETAILS
31. LIGHT SUPPORT REINFORCEMENT
32. FENCE DECORATIVE BRIDGE - 1
33. FENCE DECORATIVE BRIDGE - 2
34. FENCE DECORATIVE BRIDGE - 3
35. AESTHETIC DETAILS



ELEVATION

(LOOKING WEST)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.08
OPERATING RATING FACTOR: RF = 1.91
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
- 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

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 AS BELOW PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA ACCEPTANCE METHOD.

SOUTH ABUTMENT	257 TONS
NORTH ABUTMENT	265 TONS
PIER	240 TONS

FOR THE PIER, THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.50.

FOR NORTH ABUTMENT, THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE REDUCED BY A VALUE OF 68.5 TONS AND MULTIPLIED BY A RESISTANCE FACTOR OF 0.50.

FOR SOUTH ABUTMENT, THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE REDUCED BY A VALUE OF 17 TONS AND MULTIPLIED BY A RESISTANCE FACTOR OF 0.50.

ESTIMATED PILE LENGTHS:

SOUTH ABUTMENT	64 FEET
NORTH ABUTMENT	63 FEET
PIER	40 FEET

TRAFFIC DATA

76TH STREET

ADT = 9,600 (NB) (2010)
9,800 (SB) (2009)
ADT = 12,170 (NB) (2035)
13,100 (SB) (2035)
RDS = 30 MPH

IH 94

ADT = 153,000 (2009)
ADT = 186,240 (2035)
RDS = 60 MPH

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 351-6668

LEGEND

- EXISTING STRUCTURE B-40-89 IS A 4 SPAN CONTINUOUS CONCRETE HOLLOW SLAB.
- DIRECTION OF TRAFFIC
- MINIMUM VERTICAL CLEARANCE DURING CONSTRUCTION.
- (X) WINGWALL NUMBER
- MINIMUM VERTICAL CLEARANCE

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher — CHIEF STRUCTURES DESIGN ENGINEER — 6/20/13 DATE

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE, WISCONSIN
PROFESSIONAL ENGINEER
6/17/2013

STRUCTURE B-40-785

76TH STREET 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	MHZ	RT	MHZ

GENERAL PLAN & ELEVATION

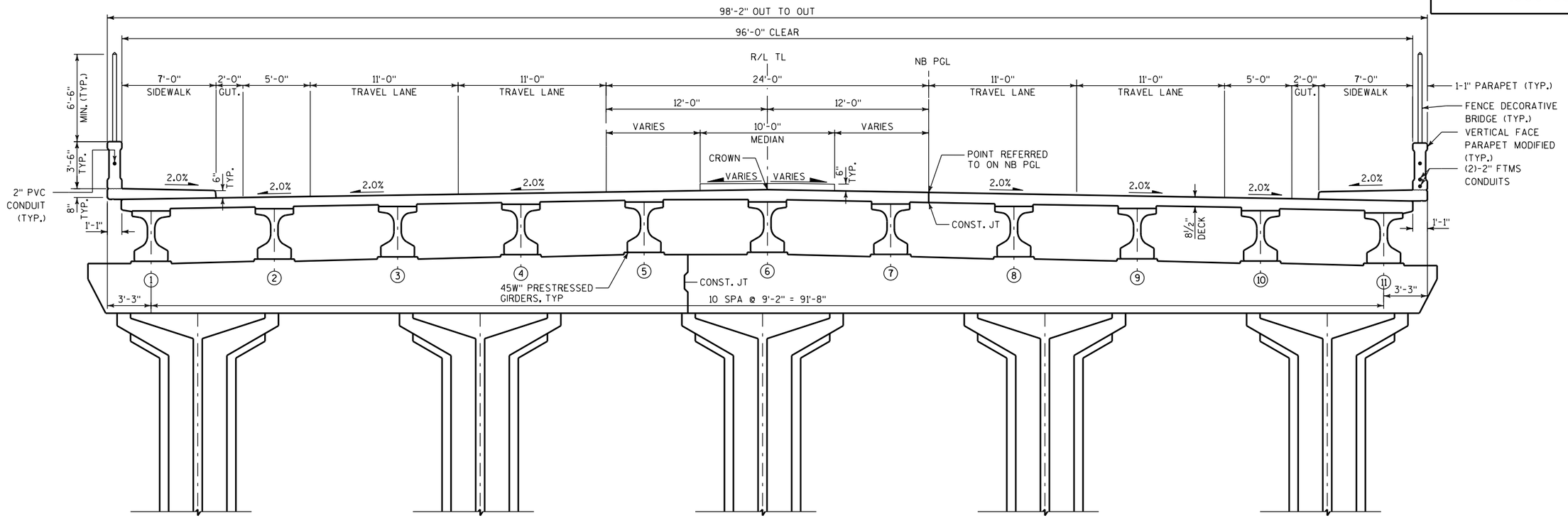
SHEET 1 OF 35

8

8

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\B-40-785 76th Street\cds\080101_gp.dgn
PLOT DATE : 17-JUN-2013 11:55
PLOT BY : MSCM1M
PLOT NAME : 080101_gp
PLOT SCALE : 40:1

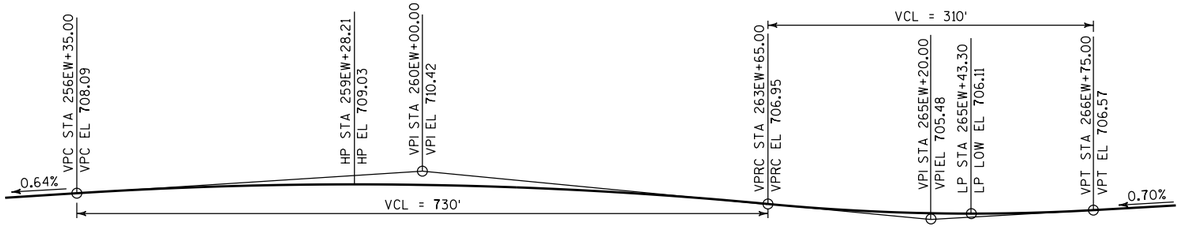
STATE PROJECT NUMBER
1060-33-78



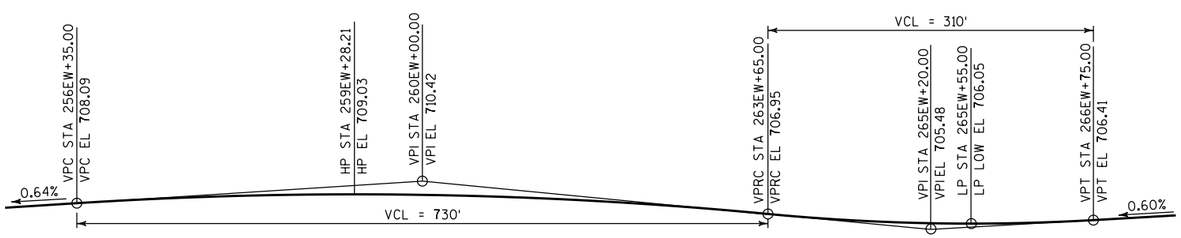
BRIDGE CROSS SECTION B-40-785

(LOOKING NORTH)

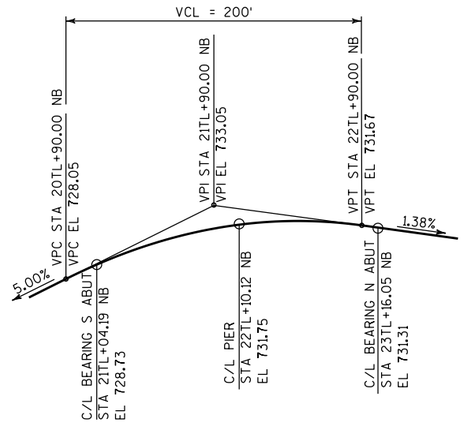
ALL DIMENSIONS ARE MEASURED NORMAL TO NB PGL 76TH STREET



PROFILE GRADE LINE - IH 94 EB



PROFILE GRADE LINE - IH 94 WB



PROFILE GRADE LINE - 76TH STREET NB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY RT | PLANS CK'D. MHZ

CROSS SECTION & PROFILE GRADE LINES

SHEET 2 OF 35

8

8

STATE PROJECT NUMBER
1060-33-78

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	S ABUT	PIER	N ABUT	SUPER	TOTAL
203.0200	REMOVING OLD STRUCTURE STA 22+00.00	LS	--	--	--	--	1
203.0210.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL STRUCTURE B-40-0089	LS	--	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURE BRIDGE B-40-785	LS	--	--	--	--	1
210.0100	BACKFILL STRUCTURE	CY	550	--	460	--	1010
502.0100	CONCRETE MASONRY BRIDGES	CY	136	183	125	--	444
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	--	--	2403	2403
503.0146	PRESTRESSED GIRDER TYPE I 45W-INCH	LF	--	--	--	2339	2339
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	2649	6732	2422	--	11802
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	9920	40780	9134	185502	245336
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	11	22	11	--	44
506.4000	STEEL DIAPHRAGMS B-40-785	EACH	--	--	--	40	40
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	22	--	22	--	44
550.2146	PILING CIP CONCRETE 14 X 0.375- INCH	LF	1024	1800	1134	--	3958
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	103	--	103	--	205
652.0210	CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	LF	--	68	--	--	68
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 -INCH	LF	--	--	--	824	824
653.0222	JUNCTION BOXES 18X12X6- INCH	EACH	--	--	--	2	2
SPV.0060.4100	ANCHOR ASSEMBLY LIGHT POLES STRUCTURES	EACH	--	--	--	2	2
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	--	--	--	931	931
SPV.0090.4400	FENCE DECORATIVE BRDIGE	LF	--	--	--	432	432
	NON BID ITEMS:						
	PREFORMED JOINT FILLER	SIZE					3/4"
	NON-BITUMINOUS JOINT SEALER	SIZE					3/4"
	NON-BITUMINOUS JOINT SEALER	SIZE					1 1/2"
	CORK FILLER	SIZE					3/4"
	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.

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). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD).

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED

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.

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 SIGNIFIES 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 AN AVERAGE DEPTH OF 4½", WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

PILE SPLICES SHALL BE MADE BY A CERTIFIED WELDER.

THE EXISTING BRIDGE B-40-89 IS A FOUR SPAN CONTINUOUS HOLLOW CONCRETE SLAB STRUCTURE. THE ENTIRE STRUCTURE SHALL BE REMOVED, EXCEPT EXISTING TIMBER PILES. TIMBER PILES SHALL BE REMOVED TO THE EXTEND REQUIRED FOR ROADWAY, WALLS AND BRIDGE CONSTRUCTION.

THE VERTICAL FACE PARAPET CONCRETE QUANTITY ON SUPERSTRUCTURE ONLY SHALL BE PAID FOR UNDER BID ITEM "HPC MASONRY STRUCTURES".
WINGWALLS AND VERTICAL FACE PARAPET FOR WINGWALLS SHALL BE PAID UNDER BID ITEM "CONCRETE MASONRY BRIDGES"

THE CONTRACTOR MUST COORDINATE THE REMOVAL OF EXISTING STRUCTURE B-40-89 AND CONSTRUCTION OF THE BRIDGE B-40-785 ABUTMENTS WITH CONSTRUCTION OF RETAINING WALLS R-40-554 AND R-40-555.

ALL ABUTMENT PILES SHALL BE DRIVEN COMPLETELY BEFORE INSTALLING TIEBACK ANCHORS FOR THE WALLS AT ABUTMENTS LOCATION.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY RT | PLANS CK'D. MHZ

GENERAL NOTES & QUANTITIES

SHEET 3 OF 35

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\B-40-785 76th Street\cds\080104_est.dgn PLOT DATE : 30-APR-2013 13:28 PLOT BY : MSCRXT PLOT NAME : 080104_est PLOT SCALE : 8:1

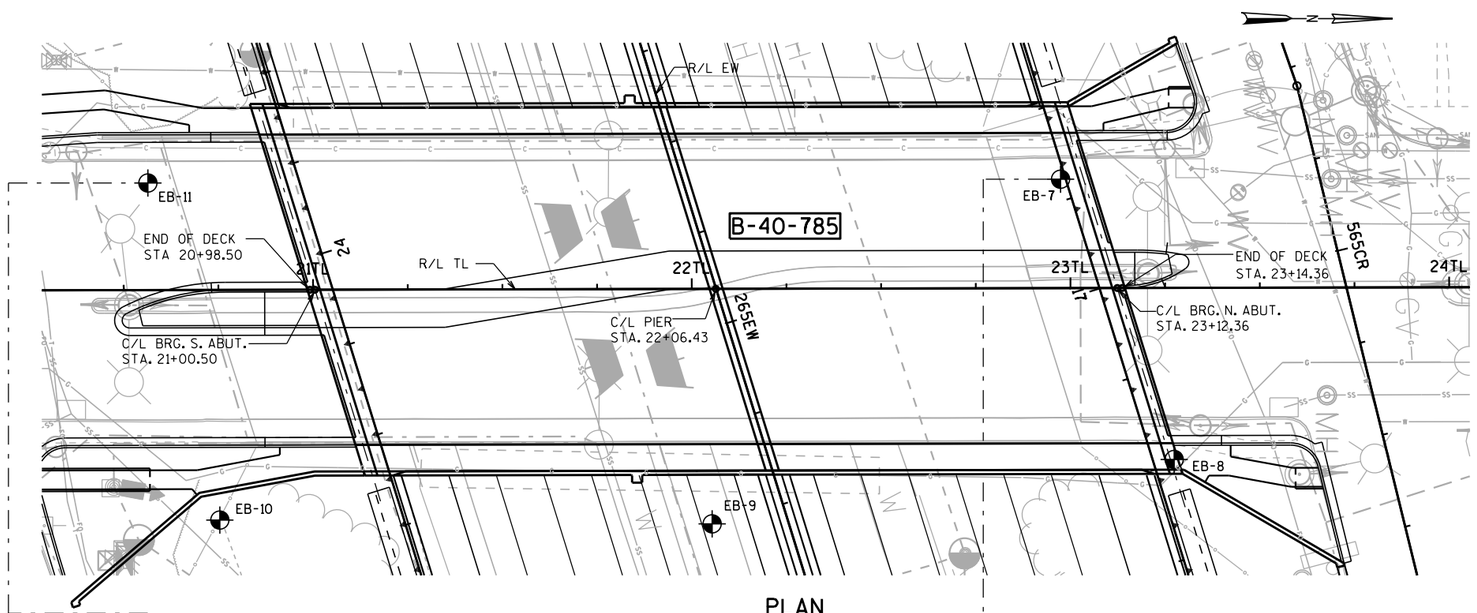
NOTES

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.

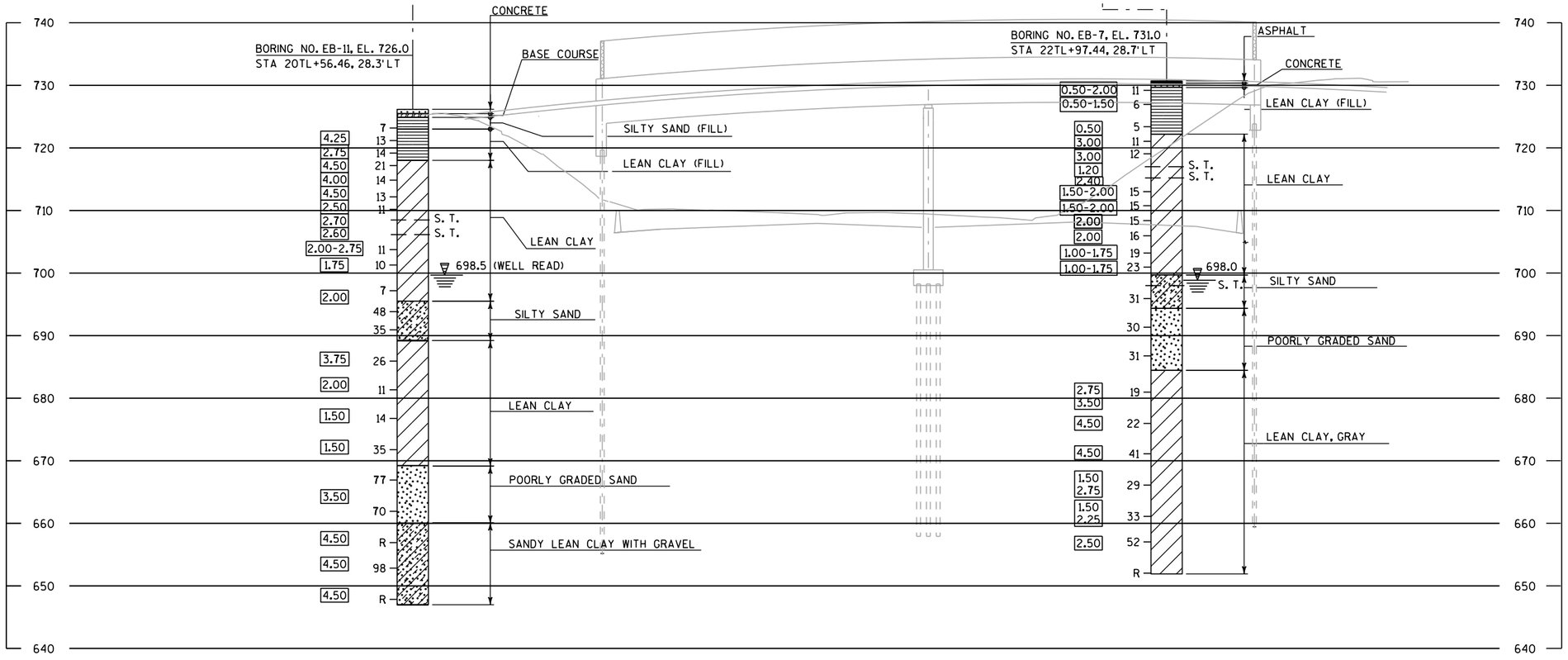
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
SEPTEMBER 01 2011 - BORING EB-7
SEPTEMBER 01 2011 - BORING EB-11



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-78

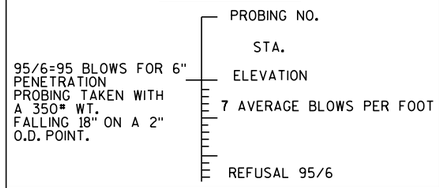
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

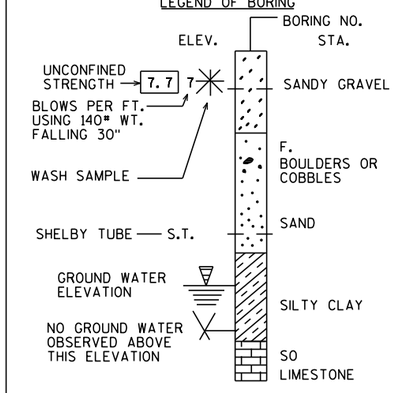
MATERIAL SYMBOLS

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-40-785

DRAWN BY MM | PLANS CK'D. MHZ

SUBSURFACE EXPLORATION 1

SHEET 4 OF 35

8

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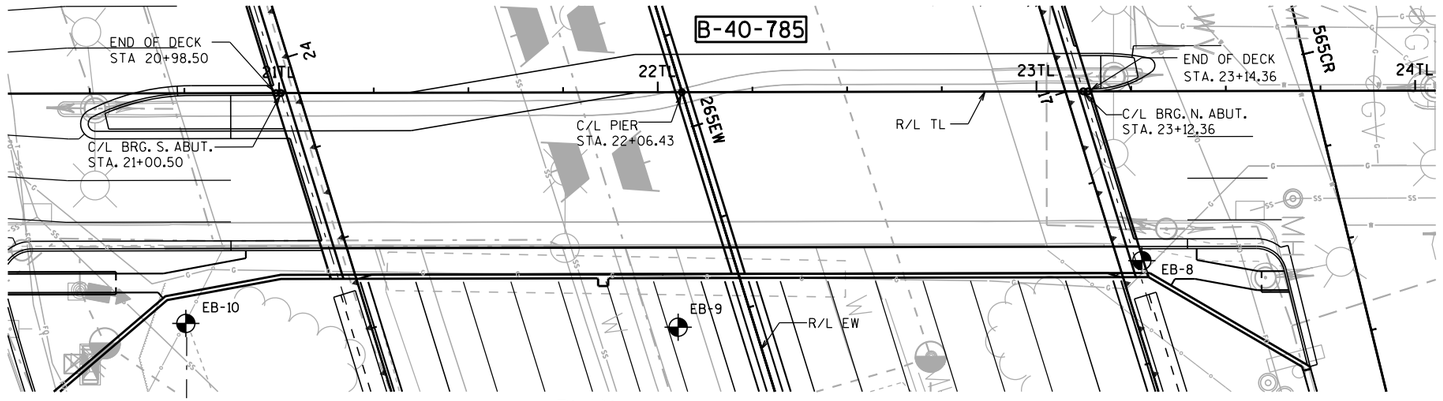
NOTES

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.

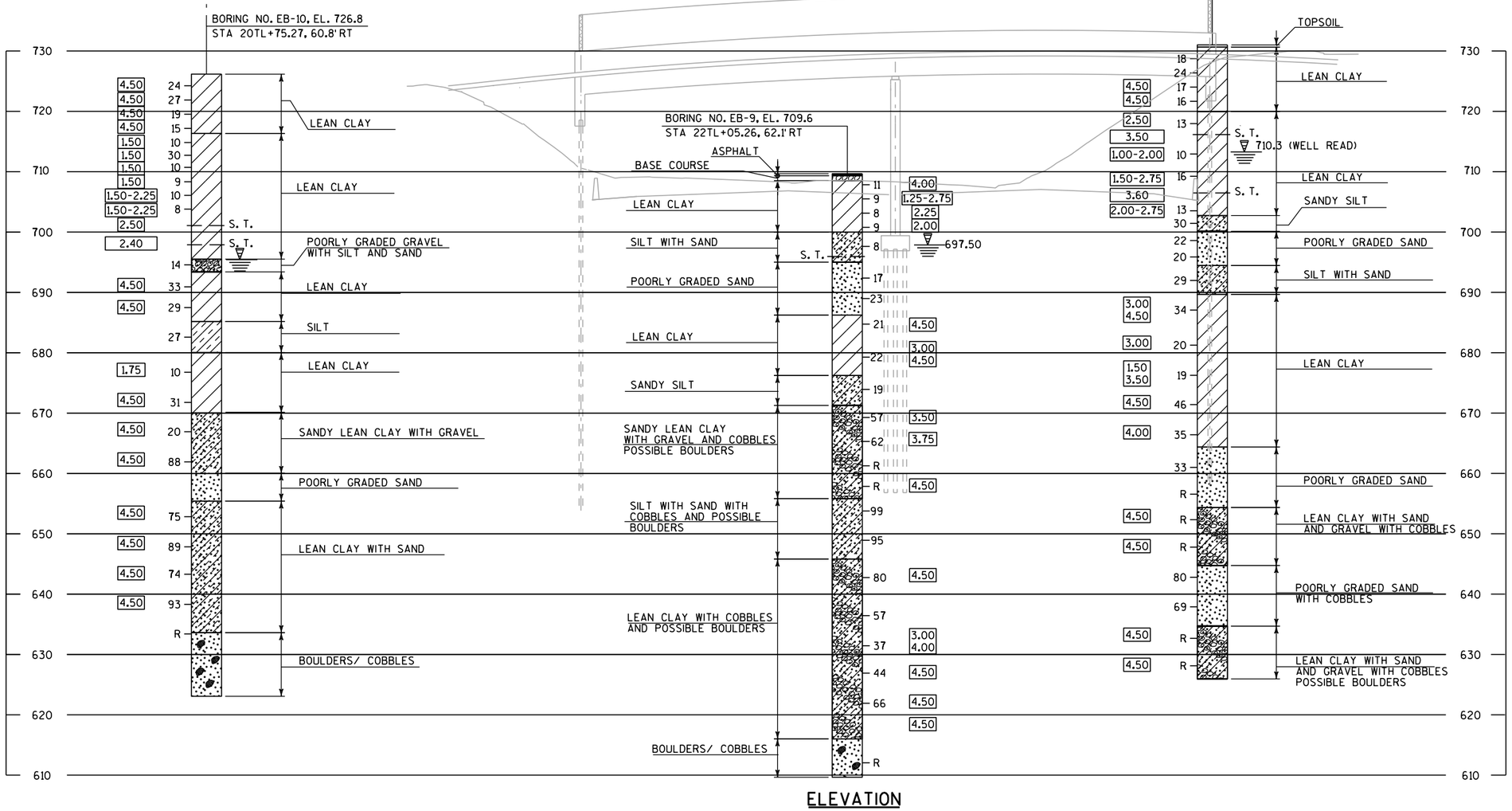
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
SEPTEMBER 02 2011 - BORING EB-8
SEPTEMBER 06 2011 - BORING EB-10
SEPTEMBER 21 2011 - BORING EB-9



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-78

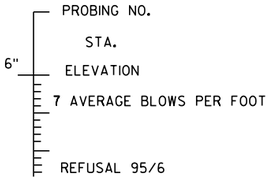
ABBREVIATIONS

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WS — WEATHERED SO — SOUND

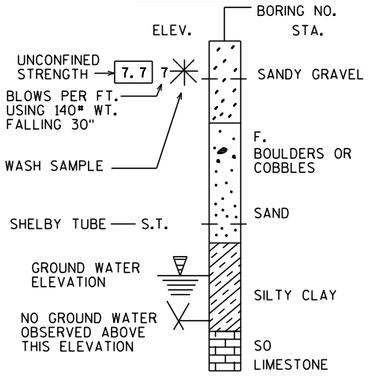
MATERIAL SYMBOLS

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-40-785

DRAWN BY MM | PLANS CK'D. MHZ

SUBSURFACE EXPLORATION 2

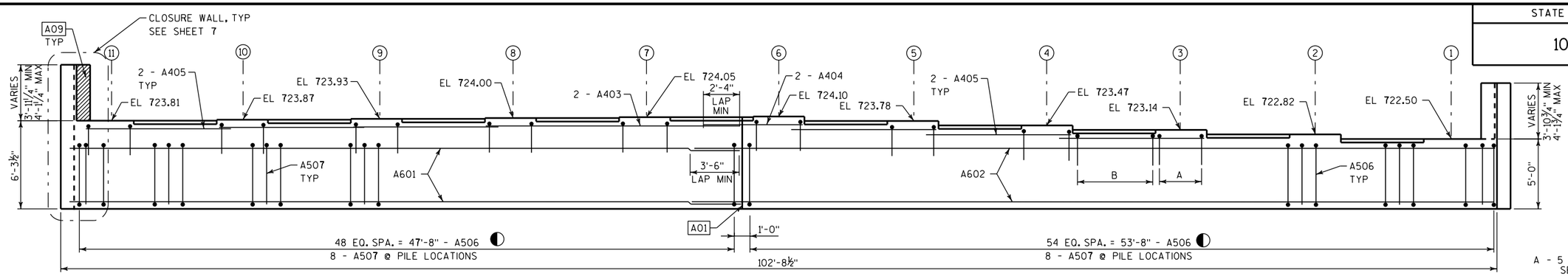
SHEET 5 OF 35

8

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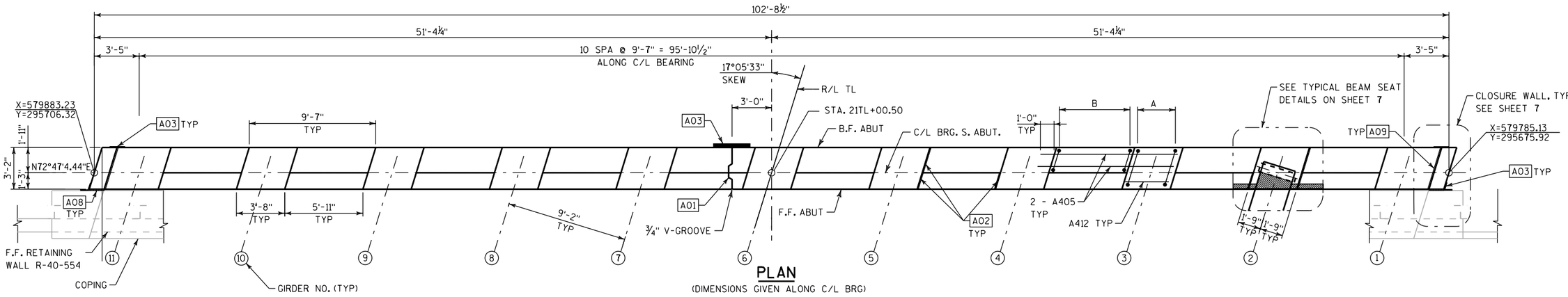
STATE PROJECT NUMBER
1060-33-78



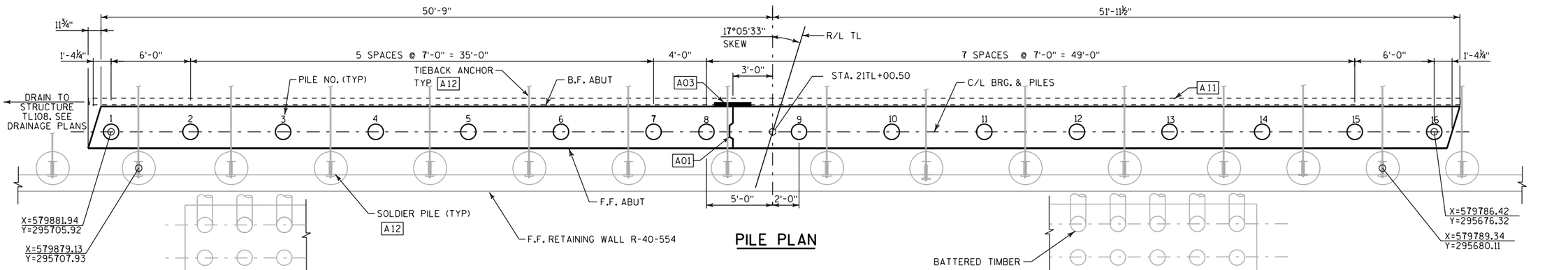
ELEVATION
(LOOKING SOUTH)

A - 5 - A508 EQ. SPA. ADDITIONAL SEAT REINFORCEMENT REQ'D @ GIRDERS 3 THRU 11

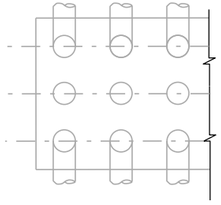
B - 5 - A410 EQ. SPA. BETWEEN GIRDER SEATS (TYP.)

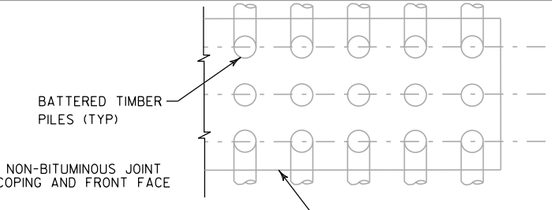


PLAN
(DIMENSIONS GIVEN ALONG C/L BRG)



PILE PLAN





LEGEND

○ 14" DIAMETER, 0.375" WALL CIP PIPE CONCRETE PILING

◐ REPLACE A506 WITH A507 @ PILE LOCATIONS

NOTES

A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X8".

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.

A07 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND FRONT FACE OF ABUTMENT.

A08 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND CLOSURE WALL.

A09 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER AT EDGE OF DIAPHRAGM ABOVE BEAM SEAT.

A10 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER ON THE TOP OF CLOSURE WALL.

A11 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.

A12 ALL ABUTMENT PILES SHALL BE DRIVEN COMPLETELY BEFORE INSTALLING TIEBACK ANCHORS FOR THE WALLS. SEE RETAINING WALL PLANS FOR SOLDIER PILE AND TIEBACK LOCATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

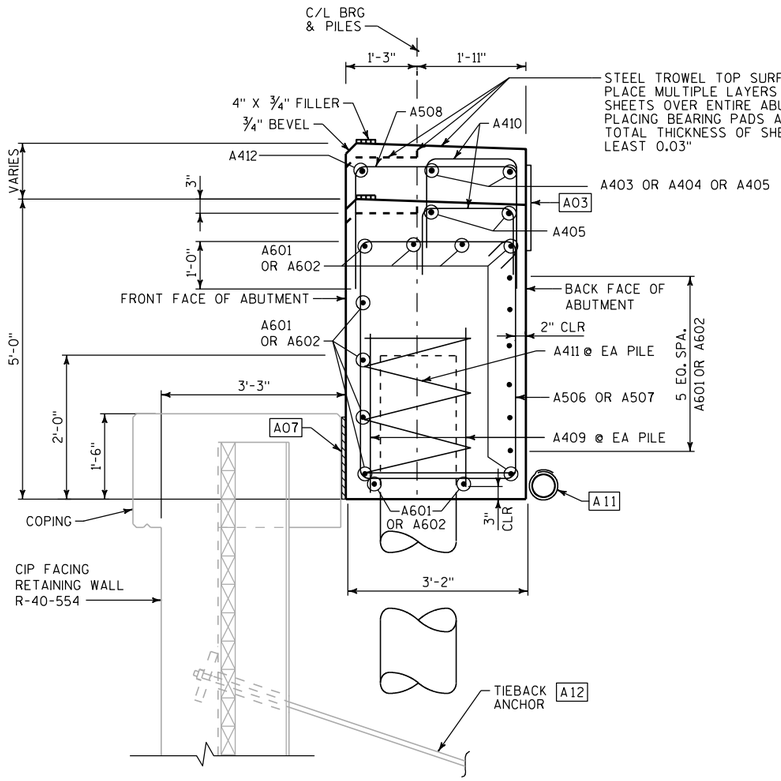
STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. RT

SOUTH ABUTMENT

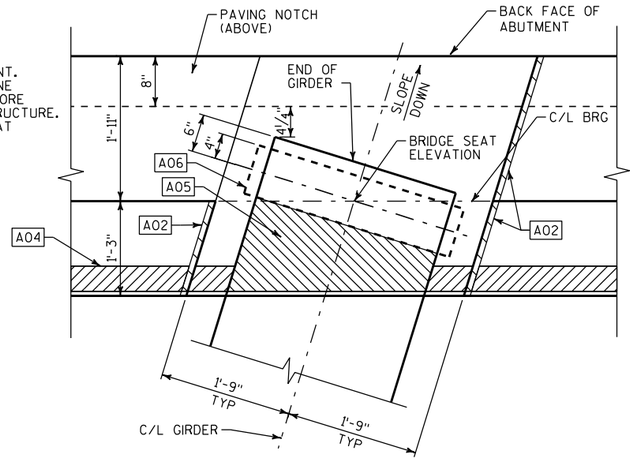
SHEET 6 OF 35

STATE PROJECT NUMBER
1060-33-78



SECTION THRU ABUTMENT BODY

(LOOKING EAST)

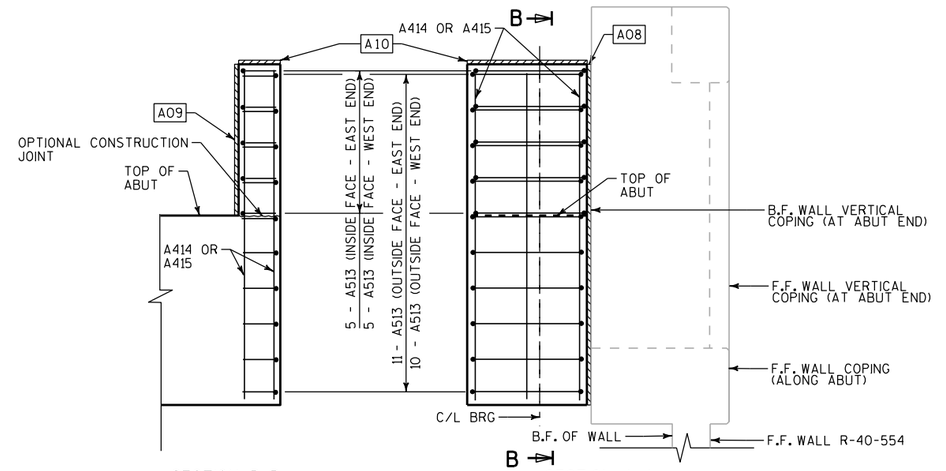


TYPICAL BEAM SEAT DETAIL

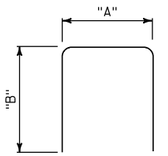
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

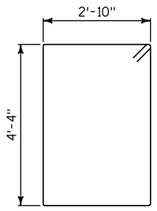
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A601	X	17	48'- 4"			BODY- LONGITUDINAL
A602	X	17	58'- 5"			BODY- LONGITUDINAL
A403	X	2	17'- 6"			BODY-TOP-ABUT- LONGITUDINAL
A404	X	2	7'- 7"			BODY-TOP-ABUT- LONGITUDINAL
A405	X	16	10'- 5"			BODY-TOP-ABUT- LONGITUDINAL
A506	X	88	14'- 11"	X		BODY-ABUT- TRANSVERSE
A507	X	16	11'- 3"	X		BODY-ABUT- TRANSVERSE- PILE LOCATION
A508	X	45	7'- 3"	X		BODY - TOP -ABUT-TRANSVERSE- UNDER GRIDERS
A409	X	32	2'- 3"			BODY-ABUT- TRANSVERSE- PILE LOCATION (2 BARS)
A410	X	50	6'- 0"	X		BODY-ABUT-BETWEEN BEAM SEATS- TRANS.
A411	X	16	29'- 6"	X		PILE STIRRUP-1 PER PILE- 5 WRAP SPIRAL
A412	X	9	3'- 4"			BODY-TOP-ABUT- LONG.- UNDER BEAM SEAT
A513	X	31	4'- 1"	X		CLOSURE WALL- HORZ TIE
A414	X	6	10'- 0"			CLOSURE WALL-VERT EAST END
A415	X	6	8'- 8"			CLOSURE WALL-VERT WEST END



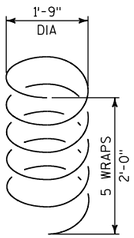
SECTION A-A



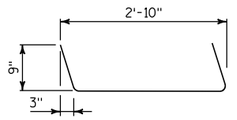
BAR MARK	DIM "A"	DIM "B"
A507	2'-10"	4'-4"
A508	2'-10"	2'-4"
A410	1'-7"	2'-4"



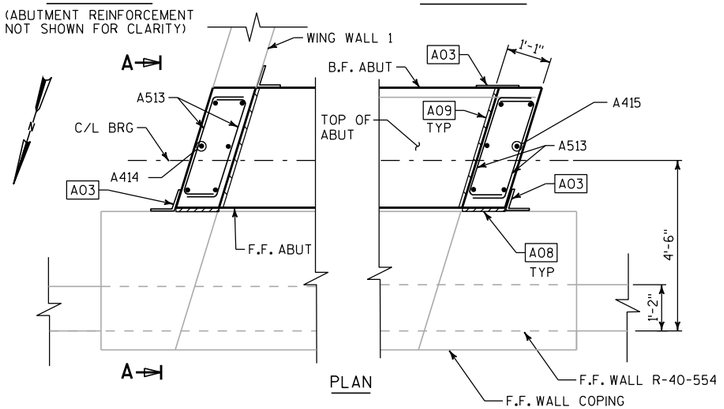
A506



A411

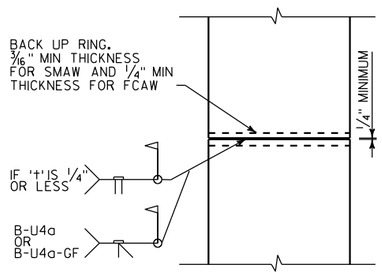


A513

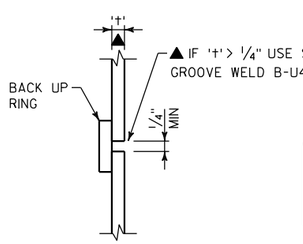


CLOSURE WALL DETAILS

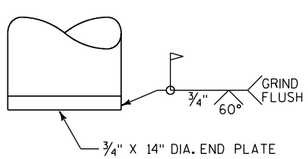
(COORDINATE CONSTRUCTION OF CLOSURE WALLS WITH CONSTRUCTION OF RETAINING WALL R-40-554)



CAST-IN-PLACE 'PIPE PILE'



CIP PILE WELD DETAIL



END PLATE DETAIL

NOTES

- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X8".
- 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.
  ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND FRONT FACE OF ABUTMENT.
- A08 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND CLOSURE WALL.
- A09 EXTEND POLYETHYLENE SHEETING OVER VERTICAL SURFACE OF CLOSURE WALL.
- A10 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER ON THE TOP OF CLOSURE WALL.
- A11 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- A12 ALL ABUTMENT PILES SHALL BE DRIVEN COMPLETELY BEFORE INSTALLING TIEBACK ANCHORS FOR THE WALLS. SEE RETAINING WALL PLANS FOR SOLDIER PILE AND TIEBACK LOCATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

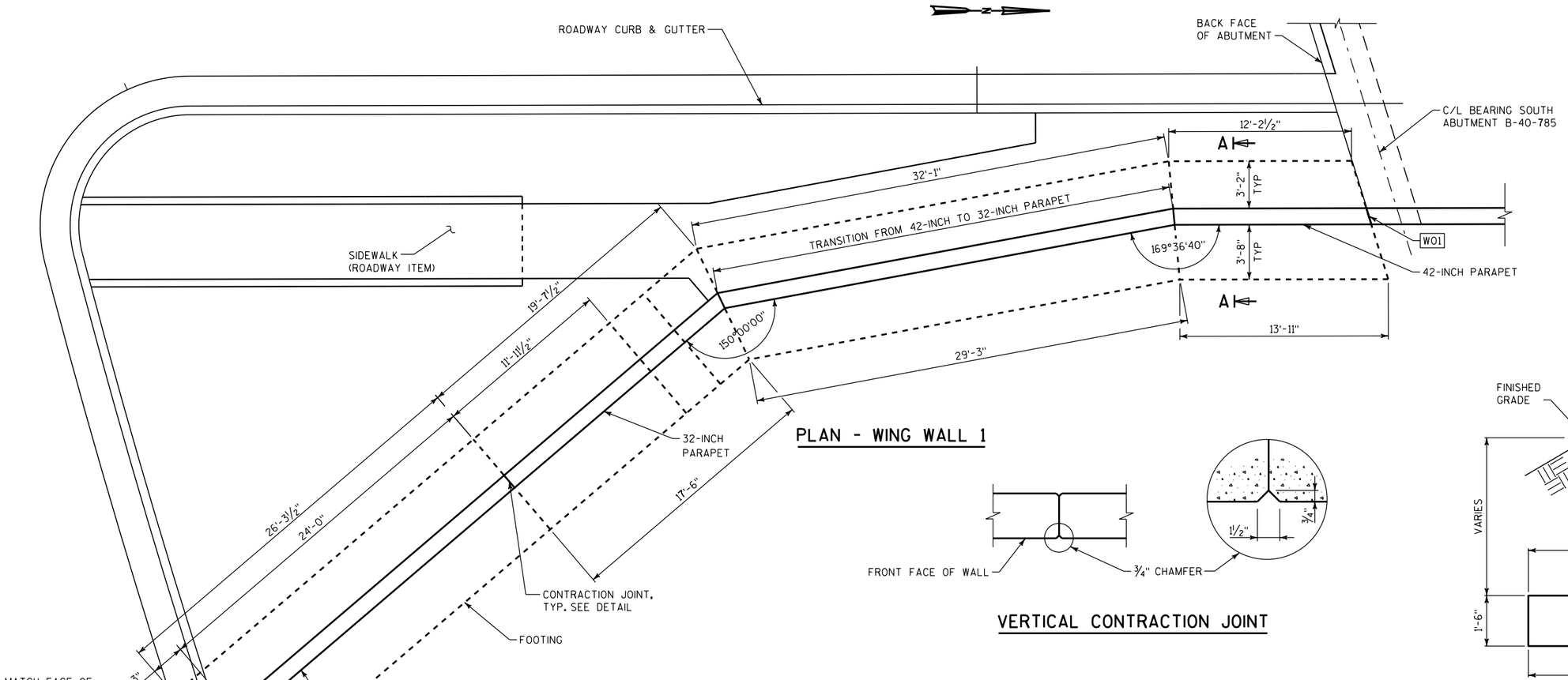
DRAWN BY MM | PLANS CK'D. RT

SOUTH ABUTMENT DETAILS

SHEET 7 OF 35

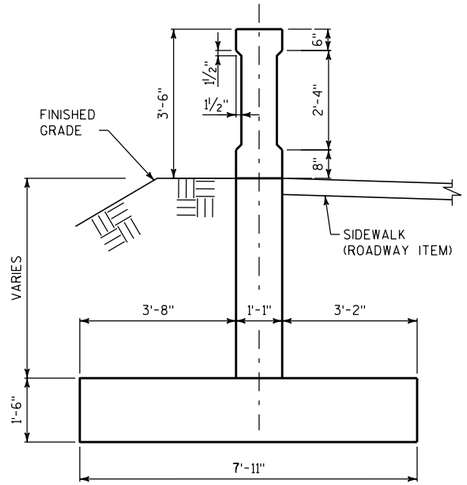
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STATE PROJECT NUMBER
1060-33-78

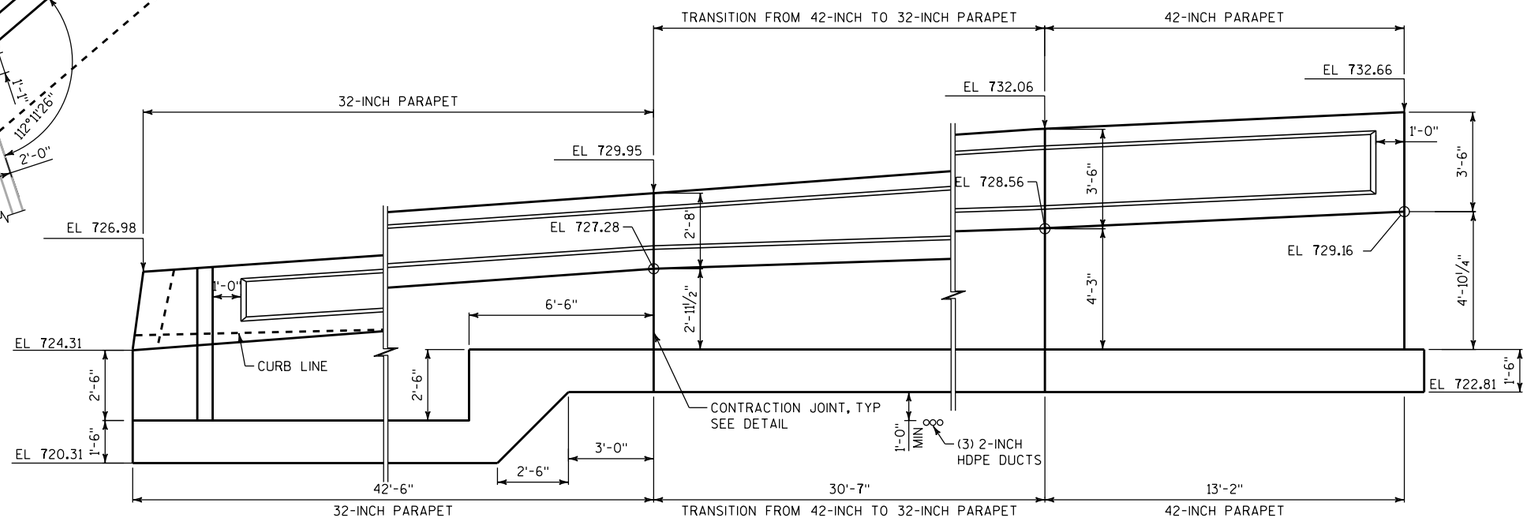


PLAN - WING WALL 1

VERTICAL CONTRACTION JOINT



SECTION A-A



ELEVATION - WING WALL 1

(LOOKING WEST)

W01 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN VERTICAL SURFACES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. MHZ

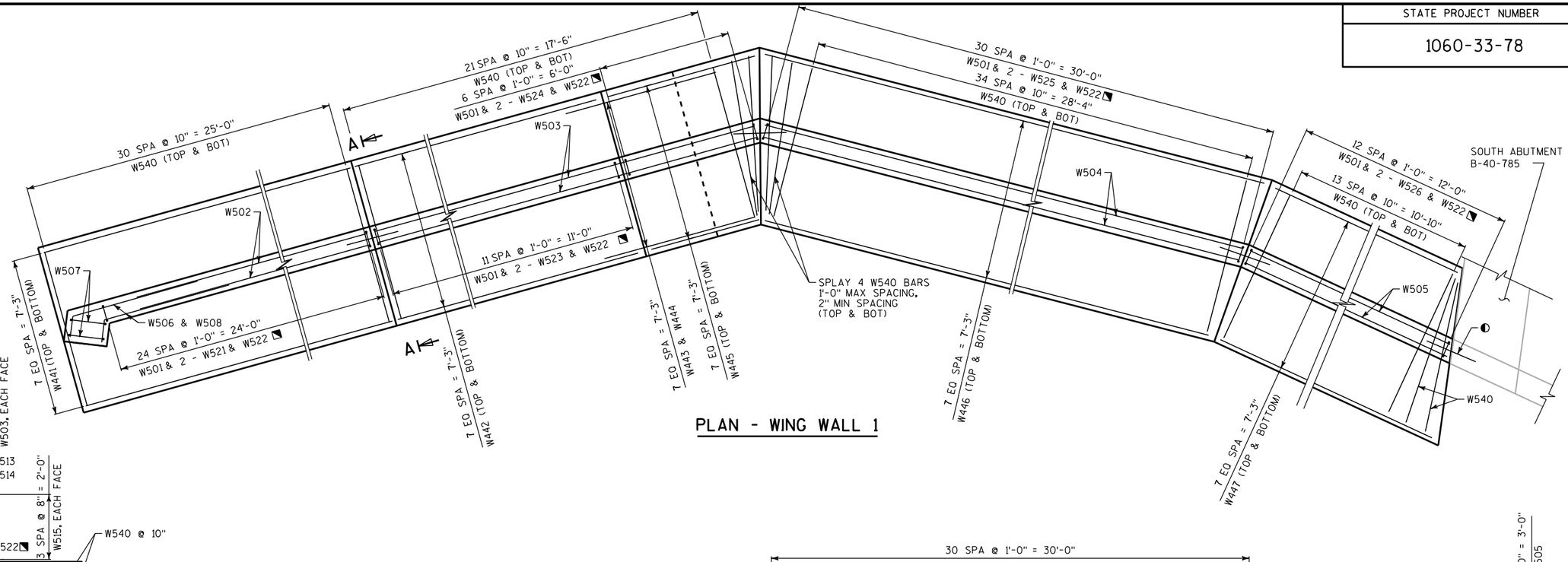
SOUTH ABUTMENT WING WALL DETAILS - 1

SHEET 8 OF 35

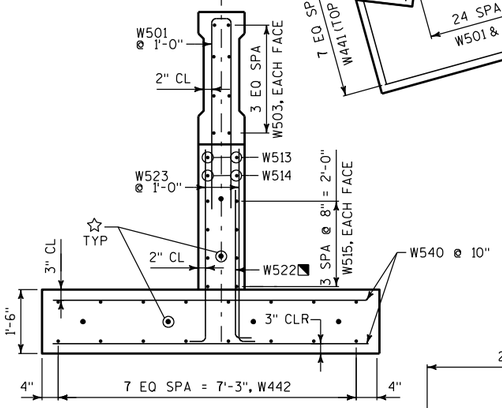
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STATE PROJECT NUMBER
1060-33-78

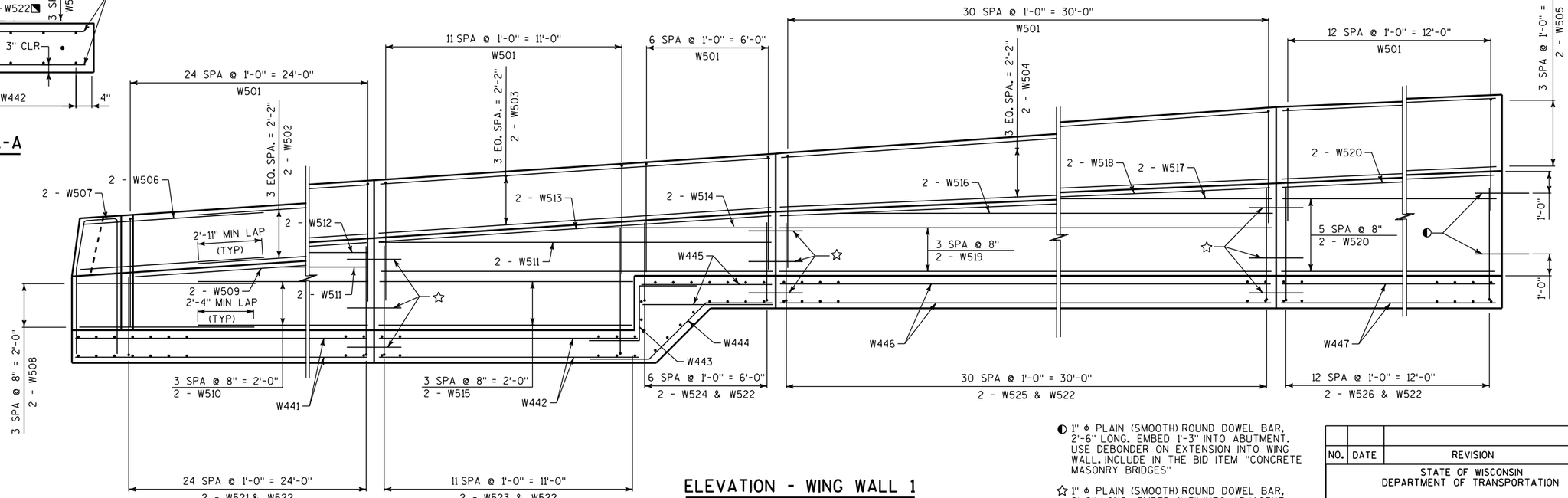


PLAN - WING WALL 1



SECTION A-A

WING WALL 1



ELEVATION - WING WALL 1

◐ 1" ϕ PLAIN (SMOOTH) ROUND DOWEL BAR, 2'-6" LONG. EMBED 1'-3" INTO ABUTMENT. USE DEBONDER ON EXTENSION INTO WING WALL. INCLUDE IN THE BID ITEM "CONCRETE MASONRY BRIDGES"

☆ 1" ϕ PLAIN (SMOOTH) ROUND DOWEL BAR, 2'-6" LONG. EMBED 1'-3" INTO ADJACENT WALL OR WALL FOOTING. DOWELS SHALL BE LIGHTLY COATED WITH DEBONDING SURFACE TREATMENT OVER ONE HALF DOWEL LENGTH. INCLUDE IN THE BID ITEM "CONCRETE MASONRY BRIDGES"

◥ W522 IS TO BE PLACED ON SIDE OF WING WALL FACING ROADWAY

FOR BILL OF BARS SEE SHEET 14

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

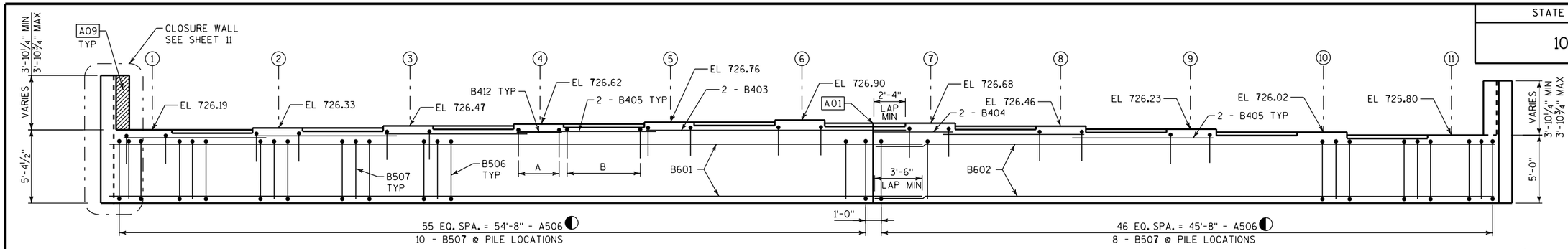
STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. MHZ

SOUTH ABUTMENT WING WALL DETAILS - 2

SHEET 9 OF 35

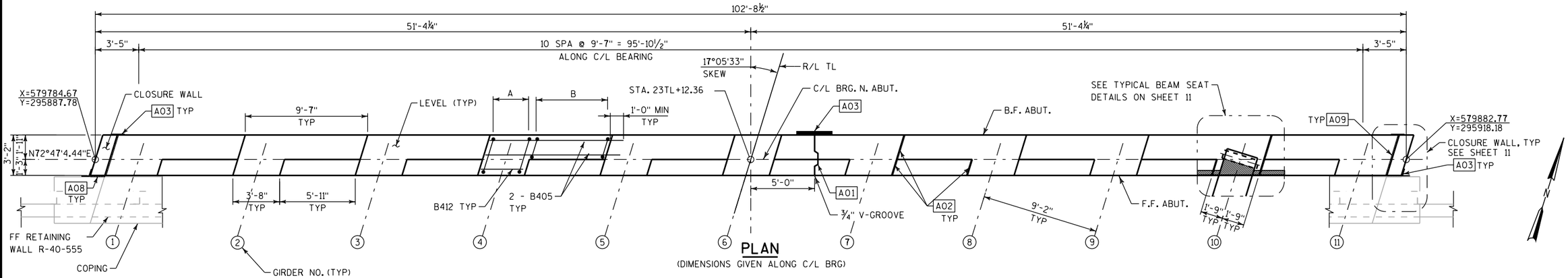
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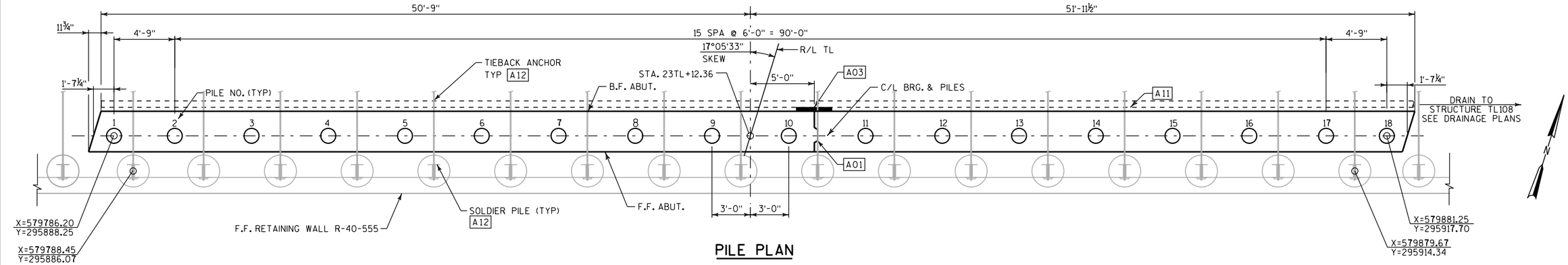
ELEVATION
(LOOKING NORTH)

A - 5 - B508 EQ. SPA. ADDITIONAL SEAT REINFORCEMENT REQ'D @ GIRDERS 1 THRU 9

B - 5 - B410 EQ. SPA. BETWEEN GIRDER SEATS (TYP.)



PLAN
(DIMENSIONS GIVEN ALONG C/L BRG)



PILE PLAN

LEGEND

- ○ 14" DIAMETER, 0.375" WALL CIP PIPE CONCRETE PILING
- ◐ REPLACE A506 WITH A507 @ PILE LOCATIONS

NOTES

- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X8".
- 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 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND FRONT FACE OF ABUTMENT.
- A08 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND CLOSURE WALL.
- A09 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER AT EDGE OF DIAPHRAGM ABOVE BEAM SEAT.
- A10 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER ON THE TOP OF CLOSURE WALL.
- A11 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- A12 ALL ABUTMENT PILES SHALL BE DRIVEN COMPLETELY BEFORE INSTALLING TIEBACK ANCHORS FOR THE WALLS. SEE RETAINING WALL PLANS FOR SOLDIER PILE AND TIEBACK LOCATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. RT

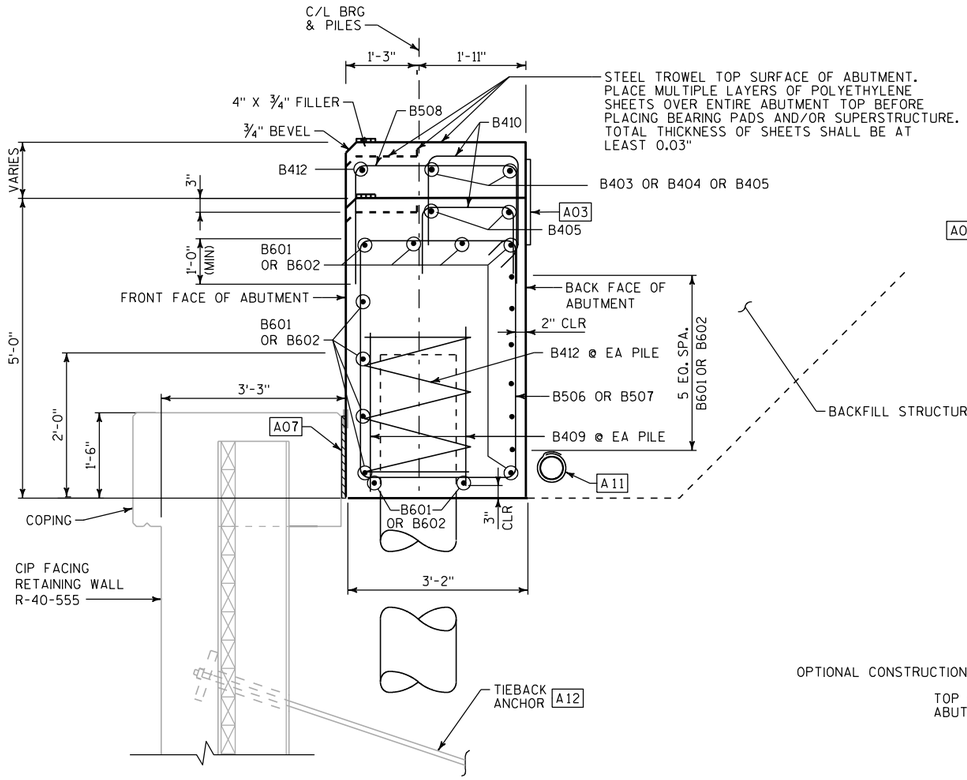
NORTH ABUTMENT

SHEET 10 OF 35

8

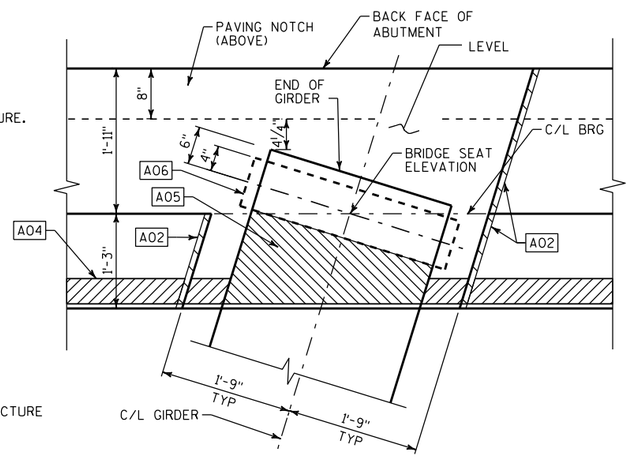
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STATE PROJECT NUMBER
1060-33-78



SECTION THRU ABUTMENT BODY

(LOOKING WEST)

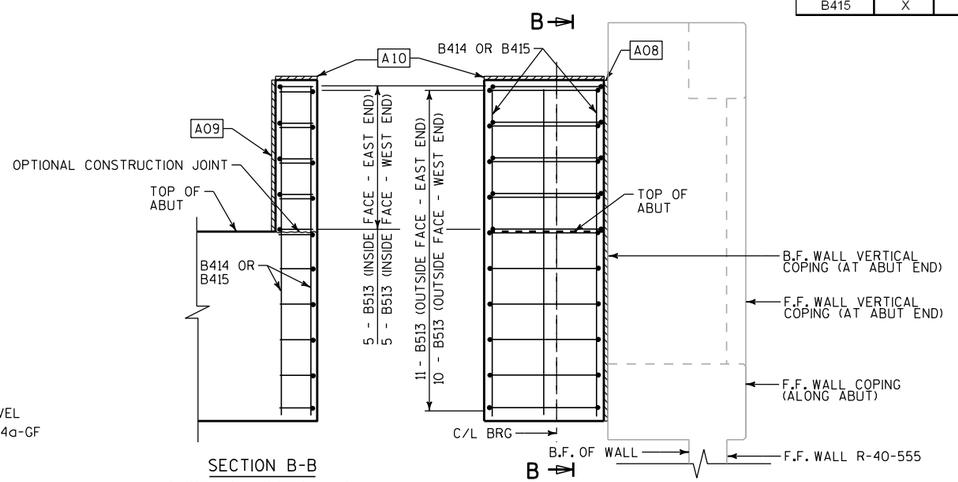


TYPICAL BEAM SEAT DETAIL

BILL OF BARS

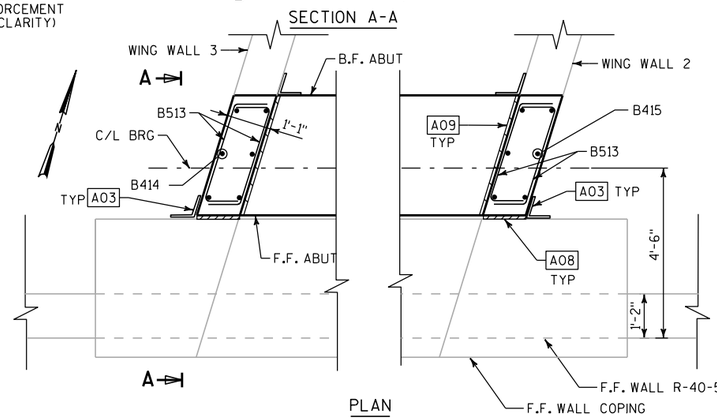
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B601	X	17	60'- 0"			BODY- LONGITUDINAL
B602	X	17	46'- 3"			BODY- LONGITUDINAL
B403	X	2	15'- 6"			BODY-TOP-ABUT- LONGITUDINAL
B404	X	2	8'- 8"			BODY-TOP-ABUT- LONGITUDINAL
B405	X	16	10'- 5"			BODY-TOP-ABUT- LONGITUDINAL
B506	X	85	14'- 11"	X		BODY-ABUT- TRANSVERSE
B507	X	18	11'- 3"	X		BODY-ABUT- TRANSVERSE- PILE LOCATION
B508	X	45	7'- 3"	X		BODY - TOP -ABUT-TRANSVERSE- UNDER GRIDERS
B409	X	36	2'- 3"			BODY-ABUT- TRANSVERSE- PILE LOCATION (2 BARS)
B410	X	50	6'- 0"	X		BODY-ABUT-BETWEEN BEAM SEATS- TRANS.
B411	X	18	29'- 6"	X		PILE STIRRUP-1 PER PILE- 5 WRAP SPIRAL
B412	X	9	3'- 4"			BODY-TOP-ABUT- LONG.- UNDER BEAM SEAT
B513	X	31	4'- 1"	X		CLOSURE WALL- HOR. TIE
B414	X	6	8'- 11"			CLOSURE WALL- VERT WEST END
B415	X	6	10'- 0"			CLOSURE WALL- VERT EAST END

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE



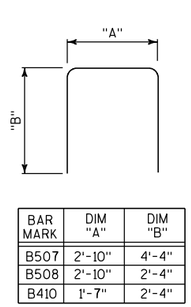
SECTION B-B

(ABUTMENT REINFORCEMENT NOT SHOWN FOR CLARITY)

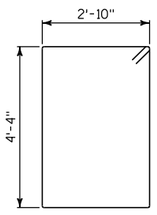


CLOSURE WALL DETAILS

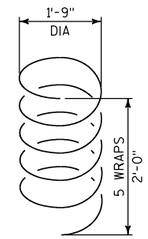
(COORDINATE CONSTRUCTION OF CLOSURE WALLS WITH CONSTRUCTION OF RETAINING WALL R-40-555)



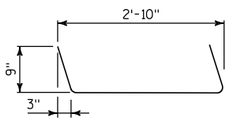
BAR MARK	DIM "A"	DIM "B"
B507	2'-10"	4'-4"
B508	2'-10"	2'-4"
B410	1'-7"	2'-4"



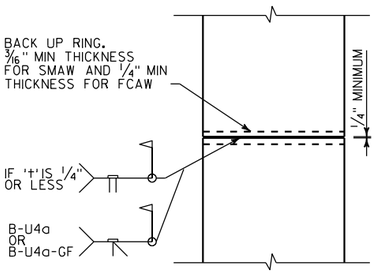
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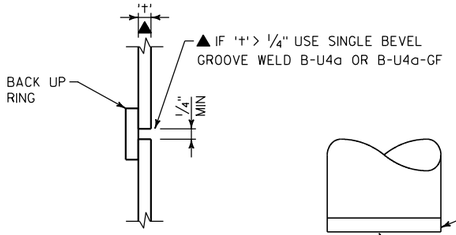
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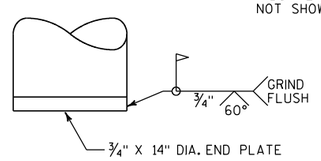
B513



CAST-IN-PLACE 'PIPE PILE'



CIP PILE WELD DETAIL



END PLATE DETAIL

NOTES

- A01 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2"X8".
- 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.
- A08 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND FRONT FACE OF ABUTMENT.
- A08 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND CLOSURE WALL.
- A09 EXTEND POLYETHYLENE SHEETING OVER VERTICAL SURFACE OF CLOSURE WALL.
- A10 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER ON THE TOP OF CLOSURE WALL.
- A11 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN.
- A12 ALL ABUTMENT PILES SHALL BE DRIVEN COMPLETELY BEFORE INSTALLING TIEBACK ANCHORS FOR THE WALLS. SEE RETAINING WALL PLANS FOR SOLDIER PILE AND TIEBACK LOCATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. RT

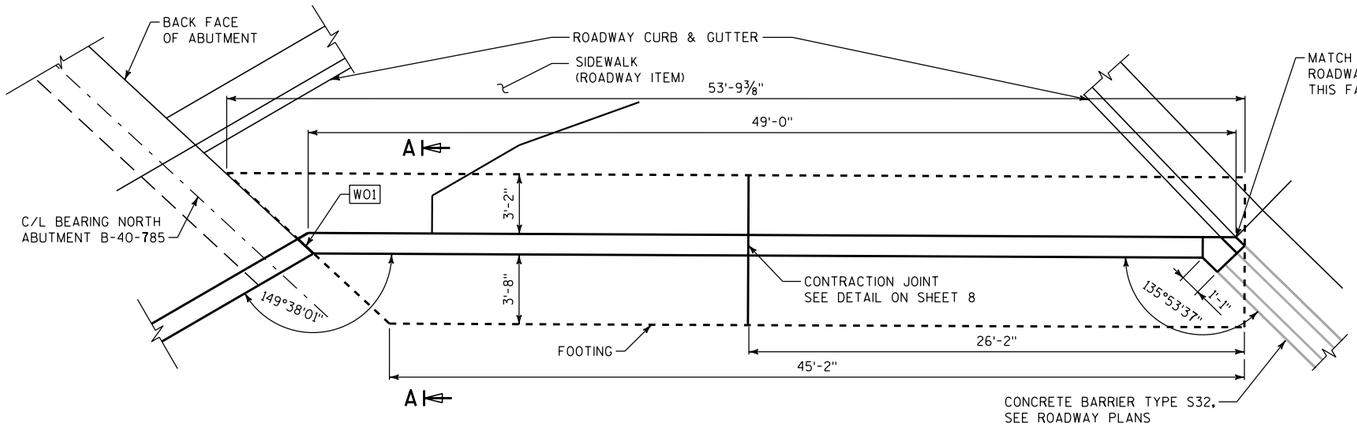
NORTH ABUTMENT DETAILS

SHEET 11 OF 35

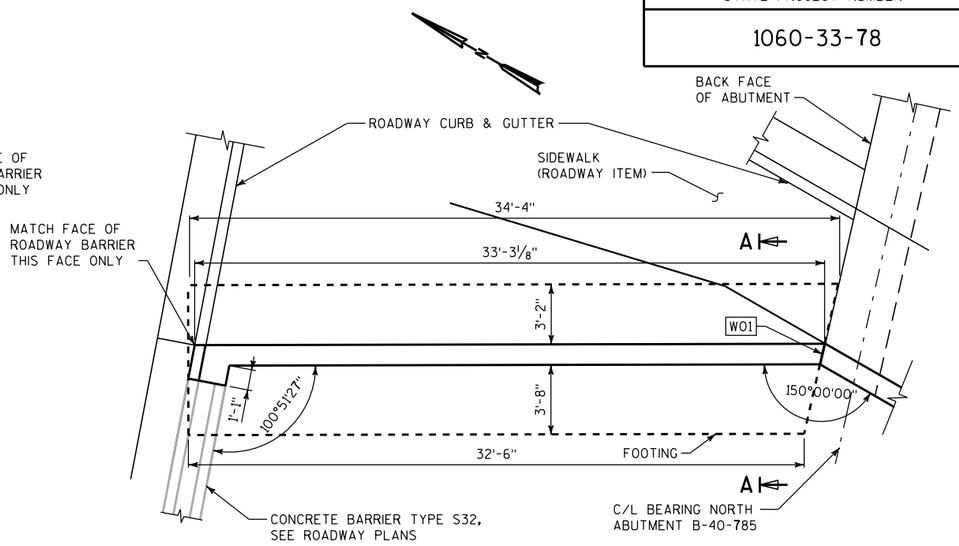
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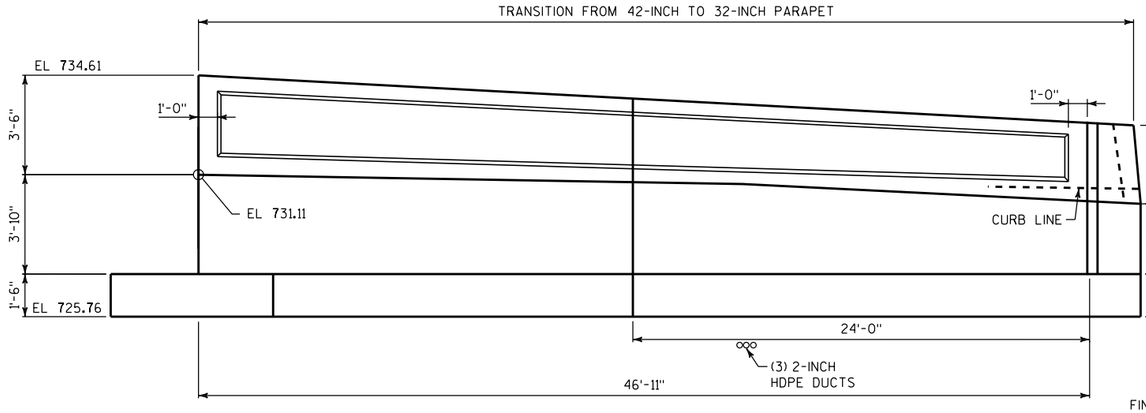
STATE PROJECT NUMBER
1060-33-78



PLAN - WING WALL 2

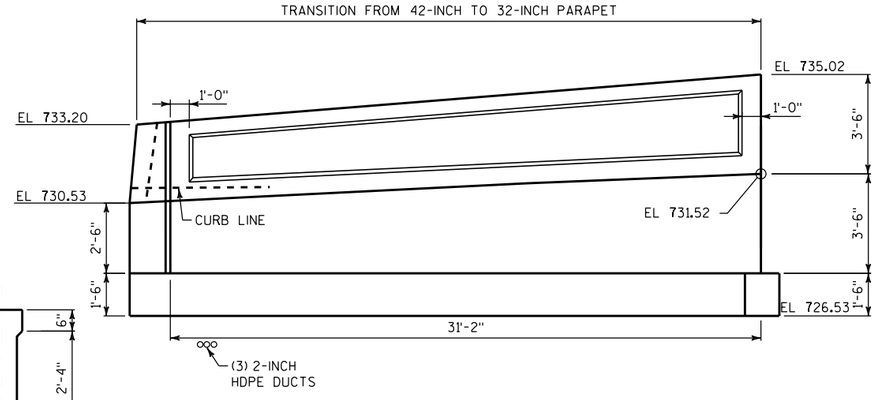


PLAN - WING WALL 3



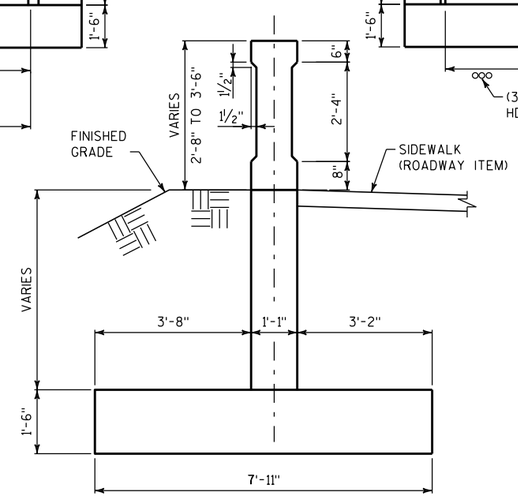
ELEVATION - WING WALL 2

(LOOKING WEST)



ELEVATION - WING WALL 3

(LOOKING EAST)



SECTION A-A

WING WALLS 2 & 3

W01 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN VERTICAL SURFACES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. MHZ

NORTH ABUTMENT
WING WALL
DETAILS - 1

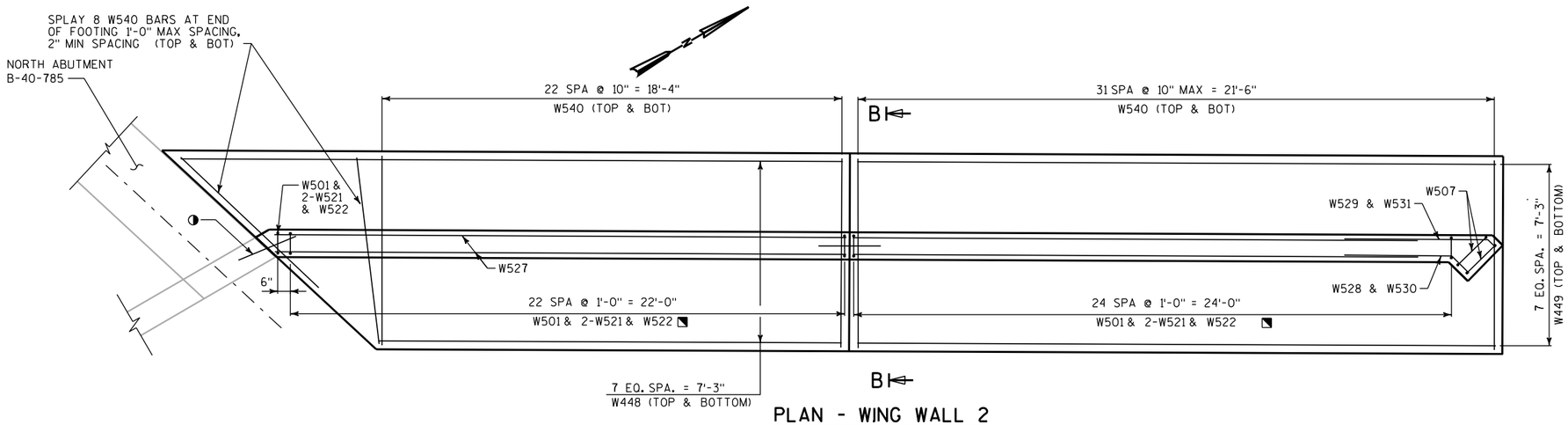
SHEET 12 OF 35

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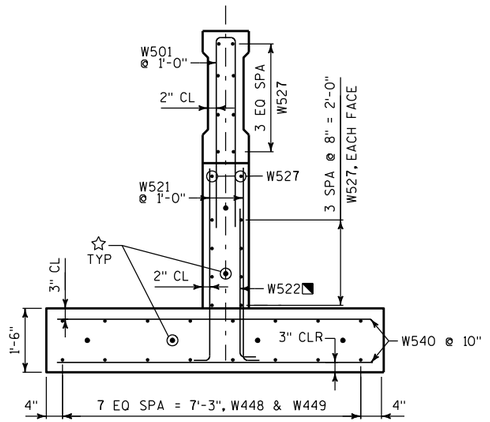
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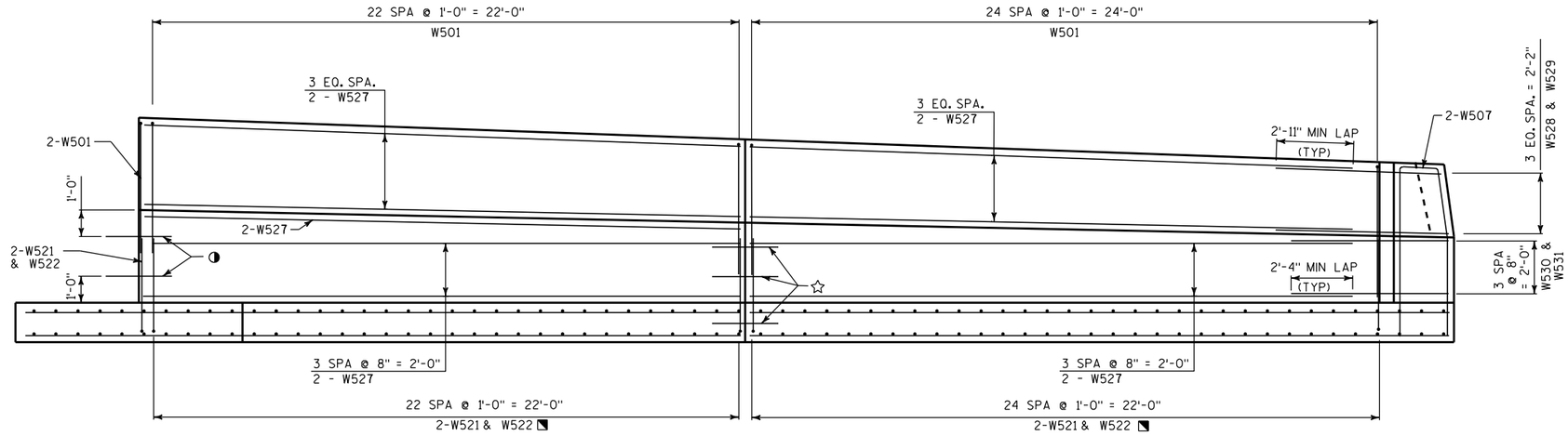
STATE PROJECT NUMBER
1060-33-78



PLAN - WING WALL 2



SECTION B-B



ELEVATION - WING WALL 2

◐ 1" ϕ PLAIN (SMOOTH) ROUND DOWEL BAR, 2'-6" LONG. EMBED 1'-3" INTO ABUTMENT. USE DEBONDER ON EXTENSION INTO WING WALL. INCLUDE IN THE BID ITEM "CONCRETE MASONRY BRIDGES"

☆ 1" ϕ PLAIN (SMOOTH) ROUND DOWEL BAR, 2'-6" LONG. EMBED 1'-3" INTO ADJACENT WALL OR WALL FOOTING. DOWELS SHALL BE LIGHTLY COATED WITH DEBONDING SURFACE TREATMENT OVER ONE HALF DOWEL LENGTH. INCLUDE IN THE BID ITEM "CONCRETE MASONRY BRIDGES"

◥ W522 IS TO BE PLACED ON SIDE OF WING WALL FACING ROADWAY

FOR BILL OF BARS SEE SHEET 14

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY	MM	PLANS CK'D.	MHZ

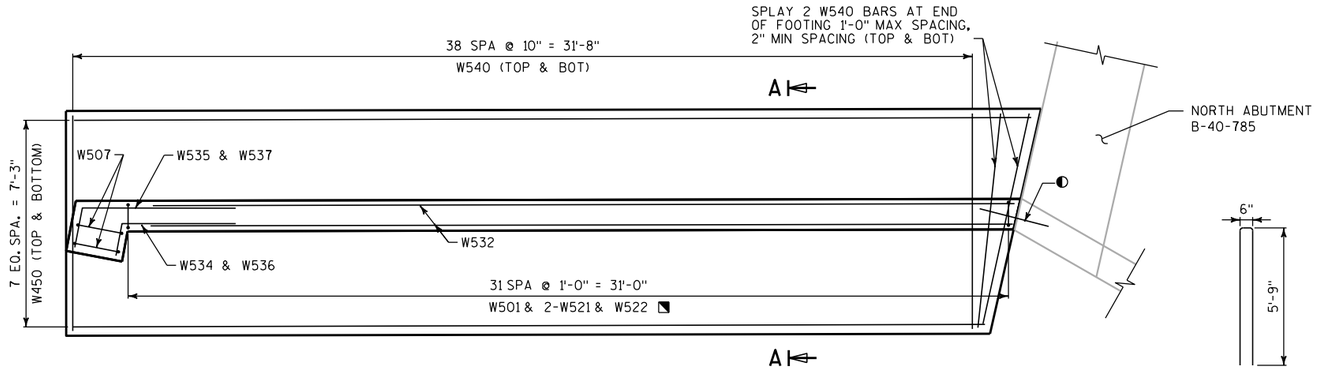
NORTH ABUTMENT WING WALL DETAILS - 2

SHEET 13 OF 35

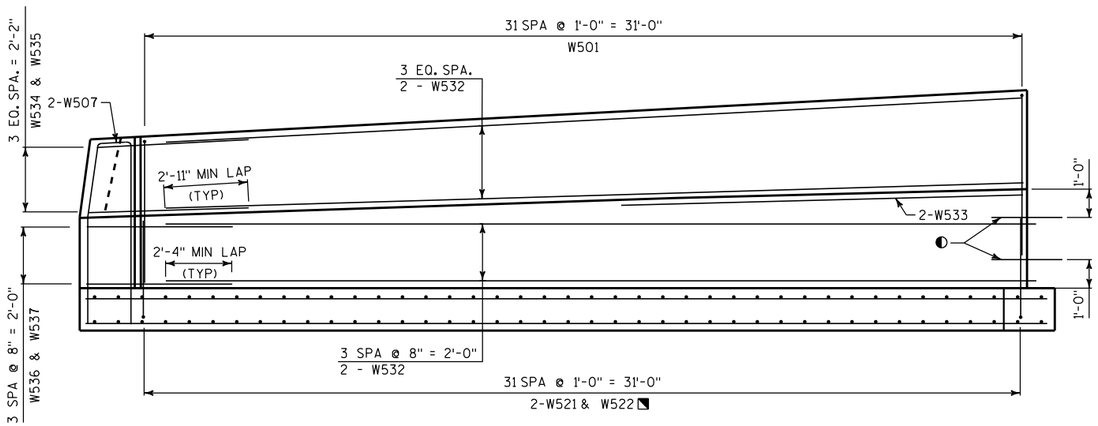
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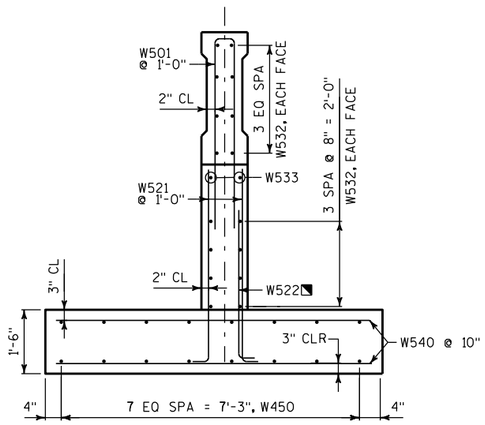
STATE PROJECT NUMBER
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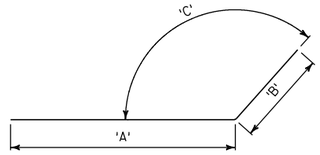
PLAN - WING WALL 3



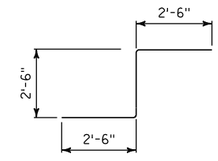
ELEVATION - WING WALL 3



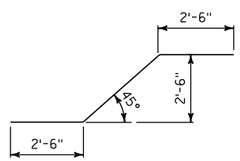
SECTION A-A



BAR MARK	DIM 'A'	DIM 'B'	DIM 'C'
W506	6'-0"	0'-10"	112°
W508	5'-5"	0'-10"	112°
W528	4'-3"	1'-0"	136°
W529	5'-9"	0'-5"	136°
W530	3'-8"	1-0"	136°
W531	5'-2"	0-5"	136°
W534	4'-0"	1'-1"	101°
W535	5'-5"	1'-4"	101°
W536	3'-5"	1'-1"	101°
W537	4'-10"	1'-4"	101°

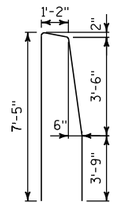


W443

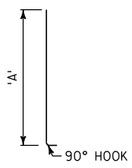


W444

W501



W507



BAR MARK	DIM 'A'
W521	3'-6"
W522	2'-9"
W523	5'-5"
W524	3'-10"
W525	4'-1" TO 5'-5"
W526	5'-6"

BAR SERIES TABLE ▲

BAR MARK	NO. REQ'D	LENGTH
W525	2 SERIES OF 31	4'-10" TO 6'-2"
W445	2 SERIES OF 8	4'-10" TO 6'-11"
W446	2 SERIES OF 8	28'-10" TO 31'-8"
W447	2 SERIES OF 8	11'-9" TO 13'-6"
W448	2 SERIES OF 8	18'-7" TO 26'-6"
W450	2 SERIES OF 8	31'-10" TO 33'-8"

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
W501	X	169	11'- 9"	X		PARAPET TRANSVERSE- ALL WINGWALLS
W502	X	8	22'- 4"			PARAPET LONGITUDINAL - WING WALL 1
W503	X	8	18'- 0"			PARAPET LONGITUDINAL- WING WALL1
W504	X	8	30'- 3"			PARAPET LONGITUDINAL- WING WALL1
W505	X	8	12'- 7"			PARAPET LONGITUDINAL- WING WALL1
W506	X	8	6'- 10"	X		PARAPET LONGITUDINAL END- WING WALL1
W507	X	8	15'- 8"	X		PARAPET TRANSVERSE END - ALL WING WALLS
W508	X	8	6'- 3"	X		WALL LONGITUDINAL BODY END- WING WALL 1
W509	X	2	23'- 8"			WALL LONGITUDINAL TOP - WINGWALL 1
W510	X	8	22'- 2"			WALL LONGITUDINAL BODY- WING WALL 1
W511	X	8	17'- 8"			WALL LONGITUDINAL BODY- WING WALL 1
W512	X	2	7'- 3"			WALL LONGITUDINAL TOP- WING WALL 1
W513	X	2	18'- 0"			WALL LONGITUDINAL TOP- WING WALL 1
W514	X	2	8'- 5"			WALL LONGITUDINAL TOP- WING WALL 1
W515	X	8	11'- 8"			WALL LONGITUDINAL BODY- WING WALL 1
W516	X	2	27'- 8"			WALL LONGITUDINAL TOP- WING WALL 1
W517	X	2	11'- 4"			WALL LONGITUDINAL TOP- WING WALL 1
W518	X	2	30'- 3"			WALL LONGITUDINAL TOP- WING WALL 1
W519	X	8	30'- 2"			WALL LONGITUDINAL BODY- WING WALL 1
W520	X	14	12'- 10"			WALL LONGITUDINAL BODY- WING WALL 1
W521	X	212	4'- 3"	X		WALL TRANSVERSE - ALL WING WALLS
W522	X	169	3'- 6"	X		WALL TRANSVERSE - ALL WING WALLS
W523	X	24	6'- 2"	X		WALL TRANSVERSE - WING WALL 1
W524	X	14	4'- 7"	X		WALL TRANSVERSE - WING WALL 1
W525	X	62	5'- 6"	X	▲	WALL TRANSVERSE - WING WALL 1- SERIES
W526	X	26	6'- 3"	X		WALL TRANSVERSE - WING WALL 1
W527	X	34	22'- 7"			PARAPET LONGITUDINAL END- WING WALL2
W528	X	4	5'- 3"	X		PARAPET LONGITUDINAL END- WING WALL2
W529	X	4	6'- 2"	X		PARAPET LONGITUDINAL END- WING WALL2
W530	X	4	4'- 8"	X		WALL LONGITUDINAL END- WING WALL 2
W531	X	4	5'- 7"	X		WALL LONGITUDINAL END- WING WALL 2
W532	X	16	30'- 4"			PARAPET & WALL LONGITDUNAL - WING WALL 3
W533	X	2	14'- 0"			WALL LONGITUDINAL TOP- WING WALL 3
W534	X	4	5'- 1"	X		PARAPET LONGITDUNAL END- WING WALL 3
W535	X	4	6'- 8"	X		PARAPET LONGITDUNAL END- WING WALL 3
W536	X	4	4'- 6"	X		WALL LONGITUDINAL END - WING WALL 3
W537	X	4	6'- 2"	X		WALL LONGITUDINAL END - WING WALL 3
W540		424	7'- 3"			FOOTING - ALL WING WALLS
W441		16	25'- 8"			FOOTING - WING WALL1
W442		16	11'- 8"			FOOTING - WING WALL1
W443		8	7'- 4"	X		FOOTING - WING WALL
W444		8	8'- 6"	X		FOOTING - WING WALL 1
W445		16	5'- 11"		▲	FOOTING - WING WALL 1- SERIES
W446		16	30'- 0"		▲	FOOTING WING WALL 1- SERIES
W447		16	12'- 5"		▲	FOOTING WING WALL 1- SERIES
W448		16	22'- 7"		▲	FOOTING WING WALL 2- SERIES
W449		16	25'- 6"			FOOTING WING WALL 2
W450		16	32'- 9"		▲	FOOTING WING WALL 3 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

◐ 1" Φ PLAIN (SMOOTH) ROUND DOWEL BAR, 2'-6" LONG. EMBED 1'-3" INTO ABUTMENT. USE DEBONDER ON EXTENSION INTO WING WALL. INCLUDE IN THE BID ITEM "CONCRETE MASONRY BRIDGES"

◥ W522 IS TO BE PLACED ON SIDE OF WING WALL FACING ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

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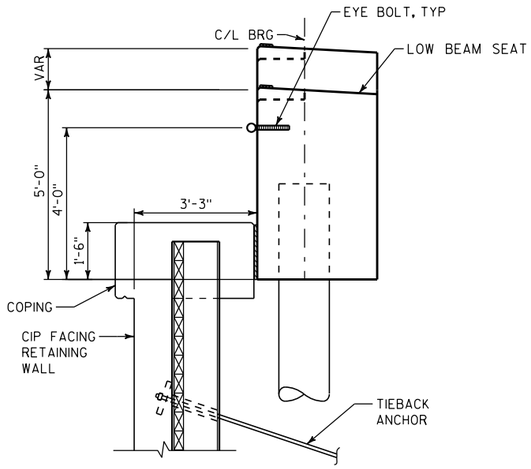
NORTH ABUTMENT WING WALL DETAILS - 3

SHEET 14 OF 35

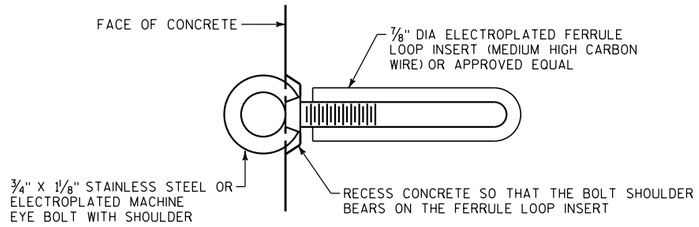
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8

STATE PROJECT NUMBER
1060-33-78

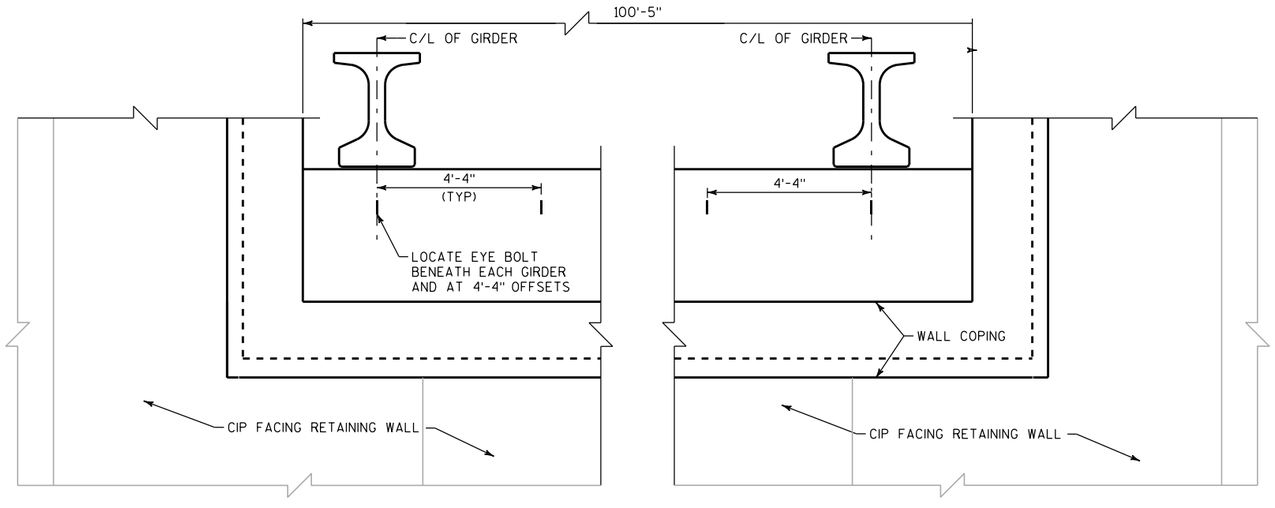


FALL PROTECTION ANCHOR



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.



FALL PROTECTION ELEVATION

(LOOKING AT FRONT FACE OF ABUTMENT)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

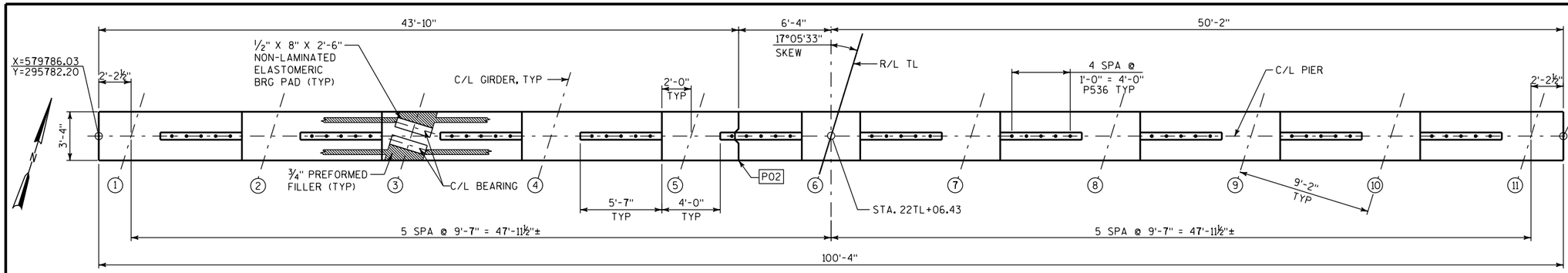
STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. RT

ABUTMENT DETAILS

SHEET 15 OF 35

STATE PROJECT NUMBER
1060-33-78



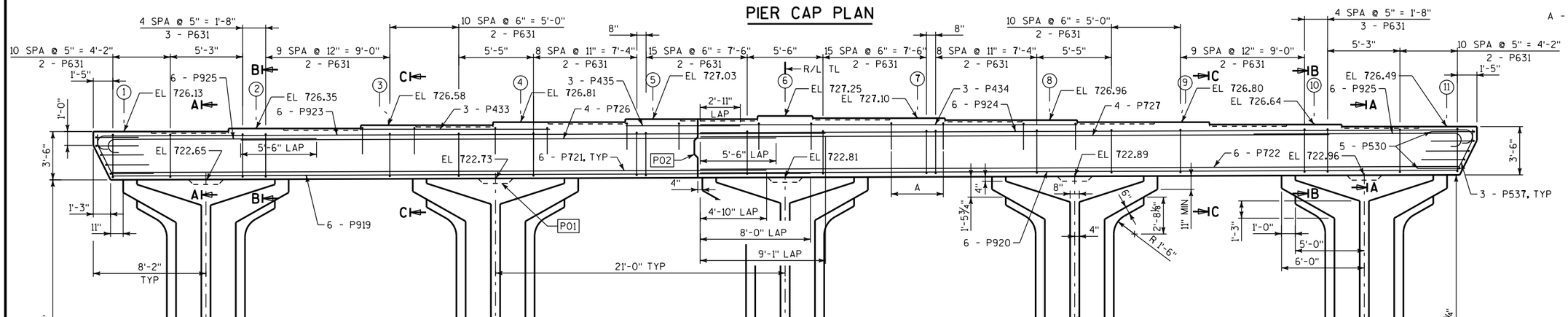
LEGEND

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 3" X 1'-0" X 1'-6" IN PIER CAP

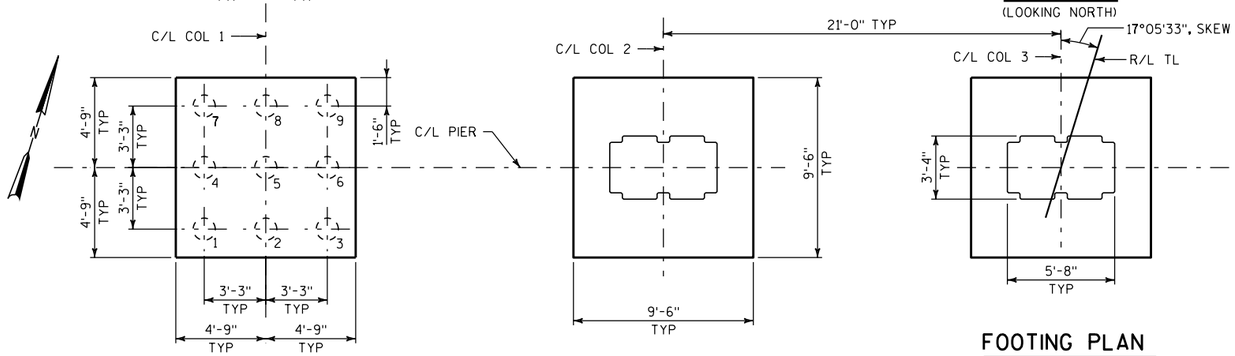
A - 5 - P532 EQ. SPA. ADDITIONAL SEAT REINFORCEMENT REQ'D @ GIRDERS 3 THRU 8

PIER CAP PLAN

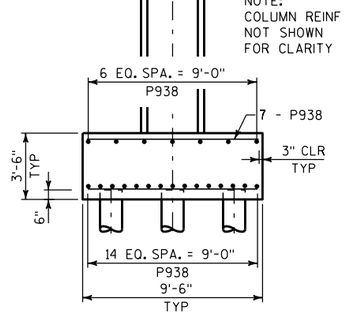


ELEVATION

(LOOKING NORTH)



FOOTING PLAN



END VIEW

(LOOKING WEST)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

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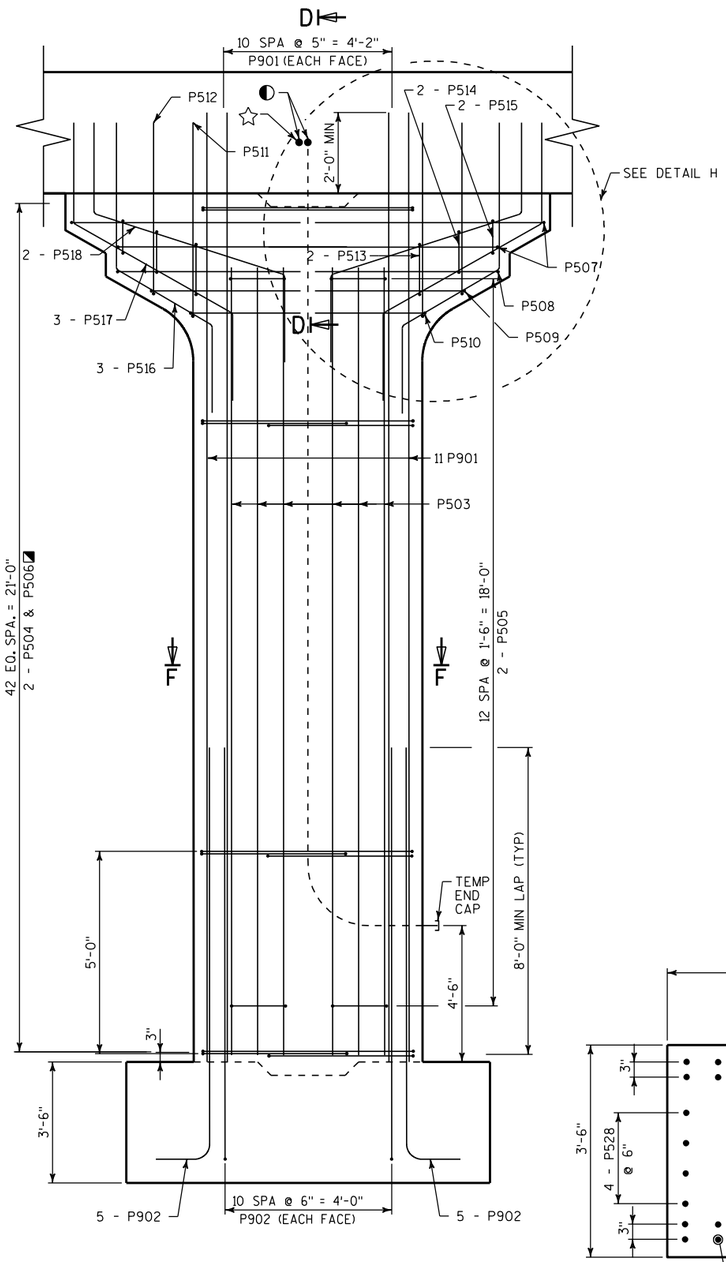
PIER - 1

SHEET 16 OF 35

8

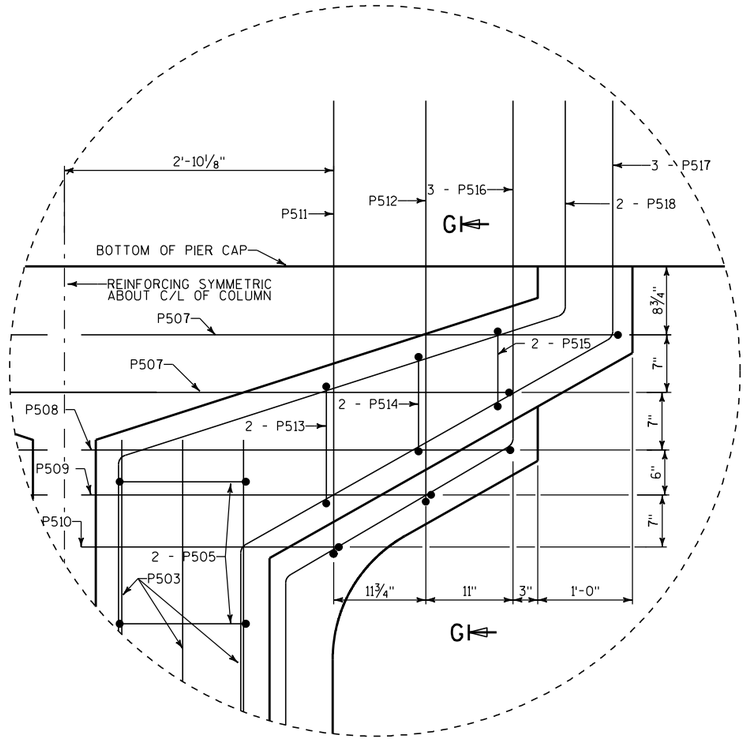
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STATE PROJECT NUMBER
1060-33-78



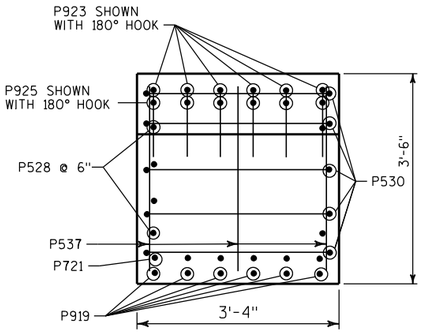
COLUMN ELEVATION

(LOOKING NORTH)



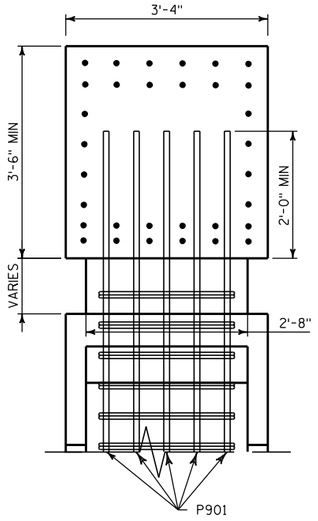
DETAIL H

SECONDARY REINFORCEMENT SHOWN ONLY
(LOOKING NORTH)



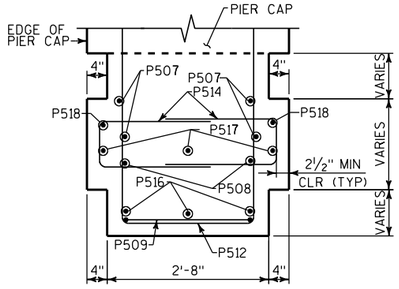
END OF PIER CAP

(LOOKING EAST)

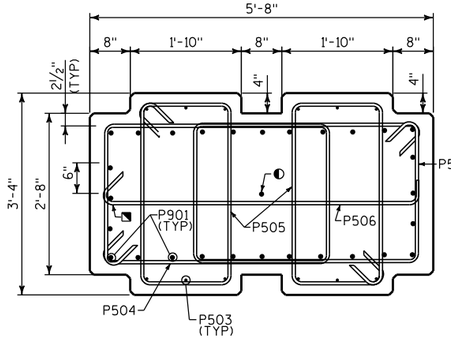


SECTION D-D

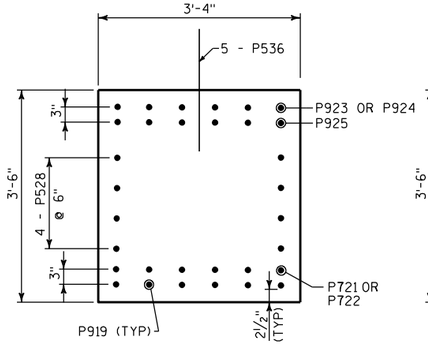
(LOOKING NORTH)



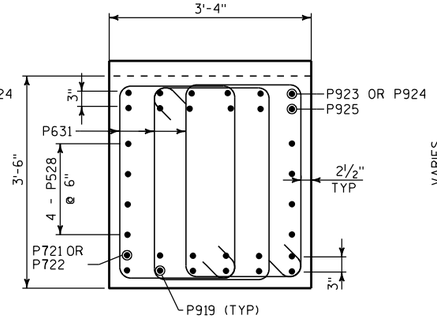
SECTION G-G



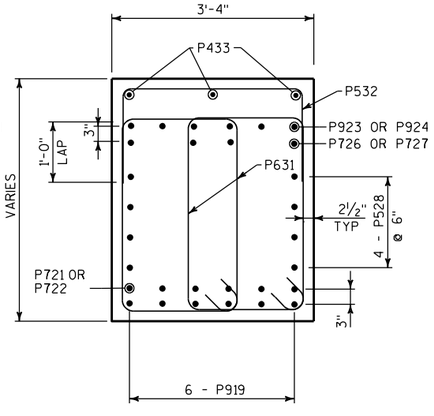
SECTION F-F



SECTION A-A



SECTION B-B



SECTION C-C

LEGEND

- ◐ 1" DIA. NONMETALLIC CONDUIT FOR UNDERDECK LIGHTING. TYP FOR COLS 2 & 4.
- ☆ CONDUIT COMPLETE THRU PIER CAP BOTH ENDS.
- ◥ ALTERNATE END EACH LEVEL (TYP).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

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PIER - 2

SHEET 17 OF 35

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\B-40-785 76th Street\cds\080402_pi.dgn PLOT DATE : 14-JUN-2013 11:47 PLOT BY : MSCM1M PLOT NAME : 080402_pi PLOT SCALE : 8:1

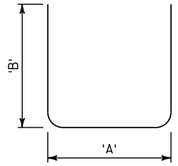
STATE PROJECT NUMBER

1060-33-78

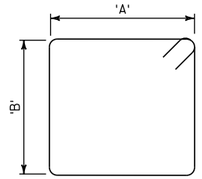
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

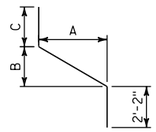
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
P901	X	140	23'- 2"			VERTICAL COLUMN (PRIMARY)
P902	X	140	11'- 10"	X		VERTICAL COLUMN- DOWEL BARS
P503	X	60	19'- 6"			VERTICAL COLUMN- AESTHETIC DETAIL (PRIMARY)
P504	X	430	12'- 6"	X		COLUMN STIRRUP (PRIMARY)
P505	X	130	9'- 2"	X		COLUMN STIRRUP (AESTHETIC)
P506	X	215	6'- 1"	X		COLUMN TIE (PRIMARY)
P507	X	20	13'- 4"	X		HORIZONTAL COLUMN - TIE (SECONDARY)
P508	X	10	11'- 5"	X		HORIZONTAL COLUMN - TIE (SECONDARY)
P509	X	10	10'- 6"	X		HORIZONTAL COLUMN - TIE (SECONDARY)
P510	X	10	8'- 0"	X		HORIZONTAL COLUMN - TIE (SECONDARY)
P511	X	10	12'- 10"	X		VERTICAL COLUMN-TIE- SECONDARY
P512	X	10	11'- 8"	X		VERTICAL COLUMN-TIE- SECONDARY
P513	X	20	5'- 3"	X		HORIZONTAL COLUMN - TIE (SECONDARY)-SHORT DIRECTION
P514	X	20	5'- 0"	X		HORIZONTAL COLUMN - TIE (SECONDARY)-SHORT DIRECTION
P515	X	20	4'- 10"	X		HORIZONTAL COLUMN - TIE (SECONDARY)-SHORT DIRECTION
P516	X	30	8'- 7"	X		OUTSIDE OF COLUMN- BENT (SECONDARY)
P517	X	30	9'- 1"	X		OUTSIDE OF COLUMN- BENT (SECONDARY)
P518	X	20	9'- 4"	X		OUTSIDE OF COLUMN- BENT (SECONDARY)
P919	X	6	50'- 6"			BOTTOM OF PIER CAP- LONG
P920	X	6	54'- 10"			BOTTOM OF PIER CAP- LONG
P721	X	6	47'- 8"			BOTTOM OF PIER CAP- LONG
P722	X	6	54'- 10"			BOTTOM OF PIER CAP- LONG
P923	X	6	53'- 9"	X		TOP OF PIER CAP- LONG
P924	X	6	57'- 4"	X		TOP OF PIER CAP- LONG
P925	X	12	16'- 3"	X		TOP OF PIER CAP- LONG
P726	X	6	38'- 10"			TOP OF PIER CAP- LONG
P727	X	6	45'- 8"			TOP OF PIER CAP- LONG
P528	X	8	46'- 9"			BODY OF PIER CAP- LONG
P529	X	8	54'- 10"			BODY OF PIER CAP- LONG
P530	X	10	8'- 11"	X		ENDS OF PIER CAP- LONG.
P831	X	250	10'- 8"	X		BODY OF CAP- STIRRUPS
P532	X	30	7'- 7"	X		TOP OF CAP -TIE
P433	X	3	13'- 9"			TOP OF CAP -LONG
P434	X	3	27'- 4"			TOP OF CAP -LONG
P435	X	3	8'- 3"			TOP OF CAP -LONG
P536	X	50	2'- 0"			VERTICAL PIER CAP-B/W BEAM SEATS
P537	X	6	3'- 5"	X		ENDS OF CAP- TIE
P938		220	9'- 0"			FOOTING- TOP AND BOT. MAT



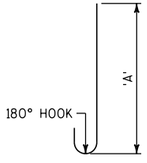
BAR MARK	DIM. 'A'	DIM. 'B'
P507	2'-3"	5'-8"
P508	2'-3"	4'-9"
P509	2'-3"	4'-3"
P510	2'-3"	3'-0"
P511	2'-3"	5'-5"
P512	2'-3"	4'-10"
P513	1'-4"	2'-1"
P514	1'-1"	2'-1"
P515	0'-11"	2'-1"
P530	2'-11"	3'-2"
P532	2'-10"	2'-6"



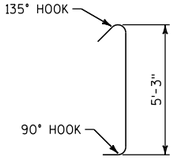
BAR MARK	DIM. 'A'	DIM. 'B'
P504	3'-9"	2'-3"
P505	2'-11"	1'-5"
P631	1'-10"	3'-1"



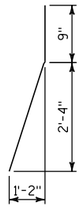
BAR MARK	DIM. 'A'	DIM. 'B'	DIM. 'C
P516	2'-5"	1'-5"	3'-8"
P517	3'-11"	2'-3"	2'-6"
P518	4'-9"	1'-7"	2'-3"



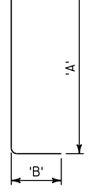
BAR MARK	DIM. 'A'
P923	52'-6"
P924	56'-1"
P925	15'-0"



P506



P537



BAR MARK	DIM. 'A'	DIM. 'B'
P902	10'-6"	1'-7"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

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PIER - 3

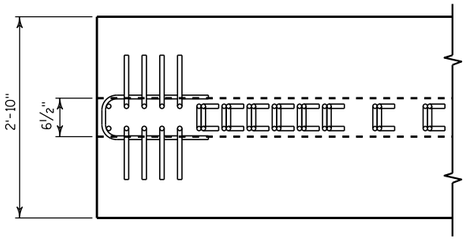
SHEET 18 OF 35

8

8

STATE PROJECT NUMBER

1060-33-78



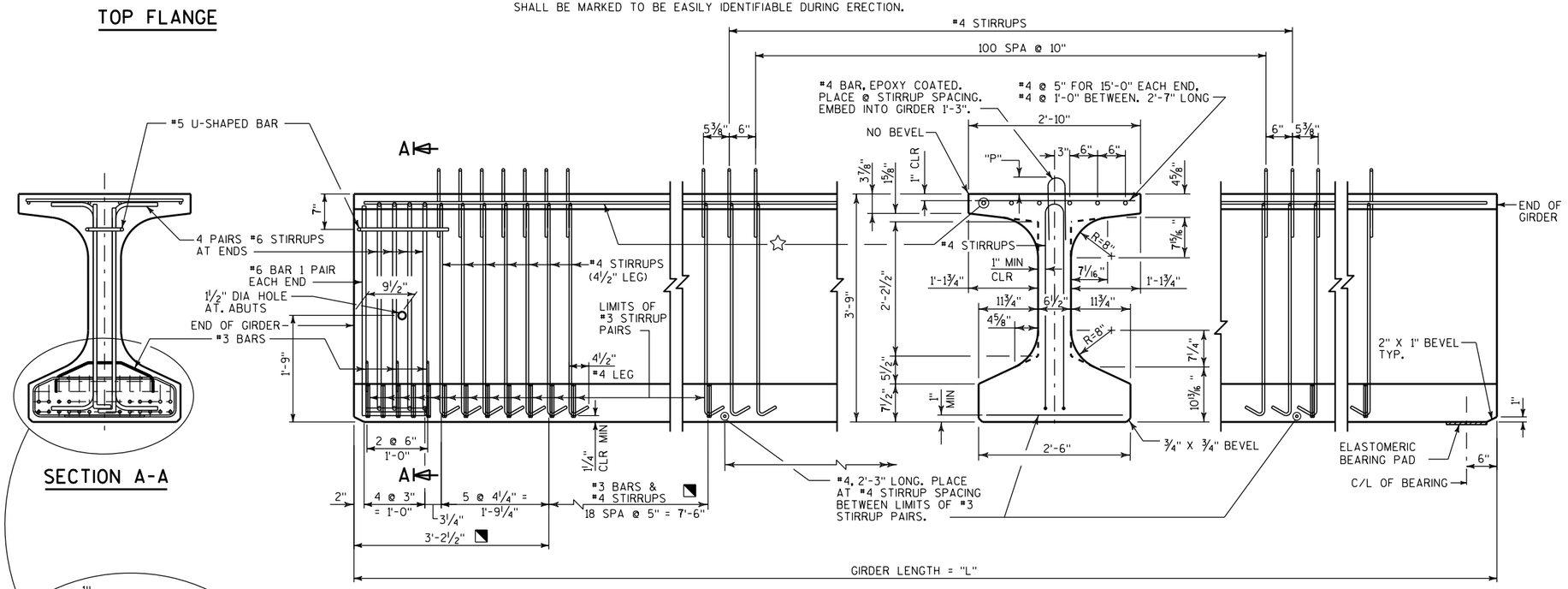
GIRDER DATA

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 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.) *	NO. OF DEBONDED STRANDS **
1 & 2	G2 - G10	INTERIOR	106'-3¾"	¾	1⅛	1¼	1⅜	1½	8000	8½"	10"	8"	0.6	38	6400	40	14	17	5	N/A	N/A	0
1 & 2	G1 & G11	EXTERIOR	106'-3¾"	1/2	5/8	3/4	3/4	3/4	8000	9"	11½"	9"	0.6	34	6400	40	14	17	5	N/A	N/A	6

* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

** DEBOND STRANDS AT THE EXTERIOR GIRDER ONLY. THE EXTERIOR GIRDER SHALL BE MARKED TO BE EASILY IDENTIFIABLE DURING ERECTION.

TOP FLANGE

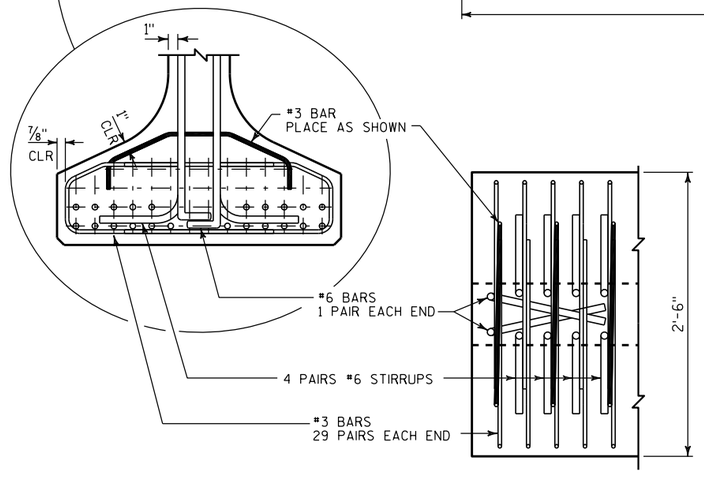


SECTION A-A

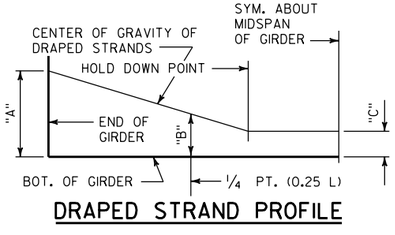
SIDE VIEW & TYPICAL SECTION IN SPAN

▙ DETAIL TYPICAL AT EACH END

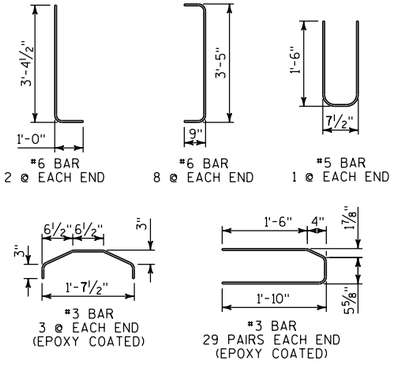
☆ 6 #4 BARS, FULL LENGTH, LAP = 1'-8"



BOTTOM FLANGE



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 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. 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 22.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

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45W" PRESTRESSED GIRDER

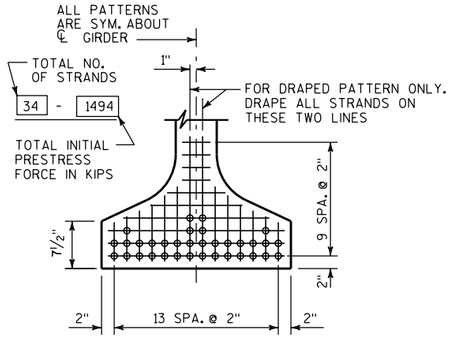
SHEET 19 OF 35

8

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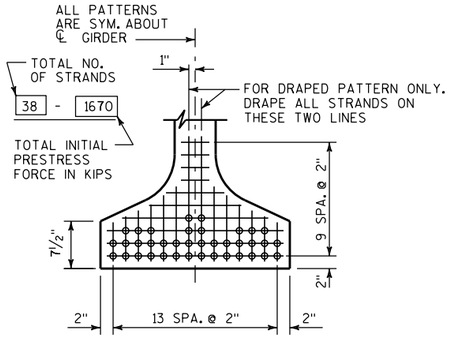
STATE PROJECT NUMBER

1060-33-78



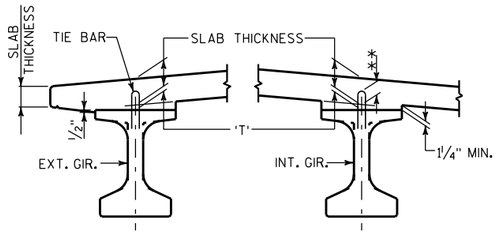
STRAND PATTERN

EXTERIOR GIRDERS
0.6" DIA. STRANDS



STRAND PATTERN

INTERIOR GIRDERS
0.6" DIA. STRANDS



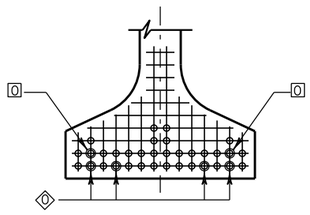
SLAB HAUNCH DETAIL

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'



DEBONDED STRANDS

DEBONDING BOTH ENDS
(EXTERIOR GIRDERS)

◇0◇ DEBOND LENGTH = 4'-0" (4 STRANDS)

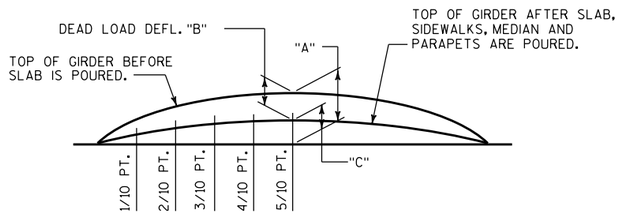
[0] DEBOND LENGTH = 2'-0" (2 STRANDS)

SPAN	PRESTRESS CAMBER (A*) (IN.)	DEAD LOAD DEFLECTION (B) (IN.)	RESIDUAL CAMBER (C) (IN.)
1	4 3/8	2 7/8	1 1/2
2	4 3/8	2 7/8	1 1/2

*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.



DEAD LOAD DEFLECTION DIAGRAM

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

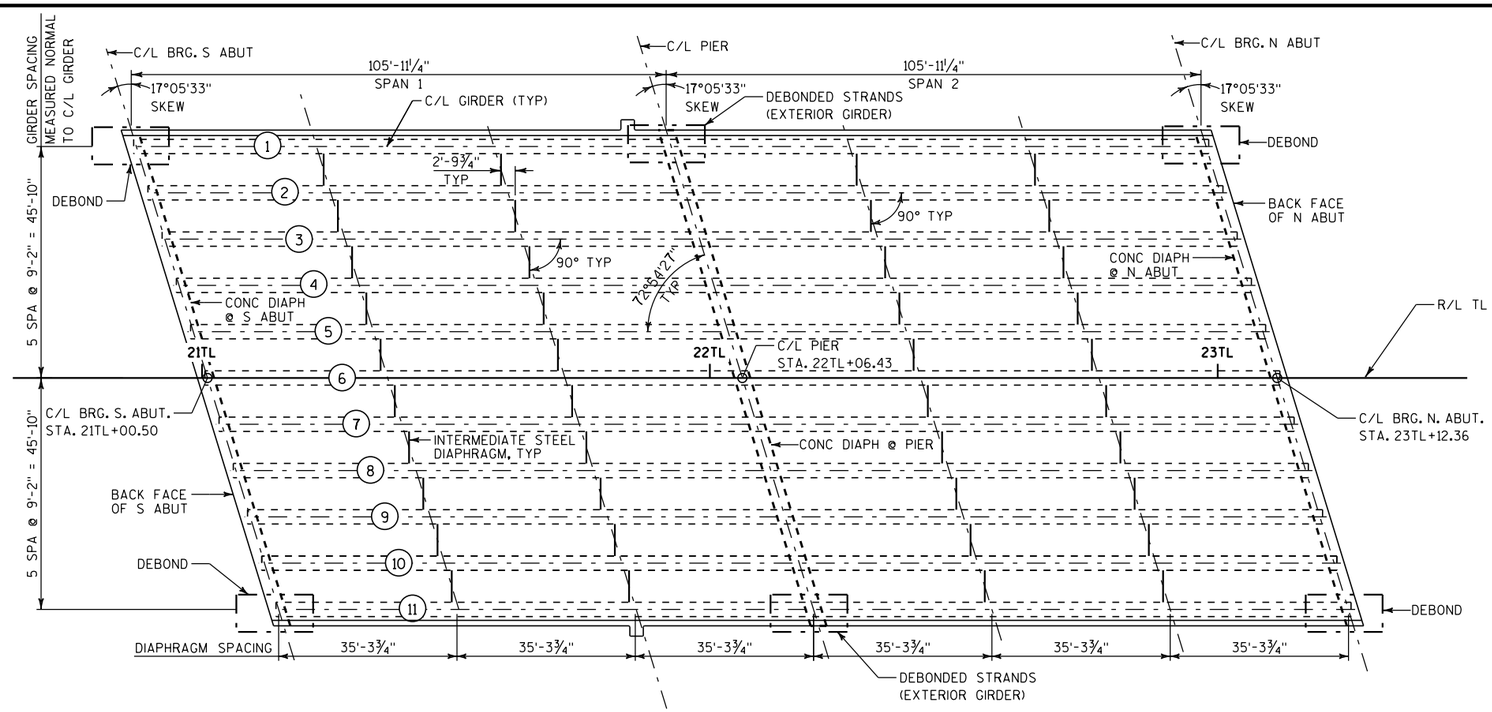
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45W" PRESTRESSED GIRDER DETAILS

SHEET 20 OF 35

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\B-40-785 76th Street\cds\080502_gr.dgn PLOT DATE : 30-APR-2013 13:29 PLOT BY : MSCRXT PLOT NAME : 080502_gr PLOT SCALE : 2:1

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1060-33-78



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	CL 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	727.12	727.64	728.13	728.59	729.00	729.39	729.73	730.05	730.32	730.56	730.76	730.93	731.07	731.16	731.22	731.25	731.24	731.19	731.11	730.99	730.85
C/L GIRDER 1	727.19	727.72	728.20	728.66	729.07	729.45	729.80	730.11	730.38	730.62	730.82	730.99	731.12	731.21	731.27	731.29	731.28	731.23	731.15	731.02	730.88
SIDEWALK TOE WEST	727.36	727.88	728.37	728.81	729.22	729.60	729.94	730.24	730.51	730.75	730.94	731.10	731.23	731.32	731.37	731.39	731.37	731.32	731.23	731.10	730.96
C/L GIRDER 2	727.52	728.03	728.51	728.95	729.36	729.73	730.07	730.37	730.63	730.86	731.05	731.21	731.33	731.41	731.46	731.47	731.45	731.39	731.30	731.17	731.02
C/L GIRDER 3	727.84	728.35	728.82	729.25	729.65	730.01	730.33	730.62	730.88	731.10	731.28	731.43	731.54	731.61	731.65	731.66	731.62	731.56	731.45	731.31	731.17
C/L GIRDER 4	728.16	728.66	729.12	729.54	729.93	730.28	730.60	730.88	731.12	731.33	731.51	731.64	731.74	731.81	731.84	731.83	731.79	731.71	731.60	731.46	731.31
C/L GIRDER 5	728.48	728.97	729.42	729.83	730.21	730.55	730.86	731.13	731.37	731.56	731.73	731.86	731.95	732.00	732.03	732.01	731.96	731.87	731.75	731.60	731.46
C/L GIRDER 6/CROWN	728.80	729.27	729.71	730.12	730.49	730.82	731.12	731.38	731.61	731.80	731.95	732.07	732.15	732.20	732.21	732.18	732.12	732.03	731.89	731.75	731.60
C/L GIRDER 7	728.74	729.21	729.64	730.04	730.40	730.72	731.01	731.26	731.48	731.66	731.80	731.91	731.98	732.02	732.02	731.99	731.92	731.81	731.67	731.53	731.38
LONGITUDINAL CONST JT	728.73	729.19	729.62	730.01	730.37	730.69	730.97	731.22	731.44	731.61	731.75	731.86	731.93	731.96	731.96	731.93	731.85	731.74	731.60	731.46	731.31
C/L GIRDER 8	728.69	729.15	729.57	729.95	730.30	730.62	730.90	731.14	731.34	731.51	731.65	731.75	731.81	731.84	731.83	731.79	731.71	731.59	731.45	731.30	731.16
C/L GIRDER 9	728.63	729.08	729.49	729.87	730.21	730.51	730.78	731.01	731.21	731.37	731.50	731.59	731.64	731.66	731.64	731.59	731.50	731.37	731.23	731.08	730.93
C/L GIRDER 10	728.57	729.01	729.41	729.78	730.11	730.40	730.66	730.89	731.07	731.22	731.34	731.42	731.47	731.47	731.45	731.38	731.29	731.15	731.00	730.86	730.71
SIDEWALK TOE EAST	728.54	728.97	729.37	729.73	730.06	730.35	730.61	730.82	731.01	731.15	731.27	731.34	731.38	731.39	731.35	731.29	731.18	731.05	730.90	730.75	730.61
C/L GIRDER 11	728.51	728.94	729.33	729.69	730.01	730.29	730.54	730.76	730.93	731.08	731.18	731.25	731.29	731.29	731.25	731.18	731.07	730.93	730.78	730.64	730.49
E EDGE OF DECK	728.49	728.92	729.31	729.66	729.98	730.27	730.51	730.72	730.90	731.04	731.14	731.21	731.25	731.24	731.20	731.13	731.02	730.88	730.73	730.58	730.44

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

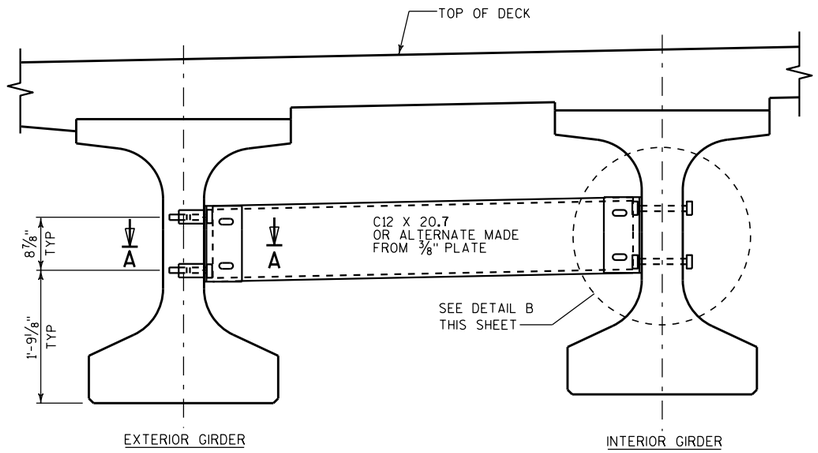
DRAWN BY MM | PLANS CK'D. RT

SUPERSTRUCTURE FRAMING PLAN & DATA

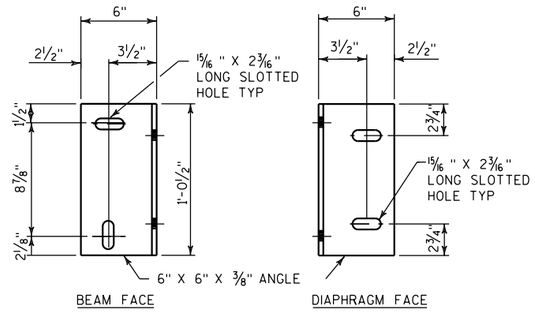
SHEET 21 OF 35

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STATE PROJECT NUMBER
1060-33-78



PART TRANSVERSE SECTION AT DIAPHRAGM



DIAPHRAGM SUPPORT

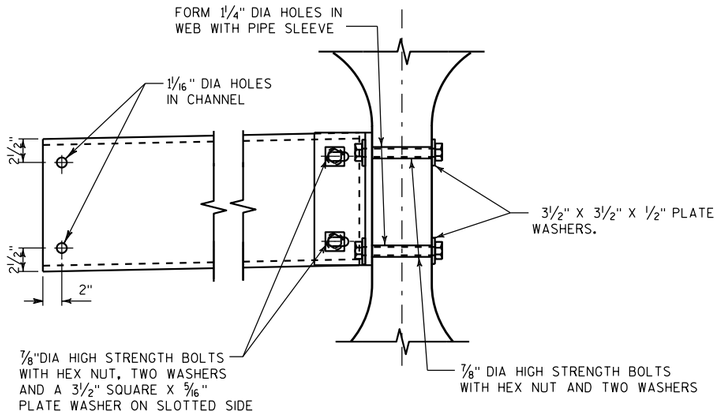
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-785", EACH.

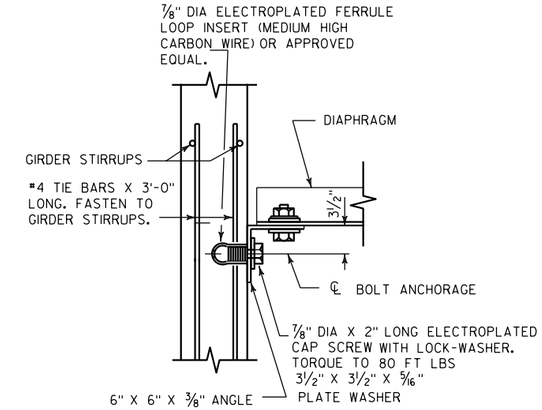
EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

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 A-A

(FOR EXTERIOR ATTACHMENT)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

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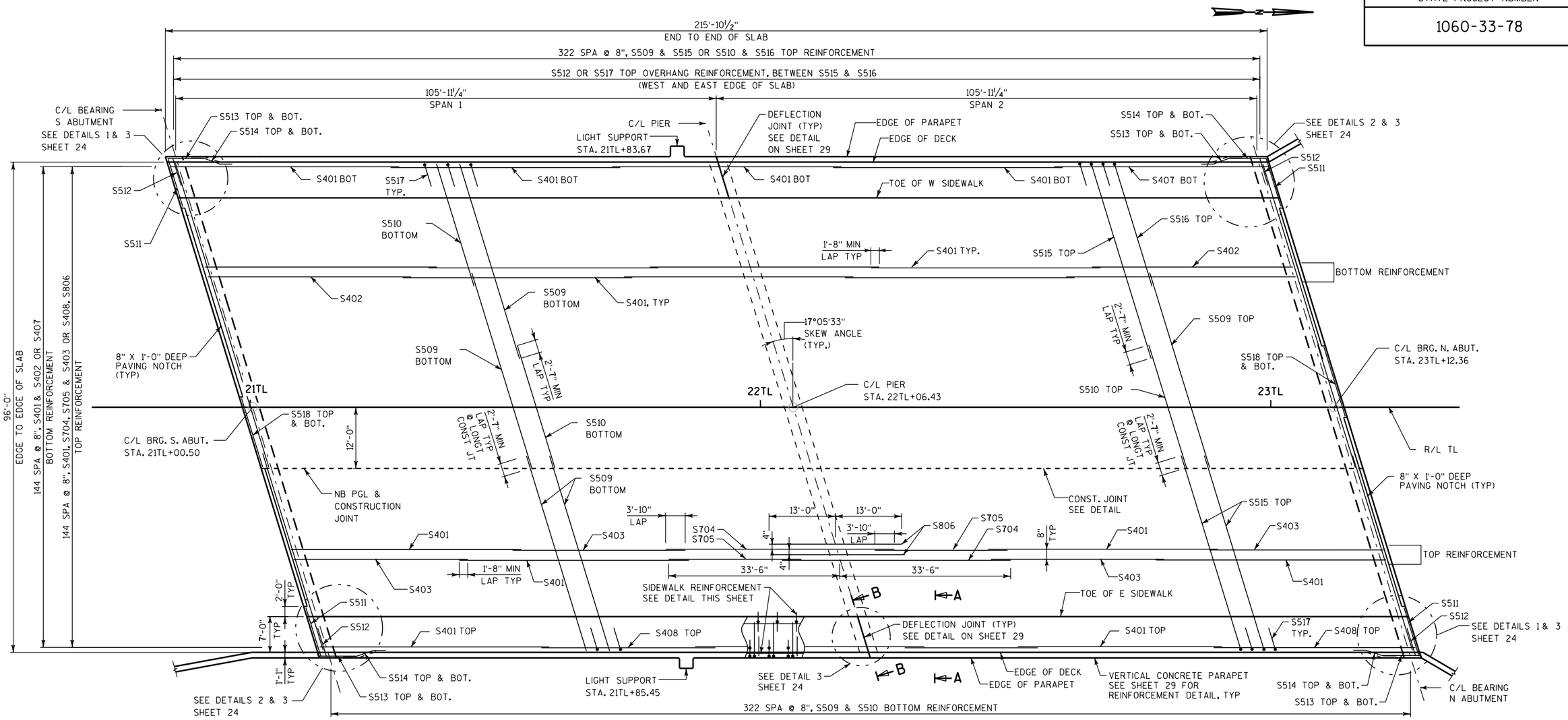
STEEL
DIAPHRAGM

SHEET 22 OF 35

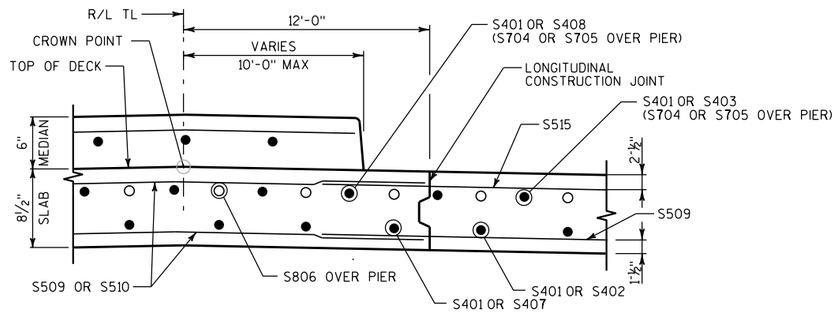
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STATE PROJECT NUMBER
1060-33-78

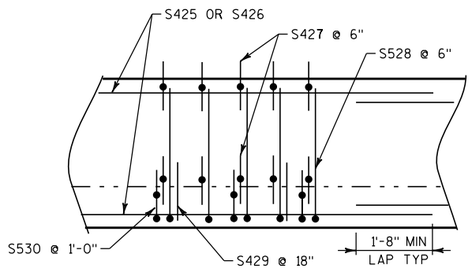


DECK REINFORCEMENT PLAN



LONGITUDINAL CONSTRUCTION JOINT DETAIL

(LOOKING NORTH)



SIDEWALK REINFORCEMENT DETAIL

NOTES

SEE SHEET 29 FOR
SECTIONS A-A AND B-B
SEE SHEET 24 FOR MEDIAN
REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY: MM | PLANS CK'D.: RT

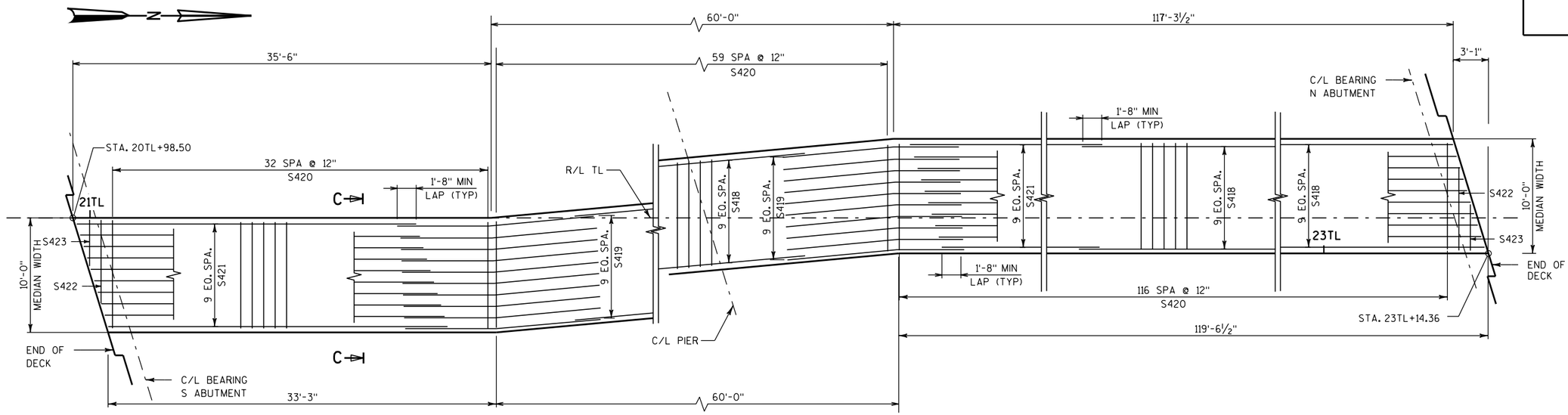
SUPERSTRUCTURE REINFORCEMENT

SHEET 23 OF 35

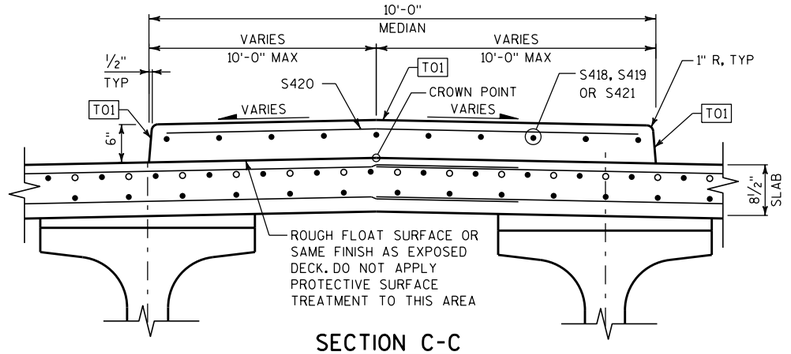
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STATE PROJECT NUMBER
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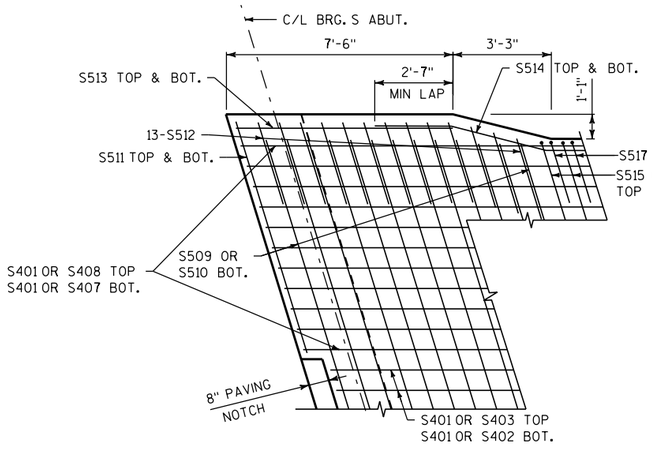


MEDIAN REINFORCEMENT PLAN



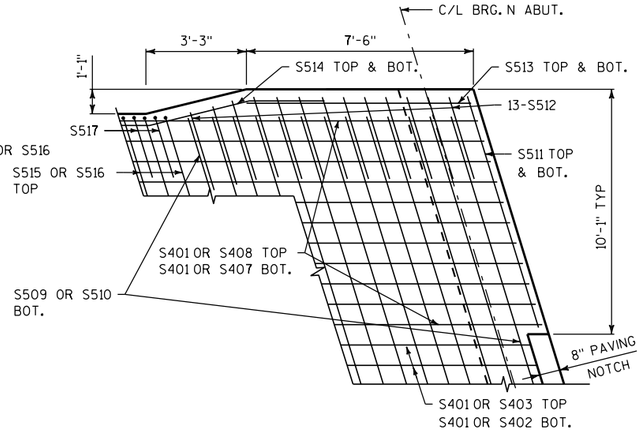
SECTION C-C

(LOOKING NORTH)



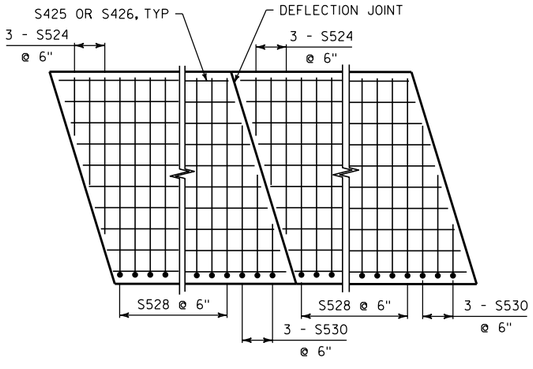
DETAIL 1

(DECK REINFORCEMENT)
(DECK FLARE S-W CORNER SHOWN, N-E CORNER SIMILAR)



DETAIL 2

(DECK REINFORCEMENT)
(DECK FLARE N-W CORNER SHOWN, S-E CORNER SIMILAR)



DETAIL 3

(SIDEWALK REINFORCEMENT)
(EAST SIDEWALK SHOWN, WEST SIDEWALK SIMILAR)
(PARAPET AND SLAB CONNECTION BARS NOT SHOWN FOR CLARITY)

T01 COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

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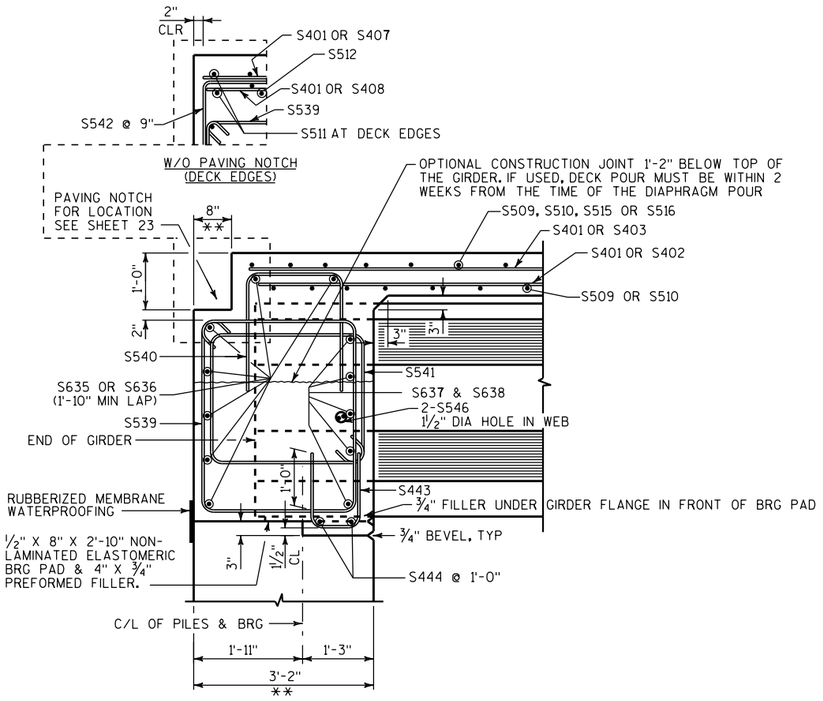
SUPERSTRUCTURE DETAILS - 1

SHEET 24 OF 35

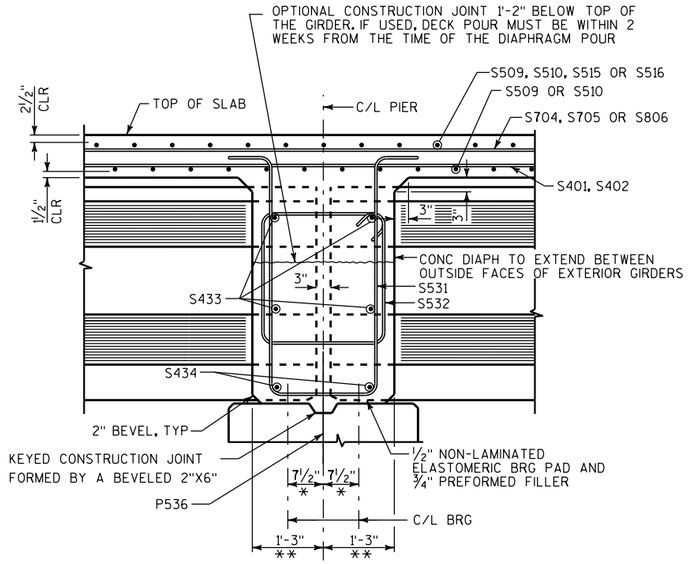
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8

STATE PROJECT NUMBER
1060-33-78



PARTIAL LONGITUDINAL SECTION AT ABUTMENT



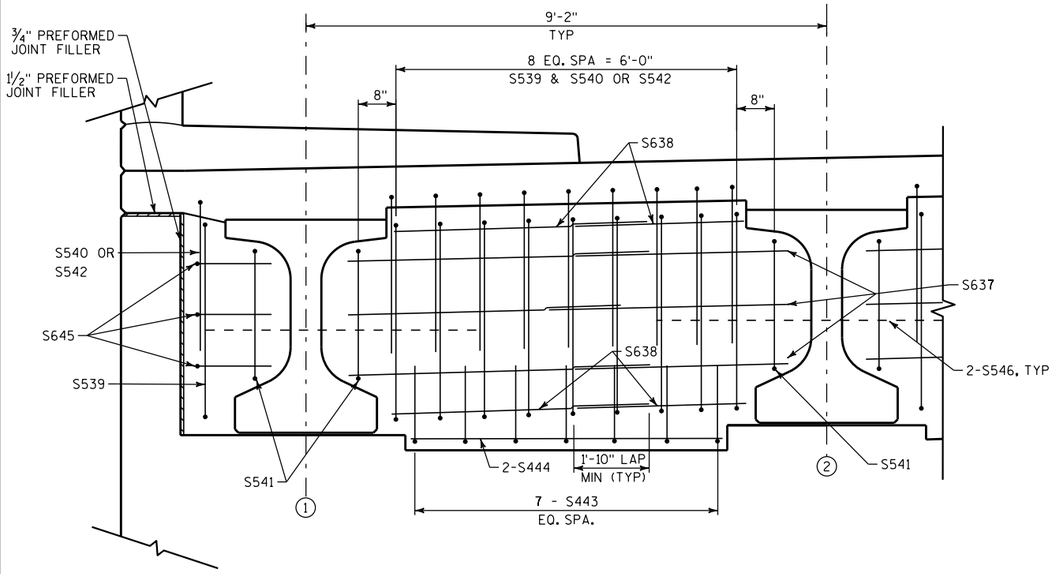
PARTIAL LONGITUDINAL SECTION AT PIER

(LOOKING WEST)

NOTES:

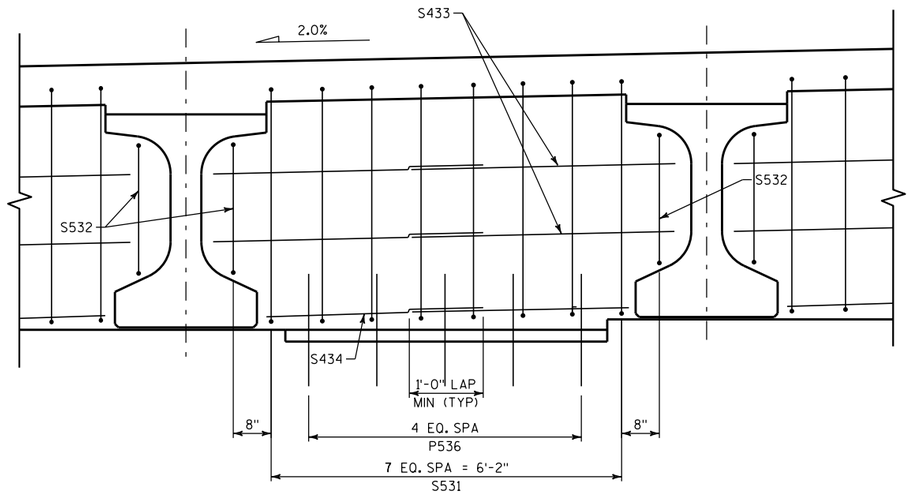
* DIMENSION IS TAKEN PARALLEL TO C/L GIRDERS

** DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNIT



CONCRETE DIAPHRAGM AT ABUTMENT

TYPICAL
(BACK FACE HORIZONTAL BARS S635 AND S636 NOT SHOWN FOR CLARITY)



CONCRETE DIAPHRAGM AT PIER

TYPICAL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. RT

SUPERSTRUCTURE DETAILS - 2

SHEET 25 OF 35

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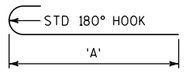
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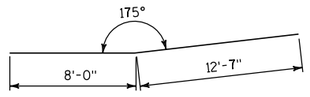
BILL OF BARS

	BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
SLAB LONGITUDINAL	S401	X	870	45'- 0"			SLAB TOP AND BOTTOM
	S402	X	94	40'- 10"			SLAB BOTTOM
	S403	X	188	34'- 1"			SLAB TOP
	S704	X	145	44'- 10"			CONTINUITY REINFORCEMENT
	S705	X	145	26'- 0"			CONTINUITY REINFORCEMENT
	S806	X	144	26'- 0"			CONTINUITY REINFORCEMENT
	S407	X	51	42'- 2"			SLAB BOT OUTSIDE OF PAVING NOTCH
	S408	X	102	34'- 9"			SLAB TOP OUTSIDE OF PAVING NOTCH
SLAB TRANSVERSE	S509	X	808	40'- 0"			SLAB TOP AND BOTTOM
	S510	X	484	25'- 6"			SLAB TOP AND BOTTOM
	S511	X	8	10'- 2"			SLAB TOP AND BOTTOM OUTSIDE OF PAVING NOTCH
	S512	X	52	4'- 8"			OVERHANG BAR IN DECK CORNERS
	S513	X	8	7'- 3"			DECK FLARE BAR
	S514	X	8	8'- 8"	X		DECK FLARE BAR
	S515	X	484	40'- 7"	X		SLAB HOOKED BAR TOP
	S516	X	162	25'- 8"	X		SLAB HOOKED BAR TOP
	S517	X	594	4'- 2"	X		OVERHANG HOOKED BAR IN DECK
	S518	X	4	14'- 4"			SLAB TOP & BOTTOM B/W PAVING NOTCH
MEDIAN	S418	X	30	45'- 0"			MEDIAN LONGITUDINAL
	S419	X	20	17'- 7"	X		MEDIAN LONGITUDINAL
	S420	X	210	9'- 8"			MEDIAN TRANSVERSE
	S421	X	20	28'- 11"			MEDIAN LONGITUDINAL
	S422	X	2	7'- 3"			MEDIAN TRANSVERSE S. & N. EDGE
	S423	X	2	4'- 0"			MEDIAN TRANSVERSE S. & N. EDGE
SIDEWALK	S524	X	12	3'- 6"		⚠	SIDEWALK TRANSVERSE IN CORNERS
	S426	X	104	45'- 0"			SIDEWALK LONGITUDINAL
	S427	X	52	20'- 10"			SIDEWALK LONGITUDINAL
	S428	X	1728	2'- 8"	X		SLAB CONNECTION
	S529	X	841	8'- 4"	X		SIDEWALK TRANSVERSE
	S430	X	290	2'- 0"			SIDEWALK OVERHANG
	S531	X	12	4'- 1"	X	⚠	SIDEWALK TRANSVERSE IN CORNERS
CONCRETE DIAPHRAGM	S532	X	80	11'- 5"	X		VERTICAL- PIER DIAPHRAGM
	S533	X	20	9'- 11"	X		STIRRUP - PIER DIAPHRAGM
	S434	X	40	4'- 7"			HORZ- BODY- PIER DIAPHRAGM
	S435	X	20	3' 11"			HORZ BOTTOM PIER DIAPHRAGM
	S636	X	14	60'- 0"			BACK FACE-ABUT DIAPHRAGM HORZ
	S637	X	14	44'- 3"			BACK FACE-ABUT DIAPHRAGM HORZ
	S638	X	120	5'- 0"			FRONT FACE-ABUT DIAPHRAGM HORZ
	S639	X	80	4'- 4"			FRONT FACE (TOP &BOT)-ABUT DIAPHRAGM HORZ
	S540	X	184	13'- 3"	X		ABUTMENT DIAPHRAGM STIRRUP
	S541	X	144	7'- 5"	X		ABUTMENT DIAPHRAGM TIE
	S542	X	44	12'- 5"	X		ABUTMENT DIAPHRAGM STIRRUP
	S543	X	40	8'- 6"	X		ABUTMENT DIAPHRAGM TIE (NO NOTCH)
	S444	X	140	3'- 4"	X		ABUTMENT DIAPHRAGM TIE FRONT FACE
	S445	X	40	5'- 4"			ABUTMENT DIAPHRAGM TIE FRONT FACE- DIAP
	S646	X	12	5'- 5"	X		ABUTMENT DIAPHRAGM AT END
	S547	X	44	6'- 0"			DIAPHRAGM THROUGH GIRDERS

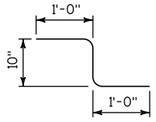
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTH



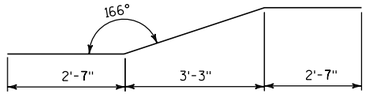
BAR MARK	DIM 'A'
S515	40'-0"
S516	25'-6"
S517	3'-7"
S528	7'-9"
S530	1'-10" TO 5'-2"



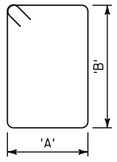
S419



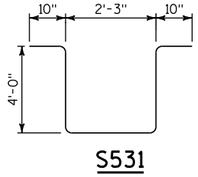
S427



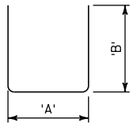
S514



BAR MARK	DIM 'A'	DIM 'B'
S532	2'-3"	2'-5"
S539	3'-0"	3'-4"
S541	3'-0"	2'-11"



S531



BAR MARK	DIM. 'A'	DIM. 'B'
S540	2'-2"	2'-9"
S542	3'-0"	2'-9"
S443	0'-10"	1'-4"
S645	3'-0"	1'-3"

BAR SERIES TABLE ⚠

BAR MARK	NO. REQ'D	LENGTH
S524	2 SERIES OF 3	1'-10" TO 5'-2"
S531	2 SERIES OF 3	2'-5" TO 5'-9"

BUNDLE AND TAG EACH SERIES SEPARATELY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. RT

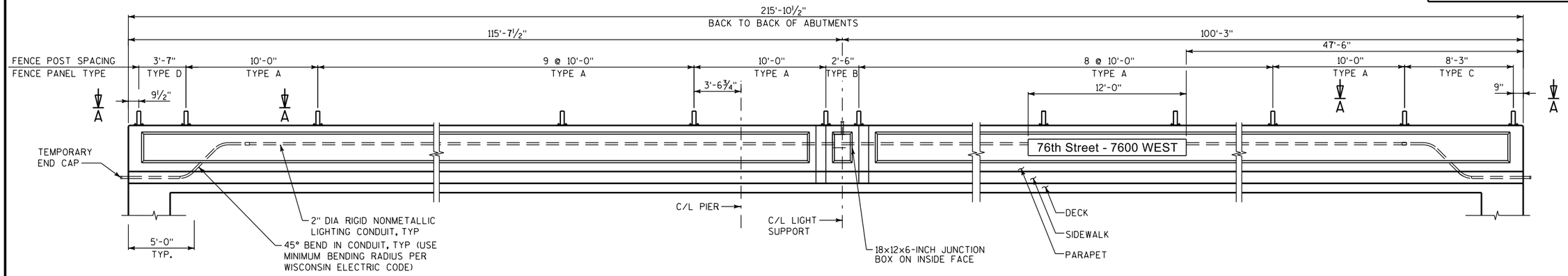
SUPERSTRUCTURE DETAILS - 3

SHEET 26 OF 35

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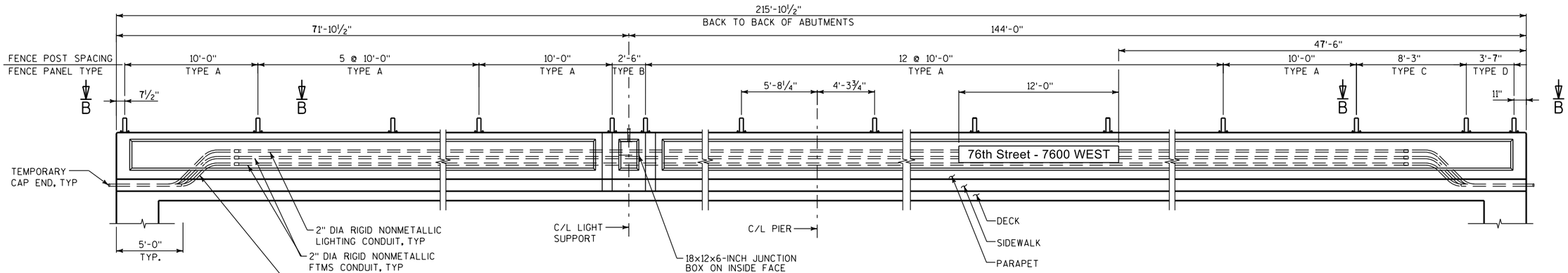
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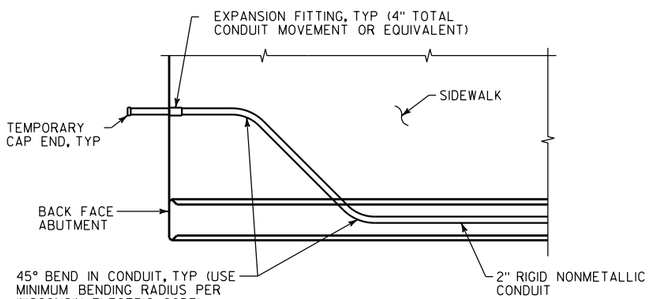
OUTSIDE ELEVATION OF WEST PARAPET

(LOOKING EAST)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)



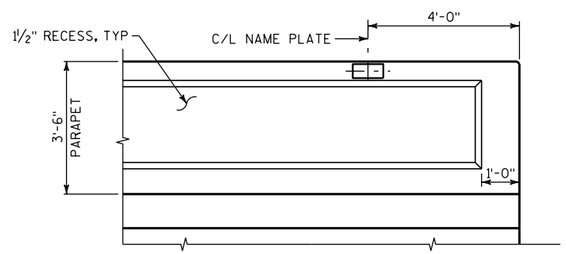
OUTSIDE ELEVATION OF EAST PARAPET

(LOOKING WEST)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)



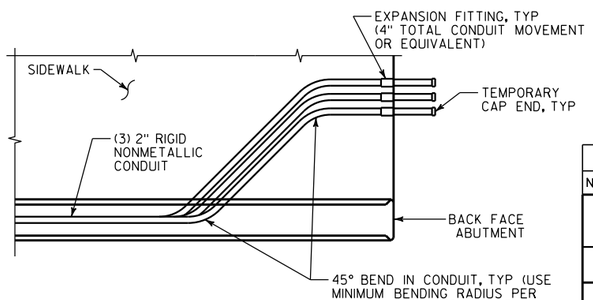
SECTION A-A

(NORTH END SHOWN,
SOUTH END SIMILAR BUT OPPOSITE HAND)



INSIDE ELEVATION OF EAST PARAPET

(SOUTH END, LOOKING EAST)
(DIMENSIONS GIVEN AT INSIDE FACE OF PARAPET)



SECTION B-B

(NORTH END SHOWN,
SOUTH END SIMILAR BUT OPPOSITE HAND)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY	PLANS CK'D.
MM	MHZ

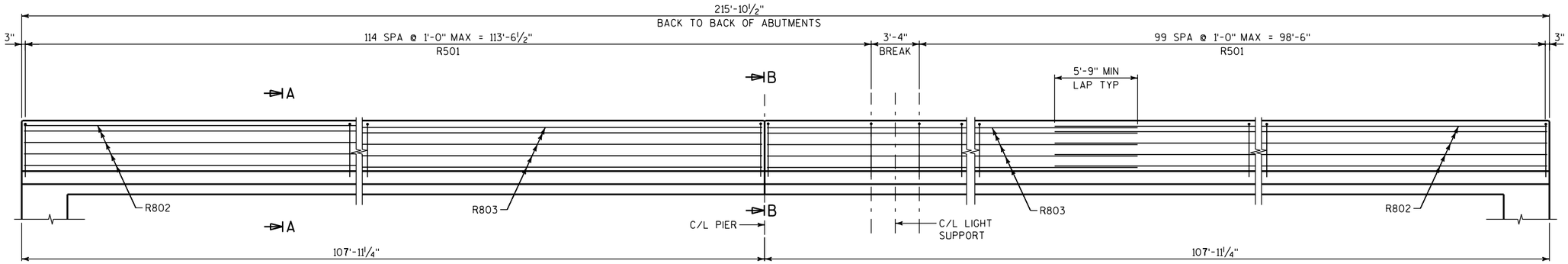
VERTICAL FACE PARAPET - 1

SHEET 27 OF 35

8

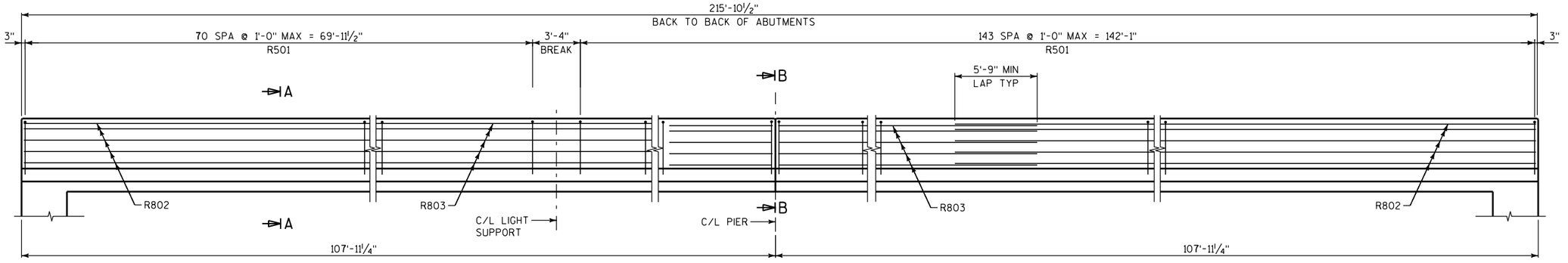
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STATE PROJECT NUMBER
1060-33-78



OUTSIDE ELEVATION OF WEST PARAPET

(LOOKING EAST)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)



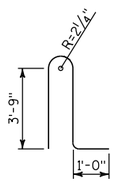
OUTSIDE ELEVATION OF EAST PARAPET

(LOOKING WEST)
(DIMENSIONS GIVEN AT OUTSIDE FACE OF PARAPET)

BILL OF BARS

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	430	9'-0"	X		SIDEWALK CONNECTION
R802	X	36	60'-0"	-		PARAPET LONGITUDINAL
R803	X	36	53'-3"	-		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



R501

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

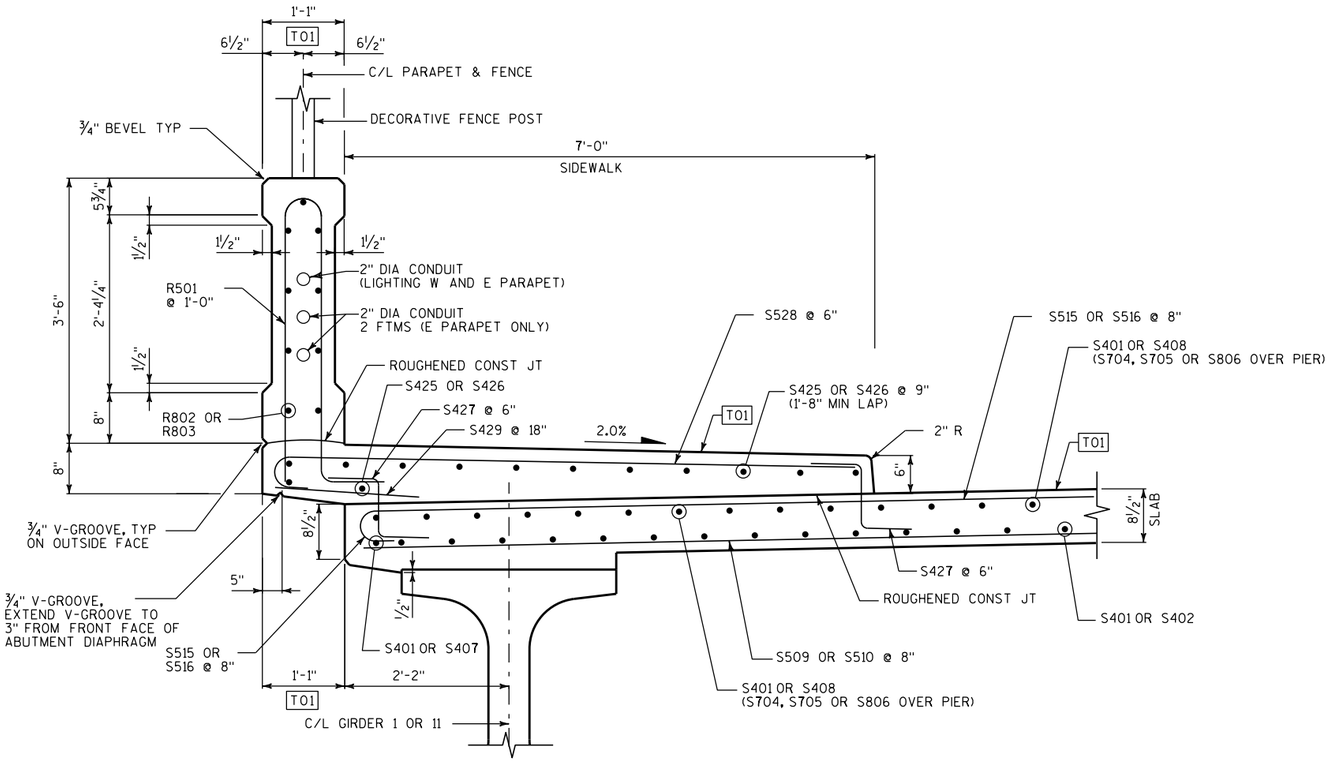
DRAWN BY MM | PLANS CK'D. MHZ

VERTICAL FACE PARAPET - 2

SHEET 28 OF 35

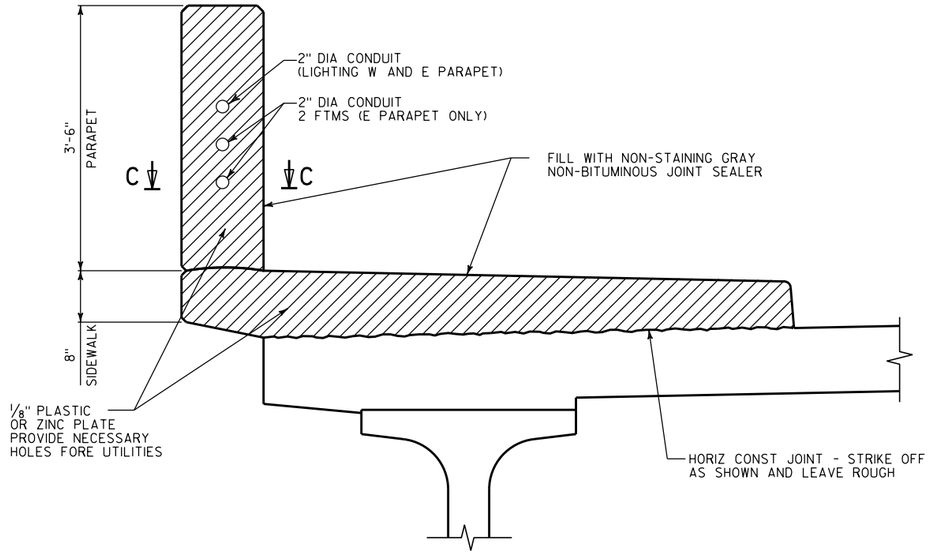
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STATE PROJECT NUMBER
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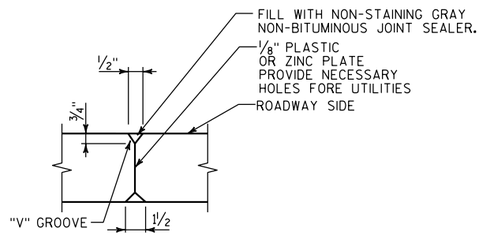
SECTION A-A (PARAPET & SIDEWALK DETAIL)

(EAST PARAPET SHOWN,
WEST PARAPET SIMILAR BUT OPPOSITE)



SECTION B-B

THRU DEFLECTION JOINT
(SEE SHEET 23 FOR LOCATIONS)



SECTION C-C

T01 COAT WITH "PROTECTIVE SURFACE TREATMENT"
AS PER THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. RT

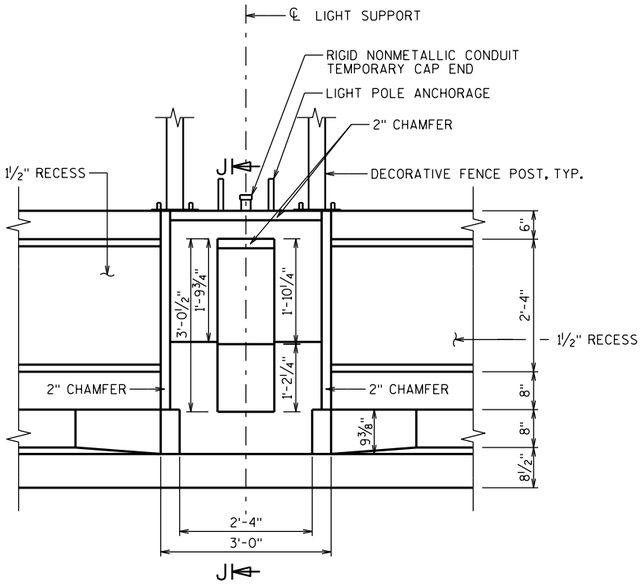
VERTICAL FACE
PARAPET - 3

SHEET 29 OF 35

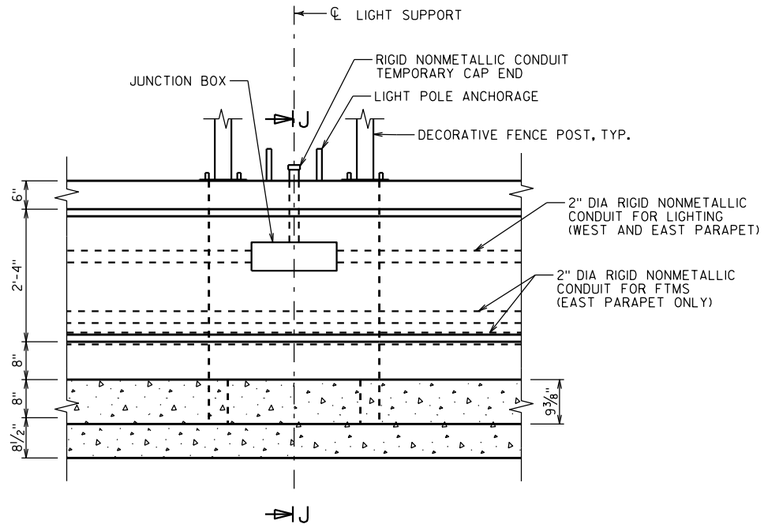
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STATE PROJECT NUMBER

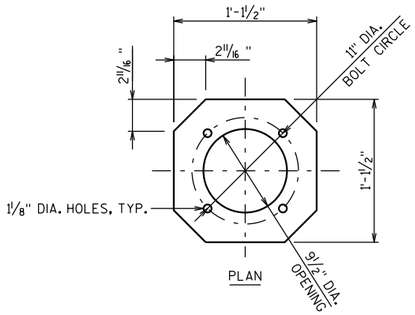
1060-33-78

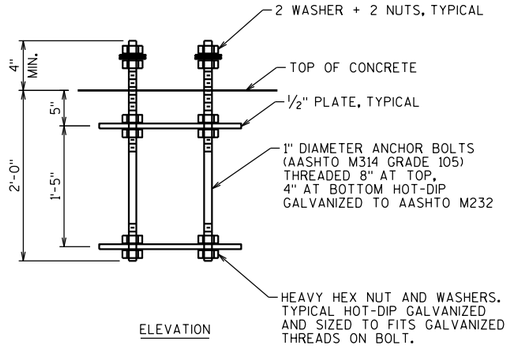


OUTSIDE ELEVATION AT LIGHT SUPPORT

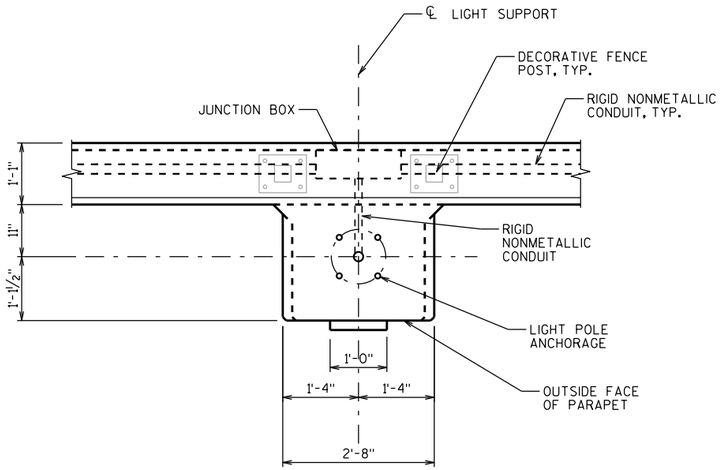


INSIDE ELEVATION AT LIGHT SUPPORT

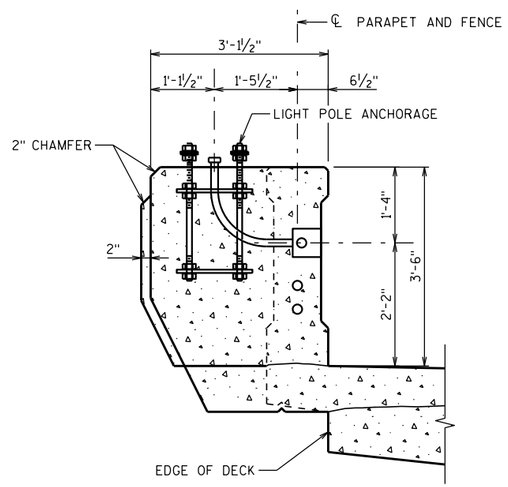




ANCHOR ASSEMBLY LIGHT POLE STRUCTURES



PLAN AT LIGHT SUPPORT



SECTION J-J

NOTES

SEE SHEETS VERTICAL FACE PARAPET (1 OF 2) AND VERTICAL FACE PARAPET (2 OF 2) FOR CONDUIT AND JUNCTION BOX TYPES AND SIZES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. RT

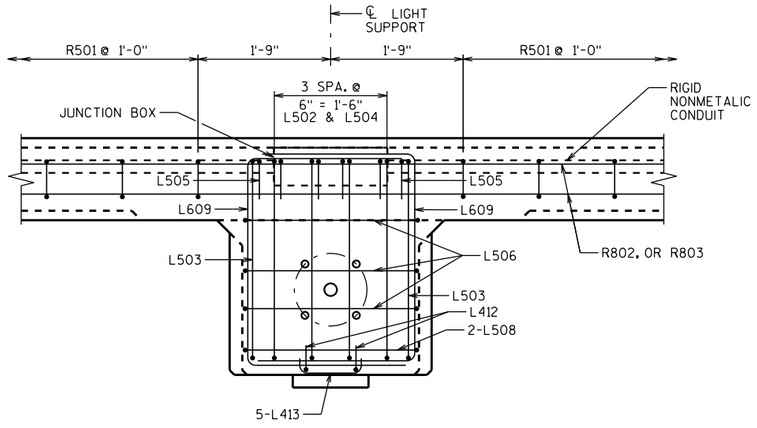
LIGHT SUPPORT DETAILS

SHEET 30 OF 35

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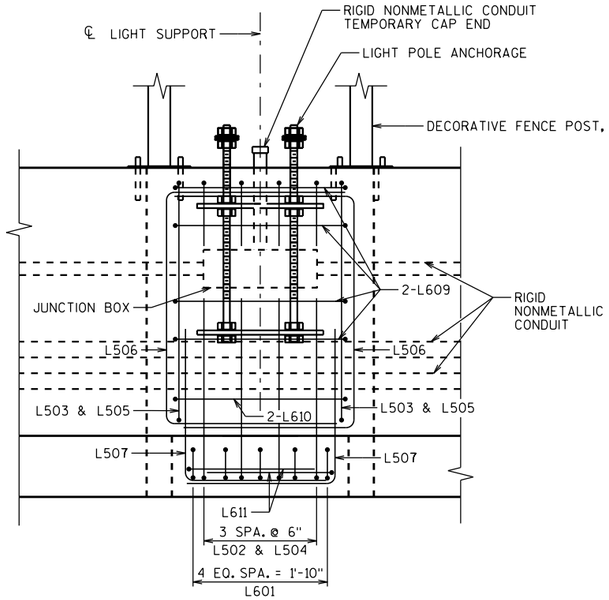
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STATE PROJECT NUMBER
1060-33-78



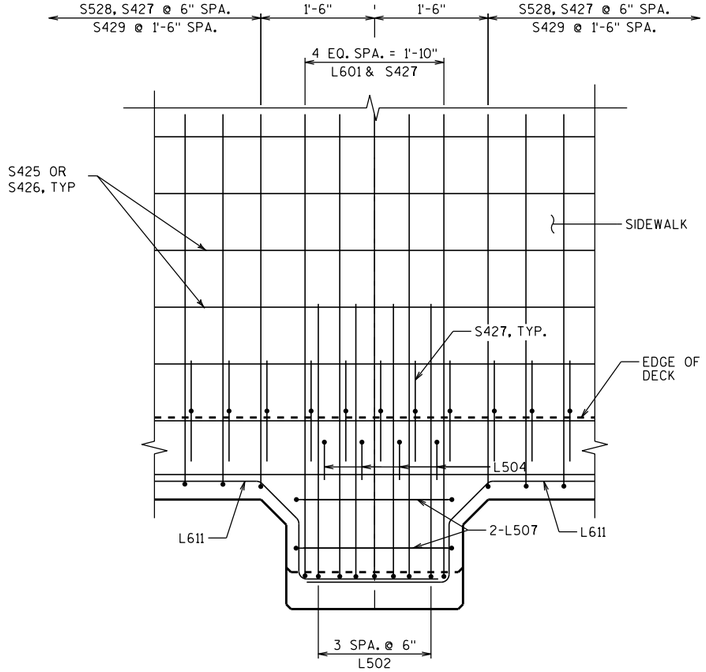
REINFORCEMENT IN LIGHT SUPPORT

SECTIONAL PLAN

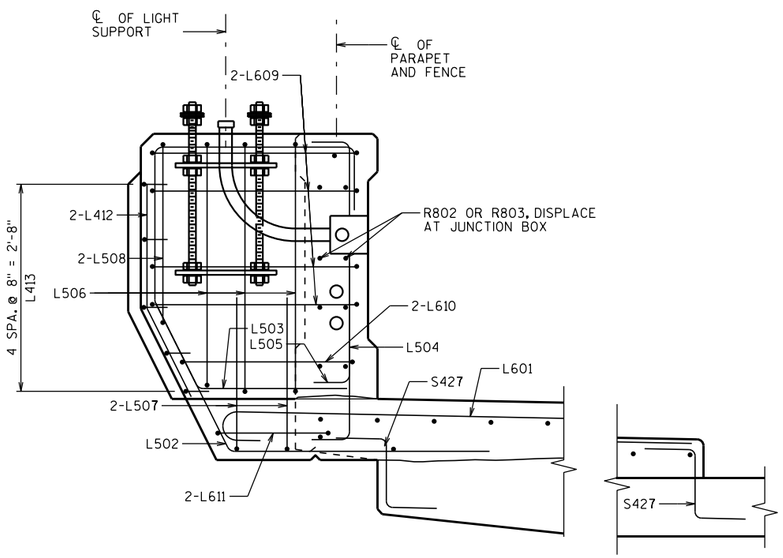


REINFORCEMENT IN LIGHT SUPPORT

INSIDE ELEVATION



REINFORCEMENT IN SIDEWALK AT LIGHT SUPPORT



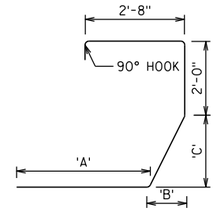
REINFORCEMENT IN SIDEWALK AND LIGHT SUPPORT

CROSS SECTION AT LIGHT SUPPORT

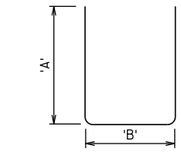
BILL OF BARS

NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE

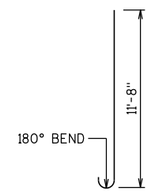
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
L601	X	10	12'- 5"	X		SIDEWALK HOOK
L502	X	8	10'- 7"	X		VERTICAL - INSIDE
L503	X	4	7'- 11"	X		VERTICAL - OUTSIDE
L504	X	8	4'- 8"	X		VERTICAL - OUTSIDE
L505	X	4	3'- 10"	X		VERTICAL - BRIDGE-SIDE
L506	X	12	7'- 5"	X		VERTICAL - BODY
L507	X	8	5'- 8"	X		VERTICAL - LOWER BODY
L508	X	4	6'- 6"	X		VERTICAL - OUTSIDE
L609	X	16	6'- 10"	X		HORIZONTAL - TOP
L610	X	4	6'- 5"	X		HORIZONTAL - BODY
L611	X	4	4'- 7"	X		HORIZONTAL - BOTTOM
L412	X	4	3'- 0"	X		OUTSIDE FACE
L413	X	10	1'- 1"	X		OUTSIDE FACE



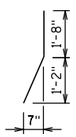
BAR MARK	DIM 'A'	DIM 'B'	DIM 'C'
L502	3'- 6"	1'- 0"	2'- 0"
L503	2'- 0"	0'- 6"	1'- 0"



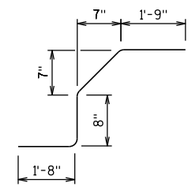
BAR MARK	DIM 'A'	DIM 'B'
L504	0'- 6"	3'- 11"
L505	0'- 6"	3'- 1"
L506	2'- 3"	3'- 2"
L507	2'- 0"	1'- 11"
L508	2'- 3"	2'- 3"
L609	2'- 3"	2'- 7"
L610	2'- 3"	2'- 3"
L413	0'- 4"	0'- 7"



L601



L412



L611

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

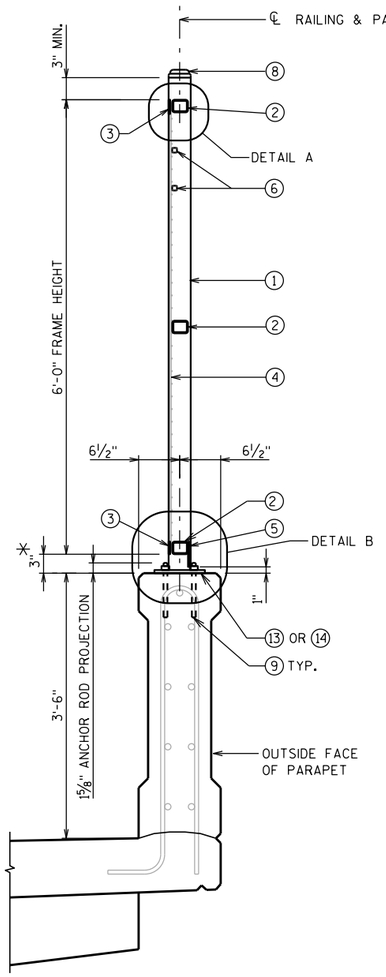
DRAWN BY	MM	PLANS CK'D.	RT

LIGHT SUPPORT REINFORCEMENT

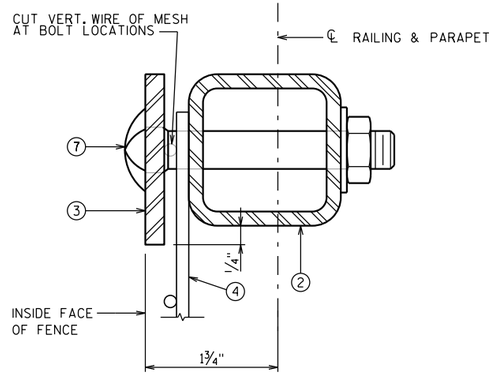
SHEET 31 OF 35

8

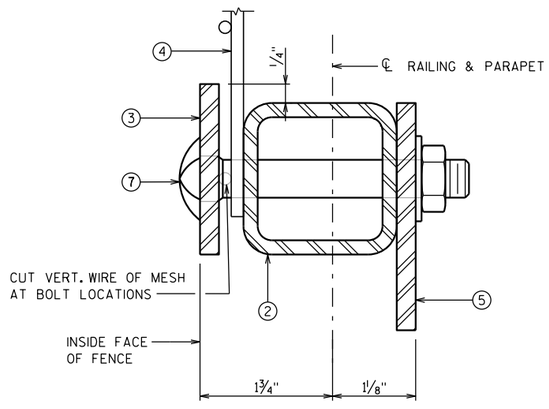
8



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. WELD TO NO. 4. 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. WELD TO NO. 3.
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 WITH A MINIMUM PULLOUT OF 20 KIPS.
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 2½" 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.
16. ¼" DECORATIVE SILHOUETTE INSET PLATE AT SPECIAL 10'-0" PANEL. BOLT TO NO. 2 WITH NO. 7. ELECTRONIC COPIES OF THE CUTTING PATTERN ARE AVAILABLE BY CONTACTING: MR. BILL MOHR, WIS. D.O.T., 141 NW BARSTOW ST., WAUKESHA, WI 53187 PHONE: (262) 548-5666 EMAIL: BILL.MOHR@DOT.STATE.WI.US

✳ 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 3" 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 ELEVATION VIEW OF FENCE PANELS, SEE SHEET 33.

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.

THE STEEL MESH SHALL BE TACK WELDED TO THE 2¾" X ¼" WELDED FRAME. THE MESH SHALL BE STRETCHED TO REMOVE SLACK.

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.

ALL WELDS SHALL BE PREQUALIFIED ACCORDING TO THE STRUCTURAL WELDING CODE STEEL (AWS D1.1). THE MINIMUM SIZE OF FILLET WELDS IS 3/16".

COAT THE RAILING WITH AN EPOXY PAINT SYSTEM. TOUCH UP DAMAGED PORTIONS OF PAINT AFTER PANEL ERECTION. SEE SPECIAL PROVISIONS FOR REQUIREMENTS.

STATE PROJECT NUMBER
1060-33-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. RT

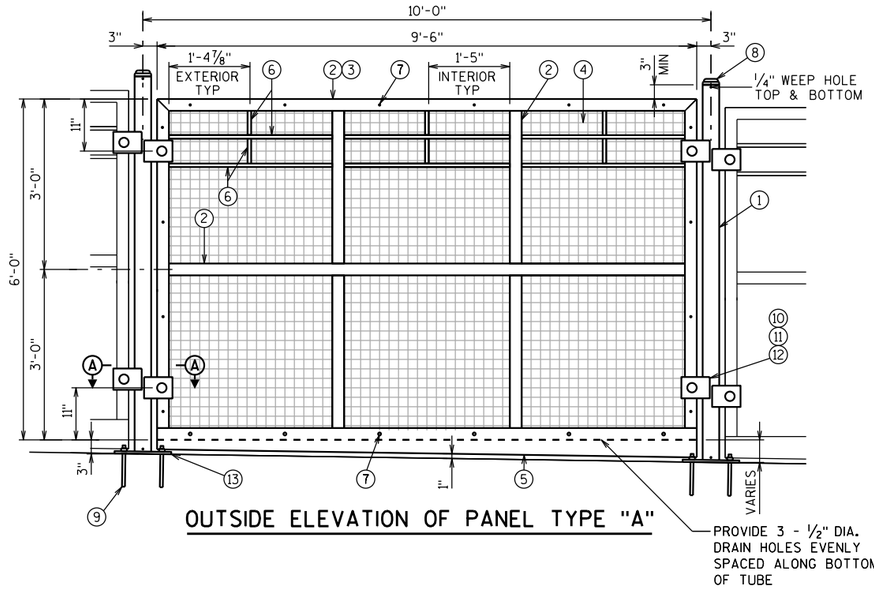
FENCE DECORATIVE BRIDGE - 1

SHEET 32 OF 35

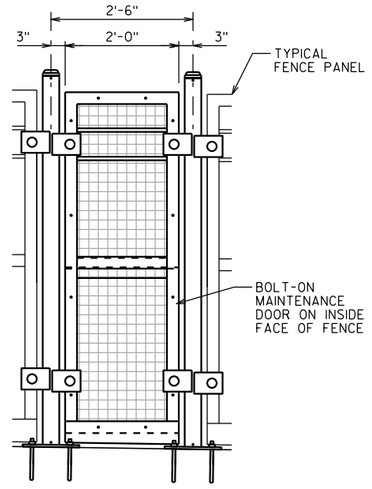
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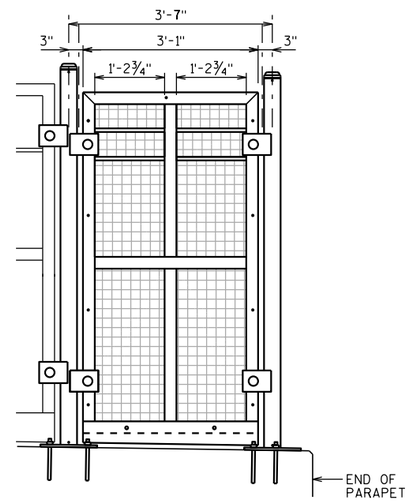
STATE PROJECT NUMBER
1060-33-78



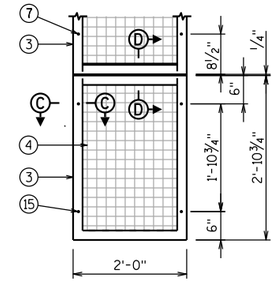
OUTSIDE ELEVATION OF PANEL TYPE "A"



OUTSIDE ELEVATION OF PANEL TYPE "B"

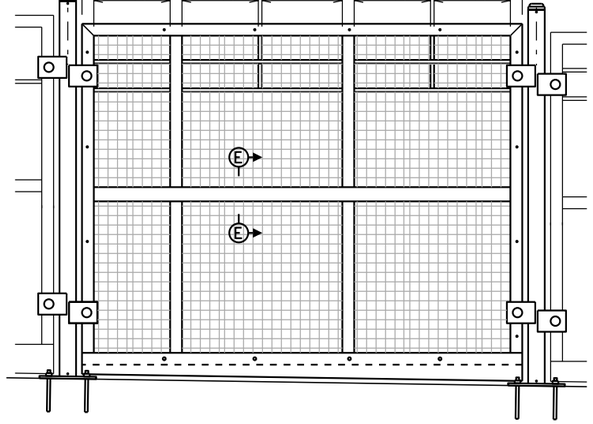


OUTSIDE ELEVATION OF PANEL TYPE "D"

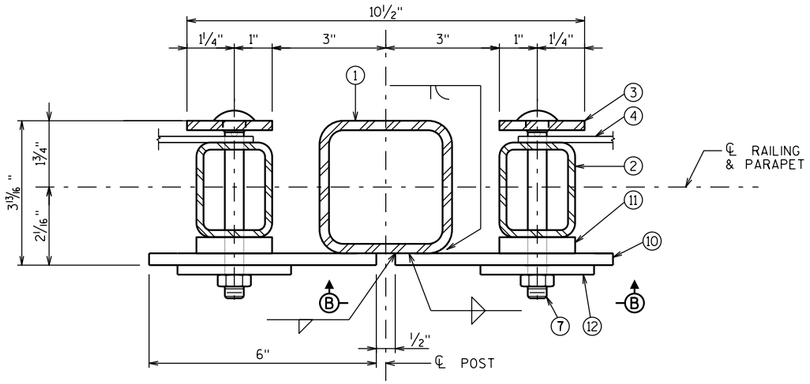


MAINTENANCE DOOR DETAIL

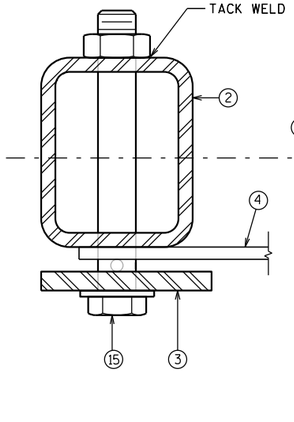
INSIDE ELEVATION



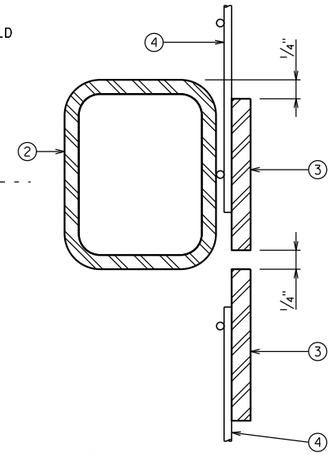
OUTSIDE ELEVATION OF PANEL TYPE "C"



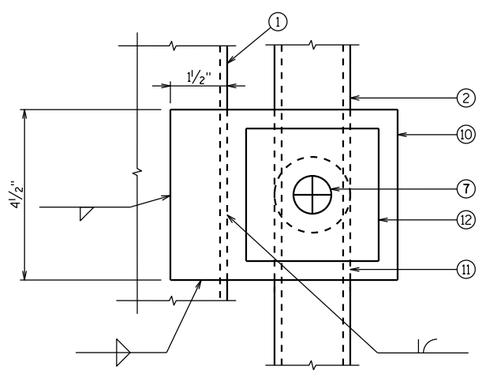
SECTION A-A



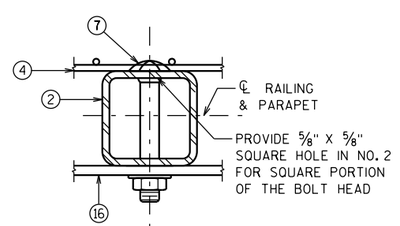
SECTION C-C



SECTION D-D



ELEVATION B-B



SECTION E-E

NOTES

FOR NOTES AND LEGEND, SEE SHEET 32.

TYPICAL MEMBER SIZES, WELDING AND BOLTING DETAILS, AND MATERIALS ARE SHOWN IN 'DECORATIVE FENCE BRIDGE PANEL' ON SHEET 32.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY	MM	PLANS CK'D.	RT

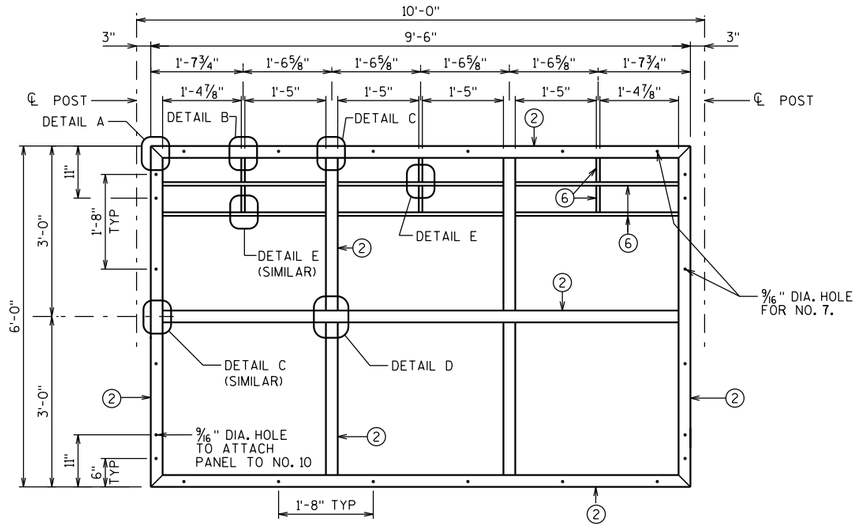
FENCE DECORATIVE BRIDGE - 2

SHEET 33 OF 35

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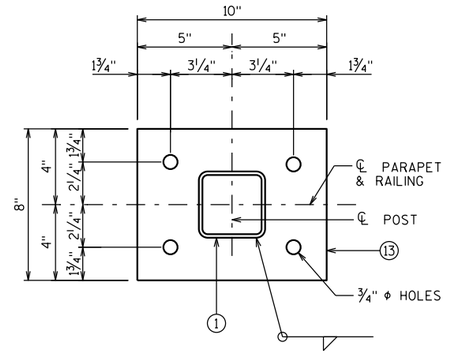
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STATE PROJECT NUMBER
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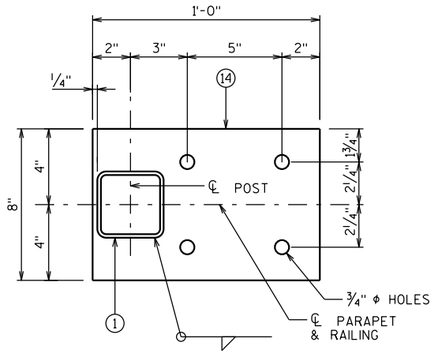


FENCE DECORATIVE BRIDGE PANEL

TYPICAL 10' PANEL SHOWN



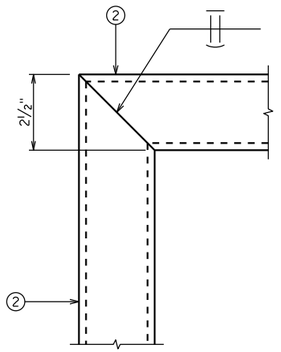
BASE PLATE



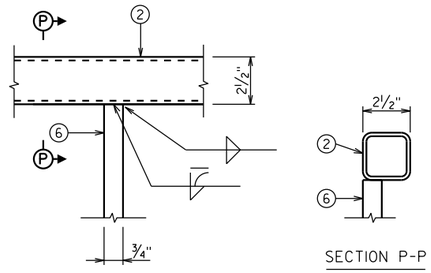
END BASE PLATE

(INSTALL AT END SECTIONS AND DEFLECTION JOINT LOCATION)

BASE PLATE DETAILS

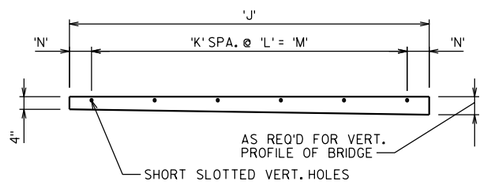


DETAIL A



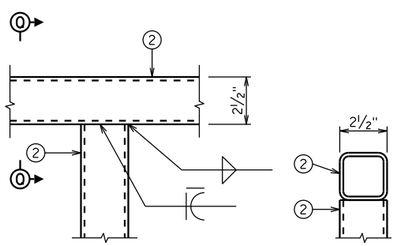
DETAIL B

SECTION P-P



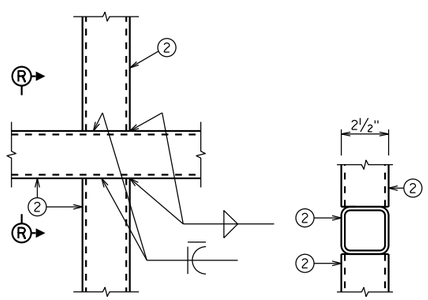
¼" PLATE (NO. 5)

PANEL TYPE	DIM 'J'	NO. 'K'	SPA 'L'	DIM 'M'	DIM 'N'
A	9'-6"	5	1'-8"	8'-4"	7"
B	2'-0"	1	10"	10"	7"
C	5'-5"	3	1'-5"	4'-3"	7"



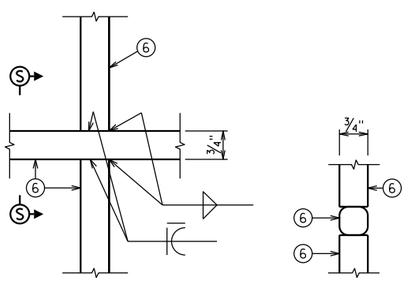
SECTION Q-Q

DETAIL C



SECTION R-R

DETAIL D



SECTION S-S

DETAIL E

NOTES

FOR NOTES AND LEGEND, SEE SHEET 32.

DETAILS SHOWN ARE TYPICAL FOR ALL FENCE PANELS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. RT

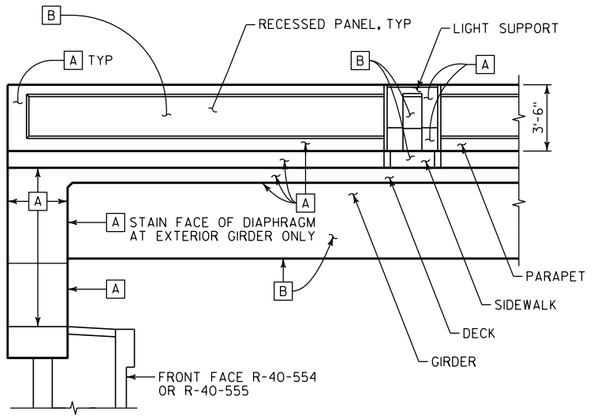
FENCE DECORATIVE BRIDGE - 3

SHEET 34 OF 35

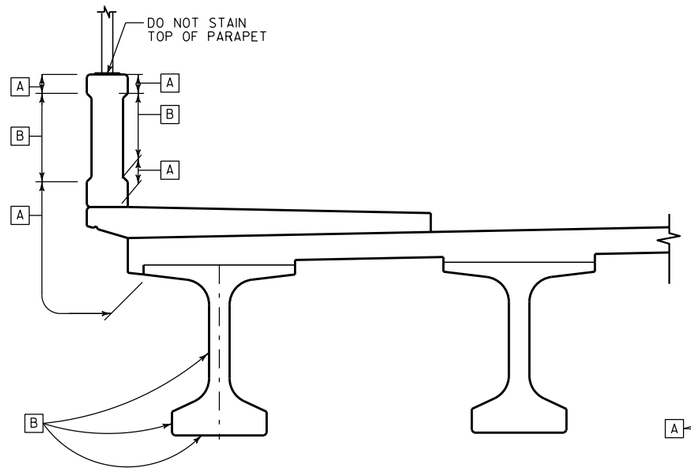
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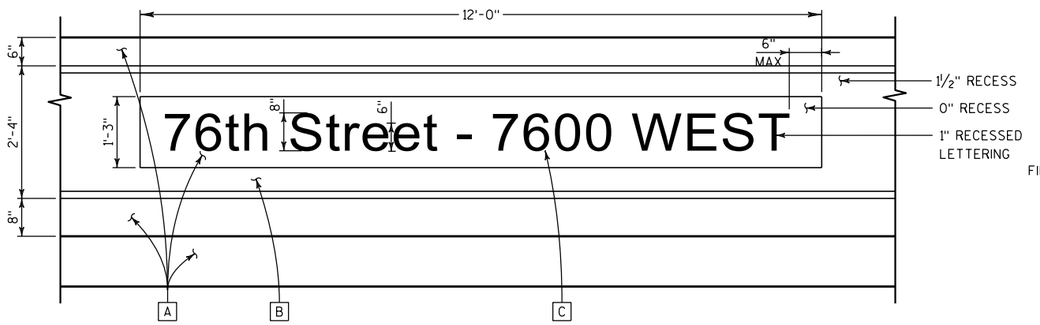
STATE PROJECT NUMBER
1060-33-78



OUTSIDE ELEVATION OF PARAPET

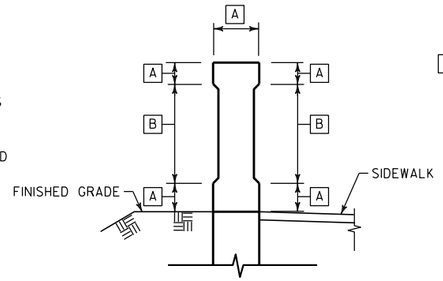


ELEVATION OF DECK



INDENTED TEXT

EXTERIOR FACE OF PARAPET ONLY



WINGWALL PARAPET

NOTES:

LETTERING SHALL BE HELVETICA, 8" UPPER CASE AND 6" LOWER CASE.

SEE SHT 27 FOR LOCATIONS.

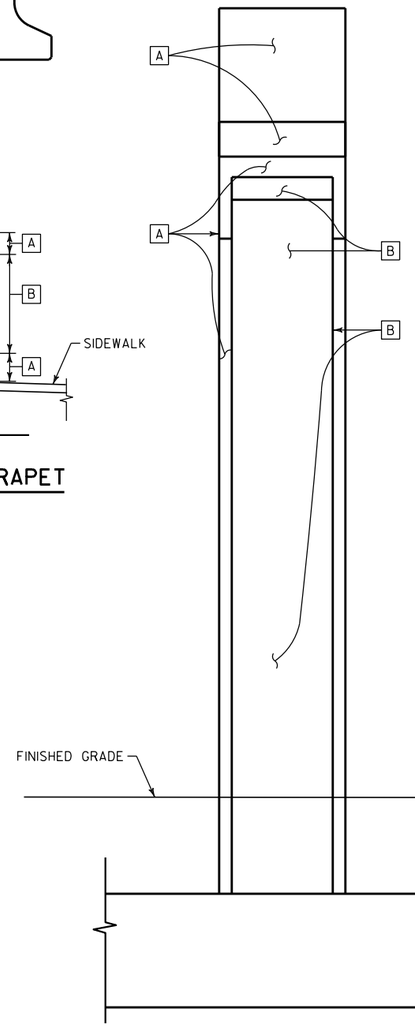
CONCRETE STAINING SCHEDULE

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 TOP OF CONCRETE SLOPE PAVING
		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
C	ACCENT COLOR #2	PARAPETS	LETTERING AT ROADWAY NAME

THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE COLORS LISTED BELOW:

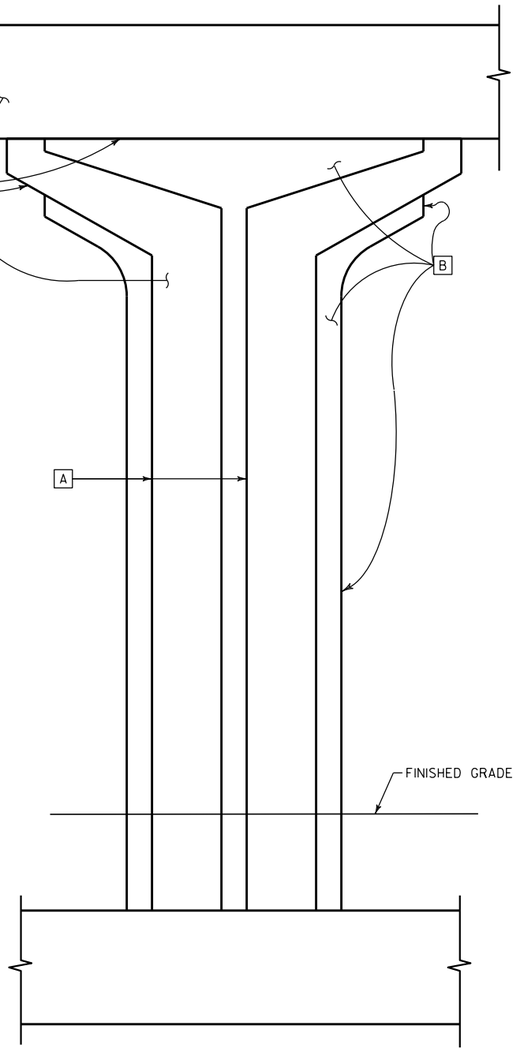
BASE COLOR : FEDERAL COLOR - 33564
ACCENT COLOR #1: FEDERAL COLOR - 33448
ACCENT COLOR #2: FEDERAL COLOR - 37038

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.



ELEVATION OF PIER

LOOKING EAST (FROM WEST END)



ELEVATION OF PIER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-785

DRAWN BY MM | PLANS CK'D. MHZ

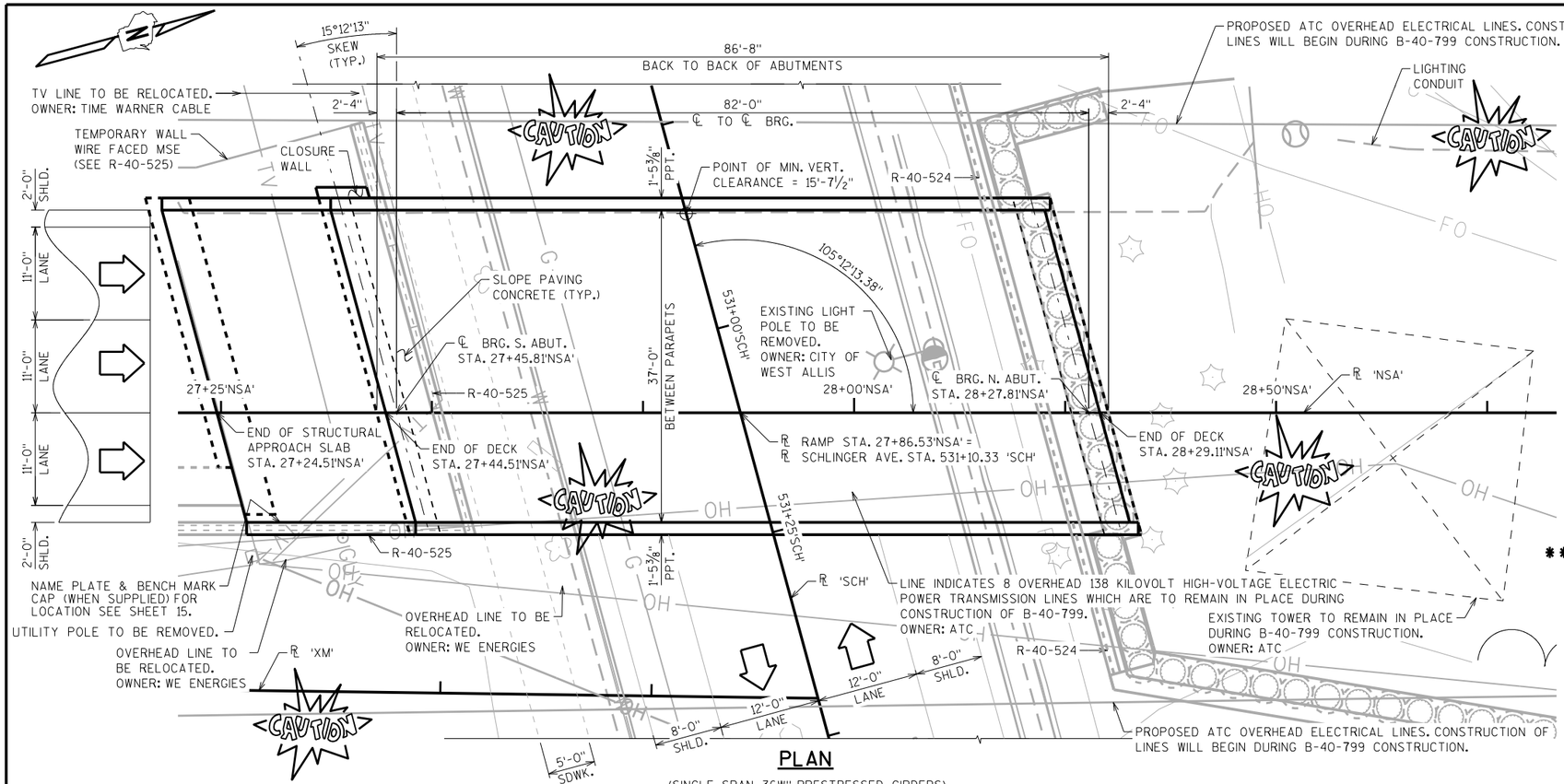
AESTHETIC DETAILS | SHEET 35 OF 35

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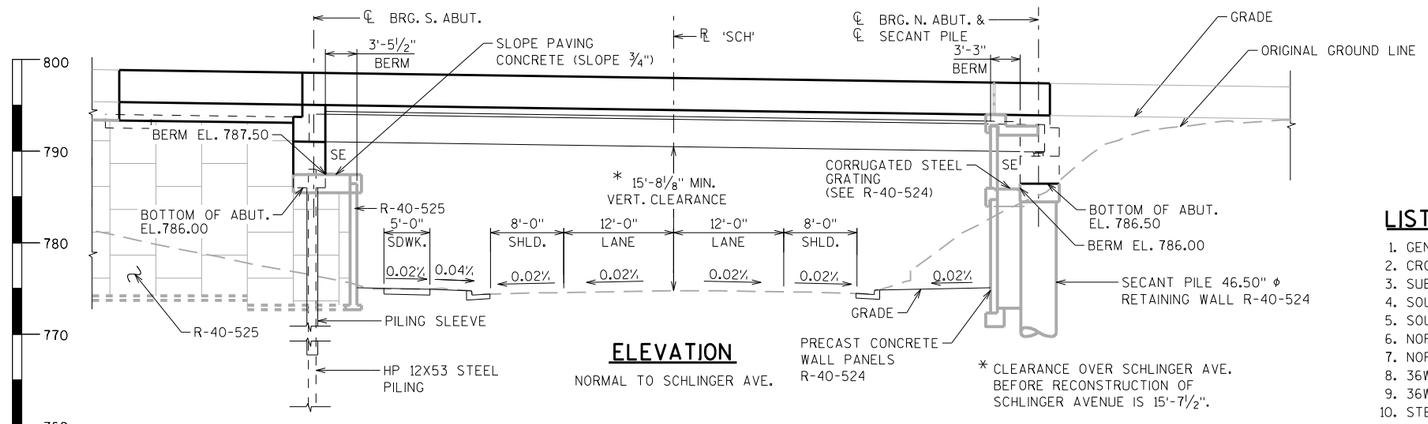
STATE PROJECT NUMBER

1060-33-78



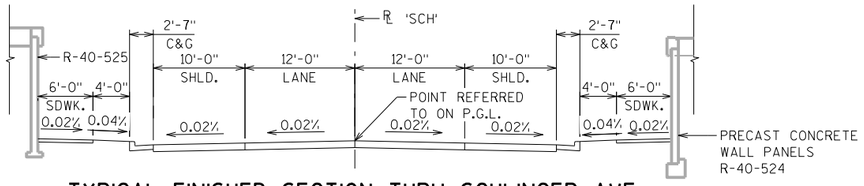
PLAN

(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)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING; HL-93
INVENTORY RATING FACTOR: RF=1.13
OPERATING RATING FACTOR: RF=1.46
WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 240 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

B-40-799 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.
36W" 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

SOUTH ABUTMENT TO BE SUPPORTED ON HP 12X53 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 100 FEET LONG.

** 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.

NORTH ABUTMENT TO BE SUPPORTED ON 46.5" DIA. DRILLED SHAFTS PROVIDING A FACTORED AXIAL RESISTANCE OF 89 TONS. DRILLED SHAFTS ARE INCLUDED WITH RETAINING WALL R-40-524.

TRAFFIC VOLUME

RAMP 'NSA'	SCHLINGER AVE. 'SCH'
A.D.T.=5,600 (2035)	A.D.T.=3,800 (2035)
R.D.S.=45 M.P.H.	R.D.S.=30 M.P.H.

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. EXPANSION BEARING DETAILS
12. SUPERSTRUCTURE
13. SUPERSTRUCTURE DETAILS
14. STRUCTURAL APPROACH SLAB - SOUTH ABUTMENT
15. SINGLE SLOPE PARAPET 42SS (MODIFIED)
16. AESTHETIC DETAILS

STRUCTURE DESIGN CONTACTS:
RUTH A. 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 5/7/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-799

US 45 NB. ON 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	DFD	RAC	DFD

GENERAL PLAN

SHEET 1 OF 16

687

I.D. 1060-33-07D

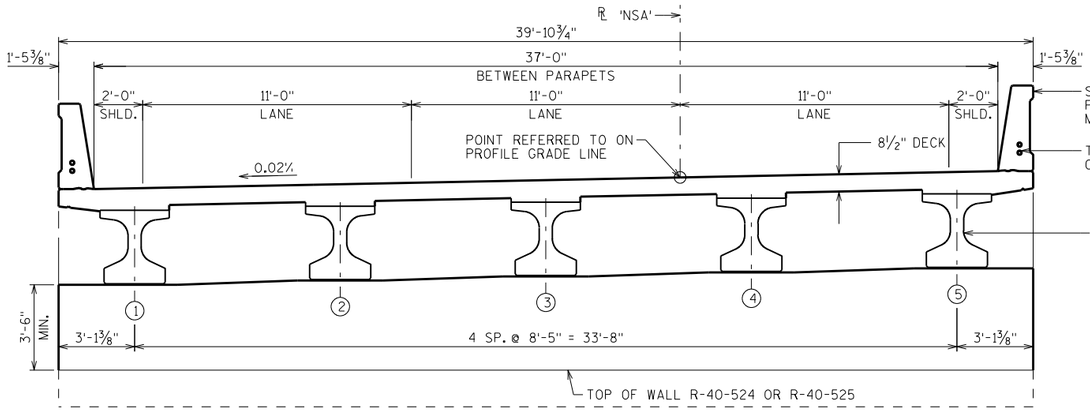
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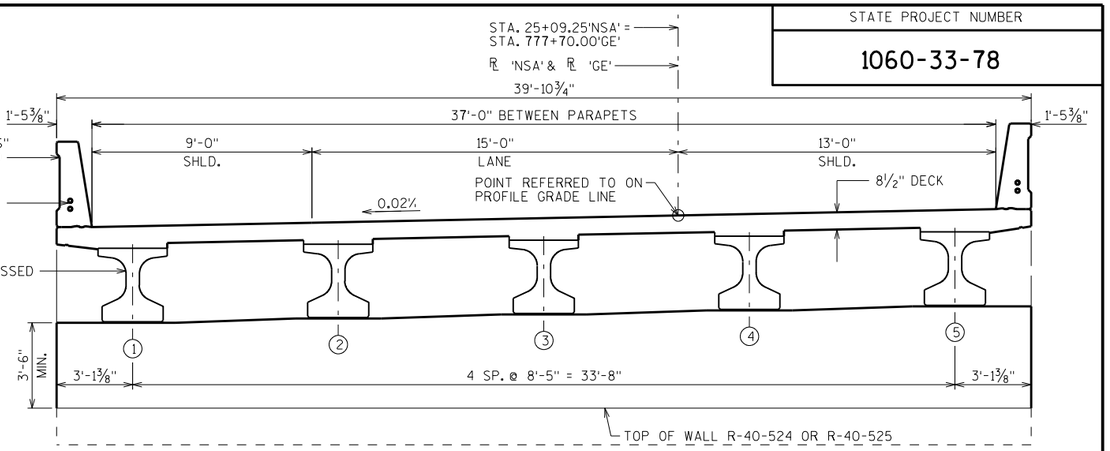
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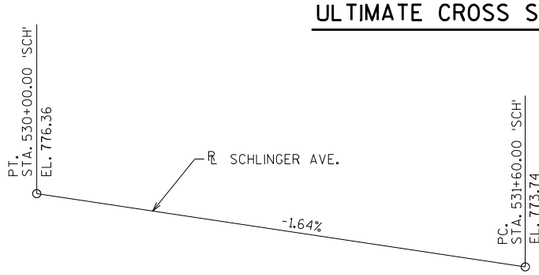
STATE PROJECT NUMBER
1060-33-78



TEMPORARY CROSS SECTION THRU ROADWAY LOOKING NORTH



ULTIMATE CROSS SECTION THRU ROADWAY LOOKING NORTH



PROFILE GRADE LINE - SCHLINGER AVENUE

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 OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

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 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.

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 SLAB.

THE SLOPE OF THE FILL IN FRONT OF THE SOUTH ABUTMENT SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS.

EMBEDDED CONDUITS IN THE WEST AND EAST PARAPETS FOR FUTURE US 45 FTMS AND FUTURE LIGHTING OF RAMP 'GE' ARE INCLUDED IN THE BRIDGE PLANS.

THE COST OF FURNISHING AND PLACING THE SIZE 2 COARSE AGGREGATE UNDER THE SLOPE PAVING SHALL BE CONSIDERED INCIDENTAL TO "SLOPE PAVING CONCRETE."

THE CONCRETE QUANTITIES FOR THE PARAPETS, SUPERSTRUCTURE DECK, APPROACH SLAB (EXCLUDING THE FOOTING), CONCRETE DIAPHRAGMS AND HAUNCH OVER GIRDERS SHALL BE PAID FOR UNDER THE BID ITEM "HPC MASONRY STRUCTURES."

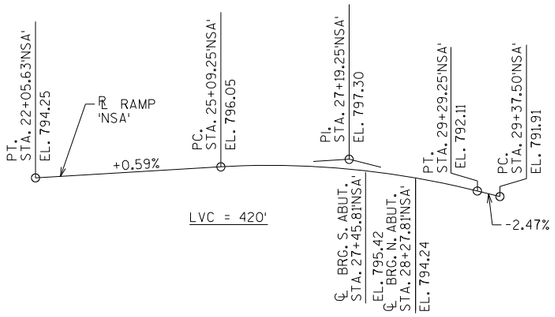
ATC OVERHEAD HIGH-VOLTAGE POWER TRANSMISSION LINES, 138 KILOVOLT, ARE TO REMAIN IN PLACE AND BE ENERGIZED DURING CONSTRUCTION. OSHA REGULATIONS REGARDING PROXIMITY OF CONSTRUCTION EQUIPMENT TO ENERGIZED POWER TRANSMISSION LINES MUST BE MET.

THE CONTRACTOR MUST COORDINATE THE CONSTRUCTION OF THE BRIDGE B-40-799 ABUTMENTS WITH RETAINING WALLS R-40-524 AND R-40-525.

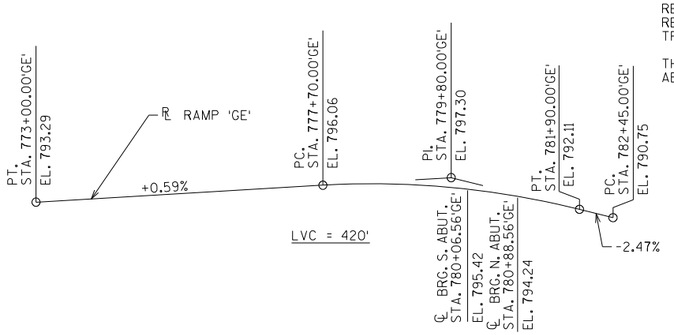
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	SOUTH APPROACH SLAB	SOUTH ABUT.	NORTH ABUT.	TOTALS
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-40-799	LS	--	--	--	--	1
210.0100	BACKFILL STRUCTURE	CY	--	--	140	90	230
502.0100	CONCRETE MASONRY BRIDGES	CY	--	11	31	22	64
502.3200	PROTECTIVE SURFACE TREATMENT	SY	435	115	--	--	550
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	416	--	--	--	416
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	--	--	2,340	930	3,270
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	25,720	9,750	210	--	35,680
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	--	--	5	--	5
506.2610	BEARING PADS ELASTOMERIC LAMINATED	EACH	--	--	--	5	5
506.4000	STEEL DIAPHRAGMS B-40-799	EACH	8	--	--	--	8
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	--	--	10	21	31
550.0500	PILE POINTS	EACH	--	--	6	--	6
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	--	--	600	--	600
604.0400	SLOPE PAVING CONCRETE	SY	--	--	13	--	13
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	--	67	61	--	128
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	300	--	--	--	300
652.0405	CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH	LF	40	80	--	--	120
SPV.0035.4000	HPC MASONRY STRUCTURES	CY	161	46	--	--	207
SPV.0085.4300	BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	LB	700	--	--	--	700
SPV.0090.4430	PILING SLEEVES	LF	--	--	126	--	126
SPV.0165.4700	LONGITUDINAL GROOVING BRIDGE DECK	SF	3,130	740	--	--	3,870
	NON-BID ITEMS						
	FILLER	SIZE	--	--	--	--	½" & ¾"

ALL ITEMS ARE CATEGORY 2010



PROFILE GRADE LINE - TEMPORARY RAMP 'NSA'



PROFILE GRADE LINE - ULTIMATE RAMP 'GE'

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

CROSS SECTION & QUANTITIES

SHEET 2

688

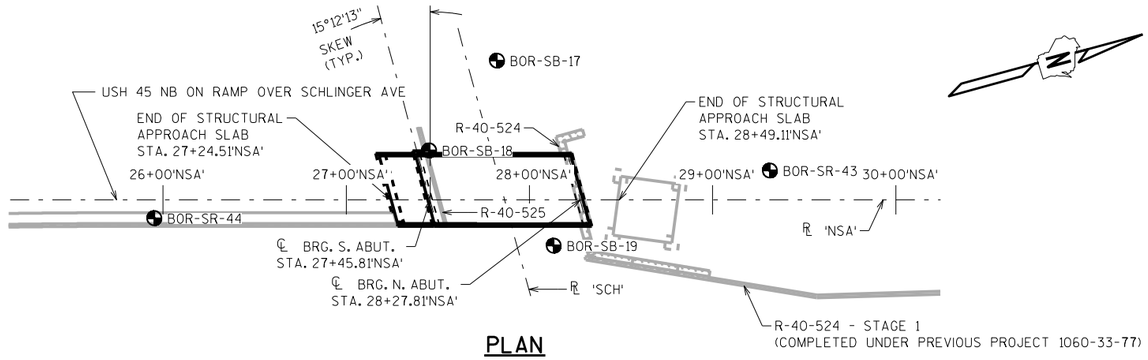
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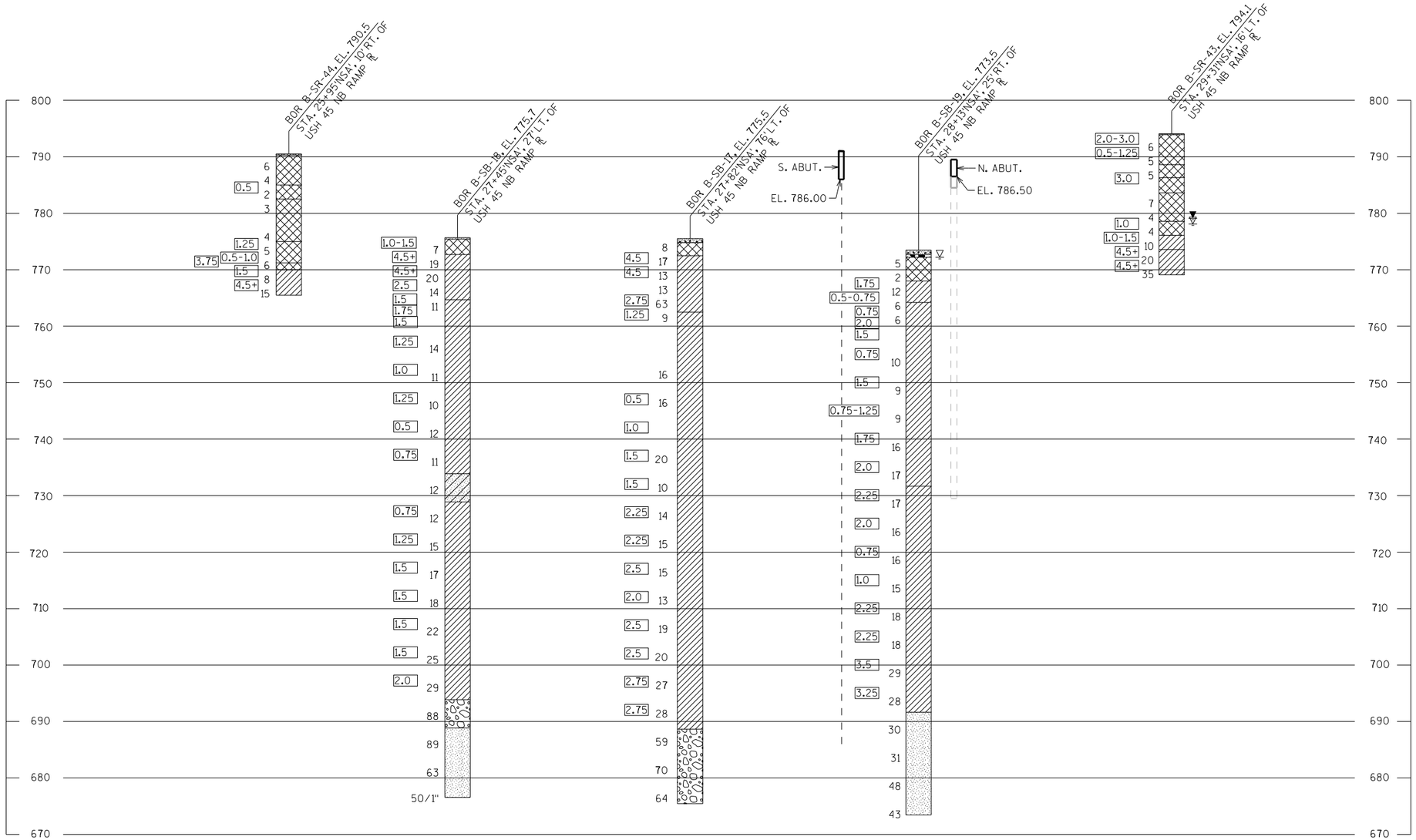
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ZOO INTERCHANGE

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
SB-17	2/3/2012	294207	572205
SB-18	2/1/2012	294156	572243
SB-19	1/31/2012	294207	572328
SR-43	2/9/2012	294331	572302
SR-44	2/9/2012	294016	572241
BORINGS COMPLETED BY: GESTRA			
REPORT COMPLETED BY: HNTB			
ALL COORDINATES REFERENCED TO WISCRS (2006) NAVD 88			



PLAN



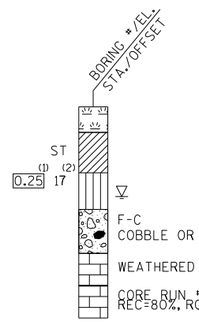
STATE PROJECT NUMBER

1060-33-78

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-40-799

DRAWN BY PR/RAC | PLANS CK'D. DFD

SUBSURFACE EXPLORATION

SHEET 3

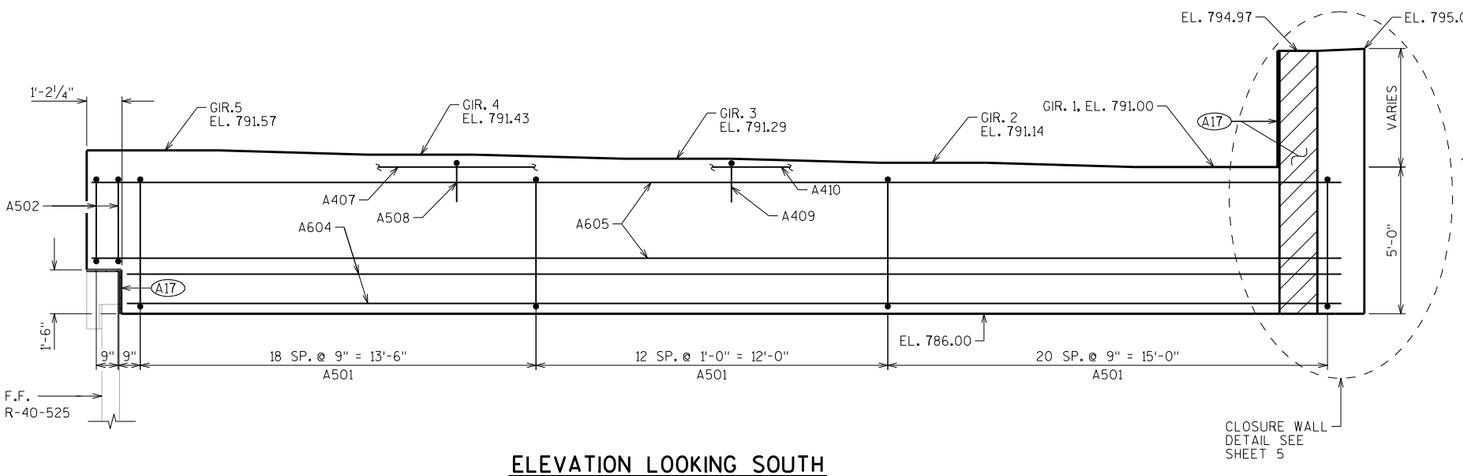
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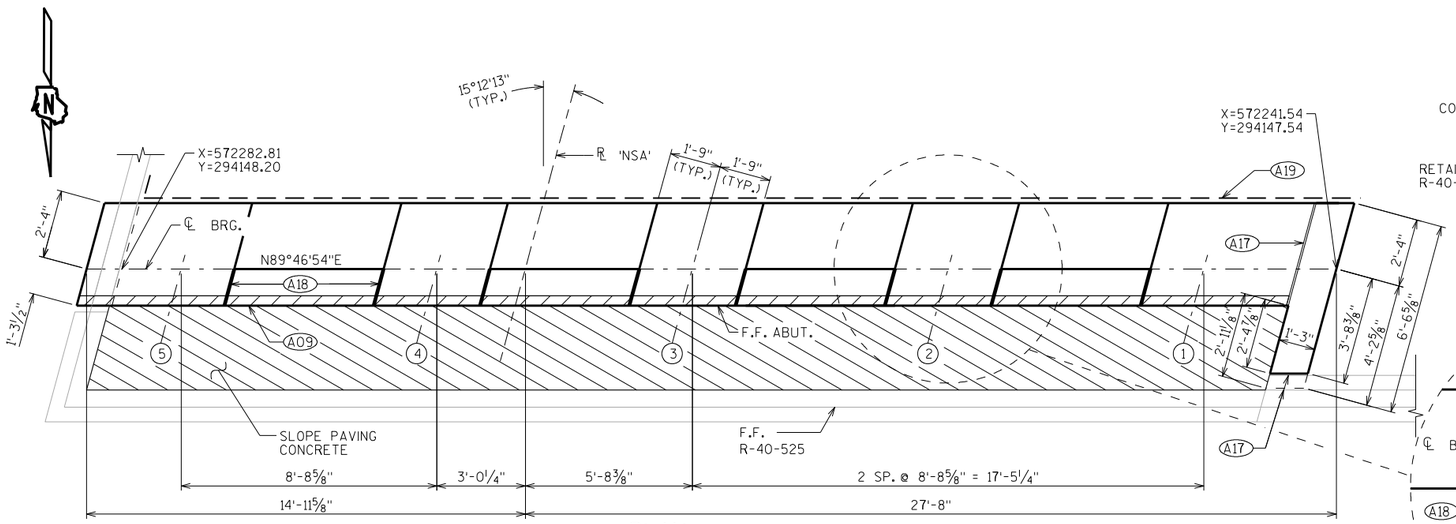
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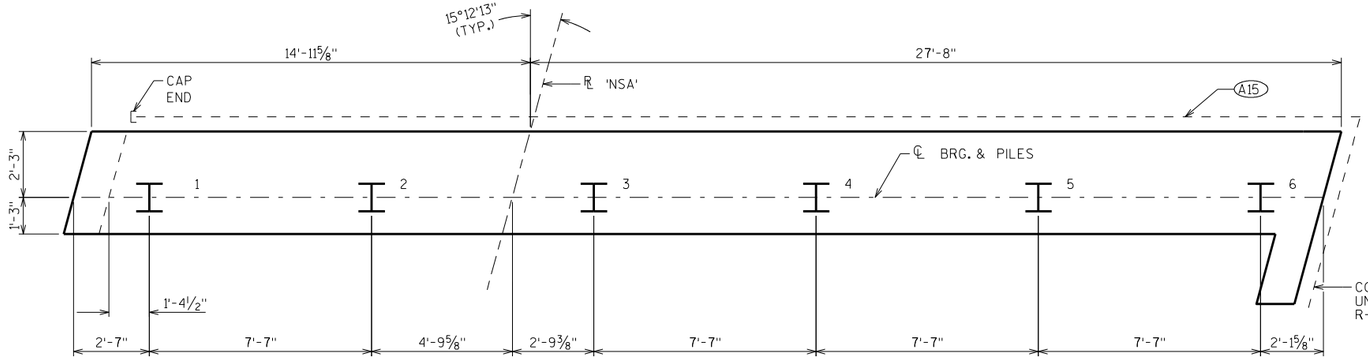
STATE PROJECT NUMBER
1060-33-78



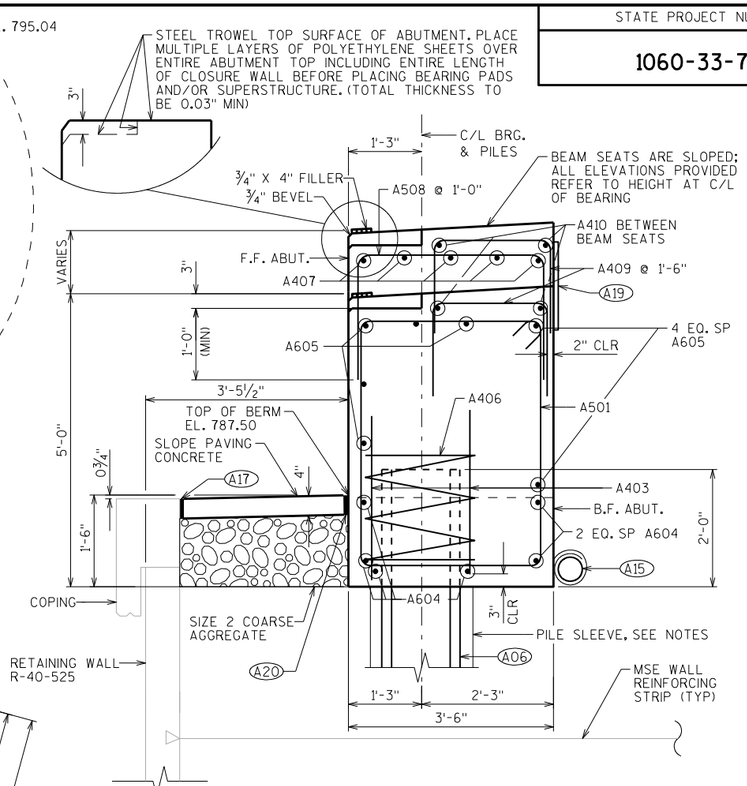
ELEVATION LOOKING SOUTH



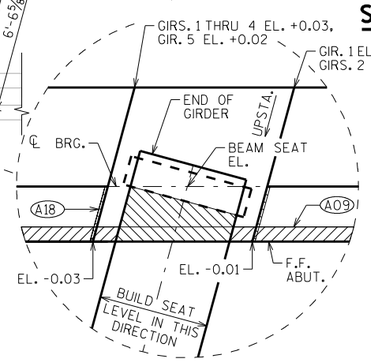
PLAN



PILE PLAN



SECTION THRU BODY



TYPICAL BEAM SEAT DETAIL

(ELEVATION CORRECTIONS GIVEN IN FEET)

- A06 SUPPORT ABUTMENT ON HP 12×53 STEEL PILING, ESTIMATED 100 FEET LONG WITH A REQUIRED DRIVING RESISTANCE OF 210 TONS PER PILE.
- A09 ¾" X 4" FILLER (OUT TO OUT OF ABUT.)
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. AND CONNECT TO R-40-525 PIPE UNDERDRAIN.
- 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).

PILE SLEEVE NOTES

COORDINATE SLEEVE LOCATIONS WITH RETAINING WALL R-40-525.

SLEEVES SHALL BE PLACED FROM LOWER LIMITS OF EXCAVATION FOR MSE REINFORCED ZONE TO BOTTOM OF ABUTMENT.

IF PIPE SLEEVES ARE USED, THE 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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

SOUTH ABUTMENT

SHEET 4

690

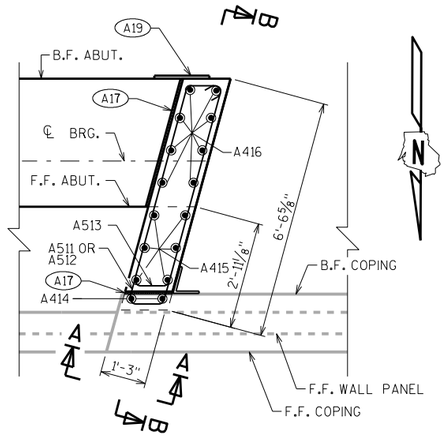
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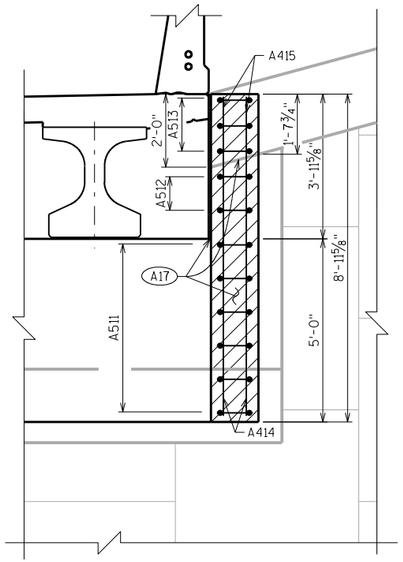
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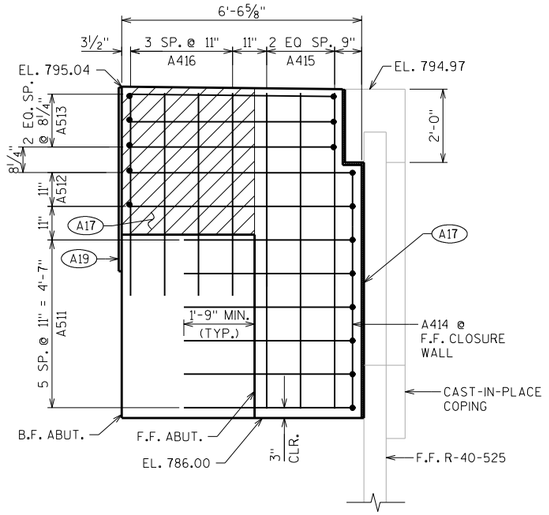
1060-33-78



CLOSURE WALL PLAN



SECTION A-A



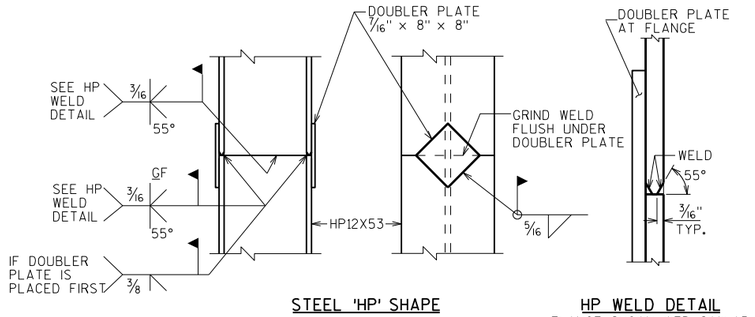
SECTION B-B

BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		51	15'-7"	X		BODY - STIRRUPS
A502		2	12'-7"	X		BODY - STIRRUPS - MSE NOTCH
A403		12	2'-3"			PILES - 2 PER PILE
A604		7	41'-1"			BODY - HORIZ.
A605		10	42'-3"			BODY - HORIZ.
A406		6	28'-0"	X		PILES - 1 PER PILE
A407		5	17'-2"			BODY - HORIZ. UNDER GIRS. 4 & 5
A508		18	6'-11"	X		BODY - TOP UNDER GIRS. 4 & 5
A409		20	4'-3"	X		BODY - BETWEEN BEAM SEATS
A410		8	7'-2"			BODY - HORIZ. EXT
A511	X	6	9'-8"	X		CLOSURE WALL - HORIZ. BOT.
A512	X	2	14'-8"	X		CLOSURE WALL - HORIZ. MID.
A513	X	3	13'-8"	X		CLOSURE WALL - HORIZ. TOP.
A514	X	2	6'-5"			CLOSURE WALL - VERT. FRONT
A415	X	6	8'-6"			CLOSURE WALL - VERT. MID
A416	X	8	5'-6"			CLOSURE WALL - VERT. BACK

(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).

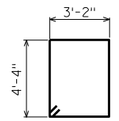
(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



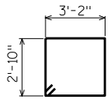
STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

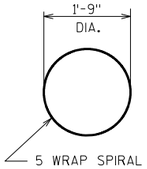
PILE DETAILS



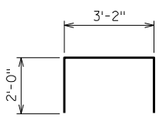
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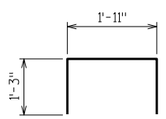
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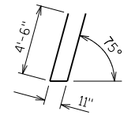
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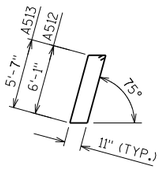
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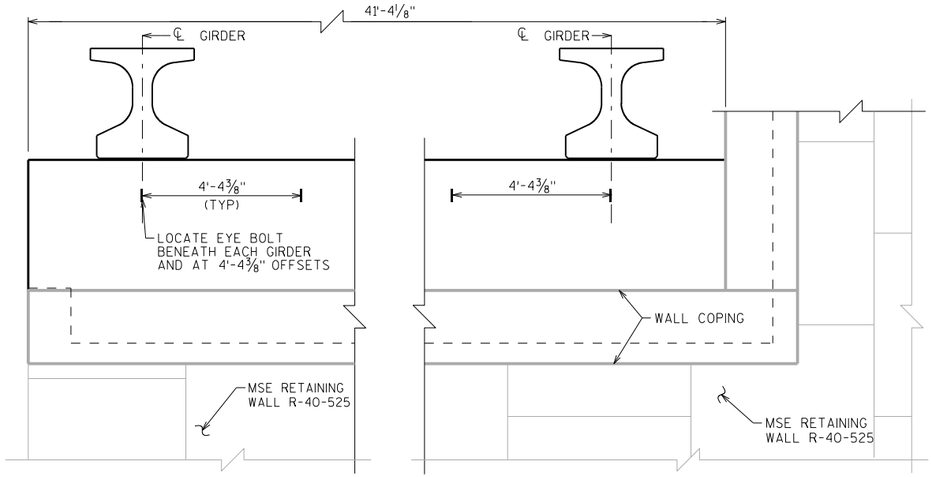
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A511

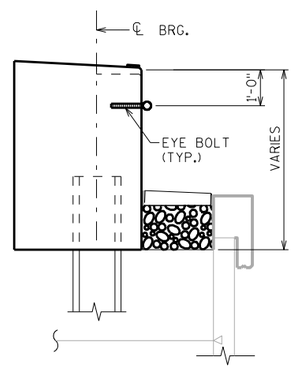


A512, A513



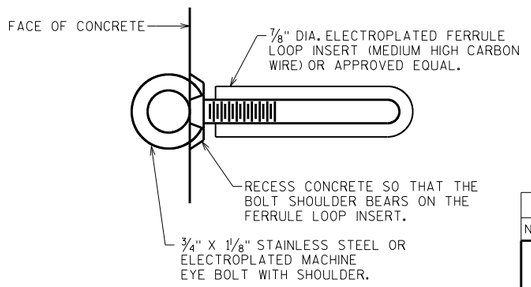
FALL PROTECTION ELEVATION

(LOOKING SOUTH)



FALL PROTECTION ANCHOR

(LOOKING WEST)



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-40-799

DRAWN BY RAC | PLANS CK'D. DFD

SOUTH ABUTMENT DETAILS

SHEET 5

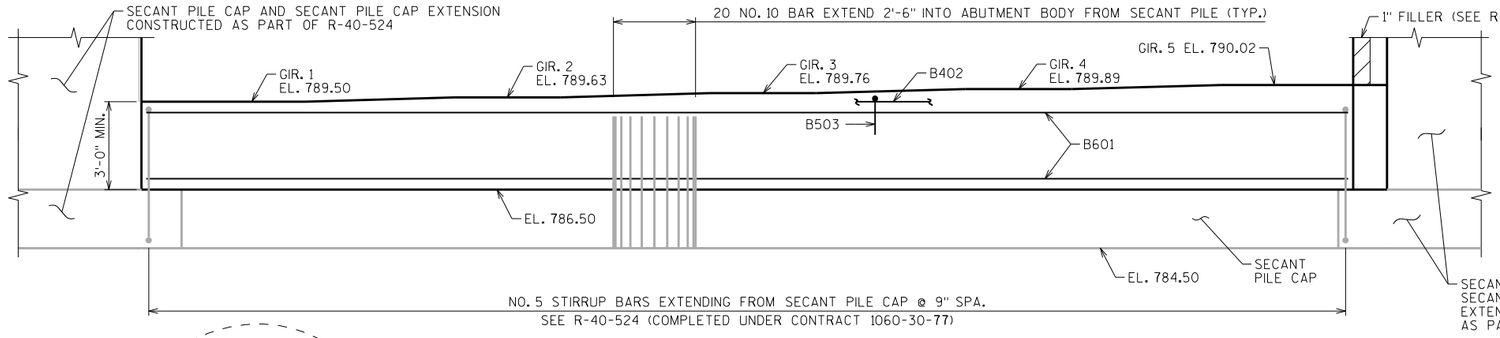
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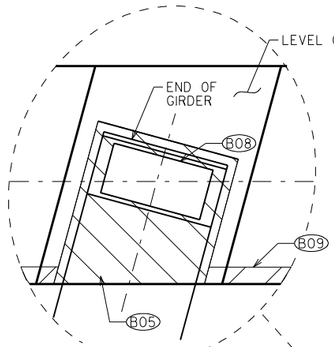
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8

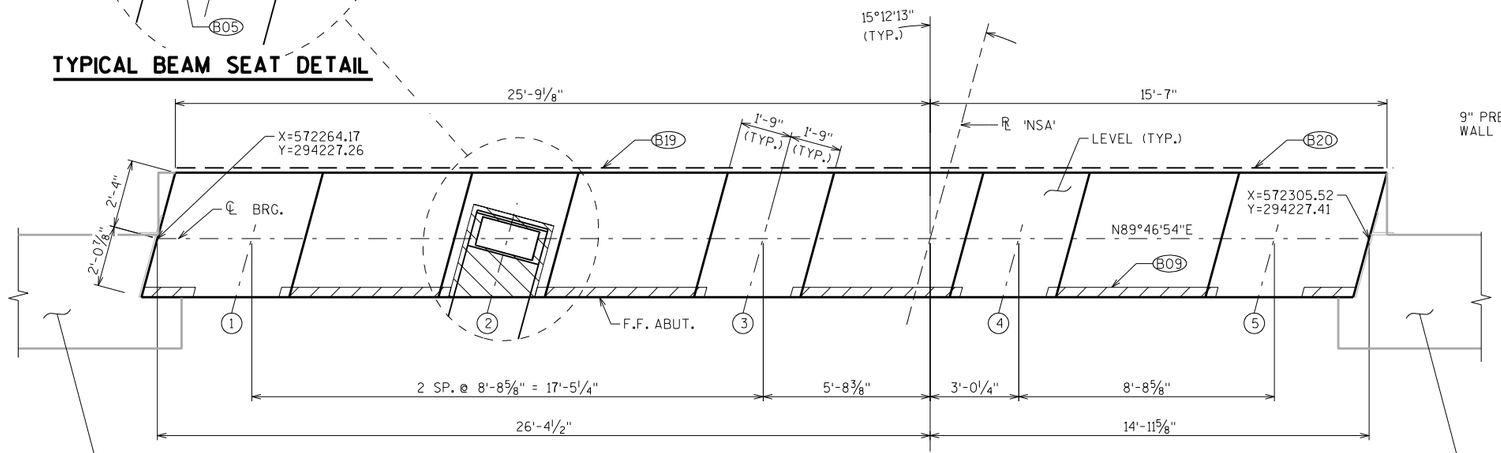
STATE PROJECT NUMBER
1060-33-78



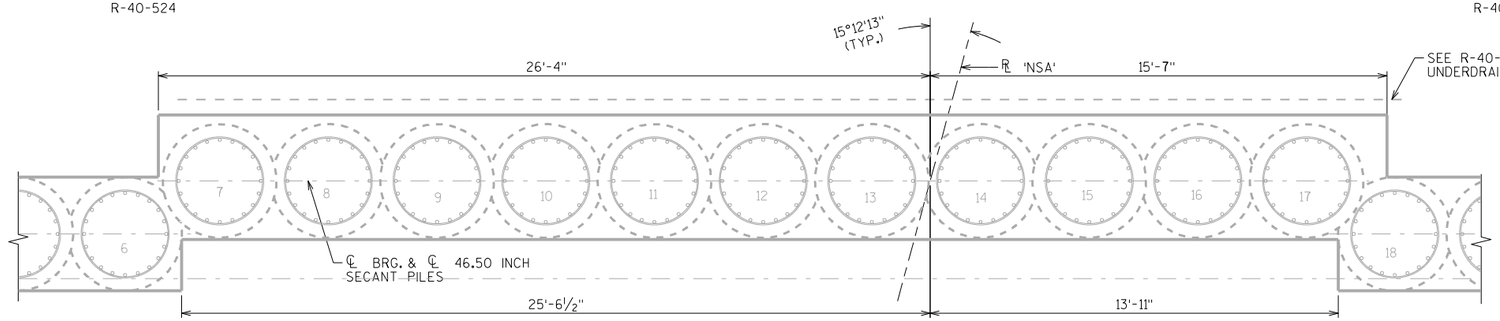
ELEVATION LOOKING NORTH



TYPICAL BEAM SEAT DETAIL

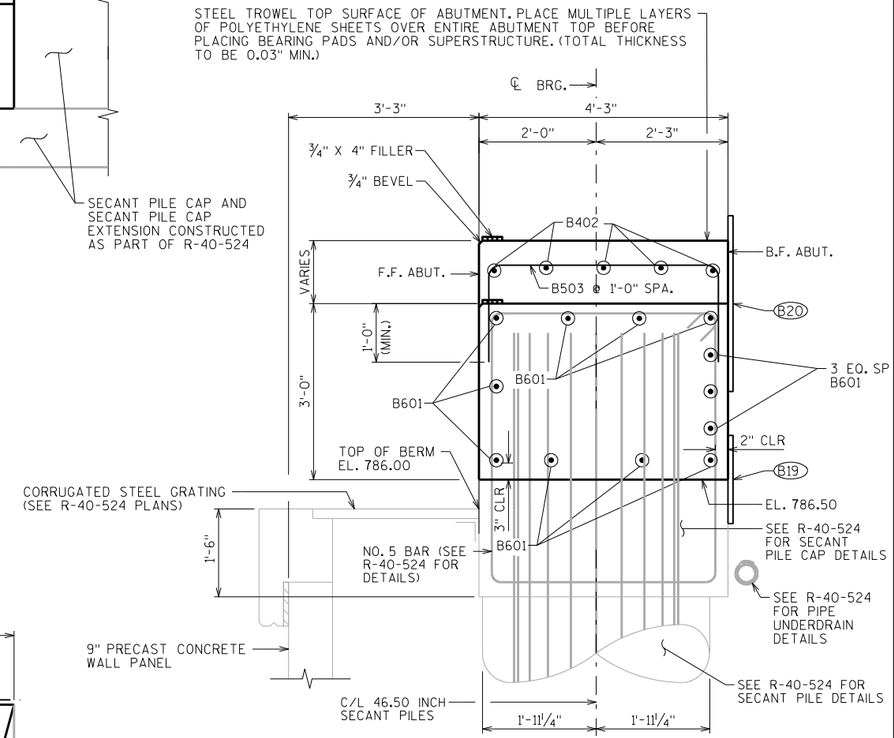


PLAN



SECANT PILE PLAN

(SECANT PILES CONSTRUCTED AS PART OF R-40-524)



SECTION THRU ABUTMENT BODY

(LOOKING WEST)

- (B05) BLOCKOUT AREA UNDERNEATH GIRDERS.
- (B08) LAMINATED ELASTOMERIC BEARING PAD, TYP., SEE SHEET 11.
- (B09) 3/4" X 4" FILLER, TYP. RUN BETWEEN GIRDERS.
- (B19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL HORIZ. JOINT BETWEEN SECANT PILE CAP AND ABUTMENT BODY AT BACKFACE.
- (B20) 36" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL HORIZ. JOINT BETWEEN DIAPHRAGM AND ABUTMENT BODY AT BACKFACE. SEE SHT. 13 FOR DETAILS.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

NORTH ABUTMENT

SHEET 6

692

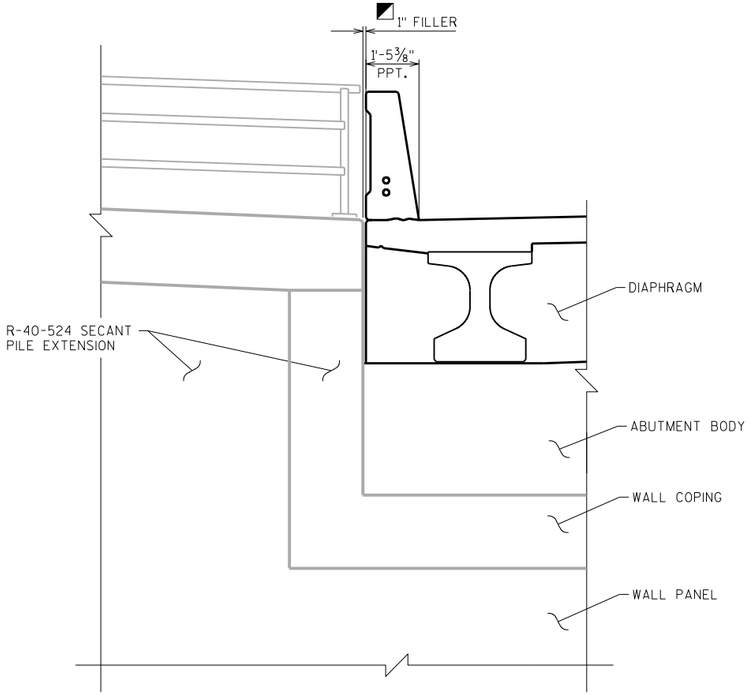
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STATE PROJECT NUMBER

1060-33-78

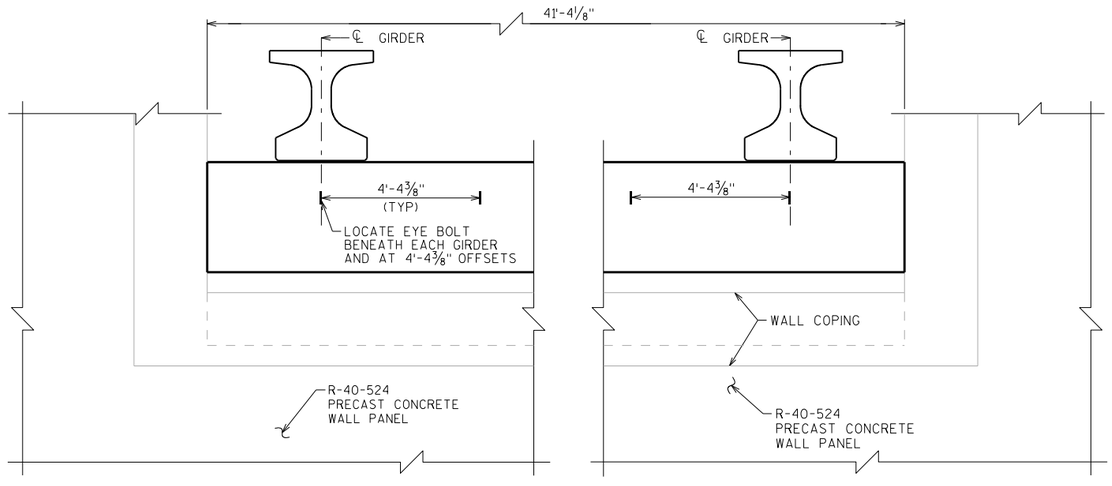
BILL OF BARS

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B601		12	41'-0"			BODY - HORIZ.
B402		5	15'-10"			BODY - HORIZ. UNDER GIRS. 4 & 5
B503		17	7'-8"	X		BODY - TOP UNDER GIRS. 4 & 5



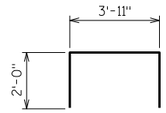
ELEVATION SECANT PILE EXTENSION

(WEST SIDE OF NORTH ABUTMENT SHOWN, EAST SIDE OF NORTH ABUTMENT SIMILAR. SEE R-40-524 FOR DETAILS.)



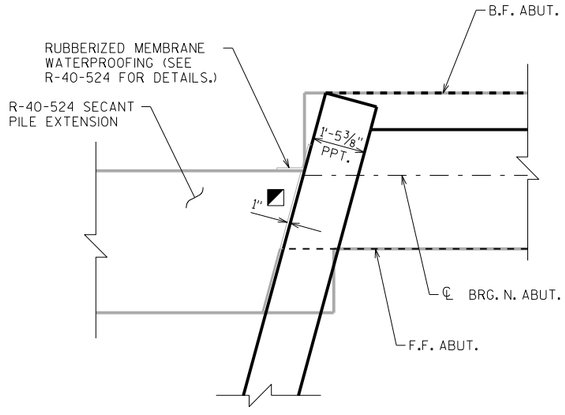
FALL PROTECTION ELEVATION

LOOKING NORTH



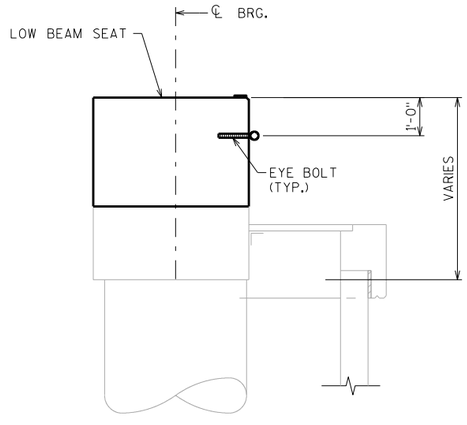
B503

■ 1" FILLER BETWEEN SECANT PILE EXTENSION AND DIAPHRAGM (SEE R-40-524 FOR DETAILS)



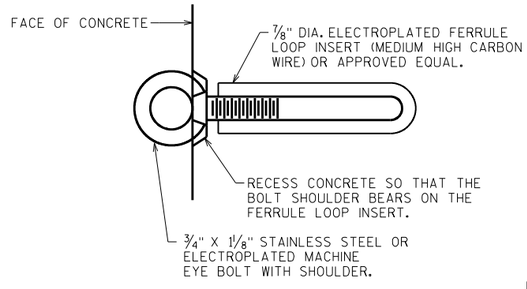
PLAN VIEW SECANT PILE EXTENSION

(WEST SIDE OF NORTH ABUTMENT SHOWN, EAST SIDE OF NORTH ABUTMENT SIMILAR. SEE R-40-524 FOR DETAILS.)



FALL PROTECTION ANCHOR

(LOOKING EAST)



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-40-799

DRAWN BY RAC | PLANS CK'D. DFD

NORTH ABUTMENT DETAILS

SHEET 7

693

8

8

SCALE = 2:1

STATE PROJECT NUMBER

1060-33-78

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.

STRANDS SHALL BE FLUSH WITH THE END OF GIRDER. ENDS OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

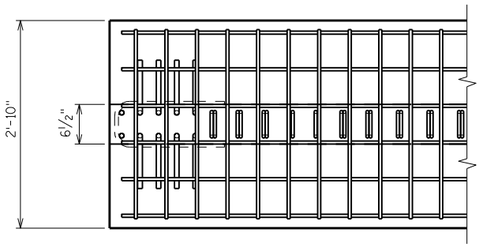
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT. IF THE FABRICATOR WANTS TO BUILD A BAR STEEL CAGE BY WELDING LONGITUDINAL REINFORCEMENT TO THE #4 STIRRUPS, ONE OPTION IS AVAILABLE:

USE ASTM A706, GRADE 60 REINFORCEMENT AND THE STIRRUP SPACING AS SHOWN ON THE PLANS.

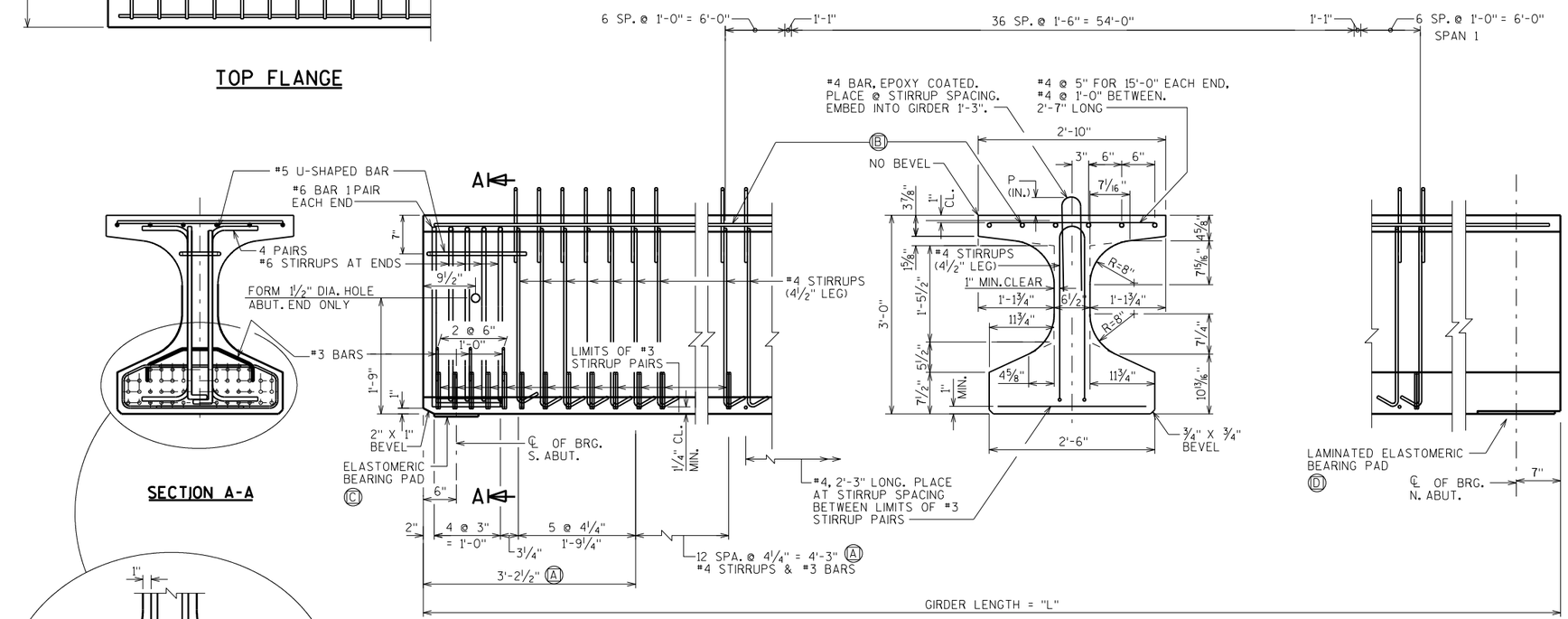
AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A497 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT CHIEF, (608)266-5161.

PRESTRESSING STRANDS SHALL BE 0.6" DIA.-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 psi.

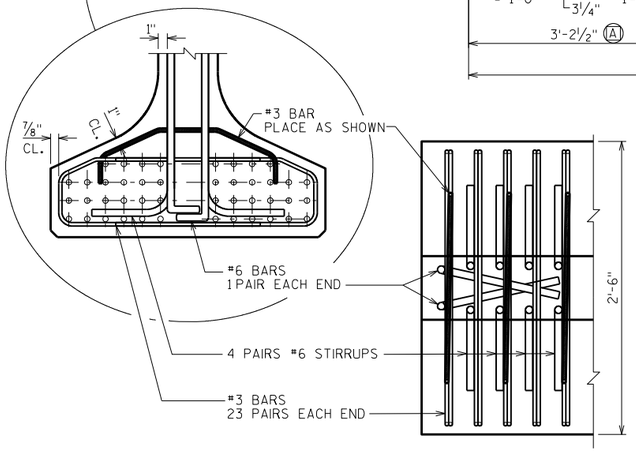
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



TOP FLANGE



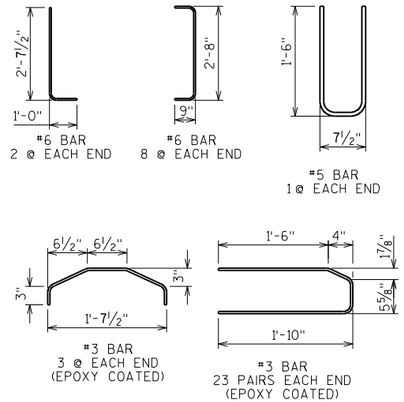
SECTION A-A



BOTTOM FLANGE

SIDE VIEW & TYP. SECTION IN SPAN

- (A) DETAIL TYP. AT EACH END
- (B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"
- (C) DETAIL TYP. AT S. ABUT.
- (D) DETAIL TYP. AT N. ABUT. SEE SHEET 11 FOR DETAILS.



✳ 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					
			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"
1	1,5	83.08	0.5	1.0	1.3	1.5	1.6	1.5	1.3	1.0	0.5	8000	7	7	7	0.60	32	6400	31.0	11.5	14.5	5.0
1	2-4	83.08	0.6	1.0	1.4	1.7	1.7	1.7	1.4	1.0	0.6	8000	7	7	7	0.60	32	6400	31.0	11.5	14.5	5.0

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

36W" PRESTRESSED GIRDER

SHEET 8

694

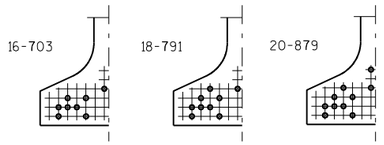
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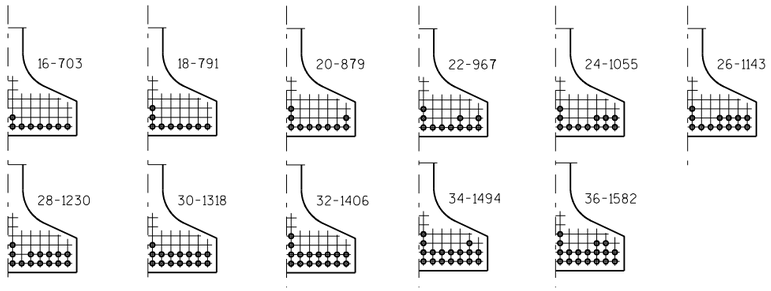
STATE PROJECT NUMBER

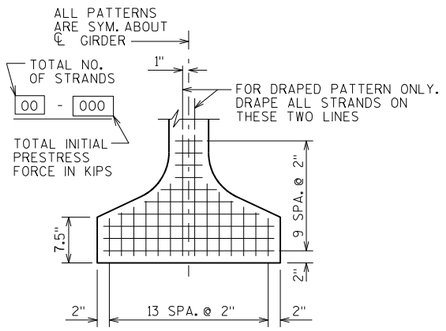
1060-33-78



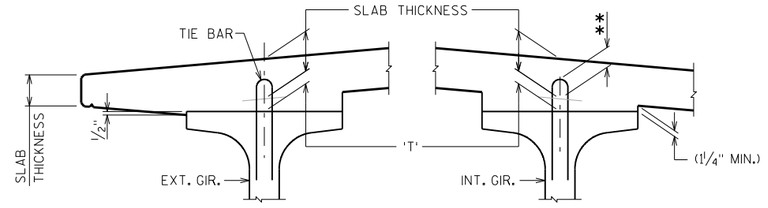
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6"Φ STRANDS





TYP. STRAND PATTERN



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.

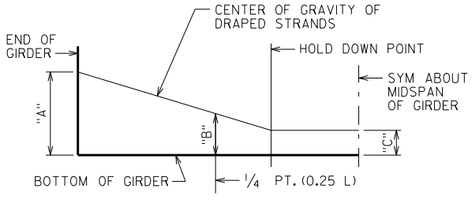
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

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 2⅝" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

ARRANGEMENT AT ℄ SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6"Φ STRANDS



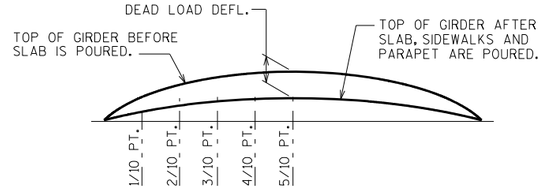
DRAPED STRAND PROFILE

*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	3.46

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DEAD LOAD DEFLECTION DIAGRAM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

36W" PRESTRESSED GIRDER DETAILS

SHEET 9

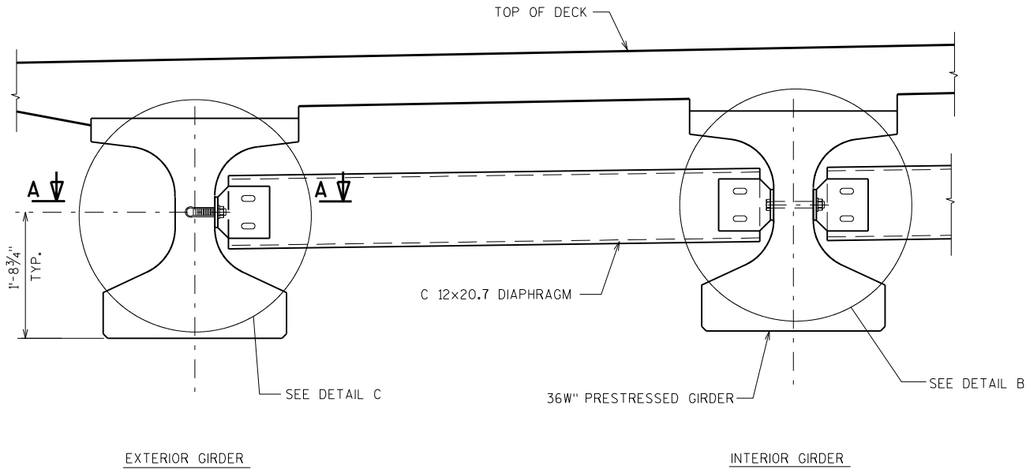
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STATE PROJECT NUMBER

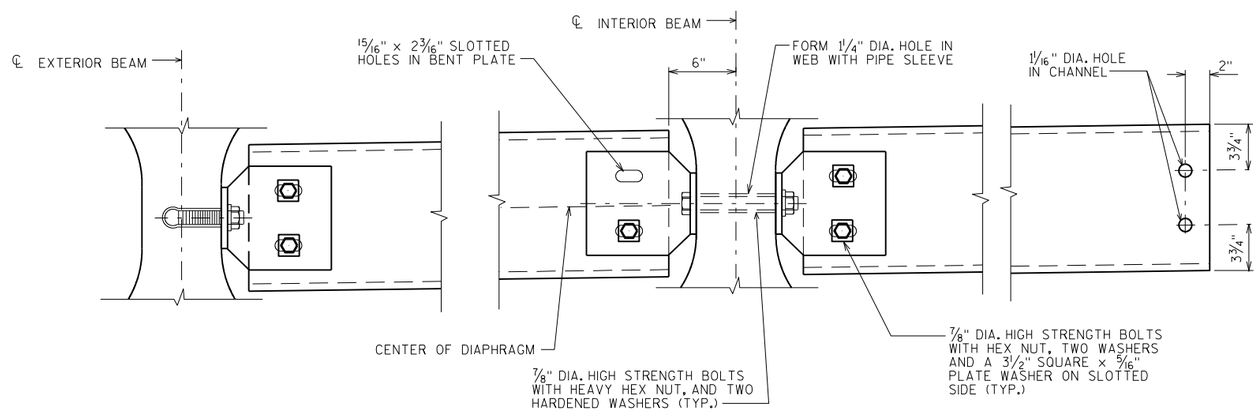
1060-33-78



EXTERIOR GIRDER

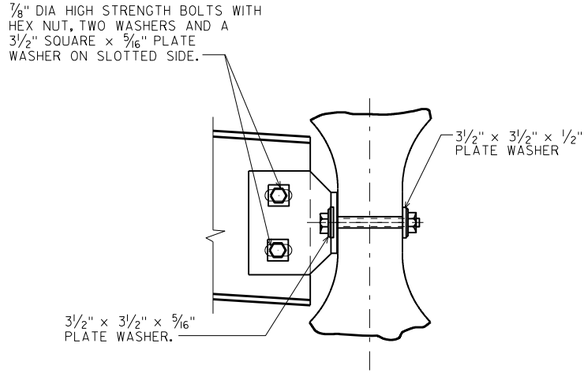
INTERIOR GIRDER

PART TRANSVERSE SECTION AT DIAPHRAGM



DETAIL C

DETAIL B



SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°

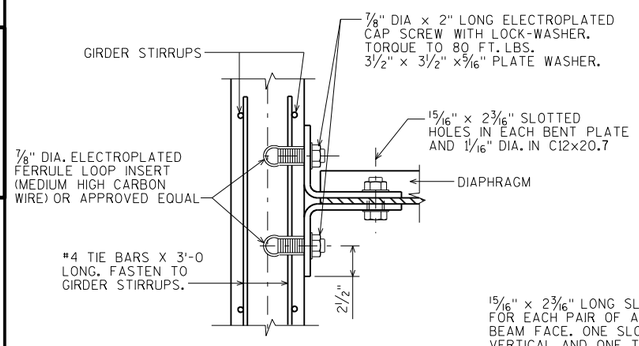
NOTES

ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-40-799", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

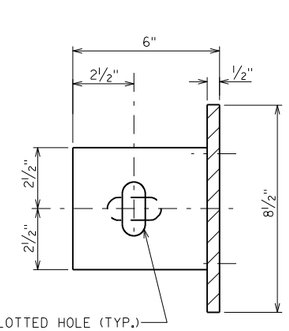
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36. ALL BOLTS, NUTS AND WASHERS SHALL BE ASTM A325 TYPE 1.

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.

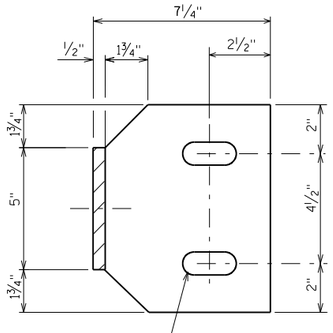


SECTION A-A

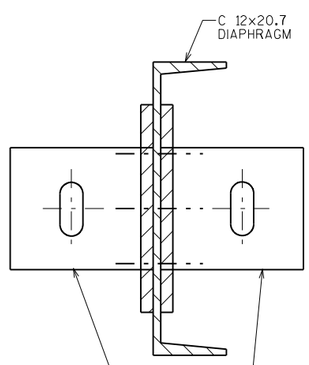
(FOR EXTERIOR ATTACHMENT)



BEAM FACE



DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

STEEL DIAPHRAGM

SHEET 10

696

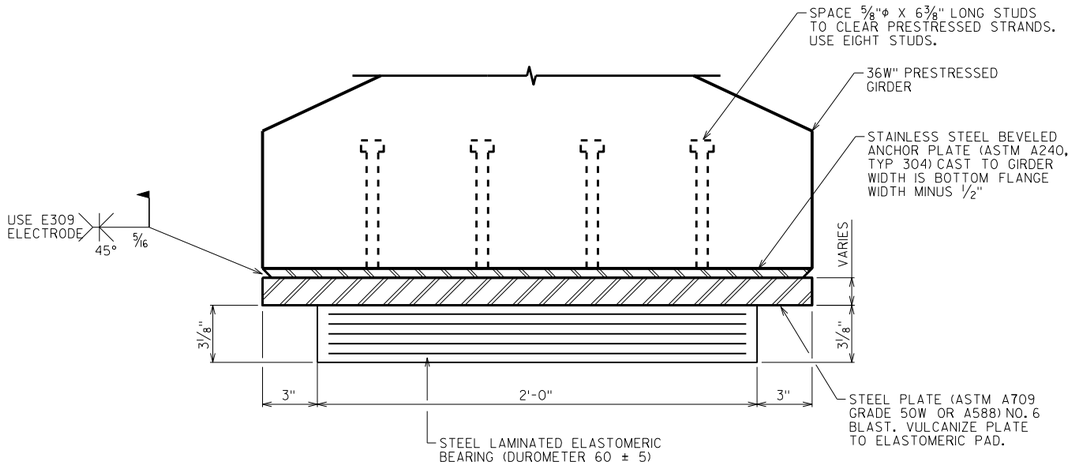
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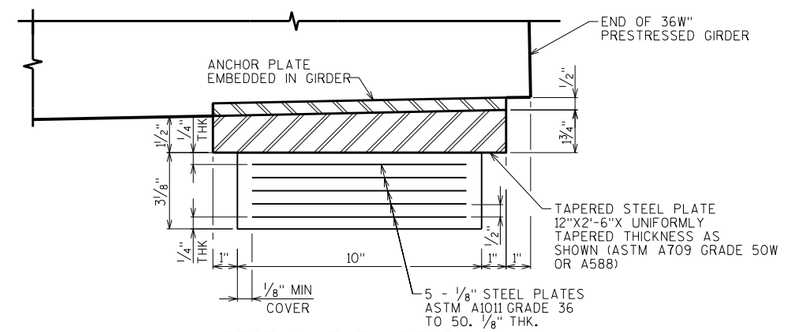
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STATE PROJECT NUMBER

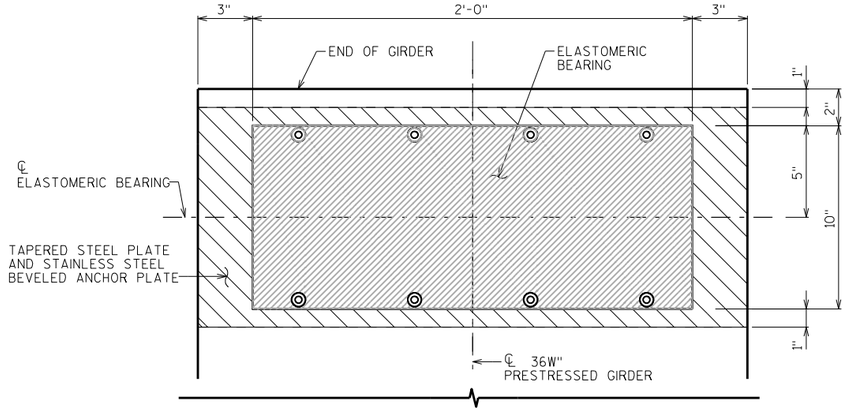
1060-33-78



END VIEW
AT NORTH ABUTMENT



SECTION THRU BEARING
AT NORTH ABUTMENT



PLAN VIEW
AT NORTH ABUTMENT

NOTES

1. ALL STRUCTURAL STEEL BEARING PLATES SHALL BE FLAT ROLLED STEEL PLATES WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL.
2. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUTS.
3. ALL MATERIAL USED FOR THE BEARINGS, INCLUDING BEARING PADS, STUDS, AND STEEL PLATES, SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "BEARING PADS ELASTOMERIC LAMINATED".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

EXPANSION BEARING DETAILS

SHEET 11

697

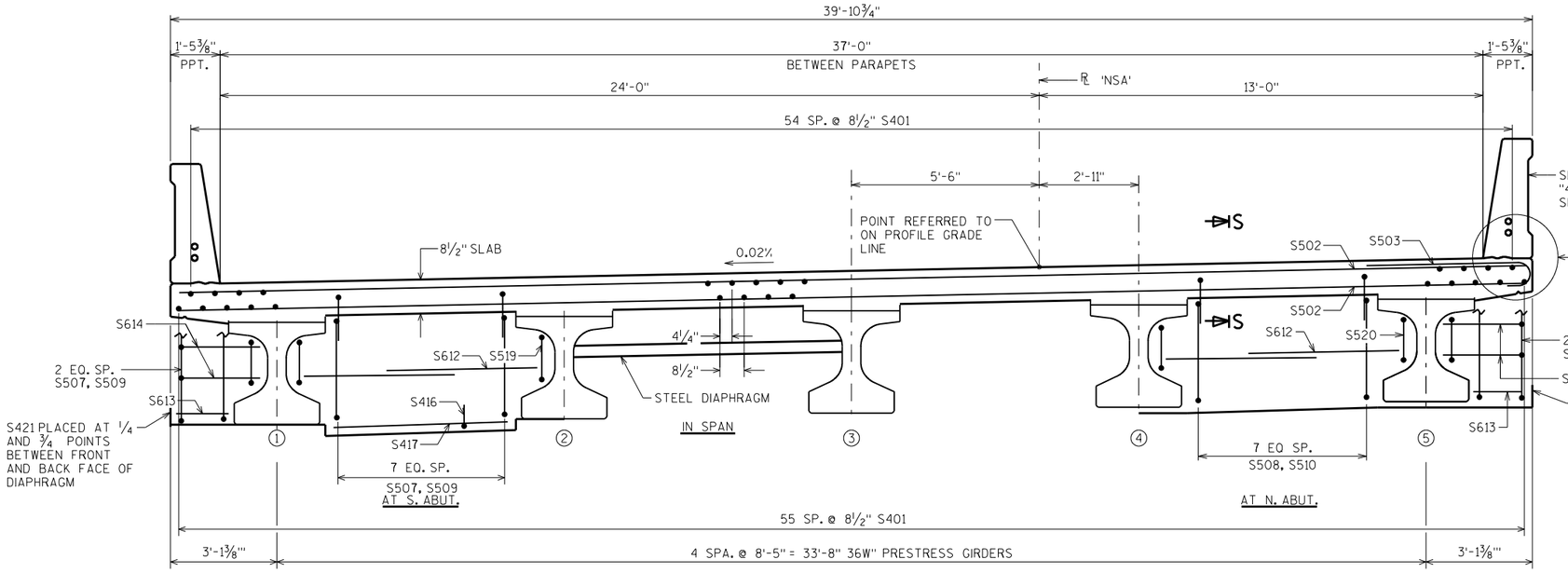
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8

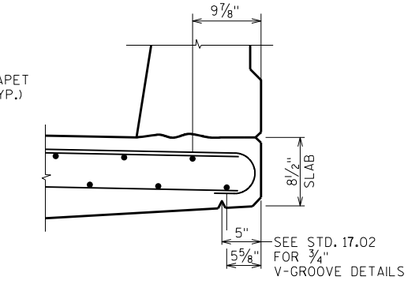
STATE PROJECT NUMBER

1060-33-78

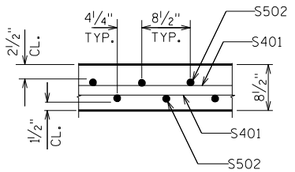


CROSS SECTION THRU ROADWAY

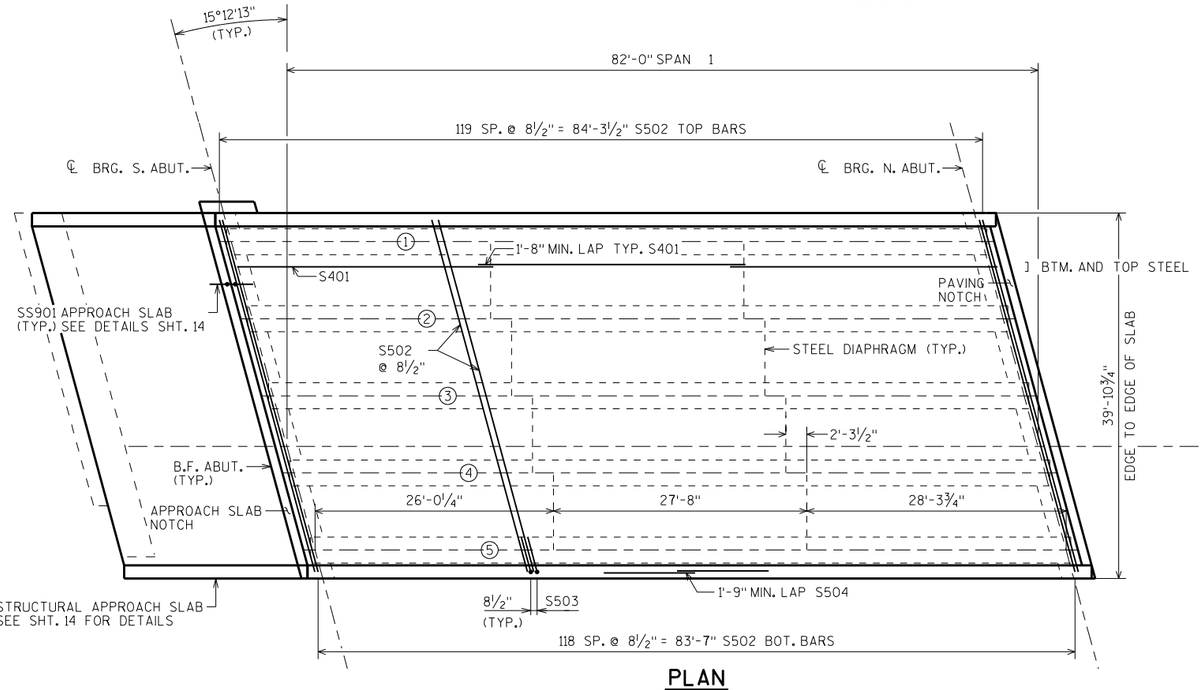
(LOOKING NORTH)



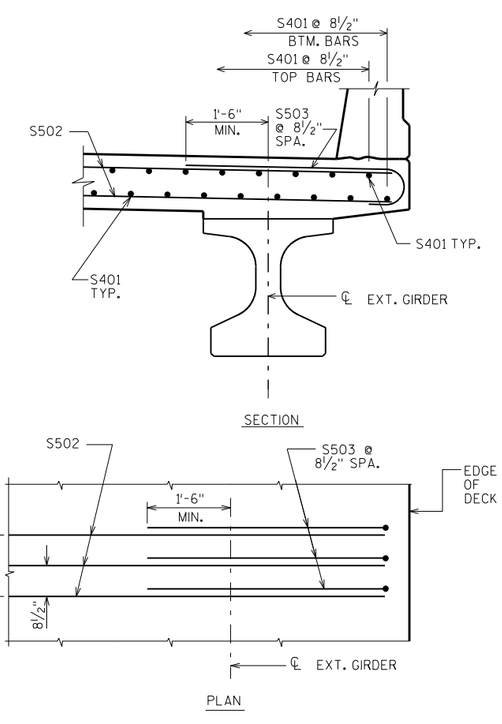
DETAIL A



SECTION S-S



PLAN



ADDITIONAL REINF. DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

SUPERSTRUCTURE

SHEET 12

698

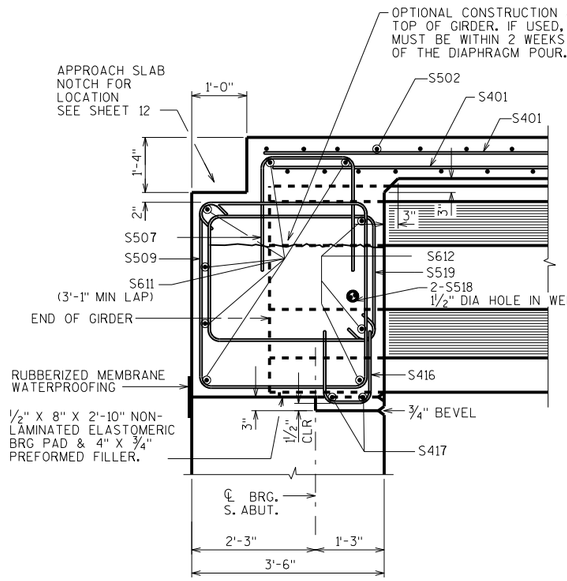
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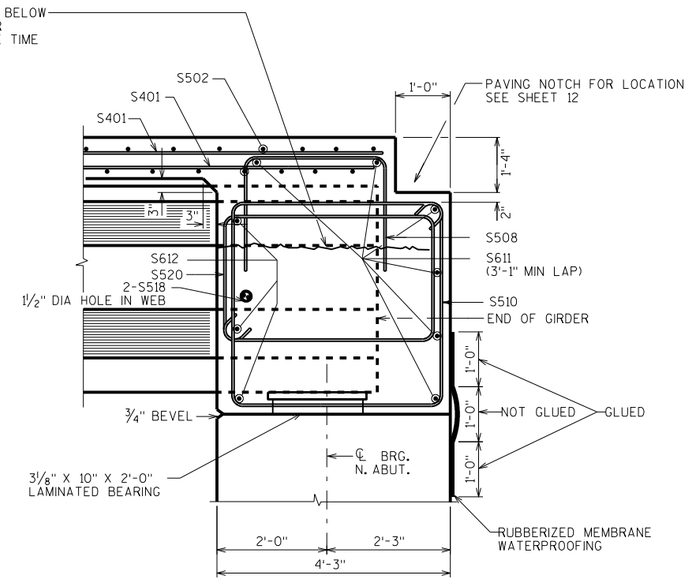
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STATE PROJECT NUMBER

1060-33-78



AT SOUTH ABUTMENT



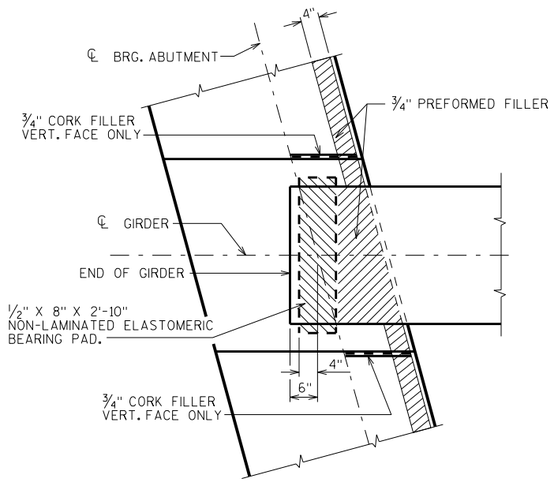
AT NORTH ABUTMENT

BILL OF BARS

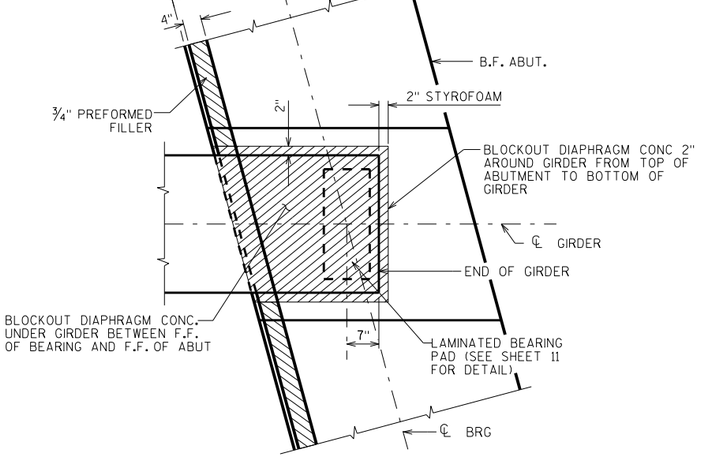
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	333	29'-7"			LONGITUDINAL TOP & BOTTOM
S502	X	239	41'-0"			TRANSVERSE TOP AND BOTTOM
S503	X	239	5'-1"	X		TRANSVERSE TOP - EDGE OF SLAB
S504	X	48	29'-8"			PPT. HORIZ.
S505	X	258	6'-8"	X		PPT. VERT.
S506	X	258	4'-5"	X		PPT. VERT.
S507	X	38	5'-9"	X		ABUT. DIAPH. - VERT. - S. ABUT.
S508	X	38	6'-6"	X		ABUT. DIAPH. - VERT. - N. ABUT.
S509	X	38	11'-5"	X		ABUT. DIAPH. - VERT. - STIRRUPS - S. ABUT.
S510	X	38	13'-11"	X		ABUT. DIAPH. - VERT. - STIRRUPS - N. ABUT.
S611	X	24	22'-1"			ABUT. DIAPHRAGM - HORIZ.
S612	X	48	4'-10"			ABUT. DIAPHRAGM - HORIZ.
S613	X	4	1'-7"			ABUT. DIAPHRAGM - HORIZ. - ENDS
S614	X	4	8'-1"	X		ABUT. DIAPH. - HORIZ. - ENDS - S. ABUT.
S615	X	4	8'-9"	X		ABUT. DIAPH. - HORIZ. - ENDS - N. ABUT.
S416	X	24	3'-3"	X		ABUT. DIAPH. - VERT. - S. ABUT.
S417	X	8	4'-9"			ABUT. DIAPH. - HORIZ. - S. ABUT.
S518	X	20	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRS.
S519	X	10	9'-9"	X		ABUT. DIAPH. - VERT. - STIRRUPS - S. ABUT.
S520	X	10	11'-3"	X		ABUT. DIAPH. - VERT. - STIRRUPS - N. ABUT.
S421	X	8	2'-10"			ABUT. DIAPH. - VERT. - EXTERIOR FACES
SS901		41	5'-0"	X		CONC. ABUT. DIAPH. TO APPROACH SLAB

STAINLESS STEEL →

PARTIAL LONGITUDINAL SECTION AT ABUTMENT



AT SOUTH ABUTMENT



AT NORTH ABUTMENT

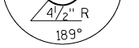
BEARING PAD DETAIL

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	795.00	794.91	794.81	794.71	794.61	794.50	794.38	794.26	794.13	794.00	793.87
GIR. 1	795.04	794.95	794.85	794.75	794.64	794.53	794.41	794.29	794.17	794.04	793.90
GIR. 2	795.18	795.09	794.99	794.89	794.78	794.67	794.55	794.43	794.30	794.17	794.03
GIR. 3	795.32	795.23	795.13	795.03	794.92	794.80	794.68	794.56	794.43	794.30	794.16
GIR. 4	795.47	795.37	795.27	795.16	795.05	794.94	794.82	794.69	794.56	794.43	794.29
GIR. 5	795.61	795.51	795.41	795.30	795.19	795.07	794.95	794.82	794.69	794.56	794.42
EOD	795.64	795.55	795.44	795.34	795.22	795.11	794.99	794.86	794.73	794.59	794.45



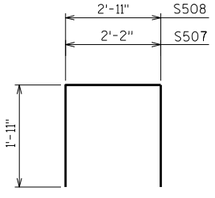
S503



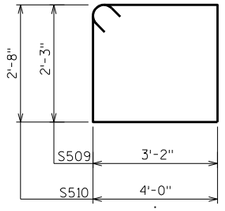
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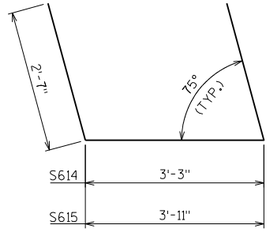
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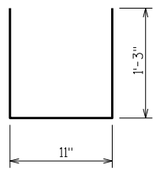
S507;S508



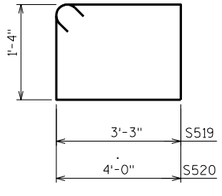
S509,S510



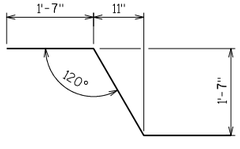
S614;S615



S416



S519,S520



SS901

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

SUPERSTRUCTURE DETAILS

SHEET 13

699

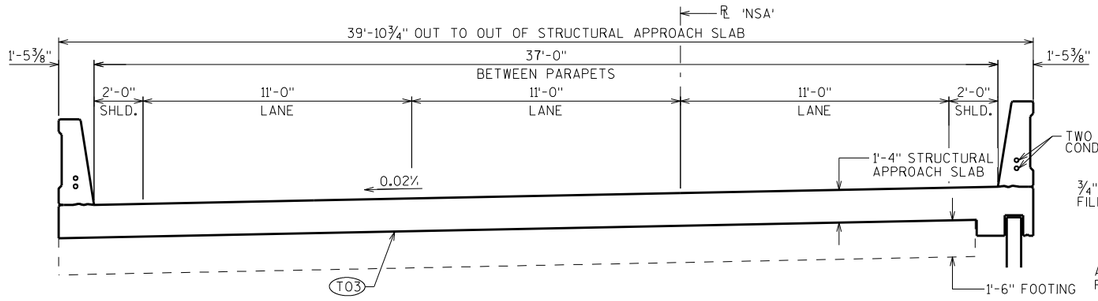
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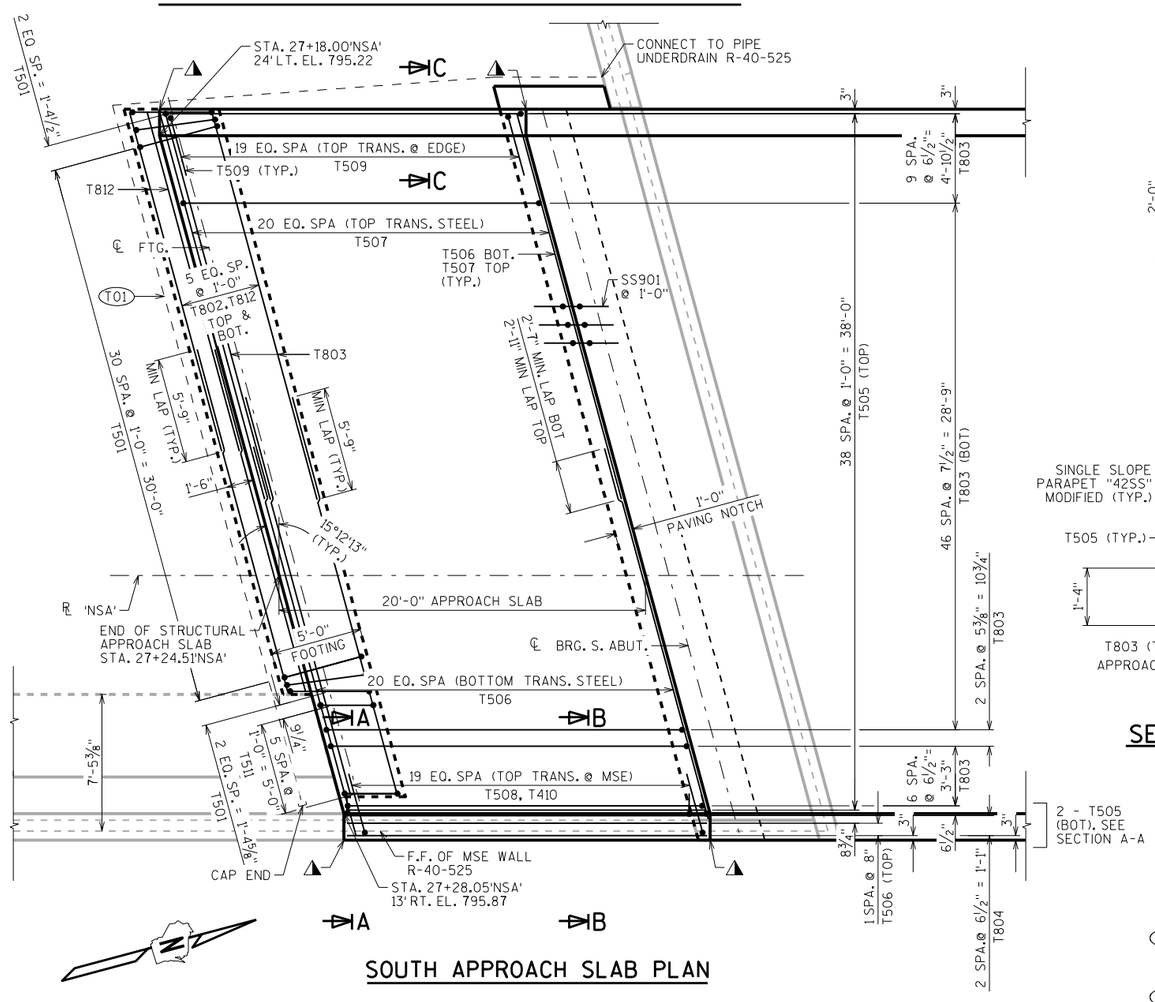
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STATE PROJECT NUMBER

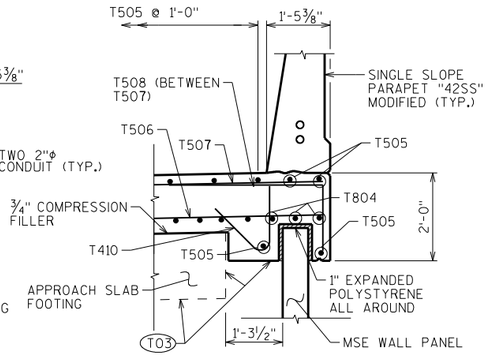
1060-33-78



CROSS SECTION THRU ROADWAY - LOOKING NORTH



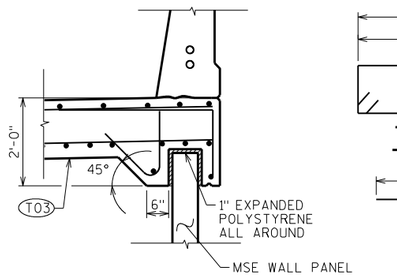
SOUTH APPROACH SLAB PLAN



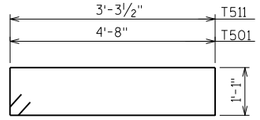
SECTION A-A

BILL OF BARS

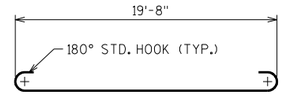
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
T501	X	35	12'-1"	X		FOOTING STIRRUP
T802	X	16	22'-2"			FOOTING - TRANSVERSE - HORIZ.
T803	X	64	21'-6"	X		APPROACH SLAB - LONGIT. - BOTTOM
T804	X	3	19'-8"			APPROACH SLAB - LONGIT. - BOTTOM - WALL
T505	X	43	19'-6"			APPROACH SLAB - LONGIT. - TOP
T506	X	42	21'-10"			APPROACH SLAB - TRANS. - BOT.
T507	X	42	22'-0"			APPROACH SLAB - TRANS. - TOP.
T508	X	20	5'-0"	X		APPROACH SLAB - TRANS. - TOP. - WALL
T509	X	20	4'-1"	X		APPROACH SLAB - TRANS. - TOP. - EDGE
T410	X	21	3'-0"	X		APPROACH SLAB - TRANS. WALL
T511	X	6	9'-4"	X		FOOTING STIRRUP - NOTCH
T812	X	8	19'-6"			FOOTING - TRANSVERSE - HORIZ. - NOTCH



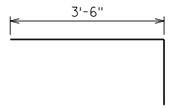
SECTION B-B



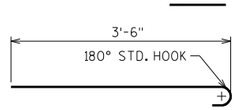
T501, T511



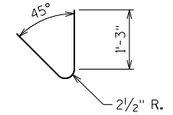
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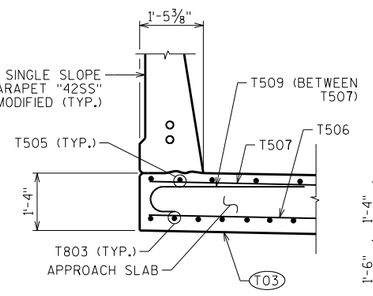
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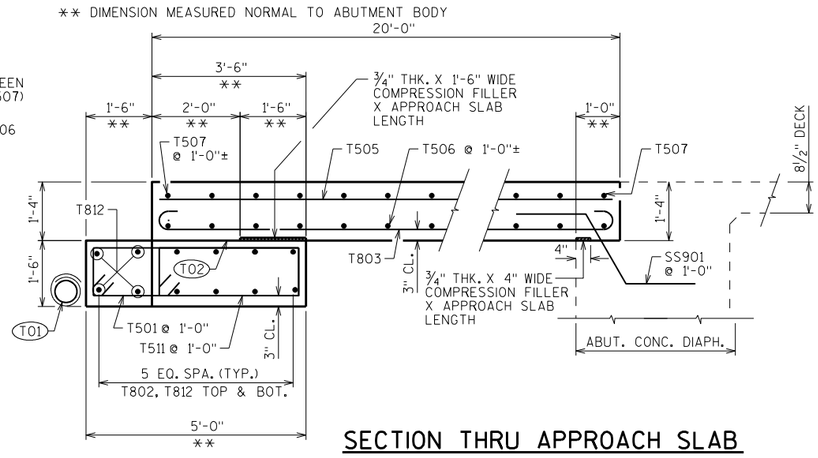
T509



T410



SECTION C-C



SECTION THRU APPROACH SLAB

(T01) PIPE UNDERDRAIN WRAPPED (6-INCH) AT APPROACH SLAB. LOCATED ONLY ON THE UPHILL SIDE OF APPROACH SLAB FOOTING. SLOPE 0.05% MINIMUM AND CONNECT TO PIPE UNDERDRAIN OF R-40-525.

(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.)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

STRUCTURAL APPROACH SLAB-SOUTH ABUTMENT

SHEET 14

700

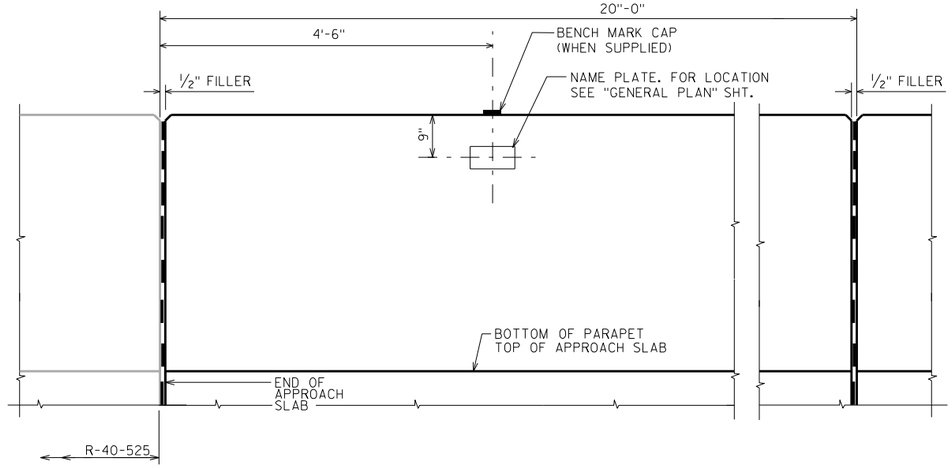
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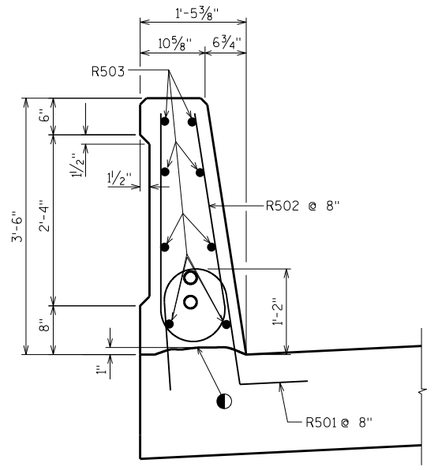
8

STATE PROJECT NUMBER

1060-33-78



INSIDE ELEVATION



SECTION C-C

NOTES

BID ITEMS SHALL BE:

"CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH"
"CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH".

REINFORCED THERMOSETTING RESIN CONDUIT (RTRC) EXPANSION FITTING WITH 4" TOTAL CONDUIT MOVEMENT. EXPANSION FITTINGS TO BE INCIDENTAL TO "CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH".

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

▽ R501 BARS TO BE TIED TO APPROACH SLAB STEEL BEFORE IT IS POURED.

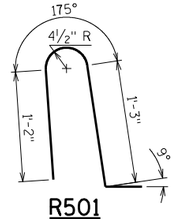
◭ SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMIONS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

■ USE 2"ϕ RIGID NONMETALLIC CONDUIT EXCEPT AT EXPANSION FITTING. AT EXPANSION FITTING USE REINFORCED THERMOSETTING RESIN CONDUIT 5'-0" INTO PARAPET ON DECK SIDE AND THRU PARAPET ON APPROACH SLAB.

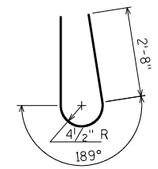
BILL OF BARS

FOR ABUTMENT PARAPETS

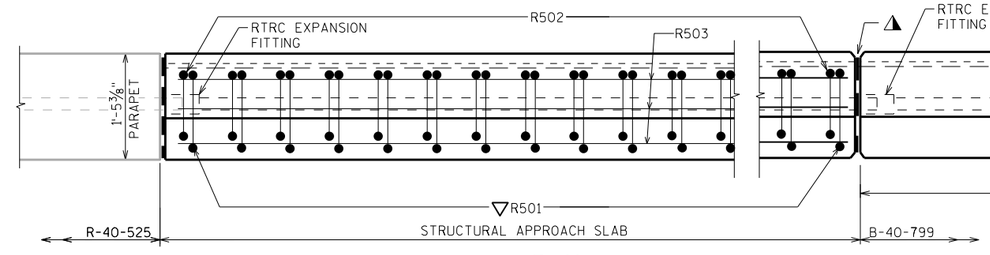
BAR MARK	COAT	S. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	60	4-5	X		PARAPET VERT.
R502	X	60	6-8	X		PARAPET VERT.
R503	X	16	19-7			PARAPET HORIZ.



R501



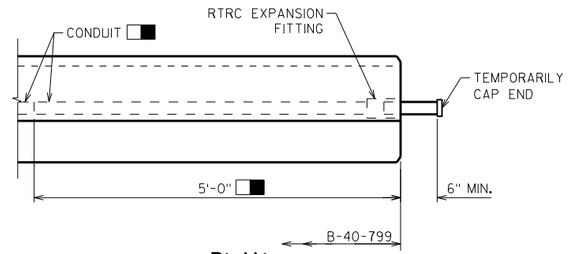
R502



PLAN

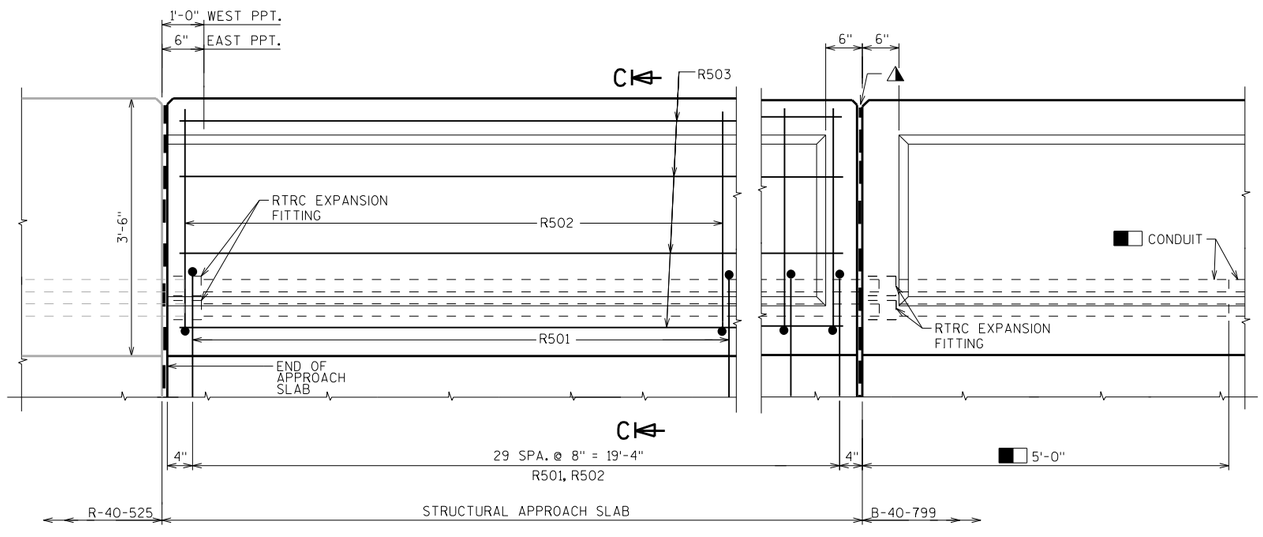
CONDUIT DETAILS FOR EAST PARAPET AT SOUTH APPROACH SLAB

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.



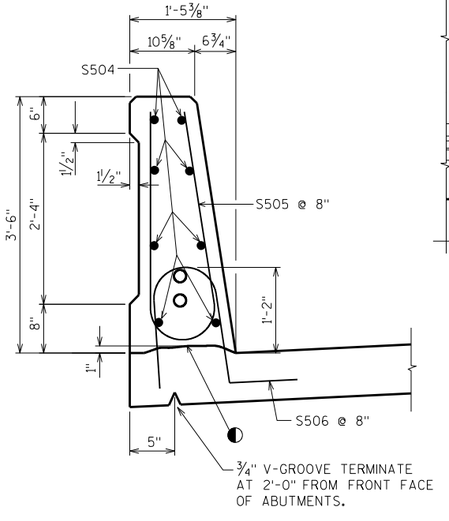
PLAN

CONDUIT DETAILS FOR PARAPET AT NORTH ABUTMENT

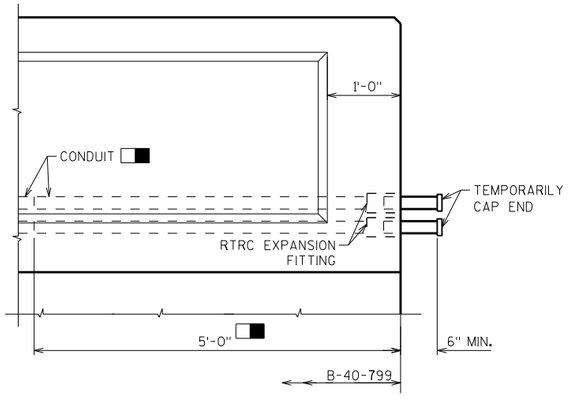


OUTSIDE ELEVATION

CONDUIT DETAILS FOR EAST PARAPET AT SOUTH APPROACH SLAB



SECTION THRU PARAPET ON BRIDGE



OUTSIDE ELEVATION

CONDUIT DETAILS FOR PARAPET AT NORTH ABUTMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

SINGLE SLOPE PARAPET 42SS (MODIFIED)

SHEET 15

701

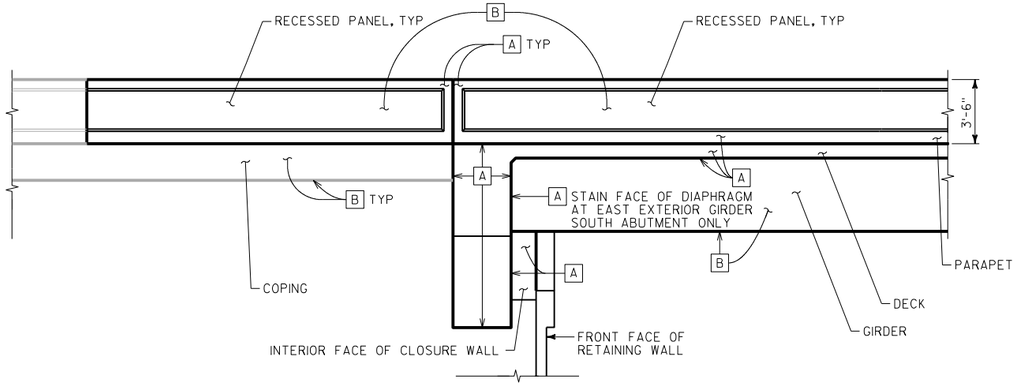
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8

8

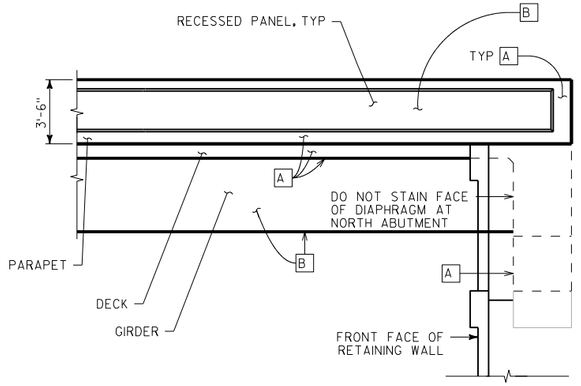
STATE PROJECT NUMBER

1060-33-78



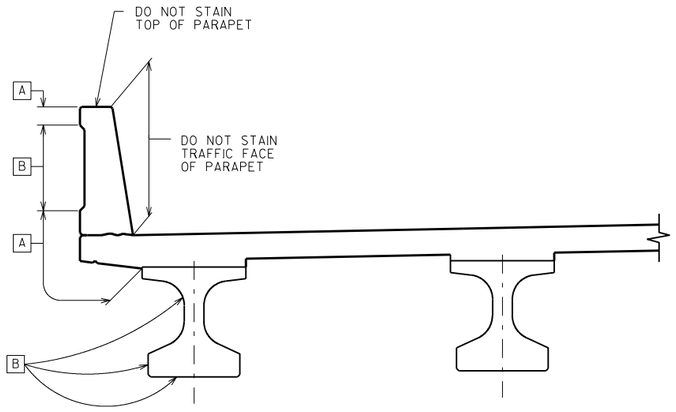
OUTSIDE ELEVATION OF PARAPET & SOUTH APPROACH SLAB

(LOOKING WEST)

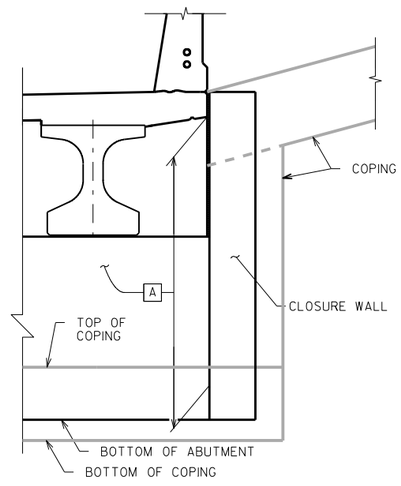


OUTSIDE ELEVATION OF PARAPET AT NORTH ABUTMENT

(LOOKING WEST)



ELEVATION OF DECK



ELEVATION OF CLOSURE WALL

(LOOKING SOUTH)

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
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 - #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
STRUCTURES DESIGN SECTION

STRUCTURE B-40-799

DRAWN BY RAC | PLANS CK'D. DFD

AESTHETIC DETAILS

SHEET 16

702

SCALE = 4:1

STATE PROJECT NUMBER
1060-33-78

LIST OF DRAWINGS

1. SITE PLAN
2. PLAN & ELEVATION (1 OF 3)
3. PLAN & ELEVATION (2 OF 3)
4. PLAN & ELEVATION (3 OF 3)
5. GENERAL NOTES, QUANTITIES AND CULVERT ALIGNMENT
6. EXCAVATION & BACKFILL LIMITS & MISC. DETAILS
7. CONSTRUCTION STAGING (1 OF 10)
8. CONSTRUCTION STAGING (2 OF 10)
9. CONSTRUCTION STAGING (3 OF 10)
10. CONSTRUCTION STAGING (4 OF 10)
11. CONSTRUCTION STAGING (5 OF 10)
12. CONSTRUCTION STAGING (6 OF 10)
13. CONSTRUCTION STAGING (7 OF 10)
14. CONSTRUCTION STAGING (8 OF 10)
15. CONSTRUCTION STAGING (9 OF 10)
16. CONSTRUCTION STAGING (10 OF 10)
17. TYPICAL SECTION
18. BOX CULVERT BARREL DETAILS 40' SECTION
19. BOX CULVERT BARREL DETAILS 25' SECTION
20. JUNCTION CHAMBER "JC-A" PLAN
21. JUNCTION CHAMBER "JC-A" DETAILS (1 OF 3)
22. JUNCTION CHAMBER "JC-A" DETAILS (2 OF 3)
23. JUNCTION CHAMBER "JC-A" DETAILS (3 OF 3)
24. JUNCTION CHAMBER "JC-B" DETAILS (1 OF 2)
25. JUNCTION CHAMBER "JC-B" DETAILS (2 OF 2)
26. JUNCTION CHAMBER "JC-C" DETAILS (1 OF 2)
27. JUNCTION CHAMBER "JC-C" DETAILS (2 OF 2)
28. JUNCTION CHAMBER "JC-D" DETAILS (1 OF 2)
29. JUNCTION CHAMBER "JC-D" DETAILS (2 OF 2)
30. JUNCTION CHAMBER "JC-E" DETAILS (1 OF 2)
31. JUNCTION CHAMBER "JC-E" DETAILS (2 OF 2)
32. JUNCTION CHAMBER "JC-F" DETAILS (1 OF 4)
33. JUNCTION CHAMBER "JC-F" DETAILS (2 OF 4)
34. JUNCTION CHAMBER "JC-F" DETAILS (3 OF 4)
35. JUNCTION CHAMBER "JC-F" DETAILS (4 OF 4)
36. SUBSURFACE EXPLORATION (1 OF 2)
37. SUBSURFACE EXPLORATION (2 OF 2)

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 05/07/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-40-892

IH-94 EB RAMPS, 84TH STREET/STH 181, KEARNEY STREET & PRIVATE PARKING LOT OVER HONEY CREEK

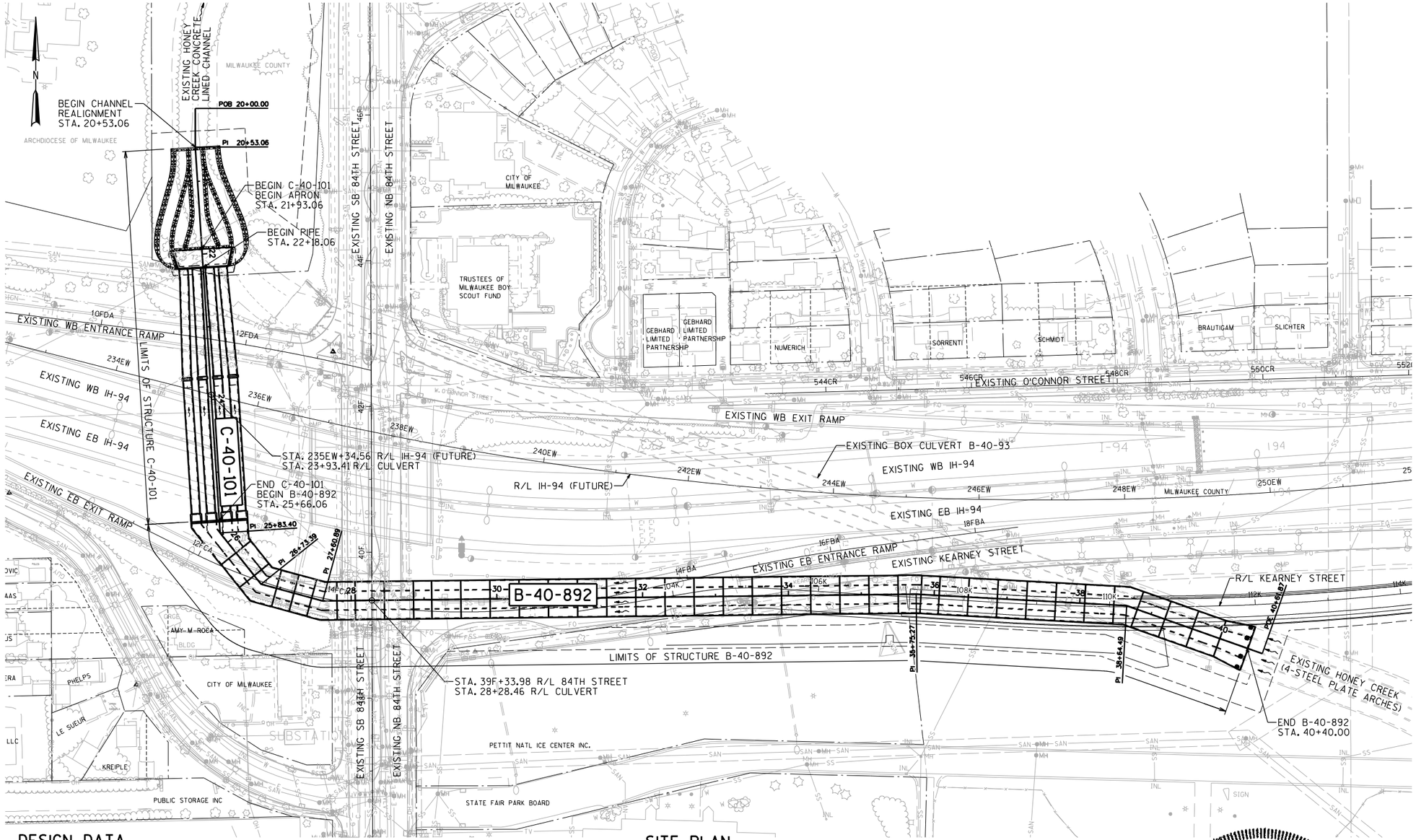
COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DAA	DESIGN CK'D.	BJM	DRAWN BY	TJC	PLANS CK'D.	BKS

SHEET 1 OF 37

SITE PLAN



SITE PLAN

DESIGN DATA

LIVE LOAD:
- DESIGN LOADING: HL-93
- INVENTORY RATING FACTOR: RF = 1.05
- OPERATING RATING FACTOR: RF = 1.35
- WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 255 KIPS

EARTH LOAD:
- JC-A - DESIGNED FOR 18 FEET FILL
- BARREL SECTION 1 - DESIGNED FOR 15 FEET FILL
- BARREL SECTION 7 THRU 23 - DESIGNED FOR 13 FEET FILL
- JC-D - DESIGNED FOR 10 FEET FILL
- BARREL SECTION 2 THRU 6, 24 THRU 30, JC-B, JC-C - DESIGNED FOR 9 FEET FILL
- JC-E - DESIGNED FOR 6 FEET FILL
- BARREL SECTION 31 THRU 33 - DESIGNED FOR 5.5 FEET FILL
- JC-F - DESIGNED FOR 5 FEET FILL

ULTIMATE DESIGN STRESSES:
- CONCRETE MASONRY ..... f'c = 3,500 psi
- BAR STEEL REINFORCEMENT ..... fy = 60,000 psi

HYDRAULIC DATA

BASE FLOOD
Q100 = 2,340 C.F.S.
V100 = 6.3 F.P.S.
* HW100 = EL. 698.19 (NAVD88) = EL. 698.50 (NGVD29)
Q2 = 1,160 C.F.S.
** HW2 = EL. 693.64 (NAVD88) = EL. 693.95 (NGVD29)
WATERWAY AREA = 373 S.F. (Q100)
DRAINAGE AREA = 9.2 SQ. MI.
SCOUR CODE 8
OVERTOPING FLOOD
ROAD OVERTOPPING = N/A

* 238'± UPSTREAM FROM STA. 40+40
** AT STA. 40+00

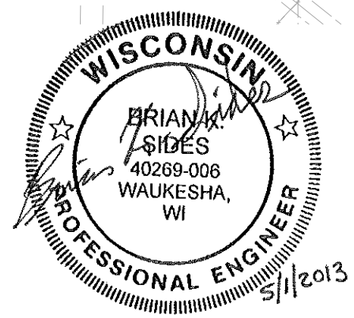
TRAFFIC DATA

RAMP FB
A.D.T. = 7,600 (2010)
A.D.T. = 9,400 (2035)
R.D.S. = 30 MPH

RAMP FC
A.D.T. = 7,200 (2010)
A.D.T. = 9,400 (2035)
R.D.S. = 30 MPH

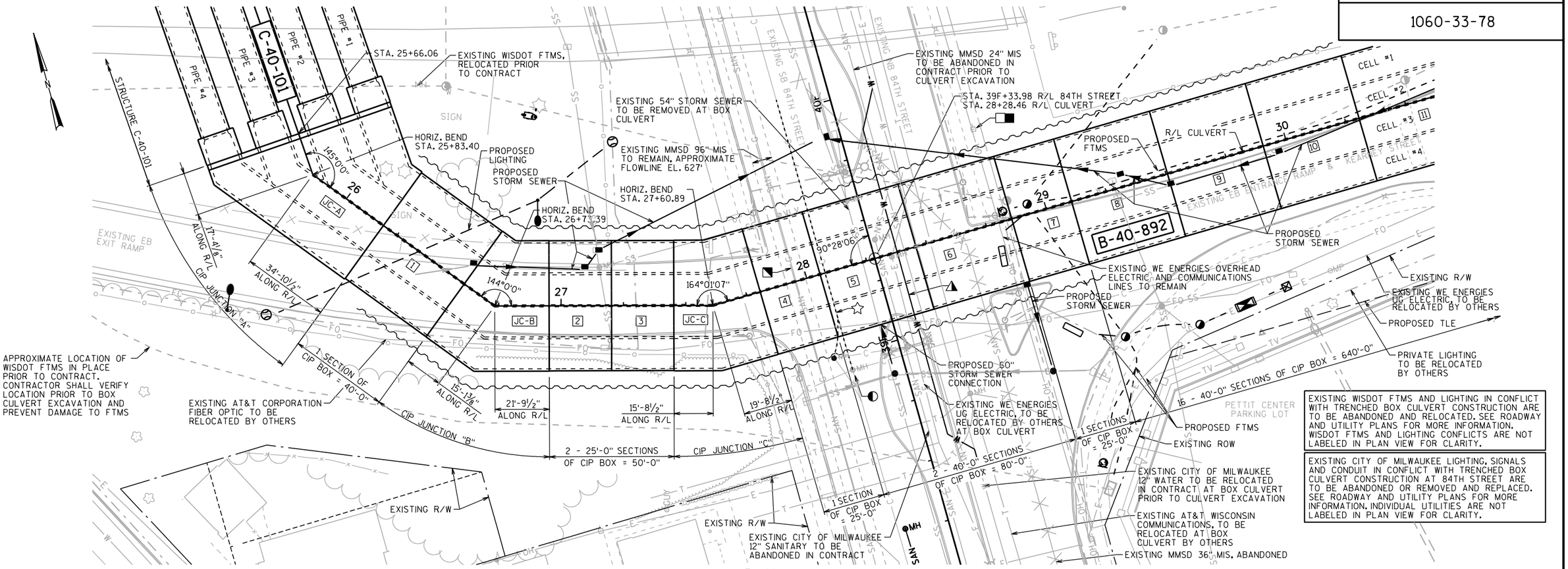
84TH STREET
A.D.T. = 16,900 (2010)
A.D.T. = 22,500 (2035)
R.D.S. = 35 MPH

KEARNEY STREET
A.D.T. = 1,900 (2008)
A.D.T. = 3,700 (2035)
R.D.S. = 35 MPH



FILE NAME : \\Wke31fp1\w3zoo\Cadd\Final\10603378_TL\Structs\B-40-892 Box Culvert\cds\B400892_080101_sp.dgn
PLOT DATE : 01-MAY-2013 11:19
PLOT BY : MSCBKS
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PLOT SCALE : 150:1

STATE PROJECT NUMBER
1060-33-78

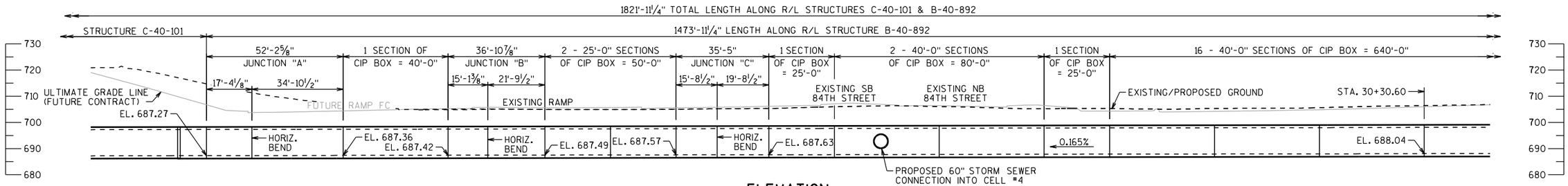


EXISTING WISDOT FTMS AND LIGHTING IN CONFLICT WITH TRENCHED BOX CULVERT CONSTRUCTION ARE TO BE ABANDONED AND RELOCATED. SEE ROADWAY AND UTILITY PLANS FOR MORE INFORMATION. WISDOT FTMS AND LIGHTING CONFLICTS ARE NOT LABELED IN PLAN VIEW FOR CLARITY.

EXISTING CITY OF MILWAUKEE LIGHTING, SIGNALS AND CONDUIT IN CONFLICT WITH TRENCHED BOX CULVERT CONSTRUCTION AT 84TH STREET ARE TO BE ABANDONED OR REMOVED AND REPLACED. SEE ROADWAY AND UTILITY PLANS FOR MORE INFORMATION. INDIVIDUAL UTILITIES ARE NOT LABELED IN PLAN VIEW FOR CLARITY.

PLAN

TEMPORARY RAMP ALIGNMENTS AND PROPOSED RAMP PAVEMENT REPLACEMENT ARE NOT SHOWN FOR CLARITY, SEE ROADWAY PLANS FOR DETAILS.



ELEVATION

ELEVATIONS GIVEN AT FLOWLINE

LEGEND

- [X] BARREL SECTION NUMBER
- [JC-X] JUNCTION CHAMBER DESIGNATION
- ASSUMED LOCATION WHERE TEMPORARY SHORING MAY BE REQUIRED, SEE CONSTRUCTION STAGING SHEETS FOR LIMITATIONS ON THE PLACEMENT OF TEMPORARY SHORING. THE TYPE AND LOCATION OF TEMPORARY SHORING TO BE DETERMINED BY THE CONTRACTOR.
- EXISTING WE ENERGIES POWER POLE, TO REMAIN
- PROPOSED CITY OF MILWAUKEE 12" WATER MAIN
- EXISTING WE ENERGIES 8" GAS MAIN TO BE TEMPORARILY ABANDONED DURING CULVERT CONSTRUCTION AND THEN RECONNECTED BY OTHERS.
- EXISTING CITY OF MILWAUKEE COMMUNICATIONS TO BE TEMPORARILY ABANDONED DURING CULVERT CONSTRUCTION AND THEN RECONNECTED.
- EXISTING CITY OF MILWAUKEE COMMUNICATIONS MANHOLE, TO REMAIN.

NOTE

EXISTING KNOWN UTILITIES, STORM SEWERS, MANHOLES AND CONDUITS THAT ARE RELOCATED OR ABANDONED AT THE BOX CULVERT, WILL BE REMOVED WITH THE BOX CULVERT EXCAVATION. UNLESS INDICATED ON OTHER ROADWAY, STORM SEWER, OR UTILITY PLAN SHEETS, THE PAYMENT FOR REMOVAL OF THESE ITEMS IS INCLUDED WITH THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS B-40-892".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

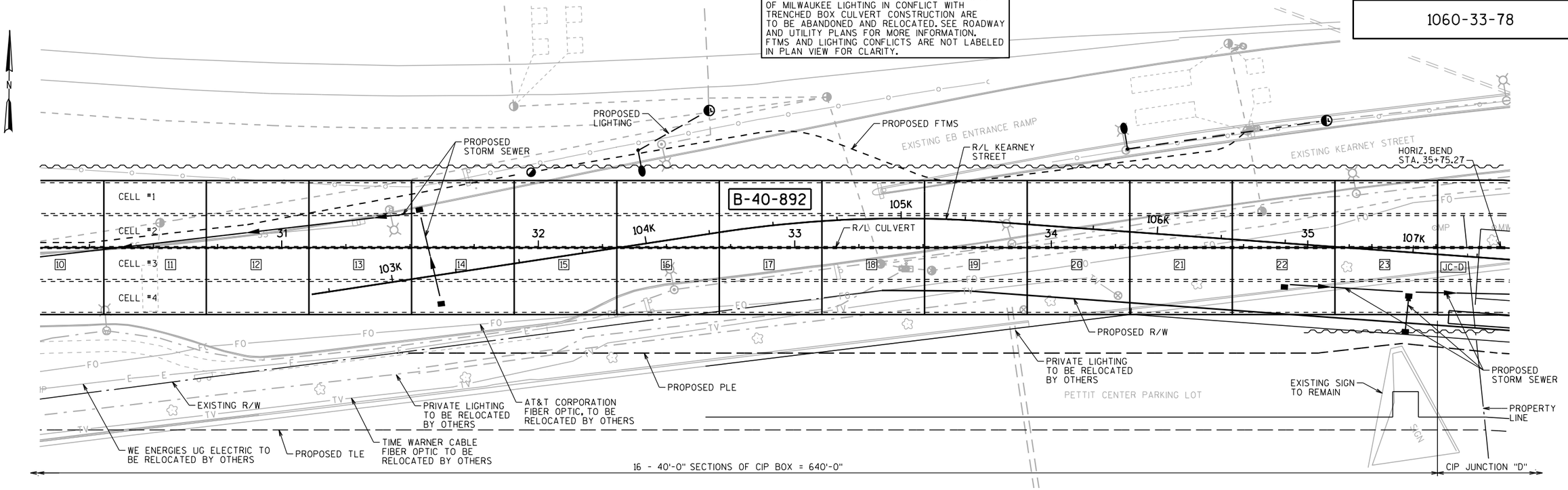
PLAN AND ELEVATION (1 OF 3)

SHEET 2 OF 37

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PLOT BY : MSCBKS
PLOT NAME : B400892_080102_gp
PLOT SCALE : 40:1

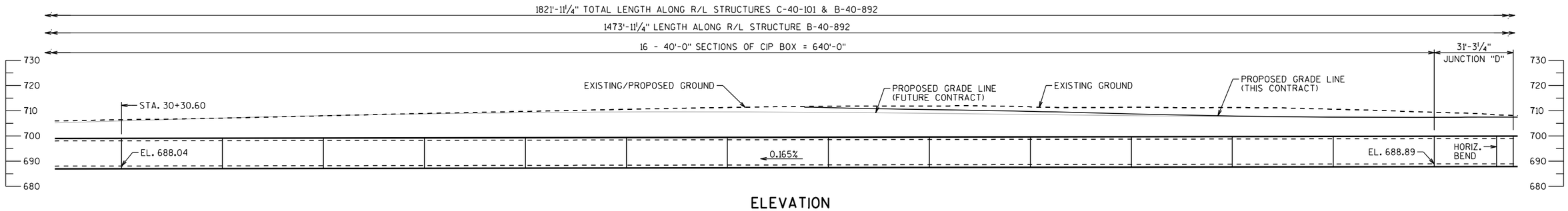
STATE PROJECT NUMBER
1060-33-78

EXISTING WISDOT FTMS AND LIGHTING AND CITY OF MILWAUKEE LIGHTING IN CONFLICT WITH TRENCHED BOX CULVERT CONSTRUCTION ARE TO BE ABANDONED AND RELOCATED. SEE ROADWAY AND UTILITY PLANS FOR MORE INFORMATION. FTMS AND LIGHTING CONFLICTS ARE NOT LABELED IN PLAN VIEW FOR CLARITY.



PLAN

TEMPORARY RAMP ALIGNMENTS AND PROPOSED RAMP PAVEMENT REPLACEMENT ARE NOT SHOWN FOR CLARITY, SEE ROADWAY PLANS FOR DETAILS.



ELEVATION

ELEVATIONS GIVEN AT FLOWLINE

LEGEND

- [X] BARREL SECTION NUMBER
- [JC-X] JUNCTION CHAMBER DESIGNATION
- ASSUMED LOCATION WHERE TEMPORARY SHORING MAY BE REQUIRED, SEE CONSTRUCTION STAGING SHEETS FOR LIMITATIONS ON THE PLACEMENT OF TEMPORARY SHORING. THE TYPE AND LOCATION OF TEMPORARY SHORING TO BE DETERMINED BY THE CONTRACTOR.

NOTE

EXISTING KNOWN UTILITIES, STORM SEWERS, MANHOLES AND CONDUITS THAT ARE RELOCATED OR ABANDONED AT THE BOX CULVERT, WILL BE REMOVED WITH THE BOX CULVERT EXCAVATION. UNLESS INDICATED ON OTHER ROADWAY, STORM SEWER, OR UTILITY PLAN SHEETS, THE PAYMENT FOR REMOVAL OF THESE ITEMS IS INCLUDED WITH THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS B-40-892".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

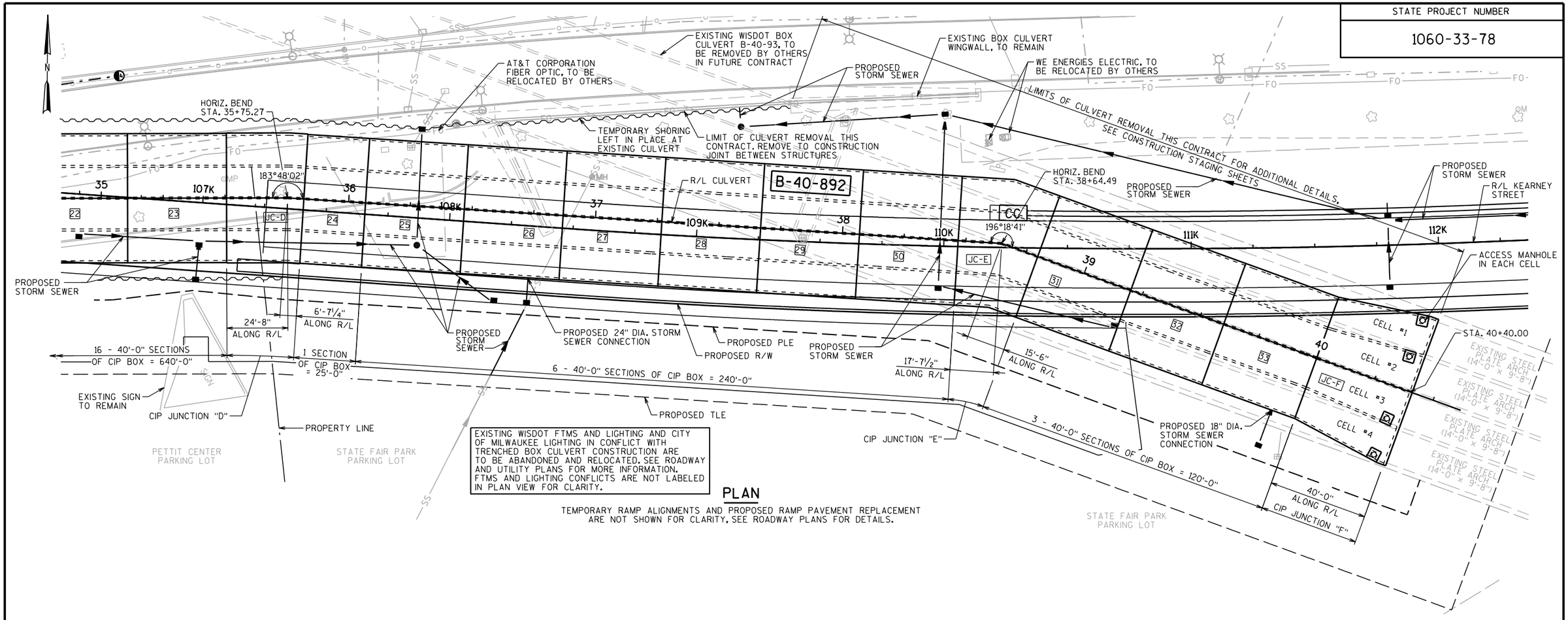
PLAN AND ELEVATION (2 OF 3)

SHEET 3 OF 37

8

8

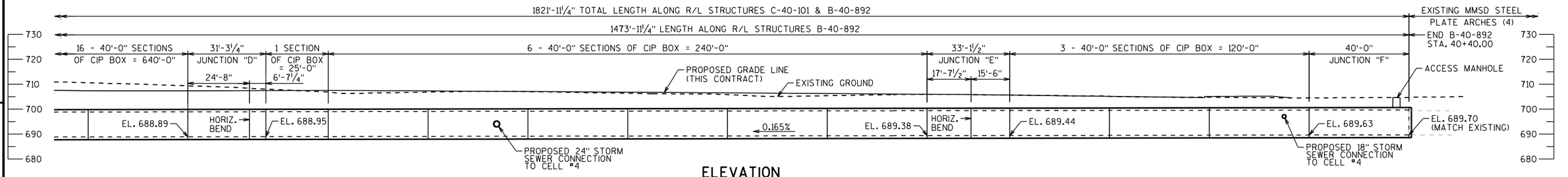
STATE PROJECT NUMBER
1060-33-78



EXISTING WISDOT FTMS AND LIGHTING AND CITY OF MILWAUKEE LIGHTING IN CONFLICT WITH TRENCHED BOX CULVERT CONSTRUCTION ARE TO BE ABANDONED AND RELOCATED. SEE ROADWAY AND UTILITY PLANS FOR MORE INFORMATION. FTMS AND LIGHTING CONFLICTS ARE NOT LABELED IN PLAN VIEW FOR CLARITY.

PLAN

TEMPORARY RAMP ALIGNMENTS AND PROPOSED RAMP PAVEMENT REPLACEMENT ARE NOT SHOWN FOR CLARITY. SEE ROADWAY PLANS FOR DETAILS.



ELEVATION

ELEVATIONS GIVEN AT FLOWLINE

LEGEND

- [X] BARREL SECTION NUMBER
- [JC-X] JUNCTION CHAMBER DESIGNATION
- ~~~ ASSUMED LOCATION WHERE TEMPORARY SHORING MAY BE REQUIRED, SEE CONSTRUCTION STAGING SHEETS FOR LIMITATIONS ON THE PLACEMENT OF TEMPORARY SHORING. THE TYPE AND LOCATION OF TEMPORARY SHORING TO BE DETERMINED BY THE CONTRACTOR.

NOTE

EXISTING KNOWN UTILITIES, STORM SEWERS, MANHOLES AND CONDUITS THAT ARE RELOCATED OR ABANDONED AT THE BOX CULVERT, WILL BE REMOVED WITH THE BOX CULVERT EXCAVATION. UNLESS INDICATED ON OTHER ROADWAY, STORM SEWER, OR UTILITY PLAN SHEETS, THE PAYMENT FOR REMOVAL OF THESE ITEMS IS INCLUDED WITH THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS B-40-892".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

PLAN AND ELEVATION (3 OF 3)

SHEET 4 OF 37

8

8

STATE PROJECT NUMBER
1060-33-78

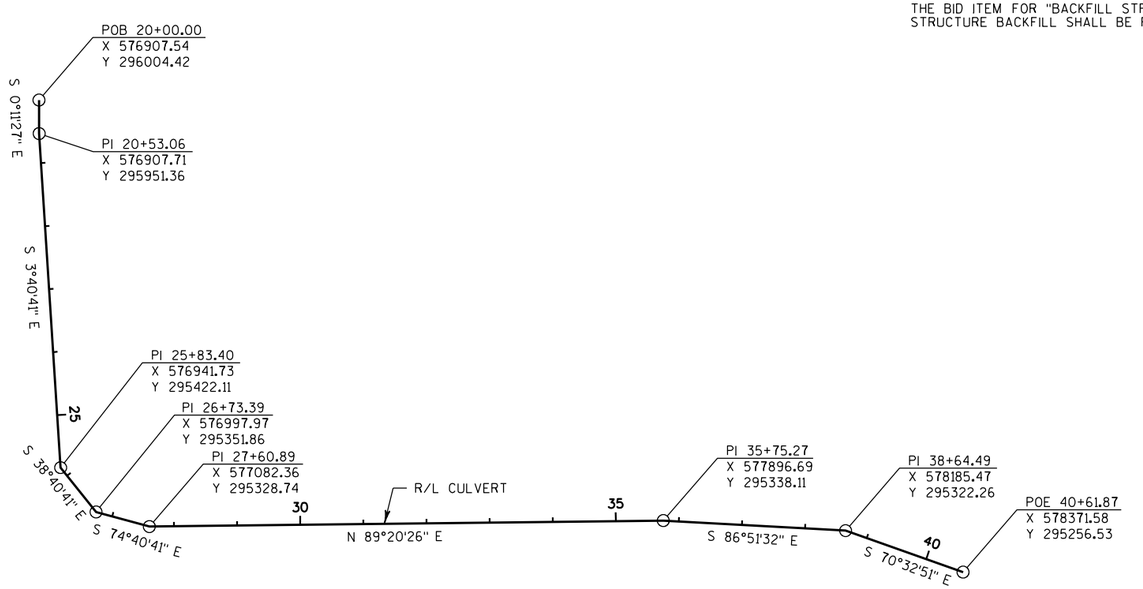
TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTAL
203.0200	REMOVING OLD STRUCTURE 40+40.00	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS B-40-892	LS	1
210.0100	BACKFILL STRUCTURE	CY	19,800
504.0100	CONCRETE MASONRY CULVERTS	CY	8,716
505.0410	BAR STEEL REINFORCEMENT HS CULVERTS	LB	1,379,700
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	615
611.0535	MANHOLE COVERS TYPE J-SPECIAL	EACH	4
645.0105	GEOTEXTILE FABRIC TYPE C	SY	10,150
SPV.0165.0010	TEMPORARY SHORING LEFT IN PLACE	SF	2,520

ALL ITEMS ARE CATEGORY 2020

FOUNDATION DATA

FOUNDATION SOILS SUITABLE FOR SUPPORT OF THE BOX CULVERT SHALL BE VERIFIED BY THE ENGINEER IMMEDIATELY PRIOR TO PLACEMENT OF THE GEOTEXTILE FABRIC AND STRUCTURE BACKFILL. COHESIVE SUBGRADE SOILS SHALL EXHIBIT A MINIMUM UNCONFINED COMPRESSIVE STRENGTH OF 1.5 TONS PER SQUARE FOOT. GRANULAR SOILS SHALL EXHIBIT AN EQUIVALENT STANDARD PENETRATION TEST N-VALUE OF AT LEAST 13 BLOWS PER FOOT. IF SUITABLE FOUNDATION SOILS ARE NOT ENCOUNTERED AT THE PLANNED FOUNDATION SUBGRADE, A SUITABLE FOUNDATION SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.



HORIZONTAL CULVERT ALIGNMENT

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012.

DRAWINGS SHALL NOT BE SCALED.

THE TERM "FUTURE" IN THIS PLAN SET REFERS TO IMPROVEMENTS THAT WILL OCCUR IN FUTURE CONTRACTS.

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.

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).

A NAME PLATE WILL NOT BE REQUIRED ON STRUCTURE B-40-892.

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.

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 CONCRETE QUANTITY FOR ALL JUNCTION CHAMBERS AND ALL BARREL SECTIONS IS INCLUDED IN THE BID ITEM FOR "CONCRETE MASONRY CULVERTS".

ESTIMATED CONCRETE QUANTITY:

JC-A.....427 CYD
JC-B.....206 CYD
JC-C.....197 CYD
JC-D.....176 CYD
JC-E.....182 CYD
JC-F.....267 CYD
40' BARREL SECTION.....6553 CYD FOR 28 BARREL SECTIONS
25' BARREL SECTION.....708 CYD FOR 5 BARREL SECTIONS

THE BAR STEEL REINFORCEMENT QUANTITY FOR ALL JUNCTION CHAMBERS AND ALL BARREL SECTIONS IS INCLUDED IN THE BID ITEM FOR "BAR STEEL REINFORCEMENT HS CULVERTS".

IN ADDITION TO THE INFORMATION PROVIDED ON THE SUBSURFACE EXPLORATION SHEETS, THE GEOTECHNICAL ENGINEERING REPORT CONTAINS ADDITIONAL SOIL BORING INFORMATION ALONG WITH GROUNDWATER CONDITIONS AND CONSTRUCTION CONSIDERATIONS FOR TEMPORARY SHORING AND EXCAVATION.

THE BID ITEM FOR "BACKFILL STRUCTURE" WILL BE PAID FOR AT THE PLAN QUANTITY. STRUCTURE BACKFILL SHALL BE PROVIDED AT LOCATIONS SHOWN IN THIS PLAN SET.

GENERAL NOTES, CONTINUED

PAYMENT FOR CULVERT EXCAVATION, TEMPORARY SHORING AND THE REMOVAL OF EXISTING UTILITIES, ABANDONED UTILITIES, CONDUITS, CABLES, WIRES, AND STORM SEWERS IN THE EXCAVATED TRENCH ARE ALL INCLUDED WITH THE BID ITEM "EXCAVATION FOR STRUCTURES CULVERTS B-40-892". SEPERATE PAYMENT WILL NOT BE MADE FOR REMOVAL OF UTILTIES OR STORM SEWERS, EXCEPT AS STATED ELSEWHERE IN THE PLAN SET. THE CONSTRUCTION STAGING SHEETS HAS A LIST OF KNOWN UTILITIES THAT WILL BE ENCOUNTERED IN THE EXCAVATION AT 84TH STREET. THE PAYMENT FOR THE EXCAVATION OF THE SOILS OUTLINED IN THE SPECIAL PROVISIONS FOR "LOADING, HAULING, AND DISPOSAL OF PETROLEUM-CONTAMINATED SOIL" AND "LOADING, HAULING, AND REUSE OF SOLID WASTE SOIL" IS INCLUDED WITH THE BID ITEM "EXCAVATION FOR STRUCTURES CULVERTS B-40-892".

THE AREAS NOT OCCUPIED BY THE BOX CULVERT OR STRUCTURE BACKFILL SHALL BE BACKFILLED WITH MATERIAL TAKEN FROM THE CULVERT EXCAVATION EXCEPT AS OUTLINED IN THE SPECIAL PROVISIONS FOR "LOADING, HAULING, AND DISPOSAL OF PETROLEUM-CONTAMINATED SOIL" AND "LOADING, HAULING, AND REUSE OF SOLID WASTE SOIL". PAYMENT FOR FILL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES CULVERTS B-40-892". SEE ROADWAY PLANS FOR EARTHWORK DATA SHEETS, EARTHWORK SUMMARY SHEETS AND "FOR INFORMATION ONLY" CROSS SECTIONS ALONG THE LENGTH OF THE BOX CULVERT.

THE CONTRACTOR MAY FURNISH A PRECAST CONCRETE BOX CULVERT IN LIEU OF THE CAST-IN-PLACE BOX CULVERT WITH THE ACCEPTANCE OF THE SHOP DRAWINGS BY THE STRUCTURES DESIGN SECTION. THE PRECAST CONCRETE BOX CULVERT SHALL CONFORM TO THE PRECAST DETAILS IN CHAPTER 36 STANDARDS OF THE CURRENT WISCONSIN DOT BRIDGE MANUAL. THE CONTRACTOR WILL BE RESPONSIBLE FOR DETAILING AND DESIGNING ALL NECESSARY CHANGES TO THE JUNCTION CHAMBERS, PAYMENT FOR THE PRECAST CULVERT SHALL BE BASED ON THE QUANTITIES AND BID PRICES FOR THE ITEMS LISTED IN THE "TOTAL ESTIMATED QUANTITIES". THE FOLLOWING LOADING CONDITIONS SHOULD BE USED WHEN DESIGNING THE PRECAST CONCRETE BOX CULVERT AND DESIGNING REVISED JUNCTIONS CHAMBERS:

LOCATION	DESIGN LOADS
JC-A	MINIMUM EARTH COVER OF 5 FEET WITH HL-93 LIVE LOAD MAXIMUM EARTH COVER OF 18 FEET WITH HL-93 LIVE LOAD
BARREL SECTION 1	MINIMUM EARTH COVER OF 4 FEET WITH HL-93 LIVE LOAD MAXIMUM EARTH COVER OF 15 FEET WITH HL-93 LIVE LOAD
BARREL SECTION 7 THRU 23	MINIMUM EARTH COVER OF 5 FEET WITH HL-93 LIVE LOAD MAXIMUM EARTH COVER OF 13 FEET WITH HL-93 LIVE LOAD
JC-D	MINIMUM EARTH COVER OF 6.5 FEET WITH HL-93 LIVE LOAD MAXIMUM EARTH COVER OF 10 FEET WITH HL-93 LIVE LOAD
BARREL SECTION 2 THRU 6, BARREL SECTION 24 THRU 30 JC-B, JC-C	MINIMUM EARTH COVER OF 5 FEET WITH HL-93 LIVE LOAD MAXIMUM EARTH COVER OF 9 FEET WITH HL-93 LIVE LOAD
JC-E	MINIMUM EARTH COVER OF 5 FEET WITH HL-93 LIVE LOAD MAXIMUM EARTH COVER OF 6 FEET WITH HL-93 LIVE LOAD
BARREL SECTION 31 THRU 33	MINIMUM EARTH COVER OF 3.5 FEET WITH HL-93 LIVE LOAD MAXIMUM EARTH COVER OF 5.5 FEET WITH HL-93 LIVE LOAD
JC-F	MINIMUM EARTH COVER OF 3.5 FEET WITH HL-93 LIVE LOAD MAXIMUM EARTH COVER OF 5 FEET WITH HL-93 LIVE LOAD

NO.	DATE	REVISION	BY

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STRUCTURE B-40-892

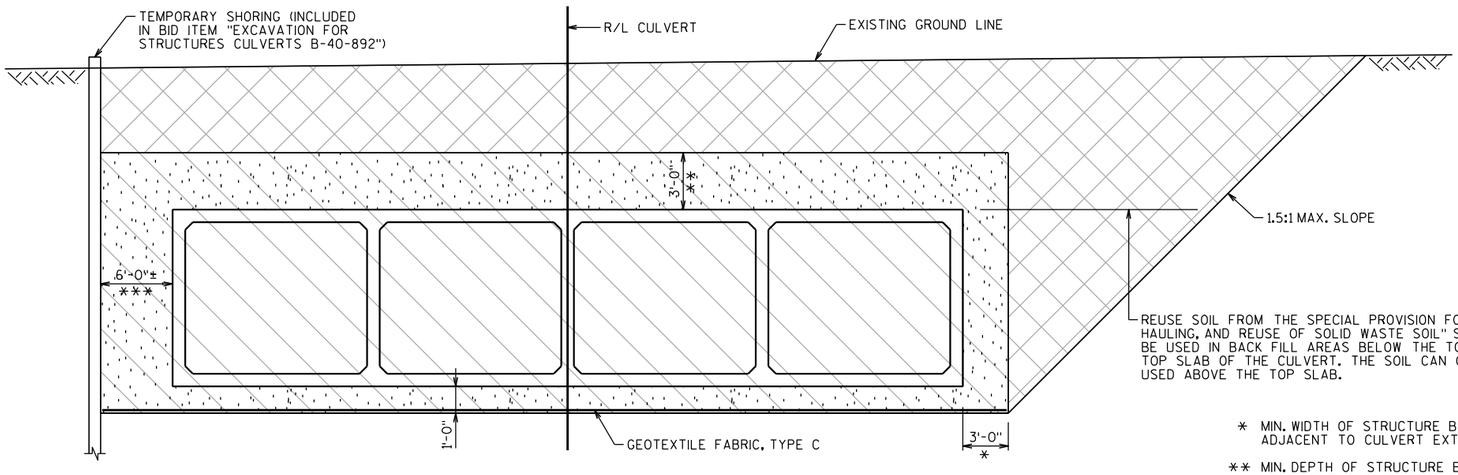
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GENERAL NOTES, QUANTITIES, AND CULVERT ALIGNMENT

SHEET 5 OF 37

FILE NAME : \\Wke31fp1\w3zoo\Cadd\Final\10603378_TL\Structs\B-40-892 Box Culvert\cds\B400892_080105_qu.dgn
PLOT DATE : 01-MAY-2013 11:20
PLOT BY : MSCBKS
PLOT NAME : B400892_080105_qu
PLOT SCALE : 8:1

STATE PROJECT NUMBER
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PART SECTION WITH TEMPORARY SHORING

PART SECTION WITH SLOPED EXCAVATION

CULVERT EXCAVATION & BACKFILL LIMITS DETAIL

LEGEND

LIMITS OF STRUCTURE EXCAVATION

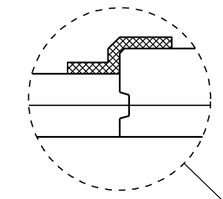
LIMITS OF STRUCTURE BACKFILL. UNDERCUT CULVERT 1'-0", PLACE GEOTEXTILE FABRIC TYPE 'C' AND BACKFILL WITH STRUCTURE BACKFILL

LIMITS OF ROADWAY FILL INCLUDED IN STRUCTURE EXCAVATION BID ITEM. SEE ROADWAY PLANS FOR THE "FOR INFORMATION ONLY" CROSS SECTIONS, EARTHWORK DATA SHEETS AND EARTHWORK SUMMARY SHEETS.

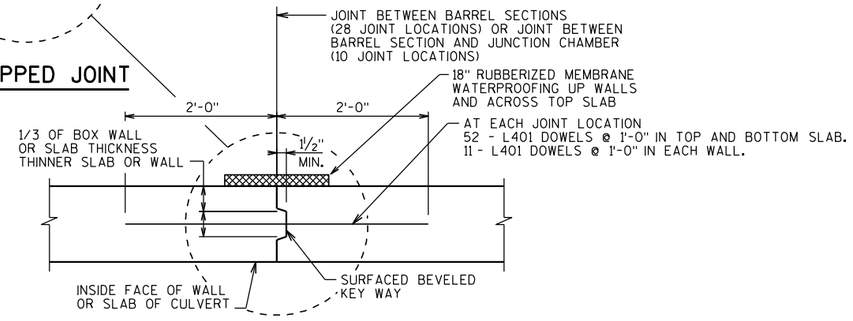
* MIN. WIDTH OF STRUCTURE BACKFILL REQUIRED ADJACENT TO CULVERT EXTERIOR WALL.

** MIN. DEPTH OF STRUCTURE BACKFILL REQUIRED ABOVE THE TOP SLAB OF CULVERT.

*** THE DIMENSION SHOWN IS THE DESIGNER'S ASSUMED LOCATION OF TEMPORARY SHORING AND ALSO THE BASIS FOR THE QUANTITY OF STRUCTURE BACKFILL. A 3'-0" MIN. WIDTH OF STRUCTURE BACKFILL IS REQUIRED ADJACENT TO THE CULVERT EXTERIOR WALL.



AT STEPPED JOINT



CONSTRUCTION JOINT DETAIL

IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY PROVIDE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

BILL OF BARS FOR CONSTRUCTION JOINT DOWELS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D EACH JOINT LOCATION	TOTAL NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
L401		159	6042	4'-0"			CONSTRUCTION JOINT DOWEL

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STRUCTURE B-40-892

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EXCAVATION & BACKFILL LIMITS & MISC. DETAILS

SHEET 6 OF 37

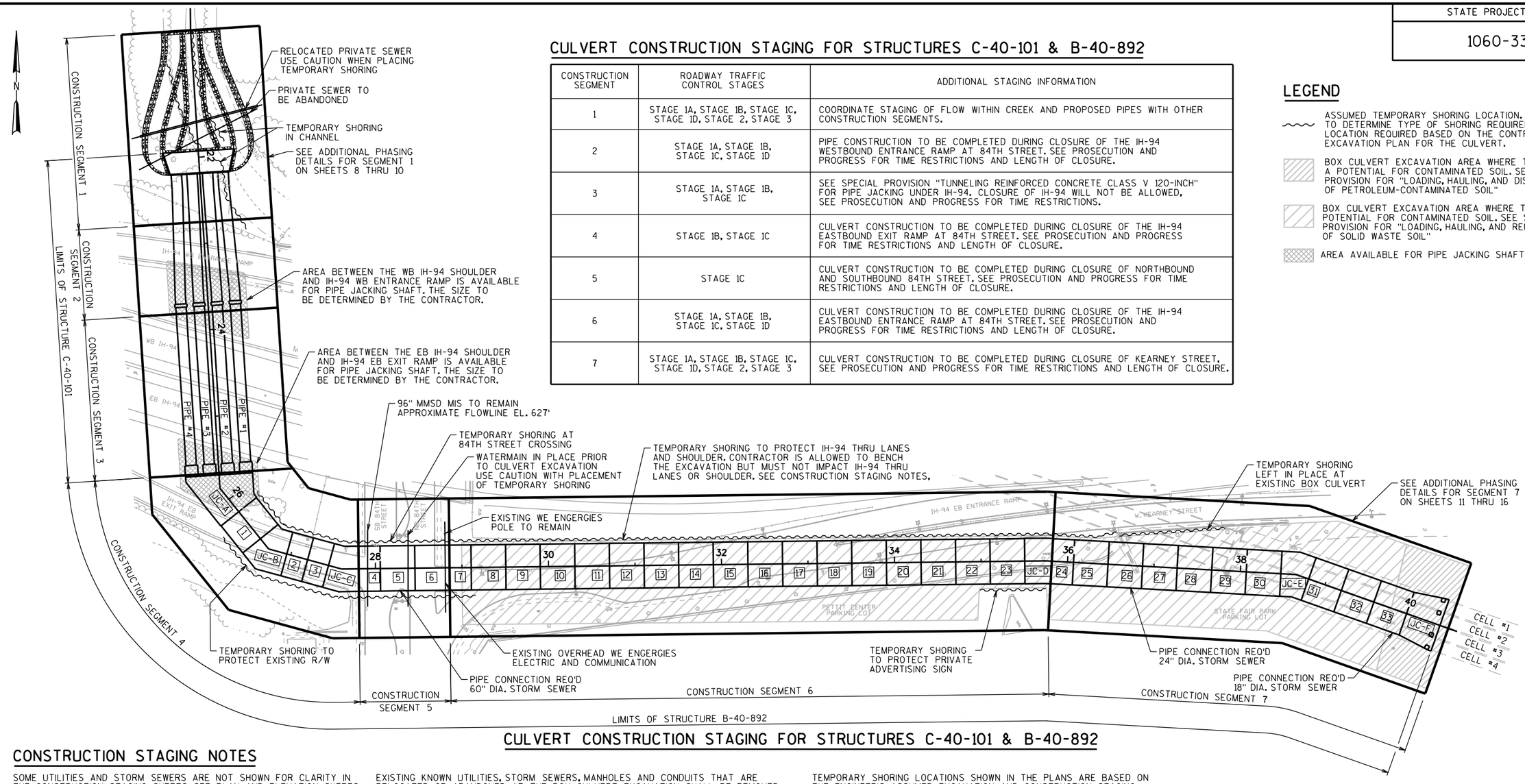
STATE PROJECT NUMBER
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CULVERT CONSTRUCTION STAGING FOR STRUCTURES C-40-101 & B-40-892

CONSTRUCTION SEGMENT	ROADWAY TRAFFIC CONTROL STAGES	ADDITIONAL STAGING INFORMATION
1	STAGE 1A, STAGE 1B, STAGE 1C, STAGE 1D, STAGE 2, STAGE 3	COORDINATE STAGING OF FLOW WITHIN CREEK AND PROPOSED PIPES WITH OTHER CONSTRUCTION SEGMENTS.
2	STAGE 1A, STAGE 1B, STAGE 1C, STAGE 1D	PIPE CONSTRUCTION TO BE COMPLETED DURING CLOSURE OF THE IH-94 WESTBOUND ENTRANCE RAMP AT 84TH STREET. SEE PROSECUTION AND PROGRESS FOR TIME RESTRICTIONS AND LENGTH OF CLOSURE.
3	STAGE 1A, STAGE 1B, STAGE 1C	SEE SPECIAL PROVISION "TUNNELING REINFORCED CONCRETE CLASS V 120-INCH" FOR PIPE JACKING UNDER IH-94. CLOSURE OF IH-94 WILL NOT BE ALLOWED, SEE PROSECUTION AND PROGRESS FOR TIME RESTRICTIONS.
4	STAGE 1B, STAGE 1C	CULVERT CONSTRUCTION TO BE COMPLETED DURING CLOSURE OF THE IH-94 EASTBOUND EXIT RAMP AT 84TH STREET. SEE PROSECUTION AND PROGRESS FOR TIME RESTRICTIONS AND LENGTH OF CLOSURE.
5	STAGE 1C	CULVERT CONSTRUCTION TO BE COMPLETED DURING CLOSURE OF NORTHBOUND AND SOUTHBOUND 84TH STREET. SEE PROSECUTION AND PROGRESS FOR TIME RESTRICTIONS AND LENGTH OF CLOSURE.
6	STAGE 1A, STAGE 1B, STAGE 1C, STAGE 1D	CULVERT CONSTRUCTION TO BE COMPLETED DURING CLOSURE OF THE IH-94 EASTBOUND ENTRANCE RAMP AT 84TH STREET. SEE PROSECUTION AND PROGRESS FOR TIME RESTRICTIONS AND LENGTH OF CLOSURE.
7	STAGE 1A, STAGE 1B, STAGE 1C, STAGE 1D, STAGE 2, STAGE 3	CULVERT CONSTRUCTION TO BE COMPLETED DURING CLOSURE OF KEARNEY STREET, SEE PROSECUTION AND PROGRESS FOR TIME RESTRICTIONS AND LENGTH OF CLOSURE.

LEGEND

- ASSUMED TEMPORARY SHORING LOCATION. CONTRACTOR TO DETERMINE TYPE OF SHORING REQUIRED AND LOCATION REQUIRED BASED ON THE CONTRACTOR'S EXCAVATION PLAN FOR THE CULVERT.
- BOX CULVERT EXCAVATION AREA WHERE THERE IS A POTENTIAL FOR CONTAMINATED SOIL. SEE SPECIAL PROVISION FOR "LOADING, HAULING, AND DISPOSAL OF PETROLEUM-CONTAMINATED SOIL"
- BOX CULVERT EXCAVATION AREA WHERE THERE IS A POTENTIAL FOR CONTAMINATED SOIL. SEE SPECIAL PROVISION FOR "LOADING, HAULING, AND REUSE OF SOLID WASTE SOIL"
- AREA AVAILABLE FOR PIPE JACKING SHAFT



CULVERT CONSTRUCTION STAGING FOR STRUCTURES C-40-101 & B-40-892

CONSTRUCTION STAGING NOTES

SOME UTILITIES AND STORM SEWERS ARE NOT SHOWN FOR CLARITY IN THE CONSTRUCTION STAGING SHEETS. SEE PLAN AND ELEVATION SHEETS AND OTHER ROADWAY SHEETS FOR UTILITIES AND STORM SEWERS NOT SHOWN ON CONSTRUCTION STAGING SHEETS.

EXISTING STRUCTURE REMOVALS IDENTIFIED IN THE CONSTRUCTION STAGING SHEETS ARE CONSIDERED INCLUDED IN THE BID ITEM "REMOVING OLD STRUCTURE 40+40.00" ON STRUCTURE B-40-892. THIS INCLUDES REMOVALS IN THE EXISTING CHANNEL IN THE OUTLET OF STRUCTURE C-40-101.

THE COSTS ASSOCIATED WITH CONSTRUCTION STAGING SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS. THE CONTRACTOR SHALL SUBMIT CONSTRUCTION STAGING PLANS TO THE ENGINEER PRIOR TO START OF CONSTRUCTION. THE CONTRACTOR SHALL INCLUDE ALL METHODS USED TO MAINTAIN FLOW. A CONTINGENCY PLAN FOR THE MAINTAINANCE OF FLOW IN THE CASE OF A MAJOR STORM EVENT SHALL BE DEVELOPED AND PROVIDED TO THE ENGINEER.

FLOW WITHIN HONEY CREEK SHALL BE MAINTAINED AT ALL TIMES AND SHALL BE OUTLINED IN THE CONSTRUCTION STAGING PLANS AND THE EROSION CONTROL IMPLEMENTATION PLAN. BLOCKAGE OF STREAM FLOW SHALL BE MINIMIZED. COSTS ASSOCIATED WITH MAINTAINING FLOW SUCH AS TEMPORARY EARTHEN BERMS, TEMPORARY SANDBAG BERMS, TEMPORARY SHORING, PUMPING OR OTHER MEANS AND METHOD'S SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.

EXISTING KNOWN UTILITIES, STORM SEWERS, MANHOLES AND CONDUITS THAT ARE RELOCATED OR ABANDONED AT THE BOX CULVERT EXCAVATION SHALL BE REMOVED WITH THE BOX CULVERT EXCAVATION. UNLESS INDICATED ON OTHER ROADWAY, STORM SEWER, OR UTILITY PLAN SHEETS, THE PAYMENT FOR REMOVAL OF THESE ITEMS IS INCLUDED WITH THE STRUCTURE EXCAVATION BID ITEMS. EXISTING UTILITY CONDUITS AND STORM SEWERS WILL BE ENCOUNTERED IN THE EXCAVATION. THE FOLLOWING KNOWN UTILITIES WILL BE ENCOUNTERED AT THE 84TH STREET CROSSING DURING EXCAVATION:

- CITY OF MILWAUKEE
  - -12" WATER MAIN ABANDONED IN CONTRACT
  - -12" SANITARY SEWER AND MANHOLE ABANDONED PRIOR TO EXCAVATION
  - -COMMUNICATION DUCT ABANDONED PRIOR TO EXCAVATION
  - -LIGHTING CONDUITS ABANDONED DURING EXCAVATION
  - -TRAFFIC SIGNAL CONDUITS ABANDONED DURING EXCAVATION
- MMSD
  - -36" MIS, PREVIOUSLY ABANDONED
  - -24" MIS, ABANDONED IN CONTRACT
- WE ENERGIES
  - -8" GAS LINE ABANDONED DURING EXCAVATION
  - -UNDERGROUND ELECTRIC ABANDONED PRIOR TO EXCAVATION
- AT&T WISCONSIN
  - -COMMUNICATION DUCTS ABANDONED PRIOR TO EXCAVATION
- AT&T CORPORATION
  - -FO COMMUNICATION ABANDONED PRIOR TO EXCAVATION
- WISDOT
  - -STORM SEWERS, MANHOLES, AND INLET REMOVED DURING EXCAVATION
  - -FTMS AND LIGHTING CONDUITS REMOVED DURING EXCAVATION

TEMPORARY SHORING LOCATIONS SHOWN IN THE PLANS ARE BASED ON THE ENGINEER'S ASSUMED EXCAVATION AND CONSTRUCTION STAGING. THE CONTRACTOR IS PERMITTED TO BENCH THE EXCAVATION AND LOCATE TEMPORARY SHORING IN OTHER LOCATIONS AS LONG AS THE CONTRACTOR'S WORKZONE IS WITHIN THE EXISTING RIGHT-OF-WAY AND THE PROPOSED TEMPORARY EASEMENTS. THE CONTRACTOR MUST MAINTAIN TRAFFIC ON IH-94, INCLUDING THE SHOULDER, DURING CULVERT EXCAVATION AND CONSTRUCTION. THE CONTRACTOR SHALL IDENTIFY IN THE CONSTRUCTION STAGING PLANS THE CONTRACTOR'S PLANNED LOCATION OF ALL TEMPORARY SHORING NEEDED FOR EXCAVATION FOR THE CULVERT. PAYMENT FOR TEMPORARY SHORING IS INCLUDED WITH THE STRUCTURE EXCAVATION BID ITEMS.

AFTER CONSTRUCTION OF THE BOX CULVERT, AT A MINIMUM TEMPORARY SHORING SHALL BE REMOVED DOWN TO AN ELEVATION EQUAL TO THE TOP OF THE BOX CULVERT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

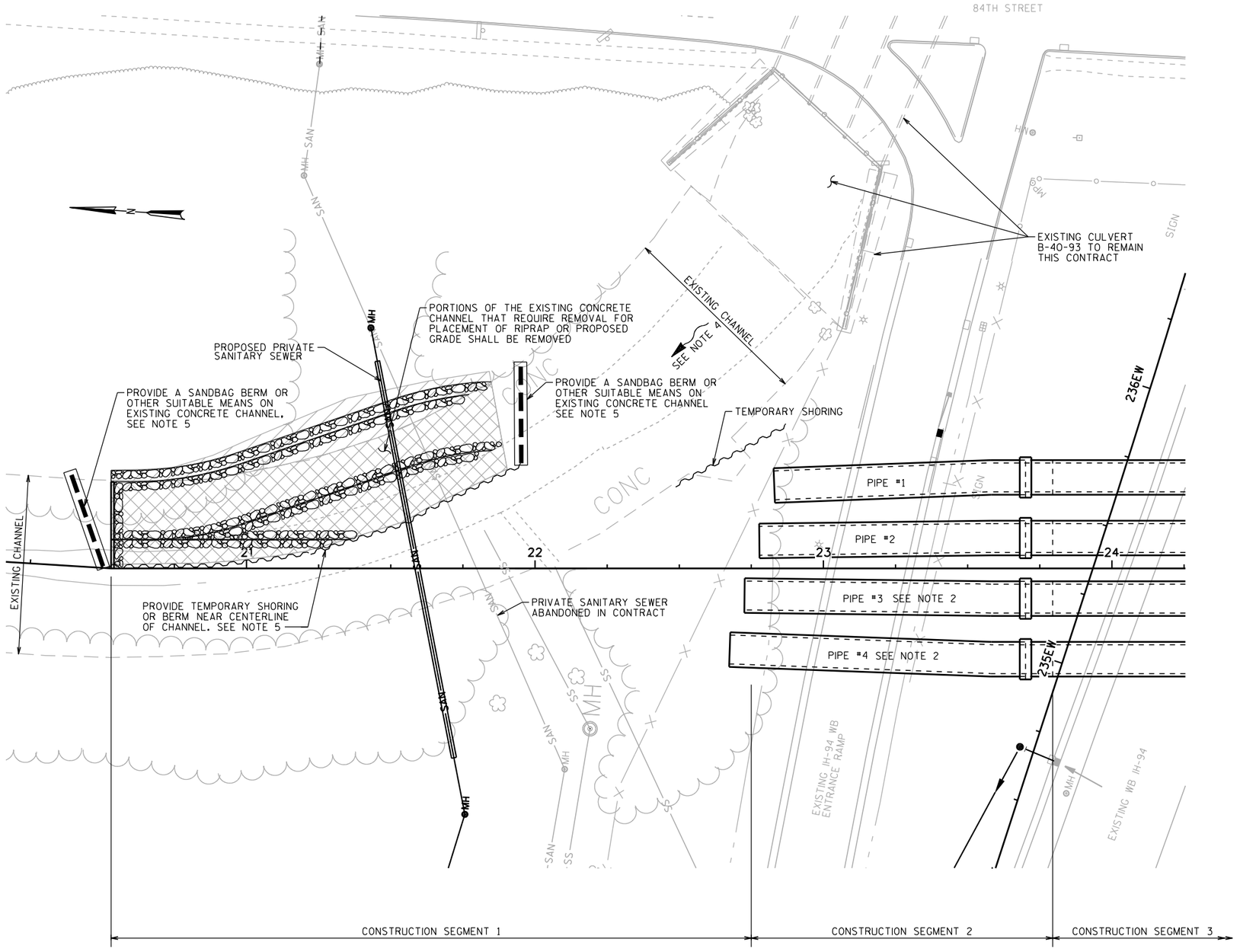
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CONSTRUCTION STAGING (1 OF 10)

SHEET 7 OF 37

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STATE PROJECT NUMBER
1060-33-78



CONSTRUCTION SEGMENT 1 - PHASE 1

LEGEND

CONSTRUCTION, THIS PHASE

REMOVALS THIS PHASE, PAID FOR UNDER BID ITEM FOR "REMOVING OLD STRUCTURE 40+40.00" ON B-40-892.

CONSTRUCTION SEGMENT 1 - PHASE 1 NOTES:

1. ENGINEER'S ASSUMED CONSTRUCTION STAGING SHOWN. PHASING SHOWN IN CONSTRUCTION SEGMENT 1 IS INDEPENDENT OF PHASING SHOWN IN CONSTRUCTION SEGMENT 7.
2. SEGMENT 1 PHASE 1 & 2 MUST BE COMPLETE PRIOR TO FLOW IN PIPES 3 & 4.
3. COORDINATE CONSTRUCTION IN THIS SEGMENT WITH OTHER CONSTRUCTION SEGMENTS.
4. THE CONTRACTOR SHALL MAINTAIN FLOW IN CHANNEL AT ALL TIMES BY WHATEVER MEANS NECESSARY AS INDICATED IN THE CONTRACTORS APPROVED EROSION CONTROL IMPLEMENTATION PLAN (ECIP). COST OF MAINTAINING FLOW IN CHANNEL SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
5. TEMPORARY SHORING LOCATIONS DESIGNATED AS "TEMPORARY SHORING OR BERM" AND LOCATIONS DESIGNATED AS "SANDBAG BERM OR OTHER SUITABLE MEANS" ARE CONSIDERED INCLUDED UNDER THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS C-40-101". THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SHORING OR BERM TO THE ENGINEER PRIOR TO CONSTRUCTION.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

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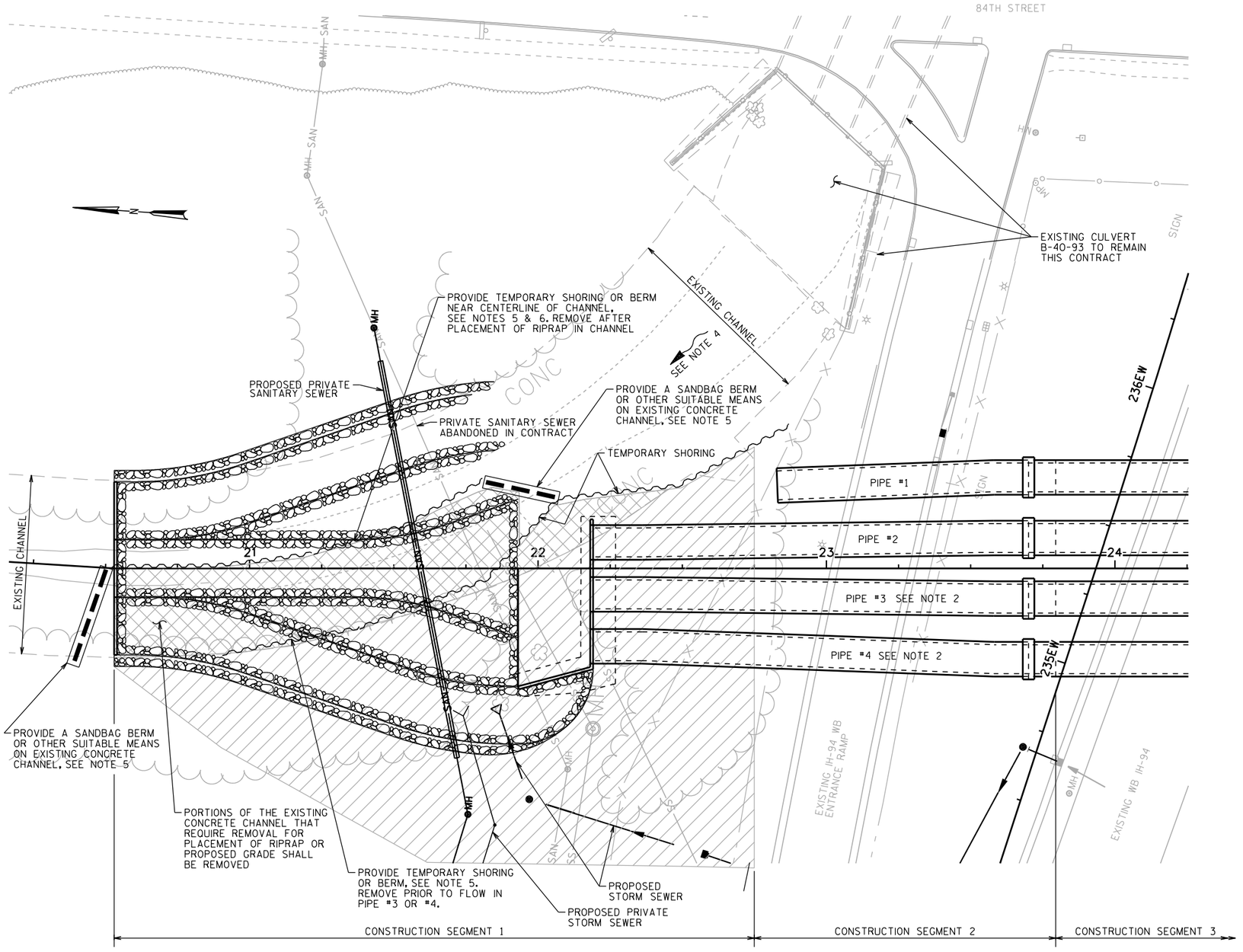
CONSTRUCTION STAGING (2 OF 10)

SHEET 8 OF 37

8

8

STATE PROJECT NUMBER
1060-33-78



CONSTRUCTION SEGMENT 1 - PHASE 2

LEGEND

CONSTRUCTION, THIS PHASE

REMOVALS THIS PHASE, PAID FOR UNDER BID ITEM FOR "REMOVING OLD STRUCTURE 40+40.00" ON B-40-892.

CONSTRUCTION SEGMENT 1 - PHASE 2 NOTES:

1. ENGINEER'S ASSUMED CONSTRUCTION STAGING SHOWN. PHASING SHOWN IN CONSTRUCTION SEGMENT 1 IS INDEPENDENT OF PHASING SHOWN IN CONSTRUCTION SEGMENT 7.
2. SEGMENT 1 PHASE 1 & 2 MUST BE COMPLETE PRIOR TO FLOW IN PIPES 3 & 4.
3. COORDINATE CONSTRUCTION IN THIS SEGMENT WITH OTHER CONSTRUCTION SEGMENTS.
4. THE CONTRACTOR SHALL MAINTAIN FLOW IN CHANNEL AT ALL TIMES BY WHATEVER MEANS NECESSARY AS INDICATED IN THE CONTRACTORS APPROVED EROSION CONTROL IMPLEMENTATION PLAN (ECIP). COST OF MAINTAINING FLOW IN CHANNEL SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
5. TEMPORARY SHORING LOCATIONS DESIGNATED AS "TEMPORARY SHORING OR BERM" AND LOCATIONS DESIGNATED AS "SANDBAG BERM OR OTHER SUITABLE MEANS" ARE CONSIDERED INCLUDED UNDER THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS C-40-101". THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SHORING OR BERM TO THE ENGINEER PRIOR TO CONSTRUCTION.
6. TEMPORARY SHORING OR BERM IN CHANNEL SHALL BE REMOVED ONCE RIPRAP PLACEMENT IN CHANNEL IS COMPLETE.

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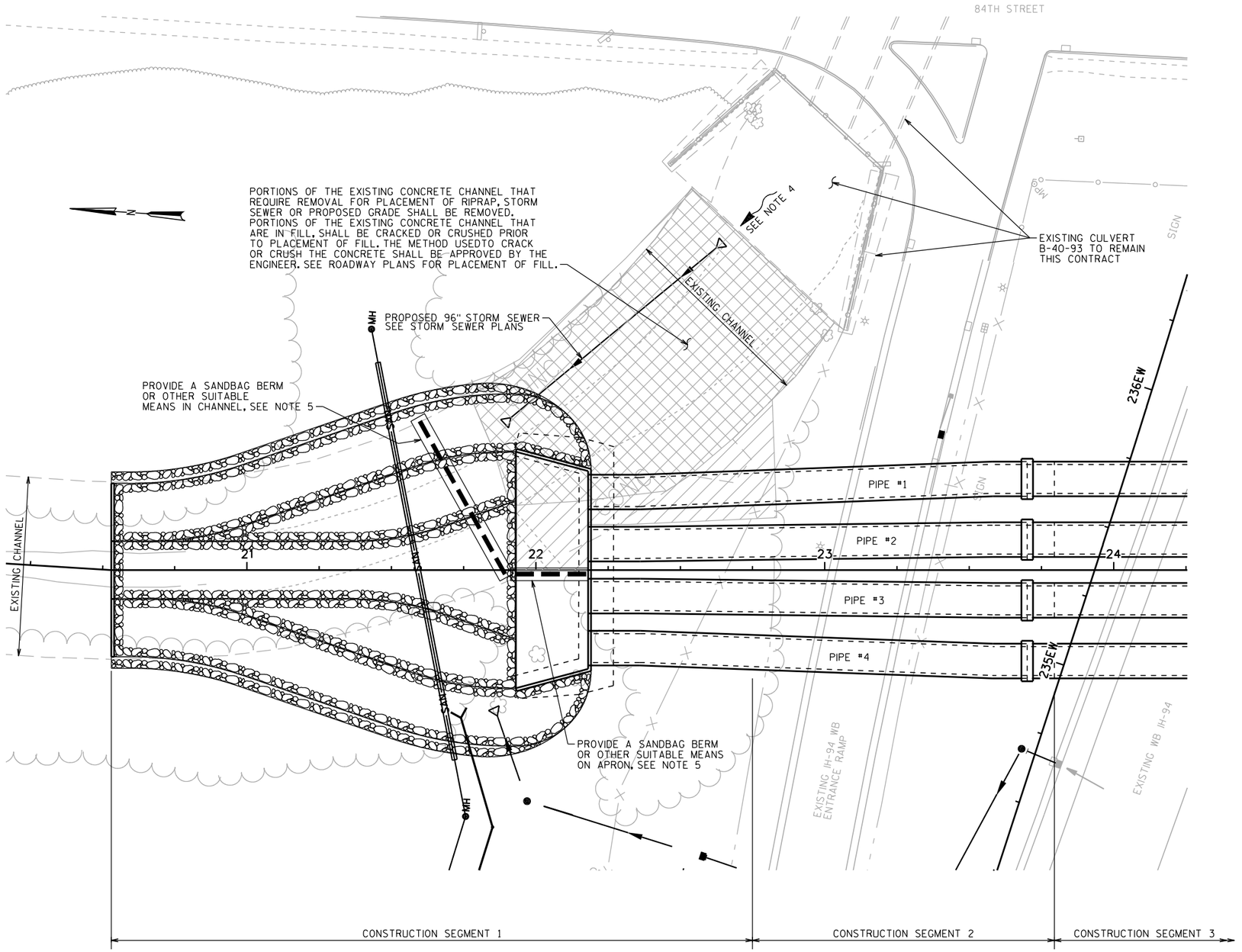
STRUCTURE B-40-892

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CONSTRUCTION STAGING (3 OF 10)

SHEET 9 OF 37

STATE PROJECT NUMBER
1060-33-78



CONSTRUCTION SEGMENT 1 - PHASE 3

LEGEND

CONSTRUCTION, THIS PHASE

REMOVALS THIS PHASE, PAID FOR UNDER BID ITEM FOR "REMOVING OLD STRUCTURE 40+40.00" ON B-40-892.

CONSTRUCTION SEGMENT 1 - PHASE 3 NOTES:

1. ENGINEER'S ASSUMED CONSTRUCTION STAGING SHOWN. PHASING SHOWN IN CONSTRUCTION SEGMENT 1 IS INDEPENDENT OF PHASING SHOWN IN CONSTRUCTION SEGMENT 7.
2. SEGMENT 1 PHASE 1 & 2 MUST BE COMPLETE PRIOR TO FLOW IN PIPES 3 & 4.
3. COORDINATE CONSTRUCTION IN THIS SEGMENT WITH OTHER CONSTRUCTION SEGMENTS.
4. THE CONTRACTOR SHALL MAINTAIN FLOW IN CHANNEL AND/OR PIPES AT ALL TIMES EVEN AFTER FLOW HAS BEEN COMPLETELY DIVERTED TO PIPES 1, 2, 3 AND 4. BASE FLOW ALONG WITH FLOW FROM EXISTING INLET AND PIPE CONNECTIONS WILL BE PRESENT IN EXISTING CULVERT B-40-93. THE COST TO MAINTAIN FLOW IN CHANNEL AND PIPES SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
5. LOCATIONS DESIGNATED AS "SANDBAG BERM OR OTHER SUITABLE MEANS" ARE CONSIDERED INCLUDED UNDER THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS C-40-101". THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SHORING OR BERM TO THE ENGINEER PRIOR TO CONSTRUCTION.

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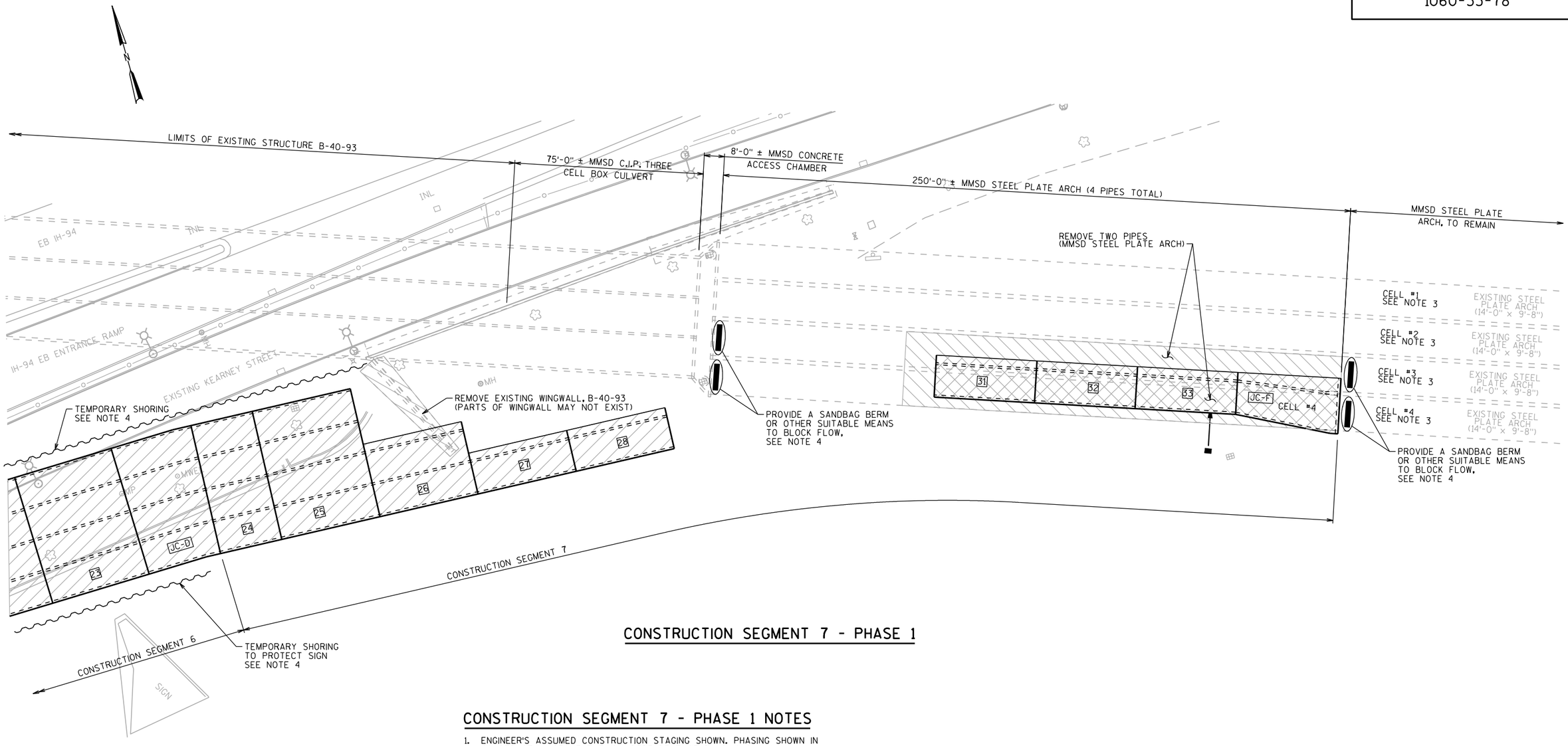
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CONSTRUCTION STAGING (4 OF 10)

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STATE PROJECT NUMBER
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CONSTRUCTION SEGMENT 7 - PHASE 1

LEGEND

- [X] BARREL SECTION NUMBER
- [JC-X] JUNCTION CHAMBER DESIGNATION
- CONSTRUCTION, THIS PHASE
- REMOVALS THIS PHASE, PAID FOR UNDER BID ITEM FOR "REMOVING OLD STRUCTURE 40+40.00" ON B-40-892.

CONSTRUCTION SEGMENT 7 - PHASE 1 NOTES

1. ENGINEER'S ASSUMED CONSTRUCTION STAGING SHOWN. PHASING SHOWN IN CONSTRUCTION SEGMENT 7 IS INDEPENDENT OF PHASING SHOWN IN CONSTRUCTION SEGMENT 1.
2. COORDINATE CONSTRUCTION IN THIS SEGMENT WITH OTHER CONSTRUCTION SEGMENTS.
3. THE CONTRACTOR SHALL MAINTAIN FLOW IN CHANNEL AT ALL TIMES BY WHATEVER MEANS NECESSARY AS INDICATED IN THE CONTRACTORS APPROVED EROSION CONTROL IMPLEMENTATION PLAN (ECIP). COST OF MAINTAINING FLOW IN CHANNEL SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
4. TEMPORARY SHORING LOCATIONS DESIGNATED AS "TEMPORARY SHORING" AND LOCATIONS DESIGNATED AS "SANDBAG BERM OR OTHER SUITABLE MEANS" ARE CONSIDERED INCLUDED UNDER THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS B-40-892". THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SHORING OR BERM TO THE ENGINEER PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL VERIFY WALL STABILITY FOR THE INTERIOR AND EXTERIOR CULVERT WALLS FOR ALL CONSTRUCTION STAGES. TEMPORARY WALL BRACING MAY BE REQUIRED DEPENDING ON THE CONTRACTORS CONSTRUCTION STAGING SEQUENCE FOR STAGED CULVERT BARREL SECTIONS AND JUNCTION CHAMBERS.

NO.	DATE	REVISION	BY

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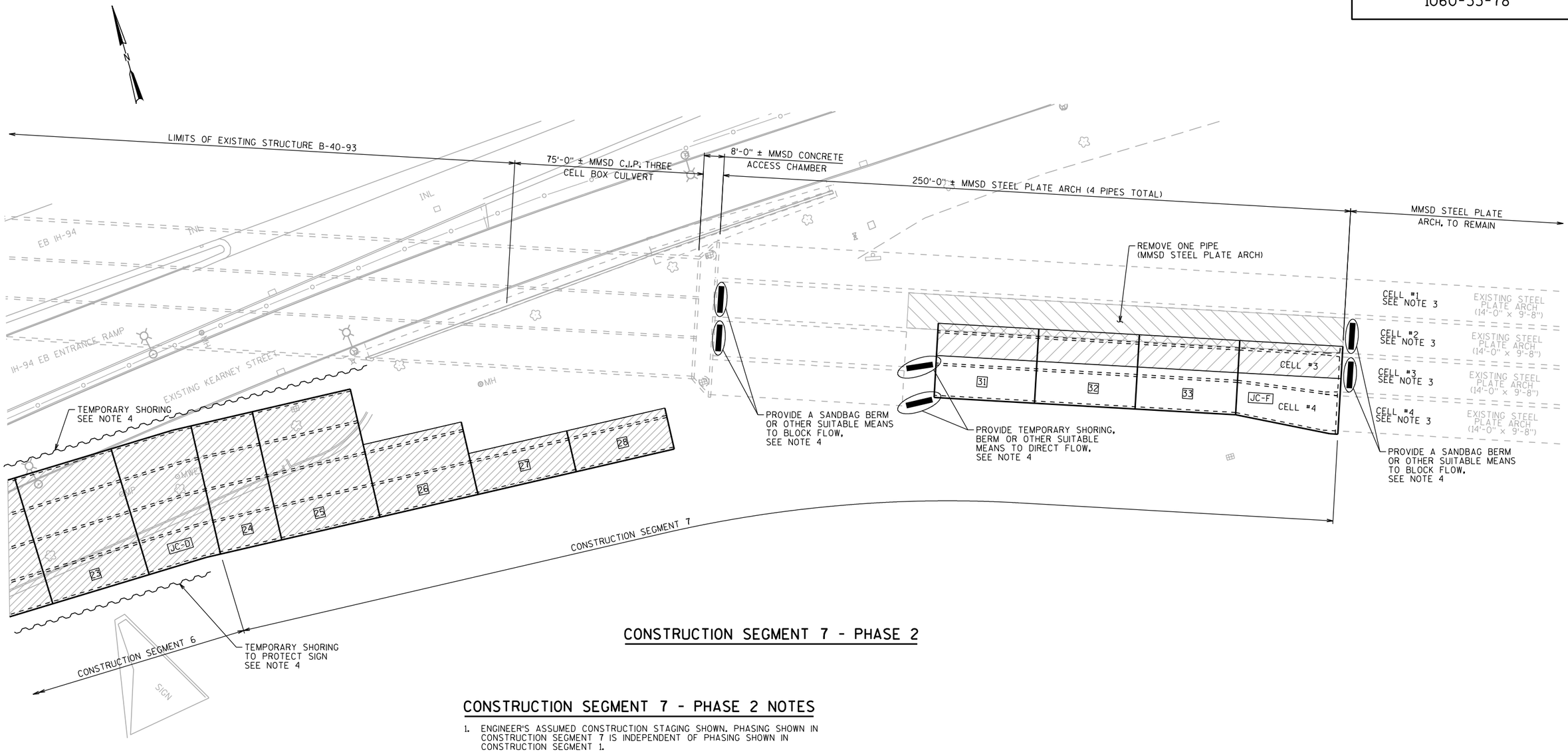
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CONSTRUCTION STAGING (5 OF 10)

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STATE PROJECT NUMBER
1060-33-78



CONSTRUCTION SEGMENT 7 - PHASE 2

CONSTRUCTION SEGMENT 7 - PHASE 2 NOTES

1. ENGINEER'S ASSUMED CONSTRUCTION STAGING SHOWN. PHASING SHOWN IN CONSTRUCTION SEGMENT 7 IS INDEPENDENT OF PHASING SHOWN IN CONSTRUCTION SEGMENT 1.
2. COORDINATE CONSTRUCTION IN THIS SEGMENT WITH OTHER CONSTRUCTION SEGMENTS.
3. THE CONTRACTOR SHALL MAINTAIN FLOW IN CHANNEL AT ALL TIMES BY WHATEVER MEANS NECESSARY AS INDICATED IN THE CONTRACTORS APPROVED EROSION CONTROL IMPLEMENTATION PLAN (ECIP). COST OF MAINTAINING FLOW IN CHANNEL SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
4. TEMPORARY SHORING LOCATIONS DESIGNATED AS "TEMPORARY SHORING" AND LOCATIONS DESIGNATED AS "SANDBAG BERM OR OTHER SUITABLE MEANS" ARE CONSIDERED INCLUDED UNDER THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS B-40-892". THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SHORING OR BERM TO THE ENGINEER PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL VERIFY WALL STABILITY FOR THE INTERIOR AND EXTERIOR CULVERT WALLS FOR ALL CONSTRUCTION STAGES. TEMPORARY WALL BRACING MAY BE REQUIRED DEPENDING ON THE CONTRACTORS CONSTRUCTION STAGING SEQUENCE FOR STAGED CULVERT BARREL SECTIONS AND JUNCTION CHAMBERS.

LEGEND

- [X] BARREL SECTION NUMBER
- [JC-X] JUNCTION CHAMBER DESIGNATION
- BEGIN CONSTRUCTION, THIS PHASE
- CONSTRUCTION CONTINUES, THIS PHASE
- REMOVALS THIS PHASE, PAID FOR UNDER BID ITEM FOR "REMOVING OLD STRUCTURE 40+40.00" ON B-40-892.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

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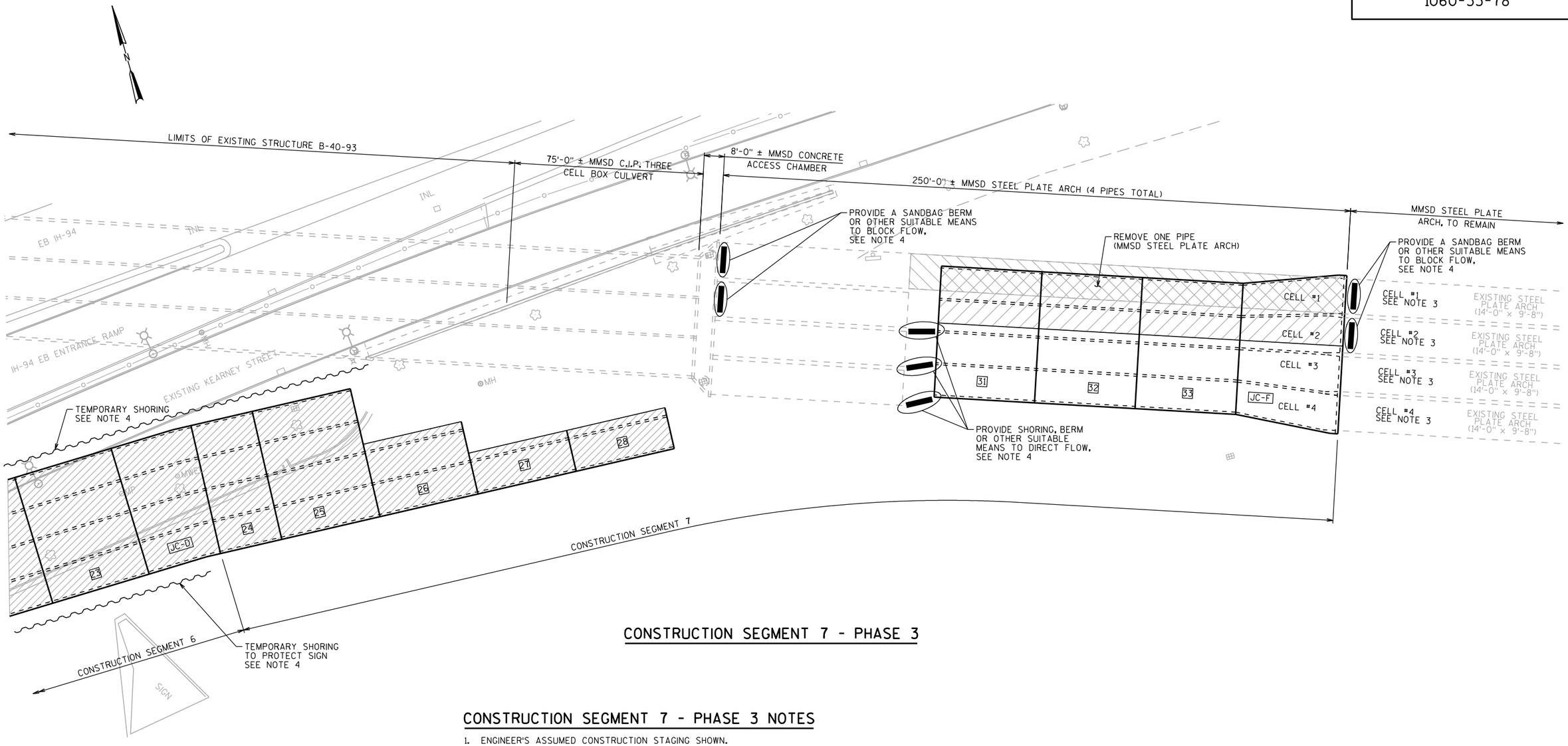
CONSTRUCTION STAGING (6 OF 10)

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STATE PROJECT NUMBER
1060-33-78



CONSTRUCTION SEGMENT 7 - PHASE 3

LEGEND

- [X] BARREL SECTION NUMBER
- [JC-X] JUNCTION CHAMBER DESIGNATION
- BEGIN CONSTRUCTION, THIS PHASE
- CONSTRUCTION CONTINUES, THIS PHASE
- REMOVALS THIS PHASE, PAID FOR UNDER BID ITEM FOR "REMOVING OLD STRUCTURE 40+40.00" ON B-40-892.

CONSTRUCTION SEGMENT 7 - PHASE 3 NOTES

1. ENGINEER'S ASSUMED CONSTRUCTION STAGING SHOWN.
2. COORDINATE CONSTRUCTION IN THIS SEGMENT WITH OTHER CONSTRUCTION SEGMENTS.
3. THE CONTRACTOR SHALL MAINTAIN FLOW IN CHANNEL AT ALL TIMES BY WHATEVER MEANS NECESSARY AS INDICATED IN THE CONTRACTORS APPROVED EROSION CONTROL IMPLEMENTATION PLAN (ECIP). COST OF MAINTAINING FLOW IN CHANNEL SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
4. TEMPORARY SHORING LOCATIONS DESIGNATED AS "TEMPORARY SHORING" AND LOCATIONS DESIGNATED AS "SANDBAG BERM OR OTHER SUITABLE MEANS" ARE CONSIDERED INCLUDED UNDER THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS B-40-892". THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SHORING OR BERM TO THE ENGINEER PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL VERIFY WALL STABILITY FOR THE INTERIOR AND EXTERIOR CULVERT WALLS FOR ALL CONSTRUCTION STAGES. TEMPORARY WALL BRACING MAY BE REQUIRED DEPENDING ON THE CONTRACTORS CONSTRUCTION STAGING SEQUENCE FOR STAGED CULVERT BARREL SECTIONS AND JUNCTION CHAMBERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

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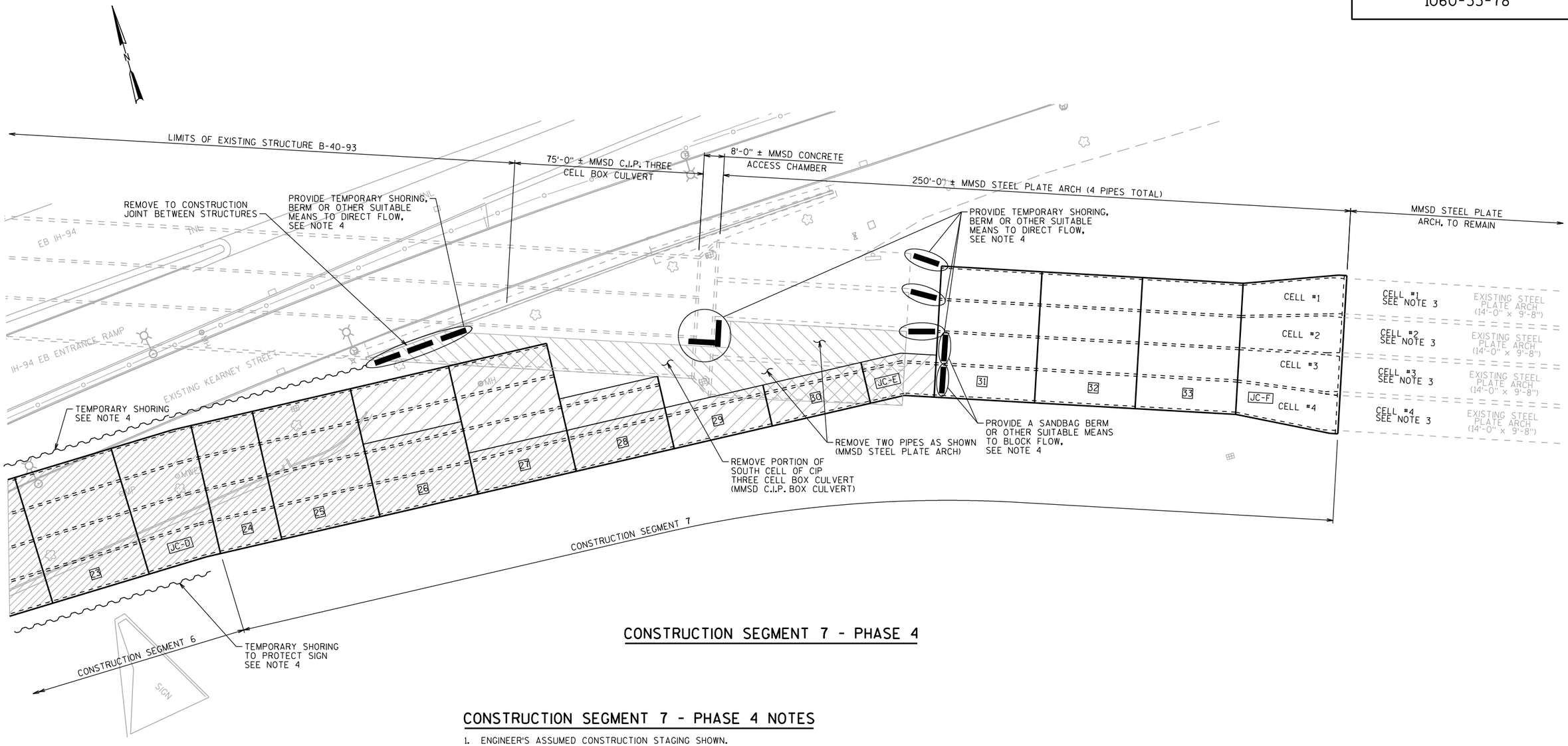
CONSTRUCTION STAGING (7 OF 10)

SHEET 13 OF 37

8

FILE NAME : \\Wke31fp1\w3zoo\Cadd\Final\10603378_TL\Structs\B-40-892 Box Culvert\cds\B400892_080113_st.dgn PLOT DATE : 01-MAY-2013 11:21 PLOT BY : MSCBKS PLOT NAME : B400892_080113_st PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-78



CONSTRUCTION SEGMENT 7 - PHASE 4

LEGEND

- [X] BARREL SECTION NUMBER
- [JC-X] JUNCTION CHAMBER DESIGNATION
- BEGIN CONSTRUCTION, THIS PHASE
- CONSTRUCTION CONTINUES, THIS PHASE
- REMOVALS THIS PHASE, PAID FOR UNDER BID ITEM FOR "REMOVING OLD STRUCTURE 40+40.00" ON B-40-892.

CONSTRUCTION SEGMENT 7 - PHASE 4 NOTES

1. ENGINEER'S ASSUMED CONSTRUCTION STAGING SHOWN.
2. COORDINATE CONSTRUCTION IN THIS SEGMENT WITH OTHER CONSTRUCTION SEGMENTS.
3. THE CONTRACTOR SHALL MAINTAIN FLOW IN CHANNEL AT ALL TIMES BY WHATEVER MEANS NECESSARY AS INDICATED IN THE CONTRACTORS APPROVED EROSION CONTROL IMPLEMENTATION PLAN (ECIP). COST OF MAINTAINING FLOW IN CHANNEL SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
4. TEMPORARY SHORING LOCATIONS DESIGNATED AS "TEMPORARY SHORING" AND LOCATIONS DESIGNATED AS "SANDBAG BERM OR OTHER SUITABLE MEANS" ARE CONSIDERED INCLUDED UNDER THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS B-40-892". THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SHORING OR BERM TO THE ENGINEER PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL VERIFY WALL STABILITY FOR THE INTERIOR AND EXTERIOR CULVERT WALLS FOR ALL CONSTRUCTION STAGES. TEMPORARY WALL BRACING MAY BE REQUIRED DEPENDING ON THE CONTRACTORS CONSTRUCTION STAGING SEQUENCE FOR STAGED CULVERT BARREL SECTIONS AND JUNCTION CHAMBERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

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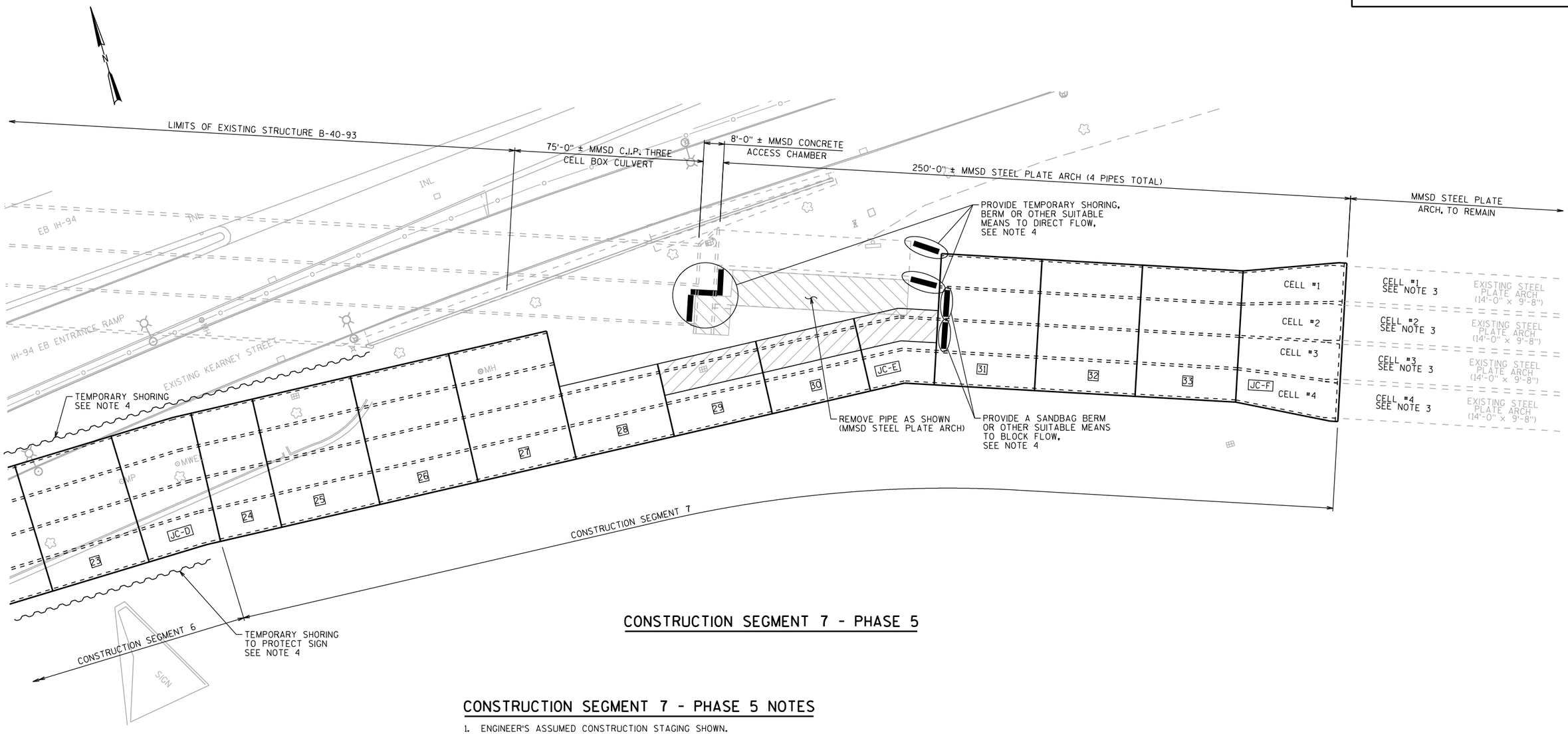
CONSTRUCTION STAGING (8 OF 10)

SHEET 14 OF 37

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STATE PROJECT NUMBER
1060-33-78



CONSTRUCTION SEGMENT 7 - PHASE 5

LEGEND

- [X] BARREL SECTION NUMBER
- [JC-X] JUNCTION CHAMBER DESIGNATION
- BEGIN CONSTRUCTION, THIS PHASE
- CONSTRUCTION CONTINUES, THIS PHASE
- REMOVALS THIS PHASE, PAID FOR UNDER BID ITEM FOR "REMOVING OLD STRUCTURE 40+40.00" ON B-40-892.

CONSTRUCTION SEGMENT 7 - PHASE 5 NOTES

1. ENGINEER'S ASSUMED CONSTRUCTION STAGING SHOWN.
2. COORDINATE CONSTRUCTION IN THIS SEGMENT WITH OTHER CONSTRUCTION SEGMENTS. ALL WORK IN CELL #4 OR (PIPE #4) MUST BE COMPLETE IN OTHER CONSTRUCTION SEGMENTS PRIOR TO SEGMENT 7, PHASE 5.
3. THE CONTRACTOR SHALL MAINTAIN FLOW IN CHANNEL AT ALL TIMES BY WHATEVER MEANS NECESSARY AS INDICATED IN THE CONTRACTORS APPROVED EROSION CONTROL IMPLEMENTATION PLAN (ECIP). COST OF MAINTAINING FLOW IN CHANNEL SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
4. TEMPORARY SHORING LOCATIONS DESIGNATED AS "TEMPORARY SHORING" AND LOCATIONS DESIGNATED AS "SANDBAG BERM OR OTHER SUITABLE MEANS" ARE CONSIDERED INCLUDED UNDER THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS B-40-892". THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SHORING OR BERM TO THE ENGINEER PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL VERIFY WALL STABILITY FOR THE INTERIOR AND EXTERIOR CULVERT WALLS FOR ALL CONSTRUCTION STAGES. TEMPORARY WALL BRACING MAY BE REQUIRED DEPENDING ON THE CONTRACTORS CONSTRUCTION STAGING SEQUENCE FOR STAGED CULVERT BARREL SECTIONS AND JUNCTION CHAMBERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

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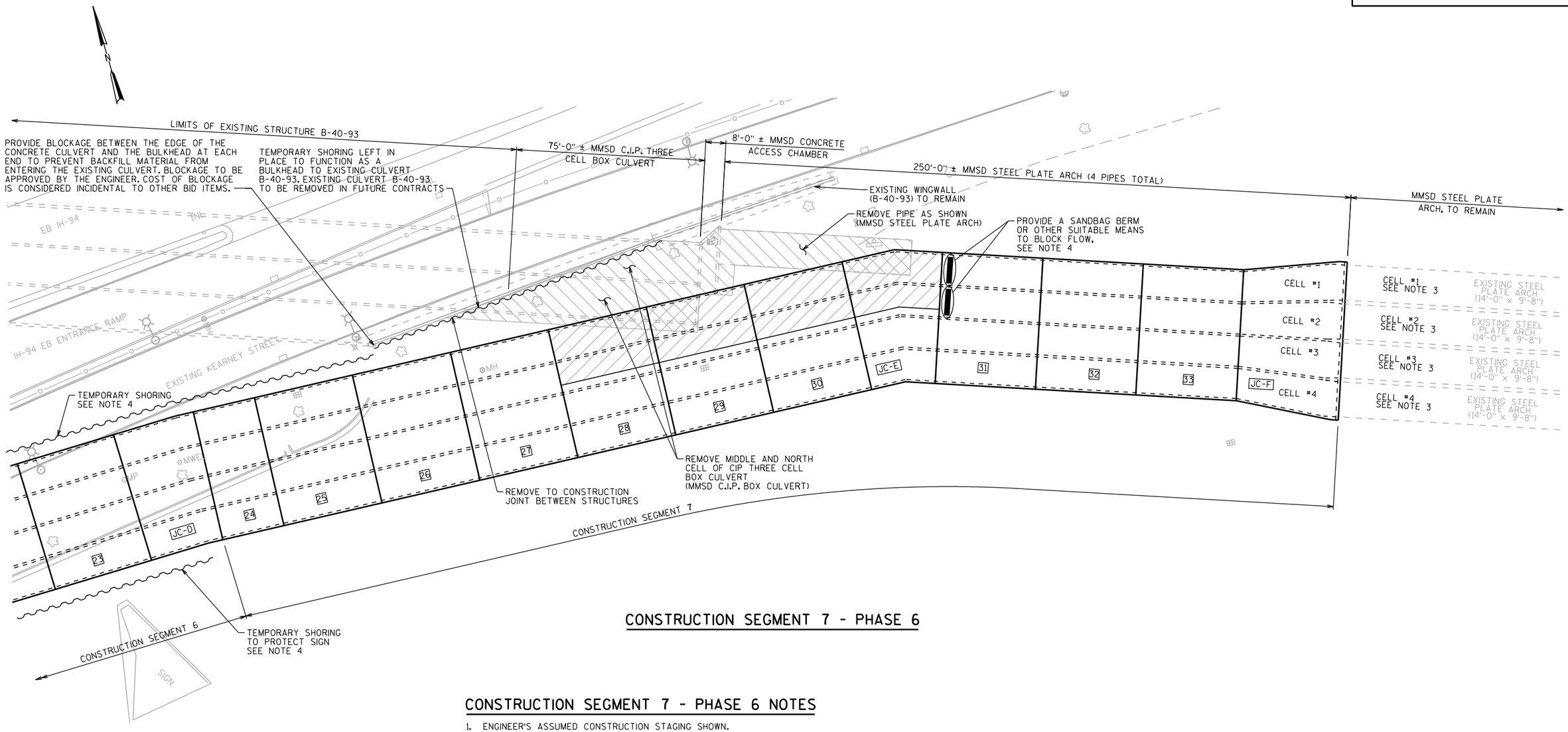
CONSTRUCTION STAGING (9 OF 10)

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STATE PROJECT NUMBER
1060-33-78



CONSTRUCTION SEGMENT 7 - PHASE 6

LEGEND

- [X] BARREL SECTION NUMBER
- [JC-X] JUNCTION CHAMBER DESIGNATION
- CONSTRUCTION, THIS PHASE
- REMOVALS THIS PHASE, PAID FOR UNDER BID ITEM FOR "REMOVING OLD STRUCTURE 40+40.00" ON B-40-892.

CONSTRUCTION SEGMENT 7 - PHASE 6 NOTES

1. ENGINEER'S ASSUMED CONSTRUCTION STAGING SHOWN.
2. COORDINATE CONSTRUCTION IN THIS SEGMENT WITH OTHER CONSTRUCTION SEGMENTS. ALL WORK IN CELL #3 OR (PIPE #3) MUST BE COMPLETE IN OTHER CONSTRUCTION SEGMENTS PRIOR TO SEGMENT 7, PHASE 6.
3. THE CONTRACTOR SHALL MAINTAIN FLOW IN CHANNEL AT ALL TIMES BY WHATEVER MEANS NECESSARY AS INDICATED IN THE CONTRACTORS APPROVED EROSION CONTROL IMPLEMENTATION PLAN (ECIP). COST OF MAINTAINING FLOW IN CHANNEL SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.
4. TEMPORARY SHORING LOCATIONS DESIGNATED AS "TEMPORARY SHORING" AND LOCATIONS DESIGNATED AS "SANDBAG BERM OR OTHER SUITABLE MEANS" ARE CONSIDERED INCLUDED UNDER THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS B-40-892". THE CONTRACTOR SHALL PROVIDE DETAILS OF THE SHORING OR BERM TO THE ENGINEER PRIOR TO CONSTRUCTION.
5. THE CONTRACTOR SHALL VERIFY WALL STABILITY FOR THE INTERIOR AND EXTERIOR CULVERT WALLS FOR ALL CONSTRUCTION STAGES. TEMPORARY WALL BRACING MAY BE REQUIRED DEPENDING ON THE CONTRACTORS CONSTRUCTION STAGING SEQUENCE FOR STAGED CULVERT BARREL SECTIONS AND JUNCTION CHAMBERS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

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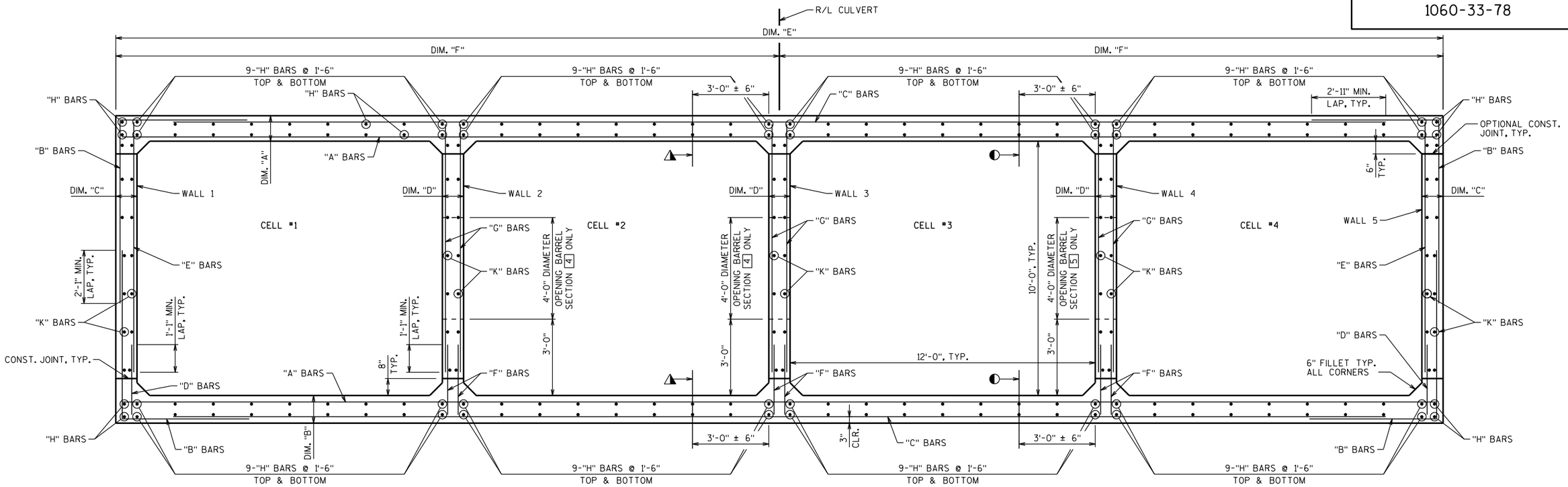
CONSTRUCTION STAGING (10 OF 10)

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STATE PROJECT NUMBER
1060-33-78



LEGEND

◐ LOCATION OF LONGITUDINAL CONSTRUCTION JOINT FOR STAGED CONSTRUCTION, SEE LONGITUDINAL STAGED CONSTRUCTION JOINT DETAIL. REQ'D IN BARREL SECTIONS; 27, 28, 29, 30, 31, 32 & 33

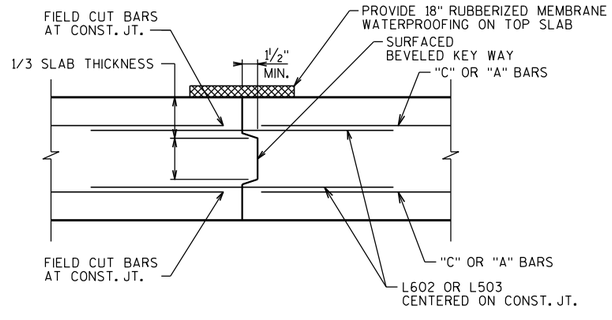
⚠ LOCATION OF LONGITUDINAL CONSTRUCTION JOINT FOR STAGED CONSTRUCTION, SEE LONGITUDINAL STAGED CONSTRUCTION JOINT DETAIL. REQ'D IN BARREL SECTIONS; 26, 27, 28, 29, 30, 31, 32 & 33

NOTE:

FOR BILL OF BARS, SEE SHEET 19.

SECTION THRU BOX - BARREL SECTIONS 1 THRU 33

LOOKING UPSTATION



BILL OF BARS FOR LONGITUDINAL STAGED CONSTRUCTION JOINT

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D TOTAL	LENGTH	BENT	BAR SERIES	LOCATION
L602		1458	6'-0"			LONGITUDINAL CONSTRUCTION JOINT SPLICE
L503		3402	5'-0"			LONGITUDINAL CONSTRUCTION JOINT SPLICE

THE TABLE ABOVE GIVES THE ESTIMATED NUMBER OF CONSTRUCTION JOINT SPLICE BARS REQUIRED BASED ON THE ENGINEERS ASSUMED CONSTRUCTION SEQUENCE. NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL BARS.

GEOMETRY AND REINFORCEMENT TABLE

LONGITUDINAL STAGED CONSTRUCTION JOINT DETAIL

BARREL SECTIONS	SECTION LENGTH	DESIGN FILL *	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"	DIM. "E"	DIM. "F"	"A" BARS	"B" BARS	"C" BARS	"D" BARS	"E" BARS	"F" BARS	"G" BARS	"H" BARS	"K" BARS
1	40'-0"	15'-0"	14"	14"	14"	10"	52'-10"	26'-5"	162 - G501, 160 SPA. @ 6" MAX.	324 - G602, 320 SPA. @ 6" MAX.	162 - G703, 160 SPA. @ 6" MAX.	162 - G404, 160 SPA. @ 6" MAX.	162 - G405, 160 SPA. @ 6" MAX.	246 - G406, 240 SPA. @ 1'-0" MAX.	246 - G407, 240 SPA. @ 1'-0" MAX.	152 - G408, 147 SPA. @ 1'-6" MAX.	70 - G409, 69 SPA. @ 1'-6" MAX.
8 THRU 23	40'-0"	13'-0"	13"	13"	13"	10"	52'-8"	26'-4"	162 - G519, 160 SPA. @ 6" MAX.	324 - G620, 320 SPA. @ 6" MAX.	162 - G621, 160 SPA. @ 6" MAX.	162 - G422, 160 SPA. @ 6" MAX.	162 - G423, 160 SPA. @ 6" MAX.	246 - G424, 240 SPA. @ 1'-0" MAX.	246 - G425, 240 SPA. @ 1'-0" MAX.	152 - G426, 147 SPA. @ 1'-6" MAX.	70 - G427, 69 SPA. @ 1'-6" MAX.
7	25'-0"	13'-0"	13"	13"	13"	10"	52'-8"	26'-4"	102 - G546, 100 SPA. @ 6" MAX.	204 - G647, 200 SPA. @ 6" MAX.	102 - G648, 100 SPA. @ 6" MAX.	102 - G449, 100 SPA. @ 6" MAX.	102 - G450, 100 SPA. @ 6" MAX.	156 - G451, 150 SPA. @ 1'-0" MAX.	156 - G452, 150 SPA. @ 1'-0" MAX.	152 - G453, 147 SPA. @ 1'-6" MAX.	70 - G454, 69 SPA. @ 1'-6" MAX.
2, 3, 4, & 24	25'-0"	9'-0"	12"	12"	11"	10"	52'-4"	26'-2"	102 - G510, 100 SPA. @ 6" MAX.	204 - G511, 200 SPA. @ 6" MAX.	102 - G612, 100 SPA. @ 6" MAX.	102 - G413, 100 SPA. @ 6" MAX.	102 - G414, 100 SPA. @ 6" MAX.	156 - G415, 150 SPA. @ 1'-0" MAX.	156 - G416, 150 SPA. @ 1'-0" MAX.	152 - G417, 147 SPA. @ 1'-6" MAX.	70 - G418, 69 SPA. @ 1'-6" MAX.
5, 6, & 25 THRU 30	40'-0"	9'-0"	12"	12"	11"	10"	52'-4"	26'-2"	162 - G528, 160 SPA. @ 6" MAX.	324 - G529, 320 SPA. @ 6" MAX.	162 - G630, 160 SPA. @ 6" MAX.	162 - G431, 160 SPA. @ 6" MAX.	162 - G432, 160 SPA. @ 6" MAX.	246 - G433, 240 SPA. @ 1'-0" MAX.	246 - G434, 240 SPA. @ 1'-0" MAX.	152 - G435, 147 SPA. @ 1'-6" MAX.	70 - G436, 69 SPA. @ 1'-6" MAX.
31 THRU 33	40'-0"	5'-6"	12"	12"	10"	10"	52'-2"	26'-1"	162 - G537, 160 SPA. @ 6" MAX.	324 - G538, 320 SPA. @ 6" MAX.	162 - G539, 160 SPA. @ 6" MAX.	162 - G440, 160 SPA. @ 6" MAX.	162 - G441, 160 SPA. @ 6" MAX.	246 - G442, 240 SPA. @ 1'-0" MAX.	246 - G443, 240 SPA. @ 1'-0" MAX.	152 - G444, 147 SPA. @ 1'-6" MAX.	70 - G445, 69 SPA. @ 1'-6" MAX.

* MAXIMUM DESIGN FILL SHOWN

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STRUCTURE B-40-892

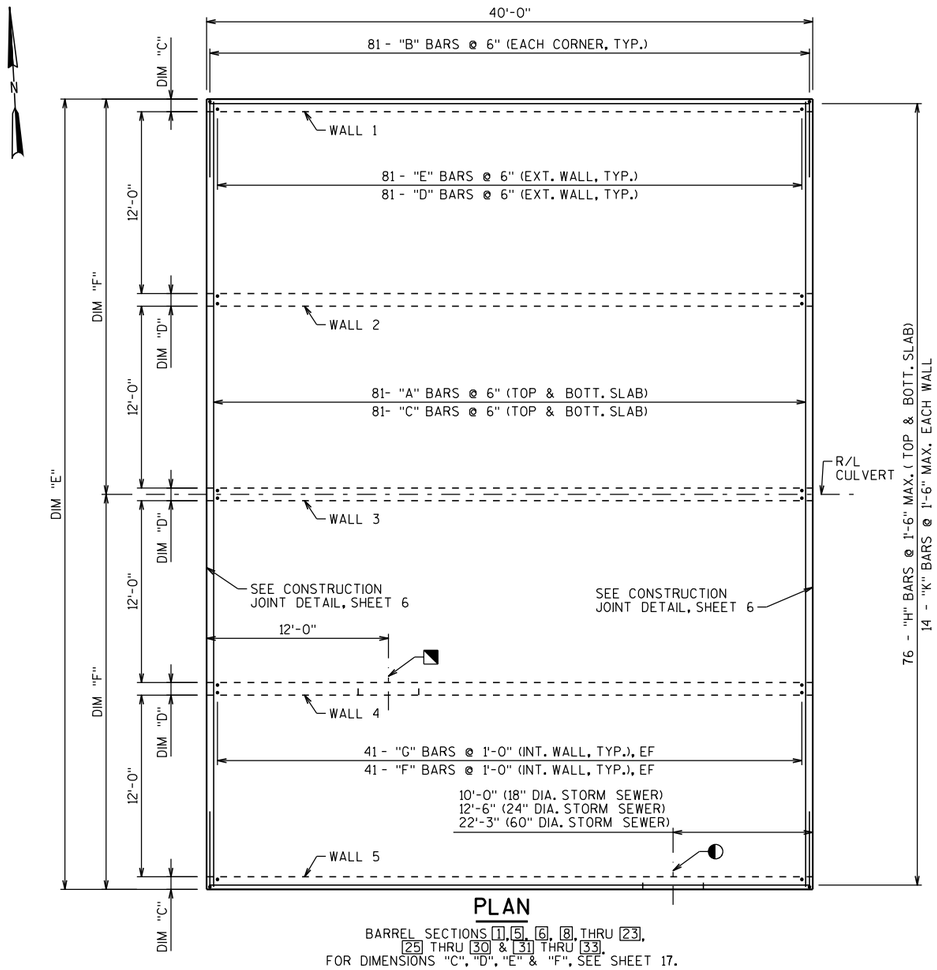
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TYPICAL SECTION

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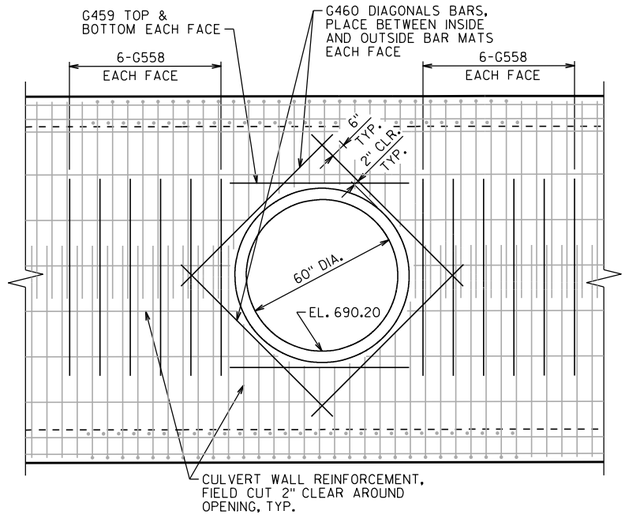
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STATE PROJECT NUMBER
1060-33-78



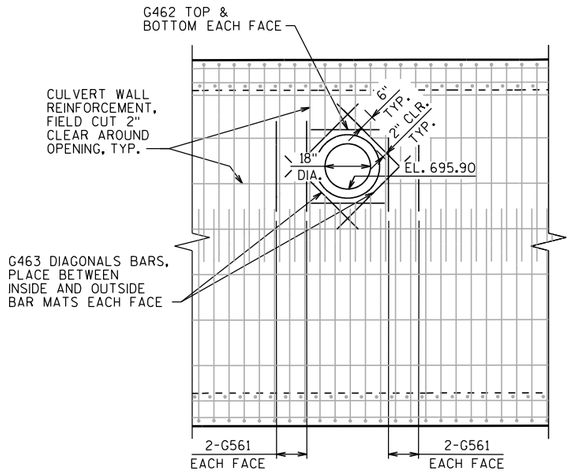
PLAN

BARREL SECTIONS [1], [5], [6], [8], THRU [23], [25] THRU [30] & [31] THRU [33].
FOR DIMENSIONS "C", "D", "E" & "F", SEE SHEET 17.



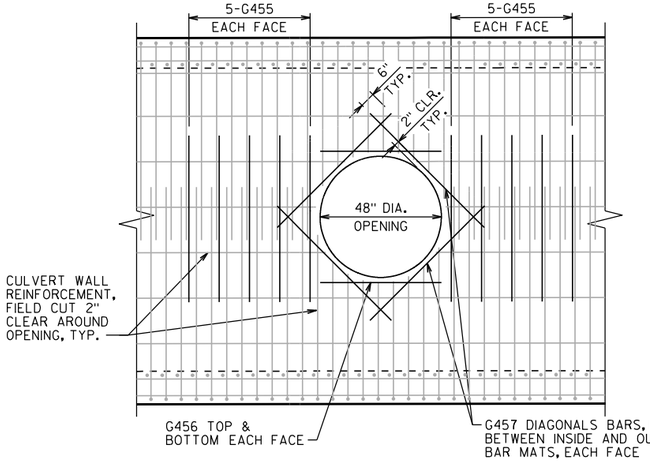
60" STORM SEWER CONNECTION

BARREL SECTION [5] WALL 5



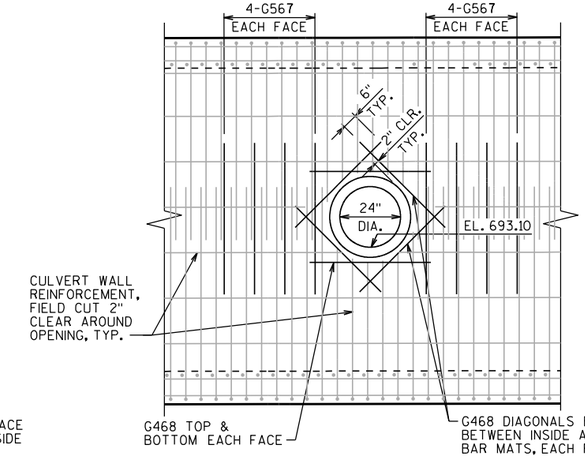
18" STORM SEWER CONNECTION

BARREL SECTION [33] WALL 5



WALL OPENING DETAIL

BARREL SECTION [5] WALL 4



24" STORM SEWER CONNECTION

BARREL SECTION [26] WALL 5.

LEGEND

- C/L 4'-0" DIA. WALL OPENING LOCATED IN BARREL SECTION [5], WALL 4. SEE WALL OPENING DETAIL.
- C/L WALL OPENING FOR STORM SEWER CONNECTION. SEE STORM SEWER CONNECTION DETAIL.

NOTE:

FOR BILL OF BARS, SEE SHEET 19.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

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BOX CULVERT BARREL DETAILS 40' SECTION

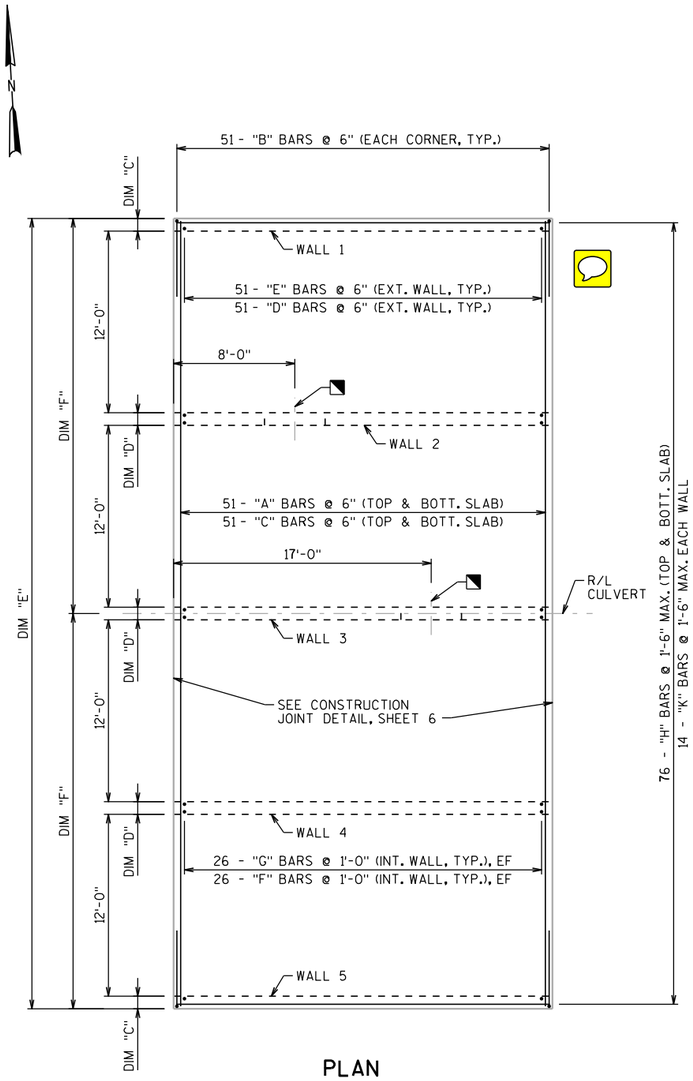
SHEET 18 OF 37

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PLAN

BARREL SECTION 2 TO 4, 7 & 24.
FOR DIMENSIONS "C", "D", "E" & "F", SEE SHEET 17.

LEGEND

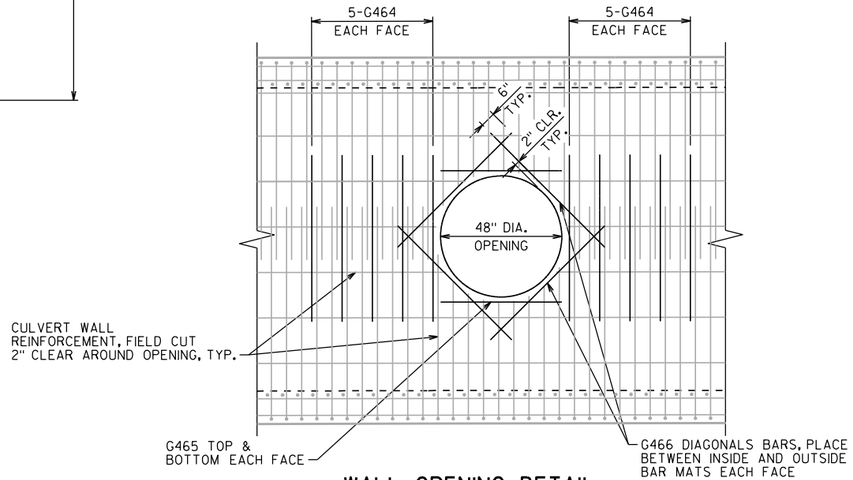
C/L 4'-0" DIA. WALL OPENING LOCATED IN BARREL SECTION 4, WALLS 2 AND 3. SEE WALL OPENING DETAIL.

BILL OF BARS FOR ALL BARREL SECTIONS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

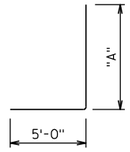
BAR MARK	COAT	NO. REQ'D EACH BARREL SECTION	NO. REQ'D TOTAL	LENGTH	BENT	BAR SERIES	LOCATION
G501		162	162	52'-5"			TOP & BOTT. SLAB - TRANS.
G602		324	324	11'-11"	X		CORNERS
G703		162	162	48'-4"			TOP & BOTT. SLAB - TRANS.
G404		162	162	2'-10"			EXT. WALLS - DOWELS VERT.
G405		162	162	10'-2"			EXT. WALLS - VERT.
G406		246	246	2'-10"			INT. WALLS - DOWELS VERT.
G407		246	246	10'-2"			INT. WALLS - VERT.
G408		152	152	39'-8"			TOP & BOTT. SLAB - LONGIT.
G409		70	70	39'-8"			WALLS - LONGIT.
G510		102	408	51'-11"			TOP & BOTT. SLAB - TRANS.
G511		204	816	11'-9"	X		CORNERS
G612		102	408	47'-10"			TOP & BOTT. SLAB - TRANS.
G413		102	408	2'-8"			EXT. WALLS - DOWELS VERT.
G414		102	408	10'-0"			EXT. WALLS - VERT.
G415		156	624	2'-8"			INT. WALLS - DOWELS VERT.
G416		156	624	10'-0"			INT. WALLS - VERT.
G417		152	608	24'-8"			TOP & BOTT. SLAB - LONGIT.
G418		70	280	24'-8"			WALLS - LONGIT.
G519		162	2592	52'-3"			TOP & BOTT. SLAB - TRANS.
G620		324	5184	11'-10"	X		CORNERS
G621		162	2592	48'-2"			TOP & BOTT. SLAB - TRANS.
G422		162	2592	2'-9"			EXT. WALLS - DOWELS VERT.
G423		162	2592	10'-1"			EXT. WALLS - VERT.
G424		246	3936	2'-9"			INT. WALLS - DOWELS VERT.
G425		246	3936	10'-1"			INT. WALLS - VERT.
G426		152	2432	39'-8"			TOP & BOTT. SLAB - LONGIT.
G427		70	1120	39'-8"			WALLS - LONGIT.
G528		162	1296	51'-11"			TOP & BOTT. SLAB - TRANS.
G529		324	2592	11'-9"	X		CORNERS
G630		162	1296	47'-10"			TOP & BOTT. SLAB - TRANS.
G431		162	1296	2'-8"			EXT. WALLS - DOWELS VERT.
G432		162	1296	10'-0"			EXT. WALLS - VERT.
G433		246	1968	2'-8"			INT. WALLS - DOWELS VERT.
G434		246	1968	10'-0"			INT. WALLS - VERT.

BAR MARK	COAT	NO. REQ'D EACH BARREL SECTION	NO. REQ'D TOTAL	LENGTH	BENT	BAR SERIES	LOCATION
G435		152	1216	39'-8"			TOP & BOTT. SLAB - LONGIT.
G436		70	560	39'-8"			WALLS - LONGIT.
G537		162	486	51'-9"			TOP & BOTT. SLAB - TRANS.
G538		324	972	11'-9"			CORNERS
G539		162	486	47'-8"	X		TOP & BOTT. SLAB - TRANS.
G440		162	486	2'-8"			EXT. WALLS - DOWELS VERT.
G441		162	486	10'-0"			EXT. WALLS - VERT.
G442		246	738	2'-8"			INT. WALLS - DOWELS VERT.
G443		246	738	10'-0"			INT. WALLS - VERT.
G444		152	456	39'-8"			TOP & BOTT. SLAB - LONGIT.
G445		70	210	39'-8"			WALLS - LONGIT.
G546		102	102	52'-3"			TOP & BOTT. SLAB - TRANS.
G647		204	204	11'-10"			CORNERS
G648		102	102	48'-2"	X		TOP & BOTT. SLAB - TRANS.
G449		102	102	2'-9"			EXT. WALLS - DOWELS VERT.
G450		102	102	10'-1"			EXT. WALLS - VERT.
G451		156	156	2'-9"			INT. WALLS - DOWELS VERT.
G452		156	156	10'-1"			INT. WALLS - VERT.
G453		152	152	24'-8"			TOP & BOTT. SLAB - LONGIT.
G454		70	70	24'-8"			WALLS - LONGIT.
G455		--	20	5'-4"			WALL OPENING - VERT.
G456		--	4	4'-0"			WALL OPENING - HORIZ.
G457		--	8	5'-6"			WALL OPENING - DIAGONALS
G558		--	24	6'-6"			STORM SEWER - VERT.
G459		--	4	5'-9"			STORM SEWER - HORIZ.
G460		--	8	7'-1"			STORM SEWER - DIAGONALS
G561		--	8	3'-0"			STORM SEWER - VERT.
G462		--	4	2'-2"			STORM SEWER - HORIZ.
G463		--	8	3'-6"			STORM SEWER - DIAGONALS
G464		--	40	5'-4"			WALL OPENING - VERT.
G465		--	8	4'-0"			WALL OPENING - HORIZ.
G466		--	16	5'-6"			WALL OPENING - DIAGONALS
G567		--	16	5'-0"			STORM SEWER - VERT.
G468		--	12	4'-0"			STORM SEWER - HORIZ. & DIAG.



WALL OPENING DETAIL

BARREL SECTION 4, WALLS 2 & 3.



BAR MARK	DIM. "A"
G602	7'-1"
G511	6'-11"
G620	7'-0"
G529	6'-11"
G538	6'-11"
G647	7'-0"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

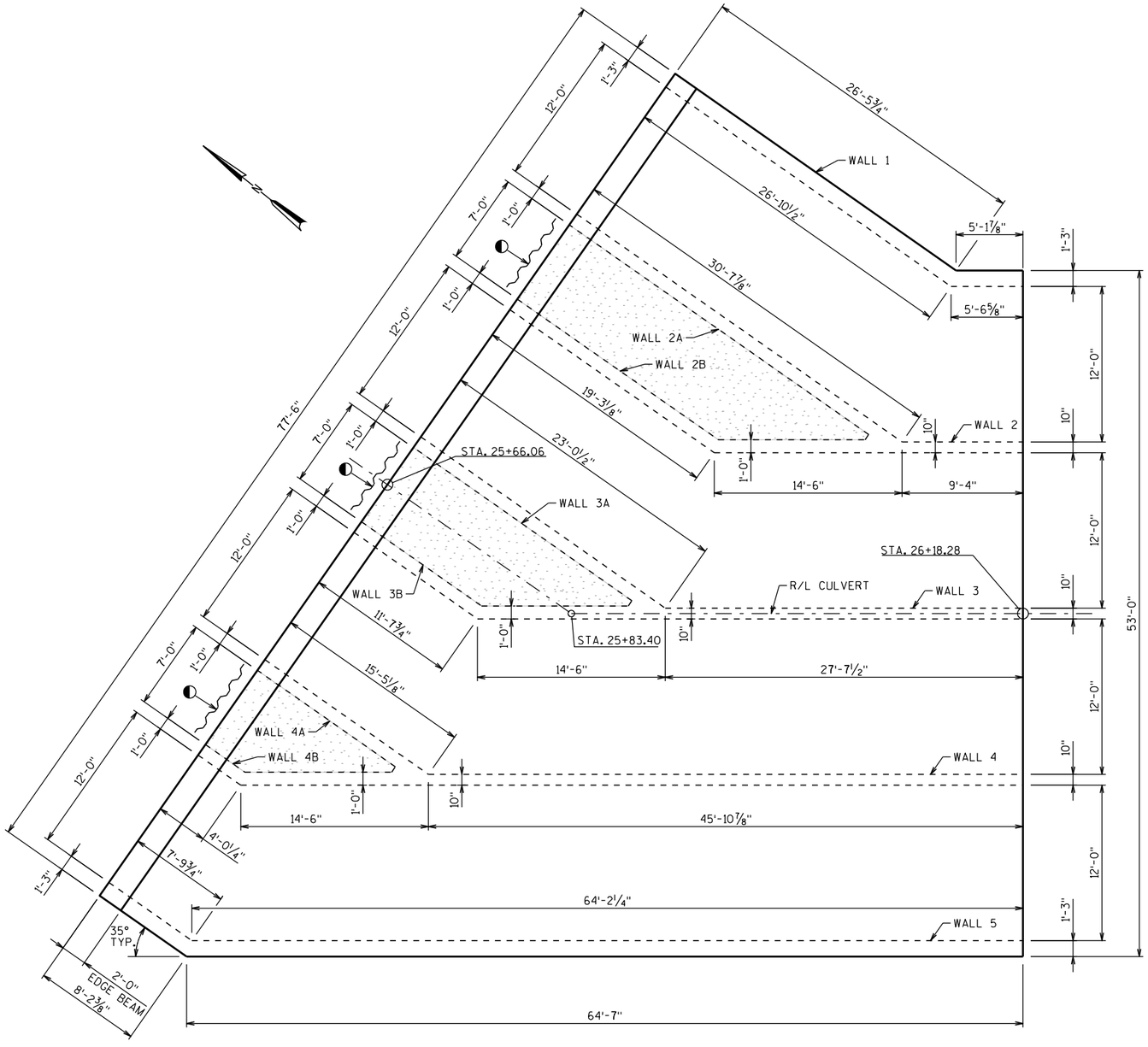
BOX CULVERT BARREL DETAILS 25' SECTION

SHEET 19 OF 37

8

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PLAN SHOWING DIMENSIONS

NOTES

1. PLACE STRUCTURE BACKFILL BETWEEN THE WALLS. PLACE AND COMPACT PER THE STANDARD SPECIFICATION. THE TOP SLAB CONCRETE CAN BE POURED DIRECTLY AGAINST THE STRUCTURE BACKFILL. A 3" CLEARANCE TO THE REINFORCEMENT MUST BE MAINTAINED TO THE TOP SLAB BOTTOM REINFORCEMENT.

2. CONTRACTORS CONSTRUCTION SEQUENCE MAY REQUIRE TEMPORARY SHORING AT THIS LOCATION. IF THE TOP SLAB OF JUNCTION CHAMBER "JC-A" IS TO BE CONSTRUCTED PRIOR TO COMPLETION OF THE WALLS OF THE TRANSITION SECTIONS OF STRUCTURE C-40-101, THEN TEMPORARY SHORING WILL BE PLACED PRIOR TO PLACEMENT OF THE STRUCTURE BACKFILL. PAYMENT FOR THE TEMPORARY SHORING AT THIS LOCATION WILL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS.

LEGEND

◐ TEMPORARY SHORING MAY BE REQUIRED AT THIS LOCATION, SEE NOTE 2.

STRUCTURE BACKFILL, PLACE STRUCTURE BACKFILL BETWEEN "A" AND "B" WALLS PRIOR TO FORMING AND POURING TOP SLAB, SEE NOTE 1.

NO.	DATE	REVISION	BY

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STRUCTURE B-40-892

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JUNCTION CHAMBER "JC-A" PLAN

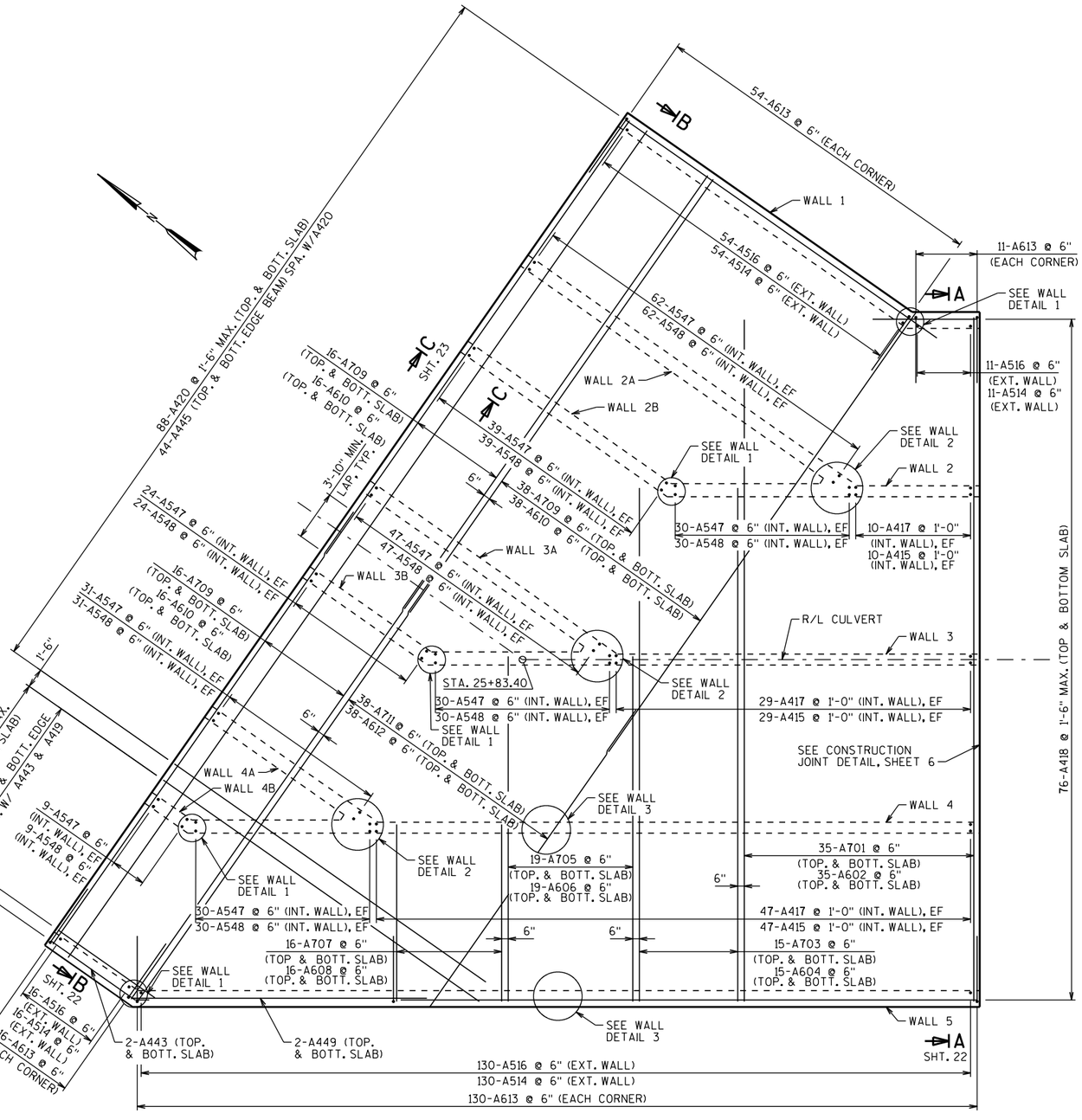
SHEET 20 OF 37

FILE NAME : \\Wke31fp1\w3zoo\Cadd\Final\10603378_TL\Structs\B-40-892 Box Culvert\cds\B400892_080120_de.dgn PLOT DATE : 01-MAY-2013 11:21 PLOT BY : MSCBKS PLOT NAME : B400892_080120_de PLOT SCALE : 10:1

STATE PROJECT NUMBER
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HORIZONTAL WALL REINFORCEMENT TABLE

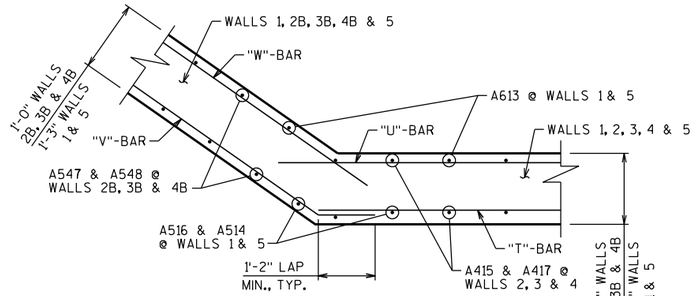
WALL	"R"-BAR	"S"-BAR	"T"-BAR	"U"-BAR	"V"-BAR	"W"-BAR	"X"-BAR	"Y"-BAR
1	-	-	7-A421	7-A422	7-A423	7-A424	-	-
2	-	-	7-A425	7-A426	-	-	-	-
2A	-	-	-	-	-	-	7-A427	7-A428
2B	-	-	-	-	7-A429	7-A430	-	-
3	-	-	7-A431	7-A432	-	-	-	-
3A	-	-	-	-	-	-	7-A433	7-A434
3B	-	-	-	-	7-A435	7-A436	-	-
4	7-A437	7-A437	7-A437	7-A437	-	-	-	-
4A	-	-	-	-	-	-	7-A438	7-A439
4B	-	-	-	-	7-A440	7-A441	-	-
5	7-A442	7-A442	7-A442	7-A442	7-A443	7-A444	-	-



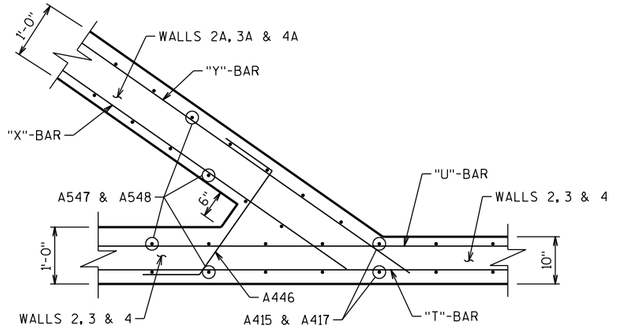
PLAN SHOWING REINFORCEMENT

NOTE:

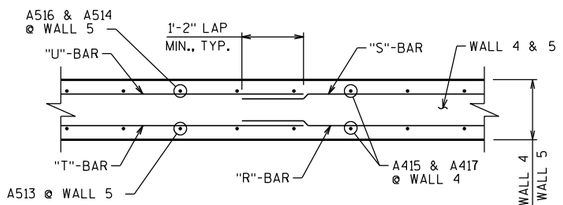
FOR BAR MARKS A421 THRU A444 IN WALLS 1 THRU 5, SEE DETAILS 1, 2 & 3 AND HORIZONTAL WALL REINFORCEMENT TABLE ON THIS SHEET.



WALL DETAIL 1



WALL DETAIL 2



WALL DETAIL 3

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

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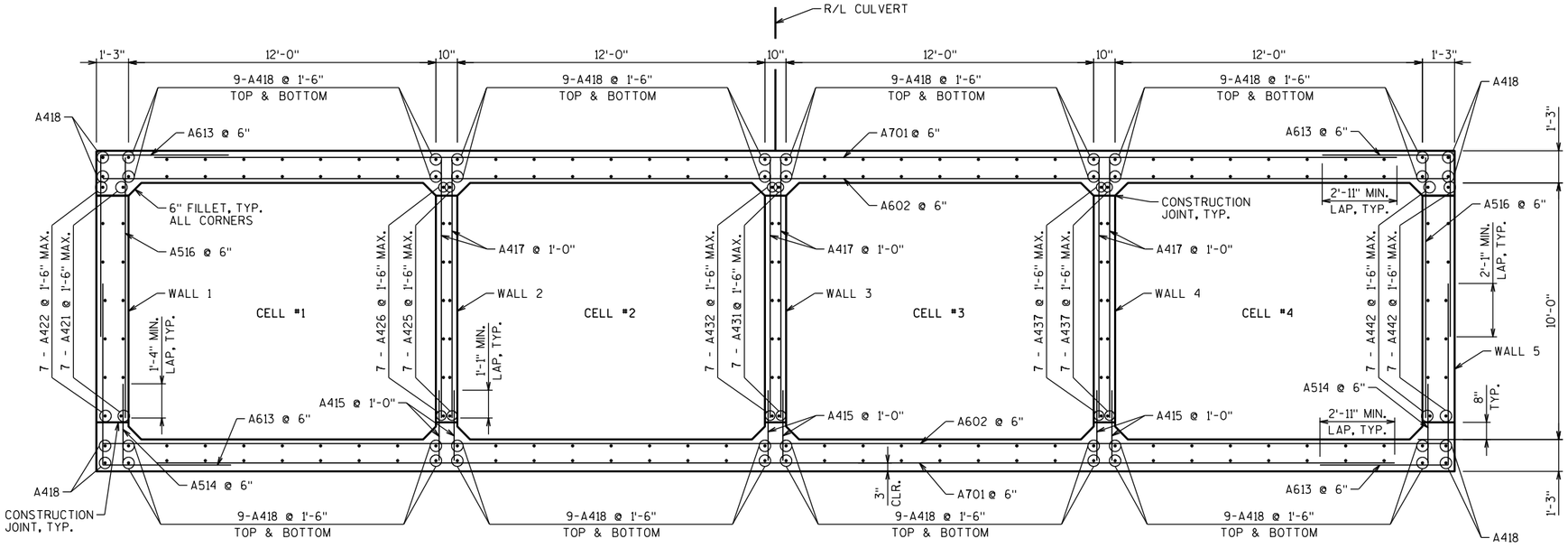
JUNCTION CHAMBER "JC-A" DETAILS (1 OF 3)

SHEET 21 OF 37

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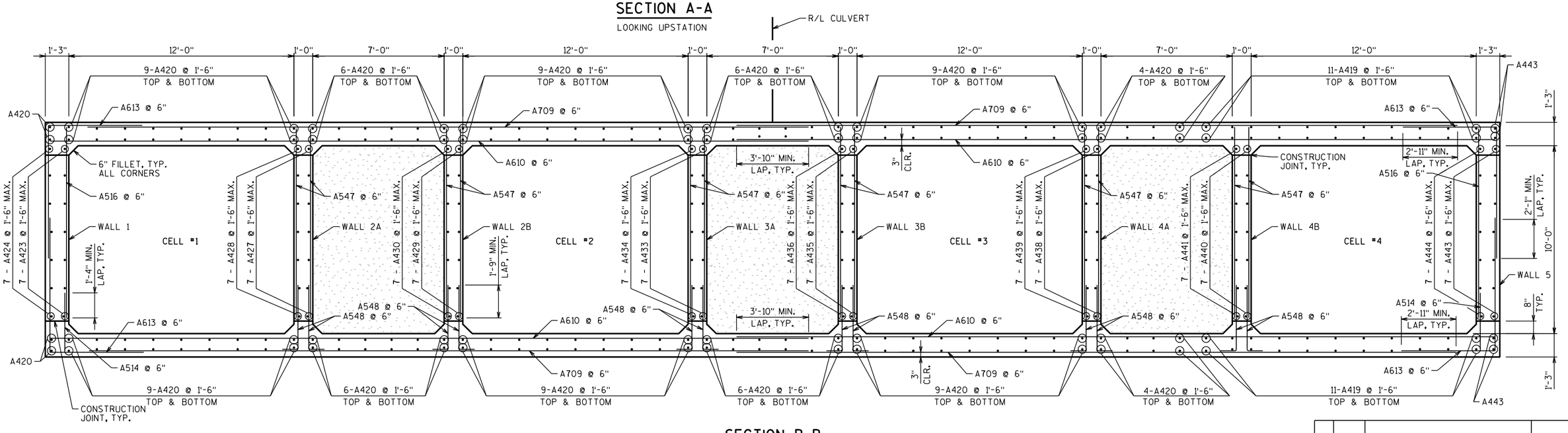
8

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SECTION A-A

LOOKING UPSTATION



SECTION B-B

LOOKING UPSTATION

LEGEND

STRUCTURE BACKFILL, PLACE STRUCTURE BACKFILL BETWEEN "A" AND "B" WALLS PRIOR TO FORMING AND POURING TOP SLAB

NO.	DATE	REVISION	BY

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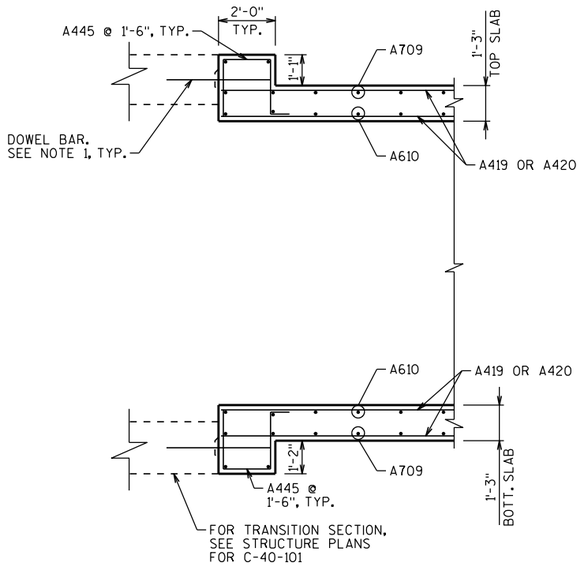
STRUCTURE B-40-892

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JUNCTION CHAMBER "JC-A" DETAILS (2 OF 3)

SHEET 22 OF 37

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SECTION C-C

NOTE:

1. FOR DOWEL BAR CONNECTION AND KEYWAY, SEE STRUCTURE C-40-101, SHEET 13.

BILL OF BARS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

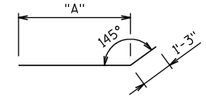
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A701		70	48'-6"			TOP & BOTT. SLAB - TRANS.
A602		70	52'-7"			TOP & BOTT. SLAB - TRANS.
A703		30	39'-9"			TOP & BOTT. SLAB - TRANS.
A604		30	41'-9"			TOP & BOTT. SLAB - TRANS.
A705		38	26'-10"			TOP & BOTT. SLAB - TRANS.
A606		38	28'-10"			TOP & BOTT. SLAB - TRANS.
A707		32	14'-0"			TOP & BOTT. SLAB - TRANS.
A608		32	16'-0"			TOP & BOTT. SLAB - TRANS.
A709		140	38'-6"			TOP & BOTT. SLAB - TRANS.
A610		140	40'-7"			TOP & BOTT. SLAB - TRANS.
A711		76	31'-11"		⚠	TOP & BOTT. SLAB - TRANS.
A612		76	34'-0"		⚠	TOP & BOTT. SLAB - TRANS.
A613		422	11'-11"	X		CORNERS
A514		211	3'-2"			EXT. WALLS - DOWELS VERT.
A415		172	2'-11"			INT. WALLS - DOWELS VERT.
A516		211	10'-3"			EXT. WALLS - VERT.
A417		172	10'-3"			INT. WALLS - VERT.
A418		152	25'-5"		⚠	TOP & BOTT. SLAB - LONGIT.
A419		44	18'-10"		⚠	TOP & BOTT. SLAB - LONGIT.
A420		176	28'-8"			TOP & BOTT. SLAB - LONGIT.
A421		7	5'-4"			WALLS - HORIZ.
A422		7	6'-2"			WALLS - HORIZ.
A423		7	27'-11"	X		WALLS - HORIZ.
A424		7	27'-6"			WALLS - HORIZ.
A425		7	23'-7"			WALLS - HORIZ.
A426		7	24'-2"			WALLS - HORIZ.
A427		7	30'-3"			WALLS - HORIZ.
A428		7	31'-3"			WALLS - HORIZ.
A429		7	20'-3"	X		WALLS - HORIZ.
A430		7	19'-10"			WALLS - HORIZ.
A431		7	41'-9"			WALLS - HORIZ.
A432		7	42'-7"			WALLS - HORIZ.
A433		7	22'-8"			WALLS - HORIZ.
A434		7	23'-8"			WALLS - HORIZ.
A435		7	12'-8"	X		WALLS - HORIZ.
A436		7	12'-3"			WALLS - HORIZ.
A437		28	32'-0"			WALLS - HORIZ.
A438		7	15'-1"			WALLS - HORIZ.
A439		7	16'-1"			WALLS - HORIZ.
A440		7	5'-0"	X		WALLS - HORIZ.
A441		7	4'-8"			WALLS - HORIZ.
A442		28	33'-0"			WALLS - HORIZ.
A443		11	8'-11"	X		WALLS - HORIZ. & TOP & BOTT. SLAB
A444		7	8'-8"			WALLS - HORIZ.
A445		112	6'-1"	X		TOP & BOTTOM - EDGE BEAM
A446		21	3'-9"	X		WALLS - HORIZ.
A547		604	10'-3"			INT. WALLS - VERT.
A548		604	4'-4"	X		INT. WALLS - DOWELS VERT.
A449		4	22'-0"			TOP & BOTT. SLAB - LONGIT.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

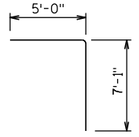
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

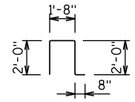
BAR MARK	NO. REQ'D	LENGTH
A711	2 SERIES OF 38	25'-3" TO 38'-6"
A612	2 SERIES OF 38	27'-4" TO 40'-7"
A418	4 SERIES OF 38	7'-0" TO 43'-10"
A419	4 SERIES OF 11	9'-0" TO 28'-8"



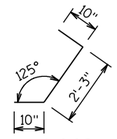
BAR MARK	DIM. "A"
A423	26'-8"
A429	19'-0"
A435	11-5"
A440	3'-9"
A443	7'-8"



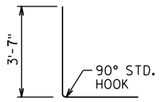
A613



A445



A446



A548

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

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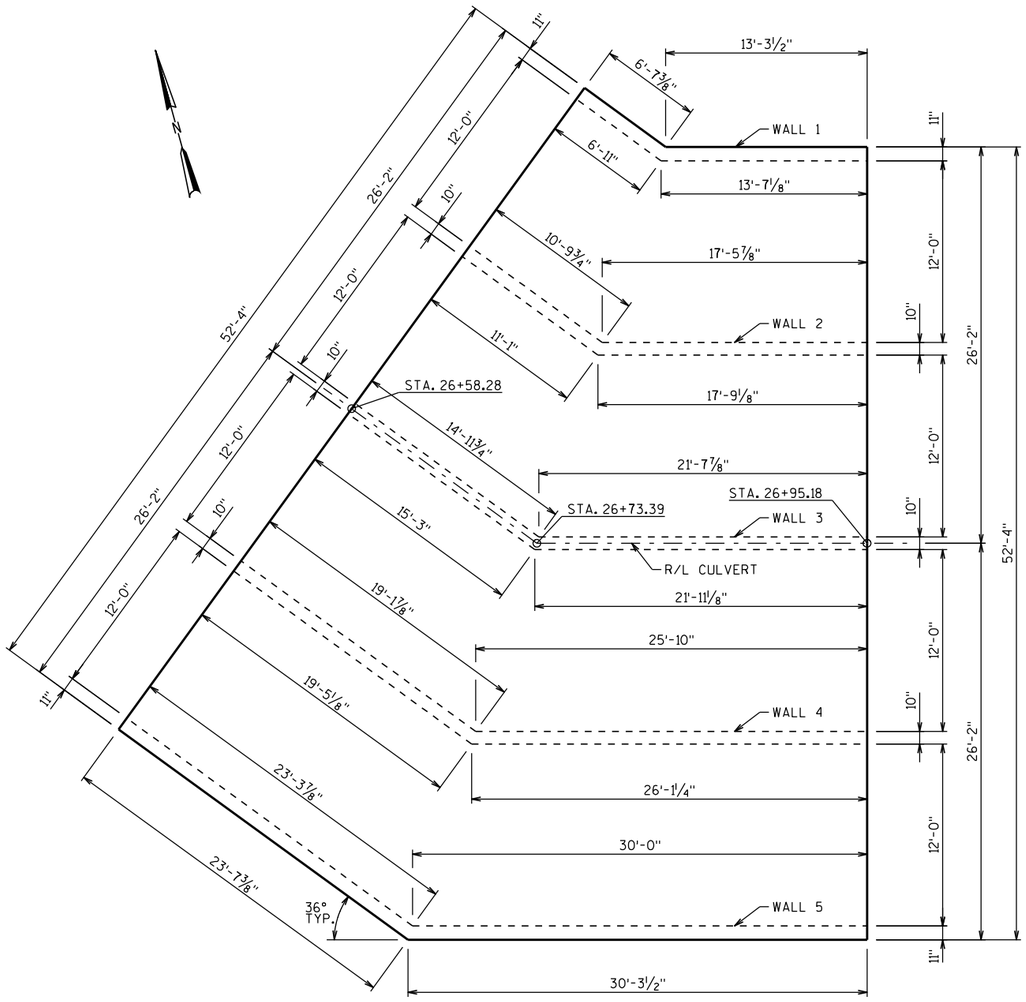
JUNCTION CHAMBER "JC-A" DETAILS (3 OF 3)

SHEET 23 OF 37

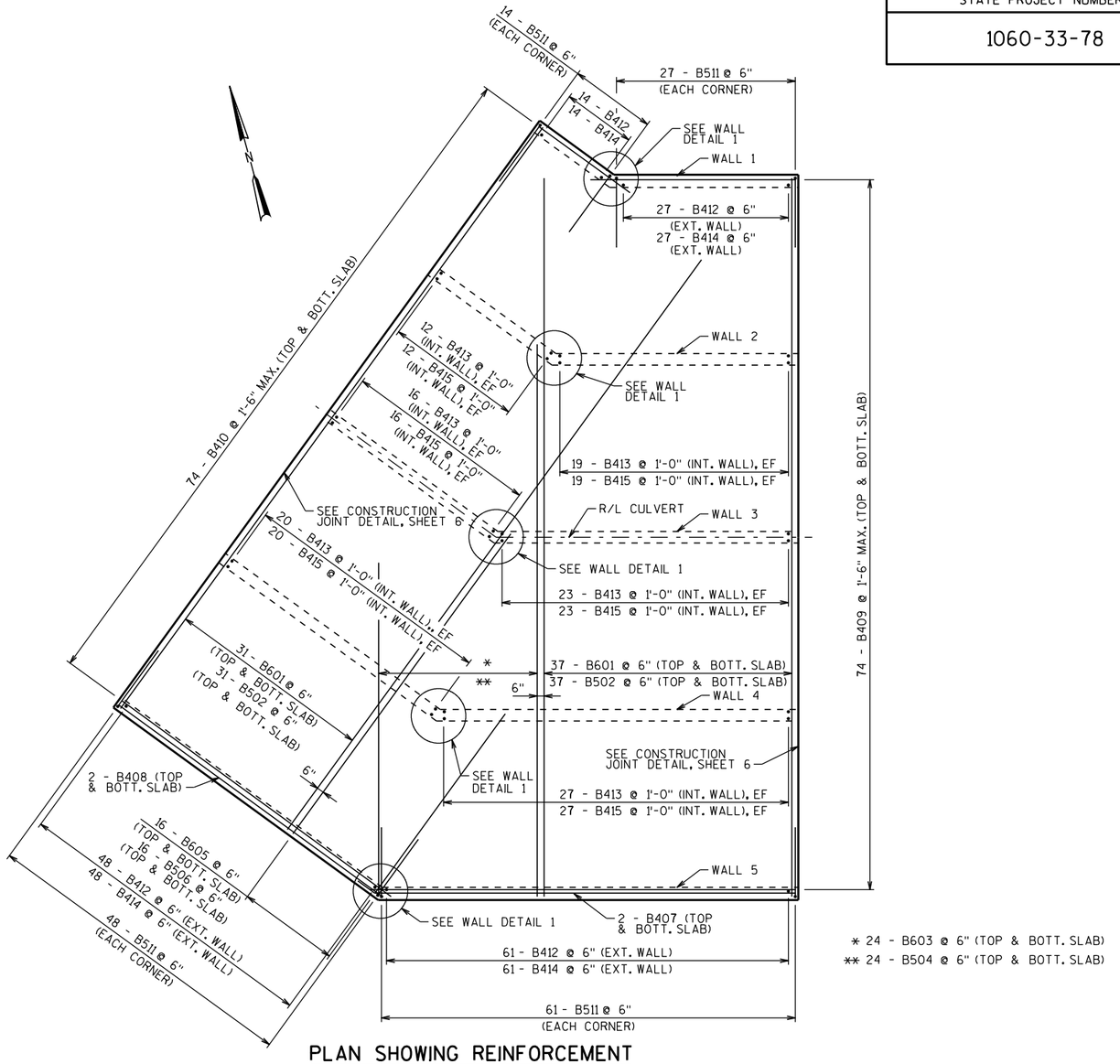
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PLAN SHOWING DIMENSIONS

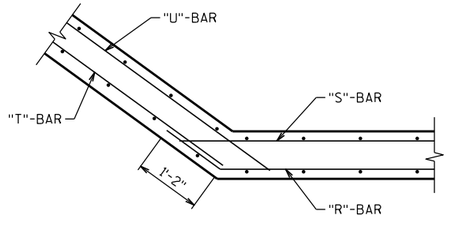


* 24 - B603 @ 6" (TOP & BOTT. SLAB)
** 24 - B504 @ 6" (TOP & BOTT. SLAB)

PLAN SHOWING REINFORCEMENT

HORIZONTAL WALL REINFORCEMENT TABLE

WALL	"R"-BAR	"S"-BAR	"T"-BAR	"U"-BAR
1	7-B416	7-B417	7-B418	7-B419
2	7-B420	7-B421	7-B422	7-B423
3	7-B424	7-B425	7-B426	7-B427
4	7-B428	7-B429	7-B430	7-B431
5	7-B432	7-B433	7-B434	7-B435



WALL DETAIL 1
TYPICAL ALL WALLS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

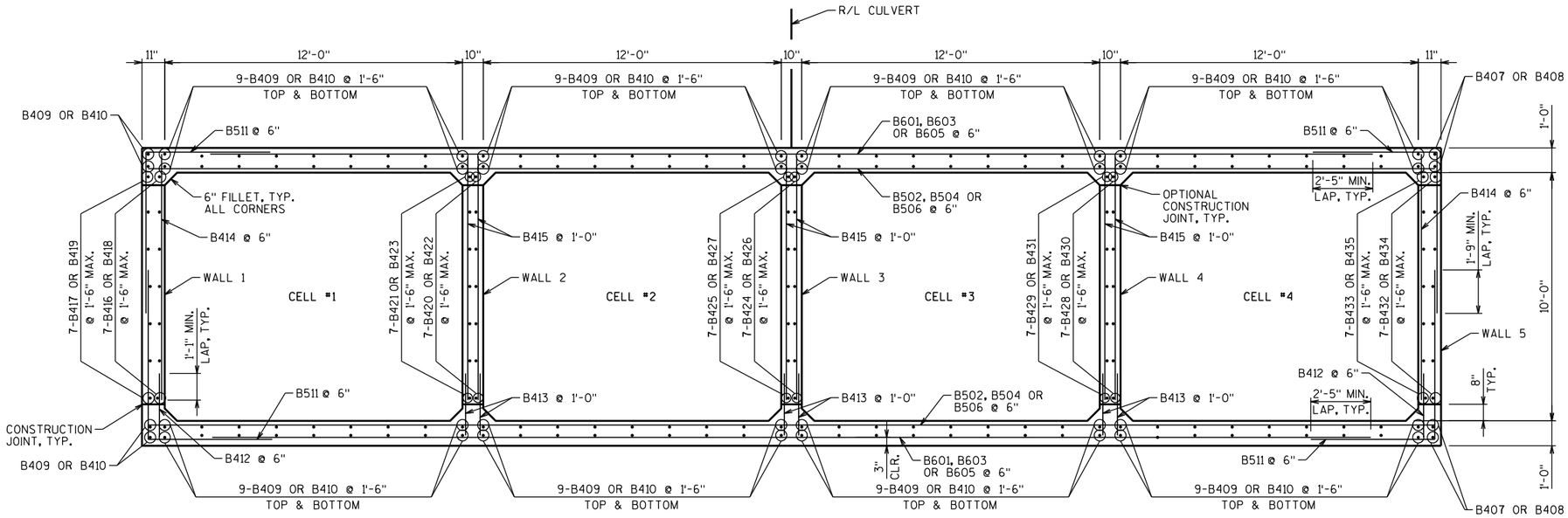
STRUCTURE B-40-892

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JUNCTION CHAMBER "JC-B" DETAILS (1 OF 2)

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STATE PROJECT NUMBER
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SECTION THRU JUNCTION CHAMBER JC-B

LOOKING UPSTATION

BILL OF BARS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B601		136	46'-10"			TOP & BOTT. SLAB - TRANS.
B502		136	51'-11"			TOP & BOTT. SLAB - TRANS.
B603		48	29'-11"		⚠	TOP & BOTT. SLAB - TRANS.
B504		48	31'-11"		⚠	TOP & BOTT. SLAB - TRANS.
B605		32	19'-6"		⚠	TOP & BOTT. SLAB - TRANS.
B506		32	21'-6"		⚠	TOP & BOTT. SLAB - TRANS.
B407		4	31'-4"	X		TOP & BOTT. SLAB - LONGIT.
B408		4	23'-4"			TOP & BOTT. SLAB - LONGIT.
B409		148	23'-0"		⚠	TOP & BOTT. SLAB - LONGIT.
B410		148	16'-2"		⚠	TOP & BOTT. SLAB - LONGIT.
B511		300	11'-7"	X		CORNERS
B412		150	2'-8"			EXT. WALLS - DOWELS VERT.
B413		234	2'-8"			INT. WALLS - DOWELS VERT.
B414		150	10'-0"			EXT. WALLS - VERT.
B415		234	10'-0"			INT. WALLS - VERT.
B416		7	14'-6"	X		WALLS - HORIZ.
B417		7	14'-0"			WALLS - HORIZ.
B418		7	6'-8"			WALLS - HORIZ.
B419		7	7'-3"			WALLS - HORIZ.
B420		7	18'-9"	X		WALLS - HORIZ.

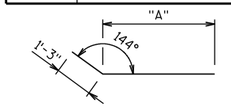
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B421		7	18'-2"			WALLS - HORIZ.
B422		7	10'-10"			WALLS - HORIZ.
B423		7	11'-5"			WALLS - HORIZ.
B424		7	22'-11"	X		WALLS - HORIZ.
B425		7	22'-4"			WALLS - HORIZ.
B426		7	15'-0"			WALLS - HORIZ.
B427		7	15'-7"			WALLS - HORIZ.
B428		7	27'-1"	X		WALLS - HORIZ.
B429		7	26'-6"			WALLS - HORIZ.
B430		7	19'-2"			WALLS - HORIZ.
B431		7	19'-9"			WALLS - HORIZ.
B432		7	31'-3"	X		WALLS - HORIZ.
B433		7	30'-8"			WALLS - HORIZ.
B434		7	23'-4"			WALLS - HORIZ.
B435		7	24'-2"			WALLS - HORIZ.

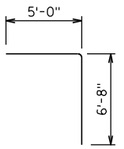
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D	LENGTH
B603	2 SERIES OF 24	22'-0" TO 37'-10"
B504	2 SERIES OF 24	24'-0" TO 39'-10"
B605	2 SERIES OF 16	14'-0" TO 25'-0"
B506	2 SERIES OF 16	16'-0" TO 27'-0"
B409	4 SERIES OF 37	14'-10" TO 31'-2"
B410	4 SERIES OF 37	8'-2" TO 24'-2"



BAR MARK	DIM. "A"
B407	30'-0"
B416	13'-4"
B420	17'-6"
B424	21'-8"
B428	25'-10"
B432	30'-0"



B511

NO.	DATE	REVISION	BY

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STRUCTURE B-40-892

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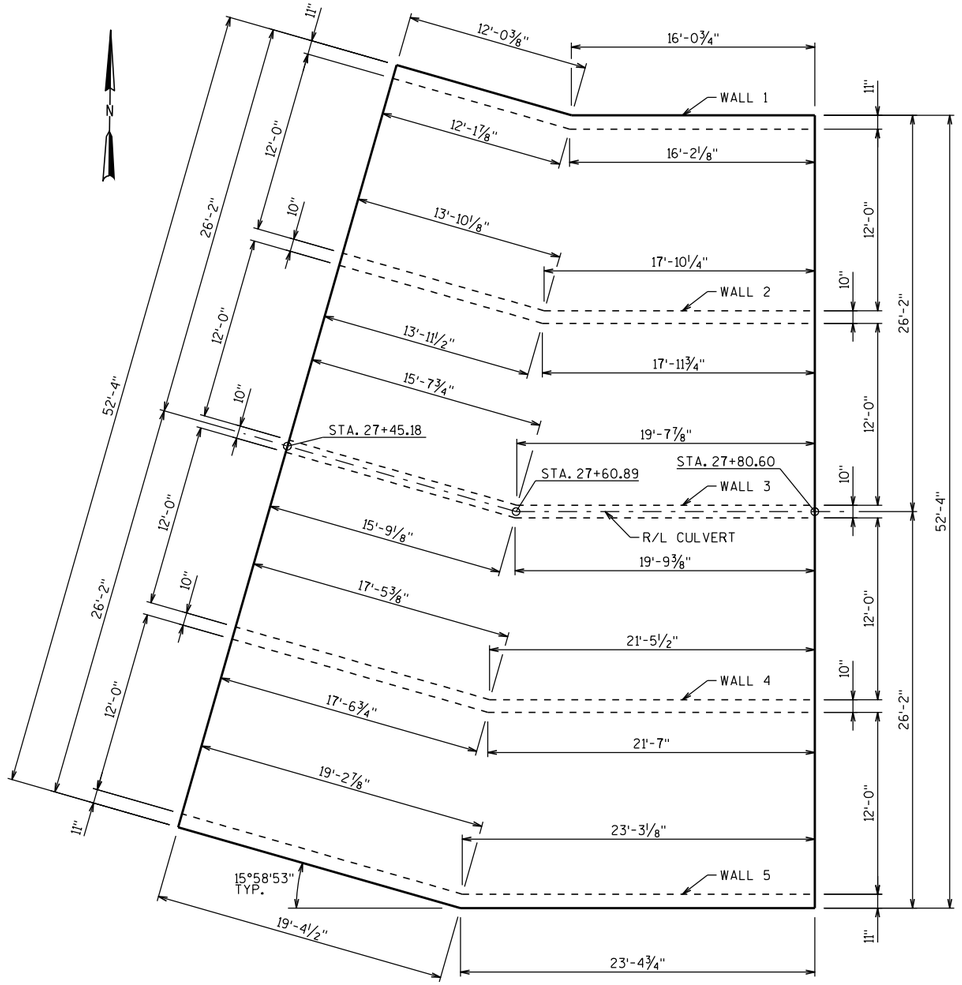
JUNCTION CHAMBER "JC-B" DETAILS (2 OF 2)

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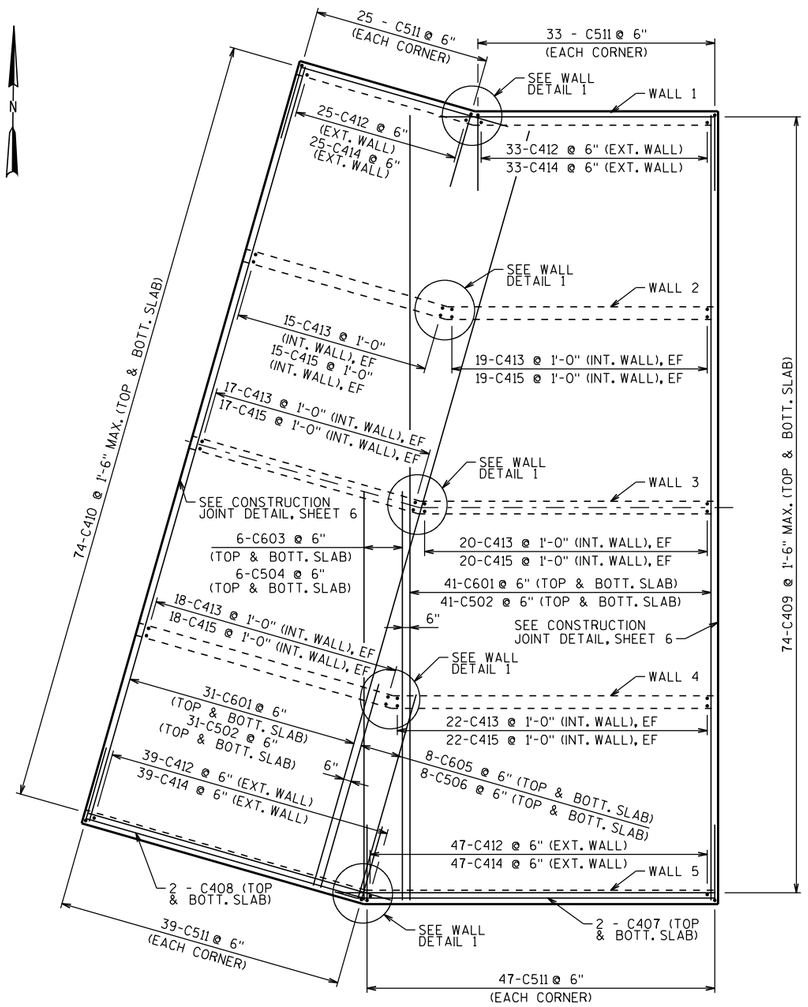
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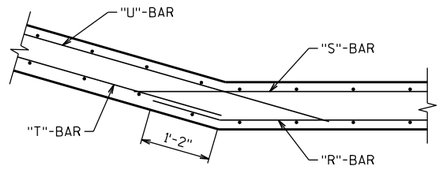
PLAN SHOWING DIMENSIONS



PLAN SHOWING REINFORCEMENT

HORIZONTAL WALL REINFORCEMENT TABLE

WALL	"R"-BAR	"S"-BAR	"T"-BAR	"U"-BAR
1	7-C416	7-C417	7-C418	7-C419
2	7-C420	7-C421	7-C422	7-C423
3	7-C424	7-C425	7-C426	7-C427
4	7-C428	7-C429	7-C430	7-C431
5	7-C432	7-C433	7-C434	7-C435



WALL DETAIL 1
TYPICAL ALL WALLS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

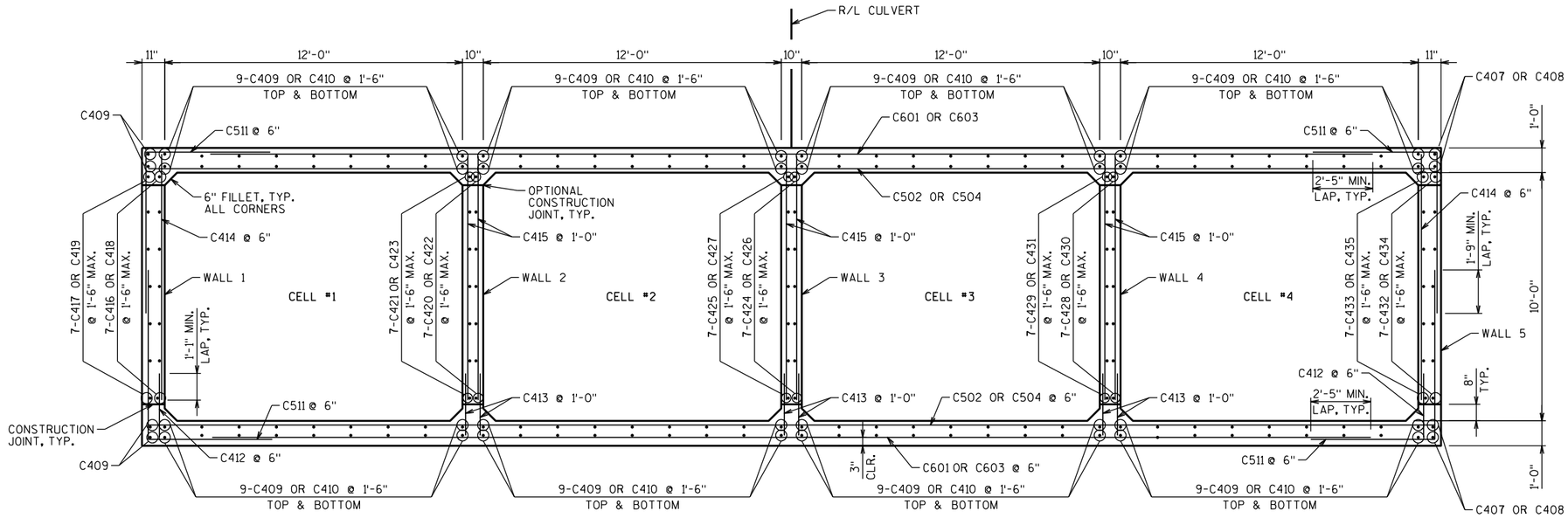
JUNCTION CHAMBER "JC-C" DETAILS (1 OF 2)

SHEET 26 OF 37

8

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PLOT DATE : 01-MAY-2013 11:21
PLOT BY : MSCBKS
PLOT NAME : B400892_080126_de
PLOT SCALE : 10:1

STATE PROJECT NUMBER
1060-33-78



SECTION THRU JUNCTION CHAMBER JC-C

LOOKING UPSTATION

BILL OF BARS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C601		144	46'-10"			TOP & BOTT. SLAB - TRANS.
C502		144	51'-11"			TOP & BOTT. SLAB - TRANS.
C603		12	25'-0"			TOP & BOTT. SLAB - TRANS.
C504		12	27'-0"			TOP & BOTT. SLAB - TRANS.
C605		16	12'-0"			TOP & BOTT. SLAB - TRANS.
C506		16	14'-0"			TOP & BOTT. SLAB - TRANS.
C407		4	24'-4"	X		TOP & BOTT. SLAB - LONGIT.
C408		4	19'-2"			TOP & BOTT. SLAB - LONGIT.
C409		148	21'-3"		⚠	TOP & BOTT. SLAB - LONGIT.
C410		148	17'-5"		⚠	TOP & BOTT. SLAB - LONGIT.
C511		288	11'-7"	X		CORNERS
C412		144	2'-8"			EXT. WALLS - DOWELS VERT.
C413		222	2'-8"			INT. WALLS - DOWELS VERT.
C414		144	10'-0"			EXT. WALLS - VERT.
C415		222	10'-0"			INT. WALLS - VERT.
C416		7	17'-1"	X		WALLS - HORIZ.
C417		7	17'-8"			WALLS - HORIZ.
C418		7	11'-11"			WALLS - HORIZ.
C419		7	13'-8"			WALLS - HORIZ.
C420		7	18'-10"	X		WALLS - HORIZ.

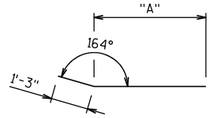
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C421		7	19'-5"			WALLS - HORIZ.
C422		7	13'-9"			WALLS - HORIZ.
C423		7	15'-5"			WALLS - HORIZ.
C424		7	20'-8"	X		WALLS - HORIZ.
C425		7	21'-2"			WALLS - HORIZ.
C426		7	15'-6"			WALLS - HORIZ.
C427		7	17'-2"			WALLS - HORIZ.
C428		7	22'-6"	X		WALLS - HORIZ.
C429		7	23'-0"			WALLS - HORIZ.
C430		7	17'-4"			WALLS - HORIZ.
C431		7	19'-0"			WALLS - HORIZ.
C432		7	24'-3"	X		WALLS - HORIZ.
C433		7	24'-11"			WALLS - HORIZ.
C434		7	19'-2"			WALLS - HORIZ.
C435		7	20'-10"			WALLS - HORIZ.

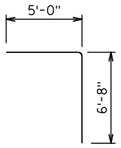
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D	LENGTH
B409	4 SERIES OF 35	17'-6" TO 25'-0"
B410	4 SERIES OF 35	13'-6" TO 21'-4"



BAR MARK	DIM. "A"
C407	23'-2"
C416	15'-10"
C420	17'-7"
C424	19'-5"
C428	21'-3"
C432	23'-0"



C511

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

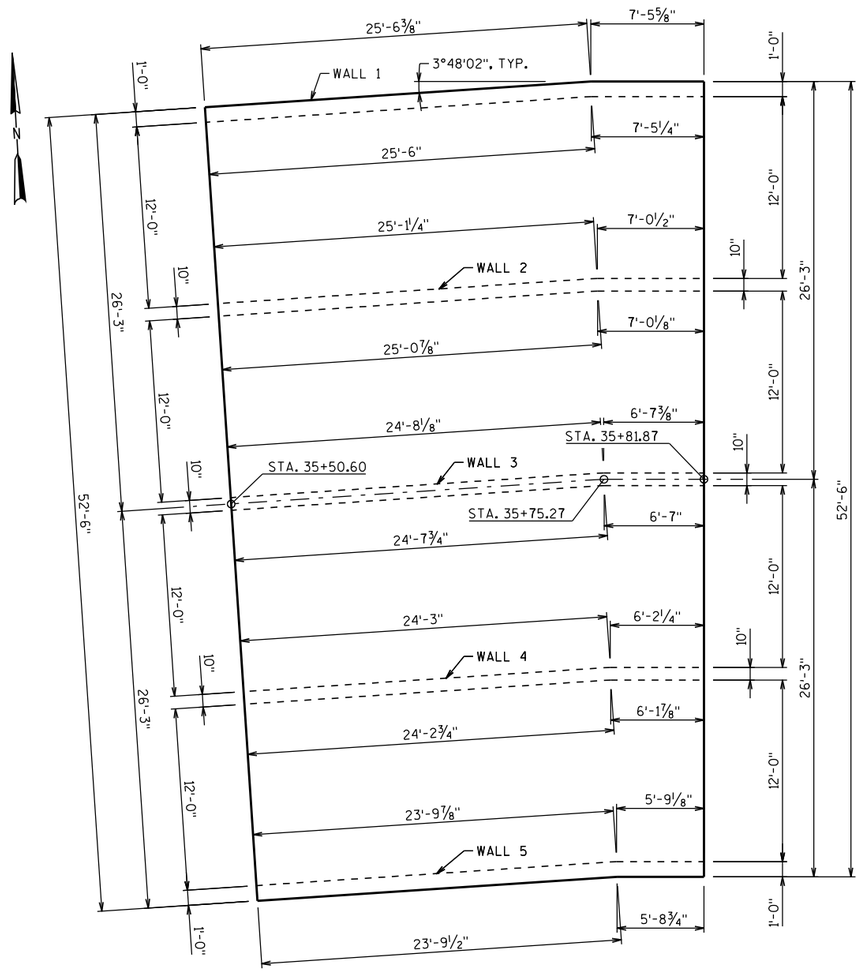
STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

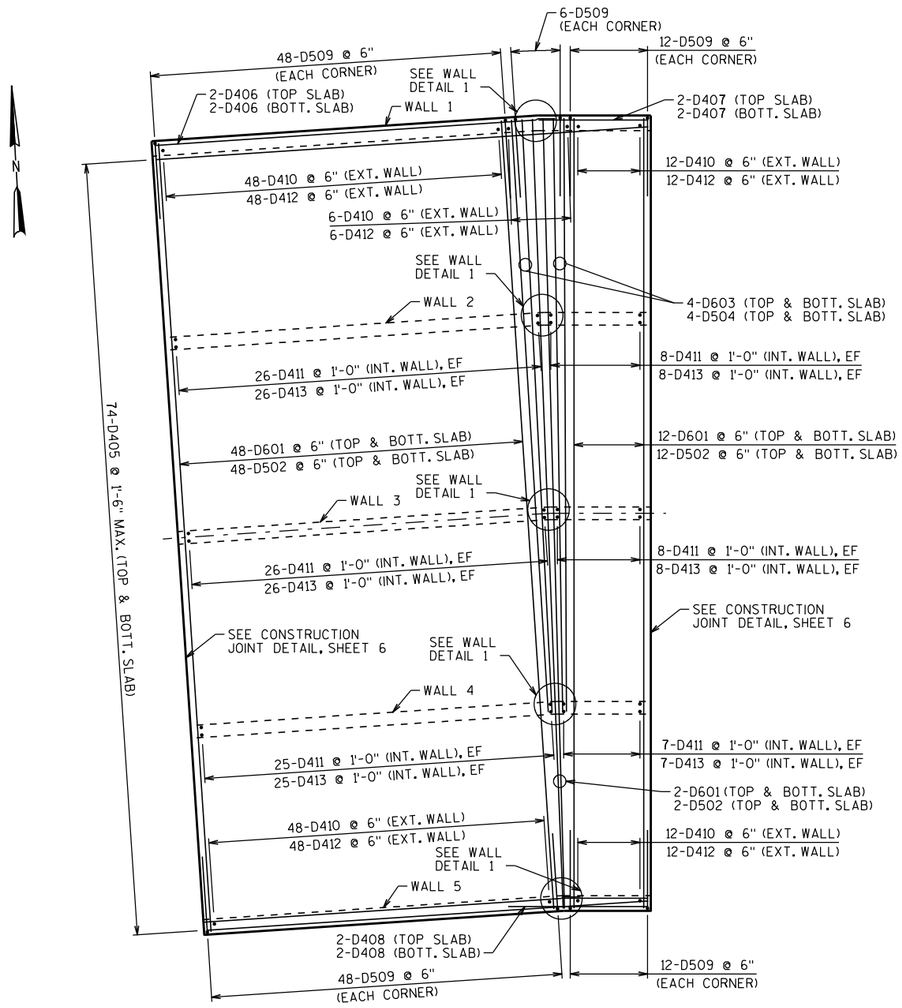
JUNCTION CHAMBER "JC-C" DETAILS (2 OF 2)

SHEET 27 OF 37

STATE PROJECT NUMBER
1060-33-78



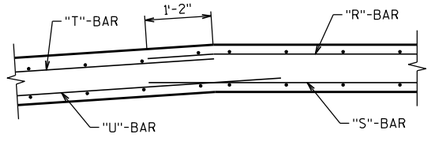
PLAN SHOWING DIMENSIONS



PLAN SHOWING REINFORCEMENT

HORIZONTAL WALL REINFORCEMENT TABLE

WALL	"R"-BAR	"S"-BAR	"T"-BAR	"U"-BAR
1	7-D414	7-D415	7-D416	7-D417
2	7-D418	7-D419	7-D420	7-D421
3	7-D422	7-D423	7-D424	7-D425
4	7-D426	7-D427	7-D428	7-D429
5	7-D430	7-D431	7-D432	7-D433



WALL DETAIL 1
TYPICAL ALL WALLS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

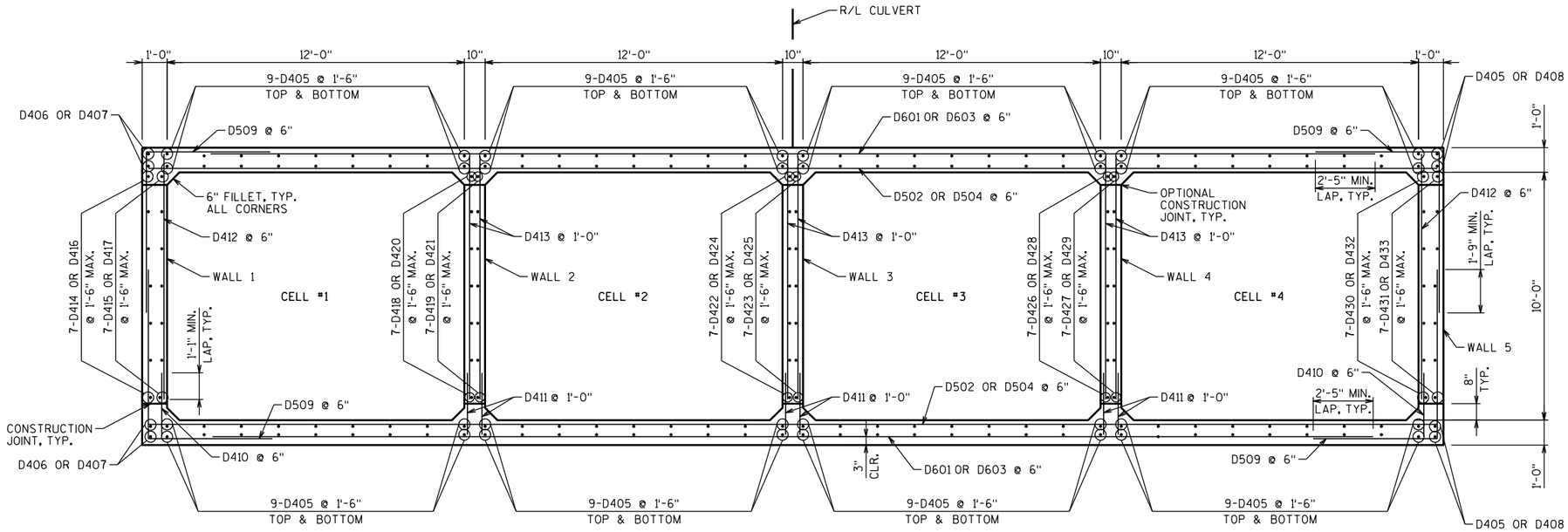
JUNCTION CHAMBER
"JC-D" DETAILS
(1 OF 2)

SHEET 28 OF 37

8

8

STATE PROJECT NUMBER
1060-33-78



SECTION THRU JUNCTION CHAMBER JC-D

LOOKING UPSTATION

BILL OF BARS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D601		124	47'-0"			TOP & BOTT. SLAB - TRANS.
D502		124	52'-1"			TOP & BOTT. SLAB - TRANS.
D603		8	37'-6"			TOP & BOTT. SLAB - TRANS.
D504		8	39'-6"			TOP & BOTT. SLAB - TRANS.
D405		148	30'-9"		⚠	TOP & BOTT. SLAB - LONG.
D406		4	26'-6"	X		TOP & BOTT. SLAB - LONG.
D407		4	7'-1"			TOP & BOTT. SLAB - LONG.
D408		4	6'-8"			TOP & BOTT. SLAB - LONG.
D509		252	11'-7"	X		CORNERS
D410		126	2'-8"			EXT. WALLS - DOWELS VERT.
D411		200	2'-8"			INT. WALLS - DOWELS VERT.
D412		126	10'-0"			EXT. WALLS - VERT.
D413		200	10'-0"			INT. WALLS - VERT.
D414		7	8'-6"	X		WALLS - HORIZ.
D415		7	8'-7"			WALLS - HORIZ.
D416		7	25'-4"			WALLS - HORIZ.
D417		7	26'-6"			WALLS - HORIZ.
D418		7	8'-1"	X		WALLS - HORIZ.
D419		7	8'-0"			WALLS - HORIZ.
D420		7	24'-9"			WALLS - HORIZ.

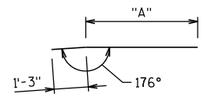
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
D421		7	26'-1"			WALLS - HORIZ.
D422		7	7'-8"	X		WALLS - HORIZ.
D423		7	7'-9"			WALLS - HORIZ.
D424		7	24'-4"			WALLS - HORIZ.
D425		7	25'-9"			WALLS - HORIZ.
D426		7	7'-3"	X		WALLS - HORIZ.
D427		7	7'-4"			WALLS - HORIZ.
D428		7	23'-11"			WALLS - HORIZ.
D429		7	25'-2"			WALLS - HORIZ.
D430		7	6'-10"	X		WALLS - HORIZ.
D431		7	6'-8"			WALLS - HORIZ.
D432		7	23'-5"			WALLS - HORIZ.
D433		7	24'-9"			WALLS - HORIZ.

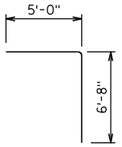
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D	LENGTH
D405	4 SERIES OF 37	29'-0" TO 32'-6"



BAR MARK	DIM. "A"
D406	25'-2"
D414	7'-3"
D418	6'-10"
D422	6'-5"
D426	6'-0"
D430	5'-7"



D509

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

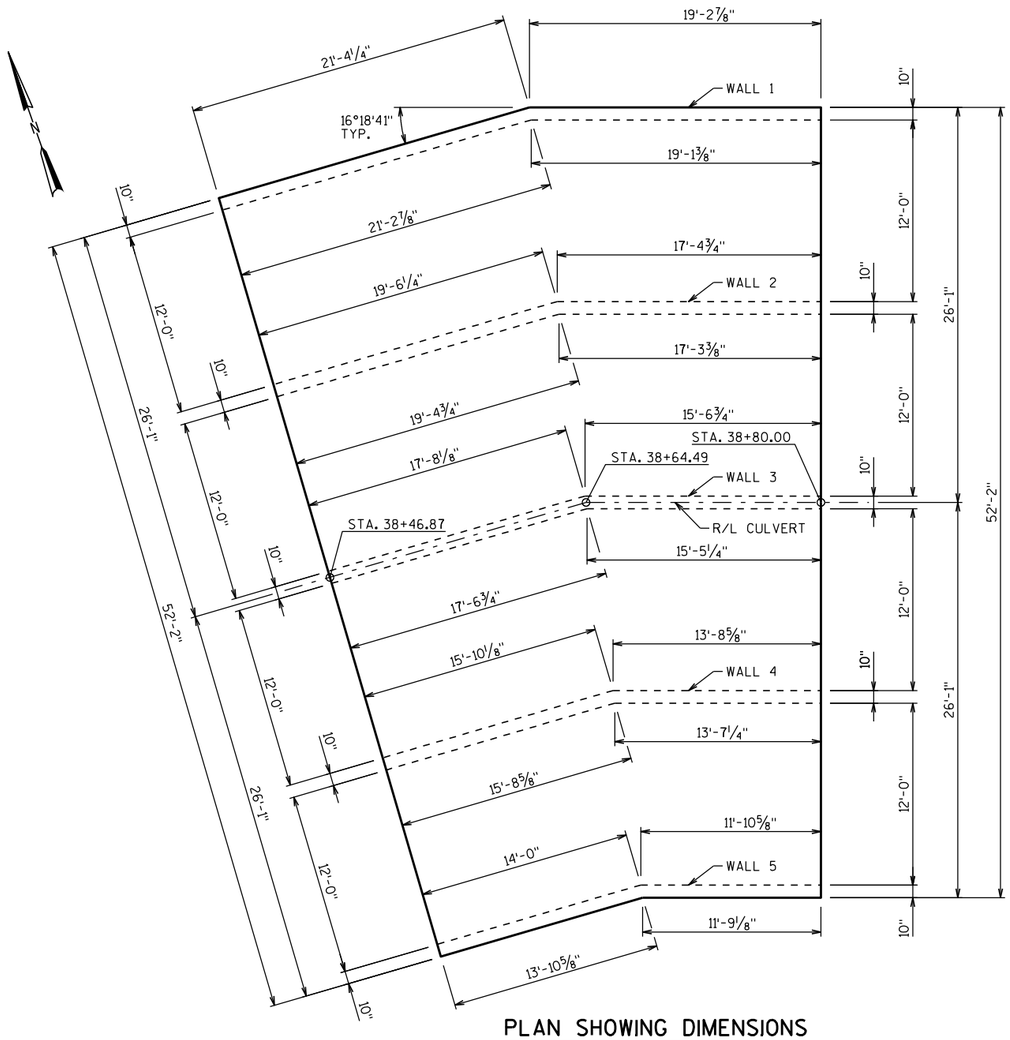
STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

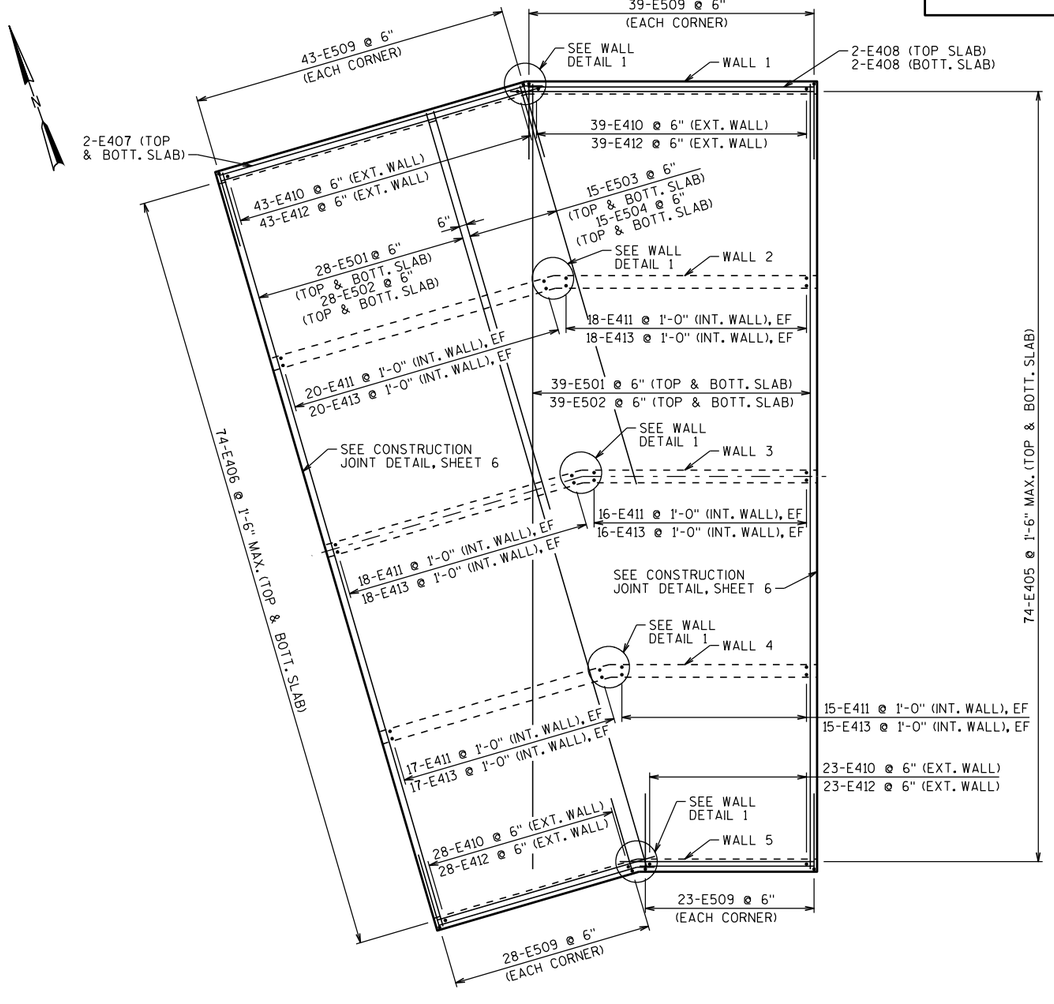
JUNCTION CHAMBER "JC-D" DETAILS (2 OF 2)

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STATE PROJECT NUMBER
1060-33-78



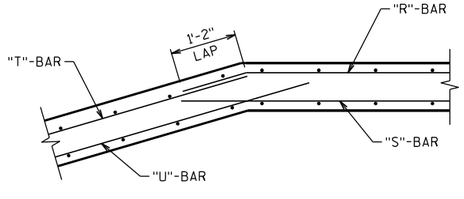
PLAN SHOWING DIMENSIONS



PLAN SHOWING REINFORCEMENT

HORIZONTAL WALL REINFORCEMENT TABLE

WALL	"R"-BAR	"S"-BAR	"T"-BAR	"U"-BAR
1	7-E414	7-E415	7-E416	7-E417
2	7-E418	7-E419	7-E420	7-E421
3	7-E422	7-E423	7-E424	7-E425
4	7-E426	7-E427	7-E428	7-E429
5	7-E430	7-E431	7-E432	7-E433



WALL DETAIL 1
TYPICAL ALL WALLS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

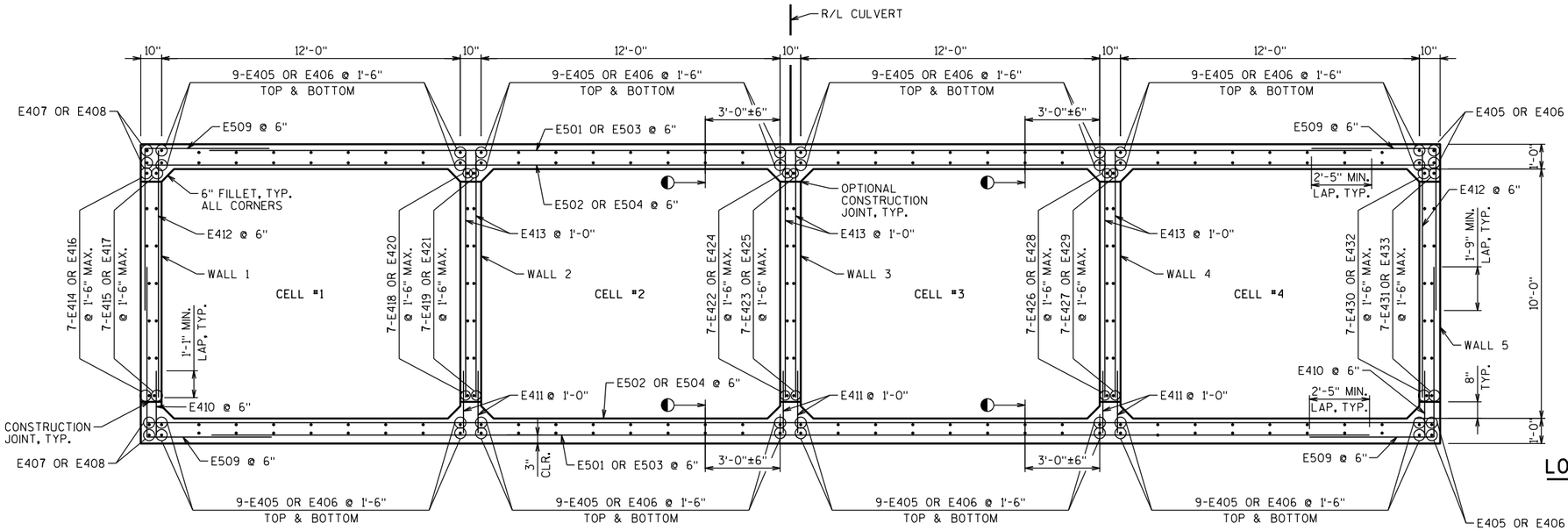
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JUNCTION CHAMBER "JC-E" DETAILS (1 OF 2)

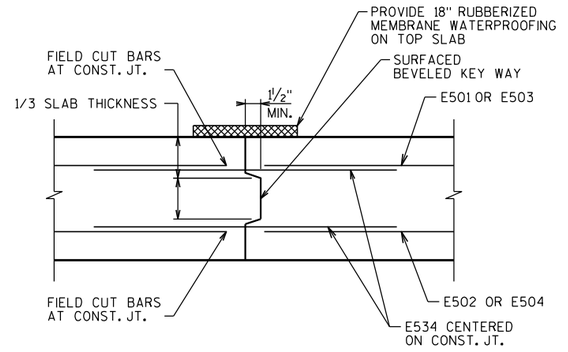
SHEET 30 OF 37

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PLOT BY : MSCBKS
PLOT NAME : B400892_080130_de
PLOT SCALE : 10:1

STATE PROJECT NUMBER
1060-33-78



SECTION THRU JUNCTION CHAMBER JC-E



LONGITUDINAL STAGED CONSTRUCTION JOINT DETAIL

BILL OF BARS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
E501		134	46'-8"			TOP & BOTT. SLAB - TRANS.
E502		134	51'-9"			TOP & BOTT. SLAB - TRANS.
E503		30	25'-5"			TOP & BOTT. SLAB - TRANS.
E504		30	27-5"			TOP & BOTT. SLAB - TRANS.
E405		148	16'-8"		⚠	TOP & BOTT. SLAB - LONGIT.
E406		148	18'-9"		⚠	TOP & BOTT. SLAB - LONGIT.
E407		4	21'-2"			TOP & BOTT. SLAB - LONGIT.
E408		4	20'-3"	X		TOP & BOTT. SLAB - LONGIT.
E509		266	11'-7"	X		CORNERS
E410		133	2'-8"			EXT. WALLS - DOWELS VERT.
E411		208	2'-8"			INT. WALLS - DOWELS VERT.
E412		133	10'-0"			EXT. WALLS - VERT.
E413		208	10'-0"			INT. WALLS - VERT.
E414		7	20'-2"	X		WALLS - HORIZ.
E415		7	20'-2"			WALLS - HORIZ.
E416		7	21'-2"			WALLS - HORIZ.
E417		7	22'-3"			WALLS - HORIZ.
E418		7	18'-5"	X		WALLS - HORIZ.
E419		7	18'-3"			WALLS - HORIZ.
E420		7	19'-4"			WALLS - HORIZ.

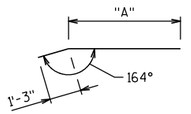
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
E421		7	20'-4"			WALLS - HORIZ.
E422		7	16'-7"	X		WALLS - HORIZ.
E423		7	16'-5"			WALLS - HORIZ.
E424		7	17'-5"			WALLS - HORIZ.
E425		7	18'-6"			WALLS - HORIZ.
E426		7	14'-9"	X		WALLS - HORIZ.
E427		7	14'-7"			WALLS - HORIZ.
E428		7	15'-7"			WALLS - HORIZ.
E429		7	16'-9"			WALLS - HORIZ.
E430		7	12'-11"	X		WALLS - HORIZ.
E431		7	12'-9"			WALLS - HORIZ.
E432		7	13'-9"			WALLS - HORIZ.
E433		7	14'-11"			WALLS - HORIZ.
E534		596	5'-0"			TOP & BOTT. SLAB TRANS.- SPLICE

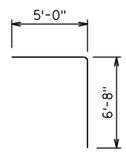
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D	LENGTH
E405	4 SERIES OF 37	13'-0" TO 20'-4"
E406	4 SERIES OF 37	15'-0" TO 22'-6"



BAR MARK	DIM. "A"
E408	19'-0"
E414	18'-11"
E418	17'-2"
E422	15'-4"
E426	13'-6"
E430	11'-8"



E509

LEGEND

◐ LOCATION OF LONGITUDINAL CONSTRUCTION JOINT FOR STAGED CONSTRUCTION. SEE LONGITUDINAL STAGED CONSTRUCTION JOINT DETAIL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

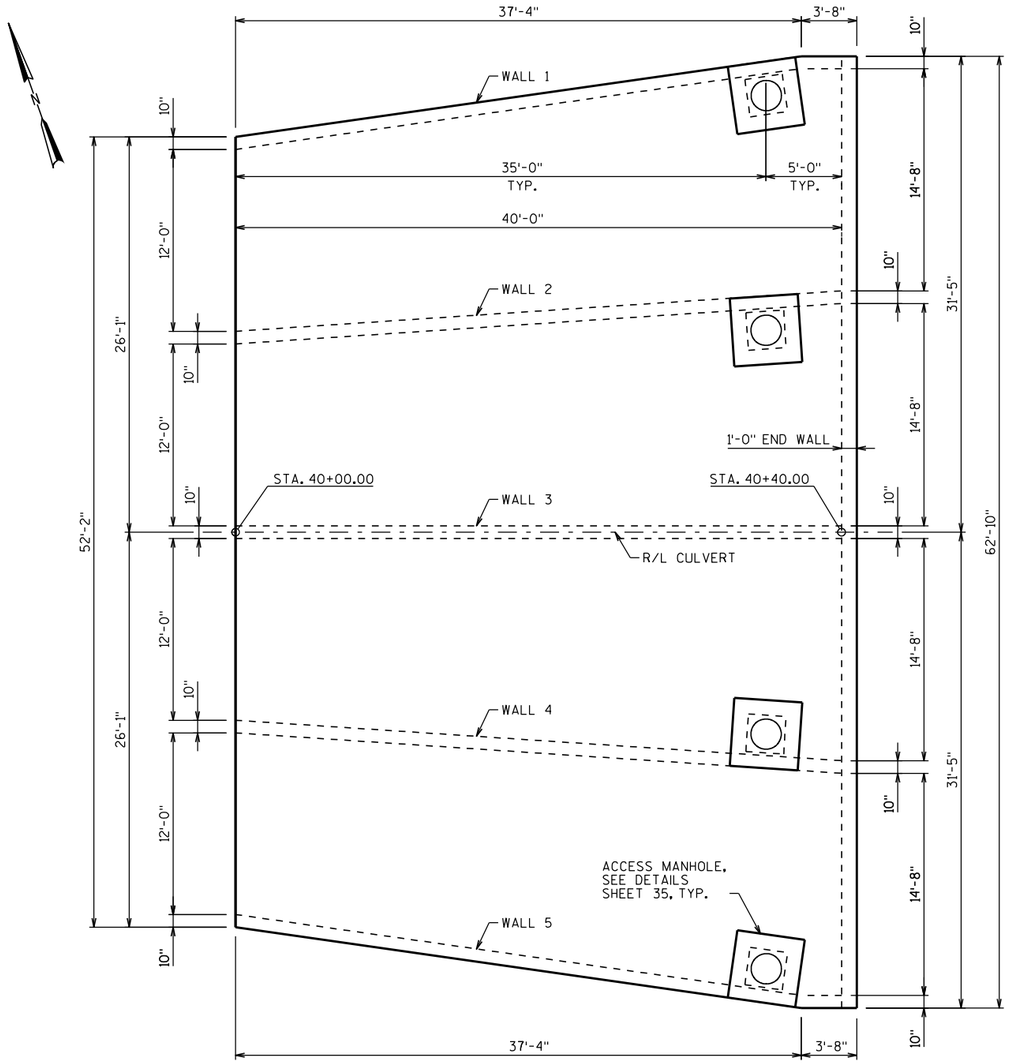
DRAWN BY TJC | PLANS CK'D. BKS

JUNCTION CHAMBER "JC-E" DETAILS (2 OF 2)

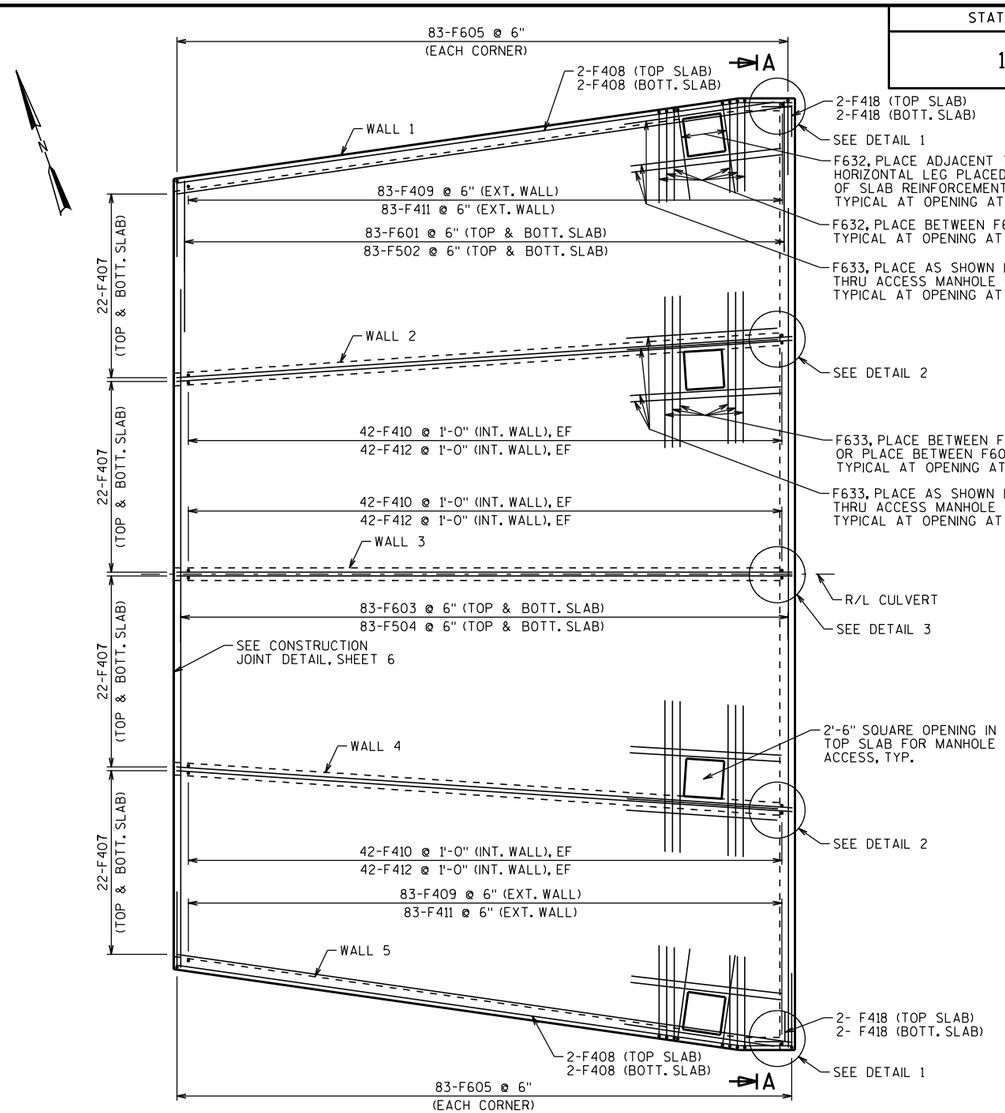
SHEET 31 OF 37

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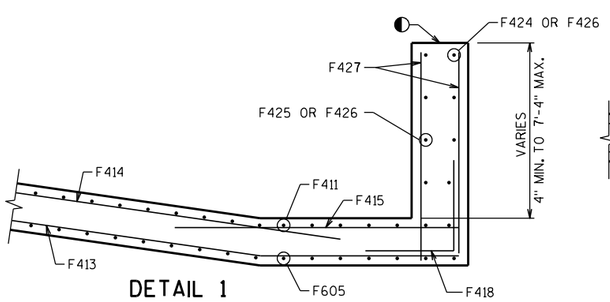
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PLAN SHOWING DIMENSIONS

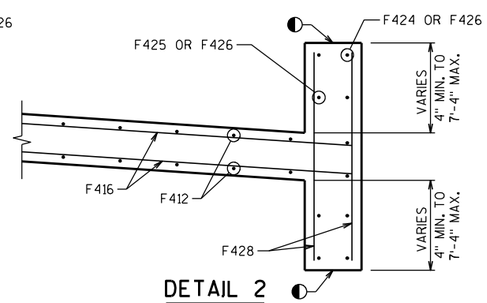


PLAN SHOWING REINFORCEMENT



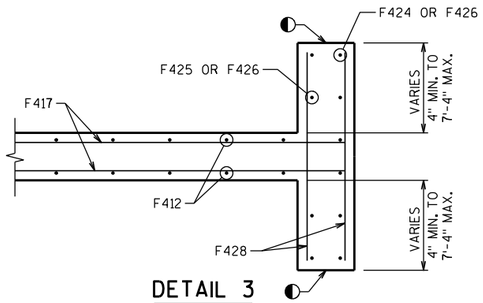
DETAIL 1

WALL 5 SHOWN, WALL 1 SIMILAR



DETAIL 2

WALL 4 SHOWN, WALL 2 SIMILAR



DETAIL 3

LEGEND

◐ EDGE OF EXIST. MULTI-PLATE STEEL PIPE ARCH CONDUIT

STATE PROJECT NUMBER

1060-33-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

JUNCTION CHAMBER "JC-F" DETAILS (1 OF 4)

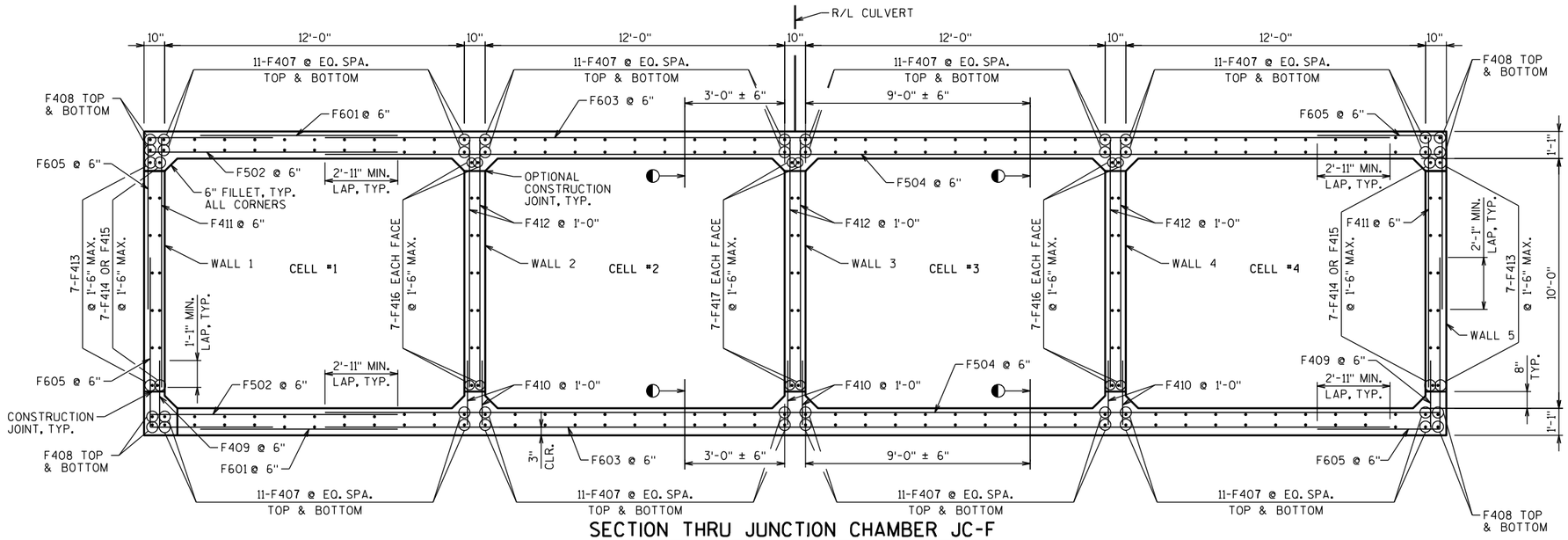
SHEET 32 OF 37

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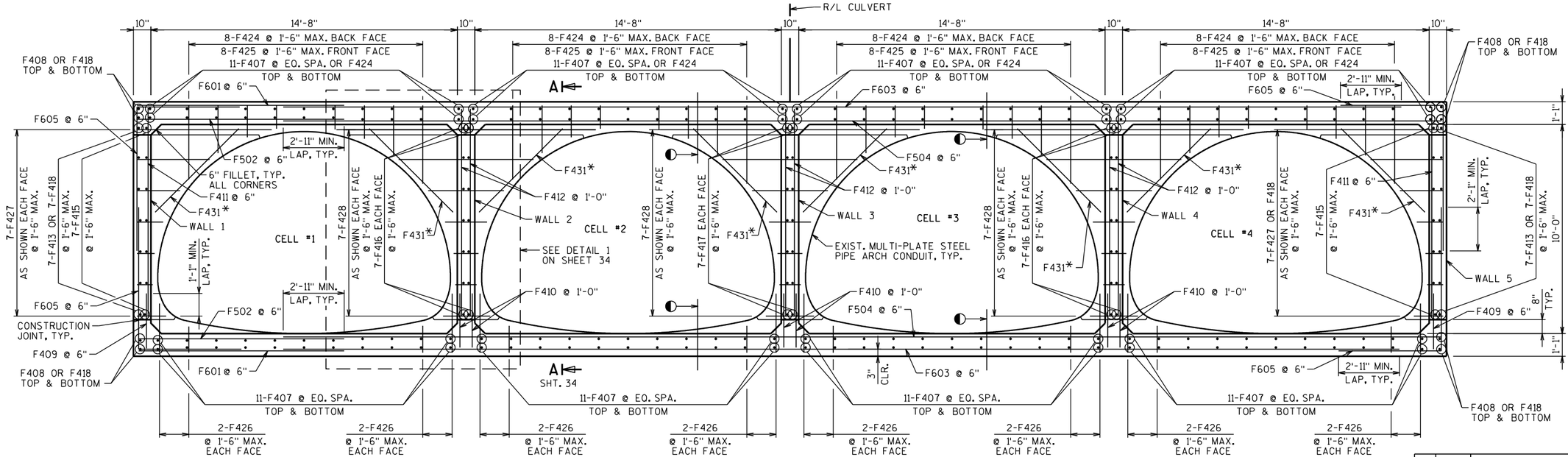
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STATE PROJECT NUMBER
1060-33-78



SECTION THRU JUNCTION CHAMBER JC-F

LOOKING UPSTATION



SECTION A-A

LOOKING UPSTATION AT ENDWALL

LEGEND

◐ LOCATION OF LONGITUDINAL CONSTRUCTION JOINT FOR STAGED CONSTRUCTION, SEE LONGITUDINAL STAGED CONSTRUCTION JOINT DETAIL, SHEET 35.

* EACH FACE

NOTE:

FIELD CUT BARS F418 AND F424 TO F428 IN JUNCTION CHAMBER END WALL AROUND EXISTING MULTI-PLATE STEEL PIPE ARCH CONDUIT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

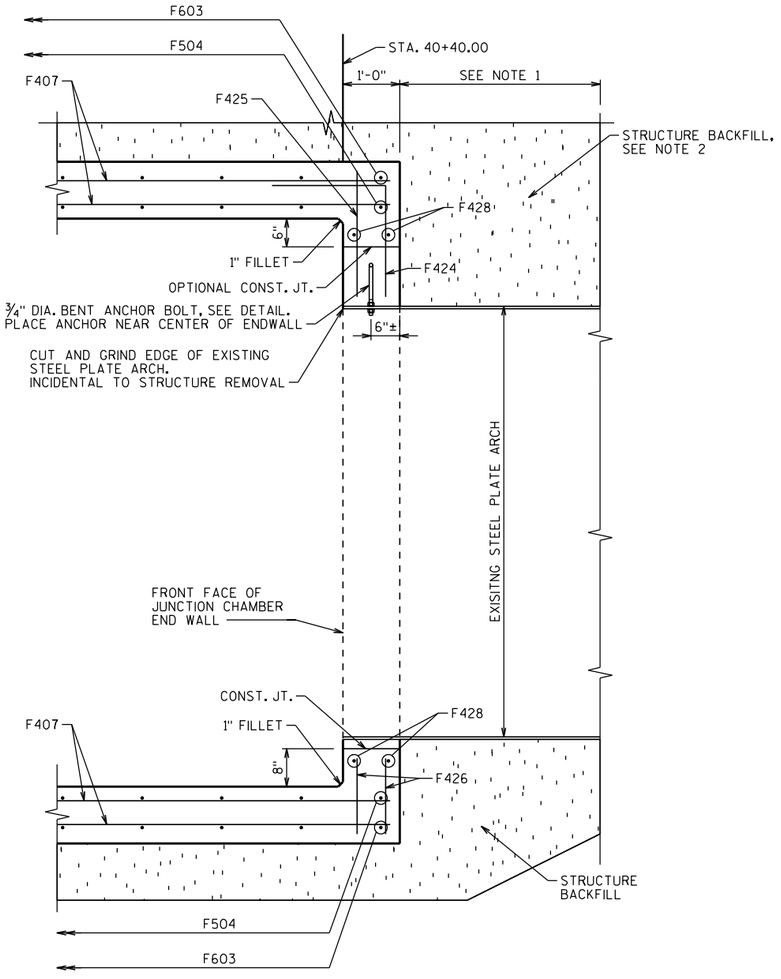
STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

JUNCTION CHAMBER "JC-F" DETAILS (2 OF 4)

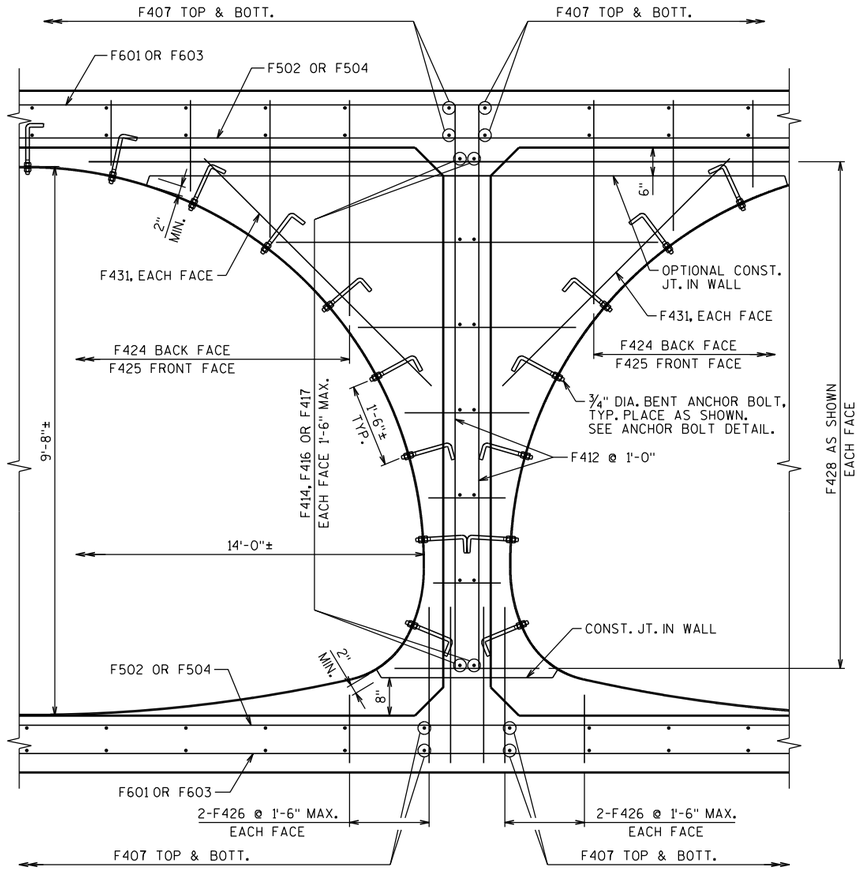
SHEET 33 OF 37

STATE PROJECT NUMBER
1060-33-78



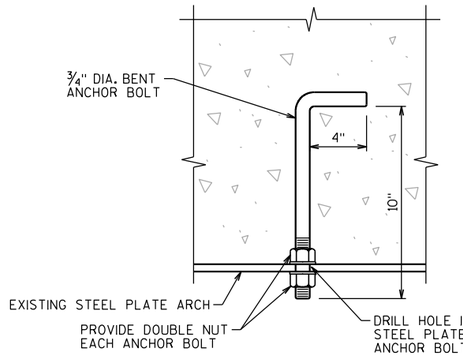
SECTION A-A

SEE SHEET 33 FOR LOCATION



DETAIL 1

SEE SHEET 33 FOR LOCATION



BENT ANCHOR BOLT DETAIL

PROVIDE HOT-DIP GALVANIZED ASTM F1554 GRADE 36 BENT ANCHOR BOLTS AT 1'-6"± SPACING ON THE TOP AND SIDES OF THE EXISTING STEEL PLATE ARCHES AT THE CONCRETE ENDWALL. THE COST OF PROVIDING AND INSTALLING THE ANCHOR BOLTS IS CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY CULVERTS"

NOTES:

1. AREAS EXCAVATED AROUND EXISTING STEEL PLATE ARCHES SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.
2. AVOID DAMAGE TO EXISTING PIPES DURING BACKFILLING. BACKFILL IN ACCORDANCE WITH STANDARD SPECIFICATION 527.3.3.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

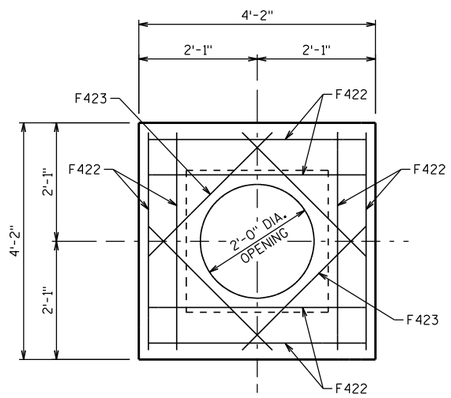
STRUCTURE B-40-892

DRAWN BY TJC | PLANS CK'D. BKS

JUNCTION CHAMBER "JC-F" DETAILS (3 OF 4)

SHEET 34 OF 37

STATE PROJECT NUMBER
1060-33-78



ACCESS MANHOLE TOP SLAB REINFORCEMENT

ACCESS MANHOLE NOTES:

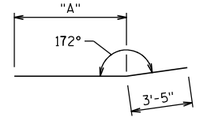
1. FIELD CUT BAR STEEL REINFORCEMENT IN JUNCTION CHAMBERS TOP SLAB TO CLEAR THE OPENING PROVIDED FOR ACCESS MANHOLE.
2. STEPS SHALL MEET THE REQUIREMENTS OF AASHTO M199. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH. STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BARS ARE ACCEPTABLE. CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS ARE TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280. PROVIDE STEPS AT A 1'-4" VERTICAL SPACING FROM TOP OF ACCESS MANHOLE TO BOTTOM SLAB OF JUNCTION CHAMBER. COST OF FURNISHING AND INSTALLING MANHOLE STEPS IS INCIDENTAL TO "CONCRETE MASONRY CULVERTS."
3. USE 2'-0" DIAMETER OPENING WITH TYPE "J" SPECIAL MANHOLE COVER.
4. FIELD VERIFY MANHOLE COVER ELEVATION PRIOR TO CONSTRUCTION OF ACCESS MANHOLE. ADJUST MANHOLE HEIGHT IF FIELD CONDITIONS ARE DIFFERENT. CONTRACTOR SHALL SECURE THE MANHOLE COVER TO THE ACCESS MANHOLE TOP SLAB BY USE OF MECHANICAL CONNECTOR OR USE OF A GROUT BED. THE ACCESS MANHOLE HEIGHT DOES NOT INCLUDE AN ALLOWANCE FOR A GROUT BED.

BILL OF BARS

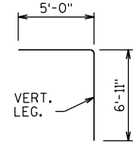
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
F601		166	10'-0"			TOP & BOTT. SLAB - TRANS.
F502		166	10'-0"			TOP & BOTT. SLAB - TRANS.
F603		166	45'-11"		⚠	TOP & BOTT. SLAB - TRANS.
F504		166	50'-1"		⚠	TOP & BOTT. SLAB - TRANS.
F605		332	11'-9"	X		CORNERS
F407		176	40'-8"			TOP & BOTT. SLAB - LONGIT.
F408		8	40'-11"	X		TOP & BOTT. SLAB - LONGIT.
F409		166	2'-9"			EXT. WALLS - DOWELS VERT.
F410		252	2'-9"			INT. WALLS - DOWELS VERT.
F411		166	10'-1			EXT. WALLS - VERT.
F412		252	10'-1			INT. WALLS - VERT.
F413		14	40'-11"	X		WALLS - HORIZ.
F414		14	39'-0"			WALLS - HORIZ.
F415		14	5'-0"			WALLS - HORIZ.
F416		28	40'-9"			WALLS - HORIZ.
F417		14	40'-8"			WALLS - HORIZ.
F418		14	3'-11"	X		WALLS - CORNERS
F419		144	3'-3"	X		MANHOLE - DOWELS VERT.
F420		48	3'-0"			MANHOLE - VERT.
F421		32	8'-8"	X		MANHOLE - HORIZ.
F422		96	3'-10"			MANHOLE - HORIZ.
F423		16	3'-1"			MANHOLE - DIAGONAL
F424		32	5'-11"	X		ENDWALL - VERT.
F425		32	4'-0"			ENDWALL - VERT.
F426		32	3'-0"			ENDWALL - VERT.
F427		28	6'-6"			ENDWALL - HORIZ.
F428		42	12'-0"			ENDWALL - HORIZ.
F629		332	6'-0"			TOP & BOTT. SLAB TRANS.- SPLICE
F530		332	6'-0"			TOP & BOTT. SLAB TRANS.- SPLICE
F431		16	5'-9"			ENDWALL - DIAGONAL
F632		16	13'-3"	X		TOP SLAB @ ACCESS MANHOLE
F633		40	10'-0"			TOP SLAB @ ACCESS MANHOLE

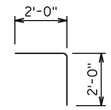
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



BAR MARK	DIM. "A"
F408	37'-6"
F413	37'-6"



F605

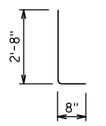


F418

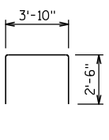
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

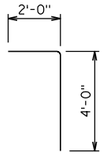
BAR MARK	NO. REQ'D	LENGTH
F603	2 SERIES OF 83	40'-7" TO 51'-3"
F504	2 SERIES OF 83	44'-9" TO 55'-5"



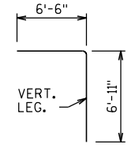
F419



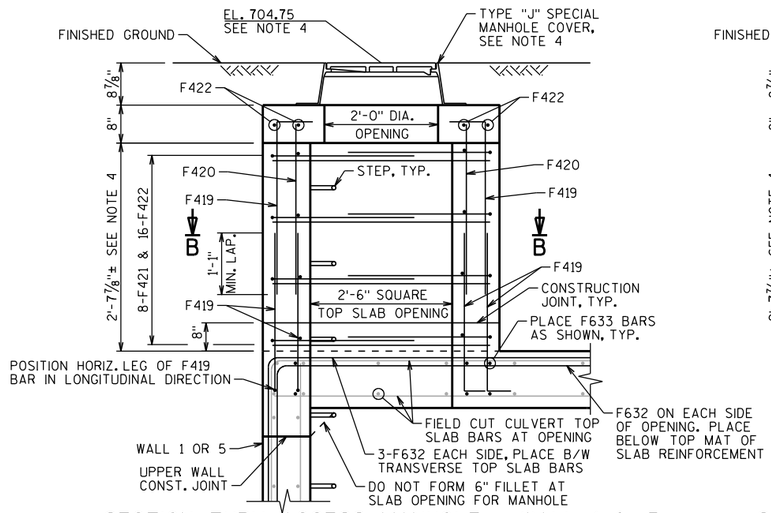
F421



F424

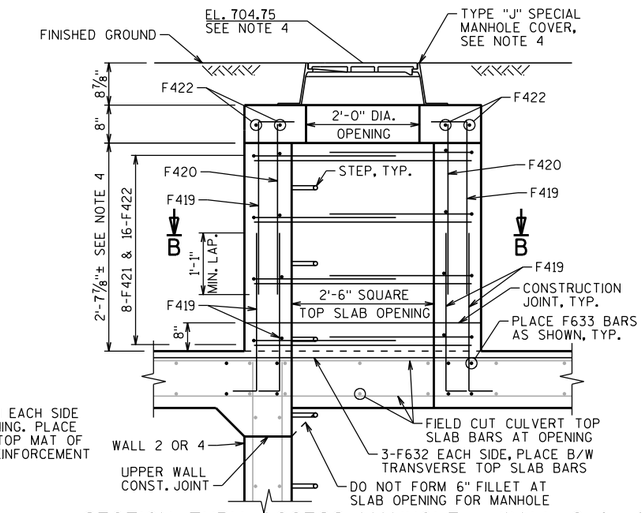


F632



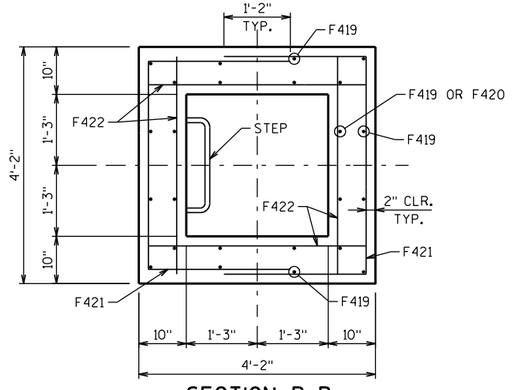
SECTION THRU ACCESS MANHOLE - WALL 1 & 5

LOOKING UPSTATION FOR WALL 1, LOOKING DOWNSTATION FOR WALL 5

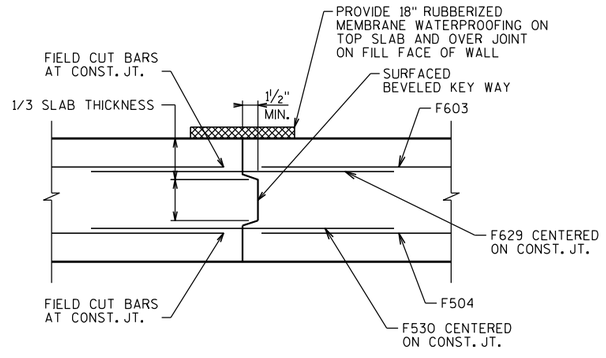


SECTION THRU ACCESS MANHOLE - WALL 2 & 4

LOOKING UPSTATION FOR WALL 2, LOOKING DOWNSTATION FOR WALL 4



SECTION B-B



LONGITUDINAL STAGED CONSTRUCTION JOINT DETAIL

TOP SLAB SHOWN, BOTTOM SLAB SIMILAR.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

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JUNCTION CHAMBER "JC-F" DETAILS (4 OF 4)

SHEET 35 OF 37

8

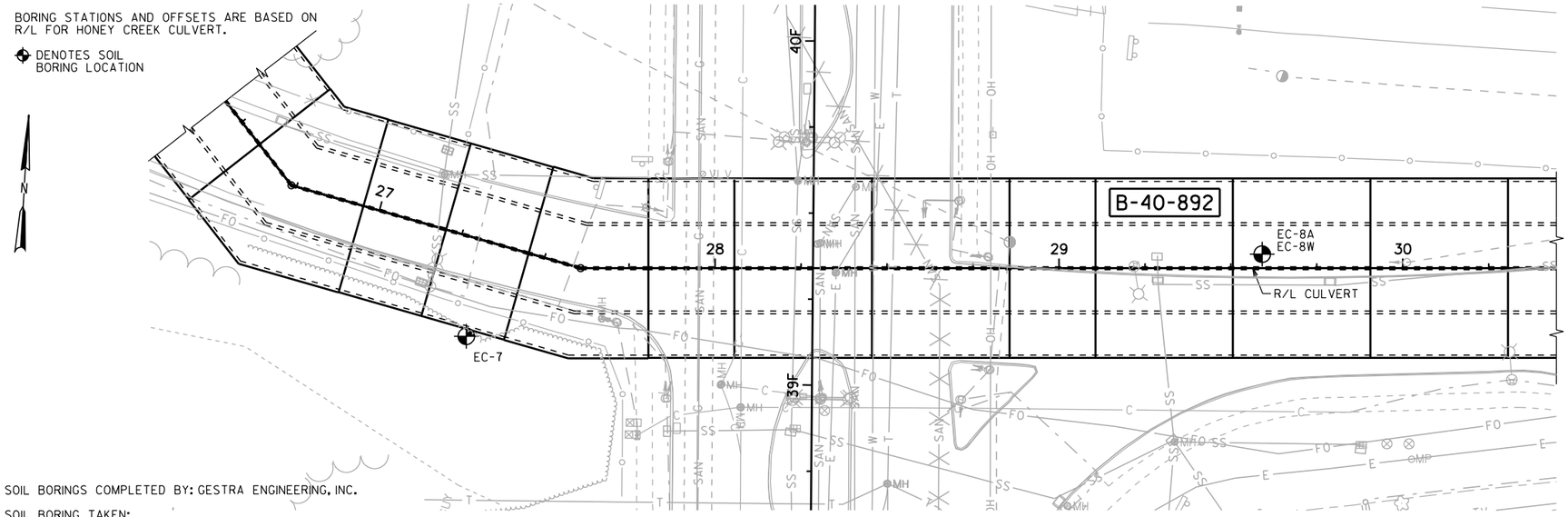
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NOTES:

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 HONEY CREEK CULVERT.

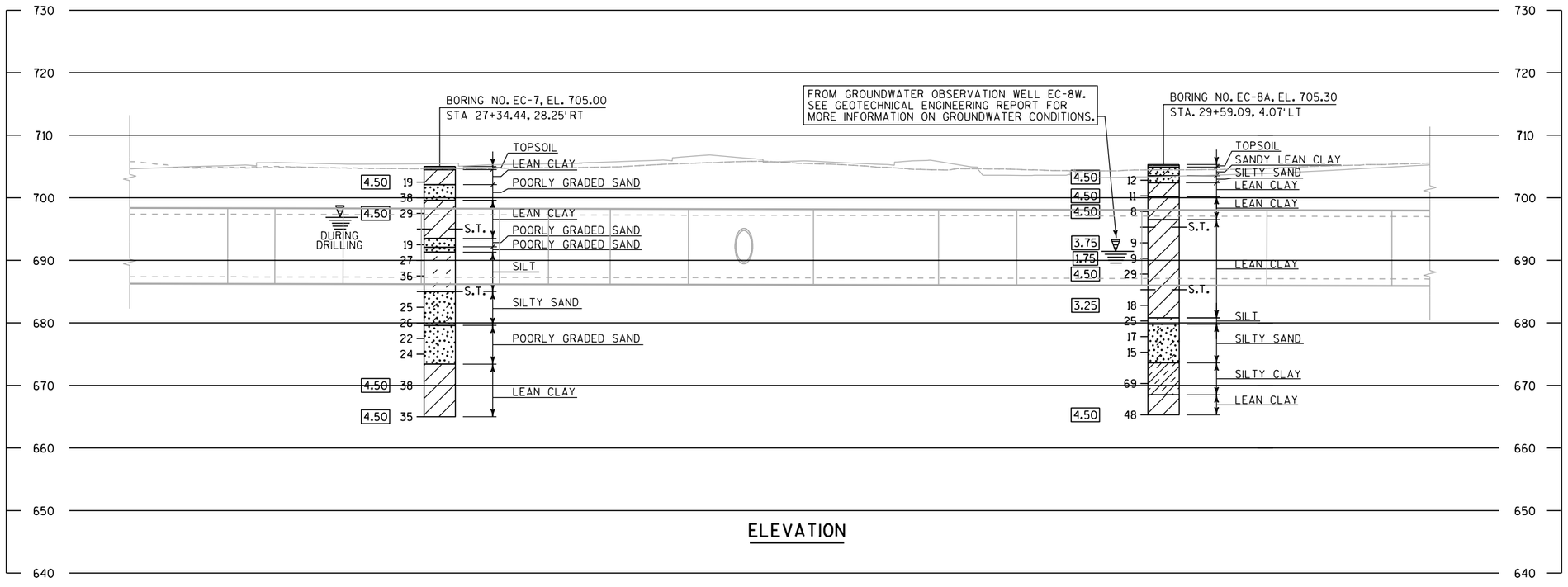
DENOTES SOIL BORING LOCATION



PLAN

SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JULY 30, 2012 - BORING EC-7
JULY 30, 2012 - BORING EC-8A



ELEVATION

STATE PROJECT NUMBER

1060-33-78

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

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-40-892

DRAWN BY TJC | PLANS CK'D. BKS

SUBSURFACE EXPLORATION (1 OF 2)

SHEET 36 OF 37

8

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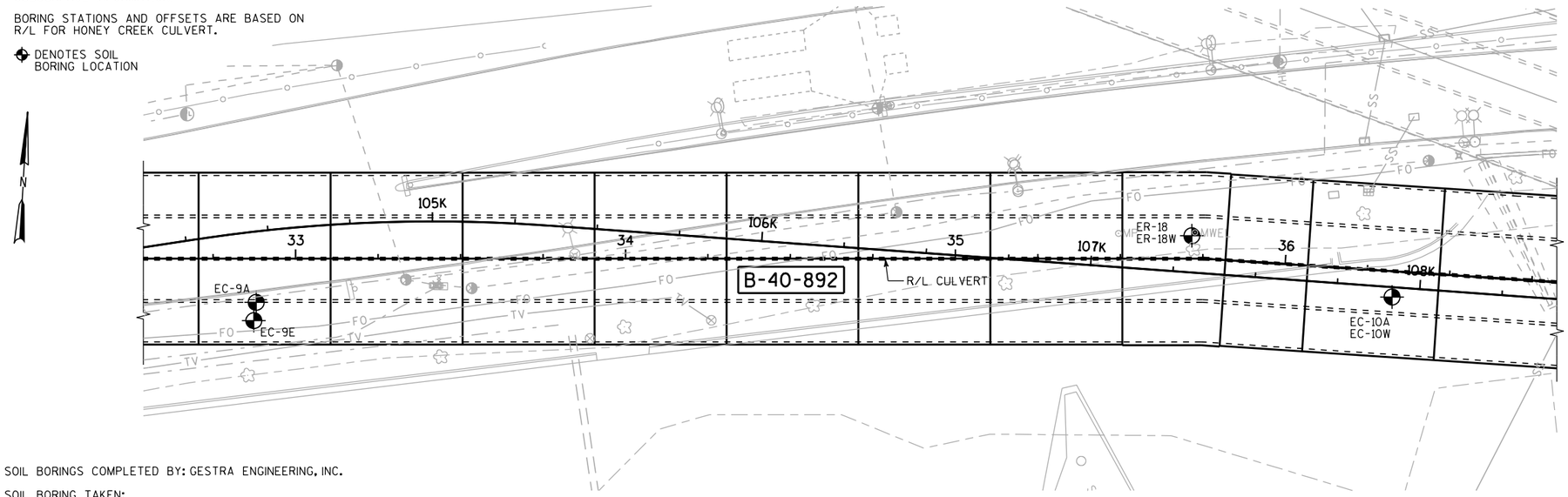
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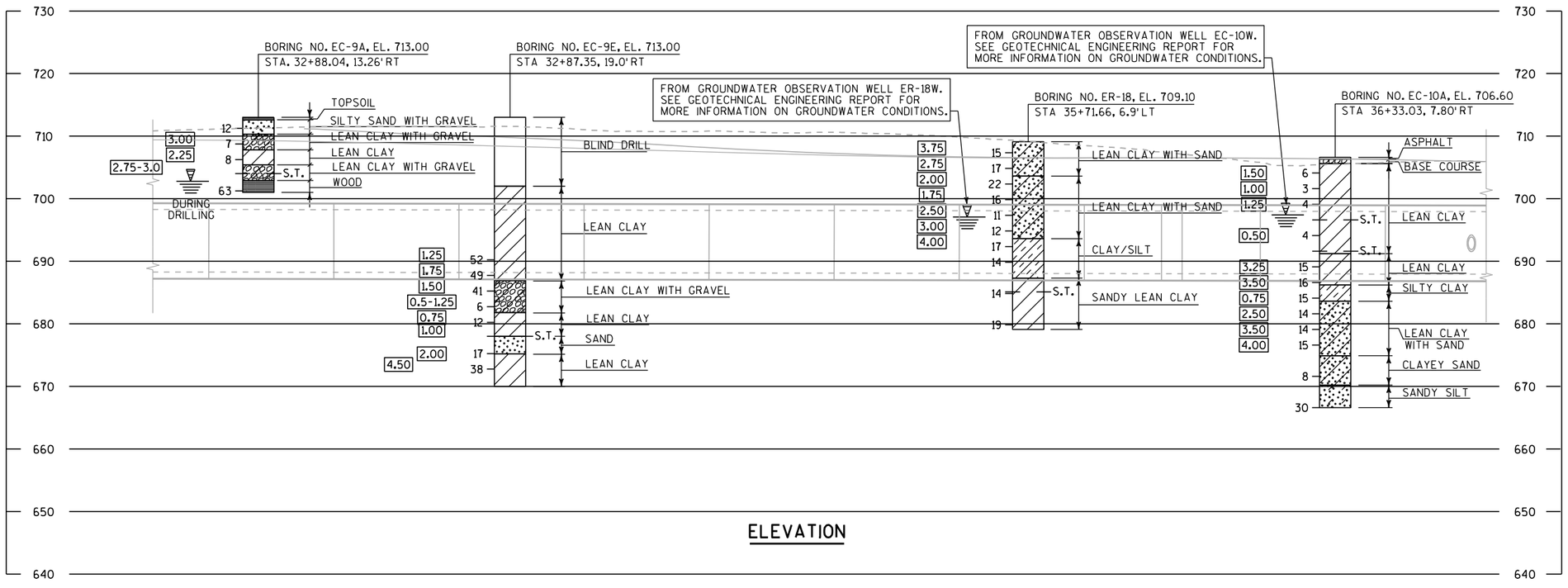
DENOTES SOIL BORING LOCATION



PLAN

SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JULY 31, 2012 - BORING EC-9A
SEPTEMBER 5, 2012 - BORING EC-9E
JULY 31, 2012 - BORING EC-10A
DECEMBER 5, 2011 - BORING ER-18



ELEVATION

8

STATE PROJECT NUMBER
1060-33-78

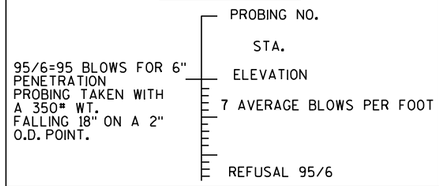
ABBREVIATIONS

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LEGEND OF BORING

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-40-892

DRAWN BY	TJC	PLANS CK'D.	BKS

SUBSURFACE EXPLORATION (2 OF 2)

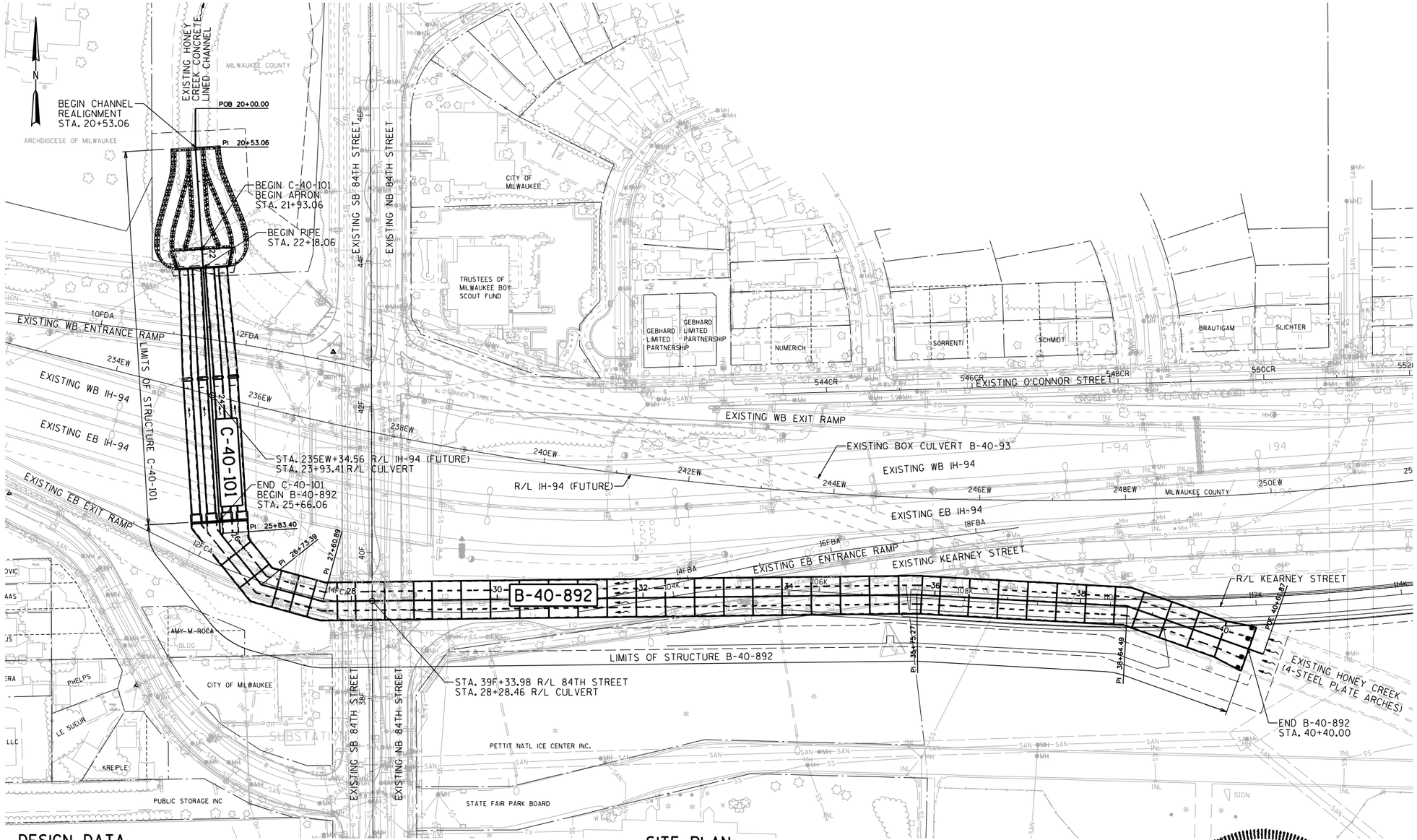
SHEET 37 OF 37

FILE NAME : \\Wke31fp1\w3zoo\Cadd\Final\10603378_TL\Structs\B-40-892 Box Culvert\cds\B400892_080137_se.dgn
PLOT DATE : 01-MAY-2013 11:22
PLOT BY : MSCBKS
PLOT NAME : B400892_080137_se
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-78

LIST OF DRAWINGS

1. SITE PLAN
2. PLAN AND ELEVATION
3. GENERAL NOTES, QUANTITIES AND CULVERT ALIGNMENT
4. TYPICAL SECTIONS
5. EXCAVATION AND BACKFILL LIMITS
6. EXISTING CONCRETE CHANNEL SECTION & CUT-OFF WALL
7. HONEY CREEK CHANNEL REALIGNMENT
8. CONCRETE OUTLET APRON PLAN & ELEVATION
9. CONCRETE OUTLET APRON DETAILS (1 OF 3)
10. CONCRETE OUTLET APRON DETAILS (2 OF 3)
11. CONCRETE OUTLET APRON DETAILS (3 OF 3)
12. PIPE RAILING DETAILS
13. TRANSITION SECTION PLAN AND SECTIONS
14. CONCRETE PIPE COLLAR DETAILS
15. SUBSURFACE EXPLORATION



SITE PLAN

DESIGN DATA

LIVE LOAD:
- DESIGN LOADING: HL-93
- INVENTORY RATING FACTOR: RF = 1.05
- OPERATING RATING FACTOR: RF = 1.35
- WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 255 KIPS

EARTH LOAD:
- 120" DIA. RCP - SEE GENERAL NOTES
- TRANSITION SECTION - DESIGNED FOR 18 FEET FILL

ULTIMATE DESIGN STRESSES:
- CONCRETE MASONRY:
  - CONCRETE CUT OFF WALL ..... f'c = 3,500 psi
  - CONCRETE APRON SLAB ..... f'c = 3,500 psi
  - C.I.P. RETAINING WALL ..... f'c = 3,500 psi
  - CONCRETE PIPE COLLAR ..... f'c = 3,500 psi
  - CONCRETE TRANSITION SECTION ..... f'c = 3,500 psi
- BAR STEEL REINFORCEMENT..... fy = 60,000 psi

HYDRAULIC DATA

BASE FLOOD
- Q100 = 2,340 C.F.S.
- V100 = 6.3 F.P.S.
- * HW100 = EL. 698.19 (NAVD88) = EL. 698.50 (NGVD29)
- Q2 = 1,160 C.F.S.
- ** HW2 = EL. 693.64 (NAVD88) = EL. 693.95 (NGVD29)
- WATERWAY AREA = 373 S.F. (Q100)
- DRAINAGE AREA = 9.2 SQ. MI.
- SCOUR CODE 8

OVERTOPING FLOOD
- ROAD OVERTOPPING = N/A

* 238'± UPSTREAM FROM STA. 40+40

** AT STA. 40+00

TRAFFIC DATA

IH94 EB
- A.D.T. = 69,050 (2010)
- A.D.T. = 85,200 (2035)
- R.D.S. = 60 MPH

IH94 WB
- A.D.T. = 69,050 (2010)
- A.D.T. = 82,400 (2035)
- R.D.S. = 60 MPH

RAMP FD
- A.D.T. = 7,700 (2010)
- A.D.T. = 9,400 (2035)
- R.D.S. = 30 MPH

WISCONSIN BRIAN A. SIDES 40269-006 WAUKESHA, WI PROFESSIONAL ENGINEER 5/1/2013

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 05/07/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE C-40-101

IH-94 MAINLINE & IH-94 WB RAMP

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

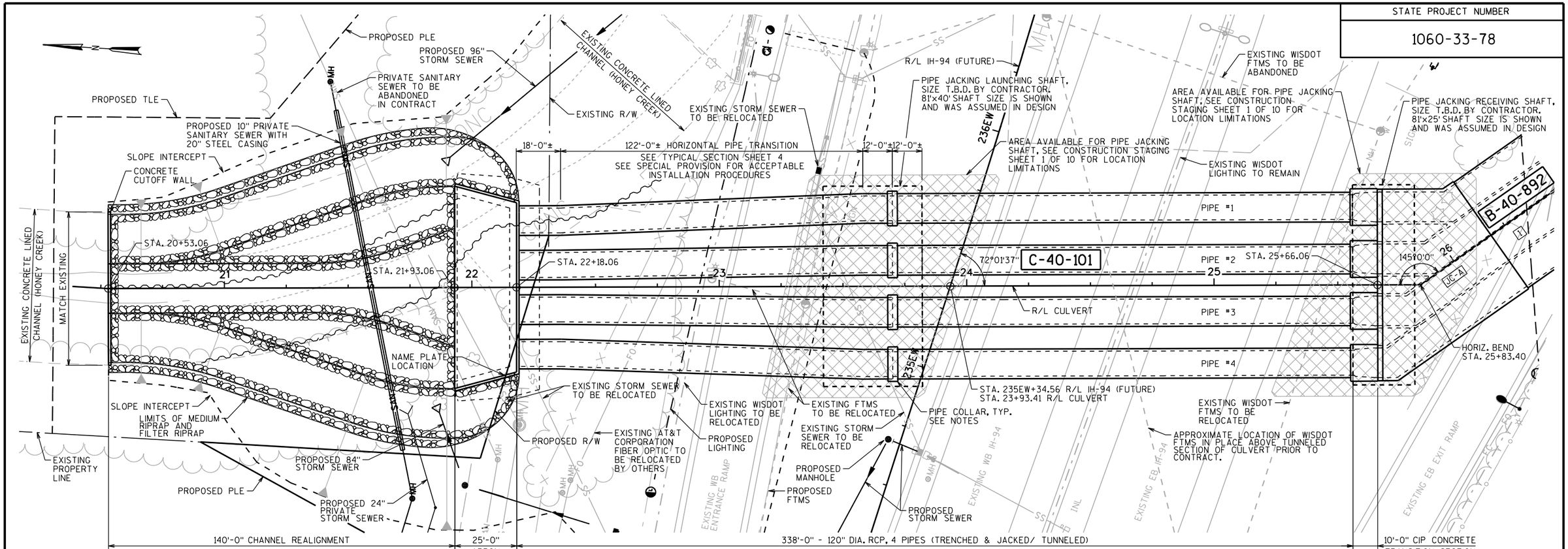
DESIGNED BY	BJM	DESIGN CK'D.	MRM	DRAWN BY	TJC	PLANS CK'D.	BKS

SITE PLAN

SHEET 1 OF 15

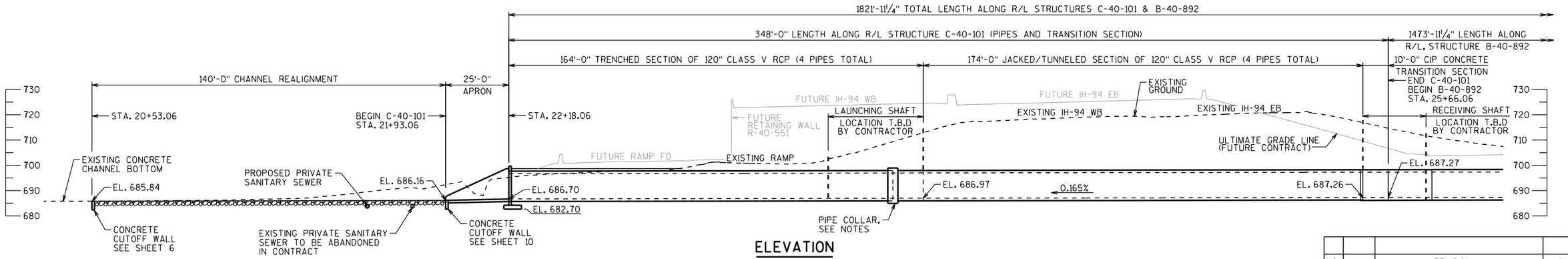
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STATE PROJECT NUMBER
1060-33-78



PLAN

TEMPORARY RAMP ALIGNMENTS AND PROPOSED RAMP PAVEMENT REPLACEMENT ARE NOT SHOWN FOR CLARITY, SEE ROADWAY PLANS FOR DETAILS.



ELEVATION

ELEVATIONS GIVEN AT FLOWLINE

LEGEND

- [X] BARREL SECTION NUMBER
- [JC-X] JUNCTION CHAMBER DESIGNATION
- ~~~ ASSUMED LOCATION WHERE TEMPORARY SHORING MAY BE REQUIRED, SEE CONSTRUCTION STAGING SHEETS FOR LIMITATIONS ON THE PLACEMENT OF TEMPORARY SHORING. THE TYPE AND LOCATION OF TEMPORARY SHORING TO BE DETERMINED BY THE CONTRACTOR.

NOTES

PIPE COLLAR LOCATION TO BE DETERMINED BY CONTRACTOR BASED ON CONTRACTOR'S PIPE LAYING SEQUENCE. THE CONCRETE AND REBAR QUANTITY FOR ONE PIPE COLLAR PER PIPE RUN HAS BEEN INCLUDED IN THE QUANTITIES. NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL PIPE COLLARS THAT MAY BE REQUIRED FOR THE CONTRACTOR'S PIPE LAYING SEQUENCE.

EXISTING KNOWN UTILITIES, STORM SEWERS, AND CONDUITS THAT ARE RELOCATED AT THE PROPOSED PIPES AND TRANSITION SECTION WILL BE REMOVED WITH PIPE AND TRANSITION SECTION EXCAVATION. UNLESS INDICATED ON OTHER ROADWAY, STORM SEWER, OR UTILITY PLAN SHEETS, THE PAYMENT FOR REMOVAL OF THESE ITEMS IS INCLUDED WITH THE BID ITEM FOR "EXCAVATION FOR STRUCTURES CULVERTS C-40-101".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-40-101

DRAWN BY	TJC	PLANS CK'D.	BKS

PLAN AND ELEVATION

SHEET 2 OF 15

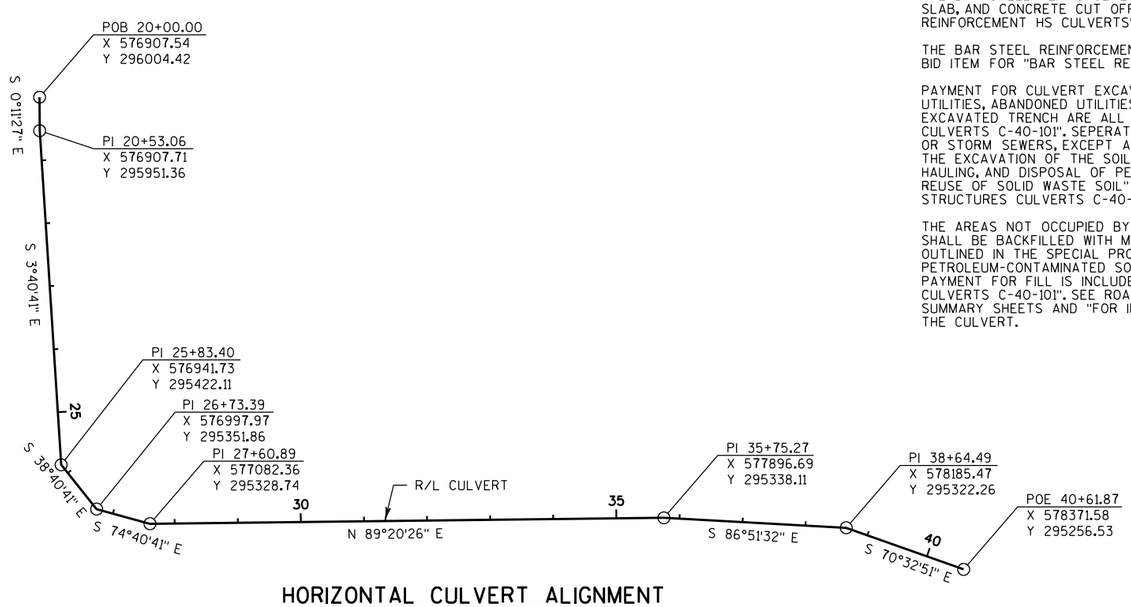
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PLOT BY : MSCBKS
PLOT NAME : C400101_080102_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-78

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	TOTAL
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-40-101	LS	1
210.0100	BACKFILL STRUCTURE	CY	4,100
502.5005	MASONRY ANCHORS TYPE L NO. 5 BARS	EACH	63
504.0100	CONCRETE MASONRY CULVERTS	CY	290
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	165
505.0410	BAR STEEL REINFORCEMENT HS CULVERTS	LB	26,730
505.0415	BAR STEEL REINFORCEMENT HS RETAINING WALLS	LB	15,360
513.2000	RAILING PIPE C-40-101	LS	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8
606.0200	RIPRAP MEDIUM	CY	1,120
645.0105	GEOTEXTILE FABRIC TYPE C	SY	1,428
SPV.0035.4020	FILTER RIPRAP	CY	400
SPV.0090.4440	CULVERT PIPE REINFORCED CONCRETE CLASS V 120-INCH	LF	656
SPV.0090.4450	TUNNELING REINFORCED CONCRETE CLASS V 120-INCH	LF	696
SPV.0105.4500	TUNNELING INSTRUMENTATION	LS	1
	NON-BID ITEMS		
	JOINT FILLER	SIZE	¾", 1"
	NAME PLATE	EACH	1

ALL ITEMS ARE CATEGORY 4000



HORIZONTAL CULVERT ALIGNMENT

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 6TH EDITION, 2012.

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.

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 HIS OWN DETERMINATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

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 TERM "FUTURE" IN THIS PLAN SET REFERS TO THE IMPROVEMENTS THAT WILL OCCUR IN FUTURE CONTRACTS.

THE BID ITEM FOR "BACKFILL STRUCTURE" WILL BE PAID FOR AT THE PLAN QUANTITY. STRUCTURE BACKFILL SHALL BE PROVIDED AT LOCATIONS SHOWN IN THIS PLAN SET.

GEOTECHNICAL BASELINE CONDITIONS FOR THIS STRUCTURE ARE PRESENTED IN A SEPERATE REPORT INCLUDED IN THE CONSTRUCTION CONTRACT DOCUMENTS TITLED "GEOTECHNICAL BASELINE REPORT, Z00 INTERCHANGE RECONSTRUCTION, STRUCTURE C-40-101 (HONEY CREEK RECONFIGURATION)".

SUBSURFACE AND GEOTECHNICAL DATA FOR THIS STRUCTURE ARE PRESENTED IN A SEPERATE REPORT INCLUDED IN THE CONSTRUCTION CONTRACT DOCUMENTS TITLED "GEOTECHNICAL DATA REPORT, Z00 INTERCHANGE RECONSTRUCTION, STRUCTURE C-40-101 (HONEY CREEK RECONFIGURATION)".

THE CONCRETE QUANTITY FOR THE TRANSITION SECTION, PIPE COLLAR, APRON SLAB, AND CONCRETE CUT OFF WALLS IS INCLUDED IN THE BID ITEM FOR "CONCRETE MASONRY CULVERTS".

ESTIMATED CONCRETE QUANTITY:
- TRANSITION SECTION..... 174 CYD
- APRON SLAB, INCLUDING APRON CUT-OFF WALL..... 63 CYD
- PIPE COLLAR..... 44 CYD
- CONCRETE CUT-OFF WALL @ STA. 20+53.06..... 9 CYD

THE CONCRETE QUANTITY FOR THE RETAINING WALLS IS INCLUDED IN THE BID ITEM FOR "CONCRETE MASONRY RETAINING WALLS".

THE BAR STEEL REINFORCEMENT QUANTITY FOR THE TRANSITION SECTION, PIPE COLLAR, APRON SLAB, AND CONCRETE CUT OFF WALLS IS INCLUDED IN THE BID ITEM FOR "BAR STEEL REINFORCEMENT HS CULVERTS".

THE BAR STEEL REINFORCEMENT QUANTITY FOR THE RETAINING WALLS IS INCLUDED IN THE BID ITEM FOR "BAR STEEL REINFORCEMENT HS RETAINING WALLS".

PAYMENT FOR CULVERT EXCAVATION, TEMPORARY SHORING AND THE REMOVAL OF EXISTING UTILITIES, ABANDONED UTILITIES, CONDUITS, CABLES, WIRES, AND STORM SEWERS IN THE EXCAVATED TRENCH ARE ALL INCLUDED WITH THE BID ITEM "EXCAVATION FOR STRUCTURES CULVERTS C-40-101". SEPERATE PAYMENT WILL NOT BE MADE FOR REMOVAL OF UTILTIES OR STORM SEWERS, EXCEPT AS STATED ELSEWHERE IN THE PLAN SET. THE PAYMENT FOR THE EXCAVATION OF THE SOILS OUTLINED IN THE SPECIAL PROVISIONS FOR "LOADING, HAULING, AND DISPOSAL OF PETROLEUM-CONTAMINATED SOIL" AND "LOADING, HAULING, AND REUSE OF SOLID WASTE SOIL" IS INCLUDED WITH THE BID ITEM "EXCAVATION FOR STRUCTURES CULVERTS C-40-101".

THE AREAS NOT OCCUPIED BY THE PIPES, TRANSISTION SECTION OR STRUCTURE BACKFILL SHALL BE BACKFILLED WITH MATERIAL TAKEN FROM THE CULVERT EXCAVATION EXCEPT AS OUTLINED IN THE SPECIAL PROVISIONS FOR "LOADING, HAULING, AND DISPOSAL OF PETROLEUM-CONTAMINATED SOIL" AND "LOADING, HAULING, AND REUSE OF SOLID WASTE SOIL". PAYMENT FOR FILL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES CULVERTS C-40-101". SEE ROADWAY PLANS FOR EARTHWORK DATA SHEETS, EARTHWORK SUMMARY SHEETS AND "FOR INFORMATION ONLY" CROSS SECTIONS ALONG THE LENGTH OF THE CULVERT.

GENERAL NOTES, CONTINUED

THE PAY LIMITS FOR THE EXCAVATION INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES CULVERTS C-40-101" ARE FROM STA. 21+93.06 TO STA. 25+66.06, EXCEPT AS OUTLINED IN THE SPECIAL PROVISION "TUNNELING REINFORCED CONCRETE CLASS V 120-INCH". SEE ROADWAY PLANS FOR EXCAVATION IN THE REALIGNED CREEK CHANNEL.

CONSTRUCTION STAGING

FOR DETAILS OF CONSTRUCTION STAGING OF C-40-101, SEE PLANS FOR PROPOSED STRUCTURE B-40-892.

DESIGN LOADING FOR REINFORCED CONCRETE PIPE

THE REINFORCED CONCRETE PIPE, IN THE TRENCHED SECTION, SHALL BE DESIGNED AS STATED IN THE SPECIAL PROVISION FOR "CULVERT PIPE REINFORCED CONCRETE CLASS V 120-INCH". PROPOSED AND FUTURE LOADING CONDITIONS ARE AS FOLLOWS:

STATION RANGE	DESIGN LOADS
STA. 22+18.06 TO STA. 22+80 (PROPOSED)	EARTH COVER VARIES FROM 2 FEET TO 6 FEET WITH HL-93 LIVE LOAD
STA. 22+18.06 TO STA. 22+80 (FUTURE)	EARTH COVER VARIES FROM 2 FEET TO 6 FEET WITH HL-93 LIVE LOAD
STA. 22+80 TO STA. 23+82.06 (PROPOSED)	EARTH COVER VARIES FROM 6 FEET TO 18 FEET WITH HL-93 LIVE LOAD
STA. 22+80 TO STA. 23+82.06 (FUTURE)	EARTH COVER VARIES FROM 24 FEET TO 26 FEET WITH HL-93 LIVE LOAD

THE REINFORCED CONCRETE PIPE, IN THE TRENCHLESS (JACKED) SECTION, SHALL BE DESIGNED AS STATED IN THE SPECIAL PROVISION FOR "TUNNELING REINFORCED CONCRETE CLASS V 120-INCH". PROPOSED AND FUTURE LOADING CONDITIONS ARE AS FOLLOWS:

STATION RANGE	DESIGN LOADS
STA. 23+82.06 TO STA. 25+56.06 (PROPOSED)	EARTH COVER VARIES FROM 8 FEET TO 24 FEET WITH HL-93 LIVE LOAD
STA. 23+82.06 TO STA. 25+56.06 (FUTURE)	EARTH COVER VARIES FROM 17 FEET TO 27 FEET WITH HL-93 LIVE LOAD

FOUNDATION DATA

THE CAST IN PLACE CONCRETE RETAINING WALLS IN THE APRON AT THE OUTLET ARE TO BE SUPPORTED ON CONTINUOUS SPREAD FOOTINGS. THE REQUIRED NOMINAL BEARING RESISTANCE OF THE NATIVE SOIL AT THE BOTTOM OF FOOTING ELEVATION IS 6,000 PSF. SOILS SUITABLE FOR SUPPORT OF THE FOOTINGS SHALL BE VERIFIED BY THE ENGINEER PRIOR TO CONSTRUCTION OF THE FOOTINGS. THE NOMINAL BEARING CAPACITY CORRESPONDS TO A MINIMUM UNCONFINED COMPRESSIVE STRENGTH OF 2.0 TONS PER SQUARE FOOT (COHESIVE SOILS) OR MINIMUM STANDARD PENETRATION TEST N-VALUE OF 20 BLOWS PER FOOT (GRANULAR SOILS).

THE FACTORED NET BEARING RESISTANCE OF THE NATIVE SOIL FOR THE CAST IN PLACE CONCRETE RETAINING WALLS IN THE APRON AT THE OUTLET USED FOR DESIGN IS THE REQUIRED NOMINAL BEARING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.55. FACTORED NET BEARING RESISTANCE = 3,300 PSF.

FOUNDATION SOILS SUITABLE FOR SUPPORT OF THE TRANSITION SECTION SHALL BE VERIFIED BY THE ENGINEER IMMEDIATELY PRIOR TO PLACEMENT OF THE GEOTEXTILE FABRIC AND STRUCTURE BACKFILL. COHESIVE SUBGRADE SOILS SHALL EXHIBIT A MINIMUM UNCONFINED COMPRESSIVE STRENGTH OF 1.5 TONS PER SQUARE FOOT. GRANULAR SOILS SHALL EXHIBIT AN EQUIVALENT STANDARD PENETRATION TEST N-VALUE OF AT LEAST 13 BLOWS PER FOOT.

IF SUITABLE FOUNDATION SOILS ARE NOT ENCOUNTERED AT THE PLANNED FOUNDATION SUBGRADE, A SUITABLE FOUNDATION SHALL BE PROVIDED AS DIRECTED BY THE ENGINEER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-40-101

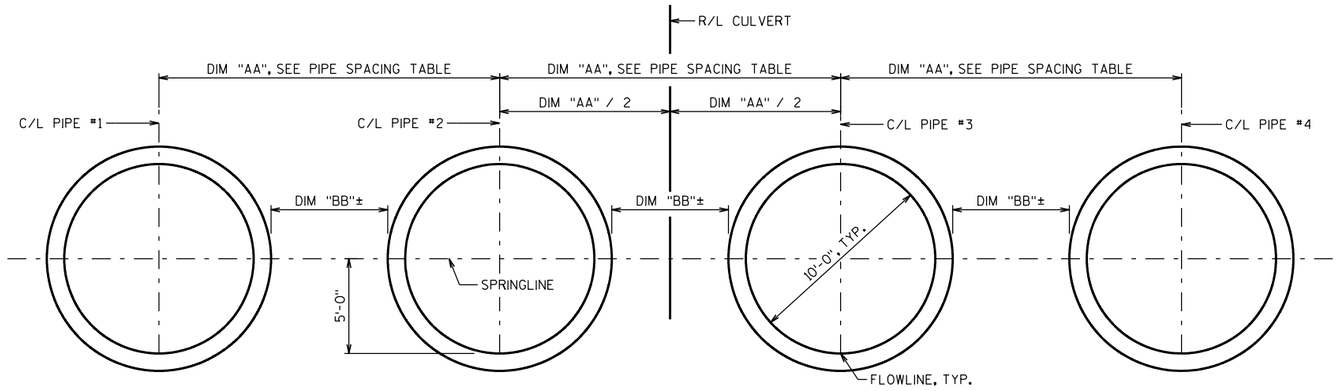
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GENERAL NOTES, QUANTITIES, AND CULVERT ALIGNMENT

SHEET 3 OF 15

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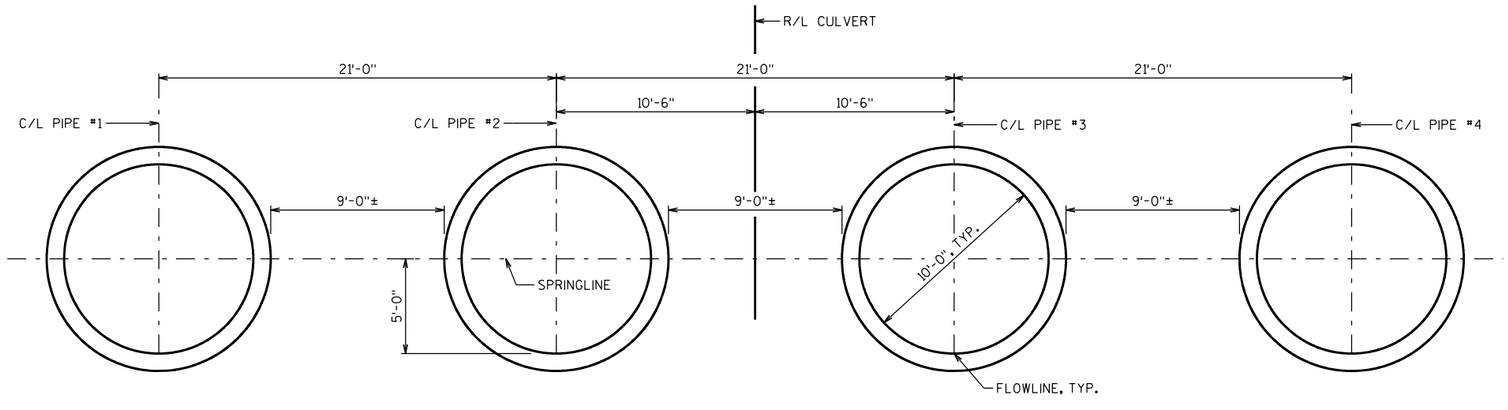
TYPICAL SECTION - 120" DIA. RCP TRENCHED SECTION

LOOKING UPSTATION

PIPE SPACING TABLE

STATION	DIM "AA"	DIM "BB"
STA. 22+18.06 BEGIN PIPE	18'-0"	6'-0"
STA. 22+36.06± BEGIN TRANSITION	18'-0"	6'-0"
STA. 23+58.06± END TRANSITION	21'-0"	9'-0"
STA. 25+56.06 END PIPE	21'-0"	9'-0"

VARY LINEARLY BETWEEN STATIONS



TYPICAL SECTION - 120" DIA. RCP JACKED/TUNNELED

LOOKING UPSTATION

8

8

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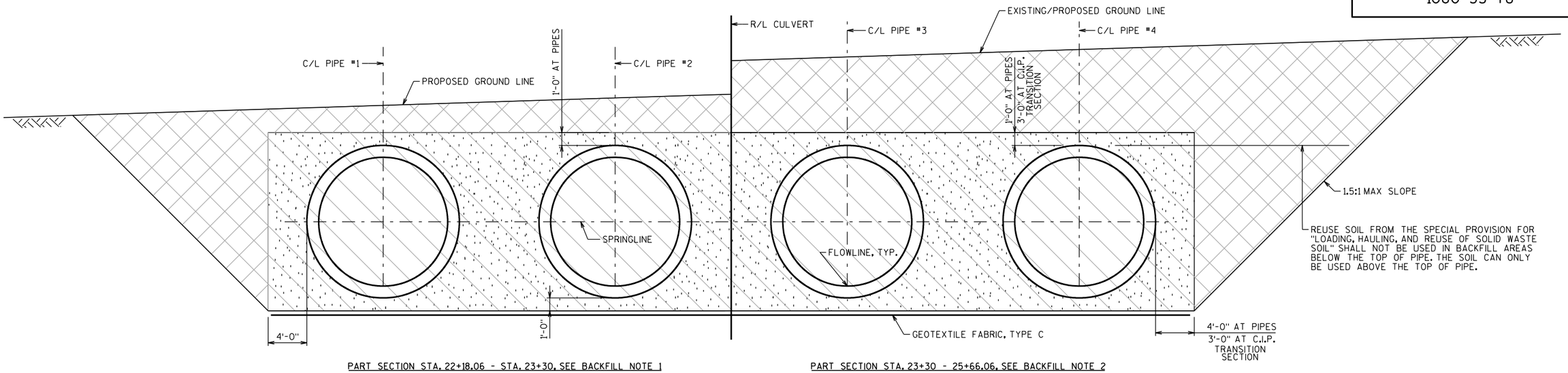
STRUCTURE C-40-101

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TYPCIAL SECTIONS

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PART SECTION STA. 22+18.06 - STA. 23+30, SEE BACKFILL NOTE 1

PART SECTION STA. 23+30 - 25+66.06, SEE BACKFILL NOTE 2

CULVERT EXCAVATION AND BACKFILL LIMITS - TRENCHED SECTION

LOOKING UPSTATION
SHOWN FOR PIPES, SIMILAR FOR C.I.P. TRANSITION SECTION

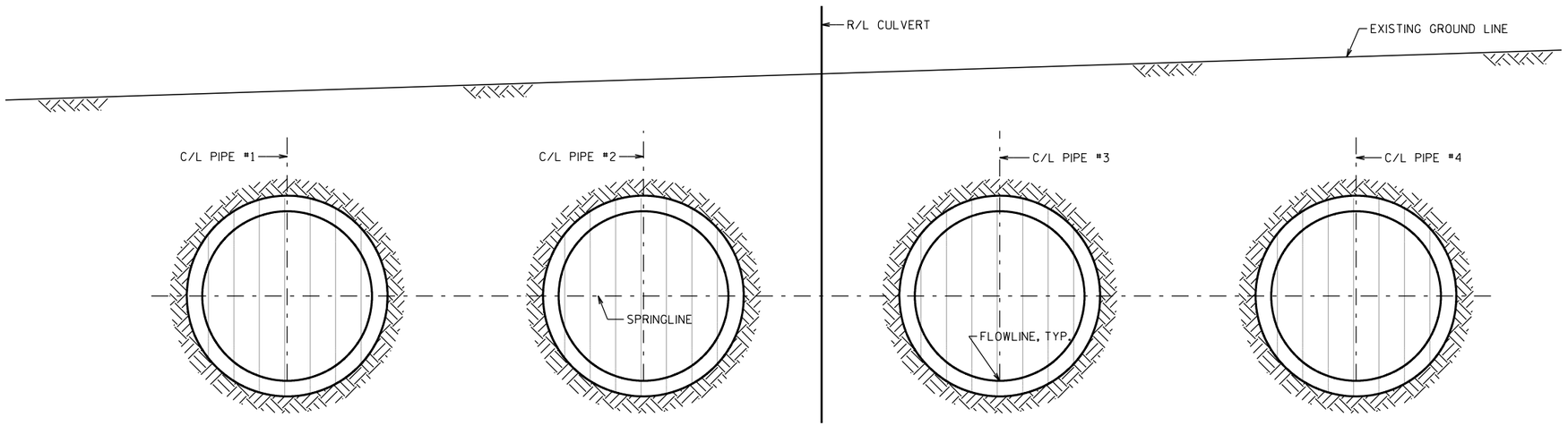
BACKFILL NOTES

1. PROVIDE STRUCTURE BACKFILL FROM BOTTOM OF EXCAVATION TO PROPOSED GROUND LINE WITHIN THE LIMITS SHOWN. SEE ROADWAY PLANS FOR PROPOSED GRADING AND PROPOSED PAVEMENT DEPTH.

2. PROVIDE STRUCTURE BACKFILL FROM BOTTOM OF EXCAVATION TO 4 FEET ABOVE THE TOP OF PIPE. PROVIDE ROADWAY EMBANKMENT FROM TOP OF STRUCTURE BACKFILL TO PROPOSED GROUND LINE. SEE ROADWAY PLANS FOR PROPOSED GRADING. THE BACKFILL DETAIL FOR THE JACKING SHAFT, RECEIVING SHAFT, AND THE C.I.P. TRANSITION SECTION SHALL BE AS SHOWN IN "PART SECTION STA. 23+50 - 25+66.06".

LEGEND

- LIMITS OF STRUCTURE EXCAVATION
- LIMITS OF STRUCTURE BACKFILL. UNDERCUT PIPES 1'-0", PLACE GEOTEXTILE FABRIC TYPE 'C' AND BACKFILL WITH STRUCTURE BACKFILL. PLACE AND COMPACT IN LIFTS OF 6" MAXIMUM.
- LIMITS OF ROADWAY FILL INCLUDED IN STRUCTURE EXCAVATION BID ITEM. SEE ROADWAY PLANS FOR THE "FOR INFORMATION ONLY" CROSS SECTIONS, EARTHWORK DATA SHEETS AND EARTHWORK SUMMARY SHEETS.
- LIMITS OF STRUCTURE EXCAVATION INCLUDED IN SPECIAL PROVISION FOR "TUNNELING REINFORCED CONCRETE PIPE CLASS V 120-INCH"



CULVERT EXCAVATION LIMITS - JACKED/TUNNELED

LOOKING UPSTATION

8

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STRUCTURE C-40-101

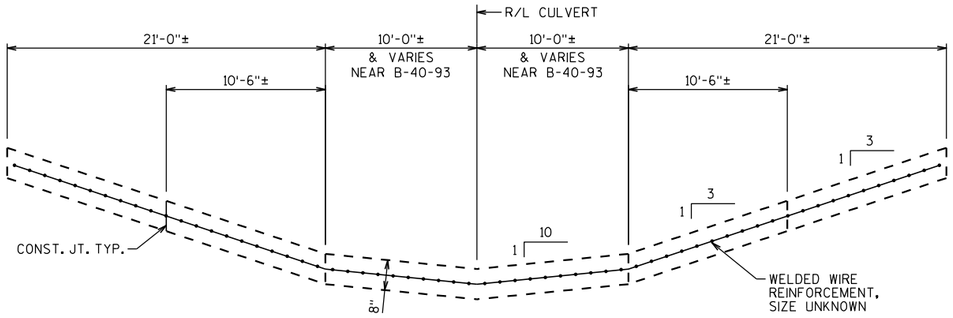
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EXCAVATION AND BACKFILL LIMITS

SHEET 5 OF 15

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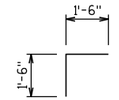
EXISTING CONCRETE CHANNEL SECTION

EXISTING CONCRETE CHANNEL DIMENSIONS OBTAINED FROM RECORD DRAWINGS. CONTRACTOR TO VERIFY BEFORE CONSTRUCTION.

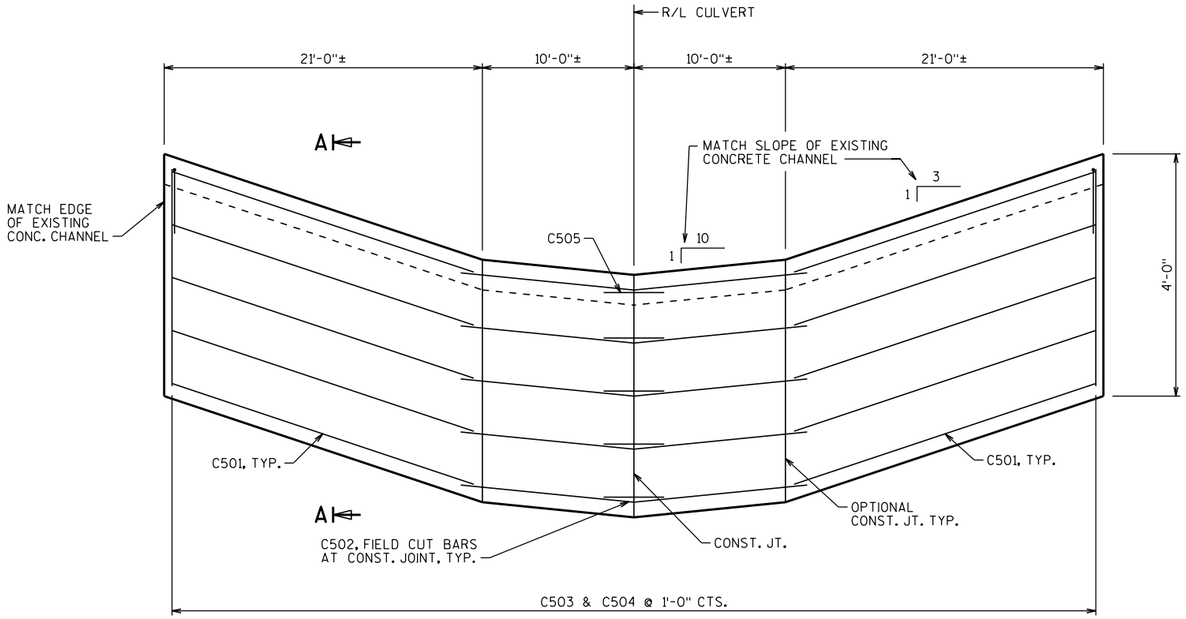
BILL OF BARS - CUT-OFF WALL

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
C501		10	21'-0"			CUT-OFF WALL - LONGIT.
C502		5	23'-0"			CUT-OFF WALL - LONGIT.
C503		63	3'-8"			CUT-OFF WALL - VERT.
C504		63	2'-11"	X		CUT-OFF WALL - VERT.
C505		5	4'-0"			CUT-OFF WALL - SPLICE

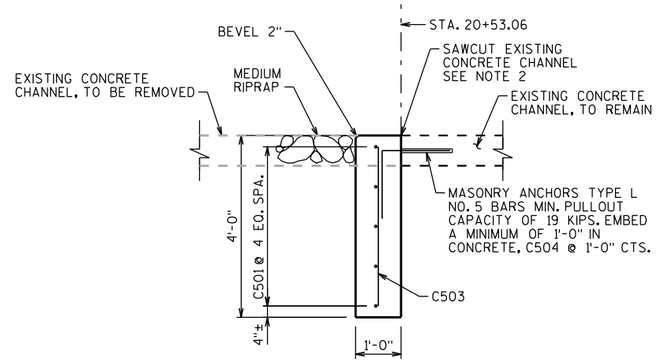


C504



CUT-OFF WALL ELEVATION AT EXISTING CONCRETE CHANNEL

LOOKING DOWN STATION AT STA. 20+53.06



SECTION A-A

NOTES:

1. THE CONCRETE IN THE CUT-OFF WALL MAY BE PLACED UNDERWATER IF THE EXCAVATION CANNOT BE DEWATERED.
2. COST OF SAW CUTTING EXISTING CONCRETE CHANNEL IS CONSIDERED INCIDENTAL TO OTHER PAY ITEMS.

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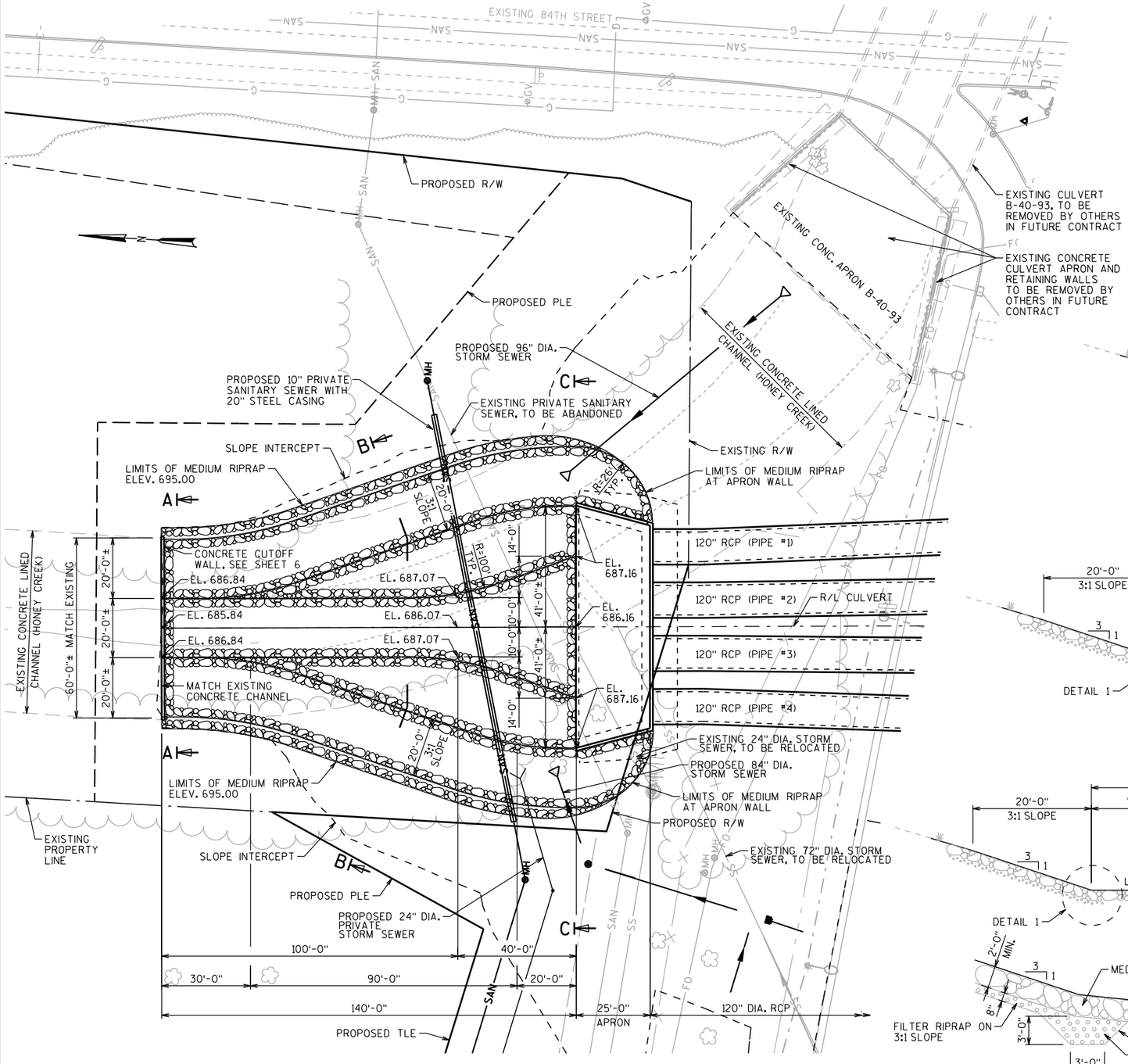
EXISTING CONCRETE CHANNEL SECTION & CUT-OFF WALL

SHEET 6 OF 15

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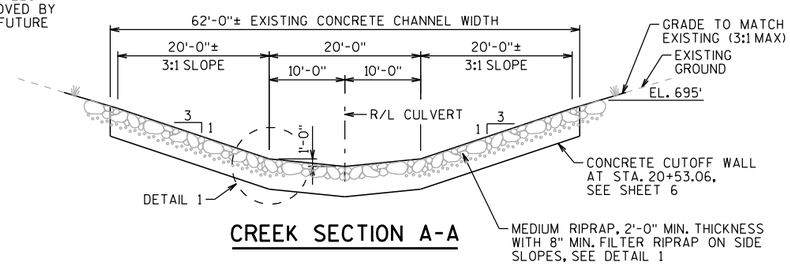


PLAN OF CHANNEL REALIGNMENT

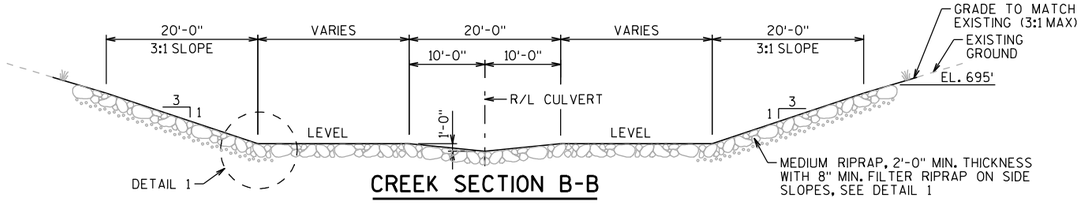
NOTE

THE FOLLOWING APPROXIMATE 2-YEAR EROSION CONTROL HYDRAULIC DATA IS GIVEN FOR THE EXISTING AND PROPOSED OPEN CHANNEL REALIGNED SECTION OF HONEY CREEK AND THIS DATA INCLUDES A FLOW INCREASE FROM THE EXISTING 72" AND 24" DIA. STORM SEWERS LOCATED DOWNSTREAM OF THE EXISTING CONCRETE APRON FOR B-40-93.

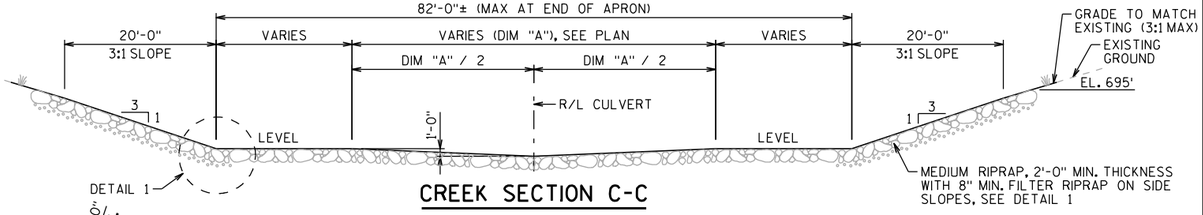
Q2 = 1,230 C.F.S.
V2 = 7.1 F.P.S
HW2 = EL. 692.7 (NAVD88) = EL. 693.00 (NGVD29)



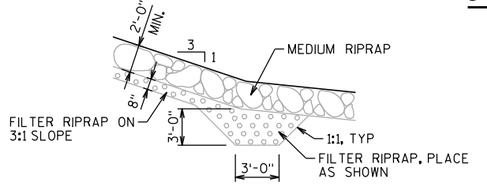
CREEK SECTION A-A



CREEK SECTION B-B



CREEK SECTION C-C



DETAIL 1

LEFT SLOPE SHOWN, RIGHT SLOPE SIMILAR

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STRUCTURE C-40-101

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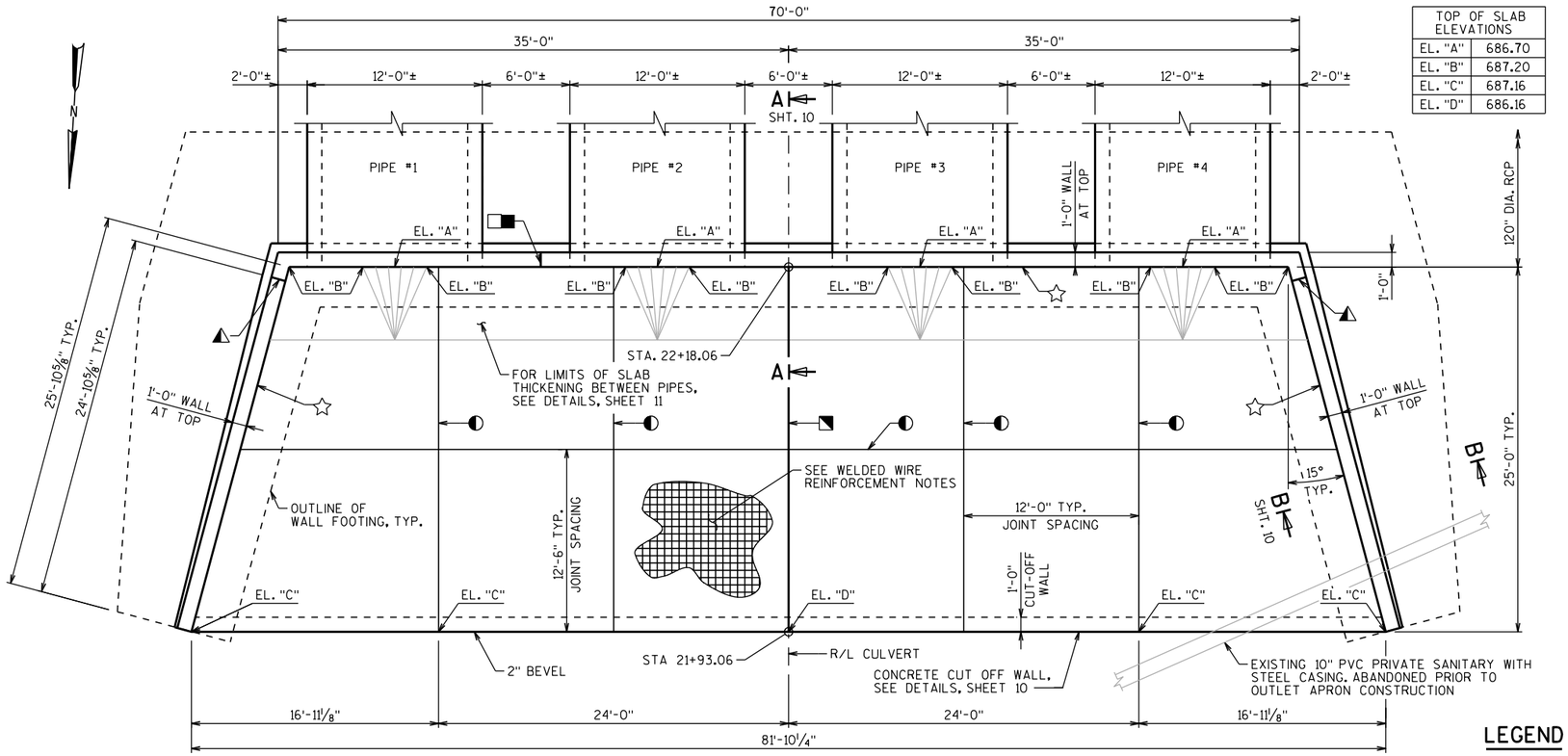
HONEY CREEK CHANNEL REALIGNMENT

SHEET 7 OF 15

8

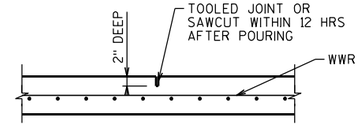
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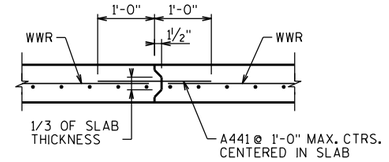


PLAN

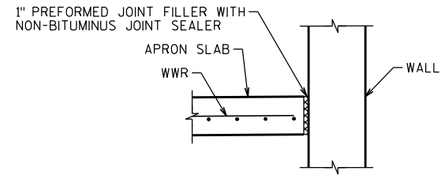
TOP OF SLAB ELEVATIONS	
EL. "A"	686.70
EL. "B"	687.20
EL. "C"	687.16
EL. "D"	686.16



SLAB CONTRACTION JOINT DETAIL



SLAB CONSTRUCTION JOINT DETAIL



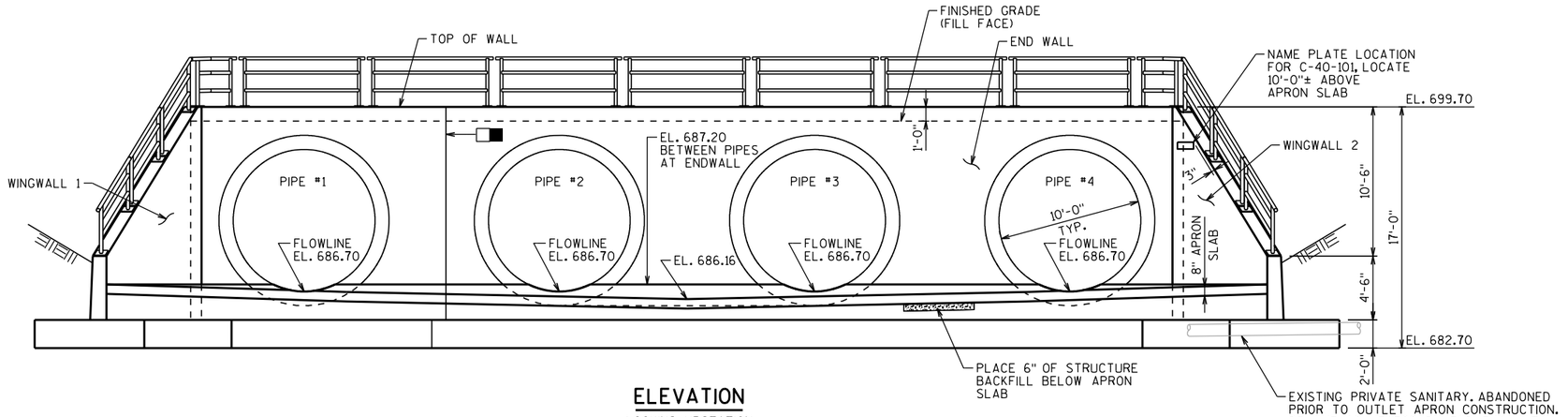
SLAB EXPANSION JOINT DETAIL

LEGEND

- CONTRACTION JOINT IN SLAB, SEE DETAIL, THIS SHEET.
- CONSTRUCTION JOINT IN SLAB, SEE DETAIL, THIS SHEET.
- EXPANSION JOINT BETWEEN WALL AND SLAB, SEE DETAIL, THIS SHEET.
- EXPANSION JOINT IN WALL, SEE DETAIL, SHEET 10.
- CONSTRUCTION JOINT IN WALL, SEE DETAIL, SHEET 10.

WELDED WIRE REINFORCEMENT NOTES:

1. PROVIDE GRID OF WELDED WIRE REINFORCEMENT (WWR) CENTERED VERTICALLY IN APRON SLAB. WELDED WIRE REINFORCEMENT SHALL BE 6x6-D10xD10.
2. PROVIDE WELDED WIRE REINFORCEMENT IN ACCORDANCE WITH ASTM A497.
3. CUT WELDED WIRE REINFORCEMENT TO FIT APRON SLAB PLAN DIMENSIONS AND PROPOSED CONSTRUCTION JOINTS.
4. LAP SPLICE WELDED WIRE REINFORCEMENT SHEETS WITH 1'-6" LAP, TYP.
5. THE WELDED WIRE REINFORCEMENT WEIGHT IS INCLUDED WITH THE BID ITEM FOR "BAR STEEL REINFORCEMENT HS CULVERTS." ESTIMATED WEIGHT = 3100 POUNDS.



ELEVATION

LOOKING UPSTATION
CONCRETE CUT-OFF WALL NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-40-101

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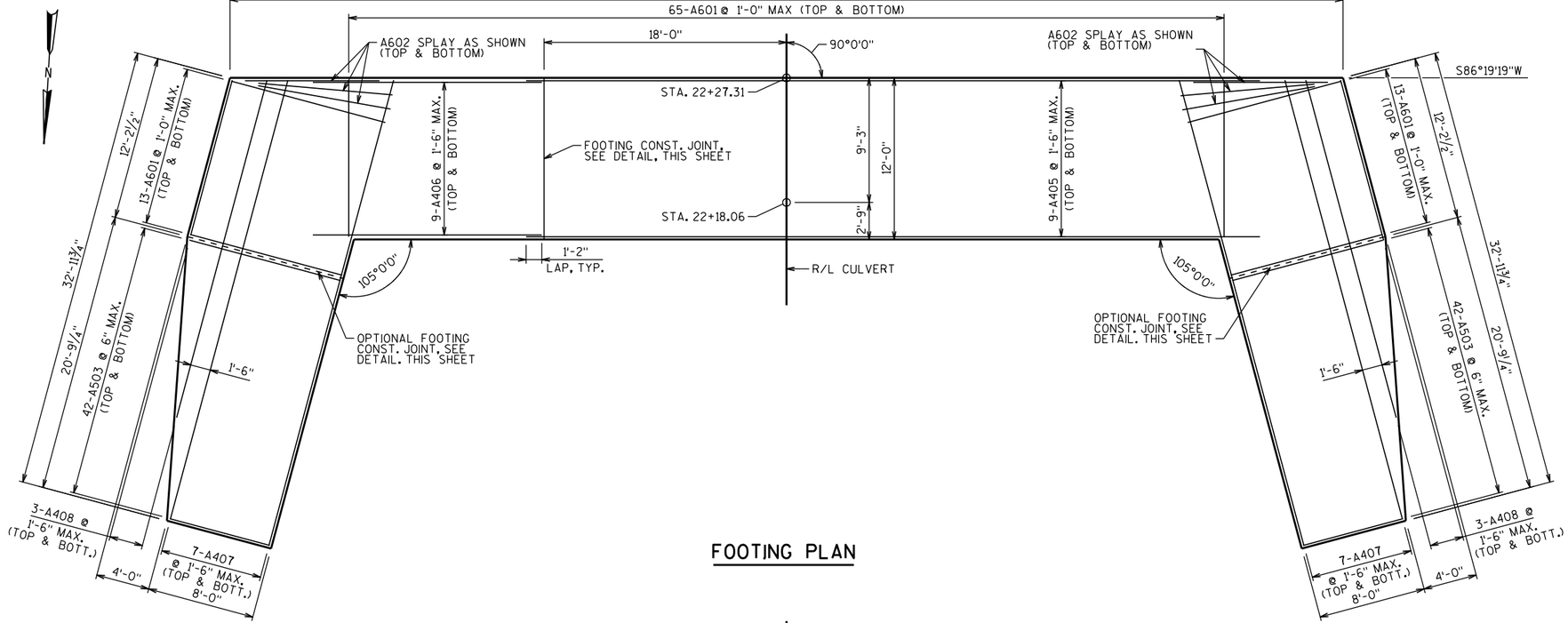
CONCRETE OUTLET APRON PLAN & ELEVATION

SHEET 8 OF 15

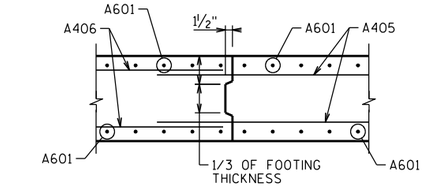
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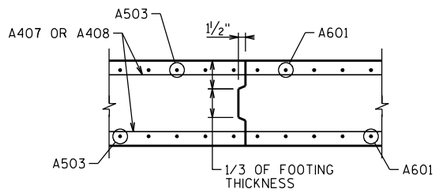
STATE PROJECT NUMBER
1060-33-78



FOOTING PLAN

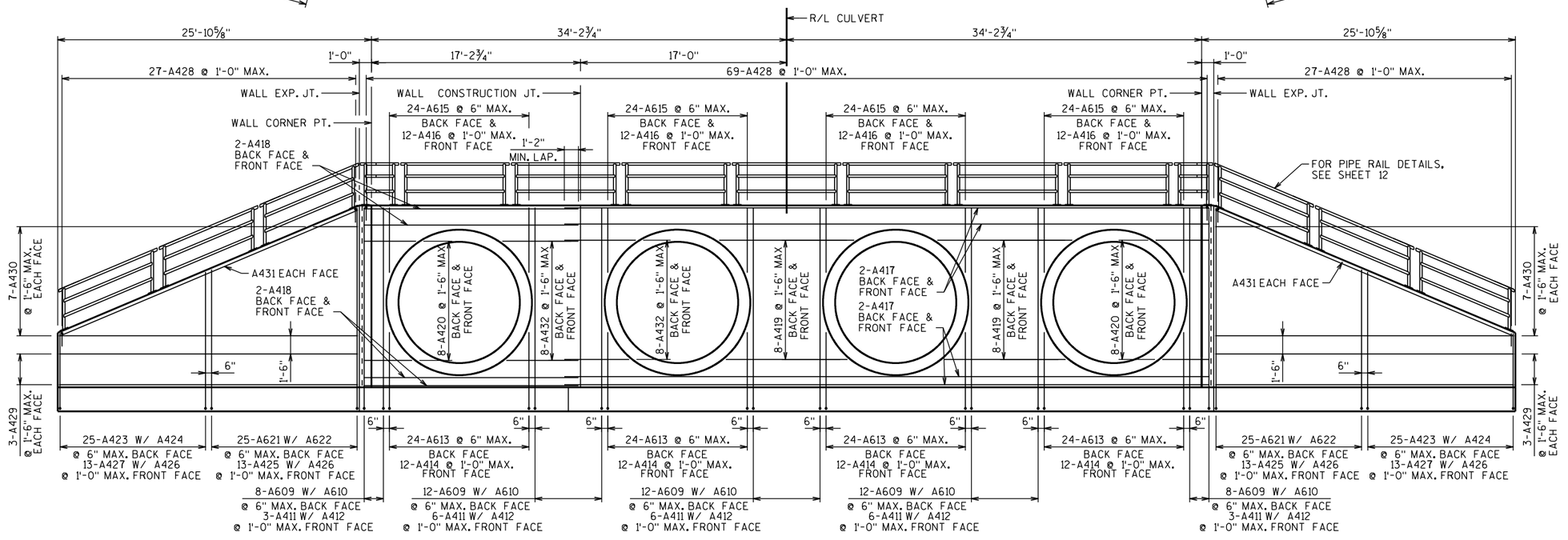


FOOTING CONSTRUCTION JOINT DETAIL



OPTIONAL FOOTING CONSTRUCTION JOINT DETAIL

REINFORCEMENT EXTENDS THROUGH JOINT.



WINGWALL 1

UNFOLDED ELEVATION

DIMENSIONS MEASURED ALONG FRONT FACE

WINGWALL 2

NOTE:

FIELD CUT BAR STEEL REINFORCMENT A613, A414, A615, A416, A419, A420, AND A432 AROUND PIPE AS SHOWN.

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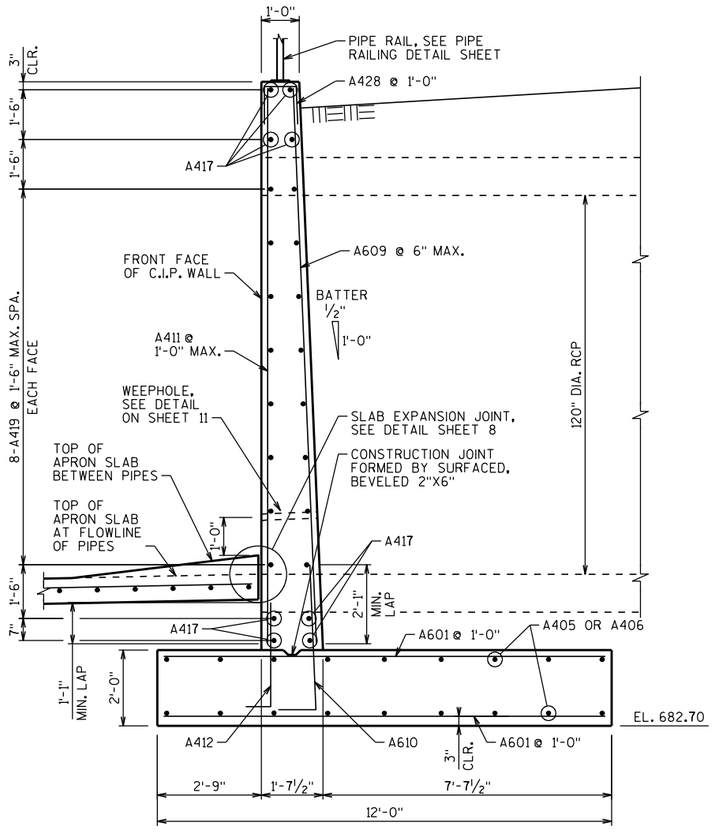
STRUCTURE C-40-101

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CONCRETE OUTLET APRON DETAILS (1 OF 3)

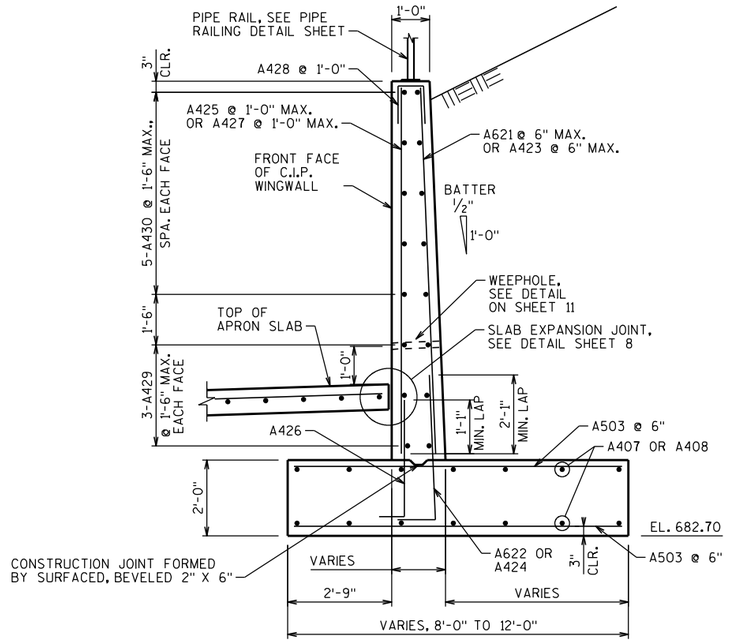
SHEET 9 OF 15

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1060-33-78



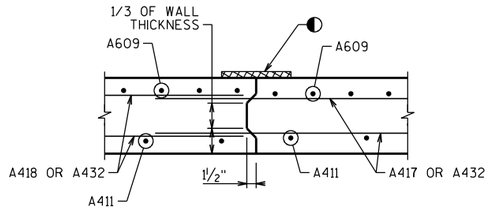
SECTION A-A

SEE SHEET 8 FOR LOCATION.

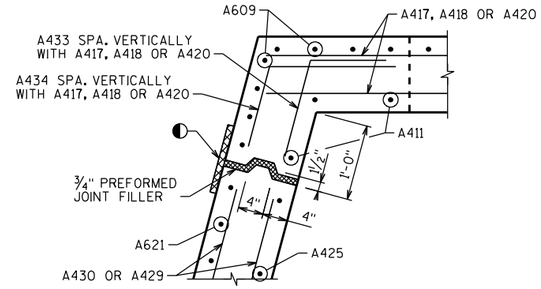


SECTION B-B

SEE SHEET 8 FOR LOCATION

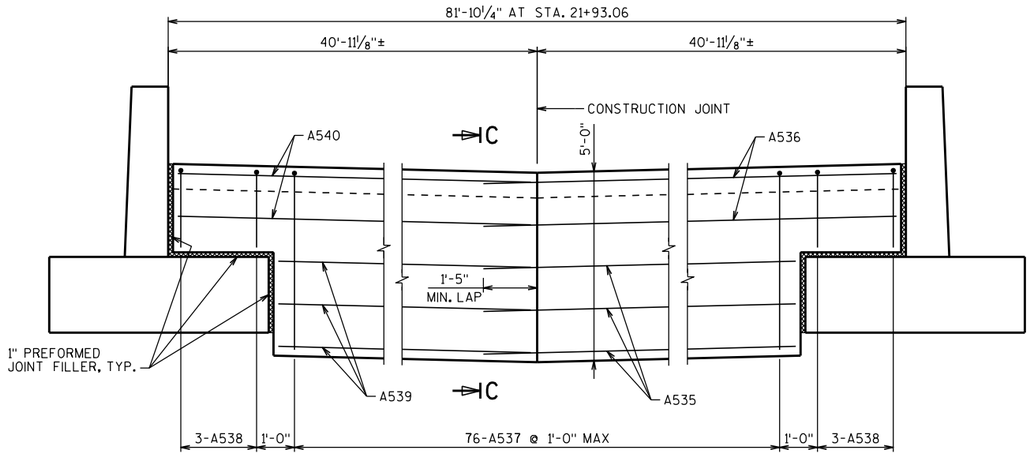


WALL CONSTRUCTION JOINT DETAIL



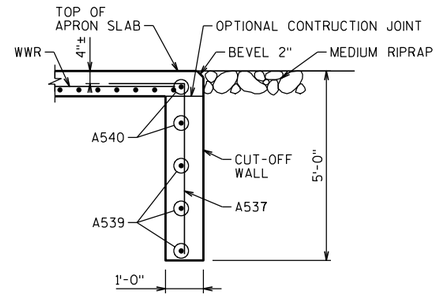
WALL EXPANSION JOINT DETAIL

◐ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL VERTICAL JOINTS ON BACK FACE OF WALLS.



CUT-OFF WALL ELEVATION

LOOKING UPSTATION



SECTION C-C

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-40-101

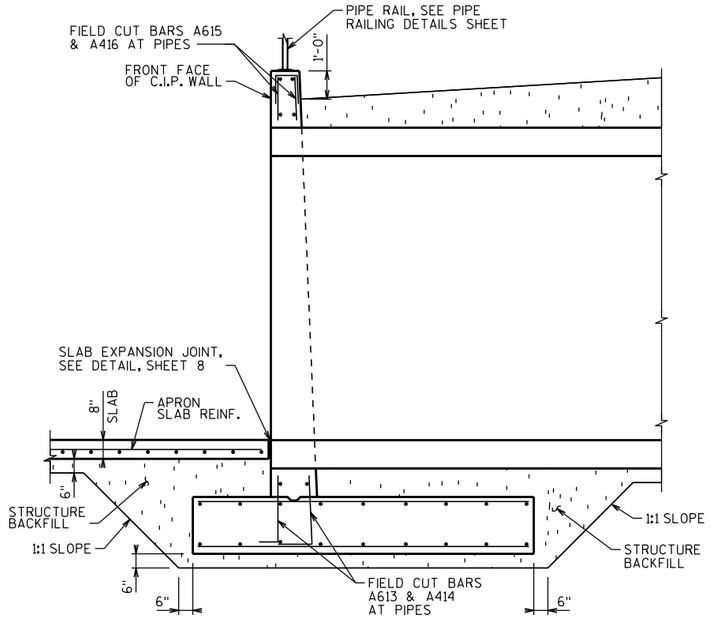
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CONCRETE OUTLET APRON DETAILS (2 OF 3)

SHEET 10 OF 15

8

8



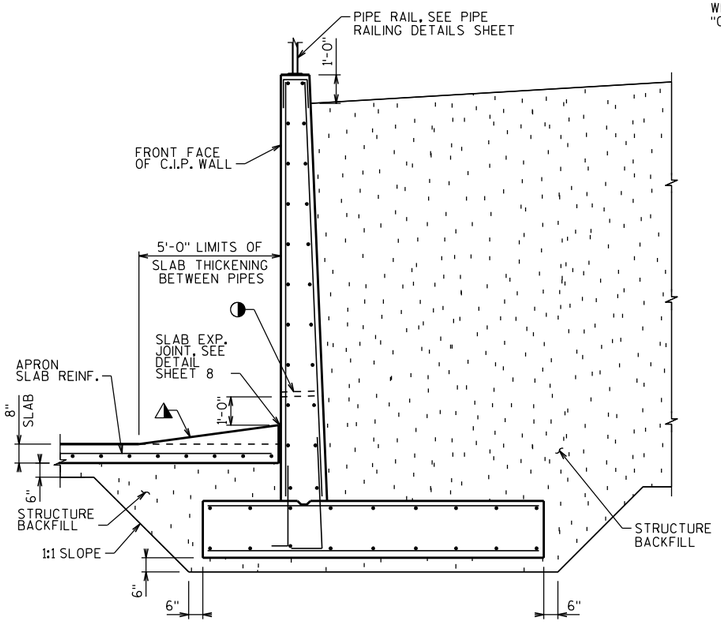
SECTION THRU WALL AT PIPE

FOR REINFORCEMENT AND DIMENSIONS, SEE SECTION A-A ON SHEET 10

LEGEND:

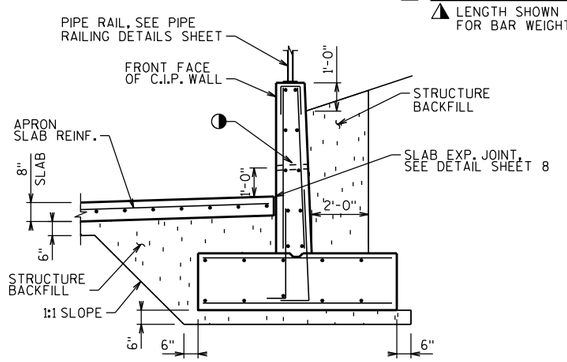
⚠ THICKEN APRON SLAB BETWEEN PIPES TO FORM CHANNEL AT PIPE. AT PIPE, MATCH CROSS SECTION OF PIPE.

◐ WEEPHOLE CONSISTING OF 2" PIPE DIA. SCHEDULE 80 PVC PIPE TO BE PLACED ONE FOOT ABOVE APRON SLAB AT ABOUT 10'-0" CENTERS. THE PIPE, INCLUDING ENDS, SHALL BE WRAPPED WITH GEOTEXTILE FABRIC TYPE DF. WEEPHOLES CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE MASONRY RETAINING WALLS."



SECTION THRU WALL BETWEEN PIPE

FOR REINFORCEMENT AND DIMENSIONS, SEE SECTION A-A ON SHEET 10



SECTION THRU WINGWALL

FOR REINFORCEMENT AND DIMENSIONS, SEE SECTION A-A ON SHEET 10

BILL OF BARS

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A601		182	11'-6"			FOOTING - LONG.
A602		12	10'-0"			FOOTING - LONG.
A503		168	9'-6"		⚠	FOOTING - LONG.
A404						NOT USED
A405		18	54'-6"			FOOTING - TRANS.
A406		18	17'-0"			FOOTING - TRANS.
A407		28	33'-6"		⚠	FOOTING - TRANS.
A408		12	18'-9"			FOOTING - TRANS.
A609		52	14'-9"			ENDWALL - VERT.
A610		52	6'-8"	X		ENDWALL - VERT.
A411		24	14'-9"			ENDWALL - VERT.
A412		24	5'-9"	X		ENDWALL - VERT.
A613		96	8'-7"	X		ENDWALL - VERT.
A414		48	8'-8"	X		ENDWALL - VERT.
A615		96	6'-0"			ENDWALL - VERT.
A416		48	6'-0"			ENDWALL - HORIZ.
A417		8	53'-2"			ENDWALL - HORIZ.
A418		8	17'-8"			ENDWALL - HORIZ.
A419		32	12'-0"			ENDWALL - HORIZ.
A420		32	6'-0"		⚠	ENDWALL - HORIZ.
A621		50	12'-0"			WINGWALL - VERT.
A622		50	6'-8"	X	⚠	WINGWALL - VERT.
A423		50	6'-10"			WINGWALL - VERT.
A424		50	6'-9"	X	⚠	WINGWALL - VERT.
A425		26	12'-1"			WINGWALL - VERT.
A426		52	5'-9"	X	⚠	WINGWALL - VERT.
A427		26	6'-10"			WINGWALL - VERT.
A428		123	2'-6"	X		ENDWALL & WINGWALL
A429		12	24'-6"		⚠	WINGWALL - HORIZ.
A430		28	14'-0"			WINGWALL - HORIZ.
A431		4	26'-2"			WINGWALL - HORIZ.
A432		32	8'-0"			ENDWALL - HORIZ.
A433		24	2'-8"	X	⚠	ENDWALL - CORNER
A434		24	3'-7"	X	⚠	ENDWALL - CORNER
A535		3	40'-0"			CUT-OFF WALL - LONGIT.
A536		2	43'-0"			CUT-OFF WALL - LONGIT.
A537		76	6'-7"	X		CUT-OFF WALL - VERT.
A538		6	3'-11"	X		CUT-OFF WALL - VERT.
A539		3	37'-9"			CUT-OFF WALL - LONGIT.
A540		2	40'-9"			CUT-OFF WALL - LONGIT.
A441		18	2'-0"			APRON SLAB - DOWELS

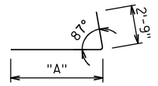
BAR MARKS INCLUDED IN BID ITEM "BAR STEEL REINFORCEMENT HS RETAINING WALLS"

BAR MARKS INCLUDED IN BID ITEM "BAR STEEL REINFORCEMENT HS CULVERTS"

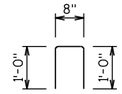
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

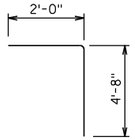
BAR MARK	NO. REQ'D	LENGTH
A503	4 SERIES OF 42	7'-6" TO 11'-6"
A408	2 SERIES OF 6	11'-10" TO 25'-8"
A621	2 SERIES OF 25	9'-6" TO 14'-9"
A423	2 SERIES OF 25	4'-3" TO 9'-6"
A425	2 SERIES OF 13	9'-6" TO 14'-9"
A427	2 SERIES OF 13	4'-3" TO 9'-6"
A430	4 SERIES OF 7	3'-6" TO 24'-6"
A433	2 SERIES OF 12	2'-5" TO 2'-11"
A434	2 SERIES OF 12	3'-3" TO 3'-11"



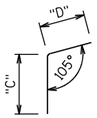
BAR MARK	DIM. "A"
A610	4'-1"
A412	3'-1"
A613	6'-0"
A414	6'-0"
A622	4'-1"
A424	4'-1"
A426	3'-1"



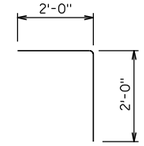
A428



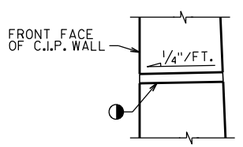
A537



BAR MARK	DIM. "C"	DIM. "D"
A433	1'-5" TO 1'-11"	1'-0"
A434	1'-7" TO 2'-3"	1'-8"



A538



WEEPHOLE DETAIL

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STRUCTURE C-40-101

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CONCRETE OUTLET APRON DETAILS (3 OF 3)

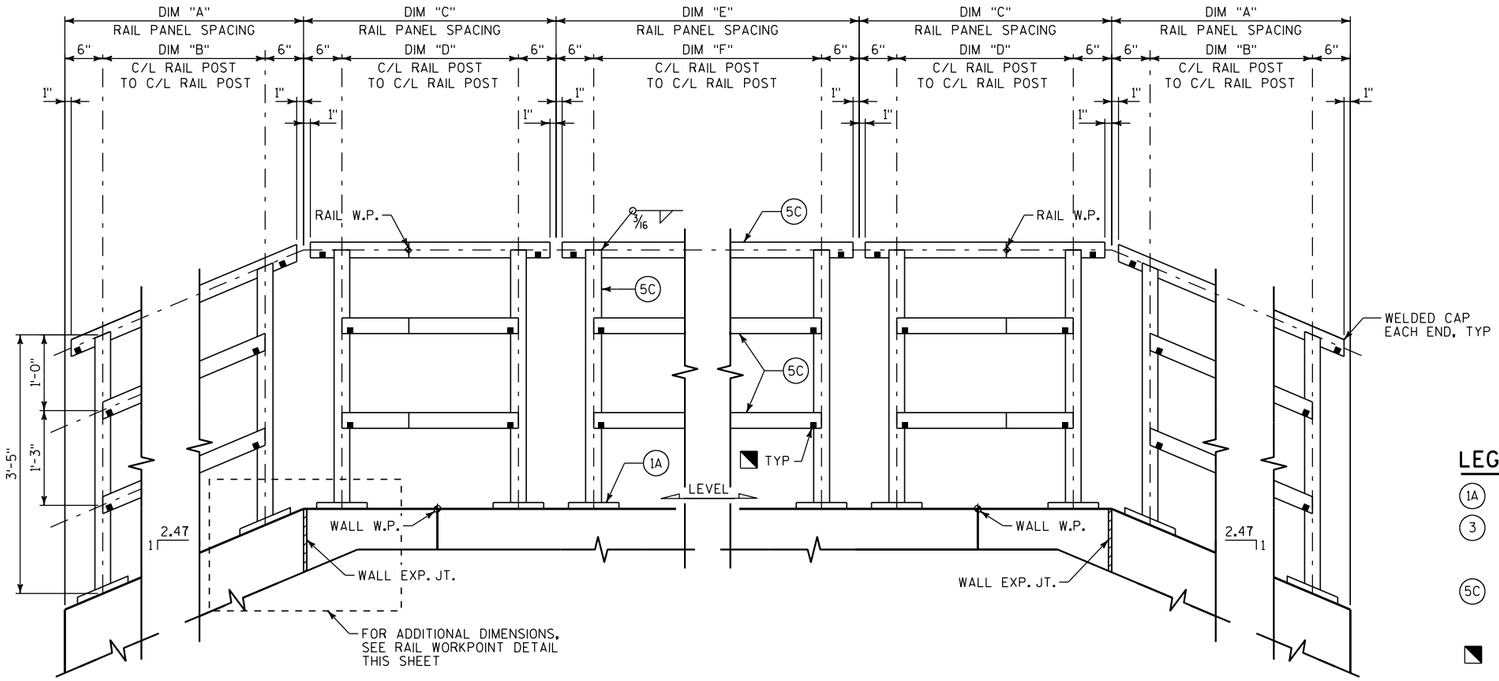
SHEET 11 OF 15

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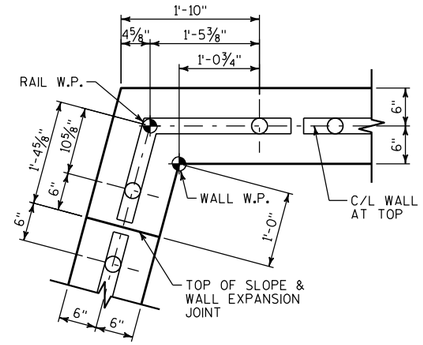
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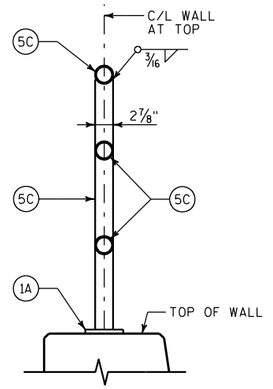
WALL RAILING ELEVATION

UNFOLDED ELEVATION AT C/L OF RAIL



RAIL WORKPOINT DETAIL

EAST END OF WALL SHOWN,
WEST END OF WALL SIMILAR, OPPOSITE HAND



WALL RAILING SECTION

LEGEND

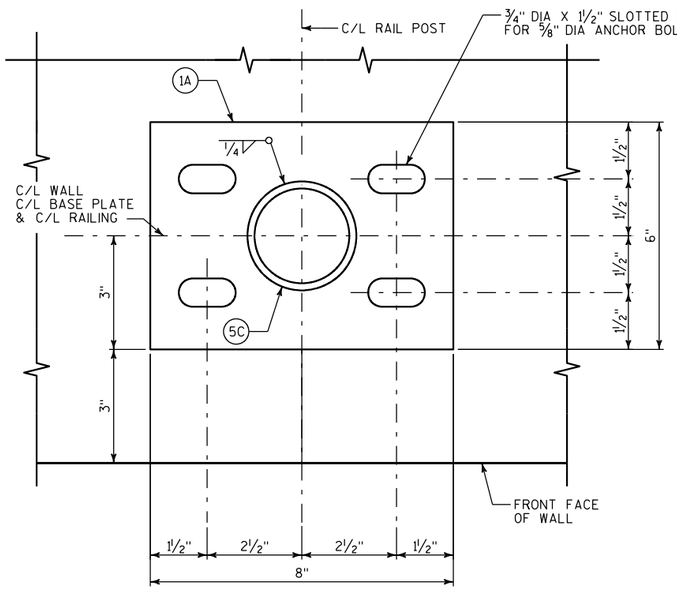
(1A) PLATE 5/8" X 6" X 8" WITH 3/4" X 1 1/2" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" DIA, MINIMUM PULLOUT CAPACITY OF 20 KIPS. EMBED A MIN OF 7".

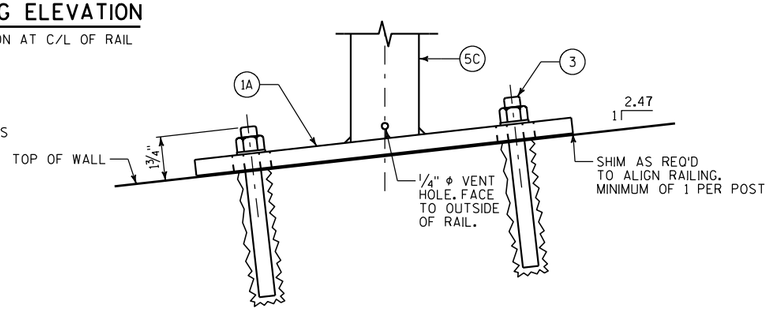
(5C) 2 1/2" DIA STANDARD PIPE RAIL (2.875" O.D.). PLACE POSTS VERTICAL. WELD TO 1A. PLACE RAILS PARALLEL TO TOP OF COPING. WELD TO 5C.

◥ 1/2" ϕ DRAIN HOLE @ BOTTOM OF EACH RAIL END.

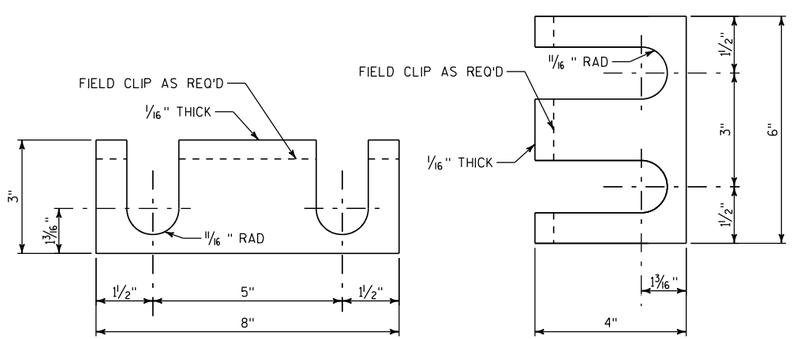
DIM	PANEL DIMENSIONS
'A'	3 PANELS @ 8'-3 1/2"
'B'	7'-3 1/2" EACH PANEL
'C'	1 PANEL @ 3'-4"
'D'	2'-4" EACH PANEL
'E'	7 PANELS @ 9'-4"
'F'	8'-4" EACH PANEL



RAIL POST BASE PLATE



ANCHOR BOLTS FOR RAIL POST



RAIL POST SHIM DETAIL

(2 SETS PER POST)

NOTES

BID ITEM SHALL BE "RAILING PIPE C-40-101", 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.

STEEL PLATE SHALL CONFORM TO A.S.T.M. A709 GRADE 36 (NO. 1A & SHIMS). 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-40-101

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PIPE RAILING DETAILS

SHEET 12 OF 15

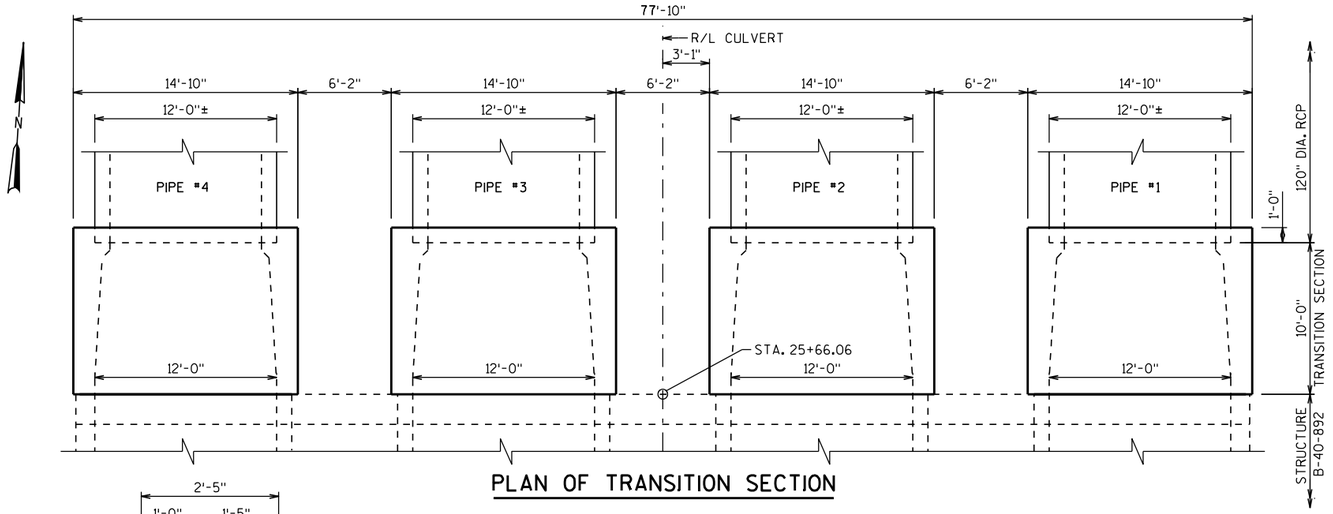
STATE PROJECT NUMBER

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STATE PROJECT NUMBER
1060-33-78



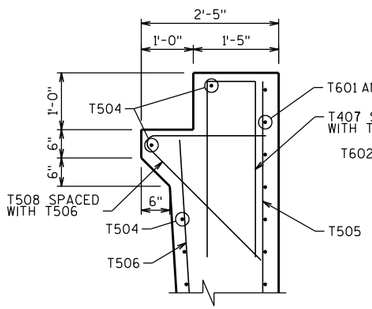
PLAN OF TRANSITION SECTION

BILL OF BARS

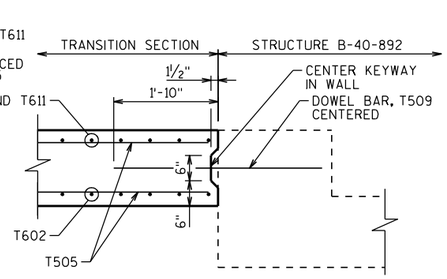
THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

	BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
	T601		176	16'-6"	X		CORNERS
	T602		264	14'-6"			TOP & BOTT. TRANS.
	T503		160	2'-10"			WALL DOWELS - VERT.
	T504		160	13'-1"			WALL - VERT.
	T505		232	10'-7"			TOP & BOTT. SLAB, WALL - LONGIT.
	T506		72	9'-8"			WALL - LONGIT.
	T407		72	6'-10"	X		WALL - LONGIT.
*	T508		72	4'-9"	X		WALL - LONGIT.
	T509		136	3'-8"			DOWELS
**	T510		192	6'-0"			END WALL - VERT. - TRANS.
	T611		176	11'-1"	X		CORNERS

* USE BEND DIAMETER FOR STIRRUPS AND TIES FOR BAR T508.
** FIELD CUT BAR T510 AROUND PIPE OPENING AS SHOWN.

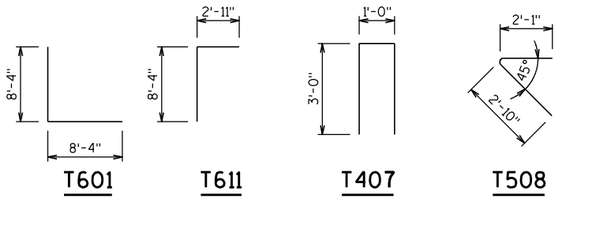


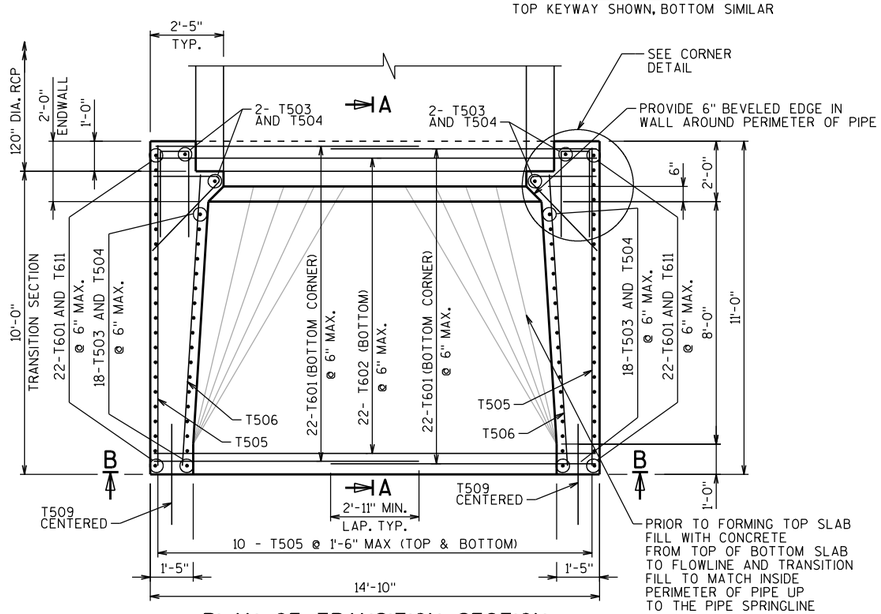
CORNER DETAIL



KEYWAY DETAIL

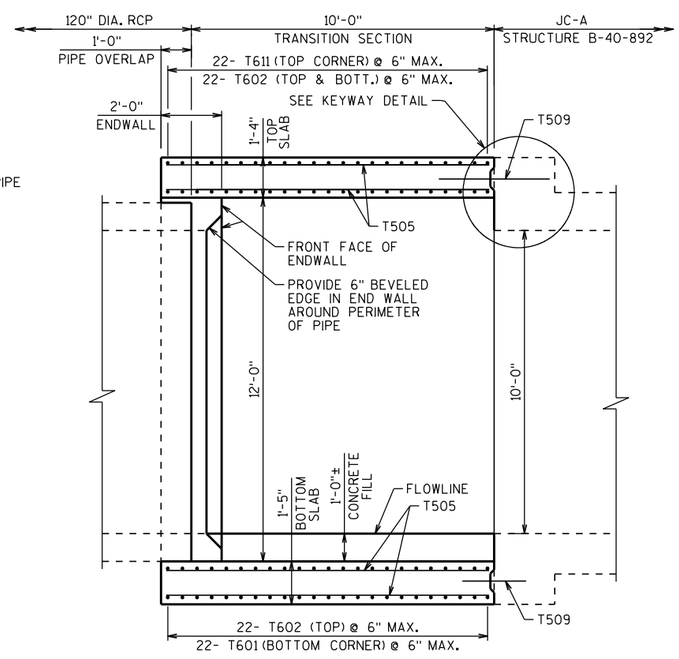
TOP KEYWAY SHOWN, BOTTOM SIMILAR



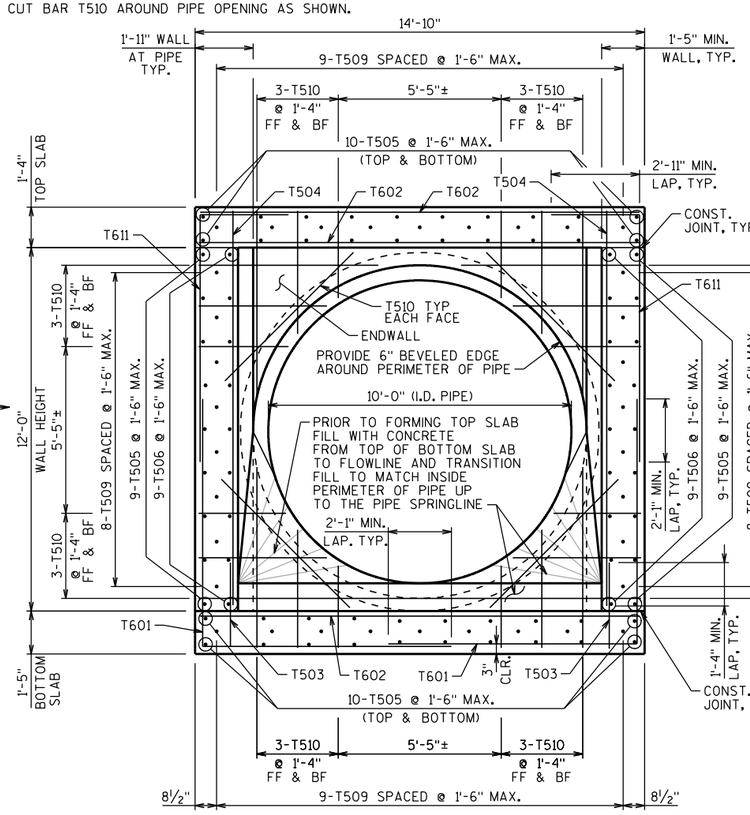


PLAN OF TRANSITION SECTION

PLAN VIEW SHOWN AT MID-HEIGHT OF TRANSITION SECTION



SECTION A-A



SECTION B-B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-40-101

DRAWN BY TJC | PLANS CK'D. BKS

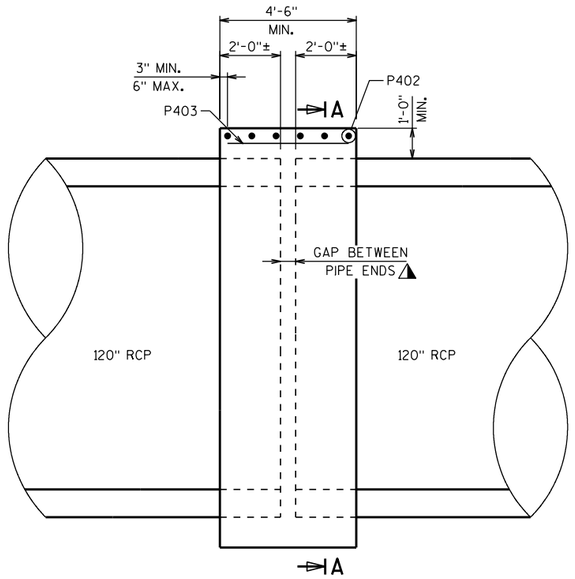
TRANSITION SECTION PLAN AND SECTIONS

SHEET 13 OF 15

8

FILE NAME : \\Wke31fp1\w3zoo\Cadd\Final\10603378_TL\Structs\C-40-101\cds\C400101_080113_de.dgn
PLOT DATE : 01-MAY-2013 11:37
PLOT BY : MSCBKS
PLOT NAME : C400101_080113_de
PLOT SCALE : 10:1

STATE PROJECT NUMBER
1060-33-78



ELEVATION

⚠ IF GAP BETWEEN PIPE ENDS EXCEEDS 6", THEN P403 BAR LENGTH WILL REQUIRE ADJUSTMENT. THE P403 BARS CAN BE FIELD CUT TO FIT FIELD CONDITIONS.

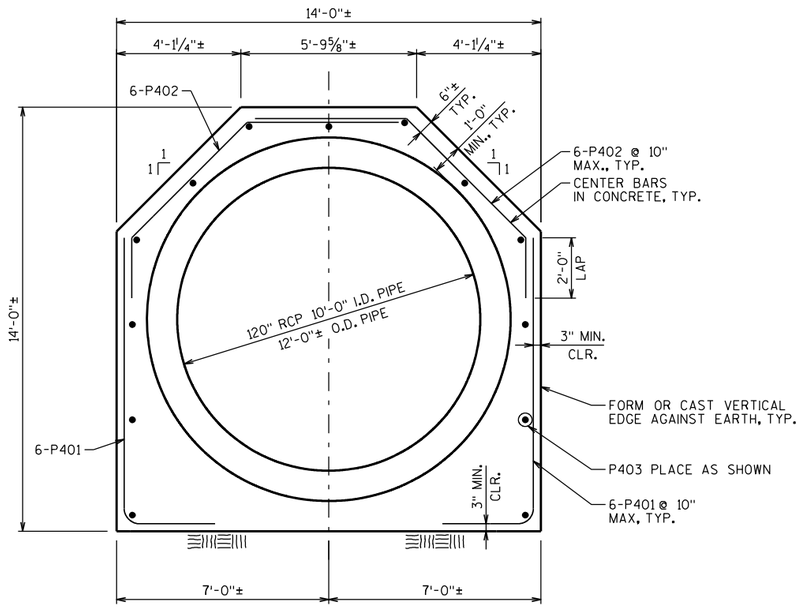
NOTE:

DEPENDING ON THE CONTRACTORS PIPE LAYING SCHEDULE, A PIPE COLLAR MAY BE REQUIRED. ONE PIPE COLLAR PER PIPE (4 TOTAL) HAS BEEN INCLUDED IN THE QUANTITIES FOR CONCRETE AND REINFORCEMENT. AN ASSUMED LOCATION IS SHOWN ON THE GENERAL PLAN AND ELEVATION SHEET. THE CONTRACTOR CAN CHANGE THE PIPE COLLAR LOCATION BASED ON THE PIPE LAYING SCHEDULE. THE CONTRACTOR IS RESTRICTED FROM PLACING A PIPE COLLAR BELOW THE EXISTING AND FUTURE IH-94 WB ENTRANCE RAMP FROM 84TH STREET. IF PIPE COLLARS ARE REQUIRED, THE CONTRACTOR WILL BE PAID THE PLAN QUANTITY FOR CONCRETE AND REINFORCEMENT. ADJUSTMENTS TO MATERIAL QUANTITIES MAY BE REQUIRED IF GAP BETWEEN PIPES EXCEEDS 6 INCHES. NO ADDITIONAL PAYMENT WILL BE MADE FOR ADDITIONAL QUANTITIES OF CONCRETE AND REINFORCEMENT.

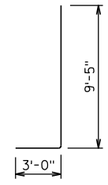
BILL OF BARS - CONCRETE PIPE COLLAR

THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE BAR SIZE

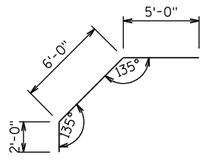
	BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
	P401		12	12'-4"	X		COLLAR - VERT.
	P402		12	13'-0"	X		COLLAR - VERT.
⚠	P403		13	4'-2"			COLLAR - LONGIT



SECTION A-A



P401



P402

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-40-101

DRAWN BY TJC | PLANS CK'D. BKS

CONCRETE PIPE COLLAR DETAILS

SHEET 14 OF 15

8

8

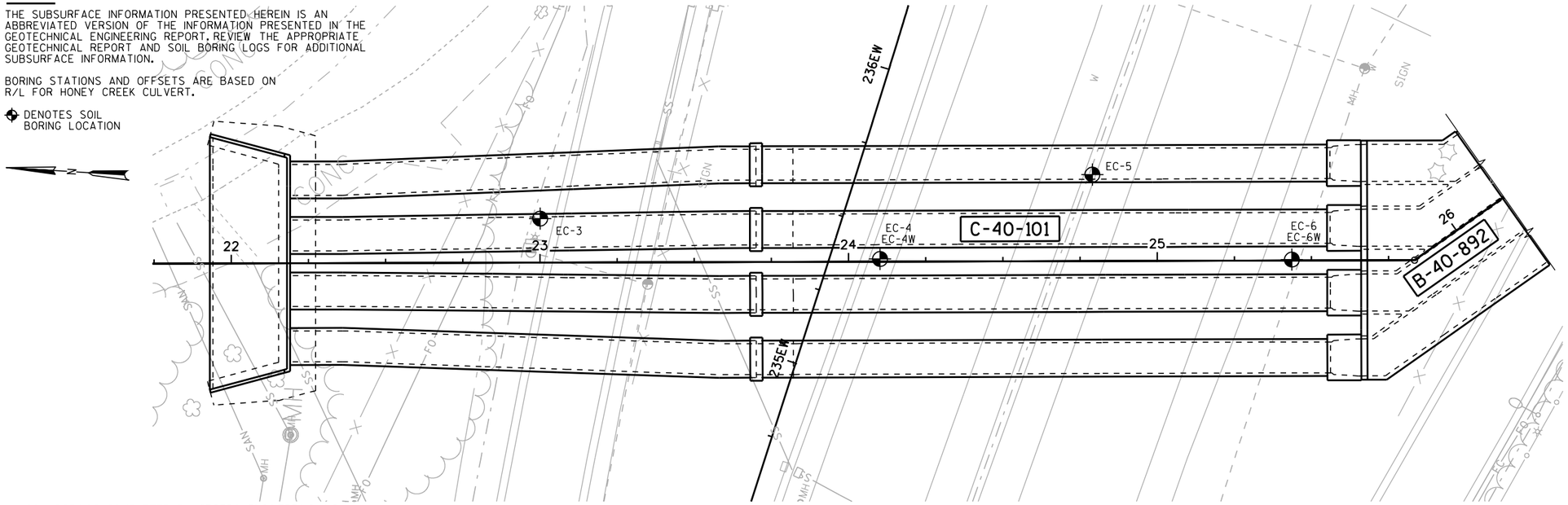
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NOTE:

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 FOR HONEY CREEK CULVERT.

DENOTES SOIL BORING LOCATION



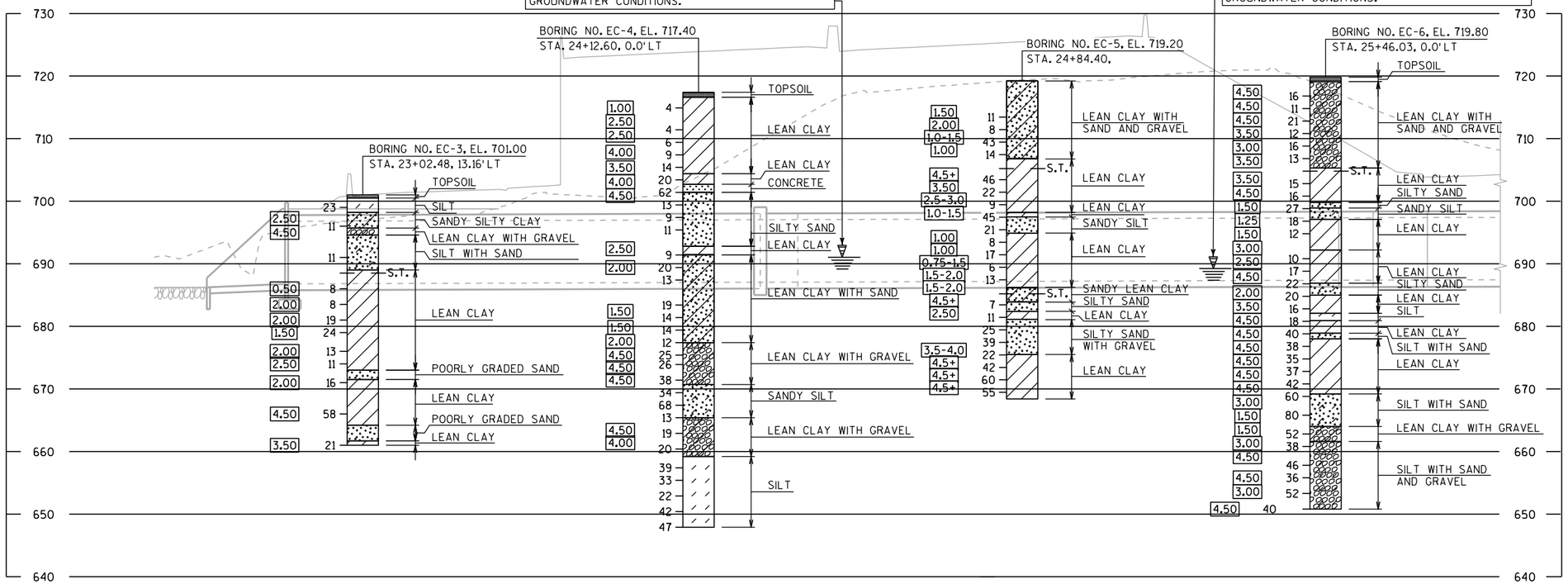
SOIL BORINGS COMPLETED BY: GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
JULY 23, 2012 - BORING EC-3
JULY 25, 2012 - BORING EC-4
AUG. 31, 2012 - BORING EC-5
JULY 27, 2012 - BORING EC-6

PLAN

FROM GROUNDWATER OBSERVATION WELL EC-4W. SEE GEOTECHNICAL BASELINE REPORT AND GEOTECHNICAL DATA REPORTS FOR MORE INFORMATION ON GROUNDWATER CONDITIONS.

FROM GROUNDWATER OBSERVATION WELL EC-6W. SEE GEOTECHNICAL BASELINE REPORT AND GEOTECHNICAL DATA REPORTS FOR MORE INFORMATION ON GROUNDWATER CONDITIONS.



ELEVATION

STATE PROJECT NUMBER

1060-33-78

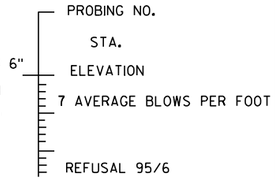
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

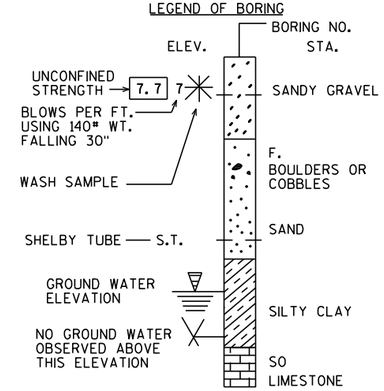
MATERIAL SYMBOLS

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

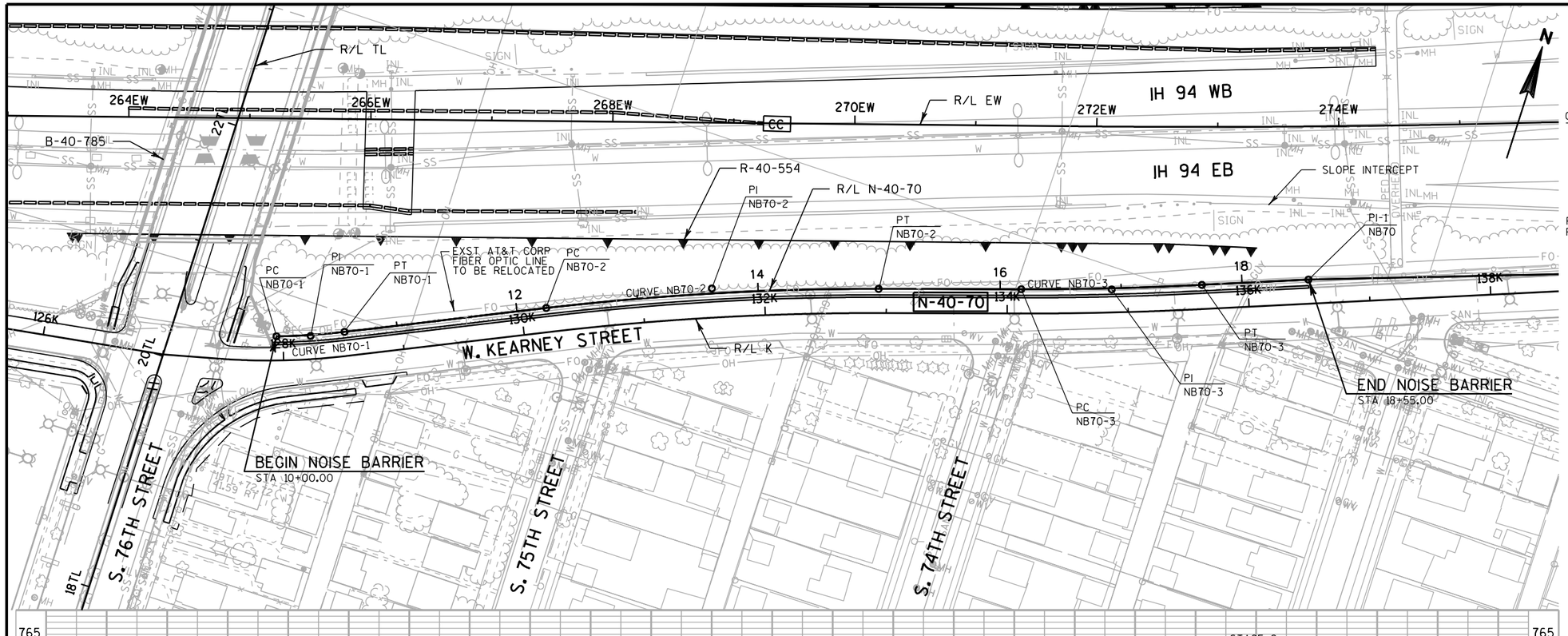
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

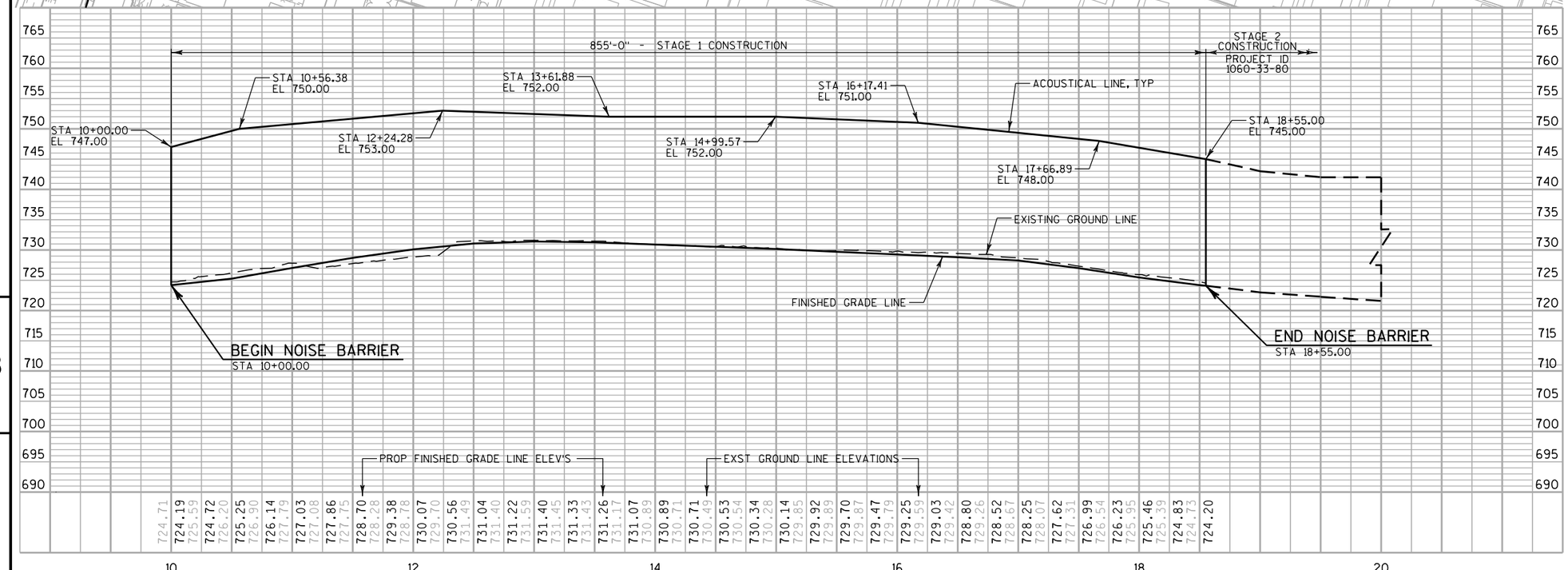
STRUCTURE C-40-101

DRAWN BY TJC | PLANS CK'D. BKS

SUBSURFACE EXPLORATION

SHEET 15 OF 15





PLAN & PROFILE: NOISE BARRIER N-40-70

STATE PROJECT NUMBER
1060-33-78

HORIZONTAL CURVE DATA

CURVE NB70-1		CURVE NB70-2		CURVE NB70-3	
P.I. =	10+44.66	P.I. =	13+78.53	P.I. =	17+08.59
X =	579945.74	X =	580249.58	X =	580564.43
Y =	295643.86	Y =	295782.37	Y =	295882.56
Δ =	5°58'50.70"	Δ =	6°51'19.20"	Δ =	2°59'50.26"
D =	10°36'37.19"	D =	2°29'24.14"	D =	2°00'22.16"
T =	28.21'	T =	137.82'	T =	74.72'
L =	56.37'	L =	275.31'	L =	149.40'
R =	540.00'	R =	2301.00'	R =	2856.00'
P.C. =	10+16.45	P.C. =	12+40.71	P.C. =	16+33.87
P.T. =	10+72.82	P.T. =	15+16.02	P.T. =	17+83.28

ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	18+55.00	580716.86	295940.00

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES & CONSTRUCTION DETAILS
3. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
4. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE
5. SUBSURFACE EXPLORATION

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/1/2013

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 05/09/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-70

NOISE BARRIER NORTH OF IH 94/EAST OF 76TH ST

COUNTY	MILWAUKEE	~~TOWN~~/CITY/~~VILLAGE~~	MILWAUKEE

DESIGN SPEC. AASHTO 2002

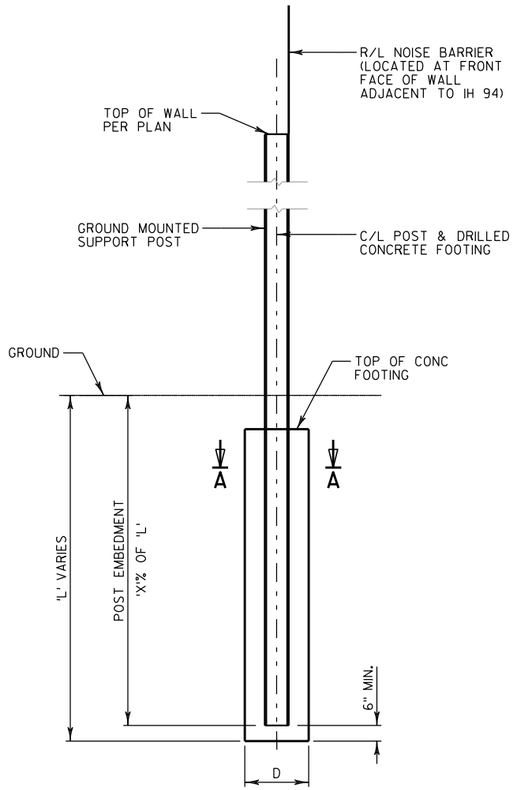
DESIGNED BY	KES	DESIGN CK'D.	EKM	DRAWN BY	GLM	PLANS CK'D.	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 5

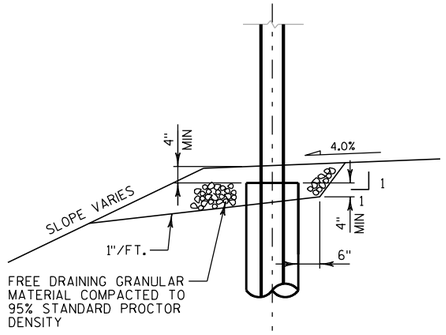
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STATE PROJECT NUMBER
1060-33-78



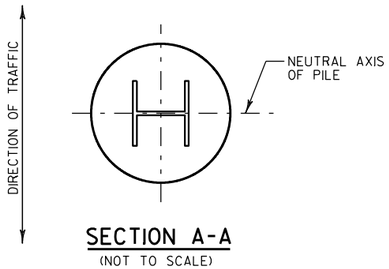
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

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)

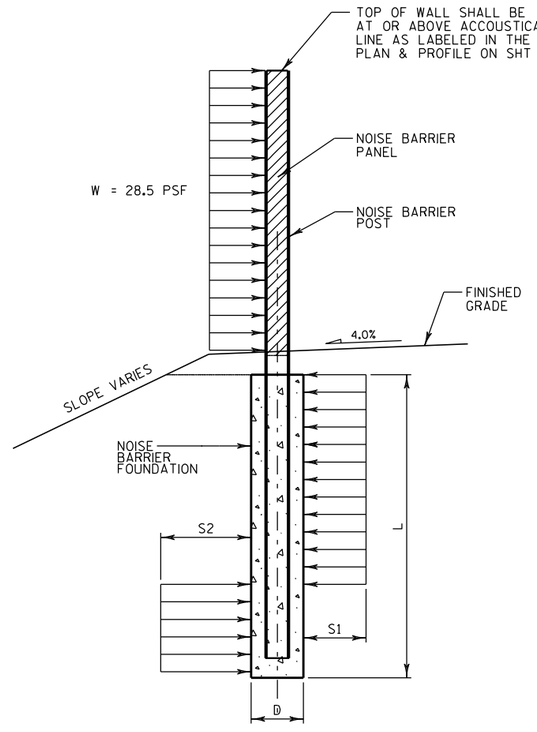


SECTION A-A

(NOT TO SCALE)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0001	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-70	SF	18,770



W = DESIGN WIND LOAD (SEE SHEET 1)
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

GROUND MOUNTED NOISE BARRIER LOADING

(NOT TO SCALE)

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 ABSORTIVE 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 "76TH STREET NOISE BARRIER GEOTECHNICAL DATA REPORT". CONTACT BILL MOHR - WISDOT, (262) 548-5666, 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

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEMS "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-70".

PLACE HYDRANT ACCESS HOLE SIGNS PER SIGNING PLAN SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-70

DRAWN BY GLM | PLANS CK'D. KES

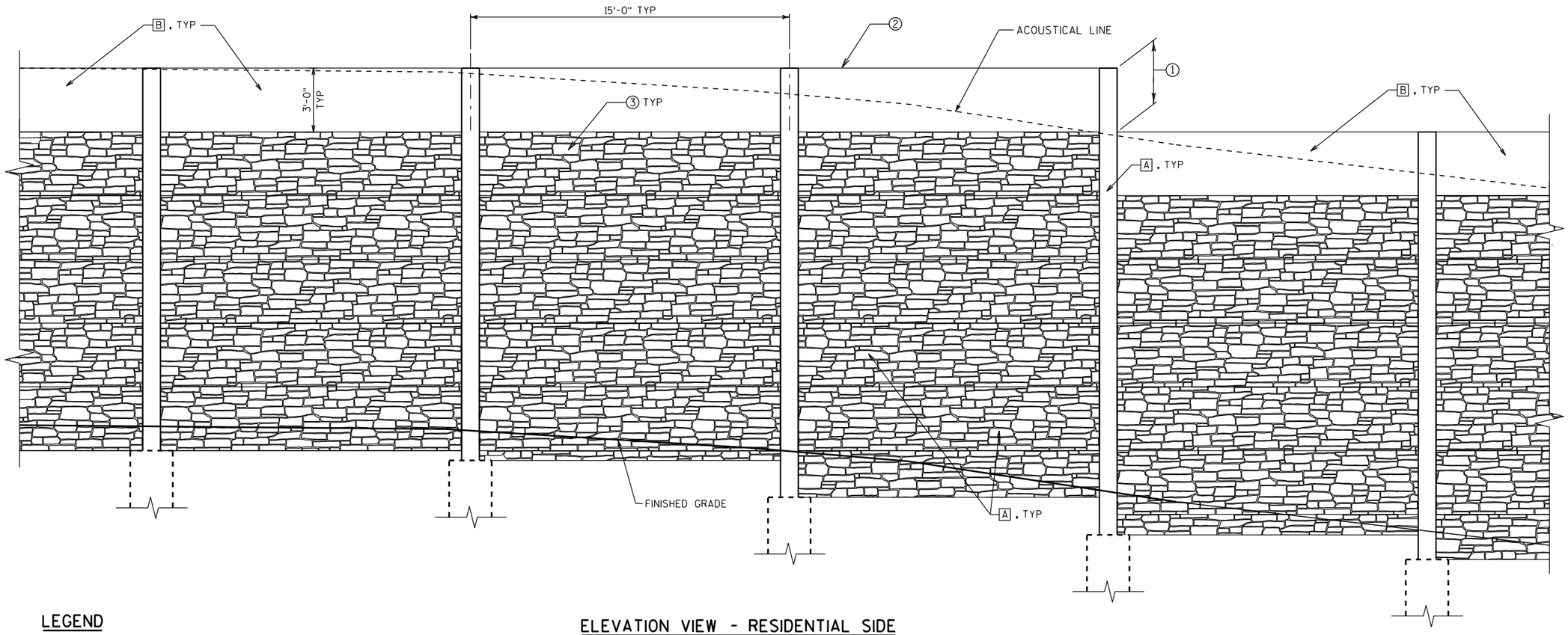
QUANTITIES & CONSTRUCTION DETAILS

SHEET 2 OF 5

8

8

STATE PROJECT NUMBER
1060-33-78



ELEVATION VIEW - RESIDENTIAL 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) THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "DRYSTACK CUT ROCK" PATTERN, SIMULATING A NATIVE WISCONSIN CUT LIMESTONE WALL. THE PATTERN SHALL CONSIST OF RANDON SIZED "CUT ROCK" PIECES RANGING FROM A MINIMUM OF 2" HIGH BY 7" LONG TO A MAXIMUM OF 12" HIGH BY 30" LONG WITH A MAXIMUM RELIEF 1".

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-40-70

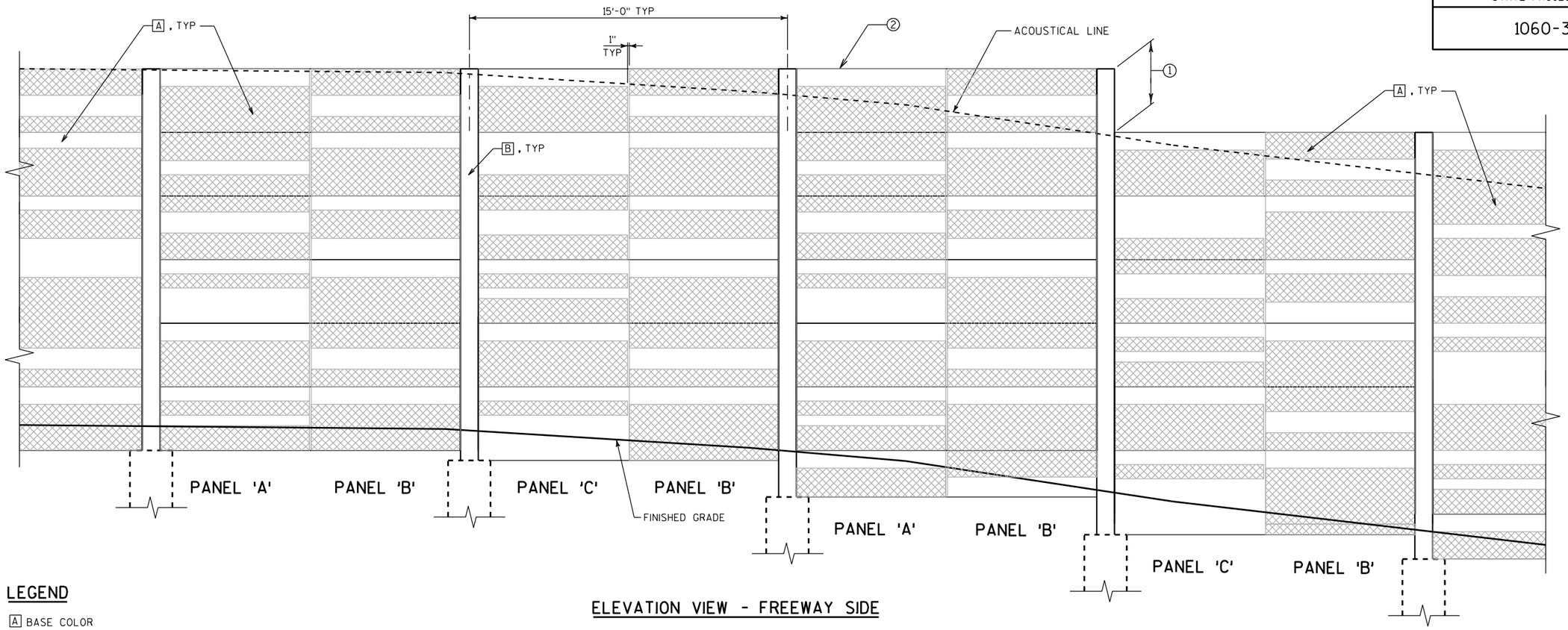
DRAWN BY KES | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 3 OF 5

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STATE PROJECT NUMBER
1060-33-78



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 - 1"

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

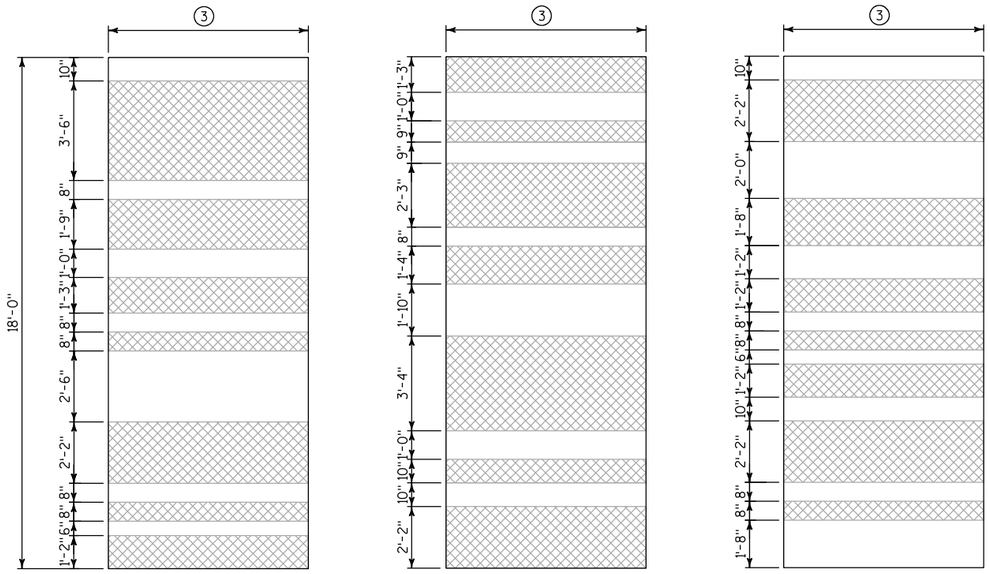
BASE COLOR - 33564

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 KES | PLANS CK'D. EKM

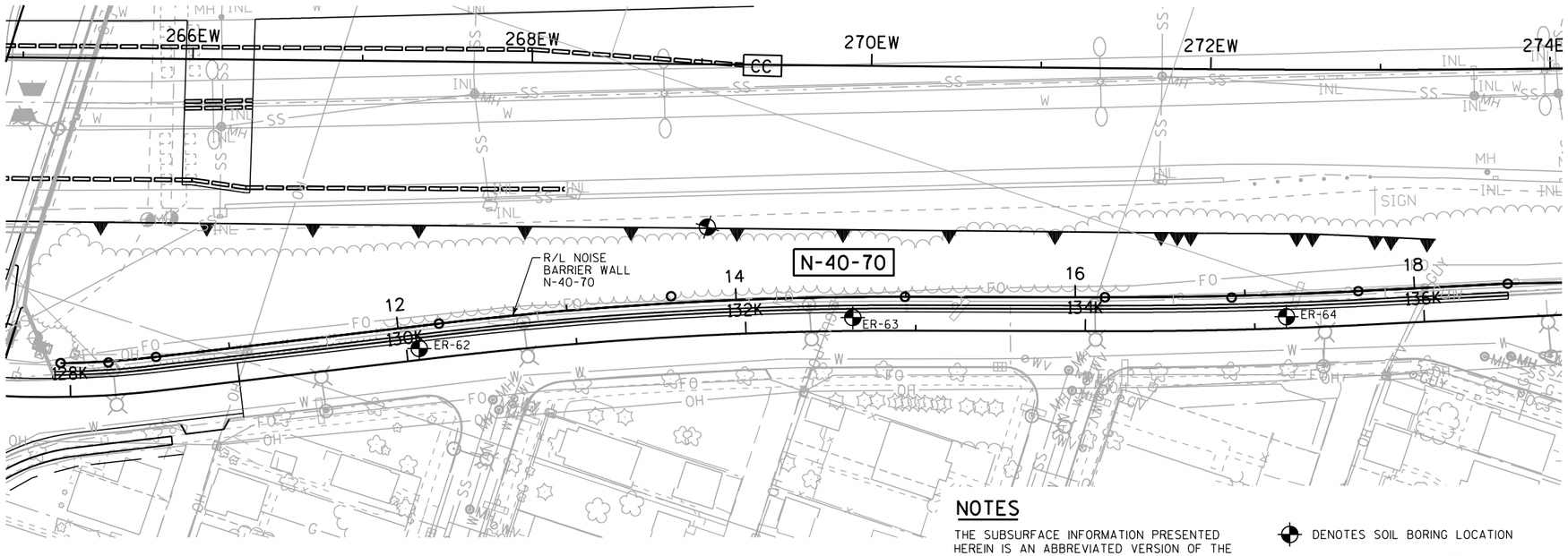
AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 4 OF 5

8

8

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\N-40-70\cds\N70_080104_ae.dgn PLOT DATE : 01-MAY-2013 16:08 PLOT BY : MSCKES PLOT NAME : N70_080104_ae PLOT SCALE : 5.333333:1



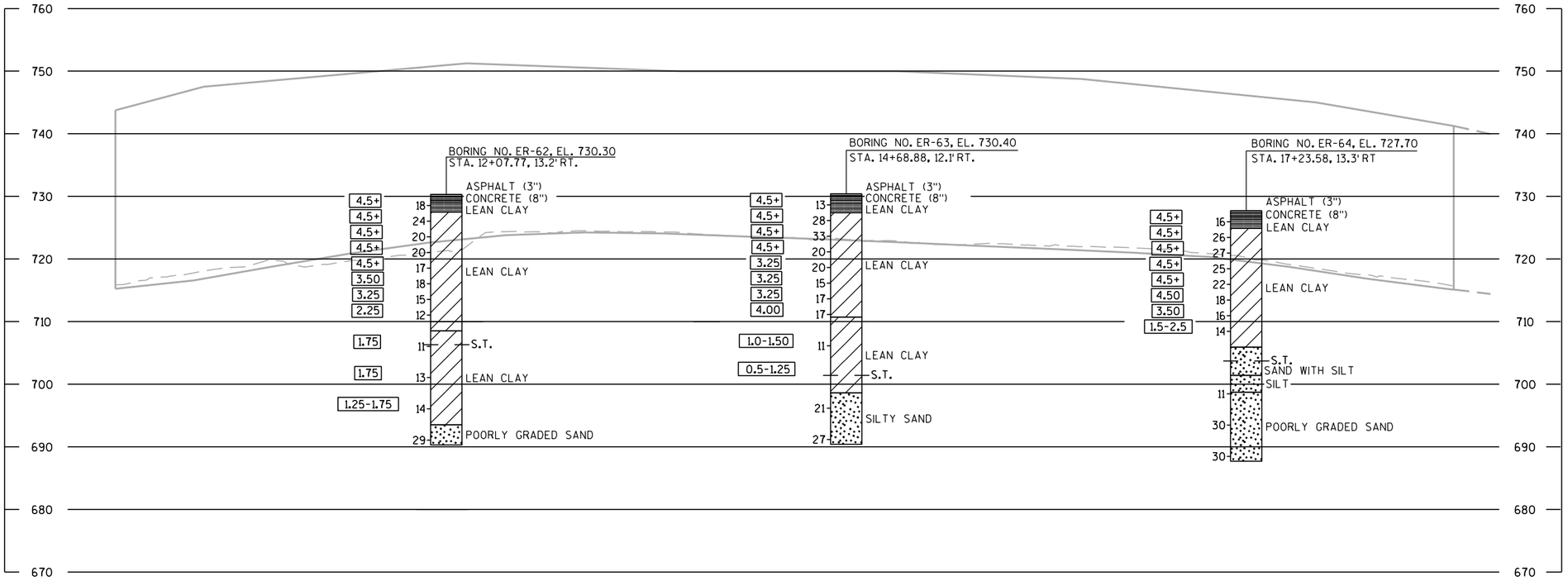
NOTES

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:
FEBRUARY 11, 2013 - BORING ER-62
FEBRUARY 12, 2013 - BORING ER-63
FEBRUARY 12, 2013 - BORING ER-64



STATE PROJECT NUMBER

1060-33-78

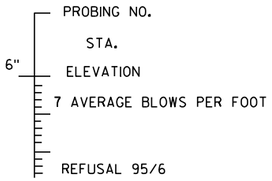
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

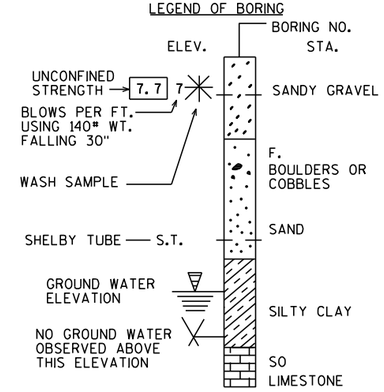
MATERIAL SYMBOLS

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

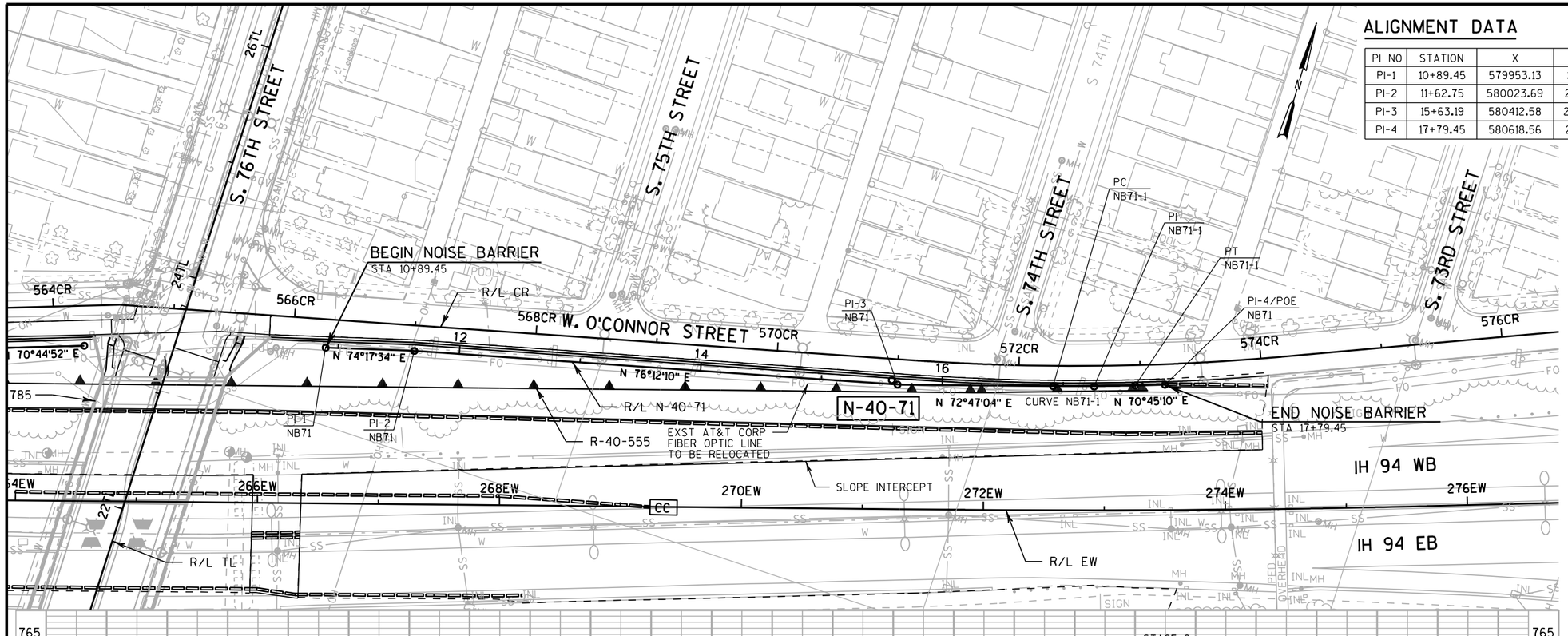
DRAWN BY GLM | PLANS CK'D. KES

SUBSURFACE EXPLORATION

SHEET 5 OF 5

8

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PLOT DATE : 01-MAY-2013 16:09
PLOT BY : MSCKES
PLOT NAME : N70_080205_se
PLOT SCALE : 80:1



ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	10+89.45	579953.13	296132.14
PI-2	11+62.75	580023.69	295968.71
PI-3	15+63.19	580412.58	296084.05
PI-4	17+79.45	580618.56	296149.87

STATE PROJECT NUMBER

1060-33-78

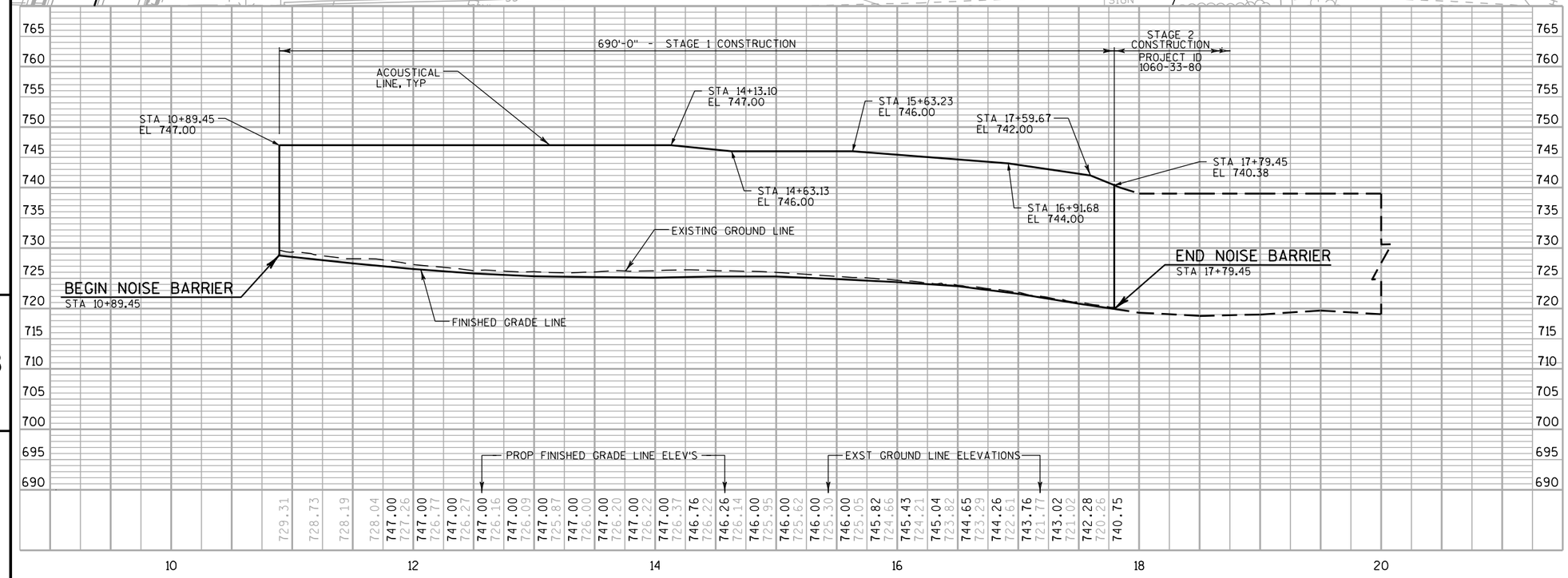
HORIZONTAL CURVE DATA

CURVE NB71-1

P.I. = 17+25.66
X = 580567.76
Y = 296132.14
Δ = 2°01'54.78"
D = 2°59'21.17"
T = 33.99'
L = 67.97'
R = 1916.75'
P.C. = 16+91.67
P.T. = 17+59.64

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES & CONSTRUCTION DETAILS
3. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
4. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE
5. SUBSURFACE EXPLORATION



PLAN & PROFILE: NOISE BARRIER N-40-71



5/1/2013

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 05/09/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-71

NOISE BARRIER E OF 76TH ST/S OF W O'CONNOR ST

COUNTY	~~TOWN~~/CITY/~~VILLAGE~~
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO 2002

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	GLM	KES

GENERAL PLAN & ELEVATION

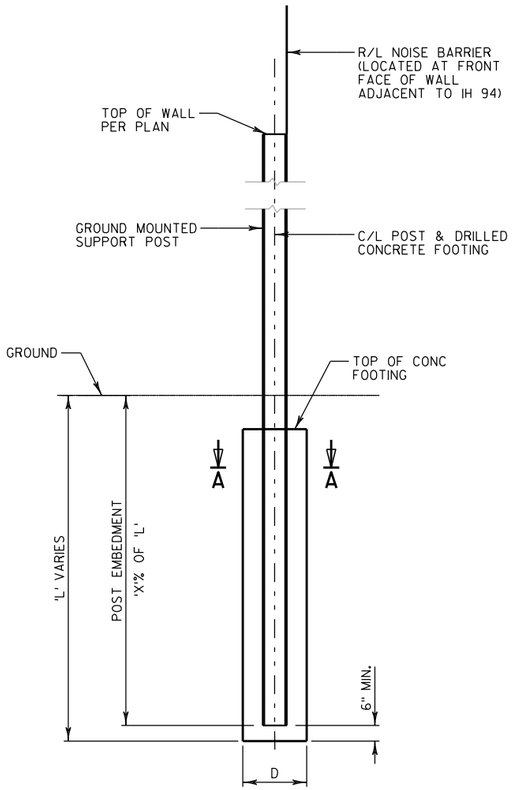
SHEET 1 OF 5

8

8

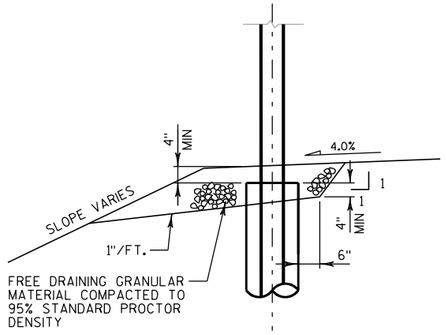
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STATE PROJECT NUMBER
1060-33-78



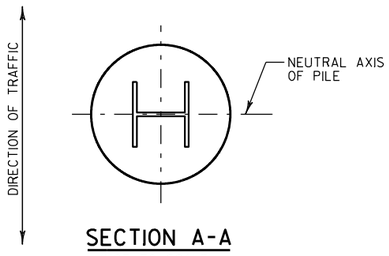
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

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)

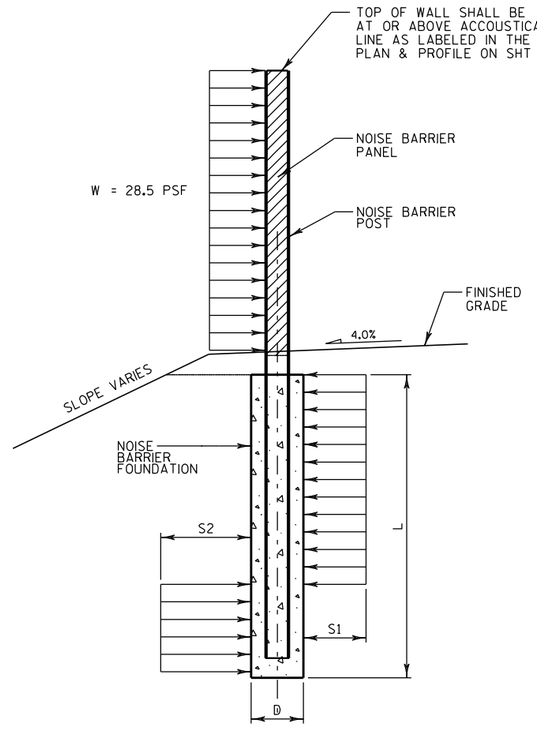


SECTION A-A

(NOT TO SCALE)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0002	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-71	SF	14,470



W = DESIGN WIND LOAD (SEE SHEET 1)
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

GROUND MOUNTED NOISE BARRIER LOADING

(NOT TO SCALE)

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 ABSORTIVE 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 "76TH STREET NOISE BARRIER GEOTECHNICAL DATA REPORT". CONTACT BILL MOHR - WISDOT, (262) 548-5666, 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

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEMS "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-71".

PLACE HYDRANT ACCESS HOLE SIGNS PER SIGNING PLAN SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-71

DRAWN BY	GLM	PLANS CK'D.	KES

QUANTITIES & CONSTRUCTION DETAILS

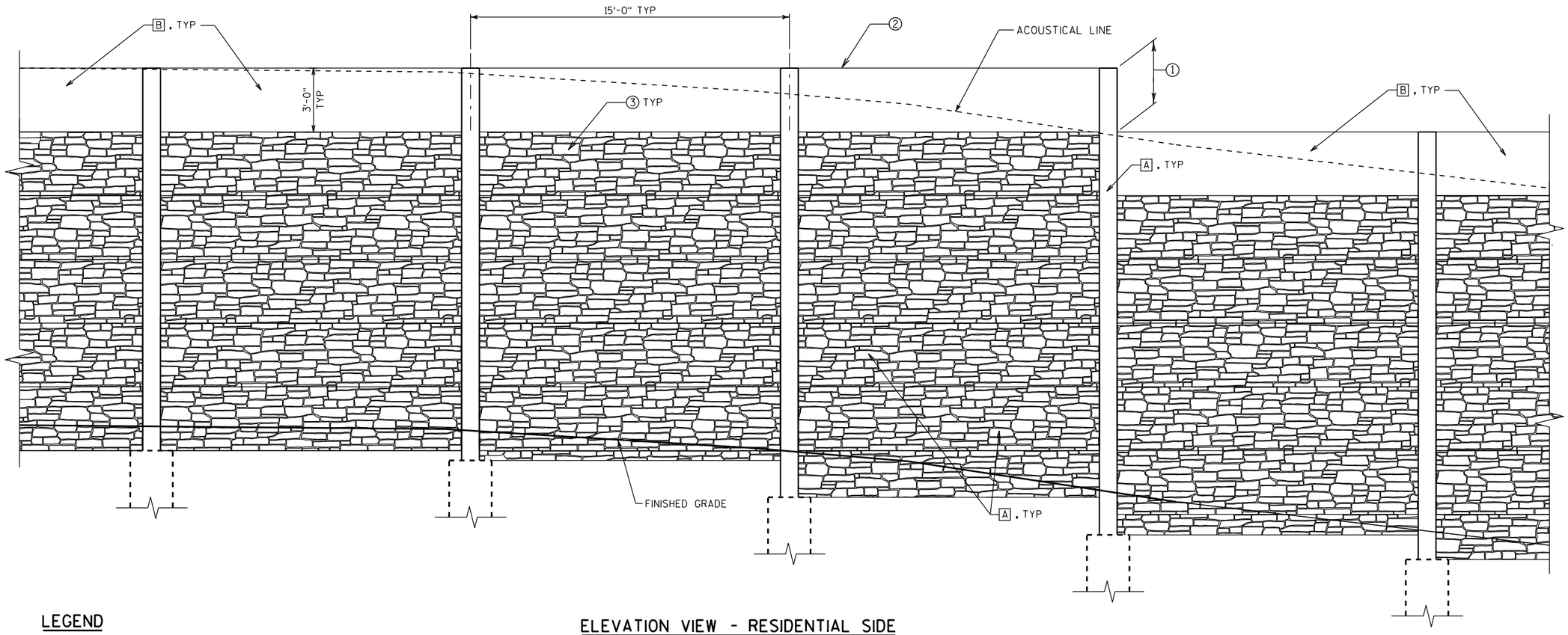
SHEET 2 OF 5

8

8

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PLOT DATE : 01-MAY-2013 17:21
PLOT BY : MSCKES
PLOT NAME : N71_080102_gn
PLOT SCALE : 1:1

STATE PROJECT NUMBER
1060-33-78



ELEVATION VIEW - RESIDENTIAL 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. THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "DRYSTACK CUT ROCK" PATTERN, SIMULATING A NATIVE WISCONSIN CUT LIMESTONE WALL. THE PATTERN SHALL CONSIST OF RANDON SIZED "CUT ROCK" PIECES RANGING FROM A MINIMUM OF 2" HIGH BY 7" LONG TO A MAXIMUM OF 12" HIGH BY 30" LONG WITH A MAXIMUM RELIEF 1".

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-40-71

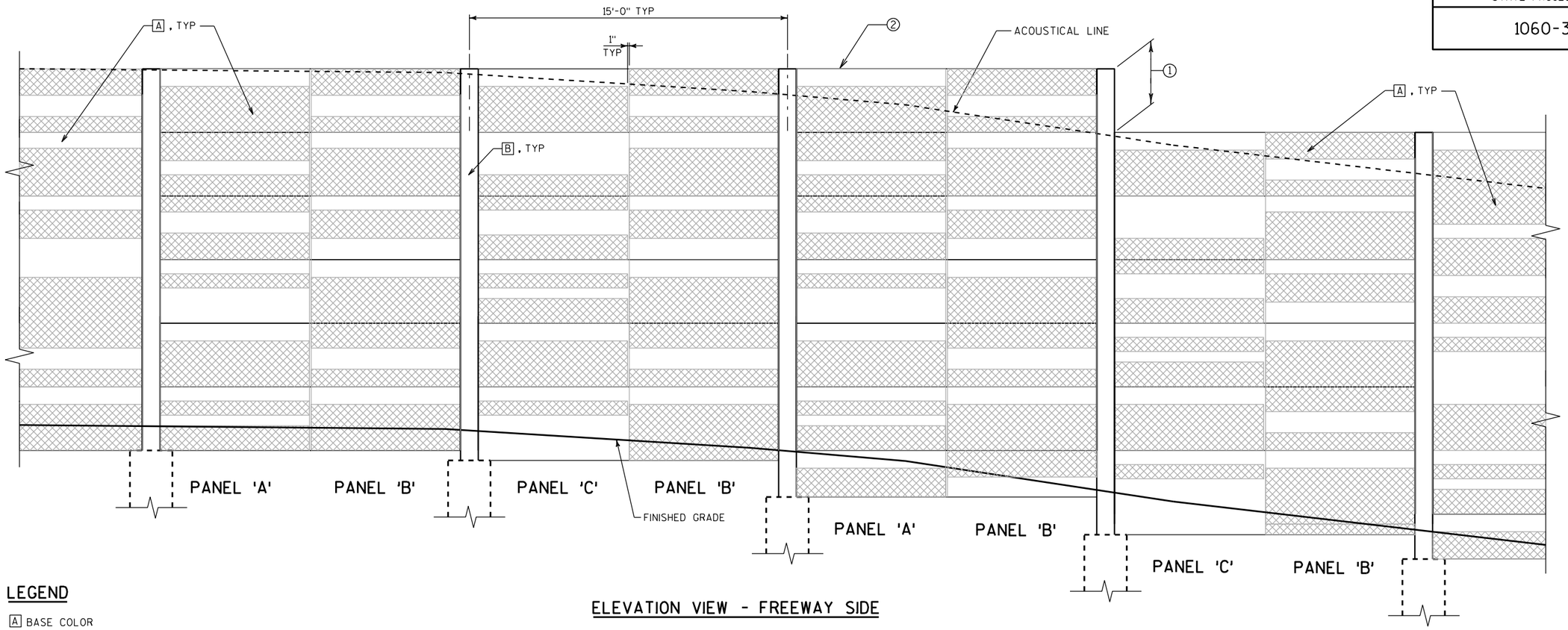
DRAWN BY KES | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 3 OF 5

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\N-40-71\cds\N71_080103_ae.dgn PLOT DATE : 01-MAY-2013 17:21 PLOT BY : MSCKES PLOT NAME : N71_080103_ae PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-78



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 - 1"

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

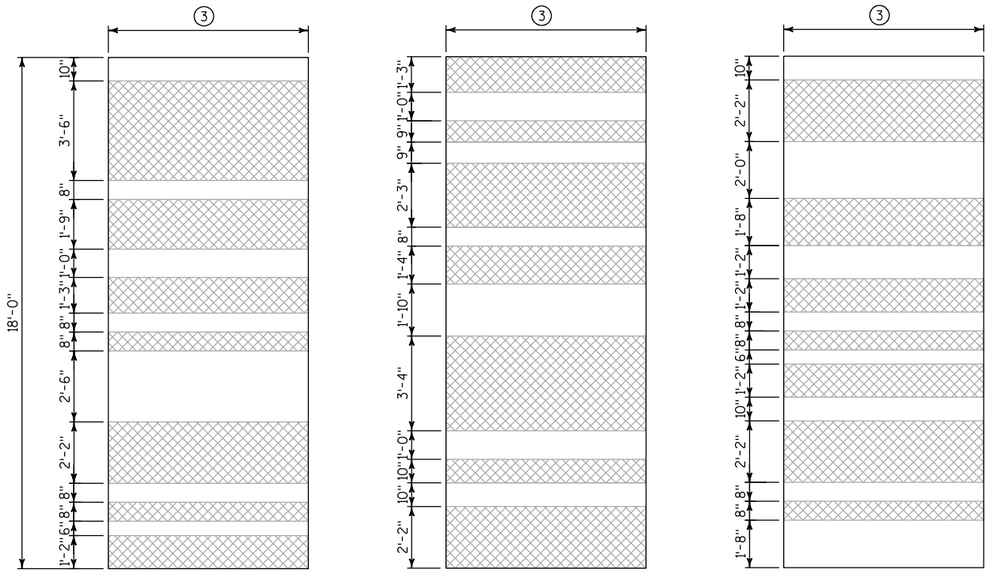
BASE COLOR - 33564

ACCENT COLOR NO. 1 - 33448

NOTES

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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 KES | PLANS CK'D. EKM

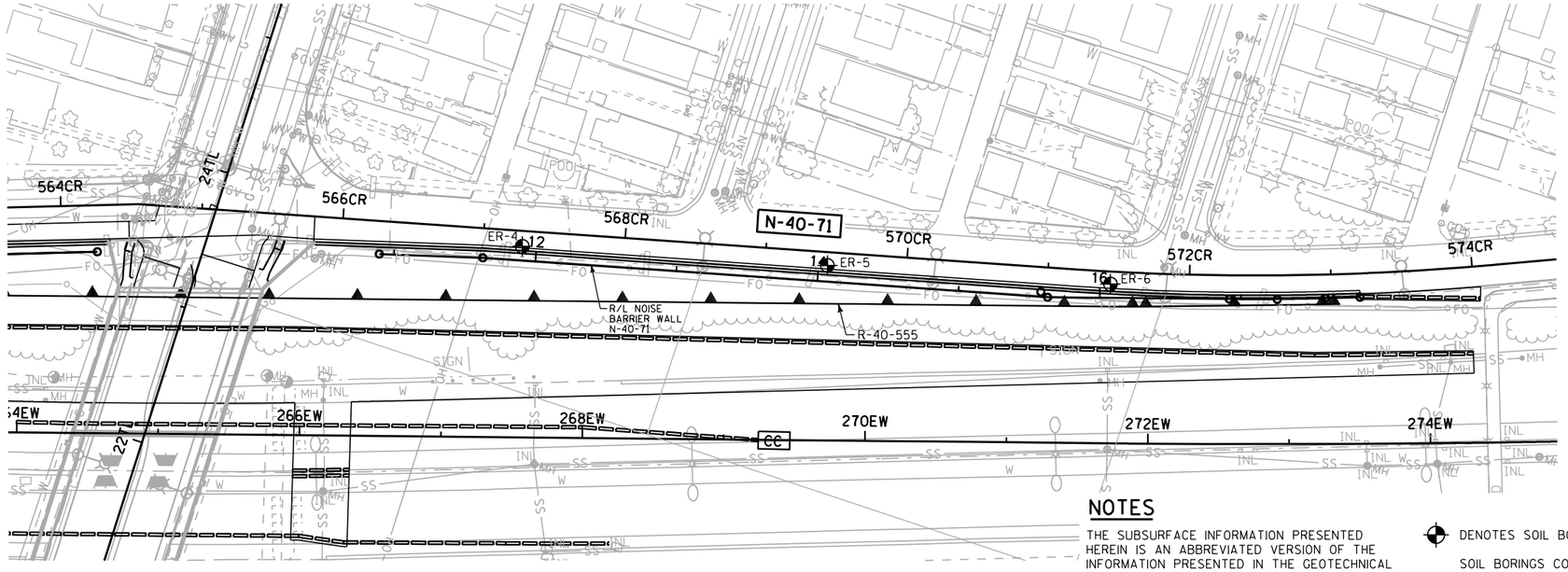
AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 4 OF 5

8

8

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\N-40-71\cds\N71_080104_ae.dgn PLOT DATE : 01-MAY-2013 17:21 PLOT BY : MSCKES PLOT NAME : N71_080104_ae PLOT SCALE : 5.333333:1



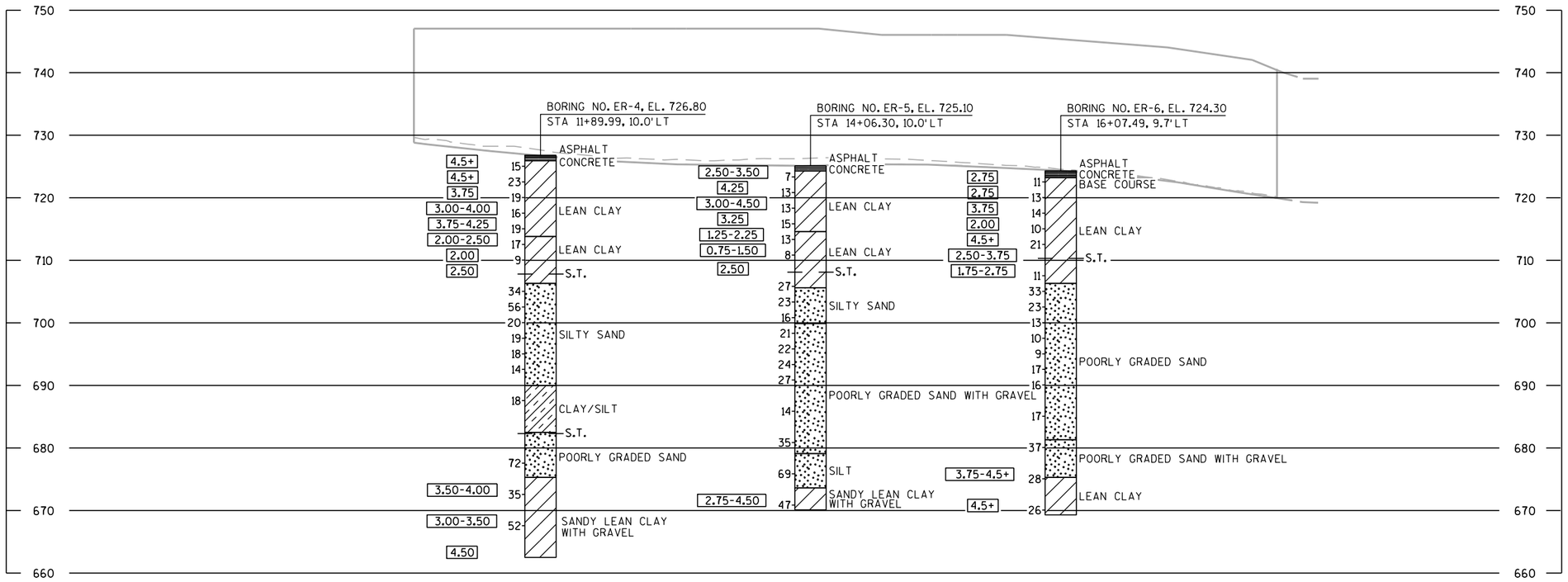
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⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
AUGUST 24, 2011 - BORING ER-4
AUGUST 23, 2011 - BORING ER-5
AUGUST 23, 2011 - BORING ER-6



STATE PROJECT NUMBER

1060-33-78

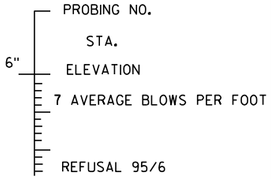
ABBREVIATIONS

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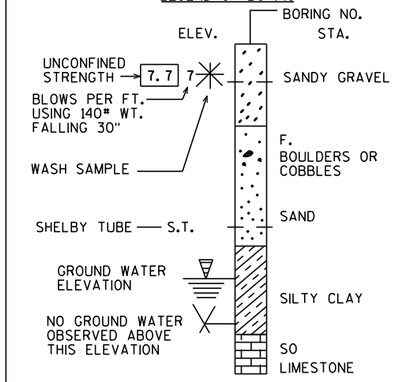
MATERIAL SYMBOLS

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-40-71

DRAWN BY GLM | PLANS CK'D. KES

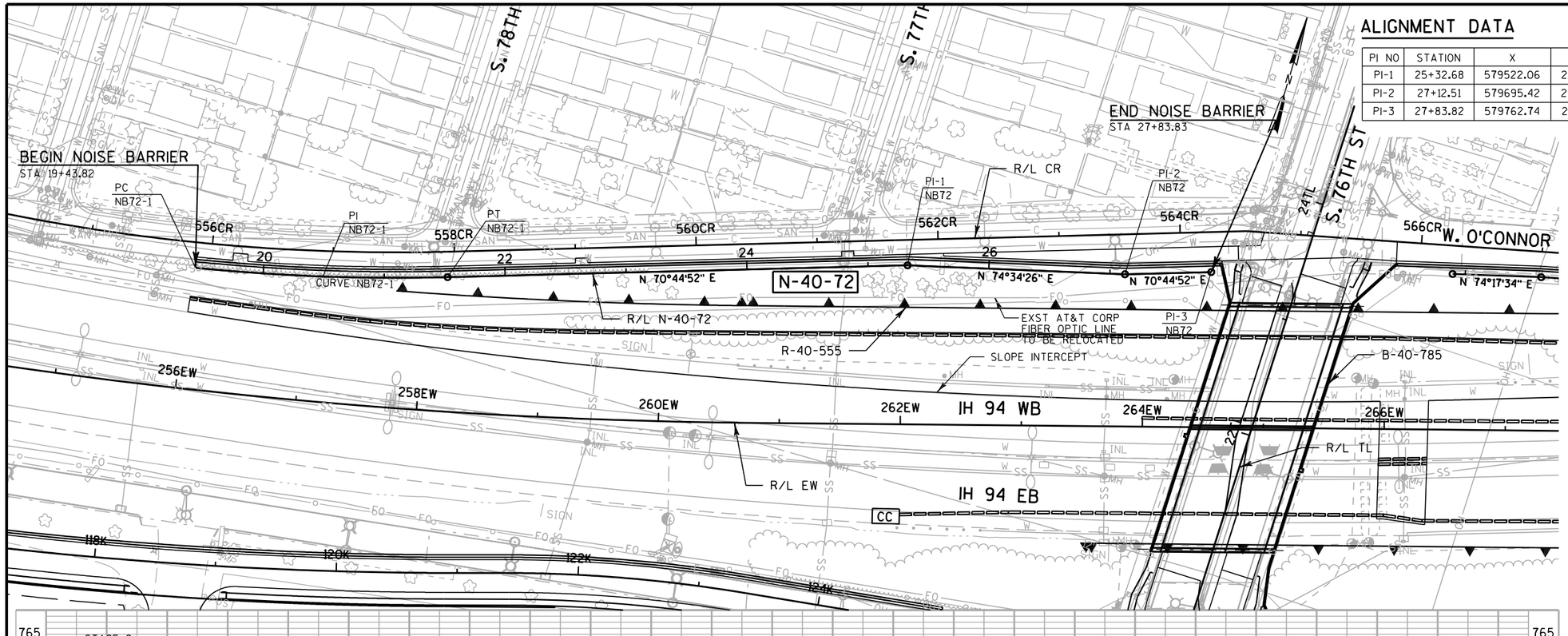
SUBSURFACE EXPLORATION

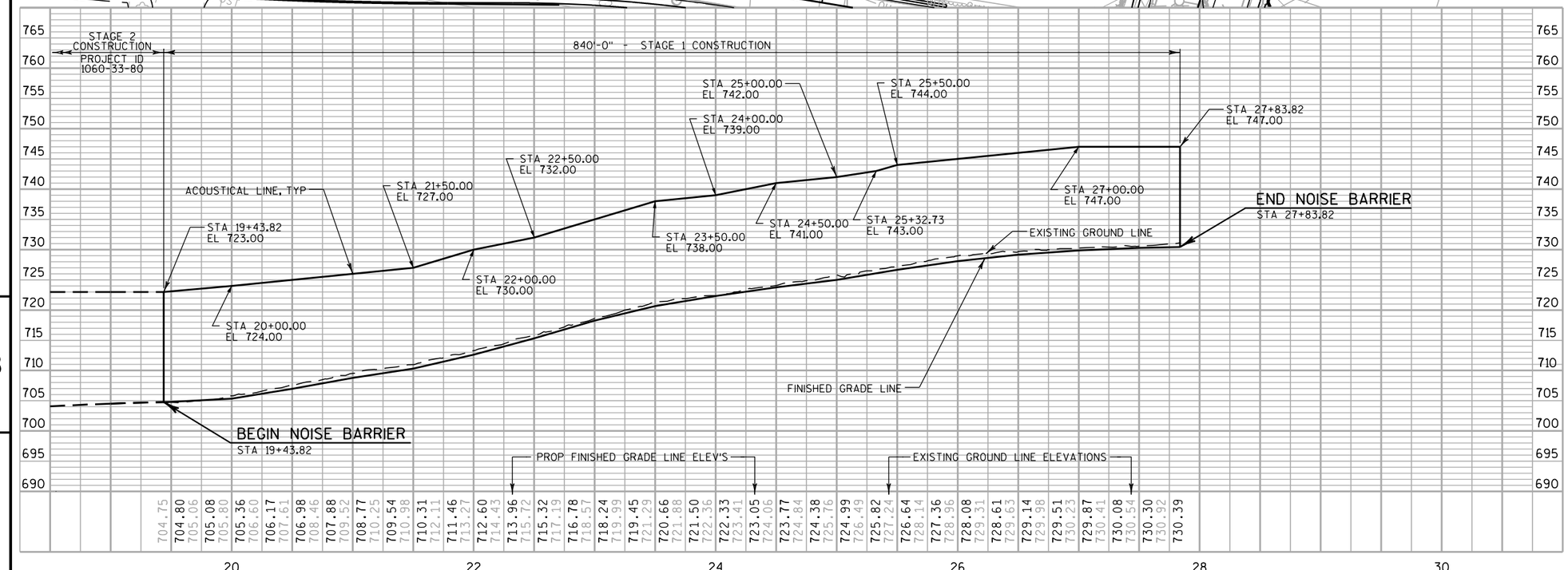
SHEET 5 OF 5

8

8

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PLAN & PROFILE: NOISE BARRIER N-40-72

ALIGNMENT DATA

PI NO	STATION	X	Y
PI-1	25+32.68	579522.06	295837.97
PI-2	27+12.51	579695.42	295885.80
PI-3	27+83.82	579762.74	295909.31

STATE PROJECT NUMBER

1060-33-78

HORIZONTAL CURVE DATA

CURVE NB72-1

P.I. = 20+48.29
X = 579064.50
Y = 295678.16
Δ = 7°11'51.17"
D = 3°26'58.11"
T = 104.47'
L = 208.66'
R = 1661.00'
P.C. = 19+43.82
P.T. = 21+52.48

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION
2. QUANTITIES & CONSTRUCTION DETAILS
3. AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE
4. AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE
5. SUBSURFACE EXPLORATION

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/1/2013

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 05/09/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE N-40-72

NOISE BARRIER NORTH OF IH 94/EAST OF 76TH ST

COUNTY MILWAUKEE
~~TOWN~~/CITY/~~VILLAGE~~ MILWAUKEE

DESIGN SPEC. AASHTO 2002

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
KES	EKM	GLM	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 5

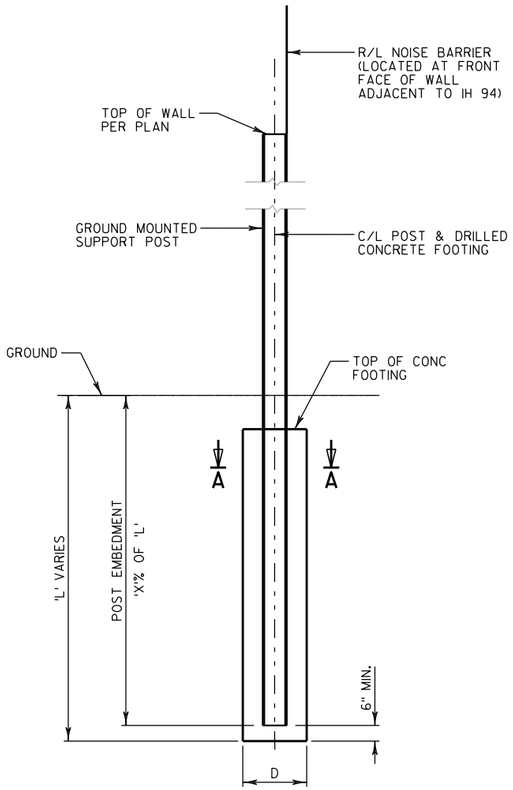
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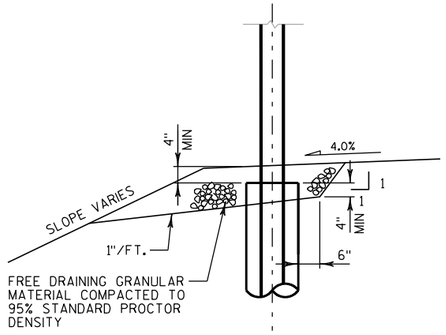
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STATE PROJECT NUMBER
1060-33-78



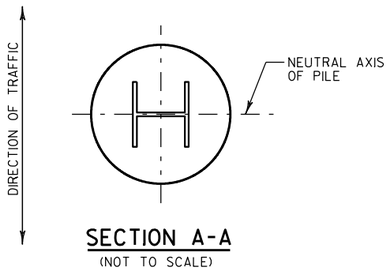
SECTION THRU GROUND MOUNTED POST & DRILLED CONC FOOTING

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)

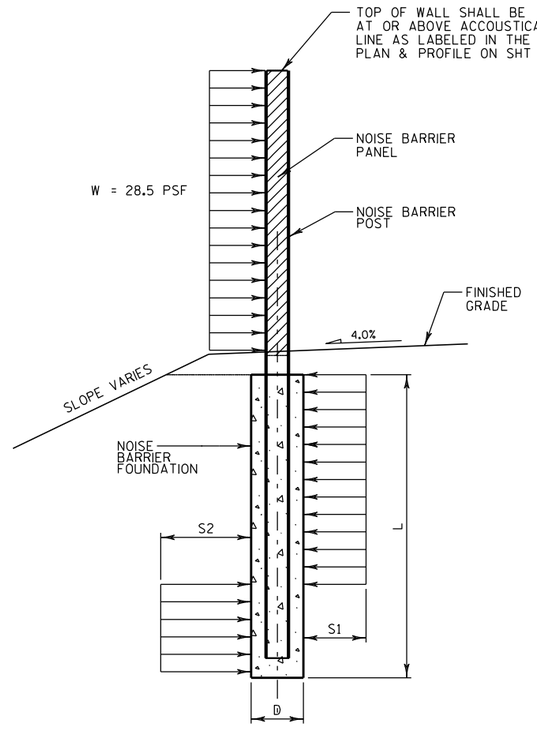


SECTION A-A

(NOT TO SCALE)

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	TOTAL
531.0300.S.0003	NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-72	SF	14,440



W = DESIGN WIND LOAD (SEE SHEET 1)
L = NOISE BARRIER FOUNDATION DEPTH BELOW EXISTING GROUND
D = NOISE BARRIER FOUNDATION DIAMETER
S = ALLOWABLE SOIL PRESSURE

GROUND MOUNTED NOISE BARRIER LOADING

(NOT TO SCALE)

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 ABSORTIVE 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 "76TH STREET NOISE BARRIER GEOTECHNICAL DATA REPORT". CONTACT BILL MOHR - WISDOT, (262) 548-5666, 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

INCLUDE THE COST OF THE STONE PATTERN SURFACE TREATMENT, REVEALS, COATING OF STEEL POSTS AND CONNECTIONS, AND COLORING/STAINING THE PANELS, UNDER THE BID ITEMS "NOISE BARRIER DOUBLE-SIDED SOUND ABSORPTIVE N-40-72".

PLACE HYDRANT ACCESS HOLE SIGNS PER SIGNING PLAN SHEETS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE N-40-72

DRAWN BY	GLM	PLANS CK'D.	KES

QUANTITIES & CONSTRUCTION DETAILS

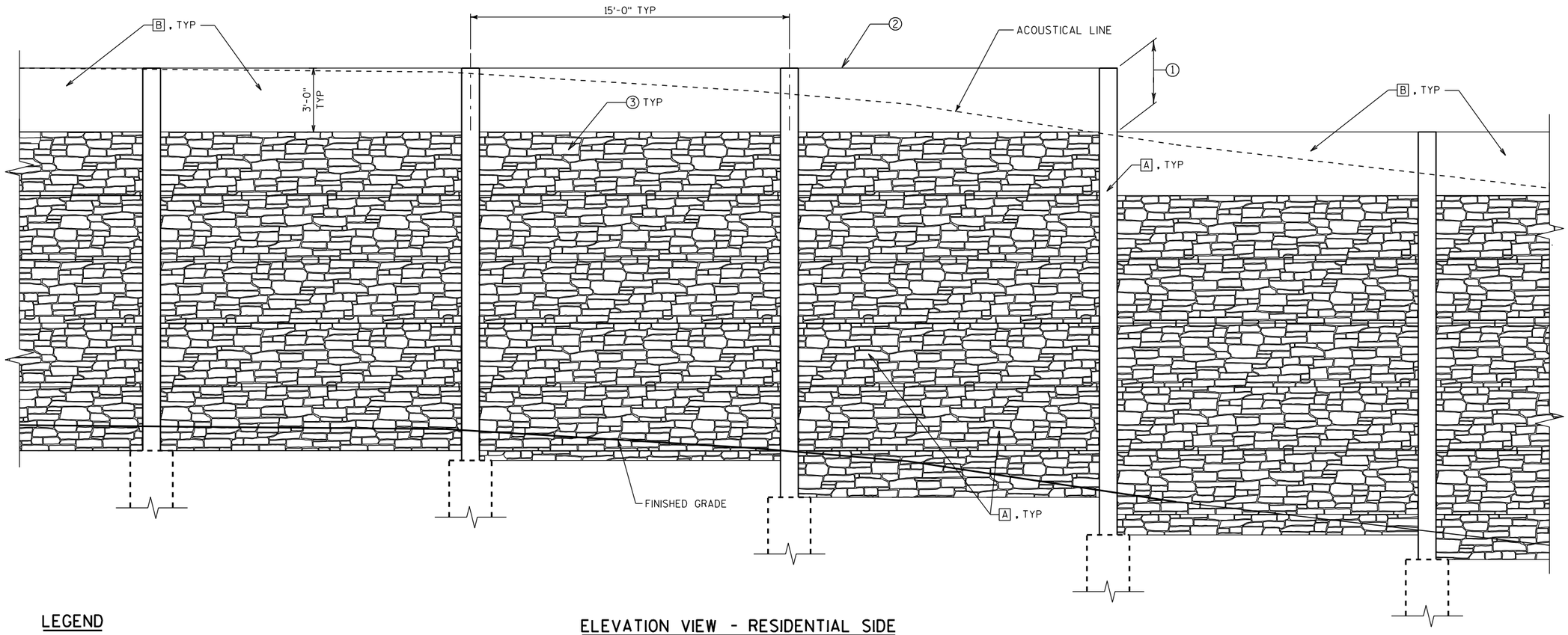
SHEET 2 OF 5

8

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PLOT DATE : 01-MAY-2013 16:55
PLOT BY : MSCKES
PLOT NAME : N72_080102_gn
PLOT SCALE : 1:1

STATE PROJECT NUMBER
1060-33-78



ELEVATION VIEW - RESIDENTIAL 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) THE RESIDENTIAL SIDE WALL PATTERN SHALL BE A "DRYSTACK CUT ROCK" PATTERN, SIMULATING A NATIVE WISCONSIN CUT LIMESTONE WALL. THE PATTERN SHALL CONSIST OF RANDON SIZED "CUT ROCK" PIECES RANGING FROM A MINIMUM OF 2" HIGH BY 7" LONG TO A MAXIMUM OF 12" HIGH BY 30" LONG WITH A MAXIMUM RELIEF 1".

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

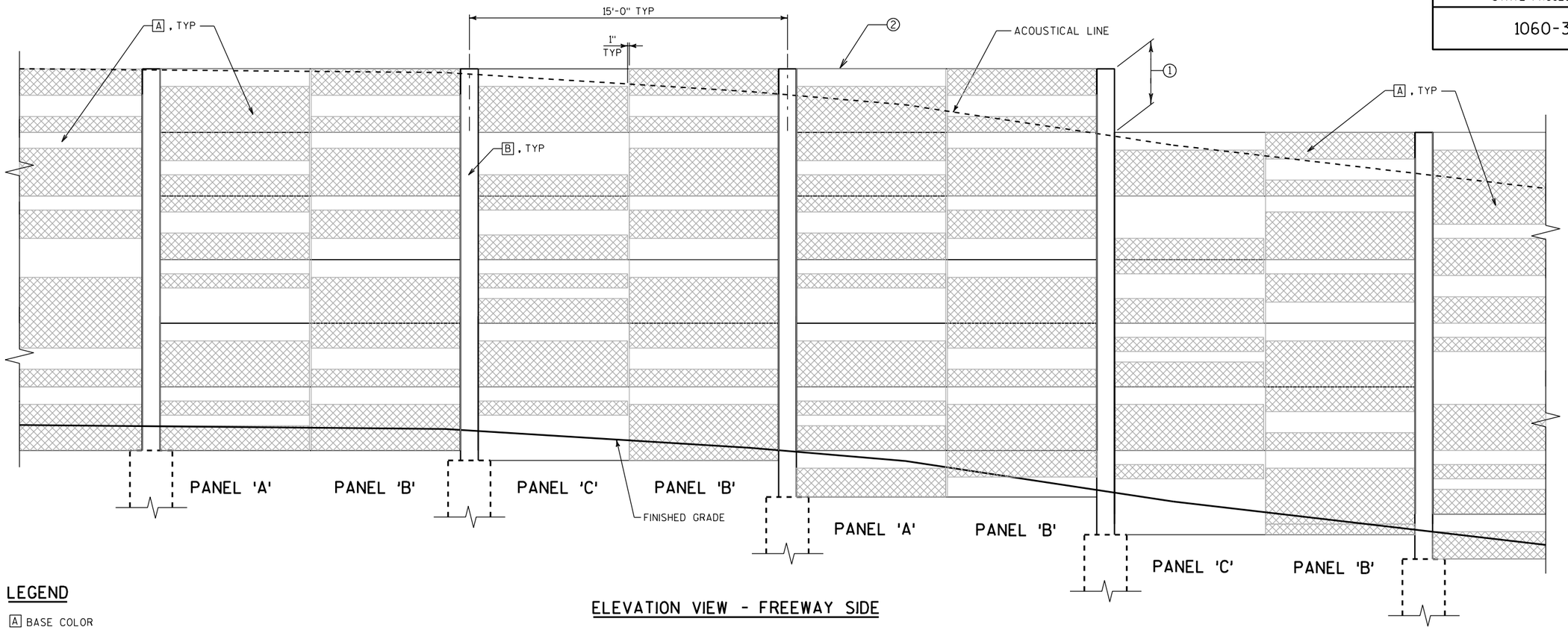
DRAWN BY KES | PLANS CK'D. EKM

AESTHETIC WALL TREATMENT DETAILS RESIDENTIAL SIDE

SHEET 3 OF 5

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\N-40-72\cds\N72_080103_ae.dgn PLOT DATE : 01-MAY-2013 16:55 PLOT BY : MSCKES PLOT NAME : N72_080103_ae PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-78



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 - 1"

STAIN COLORS

THE FINAL COLORING OF THE NOISE BARRIER FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

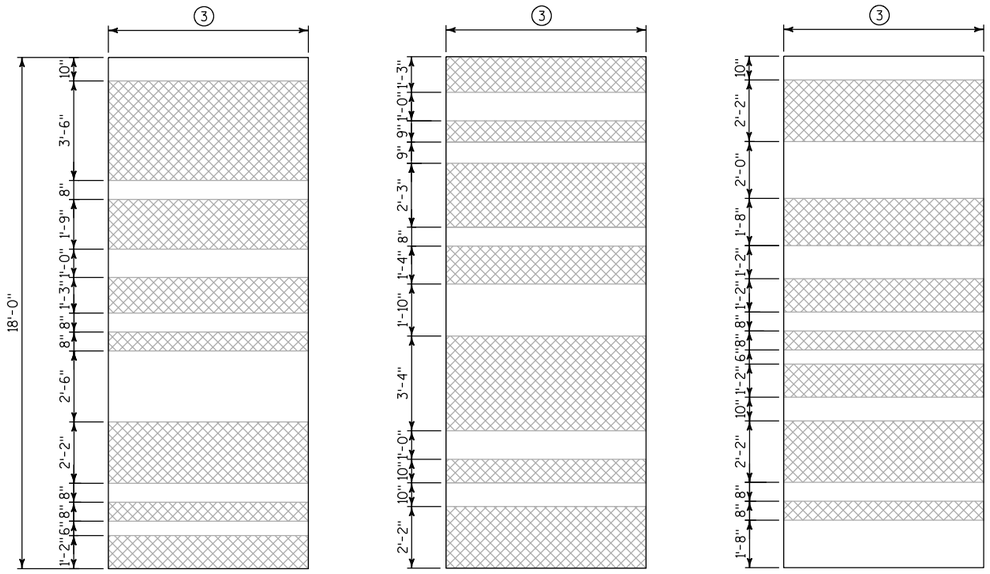
BASE COLOR - 33564

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 KES | PLANS CK'D. EKM

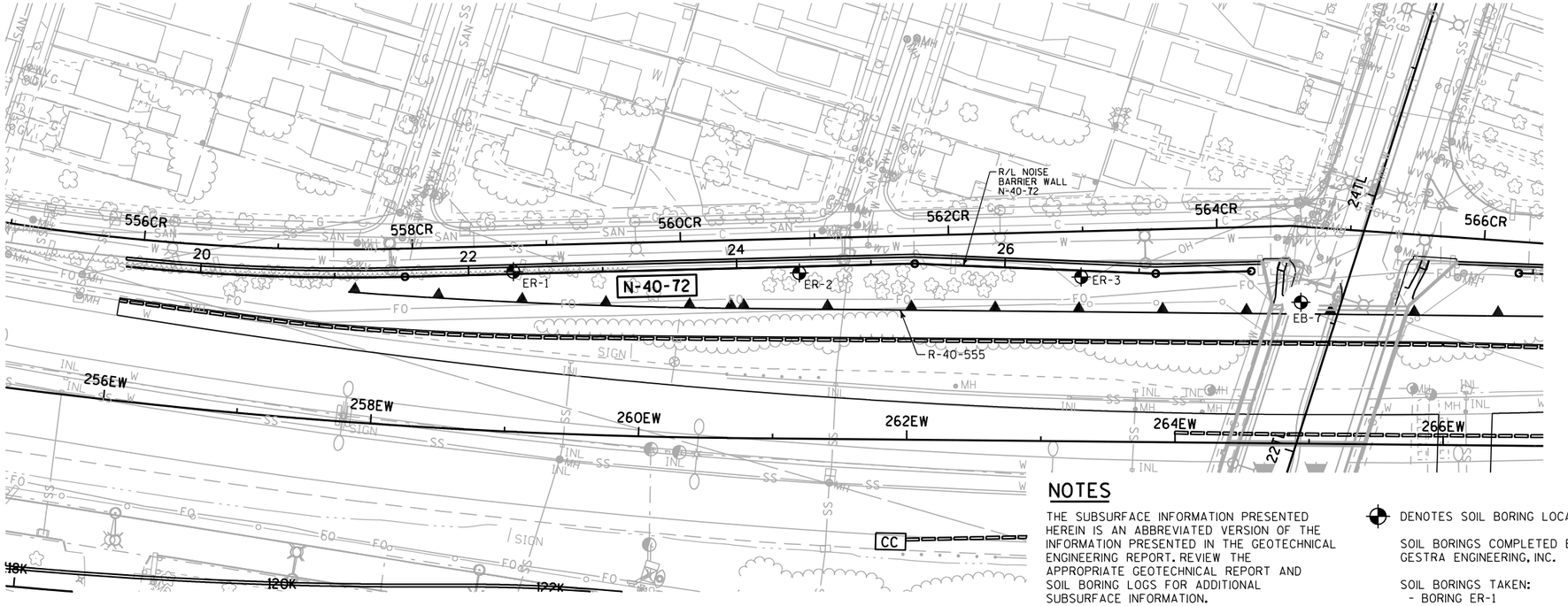
AESTHETIC WALL TREATMENT DETAILS FREEWAY SIDE

SHEET 4 OF 5

8

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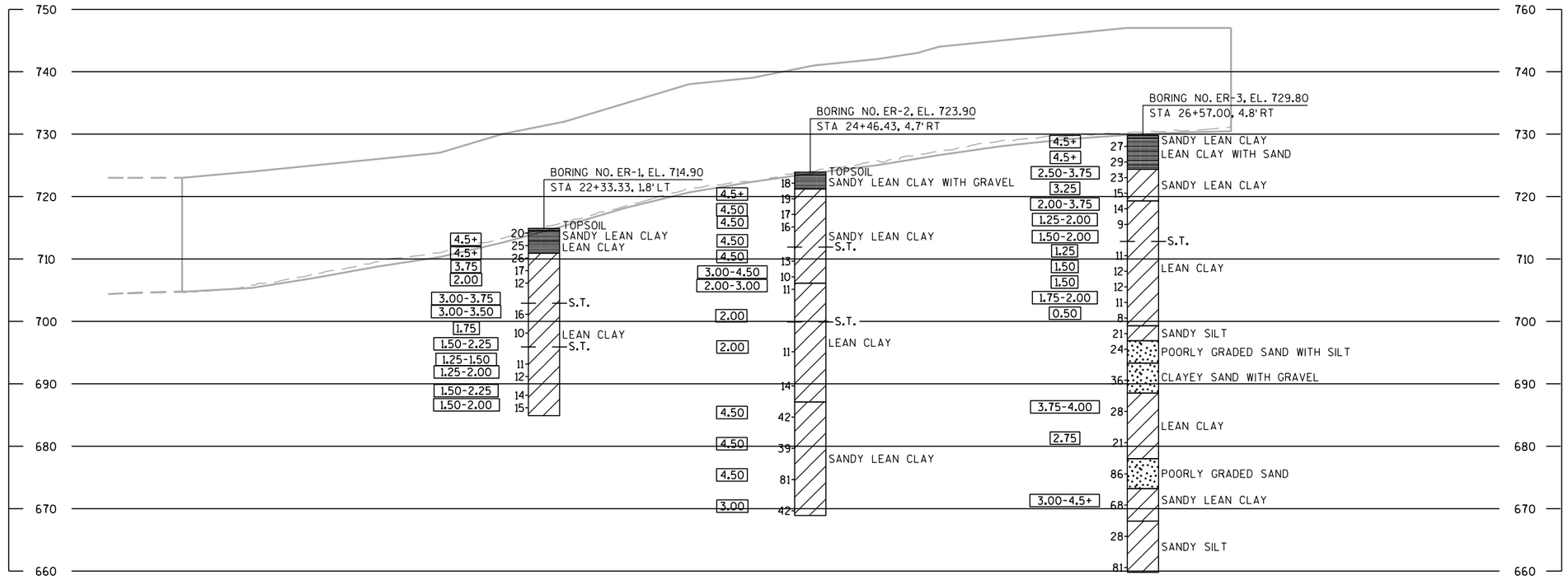
NOTES

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:
- BORING ER-1
- BORING ER-2
- BORING ER-3



STATE PROJECT NUMBER

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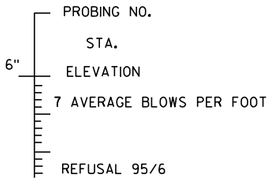
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

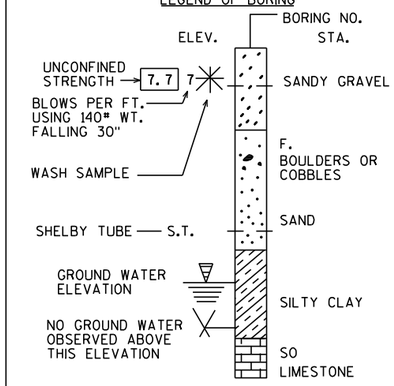
MATERIAL SYMBOLS

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 B-40-72

DRAWN BY GLM | PLANS CK'D. KES

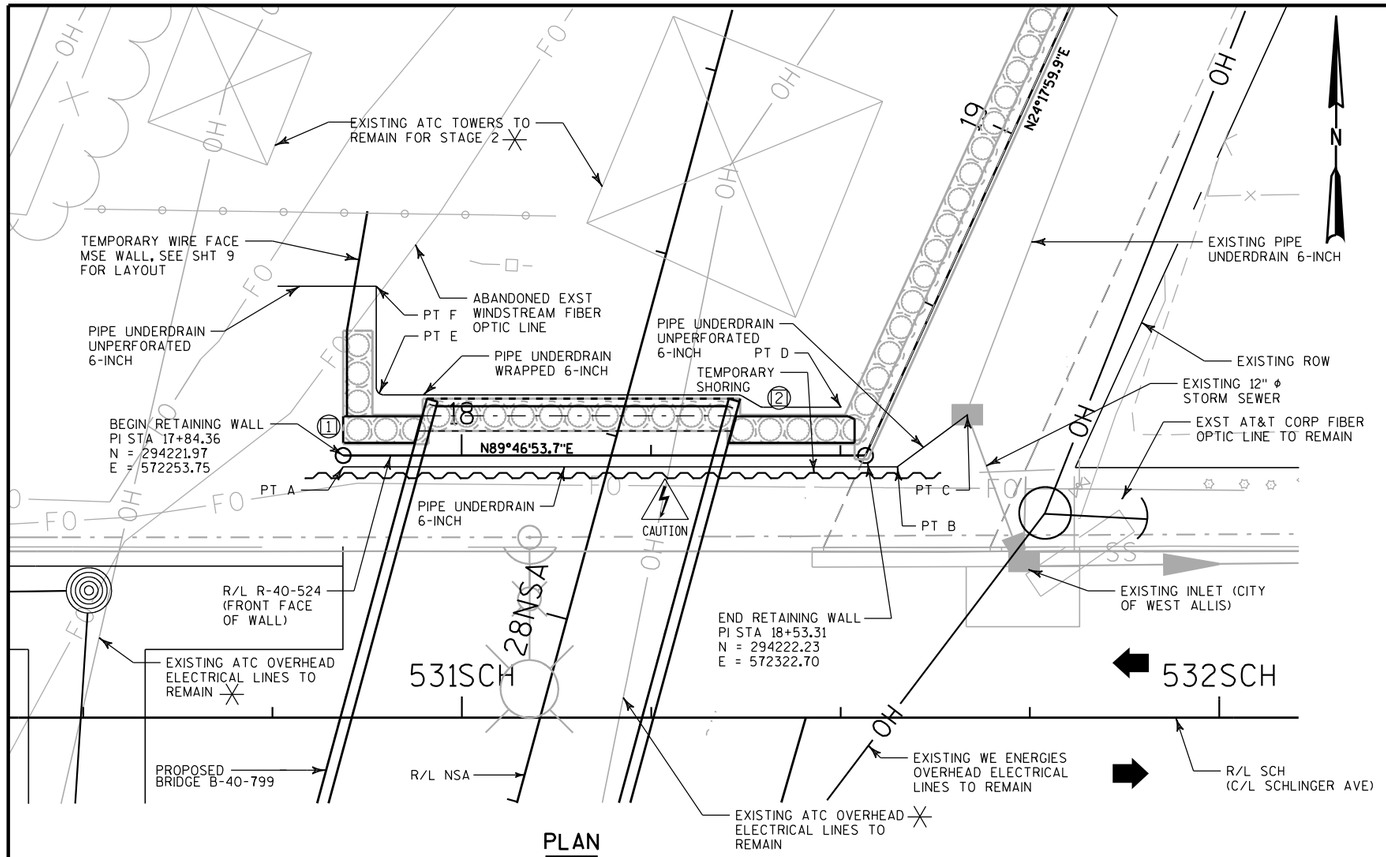
SUBSURFACE EXPLORATION

SHEET 5 OF 5

8

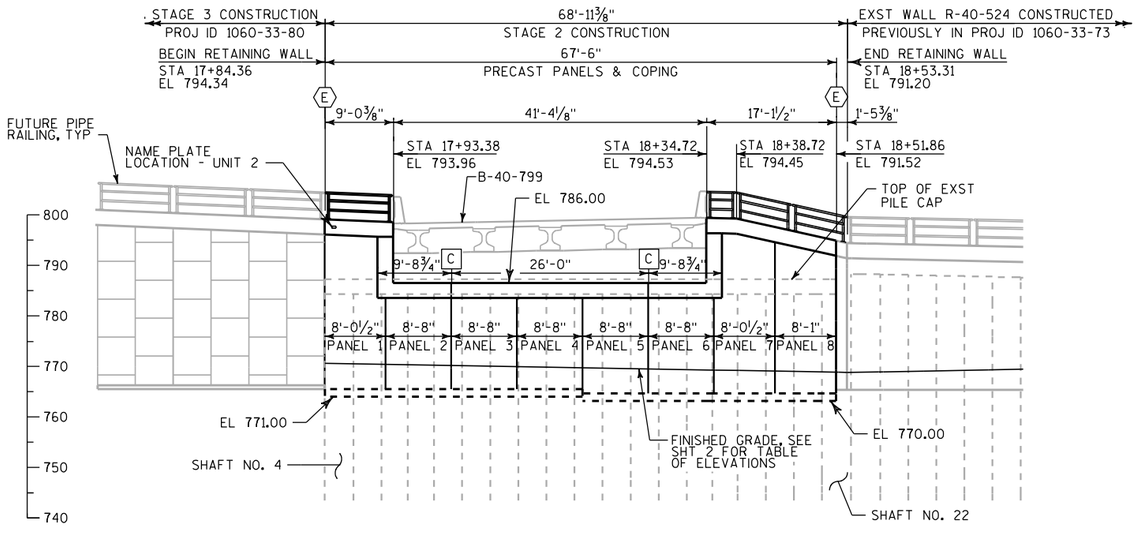
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PLAN

(UNIT 2 - SECANT PILE RETAINING WALL)



ELEVATION

(LOOKING AT FRONT FACE OF WALL)

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION
2. GENERAL NOTES, QUANTITIES & DESIGN DATA
3. CONSTRUCTION STAGING
4. WALL TYPICAL SECTIONS
5. SECANT PILE WALL EXTENSION WEST C-I-P CONC DETAILS
6. SECANT PILE WALL EXTENSION WEST COPING DETAILS
7. SECANT PILE WALL EXTENSION EAST C-I-P CONC DETAILS
8. SECANT PILE WALL EXTENSION EAST COPING DETAILS
9. TEMPORARY WALL & REINFORCEMENT DETAILS
10. TOP OF WALL PANEL CONNECTION DETAILS
11. WALL PANEL FOOTING DETAILS
12. PIPE RAILING ELEVATIONS
13. PIPE RAILING DETAILS
14. AESTHETIC WALL TREATMENT DETAILS

PIPE UNDERDRAIN INFORMATION

POINT	STATION	OFFSET	INVERT ELEV	COMMENTS
A	17+84.36	1.25' RT	770.34	START PIPE UNDERDRAIN 6-INCH
B	18+63.69	4.45' RT	768.80	END PIPE UNDERDRAIN 6-INCH, START PIPE UNDERDRAIN UNPERFORATED 6-INCH
C	18+63.79	10.03' RT	768.40	☆ CONNECT UNPERFORATED 6-INCH PIPE TO EXISTING INLET G300
D	18+50.00	5.60' LT	785.80	START PIPE UNDERDRAIN WRAPPED 6-INCH
E	17+88.73	7.80' LT	785.20	TURNING POINT
F	17+88.73	24.0' LT	785.00	END PIPE UNDERDRAIN WRAPPED 6-INCH, START PIPE UNDERDRAIN UNPERFORATED 6-INCH. DROP PIPE VERTICALLY 3' TO OUTLET UNDER TEMPORARY MSE WALL

LEGEND

- [C] CONTRACTION JOINT
- (E) EXPANSION JOINT
- ⬅ TRAFFIC DIRECTION
- (1) SECANT PILE WALL EXTENSION WEST
- (2) SECANT PILE WALL EXTENSION EAST
- ✳ CONSTRUCTION OF RETAINING WALL R-40-524 UNIT 2 WILL BE ACCOMPLISHED BENEATH ENERGIZED OVERHEAD TRANSMISSION LINES OWNED AND OPERATED BY THE AMERICAN TRANSMISSION COMPANY (ATC). OSHA REGULATIONS REGARDING PROXIMITY OF CONSTRUCTION EQUIPMENT TO ENERGIZED POWER TRANSMISSION LINES MUST BE MET. THE CONTRACTOR IS ADVISED THAT LOW OVERHEAD EQUIPMENT AND INSTALLATION TECHNIQUES MAY BE REQUIRED TO MAINTAIN SAFE CLEARANCES FROM THESE LINES. EXISTING ATC TOWER WILL REMAIN IN SERVICE DURING STAGE 2 CONSTRUCTION.
- ☆ CONNECTION OF PIPE UNDERDRAIN UNPERFORATED 6-INCH TO EXISTING INLET G300 IS INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN UNPERFORATED 6-INCH"

WISCONSIN
KARL E. SCHMID
E-30812
MILWAUKEE, WI
PROFESSIONAL ENGINEER

5/30/2013

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
KARL SCHMID (414) 272-2426

NO.	DATE	REVISION	BY

STATE PROJECT NUMBER

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FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 06/03/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE R-40-524-002

RETAINING WALL NORTH 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.
ASW	KES	TEK	KES

GENERAL PLAN & ELEVATION

SHEET 1 OF 14

STATE PROJECT NUMBER
1060-33-78

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	UNIT 2	TOTAL
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-524	LS	--------	1
206.6000.S	TEMPORARY SHORING	SF	510	510
210.0100	BACKFILL STRUCTURE	CY	10	10
502.5010	MASONRY ANCHORS TYPE L NO. 6 BARS	EACH	16	16
502.6102	MASONRY ANCHORS TYPE S 1/2-INCH	EACH	75	75
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	43	43
505.0415	BAR STEEL REINFORCEMENT HS RETAINING WALLS	LB	700	700
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	2,260	2,260
513.2000	RAILING PIPE R-40-524	LS	--------	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12	12
612.0106	PIPE UNDERDRAIN 6-INCH	LF	75	75
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	20	20
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80	80
645.0111	GEOTEXTILE FABRIC TYPE DF SCHEDULE A	SY	55	55
SPV.0105.4510	GALVANIZED STEEL GRATING	LS	--------	1
SPV.0165.4730	TEMPORARY WALL WIRE FACE MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	220	220
SPV.0165.4750	PRESTRESSED PRECAST CONCRETE WALL PANEL	SF	1,280	1,280
	NON-BID ITEMS			
	PREFORMED JOINT FILLER	SIZE		1"
	NON-BITUMINOUS JOINT FILLER	SIZE		1"
	NAME PLATE	EACH		1

ALL ITEMS ARE CATEGORY 3000

DESIGN DATA

DESIGN SPECIFICATION: AASHTO LRFD BRIDGE
DESIGN SPECIFICATIONS, 6TH EDITION, 2012

LIVE LOAD:
CANTILEVER LIVE LOAD SURCHARGE: 100 PSF
LIVE LOAD SURCHARGE (CONSTRUCTION/MAINTENANCE): 100 PSF
LIVE LOAD SURCHARGE (ROADWAY): 240 PSF

MATERIAL PROPERTIES

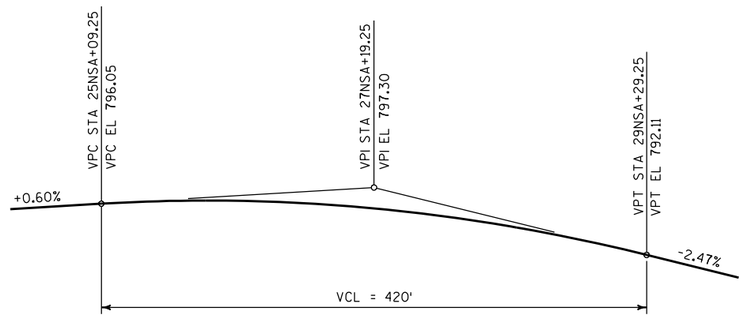
CONCRETE MASONRY RETAINING WALL f'c = 4,000 PSI
PRECAST CONCRETE WALL PANELS f'c = 4,000 PSI
BAR STEEL REINFORCEMENT fy = 60,000 PSI
WALL SECANT PILE CONCRETE f'c = 4,000 PSI

SECANT PILE WALL SOIL PARAMETERS

SOIL DESCRIPTION	UNIT WEIGHT (PCF)	UNDRAINED		DRAINED	
		FRICTION ANGLE (DEGREES)	COHESION (PSF)	FRICTION ANGLE (DEGREES)	COHESION (PSF)
CLAY FILL	130	0	1000	30	50
MEDIUM STIFF CLAY	130	0	1000	30	50
STIFF CLAY	135	0	1500	32	100
VERY STIFF CLAY	140	0	3250	33	150
SAND AND GRAVEL	135	36	0	36	0

FINISHED GRADE ELEVATION TABLE

SECANT PILE NO.	R/L RETAINING WALL STATION	FINISHED GRADE
4	17+86.29	775.34
5	17+90.00	775.28
6	17+93.71	775.21
7	17+96.93	775.16
8	18+00.64	775.10
9	18+04.35	775.03
10	18+08.06	774.97
11	18+11.76	774.90
12	18+15.47	774.84
13	18+19.18	774.77
14	18+22.89	774.71
15	18+26.60	774.65
16	18+30.31	774.60
17	18+34.01	774.54
18	18+37.02	774.50
19	18+40.72	774.44
20	18+44.43	774.39
21	18+48.14	774.34
22	18+51.85	774.02



PROFILE GRADE LINE R/L NSA - ULTIMATE

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 DIMENSIONS ARE ALONG THE FRONT FACE OF WALL, UNLESS SHOWN OTHERWISE.

BAR STEEL REINFORCEMENT SHALL HAVE 2" CLEAR COVER, UNLESS SHOWN OTHERWISE.

THE EXISTING GROUND LINE IS 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 THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

RETAINING WALL R-40-524 CONSISTS OF 3 UNITS CONSTRUCTED IN 4 STAGES. STAGE 1 CONSTRUCTION INCLUDES THE INSTALLATION OF OVERLAPPING, REINFORCED CONCRETE DRILLED SECANT PILE SHAFTS WITH A CAST-IN-PLACE CONCRETE PILE CAP (UNIT 2) AND A CONCRETE PANEL MSE WALL (UNIT 3). STAGE 2 CONSTRUCTION WILL BE TO PLACE A CAST-IN-PLACE CONCRETE COPING AND FULL HEIGHT PRECAST PANELS FOR UNIT 2 OF THE WALL. STAGE 3 AND STAGE 4 CONSTRUCTION WILL BE CONCRETE PANEL MSE WALLS (UNIT 1). SEE SHEET 3 FOR CONSTRUCTION STAGING OF WALL AND RELATED PROJECT ID'S.

UNIT 2

THE QUANTITY OF CAST-IN-PLACE CONCRETE MASONRY FOR SECANT PILE EXTENSIONS, CONCRETE COPING & CONCRETE FOOTING IS PAID FOR UNDER THE BID ITEM "CONCRETE MASONRY RETAINING WALLS".

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

DRAWN BY TEK | PLANS CK'D. KES

GENERAL NOTES, QUANTITIES & DESIGN DATA

SHEET 2 OF 14

STATE PROJECT NUMBER
1060-33-78

BEGIN RETAINING WALL R-40-524 STA 9+98.05

B-40-786

R/L GD

R/L R-40-524

R/L ES

R/L R-40-495

R/L WS

B-40-854

STAGE 4 CONSTRUCTION - PROJECT ID 1060-33-81

B-40-855

R/L NS

R/L R-40-522

R/L SW

B-40-861

R/L GE

R/L XN

END RETAINING WALL R-40-524 STA 20+65.81

R/L R-40-524

STA 15+87.41

B-40-849

BEGIN RETAINING WALL R-40-524 THIS PROJECT STA 17+84.36

END RETAINING WALL R-40-524 THIS PROJECT STA 18+53.31

STAGE 1 CONSTRUCTION PROJECT ID 1060-33-77

STA 13+64.47

526SCH 527SCH 528SCH 529SCH 530SCH 531SCH 532SCH 533SCH

R/L R-40-524

R/L SCH

B-40-796

B-40-798

B-40-799

B-40-795

B-40-797

STAGE 4 CONSTRUCTION PROJECT ID 1060-30-81

STAGE 3 CONSTRUCTION PROJECT ID 1060-30-80

STAGE 1 CONSTRUCTION
PROJECT ID 1060-33-77
SECANT PILE WALL ONLY

STAGE 2 CONSTRUCTION
PROJECT ID 1060-33-78
PRECAST PANELS & SECANT PILE WALL EXTENSIONS

WALL STAGING LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

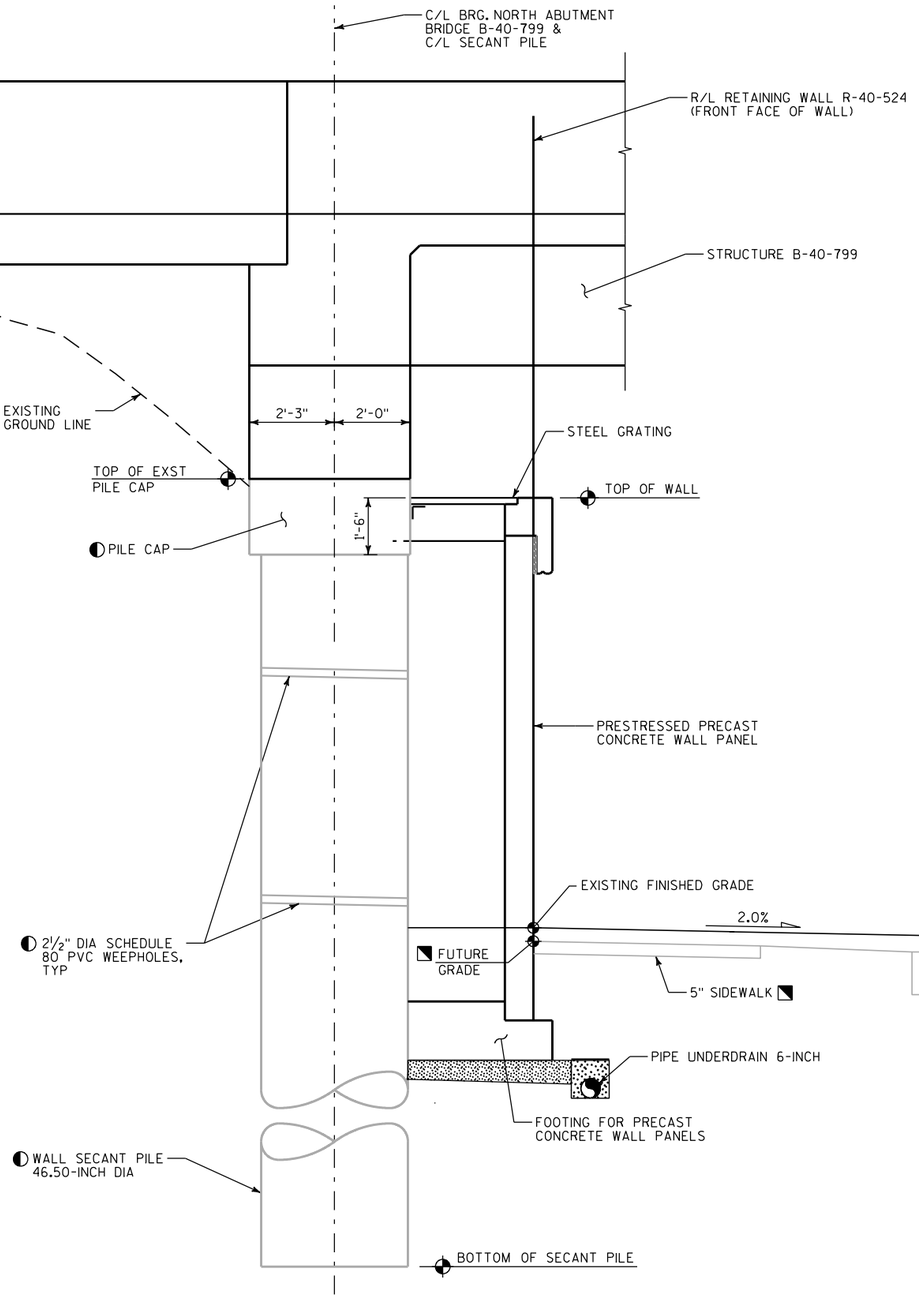
STRUCTURE R-40-524-002

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CONSTRUCTION STAGING

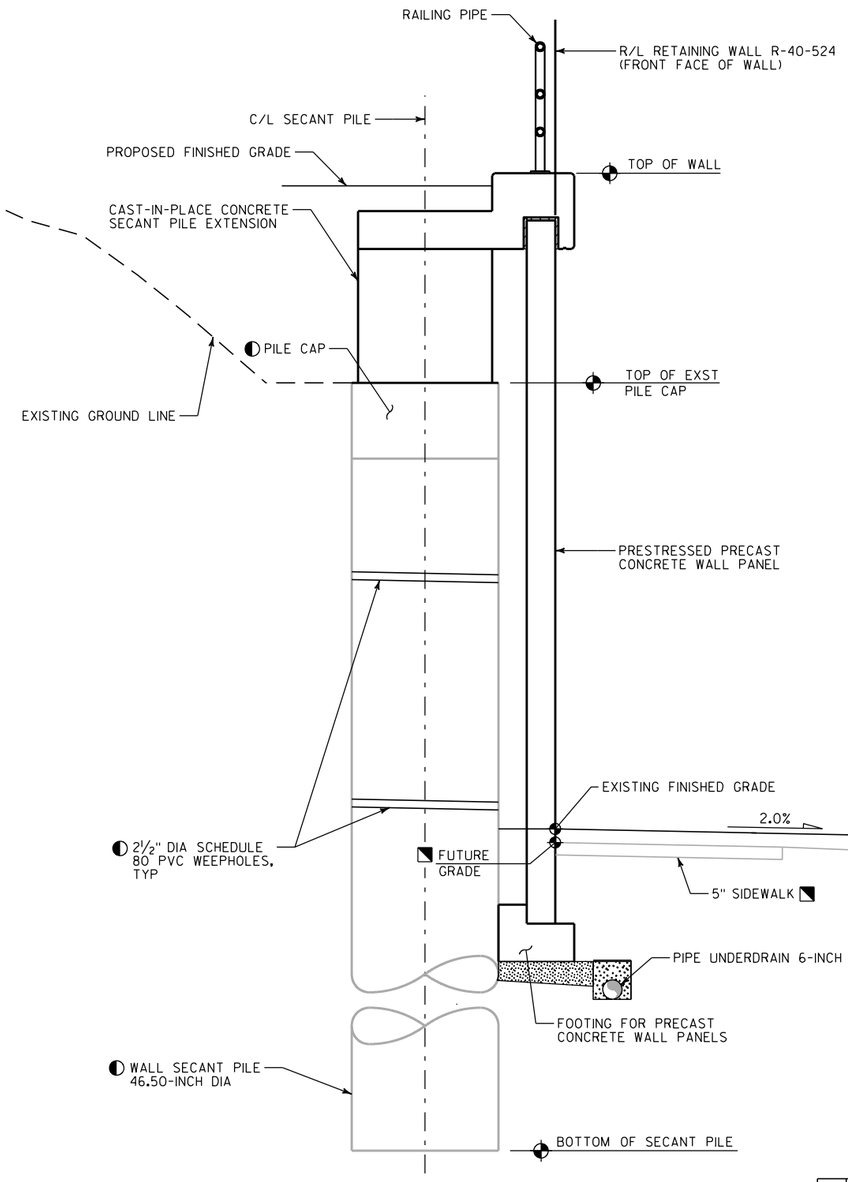
SHEET 3 OF 14

STATE PROJECT NUMBER
1060-33-78



UNIT 2 - TYPICAL SECTION

LOOKING EAST - STA. 17+93.39 TO STA. 18+34.73



UNIT 2 - TYPICAL SECTION

LOOKING EAST - STA. 17+84.35 TO STA. 17+93.29
LOOKING EAST - STA. 18+34.80 TO STA. 18+51.86

LEGEND

◐ CONSTRUCTED IN PREVIOUS CONTRACT 1060-33-77

◥ SCHLINGER AVENUE RECONSTRUCTION WITH NEW SIDEWALKS WILL BE CONSTRUCTED IN FUTURE CONTRACT ID 1060-33-88

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

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WALL TYPICAL SECTIONS

SHEET 4 OF 14

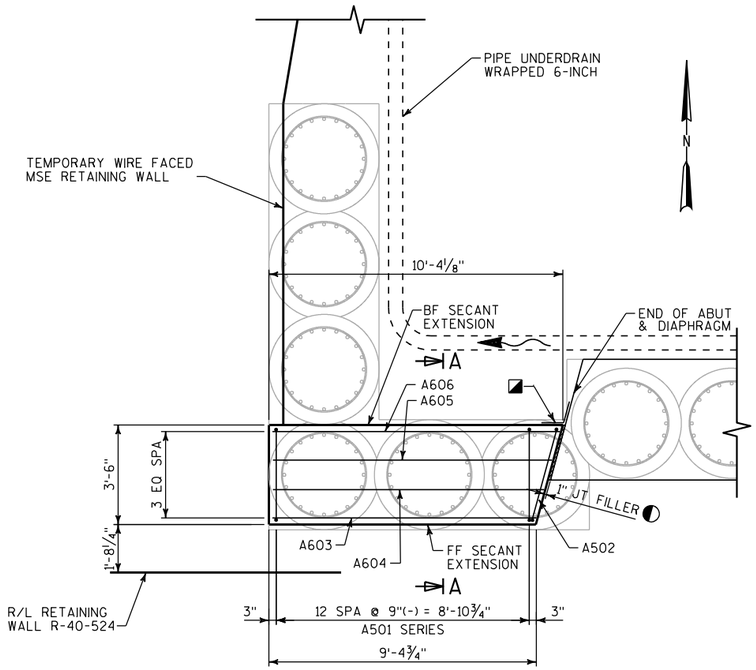
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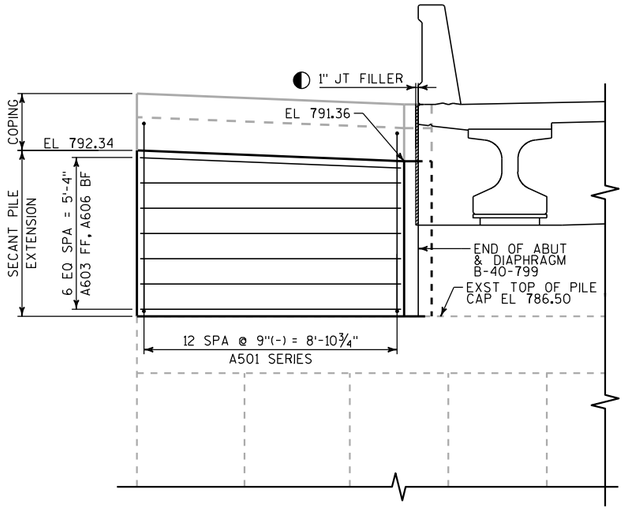
STATE PROJECT NUMBER
1060-33-78

LEGEND

- 1" PREFORMED JOINT FILLER BETWEEN DIAPRHAGM AND SECANT PILE EXTENSION, WITH NON-BITUMINOUS JOINT SEALER TO EXTEND FROM TOP OF ABUTMENT TO TOP OF CONCRETE COPING.
- RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND VERTICALLY FROM 9" BELOW TOP OF EXISTING PILE CAP TO TOP OF WALL AND HORIZONTALLY THE FULL LENGTH OF THE SECANT PILE WALL EXTENSION.

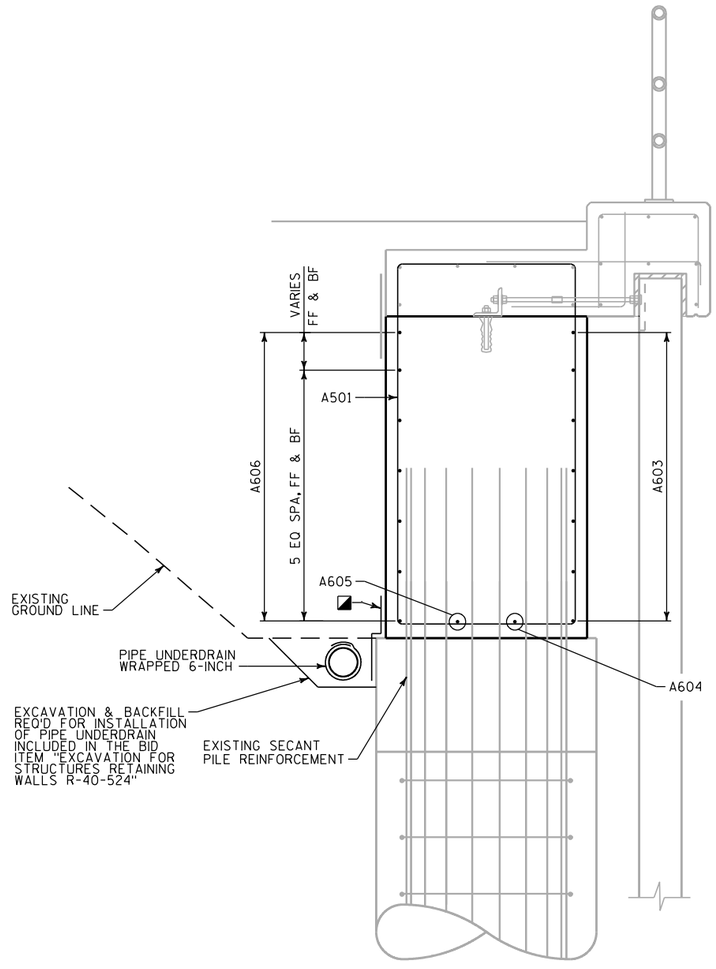


SECANT PILE EXTENSION WEST PLAN



SECANT PILE EXTENSION WEST ELEVATION

(ELEVATIONS GIVE AT FRONT FACE OF SECANT PILE WALL EXTENSION)



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

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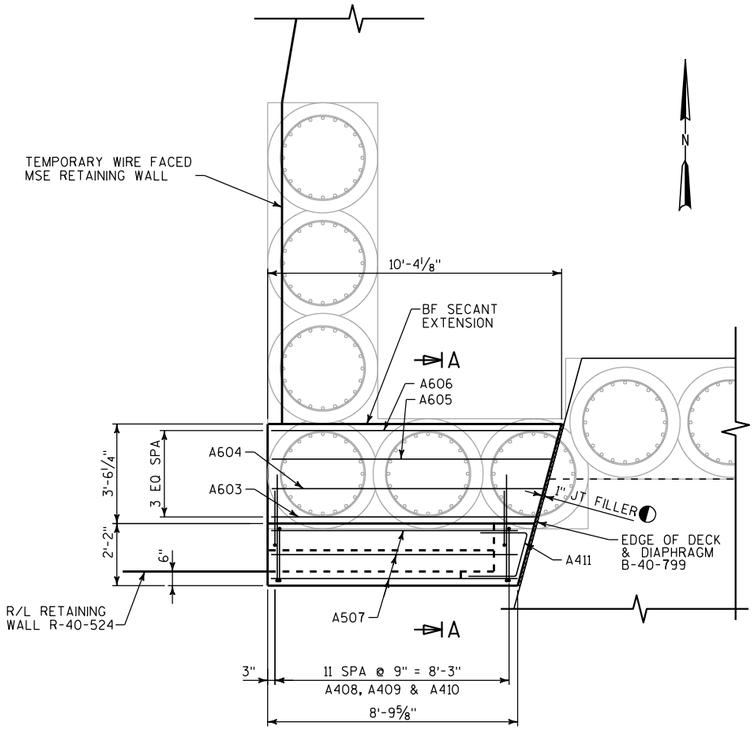
SECANT PILE WALL EXTENSION WEST C-I-P CONC DETAILS

SHEET 5 OF 14

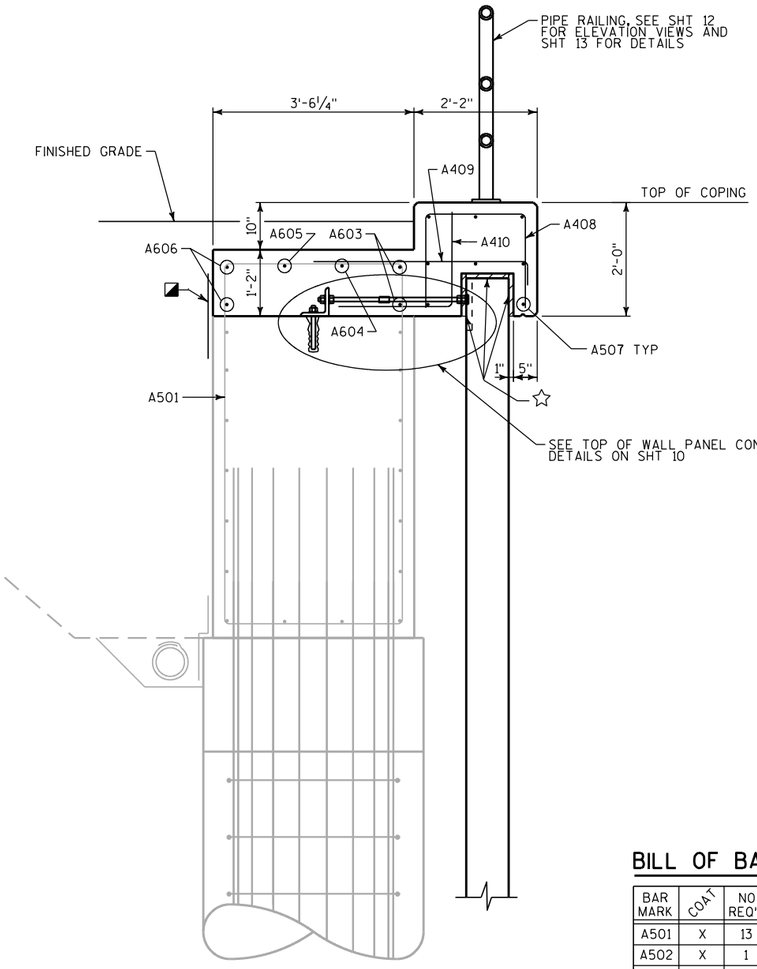
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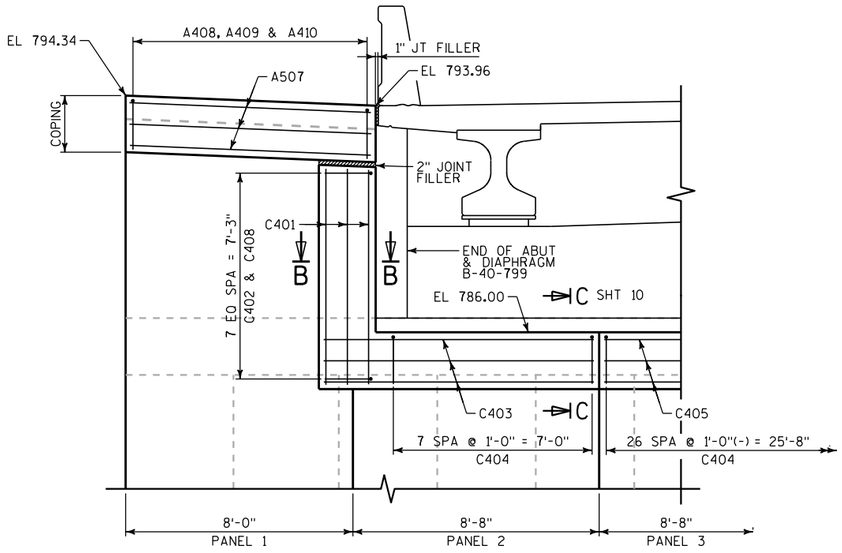
STATE PROJECT NUMBER
1060-33-78



SECANT PILE EXTENSION WEST COPING PLAN

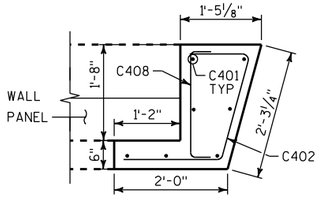


SECTION A-A



SECANT PILE EXTENSION WEST COPING ELEVATION

(SEE SHEET 10 FOR COPING BILL OF BARS)

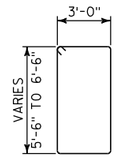


SECTION B-B

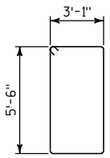
(SEE SHEET 10 FOR COPING BILL OF BARS)

LEGEND

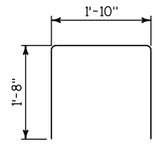
- 1" PREFORMED JOINT FILLER BETWEEN DIAPRHAGM AND SECANT PILE EXTENSION, WITH NON-BITUMINOUS JOINT SEALER TO EXTEND FROM TOP OF ABUTMENT TO TOP OF CONCRETE COPING.
- RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND VERTICALLY FROM 9" BELOW TOP OF EXISTING PILE CAP TO TOP OF WALL AND HORIZONTALLY THE FULL LENGTH OF THE SECANT PILE WALL EXTENSION.
- ☆ 1" EXPANDED POLYSTYRENE



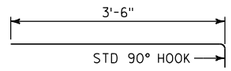
A501



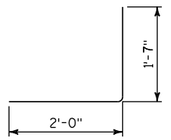
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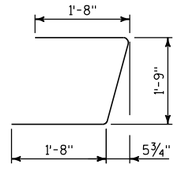
A408



A409



A410



A411

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	BAR SERIES	LOCATION
A501	X	13	18'-6"	X	⚠	STIRRUPS IN SECANT PILE EXTENSION WEST (SERIES)
A502	X	1	17'-8"	X		STIRRUP AT EAST END OF SECANT PILE EXTENSION WEST
A603	X	9	8'-11"	-		LONGITUDINAL IN SECANT PILE EXTENSION WEST (FF)
A604	X	2	9'-2"	-		LONGITUDINAL IN SECANT PILE EXTENSION WEST (MID)
A605	X	2	9'-6"	-		LONGITUDINAL IN SECANT PILE EXTENSION WEST (MID)
A606	X	9	9'-9"	-		LONGITUDINAL IN SECANT PILE EXTENSION WEST (BF)
A507	X	8	8'-3"	-		LONGITUDINAL IN COPING - PILE EXTENSION WEST
A408	X	12	5'-0"	X		TRANSVERSE IN COPING - PILE EXTENSION WEST
A409	X	12	3'-10"	X		TRANSVERSE IN COPING - PILE EXTENSION WEST
A410	X	12	3'-6"	X		TRANSVERSE IN COPING - PILE EXTENSION WEST
A411	X	1	5'-0"	X		EAST END OF COPING - PILE EXTENSION WEST

⚠ 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
A501	1 SERIES OF 13	17'-6" TO 19'-6"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

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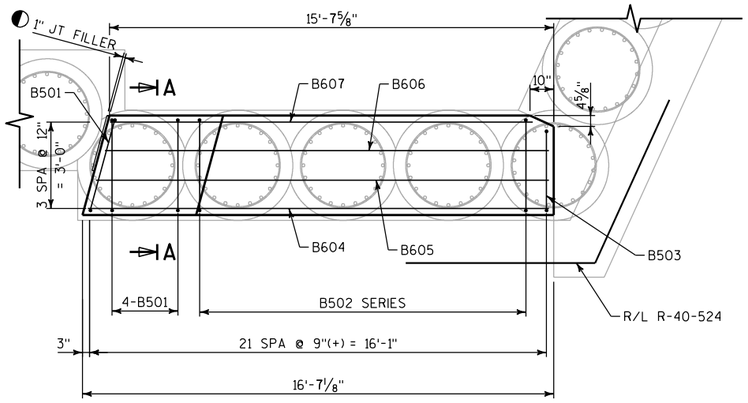
SECANT PILE WALL EXTENSION WEST COPING DETAILS

SHEET 6 OF 14

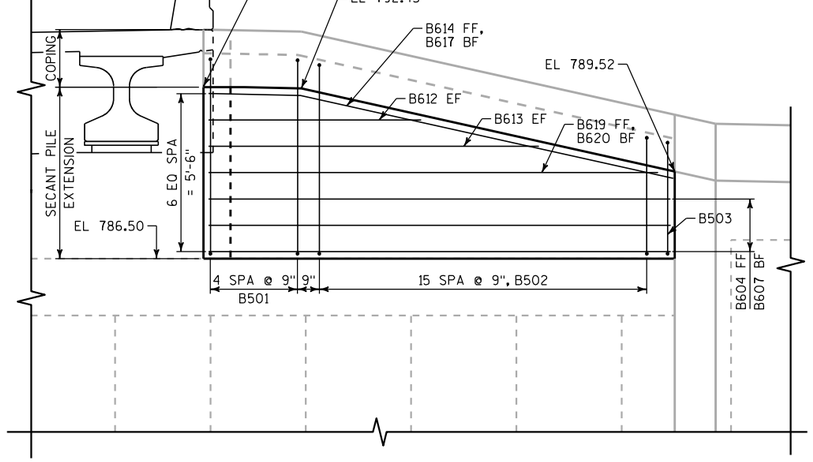
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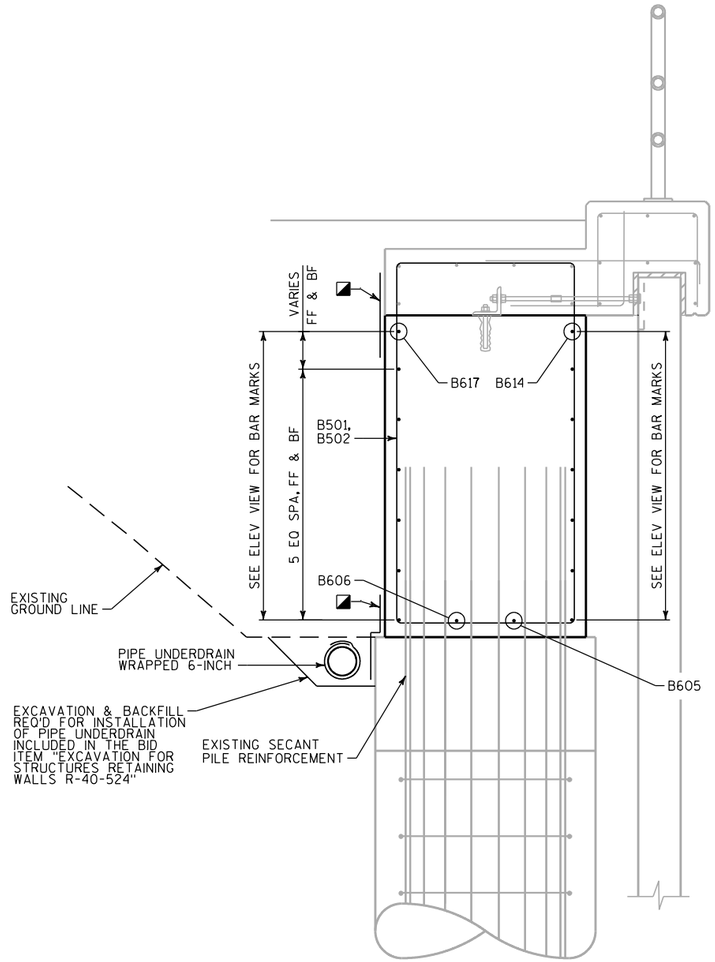
STATE PROJECT NUMBER
1060-33-78



SECANT PILE WALL EXTENSION EAST PLAN



SECANT PILE WALL EXTENSION EAST ELEVATION



SECTION A-A

LEGEND

◐ 1" PREFORMED JOINT FILLER BETWEEN DIAPRHAGM AND SECANT PILE EXTENSION, WITH NON-BITUMINOUS JOINT SEALER TO EXTEND FROM TOP OF ABUTMENT TO TOP OF CONCRETE COPING.

◪ RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND VERTICALLY FROM 9" BELOW TOP OF EXISTING PILE CAP TO TOP OF WALL AND HORIZONTALLY THE FULL LENGTH OF THE SECANT PILE WALL EXTENSION.

NOTES

FOR SECANT PILE WALL EXTENSION BILL OF BARS, SEE SHEET 9

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

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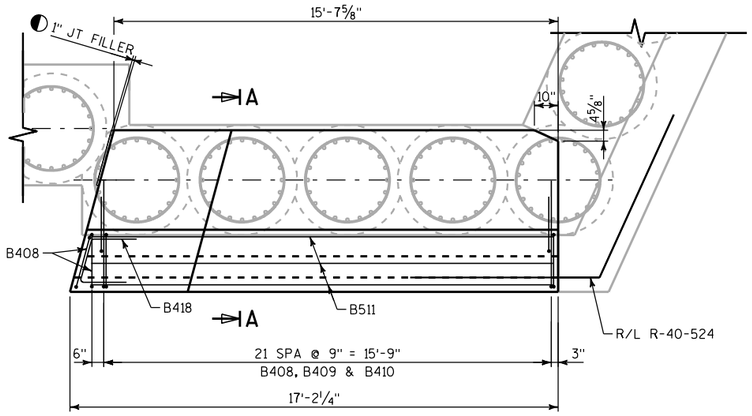
SECANT PILE WALL EXTENSION EAST C-I-P CONC DETAILS

SHEET 7 OF 14

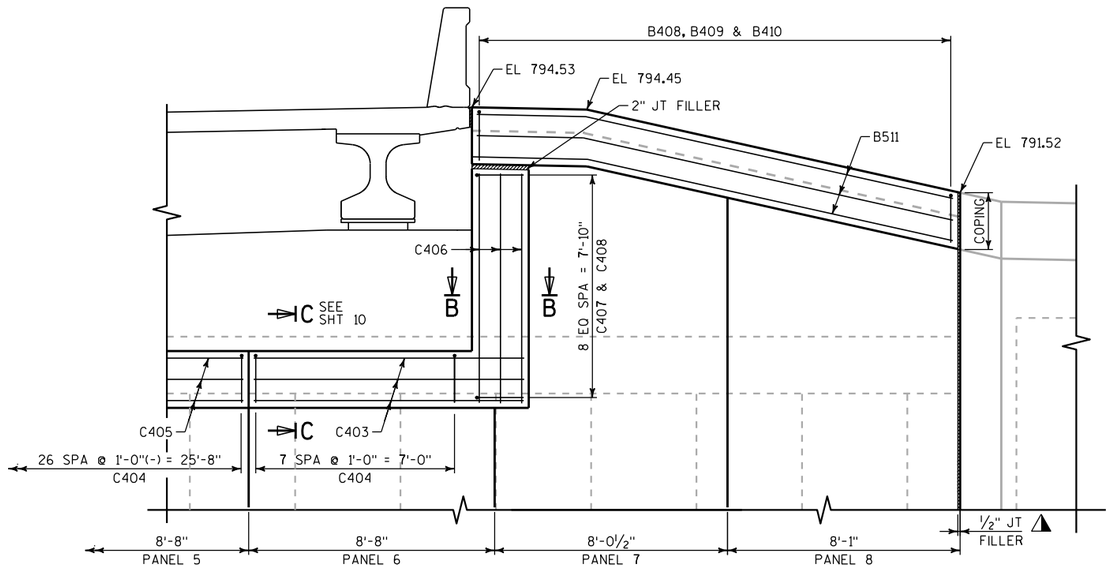
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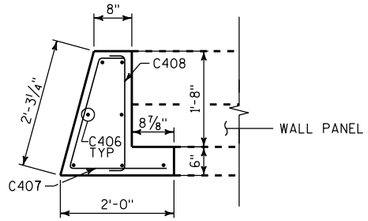
STATE PROJECT NUMBER
1060-33-78



SECANT PILE WALL EXTENSION
EAST COPING PLAN



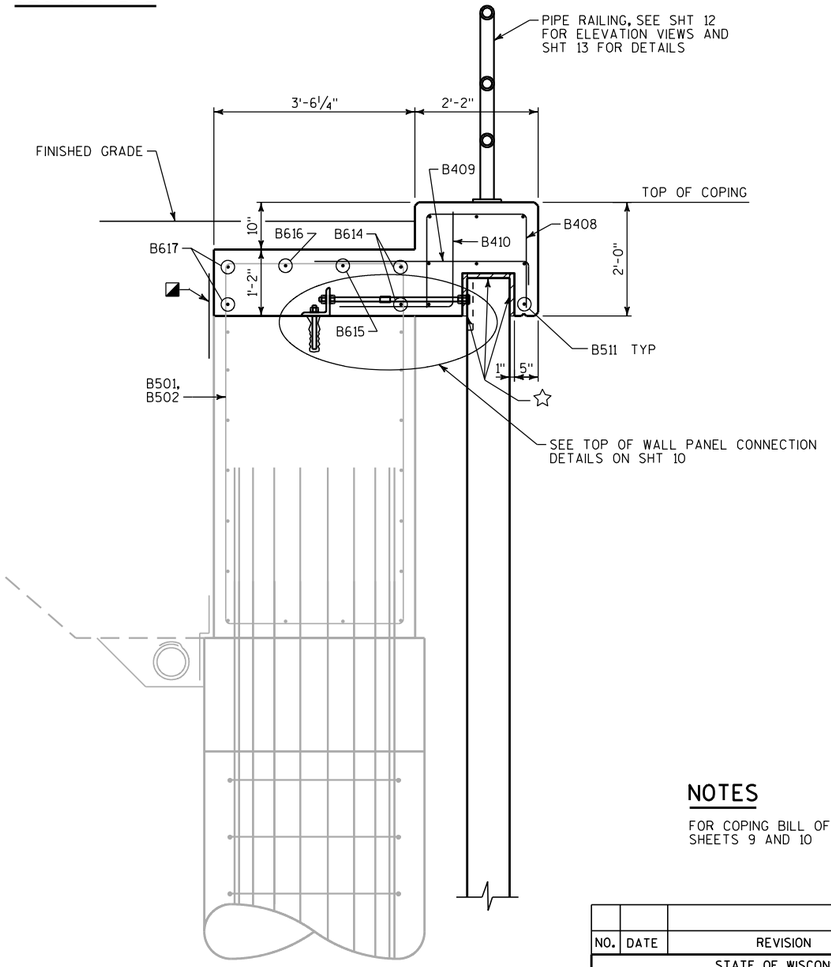
SECANT PILE WALL EXTENSION
EAST COPING ELEVATION



SECTION B-B

LEGEND

- ◐ 1" PREFORMED JOINT FILLER BETWEEN DIAPHAGM AND SECANT PILE EXTENSION, WITH NON-BITUMINOUS JOINT SEALER TO EXTEND FROM TOP OF ABUTMENT TO TOP OF CONCRETE COPING.
- ◭ ½" PREFORMED JOINT FILLER BETWEEN PRECAST PANEL, COPING AND EXST CONCRETE WALL, WITH NON-BITUMINOUS JOINT SEALER TO EXTEND FROM TOP OF CONCRETE COPING TO 1'-0" BELOW FINISHED GRADE AT WALL FACE.
- ◪ RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND VERTICALLY FROM 9" BELOW TOP OF EXISTING PILE CAP TO TOP OF WALL AND HORIZONTALLY THE FULL LENGTH OF THE SECANT PILE WALL EXTENSION.
- ☆ 1" EXPANDED POLYSTYRENE



SECTION A-A

NOTES

FOR COPING BILL OF BARS, SEE SHEETS 9 AND 10

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

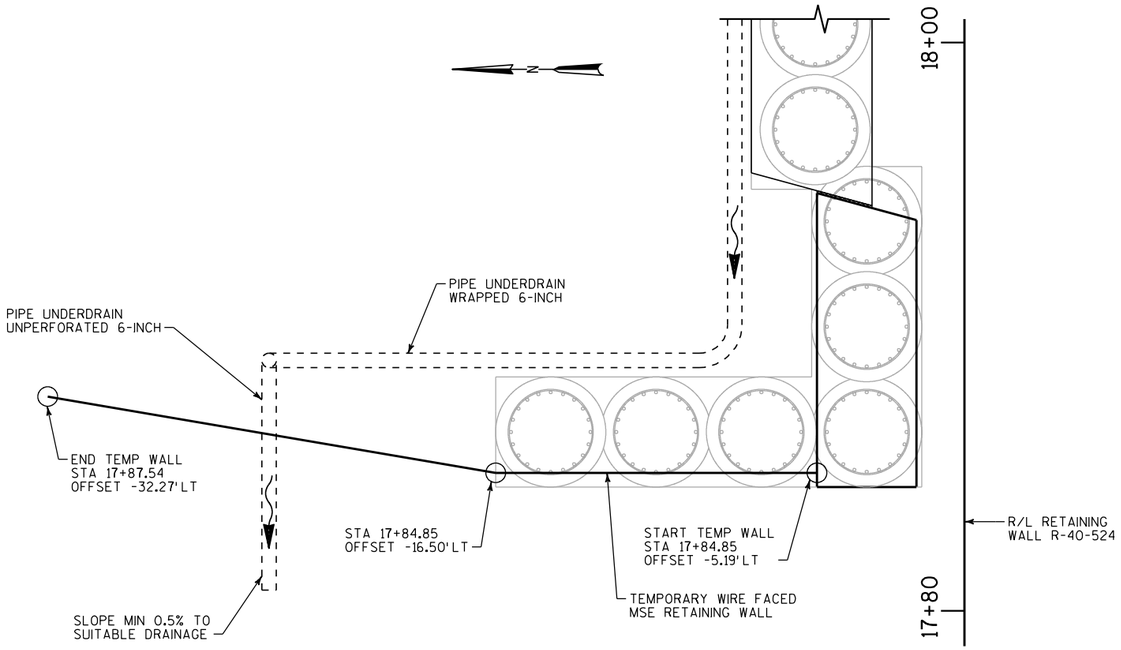
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SECANT PILE WALL EXTENSION EAST COPING DETAILS

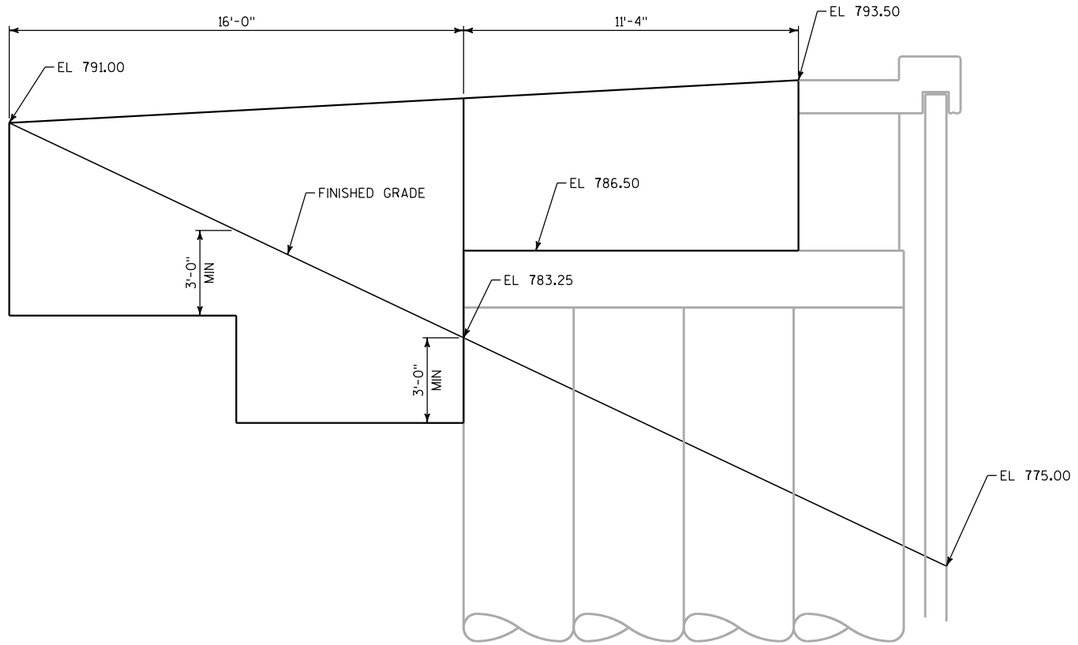
SHEET 8 OF 14

8

8



TEMPORARY WIRE FACE MSE WALL PLAN



ELEVATION AT TEMPORARY WALL

DIMENSIONS ARE GIVEN ALONG FRONT FACE OF WALL

BILL OF BARS

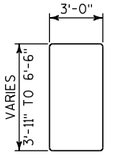
NOTE:
BAR DIMENSIONS ARE OUT TO OUT OF BAR.
THE FIRST OR FIRST TWO DIGITS
OF A BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
B501	X	4	19'-11"	X		STIRRUPS IN SECANT PILE EXTENSION EAST - WEST END
B502	X	16	17'-0"	X	⚠	STIRRUPS IN SECANT PILE EXTENSION EAST (SERIES) - EAST END
B503	X	1	13'-3"	X		STIRRUP AT EAST END OF SECANT PILE EXTENSION EAST
B604	X	3	16'-0"	-		LONGITUDINAL IN SECANT PILE EXTENSION EAST (FF)
B605	X	1	15'-9"	-		LONGITUDINAL IN SECANT PILE EXTENSION EAST (MID)
B606	X	1	15'-6"	-		LONGITUDINAL IN SECANT PILE EXTENSION EAST (MID)
B607	X	3	14'-10"	-		LONGITUDINAL IN SECANT PILE EXTENSION EAST (BF)
B408	X	22	5'-0"	X		TRANSVERSE IN COPING - PILE EXTENSION EAST
B409	X	22	3'-10"	X		TRANSVERSE IN COPING - PILE EXTENSION EAST
B410	X	22	3'-6"	X		TRANSVERSE IN COPING - PILE EXTENSION EAST
B511	X	8	17'-0"	X		LONGITUDINAL IN COPING - PILE EXTENSION EAST
B612	X	2	7'-10"	-		LONGITUDINAL IN SECANT PILE EXTENSION EAST (FF)
B613	X	2	12'-0"	-		LONGITUDINAL IN SECANT PILE EXTENSION EAST (BF)
B614	X	3	16'-4"	X		LONGITUDINAL IN SECANT PILE EXTENSION EAST (FF) - TOP
B615	X	1	16'-1"	X		LONGITUDINAL IN SECANT PILE EXTENSION EAST (FF) - COPING
B616	X	1	15'-10"	X		LONGITUDINAL IN SECANT PILE EXTENSION EAST (FF) - COPING
B617	X	3	15'-0"	X		LONGITUDINAL IN SECANT PILE EXTENSION EAST (BF) - TOP
B418	X	1	4'-6"	X		WEST END OF COPING - PILE EXTENSION EAST
B619	X	1	16'-0"			LONGITUDINAL IN SECANT PILE EXTENSION EAST (FF)
B620	X	1	15'-5"			LONGITUDINAL IN SECANT PILE EXTENSION EAST (BF)

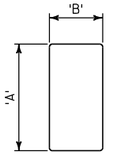
⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND
SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS.
SEE BAR SERIES TABLE FOR ACTUAL LENGTHS

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
B502	1 SERIES OF 16	14'-5" TO 19'-7"

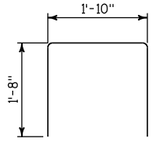


B502

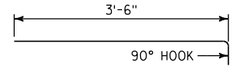


B501, B503

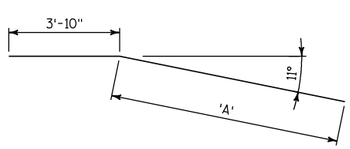
BAR MARK	'A'	'B'
B501	6'-8"	3'-0"
B503	3'-9"	2'-8"



B408

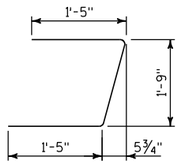


B409

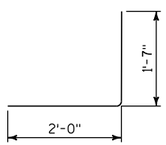


BAR MARK	'A'
B511	13'-2"
B614	12'-6"
B615	12'-3"
B616	12'-0"
B617	11'-2"

B511, B614, B615, B616 & B617



B418



B410

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

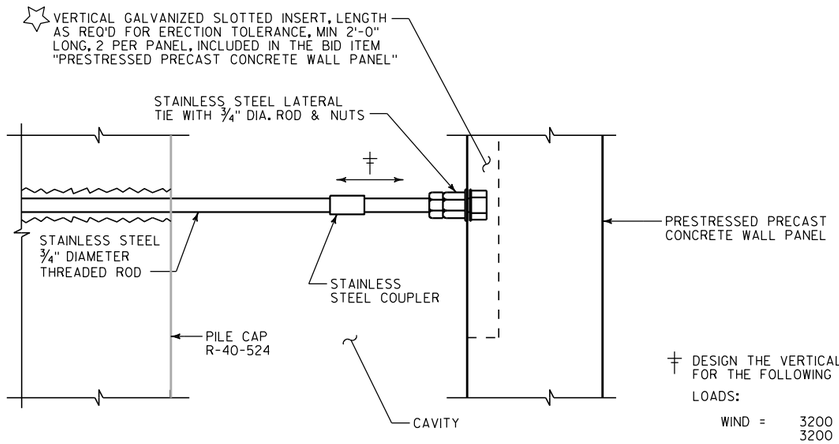
DRAWN BY TEK | PLANS CK'D. KES

TEMPORARY WALL & REINFORCEMENT DETAILS

SHEET 9 OF 14

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\R-40-524\cds\R524_080305_el.dgn
PLOT DATE : 30-MAY-2013 17:17
PLOT BY : MSCKES
PLOT NAME : R524_080305_el
PLOT SCALE : 5.333333:1

STATE PROJECT NUMBER
1060-33-78



TOP OF WALL PANEL CONNECTION DETAIL
SHAFTS 7-17

CONNECTION INCLUDED IN THE BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL"

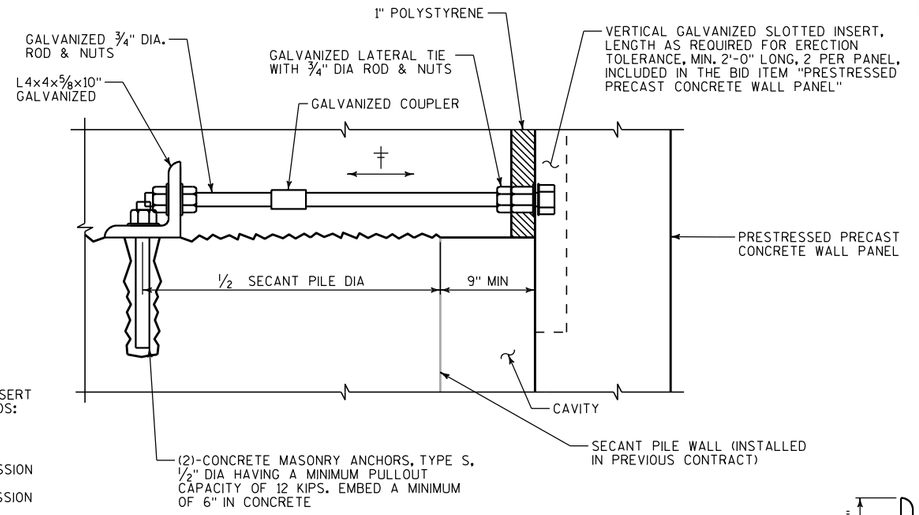
‡ DESIGN THE VERTICAL SLOTTED INSERT FOR THE FOLLOWING SERVICE LOADS:

LOADS:

WIND = 3200 LBS TENSION
3200 LBS COMPRESSION

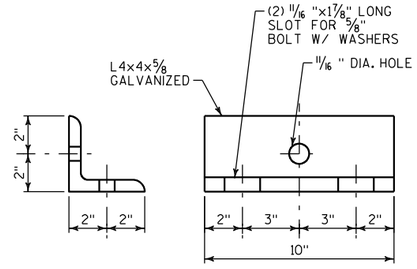
IMPACT = 2930 LBS COMPRESSION

☆ 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.



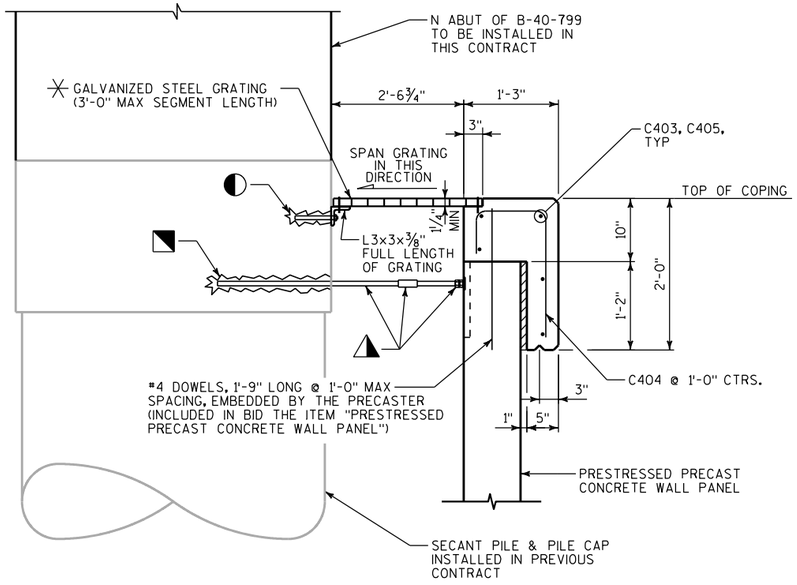
TOP OF WALL PANEL CONNECTION DETAIL
SHAFTS 4-6 & 18-22

CONNECTION INCLUDED IN BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL", EXCEPT FOR MASONRY ANCHORS WHICH ARE PAID FOR SEPARATELY

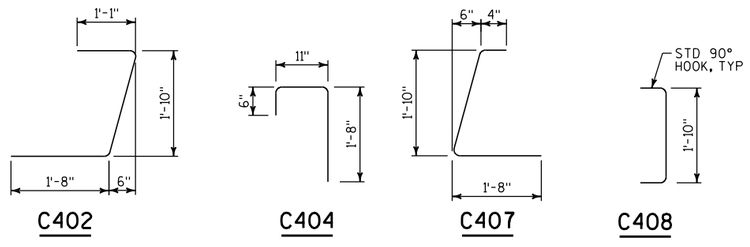


TOP ANGLE DETAIL

(2 PER PANEL REQUIRED)
INCLUDED IN BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL"



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
C401	X	7	7'-5"	-		VERTICAL COPING - WEST
C402	X	8	4'-6"	X		TRANSVERSE BARS - VERTICAL COPING - WEST
C403	X	10	9'-3"	-		LONGITUDINAL BARS - COPING ENDS UNDER BRIDGE
C404	X	27	2'-11"	X		TRANSVERSE BARS - COPING BELOW BRIDGE
C405	X	5	25'-7"	-		LONGITUDINAL BARS - COPING MID UNDER BRIDGE
C406	X	7	7'-10"	-		VERTICAL COPING - EAST
C407	X	9	3'-9"	X		TRANSVERSE BARS - VERTICAL COPING - EAST
C408	X	17	2'-5"	X		TRANSVERSE BARS - VERTICAL COPING - E & W

LEGEND

◭ EMBEDDED SLOTTED INSERT IN PRECAST WALL PANEL, ¾" DIA THREADED ROD, COUPLER AND NUTS TO BE STAINLESS STEEL FOR PRECAST WALL PANEL CONNECTION TO WALL R-40-524 PILE CAP (INCLUDED IN THE BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL").

◐ MASONRY ANCHORS TYPE S ½-INCH, MINIMUM PULLOUT CAPACITY OF 12 KIPS. EMBED A MINIMUM OF OF 6" IN CONCRETE. SPACE ANCHORS A MAXIMUM OF 4'-0" ALONG FACE OF PILE CAP. START ANCHORS 1'-0" FROM END OF ANGLE OR PLATE.

◪ CONCRETE MASONRY ANCHOR, TYPE L, NO. 6 BAR. EMBED A MINIMUM OF 1'-6" INTO CONCRETE.

✳ STEEL GRATING (ASTM A-1011) WITH 1¼"x⅛" BEARING BARS ON 1 3/16" CENTERS AND METAL CROSS BARS AT 4" CENTERS. HOT DIP GALVANIZE GRATING AND ANGLE AFTER FABRICATION PER ASTM A123. GRATING, ANGLE, SADDLE ANCHOR CLIPS, BOLTS, NUTS AND WASHERS ARE ALL INCLUDED IN THE BID ITEM "GALVANIZED STEEL GRATING".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

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TOP OF WALL PANEL CONNECTION DETAILS

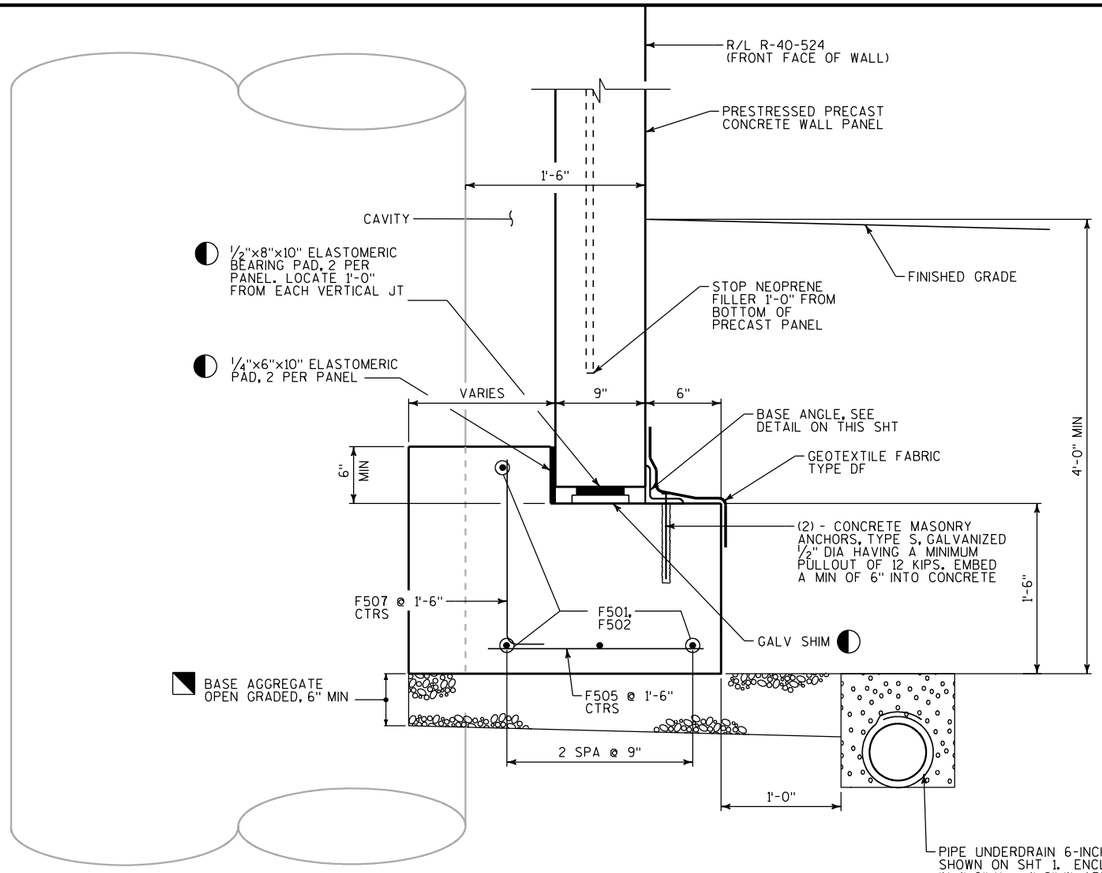
SHEET 10 OF 14

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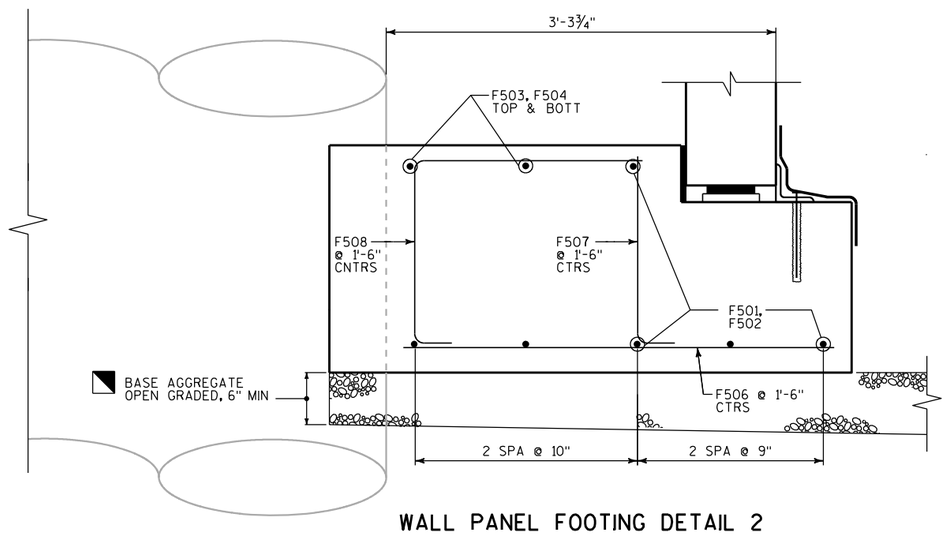
STATE PROJECT NUMBER

1060-33-78



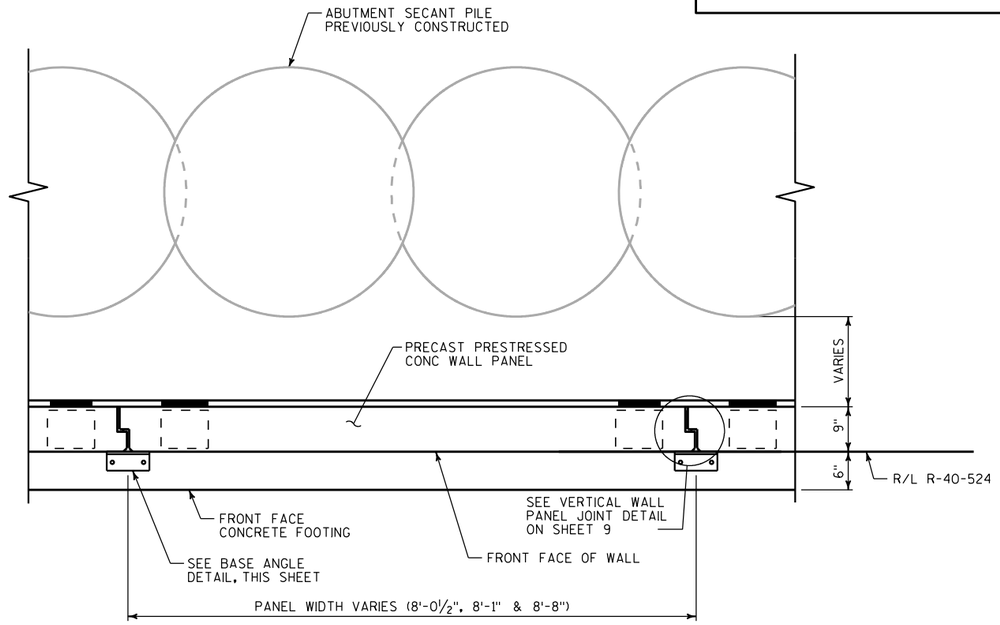
WALL PANEL FOOTING DETAIL 1

(SHAFTS 4-6 & 18-22)



WALL PANEL FOOTING DETAIL 2

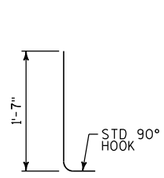
(SHAFTS 7-17)



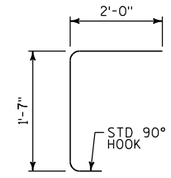
TYPICAL FOOTING PLAN

FOOTING BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	LOCATION
F501		4	33'-7"		FOOTING HORIZ - 4 WEST PANELS
F502		4	33'-0"		FOOTING HORIZ - 4 EAST PANELS
F503		2	22'-3"		FOOTING HORIZ - ADD'T BARS AT SHAFTS 7-12
F504		2	16'-2"		FOOTING HORIZ - ADD'T BARS AT SHAFTS 13-17
F505		20	1'-8"		FOOTING TRANS - SHAFTS 4-6 & 18-22
F506		28	3'-4"		FOOTING TRANS - SHAFTS 7-17
F507		48	2'-0"	X	FOOTING VERT
F508		28	3'-10"	X	FOOTING VERT - ADD'T BARS AT SHAFT 7-17



F507

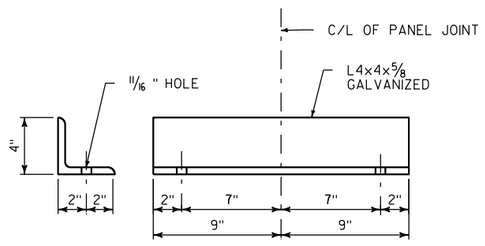


F508

LEGEND

INCLUDED IN THE BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL"

INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-524"



BASE ANGLE DETAIL

(1 AT EACH PANEL JOINT)
INCLUDED IN THE BID ITEM "PRESTRESSED PRECAST CONCRETE WALL PANEL"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

DRAWN BY TEK | PLANS CK'D. KES

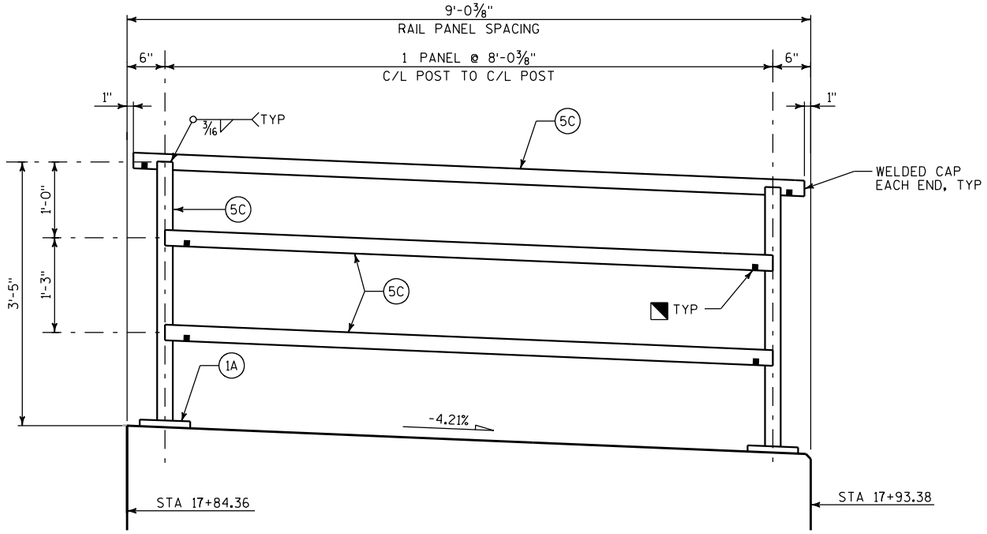
WALL PANEL FOOTING DETAILS

SHEET 11 OF 14

8

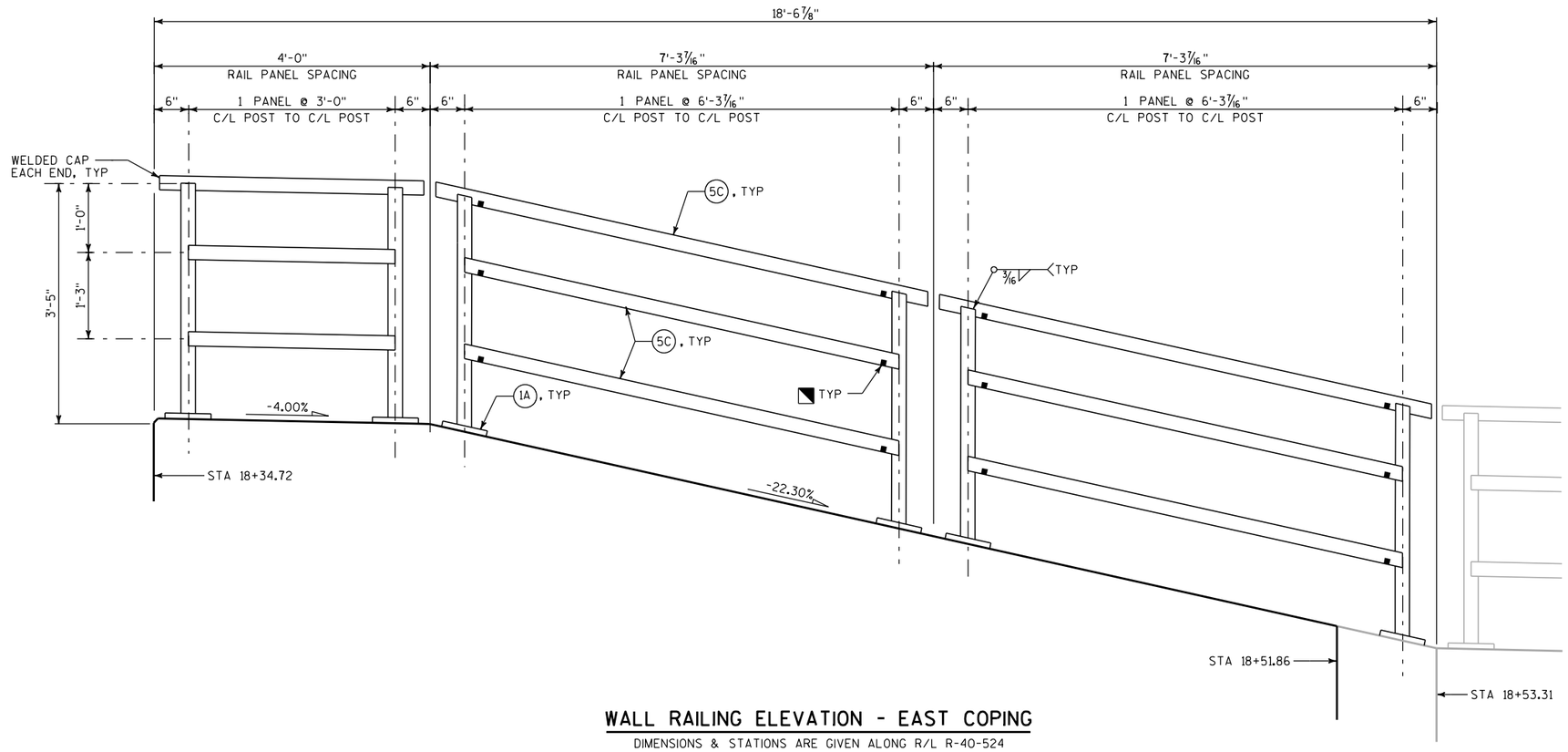
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WALL RAILING ELEVATION - WEST COPING

DIMENSIONS & STATIONS ARE GIVEN ALONG R/L R-40-524



WALL RAILING ELEVATION - EAST COPING

DIMENSIONS & STATIONS ARE GIVEN ALONG R/L R-40-524

LEGEND

(1A) PLATE 5/8" x 6" x 8" WITH 3/4" x 1 1/2" SLOTTED HOLES.

(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.

◥ 1/2" DIA DRAIN HOLE @ BOTTOM OF EACH RAIL END.

NOTES

FOR PIPE RAILING DETAILS, SEE SHEET 13.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

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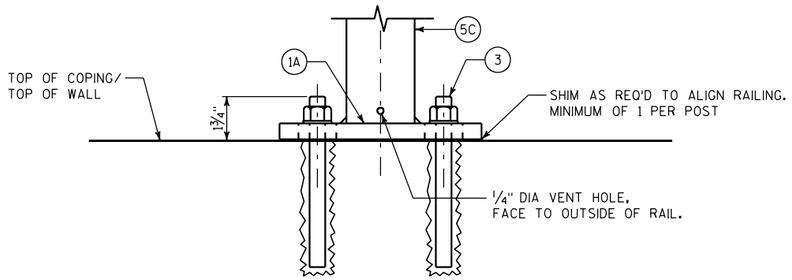
PIPE RAILING ELEVATIONS

SHEET 12 OF 14

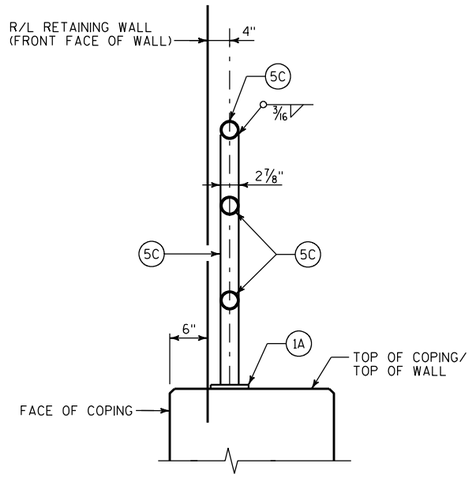
8

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ANCHOR BOLTS FOR RAIL POST



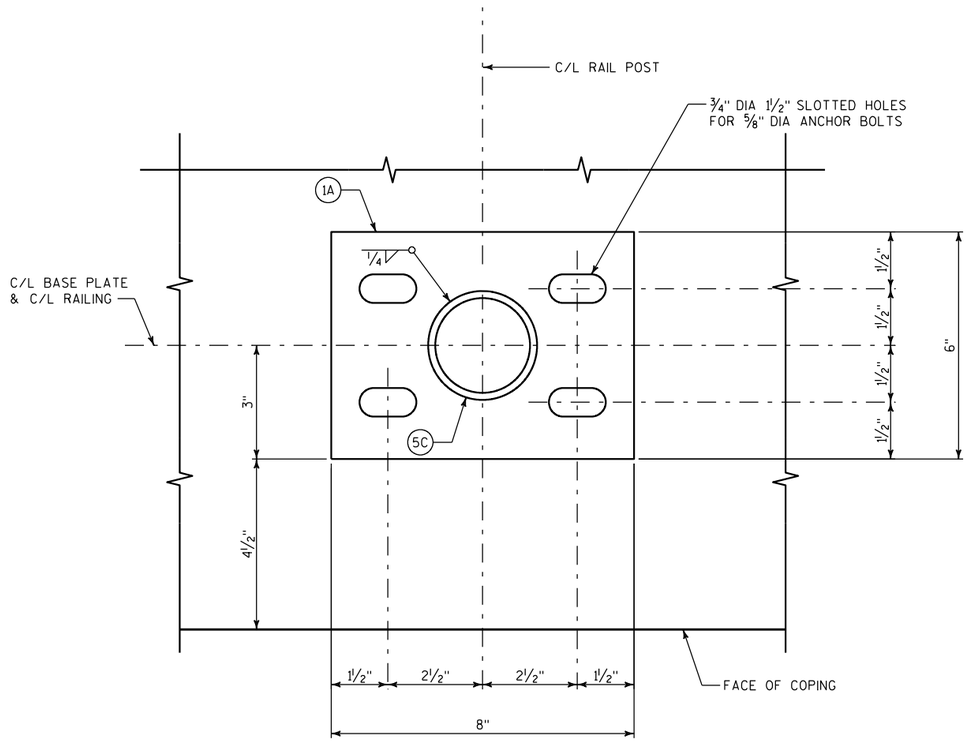
WALL RAILING SECTION

LEGEND

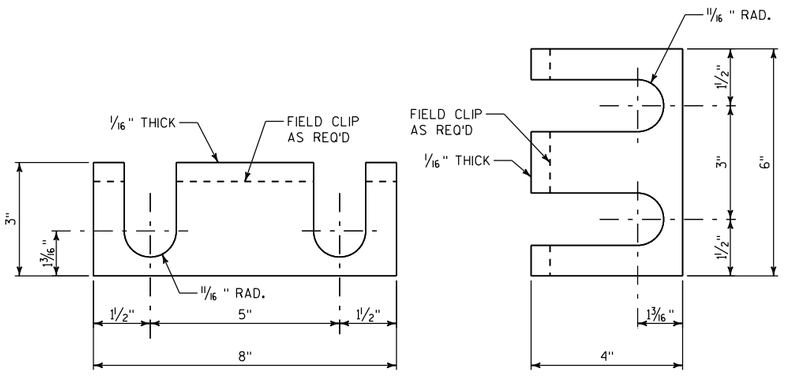
(1A) PLATE ⅝" × 6" × 8" WITH ¾" × 1½" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), ⅝" DIA, MINIMUM PULLOUT CAPACITY OF 17 KIPS. 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.



RAIL POST BASE PLATE



RAIL POST SHIM DETAIL

(2 SETS PER POST)

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.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

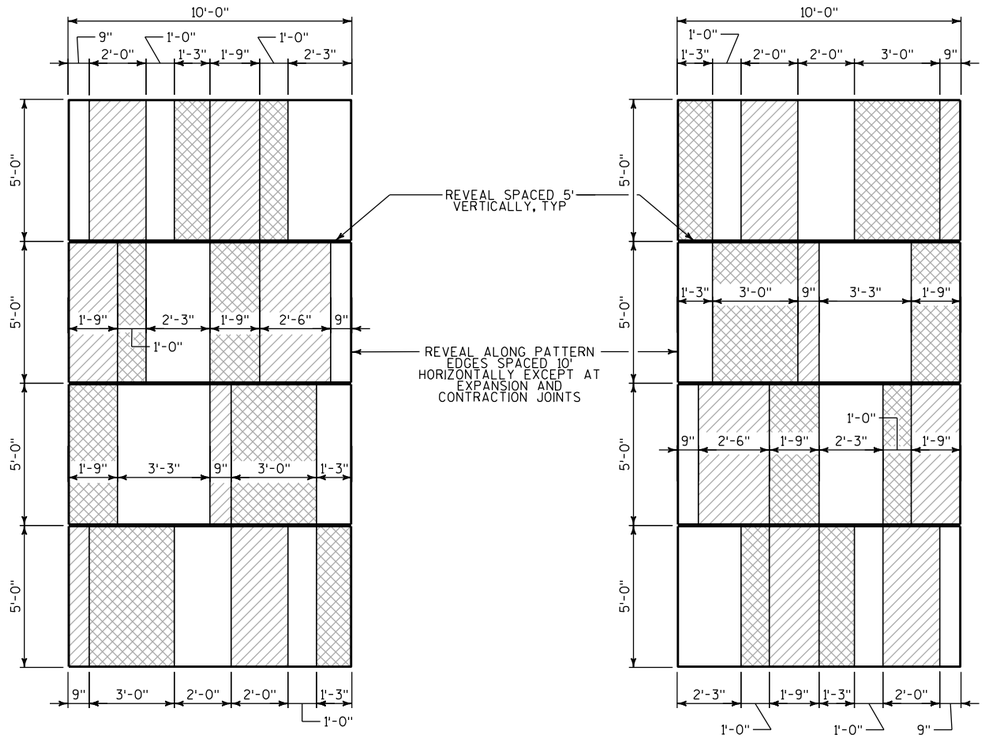
DRAWN BY	TEK	PLANS CK'D.	KES

PIPE RAILING DETAILS

SHEET 13 OF 14

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\R-40-524\cds\R524_080502_rp.dgn
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PLOT BY : MSCKES
PLOT NAME : R524_080502_rp
PLOT SCALE : 2:1

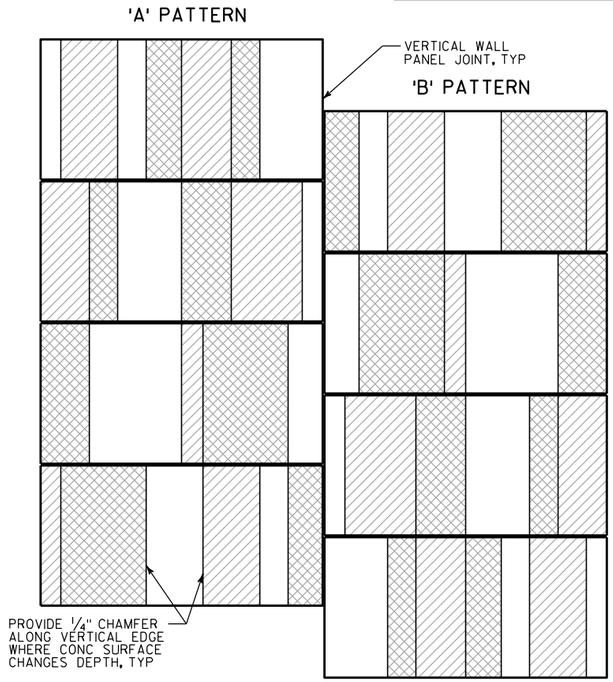
STATE PROJECT NUMBER
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5'-0" x 10'-0" PRECAST PANEL 'A' PATTERN

5'-0" x 10'-0" PRECAST PANEL 'B' PATTERN

'A' PATTERN ROTATED 180°

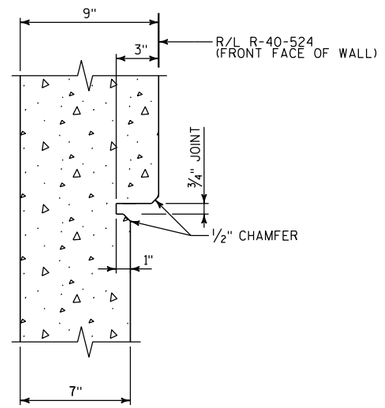


TYPICAL PRECAST PANEL PATTERN

PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 30" VERTICALLY
REPEAT VERTICALLY AS REQUIRED

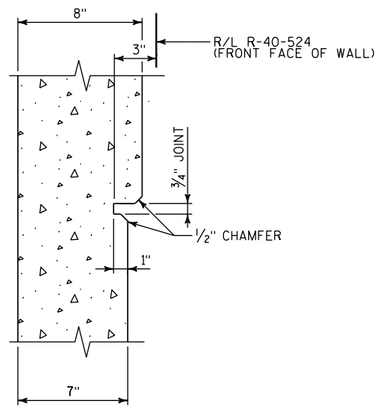
LEGEND

- 7¾" THICK FACING
- 8¾" THICK FACING
- 9¾" THICK FACING



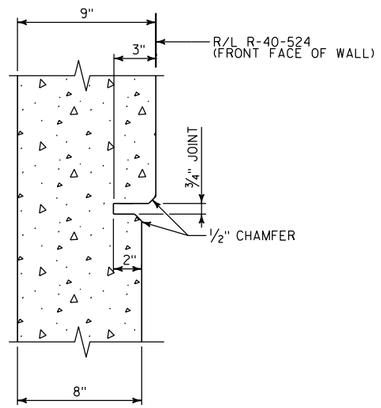
REVEAL DETAIL A

CONC PANEL WIDTHS ADJACENT TO REVEAL VARY BY 2"



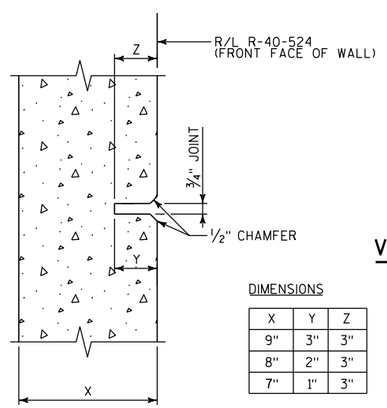
REVEAL DETAIL B

CONC PANEL WIDTHS ADJACENT TO REVEAL VARY BY 1", MAX WIDTH = 8"



REVEAL DETAIL C

CONC PANEL WIDTHS ADJACENT TO REVEAL VARY BY 1", MAX WIDTH = 9"

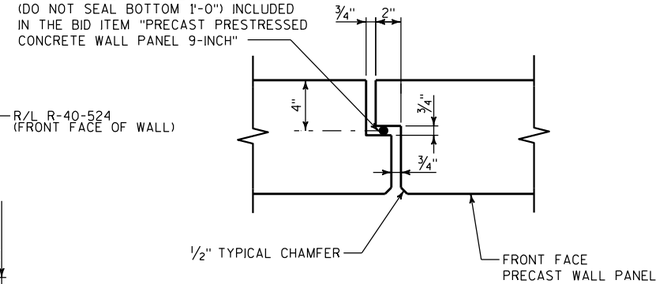


REVEAL DETAIL D

CONC PANEL WIDTHS ADJACENT TO REVEAL ARE EQUAL

DIMENSIONS

X	Y	Z
9"	3"	3"
8"	2"	3"
7"	1"	3"



VERTICAL WALL PANEL JOINT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-524-002

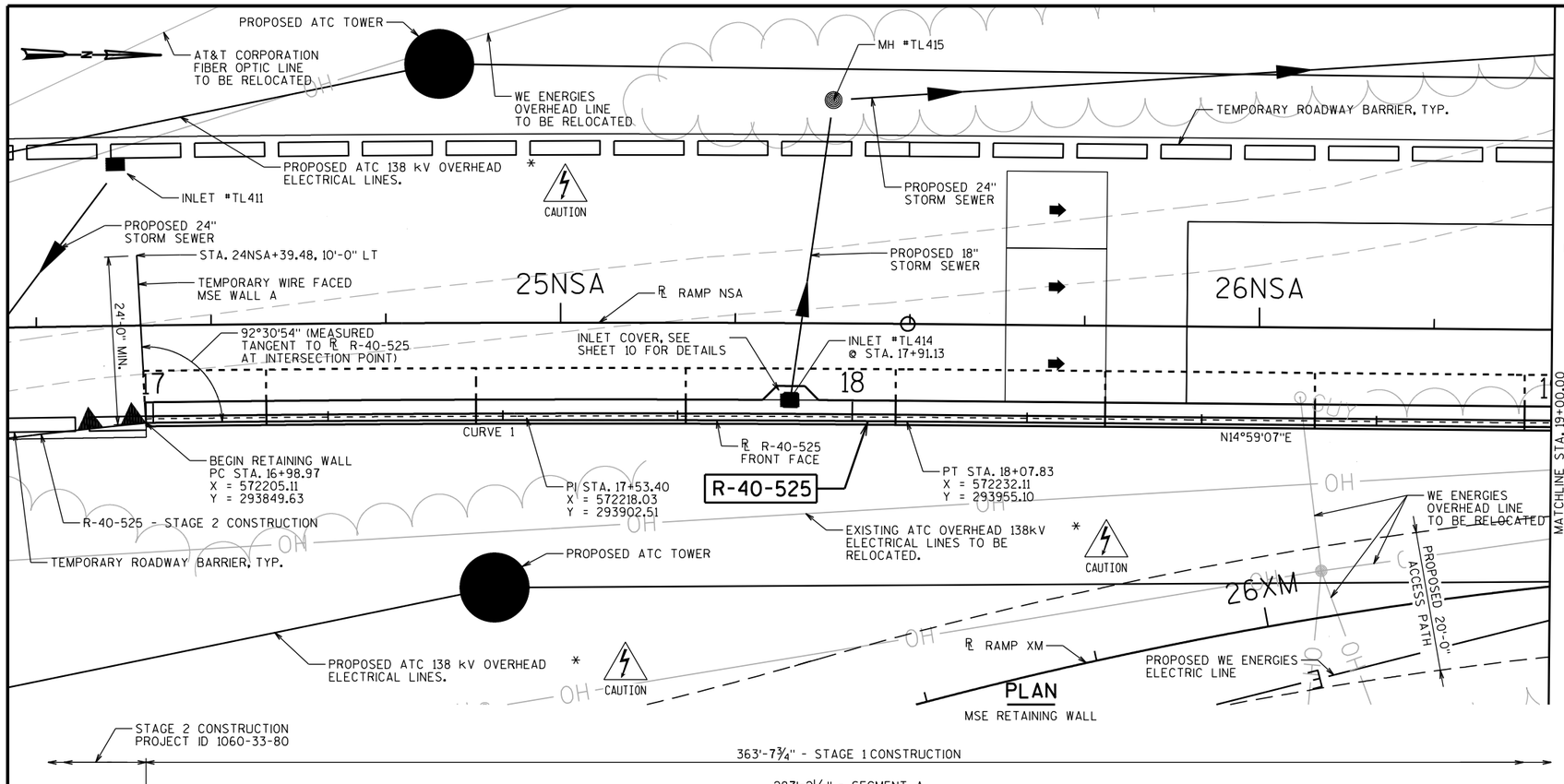
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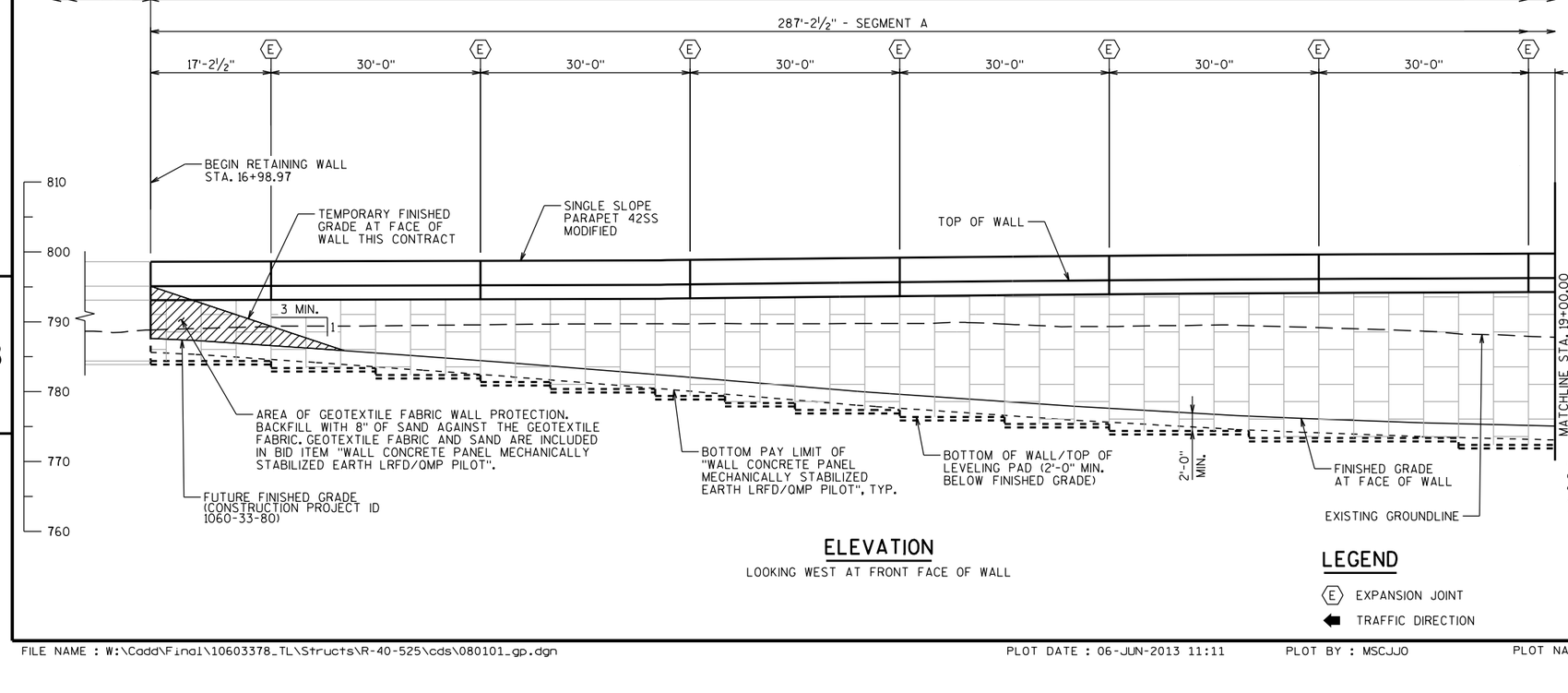
AESTHETIC WALL TREATMENT DETAILS

SHEET 14 OF 14

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ELEVATION

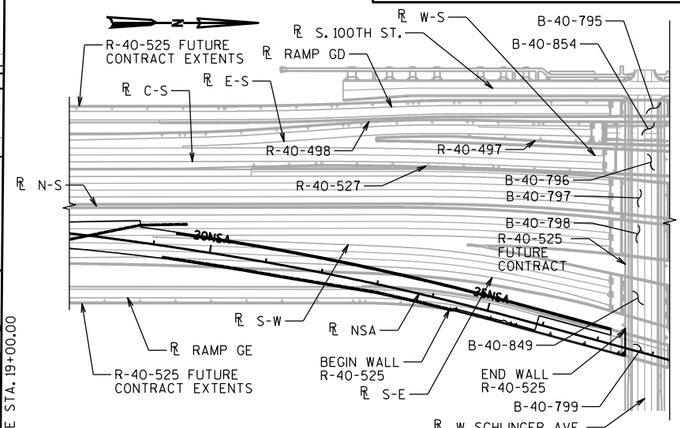
LOOKING WEST AT FRONT FACE OF WALL

LEGEND

(E) EXPANSION JOINT

TRAFFIC DIRECTION

STATE PROJECT NUMBER
1060-33-78



LOCATION MAP

* 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.

LIST OF DRAWINGS

1. GENERAL PLAN & ELEVATION 1
2. GENERAL PLAN & ELEVATION 2
3. GENERAL NOTES
4. QUANTITIES & DESIGN DATA
5. TYPICAL SECTIONS 1
6. TYPICAL SECTIONS 2
7. TEMPORARY WALL TYPICAL SECTIONS
8. ELEVATION TABLES & REINFORCEMENT SCHEDULE
9. PARAPET, COPING & ANCHOR SLAB DETAILS
10. INLET DETAILS
11. ANCHOR SLAB INLET COVER SPECIAL
12. SEGMENT A REINFORCEMENT DETAILS (1 OF 2)
13. SEGMENT A REINFORCEMENT DETAILS (2 OF 2)
14. SEGMENTS C & D REINFORCEMENT DETAILS
15. AESTHETIC WALL TREATMENT DETAILS
16. SUBSURFACE EXPLORATION

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
PAT CASHIN (414) 315-7040

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 06/09/13
CHIEF STRUCTURES DESIGN ENGINEER — DATE

WISCONSIN JOSHUA J ODENWALD E-41771-6 RUBICON WI 6-6-13 PROFESSIONAL ENGINEER

STRUCTURE R-40-525

RETAINING WALL SOUTH OF SCHLINGER AVE.

COUNTY	TOWN/CITY/VILLAGE
MILWAUKEE	WEST ALLIS

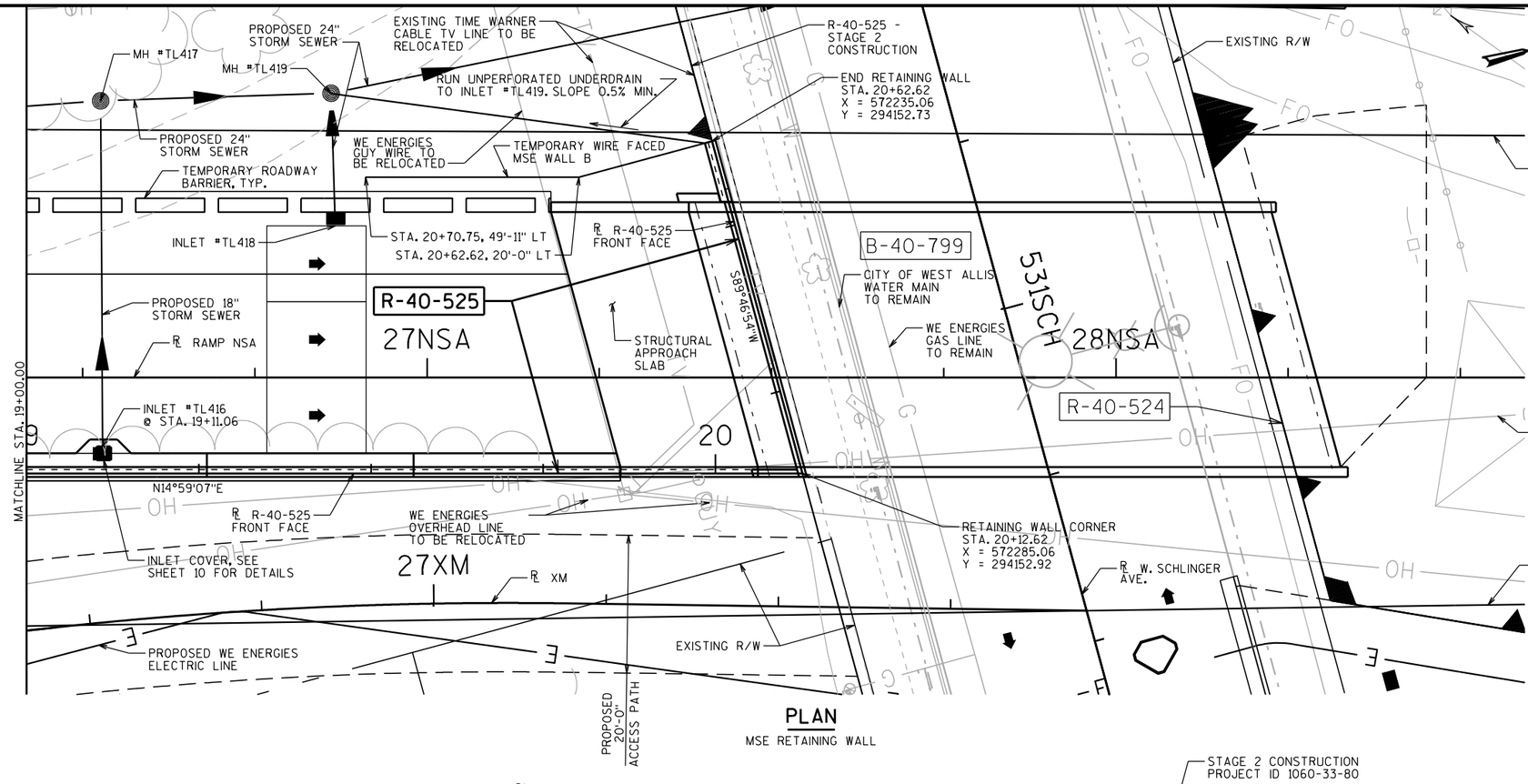
DESIGN SPEC.	LOAD
AASHTO LRFD 2010 5TH EDITION	----

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JJO	JWC	JJO	JWC

GENERAL PLAN & ELEVATION 1

SHEET 1 OF 16

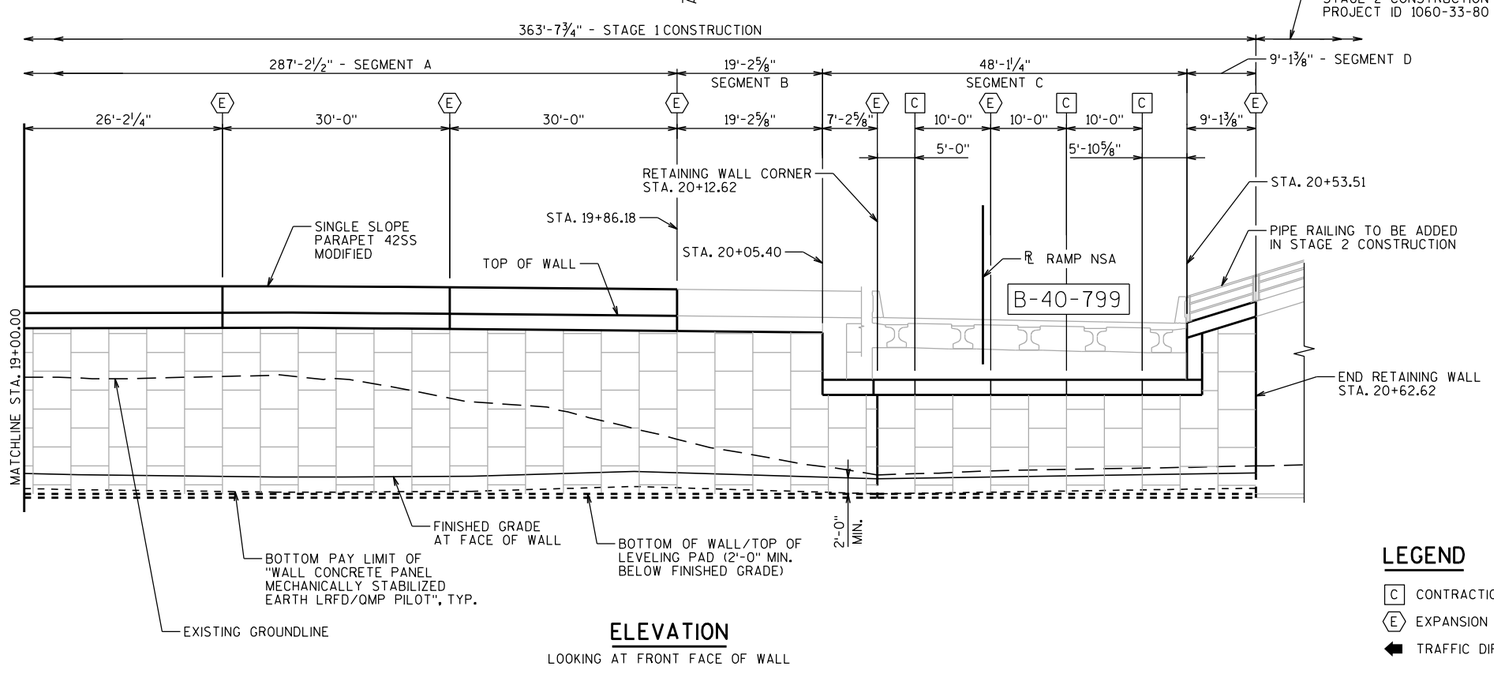
STATE PROJECT NUMBER
1060-33-78



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 AT FRONT FACE OF WALL

LEGEND

- C — CONTRACTION JOINT
- E — EXPANSION JOINT
- 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 2

SHEET 2 OF 16

STATE PROJECT NUMBER
1060-33-78

GENERAL NOTES

DESIGN IS IN ACCORDANCE WITH AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 5TH EDITION, 2010 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 ABUTMENT OF BRIDGE B-40-799.

THE QUANTITIES OF CONCRETE MASONRY AND BAR STEEL REINFORCEMENT FOR SEGMENT A 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 AND SEGMENT 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.

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP AND INSIDE FACE 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 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 THEIR OWN DETERMINATIONS AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

PLANS, DIMENSIONS, QUANTITIES AND REINFORCEMENT DETAILS ARE BASED ON AN ASSUMED CONCRETE WALL PANEL THICKNESS OF 7 INCHES. FOR PANEL THICKNESSES OTHER THAN 7 INCHES, THE CONTRACTOR SHALL VERIFY REINFORCEMENT BAR DETAILS AND QUANTITIES AND WILL BE RESPONSIBLE FOR ANY QUANTITY VARIATIONS.

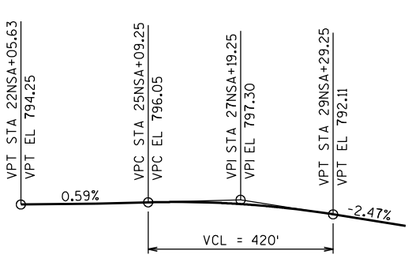
PROVIDE COMPLETE DESIGN, PLANS, DETAILS, SPECIFICATIONS, AND SHOP DRAWINGS FOR THE RETAINING WALLS IN ACCORDANCE WITH THE SPECIAL PROVISIONS. THE RETAINING WALL MANUFACTURER SHALL PROVIDE TECHNICAL ASSISTANCE TO THE CONTRACTOR DURING CONSTRUCTION. THE COST OF FURNISHING THESE ITEMS IS INCLUDED IN THE 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 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.

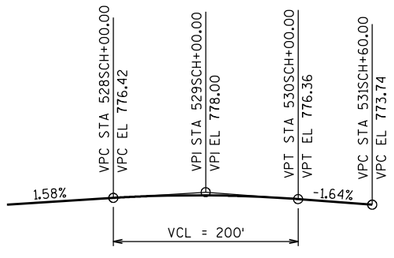
SOIL REINFORCEMENT MAY BE PLACED UP TO A MAXIMUM OF 15° FROM PERPENDICULAR IF NECESSARY TO AVOID INTERFERENCE WITH ITEMS BEHIND THE WALL. ANGLES GREATER THAN 15° REQUIRE APPROVAL FROM THE BUREAU OF STRUCTURES DESIGN SECTION.

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.



PROFILE GRADE LINE RAMP NSA

℄ 'NSA'



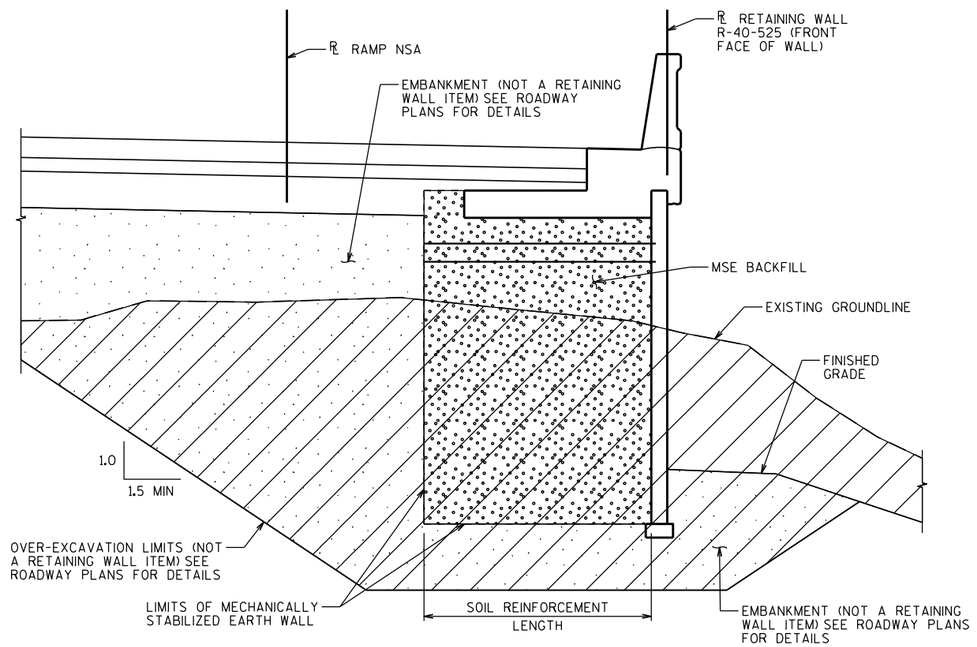
PROFILE GRADE LINE SCHLINGER AVE.

℄ 'SCH'

HORIZONTAL CURVE DATA

WALL CURVE 1

P.I. = 17+53.40
X: 572218.03
Y: 293902.51
Δ = 1°15'04" RIGHT
D = 1°08'57"
T = 54.44'
L = 108.87'
R = 4986.05'
P.C. = 16+98.97
X: 572205.11
Y: 293849.63
P.T. = 18+07.83
X: 572232.11
Y: 293955.10



WALL EXCAVATION LIMITS DIAGRAM

(LOOKING NORTH)

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"

NOTE:

REFER TO THE EARTHWORK SUMMARY OF THE MISCELLANEOUS QUANTITIES IN THE ROADWAY PLANS FOR THE CALCULATED WALL EXCAVATION VOLUME.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

GENERAL NOTES

SHEET 3 OF 16

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\R-40-525\cds\080103_gn.dgn
PLOT DATE : 06-JUN-2013 11:04
PLOT BY : MSCJJO
PLOT NAME : 080103_gn
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-78

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	SEGMENT A	SEGMENT B	SEGMENT C	SEGMENT D	TOTAL
502.3200	PROTECTIVE SURFACE TREATMENT	SY	206	-	-	-	206
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	171	-	-	-	171
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	25,940	-	-	-	25,940
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	12	2	1	2	17
517.1050.S.0002	ARCHITECTURAL SURFACE TREATMENT R-40-525	SF	5,435	440	715	215	6,805
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	-	-	-	55	55
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	288	20	49	10	367
652.0225	CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	LF	565	-	-	-	565
652.0405	CONDUIT REINFORCED THERMOSETTING RESIN 2-INCH	LF	10	-	-	-	10
653.0222	JUNCTION BOXES 18 X 12 X 6-INCH	EACH	1	-	-	-	1
SPV.0060.4150	ANCHOR SLAB INLET COVER SPECIAL	EACH	2	-	-	-	2
SPV.0165.4710	WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	5,435	440	715	215	6,805
SPV.0165.4730	TEMPORARY WALL WIRE FACED MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	SF	150	-	-	730	880
	NON-BID ITEM						
	PREFORMED JOINT FILLER	SIZE					3/4", 2"
	CORK FILLER	SIZE					1"
	NON-BITUMINOUS JOINT FILLER	SIZE					3/4", 1"
	EXPANDED POLYSTYRENE	SIZE					1"

ALL ITEMS ARE CATEGORY 3010

DESIGN DATA

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

◥ 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)
RETAINED MSE WALL FILL *	120	30	0	30	0
GRANULAR FILL	120	34	0	34	0
MEDIUM STIFF CLAY	115	0	700	24	0
STIFF CLAY	135	0	2000	32	100
VERY STIFF CLAY	140	0	2500	32	100
HARD CLAY	140	0	4500	34	200

* DESIGN WALL FOR THESE VALUES

WALL EXTERNAL STABILITY EVALUATION

DIMENSIONS	EVALUATED LOCATIONS			
WALL HEIGHT (FEET)	18.4	23.6	14.4	23.5
EXPOSED WALL HEIGHT (FEET)	16.4	21.6	12.9	22.0
◥ MINIMUM LENGTH OF REINFORCEMENT (FEET)	13.0	16.2	12.3	16.5
WALL STATION (℄ R-40-525)	18+10	19+41.2	20+05.4	20+62.6
BORING USED	SR-44 CPT-7 CPT-9	SR-44 CPT-6 CPT-7	SB-18	SB-18
CAPACITY TO DEMAND RATIO (CDR)				
SLIDING	1.44	1.49	1.01	1.31
ECCENTRICITY	1.21	1.26	1.51	1.10
BEARING	2.34	2.36	2.95	2.32
GLOBAL STABILITY	1.03	1.25	1.16	1.24

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE R-40-525

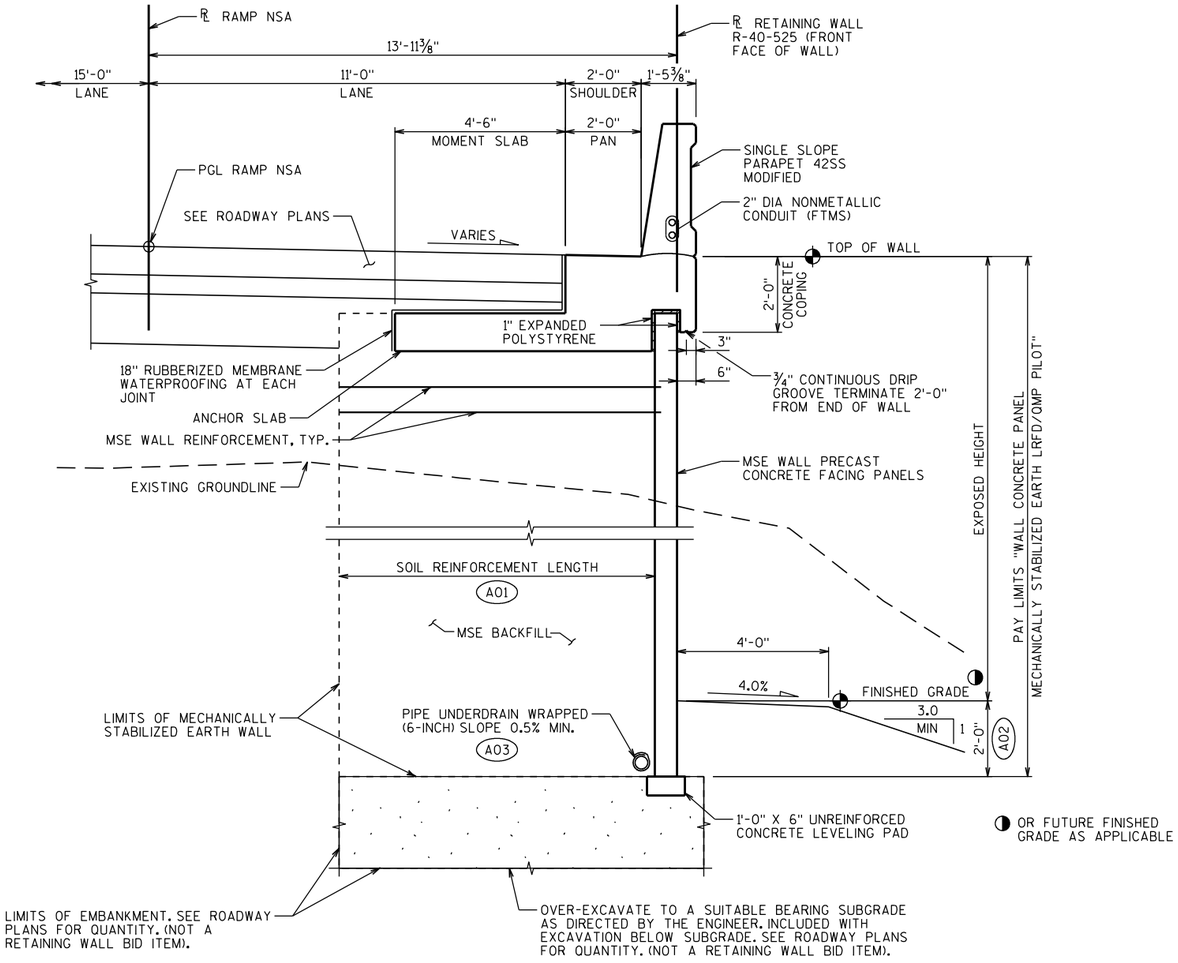
DRAWN BY JJO | PLANS CK'D. JWC

QUANTITIES & DESIGN DATA

SHEET 4 OF 16

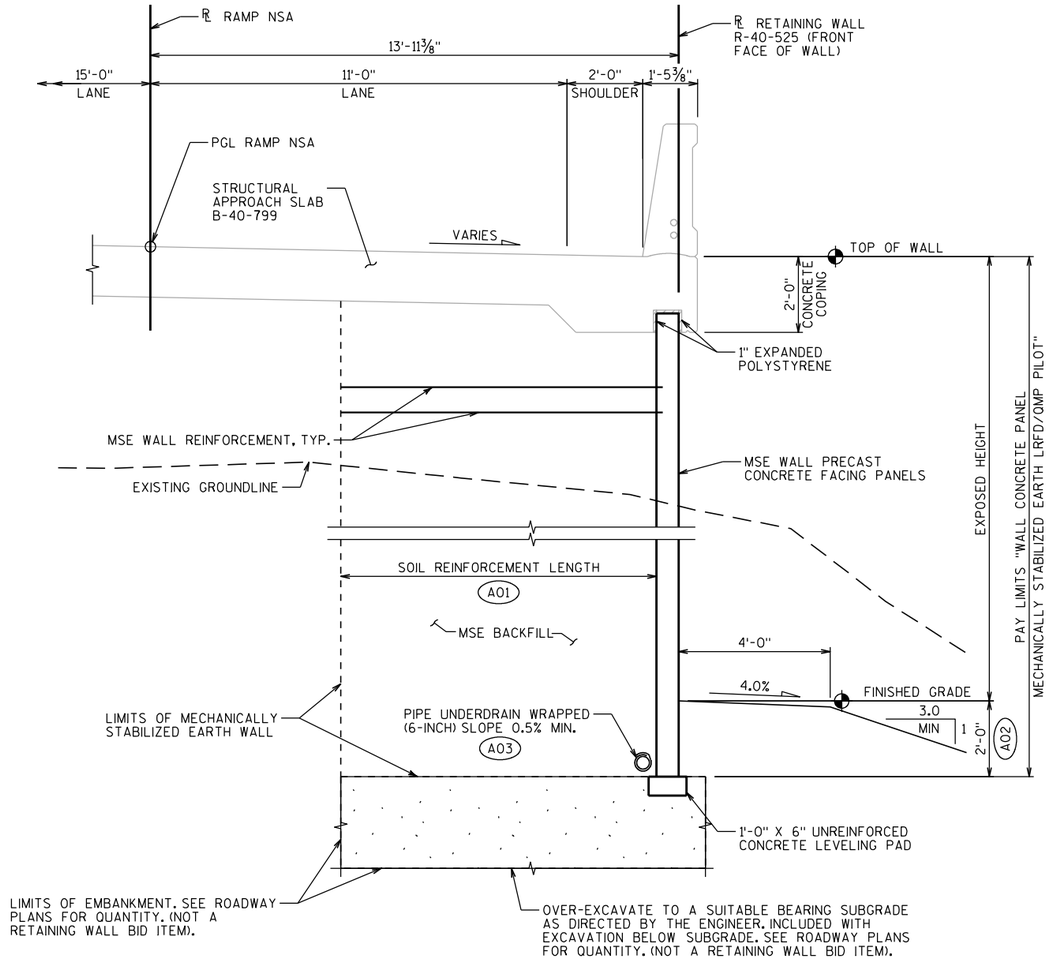
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STATE PROJECT NUMBER
1060-33-78



TYPICAL SECTION - SEGMENT A

LOOKING NORTH - STA 16+98.97 TO STA 19+86.18



TYPICAL SECTION - SEGMENT B

LOOKING NORTH - STA 19+86.18 TO STA 20+05.40

LEGEND

(A01) 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.

(A02) MINIMUM DIMENSION FROM FINISHED GRADE, OR FUTURE FINISHED GRADE AS APPLICABLE, AT FRONT FACE OF WALL TO TOP OF LEVELING PAD SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

(A03) CONNECT PIPE UNDERDRAIN WRAPPED TO MANHOLE TL419 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". 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

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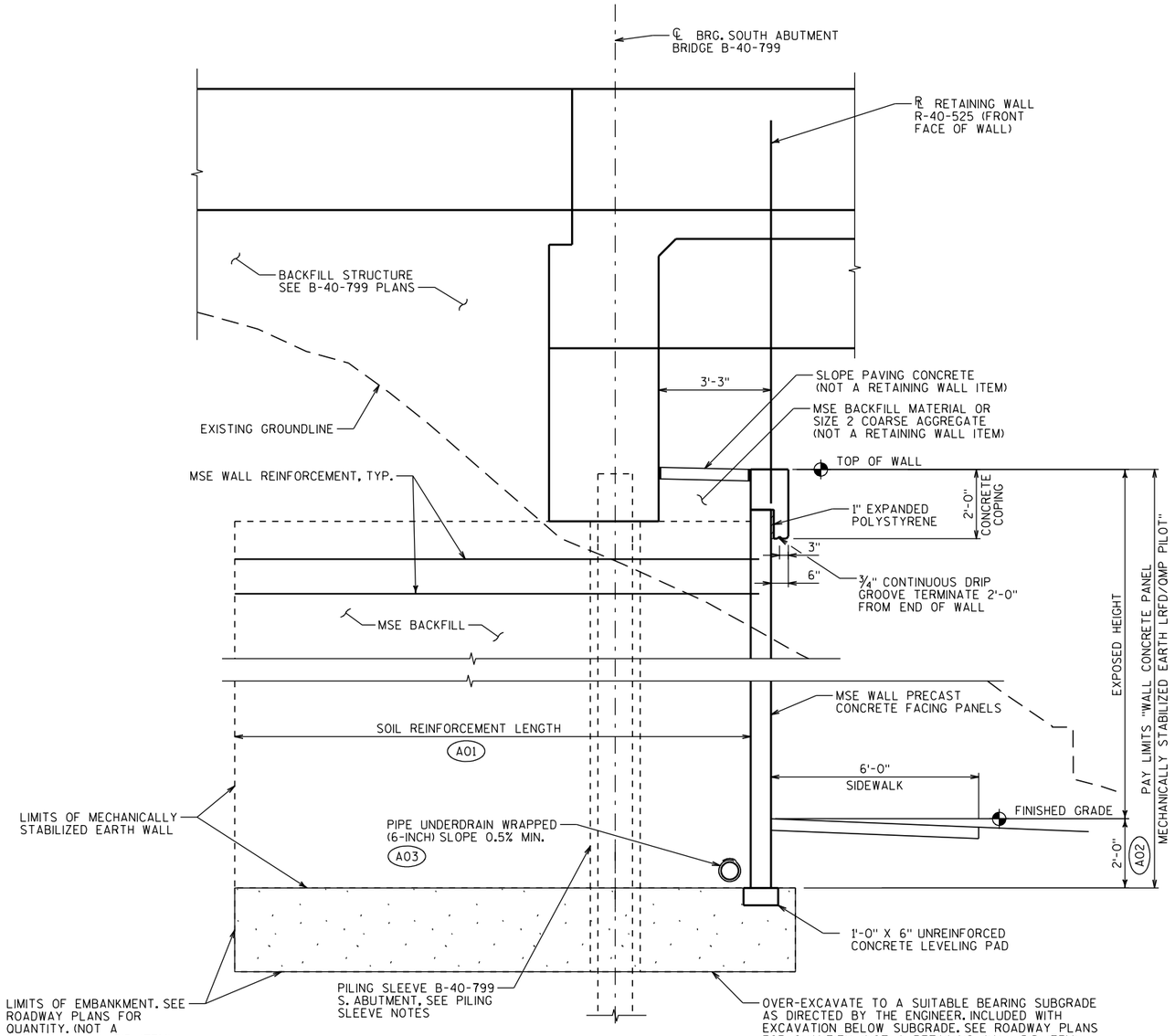
TYPICAL SECTIONS 1

SHEET 5 OF 16

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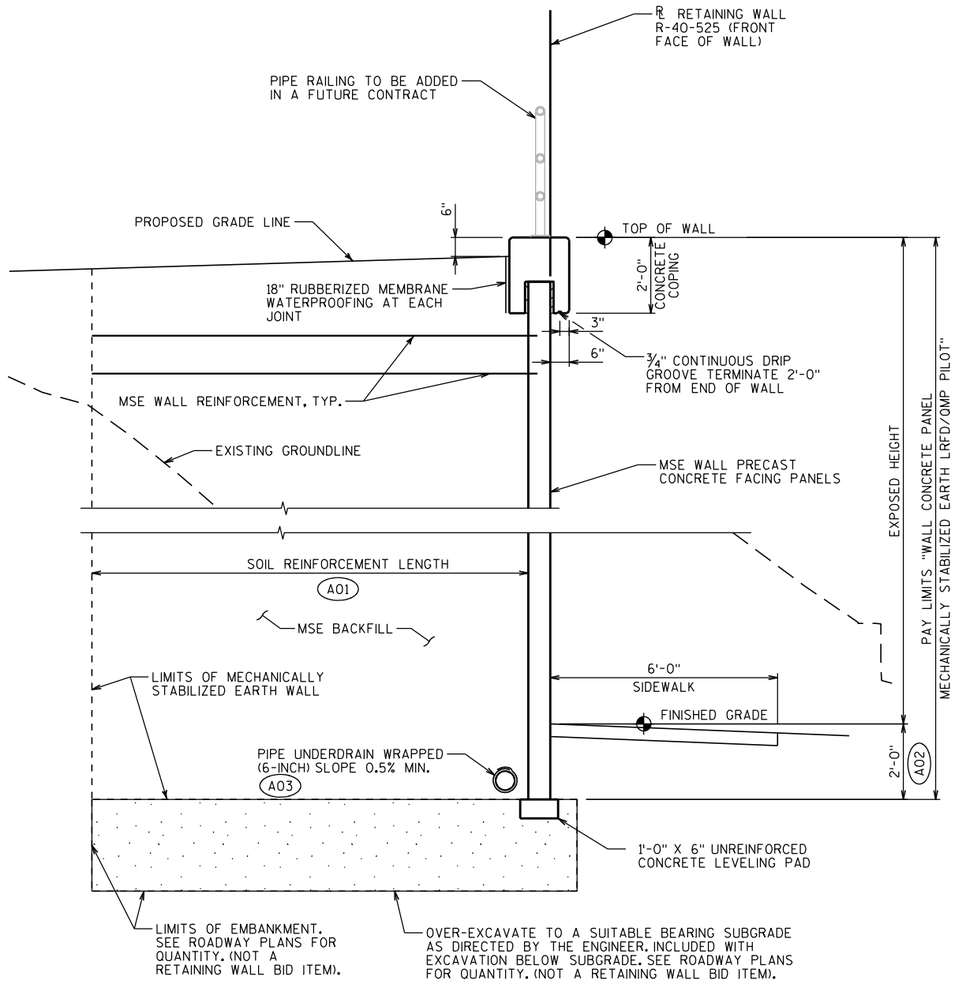
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TYPICAL SECTION - SEGMENT C

LOOKING WEST - STA. 20+05.40 TO STA. 20+53.51



TYPICAL SECTION - SEGMENT D

LOOKING WEST - STA. 20+53.51 TO STA. 20+62.62

PILING SLEEVE NOTES

1. COORDINATE SLEEVE LOCATIONS WITH BRIDGE B-40-799 PLANS.
2. PILING SLEEVES TO BE PAID FOR UNDER CORRESPONDING BRIDGE.
3. SLEEVES SHALL BE PLACED FROM LOWER LIMITS OF OVER-EXCAVATION TO BOTTOM OF ABUTMENT.
4. SLEEVES SHALL BE PLACED BEFORE BACKFILL IS STARTED AND SHALL BE ADEQUATELY BRACED TO MAINTAIN POSITION WITHIN ± 2" AS BACKFILL PROCEEDS.
5. INSTALLATION ELEVATION AT BOTTOM OF OVER-EXCAVATION VARIES. SEE ROADWAY PLANS FOR ASSUMED ELEVATIONS.

LEGEND

(A01) 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.

(A02) MINIMUM DIMENSION FROM FINISHED GRADE AT FRONT FACE OF WALL TO TOP OF LEVELING PAD SHOWN. COORDINATE CONSTRUCTION OF THE LEVELING PAD WITH THE WALL PANEL FABRICATOR. PAY LIMITS BASED ON MINIMUM DIMENSION.

(A03) CONNECT PIPE UNDERDRAIN WRAPPED TO MANHOLE TL419 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". 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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE R-40-525

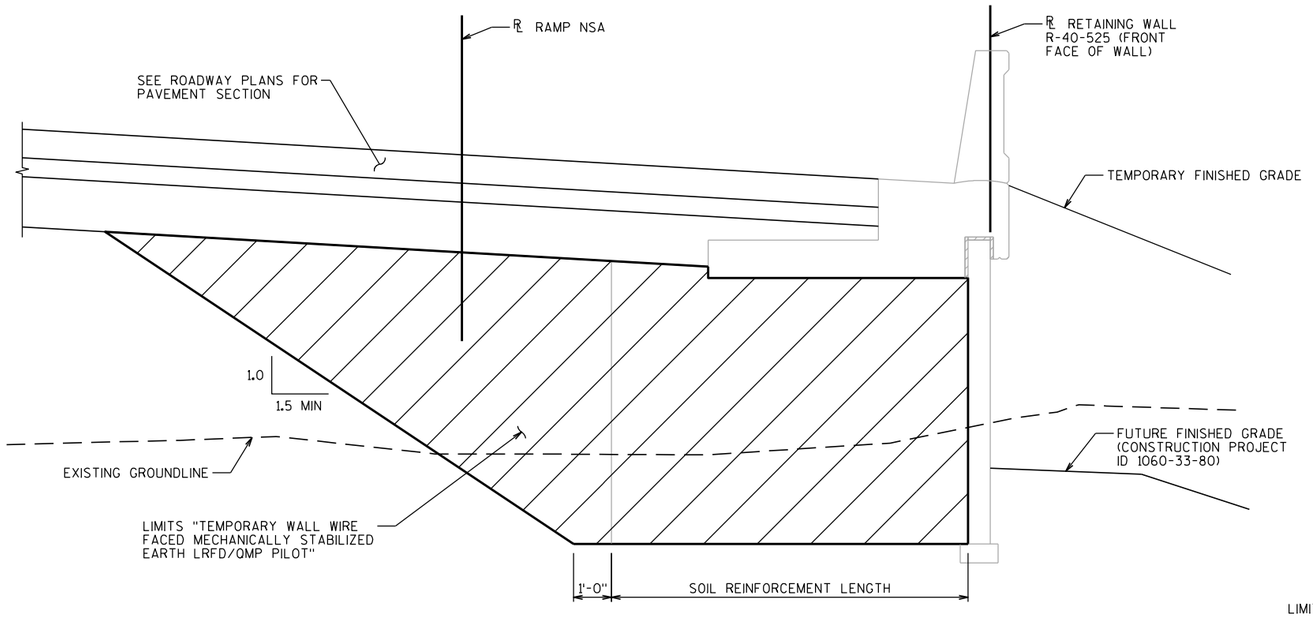
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TYPICAL SECTIONS 2

SHEET 6 OF 16

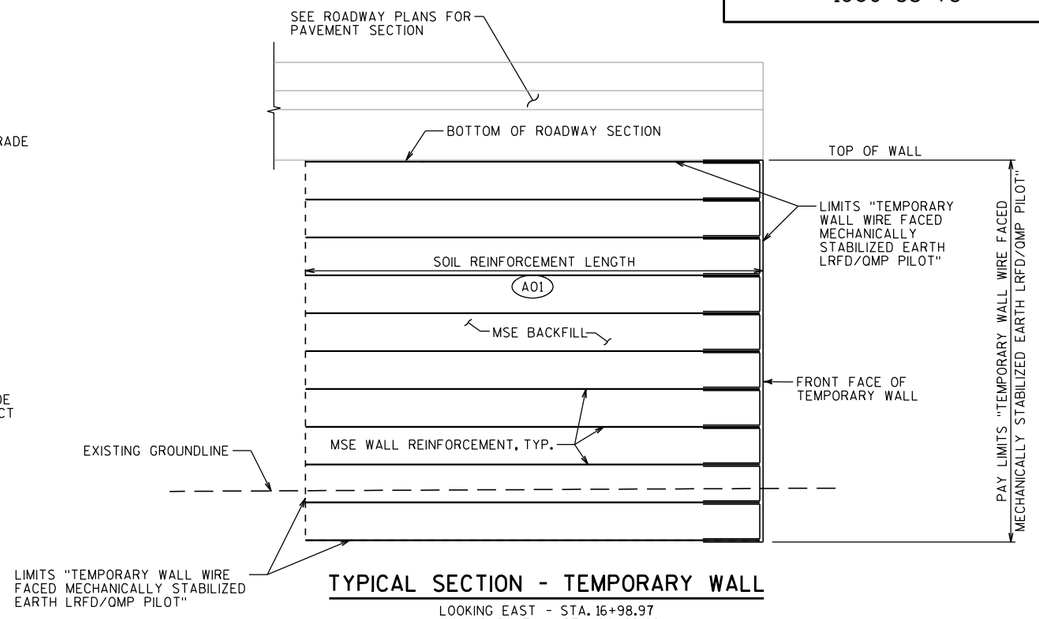
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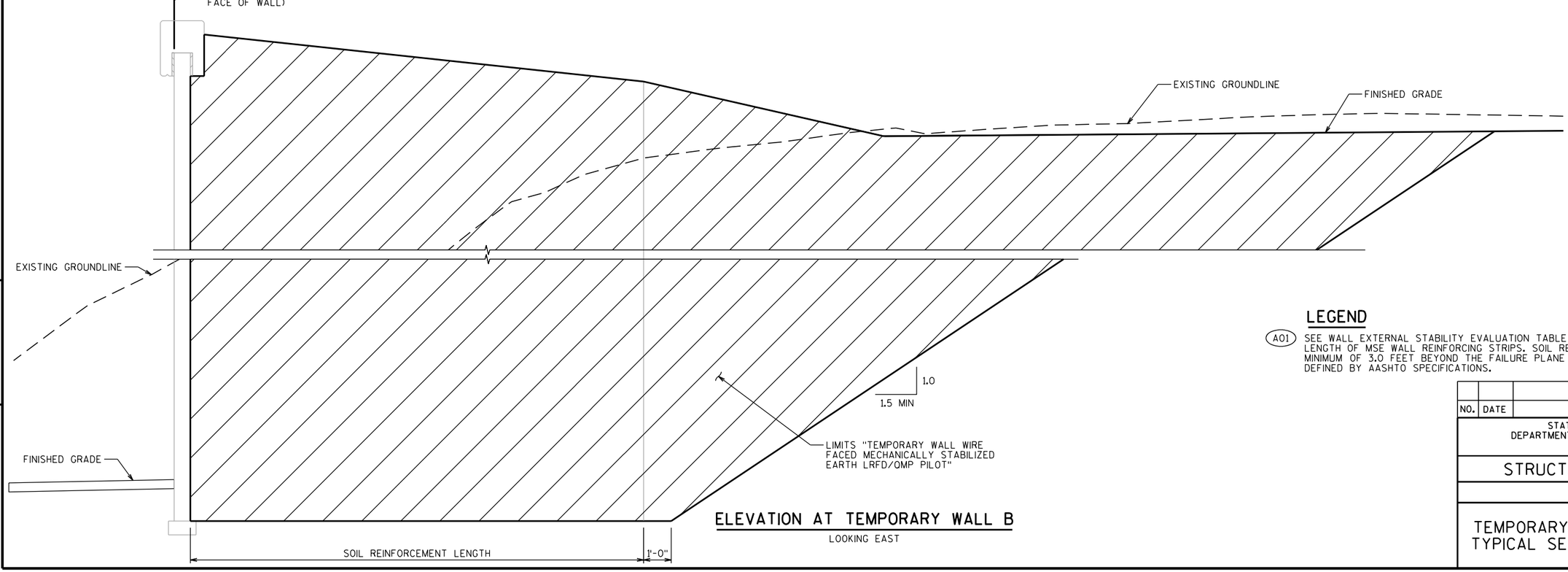
ELEVATION AT TEMPORARY WALL A

LOOKING NORTH



TYPICAL SECTION - TEMPORARY WALL

LOOKING EAST - STA. 16+98.97
LOOKING SOUTH - STA. 20+62.62



ELEVATION AT TEMPORARY WALL B

LOOKING EAST

LEGEND

(A01) 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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STRUCTURE R-40-525

DRAWN BY	JJO	PLANS CK'D.	JWC

TEMPORARY WALL TYPICAL SECTIONs

SHEET 7 OF 16

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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
16+98.97	795.22	787.42	788.83
17+07.58	795.23	786.89	789.07
17+16.18	795.24	786.37	789.31
17+31.18	795.28	785.34	789.42
17+46.18	795.32	784.25	789.55
17+61.18	795.37	783.05	789.68
17+76.18	795.46	781.83	789.70
17+91.18	795.60	780.58	789.69
18+06.18	795.73	779.45	789.73
18+21.18	795.86	778.39	789.65
18+36.18	795.97	777.48	789.33
18+51.18	796.06	776.64	789.52
18+66.18	796.14	775.97	789.15
18+81.18	796.20	775.40	788.64
18+96.18	796.24	775.01	787.92
19+11.18	796.27	774.76	787.57
19+26.18	796.28	774.54	787.90
19+41.18	796.25	774.45	787.60
19+56.18	796.14	774.45	785.02
19+71.18	796.01	774.45	783.31
19+86.18	795.87	774.45	779.59

SEGMENT B WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
19+86.18	795.87	774.45	779.59
19+95.79	795.77	774.45	777.60
20+05.40	795.66	774.45	776.00

SEGMENT C WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
20+05.40	787.50	774.45	776.00
20+12.62	787.50	774.45	774.88
20+17.62	787.50	774.54	775.05
20+27.62	787.50	774.70	775.39
20+37.62	787.50	774.86	775.58
20+47.62	787.50	775.03	775.75
20+53.51	787.50	775.13	775.87

SEGMENT D WALL ELEVATIONS ◪

STATION	TOP OF WALL EL	FINISHED GRADE EL	EXISTING GROUND EL
20+53.51	794.97	775.13	775.87
20+62.62	797.79	775.27	776.07

LEGEND

◪ LINEARLY INTERPOLATE WALL ELEVATIONS BETWEEN STATIONS.

BILL OF BARS - SEGMENT A

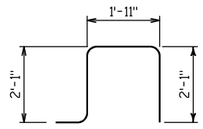
BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	SERIES	LOCATION
A501	X	646	6'- 5"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
A502	X	2	5'- 7"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
A503	X	2	3'- 2"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
A504	X	409	6'- 7"	X		COPING - VERTICAL TIE
A505	X	429	4'- 4"	X		COPING - VERTICAL TIE
A506	X	223	3'- 7"	X		COPING - VERTICAL TIE
A507	X	429	5'- 8"	X		PARAPET & COPING - VERTICAL TIE
A408	X	160	29'-8"			ANCHOR SLAB & COPING - LONGITUDINAL
A409	X	20	16'-10"			ANCHOR SLAB & COPING - LONGITUDINAL
A410	X	40	16'- 4"			ANCHOR SLAB & COPING - LONGITUDINAL
K501	X	16	3'- 2"			ANCHOR SLAB - HORIZONTAL TOP & BOTTOM
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	437	6'- 8"	X		PARAPET - VERTICAL TIE
R802	X	72	29'-8"			PARAPET - LONGITUDINAL
R803	X	8	16'-10"			PARAPET - LONGITUDINAL

NOTES

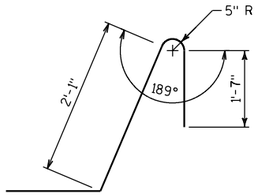
BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES BAR SIZE.

SEE 'INLET DETAILS' SHEET FOR INLET REINFORCEMENT BAR BEND DIAGRAMS.

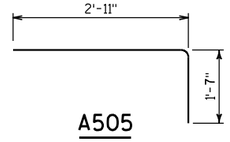
△ LENGTH USED FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



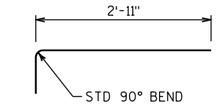
A504



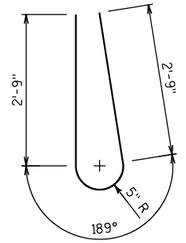
A507



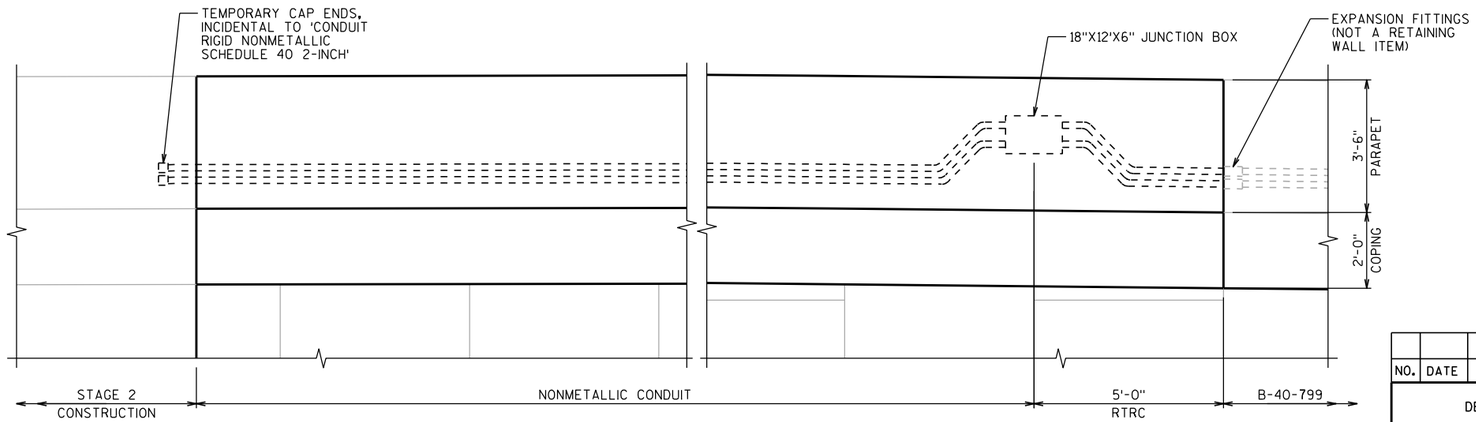
A505



A506



R501



CONDUIT DETAILS

LOOKING AT FACE OF WALL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

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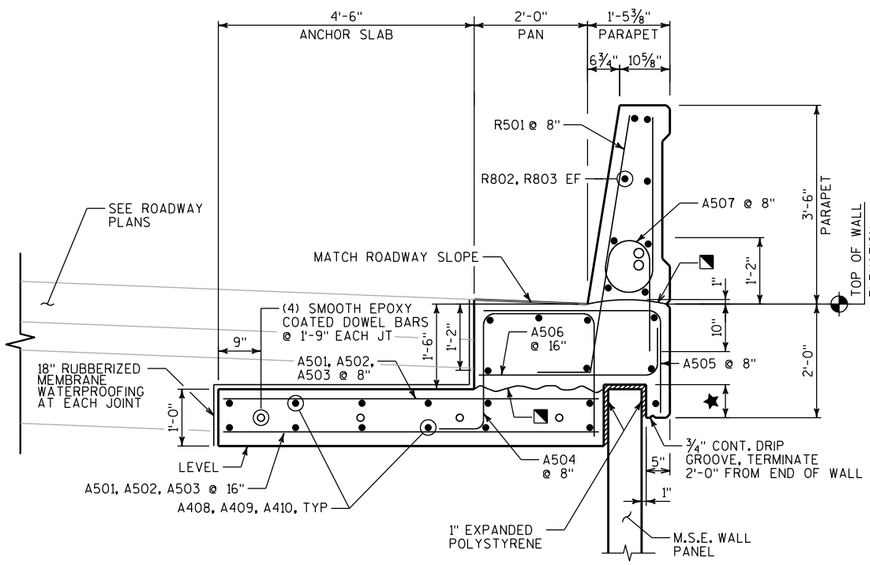
ELEVATION TABLES & REINFORCEMENT SCHEDULE

SHEET 8 OF 16

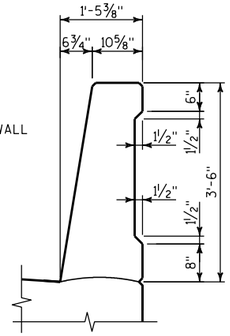
8

8

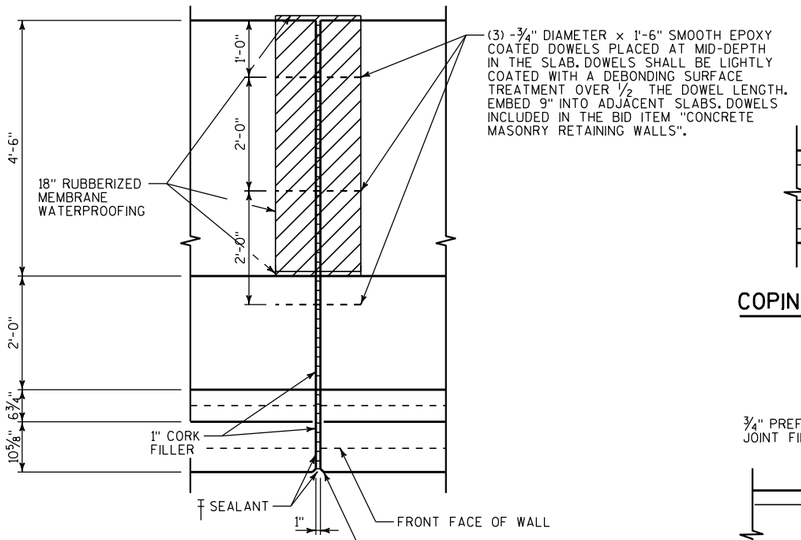
STATE PROJECT NUMBER
1060-33-78



TYPICAL SECTION AT SEGMENT A

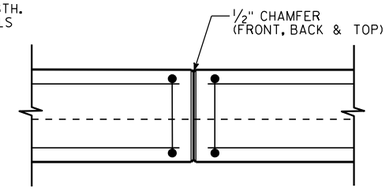


SINGLE SLOPE PARAPET 42SS (MODIFIED) DIMENSIONS



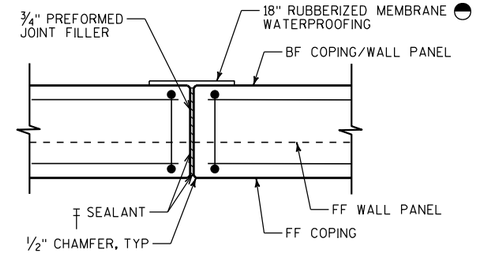
ANCHOR SLAB EXPANSION JOINT SEGMENT A

LOCATE EXPANSION JOINTS OVER WALL JOINTS
DO NOT RUN BAR STEEL THRU JOINT, EXCEPT FOR DOWELS AS SHOWN



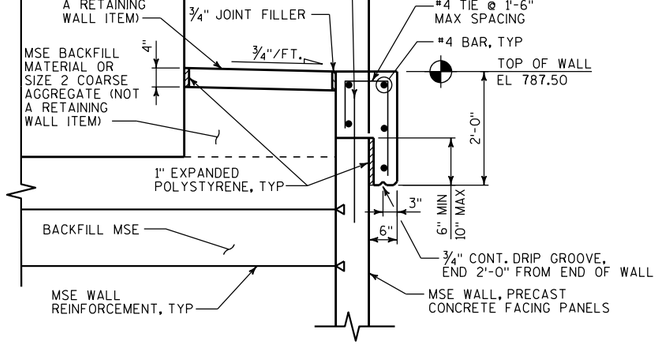
COPING CONTRACTION JOINT SEGMENT C

DO NOT RUN BAR STEEL THRU JOINT. MAX SPACING OF JOINT = 10'
FOR LOCATION OF JOINT, SEE GENERAL PLAN AND ELEVATION SHEETS.

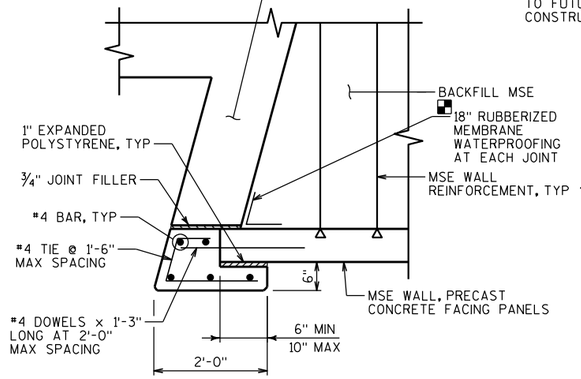


COPING EXPANSION JOINT SEGMENT C

DO NOT RUN BAR STEEL THRU JOINT.
MAX SPACING OF JOINT = 50'
FOR LOCATION OF JOINTS, SEE GENERAL PLAN AND ELEVATION SHEETS.

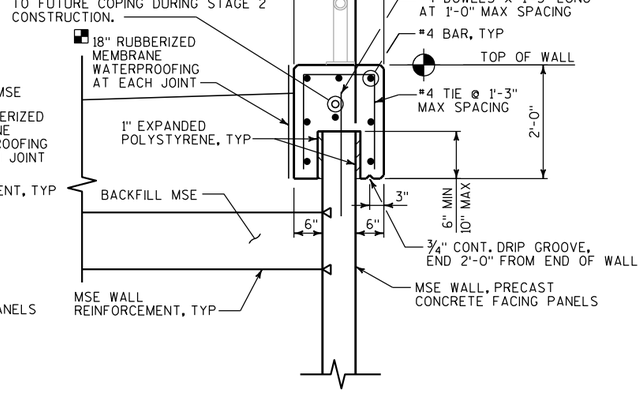


COPING DETAIL AT SEGMENT C

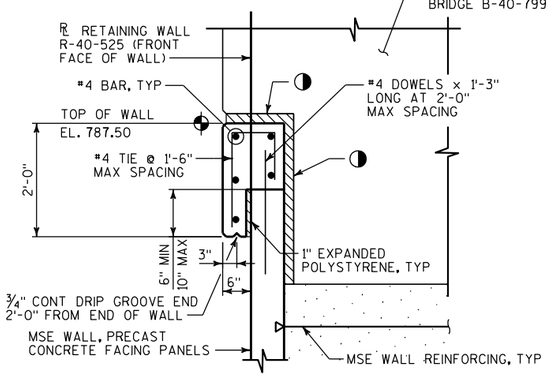


SECTION A-A - VERTICAL COPING

SEE SHEET 'SEGMENTS C & D REINFORCEMENT DETAIL'

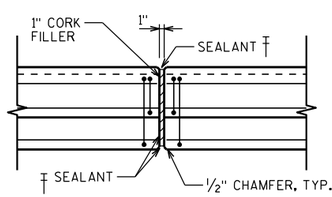


COPING DETAIL AT SEGMENT D



COPING DETAIL THRU ABUTMENT

(SEGMENT C)



PARAPET EXPANSION JOINT

(NO NOT RUN BAR STEEL THRU JOINT)

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.)
- ◑ 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

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

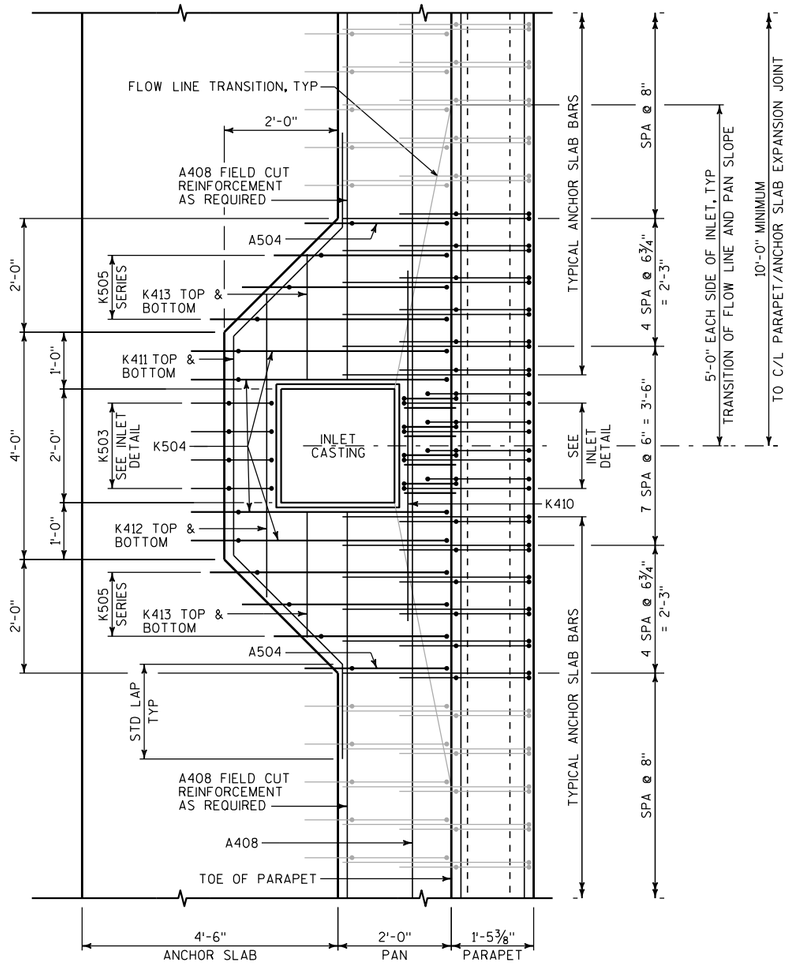
PARAPET, COPING & ANCHOR SLAB DETAILS

SHEET 9 OF 16

8

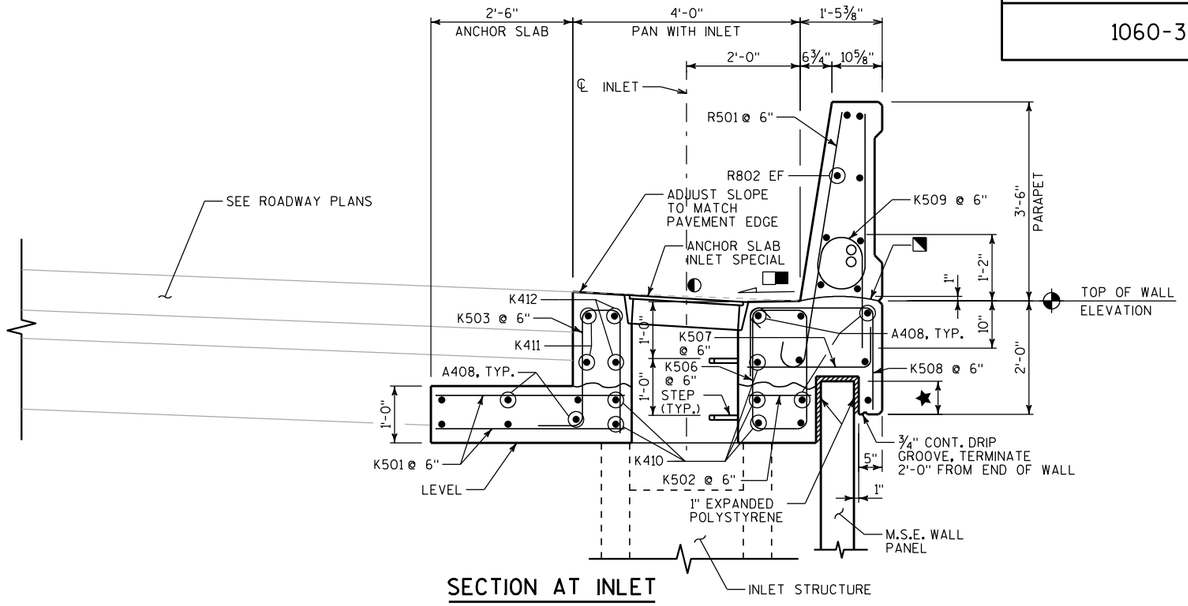
8

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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 SHEET 7 FOR TOTAL BARS REQUIRED FOR EACH SEGMENT.

△ 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
- CONST. JT. STRIKE OFF AS SHOWN AND LEAVE ROUGH
- TO CALCULATE TOP OF WALL ELEVATION, CONTINUE ROADWAY SLOPE TO TOE OF PARAPET

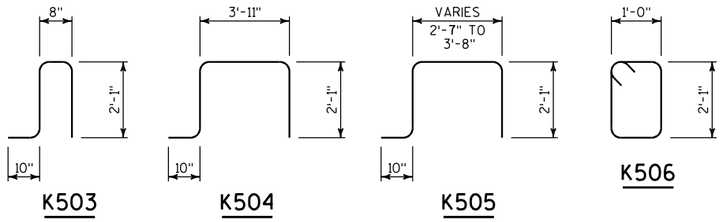
NOTES

DO NOT PLACE THE INLET WITHIN 7'-0" OF THE LIGHT POLE BASE.

LOCATE INLETS 10'-0" AWAY FROM EXPANSION JOINTS.

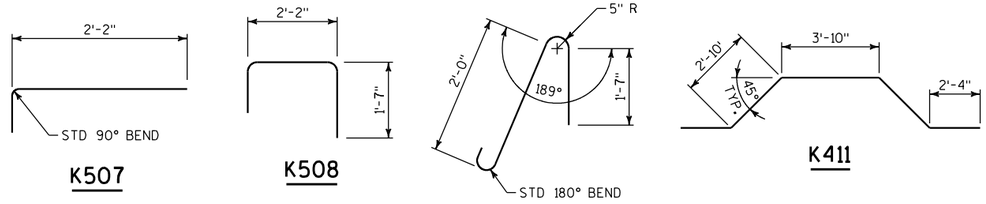
STEP SHALL COMPLY WITH ASTM C-478.

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-40-525

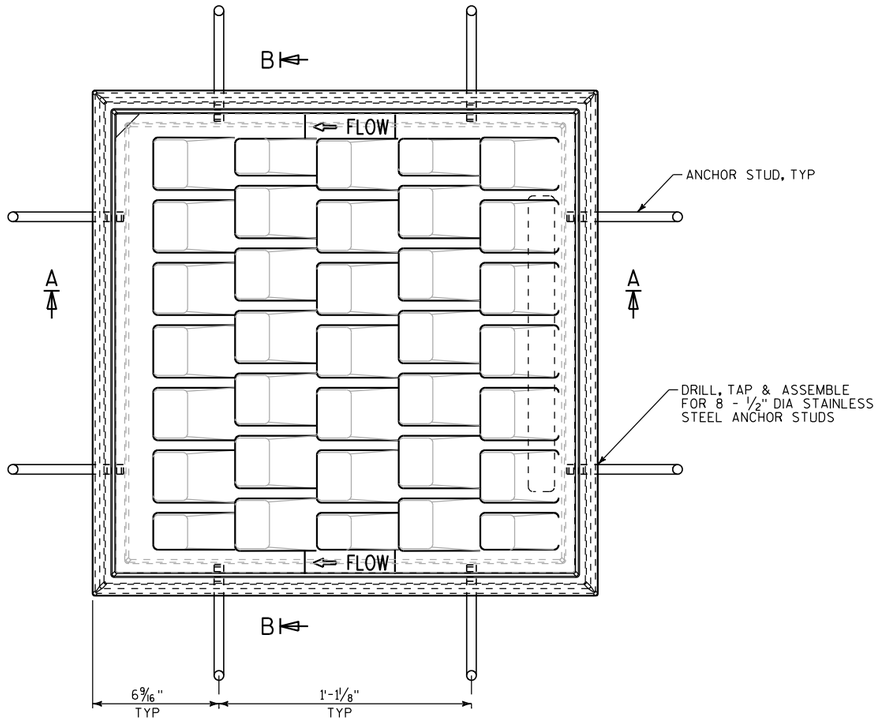
DRAWN BY JJO | PLANS CK'D. JWC

INLET DETAILS

SHEET 10 OF 16

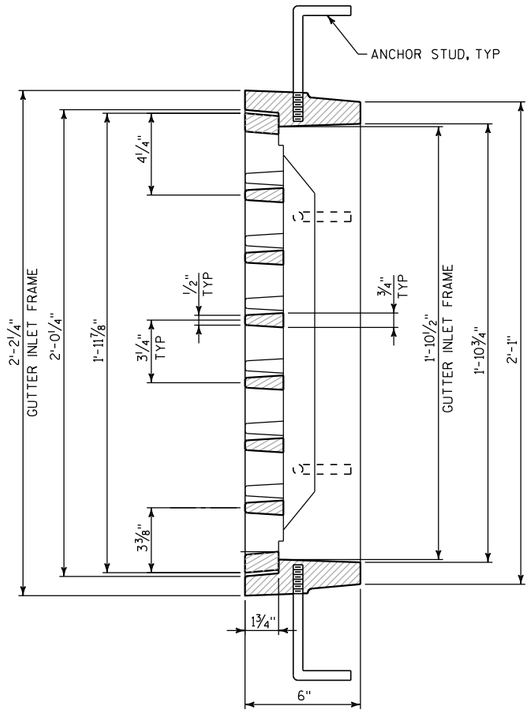
STATE PROJECT NUMBER

1060-33-78

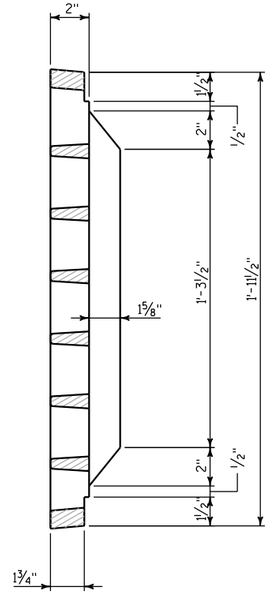


GUTTER INLET FRAME & GRATE TOP

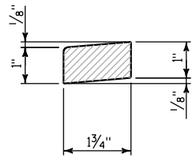
(SEE GENERAL PLAN & ELEVATION SHEET FOR LOCATIONS)



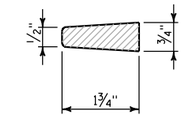
SECTION B-B



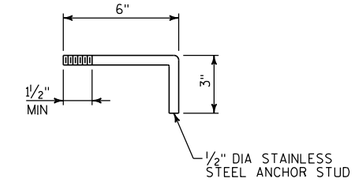
INLET GRATE



SIDE RIB DETAIL

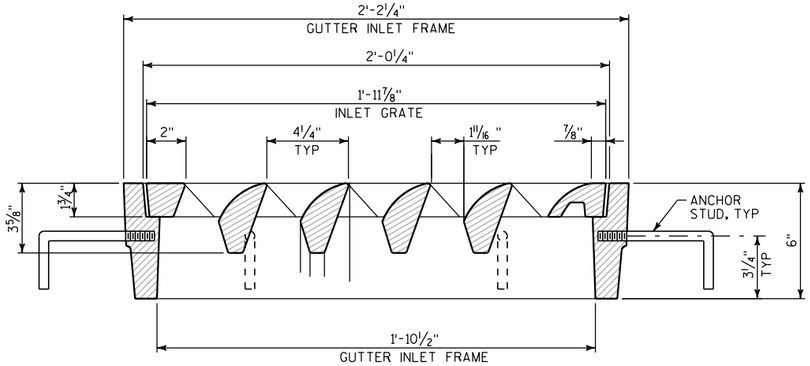


MIDDLE RIB DETAIL

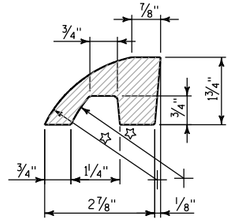


ANCHOR STUD DETAIL

(8 - 1/2" DIA STAINLESS STEEL ANCHOR STUDS REQUIRED)

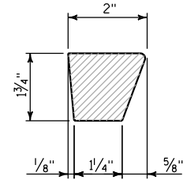


SECTION A-A

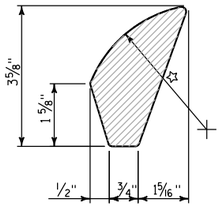


FRONT VANE DETAIL

☆ 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-40-525

DRAWN BY EKM | PLANS CK'D. PJC

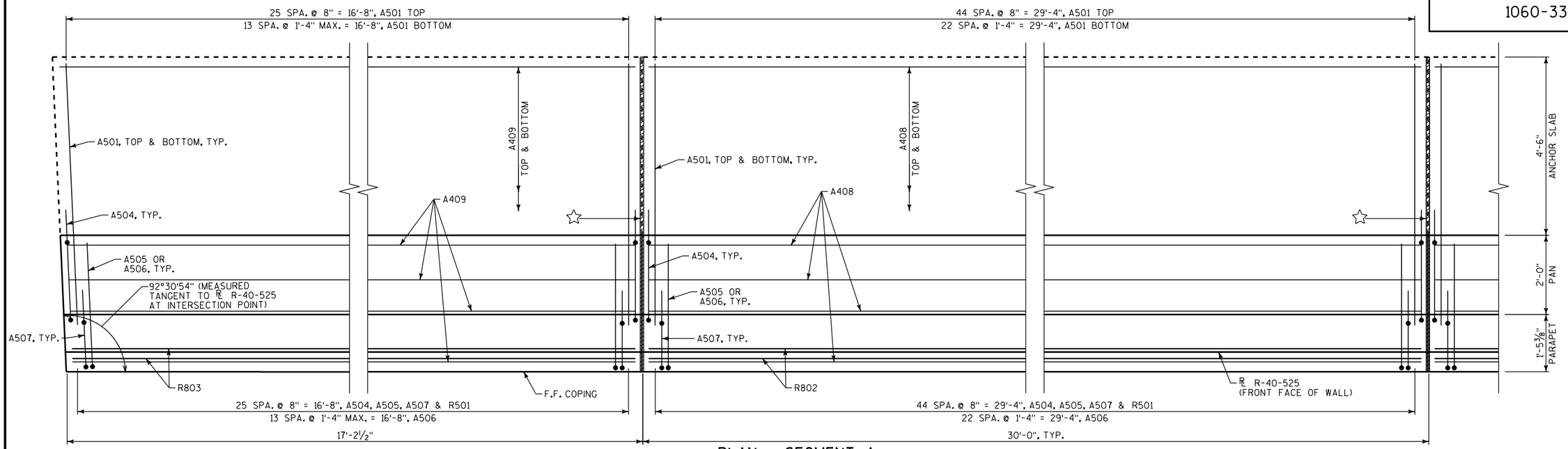
ANCHOR SLAB INLET COVER SPECIAL

SHEET 11 OF 16

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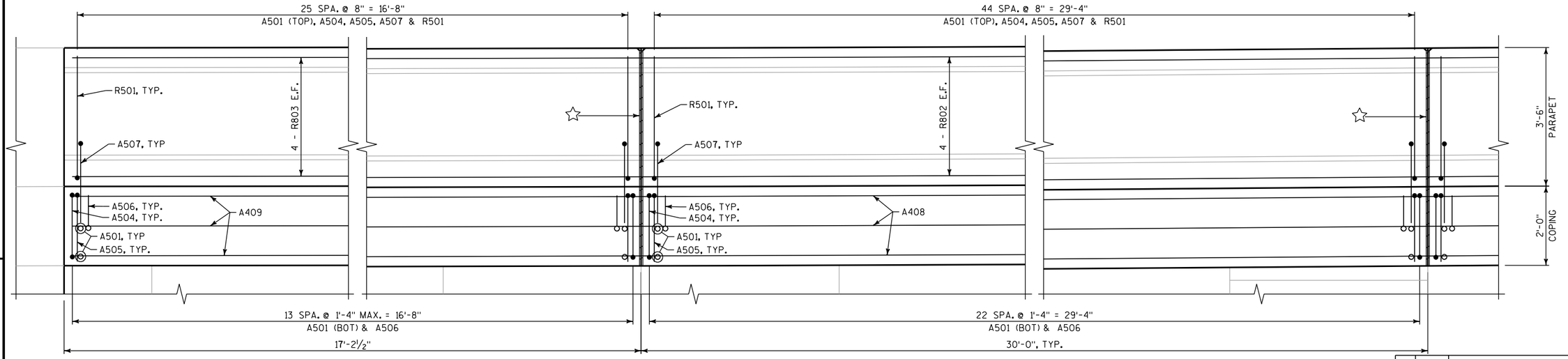
8

STATE PROJECT NUMBER
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PLAN - SEGMENT A

DIMENSIONS ALONG ℄ R-40-525



ELEVATION - SEGMENT A

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ALONG ℄ R-40-525

LEGEND

☆ 1" CORK FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

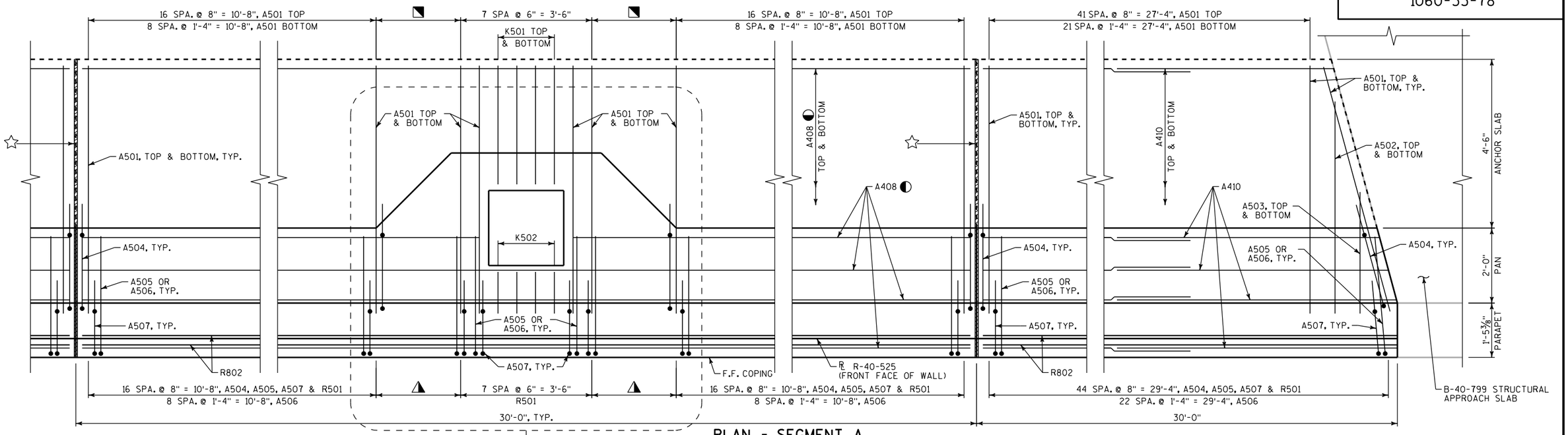
DRAWN BY	JJO	PLANS CK'D.	ENS

SEGMENT A REINFORCEMENT DETAILS (1 OF 2)

SHEET 12 OF 16

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\R-40-525\cds\080305_de.dgn PLOT DATE : 06-JUN-2013 11:05 PLOT BY : MSCJJO PLOT NAME : 080305_de PLOT SCALE : 2.666667:1

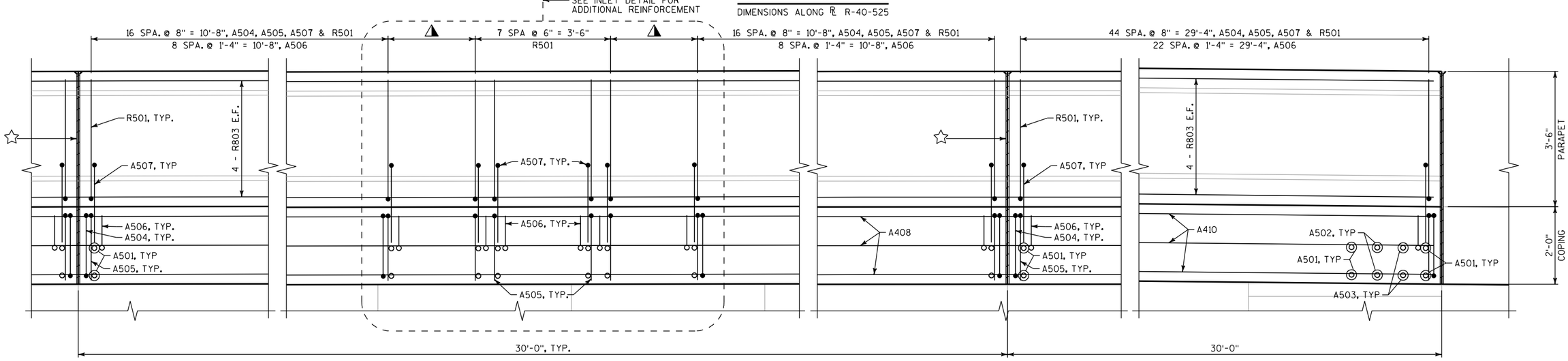
STATE PROJECT NUMBER
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SEE INLET DETAIL FOR ADDITIONAL REINFORCEMENT

PLAN - SEGMENT A

DIMENSIONS ALONG ℄ R-40-525



ELEVATION - SEGMENT A

LOOKING AT FRONT FACE OF WALL
DIMENSIONS ALONG ℄ R-40-525

LEGEND

- ◐ FIELD CUT REINFORCEMENT AS REQUIRED
- ◹ 4 SPA @ 6¾" = 2'-3", A501 TOP
  2 SPA @ 1'-1½" = 2'-3", A501 BOTTOM
- ◭ 4 SPA @ 6¾" = 2'-3", A505, A507 & R501
  2 SPA @ 1'-1½" = 2'-3", A506
- ☆ 1" CORK FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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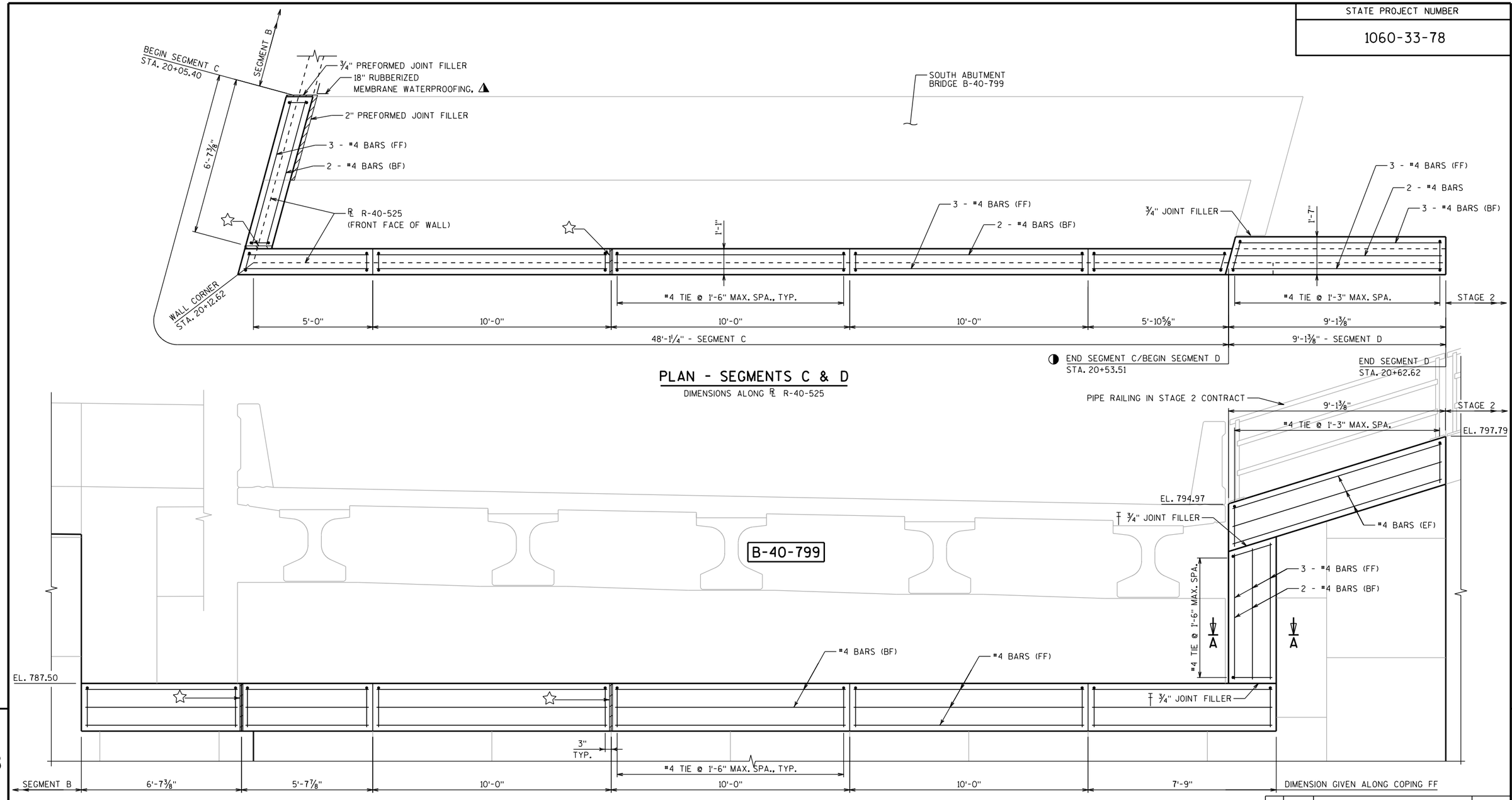
STRUCTURE R-40-525

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SEGMENT A REINFORCEMENT DETAILS (2 OF 2)

SHEET 13 OF 16

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PLAN - SEGMENTS C & D

DIMENSIONS ALONG ℄ R-40-525

ELEVATION - SEGMENTS C & D

LOOKING AT FRONT FACE OF WALL

◑ SEGMENT C INCLUDES ¾" GAP BETWEEN COPING AND BRIDGE PARAPET ON B-40-799.

◭ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BOTTOM OF APPROACH SLAB TO BOTTOM OF COPING.

NOTES

SEE PARAPET, COPING, ANCHOR SLAB & DETAILS SHEET FOR SECTION A-A

LEGEND

∓ NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

◐ SEGMENT C INCLUDES ¾" GAP BETWEEN COPING AND BRIDGE PARAPET ON B-40-799

☆ 1" CORK FILLER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

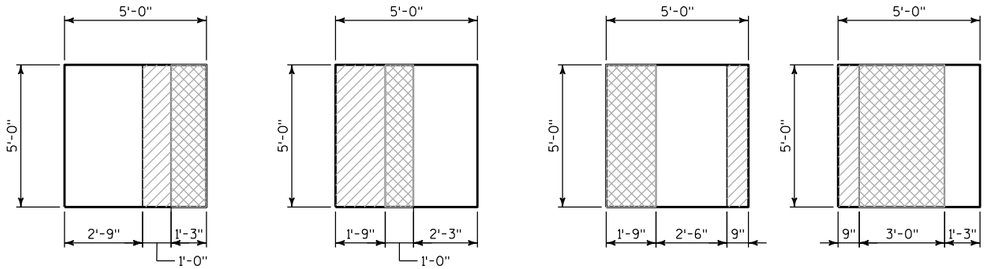
DRAWN BY JJO | PLANS CK'D. JWC

SEGMENTS C & D REINFORCEMENT DETAILS

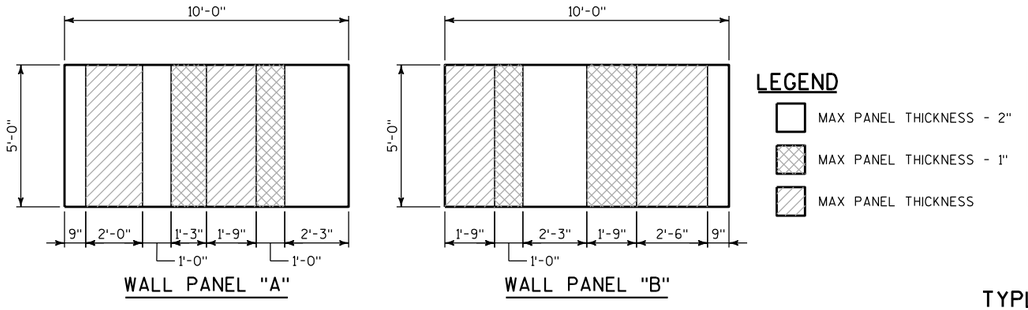
SHEET 14 OF 16

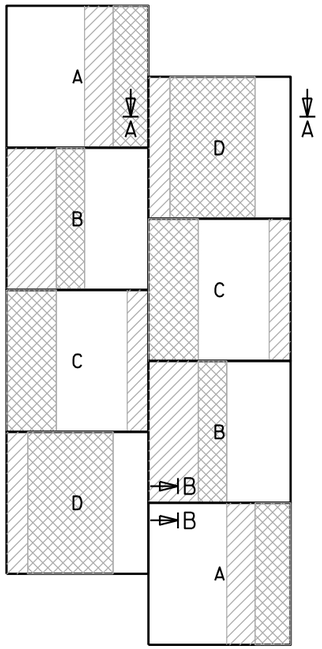
STATE PROJECT NUMBER

1060-33-78



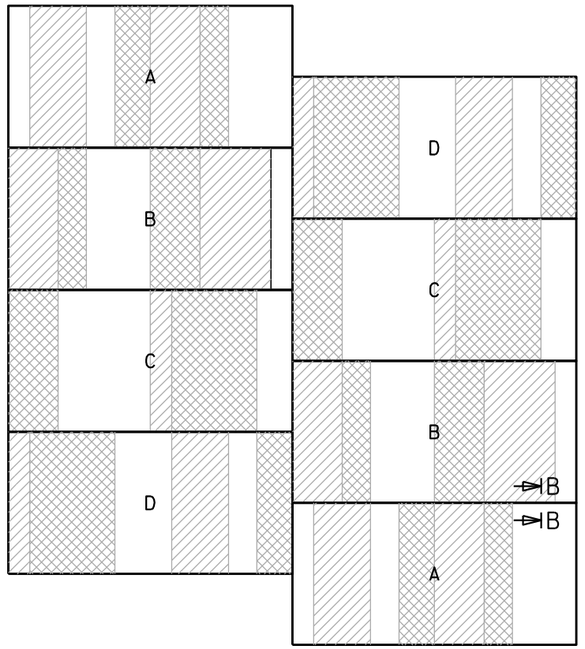
5'-0" X 5'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS





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

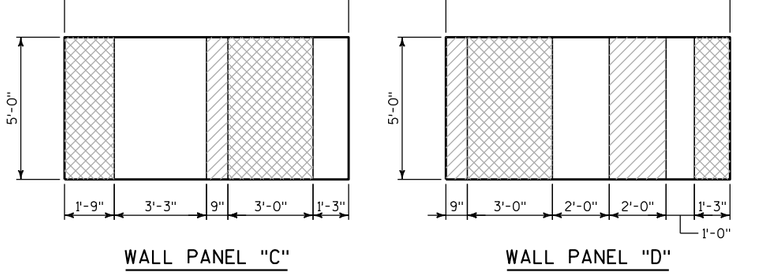
PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 30" VERTICALLY
REPEAT VERTICALLY AS REQUIRED

ARCHITECTURAL SURFACE TREATMENT NOTES:

ARCHITECTURAL SURFACE TREATMENT SHALL EXTEND 1'-0" MINIMUM BELOW FUTURE FINISHED GRADE.

PAY LIMITS FOR BID ITEM "ARCHITECTURAL SURFACE TREATMENT" SHALL BE THE SAME AS THE LIMITS FOR BID ITEM "WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT".

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".



5'-0" X 10'-0" MSE CONCRETE PANEL RAISED SURFACE DETAILS

CONCRETE STAINING SCHEDULE

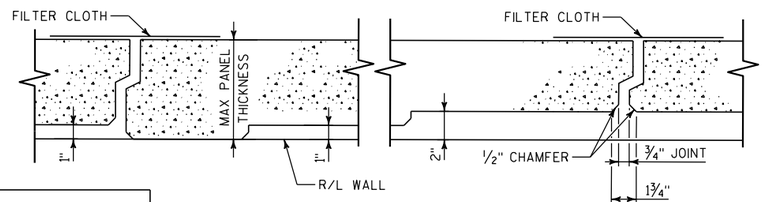
MARK	COLOR	LOCATION	NOTES
A	BASE COLOR	SINGLE SLOPED PARAPETS	EXTERIOR, EXCEPT AS NOTED FOR ACCENT COLORS
		WALLS	EXPOSED FACES TO FINISHED GRADE
		COPING	FACE AND UNDERSIDE
B	ACCENT COLOR 1	SINGLE SLOPED PARAPETS	EXTERIOR, RECESSED PANELS

STAIN COLORS

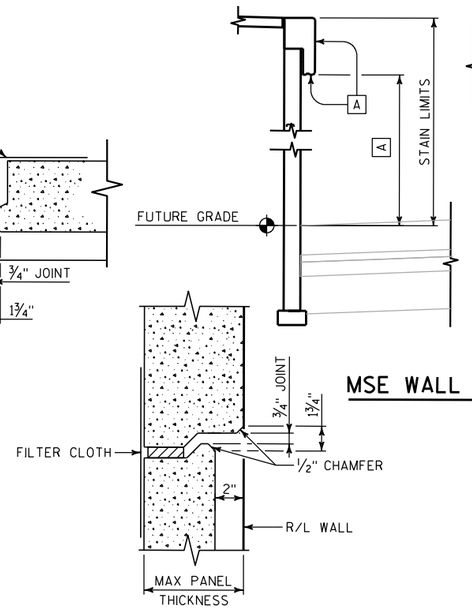
THE FINAL COLOR OF THE CONCRETE FOLLOWING APPLICATION OF THE STAIN SYSTEM SHALL MATCH THE FEDERAL STANDARD COLOR SYSTEM LISTED BELOW:

BASE COLOR - 33564
ACCENT COLOR #1 - 33448

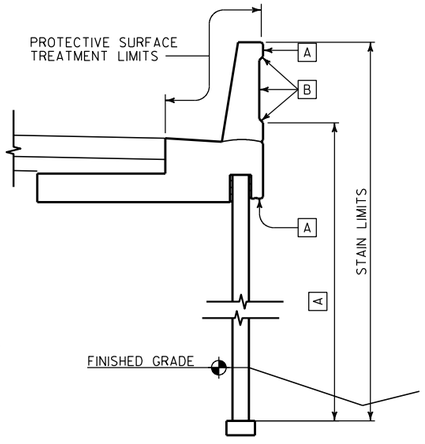
CONCRETE STAINING DETAILS SHOWN ON THIS SHEET ARE FOR INFORMATION ONLY. CONCRETE STAINING IS NOT INCLUDED IN THIS CONTRACT. CONCRETE STAINING WILL BE DONE BY OTHERS UNDER A FUTURE CONTRACT.



SECTION A-A



SECTION B-B



MSE WALL STAINING DIAGRAMS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-525

DRAWN BY JJO | PLANS CK'D. JWC

AESTHETIC WALL TREATMENT DETAILS

SHEET 15 OF 16

8

8

NOTE:

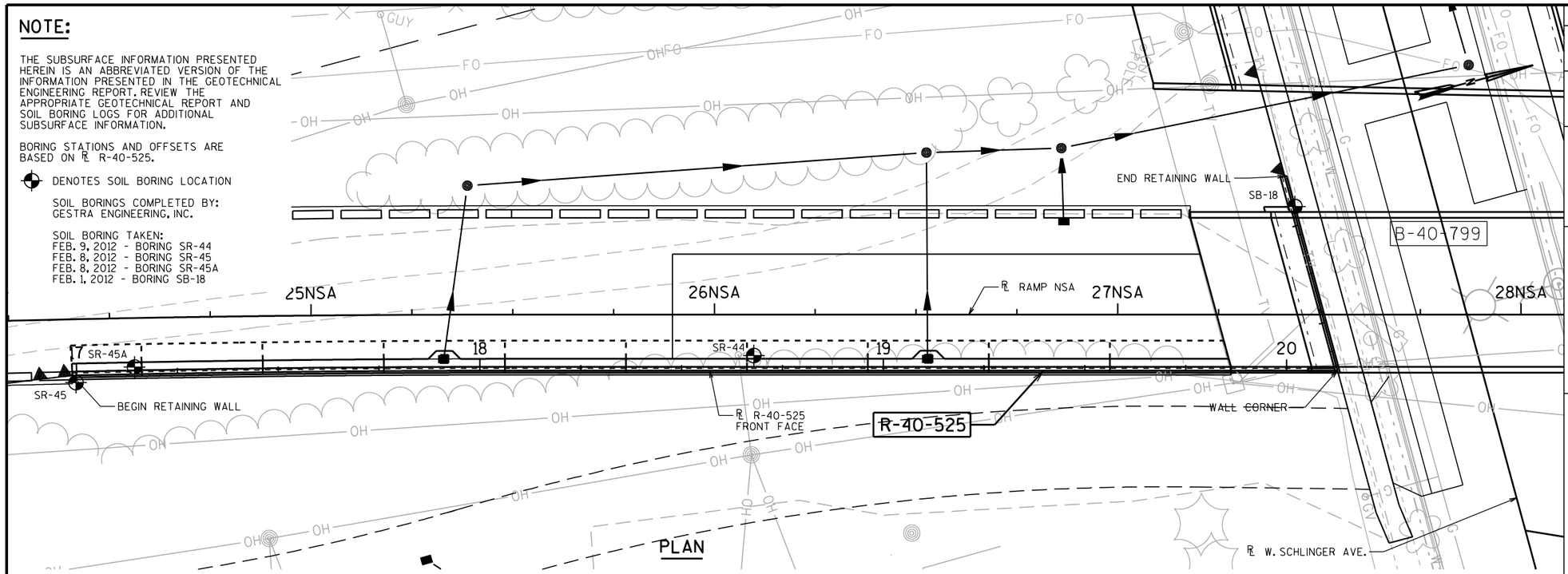
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

BORING STATIONS AND OFFSETS ARE BASED ON ℄ R-40-525.

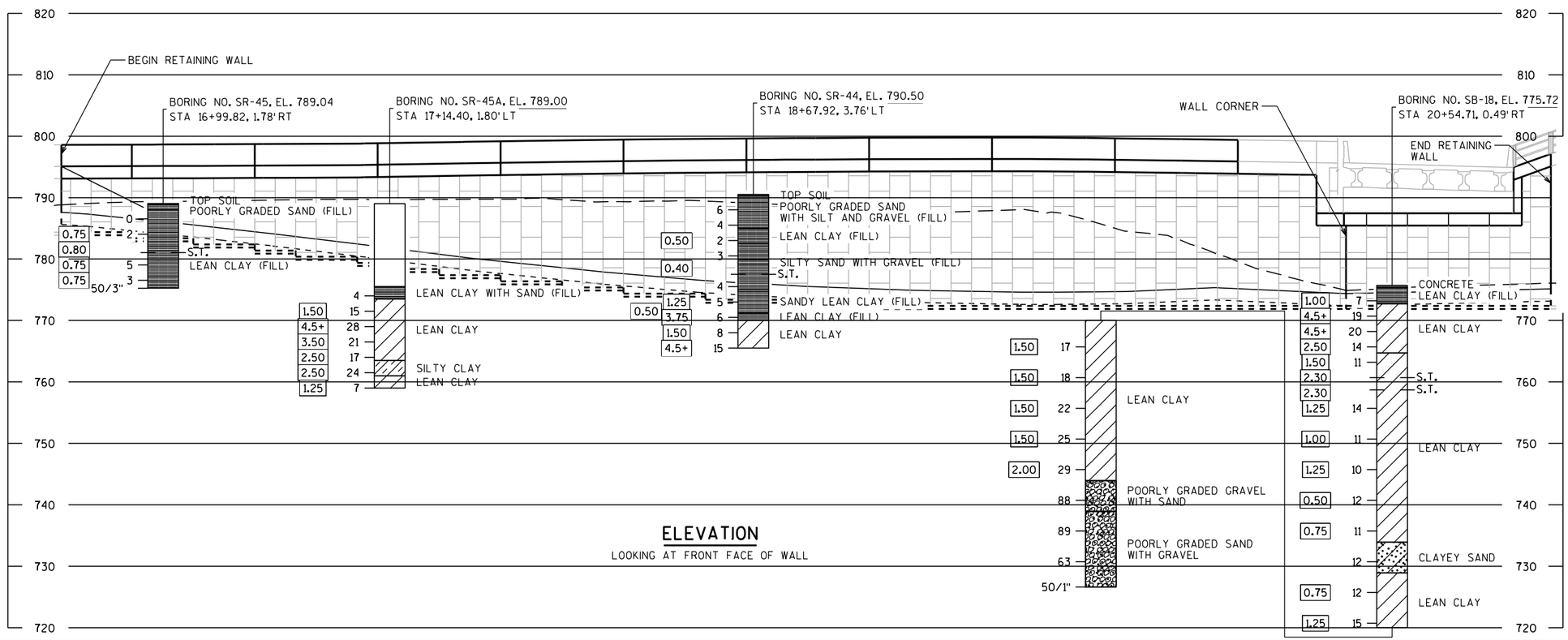
⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORING TAKEN:
FEB. 9, 2012 - BORING SR-44
FEB. 8, 2012 - BORING SR-45
FEB. 8, 2012 - BORING SR-45A
FEB. 1, 2012 - BORING SB-18



PLAN



ELEVATION

LOOKING AT FRONT FACE OF WALL

STATE PROJECT NUMBER

1060-33-78

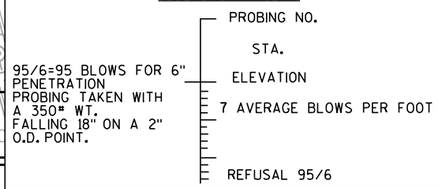
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

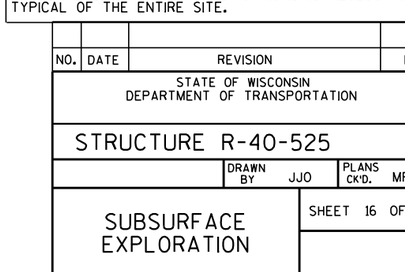
MATERIAL SYMBOLS

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. MPM

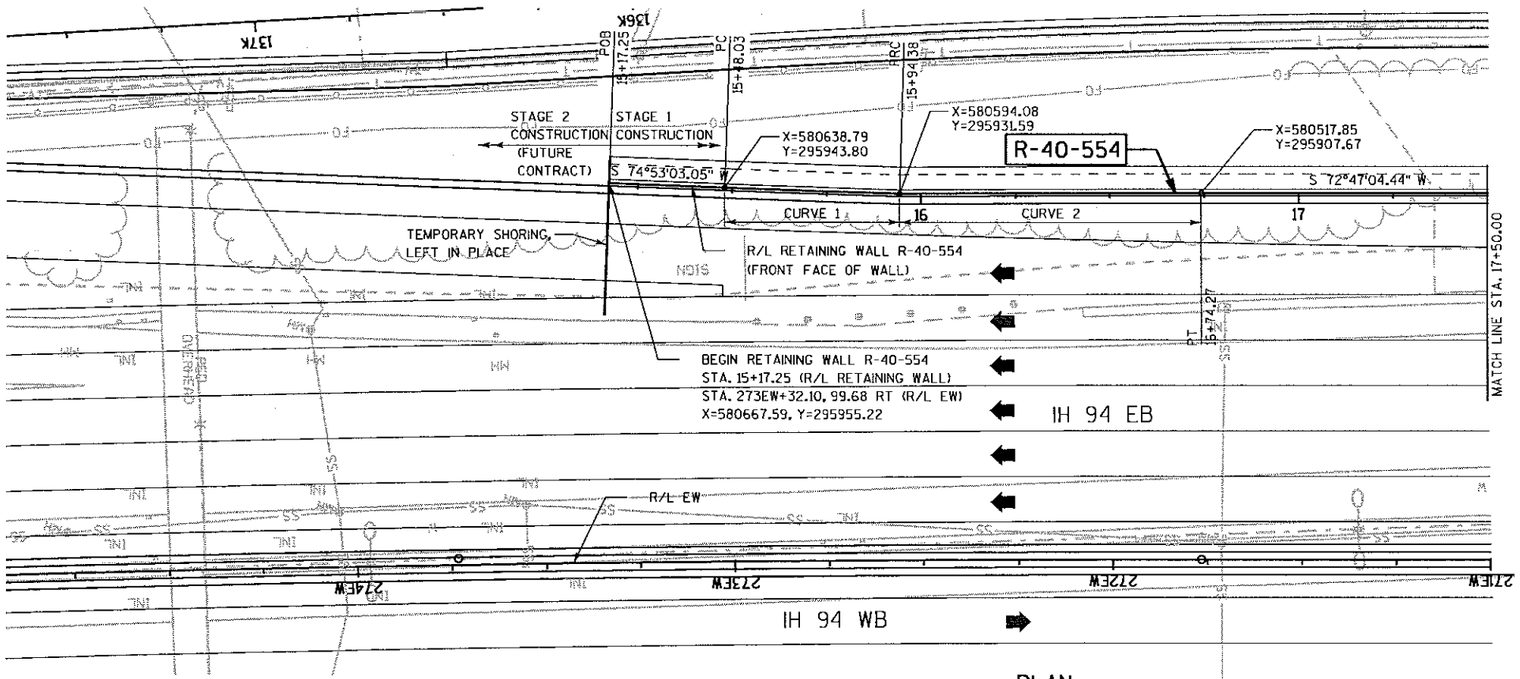
SUBSURFACE EXPLORATION

SHEET 16 OF 16

8

8

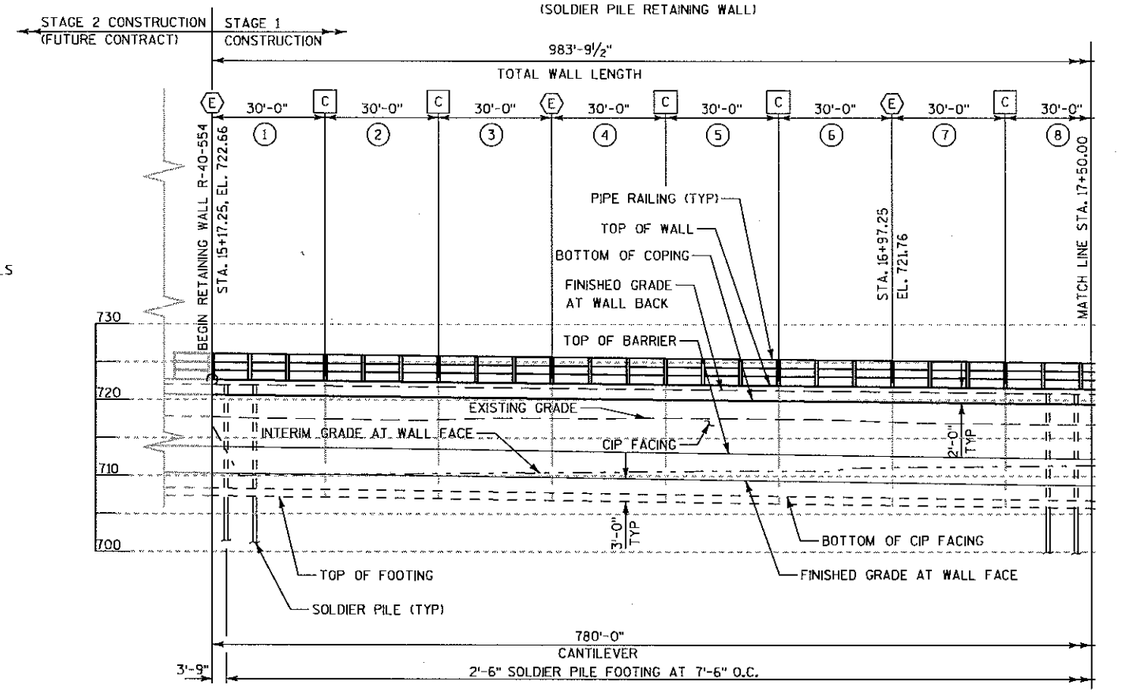
STATE PROJECT NUMBER
1060-33-78



PLAN
(SOLDIER PILE RETAINING WALL)

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION 1 OF 3
2. GENERAL PLAN AND ELEVATION 2 OF 3
3. GENERAL PLAN AND ELEVATION 3 OF 3
4. PROPOSED CONSTRUCTION SEQUENCE
5. GENERAL NOTES, QUANTITIES AND PROFILES
6. TYPICAL WALL SECTIONS 1 OF 3
7. TYPICAL WALL SECTIONS 2 OF 3
8. TYPICAL WALL SECTIONS 3 OF 3
9. WALL AND PILE DATA TABLES 1 OF 2
10. WALL AND PILE DATA TABLES 2 OF 2
11. BILL OF BARS/BAR SERIES TABLE
12. WALL DETAILS 1 OF 2
13. WALL DETAILS 2 OF 2
14. TIEBACK ANCHOR DATA TABLES AND DETAILS
15. TIEBACKS LAYOUT
16. PIPE RAILING DETAILS
17. AESTHETIC WALL TREATMENT DETAILS
18. SUBSURFACE EXPLORATION 1 OF 2
19. SUBSURFACE EXPLORATION 2 OF 2



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, REFERENCE AASHTO STANDARD SPECIFICATIONS TABLE 13.5.1A

HORIZONTAL CURVE DATA

CURVE 1	CURVE 2
PC STA. 15+48.03	PC STA. 15+94.38
X = 580638.79	X = 580594.08
Y = 295943.80	Y = 295931.59
PI STA. 15+71.21	PI STA. 16+34.33
X = 580616.42	X = 580556.01
Y = 295937.76	Y = 295919.49
PRC STA. 15+94.38	PT STA. 16+74.27
X = 580594.08	X = 580517.85
Y = 295931.59	Y = 295907.67
R = 7859.25	R = 11196.75
DELTA = 0°20'16.36"	DELTA = 0°24'31.80"
D = 0°43'44.48"	D = 0°30'42.18"
L = 46.35'	L = 79.89'
T = 23.17'	T = 39.95'
BK = S74°53'03.05"W	BK = S72°22'32.63"W
AH = S74°32'46.69"W	AH = S72°47'04.44"W

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM ORENER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 351-6668

LEGEND

- INDICATES LANE LOCATIONS AND DIRECTION OF TRAVEL
- [C] CONTRACTION JOINT IN COPING AND CONCRETE FACING
- (E) EXPANSION JOINT IN COPING AND CONCRETE FACING
- (X) PANEL NUMBER

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 06/09/13
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE R-40-554

RETAINING WALL ALONG IH 94 EB

COUNTY	CITY
MILWAUKEE	MILWAUKEE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	MR	DESIGN CK'D.	MHZ	DRAWN BY	MR	PLANS CK'D.	MHZ

GENERAL PLAN & ELEVATION 1 OF 3

SHEET 1 OF 19

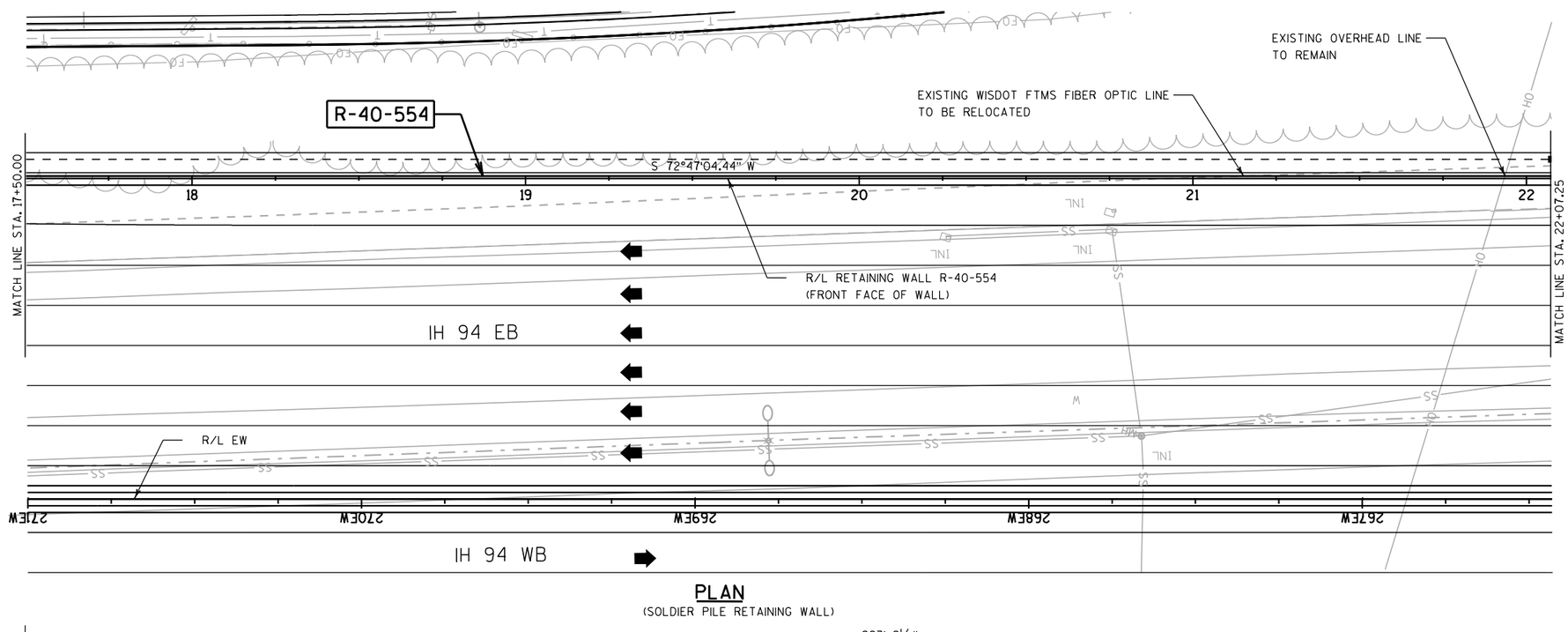
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STATE PROJECT NUMBER
1060-33-78

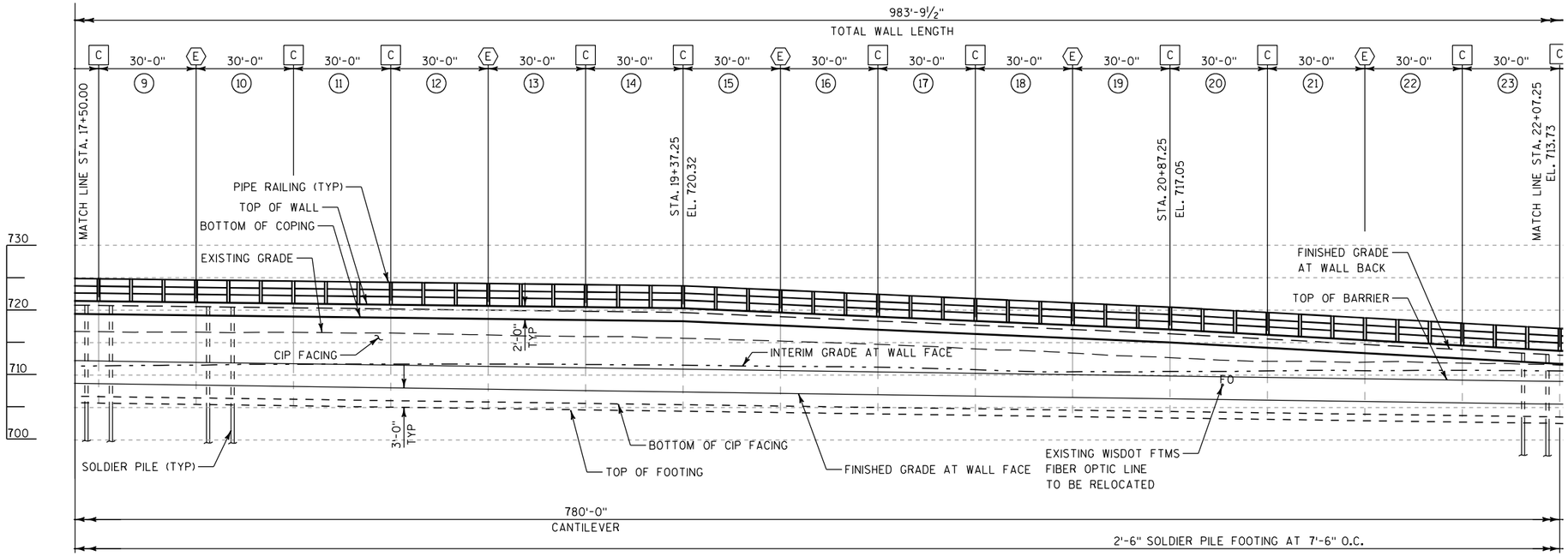
LEGEND

- INDICATES LANE LOCATIONS AND DIRECTION OF TRAVEL
- [C] CONTRACTION JOINT IN COPING AND CONCRETE FACING
- ⟨E⟩ EXPANSION JOINT IN COPING AND CONCRETE FACING
- (X) PANEL NUMBER



PLAN

(SOLDIER PILE RETAINING WALL)



ELEVATION

(LOOKING SOUTH FRONT FACE OF WALL SHOWN)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

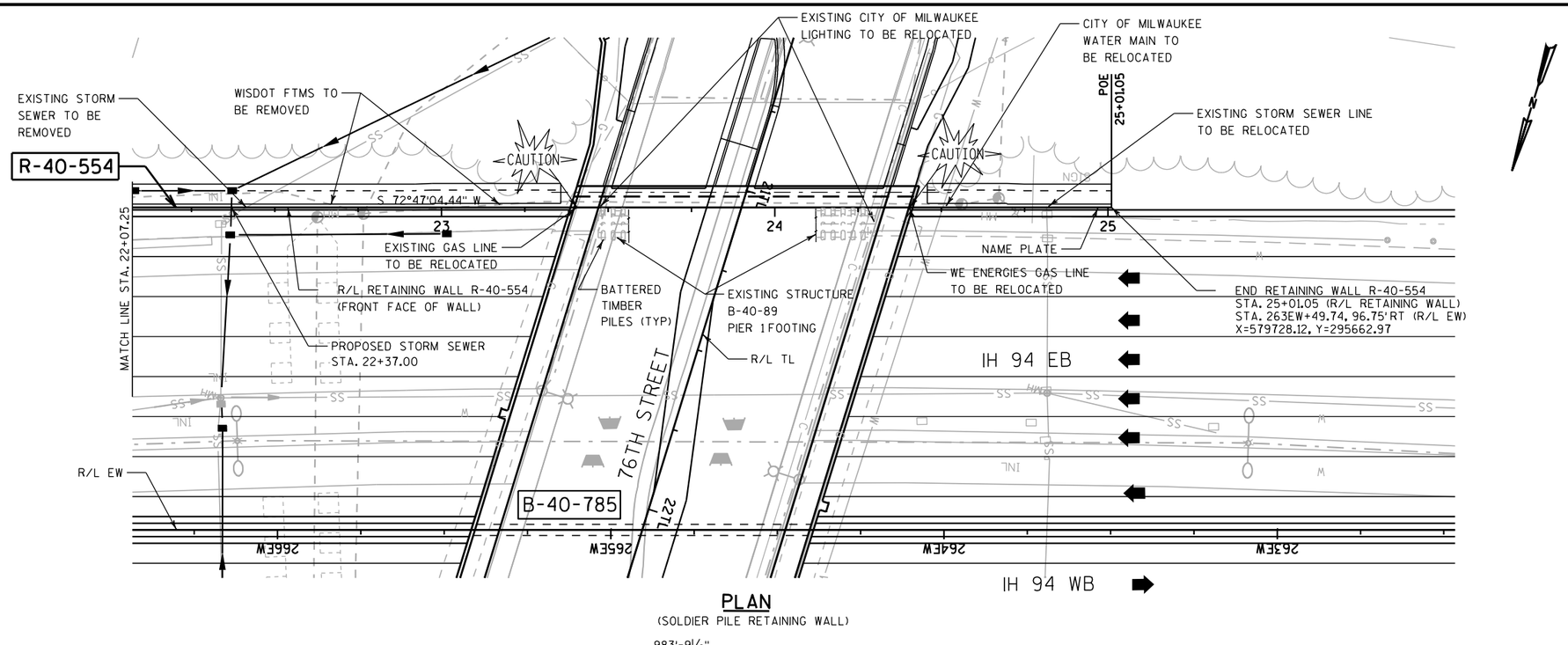
DRAWN BY MR | PLANS CK'D. MHZ

GENERAL PLAN & ELEVATION 2 OF 3

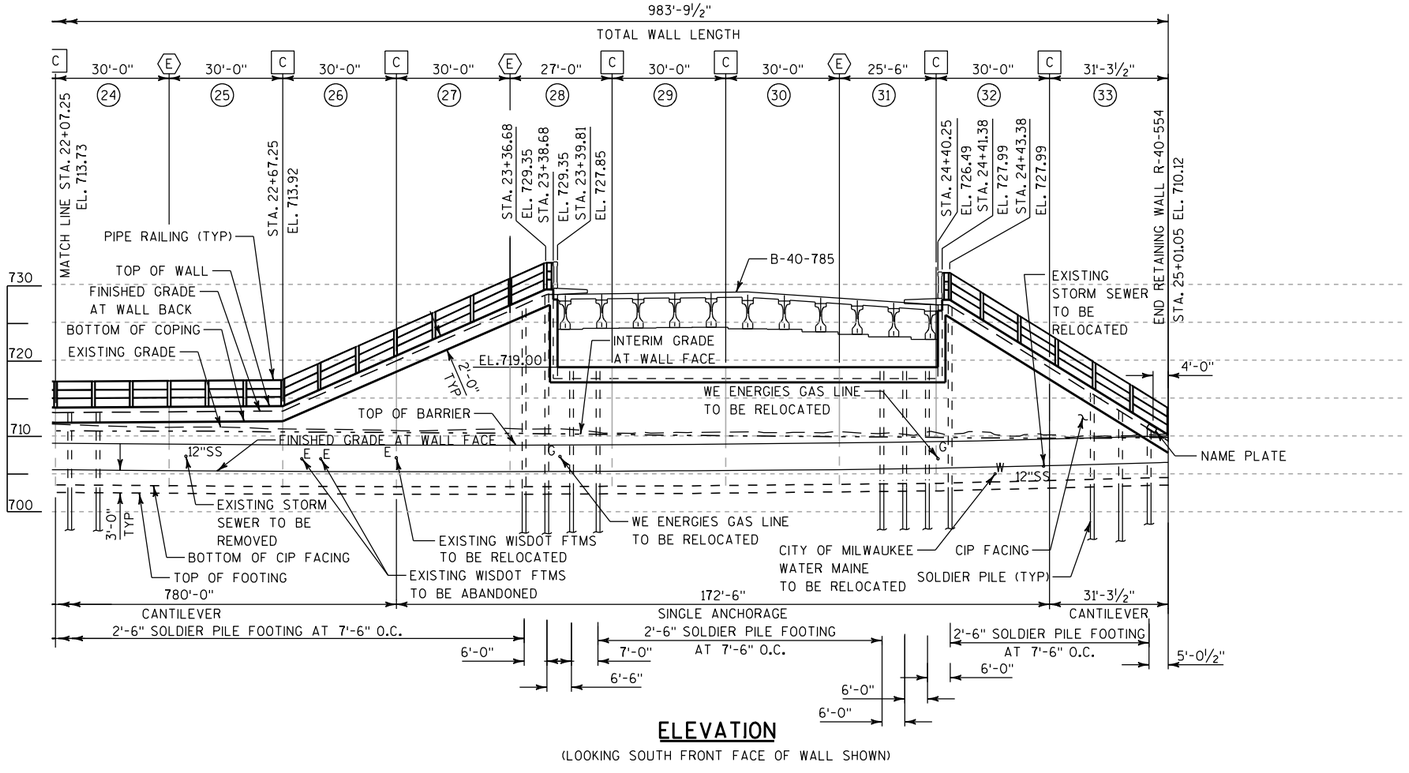
SHEET 2 OF 19

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STATE PROJECT NUMBER
1060-33-78



PLAN
(SOLDIER PILE RETAINING WALL)



ELEVATION
(LOOKING SOUTH FRONT FACE OF WALL SHOWN)

LEGEND

- INDICATES LANE LOCATIONS AND DIRECTION OF TRAVEL
- [C] CONTRACTION JOINT IN COPING AND CONCRETE FACING
- (E) EXPANSION JOINT IN COPING AND CONCRETE FACING
- (X) PANEL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

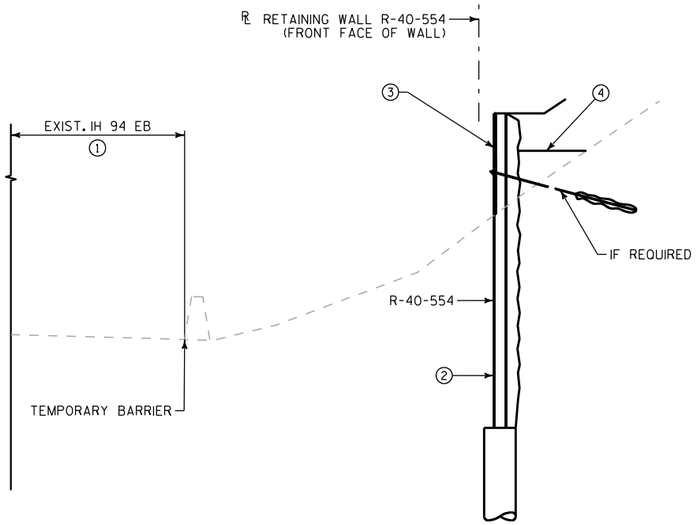
STRUCTURE R-40-554

DRAWN BY MR | PLANS CK'D. MHZ

GENERAL PLAN & ELEVATION 3 OF 3

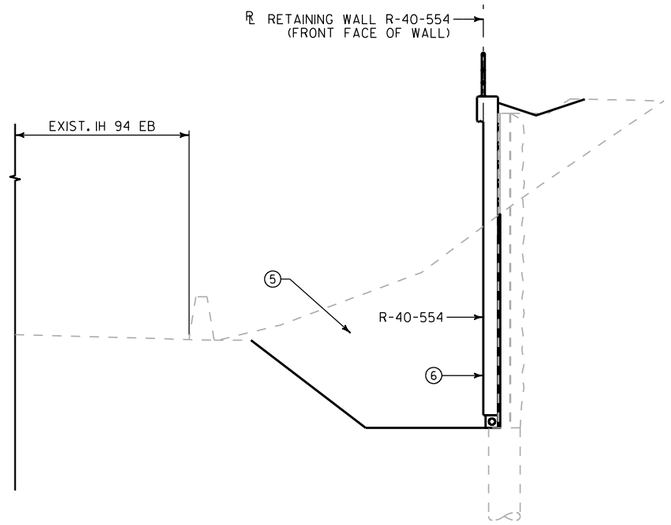
SHEET 3 OF 19

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TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE NO.1

LOOKING EAST - STEPS 1, 2, 3



TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE NO.2

LOOKING EAST - STEPS 4, 5, 6

PROPOSED CONSTRUCTION SEQUENCE

PROPOSED CONSTRUCTION SEQUENCE NO.1

① EXIST. IH 94 EB REMAINS OPEN TO TRAFFIC.

② INSTALL R-40-554 SOLDIER PILES.

③ INSTALL R-40-554 TIMBER LAGGING.

④ IF REQUIRED TIEBACKS, PLACE TEMPORARY FILL, SEE SHEET 15 FOR TIEBACKS CONSTRUCTION SEQUENCE. INSTALL TIEBACK ANCHORS.

PROPOSED CONSTRUCTION SEQUENCE NO.2

⑤ COMPLETE R-40-554 LAGGING, EXCAVATION TO FINAL GRADE OF WALL.

⑥ CONSTRUCT R-40-554 C.I.P. CONC. WALL FACING.

PROPOSED CONSTRUCTION SEQUENCE NO.3

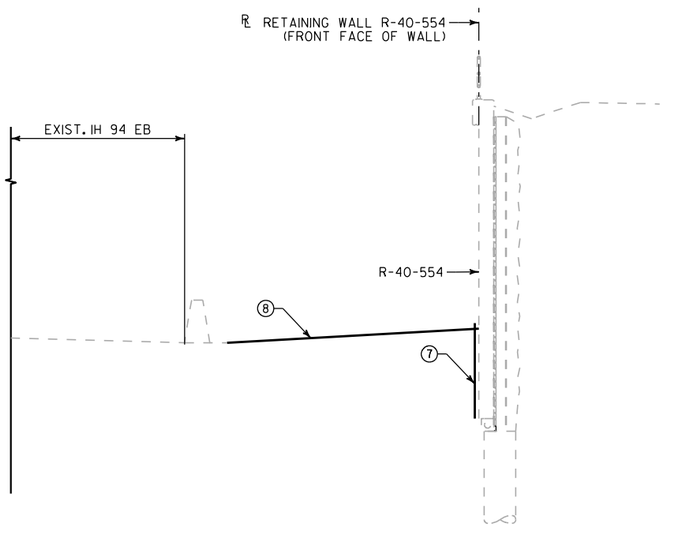
⑦ PROTECT WALL FINISH.

⑧ BACKFILL TO INTERIM GRADE TO EXISTING IH 94.

PROPOSED CONSTRUCTION SEQUENCE NO.4

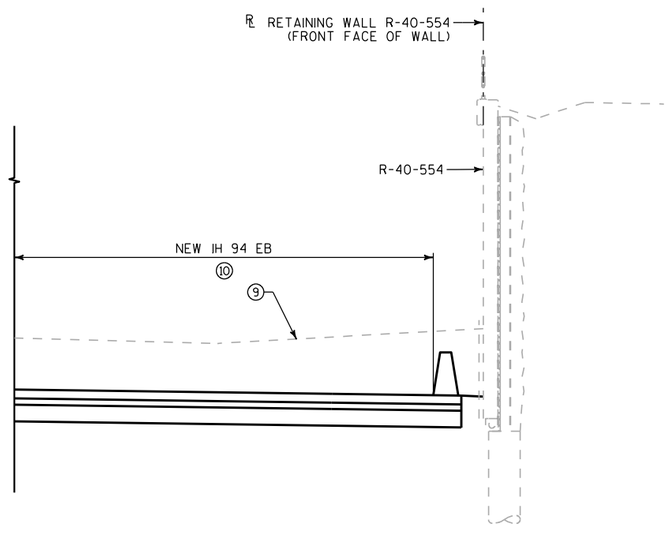
⑨ EXCAVATE IN FRONT OF R-40-554 TO FINAL GRADE, REMOVE WALL PROTECTION.

⑩ CONSTRUCT IH 94 - FUTURE CONTRACT.



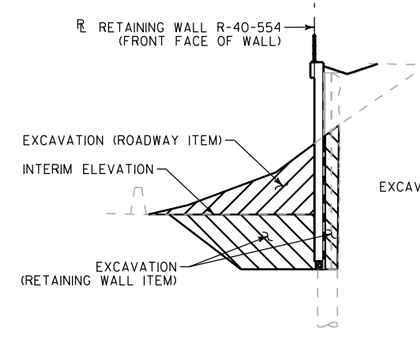
TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE NO.3

LOOKING EAST - STEPS 7, 8

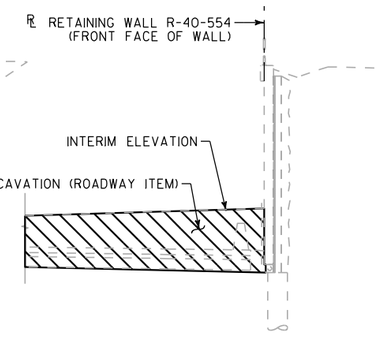


TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE NO.4

LOOKING EAST - STEPS 9, 10



EXCAVATION LIMITS PROPOSED CONSTRUCTION SEQUENCE NO.2



EXCAVATION LIMITS PROPOSED CONSTRUCTION SEQUENCE NO.4

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

DRAWN BY MR | PLANS CK'D. MHZ

PROPOSED CONSTRUCTION SEQUENCE

SHEET 4 OF 19

8

8

STATE PROJECT NUMBER
1060-33-78

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-554	LS	1
210.0100	BACKFILL STRUCTURE	CY	972
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	601
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	100,060
506.0605	STRUCTURAL STEEL HS	LB	271,048
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH	1,754
513.2000	RAILING PIPE R-40-554	LS	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	4
517.1005.S.0003	ARCHITECTURAL SURFACE TREATMENT R-40-554	SF	11,995
SPV.0035.4010	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	356
SPV.0060.4130	TIEBACK ANCHORS	EACH	24
SPV.0060.4140	TIEBACK ANCHORS PERFORMANCE TEST	EACH	4
SPV.0090.4420	FOUNDATION DRILLING	LF	3,817
SPV.0110.4600	TIMBER LAGGING	MBM	41.6
SPV. 0165.0010	TEMPORARY SHORING LEFT IN PLACE	SF	500
SPV.0165.4740	GEOCOMPOSITE DRAINBOARD	SF	13,866
	NON- BID ITEMS		
	NAME PLATE	EACH	1
	NON-BITUMINOUS JOINT FILLER	SIZE	3/4
	PREFORMED JOINT FILLER	SIZE	3/4

WALL ITEMS ARE CATEGORY NO. 3020

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.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

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-40-554".

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 CIP CONCRETE MASONRY FOR THE COPING AND FACING, CIP WALL, IS PAID FOR UNDER THE ITEM "CONCRETE MASONRY RETAINING WALLS".

GENERAL NOTES

THE VOLUME OF REMOVED EARTHWORK REQUIRED TO INSTALL UNDERDRAIN AND CONSTRUCT WALL COMPLETELY AS PROPOSED ON CONSTRUCTION SEQUENCE NO.2 IS INCLUDED IN ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-554"

BACKFILL IN FRONT OF WALL TO INTERIM ELEVATION AS PROPOSED ON CONSTRUCTION SEQUENCE NO.3 IS INCLUDED IN A BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-554"

THE VOLUME OF REMOVED EARTHWORK REQUIRED TO CONSTRUCT IH94 AS PROPOSED ON CONSTRUCTION SEQUENCE NO.4 IS ROADWAY ITEM, SEE ROADWAY PLANS.

PAINT PILE FROM TOP OF PILE TO 1'-0" BELOW TOP OF FOOTING WITH A PRIME COAT OF ORGANIC ZINC-RICH PAINT. PREPARE THE SURFACE AND APPLY THE PAINT AS SPECIFIED IN SECTION 517 OF THE STANDARD SPECIFICATIONS. PAINTING OF PILE IS INCLUDED IN THE BID ITEM "STRUCTURAL STEEL HS".

CONTRACTOR MUST COORDINATE CONSTRUCTION OF WALL R-40-554 WITH CONSTRUCTION OF BRIDGE B-40-785

ALL BRIDGE B-40-785 SOUTH ABUTMENT PILES SHALL BE DRIVEN COMPLETELY BEFORE INSTALLING TIEBACK ANCHORS AT ABUTMENT LOCATION.

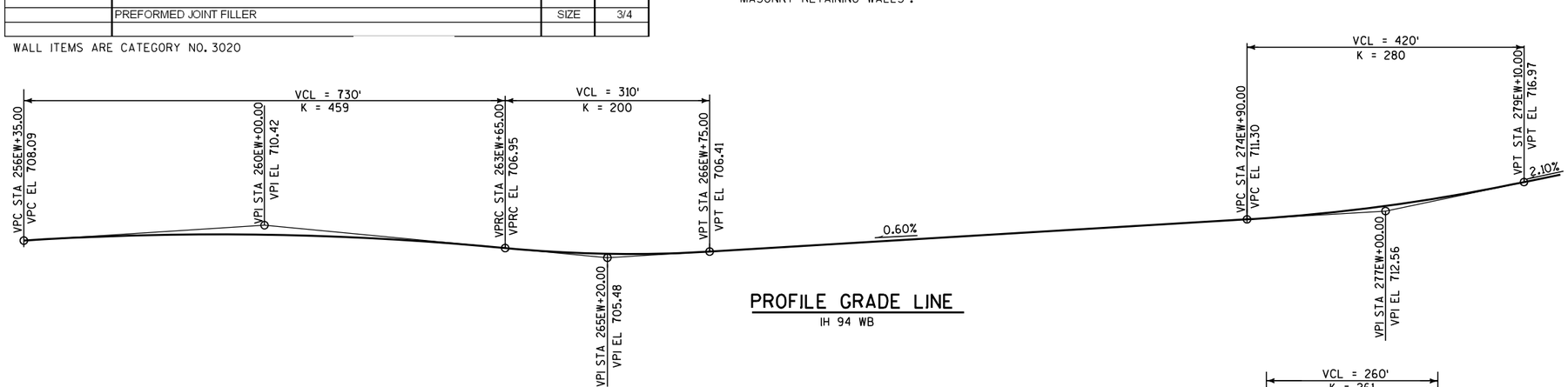
WALL STAGE 2 CONSTRUCTION WILL BE UNDER FUTURE CONTRACT. TEMPORARY SHORING SHALL BE LEFT IN PLACE.

TEMPORARY SHORING SHALL BE REMOVED IN WALL STAGE 2 CONSTRUCTION.

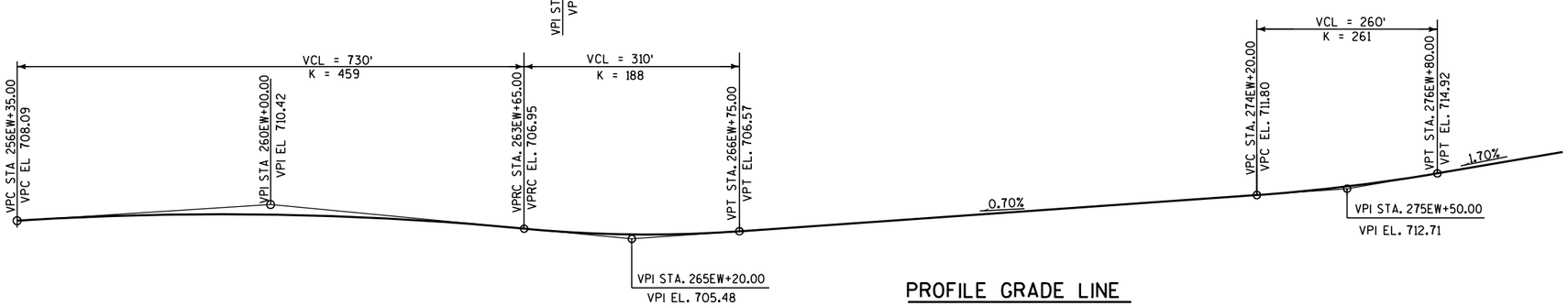
PROTECT WALL FACE AS DESCRIBED ON PROPOSED CONSTRUCTION SEQUENCE NO.3 WITH ¾ INCH EXPANDED POLYSTYRENE OR AS APPROVED BY THE ENGINEER. PROTECTION MATERIAL AND INSTALLATION SHALL BE INCIDENTAL TO BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-554"

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	-	32	-	32
SAND	130	-	32	-	32
STIFF TO VERY STIFF CLAY	130-135	2000-2500	0	100-150	32
HARD CLAY	130	4500	0	200	34



PROFILE GRADE LINE
IH 94 WB



PROFILE GRADE LINE
IH 94 EB

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

DRAWN BY MR | PLANS CK'D. MHZ

GENERAL NOTES, QUANTITIES & PROFILES

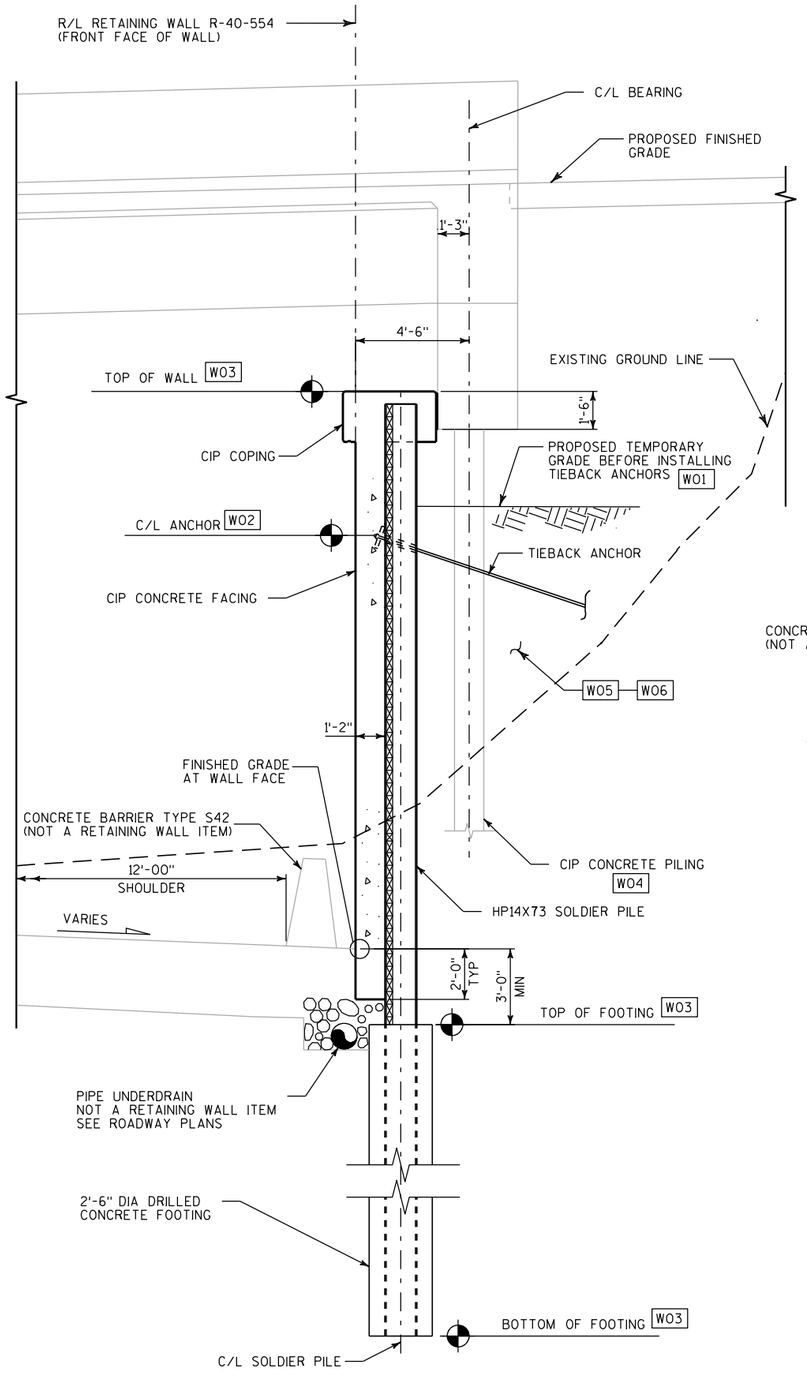
SHEET 5 OF 19

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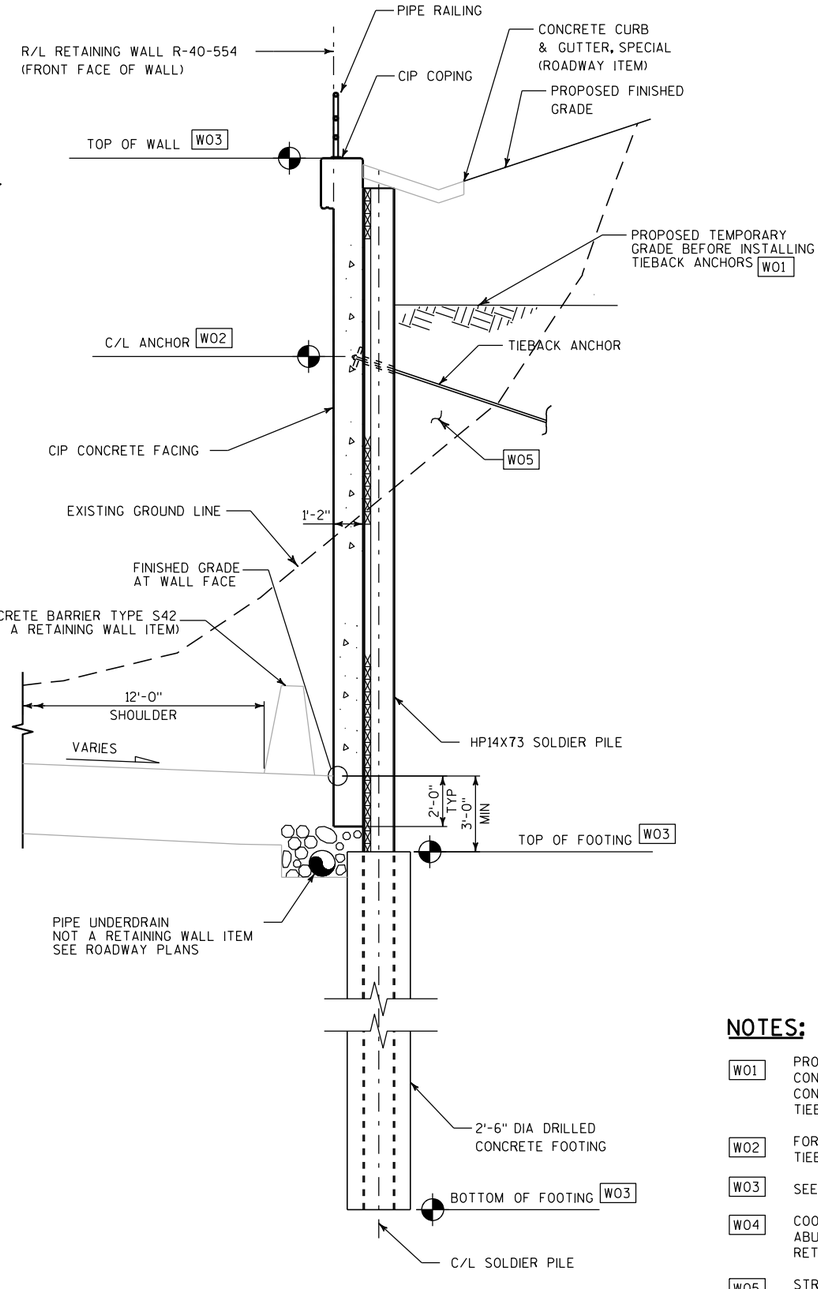
FILE NAME : W:\Cadd\Final\10603378_TL\Structs\R-40-554\cds\R554_080105_gq.dgn PLOT DATE : 28-MAY-2013 10:20 PLOT BY : MSCM1M PLOT NAME : R554_080105_gq PLOT SCALE : 4.000008:1

STATE PROJECT NUMBER
1060-33-78



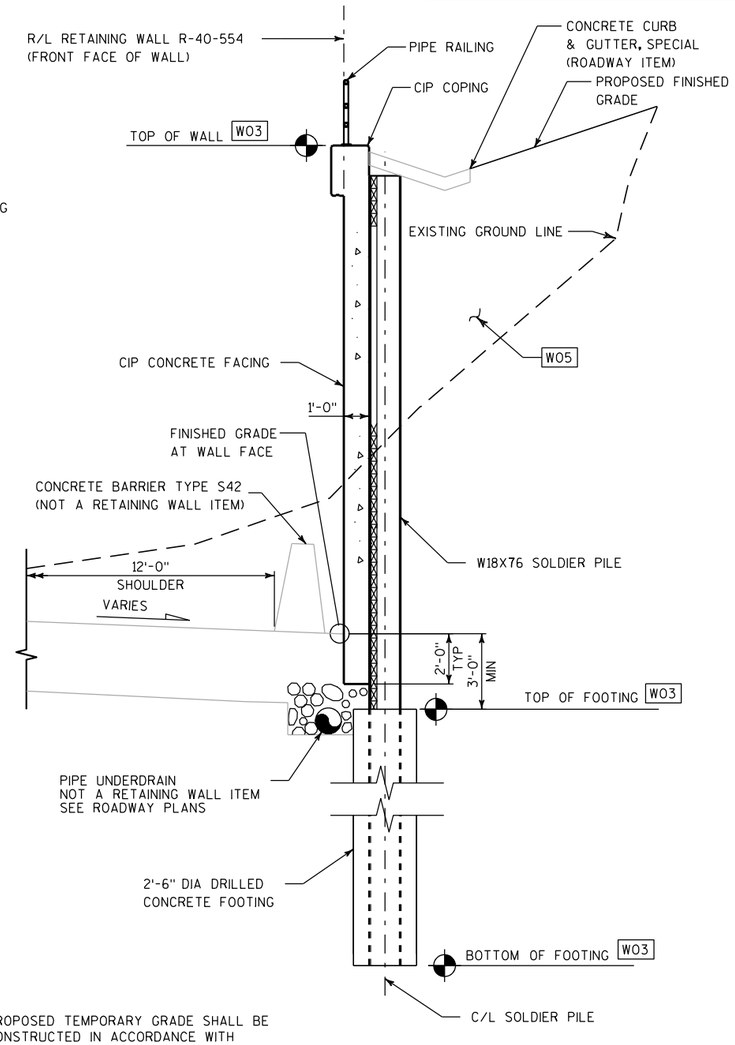
TYPICAL SECTION UNDER BRIDGE

STA.23+39.81 TO STA.24+40.25



TYPICAL SECTION

STA.22+97.25 TO STA.23+39.81
STA.24+40.25 TO STA.24+69.75



TYPICAL SECTION

STA.15+17.25 TO STA.22+97.25
STA.24+69.75 TO STA.25+01.05

NOTES:

- W01 PROPOSED TEMPORARY GRADE SHALL BE CONSTRUCTED IN ACCORDANCE WITH CONSTRUCTION SEQUENCE OUTLINED ON TIEBACK LAYOUT, SHEET 15
- W02 FOR TIEBACK ANCHOR ELEVATION SEE TIEBACK TABLE, SHEET 14
- W03 SEE SHEETS 9 AND 10 FOR ELEVATIONS
- W04 COORDINATE CONSTRUCTION OF BRIDGE B-40-785 ABUTMENT WITH THE CONSTRUCTION OF RETAINING WALL R-40-554
- W05 STRUCTURAL BACKFILL COMPACTED WITH HAND OPERATED MACHINERY NEAR THE WALL TO PREVENT DAMAGE TO WALL FACE. STRUCTURAL BACKFILL IS PAID UNDER THE ITEM "BACKFILL STRUCTURE"
- W06 AT THE BRIDGE AREA BACKFILL STRUCTURE TO BOTTOM OF ABUTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

DRAWN BY MR | PLANS CK'D. MHZ

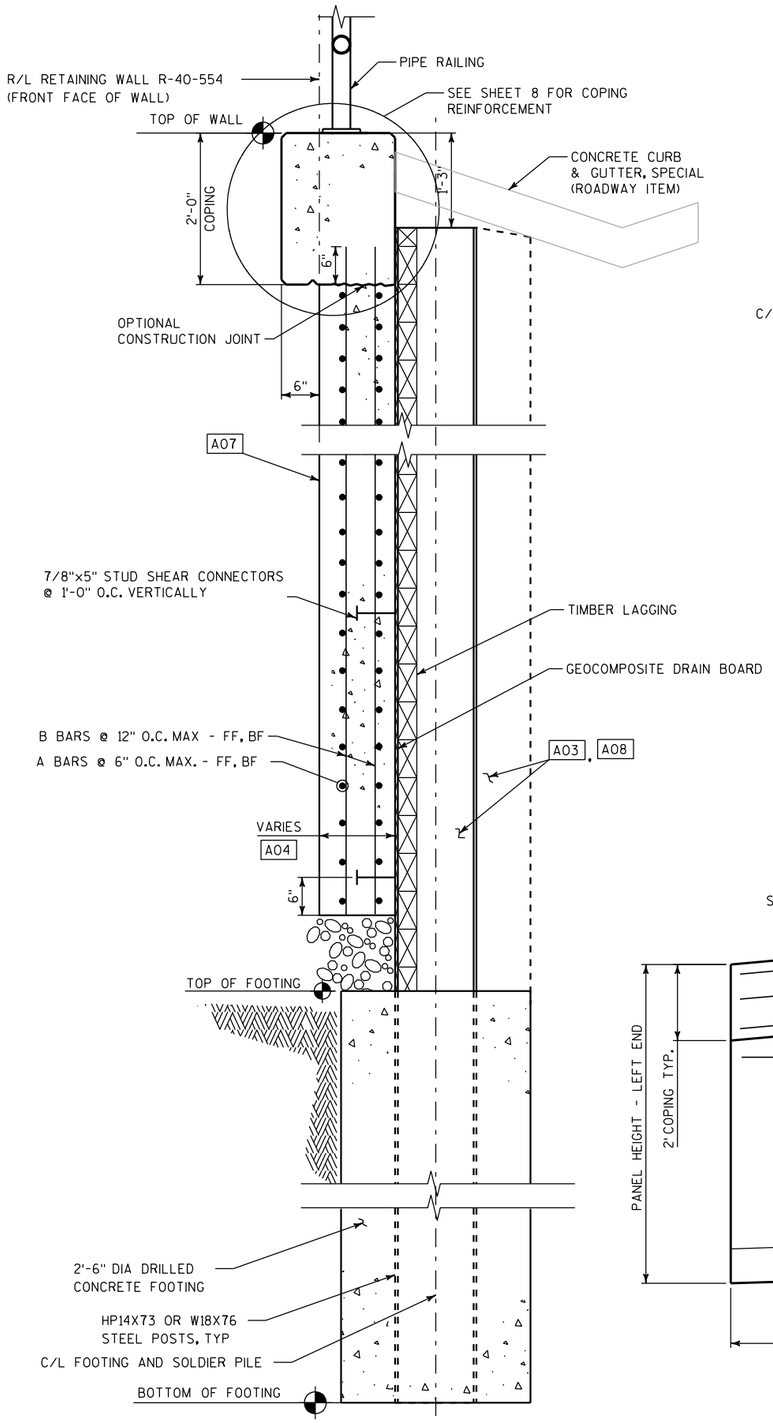
TYPICAL WALL SECTIONS 1 OF 3

SHEET 6 OF 19

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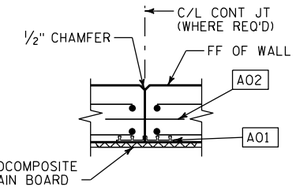
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STATE PROJECT NUMBER
1060-33-78

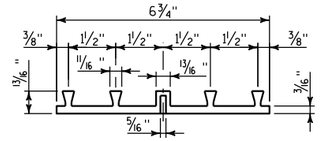


TYPICAL SOLDIER PILE AND PANEL WALL SECTION

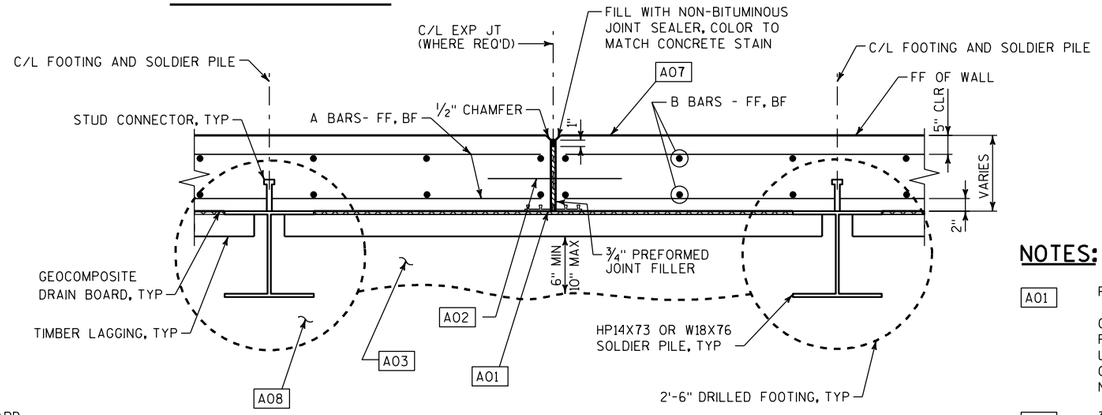
(TIEBACKS NOT SHOWN)



CONTRACTION JOINT

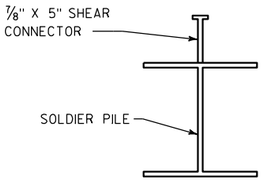


P.C.W. "TYPE B" DETAIL A01

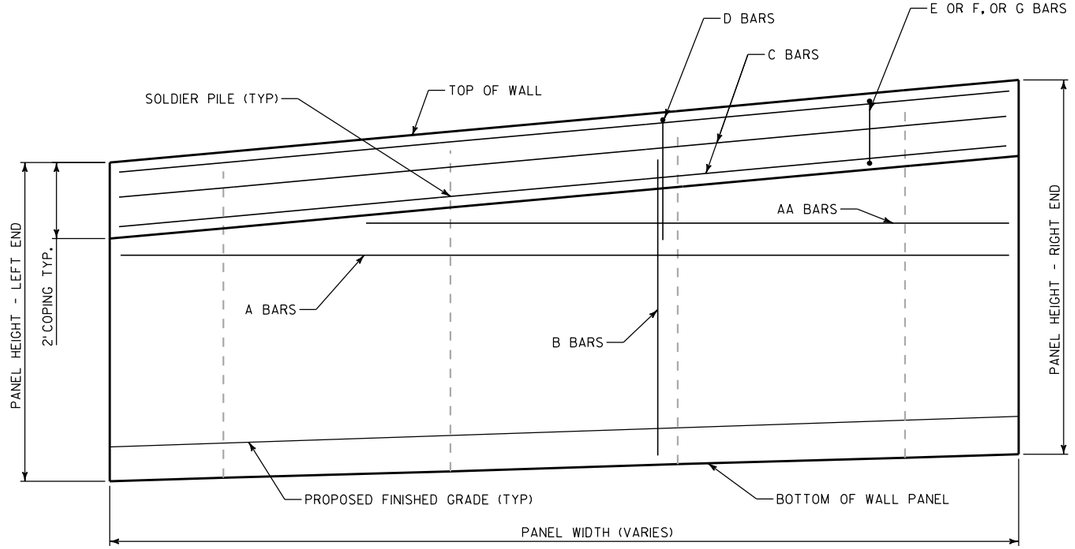


TYPICAL SOLDIER PILE SECTION AT EXPANSION JOINT

(SEE GENERAL PLAN & ELEVATION SHEET FOR
LOCATION OF CONTRACTION & EXPANSION JOINTS)



STUD CONNECTOR DETAIL



TYPICAL PANEL ELEVATION

SEE SHEET 11 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-40-554". NO CEMENTITIOUS MATERIAL WILL BE ALLOWED IN THE FLOWABLE BACKFILL.

A04 1'-0" PANEL WITH VERTICAL RUSTICATION - PANELS 1 TO 26 AND 33
1'-2" PANEL WITH VERTICAL RUSTICATION - PANELS 27 TO 32

A05 3/4" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND CLOSURE WALL.

A06 1 1/2" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER ON THE TOP OF CLOSURE WALL.

A07 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 17

A08 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"

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

DRAWN BY MR | PLANS CK'D. MHZ

TYPICAL WALL SECTIONS 2 OF 3

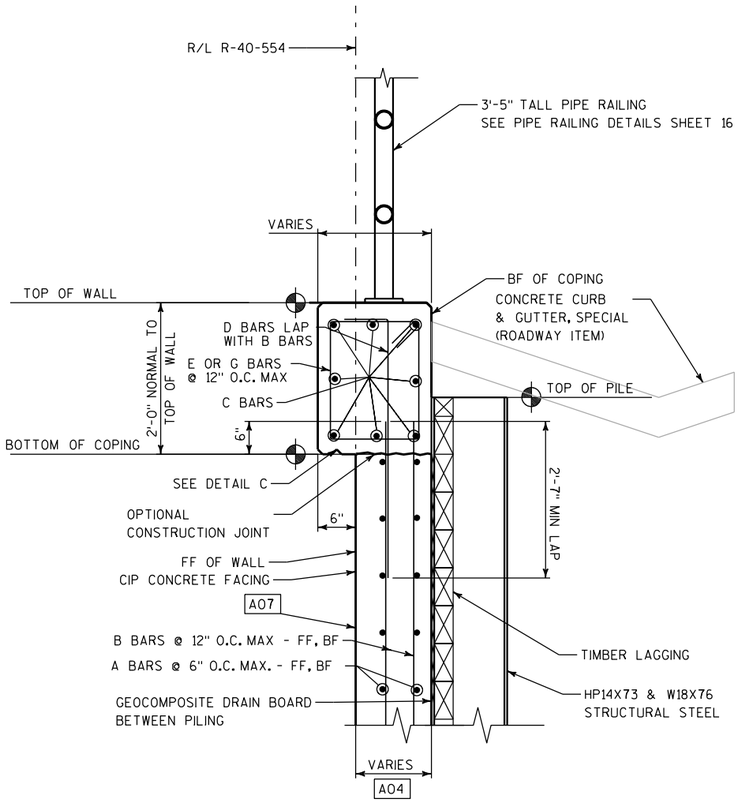
SHEET 7 OF 19

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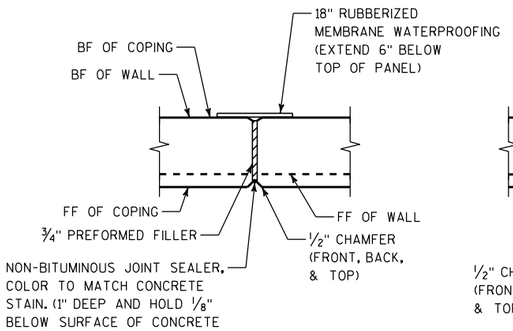
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STATE PROJECT NUMBER

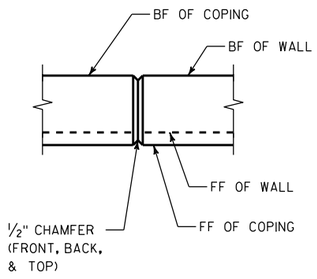
1060-33-78



TYPICAL WALL SECTION AT COPING

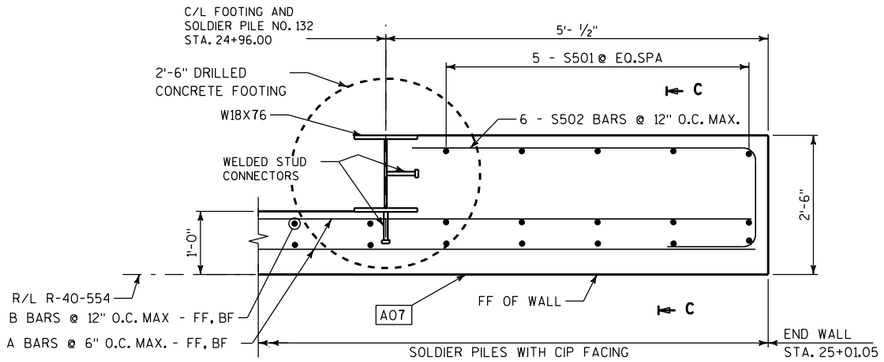


COPING EXPANSION JOINT



COPING CONTRACTION JOINT

(DO NOT RUN BAR STEEL THRU JOINT)

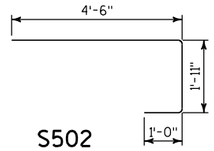


SECTION PLAN AT END OF WALL

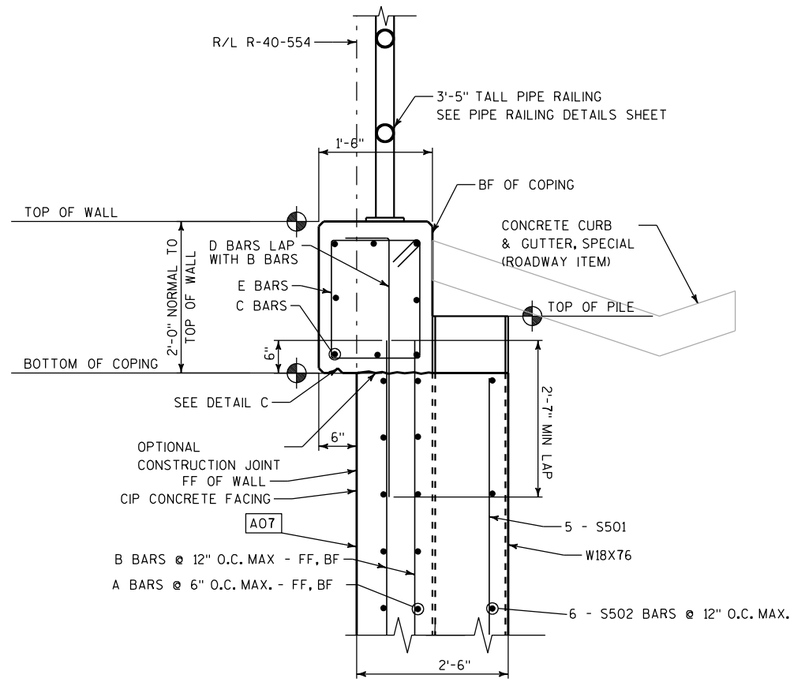
(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)

END OF WALL FACING BILL OF BARS

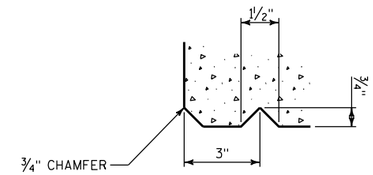
BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
S501	X	5	5'-3"			PANEL 33 END VERTICAL
S502	X	6	7'-2"	X		PANEL 33 END HORIZONTAL



S502



WALL SECTION C-C



DETAIL C
¾" CONTINUOUS DRIP GROOVE

TERMINATE 2'-0" FROM END OF WALL

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-40-554". NO CEMENTITIOUS MATERIAL WILL BE ALLOWED IN THE FLOWABLE BACKFILL.

A04 1'-0" PANEL WITH VERTICAL RUSTICATION - PANELS 1 TO 26 AND 33
1'-2" PANEL WITH VERTICAL RUSTICATION - PANELS 27 TO 32

A05 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND CLOSURE WALL.

A06 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER ON THE TOP OF CLOSURE WALL.

A07 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 17

A08 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"

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE

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DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

DRAWN BY MR | PLANS CK'D. MHZ

TYPICAL WALL SECTIONS 3 OF 3

SHEET 8 OF 19

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STATE PROJECT NUMBER

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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
14.31		BEGIN WALL	15+17.25	722.66		710.35					
		1	15+21.	722.64	721.39	710.32	707.32	692.39	14.93	29	W18X76
		2	15+28.5	722.60	721.35	710.27	707.27	692.35	14.92	29	W18X76
1	12										
		3	15+36.	722.57	721.32	710.22	707.22	692.32	14.91	29	W18X76
		4	15+43.5	722.53	721.28	710.17	707.17	692.28	14.89	29	W18X76
14.37		CONT JT.	15+47.25	722.51		710.15					
		5	15+51.	722.49	721.24	710.12	707.12	692.24	14.88	29	W18X76
		6	15+58.5	722.45	721.20	710.07	707.07	692.20	14.86	29	W18X76
2	12										
		7	15+66.	722.42	721.17	710.02	707.02	692.17	14.85	29	W18X76
		8	15+73.5	722.38	721.13	709.97	706.97	692.13	14.84	29	W18X76
14.42		CONT JT.	15+77.25	722.36		709.94					
		9	15+81.	722.34	721.09	709.91	706.91	692.09	14.82	29	W18X76
		10	15+88.5	722.30	721.05	709.86	706.86	692.05	14.81	29	W18X76
3	12										
		11	15+96.	722.27	721.02	709.81	706.81	692.02	14.80	29	W18X76
		12	16+03.5	722.23	720.98	709.76	706.76	691.98	14.78	29	W18X76
14.48		EXP JT	16+07.25	722.21		709.74					
		13	16+11.	722.19	720.94	709.71	706.71	691.94	14.77	29	W18X76
		14	16+18.5	722.15	720.90	709.66	706.66	691.90	14.75	29	W18X76
4	12										
		15	16+26.	722.12	720.87	709.61	706.61	691.87	14.74	29	W18X76
		16	16+33.5	722.08	720.83	709.56	706.56	691.83	14.73	29	W18X76
14.53		CONT JT.	16+37.25	722.06		709.53					
		17	16+41.	722.04	720.79	709.50	706.50	691.79	14.71	29	W18X76
		18	16+48.5	722.00	720.75	709.45	706.45	691.75	14.70	29	W18X76
5	12										
		19	16+56.	721.97	720.72	709.40	706.40	691.72	14.69	29	W18X76
		20	16+63.5	721.93	720.68	709.35	706.35	691.68	14.67	29	W18X76
14.58		CONT JT.	16+67.25	721.91		709.33					
		21	16+71.	721.89	720.64	709.30	706.30	691.64	14.66	29	W18X76
		22	16+78.5	721.85	720.60	709.25	706.25	691.60	14.64	29	W18X76
6	12										
		23	16+86.	721.82	720.57	709.20	706.20	691.57	14.63	29	W18X76
		24	16+93.5	721.78	720.53	709.15	706.15	691.53	14.62	29	W18X76
14.64		EXP JT	16+97.25	721.76		709.12					
		25	17+01.	721.74	720.49	709.09	706.09	691.49	14.61	29	W18X76
		26	17+08.5	721.69	720.44	709.04	706.04	691.44	14.60	29	W18X76
7	12										
		27	17+16.	721.65	720.40	708.99	705.99	691.40	14.59	29	W18X76
		28	17+23.5	721.60	720.35	708.93	705.93	691.35	14.58	29	W18X76
14.67		CONT JT.	17+27.25	721.58		708.91					
		29	17+31.	721.56	720.31	708.88	705.88	691.31	14.57	29	W18X76
		30	17+38.5	721.51	720.26	708.83	705.83	691.26	14.56	29	W18X76
8	12										
		31	17+46.	721.47	720.22	708.77	705.77	691.22	14.56	29	W18X76
		32	17+53.5	721.42	720.17	708.72	705.72	691.17	14.55	29	W18X76
14.71		CONT JT.	17+57.25	721.40		708.69					
		33	17+61.	721.38	720.13	708.67	705.67	691.13	14.54	29	W18X76
		34	17+68.5	721.33	720.08	708.61	705.61	691.08	14.53	29	W18X76
9	12										
		35	17+76.	721.29	720.04	708.56	705.56	691.04	14.52	29	W18X76
		36	17+83.5	721.24	719.99	708.51	705.51	690.99	14.51	29	W18X76
14.74		EXP JT	17+87.25	721.22		708.48					

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
14.74		EXP JT	17+87.25	721.22		708.48					
		37	17+91.	721.20	719.95	708.45	705.45	690.95	14.50	29	W18X76
		38	17+98.5	721.15	719.90	708.40	705.40	690.90	14.50	29	W18X76
10	12										
		39	18+06.	721.11	719.86	708.35	705.35	690.86	14.49	29	W18X76
		40	18+13.5	721.06	719.81	708.29	705.29	690.81	14.48	29	W18X76
14.78		CONT JT.	18+17.25	721.04		708.27					
		41	18+21.	721.02	719.77	708.24	705.24	690.77	14.47	29	W18X76
		42	18+28.5	720.97	719.72	708.18	705.18	690.72	14.46	29	W18X76
11	12										
		43	18+36.	720.93	719.68	708.13	705.13	690.68	14.45	29	W18X76
		44	18+43.5	720.88	719.63	708.08	705.08	690.63	14.45	29	W18X76
14.81		CONT JT.	18+47.25	720.86		708.05					
		45	18+51.	720.84	719.59	708.02	705.02	690.59	14.44	29	W18X76
		46	18+58.5	720.79	719.54	707.97	704.97	690.54	14.43	29	W18X76
12	12										
		47	18+66.	720.75	719.50	707.92	704.92	690.50	14.42	29	W18X76
		48	18+73.5	720.70	719.45	707.86	704.86	690.45	14.41	29	W18X76
14.84		EXP JT	18+77.25	720.68		707.84					
		49	18+81.	720.66	719.41	707.81	704.81	690.41	14.40	29	W18X76
		50	18+88.5	720.61	719.36	707.76	704.76	690.36	14.39	29	W18X76
13	12										
		51	18+96.	720.57	719.32	707.70	704.70	690.32	14.39	29	W18X76
		52	19+03.5	720.52	719.27	707.65	704.65	690.27	14.38	29	W18X76
14.88		CONT JT.	19+07.25	720.50		707.62					
		53	19+11.	720.48	719.23	707.60	704.60	690.23	14.37	29	W18X76
		54	19+18.5	720.43	719.18	707.54	704.54	690.18	14.36	29	W18X76
14	12										
		55	19+26.	720.39	719.14	707.49	704.49	690.14	14.35	29	W18X76
		56	19+33.5	720.34	719.09	707.44	704.44	690.09	14.34	29	W18X76
14.91		CONT JT.	19+37.25	720.32		707.41					
		57	19+41.	720.24	718.99	707.38	704.38	689.99	14.40	29	W18X76
		58	19+48.5	720.07	718.82	707.33	704.33	689.82	14.51	29	W18X76
15	12										
		59	19+56.	719.91	718.66	707.28	704.28	689.66	14.62	29	W18X76
		60	19+63.5	719.75	718.50	707.23	704.23	689.50	14.73	29	W18X76
14.47		EXP JT	19+67.25	719.67		707.20					
		61	19+71.	719.58	718.33	707.17	704.17	689.33	14.84	29	W18X76
		62	19+78.5	719.42	718.17	707.12	704.12	689.17	14.95	29	W18X76
16	12										
		63	19+86.	719.26	718.01	707.07	704.07	689.01	15.06	29	W18X76
		64	19+93.5	719.09	717.84	707.02	704.02	688.84	15.17	29	W18X76
14.02		CONT JT.	19+97.25	719.01		706.99					
		65	20+01.	718.93	717.68	706.96	703.96	689.68	14.28	28	W18X76
		66	20+08.5	718.77	717.52	706.91	703.91	689.52	14.39	28	W18X76
17	12										
		67	20+16.	718.60	717.35	706.86	703.86	689.35	14.51	28	W18X76
		68	20+23.5	718.44	717.19	706.81	703.81	689.19	14.62	28	W18X76
13.58		CONT JT.	20+27.25	718.36		706.78					
		69	20+31.	718.28	717.03	706.75	703.75	690.03	13.73	27	W18X76
		70	20+38.5	718.11	716.86	706.70	703.70	689.86	13.84	27	W18X76
18	12										
		71	20+46.	717.95	716.70	706.65	703.65	689.70	13.95	27	W18X76
		72	20+53.5	717.79	716.54	706.60	703.60	689.54	14.06	27	W18X76
13.13		EXP JT	20+57.25	717.70		706.57					

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

DRAWN BY MR | PLANS CK'D. MHZ/CHW

WALL AND PILE DATA TABLE 1 OF 2

SHEET 9 OF 19

FILE NAME : \\WKE31FP1\w3zoo\Cadd\Final\10603378_TL\Structs\R-40-554\cds\R554_080109_de.dgn
PLOT DATE : 30-APR-2013 14:36
PLOT BY : MSCM1M
PLOT NAME : R554_080109_de
PLOT SCALE : 8:1

STATE PROJECT NUMBER
1060-33-78

WALL AND PILE DATA TABLE

PANEL Number & HEIGHT (FT)	WALL THICK NESS, 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
13.13		EXP JT.	20+57.25	717.70		706.57					
		73	20+61.	717.62	716.37	706.54	703.54	689.37	14.17	27	W18X76
		74	20+68.5	717.46	716.21	706.49	703.49	690.21	13.28	26	W18X76
19	12										
		75	20+76.	717.30	716.05	706.44	703.44	690.05	13.39	26	W18X76
		76	20+83.5	717.13	715.88	706.39	703.39	689.88	13.50	26	W18X76
12.69		CONT JT.	20+87.25	717.05		706.36					
		77	20+91.	716.95	715.70	706.33	703.33	689.70	13.64	26	W18X76
		78	20+98.5	716.74	715.49	706.28	703.28	689.49	13.80	26	W18X76
20	12										
		79	21+06.	716.53	715.28	706.23	703.23	689.28	13.95	26	W18X76
		80	21+13.5	716.32	715.07	706.18	703.18	689.07	14.11	26	W18X76
12.06		CONT JT.	21+17.25	716.22		706.16					
		81	21+21.	716.12	714.87	706.13	703.13	690.87	12.27	24	W18X76
		82	21+28.5	715.91	714.66	706.08	703.08	690.66	12.42	24	W18X76
21	12										
		83	21+36.	715.70	714.45	706.03	703.03	690.45	12.58	24	W18X76
		84	21+43.5	715.49	714.24	705.98	702.98	690.24	12.74	24	W18X76
11.44		EXP JT.	21+47.25	715.39		705.96					
		85	21+51.	715.29	714.04	705.93	702.93	690.04	12.89	24	W18X76
		86	21+58.5	715.08	713.83	705.88	702.88	689.83	13.05	24	W18X76
22	12										
		87	21+66.	714.87	713.62	705.83	702.83	690.62	12.21	23	W18X76
		88	21+73.5	714.66	713.41	705.78	702.78	690.41	12.36	23	W18X76
10.81		CONT JT.	21+77.25	714.56		705.75					
		89	21+81.	714.46	713.21	705.73	702.73	690.21	12.52	23	W18X76
		90	21+88.5	714.25	713.00	705.68	702.68	690.00	12.68	23	W18X76
23	12										
		91	21+96.	714.04	712.79	705.63	702.63	689.79	12.83	23	W18X76
		92	22+03.5	713.83	712.58	705.58	702.58	689.58	12.99	23	W18X76
10.18		CONT JT.	22+07.25	713.73		705.55					
		93	22+11.	713.74	712.49	705.54	702.54	689.49	13.04	23	W18X76
		94	22+18.5	713.77	712.52	705.51	702.51	689.52	12.99	23	W18X76
24	12										
		95	22+26.	713.79	712.54	705.48	702.48	689.54	12.94	23	W18X76
		96	22+33.5	713.81	712.56	705.45	702.45	689.56	12.89	23	W18X76
10.39		EXP JT.	22+37.25	713.83		705.44					
		97	22+41.	713.84	712.59	705.42	702.42	688.59	13.83	24	W18X76
		98	22+48.5	713.86	712.61	705.39	702.39	687.61	14.78	25	W18X76
25	12										
		99	22+56.	713.88	712.63	705.36	702.36	686.63	15.73	26	W18X76
		100	22+63.5	713.91	712.66	705.33	702.33	685.66	16.68	27	W18X76
10.60		CONT JT.	22+67.25	713.92		705.32					
		101	22+71.	714.75	713.50	705.32	702.32	685.50	16.82	28	W18X76
		102	22+78.5	716.42	715.17	705.32	702.32	685.17	17.15	30	W18X76
26	12										
		103	22+86.	718.09	716.84	705.31	702.31	685.84	16.48	31	W18X76
		104	22+93.5	719.75	718.50	705.31	702.31	685.50	16.81	33	W18X76
17.28		CONT JT.	22+97.25	720.59		705.31					

WALL AND PILE DATA TABLE

PANEL Number & HEIGHT (FT)	WALL THICK NESS, 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
17.28		CONT JT.	22+97.25	720.59		705.31					
		105	23+01.	721.42	720.17	705.31	702.31	685.17	17.14	35	HP14X73
	14	106	23+08.5	723.09	721.84	705.31	702.31	685.84	16.47	36	HP14X73
27											
		107	23+16.	724.75	723.50	705.31	702.31	685.50	16.80	38	HP14X73
		108	23+23.5	726.42	725.17	705.30	702.30	685.17	17.13	40	HP14X73
23.95		EXP JT.	23+27.25	727.25		705.30					
		109	23+31.	728.09	726.84	705.30	702.30	685.84	16.46	41	HP14X73
						705.30					
		110	23+37.	729.35	728.10	705.30	702.30	686.10	16.20	42	HP14X73
28	14					705.31					
		111	23+43.5	719.00	717.75	705.33	702.33	685.75	16.58	32	HP14X73
		112	23+50.5	719.00	717.75	705.36	702.36	685.75	16.61	32	HP14X73
15.62		CONT JT.	23+54.25	719.00		705.38					
		113	23+58.	719.00	717.75	705.39	702.39	685.75	16.64	32	HP14X73
		114	23+65.5	719.00	717.75	705.43	702.43	685.75	16.68	32	HP14X73
29	14										
		115	23+73.	719.00	717.75	705.46	702.46	685.75	16.71	32	HP14X73
		116	23+80.5	719.00	717.75	705.49	702.49	685.75	16.74	32	HP14X73
15.49		CONT JT.	23+84.25	719.00		705.51					
		117	23+88.	719.00	717.75	705.52	702.52	685.75	16.77	32	HP14X73
		118	23+95.5	719.00	717.75	705.56	702.56	685.75	16.81	32	HP14X73
30	14										
		119	24+03.	719.00	717.75	705.59	702.59	685.75	16.84	32	HP14X73
		120	24+10.5	719.00	717.75	705.62	702.62	685.75	16.87	32	HP14X73
15.36		EXP JT.	24+14.25	719.00		705.64					
		121	24+18.	719.00	717.75	705.65	702.65	685.75	16.90	32	HP14X73
		122	24+25.5	719.00	717.75	705.69	702.69	685.75	16.94	32	HP14X73
31	14										
		123	24+31.5	719.00	717.75	705.71	702.71	685.75	16.96	32	HP14X73
		124	24+37.5	719.00	717.75	705.74	702.74	685.75	16.99	32	HP14X73
15.25		CONT JT.	24+39.75	719.00		705.75					
		125	24+43.5	727.95	726.70	705.79	702.79	685.70	17.09	41	HP14X73
		126	24+51.	725.63	724.38	705.88	702.88	686.38	16.51	38	HP14X73
32	14										
		127	24+58.5	723.30	722.05	705.98	702.98	686.05	16.92	36	HP14X73
		128	24+66.	720.98	719.73	706.07	703.07	686.73	16.34	33	HP14X73
15.70		CONT JT.	24+69.75	719.82		706.12					
		129	24+73.5	718.66	717.41	706.17	703.17	687.41	15.76	30	W18X76
		130	24+81.	716.33	715.08	706.26	703.26	687.08	16.18	28	W18X76
33	12										
		131	24+88.5	714.01	712.76	706.35	703.35	687.76	15.59	25	W18X76
		132	24+96.	711.68	710.43	706.45	703.45	687.43	16.01	23	W18X76

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

DRAWN BY MR | PLANS CK'D. MHZ/CHW

WALL AND PILE DATA TABLE 2 OF 2

SHEET 10 OF 19

FILE NAME : \\WKE31FP1\w3zoo\Cadd\Final\10603378_TL\Structs\R-40-554\cds\R554_080110_de.dgn
PLOT DATE : 30-APR-2013 14:36
PLOT BY : MSCM1M
PLOT NAME : R554_080110_de
PLOT SCALE : 8:1

STATE PROJECT NUMBER

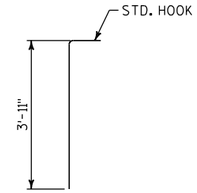
1060-33-78

BILL OF BARS/BAR SERIES TABLE

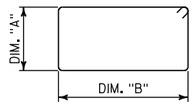
PANEL Number	WALL THICK NESS, INCH	PANEL HEIGHT LEFT END FT	PANEL HEIGHT RIGHT END Ft	PANEL WIDTH FT	QUAN. HORIZ A BARS, EF *	LENGTH OF A BAR- FT - inch	QUAN. VERT. B BARS, EF *	LENGTH VARY SERIES B BAR FT.		LENGTH B BARS FT-inch	QUAN. HORIZ. C BARS	LENGTH C BARS FT-inch	QUAN. VERT. D BARS	LENGTH OF D BAR FT.	QUAN. COPING. E BARS	LENGTH OF E BAR FT.	QUAN. COPING. F BARS	LENGTH OF F BAR FT.	QUAN. COPING. G BARS	LENGTH OF G BAR FT. *	QUAN. HORIZ AA BARS, EF	LENGTH VARY SERIES AA BAR FT.	
1	12	14.31	14.37	30	26	29'8"	31			12'8"	8	29'8"	31	4'8"	31	6'3"							
2	12	14.37	14.42	30	26	29'8"	31			12'8"	8	29'8"	31	4'8"	31	6'3"							
3	12	14.42	14.48	30	26	29'8"	31			12'9"	8	29'8"	31	4'8"	31	6'3"							
4	12	14.48	14.53	30	27	29'8"	31			12'10"	8	29'8"	31	4'8"	31	6'3"							
5	12	14.53	14.58	30	27	29'8"	31			12'10"	8	29'8"	31	4'8"	31	6'3"							
6	12	14.58	14.64	30	27	29'8"	31			12'11"	8	29'8"	31	4'8"	31	6'3"							
7	12	14.64	14.67	30	27	29'8"	31			13'0"	8	29'8"	31	4'8"	31	6'3"							
8	12	14.67	14.71	30	27	29'8"	31			13'0"	8	29'8"	31	4'8"	31	6'3"							
9	12	14.71	14.74	30	27	29'8"	31			13'0"	8	29'8"	31	4'8"	31	6'3"							
10	12	14.74	14.78	30	27	29'8"	31			13'1"	8	29'8"	31	4'8"	31	6'3"							
11	12	14.78	14.81	30	27	29'8"	31			13'1"	8	29'8"	31	4'8"	31	6'3"							
12	12	14.81	14.84	30	27	29'8"	31			13'2"	8	29'8"	31	4'8"	31	6'3"							
13	12	14.84	14.88	30	27	29'8"	31			13'2"	8	29'8"	31	4'8"	31	6'3"							
14	12	14.88	14.91	30	27	29'8"	31			13'3"	8	29'8"	31	4'8"	31	6'3"							
15	12	14.91	14.47	30	27	29'8"	31 ⚠	13'3"	12'10"		8	29'8"	31	4'8"	31	6'3"							
16	12	14.47	14.02	30	26	29'8"	31 ⚠	12'10"	12'4"		8	29'8"	31	4'8"	31	6'3"							
17	12	14.02	13.58	30	26	29'8"	31 ⚠	12'4"	11'11"		8	29'8"	31	4'8"	31	6'3"							
18	12	13.58	13.13	30	25	29'8"	31 ⚠	11'11"	11'6"		8	29'8"	31	4'8"	31	6'3"							
19	12	13.13	12.69	30	24	29'8"	31 ⚠	11'6"	11'0"		8	29'8"	31	4'8"	31	6'3"							
20	12	12.69	12.06	30	23	29'8"	31 ⚠	11'0"	10'5"		8	29'8"	31	4'8"	31	6'3"							
21	12	12.06	11.44	30	22	29'8"	31 ⚠	10'5"	9'9"		8	29'8"	31	4'8"	31	6'3"							
22	12	11.44	10.81	30	20	29'8"	31 ⚠	9'9"	9'2"		8	29'8"	31	4'8"	31	6'3"							
23	12	10.81	10.18	30	19	29'8"	31 ⚠	9'2"	8'6"		8	29'8"	31	4'8"	31	6'3"							
24	12	10.18	10.39	30	18	29'8"	31			8'6"	8	29'8"	31	4'8"	31	6'3"							
25	12	10.39	10.60	30	19	29'8"	31			8'9"	8	29'8"	31	4'8"	31	6'3"							
26	12	10.60	17.28	30	19	29'8"	31	8'11"	15'7"		8	30'5"	31	4'8"	31	6'3"					12	2'0"	26'9"
27	14	17.28	23.95	30	32	29'8"	31	15'7"	22'3"		8	30'5"	31	4'8"					31	6'7"	12	2'0"	26'9"
28	14	23.95	15.62	27	SEE SHEET 12 FOR PANEL REINFORCEMENT																		
29	14	15.62	15.49	30	28	29'8"	31			13'10"	10	29'8"	31	4'8"			31	10'9"					
30	14	15.49	15.36	30	28	29'8"	31			13'8"	10	29'8"	31	4'8"			31	10'9"					
31	14	15.36	15.25	25.5	28	25'2"	27			13'7"	10	25'2"	27	4'8"			27	10'9"					
32	14	15.25	15.70	30	SEE SHEET 12 FOR PANEL REINFORCEMENT																		
33	12	15.70	5.61	31.3	9	30'12"	32	14'0"	3'11"		8	32'5"	32	4'8"					32	6'7"	18	2'0"	29'0"

* QUANTITIES OF BARS SHOWN ARE FOR SINGLE FACE, TWO SETS REQUIRED

BAR MARK	BAR SIZE, NO.
A	5
B	5
C	5
D	5
E	5
F	5
G	5
AA	5



D BAR



BAR MARK	DIM. "A"	DIM. "B"
E	1'-8"	1'-2"
F	1'-8"	3'-5"
G	1'-8"	1'-4"

⚠ BUNDLE TWO SETS OF 10 BARS AND ONE SET OF 11 BARS. BARS IN A SET SHALL HAVE SAME LENGTH.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

DRAWN BY MR | PLANS CK'D. MHZ

BILL OF BARS/ BAR SERIES TABLE

SHEET 11 OF 19

STATE PROJECT NUMBER
1060-33-78

WALL FACING BILL OF BARS

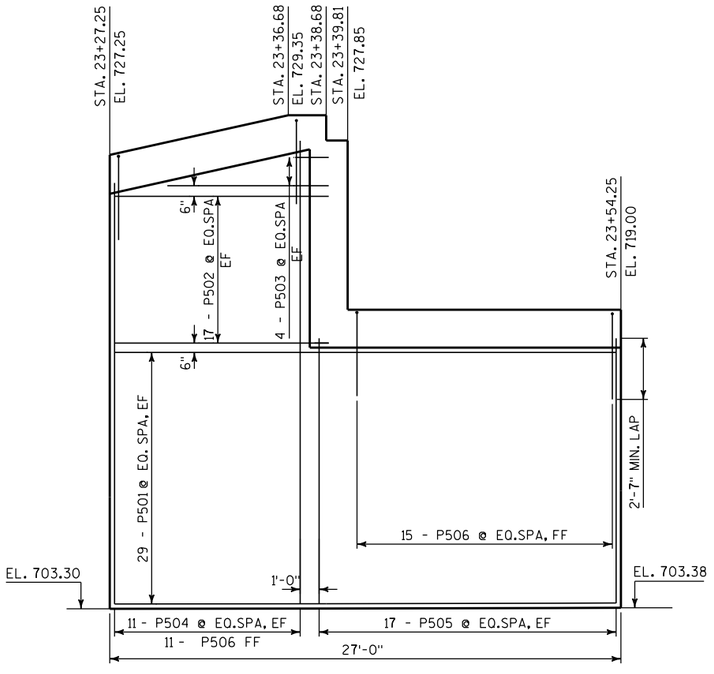
BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
P501	X	58	26'-8"			PANEL 28 HORIZONTAL
P502	X	34	11'-6"			PANEL 28 HORIZONTAL
P503	X	8	5'-5"		⚠	PANEL 28 HORIZONTAL
P504	X	22	23'-5"		⚠	PANEL 28 VERTICAL
P505	X	34	14'-0"			PANEL 28 VERTICAL
P506	X	26	4'-8"	X		PANEL 28 VERTICAL
N501	X	56	29'-8"			PANEL 32 HORIZONTAL
N502	X	34	14'-10"		⚠	PANEL 32 HORIZONTAL
N503	X	6	13'-7"			PANEL 32 VERTICAL
N504	X	56	17'-5"		⚠	PANEL 32 VERTICAL
N505	X	29	4'-8"	X		PANEL 32 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

BAR SERIES TABLE ⚠

BAR MARK	NO. REQ'D	LENGTH
P503	2 SERIES OF 4	2'-0" TO 8'-9"
P504	2 SERIES OF 11	22'-3" TO 24'-6"
N502	2 SERIES OF 17	2'-0" TO 27'-9"
N504	2 SERIES OF 28	14'-0" TO 21'-0"

BUNDLE & TAG EACH SERIES SEPARATELY

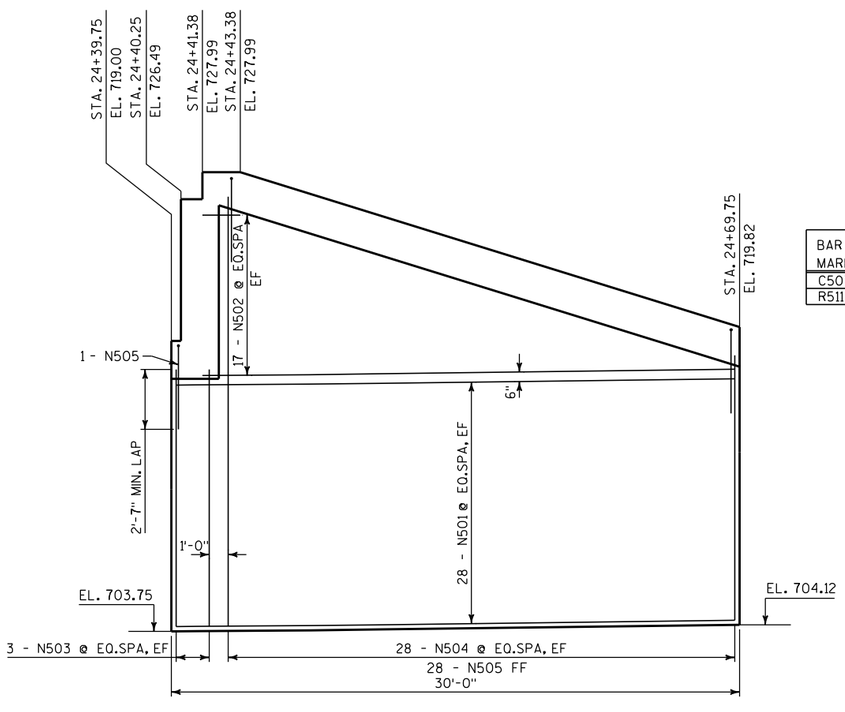


PANEL-28 ELEVATION

SEE SHEET 13 FOR COPING REINFORCEMENT

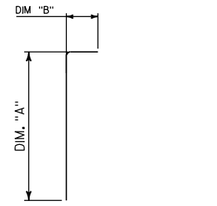
WALL COPING BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
C501	X	5	11'-4"			COPING HORIZONTAL PANEL 28
C502	X	3	11'-4"	X		COPING HORIZONTAL PANEL 28
C503	X	3	8'-6"	X		COPING VERTICAL W/VERTICAL COPING REINF. PANEL 28
C504	X	1	6'-1"	X		COPING HORIZONTAL PANEL 28
C505	X	10	16'-1"			COPING HORIZONTAL PANEL 28
C506	X	9	10'-6"			COPING VERTICAL PANEL 28
C507	X	9	4'-11"	X		COPING VERTICAL PANEL 28
C508	X	3	3'-0"	X		COPING HORIZONTAL W/C505 PANEL 28
C509	X	3	2'-3"	X		COPING HORIZONTAL W/C505 PANEL 28
C510	X	15	10'-9"	X		COPING HORIZONTAL PANEL 28
C511	X	10	6'-7"	X		COPING HORIZONTAL PANEL 28
C512	X	9	5'-11"	X		COPING VERTICAL PANEL 28
R501	X	5	29'-4"			COPING HORIZONTAL PANEL 32
R502	X	3	29'-4"	X		COPING HORIZONTAL PANEL 32
R503	X	1	8'-6"	X		COPING VERTICAL W/VERTICAL COPING REINF. PANEL 32
R504	X	1	5'-9"	X		HORIZONTAL PANEL 32
R505	X	1	10'-9"	X		COPING HORIZONTAL PANEL 32
R506	X	8	9'-1"			COPING VERTICAL PANEL 32
R507	X	27	6'-7"	X		COPING HORIZONTAL PANEL 32
R508	X	3	4'-1"	X		COPING HORIZONTAL PANEL 32
R509	X	3	7'-0"	X		COPING VERTICAL PANEL 32
R510	X	8	4'-11"	X		COPING VERTICAL PANEL 32
R511	X	8	4'-8"	X		COPING VERTICAL PANEL 32

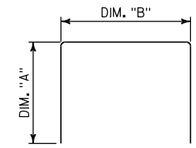


PANEL-32 ELEVATION

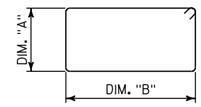
SEE SHEET 13 FOR COPING REINFORCEMENT



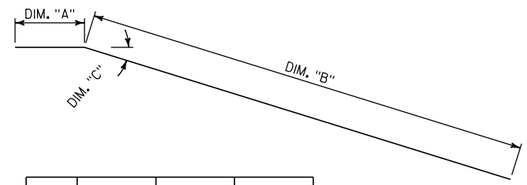
BAR MARK	DIM. "A"	DIM. "B"
P506	3'-11"	STD. HOOK
N505	3'-11"	STD. HOOK
C508	1'-10"	1'-4"
C509	1'-10"	0'-7"



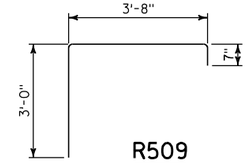
BAR MARK	DIM. "A"	DIM. "B"
C503	2'-8"	3'-5"
R503	2'-8"	3'-5"
R508	1'-4"	1'-8"



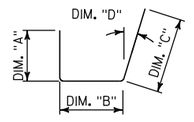
BAR MARK	DIM. "A"	DIM. "B"
C504	1'-5"	1'-4"
C510	1'-8"	3'-5"
C511	1'-8"	1'-4"
R504	1'-3"	1'-4"
R505	1'-8"	3'-5"
R507	1'-8"	1'-4"



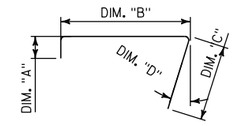
BAR MARK	DIM. "A"	DIM. "B"	DIM. "C"
C502	1'-10"	9'-6"	12.5 °
R502	1'-10"	27'-6"	17.2 °



R509



BAR MARK	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"
C507	1'-4"	1'-8"	2'-0"	17.09°
R511	0'-7"	2'-2"	2'-0"	17.09°



BAR MARK	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"
C512	0'-7"	3'-5"	2'-0"	17.09 °
R510	1'-4"	1'-8"	2'-0"	17.09 °

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

DRAWN BY MR | PLANS CK'D. MHZ

WALL DETAILS 1 OF 2

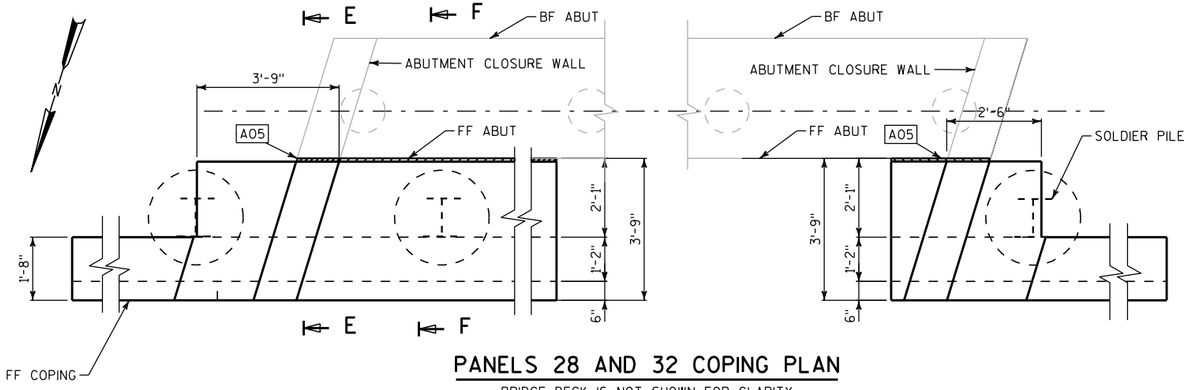
SHEET 12 OF 19

8

8

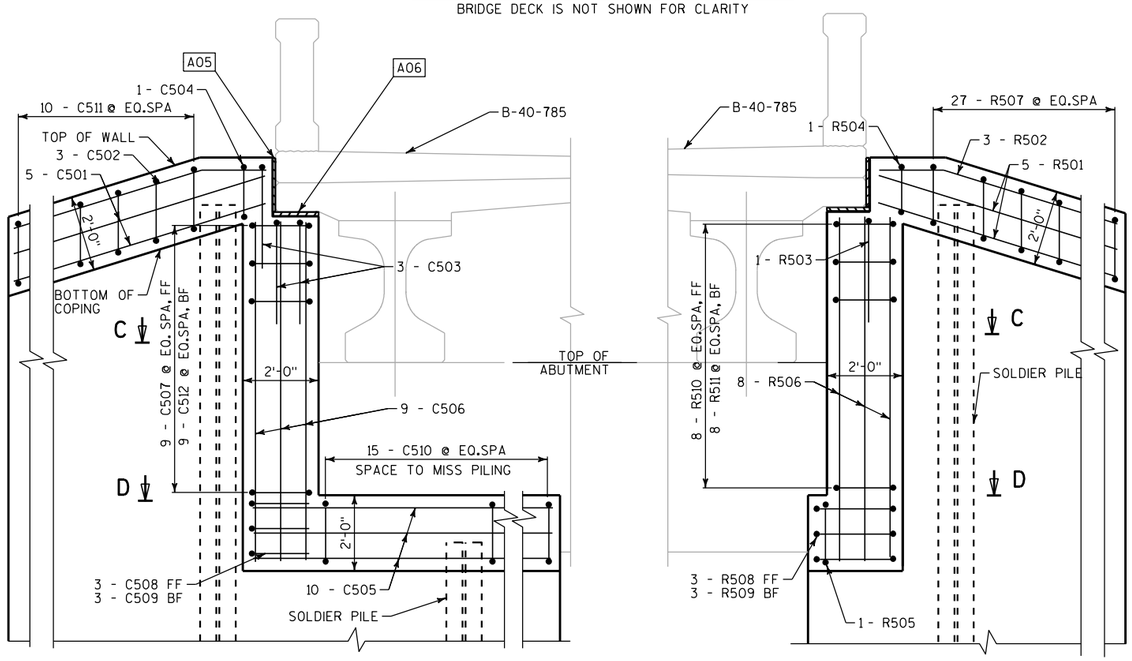
STATE PROJECT NUMBER

1060-33-78

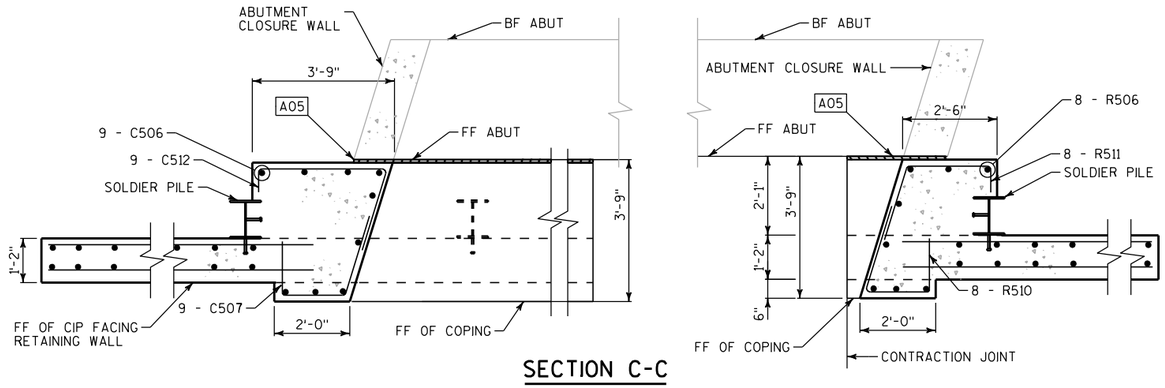


PANELS 28 AND 32 COPING PLAN

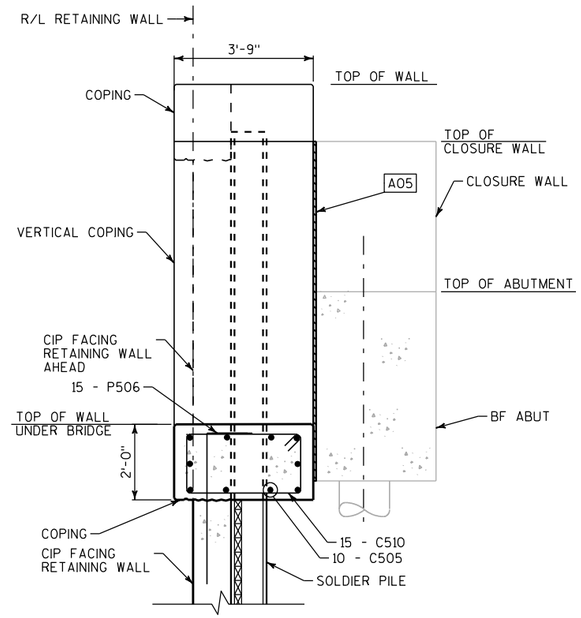
BRIDGE DECK IS NOT SHOWN FOR CLARITY



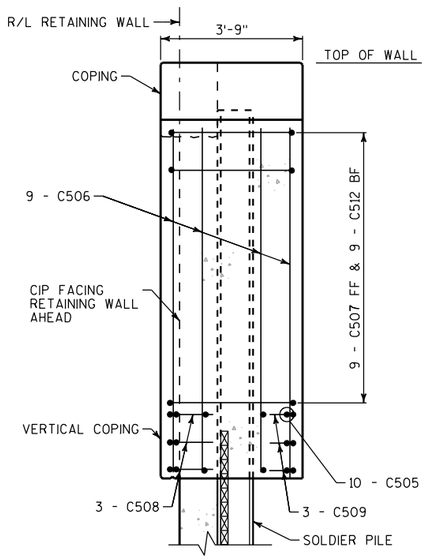
PANELS 28 AND 32 COPING ELEVATION



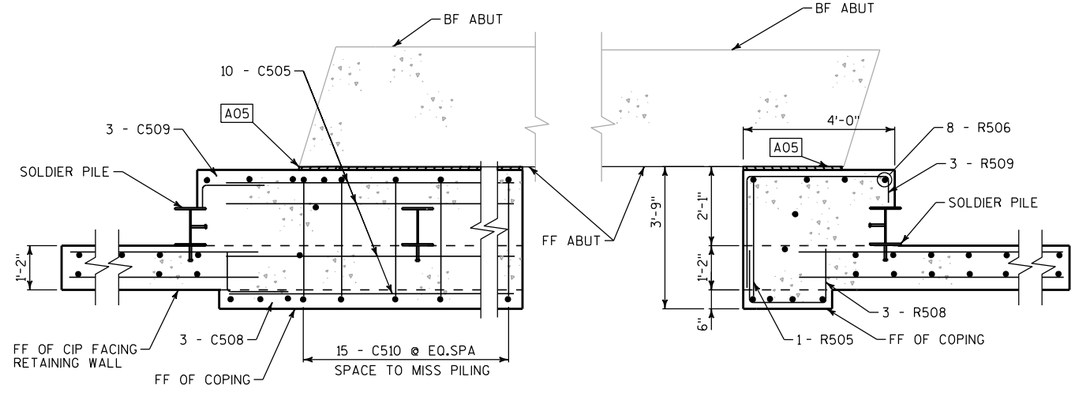
SECTION C-C



SECTION F-F



SECTION E-E



SECTION D-D

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE

NOTES

A05 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND ABUTMENT.

A06 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN TOP OF VERTICAL COPING AND BRIDGE DECK.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

DRAWN BY: MR | PLANS CK'D.: MHZ

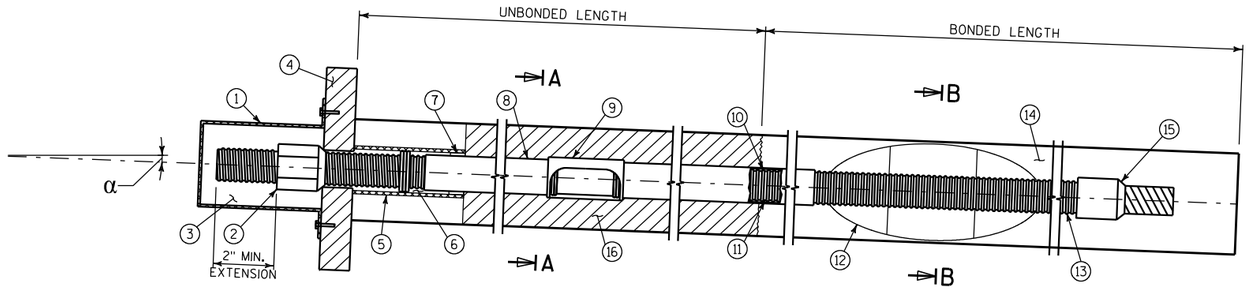
WALL DETAILS 2 OF 2

SHEET 13 OF 19

8

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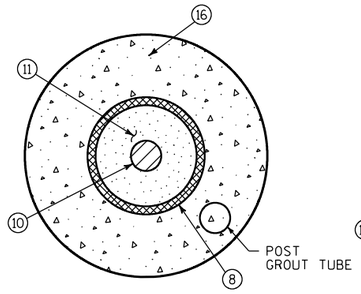


ENCAPSULATED TIEBACK

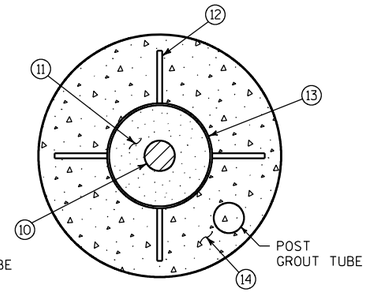
LEGEND:

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

A. STIFFENER PLAT 1"x12⅝"x1'-4"
B. 8" DIA. ASTM A-53 SCHEDULE 40 PIPE
C. WEDGE PLATE 1"x10" WIDE, CUT TO REQUIRED ANGLE
D. BEARING PLATE 1¾"x10"x10"



SECTION A-A



SECTION B-B

NOTES

1. BAR TENDON SHOWN. PRESTRESSED STEEL TENDONS MAY BE USED BUT ARE NOT SHOWN HERE.

2. HP 14x73 SHALL BE PRE-FABRICATED WITH ANCHORAGE DETAIL SHOWN BEFORE INSTALLATION. BEARING PLATE, STIFFENERS, PIPE ARE INCLUDED IN THE ITEM "TIEBACK ANCHORS".

TIEBACK ANCHOR DATA TABLE

PILE NO. ●	** TIEBACK NUMBER	TIEBACK ELEVATION	α TIEBACK VERTICAL ORIENTATION (DEGREES)	β TIEBACK HORIZONTAL ORIENTATION (DEGREES)	ESTIMATED BONDED ANCHOR LENGTH * (FT)	MINIMUM UNBONDED ANCHOR LENGTH (FT)	ESTIMATED TOTAL ANCHOR LENGTH (FT)	FACTORED DESIGN LOAD (KIPS)	LOCK OFF LOAD (KIPS)	PROOF TEST LOAD (KIPS)
105	1	711	15	90	35	30	65	105	63	105
106	2	713	15	90	35	30	65	105	63	105
107	3	715	15	90	35	30	65	105	63	105
108	4	715	15	90	35	30	65	105	63	105
109	5	715	15	90	47	30	77	145	87	145
110	6	715	15	90	47	30	77	145	87	145
111	7	712	15	90	45	30	75	125	75	125
112	8	712	15	90	45	30	75	125	75	125
113	9	712	15	90	45	30	75	125	75	125
114	10	712	15	90	45	30	75	125	75	125
115	11	712	15	90	45	30	75	125	75	125
116	12	712	15	90	45	30	75	125	75	125
117	13	712	15	90	45	30	75	125	75	125
118	14	712	15	90	45	30	75	125	75	125
119	15	712	15	90	45	30	75	125	75	125
120	16	712	15	90	45	30	75	125	75	125
121	17	712	15	90	45	30	75	125	75	125
122	18	712	15	90	45	30	75	125	75	125
123	19	712	15	90	45	30	75	125	75	125
124	20	712	15	90	45	30	75	125	75	125
125	21	715	15	90	47	30	77	140	84	140
126	22	715	15	90	47	30	77	140	84	140
127	23	713	15	90	35	30	65	105	63	105
128	24	711	15	90	35	30	65	105	63	105

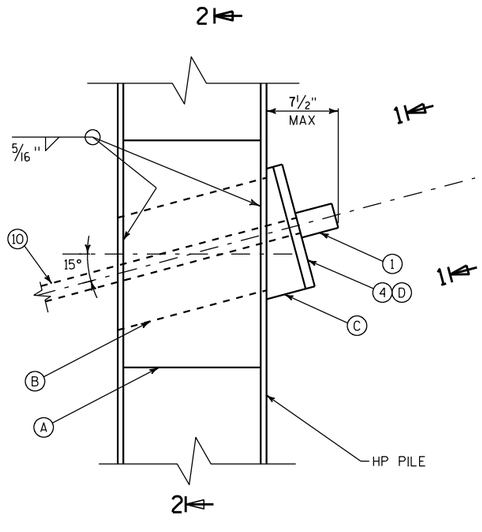
* ESTIMATED BONDED ANCHOR LENGTH BASED ON 6" DIA ANCHOR

α ANGLE FROM HORIZONTAL (LEVEL)

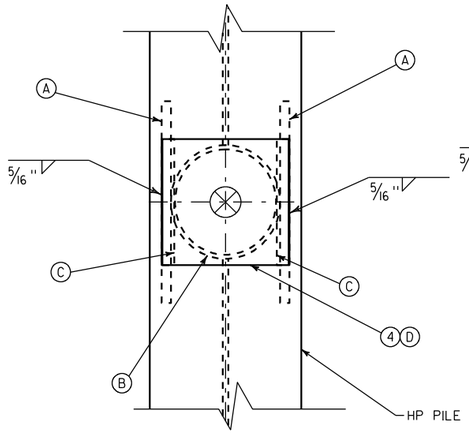
β HORIZONTAL ORIENTATION IS MEASURED FROM WALL R/L IN COUNTER-CLOCKWISE DIRECTION

** ALL BARS ARE 1.375" DIAMETER, ASTM A722 GRADE 150

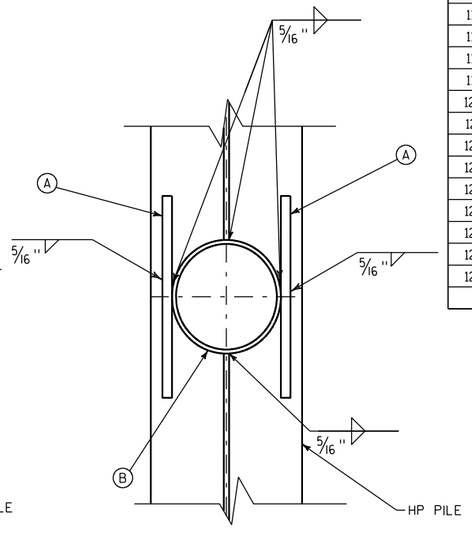
● ALL BRIDGE B-40-785 SOUTH ABUTMENT PILES SHALL BE DRIVEN COMPLETELY BEFORE INSTALLING TIEBACK ANCHORS AT BRIDGE ABUTMENT LOCATION.



ANCHOR DETAIL



SECTION 1-1



SECTION 2-2

TENDON NOT SHOWN FOR CLARITY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

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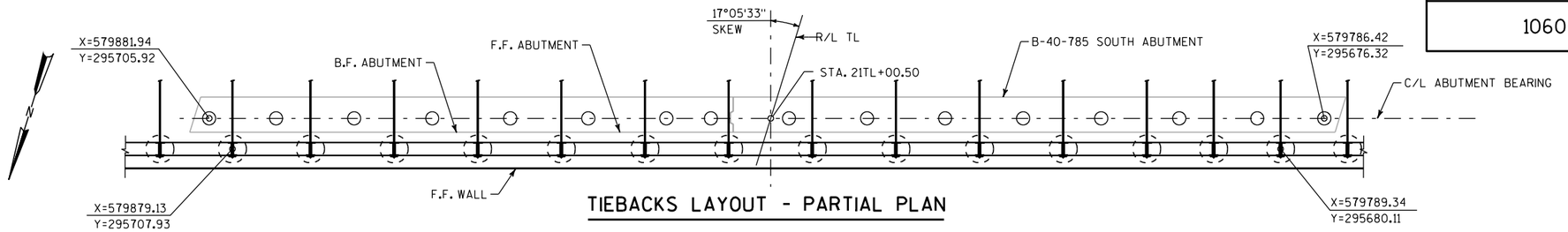
TIEBACK ANCHOR DATA TABLES & DETAILS

SHEET 14 OF 19

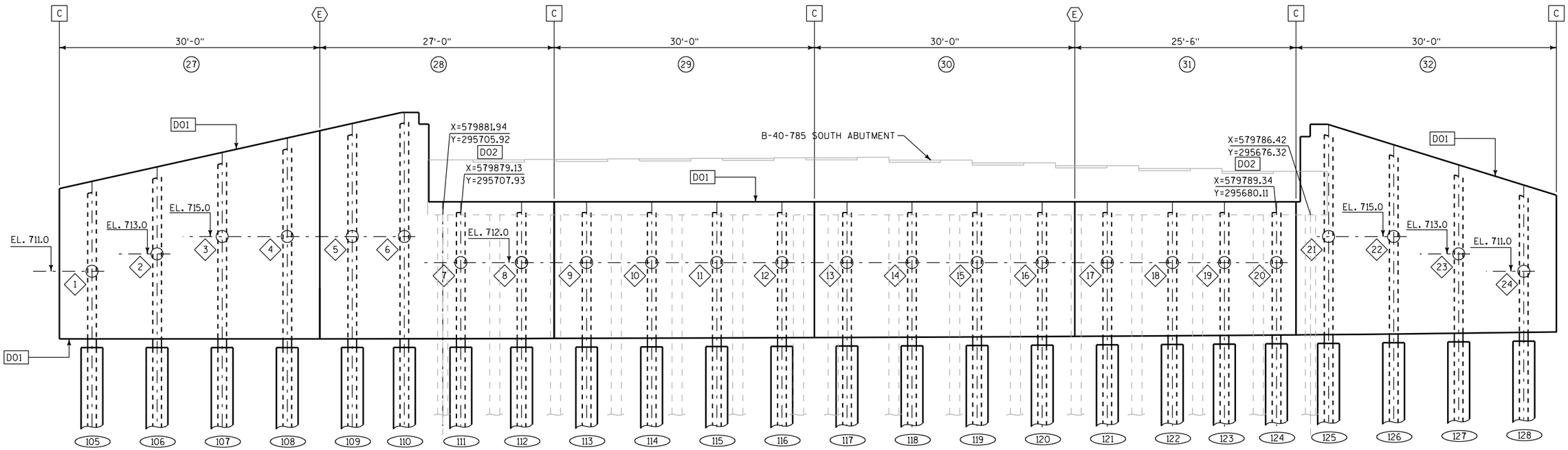
8

8

STATE PROJECT NUMBER
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TIEBACKS LAYOUT - PARTIAL PLAN



TIEBACKS LAYOUT - ELEVATION

LEGEND

- (X) PANEL NUMBER
- ◇X TIEBACK NUMBER
- [C] CONTRACTION JOINT IN COPING AND CONCRETE FACING
- ⬡E EXPANSION JOINT IN COPING AND CONCRETE FACING
- (X) PILE NUMBER

NOTE

[D01] FOR TOP AND BOTTOM OF WALL ELEVATIONS SEE SHEETS 9 AND 10

[D02] COORDINATE NOTATION DENOTES CENTER OF PILE OR DRILLED SHAFT

CONSTRUCTION SEQUENCE NOTES

CONSTRUCTION OF PANELS 27 THROUGH 32 REQUIRE FOLLOWING SEQUENCE:

1. DRILL FOOTING SHAFTS AND INSTALL SOLDIER PILES.
2. PLACE LAGGING AND BACKFILL TO ELEVATION 719.00. EXTEND FILL HORIZONTALLY BACK TO EXISTING SLOPE.
3. INSTALL AND TEST ANCHORS.
4. REMOVE SOIL IN FRONT OF WALL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

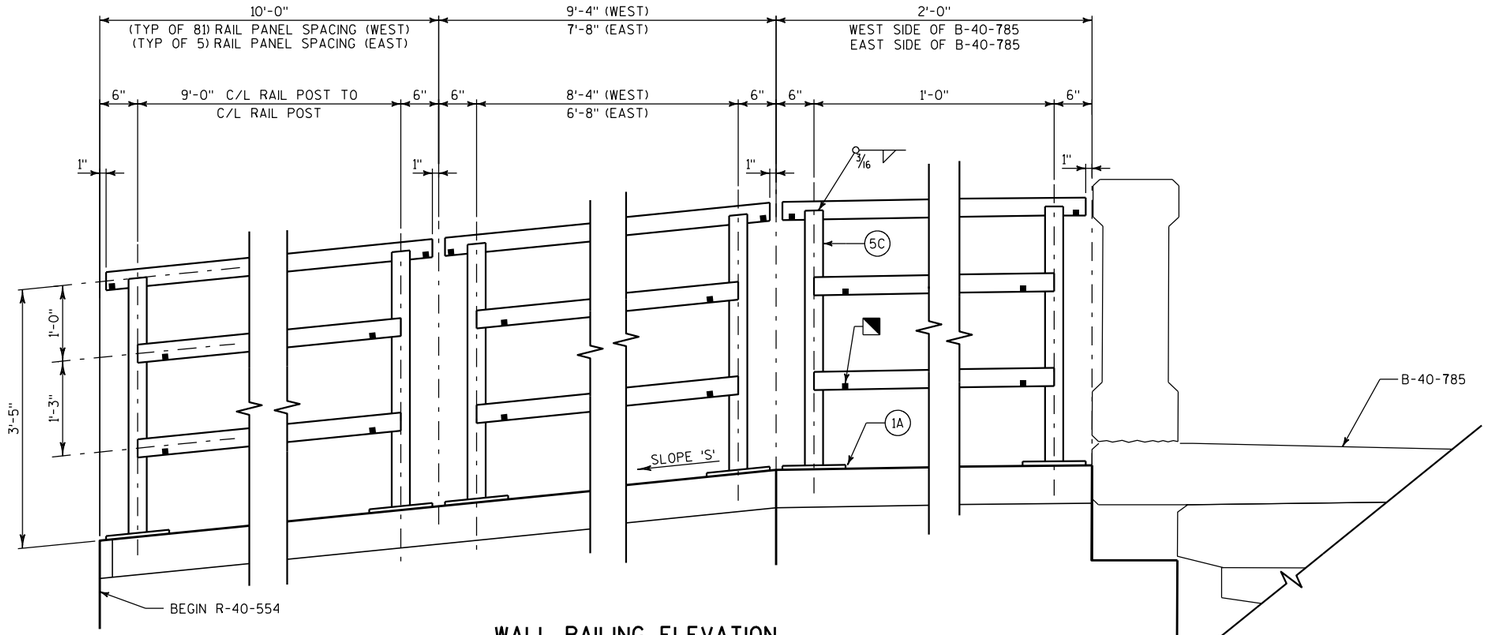
DRAWN BY MR | PLANS CK'D. MHZ/CHW

TIEBACKS LAYOUT

SHEET 15 OF 19

FILE NAME : \\WKE31FP1\w3zoo\Cadd\Final\10603378_TL\Structs\R-40-554\cds\R554_080115_de.dgn PLOT DATE : 30-APR-2013 14:36 PLOT BY : MSCM1M PLOT NAME : R554_080115_de PLOT SCALE : 12:1

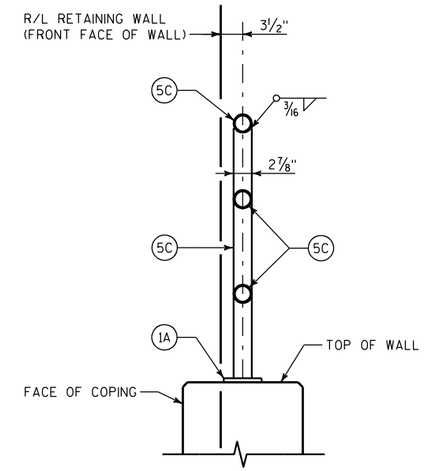
STATE PROJECT NUMBER
1060-33-78



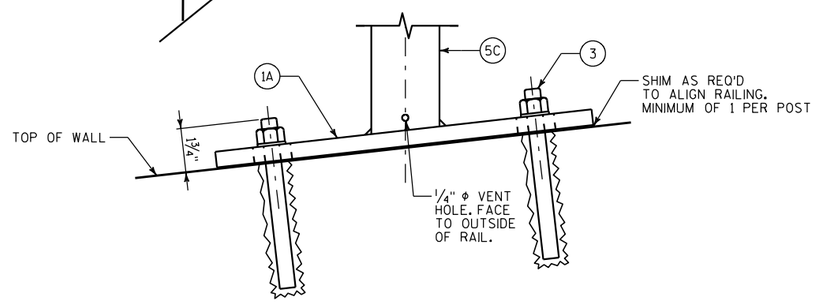
WALL RAILING ELEVATION

(LOOKING AT FRONT FACE OF COPING ON THE EAST PART OF WALL, WEST PART SIMILAR BUT OPPOSITE)

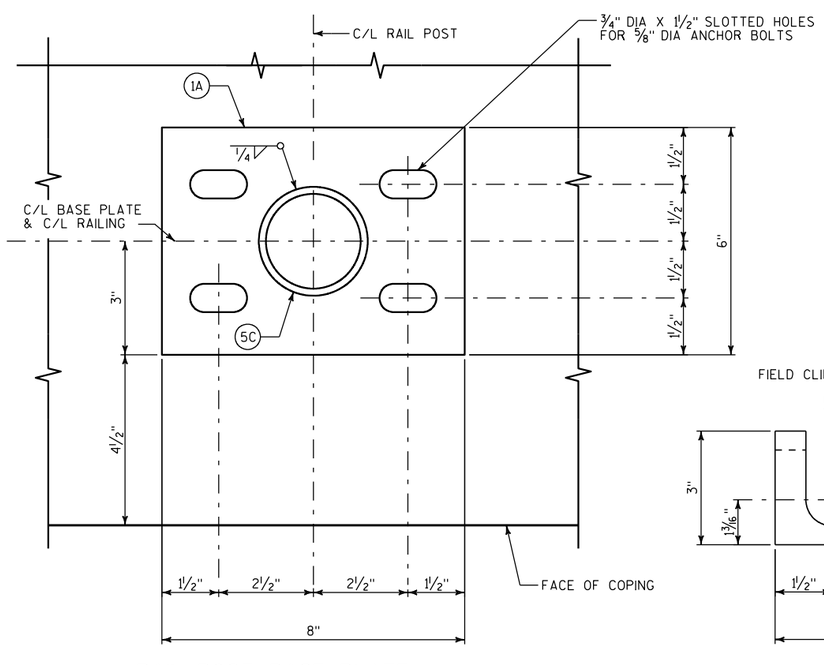
STATION FROM	STATION TO	SLOPE S, %
15+17.25	16+97.25	0.5
16+97.25	19+37.25	0.6
19+37.25	20+87.25	2.2
20+87.25	22+07.25	2.7
22+07.25	22+67.25	-0.3
22+67.25	23+36.68	-22.2
23+36.68	23+38.68	0
24+41.38	24+43.38	0
24+43.38	25+01.05	31.0



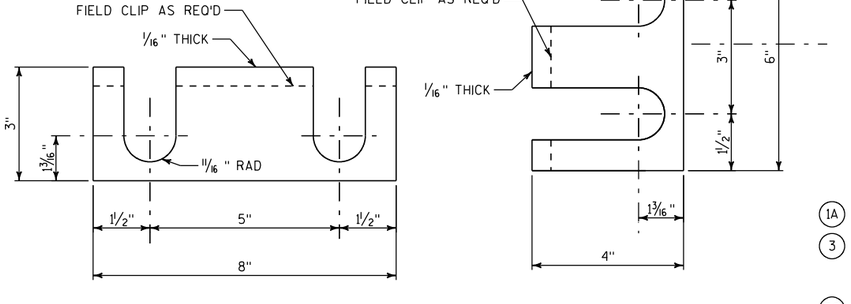
WALL RAILING SECTION



ANCHOR BOLTS FOR RAIL POST



RAIL POST BASE PLATE



RAIL POST SHIM DETAIL

(2 SETS PER POST)

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.

LEGEND

(1A) PLATE 5/8" X 6" X 10" WITH 3/4" X 1 1/2" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" DIA, MINIMUM PULLOUT CAPACITY OF 20 KIPS. 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 5C.

◥ 1/2" Φ DRAIN HOLE @ BOTTOM OF EACH RAIL END.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

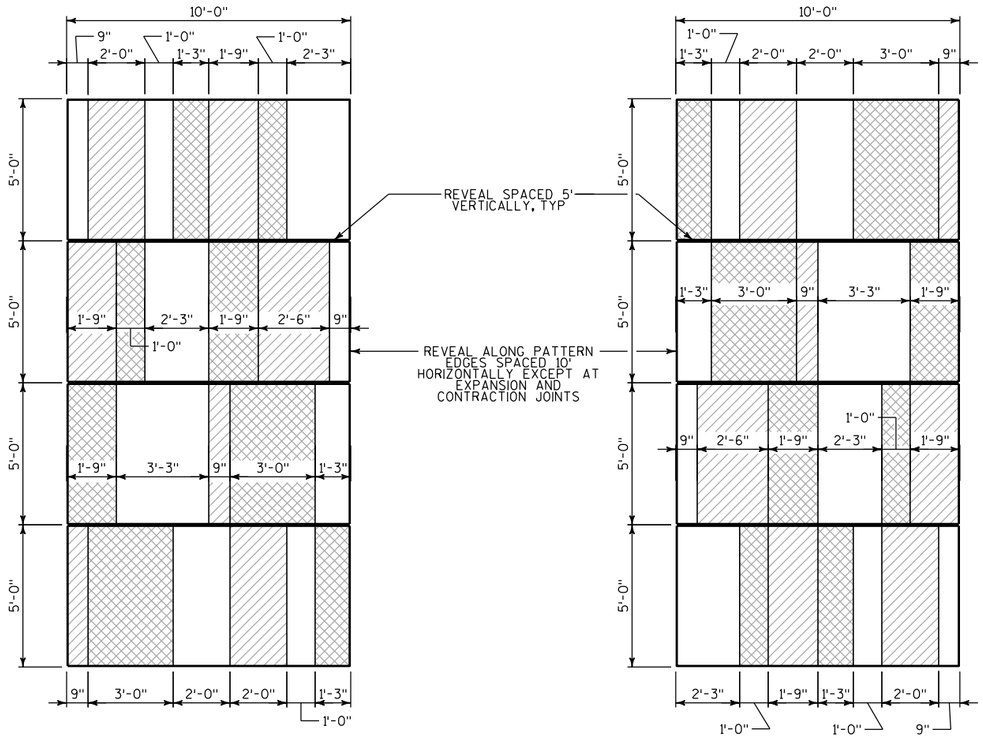
STRUCTURE R-40-554

DRAWN BY: MR | PLANS CK'D: MHZ

PIPE RAILING DETAILS

SHEET 16 OF 19

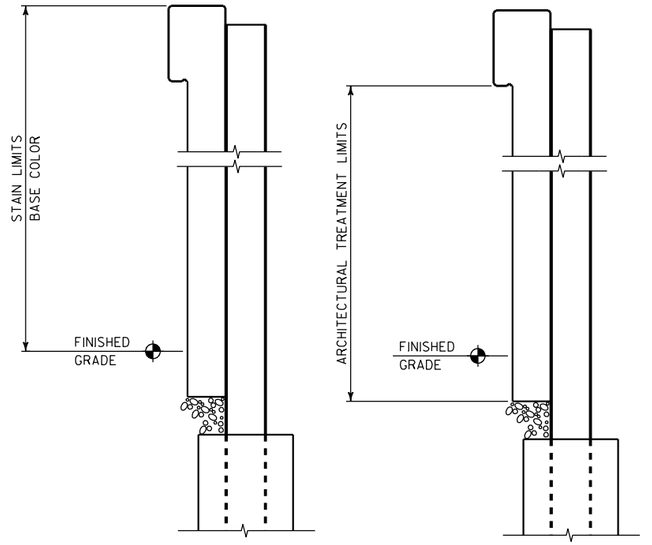
STATE PROJECT NUMBER
1060-33-78



CAST-IN-PLACE 'A' PATTERN

CAST-IN-PLACE 'B' PATTERN

'A' PATTERN ROTATED 180°



WALL STAINING DIAGRAM

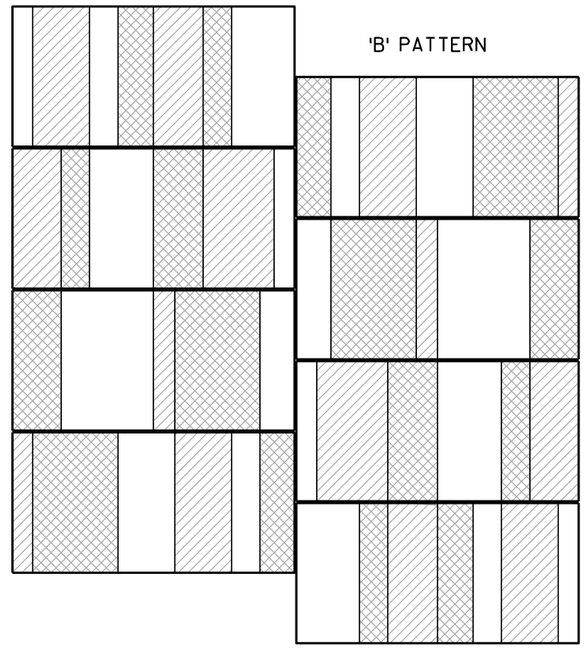
BASE COLOR: FEDERAL COLOR - 33564

WALL 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.

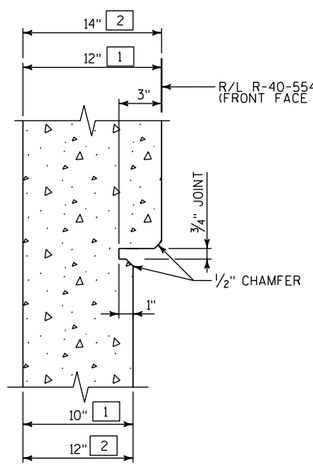
'A' PATTERN

'B' PATTERN



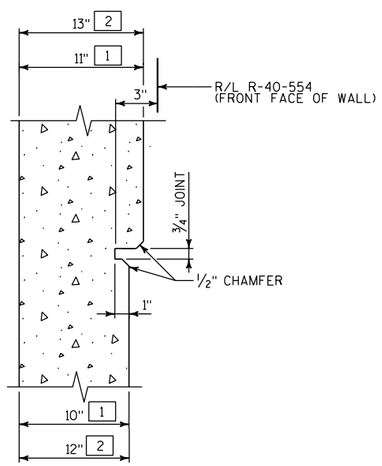
TYPICAL CAST-IN-PLACE PATTERN

PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 30" VERTICALLY
REPEAT VERTICALLY AS REQUIRED



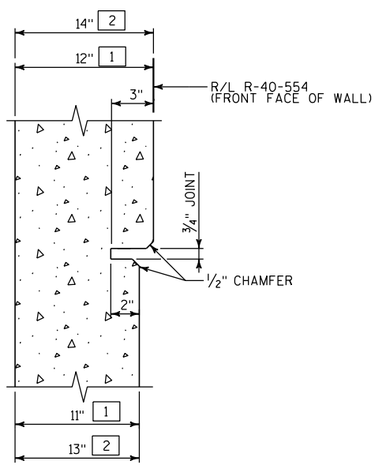
REVEAL DETAIL A

CONC FACING WIDTHS ADJACENT TO REVEAL VARY BY 2"



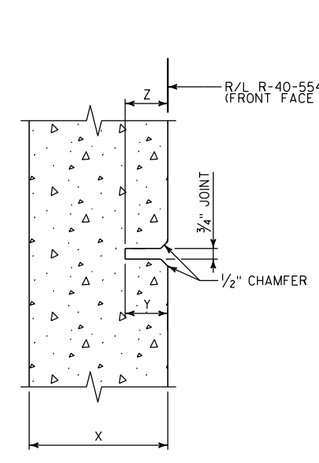
REVEAL DETAIL B

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

2 1'-2" THICK WALL

FACING THICKNESS	1	2
	10"	12"
	11"	13"
	12"	14"

DIMENSIONS 1

X	Y	Z
12"	3"	3"
11"	2"	3"
10"	1"	3"

DIMENSIONS 2

X	Y	Z
14"	3"	3"
13"	2"	3"
12"	1"	3"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-554

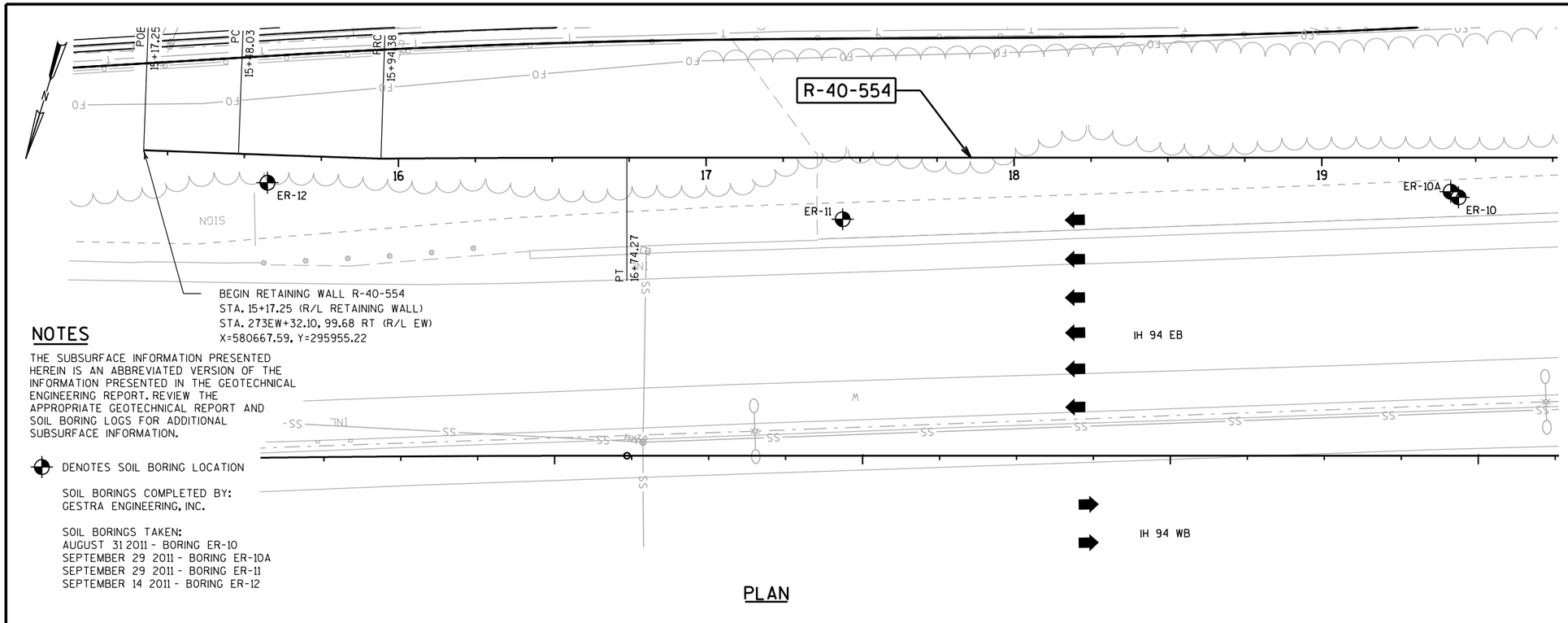
DRAWN BY MR | PLANS CK'D. MHZ

AESTHETIC WALL TREATMENT DETAILS

SHEET 17 OF 19

8

8



NOTES

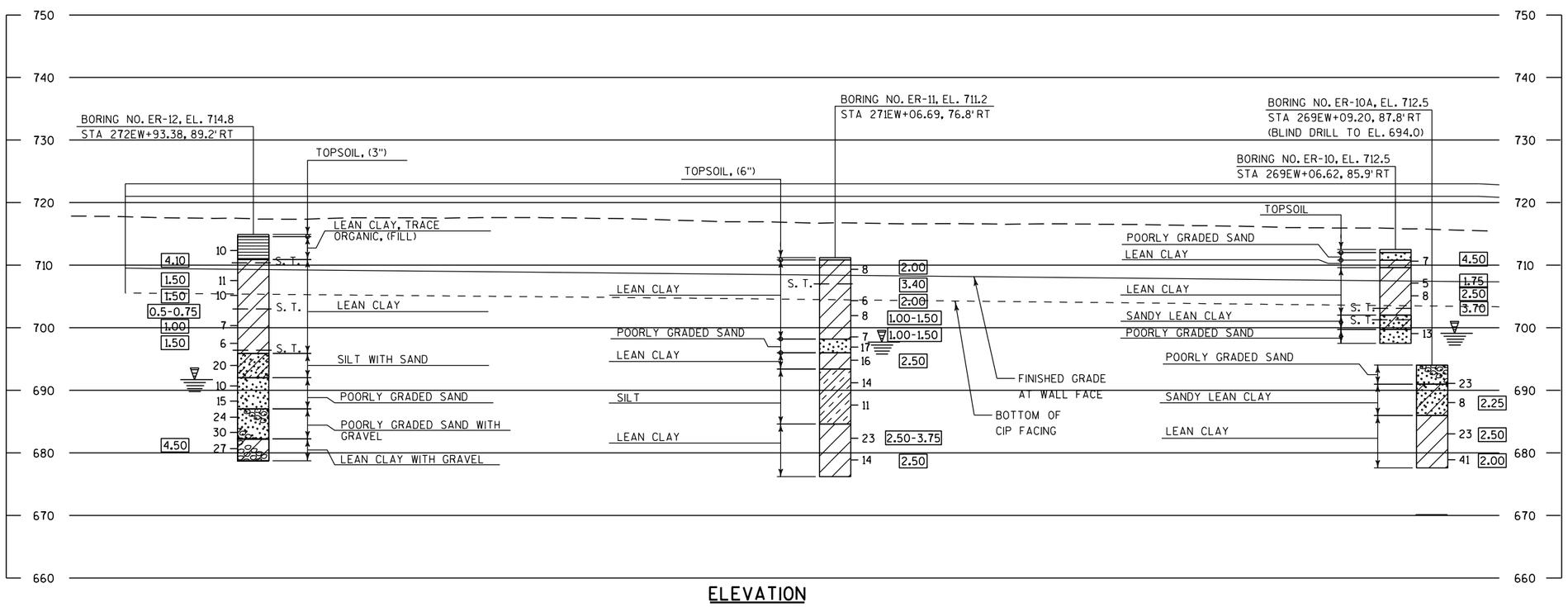
THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.

DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
AUGUST 31 2011 - BORING ER-10
SEPTEMBER 29 2011 - BORING ER-10A
SEPTEMBER 29 2011 - BORING ER-11
SEPTEMBER 14 2011 - BORING ER-12

PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-78

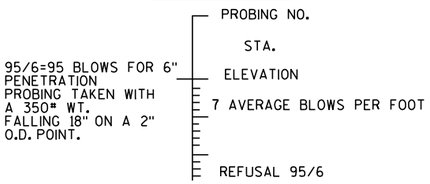
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

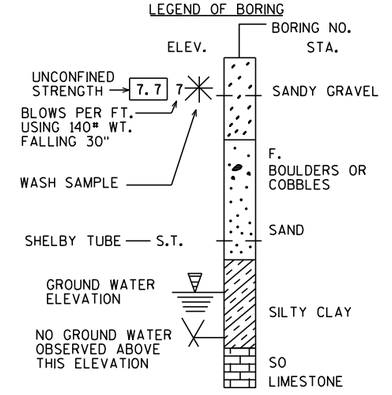
MATERIAL SYMBOLS

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-40-554

DRAWN BY MM | PLANS CK'D. MHZ

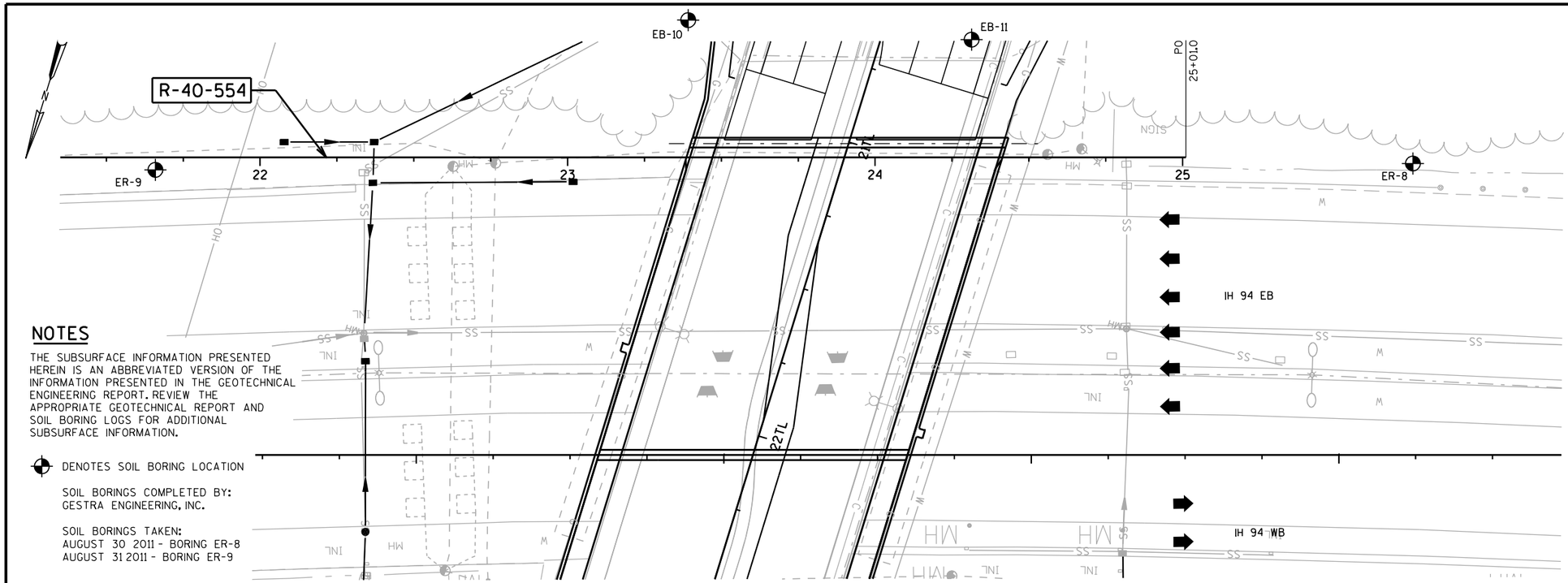
SUBSURFACE EXPLORATION 1 OF 2

SHEET 18 OF 19

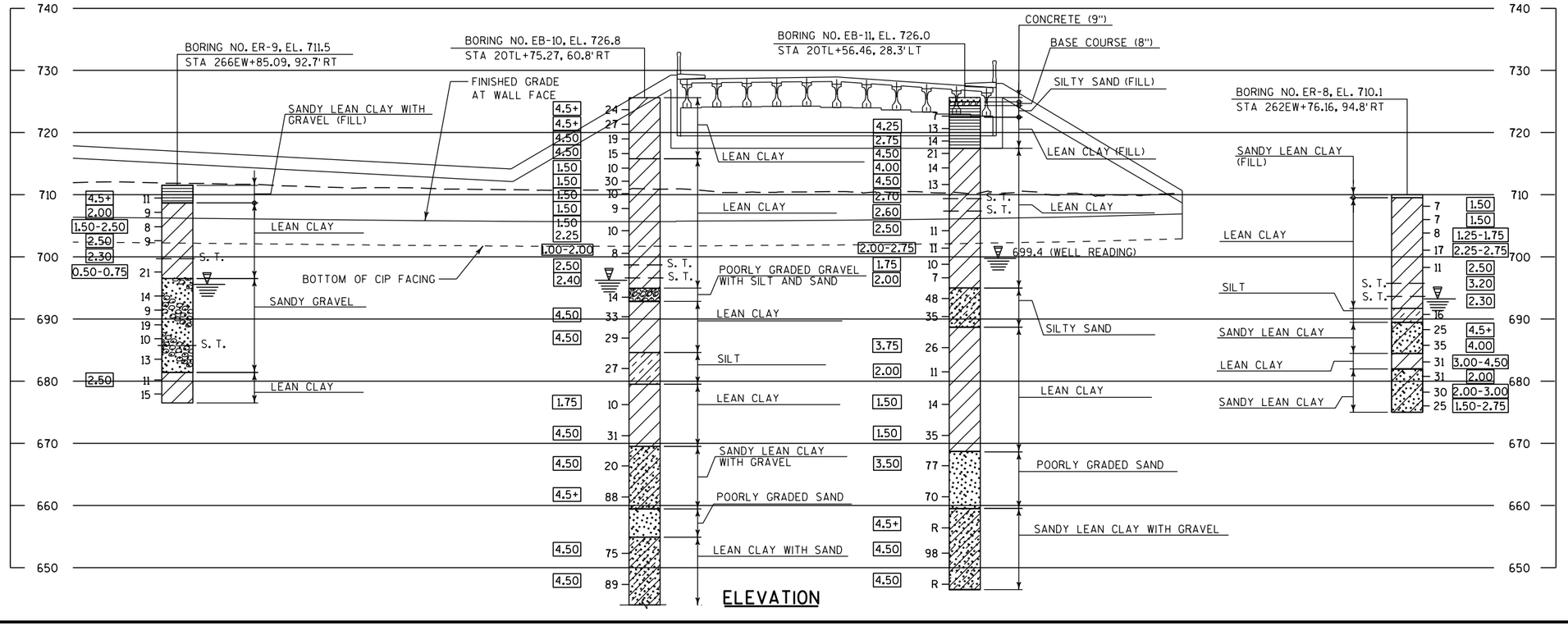
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PLAN



ELEVATION

8

8

STATE PROJECT NUMBER

1060-33-78

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
SILTY CLAY
NO GROUND WATER OBSERVED ABOVE THIS ELEVATION
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

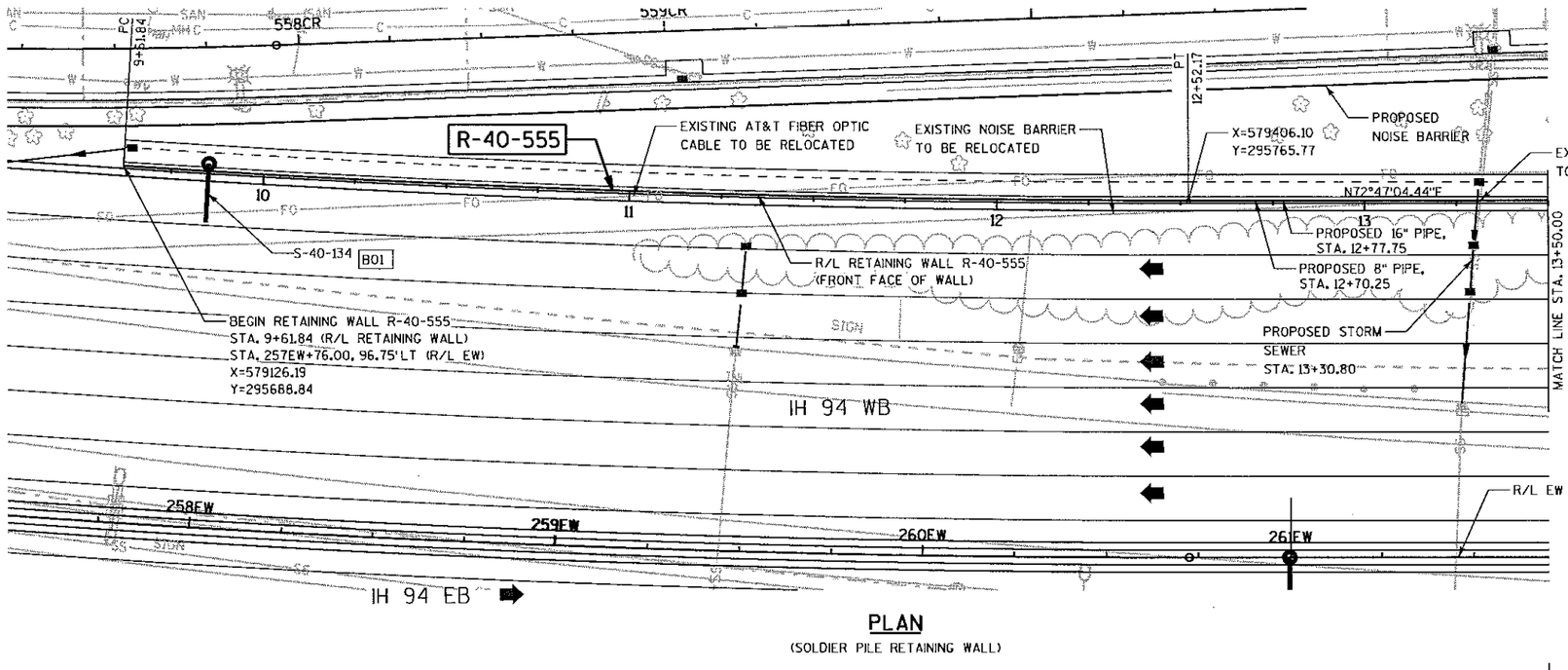
STRUCTURE R-40-554

DRAWN BY MM | PLANS CK'D. MHZ

SUBSURFACE EXPLORATION 1 OF 2

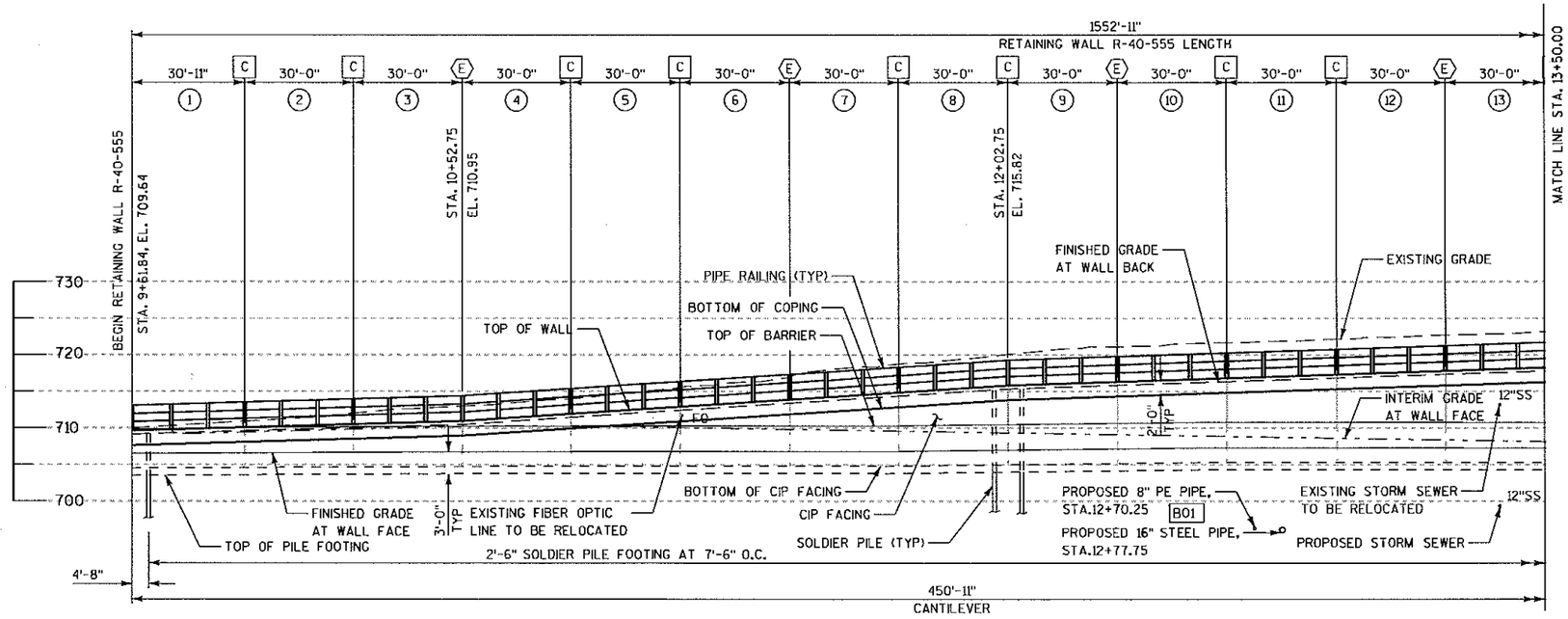
SHEET 19 OF 19

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PLAN

(SOLDIER PILE RETAINING WALL)



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

STATE PROJECT NUMBER

1060-33-78

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
*MATERIAL VALUES BASED ON DOUGLAS FIR-LARCH NO. 1, 2"-4" THICK, REFERENCE AASHTO STANDARD SPECIFICATIONS TABLE 13.5.1A	E = 1,800,000 PSI

LIST OF DRAWINGS

1. GENERAL PLAN AND ELEVATION 1 OF 4
2. GENERAL PLAN AND ELEVATION 2 OF 4
3. GENERAL PLAN AND ELEVATION 3 OF 4
4. GENERAL PLAN AND ELEVATION 4 OF 4
5. PROPOSED CONSTRUCTION SEQUENCE
6. GENERAL NOTES, QUANTITIES AND PROFILES
7. TYPICAL WALL SECTIONS 1 OF 3
8. TYPICAL WALL SECTIONS 2 OF 3
9. TYPICAL WALL SECTIONS 2 OF 3
10. WALL AND PILE DATA TABLES 1 OF 3
11. WALL AND PILE DATA TABLES 2 OF 3
12. WALL AND PILE DATA TABLES 3 OF 3
13. BILL OF BARS/BAR SERIES TABLE 1 OF 2
14. BILL OF BARS/BAR SERIES TABLE 2 OF 2
15. WALL DETAILS 1 OF 2
16. WALL DETAILS 2 OF 2
17. TIEBACK ANCHOR DATA TABLE AND DETAILS 1 OF 2
18. TIEBACK ANCHOR DATA TABLE AND DETAILS 2 OF 2
19. TIEBACKS LAYOUT 1 OF 3
20. TIEBACKS LAYOUT 2 OF 3
21. TIEBACKS LAYOUT 3 OF 3
22. PIPE RAILING DETAILS
23. AESTHETIC WALL TREATMENT DETAILS
24. SUBSURFACE EXPLORATION 1 OF 3
25. SUBSURFACE EXPLORATION 2 OF 3
26. SUBSURFACE EXPLORATION 3 OF 3

NOTES

B01 SIGN STRUCTURES S-40-134 AND S-40-135 WILL BE CONSTRUCTED IN FUTURE CONTRACT

B02 SEE UTILITIES PLANS FOR ELEVATION OF 8" AND 16" DIAMETER PIPES

LEGEND

- INDICATES LANE LOCATIONS AND DIRECTION OF TRAVEL
- C — CONTRACTION JOINT IN COPING AND CONCRETE FACING
- E — EXPANSION JOINT IN COPING AND CONCRETE FACING
- X — PANEL NUMBER

HORIZONTAL CURVE DATA

PC STA. 9+61.84
X = 579126.19
Y = 295688.84
PI STA. 11+07.05
X = 579267.38
Y = 295722.79
PT STA. 12+52.17
X = 579406.10
Y = 295765.77
R = 4503.25
DELTA = 3°41'38.29"
D = 1°16'20.35"
L = 290.33'
T = 145.22'
BK = N76°28'42.73"E
AH = N72°47'04.44"E

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
WILLIAM DREHER (608) 266-8489
CONSULTANT:
MOHAMMED ZAGLOUL (414) 351-6668

NO.	DATE	REVISION	BY

FORWARD 45

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher KAR 06/09/13
CHIEF STRUCTURES DESIGN ENGINEER DATE

WISCONSIN
MOHAMMED H. ZAGLOUL
E-26970
MILWAUKEE
WISCONSIN
PROFESSIONAL ENGINEER
4/30/2013

STRUCTURE R-40-555

RETAINING WALL ALONG IH 94 WB

COUNTY	CITY
MILWAUKEE	MILWAUKEE

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

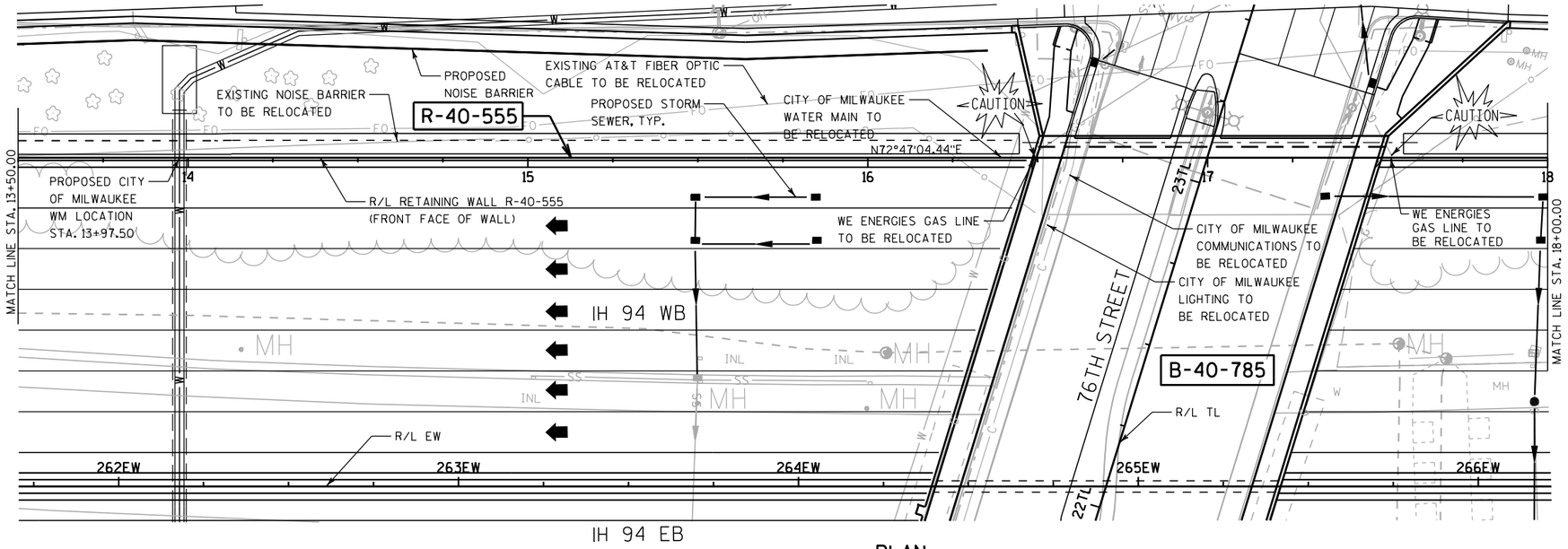
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MR	MHZ	MR	MHZ

GENERAL PLAN & ELEVATION 1 OF 4

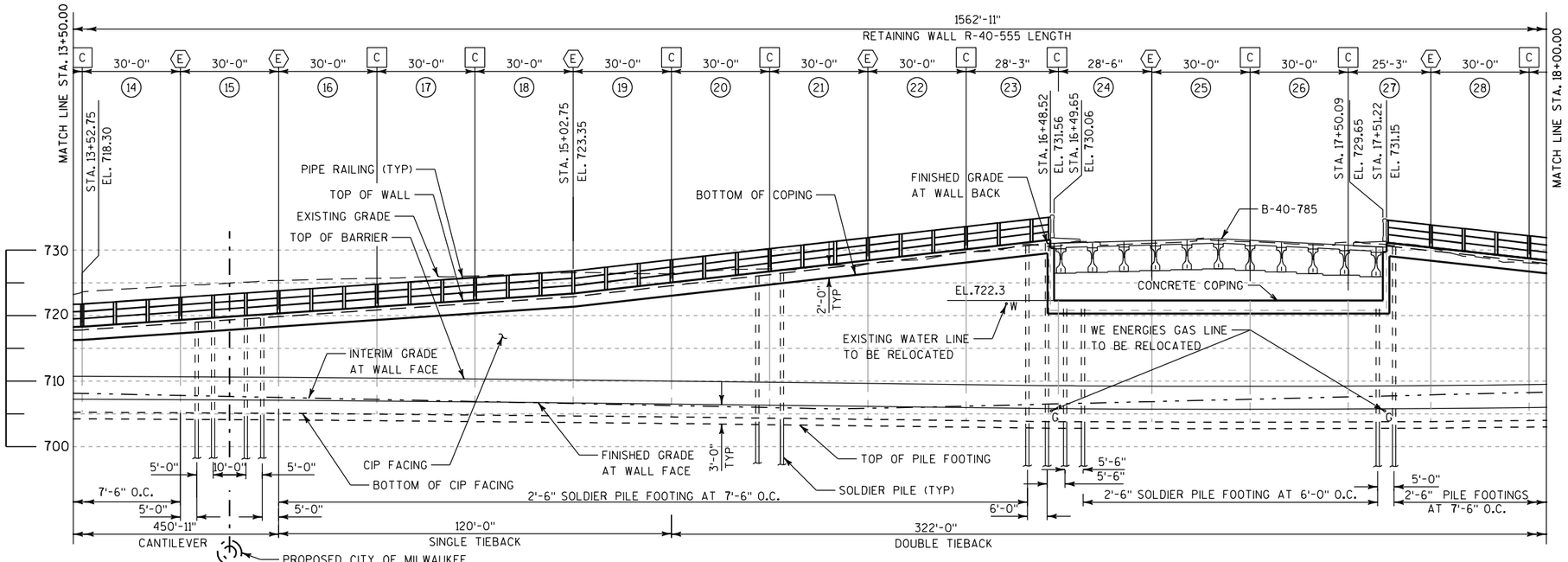
SHEET 1 OF 26

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PLOT DATE : 30-APR-2013 15:10
PLOT BY : MSCM1M
PLOT NAME : R555_080101_gp
PLOT SCALE : 40:1

STATE PROJECT NUMBER
1060-33-78



PLAN
(SOLDIER PILE RETAINING WALL)



ELEVATION
LOOKING NORTH AT FRONT FACE OF WALL
(DISTANCES AND STATIONS ARE GIVEN ALONG THE FRONT FACE OF WALL)

LEGEND

- INDICATES LANE LOCATIONS AND DIRECTION OF TRAVEL
- C — CONTRACTION JOINT IN COPING AND CONCRETE FACING
- E — EXPANSION JOINT IN COPING AND CONCRETE FACING
- X — PANEL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

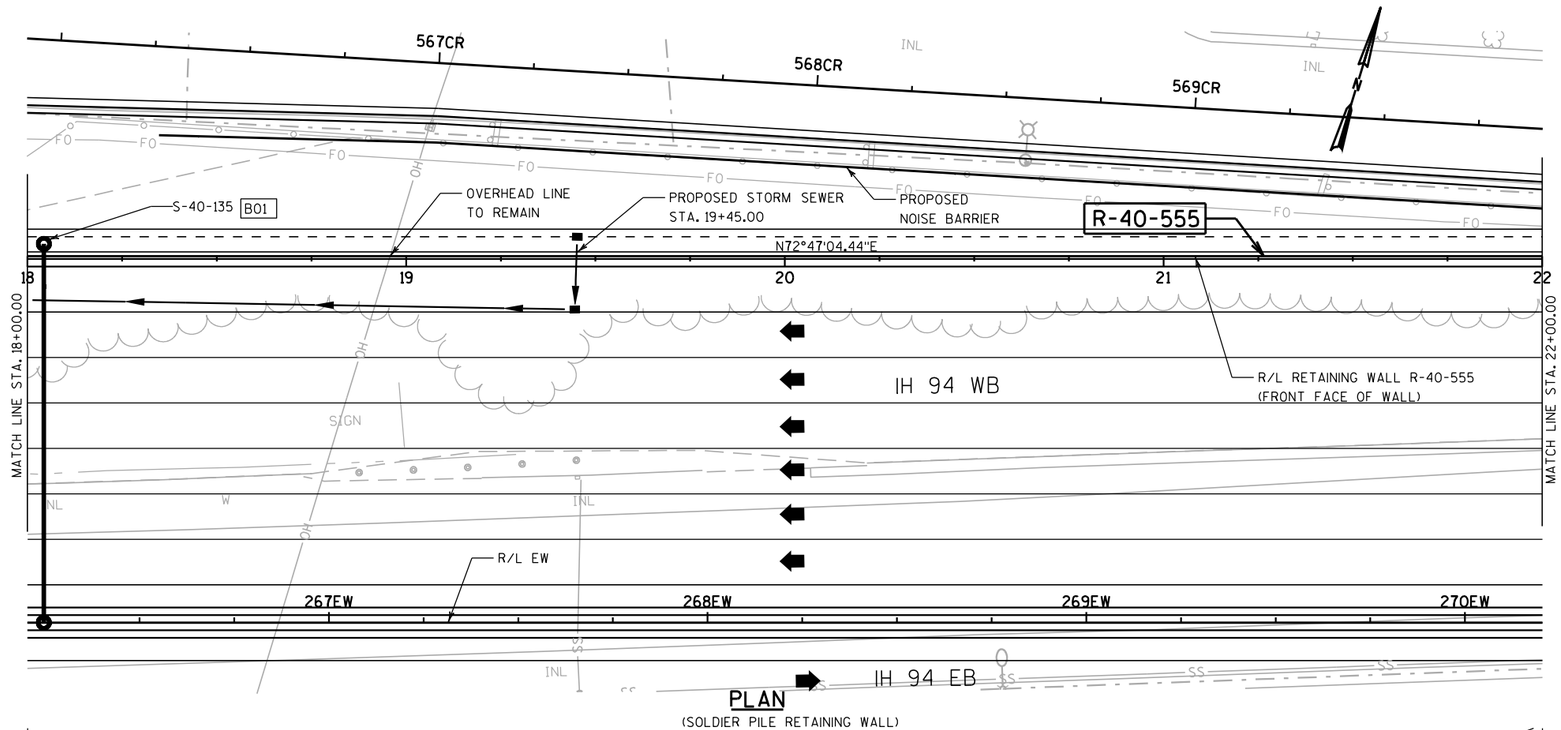
DRAWN BY MR | PLANS CK'D. MHZ

GENERAL PLAN & ELEVATION 2 OF 4

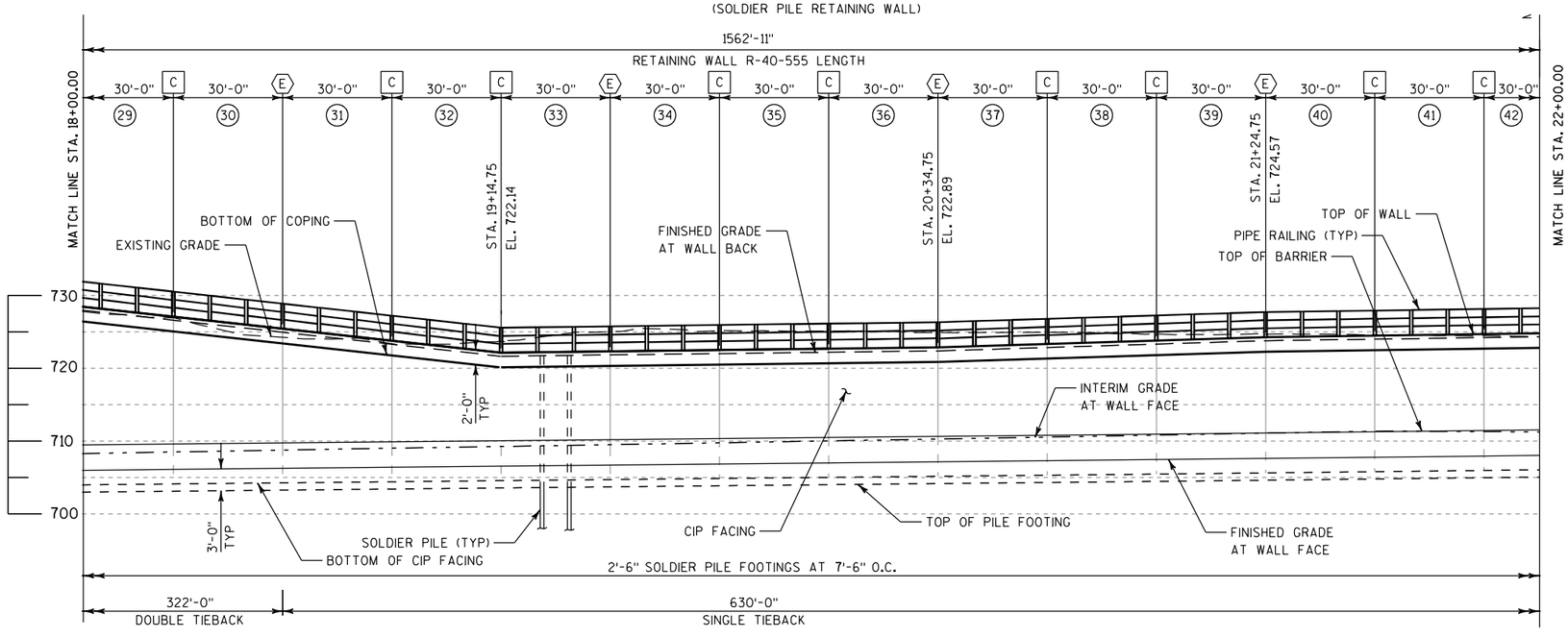
SHEET 2 OF 26

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STATE PROJECT NUMBER
1060-33-78



PLAN
(SOLDIER PILE RETAINING WALL)



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL
(DISTANCES AND STATIONS ARE GIVEN
ALONG THE FRONT FACE OF WALL)

B01 SIGN STRUCTURES S-40-134 AND S-40-135 WILL BE CONSTRUCTED IN FUTURE CONTRACT

LEGEND

- INDICATES LANE LOCATIONS AND DIRECTION OF TRAVEL
- [C] CONTRACTION JOINT IN COPING AND CONCRETE FACING
- ⟨E⟩ EXPANSION JOINT IN COPING AND CONCRETE FACING
- (X) PANEL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

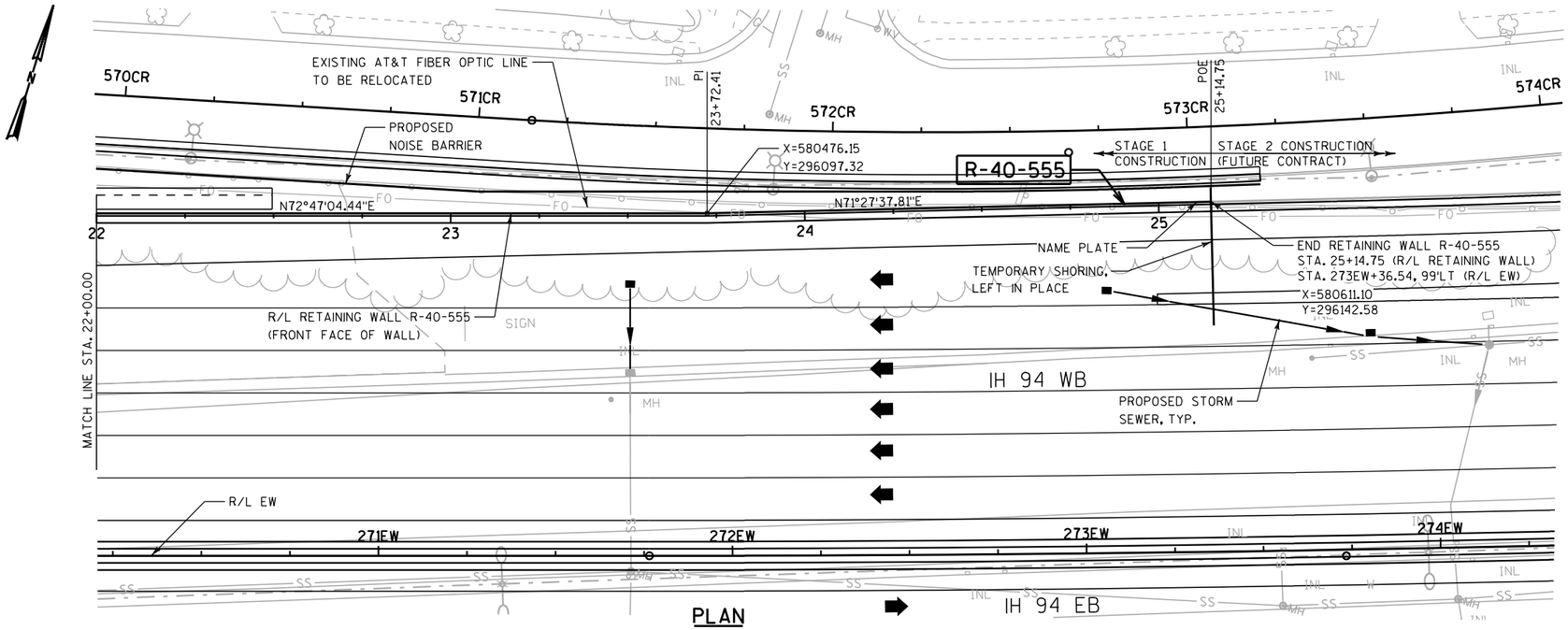
GENERAL PLAN & ELEVATION 3 OF 4

SHEET 3 OF 26

8

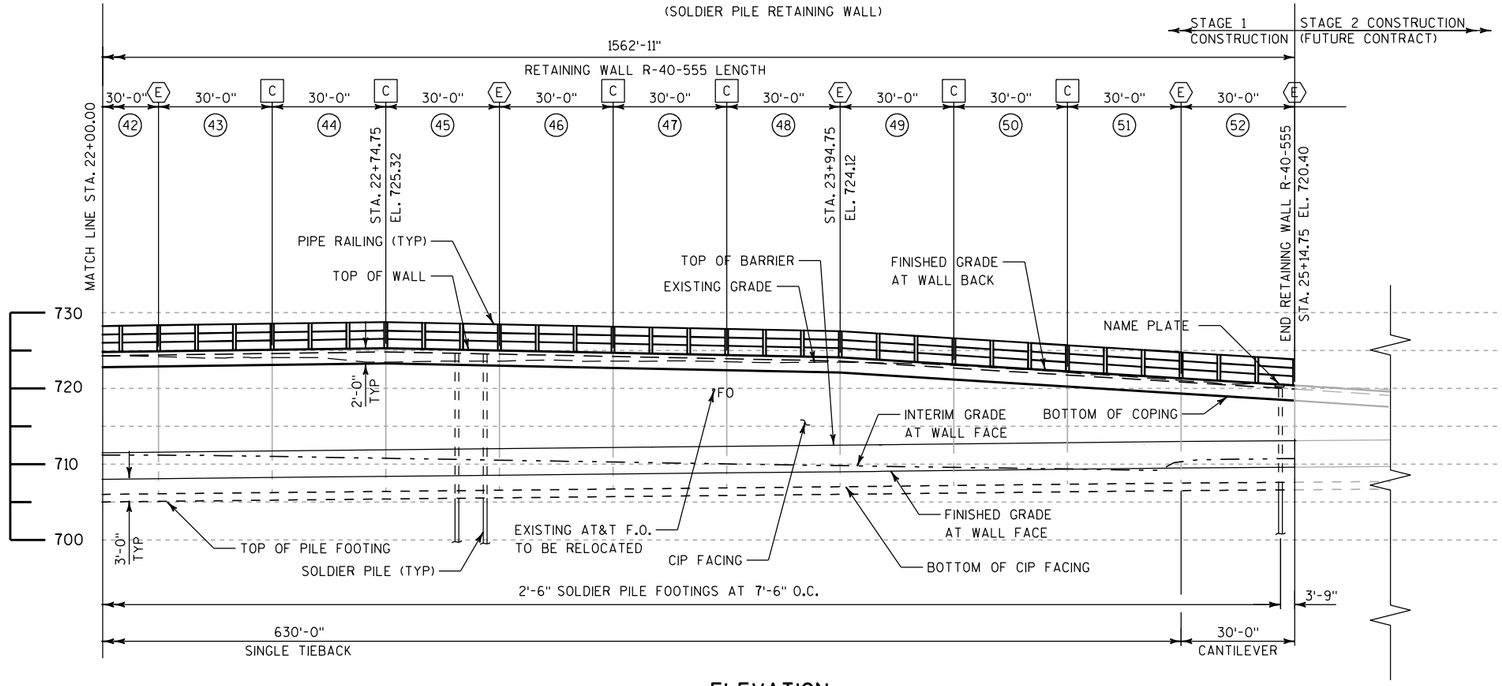
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STATE PROJECT NUMBER
1060-33-78



PLAN

(SOLDIER PILE RETAINING WALL)



ELEVATION

LOOKING NORTH AT FRONT FACE OF WALL
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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

GENERAL PLAN & ELEVATION 4 OF 4

SHEET 4 OF 26

8

8

STATE PROJECT NUMBER

1060-33-78

PROPOSED CONSTRUCTION SEQUENCE

PROPOSED CONSTRUCTION SEQUENCE NO. 1

① EXIST. IH 94 WB REMAINS OPEN TO TRAFFIC.

② INSTALL R-40-555 SOLDIER PILES.

PROPOSED CONSTRUCTION SEQUENCE NO. 2

③ INSTALL TIEBACK ANCHORS AS REQUIRED.

④ INSTALL R-40-555 LAGGING, EXCAVATION TO FINAL GRADE OF WALL.

⑤ CONSTRUCT R-40-555 C.I.P. CONC. WALL FACING.

PROPOSED CONSTRUCTION SEQUENCE NO. 3

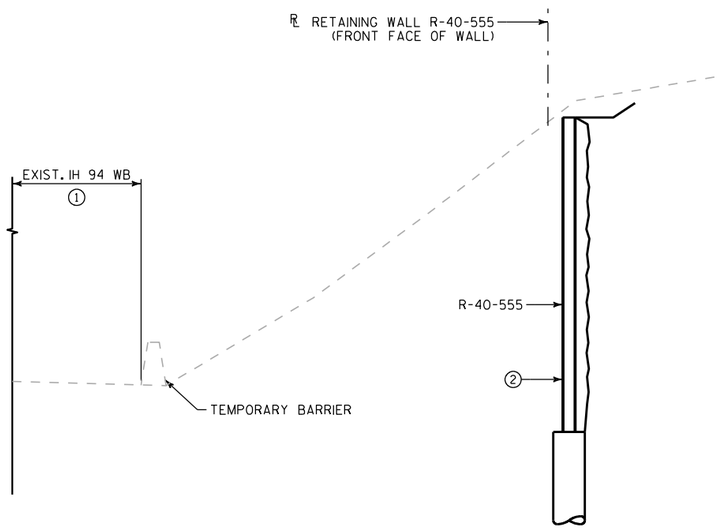
⑥ PROTECT WALL FINISH.

⑦ INTERIM GRADE TO EXISTING IH 94.

PROPOSED CONSTRUCTION SEQUENCE NO. 4

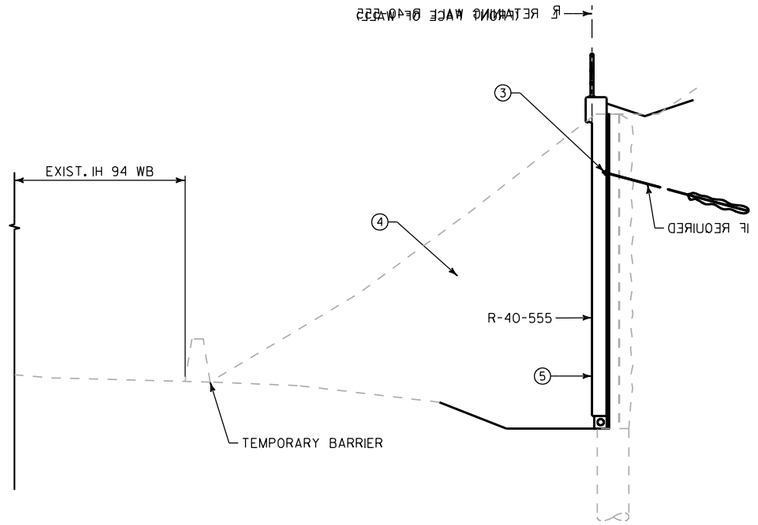
⑧ REMOVE WALL PROTECTION.

⑨ CONSTRUCT IH 94 - FUTURE CONTRACT.



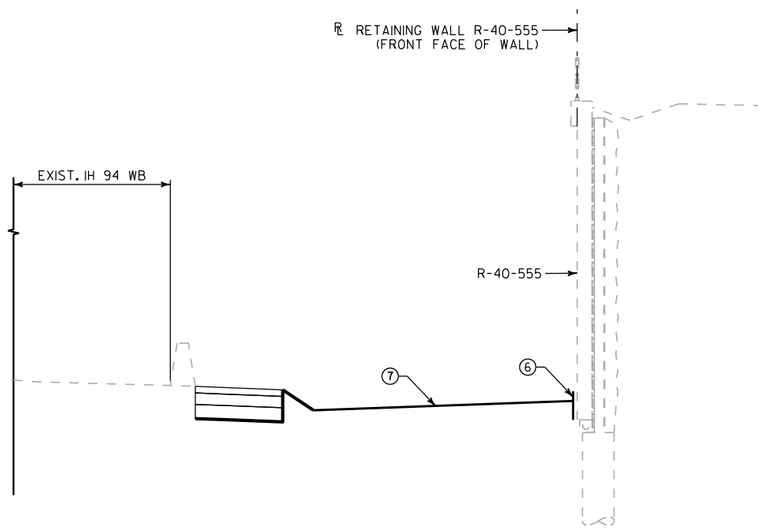
TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE NO. 1

LOOKING WEST - STEPS 1, 2



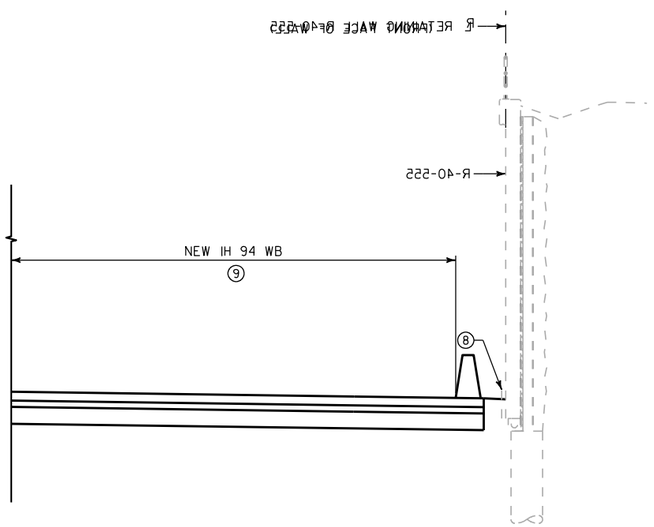
TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE NO. 2

LOOKING WEST - STEPS 3, 4, 5



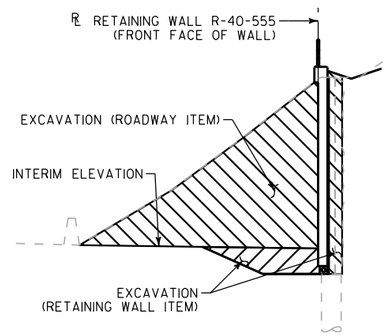
TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE NO. 3

LOOKING WEST - STEPS 6, 7

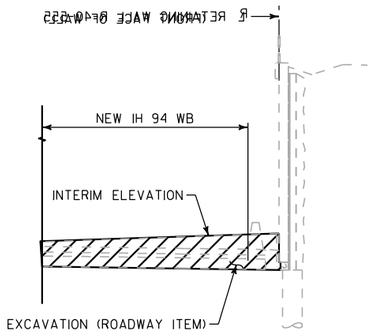


TYPICAL SECTION - PROPOSED CONSTRUCTION SEQUENCE NO. 4

LOOKING WEST - STEPS 8, 9



EXCAVATION LIMITS
PROPOSED CONSTRUCTION
SEQUENCE NO.2



EXCAVATION LIMITS
PROPOSED CONSTRUCTION
SEQUENCE NO.4

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

PROPOSED CONSTRUCTION SEQUENCE

SHEET 5 OF 26

STATE PROJECT NUMBER
1060-33-78

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEM	UNIT	TOTAL
206.3000	EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-555	LS	1
504.0500	CONCRETE MASONRY RETAINING WALLS	CY	1,180
505.0615	BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	LB	185,749
506.0605	STRUCTURAL STEEL HS	LB	369,372
506.3010	WELDED STUD SHEAR CONNECTORS 7/8 X 5-INCH	EACH	3,318
513.2000	RAILING PIPE R-40-555	LS	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8
517.1005.S.0004	ARCHITECTURAL SURFACE TREATMENT R-40-555	SF	22,950
SPV.0035.4010	CONCRETE MASONRY SOLDIER PILE FOOTINGS	CY	566
SPV.0060.4130	TIEBACK ANCHORS	EACH	194
SPV.0060.4140	TIEBACK ANCHORS PERFORMANCE TEST	EACH	10
SPV.0090.4420	FOUNDATION DRILLING	LF	6,484
SPV.0110.4600	TIMBER LAGGING	MBM	77.0
SPV.0165.0010	TEMPORARY SHORING LEFT IN PLACE	SF	550
SPV.0165.4740	GEOCOMPOSITE DRAINBOARD	SF	25,671
	NON- BID ITEMS		
	NAME PLATE	EACH	1
	NON-BITUMINOUS JOINT FILLER	SIZE	3/4
	PREFORMED JOINT FILLER	SIZE	3/4
	PREFORMED JOINT FILLER	SIZE	1 1/2

WALL ITEMS ARE CATEGORY NO. 3030

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.

SEE SPECIAL PROVISIONS FOR AESTHETIC TREATMENT TO WALL.

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-40-555".

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 CIP CONCRETE MASONRY FOR THE COPING AND FACING, CIP WALL, 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

THE VOLUME OF REMOVED EARTHWORK REQUIRED TO INSTALL UNDERDRAIN AND CONSTRUCT WALL COMPLETELY AS PROPOSED ON CONSTRUCTION SEQUENCE NO.2 IS INCLUDED IN ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-555"

BACKFILL IN FRONT OF WALL TO INTERIM ELEVATION AS PROPOSED ON CONSTRUCTION SEQUENCE NO.3 IS INCLUDED IN A BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-555"

THE VOLUME OF REMOVED EARTHWORK REQUIRED TO CONSTRUCT IH94 AS PROPOSED ON CONSTRUCTION SEQUENCE NO.4 IS ROADWAY ITEM, SEE ROADWAY PLANS.

PAINT PILE FROM TOP OF PILE TO 1'-0" BELOW TOP OF FOOTING WITH A PRIME COAT OF ORGANIC ZINC-RICH PAINT. PREPARE THE SURFACE AND APPLY THE PAINT AS SPECIFIED IN SECTION 517 OF THE STANDARD SPECIFICATIONS. PAINTING OF PILE IS INCLUDED IN THE BID ITEM "STRUCTURAL STEEL HS".

CONTRACTOR MUST COORDINATE CONSTRUCTION OF WALL R-40-555 WITH CONSTRUCTION OF BRIDGE B-40-785

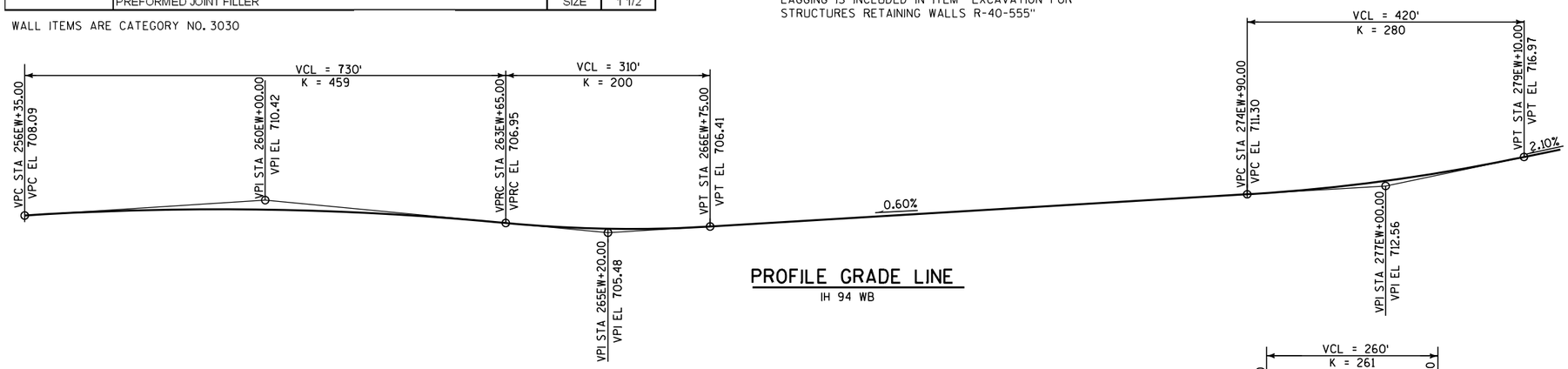
ALL BRIDGE B-40-785 NORTH ABUTMENT PILES SHALL BE DRIVEN COMPLETELY BEFORE INSTALLING TIEBACK ANCHORS AT ABUTMENT LOCATION.

WALL STAGE 2 CONSTRUCTION WILL BE UNDER FUTURE CONTRACT. TEMPORARY SHORING SHALL BE LEFT IN PLACE.

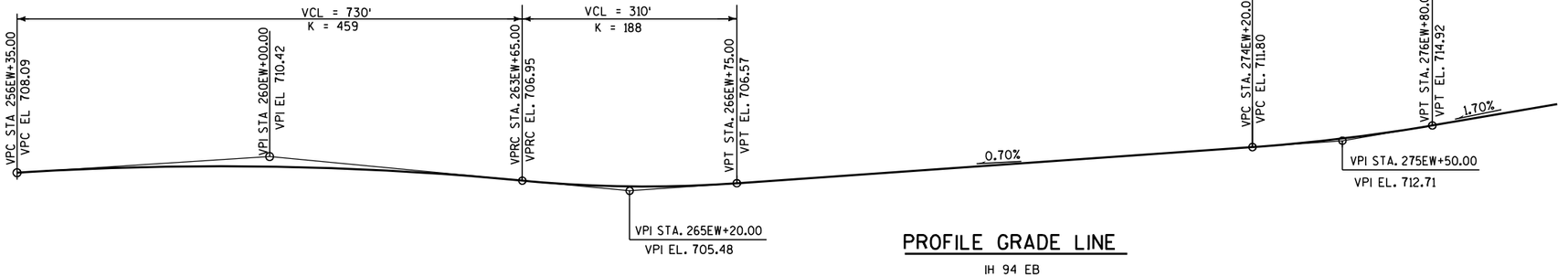
TEMPORARY SHORING SHALL BE REMOVED IN WALL STAGE 2 CONSTRUCTION.

PROTECT WALL FACE AS DESCRIBED ON PROPOSED CONSTRUCTION SEQUENCE NO.3 WITH ¾ INCH EXPANDED POLYSTYRENE OR AS APPROVED BY THE ENGINEER. PROTECTION MATERIAL AND INSTALLATION SHALL BE INCIDENTAL TO BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALLS R-40-555"

SIGN STRUCTURES S-40-134 AND S-40-135 WILL BE CONSTRUCTED IN FUTURE CONTRACT.



PROFILE GRADE LINE
IH 94 WB



PROFILE GRADE LINE
IH 94 EB

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	-	32	-	32
SAND	130	-	32	-	32
STIFF TO VERY STIFF CLAY	130-135	2000-2500	0	100-150	32
HARD CLAY	130	4500	0	200	34

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

GENERAL NOTES, QUANTITIES & PROFILES

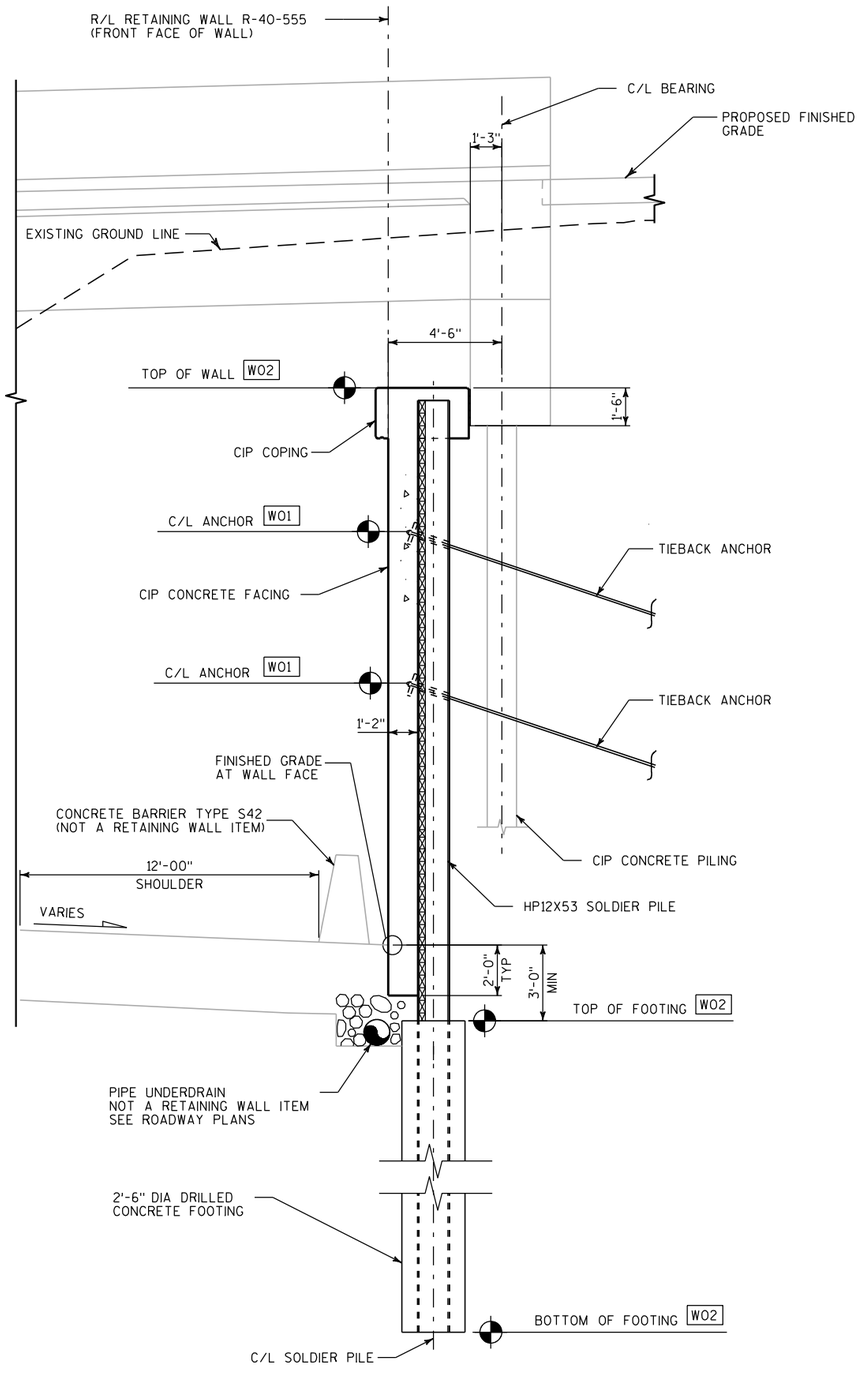
SHEET 6 OF 26

8

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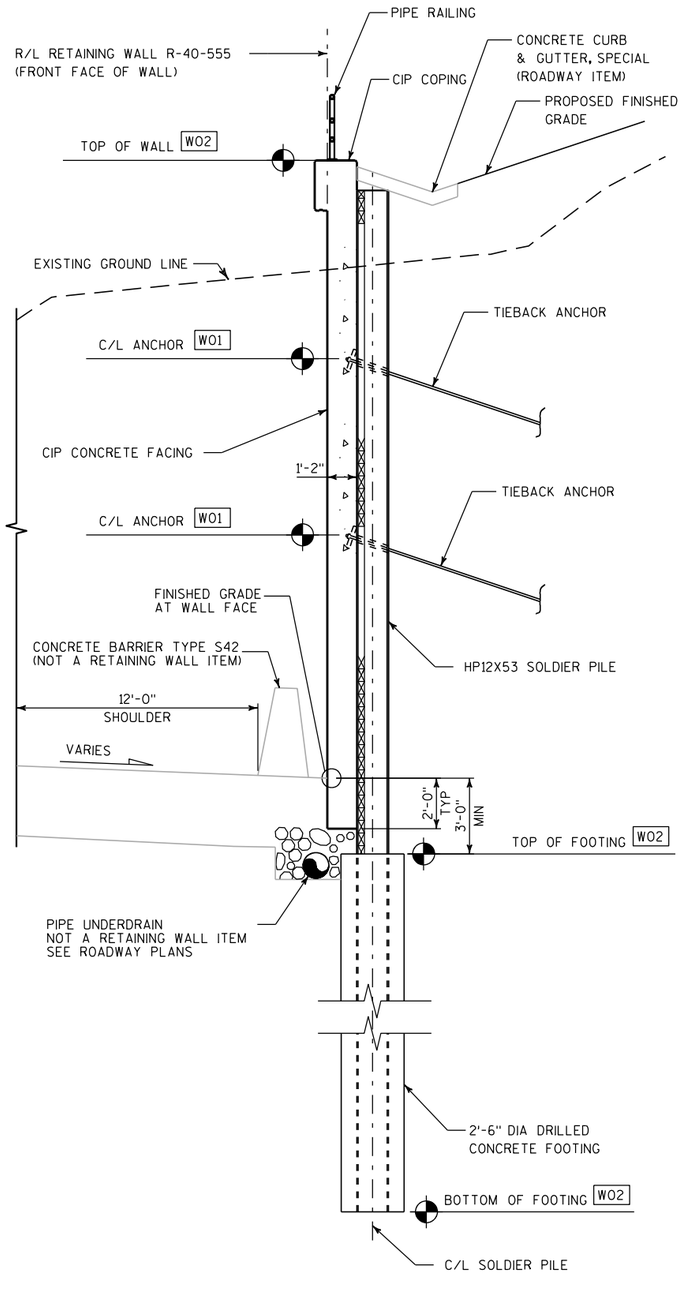
STATE PROJECT NUMBER

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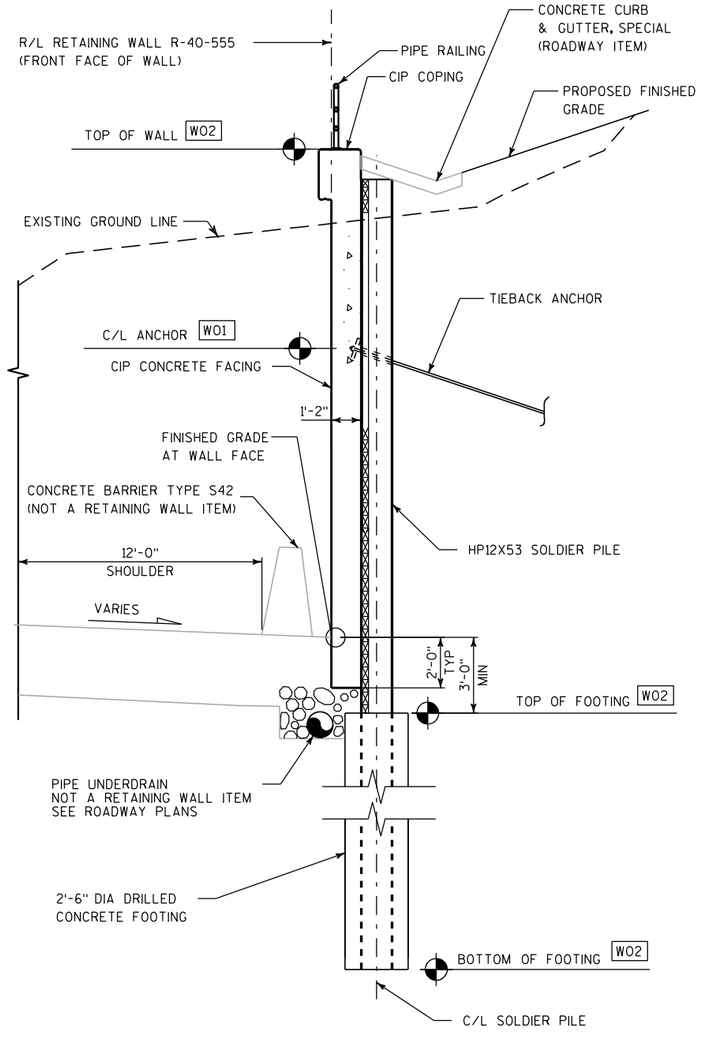
TYPICAL SECTION UNDER BRIDGE

STA.16+49.65 TO STA.17+50.09



TYPICAL SECTION W/DOUBLE TIEBACKS

STA.15+32.75 TO STA.16+49.65
STA.17+50.09 TO STA.18+54.75



TYPICAL SECTION W/SINGLE TIEBACK

STA.14+12.75 TO STA.15+32.75
STA.18+54.75 TO STA.24+84.75

NOTES:

W01 FOR TIEBACK ANCHOR ELEVATION SEE TIEBACK TABLE, SHEET 17, 18

W02 SEE SHEETS 10 AND 11 FOR ELEVATIONS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

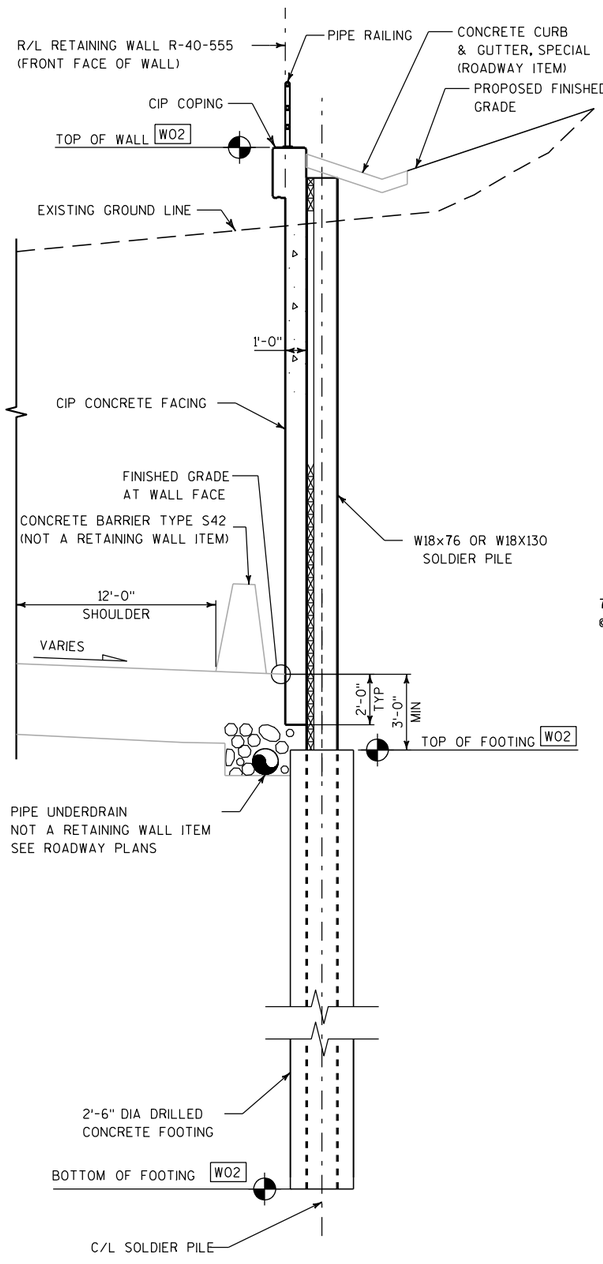
TYPICAL WALL SECTIONS 1 OF 3

SHEET 7 OF 26

8

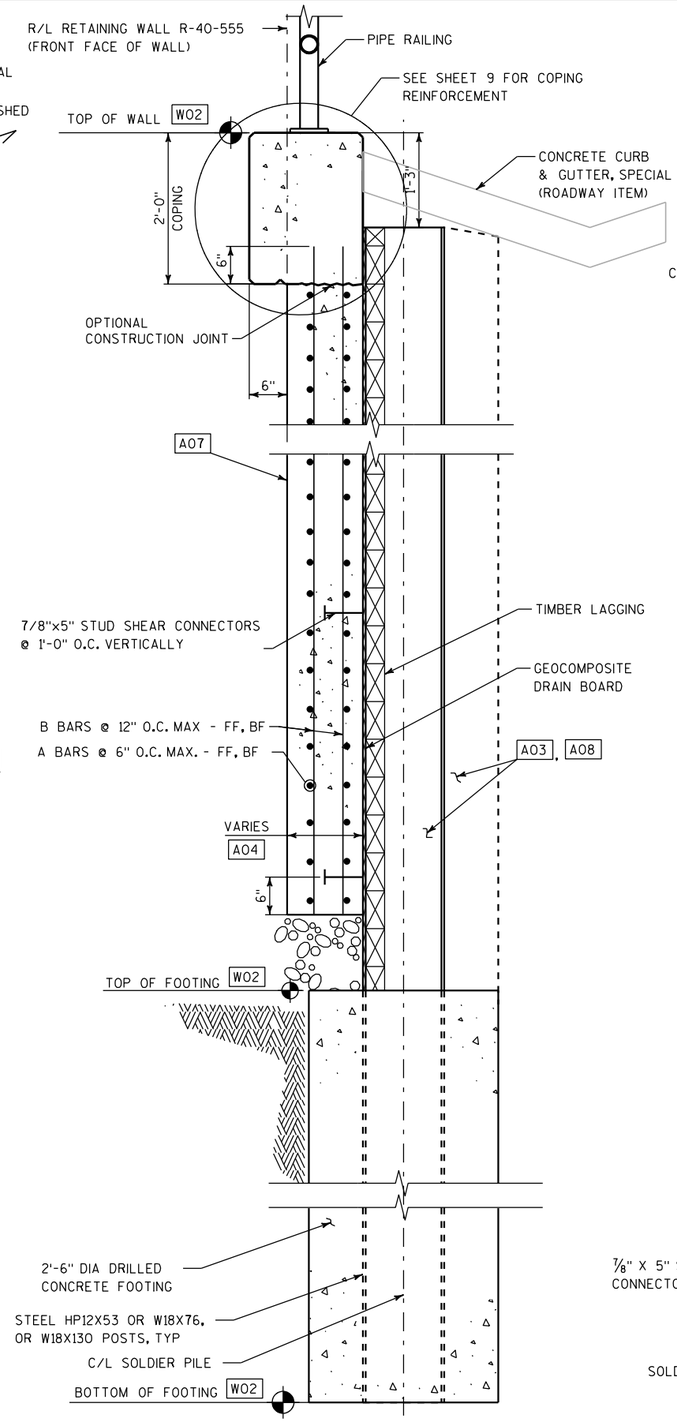
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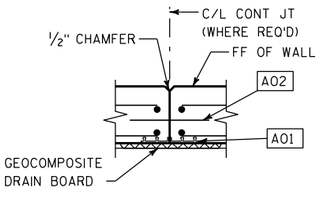
TYPICAL SECTION, CANTILEVER

STA.9+61.84 TO STA.14+12.75
STA.24+84.75 TO STA.25+14.75

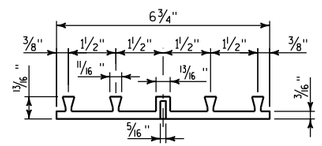


TYPICAL SOLDIER PILE AND PANEL WALL SECTION

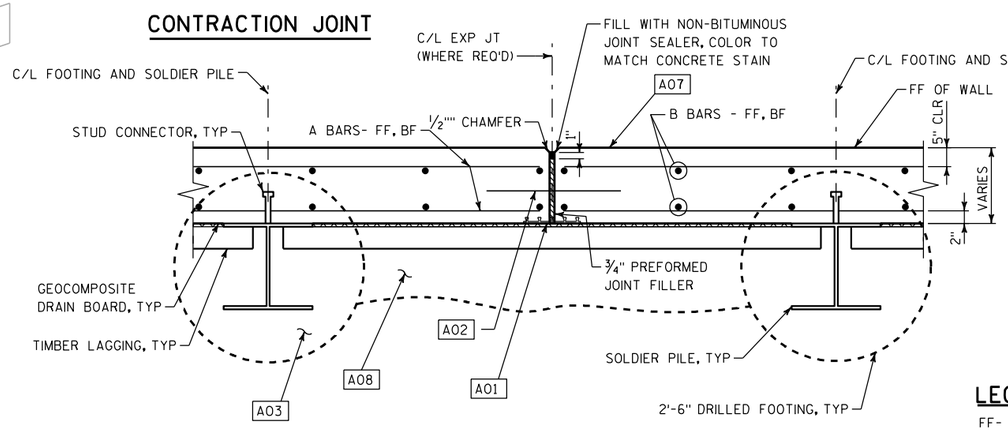
(TIEBACKS NOT SHOWN)



CONTRACTION JOINT



P.C.W. "TYPE B" DETAIL A01

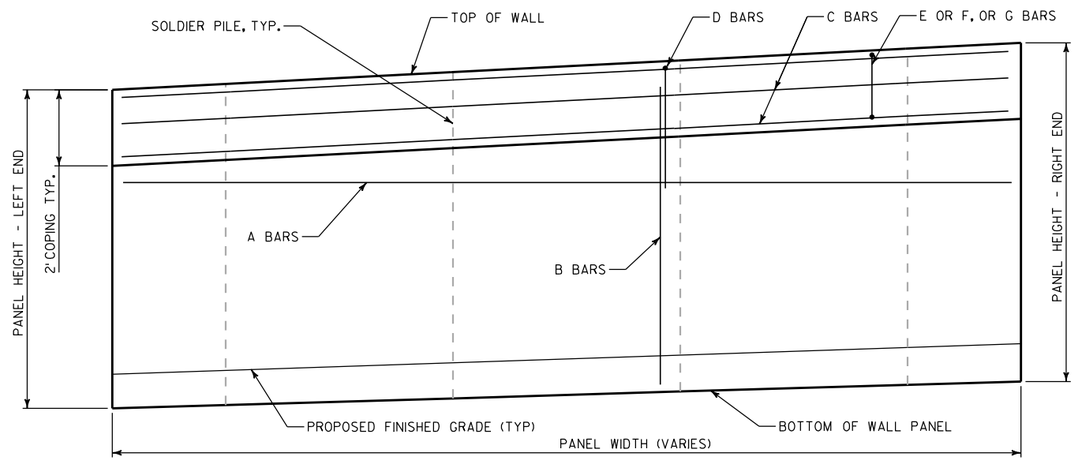


TYPICAL SOLDIER PILE SECTION AT EXPANSION JOINT

(SEE GENERAL PLAN & ELEVATION SHEET FOR
LOCATION OF CONTRACTION & EXPANSION JOINTS)

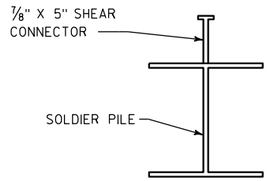
LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE



TYPICAL PANEL ELEVATION

SEE SHEETS 13 AND 14 FOR WALL PANEL DIMENSIONS,
BAR SIZES AND QUANTITIES



STUD CONNECTOR DETAIL

NOTES:

W02 SEE SHEETS 10 AND 11 FOR ELEVATIONS

AOX SEE SHEETS 9 FOR NOTES

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

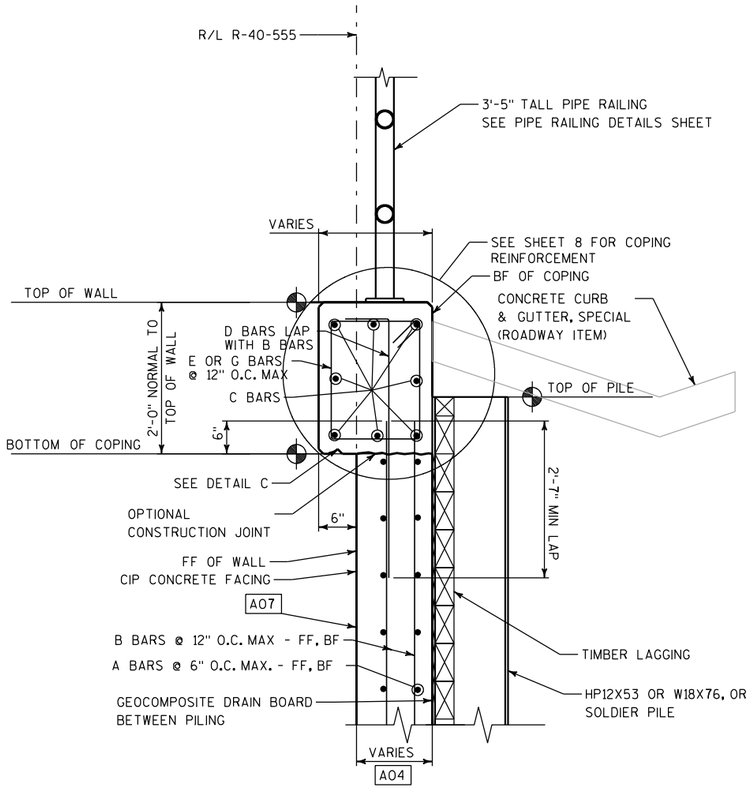
TYPICAL WALL
SECTIONS 2 OF 3

SHEET 8 OF 26

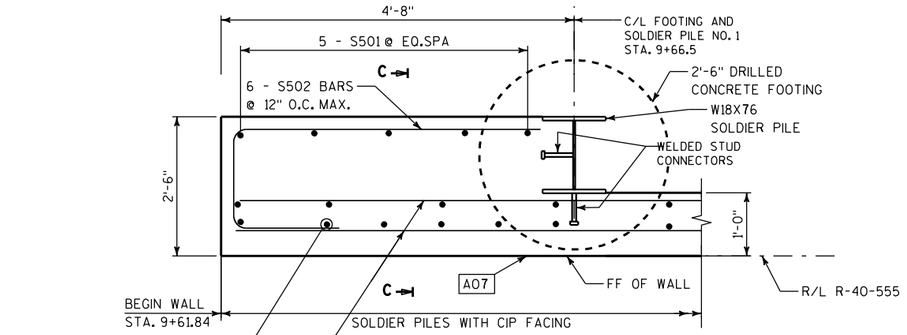
8

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STATE PROJECT NUMBER
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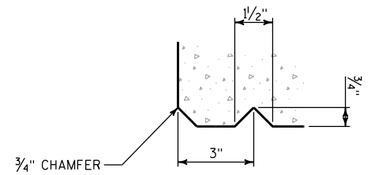


TYPICAL WALL SECTION AT COPING



PLAN OF WALL AT BEGINNING OF WALL

(TIMBER LAGGING AND GEOCOMPOSITE DRAIN BOARD NOT SHOWN)

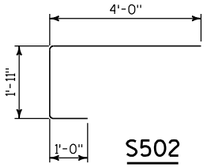


DETAIL C
¾" CONTINUOUS DRIP GROOVE

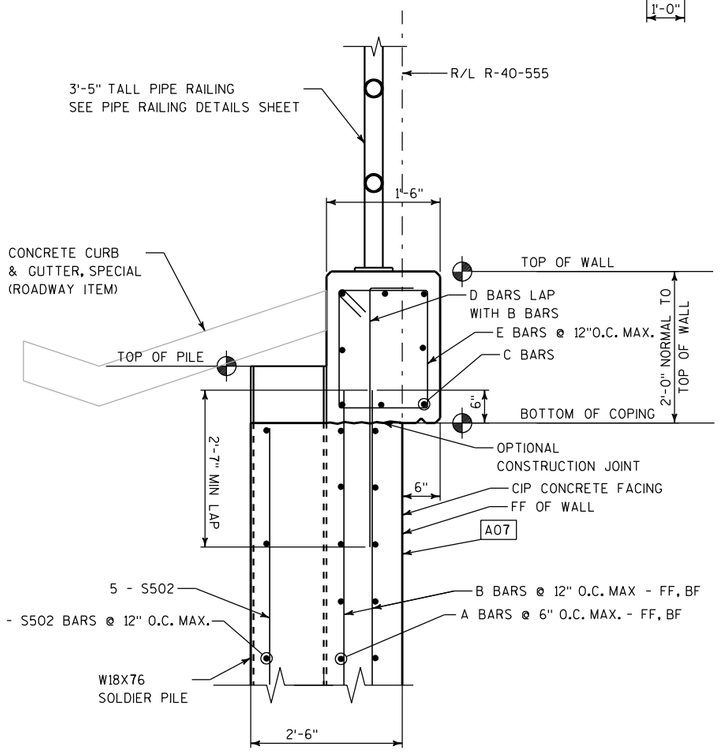
TERMINATE 2'-0" FROM END OF WALL

WALL FACING BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
S501	X	5	3'-9"			PANEL 1 BEGINNING VERTICAL
S502	X	6	6'-8"	X		PANEL 1 BEGINNING HORIZONTAL



S502



WALL SECTION C-C

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-40-555". NO CEMENTITIOUS MATERIAL WILL BE ALLOWED IN THE FLOWABLE BACKFILL.

A04 1'-0" PANEL WITH VERTICAL RUSTICATION - PANELS 1 TO 26 AND 33
1'-2" PANEL WITH VERTICAL RUSTICATION - PANELS 27 TO 32

A05 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND CLOSURE WALL.

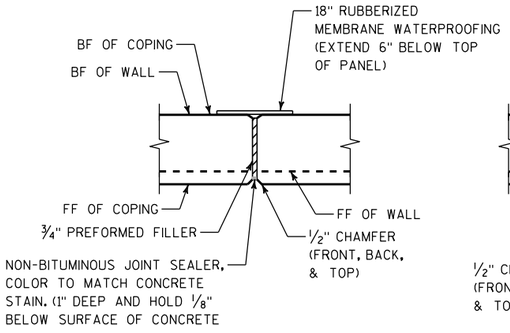
A06 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER ON THE TOP OF CLOSURE WALL.

A07 FOR AESTHETIC TREATMENT OF WALL SEE SHEET 17

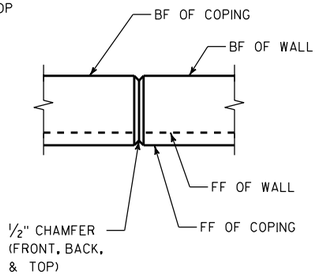
A08 FILL HOLE AROUND SOLDIER PILE FROM TOP OF FOOTING TO EXISTING GROUND WITH CONTROLLED LOW STRENGTH MATERIAL (CLSM). INCLUDED IN BID ITEM "EXCAVATION FOR STRUCTURES RETAINING WALL R-40-555".

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE



COPING EXPANSION JOINT



COPING CONTRACTION JOINT

(DO NOT RUN BAR STEEL THRU JOINT)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

TYPICAL WALL SECTIONS 3 OF 3

SHEET 9 OF 26

8

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STATE PROJECT NUMBER

1060-33-78

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
5.42		BEGIN WALL	9+61.84	709.64		706.22					
		1	9+66.5	709.71	708.46	706.23	703.23	695.46	7.78	13	W18X76
		2	9+74.	709.82	708.57	706.25	703.25	694.57	8.69	14	W18X76
1	12										
		3	9+81.5	709.92	708.67	706.28	703.28	694.67	8.60	14	W18X76
		4	9+89.	710.03	708.78	706.30	703.30	694.78	8.52	14	W18X76
5.78		CONT JT.	9+92.75	710.09		706.31					
		5	9+96.5	710.14	708.89	706.32	703.32	694.89	8.43	14	W18X76
		6	10+04.	710.25	709.00	706.34	703.34	695.00	8.34	14	W18X76
2	12										
		7	10+11.5	710.36	709.11	706.36	703.36	695.11	8.26	14	W18X76
		8	10+19.	710.46	709.21	706.38	703.38	695.21	8.17	14	W18X76
6.12		CONT JT.	10+22.75	710.52		706.39					
		9	10+26.5	710.57	709.32	706.40	703.40	695.32	8.08	14	W18X76
		10	10+34.	710.68	709.43	706.43	703.43	695.43	8.00	14	W18X76
3	12										
		11	10+41.5	710.79	709.54	706.45	703.45	695.54	7.91	14	W18X76
		12	10+49.	710.90	709.65	706.47	703.47	695.65	7.82	14	W18X76
6.47		EXP JT.	10+52.75	710.95		706.48					
		13	10+56.5	711.07	709.82	706.49	703.49	693.82	9.66	16	W18X76
		14	10+64.	711.32	710.07	706.50	703.50	694.07	9.43	16	W18X76
4	12										
		15	10+71.5	711.56	710.31	706.51	703.51	693.31	10.20	17	W18X76
		16	10+79.	711.80	710.55	706.52	703.52	693.55	9.96	17	W18X76
7.40		CONT JT	10+82.75	711.92		706.52					
		17	10+86.5	712.05	710.80	706.53	703.53	693.80	9.73	17	W18X76
		18	10+94.	712.29	711.04	706.54	703.54	694.04	9.50	17	W18X76
5	12										
		19	11+01.5	712.53	711.28	706.55	703.55	694.28	9.26	17	W18X76
		20	11+09.	712.78	711.53	706.56	703.56	693.53	10.03	18	W18X76
8.34		CONT JT	11+12.75	712.90		706.56					
		21	1116.5	713.02	711.77	706.57	703.57	692.77	10.80	19	W18X76
		22	1124	713.26	712.01	706.58	703.58	692.01	11.56	20	W18X76
6	12										
		23	1131.5	713.51	712.26	706.59	703.59	692.26	11.33	20	W18X76
		24	1139	713.75	712.50	706.60	703.60	692.50	11.09	20	W18X76
9.27		EXP JT	11+42.75	713.87		706.60					
		25	11+46.5	713.99	712.74	706.61	703.61	692.74	10.86	20	W18X76
		26	11+54.	714.24	712.99	706.62	703.62	691.99	11.63	21	W18X76
7	12										
		27	11+61.5	714.48	713.23	706.63	703.63	692.23	11.39	21	W18X76
		28	11+69.	714.72	713.47	706.64	703.64	692.47	11.16	21	W18X76
10.21		CONT JT.	11+72.75	714.85		706.64					
		29	11+76.5	714.97	713.72	706.65	703.65	691.72	11.93	22	W18X76
		30	11+84.	715.21	713.96	706.66	703.66	690.96	12.69	23	W18X76
8	12										
		31	11+91.5	715.45	714.20	706.67	703.67	691.20	12.46	23	W18X76
		32	11+99.	715.70	714.45	706.68	703.68	691.45	12.23	23	W18X76
11.14		CONT JT.	12+02.75	715.82		706.68					
		33	12+06.5	715.88	714.63	706.68	703.68	691.63	12.05	23	W18X76
		34	12+14.	716.01	714.76	706.69	703.69	691.76	11.94	23	W18X76
9	12										
		35	12+21.5	716.13	714.88	706.70	703.70	691.88	11.82	23	W18X76
		36	12+29.	716.25	715.00	706.71	703.71	692.00	11.71	23	W18X76
11.60		EXP JT	12+32.75	716.32		706.71					

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
11.60		EXP JT	12+32.75	716.32		706.71					
		37	12+36.5	716.38	715.13	706.72	703.72	691.13	12.59	24	W18X76
		38	12+44.	716.50	715.25	706.73	703.73	691.25	12.47	24	W18X76
10	12										
		39	12+51.5	716.63	715.38	706.74	703.74	691.38	12.36	24	W18X76
		40	12+59.	716.75	715.50	706.74	703.74	691.50	12.24	24	W18X76
12.06		CONT JT.	12+62.75	716.81		706.75					
		41	12+66.5	716.87	715.62	706.75	703.75	690.62	13.13	25	W18X76
		42	12+74.	717.00	715.75	706.76	703.76	690.75	13.01	25	W18X76
11	12										
		43	12+81.5	717.12	715.87	706.77	703.77	690.87	12.90	25	W18X76
		44	12+89.	717.25	716.00	706.78	703.78	691.00	12.78	25	W18X76
12.53		CONT JT.	12+92.75	717.31		706.78					
		45	12+96.5	717.37	716.12	706.79	703.79	689.12	14.67	27	W18X76
		46	13+04.	717.49	716.24	706.79	703.79	689.24	14.55	27	W18X76
12	12										
		47	13+11.5	717.62	716.37	706.80	703.80	689.37	14.44	27	W18X76
		48	13+19.	717.74	716.49	706.81	703.81	689.49	14.32	27	W18X76
12.99		EXP JT	13+22.75	717.80		706.82					
		49	13+26.5	717.87	716.62	706.82	703.82	689.62	14.20	27	W18X76
		50	13+34.	717.99	716.74	706.83	703.83	688.74	15.09	28	W18X76
13	12										
		51	13+41.5	718.11	716.86	706.84	703.84	688.86	14.97	28	W18X76
		52	13+49.	718.24	716.99	706.85	703.85	688.99	14.86	28	W18X76
13.45		CONT JT.	13+52.75	718.30		706.85					
		53	13+56.5	718.43	717.18	706.84	703.84	689.18	14.66	28	W18X76
		54	13+64.	718.68	717.43	706.81	703.81	689.43	14.38	28	W18X76
14	12										
		55	13+71.5	718.93	717.68	706.78	703.78	688.68	15.10	29	W18X76
		56	13+79.	719.18	717.93	706.75	703.75	688.93	14.81	29	W18X76
14.58		EXP JT.	13+82.75	719.31		706.73					
		57*	13+87.75	719.48	718.23	706.71	703.71	684.23	19.48	34	W18X130
		58*	13+92.75	719.65	718.40	706.69	703.69	684.40	19.30	34	W18X130
15	12										
		59*	14+02.75	719.98	718.73	706.65	703.65	684.73	18.92	34	W18X130
		60*	14+07.75	720.15	718.90	706.63	703.63	684.90	18.73	34	W18X130
15.71		EXP JT	14+12.75	720.32		706.61					
		61	14+16.5	720.45	719.20	706.60	703.60	690.20	13.40	29	HP12X53
		62	14+24.	720.70	719.45	706.57	703.57	689.45	14.12	30	HP12X53
16	14										
		63	14+31.5	720.95	719.70	706.54	703.54	689.70	13.84	30	HP12X53
		64	14+39.	721.20	719.95	706.51	703.51	689.95	13.56	30	HP12X53
16.83		CONT JT.	14+42.75	721.33		706.50					
		65	14+46.5	721.46	720.21	706.48	703.48	690.21	13.28	30	HP12X53
		66	14+54.	721.71	720.46	706.45	703.45	689.46	13.99	31	HP12X53
17	14										
		67	14+61.5	721.96	720.71	706.42	703.42	689.71	13.71	31	HP12X53
		68	14+69.	722.21	720.96	706.39	703.39	689.96	13.43	31	HP12X53
17.96		CONT JT.	14+72.75	722.34		706.38					
		69	14+76.5	722.47	721.22	706.36	703.36	689.22	14.15	32	HP12X53
		70	14+84.	722.72	721.47	706.33	703.33	689.47	13.87	32	HP12X53
18	14										
		71	14+91.5	722.97	721.72	706.30	703.30	689.72	13.58	32	HP12X53
		72	14+99.	723.22	721.97	706.27	703.27	689.97	13.30	32	HP12X53
19.09		EXP JT	15+02.75	723.35		706.26					

* PILES LOCATIONS ADJUSTED TO ACCOMMODATE PROPOSED WATER MAIN. CONTRACTOR SHALL COORDINATE WALL CONSTRUCTION WITH WATER MAIN CONSTRUCTION.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ/CHW

WALL AND PILE DATA TABLE 1 OF 3

SHEET 10 OF 26

FILE NAME : \\WKE31FP1\w3zoo\Cadd\Final\10603378_TL\Structs\R-40-555\cds\R555_080110_de.dgn
PLOT DATE : 30-APR-2013 14:42
PLOT BY : MSCM1M
PLOT NAME : R555_080110_de
PLOT SCALE : 8:1

STATE PROJECT NUMBER

1060-33-78

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
19.09		EXP JT.	15+02.75	723.35		706.26					
		73	15+06.5	723.56	722.31	706.24	703.24	687.31	15.93	35	HP12X53
		74	15+14.	723.98	722.73	706.19	703.19	686.73	16.46	36	HP12X53
19	18										
		75	15+21.5	724.41	723.16	706.15	703.15	687.16	15.99	36	HP12X53
		76	15+29.	724.83	723.58	706.11	703.11	686.58	16.53	37	HP12X53
20.95		CONT JT.	15+32.75	725.04		706.09					
		77	15+36.5	725.25	724.00	706.06	703.06	687.00	16.06	37	HP12X53
		78	15+44.	725.67	724.42	706.02	703.02	686.42	16.60	38	HP12X53
20	18										
		79	15+51.5	726.10	724.85	705.98	702.98	686.85	16.13	38	HP12X53
		80	15+59.	726.52	725.27	705.93	702.93	686.27	16.66	39	HP12X53
22.82		CONT JT.	15+62.75	726.73		705.91					
		81	15+66.5	726.94	725.69	705.89	702.89	683.69	19.20	42	HP12X53
		82	15+74.	727.36	726.11	705.84	702.84	684.11	18.73	42	HP12X53
21	18										
		83	15+81.5	727.79	726.54	705.80	702.80	684.54	18.27	42	HP12X53
		84	15+89.	728.21	726.96	705.76	702.76	683.96	18.80	43	HP12X53
24.68		EXP JT.	15+92.75	728.42		705.74					
		85	15+96.5	728.63	727.38	705.71	702.71	684.38	18.33	43	HP12X53
		86	16+04.	729.05	727.80	705.67	702.67	683.80	18.87	44	HP12X53
22	18										
		87	16+11.5	729.47	728.22	705.63	702.63	684.22	18.40	44	HP12X53
		88	16+19.	729.90	728.65	705.58	702.58	683.65	18.93	45	HP12X53
26.55		CONT JT.	16+22.75	730.11		705.56					
		89	16+26.5	730.32	729.07	705.54	702.54	684.07	18.47	45	HP12X53
		90	16+34.	730.74	729.49	705.49	702.49	683.49	19.00	46	HP12X53
23	18										
		91	16+41.5	731.16	729.91	705.45	702.45	683.91	18.54	46	HP12X53
		92	16+47.5	731.50	730.25	705.42	702.42	683.25	19.16	47	HP12X53
18.89		CONT JT.	16+51.	722.30		705.41					
		93	16+53.	722.30	721.05	705.40	702.40	684.05	18.35	37	HP12X53
		94	16+58.5	722.30	721.05	705.39	702.39	684.05	18.34	37	HP12X53
24	18	95	16+64.5	722.30	721.05	705.38	702.38	684.05	18.33	37	HP12X53
		96	16+70.5	722.30	721.05	705.37	702.37	684.05	18.32	37	HP12X53
		97	16+76.5	722.30	721.05	705.36	702.36	684.05	18.31	37	HP12X53
18.94		EXP JT.	16+79.5	722.30		705.36					
		98	16+82.5	722.30	721.05	705.35	702.35	684.05	18.30	37	HP12X53
		99	16+88.5	722.30	721.05	705.34	702.34	684.05	18.29	37	HP12X53
25	18	100	16+94.5	722.30	721.05	705.33	702.33	684.05	18.28	37	HP12X53
		101	17+00.5	722.30	721.05	705.32	702.32	684.05	18.27	37	HP12X53
		102	17+06.5	722.30	721.05	705.31	702.31	684.05	18.26	37	HP12X53
19.00		CONT JT.	17+09.5	722.30		705.30					
		103	17+12.5	722.30	721.05	705.30	702.30	684.05	18.25	37	HP12X53
		104	17+18.5	722.30	721.05	705.29	702.29	684.05	18.24	37	HP12X53
26	18	105	17+24.5	722.30	721.05	705.28	702.28	684.05	18.23	37	HP12X53
		106	17+30.5	722.30	721.05	705.26	702.26	684.05	18.21	37	HP12X53
		107	17+38.5	722.30	721.05	705.25	702.25	684.05	18.20	37	HP12X53
19.05		CONT JT.	17+39.5	722.30		705.25					

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
19.05		CONT JT.	17+39.5	722.30		705.25					
		108	17+42.5	722.30	721.05	705.24	702.24	683.05	19.19	38	HP12X53
		109	17+48.5	722.30	721.05	705.23	702.23	683.05	19.18	38	HP12X53
27	18					705.23					
		110	17+53.5	731.02	729.77	705.24	702.24	683.77	18.47	46	HP12X53
		111	17+61.	730.61	729.36	705.28	702.28	683.36	18.92	46	HP12X53
27.11		EXP JT.	17+64.75	730.40		705.29					
		112	17+68.5	730.20	728.95	705.31	702.31	683.95	18.36	45	HP12X53
		113	17+76.	729.78	728.53	705.34	702.34	683.53	18.81	45	HP12X53
28	18										
		114	17+83.5	729.37	728.12	705.37	702.37	684.12	18.25	44	HP12X53
		115	17+91.	728.96	727.71	705.41	702.41	683.71	18.70	44	HP12X53
25.33		CONT JT.	17+94.75	728.75		705.42					
		116	17+98.5	728.55	727.30	705.44	702.44	683.30	19.14	44	HP12X53
		117	18+06.	728.13	726.88	705.47	702.47	683.88	18.59	43	HP12X53
29	18										
		118	18+13.5	727.72	726.47	705.50	702.50	683.47	19.03	43	HP12X53
		119	18+21.	727.31	726.06	705.54	702.54	684.06	18.48	42	HP12X53
23.55		CONT JT.	18+24.75	727.10		705.55					
		120	18+28.5	726.89	725.64	705.57	702.57	683.64	18.93	42	HP12X53
		121	18+36.	726.48	725.23	705.60	702.60	684.23	18.37	41	HP12X53
30	18										
		122	18+43.5	726.07	724.82	705.63	702.63	683.82	18.82	41	HP12X53
		123	18+51.	725.65	724.40	705.67	702.67	684.40	18.26	40	HP12X53
21.76		EXP JT.	18+54.75	725.45		705.68					
		124	18+58.5	725.24	723.99	705.70	702.70	683.99	18.71	40	HP12X53
		125	18+66.	724.83	723.58	705.73	702.73	683.58	19.15	40	HP12X53
31	18										
		126	18+73.5	724.41	723.16	705.76	702.76	684.16	18.60	39	HP12X53
		127	18+81.	724.00	722.75	705.79	702.79	683.75	19.04	39	HP12X53
19.98		CONT JT.	18+84.75	723.79		705.81					
		128	18+88.5	723.59	722.34	705.83	702.83	684.34	18.49	38	HP12X53
		129	18+96.	723.17	721.92	705.86	702.86	684.92	17.94	37	HP12X53
32	18										
		130	19+03.5	722.76	721.51	705.89	702.89	686.51	16.38	35	HP12X53
		131	19+11.	722.35	721.10	705.92	702.92	687.10	15.83	34	HP12X53
18.20		CONT JT.	19+14.75	722.14		705.94					
		132	19+18.5	722.16	720.91	705.96	702.96	687.91	15.05	33	HP12X53
		133	19+26.	722.21	720.96	706.01	703.01	687.96	15.05	33	HP12X53
33	18										
		134	19+33.5	722.26	721.01	706.05	703.05	688.01	15.05	33	HP12X53
		135	19+41.	722.30	721.05	706.10	703.10	688.05	15.04	33	HP12X53
18.21		EXP JT.	19+44.75	722.33		706.12					
		136	19+48.5	722.35	721.10	706.14	703.14	688.10	15.04	33	HP12X53
		137	19+56.	722.40	721.15	706.19	703.19	688.15	15.04	33	HP12X53
34	18										
		138	19+63.5	722.44	721.19	706.23	703.23	688.19	15.04	33	HP12X53
		139	19+71.	722.49	721.24	706.28	703.28	688.24	15.04	33	HP12X53
18.22		CONT JT.	19+74.75	722.52		706.30					
		140	19+78.5	722.54	721.29	706.32	703.32	688.29	15.03	33	HP12X53
		141	19+86.	722.59	721.34	706.37	703.37	688.34	15.03	33	HP12X53
35	18										
		142	19+93.5	722.63	721.38	706.41	703.41	688.38	15.03	33	HP12X53
		143	20+01.	722.68	721.43	706.46	703.46	688.43	15.03	33	HP12X53
18.22		CONT JT.	20+04.75	722.70		706.48					

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ/CHW

WALL AND PILE DATA TABLE 2 OF 3

SHEET 11 OF 26

FILE NAME : \\WKE31FP1\w3zoo\Cadd\Final\10603378_TL\Structs\R-40-555\cds\R555_080111_de.dgn PLOT DATE : 30-APR-2013 14:42 PLOT BY : MSCM1M PLOT NAME : R555_080111_de PLOT SCALE : 8:1

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
18.22		CONT JT.	20+04.75	722.70		706.48					
		144	20+08.5	722.73	721.48	706.50	703.50	688.48	15.03	33	HP12X53
		145	20+16.	722.77	721.52	706.55	703.55	688.52	15.02	33	HP12X53
37	14										
		146	20+23.5	722.82	721.57	706.59	703.59	688.57	15.02	33	HP12X53
		147	20+31.	722.87	721.62	706.64	703.64	688.62	15.02	33	HP12X53
18.23		EXP JT.	20+34.75	722.89		706.66					
		148	20+38.5	722.96	721.71	706.68	703.68	688.71	14.97	33	HP12X53
		149	20+46.	723.10	721.85	706.73	703.73	688.85	14.88	33	HP12X53
37	14										
		150	20+53.5	723.24	721.99	706.77	703.77	688.99	14.78	33	HP12X53
		151	20+61.	723.38	722.13	706.81	703.81	689.13	14.68	33	HP12X53
18.61		CONT JT.	20+64.75	723.45		706.84					
		152	20+68.5	723.52	722.27	706.86	703.86	689.27	14.59	33	HP12X53
		153	20+76.	723.66	722.41	706.90	703.90	689.41	14.49	33	HP12X53
38	14										
		154	20+83.5	723.80	722.55	706.95	703.95	689.55	14.40	33	HP12X53
		155	20+91.	723.94	722.69	706.99	703.99	689.69	14.30	33	HP12X53
19.00		CONT JT.	20+94.75	724.01		707.01					
		156	20+98.5	724.08	722.83	707.04	704.04	689.83	14.21	33	HP12X53
		157	21+06.	724.22	722.97	707.08	704.08	688.97	15.11	34	HP12X53
39	14										
		158	21+13.5	724.36	723.11	707.12	704.12	689.11	15.01	34	HP12X53
		159	21+21.	724.50	723.25	707.17	704.17	689.25	14.92	34	HP12X53
19.38		EXP JT.	21+24.75	724.57		707.19					
		160	21+28.5	724.59	723.34	707.21	704.21	689.34	14.88	34	HP12X53
		161	21+36.	724.63	723.38	707.26	704.26	689.38	14.89	34	HP12X53
40	14										
		162	21+43.5	724.66	723.41	707.31	704.31	689.41	14.90	34	HP12X53
		163	21+51.	724.70	723.45	707.36	704.36	689.45	14.91	34	HP12X53
19.34		CONT JT.	21+54.75	724.72		707.38					
		164	21+58.5	724.74	723.49	707.40	704.40	689.49	14.92	34	HP12X53
		165	21+66.	724.78	723.53	707.45	704.45	689.53	14.93	34	HP12X53
41	14										
		166	21+73.5	724.81	723.56	707.50	704.50	689.56	14.94	34	HP12X53
		167	21+81.	724.85	723.60	707.55	704.55	689.60	14.94	34	HP12X53
19.30		CONT JT.	21+84.75	724.87		707.57					
		168	21+88.5	724.89	723.64	707.59	704.59	689.64	14.95	34	HP12X53
		169	21+96.	724.93	723.68	707.64	704.64	689.68	14.96	34	HP12X53
42	14										
		170	22+03.5	724.96	723.71	707.69	704.69	689.71	14.98	34	HP12X53
		171	22+11.	725.00	723.75	707.74	704.74	689.75	14.99	34	HP12X53
19.26		EXP JT.	22+14.75	725.02		707.76					
		172	22+18.5	725.04	723.79	707.78	704.78	689.79	15.00	34	HP12X53
		173	22+26.	725.08	723.83	707.83	704.83	689.83	15.00	34	HP12X53
43	14										
		174	22+33.5	725.11	723.86	707.88	704.88	689.86	15.01	34	HP12X53
		175	22+41.	725.15	723.90	707.93	704.93	689.90	15.03	34	HP12X53
19.22		CONT JT.	22+44.75	725.17		707.95					
		176	22+48.5	725.19	723.94	707.97	704.97	689.94	15.04	34	HP12X53
		177	22+56.	725.23	723.98	708.02	705.02	689.98	15.05	34	HP12X53
44	14										
		178	22+63.5	725.26	724.01	708.07	705.07	690.01	15.05	34	HP12X53
		179	22+71.	725.30	724.05	708.12	705.12	690.05	15.06	34	HP12X53
19.18		CONT JT.	22+74.75	725.32		708.14					

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
19.18		CONT JT.	22+74.75	725.32		708.14					
		180	22+78.5	725.28	724.03	708.16	705.16	690.03	15.13	34	HP12X53
		181	22+86.	725.21	723.96	708.21	705.21	690.96	14.25	33	HP12X53
45	14										
		182	22+93.5	725.13	723.88	708.26	705.26	690.88	14.38	33	HP12X53
		183	23+01.	725.06	723.81	708.31	705.31	690.81	14.50	33	HP12X53
18.69		EXP JT.	23+04.75	725.02		708.33					
		184	23+08.5	724.98	723.73	708.35	705.35	690.73	14.62	33	HP12X53
		185	23+16.	724.91	723.66	708.40	705.40	690.66	14.74	33	HP12X53
46	14										
		186	23+23.5	724.83	723.58	708.45	705.45	690.58	14.87	33	HP12X53
		187	23+31.	724.76	723.51	708.50	705.50	690.51	14.99	33	HP12X53
18.20		CONT JT.	23+34.75	724.72		708.52					
		188	23+38.5	724.68	723.43	708.54	705.54	690.43	15.11	33	HP12X53
		189	23+46.	724.61	723.36	708.59	705.59	691.36	14.23	32	HP12X53
47	14										
		190	23+53.5	724.53	723.28	708.64	705.64	691.28	14.36	32	HP12X53
		191	23+61.	724.46	723.21	708.69	705.69	691.21	14.48	32	HP12X53
17.71		CONT JT.	23+64.75	724.42		708.71					
		192	23+68.5	724.38	723.13	708.73	705.73	692.13	13.60	31	HP12X53
		193	23+76.	724.31	723.06	708.78	705.78	693.06	12.72	30	HP12X53
48	14										
		194	23+83.5	724.23	722.98	708.83	705.83	692.98	12.85	30	HP12X53
		195	23+91.	724.16	722.91	708.88	705.88	692.91	12.97	30	HP12X53
17.22		EXP JT.	23+94.75	724.12		708.90					
		196	23+98.5	724.00	722.75	708.92	705.92	692.75	13.17	30	HP12X53
		197	24+06.	723.77	722.52	708.96	705.96	692.52	13.43	30	HP12X53
49	14										
		198	24+13.5	723.54	722.29	708.99	705.99	693.29	12.70	29	HP12X53
		199	24+21.	723.31	722.06	709.03	706.03	693.06	12.98	29	HP12X53
16.14		CONT JT.	24+24.75	723.19		709.05					
		200	24+28.5	723.07	721.82	709.07	706.07	692.82	13.25	29	HP12X53
		201	24+36.	722.84	721.59	709.11	706.11	692.59	13.52	29	HP12X53
50	14										
		202	24+43.5	722.61	721.36	709.14	706.14	693.36	12.79	28	HP12X53
		203	24+51.	722.38	721.13	709.18	706.18	693.13	13.05	28	HP12X53
15.06		CONT JT.	24+54.75	722.26		709.20					
		204	24+58.5	722.14	720.89	709.22	706.22	692.89	13.33	28	HP12X53
		205	24+66.	721.91	720.66	709.26	706.26	692.66	13.60	28	HP12X53
51	14										
		206	24+73.5	721.68	720.43	709.29	706.29	693.43	12.87	27	HP12X53
		207	24+81.	721.45	720.20	709.33	706.33	693.20	13.14	27	HP12X53
13.98		EXP JT.	24+84.75	721.33		709.35					
		208	24+88.5	721.21	719.96	709.37	706.37	691.96	14.41	28	W18X76
		209	24+96.	720.98	719.73	709.41	706.41	691.73	14.68	28	W18X76
52	12										
		210	25+03.5	720.75	719.50	709.44	706.44	692.50	13.95	27	W18X76
		211	25+11.	720.52	719.27	709.48	706.48	692.27	14.22	27	W18X76
12.90		end wall	25+14.75	720.40		709.50					

STATE PROJECT NUMBER

1060-33-78

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ/CHW

WALL AND PILE DATA TABLE 3 OF 3

SHEET 12 OF 26

STATE PROJECT NUMBER

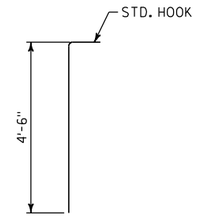
1060-33-78

BILL OF BARS/BAR SERIES TABLE

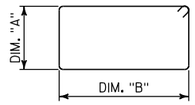
PANEL Number	PANEL WALL THICKNESS, INCH	PANEL HEIGHT LEFT END FT	PANEL HEIGHT RIGHT END Ft	PANEL WIDTH FT	QUAN. HORIZ A BARS, * EF	LENGTH OF A BAR- FT-INCH	QUAN. VERT. B BARS, * EF	LENGTH VARY SERIES B BAR, FT-INCH		LENGTH OF B BAR. FT-INCH	QUAN. HORIZ. C BARS	QUAN. VERT. D BARS	LENGTH OF D BAR, FT-INCH	QUAN. COPING. E BARS	LENGTH OF E BAR FT.	QUAN. COPING. F BARS	LENGTH OF F BAR FT.	QUAN. COPING. G BARS	LENGTH OF G BAR FT.
1	12	5.42	5.78	30.92	9	30'7"	32			3'9"	8	32	5'3"	32	6'3"				
2	12	5.78	6.12	30	10	29'8"	31			4'1"	8	31	5'3"	31	6'3"				
3	12	6.12	6.47	30	10	29'8"	31			4'5"	8	31	5'3"	31	6'3"				
4	12	6.47	7.40	30	12	29'8"	31 ◭	4'10"	5'9"		8	31	5'3"	31	6'3"				
5	12	7.40	8.34	30	14	29'8"	31 ◭	5'9"	6'8"		8	31	5'3"	31	6'3"				
6	12	8.34	9.27	30	16	29'8"	31 ◭	6'8"	7'7"		8	31	5'3"	31	6'3"				
7	12	9.27	10.21	30	18	29'8"	31 ◭	7'7"	8'6"		8	31	5'3"	31	6'3"				
8	12	10.21	11.14	30	20	29'8"	31 ◭	8'6"	9'6"		8	31	5'3"	31	6'3"				
9	12	11.14	11.60	30	21	29'8"	31 ◭	9'6"	9'11"		8	31	5'3"	31	6'3"				
10	12	11.60	12.06	30	22	29'8"	31 ◭	9'11"	10'5"		8	31	5'3"	31	6'3"				
11	12	12.06	12.53	30	23	29'8"	31 ◭	10'5"	10'10"		8	31	5'3"	31	6'3"				
12	12	12.53	12.99	30	23	29'8"	31 ◭	10'10"	11'4"		8	31	5'3"	31	6'3"				
13	12	12.99	13.45	30	24	29'8"	31 ◭	11'4"	11'9"		8	31	5'3"	31	6'3"				
14	12	13.45	14.58	30	27	29'8"	31 ◭	11'9"	12'11"		8	31	5'3"	31	6'3"				
15	12	14.58	15.71	30	29	29'8"	31 ◭	12'11"	14'0"		8	31	5'3"	31	6'3"				
16	14	15.71	16.83	30	31	29'8"	31 ◭	14'0"	15'2"		8	31	5'3"					31	6'7"
17	14	16.83	17.96	30	33	29'8"	31 ◭	15'2"	16'4"		8	31	5'3"					31	6'7"
18	14	17.96	19.09	30	36	29'8"	31 ◭	16'4"	17'5"		8	31	5'3"					31	6'7"
19	14	19.09	20.95	30	39	29'8"	31 ◹	17'5"	19'3"		8	31	5'3"					31	6'7"
20	14	20.95	22.82	30	43	29'8"	31 ◹	19'3"	21'2"		8	31	5'3"					31	6'7"
21	14	22.82	24.68	30	47	29'8"	31 ◹	21'2"	23'0"		8	31	5'3"					31	6'7"
22	14	24.68	26.55	30	51	29'8"	31 ◹	23'0"	24'11"		8	31	5'3"					31	6'7"
23	14	26.55	18.89	27.25	SEE SHEET 16 FOR PANEL REINFORCEMENT														
24	14	18.89	18.94	29.5	35	29'2"	31			17'3"	10	31	5'3"			31	10'9"		
25	14	18.94	19.00	30	35	29'8"	31			17'3"	10	31	5'3"			31	10'9"		

* QUANTITIES OF BARS SHOWN ARE FOR SINGLE FACE, TWO SETS REQUIRED

BAR MARK	BAR SIZE, NO.
A	5
B	5
C	5
D	5
E	5
F	5
G	5



D BAR



BAR MARK	DIM. "A"	DIM. "B"
E	1'-8"	1'-2"
F	1'-8"	3'-5"
G	1'-8"	1'-4"

◭ BUNDLE TWO SETS OF 10 BARS AND ONE SET OF 11 BARS. BARS IN A SET SHALL HAVE SAME LENGTH.

◹ BUNDLE THREE SETS OF 8 BARS AND ONE SET OF 7 BARS. BARS IN A SET SHALL HAVE SAME LENGTH.

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

BILL OF BARS/ BAR SERIES TABLE 1 OF 2

SHEET 13 OF 26

FILE NAME : \\WKE31FP1\w3zoo\Cadd\Final\10603378_TL\Structs\R-40-555\cds\R555_080113_de.dgn PLOT DATE : 30-APR-2013 14:42 PLOT BY : MSCM1M PLOT NAME : R555_080113_de PLOT SCALE : 8:1

STATE PROJECT NUMBER

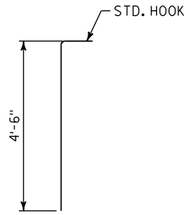
1060-33-78

BILL OF BARS/BAR SERIES TABLE

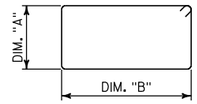
PANEL Number	PANEL WALL THICKNESS, INCH	PANEL HEIGHT LEFT END FT	PANEL HEIGHT RIGHT END Ft	PANEL WIDTH FT	QUAN. HORIZ A BARS, EF *	LENGTH OF A BAR- FT-INCH	QUAN. VERT. B BARS, *EF	LENGTH VARY SERIES B BAR, FT-INCH		LENGTH OF B BAR, FT-INCH	QUAN. HORIZ. C BARS	LENGTH OF C BAR, FT-INCH	QUAN. VERT. D BARS	LENGTH OF D BAR, FT-INCH	QUAN. COPING. E BARS	LENGTH OF E BAR FT.	QUAN. COPING. F BARS	LENGTH OF F BAR FT.	QUAN. COPING. G BARS	LENGTH OF G BAR FT.
26	14	19.00	19.05	30	36	29'8"	31			17'4"	10	29'8"	31	5'3"			31	10'9"		
27	14	19.05	27.11	25.25	SEE SHEET 16 FOR PANEL REINFORCEMENT															
28	14	27.11	25.33	30	52	29'8"	31 ◥	25'5"	23'8"		8	29'9"	31	5'3"					31	6'7"
29	14	25.33	23.55	30	48	29'8"	31 ◥	23'8"	21'11"		8	29'9"	31	5'3"					31	6'7"
30	14	23.55	21.76	30	45	29'8"	31 ◥	21'11"	20'1"		8	29'9"	31	5'3"					31	6'7"
31	14	21.76	19.98	30	41	29'8"	31 ◥	20'1"	18'4"		8	29'9"	31	5'3"					31	6'7"
32	14	19.98	18.20	30	37	29'8"	31 ◥	18'4"	16'6"		8	29'9"	31	5'3"					31	6'7"
33	14	18.20	18.21	30	34	29'8"	31			16'6"	8	29'8"	31	5'3"					31	6'7"
34	14	18.21	18.21	30	34	29'8"	31			16'6"	8	29'8"	31	5'3"					31	6'7"
35	14	18.21	18.22	30	34	29'8"	31			16'6"	8	29'8"	31	5'3"					31	6'7"
36	14	18.22	18.23	30	34	29'8"	31			16'7"	8	29'8"	31	5'3"					31	6'7"
37	14	18.23	18.61	30	35	29'8"	31			16'7"	8	29'8"	31	5'3"					31	6'7"
38	14	18.61	19.00	30	35	29'8"	31			16'11"	8	29'8"	31	5'3"					31	6'7"
39	14	19.00	19.38	30	36	29'8"	31			17'4"	8	29'8"	31	5'3"					31	6'7"
40	14	19.38	19.34	30	36	29'8"	31			17'8"	8	29'8"	31	5'3"					31	6'7"
41	14	19.34	19.30	30	36	29'8"	31			17'8"	8	29'8"	31	5'3"					31	6'7"
42	14	19.30	19.26	30	36	29'8"	31			17'7"	8	29'8"	31	5'3"					31	6'7"
43	14	19.26	19.22	30	36	29'8"	31			17'7"	8	29'8"	31	5'3"					31	6'7"
44	14	19.22	19.18	30	36	29'8"	31			17'6"	8	29'8"	31	5'3"					31	6'7"
45	14	19.18	18.69	30	36	29'8"	31 ◭	17'6"	17'0"		8	29'8"	31	5'3"					31	6'7"
46	14	18.69	18.20	30	35	29'8"	31 ◭	17'0"	16'6"		8	29'8"	31	5'3"					31	6'7"
47	14	18.20	17.71	30	34	29'8"	31 ◭	16'6"	16'1"		8	29'8"	31	5'3"					31	6'7"
48	14	17.71	17.22	30	33	29'8"	31 ◭	16'1"	15'7"		8	29'8"	31	5'3"					31	6'7"
49	14	17.22	16.14	30	32	29'8"	31 ◭	15'7"	14'6"		8	29'8"	31	5'3"					31	6'7"
50	14	16.14	15.06	30	30	29'8"	31 ◭	14'6"	13'5"		8	29'10"	31	5'3"					31	6'7"
51	14	15.06	13.98	30	28	29'8"	31 ◥	13'5"	12'4"		8	29'8"	31	5'3"					31	6'7"
52	12	13.98	12.90	30	25	29'8"	31 ◥	12'4"	11'3"		8	29'8"	31	5'3"	31	6'3"				

* QUANTITIES OF BARS SHOWN ARE FOR SINGLE FACE, TWO SETS REQUERED

BAR MARK	BAR SIZE, NO.
A	5
B	5
C	5
D	5
E	5
F	5
G	5
AA	5



D BAR



BAR MARK	DIM. "A"	DIM. "B"
E	1'-8"	1'-2"
F	1'-8"	3'-5"
G	1'-8"	1'-4"

◭ BUNDLE TWO SETS OF 10 BARS AND ONE SET OF 11 BARS. BARS IN A SET SHALL HAVE SAME LENGTH.

◥ BUNDLE THREE SETS OF 8 BARS AND ONE SET OF 7 BARS. BARS IN A SET SHALL HAVE SAME LENGTH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

BILL OF BARS/ BAR SERIES TABLE 2 OF 2

SHEET 14 OF 26

STATE PROJECT NUMBER
1060-33-78

WALL FACING BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
P501	X	70	27'-11"			PANEL 23 HORIZONTAL
P502	X	38	25'-11"			PANEL 23 HORIZONTAL
P503	X	50	25'-6"		⚠	PANEL 23 VERTICAL
P504	X	8	17'-2"			PANEL 23 VERTICAL
P505	X	27	4'-8"	X		PANEL 23 VERTICAL
N501	X	72	24'-11"			PANEL 27 HORIZONTAL
N502	X	36	13'-8"			PANEL 27 HORIZONTAL
N503	X	26	17'-5"			PANEL 27 VERTICAL
N504	X	26	25'-11"		⚠	PANEL 27 VERTICAL
N505	X	24	4'-8"	X		PANEL 27 VERTICAL
S501	X	5	3'-9"			PANEL 1 BEGINNING VERTICAL
S502	X	6	6'-8"	X		PANEL 1 BEGINNING HORIZONTAL

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS

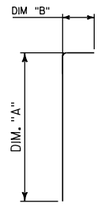
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
P503	2 SERIES OF 25	24'-11" TO 26'-0"
N504	2 SERIES OF 13	25'-6" TO 26'-3"

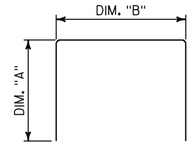
BUNDLE & TAG EACH SERIES SEPARATELY

WALL COPING BILL OF BARS

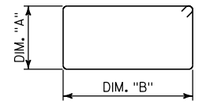
BAR MARK	COAT	NO.	LENGTH	BENT	SERIES	LOCATION
C501	X	8	25'-6"			COPING HORIZONTAL PANEL 23
C502	X	25	6'-8"	X		COPING HORIZONTAL PANEL 23
C503	X	3	8'-6"	X		COPING VERTICAL W/VERTICAL COPING REINF. PANEL 23
C504	X	8	5'-6"			COPING VERTICAL PANEL 23
C505	X	2	10'-9"	X		COPING HORIZONTAL PANEL 23
C506	X	3	5'-7"	X		COPING VERTICAL PANEL 23
C507	X	3	6'-5"	X		COPING VERTICAL PANEL 23
C508	X	8	5'-2"	X		COPING VERTICAL PANEL 23
C509	X	8	4'-11"	X		COPING VERTICAL PANEL 23
R501	X	8	13'-2"			COPING HORIZONTAL PANEL 27
R502	X	3	6'-7"	X		COPING HORIZONTAL PANEL 27
R503	X	1	8'-6"	X		COPING VERTICAL W/VERTICAL COPING REINF. PANEL 27
R504	X	8	9'-0"			COPING HORIZONTAL PANEL 27
R505	X	10	12'-3"			COPING HORIZONTAL PANEL 27
R506	X	11	10'-9"	X		COPING VERTICAL PANEL 27
R507	X	3	3'-0"	X		COPING HORIZONTAL PANEL 27
R508	X	3	2'-3"	X		COPING HORIZONTAL PANEL 27
R509	X	7	4'-8"	X		COPING VERTICAL PANEL 27
R510	X	7	4'-11"	X		COPING VERTICAL PANEL 27



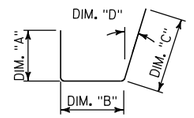
BAR MARK	DIM. "A"	DIM. "B"
P505	3'-11"	STD. HOOK
N505	3'-11"	STD. HOOK
R507	1'-10"	1'-4"
R508	1'-10"	0'-7"



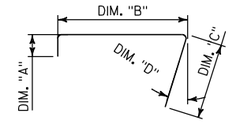
BAR MARK	DIM. "A"	DIM. "B"
C503	2'-8"	3'-5"
R503	2'-8"	3'-5"
C506	1'-4"	3'-2"



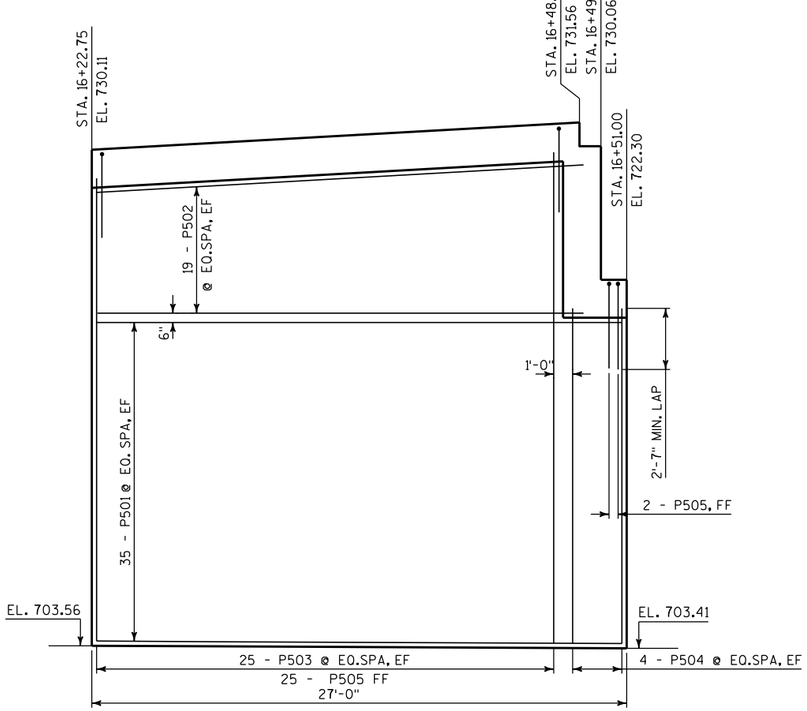
BAR MARK	DIM. "A"	DIM. "B"
C502	1'-8"	1'-4"
C505	1'-8"	3'-5"
R502	1'-8"	1'-4"
R506	1'-8"	3'-5"



BAR MARK	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"
C509	1'-4"	1'-8"	2'-0"	17.09°
R509	0'-7"	2'-2"	2'-0"	17.09°

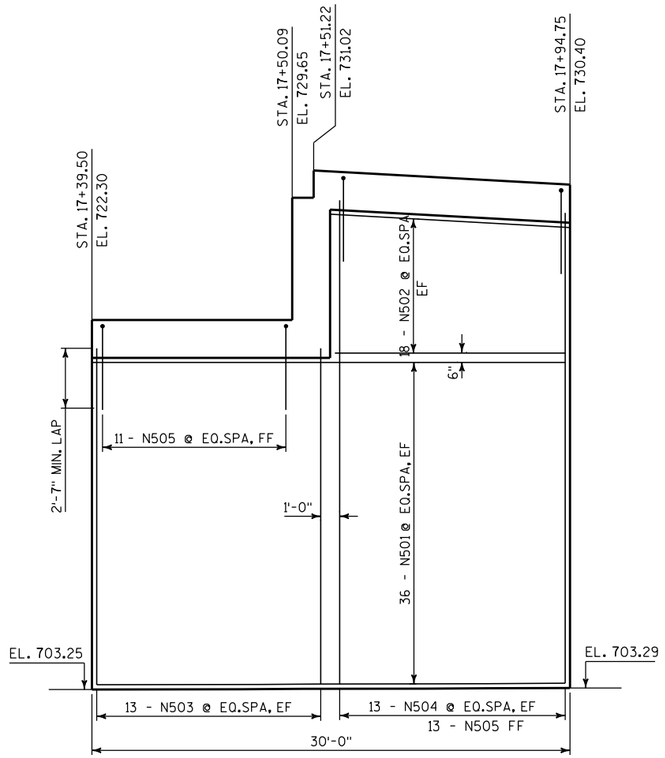


BAR MARK	DIM. "A"	DIM. "B"	DIM. "C"	DIM. "D"
C508	0'-7"	2'-8"	2'-0"	17.09°
R510	1'-4"	1'-8"	2'-0"	17.09°



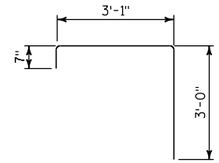
PANEL-23 ELEVATION

SEE SHEET 16 FOR COPING REINFORCEMENT



PANEL-27 ELEVATION

SEE SHEET 16 FOR COPING REINFORCEMENT



C507

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

WALL DETAILS 1 OF 2

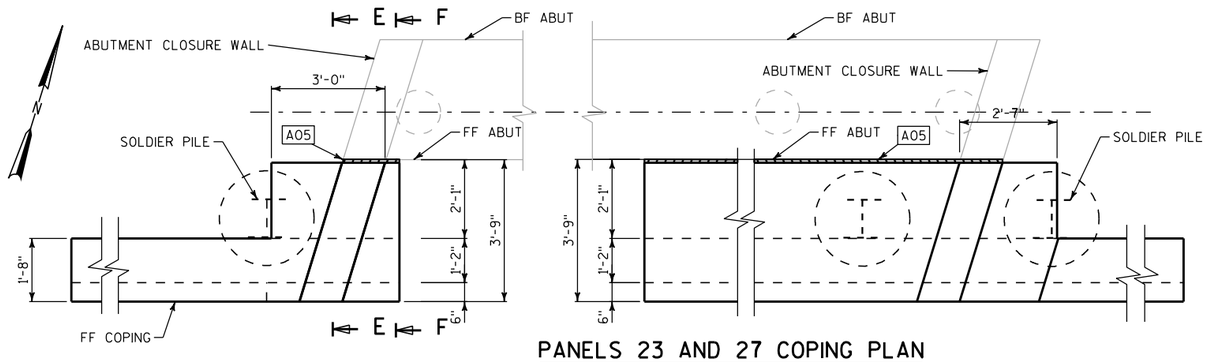
SHEET 15 OF 26

8

8

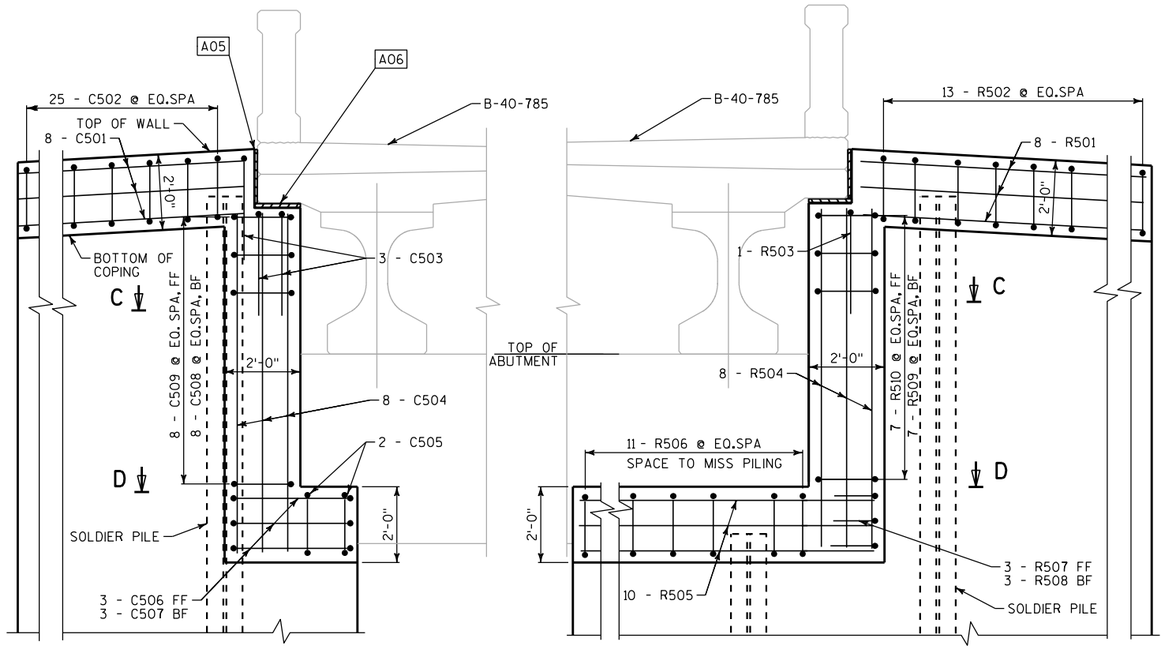
STATE PROJECT NUMBER

1060-33-78

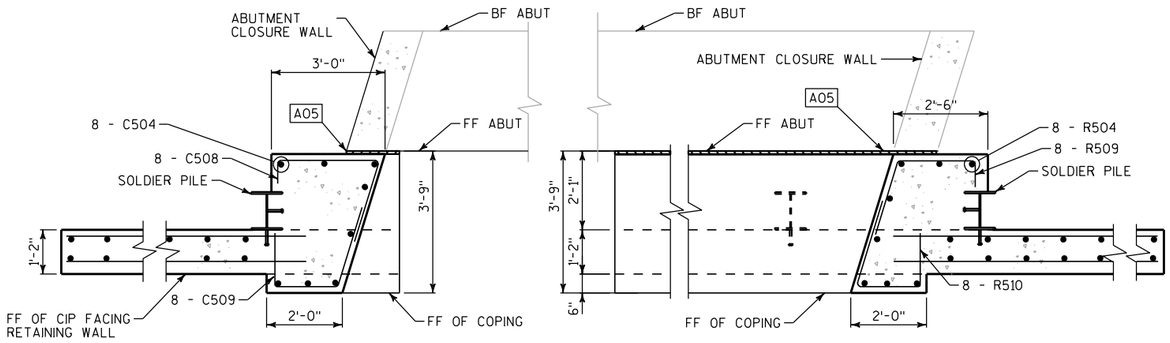


PANELS 23 AND 27 COPING PLAN

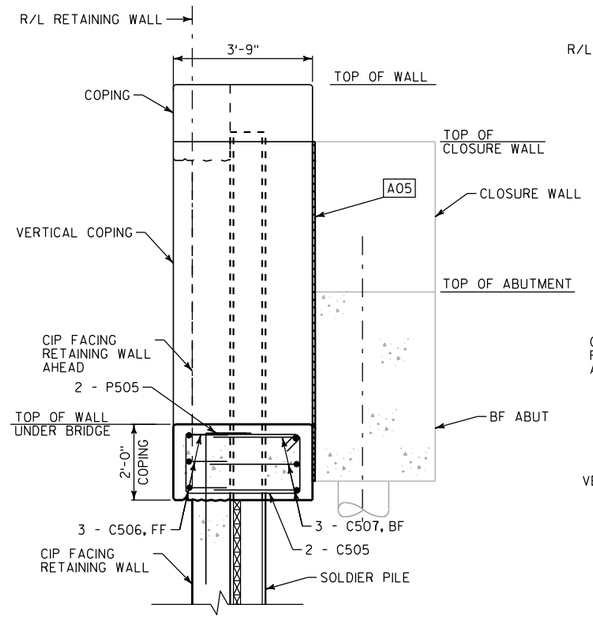
BRIDGE DECK IS NOT SHOWN FOR CLARITY



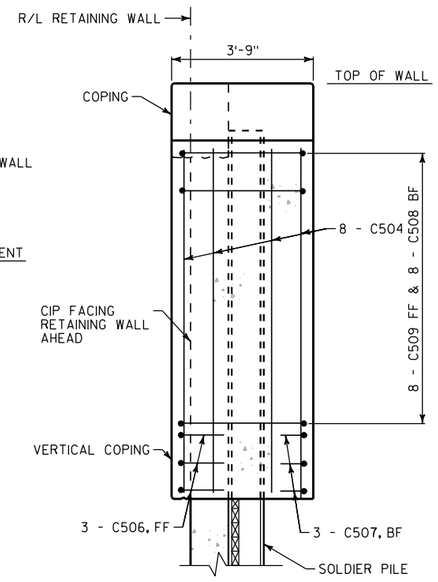
PANELS 23 AND 27 COPING ELEVATION



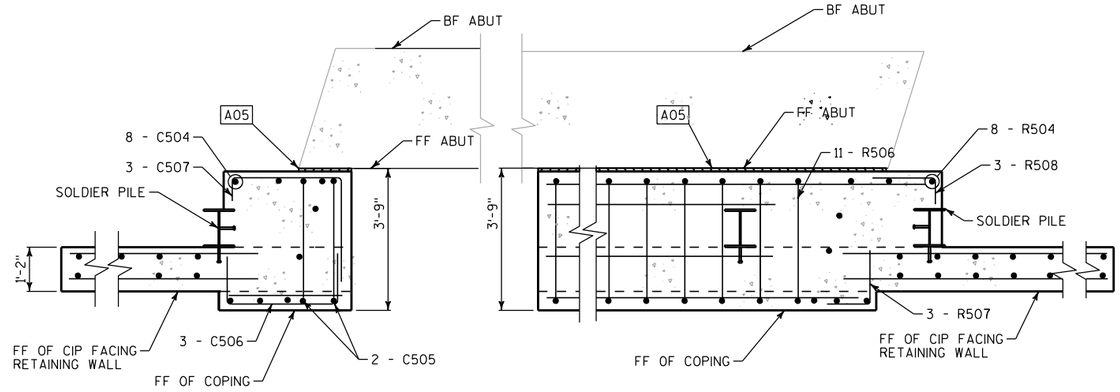
SECTION C-C



SECTION F-F



SECTION E-E



SECTION D-D

LEGEND

FF- FRONT FACE
BF- BACK FACE
EF- EACH FACE

NOTES

A05 ¾" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN BACK OF WALL COPING AND ABUTMENT.

A06 1½" PREFORMED JOINT FILLER WITH NON-BITUMINOUS JOINT SEALER BETWEEN TOP OF VERTICAL COPING AND BRIDGE DECK.

NO.	DATE	REVISION	BY

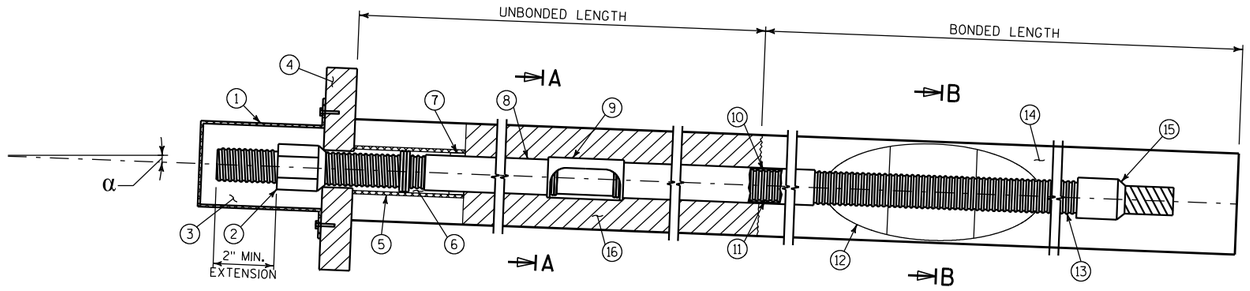
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY: MR | PLANS CK'D.: MHZ

WALL DETAILS 2 OF 2

SHEET 16 OF 26

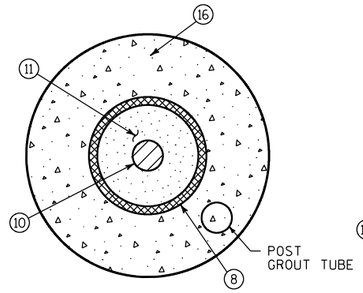


ENCAPSULATED TIEBACK

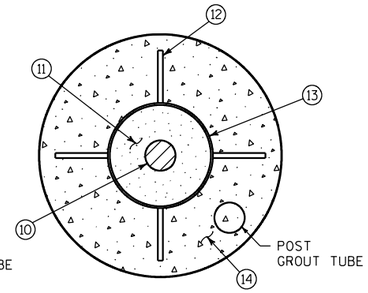
LEGEND:

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

A. STIFFENER PLAT 1"x10⅞"x1'-4"
B. 8" DIA. ASTM A-53 SCHEDULE 40 PIPE
C. WEDGE PLATE 1"x10" WIDE, CUT TO REQUIRED ANGLE
D. BEARING PLATE 1¾"x10"x10"



SECTION A-A



SECTION B-B

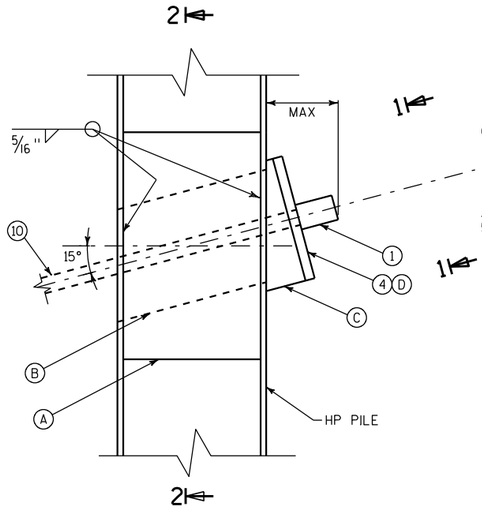
NOTES

1. BAR TENDON SHOWN. PRESTRESSED STEEL TENDONS MAY BE USED BUT ARE NOT SHOWN HERE.

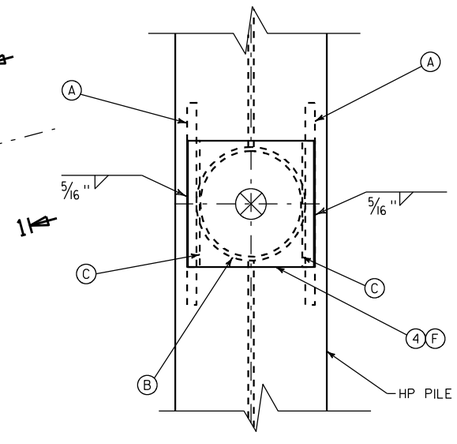
2. HP 12x53 SHALL BE PRE-FABRICATED WITH ANCHORAGE DETAIL SHOWN BEFORE INSTALLATION. BEARING PLATE, STIFFENERS, PIPE ARE INCLUDED IN THE ITEM "TIEBACK ANCHORS".

TIEBACK ANCHOR DATA TABLE

PILE NO. ●	TIEBACK NO.**	TIEBACK EL.	TIEBACK VERTICAL ORIENTATION, α Degrees	TIEBACK HORIZONTAL ORIENTATION, β Degrees	BONDED ANCHOR LENGTH, Ft *	UNBONDED ANCHOR LENGTH, Ft	TOTAL ANCHOR LENGTH, Ft	DESIGN FORCE, Kips	LOCK OFF LOAD, Kips	PROOF TEST LOAD, Kips
61	1	711.45	15	90	35	15	50	100	60	100
62	2	711.70	15	90	35	15	50	100	60	100
63	3	711.95	15	90	35	15	50	100	60	100
64	4	712.20	15	90	35	15	50	100	60	100
65	5	712.46	15	90	40	15	55	110	66	110
66	6	712.71	15	90	40	15	55	110	66	110
67	7	712.96	15	90	40	15	55	110	66	110
68	8	713.21	15	90	40	15	55	110	66	110
69	9	713.47	15	90	45	15	60	125	75	125
70	10	713.72	15	90	45	15	60	125	75	125
71	11	713.97	15	90	42	15	60	125	75	125
72	12	714.22	15	90	45	15	60	125	75	125
73	13	714.56	15	90	45	15	60	125	75	125
74	14	714.98	15	90	45	15	60	125	75	125
75	15	715.41	15	90	45	15	60	125	75	125
76	16	715.83	15	90	45	15	60	125	75	125
77	17A	716.25	15	90	40	16	56	115	69	115
	17B	708.25	15	90	33	15	48	95	57	95
78	18A	716.67	15	90	40	16	56	115	69	115
	18B	708.67	15	90	33	15	48	95	57	95
79	19A	717.10	15	90	40	16	56	115	69	115
	19B	709.10	15	90	33	15	48	95	57	95
80	20A	717.52	15	90	40	16	56	115	69	115
	20B	709.52	15	90	33	15	48	95	57	95
81	21A	717.94	15	90	40	16	56	115	69	115
	21B	709.94	15	90	33	15	48	95	57	95
82	22A	718.36	15	90	40	16	56	115	69	115
	22B	710.36	15	90	33	15	48	95	57	95
83	23A	718.79	15	90	40	16	56	115	69	115
	23B	710.79	15	90	33	15	48	95	57	95
84	24A	719.21	15	90	40	16	56	115	69	115
	24B	711.21	15	90	33	15	48	95	57	95
85	25A	719.63	15	90	40	16	56	115	69	115
	25B	711.63	15	90	33	15	48	95	57	95
86	26A	720.05	15	90	40	16	56	115	69	115
	26B	712.05	15	90	33	15	48	95	57	95
87	27A	720.47	15	90	40	16	56	115	69	115
	27B	712.47	15	90	33	15	48	95	57	95
88	28A	720.90	15	90	40	16	56	115	69	115
	28B	712.90	15	90	33	15	48	95	57	95
89	29A	721.32	15	90	42	17	59	125	75	125
	29B	713.32	15	90	38	15	53	115	69	115
90	30A	721.74	15	90	42	17	59	125	75	125
	30B	713.74	15	90	38	15	53	115	69	115
91	31A	722.16	15	90	42	17	59	125	75	125
	31B	714.16	15	90	38	15	53	115	69	115

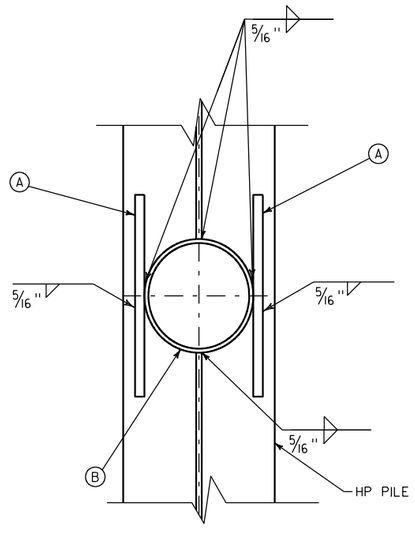


ANCHOR DETAIL



SECTION 1-1

TENDON NOT SHOWN FOR CLARITY



SECTION 2-2

TENDON NOT SHOWN FOR CLARITY

* ESTIMATED BONDED ANCHOR LENGTH BASED ON 6" DIA ANCHOR

α ANGLE FROM HORIZONTAL (LEVEL)

β HORIZONTAL ORIENTATION IS MEASURED FROM WALL R/L IN COUNTER-CLOCKWISE DIRECTION

** ALL BARS ARE 1.375" DIAMETER, ASTM A722 GRADE 150.

● ALL BRIDGE B-40-785 NORTH ABUTMENT PILES SHALL BE DRIVEN COMPLETELY BEFORE INSTALLING TIEBACK ANCHORS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

TIEBACK ANCHOR DATA TABLES & DETAILS 1 OF 2

SHEET 17 OF 26

8

8

STATE PROJECT NUMBER

1060-33-78

TIEBACK ANCHOR DATA TABLE

● PILE NO.	TIEBACK NO.**	TIEBACK EL.	TIEBACK VERTICAL ORIENTATION, α Degrees	TIEBACK HORIZONTAL ORIENTATION, β Degrees	BONDED ANCHOR LENGTH, Ft	UNBONDED ANCHOR LENGTH, Ft	TOTAL ANCHOR LENGTH, Ft	DESIGN FORCE, Kips	LOCK OFF LOAD, Kips	PROOF TEST LOAD, Kips
92	32A	722.50	15	90	42	17	59	125	75	125
	32B	714.50	15	90	38	15	53	115	69	115
93	33A	717.30	15	90	25	15	40	75	45	75
	33B	711.30	15	90	27	15	42	80	48	80
94	34A	717.30	15	90	25	15	40	75	45	75
	34B	711.30	15	90	27	15	42	80	48	80
95	35A	717.30	15	90	25	15	40	75	45	75
	35B	711.30	15	90	27	15	42	80	48	80
96	36A	717.30	15	90	25	15	40	75	45	75
	36B	711.30	15	90	27	15	42	80	48	80
97	37A	717.30	15	90	25	15	40	75	45	75
	37B	711.30	15	90	27	15	42	80	48	80
98	38A	717.30	15	90	25	15	40	75	45	75
	38B	711.30	15	90	27	15	42	80	48	80
99	39A	717.30	15	90	25	15	40	75	45	75
	39B	711.30	15	90	27	15	42	80	48	80
100	40A	717.30	15	90	25	15	40	75	45	75
	40B	711.30	15	90	27	15	42	80	48	80
101	41A	717.30	15	90	25	15	40	75	45	75
	41B	711.30	15	90	27	15	42	80	48	80
102	42A	717.30	15	90	25	15	40	75	45	75
	42B	711.30	15	90	27	15	42	80	48	80
103	43A	717.30	15	90	25	15	40	75	45	75
	43B	711.30	15	90	27	15	42	80	48	80
104	44A	717.30	15	90	25	15	40	75	45	75
	44B	711.30	15	90	27	15	42	80	48	80
105	45A	717.30	15	90	25	15	40	75	45	75
	45B	711.30	15	90	27	15	42	80	48	80
106	46A	717.30	15	90	25	15	40	75	45	75
	46B	711.30	15	90	27	15	42	80	48	80
107	47A	717.30	15	90	25	15	40	75	45	75
	47B	711.30	15	90	27	15	42	80	48	80
108	48A	717.30	15	90	25	15	40	75	45	75
	48B	711.30	15	90	27	15	42	80	48	80
109	49A	717.30	15	90	25	15	40	75	45	75
	49B	711.30	15	90	27	15	42	80	48	80
110	50A	722.02	15	90	34	15	59	100	60	100
	50B	714.02	15	90	27	15	42	80	48	80
111	51A	721.61	15	90	34	15	59	100	60	100
	51B	713.61	15	90	27	15	42	80	48	80
112	52A	721.20	15	90	33	15	48	95	57	95
	52B	713.20	15	90	22	15	37	65	39	65
113	53A	720.78	15	90	33	15	48	95	57	95
	53B	712.78	15	90	22	15	37	65	39	65
114	54A	720.37	15	90	33	15	48	95	57	95
	54B	712.37	15	90	22	15	37	65	39	65
115	55A	719.96	15	90	33	15	48	95	57	95
	55B	711.96	15	90	22	15	37	65	39	65
116	56A	719.55	15	90	27	15	42	80	48	80
	56B	711.55	15	90	18	15	33	50	30	50
117	57A	719.13	15	90	27	15	42	80	48	80
	57B	711.13	15	90	18	15	33	50	30	50
118	58A	718.72	15	90	27	15	42	80	48	80
	58B	710.72	15	90	18	15	33	50	30	50
119	59A	718.31	15	90	27	15	42	80	48	80
	59B	710.31	15	90	18	15	33	50	30	50
120	60A	717.89	15	90	27	15	42	80	48	80
	60B	709.89	15	90	18	15	33	50	30	50
121	61A	717.48	15	90	27	15	42	80	48	80
	61B	709.48	15	90	18	15	33	50	30	50
122	62A	717.07	15	90	27	15	42	80	48	80
	62B	709.07	15	90	18	15	33	50	30	50
123	63A	716.65	15	90	27	15	42	80	48	80
	63B	708.65	15	90	18	15	33	50	30	50

● PILE NO.	TIEBACK NO.**	TIEBACK EL.	TIEBACK VERTICAL ORIENTATION, α Degrees	TIEBACK HORIZONTAL ORIENTATION, β Degrees	BONDED ANCHOR LENGTH, Ft *	UNBONDED ANCHOR LENGTH, Ft	TOTAL ANCHOR LENGTH, Ft	DESIGN FORCE, Kips	LOCK OFF LOAD, Kips	PROOF TEST LOAD, Kips
124	64	716.24	15	90	38	15	53	110	66	110
125	65	715.83	15	90	38	15	53	110	66	110
126	66	715.41	15	90	38	15	53	110	66	110
127	67	715.00	15	90	38	15	53	110	66	110
128	68	714.59	15	90	38	15	53	110	66	110
129	69	714.17	15	90	38	15	53	110	66	110
130	70	713.76	15	90	38	15	53	110	66	110
131	71	713.35	15	90	38	15	53	110	66	110
132	72	713.16	15	90	38	15	53	110	66	110
133	73	713.21	15	90	38	15	53	110	66	110
134	74	713.26	15	90	38	15	53	110	66	110
135	75	713.30	15	90	38	15	53	110	66	110
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138	78	713.44	15	90	38	15	53	110	66	110
139	79	713.49	15	90	38	15	53	110	66	110
140	80	713.54	15	90	38	15	53	110	66	110
141	81	713.59	15	90	38	15	53	110	66	110
142	82	713.63	15	90	38	15	53	110	66	110
143	83	713.68	15	90	38	15	53	110	66	110
144	84	713.73	15	90	38	15	53	110	66	110
145	85	713.77	15	90	38	15	53	110	66	110
146	86	713.82	15	90	38	15	53	110	66	110
147	87	713.87	15	90	38	15	53	110	66	110
148	88	713.96	15	90	38	15	53	110	66	110
149	89	714.10	15	90	38	15	53	110	66	110
150	90	714.24	15	90	38	15	53	110	66	110
151	91	714.38	15	90	38	15	53	110	66	110
152	92	714.52	15	90	38	15	53	110	66	110
153	93	714.66	15	90	38	15	53	110	66	110
154	94	714.80	15	90	38	15	53	110	66	110
155	95	714.94	15	90	38	15	53	110	66	110
156	96	715.08	15	90	38	15	53	110	66	110
157	97	715.22	15	90	38	15	53	110	66	110
158	98	715.36	15	90	38	15	53	110	66	110
159	99	715.50	15	90	38	15	53	110	66	110
160	100	715.64	15	90	38	15	53	110	66	110
161	101	715.78	15	90	38	15	53	110	66	110
162	102	715.92	15	90	38	15	53	110	66	110
163	103	716.06	15	90	38	15	53	110	66	110

● PILE NO.	TIEBACK NO.**	TIEBACK EL.	TIEBACK VERTICAL ORIENTATION, α Degrees	TIEBACK HORIZONTAL ORIENTATION, β Degrees	BONDED ANCHOR LENGTH, Ft *	UNBONDED ANCHOR LENGTH, Ft	TOTAL ANCHOR LENGTH, Ft	DESIGN FORCE, Kips	LOCK OFF LOAD, Kips	PROOF TEST LOAD, Kips
164	104	716.20	15	90	38	15	53	110	66	110
165	105	716.34	15	90	38	15	53	110	66	110
166	106	716.48	15	90	38	15	53	110	66	110
167	107	716.62	15	90	38	15	53	110	66	110
168	108	716.69	15	90	38	15	53	110	66	110
169	109	716.69	15	90	38	15	53	110	66	110
170	110	716.69	15	90	38	15	53	110	66	110
171	111	716.69	15	90	38	15	53	110	66	110
172	112	716.69	15	90	38	15	53	110	66	110
173	113	716.69	15	90	38	15	53	110	66	110
174	114	716.69	15	90	38	15	53	110	66	110
175	115	716.69	15	90	38	15	53	110	66	110
176	116	716.69	15	90	38	15	53	110	66	110
177	117	716.69	15	90	38	15	53	110	66	110
178	118	716.69	15	90	38	15	53	110	66	110
179	119	716.69	15	90	38	15	53	110	66	110
180	120	716.69	15	90	38	15	53	110	66	110
181	121	716.69	15	90	38	15	53	110	66	110
182	122	716.69	15	90	38	15	53	110	66	110
183	123	716.69	15	90	38	15	53	110	66	110
184	124	716.63	15	90	38	15	53	110	66	110
185	125	716.52	15	90	38	15	53	110	66	110
186	126	716.41	15	90	38	15	53	110	66	110
187	127	716.29	15	90	38	15	53	110	66	110
188	128	716.18	15	90	33	15	48	95	57	95
189	129	716.07	15	90	33	15	48	95	57	95
190	130	715.95	15	90	33	15	48	95	57	95
191	131	715.84	15	90	33	15	48	95	57	95
192	132	715.73	15	90	33	15	48	95	57	95
193	133	715.61	15	90	33	15	48	95	57	95
194	134	715.50	15	90	33	15	48	95	57	95
195	135	715.39	15	90	33	15	48	95	57	95
196	136	715.24	15	90	33	15	48	95	57	95
197	137	715.06	15	90	33	15	48	95	57	95
198	138	714.89	15	90	33	15	48	95	57	95
199	139	714.71	15	90	33	15	48	95	57	95
200	140	714.53	15	90	33	15	48	95	57	95
201	141	714.35	15	90	33	15	48	95	57	95
202	142	714.18	15	90	33	15	48	95	57	95
203	143	714.00	15	90	33	15	48	95	57	95
204	144	713.79	15	90	33	15	48	95	57	95
205	145	713.56	15	90	33	15	48	95	57	95
206	146	713.32	15	90	33	15	48	95	57	95
207	147	713.08	15	90	33	15	48	95	57	95

* ESTIMATED BONDED ANCHOR LENGTH BASED ON 6" DIA ANCHOR

α ANGLE FROM HORIZONTAL (LEVEL)

β HORIZONTAL ORIENTATION IS MEASURED FROM WALL R/L IN COUNTER-CLOCKWISE DIRECTION

** ALL BARS ARE 1.375" DIAMETER, ASTM A722 GRADE 150.

● ALL BRIDGE B-40-785 NORTH ABUTMENT PILES SHALL BE DRIVEN COMPLETELY BEFORE INSTALLING TIEBACK ANCHORS AT BRIDGE ABUTMENT LOCATION.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

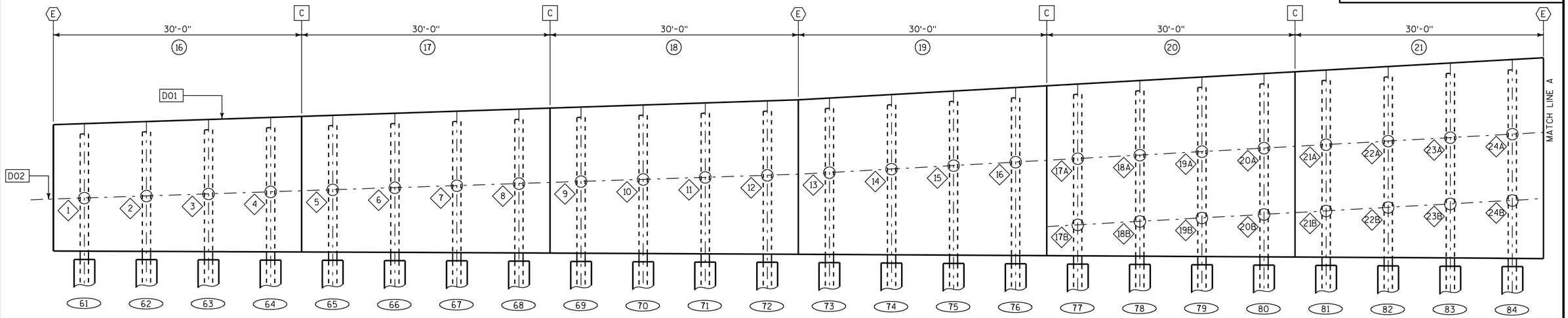
DRAWN BY MR | PLANS CK'D. MHZ

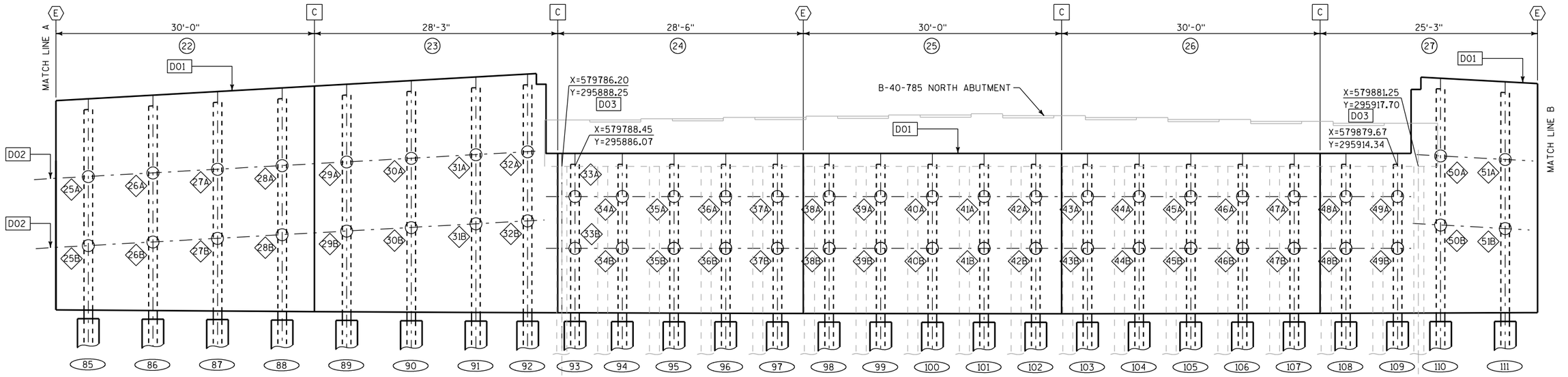
TIEBACK ANCHOR DATA TABLES & DETAILS 2 OF 2

SHEET 18 OF 26

FILE NAME : \\WKE31FP1\w3zoo\Cadd\Final\10603378_TL\Structs\R-40-555\cds\R555_080118_de.dgn
PLOT DATE : 30-APR-2013 14:43
PLOT BY : MSCM1M
PLOT NAME : R555_080118_de
PLOT SCALE : 2:1

STATE PROJECT NUMBER
1060-33-78





TIEBACKS LAYOUT - ELEVATION

NOTE

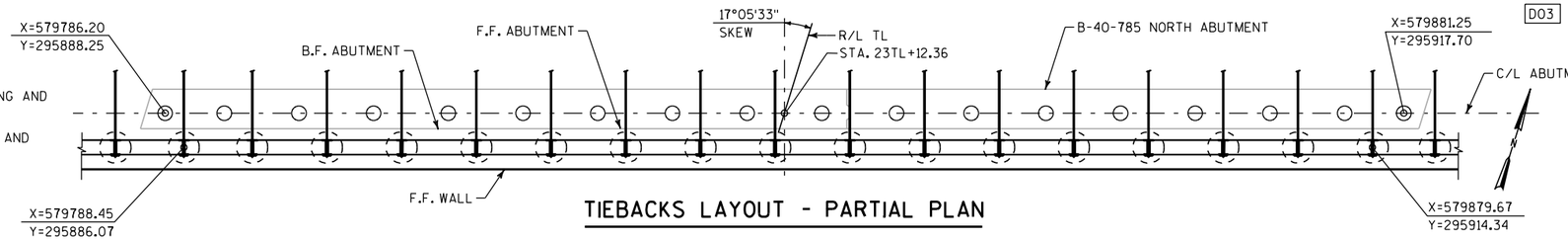
DO1 FOR TOP AND BOTTOM OF WALL ELEVATIONS SEE SHEET 10, 11, 12

DO2 FOR TIEBACK ELEVATIONS SEE SHEETS 17 AND 18

DO3 COORDINATE NOTATION DENOTES CENTER OF PILE OR DRILLED SHAFT

LEGEND

- (X) PANEL NUMBER
- ◇X TIEBACK NUMBER
- [C] CONTRACTION JOINT IN COPING AND CONCRETE FACING
- ⬡E EXPANSION JOINT IN COPING AND CONCRETE FACING
- (X) PILE NUMBER



TIEBACKS LAYOUT - PARTIAL PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

DRAWN BY MR | PLANS CK'D. MHZ

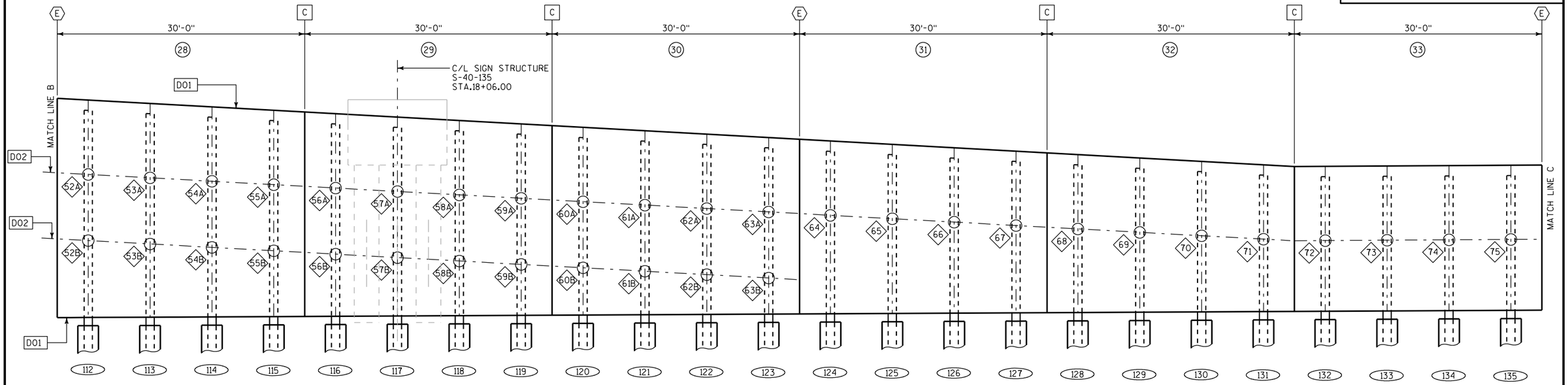
TIEBACKS LAYOUT
1 OF 3

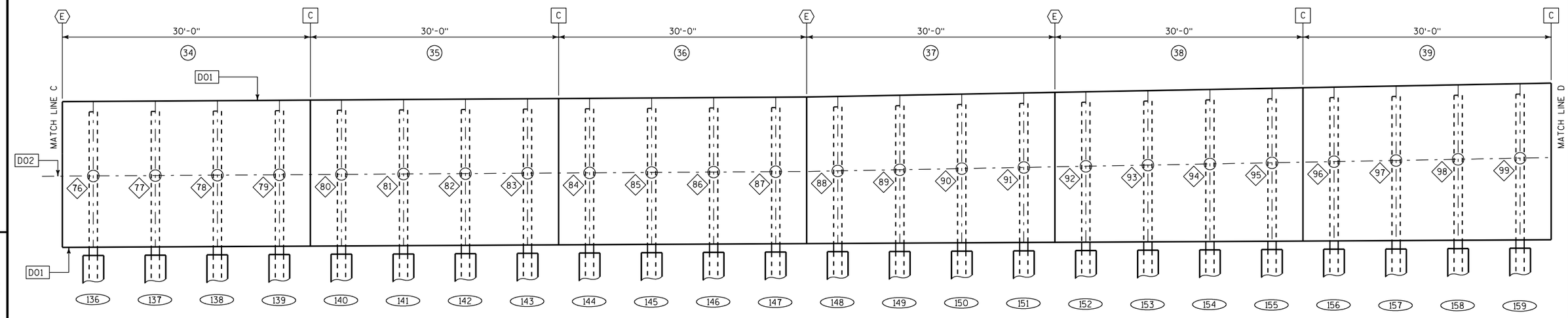
SHEET 19 OF 26

8

8

STATE PROJECT NUMBER
1060-33-78





8

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TIEBACKS LAYOUT - ELEVATION

NOTE

D01 FOR TOP AND BOTTOM OF WALL ELEVATIONS SEE SHEET 10, 11, 12

D02 FOR TIEBACK ELEVATIONS SEE SHEETS 17 AND 18

LEGEND

- (X) PANEL NUMBER
- ◇X TIEBACK NUMBER
- [C] CONTRACTION JOINT IN COPING AND CONCRETE FACING
- ⬡E EXPANSION JOINT IN COPING AND CONCRETE FACING
- (X) PILE NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

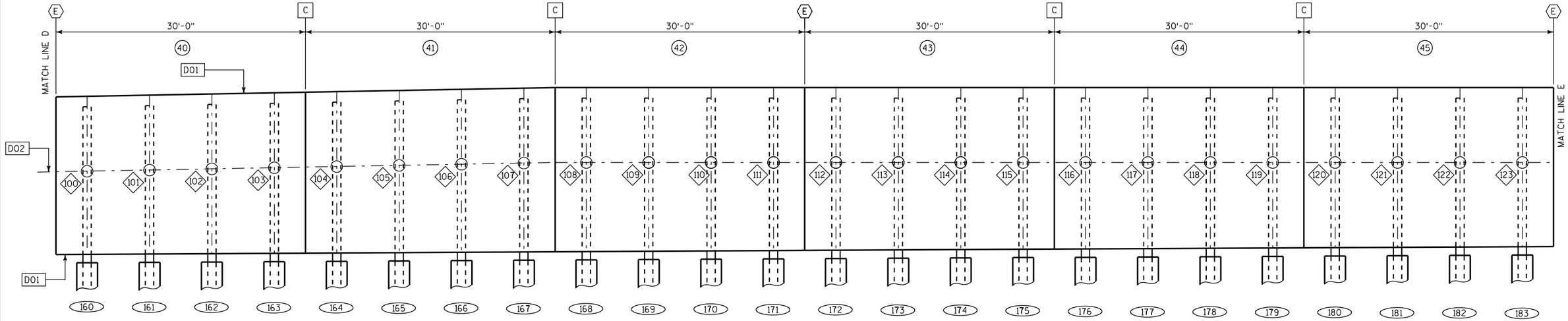
DRAWN BY MR | PLANS CK'D. MHZ

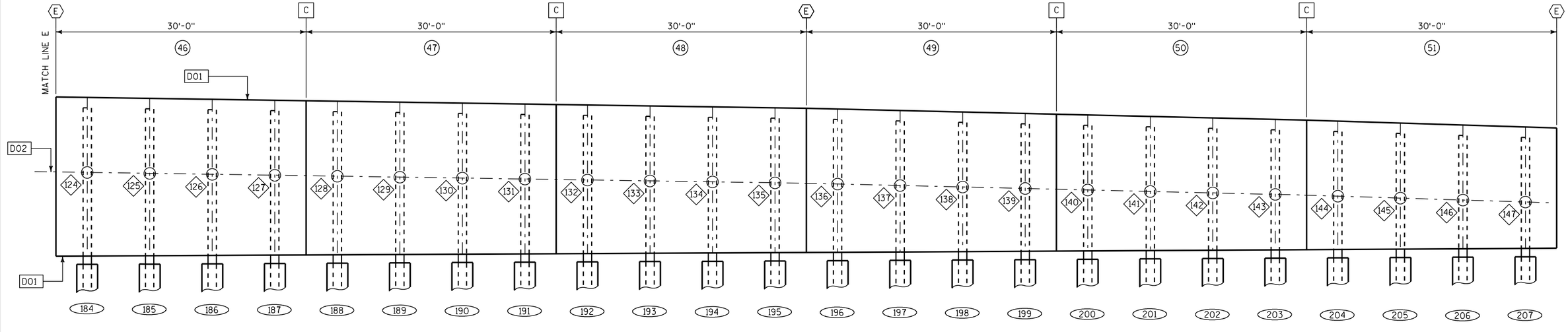
TIEBACKS LAYOUT
2 OF 3

SHEET 20 OF 26

FILE NAME : \\WKE31FP1\w3zoo\Cadd\Final\10603378_TL\Structs\R-40-555\cds\R555_080120_de.dgn PLOT DATE : 30-APR-2013 14:43 PLOT BY : MSCM1M PLOT NAME : R555_080120_de PLOT SCALE : 12:1

STATE PROJECT NUMBER
1060-33-78





8

8

TIEBACKS LAYOUT - ELEVATION

NOTE

D01 FOR TOP AND BOTTOM OF WALL ELEVATIONS SEE SHEET 10, 11, 12

D02 FOR TIEBACK ELEVATIONS SEE SHEETS 17 AND 18

LEGEND

- (X) PANEL NUMBER
- ◇X TIEBACK NUMBER
- [C] CONTRACTION JOINT IN COPING AND CONCRETE FACING
- ⟨E⟩ EXPANSION JOINT IN COPING AND CONCRETE FACING
- (X) PILE NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

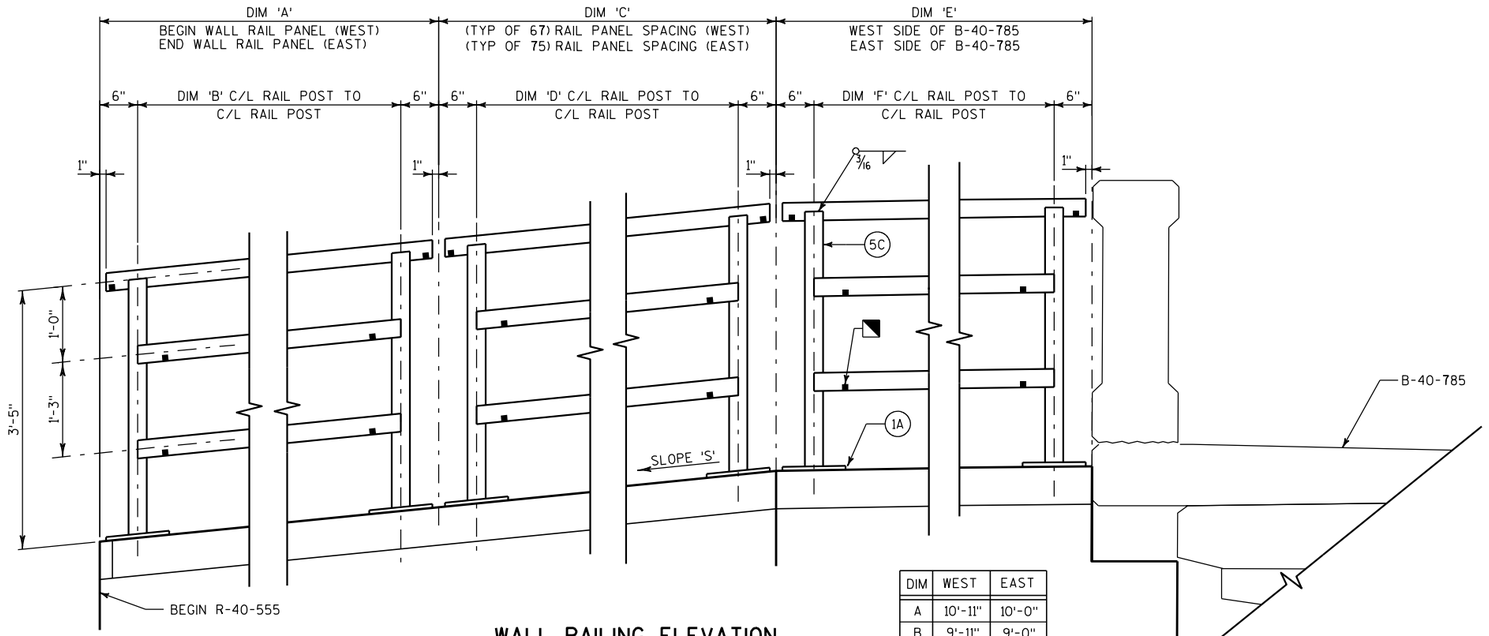
STRUCTURE R-40-555

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TIEBACKS LAYOUT
3 OF 3

SHEET 21 OF 26

STATE PROJECT NUMBER
1060-33-78

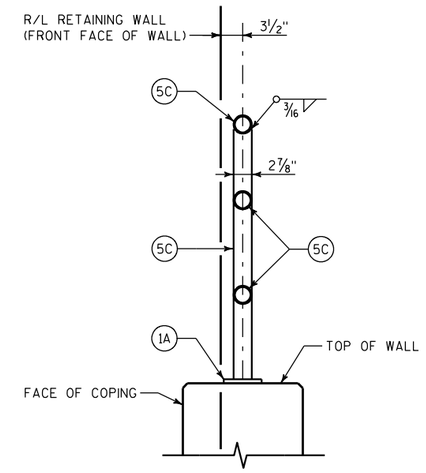


WALL RAILING ELEVATION

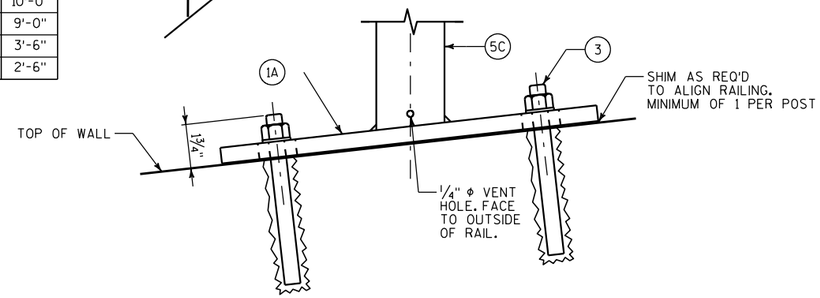
(LOOKING AT FRONT FACE OF COPING ON THE WEST PART OF WALL, EAST PART SIMILAR BUT OPPOSITE)

DIM	WEST	EAST
A	10'-11"	10'-0"
B	9'-11"	9'-0"
C	10'-0"	10'-0"
D	9'-0"	9'-0"
E	5'-9"	3'-6"
F	4'-9"	2'-6"

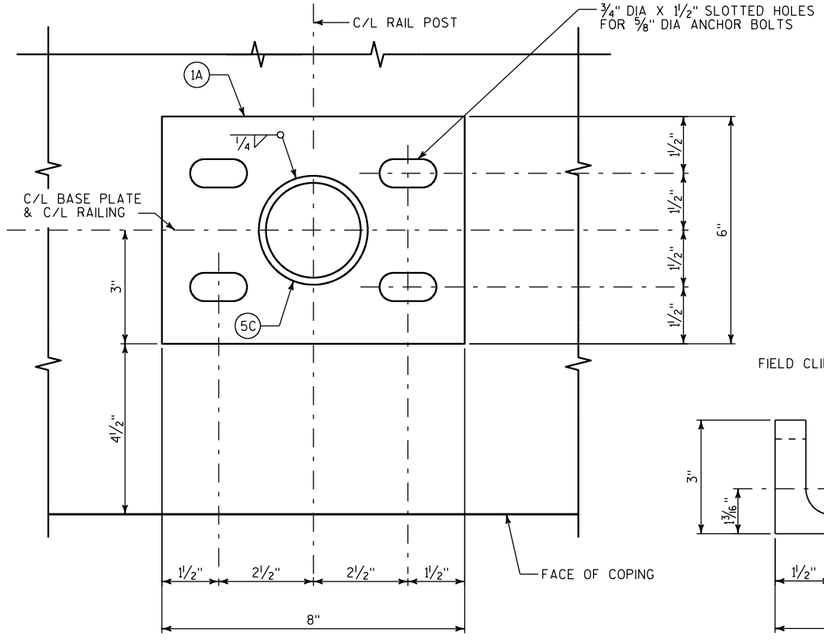
STATION FROM	STATION TO	SLOPE S, %
9+61.84	10+52.75	1.4
10+52.75	12+02.75	3.2
12+02.75	13+52.75	1.6
13+52.75	15+02.75	3.4
15+02.75	16+48.52	5.6
17+51.22	19+14.75	-5.5
19+14.75	20+34.75	0.6
20+34.75	21+24.75	1.9
21+24.75	22+24.75	0.5
22+24.75	23+94.75	-1.0
23+94.75	25+14.75	-3.1



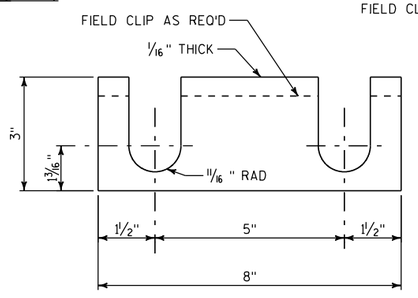
WALL RAILING SECTION

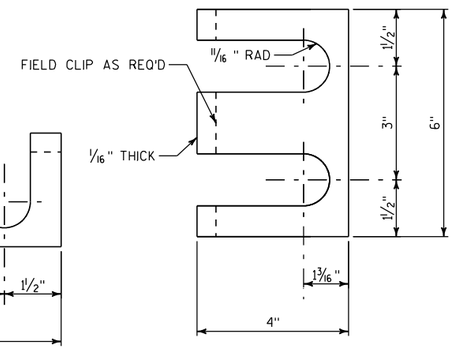


ANCHOR BOLTS FOR RAIL POST



RAIL POST BASE PLATE





RAIL POST SHIM DETAIL

(2 SETS PER POST)

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.

LEGEND

(1A) PLATE 5/8" X 6" X 10" WITH 3/4" X 1 1/2" SLOTTED HOLES.

(3) STAINLESS STEEL CONCRETE MASONRY ANCHORS, TYPE S (EPOXY), 5/8" DIA, MINIMUM PULLOUT CAPACITY OF 20 KIPS. 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 5C.

1/2" ø DRAIN HOLE @ BOTTOM OF EACH RAIL END.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE R-40-555

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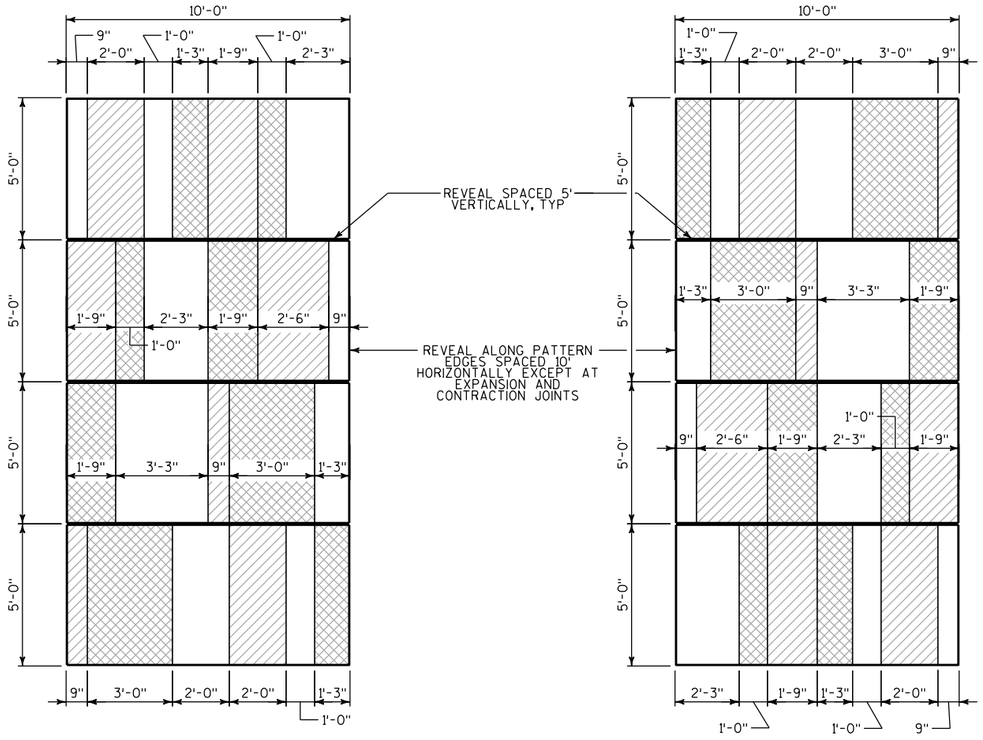
PIPE RAILING DETAILS

SHEET 22 OF 26

8

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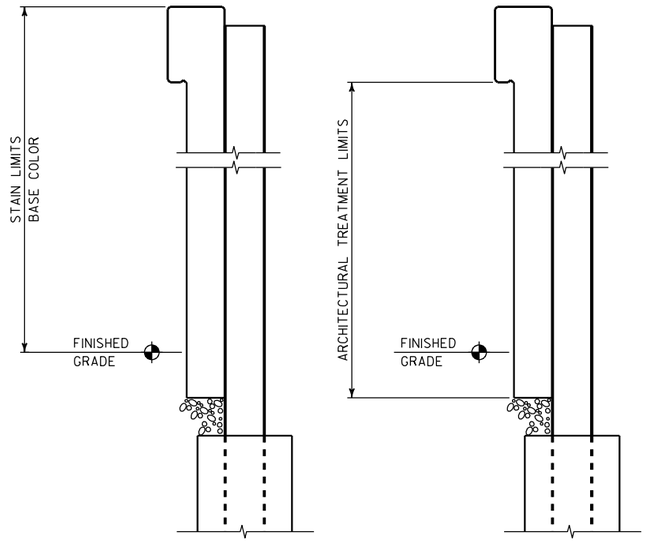
STATE PROJECT NUMBER
1060-33-78



CAST-IN-PLACE 'A' PATTERN

CAST-IN-PLACE 'B' PATTERN

'A' PATTERN ROTATED 180°

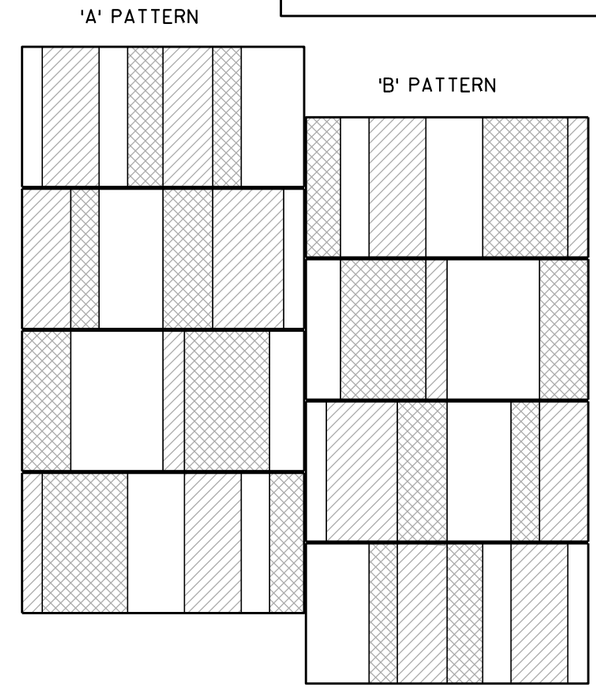


WALL STAINING DIAGRAM

BASE COLOR: FEDERAL COLOR - 33564

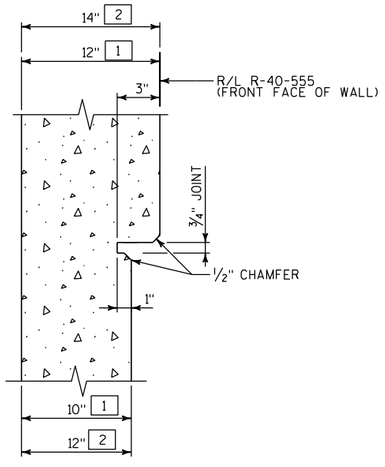
WALL ARCHITECTURAL TREATMENT DIAGRAM

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.



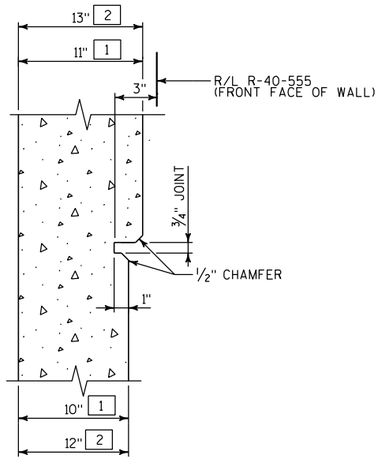
TYPICAL CAST-IN-PLACE PATTERN

PATTERN REPEATS 10' HORIZONTALLY, STAGGERED 30" VERTICALLY
REPEAT VERTICALLY AS REQUIRED



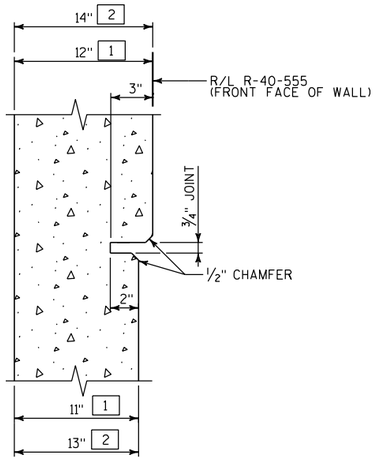
REVEAL DETAIL A

CONC FACING WIDTHS ADJACENT TO REVEAL VARY BY 2"



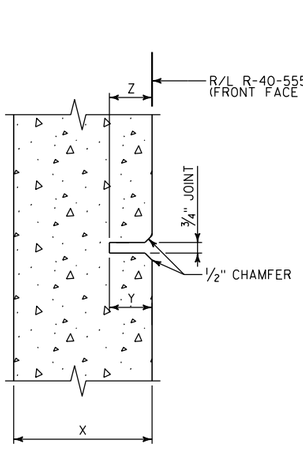
REVEAL DETAIL B

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

2 1'-2" THICK WALL

FACING THICKNESS	1	2
	10"	12"
	11"	13"
	12"	14"

DIMENSIONS 1

X	Y	Z
12"	3"	3"
11"	2"	3"
10"	1"	3"

DIMENSIONS 2

X	Y	Z
14"	3"	3"
13"	2"	3"
12"	1"	3"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE R-40-555

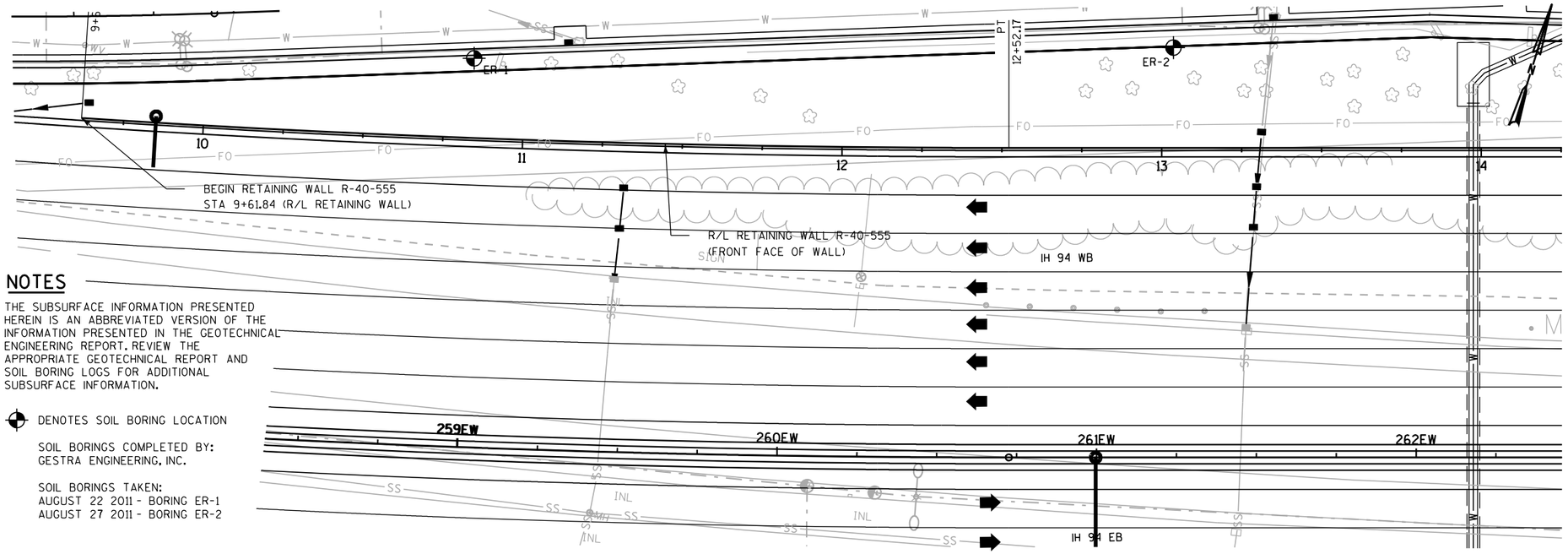
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AESTHETIC WALL TREATMENT DETAILS

SHEET 23 OF 26

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8



PLAN

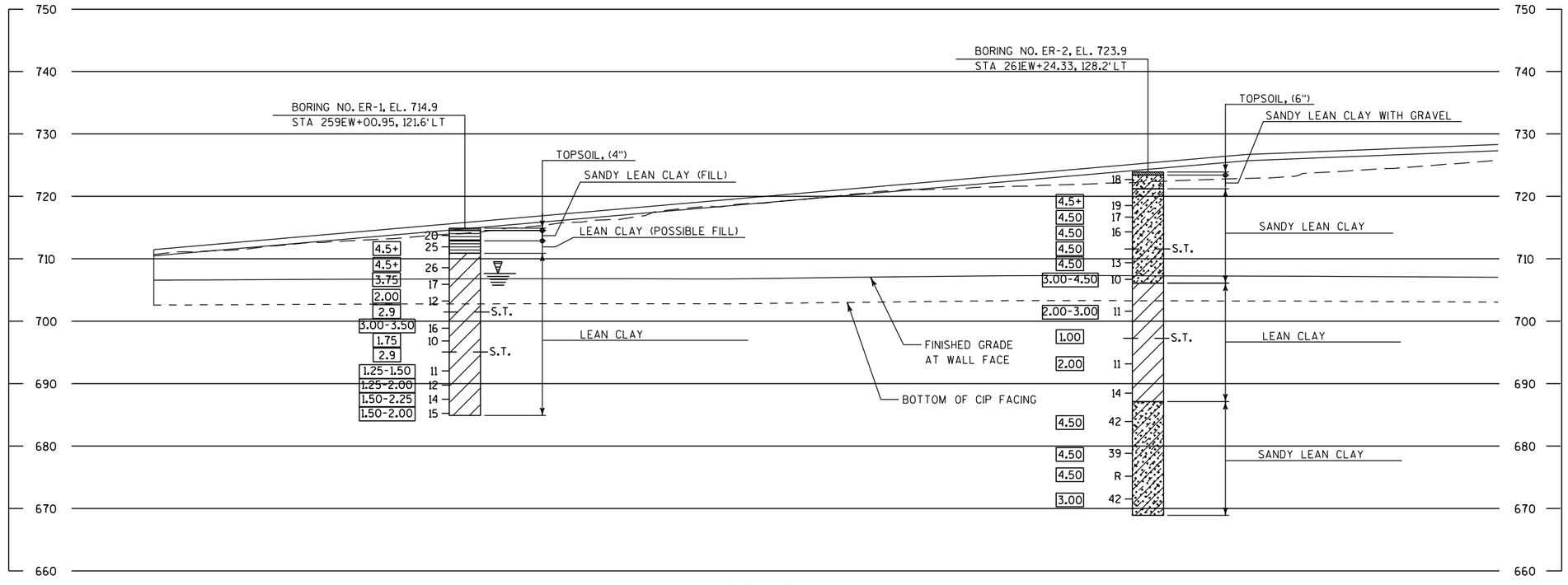
NOTES

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⊕ DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
AUGUST 22 2011 - BORING ER-1
AUGUST 27 2011 - BORING ER-2



ELEVATION

8

STATE PROJECT NUMBER

1060-33-78

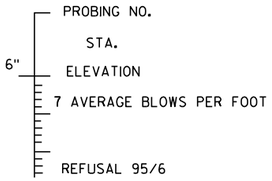
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

MATERIAL SYMBOLS

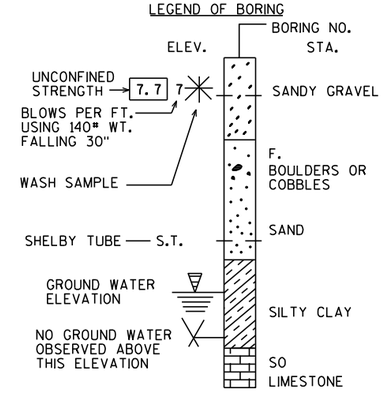
TOPSOIL / FILL · SILT · SANDSTONE
SAND · PEAT · LIMESTONE
GRAVEL · CLAY · IGNEOUS ROCK

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-40-555

DRAWN BY MM · PLANS CK'D. MHZ

SUBSURFACE EXPLORATION 1

SHEET 24 OF 26

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\R-40-555\cds\R555_080201_se.dgn PLOT DATE : 30-APR-2013 15:11 PLOT BY : MSCM1M PLOT NAME : R555_080201_se PLOT SCALE : 40:1

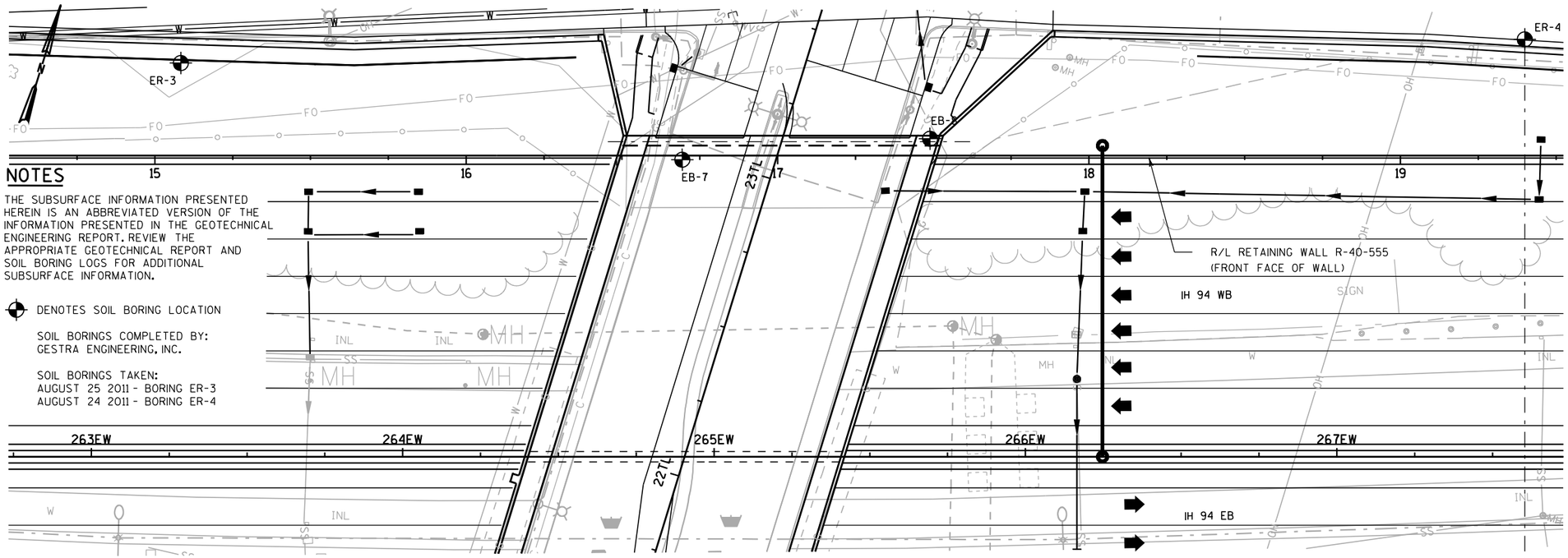
NOTES

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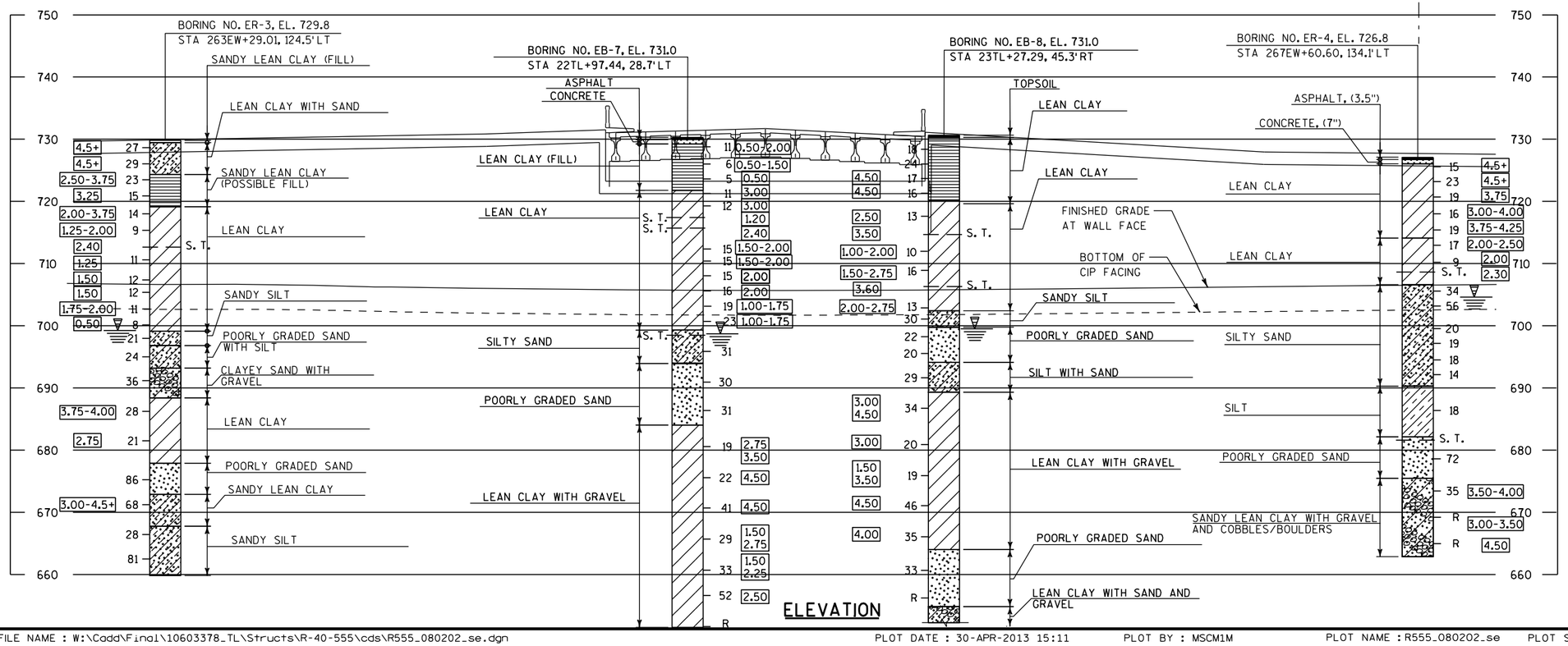
DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
AUGUST 25 2011 - BORING ER-3
AUGUST 24 2011 - BORING ER-4



PLAN



ELEVATION

STATE PROJECT NUMBER

1060-33-78

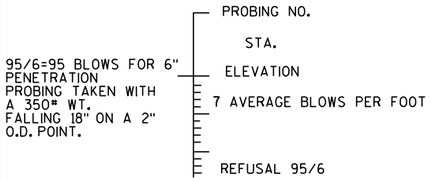
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

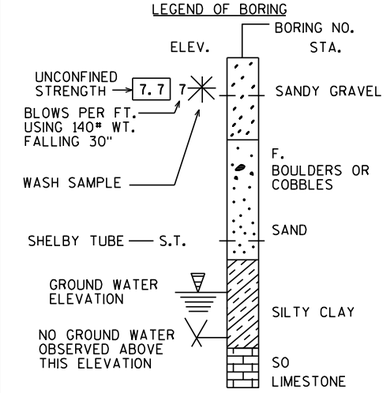
MATERIAL SYMBOLS

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

DRAWN BY MM | PLANS CK'D. MHZ

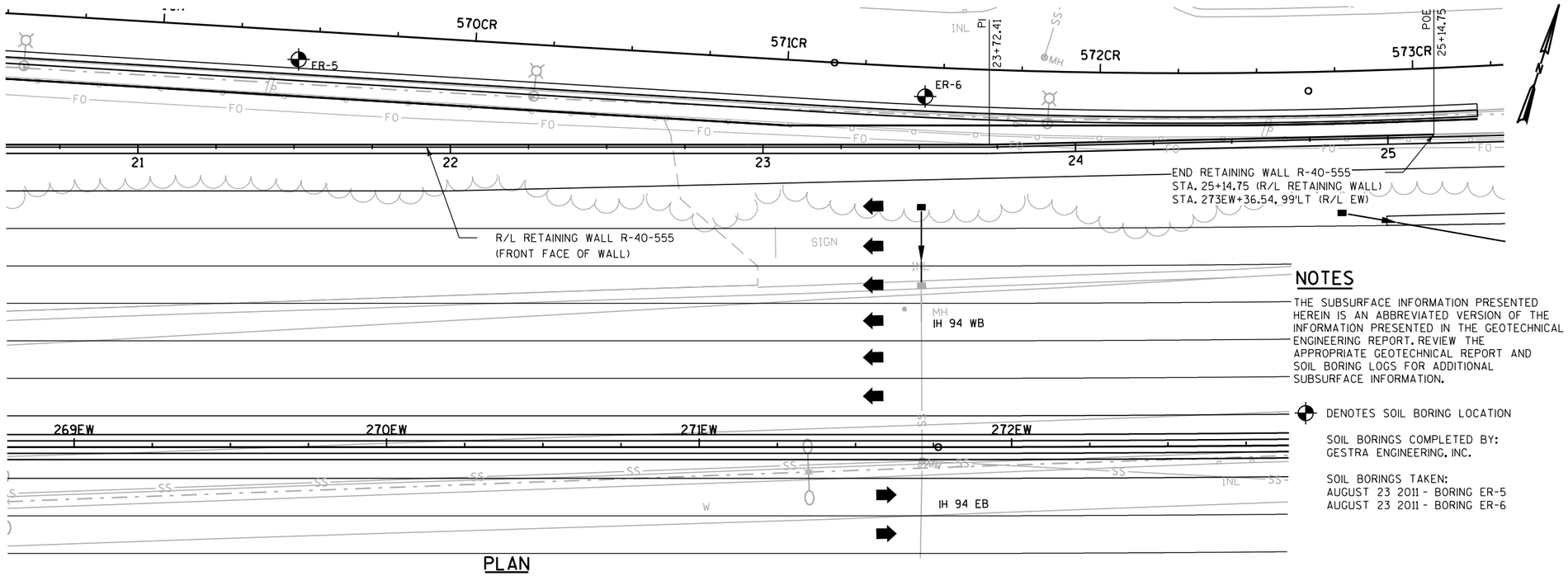
SUBSURFACE EXPLORATION 2

SHEET 25 OF 26

8

8

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\R-40-555\cds\R555_080202_se.dgn PLOT DATE : 30-APR-2013 15:11 PLOT BY : MSCM1M PLOT NAME : R555_080202_se PLOT SCALE : 40:1



PLAN

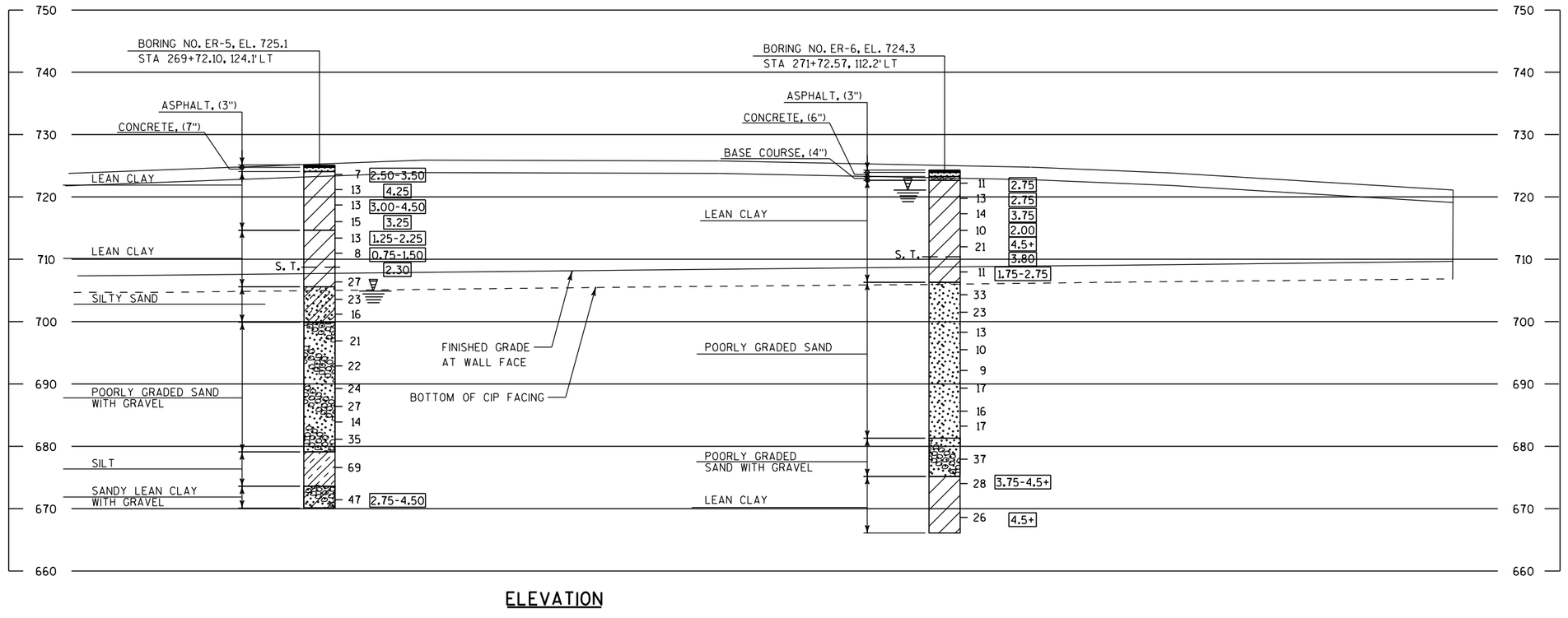
NOTES

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DENOTES SOIL BORING LOCATION

SOIL BORINGS COMPLETED BY:
GESTRA ENGINEERING, INC.

SOIL BORINGS TAKEN:
AUGUST 23 2011 - BORING ER-5
AUGUST 23 2011 - BORING ER-6



ELEVATION

8

8

STATE PROJECT NUMBER

1060-33-78

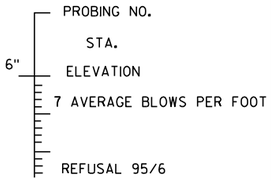
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

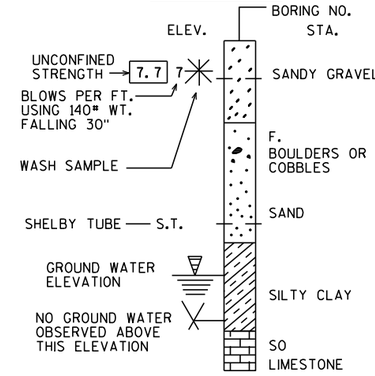
MATERIAL SYMBOLS

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-40-555

DRAWN BY MM | PLANS CK'D. MHZ

SUBSURFACE EXPLORATION 3

SHEET 26 OF 26

FILE NAME : W:\Cadd\Final\10603378_TL\Structs\R-40-555\cds\R555_080203_se.dgn PLOT DATE : 30-APR-2013 15:11 PLOT BY : MSCM1M PLOT NAME : R555_080203_se PLOT SCALE : 40:1

DIVISION 1 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 1.20	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
256+04	AH	25603.63	0.00	37.32	0.00	0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
256+50		25650.00	46.37	60.92	0.00	0.30	0.00	84.36	0.00	0.40	0.00	84.36	0.48	0.00	83.87
257+00		25700.00	50.00	63.32	0.00	0.05	0.00	115.04	0.00	0.32	0.00	199.40	0.87	0.00	198.52
257+50		25750.00	50.00	88.44	0.00	0.00	0.00	140.52	0.00	0.05	0.00	339.91	0.93	0.00	338.99
257+76		25776.00	26.00	94.33	0.00	0.00	0.00	88.00	0.00	0.00	0.00	427.91	0.93	0.00	426.99
258+00		25800.00	24.00	103.01	0.00	0.00	0.00	87.71	0.00	0.00	0.00	515.62	0.93	0.00	514.69
258+50		25850.00	50.00	168.85	0.00	0.00	0.00	251.72	0.00	0.00	0.00	767.34	0.93	0.00	766.42
259+00		25900.00	50.00	221.14	0.00	0.00	0.00	361.10	0.00	0.00	0.00	1128.45	0.93	0.00	1127.52
259+50		25950.00	50.00	320.09	0.00	0.00	0.00	501.14	0.00	0.00	0.00	1629.58	0.93	0.00	1628.66
260+00		26000.00	50.00	429.19	0.00	0.00	0.00	693.78	0.00	0.00	0.00	2323.36	0.93	0.00	2322.43
260+50		26050.00	50.00	523.66	0.00	0.00	0.00	882.27	0.00	0.00	0.00	3205.63	0.93	0.00	3204.70
261+00		26100.00	50.00	587.92	0.00	0.00	0.00	1029.24	0.00	0.00	0.00	4234.87	0.93	0.00	4233.94
261+50		26150.00	50.00	652.75	0.00	0.00	0.00	1148.77	0.00	0.00	0.00	5383.64	0.93	0.00	5382.71
262+00		26200.00	50.00	747.31	0.00	0.00	0.00	1296.35	0.00	0.00	0.00	6679.99	0.93	0.00	6679.06
262+50		26250.00	50.00	787.97	0.00	0.00	0.00	1421.56	0.00	0.00	0.00	8101.55	0.93	0.00	8100.62
263+00		26300.00	50.00	825.61	0.00	0.00	0.00	1494.06	0.00	0.00	0.00	9595.60	0.93	0.00	9594.67
263+50		26350.00	50.00	826.11	0.00	0.00	0.00	1529.37	0.00	0.00	0.00	11124.97	0.93	0.00	11124.04
264+00		26400.00	50.00	840.09	0.00	0.00	0.00	1542.78	0.00	0.00	0.00	12667.75	0.93	0.00	12666.82
264+50		26450.00	50.00	975.97	0.00	0.96	0.00	1681.54	0.00	0.89	0.00	14349.29	2.00	0.00	14347.29
265+00		26500.00	50.00	1287.60	0.00	0.00	0.00	2095.90	0.00	0.89	0.00	16445.19	3.06	0.00	16442.12
265+50		26550.00	50.00	1258.00	0.00	0.00	0.00	2357.04	0.00	0.00	0.00	18802.22	3.06	0.00	18799.16
266+00		26600.00	50.00	809.48	0.00	0.48	0.00	1914.33	0.00	0.44	0.00	20716.56	3.60	0.00	20712.96
266+50		26650.00	50.00	725.34	0.00	0.62	0.00	1421.13	0.00	1.02	0.00	22137.69	4.82	0.00	22132.87
267+00		26700.00	50.00	659.29	0.00	0.14	0.00	1282.06	0.00	0.70	0.00	23419.75	5.66	0.00	23414.09
267+50		26750.00	50.00	684.80	0.00	0.00	0.00	1244.53	0.00	0.13	0.00	24664.28	5.82	0.00	24658.46
268+00		26800.00	50.00	654.78	0.00	0.00	0.00	1240.35	0.00	0.00	0.00	25904.63	5.82	0.00	25898.81
268+50		26850.00	50.00	601.08	0.00	0.00	0.00	1162.83	0.00	0.00	0.00	27067.46	5.82	0.00	27061.65
269+00		26900.00	50.00	533.12	0.00	0.00	0.00	1050.19	0.00	0.00	0.00	28117.65	5.82	0.00	28111.83
269+50		26950.00	50.00	470.13	0.00	0.00	0.00	928.94	0.00	0.00	0.00	29046.58	5.82	0.00	29040.77
270+00		27000.00	50.00	416.89	0.00	1.51	0.00	821.31	0.00	1.40	0.00	29867.90	7.50	0.00	29860.40
270+50		27050.00	50.00	379.32	0.00	2.80	0.00	737.23	0.00	3.99	0.00	30605.13	12.28	0.00	30592.85
271+00		27100.00	50.00	368.24	0.00	5.44	0.00	692.19	0.00	7.63	0.00	31297.32	21.44	0.00	31275.88
271+50		27150.00	50.00	360.02	0.00	3.26	0.00	674.31	0.00	8.06	0.00	31971.63	31.11	0.00	31940.52
272+00		27200.00	50.00	342.20	0.00	2.49	0.00	650.20	0.00	5.32	0.00	32621.83	37.50	0.00	32584.34
272+50		27250.00	50.00	326.50	0.00	1.40	0.00	619.17	0.00	3.60	0.00	33241.00	41.82	0.00	33199.18
273+00		27300.00	50.00	312.01	0.00	2.00	0.00	591.21	0.00	3.15	0.00	33832.21	45.60	0.00	33786.62
273+32		27332.09	32.09	144.78	0.00	1.36	0.00	271.45	0.00	2.00	0.00	34103.67	47.99	0.00	34055.67
273+37		27336.54	4.45	115.91	0.00	1.48	0.00	21.48	0.00	0.23	0.00	34125.15	48.27	0.00	34076.88
273+50		27350.00	13.46	103.04	0.00	0.00	0.00	54.58	0.00	0.37	0.00	34179.72	48.72	0.00	34131.01
274+00		27400.00	50.00	72.49	0.00	0.00	0.00	162.53	0.00	0.00	0.00	34342.25	48.72	0.00	34293.54
274+30	BK	27430.46	30.46	48.41	0.00	0.63	0.00	68.20	0.00	38.62	0.00	34410.45	95.05	0.00	34315.39
							Column totals	34410.45	0.00	79.21	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 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 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	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
037+51	AH	3751.00	0.00	43.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
038+00		3800.00	49.00	39.95	0.00	0.00	0.00	75.68	0.00	0.00	0.00	75.68	0.00	0.00	0.00	75.68
038+50		3850.00	50.00	40.87	0.00	0.00	0.00	74.83	0.00	0.00	0.00	150.51	0.00	0.00	0.00	150.51
038+58		3858.00	8.00	71.01	0.00	0.00	0.00	16.57	0.00	0.00	0.00	167.09	0.00	0.00	0.00	167.09
038+75		3874.85	16.85	60.85	0.00	5.93	0.00	41.15	0.00	1.85	0.00	208.23	2.22	0.00	0.00	206.01
038+97		3897.45	22.60	119.00	0.00	0.32	0.00	75.27	0.00	2.62	0.00	283.50	5.36	0.00	0.00	278.14
039+00		3900.00	2.55	123.76	0.00	0.86	0.00	11.46	0.00	0.06	0.00	294.97	5.43	0.00	0.00	289.54
039+50		3950.00	50.00	50.58	0.00	2.19	0.00	161.43	0.00	2.82	0.00	456.39	8.82	0.00	0.00	447.58
040+00		4000.00	50.00	94.86	0.00	0.00	0.00	134.67	0.00	2.03	0.00	591.06	11.25	0.00	0.00	579.81
040+35	BK	4035.00	35.00	16.02	0.00	0.00	0.00	71.87	0.00	0.00	0.00	662.92	11.25	0.00	0.00	651.68
042+51	AH	4251.28	0.00	32.82	0.00	0.00	0.00	0.00	0.00	0.00	0.00	662.92	11.25	0.00	0.00	0.00
043+00		4300.00	48.72	17.64	0.00	1.18	0.00	45.53	0.00	1.06	0.00	708.45	12.53	0.00	0.00	44.25
043+50		4350.00	50.00	18.89	0.00	0.00	0.00	33.82	0.00	1.09	0.00	742.27	13.84	0.00	0.00	76.76
044+00		4400.00	50.00	17.43	0.00	0.06	0.00	33.63	0.00	0.06	0.00	775.90	13.90	0.00	0.00	110.32
044+50		4450.00	50.00	34.01	0.00	0.00	0.00	47.63	0.00	0.06	0.00	823.53	13.97	0.00	0.00	157.89
045+00		4500.00	50.00	12.82	0.00	0.03	0.00	43.36	0.00	0.03	0.00	866.90	14.00	0.00	0.00	201.22
045+27	BK	4527.04	27.04	21.79	0.00	0.54	0.00	17.33	0.00	0.29	0.00	884.23	14.35	0.00	0.00	218.20
							Column totals	884.23	0.00	11.96	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

DIVISION 1 RAMP FBA

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 1.20	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
010+00 AH	1000.00	0.00	8.02	0.00	25.97	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
010+50	1050.00	50.00	58.34	0.00	138.17	0.00	61.44	0.00	151.98	0.00	61.44	182.38	0.00	0.00	-120.93
011+00	1100.00	50.00	36.24	0.00	428.23	0.00	87.57	0.00	524.44	0.00	149.02	811.71	0.00	0.00	-662.69
011+50	1150.00	50.00	23.95	0.00	468.44	0.00	55.73	0.00	830.25	0.00	204.75	1808.01	0.00	0.00	-1603.26
012+00	1200.00	50.00	0.08	0.00	512.78	0.00	22.25	0.00	908.54	0.00	227.00	2898.26	0.00	0.00	-2671.26
012+50	1250.00	50.00	0.00	0.00	584.51	0.00	0.07	0.00	1016.01	0.00	227.07	4117.47	0.00	0.00	-3890.39
013+00	1300.00	50.00	3.52	0.00	625.28	0.00	3.26	0.00	1120.18	0.00	230.33	5461.68	0.00	0.00	-5231.34
013+50	1350.00	50.00	3.22	0.00	652.71	0.00	6.24	0.00	1183.32	0.00	236.57	6881.67	0.00	0.00	-6645.09
014+00	1400.00	50.00	12.84	0.00	658.46	0.00	14.87	0.00	1214.05	0.00	251.44	8338.52	0.00	0.00	-8087.08
014+50	1450.00	50.00	28.49	0.00	625.46	0.00	38.27	0.00	1188.81	0.00	289.71	9765.10	0.00	0.00	-9475.39
014+72	1472.12	22.12	31.17	0.00	370.69	0.00	24.44	0.00	408.05	0.00	314.15	10254.76	0.00	0.00	-9940.61
015+00	1500.00	27.88	38.56	0.00	35.29	0.00	36.00	0.00	209.61	0.00	350.15	10506.29	0.00	0.00	-10156.14
015+35 BK	1535.00	35.00	44.14	0.00	9.70	0.00	53.60	0.00	29.16	0.00	403.75	10541.28	0.00	0.00	-10137.53
						Column totals	403.75	0.00	8784.40	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)]

9

DIVISION 1 RAMP FCA

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 1.20	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
011+43 AH	1143.05	0.00	43.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
011+50	1150.00	6.95	44.18	0.00	0.00	0.00	11.22	0.00	0.00	0.00	11.22	0.00	0.00	0.00	11.22
012+00	1200.00	50.00	0.00	0.00	844.64	0.00	40.91	0.00	782.07	0.00	52.13	938.49	0.00	0.00	-886.36
012+50	1250.00	50.00	4.46	0.00	442.89	0.00	4.13	0.00	1192.16	0.00	56.26	2369.08	0.00	0.00	-2312.82
013+00	1300.00	50.00	0.00	0.00	260.70	0.00	4.13	0.00	651.47	0.00	60.39	3150.84	0.00	0.00	-3090.45
013+50	1350.00	50.00	0.00	0.00	159.35	0.00	0.00	0.00	388.94	0.00	60.39	3617.57	0.00	0.00	-3557.18
014+00	1400.00	50.00	0.00	0.00	180.70	0.00	0.00	0.00	314.86	0.00	60.39	3995.40	0.00	0.00	-3935.01
014+02 BK	1402.30	2.30	0.00	0.00	50.40	0.00	0.00	0.00	9.84	0.00	60.39	4007.21	0.00	0.00	-3946.82
						Column totals	60.39	0.00	3339.34	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)]

9

DIVISION 1 RAMP FDA

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 1.20	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
009+22 AH	922.21	0.00	0.09	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
009+50	950.00	27.79	0.10	0.00	1.73	0.00	0.10	0.00	1.34	0.00	0.10	1.61	0.00	0.00	-1.51
010+00	1000.00	50.00	0.28	0.00	12.89	0.00	0.35	0.00	13.54	0.00	0.45	17.86	0.00	0.00	-17.41
010+50	1050.00	50.00	0.05	0.00	27.60	0.00	0.27	0.00	26.06	0.00	0.36	32.89	0.00	0.00	-32.52
010+78	1078.00	28.00	30.29	0.00	213.29	0.00	10.58	0.00	87.73	0.00	11.03	123.13	0.00	0.00	-112.09
011+00	1100.00	22.00	0.00	0.00	1117.58	0.00	8.24	0.00	368.97	0.00	8.60	475.65	0.00	0.00	-467.04
011+50	1150.00	50.00	4.23	0.00	1832.65	0.00	21.31	0.00	1952.79	0.00	32.34	2466.48	0.00	0.00	-2434.13
012+00	1200.00	50.00	3.47	0.00	887.04	0.00	4.75	0.00	2368.69	0.00	13.36	3318.07	0.00	0.00	-3304.71
012+15 BK	1215.00	15.00	43.80	0.00	6.12	0.00	9.54	0.00	504.78	0.00	41.88	3072.21	0.00	0.00	-3030.33
						Column totals	55.14	0.00	5323.89	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)]

9

DIVISION 1 Channel Excavation

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 1.20	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
020+53 AH	2053.06	0.00	13.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
021+00	2100.00	46.94	95.63	0.00	2.61	0.00	95.11	0.00	2.27	0.00	95.11	2.72	0.00	0.00	92.38
021+50	2150.00	50.00	609.92	0.00	11.53	0.00	653.29	0.00	13.09	0.00	748.39	16.54	0.00	0.00	731.85
021+93	2193.06	43.06	887.17	0.00	74.15	0.00	1193.79	0.00	68.32	0.00	1942.18	93.65	0.00	0.00	1848.53
022+00	2200.00	6.94	866.17	0.00	135.63	0.00	158.01	0.00	14.39	0.00	253.11	19.46	0.00	0.00	233.65
022+18	2218.06	18.06	905.67	0.00	313.18	0.00	546.64	0.00	89.38	0.00	1295.03	121.75	0.00	0.00	1173.28
022+50	2250.00	31.94	22.80	0.00	618.30	0.00	667.85	0.00	227.80	0.00	762.96	273.67	0.00	0.00	489.29
022+63 BK	2262.52	12.52	41.23	0.00	786.66	0.00	14.85	0.00	325.74	0.00	777.80	664.56	0.00	0.00	113.25
						Column totals	3329.53	0.00	740.99	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)]

9

DIVISION 1 GREENFIELD BERM

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	Cumulative Vol (CY) Cut 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	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
746+00 AH	74600.00	0.00	5.90	0.00	8.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
746+50	74650.00	50.00	1.84	0.00	1210.09	0.00	7.17	0.00	1128.28	7.17	1353.93	0.00	0.00	-1346.77
747+00	74700.00	50.00	0.06	0.00	1663.90	0.00	1.76	0.00	2661.10	8.93	4547.26	0.00	0.00	-4538.33
747+50	74750.00	50.00	0.00	0.00	2097.92	0.00	0.06	0.00	3483.17	8.98	8727.06	0.00	0.00	-8718.07
748+00	74800.00	50.00	0.36	0.00	2484.04	0.00	0.33	0.00	4242.56	9.31	13818.12	0.00	0.00	-13808.81
748+50	74850.00	50.00	0.00	0.00	2553.44	0.00	0.33	0.00	4664.33	9.65	19415.32	0.00	0.00	-19405.67
749+00	74900.00	50.00	0.00	0.00	2421.51	0.00	0.00	0.00	4606.44	9.65	24943.04	0.00	0.00	-24933.40
749+50	74950.00	50.00	2.28	0.00	2512.86	0.00	2.11	0.00	4568.86	11.76	30425.68	0.00	0.00	-30413.92
750+00	75000.00	50.00	6.86	0.00	2600.33	0.00	8.46	0.00	4734.44	20.22	36107.00	0.00	0.00	-36086.78
750+50	75050.00	50.00	9.88	0.00	2719.52	0.00	15.50	0.00	4925.79	35.72	42017.94	0.00	0.00	-41982.22
751+00	75100.00	50.00	0.00	0.00	2690.70	0.00	9.15	0.00	5009.46	44.87	48029.30	0.00	0.00	-47984.43
751+50	75150.00	50.00	0.00	0.00	2566.83	0.00	0.00	0.00	4868.08	44.87	53871.00	0.00	0.00	-53826.13
752+00	75200.00	50.00	0.42	0.00	2642.13	0.00	0.39	0.00	4823.11	45.26	59658.73	0.00	0.00	-59613.47
752+50	75250.00	50.00	3.36	0.00	2820.32	0.00	3.50	0.00	5057.82	48.76	65728.12	0.00	0.00	-65679.36
753+00	75300.00	50.00	9.01	0.00	248.39	0.00	11.45	0.00	2841.40	60.21	69137.80	0.00	0.00	-69077.59
753+05 BK	75304.60	4.60	18.80	0.00	103.41	0.00	2.37	0.00	29.97	62.58	69173.76	0.00	0.00	-69111.18
						Column totals	62.58	0.00	57644.80					

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 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 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
555+88 AH	55588.00	0.00	20.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
556+00	55600.00	12.00	19.42	0.00	0.00	0.00	8.77	0.00	0.00	0.00	8.77	0.00	0.00	8.77
556+50	55650.00	50.00	18.84	0.00	0.00	0.00	35.43	0.00	0.00	0.00	44.19	0.00	0.00	44.19
557+00	55700.00	50.00	19.12	0.00	0.00	0.00	35.15	0.00	0.00	0.00	79.34	0.00	0.00	79.34
557+50	55750.00	50.00	19.50	0.00	0.00	0.00	35.76	0.00	0.00	0.00	115.10	0.00	0.00	115.10
558+00	55800.00	50.00	15.35	0.00	0.00	0.00	32.27	0.00	0.00	0.00	147.37	0.00	0.00	147.37
558+50	55850.00	50.00	14.57	0.00	0.00	0.00	27.70	0.00	0.00	0.00	175.07	0.00	0.00	175.07
559+00	55900.00	50.00	14.36	0.00	0.00	0.00	26.79	0.00	0.00	0.00	201.86	0.00	0.00	201.86
559+50	55950.00	50.00	13.41	0.00	0.00	0.00	25.71	0.00	0.00	0.00	227.57	0.00	0.00	227.57
560+00	56000.00	50.00	14.89	0.00	0.00	0.00	26.20	0.00	0.00	0.00	253.78	0.00	0.00	253.78
560+50	56050.00	50.00	11.80	0.00	0.00	0.00	24.71	0.00	0.00	0.00	278.49	0.00	0.00	278.49
561+00	56100.00	50.00	15.51	0.00	0.00	0.00	25.29	0.00	0.00	0.00	303.78	0.00	0.00	303.78
561+50	56150.00	50.00	13.46	0.00	0.00	0.00	26.82	0.00	0.00	0.00	330.60	0.00	0.00	330.60
562+00	56200.00	50.00	17.22	0.00	0.00	0.00	28.41	0.00	0.00	0.00	359.01	0.00	0.00	359.01
562+50	56250.00	50.00	23.86	0.00	0.00	0.00	38.04	0.00	0.00	0.00	397.04	0.00	0.00	397.04
563+00	56300.00	50.00	27.39	0.00	0.00	0.00	47.45	0.00	0.00	0.00	444.50	0.00	0.00	444.50
563+50	56350.00	50.00	30.49	0.00	0.00	0.00	53.59	0.00	0.00	0.00	498.09	0.00	0.00	498.09
564+00	56400.00	50.00	32.60	0.00	0.00	0.00	58.42	0.00	0.00	0.00	556.51	-1.89	0.00	558.40
564+50	56450.00	50.00	28.68	0.00	0.07	0.00	56.74	0.00	0.04	0.00	554.83	-1.21	0.00	555.95
565+00	56500.00	50.00	31.26	0.00	0.00	0.00	55.50	0.00	0.06	0.00	610.33	-1.13	0.00	611.37
565+50	56550.00	50.00	39.01	0.00	3.88	0.00	65.06	0.00	3.59	0.00	675.40	3.18	0.00	672.12
566+00	56600.00	50.00	15.14	0.00	0.00	0.00	50.14	0.00	3.59	0.00	725.54	7.49	0.00	717.95
566+50	56650.00	50.00	15.89	0.00	0.00	0.00	28.73	0.00	0.00	0.00	754.27	7.49	0.00	746.68
567+00	56700.00	50.00	15.24	0.00	0.00	0.00	28.82	0.00	0.00	0.00	783.09	7.49	0.00	775.51
567+50	56750.00	50.00	14.19	0.00	0.00	0.00	27.25	0.00	0.00	0.00	810.34	7.49	0.00	802.76
568+00	56800.00	50.00	13.50	0.00	0.00	0.00	25.64	0.00	0.00	0.00	835.98	7.49	0.00	828.39
568+50	56850.00	50.00	13.14	0.00	0.00	0.00	24.67	0.00	0.00	0.00	860.65	7.49	0.00	853.06
569+00	56900.00	50.00	16.37	0.00	0.00	0.00	27.32	0.00	0.00	0.00	887.97	7.49	0.00	880.39
569+50	56950.00	50.00	16.84	0.00	0.00	0.00	30.75	0.00	0.00	0.00	918.72	7.49	0.00	911.14
570+00	57000.00	50.00	14.76	0.00	0.00	0.00	29.26	0.00	0.00	0.00	947.98	7.49	0.00	940.39
570+50	57050.00	50.00	13.29	0.00	0.00	0.00	25.97	0.00	0.00	0.00	973.95	7.49	0.00	966.37
571+00	57100.00	50.00	10.67	0.00	0.06	0.00	22.19	0.00	0.06	0.00	996.14	7.56	0.00	988.49
571+50	57150.00	50.00	11.10	0.00	0.00	0.00	20.16	0.00	0.01	0.00	803.25	7.51	0.00	801.25
572+00	57200.00	50.00	9.81	0.00	0.00	0.00	19.36	0.00	0.01	0.00	829.70	7.13	0.00	827.87
572+50	57250.00	50.00	9.34	0.00	0.00	0.00	17.73	0.00	0.01	0.00	853.71	6.37	0.00	853.37
573+00	57300.00	50.00	10.17	0.00	0.00	0.00	18.06	0.00	0.01	0.00	878.71	5.24	0.00	878.55
573+50	57350.00	50.00	18.83	0.00	0.00	0.00	26.85	0.00	0.01	0.00	914.82	3.73	0.00	908.44
574+00	57400.00	50.00	30.01	0.00	0.00	0.00	36.43	0.00	0.01	0.00	924.40	2.70	0.00	912.32
574+04 BK	57403.86	3.86	29.76	0.00	0.00	0.00	2.57	0.00	0.00	0.00	832.27	6.45	0.00	831.13
						Column totals	1195.72	0.00	7.41	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 NSA

STATION		Real Station	Distance	AREA (SF) Cut	Salvaged/ Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.20	Expanded EBS Backfill 1.30 Note 4	Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
012+71	AH	1271.41	0.00	37.29	0.00	1.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
013+00		1300.00	28.59	50.53	0.00	1.06	0.00	46.50	0.00	1.18	0.00	46.50	1.41	0.00	0.00	45.09
013+50		1350.00	50.00	77.06	0.00	1.00	0.00	118.14	0.00	1.91	0.00	164.63	3.70	0.00	0.00	160.94
014+00		1400.00	50.00	92.94	0.00	0.89	0.00	157.41	0.00	1.75	0.00	322.04	5.80	0.00	0.00	316.24
014+50		1450.00	50.00	124.61	0.00	0.89	0.00	201.44	0.00	1.65	0.00	523.48	7.78	0.00	0.00	515.70
015+00		1500.00	50.00	142.42	0.00	0.47	0.00	247.25	0.00	1.26	0.00	770.73	9.29	0.00	0.00	761.44
015+50		1550.00	50.00	127.41	0.00	2.43	0.00	249.84	0.00	2.69	0.00	1020.57	12.51	0.00	0.00	1008.06
016+00		1600.00	50.00	107.68	0.00	6.89	0.00	217.68	0.00	8.63	0.00	1238.25	22.87	0.00	0.00	1215.38
016+50		1650.00	50.00	107.66	0.00	17.93	0.00	199.39	0.00	22.98	0.00	1437.63	50.44	0.00	0.00	1387.19
017+00		1700.00	50.00	110.93	0.00	31.06	0.00	202.40	0.00	45.36	0.00	1640.03	104.88	0.00	0.00	1535.16
017+50		1750.00	50.00	118.31	0.00	44.78	0.00	212.26	0.00	70.22	0.00	1852.29	189.14	0.00	0.00	1663.15
018+00		1800.00	50.00	122.64	0.00	56.53	0.00	223.10	0.00	93.81	0.00	2075.39	301.71	0.00	0.00	1773.68
018+50		1850.00	50.00	124.17	0.00	93.14	0.00	228.53	0.00	138.58	0.00	2303.92	468.01	0.00	0.00	1835.91
019+00		1900.00	50.00	85.95	0.00	118.51	0.00	194.56	0.00	195.97	0.00	2498.48	703.18	0.00	0.00	1795.30
019+50		1950.00	50.00	11.57	0.00	216.91	0.00	90.30	0.00	310.57	0.00	2588.77	1075.87	0.00	0.00	1512.91
020+00		2000.00	50.00	16.28	0.00	209.89	0.00	25.79	0.00	395.19	0.00	2614.56	1550.09	0.00	0.00	1064.47
020+50		2050.00	50.00	20.60	0.00	170.27	0.00	34.15	0.00	352.00	0.00	2648.71	1972.49	0.00	0.00	676.22
021+00		2100.00	50.00	19.28	0.00	168.14	0.00	36.93	0.00	313.34	0.00	2685.63	2348.50	0.00	0.00	337.14
021+50		2150.00	50.00	13.32	0.00	186.83	0.00	30.19	0.00	328.68	0.00	2715.82	2742.91	0.00	0.00	-27.09
022+00		2200.00	50.00	4.59	0.00	205.70	0.00	16.58	0.00	363.45	0.00	2732.40	3179.05	0.00	0.00	-446.65
022+50		2250.00	50.00	0.00	0.00	238.52	0.00	4.25	0.00	411.31	0.00	2736.65	3672.63	0.00	0.00	-935.98
023+00		2300.00	50.00	0.00	0.00	276.86	0.00	0.00	0.00	477.20	0.00	2736.65	4245.28	0.00	0.00	-1508.62
023+50		2350.00	50.00	0.00	0.00	391.51	0.00	0.00	0.00	618.86	0.00	2736.65	4987.91	0.00	0.00	-2251.26
024+00		2400.00	50.00	0.00	0.00	272.14	0.00	0.00	0.00	614.49	0.00	2736.65	5725.30	0.00	0.00	-2988.65
024+18		2418.14	18.14	0.00	0.00	433.84	0.00	0.00	0.00	237.16	0.00	2736.65	6009.89	0.00	0.00	-3273.23
024+40		2440.00	21.86	570.86	0.00	273.95	1122.16	231.09	0.00	286.52	454.27	2967.75	5917.62	590.55	363.41	-2949.87
024+50		2450.00	10.00	176.94	0.00	365.56	1500.40	138.48	0.00	118.43	485.66	2875.13	5685.77	631.36	388.53	-2487.27
025+00		2500.00	50.00	285.82	0.00	271.68	1311.93	428.48	0.00	590.04	2604.01	3303.62	3893.96	4016.57	2471.73	-266.99
025+50		2550.00	50.00	307.36	0.00	178.78	1249.02	549.24	0.00	417.09	2371.25	3852.86	2118.07	7099.19	4368.73	2058.14
026+00		2600.00	50.00	491.57	0.00	130.81	1446.73	739.75	0.00	286.66	2496.06	4592.61	65.84	10344.08	6365.59	4850.13
026+50		2650.00	50.00	502.78	0.00	105.65	1596.20	920.69	0.00	218.94	2817.53	5513.30	-2376.25	14006.86	8619.61	8212.91
027+00		2700.00	50.00	428.03	0.00	86.54	1674.94	861.86	0.00	177.95	3028.83	6375.16	-5070.39	17944.35	11042.68	11768.91
027+26		2726.41	26.41	276.62	0.00	90.28	1386.62	344.63	0.00	86.48	1497.33	6719.79	-6404.05	19890.88	12240.54	13447.20
027+38		2737.99	11.58	144.76	0.00	78.62	1119.90	90.36	0.00	36.22	537.51	6810.15	-6876.60	20589.64	12670.55	14010.11
027+50	BK	2750.00	12.01	7.43	0.00	2.02	612.63	33.85	0.00	17.93	385.33	6409.01	-5418.78	18445.27	11350.94	14392.35

(CONTINUED ON NEXT SHEET)

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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(CONT)

DIVISION 2 RAMP 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 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	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
029+00	AH	2900.00	0.00	114.39	0.00	0.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
029+38		2937.50	37.50	349.99	0.00	0.00	0.00	322.49	0.00	0.40	0.00	322.49	0.48	0.00	0.00	322.00
029+50		2950.00	12.50	334.92	0.00	0.00	0.00	158.54	0.00	0.00	0.00	481.03	0.48	0.00	0.00	480.55
030+00		3000.00	50.00	272.80	0.00	0.00	0.00	562.70	0.00	0.00	0.00	1043.73	0.48	0.00	0.00	1043.25
030+50		3050.00	50.00	244.52	0.00	0.47	0.00	479.00	0.00	0.44	0.00	1522.73	1.01	0.00	0.00	1521.73
031+00		3100.00	50.00	327.66	0.00	0.00	0.00	529.80	0.00	0.44	0.00	2052.53	1.53	0.00	0.00	2051.00
031+50		3150.00	50.00	308.40	0.00	0.00	0.00	588.94	0.00	0.00	0.00	2641.47	1.53	0.00	0.00	2639.95
032+00		3200.00	50.00	345.41	0.00	0.00	0.00	605.38	0.00	0.00	0.00	3246.85	1.53	0.00	0.00	3245.33
032+50		3250.00	50.00	348.36	0.00	0.00	0.00	642.38	0.00	0.00	0.00	3889.23	1.53	0.00	0.00	3887.71
033+00		3300.00	50.00	0.00	0.00	874.31	0.00	322.56	0.00	809.55	0.00	4211.79	972.98	0.00	0.00	3238.81
033+31	BK	3330.97	30.97	0.00	0.00	2261.16	0.00	0.00	0.00	1798.25	0.00	4211.79	3130.88	0.00	0.00	1080.91
033+61	AH	3360.97	0.00	0.00	0.00	2263.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
034+00		3400.00	39.03	0.00	0.00	361.87	0.00	0.00	0.00	1897.60	0.00	0.00	2277.11	0.00	0.00	-2277.11
034+50		3450.00	50.00	178.74	0.00	0.00	0.00	165.50	0.00	335.06	0.00	165.50	2679.19	0.00	0.00	-2513.69
035+00		3500.00	50.00	119.26	0.00	0.00	0.00	275.93	0.00	0.00	0.00	441.43	2679.19	0.00	0.00	-2237.77
035+50		3550.00	50.00	69.54	0.00	2.28	0.00	174.81	0.00	2.11	0.00	616.24	2681.73	0.00	0.00	-2065.48
036+00		3600.00	50.00	47.95	0.00	4.79	0.00	108.79	0.00	6.55	0.00	725.03	2689.58	0.00	0.00	-1964.55
036+50		3650.00	50.00	38.03	0.00	0.04	0.00	79.61	0.00	4.47	0.00	804.64	2694.95	0.00	0.00	-1890.31
037+00		3700.00	50.00	16.22	0.00	0.26	0.00	50.23	0.00	0.28	0.00	854.87	2695.28	0.00	0.00	-1840.41
037+50		3750.00	50.00	10.16	0.00	0.05	0.00	24.43	0.00	0.29	0.00	879.30	2695.63	0.00	0.00	-1816.33
037+84	BK	3783.94	33.94	6.06	0.00	0.07	0.00	10.19	0.00	0.08	0.00	889.49	2695.72	0.00	0.00	-1806.23
							Column totals	12176.37	0.00	12100.01	16677.78					

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 1.20	Cumulative Vol (CY) Reduced EBS In Fill 0.80 Note 5	Mass Ordinate Note 6
263+50	AH	26350.00	0.00	144.37	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
264+00		26400.00	50.00	10.82	0.00	269.16	0.00	143.69	0.00	249.23	0.00	143.69	299.08	0.00	-155.38
264+50		26450.00	50.00	13.26	0.00	18.33	0.00	22.30	0.00	266.19	0.00	165.99	618.51	0.00	-452.52
265+00		26500.00	50.00	17.02	0.00	18.29	0.00	28.04	0.00	33.91	0.00	194.03	659.20	0.00	-465.17
265+50		26550.00	50.00	71.33	0.00	151.77	0.00	81.81	0.00	157.46	0.00	275.83	848.16	0.00	-572.32
266+00		26600.00	50.00	191.15	0.00	9.06	0.00	243.04	0.00	148.92	0.00	518.87	1026.86	0.00	-507.99
266+50		26650.00	50.00	113.07	0.00	12.96	0.00	281.69	0.00	20.39	0.00	800.56	1051.32	0.00	-250.77
267+00		26700.00	50.00	56.78	0.00	26.55	0.00	157.27	0.00	36.58	0.00	957.82	1095.22	0.00	-137.40
267+50		26750.00	50.00	40.68	0.00	23.52	0.00	90.24	0.00	46.36	0.00	1048.06	1150.86	0.00	-102.79
268+00		26800.00	50.00	36.54	0.00	16.47	0.00	71.50	0.00	37.03	0.00	1119.56	1195.29	0.00	-75.72
268+50		26850.00	50.00	22.61	0.00	32.63	0.00	54.77	0.00	45.46	0.00	1174.33	1249.84	0.00	-75.51
269+00		26900.00	50.00	29.37	0.00	29.20	0.00	48.13	0.00	57.25	0.00	1222.46	1318.54	0.00	-96.08
269+50		26950.00	50.00	32.04	0.00	25.66	0.00	56.86	0.00	50.80	0.00	1279.32	1379.50	0.00	-100.18
270+00		27000.00	50.00	36.52	0.00	23.28	0.00	63.48	0.00	45.31	0.00	1342.81	1433.88	0.00	-91.07
270+50		27050.00	50.00	40.98	0.00	30.90	0.00	71.76	0.00	50.17	0.00	1414.56	1494.08	0.00	-79.51
271+00		27100.00	50.00	49.05	0.00	19.28	0.00	83.36	0.00	46.46	0.00	1497.93	1549.83	0.00	-51.91
271+50		27150.00	50.00	68.41	0.00	19.06	0.00	108.76	0.00	35.50	0.00	1606.69	1592.43	0.00	14.25
272+00		27200.00	50.00	100.99	0.00	16.19	0.00	156.85	0.00	32.64	0.00	1763.54	1631.60	0.00	131.94
272+50		27250.00	50.00	99.91	0.00	19.63	0.00	186.02	0.00	33.17	0.00	1949.56	1671.40	0.00	278.16
273+00		27300.00	50.00	119.80	0.00	16.68	0.00	203.44	0.00	33.62	0.00	2152.99	1711.74	0.00	441.25
273+32		27332.09	32.09	147.75	0.00	12.89	0.00	158.99	0.00	17.57	0.00	2311.98	1731.62	0.00	580.37
273+37	BK	27336.54	36.54	0.00	0.00	0.00	0.00	120.69	0.00	13.34	0.00	2273.69	1726.83	0.00	546.85
							Column totals	2432.68	0.00	1457.37	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 KEARNEY 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 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	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
104+94 AH	10494.15	0.00	5.08	0.00	561.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
105+00	10500.00	5.85	5.17	0.00	552.74	0.00	1.11	0.00	120.66	0.00	1.11	144.80	0.00	0.00	-143.69
105+50	10550.00	50.00	6.05	0.00	516.15	0.00	10.39	0.00	989.71	0.00	11.50	1332.45	0.00	0.00	-1320.95
106+00	10600.00	50.00	8.10	0.00	429.05	0.00	13.10	0.00	875.19	0.00	24.60	2382.68	0.00	0.00	-2358.07
106+50	10650.00	50.00	12.32	0.00	365.51	0.00	18.91	0.00	735.70	0.00	43.51	3265.52	0.00	0.00	-3222.01
107+00	10700.00	50.00	41.56	0.00	56.66	0.00	49.89	0.00	390.90	0.00	93.40	3734.60	0.00	0.00	-3641.20
107+26	10725.68	25.68	43.44	0.00	69.76	0.00	40.42	0.00	60.12	0.00	133.82	3806.74	0.00	0.00	-3672.92
107+50	10750.00	24.32	20.29	0.00	226.79	0.00	28.70	0.00	133.56	0.00	162.52	3967.01	0.00	0.00	-3804.49
108+00	10800.00	50.00	16.66	0.00	522.05	0.00	34.21	0.00	693.37	0.00	196.73	4799.05	0.00	0.00	-4602.32
108+50	10850.00	50.00	28.61	0.00	584.59	0.00	41.92	0.00	1024.67	0.00	238.65	6028.65	0.00	0.00	-5790.00
109+00	10900.00	50.00	42.38	0.00	540.26	0.00	65.73	0.00	1041.53	0.00	304.38	7278.49	0.00	0.00	-6974.11
109+50	10950.00	50.00	57.86	0.00	509.40	0.00	92.81	0.00	971.91	0.00	397.20	8444.78	0.00	0.00	-8047.58
110+00	11000.00	50.00	81.48	0.00	483.89	0.00	129.02	0.00	919.71	0.00	526.22	9548.43	0.00	0.00	-9022.22
110+50	11050.00	50.00	151.58	0.00	482.26	0.00	215.80	0.00	894.58	0.00	742.01	10621.93	0.00	0.00	-9879.92
111+00	11100.00	50.00	71.93	0.00	490.60	0.00	206.95	0.00	900.80	0.00	948.97	11702.89	0.00	0.00	-10753.92
111+50	11150.00	50.00	50.10	0.00	488.70	0.00	112.99	0.00	906.76	0.00	1061.96	12791.00	0.00	0.00	-11729.04
112+00	11200.00	50.00	68.12	0.00	170.63	0.00	109.46	0.00	610.49	0.00	1171.42	13523.59	0.00	0.00	-12352.17
112+50	11250.00	50.00	85.50	0.00	1.82	0.00	142.24	0.00	159.68	0.00	1313.66	13715.20	0.00	0.00	-12401.54
113+00	11300.00	50.00	64.48	0.00	12.68	0.00	138.87	0.00	13.43	0.00	1452.53	13731.31	0.00	0.00	-12278.78
113+50	11350.00	50.00	87.08	0.00	9.31	0.00	140.33	0.00	20.36	0.00	1592.86	13755.74	0.00	0.00	-12162.88
114+00	11400.00	50.00	89.42	0.00	1.81	0.00	163.43	0.00	10.30	0.00	1756.29	13768.10	0.00	0.00	-12011.81
114+50	11450.00	50.00	87.22	0.00	0.31	0.00	163.56	0.00	1.96	0.00	1919.85	13770.45	0.00	0.00	-11850.61
115+00	11500.00	50.00	155.63	0.00	0.01	0.00	224.86	0.00	0.30	0.00	2144.71	13770.81	0.00	0.00	-11626.10
115+50	11550.00	50.00	88.81	0.00	2.51	0.00	226.33	0.00	2.33	0.00	2371.04	13773.61	0.00	0.00	-11402.57
116+00	11600.00	50.00	89.85	0.00	1.46	0.00	165.43	0.00	3.68	0.00	2536.47	13778.02	0.00	0.00	-11241.56
116+50	11650.00	50.00	99.45	0.00	0.39	0.00	175.28	0.00	1.71	0.00	2711.74	13780.08	0.00	0.00	-11068.33
117+00	11700.00	50.00	83.47	0.00	5.76	0.00	169.37	0.00	5.69	0.00	2881.11	13786.91	0.00	0.00	-10905.80
117+50	11750.00	50.00	94.50	0.00	4.34	0.00	164.79	0.00	9.35	0.00	3045.90	13798.13	0.00	0.00	-10752.23
118+00	11800.00	50.00	125.00	0.00	2.16	0.00	203.24	0.00	6.02	0.00	3249.14	13805.35	0.00	0.00	-10556.21
118+50	11850.00	50.00	113.18	0.00	2.80	0.00	220.54	0.00	4.59	0.00	3469.68	13810.87	0.00	0.00	-10341.19
118+67	11867.05	17.05	98.78	0.00	3.40	0.00	66.92	0.00	1.96	0.00	3536.60	13813.22	0.00	0.00	-10276.61
119+00	11900.00	32.95	75.37	0.00	3.06	0.00	106.26	0.00	3.94	0.00	3642.87	13817.95	0.00	0.00	-10175.08
119+50	11950.00	50.00	69.38	0.00	3.13	0.00	134.03	0.00	5.73	0.00	3776.90	13824.82	0.00	0.00	-10047.93
120+00	12000.00	50.00	67.27	0.00	3.20	0.00	126.53	0.00	5.86	0.00	3903.42	13831.86	0.00	0.00	-9928.43
120+50	12050.00	50.00	59.81	0.00	2.47	0.00	117.67	0.00	5.25	0.00	4021.09	13838.16	0.00	0.00	-9817.07
121+00	12100.00	50.00	63.69	0.00	0.94	0.00	114.35	0.00	3.16	0.00	4135.44	13841.95	0.00	0.00	-9706.50
121+50	12150.00	50.00	78.72	0.00	0.13	0.00	131.86	0.00	0.99	0.00	4267.30	13843.13	0.00	0.00	-9575.83
122+00	12200.00	50.00	113.92	0.00	0.00	0.00	178.37	0.00	0.12	0.00	4445.67	13843.28	0.00	0.00	-9397.61
122+50	12250.00	50.00	103.91	0.00	0.00	0.00	201.69	0.00	0.00	0.00	4647.37	13843.28	0.00	0.00	-9195.91
123+00	12300.00	50.00	94.88	0.00	0.00	0.00	184.06	0.00	0.00	0.00	4831.43	13843.28	0.00	0.00	-9011.85
123+50	12350.00	50.00	49.34	0.00	0.29	0.00	133.54	0.00	0.27	0.00	4964.97	13843.60	0.00	0.00	-8878.63

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)]

(CONTINUED ON NEXT SHEET

(CONTINUED)

DIVISION 3 KEARNEY 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 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	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
124+00		12400.00	50.00	49.15	0.00	0.00	0.00	91.19	0.00	0.27	0.00	5056.16	13843.92	0.00	0.00	-8787.76
124+50		12450.00	50.00	46.31	0.00	0.37	0.00	88.39	0.00	0.34	0.00	5144.55	13844.33	0.00	0.00	-8699.78
125+00		12500.00	50.00	44.64	0.00	0.11	0.00	84.21	0.00	0.44	0.00	5228.77	13844.87	0.00	0.00	-8616.10
125+50		12550.00	50.00	37.40	0.00	13.62	0.00	75.96	0.00	12.71	0.00	5304.73	13860.12	0.00	0.00	-8555.39
126+00		12600.00	50.00	41.56	0.00	10.51	0.00	73.11	0.00	22.34	0.00	5377.84	13886.93	0.00	0.00	-8509.09
126+50		12650.00	50.00	34.19	0.00	5.02	0.00	70.14	0.00	14.38	0.00	5447.98	13904.19	0.00	0.00	-8456.21
126+64	BK	12663.50	13.50	25.32	0.00	1.40	0.00	14.88	0.00	1.61	0.00	5462.86	13906.12	0.00	0.00	-8443.26
127+38	AH	12738.09	0.00	61.65	0.00	11.86	0.00	0.00	0.00	0.00	0.00	5462.86	13906.12	0.00	0.00	0.00
127+50		12750.00	11.91	83.68	0.00	1.32	0.00	32.05	0.00	2.91	0.00	5494.91	13909.60	0.00	0.00	28.57
128+00		12800.00	50.00	68.72	0.00	0.00	0.00	141.11	0.00	1.22	0.00	5636.02	13911.07	0.00	0.00	168.21
128+50		12850.00	50.00	78.18	0.00	0.00	0.00	136.02	0.00	0.00	0.00	5772.04	13911.07	0.00	0.00	304.23
128+75		12875.00	25.00	66.95	0.00	0.00	0.00	67.19	0.00	0.00	0.00	5839.23	13911.07	0.00	0.00	371.42
129+00		12900.00	25.00	64.58	0.00	0.49	0.00	60.89	0.00	0.23	0.00	5900.12	13911.34	0.00	0.00	432.04
129+50		12950.00	50.00	8.45	0.00	5.94	0.00	67.62	0.00	5.95	0.00	5967.74	13918.49	0.00	0.00	492.52
130+00		13000.00	50.00	8.12	0.00	7.82	0.00	15.34	0.00	12.74	0.00	5983.09	13933.78	0.00	0.00	492.57
130+50		13050.00	50.00	11.65	0.00	0.00	0.00	18.31	0.00	7.24	0.00	6001.39	13942.47	0.00	0.00	502.19
131+00		13100.00	50.00	10.69	0.00	0.93	0.00	20.69	0.00	0.86	0.00	6022.08	13943.50	0.00	0.00	521.84
131+50		13150.00	50.00	9.82	0.00	0.90	0.00	18.99	0.00	1.69	0.00	6041.07	13945.53	0.00	0.00	538.79
132+00		13200.00	50.00	10.44	0.00	0.99	0.00	18.76	0.00	1.75	0.00	6059.83	13947.63	0.00	0.00	555.45
132+50		13250.00	50.00	10.57	0.00	0.68	0.00	19.45	0.00	1.55	0.00	6079.28	13949.49	0.00	0.00	573.05
133+00		13300.00	50.00	9.92	0.00	0.97	0.00	18.97	0.00	1.53	0.00	6098.25	13951.32	0.00	0.00	590.19
133+50		13350.00	50.00	10.70	0.00	0.09	0.00	19.09	0.00	0.98	0.00	6117.34	13952.50	0.00	0.00	608.11
134+00		13400.00	50.00	11.23	0.00	0.01	0.00	20.31	0.00	0.09	0.00	6137.65	13952.61	0.00	0.00	628.30
134+50		13450.00	50.00	13.05	0.00	0.00	0.00	22.48	0.00	0.01	0.00	6160.13	13952.62	0.00	0.00	650.77
135+00		13500.00	50.00	11.71	0.00	0.00	0.00	22.93	0.00	0.00	0.00	6183.06	13952.62	0.00	0.00	673.70
135+50		13550.00	50.00	11.51	0.00	0.00	0.00	21.50	0.00	0.00	0.00	6204.56	13952.62	0.00	0.00	695.20
136+00		13600.00	50.00	12.67	0.00	0.00	0.00	22.39	0.00	0.00	0.00	6226.95	13950.73	0.00	0.00	719.47
136+50	BK	13650.00	50.00	10.26	0.00	0.00	0.00	21.23	0.00	562.89	0.00	6248.18	14620.53	0.00	0.00	70.90
						Column totals		6248.18	0.00	12190.07	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

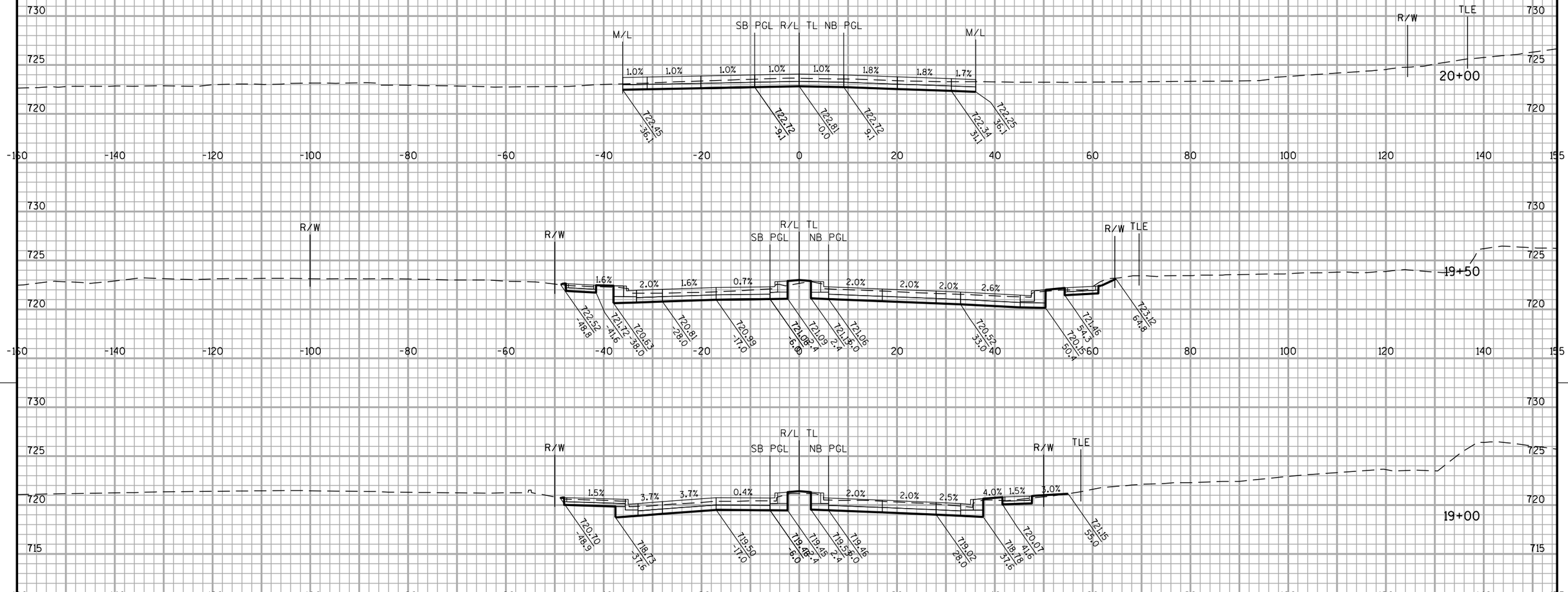
DIVISION 4 76TH ST

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 1.00 Note 1	Cumulative Vol (CY) Expanded Fill 1.20	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
018+70 AH	1870.00	0.00	103.54	0.00	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
019+00	1900.00	30.00	85.41	0.00	3.89	0.00	104.97	0.00	2.41	0.00	104.97	2.89	0.00	0.00	102.09
019+50	1950.00	50.00	89.14	0.00	4.11	0.00	161.62	0.00	7.41	0.00	266.59	11.78	0.00	0.00	254.82
020+00	2000.00	50.00	57.87	0.00	0.00	0.00	136.12	0.00	3.81	0.00	402.71	16.34	0.00	0.00	386.37
020+50	2050.00	50.00	46.10	0.00	47.62	0.00	96.27	0.00	44.09	0.00	498.98	69.25	0.00	0.00	429.73
020+84 BK	2083.93	33.93	0.00	0.00	894.94	0.00	28.97	0.00	592.24	0.00	527.95	779.94	0.00	0.00	-252.00
023+26 AH	2326.06	0.00	118.35	0.00	0.16	0.00	0.00	0.00	0.00	0.00	527.95	779.94	0.00	0.00	0.00
023+50	2350.00	23.94	72.20	0.00	0.00	0.00	84.48	0.00	0.07	0.00	612.42	780.03	0.00	0.00	84.39
023+55 BK	2354.79	4.79	56.58	0.00	0.00	0.00	11.42	0.00	0.00	0.00	623.85	780.03	0.00	0.00	95.82
						Column totals	623.85	0.00	738.51	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)]

9

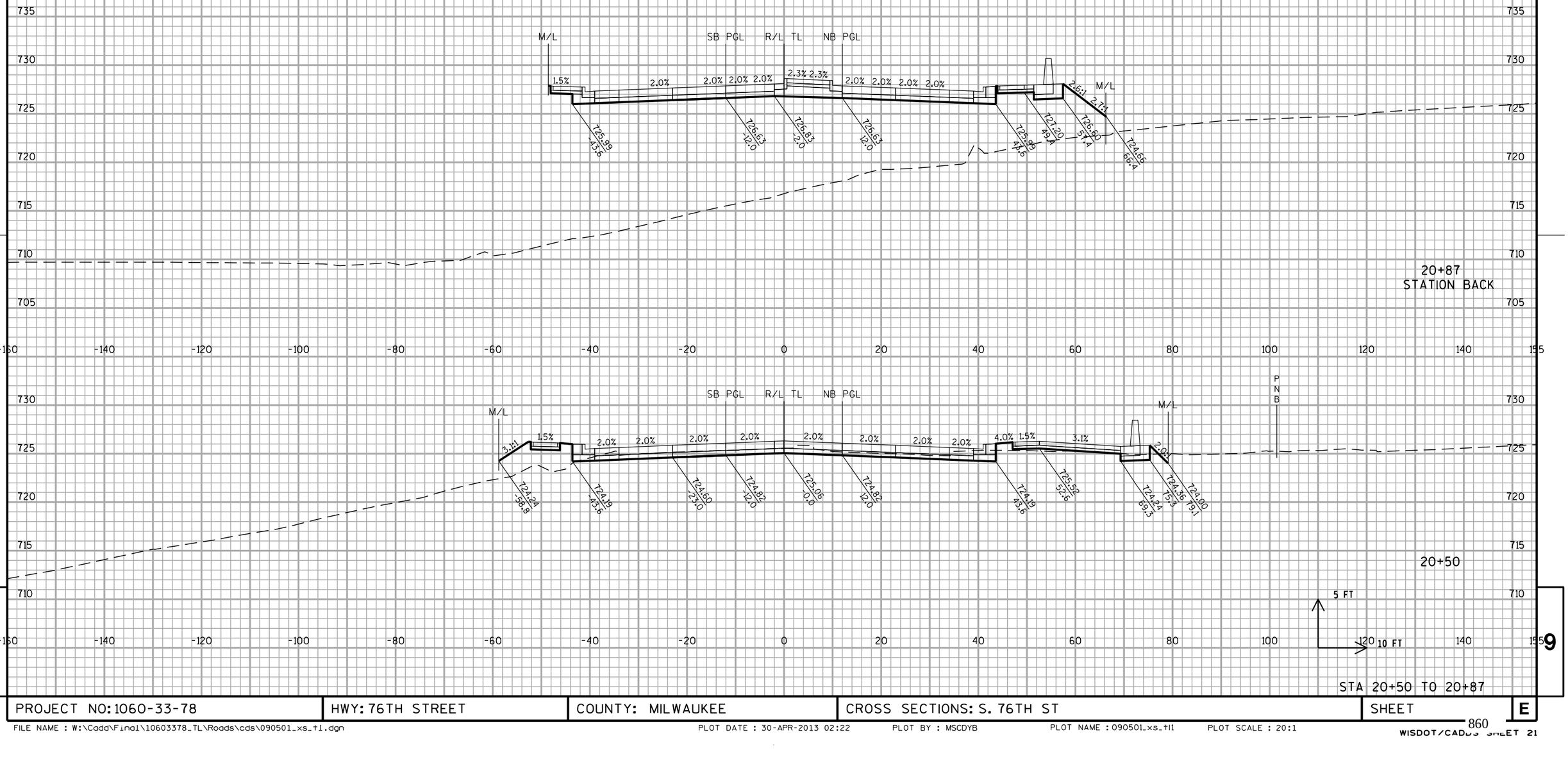
ALL WORK IN STAGE 3



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 76TH ST	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090501_xs_tl.dgn PLOT DATE : 30-APR-2013 02:22 PLOT BY : MSCDYB PLOT NAME : 090501_xs_tl PLOT SCALE : 20:1

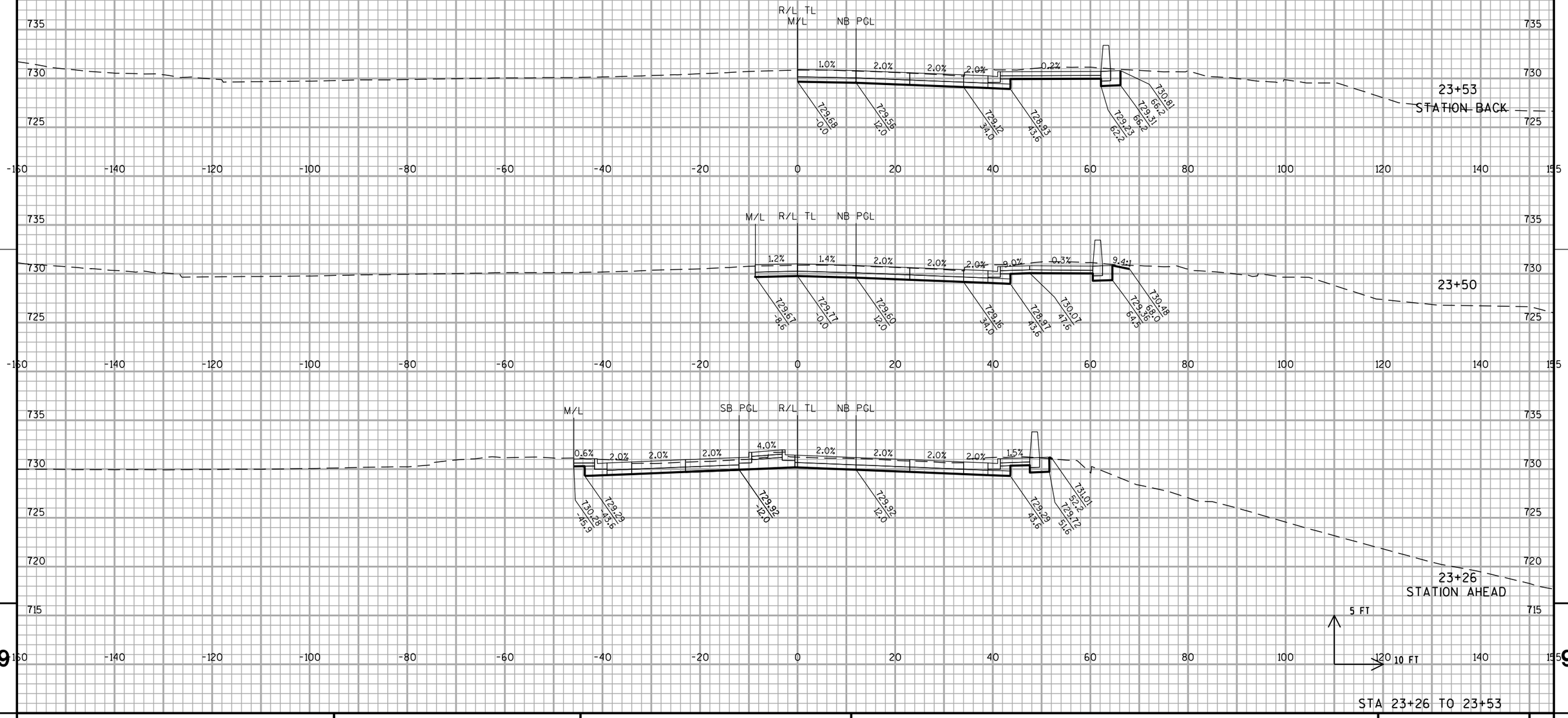
ALL WORK IN STAGE 3



STA 20+50 TO 20+87

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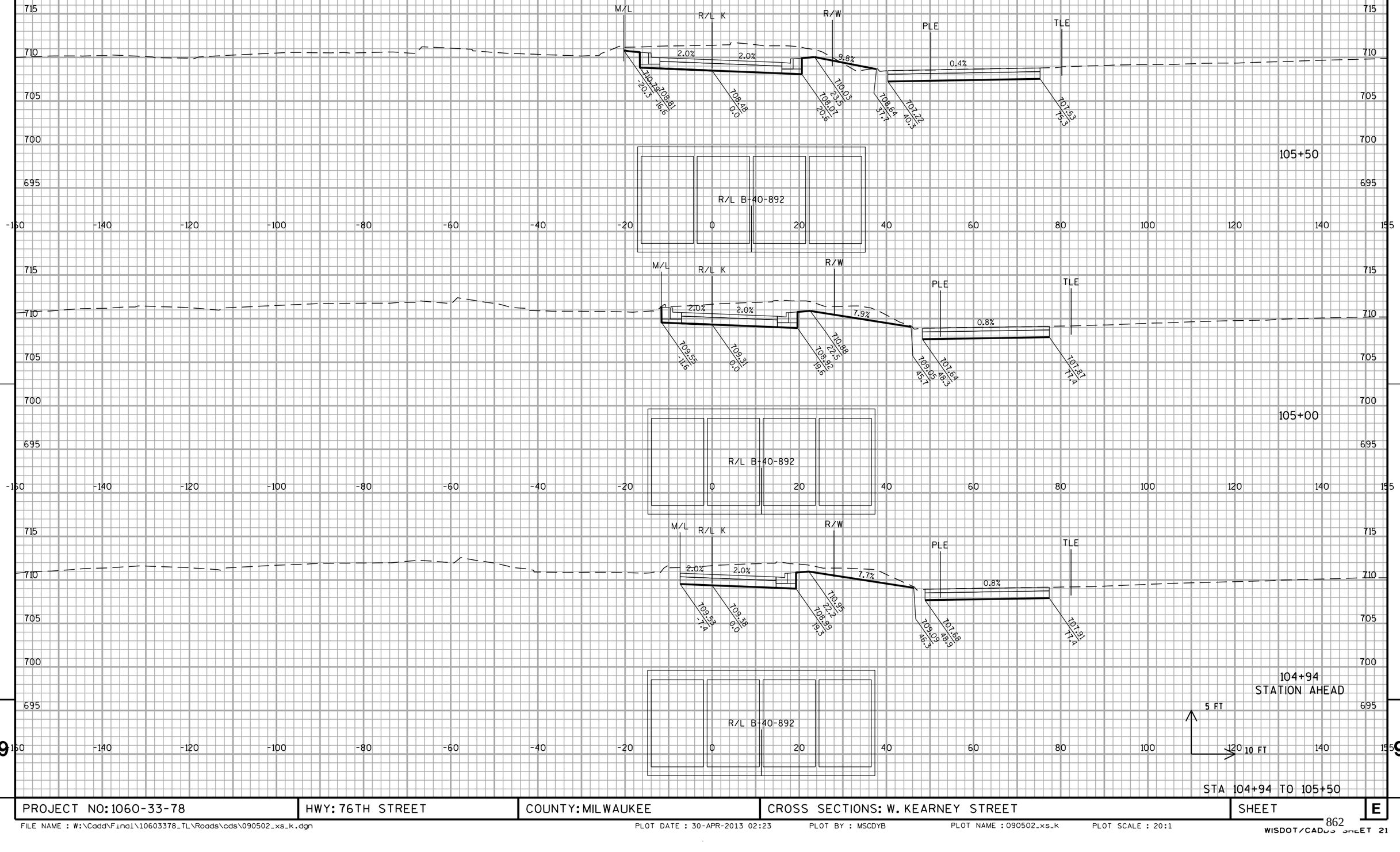
ALL WORK IN STAGE 3 AND 4



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 76TH ST	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090501_xs_tl.dgn PLOT DATE : 30-APR-2013 02:22 PLOT BY : MSCDYB PLOT NAME : 090501_xs_tl2 PLOT SCALE : 20:1

ALL WORK DONE STAGE 1



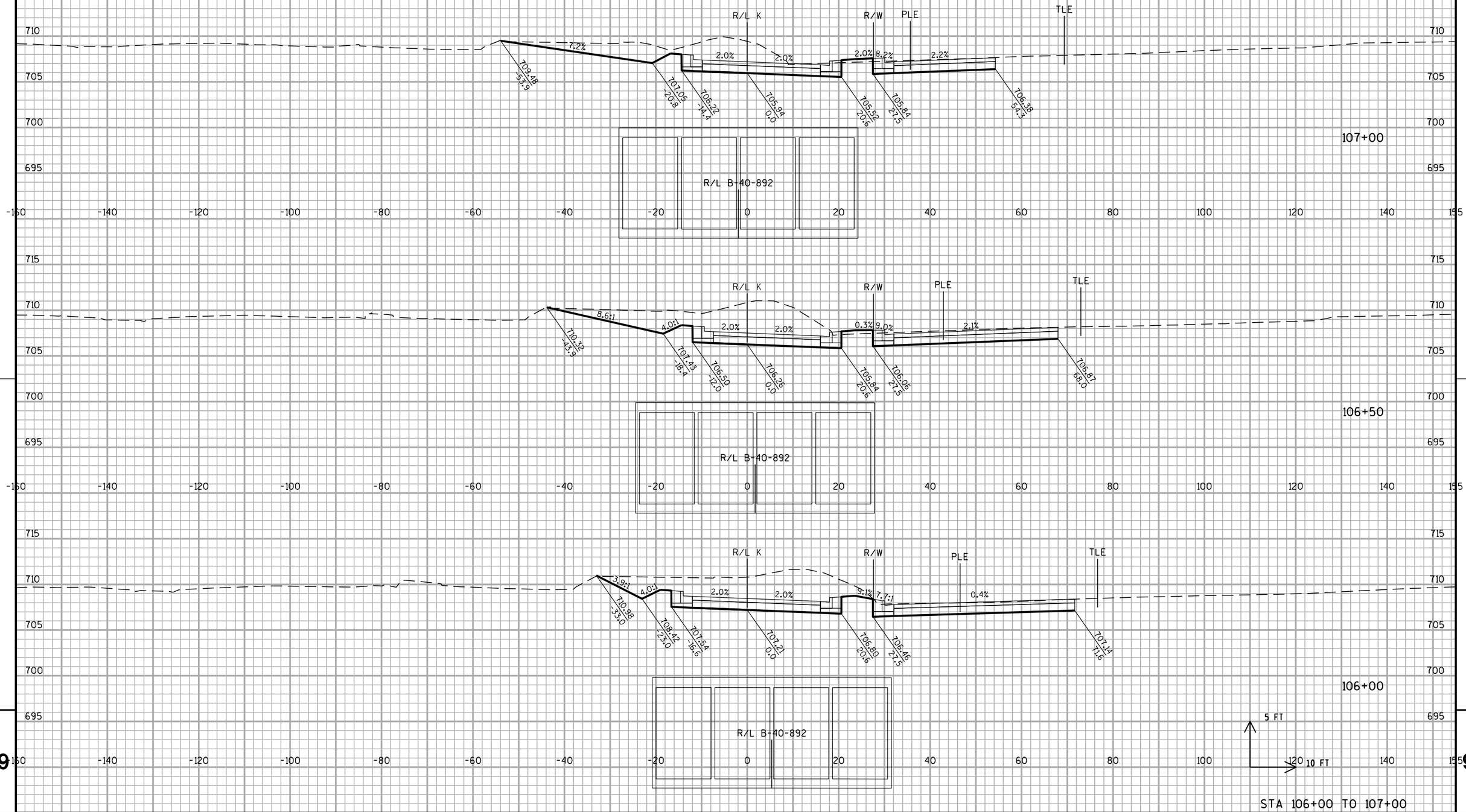
STA 104+94 TO 105+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:23 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k PLOT SCALE : 20:1

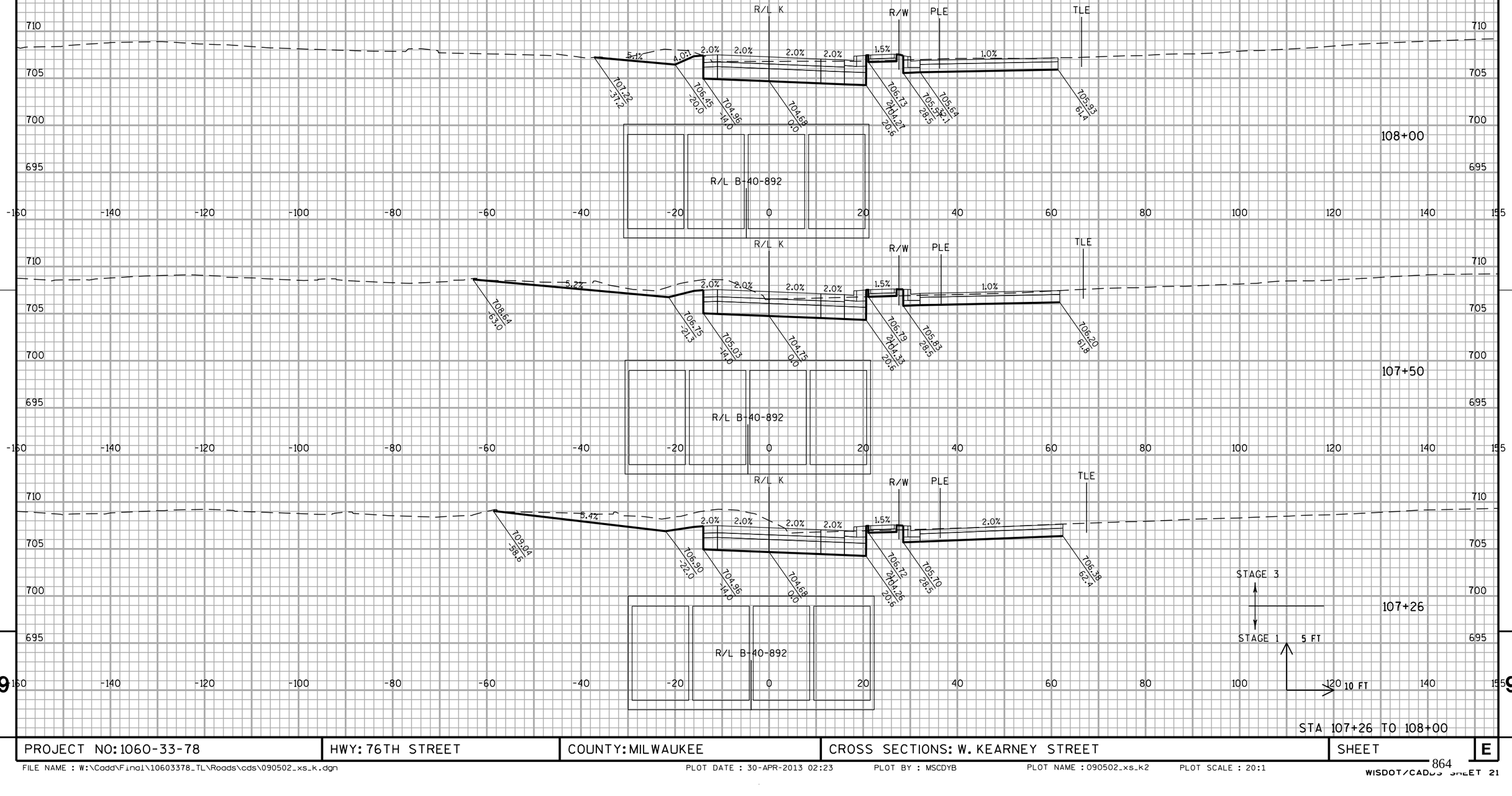
WISDOT/CADDS SHEET 21

ALL WORK DONE STAGE 1



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

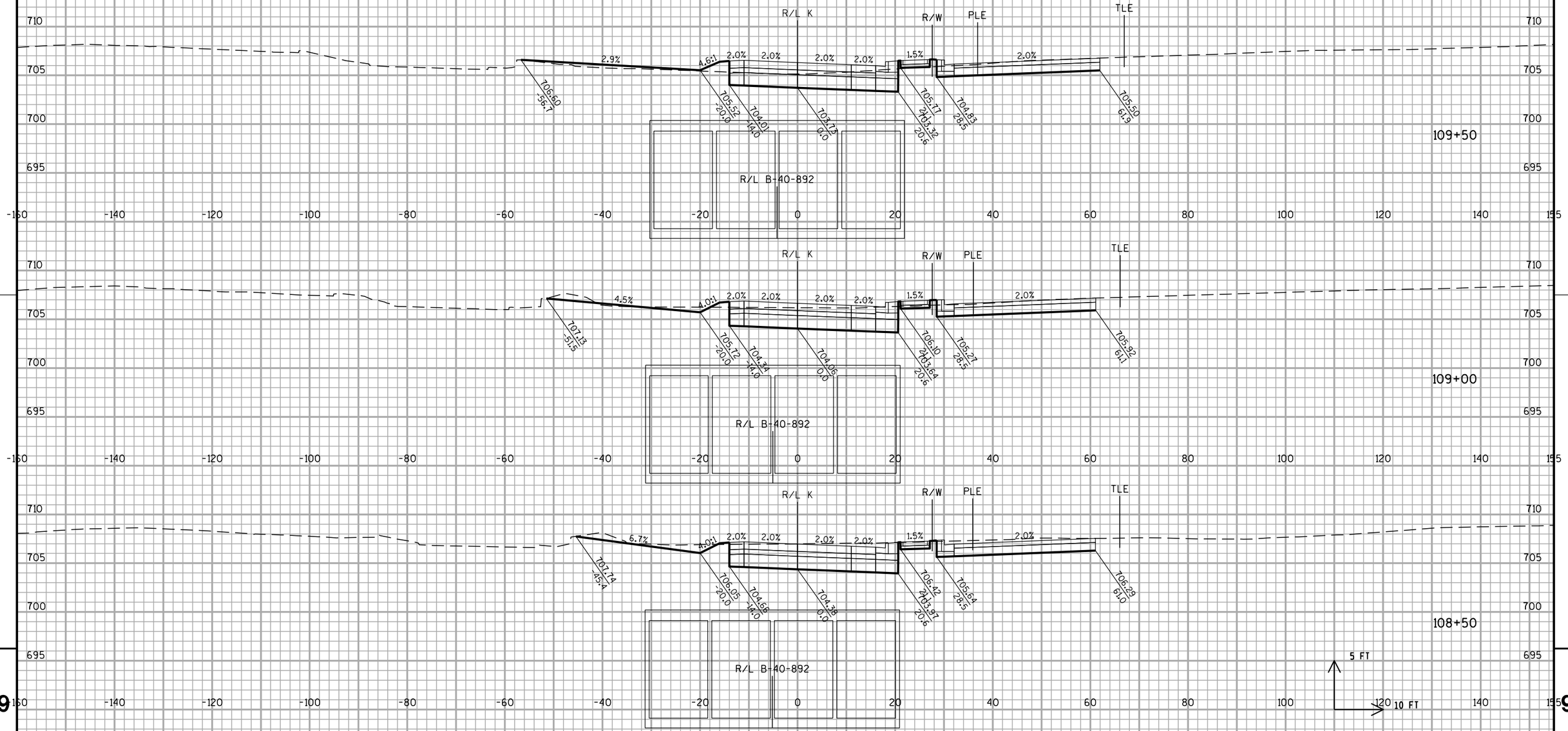
ALL WORK DONE STAGE 3



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:23 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k2 PLOT SCALE : 20:1

ALL WORK DONE STAGE 3



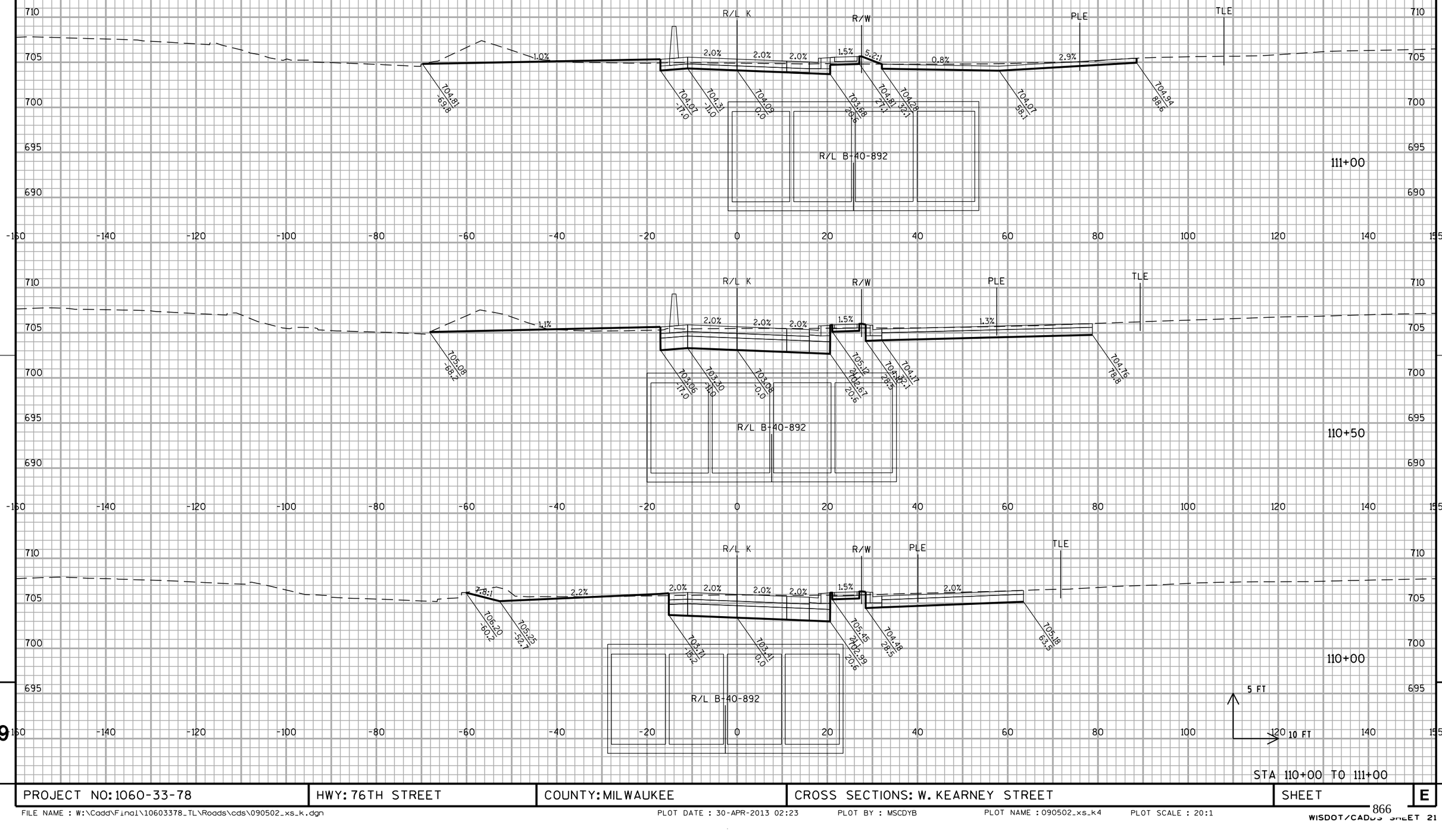
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

STA 108+50 TO 109+50

9

ALL WORK DONE STAGE 3



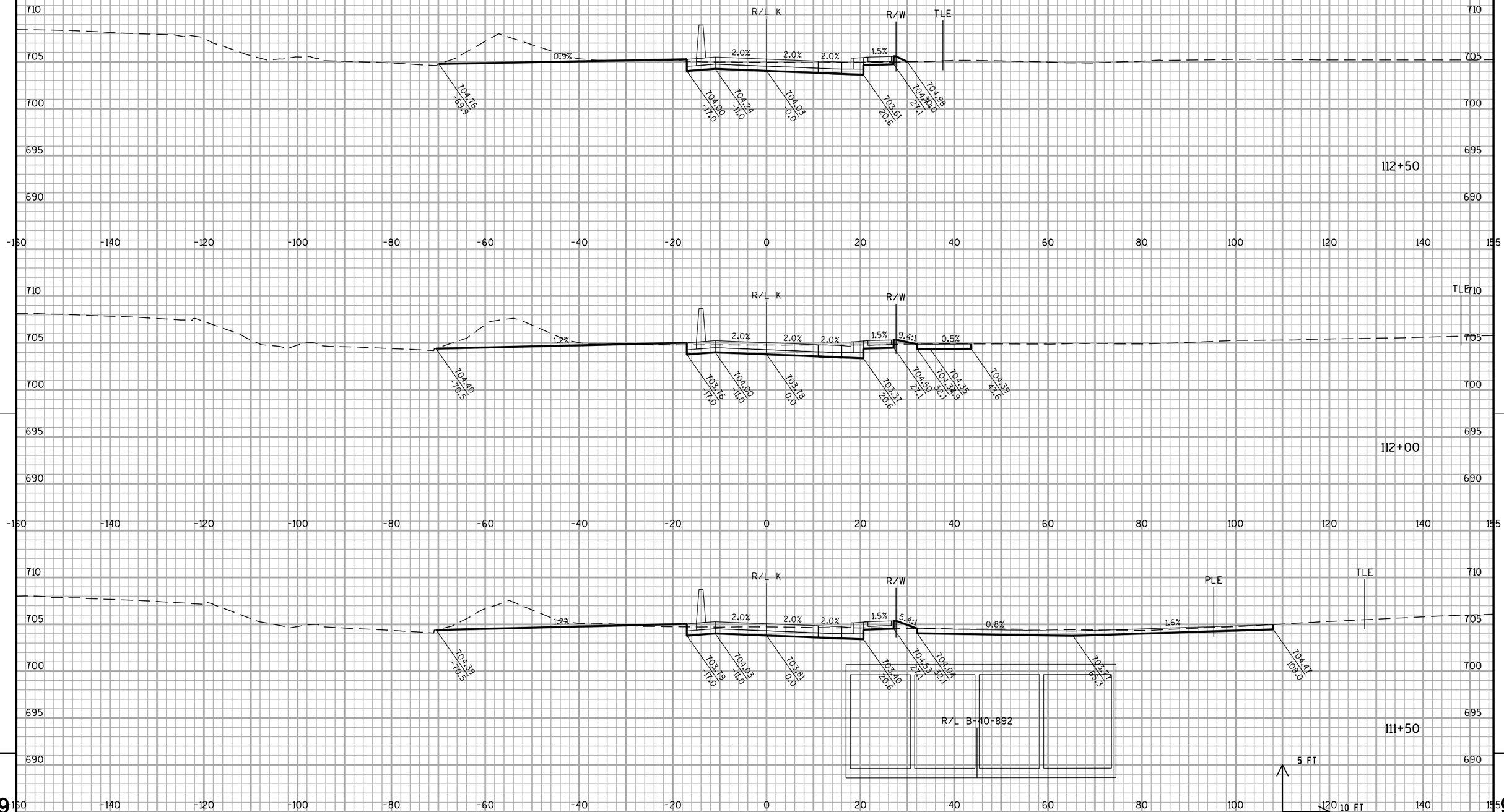
STA 110+00 TO 111+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:23 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k4 PLOT SCALE : 20:1

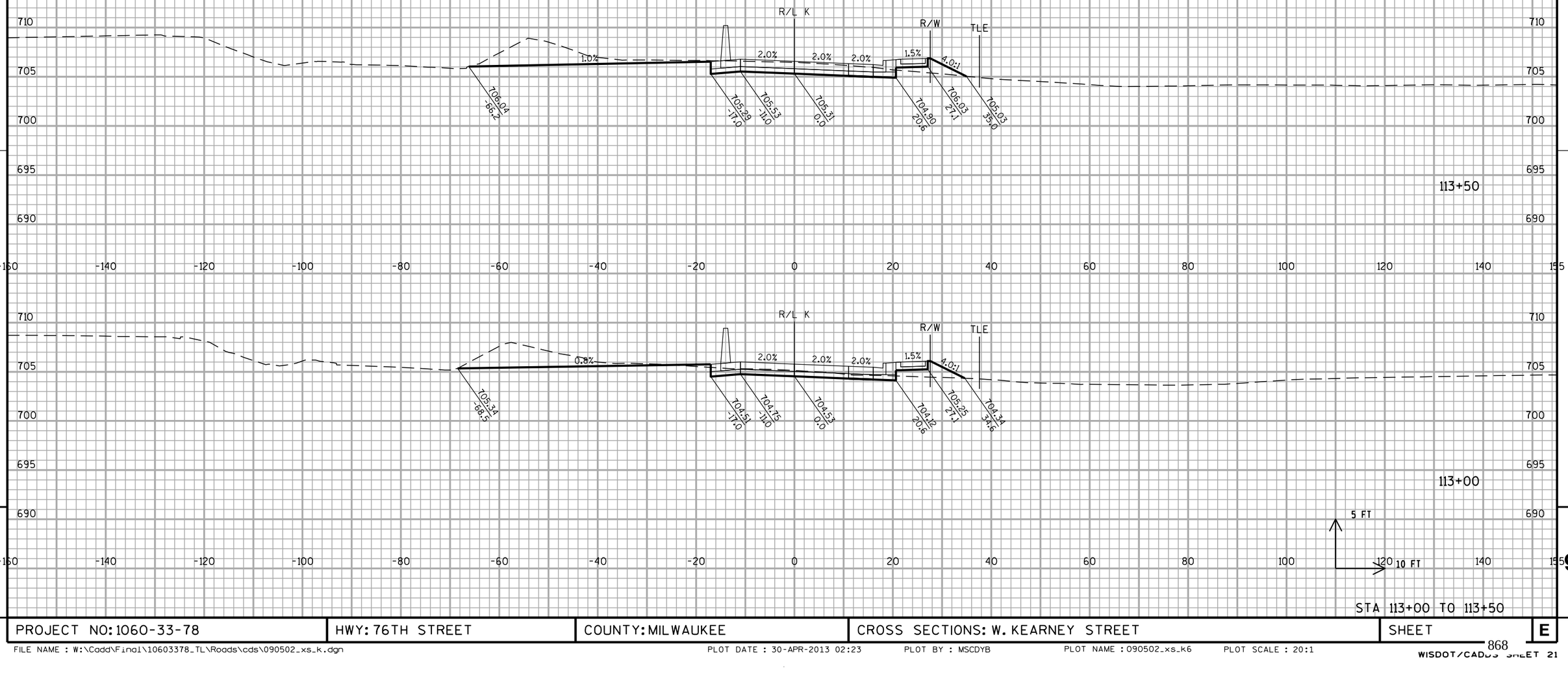
ALL WORK DONE STAGE 3



STA 111+50 TO 112+50

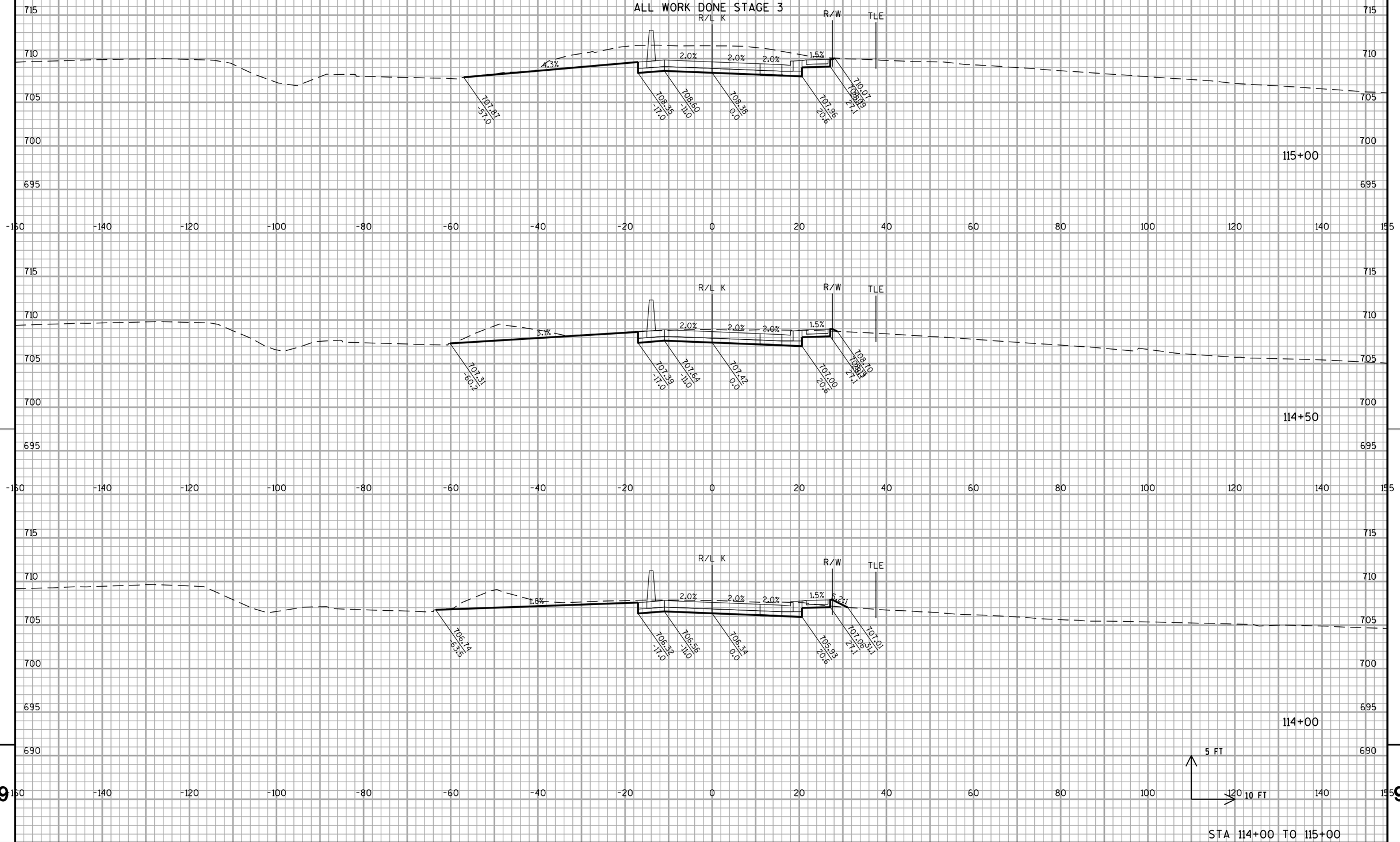
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

ALL WORK DONE STAGE 3



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

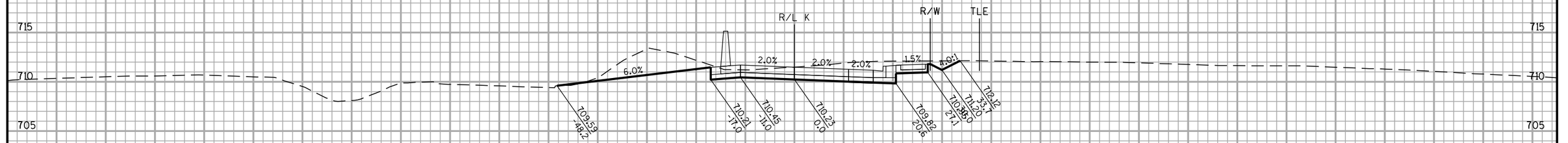
ALL WORK DONE STAGE 3

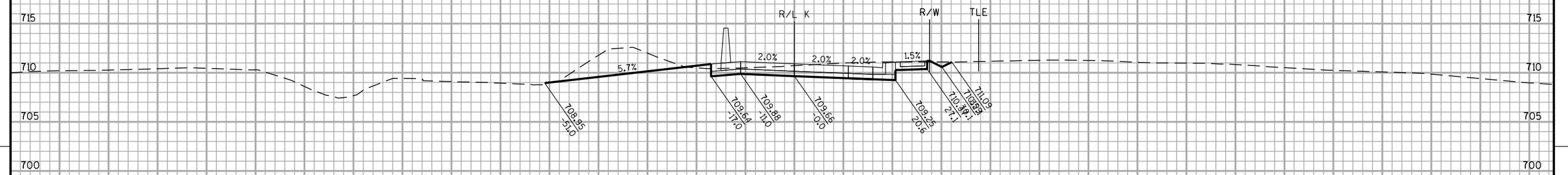


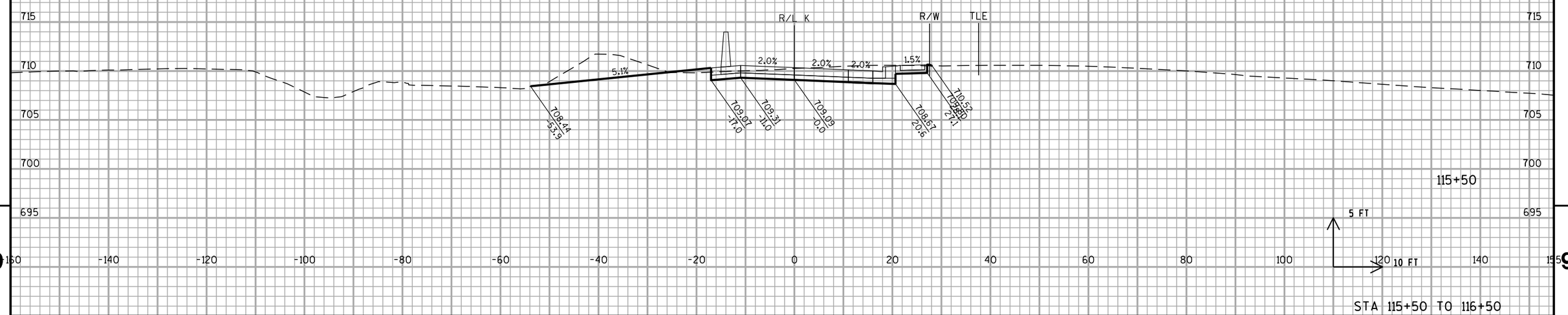
STA 114+00 TO 115+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

ALL WORK DONE STAGE 3







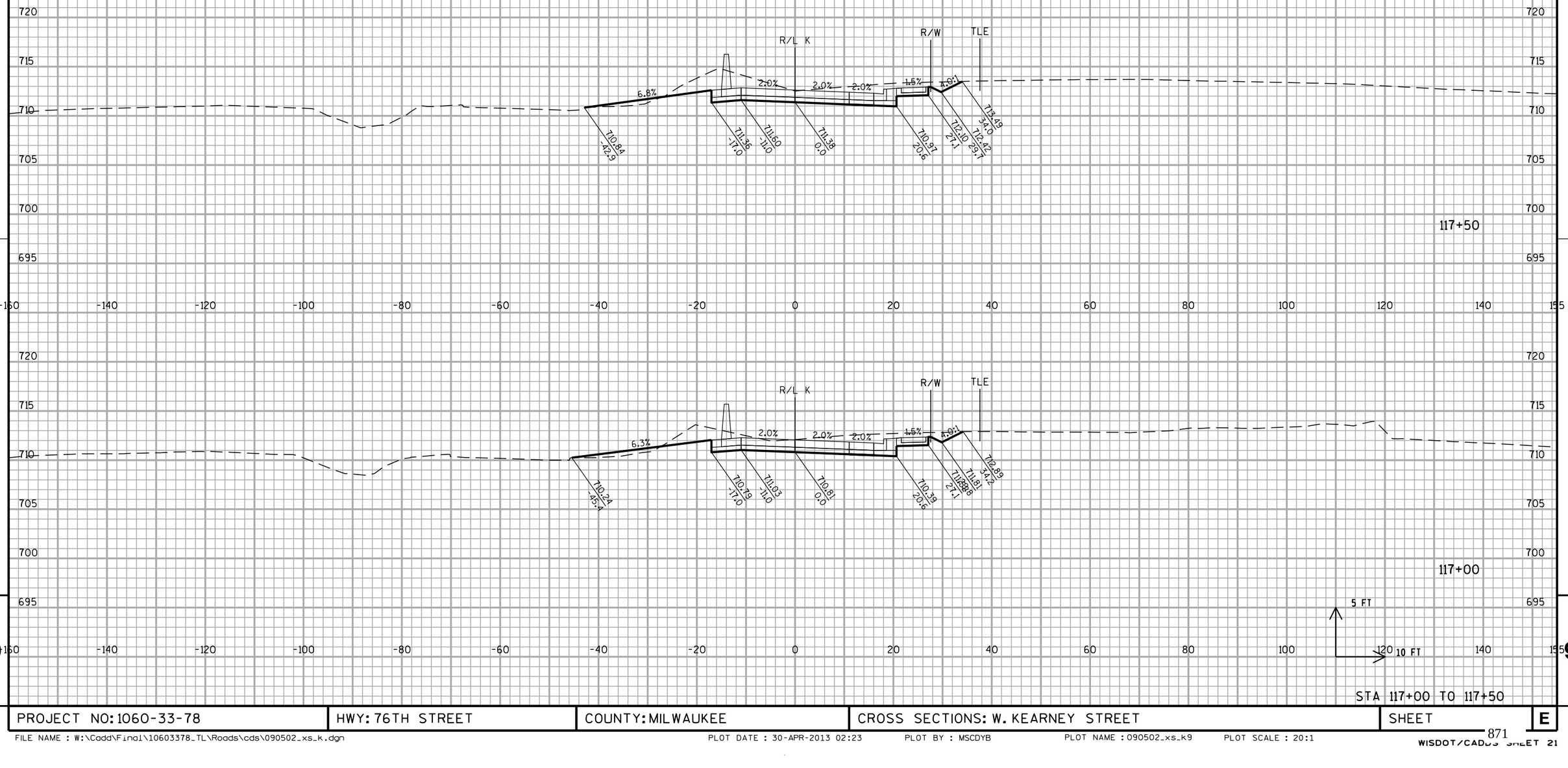
STA 115+50 TO 116+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:23 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

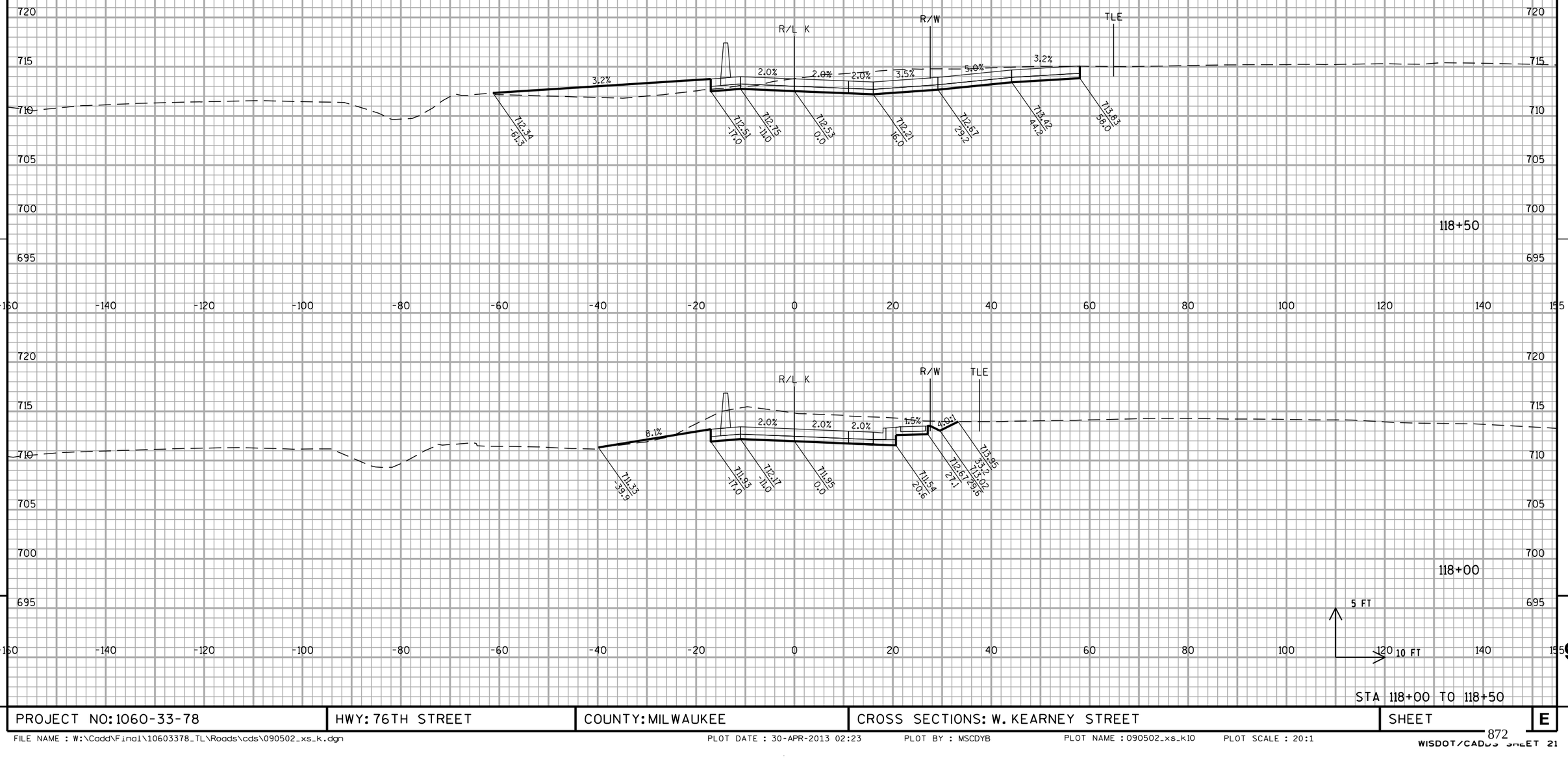
ALL WORK DONE STAGE 3



STA 117+00 TO 117+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

ALL WORK DONE STAGE 3



STA 118+00 TO 118+50

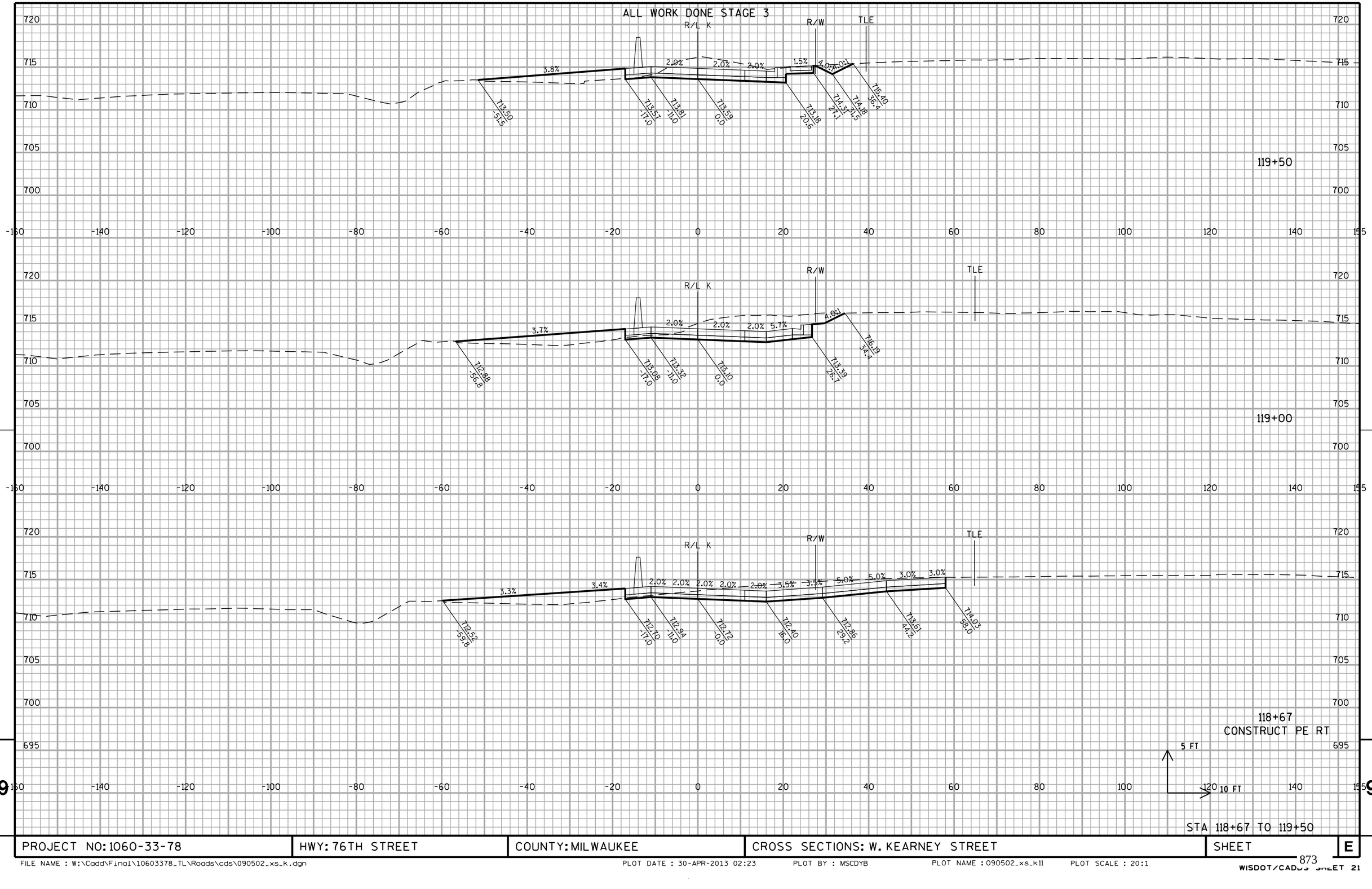
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:23 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k10 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

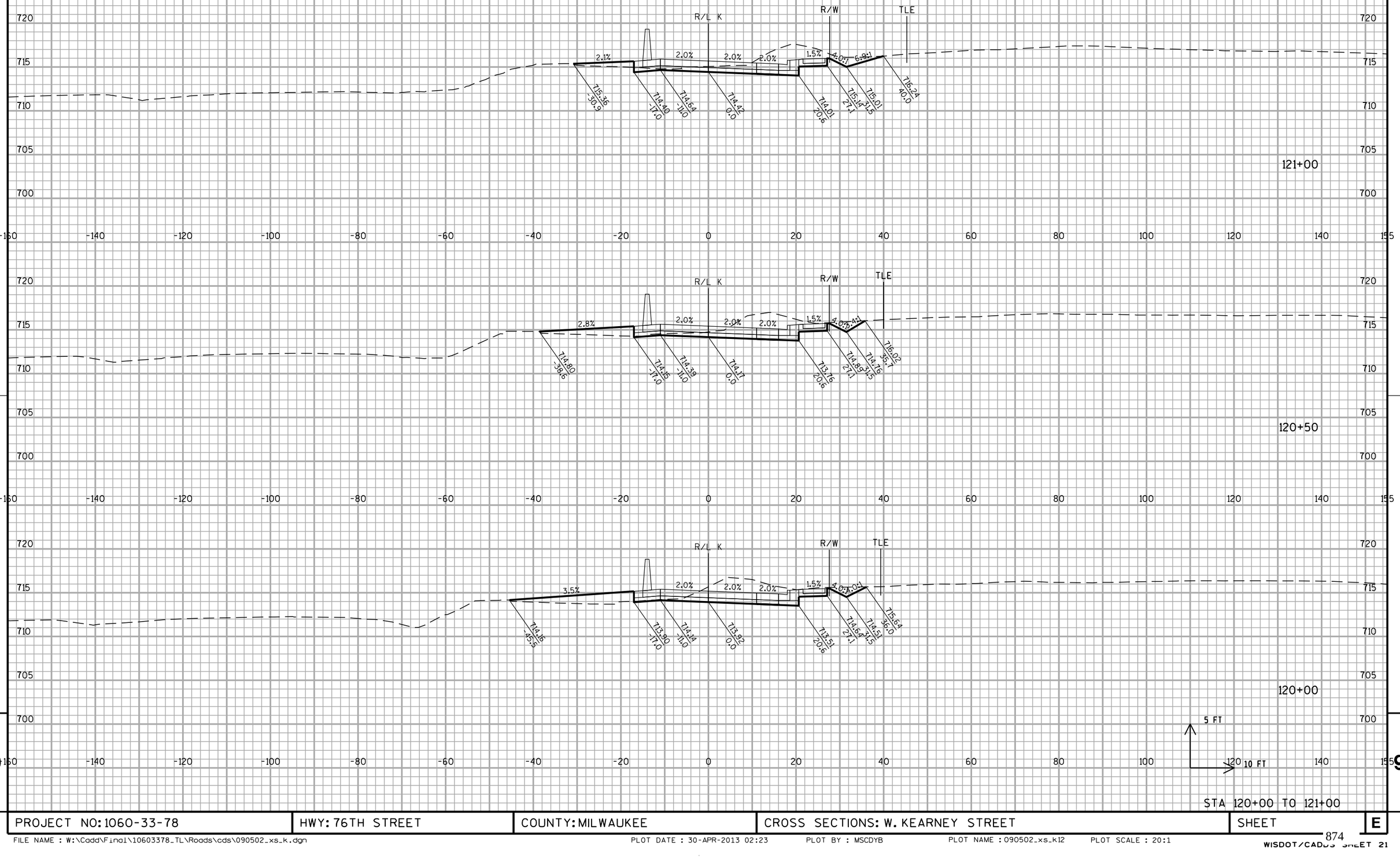
ALL WORK DONE STAGE 3



STA 118+67 TO 119+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

ALL WORK DONE STAGE 3



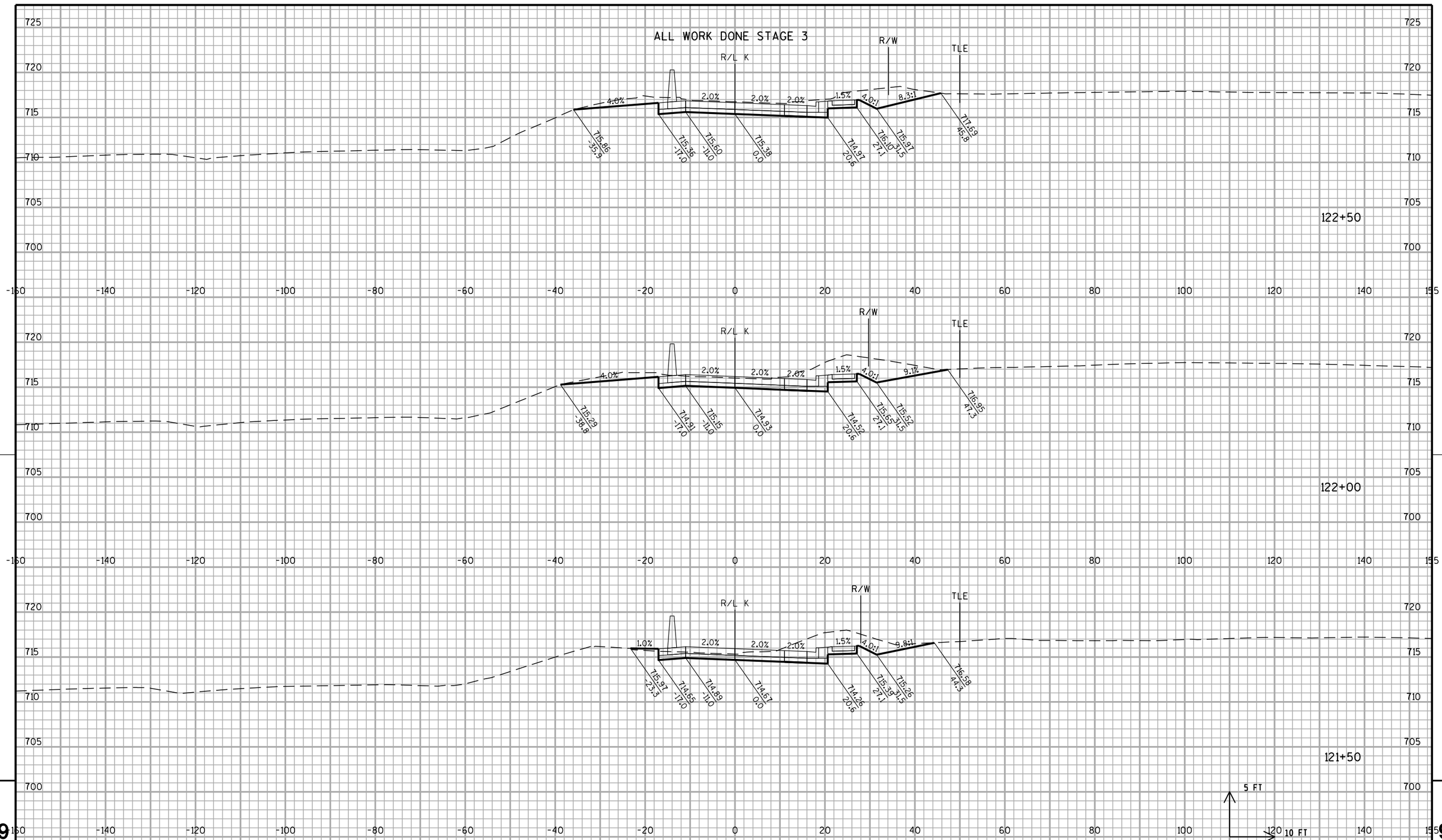
STA 120+00 TO 121+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:23 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k12 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

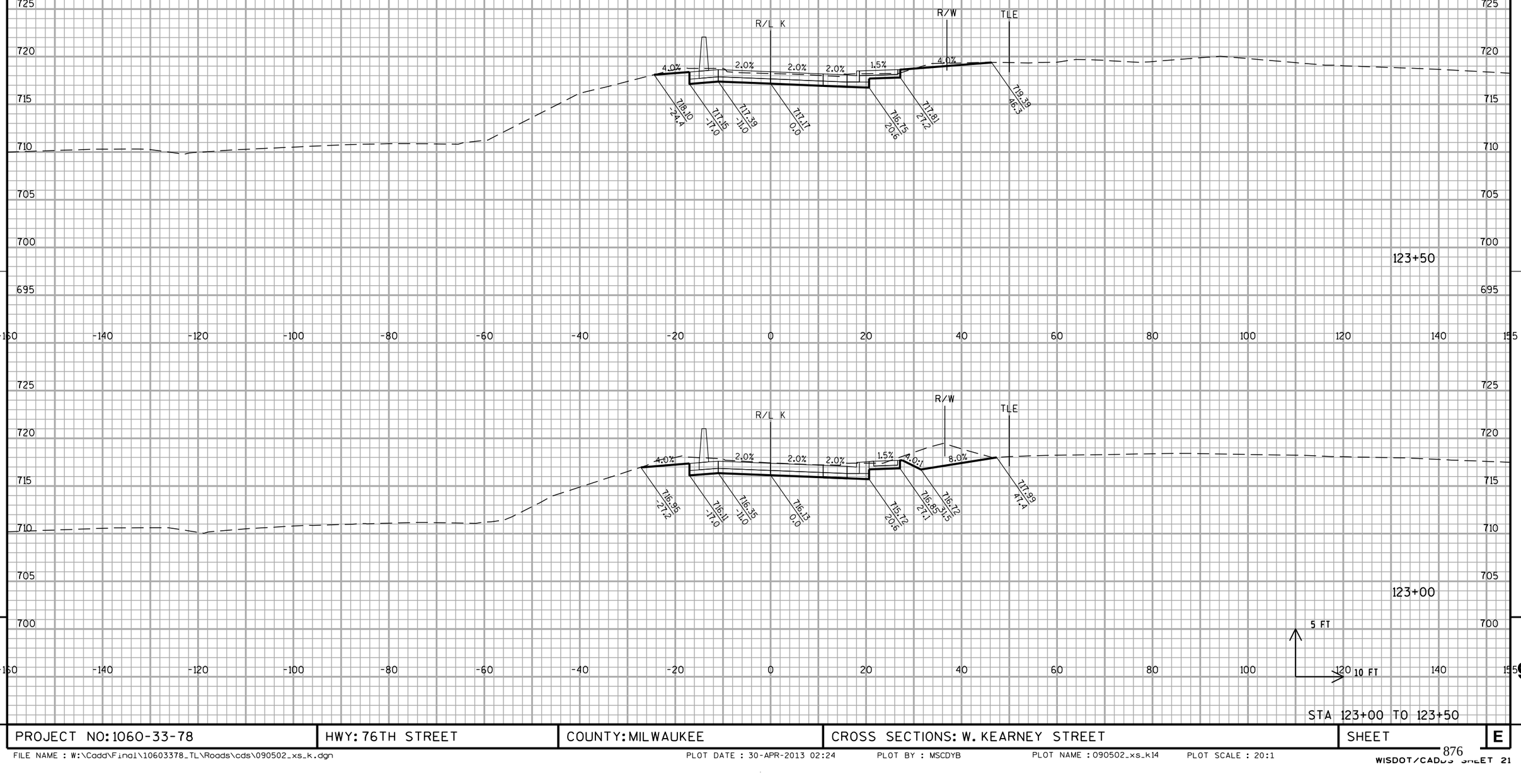
ALL WORK DONE STAGE 3



STA 121+50 TO 122+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

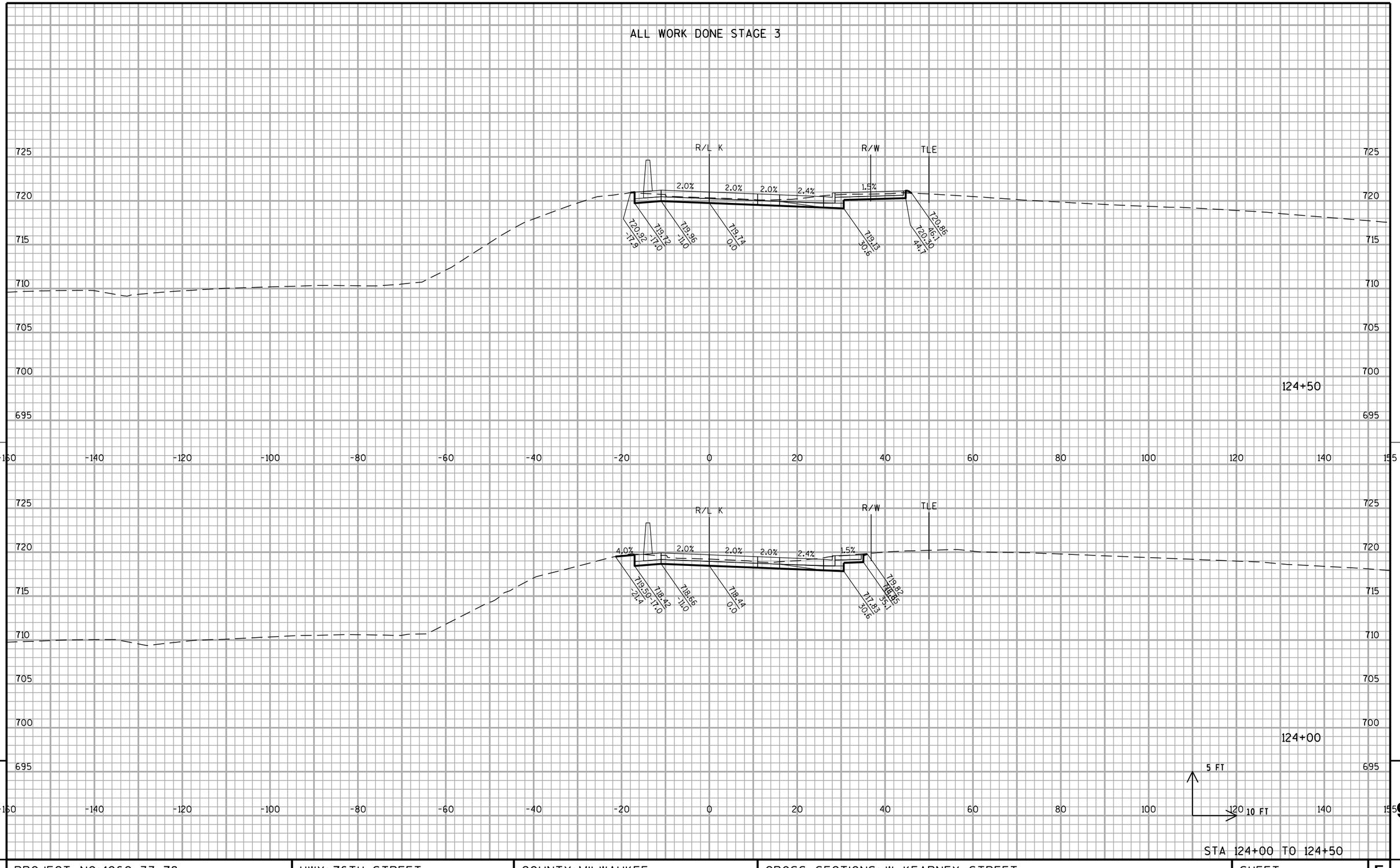
ALL WORK DONE STAGE 3



STA 123+00 TO 123+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

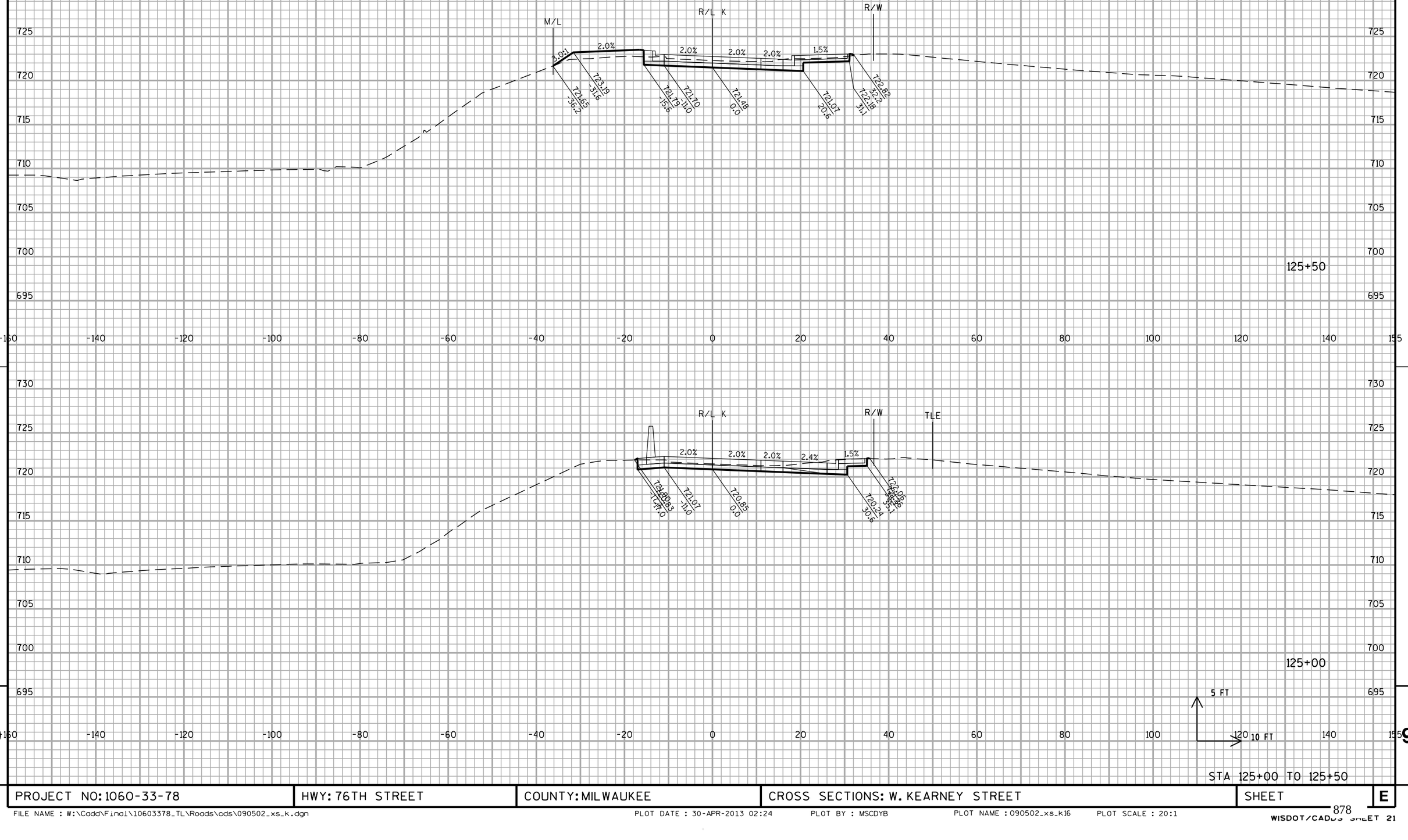
ALL WORK DONE STAGE 3



STA 124+00 TO 124+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

ALL WORK DONE STAGE 3



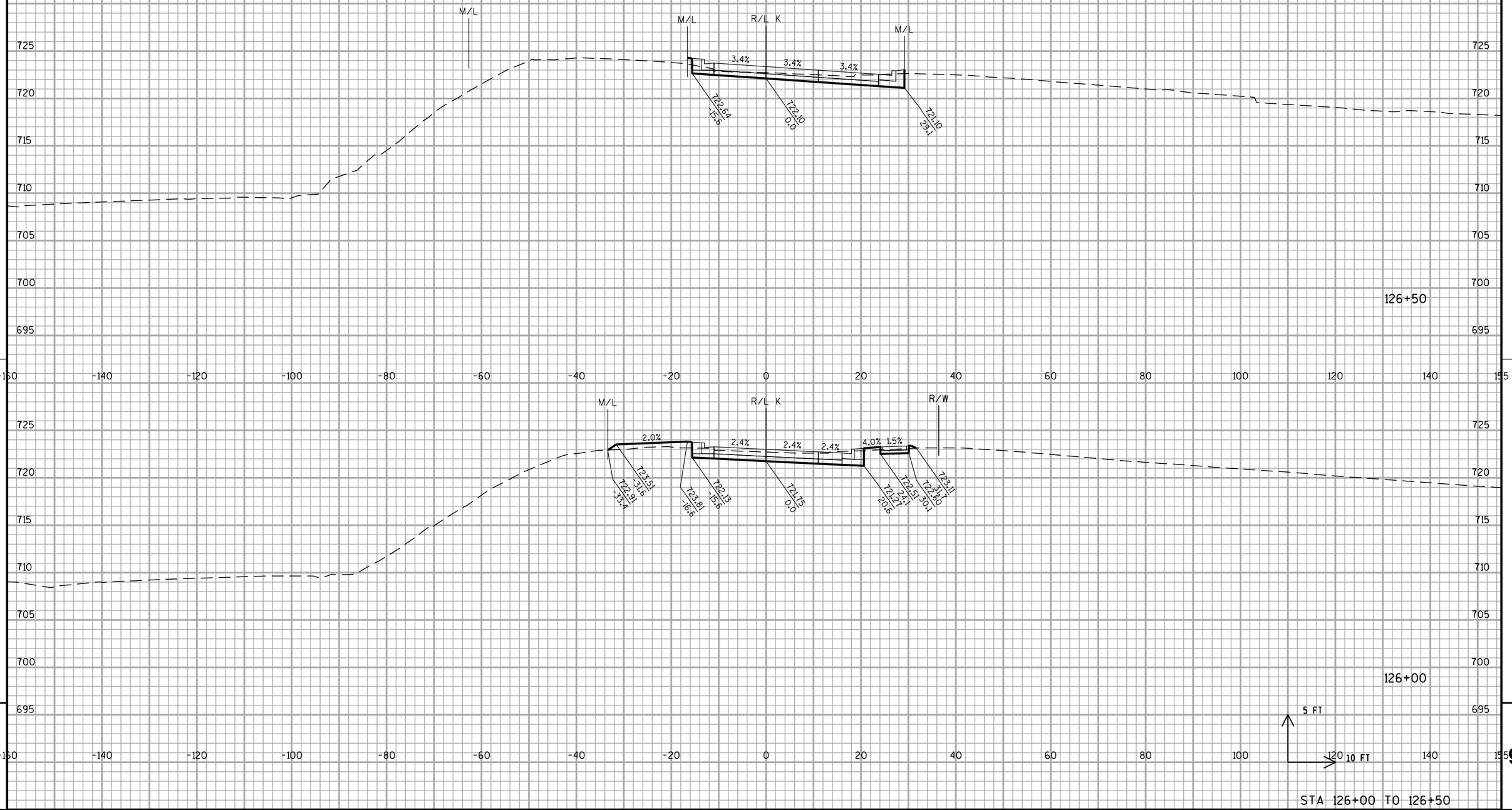
STA 125+00 TO 125+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:24 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k16 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

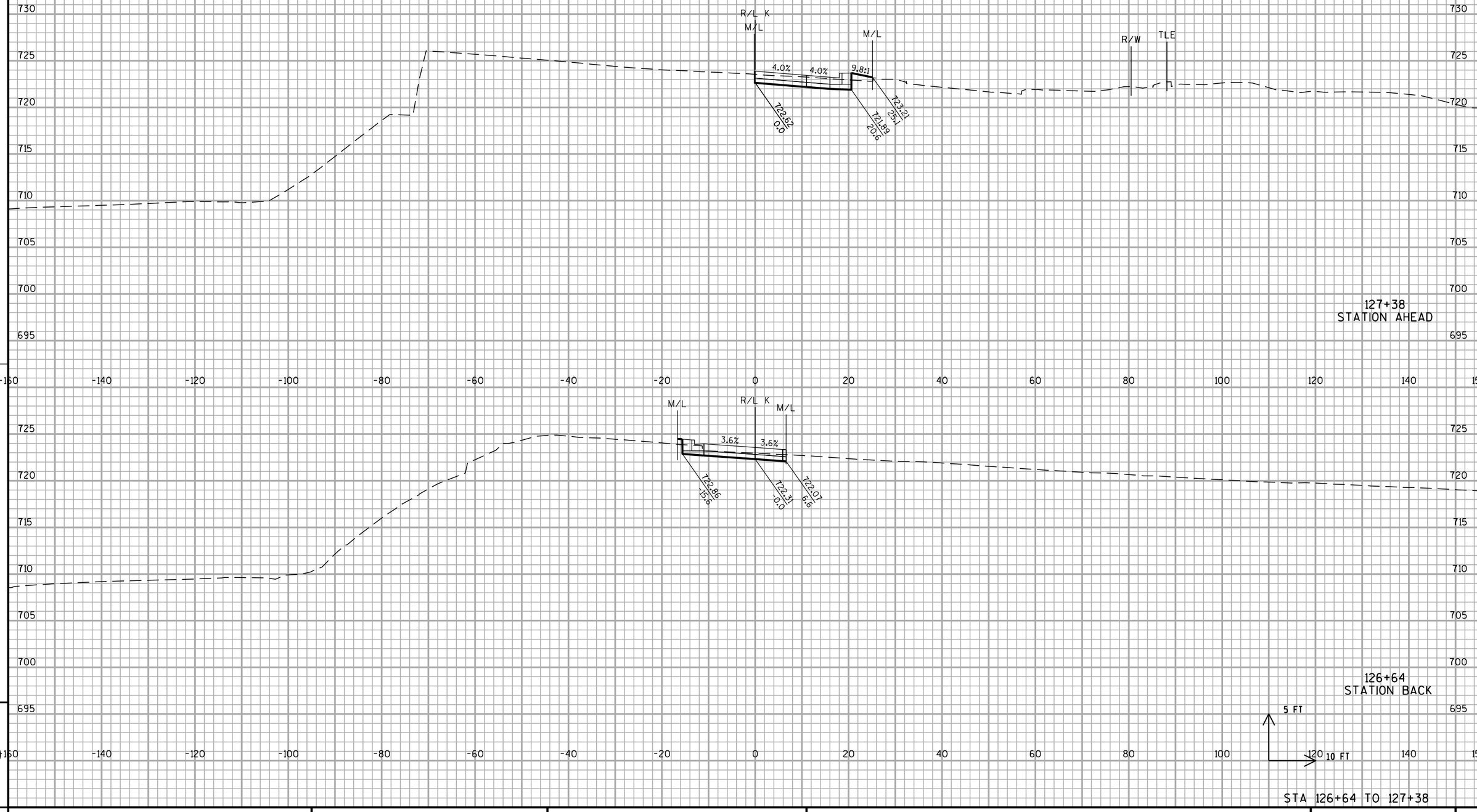
ALL WORK DONE STAGE 3



STA 126+00 TO 126+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

ALL WORK DONE STAGE 3



127+38
STATION AHEAD

126+64
STATION BACK

5 FT
10 FT

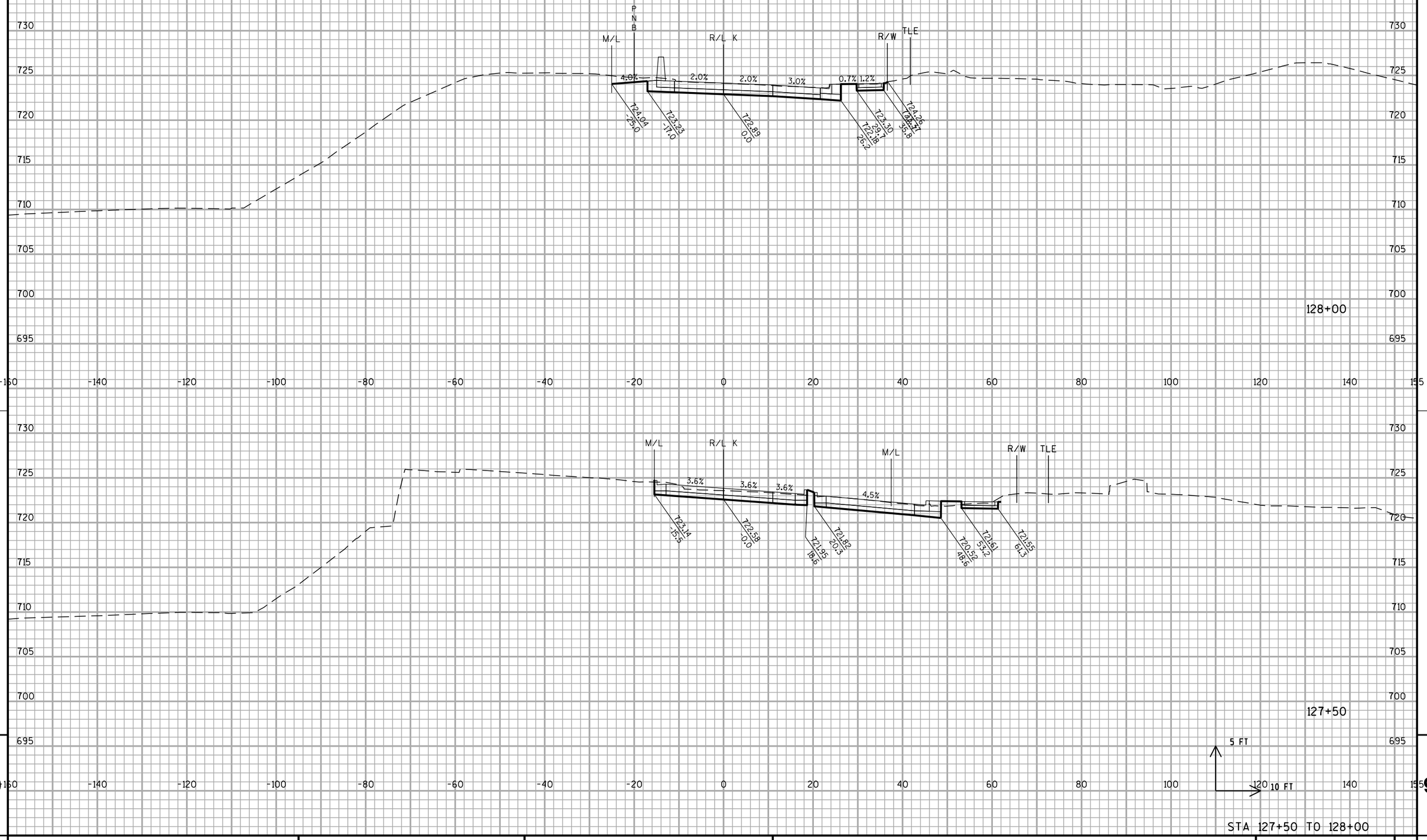
STA 126+64 TO 127+38

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:24 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k18 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

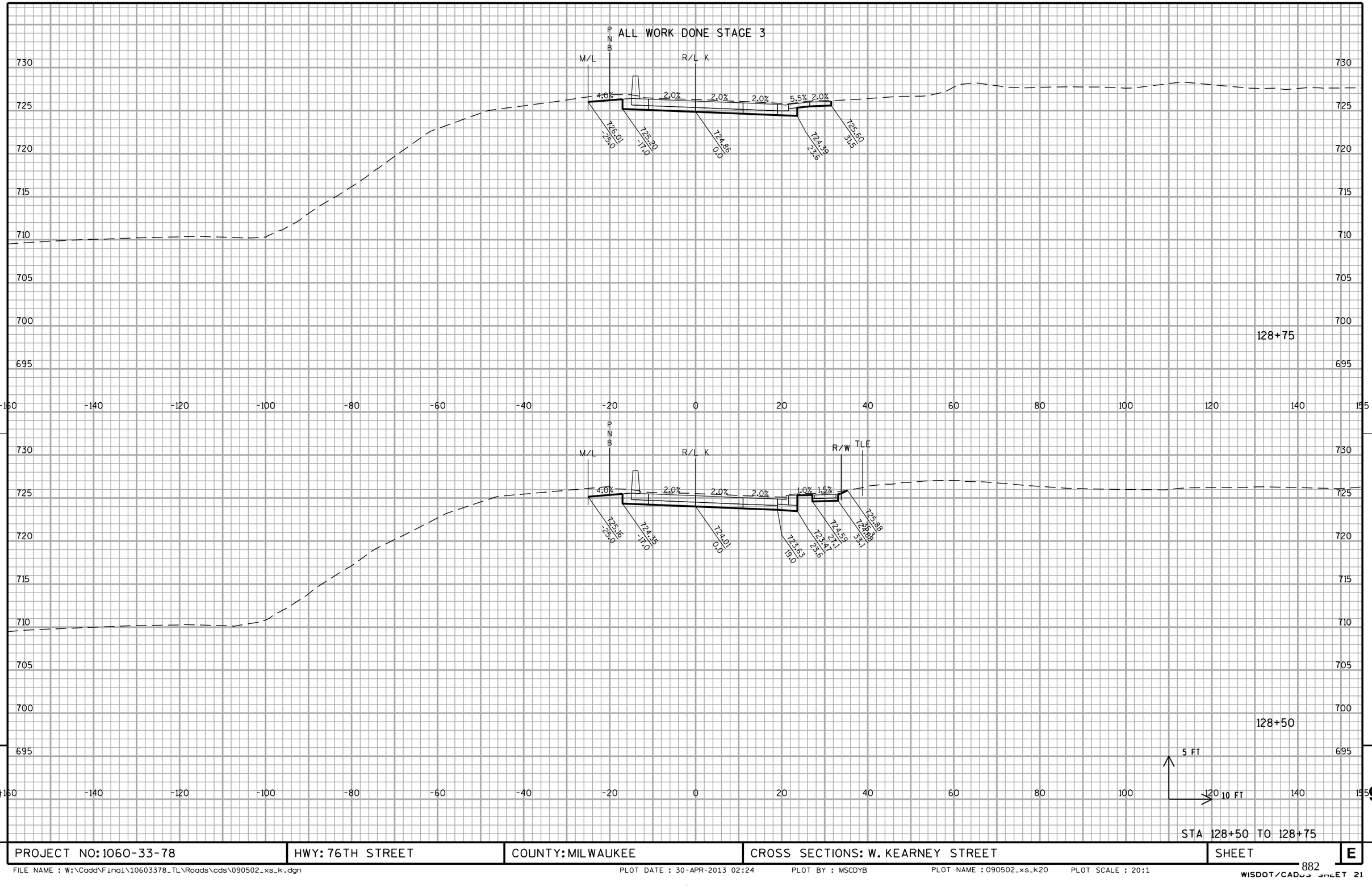
ALL WORK DONE STAGE 3



STA 127+50 TO 128+00

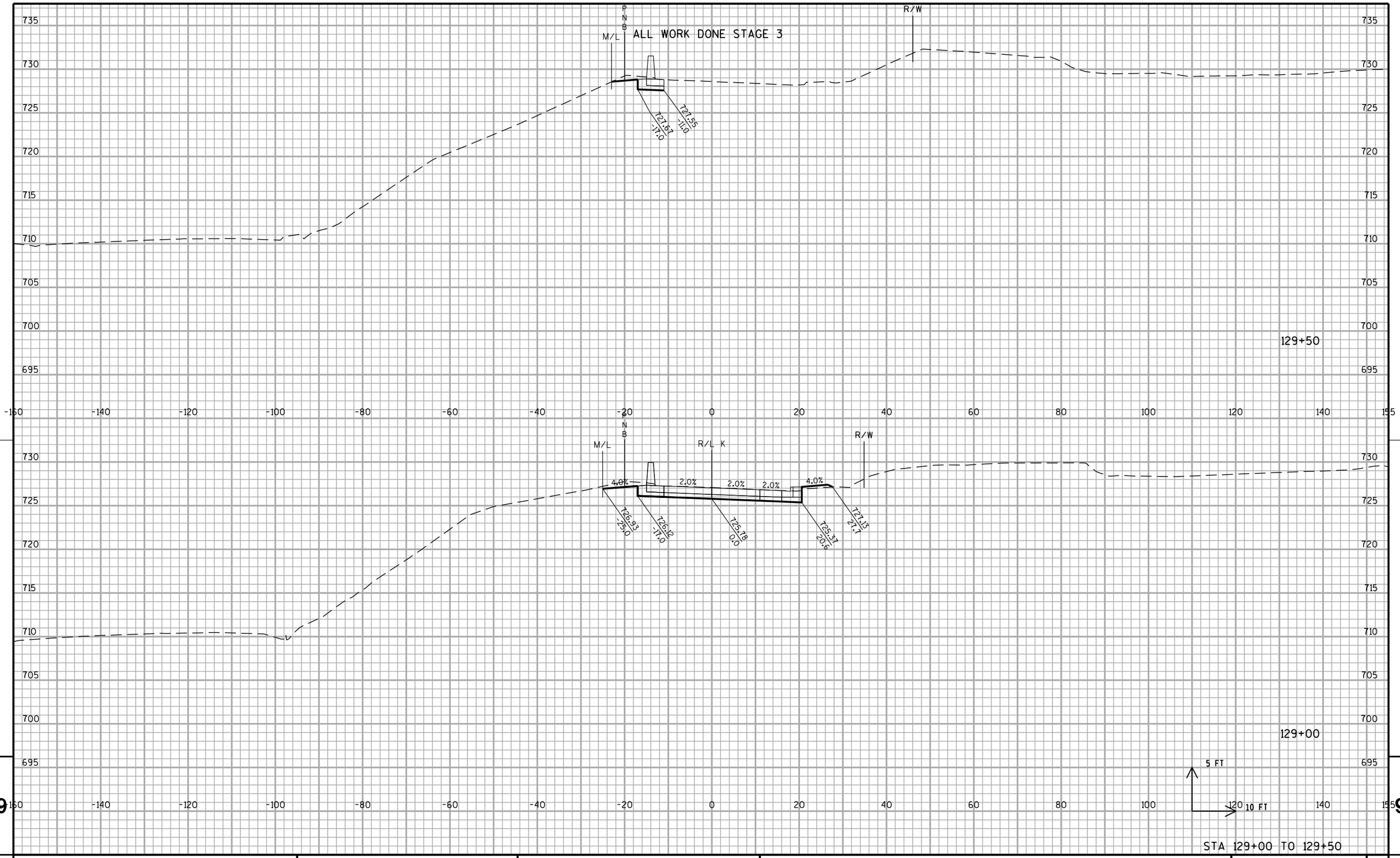
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

ALL WORK DONE STAGE 3



STA 128+50 TO 128+75

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E



9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

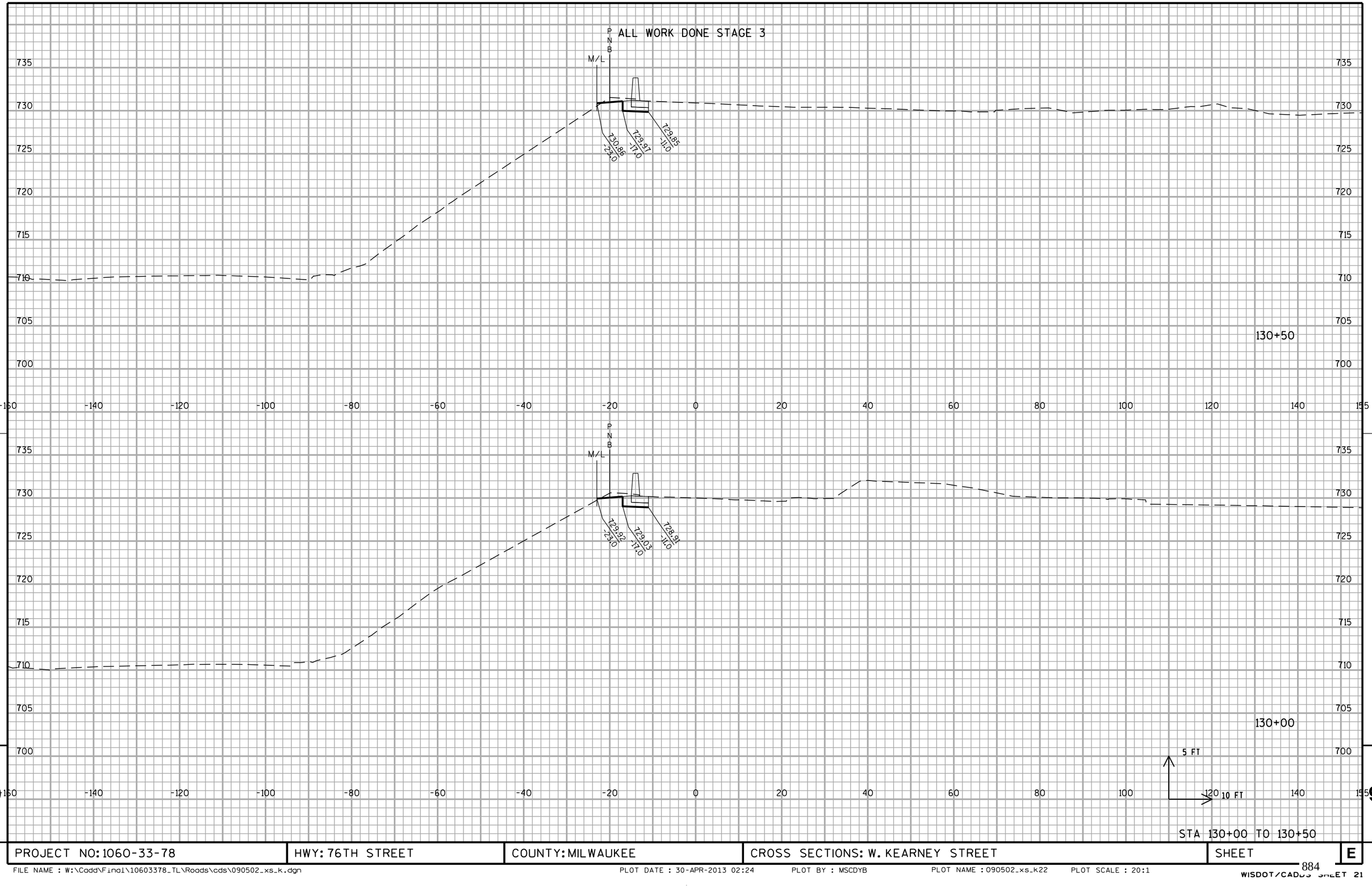
STA 129+00 TO 129+50

9

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:24 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k21 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

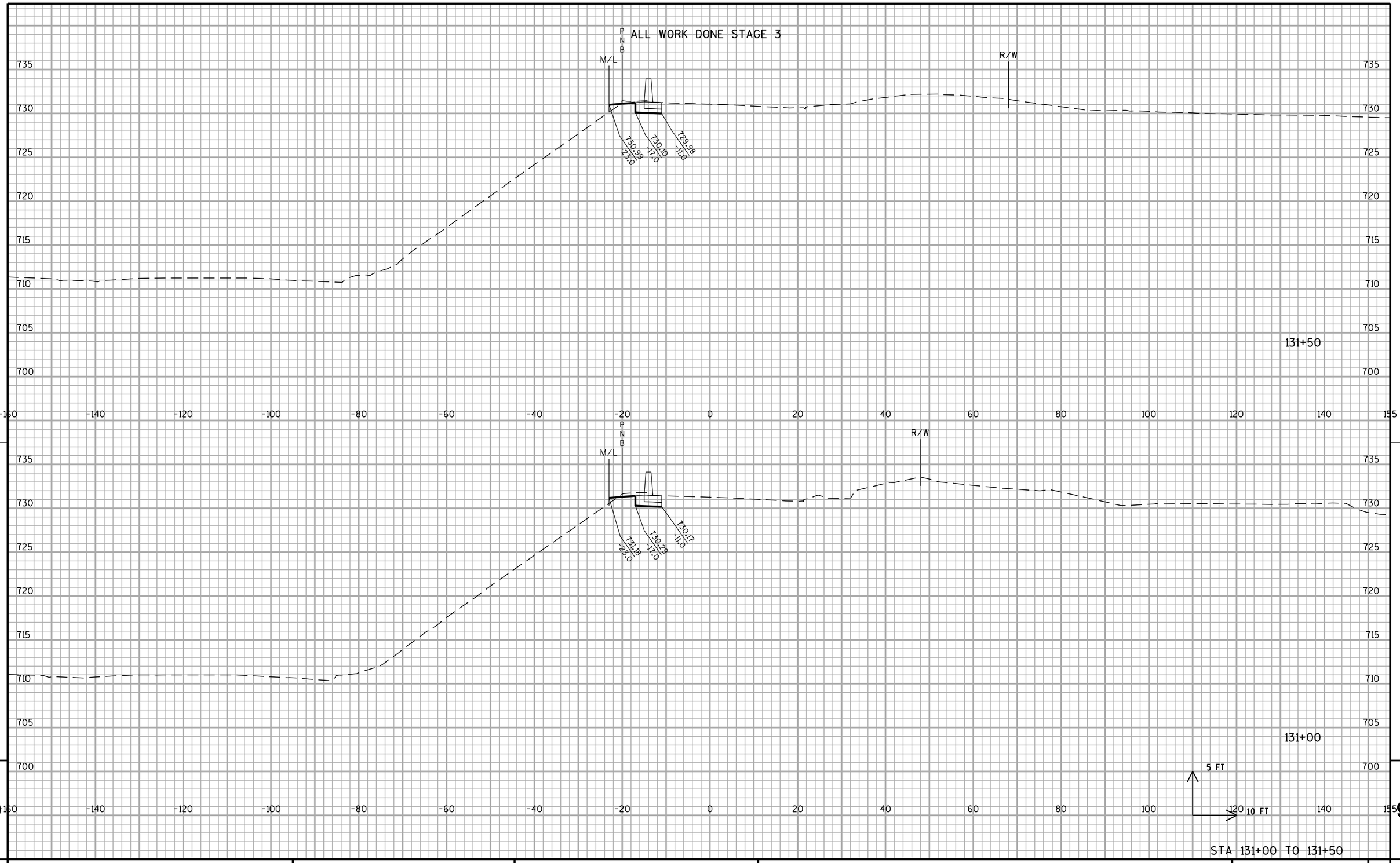
ALL WORK DONE STAGE 3



STA 130+00 TO 130+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

ALL WORK DONE STAGE 3



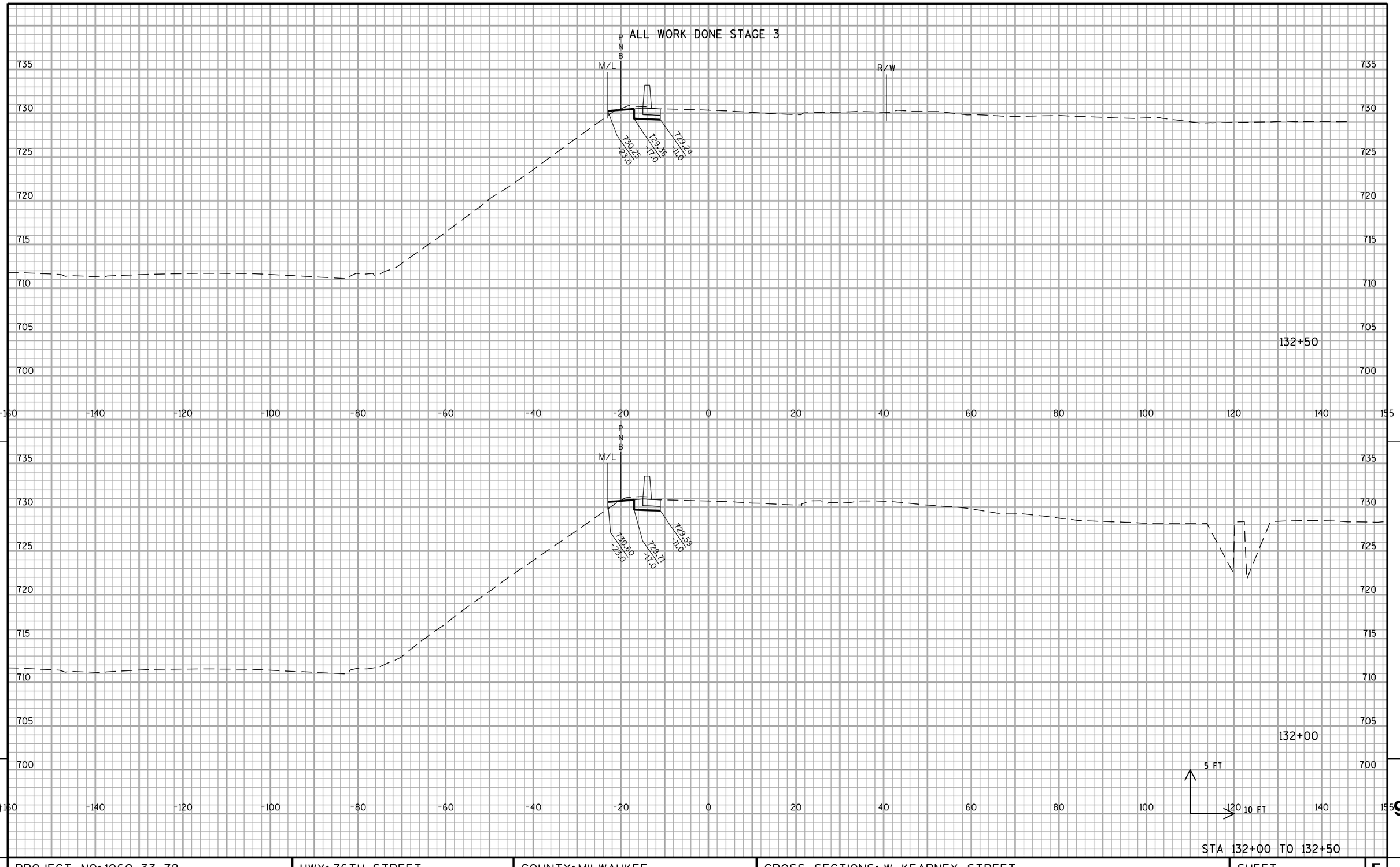
STA 131+00 TO 131+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:24 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k23 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE STAGE 3



STA 132+00 TO 132+50

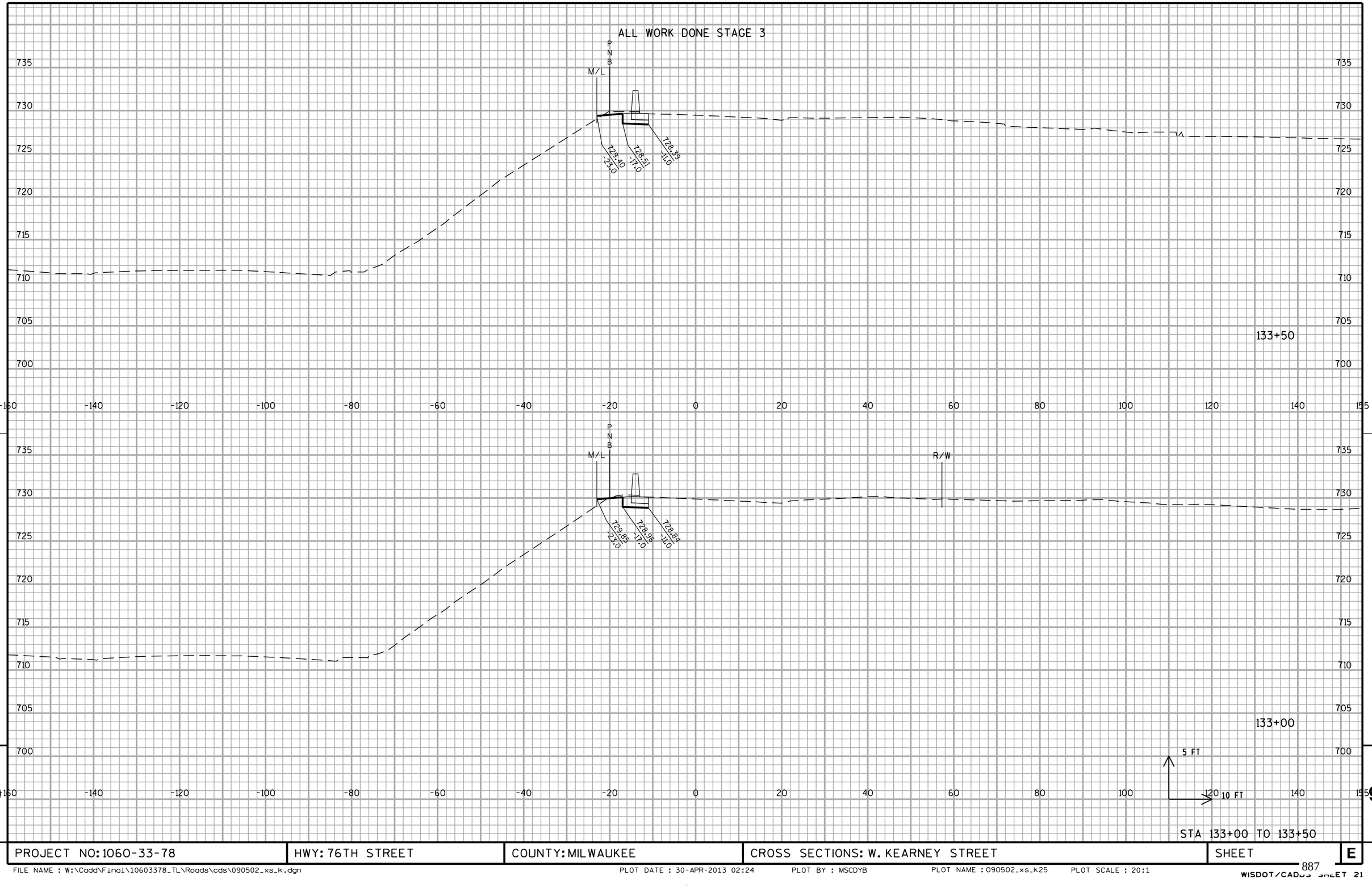
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:24 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k24 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE STAGE 3



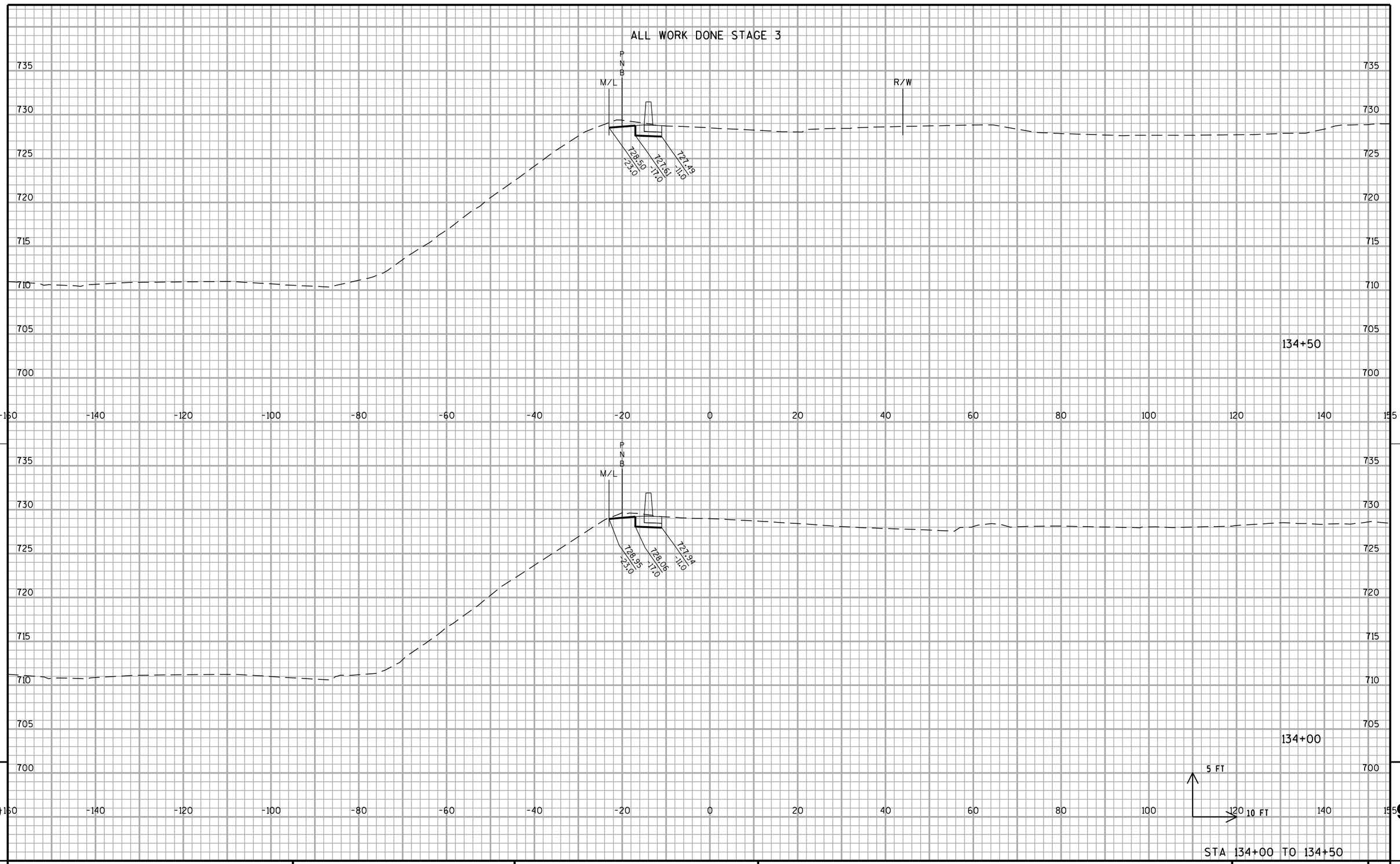
STA 133+00 TO 133+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:24 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k25 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE STAGE 3



STA 134+00 TO 134+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

9

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn
PLOT DATE : 30-APR-2013 02:24
PLOT BY : MSCDYB
PLOT NAME : 090502_xs_k26
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

ALL WORK DONE STAGE 3

P
N
B

M/L

726.61
-23.0

725.72
-17.0

725.60
-11.0

135+50

730
725
720
715
710
705
700
695

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

P
N
B

M/L

R/W

721.93
-23.0

721.04
-17.0

726.92
-11.0

135+00

5 FT

10 FT

735
730
725
720
715
710
705
700

-160 -140 -120 -100 -80 -60 -40 -20 0 20 40 60 80 100 120 140 155

STA 135+00 TO 135+50

9

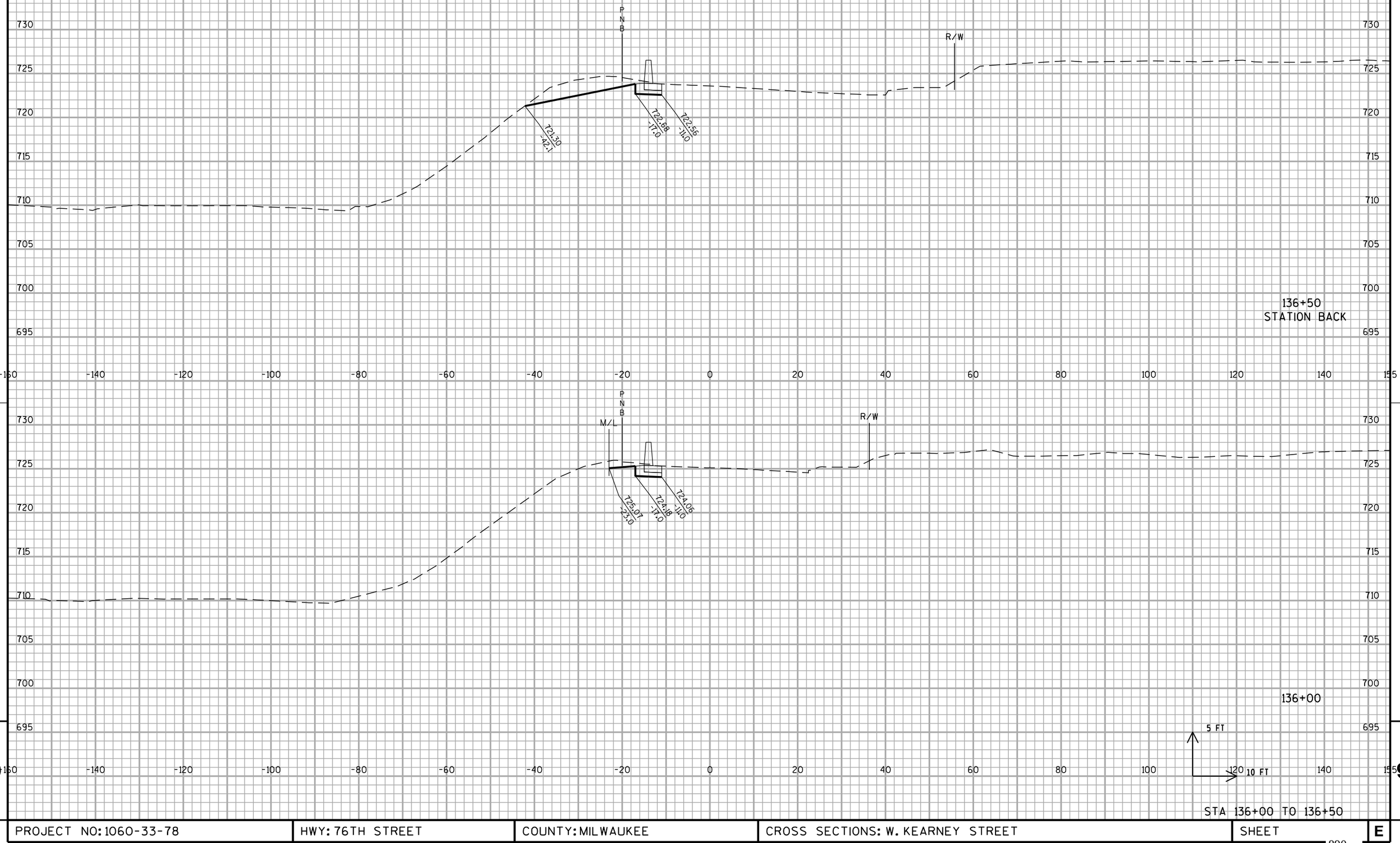
9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090502_xs_k.dgn PLOT DATE : 30-APR-2013 02:24 PLOT BY : MSCDYB PLOT NAME : 090502_xs_k27 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

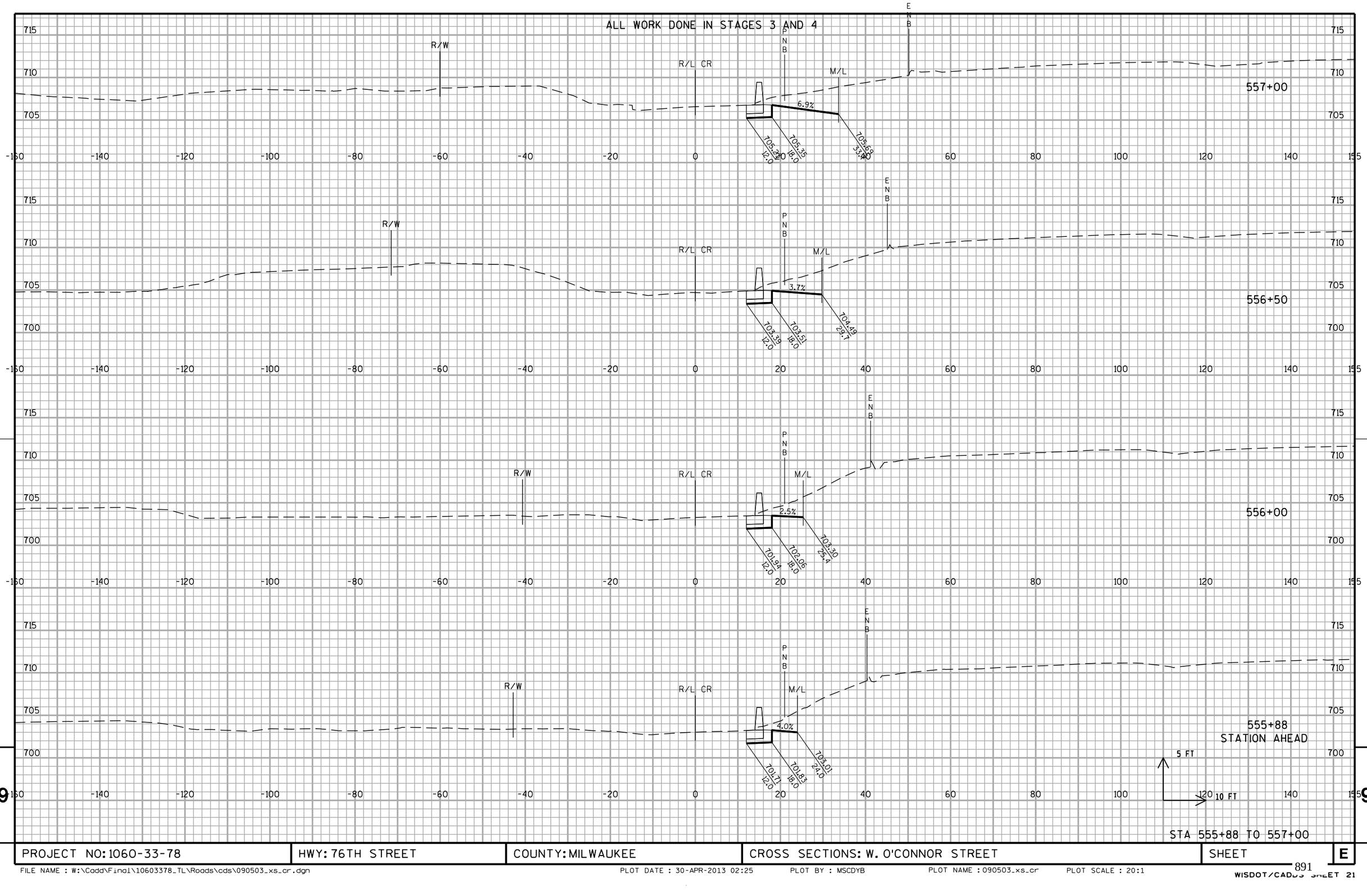
ALL WORK DONE STAGE 3



STA 136+00 TO 136+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. KEARNEY STREET	SHEET	E

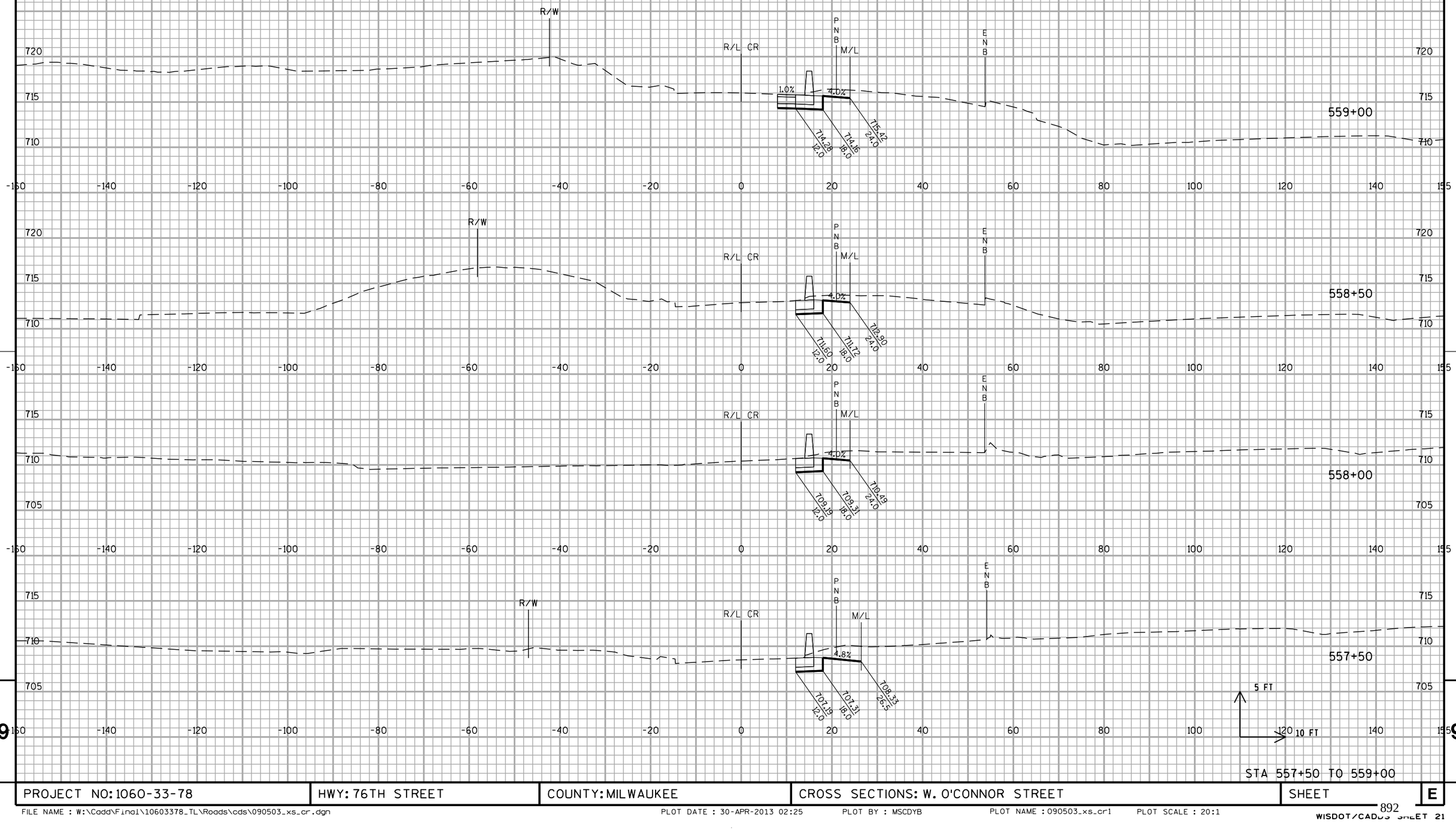
ALL WORK DONE IN STAGES 3 AND 4



STA 555+88 TO 557+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

ALL WORK DONE IN STAGES 3 AND 4



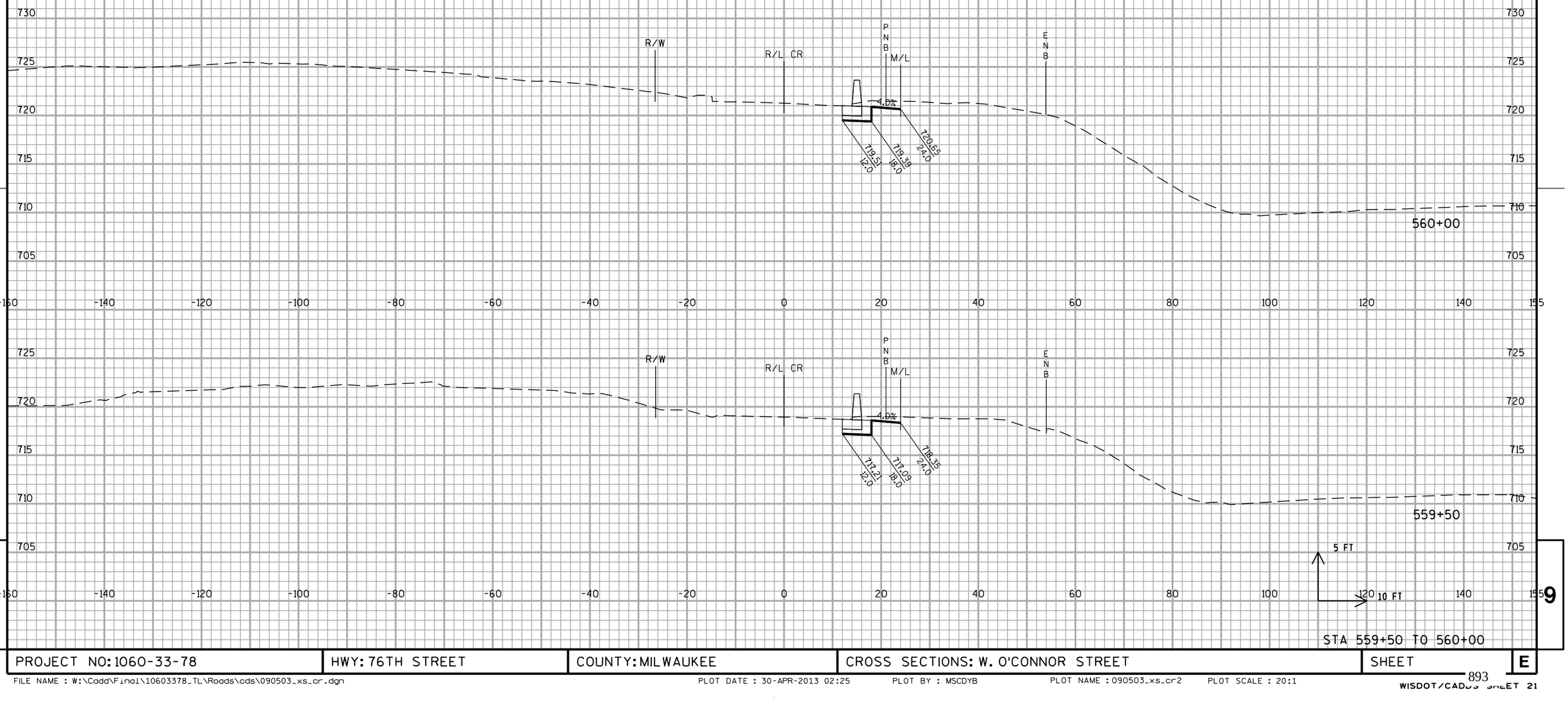
STA 557+50 TO 559+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090503_xs_cr.dgn PLOT DATE : 30-APR-2013 02:25 PLOT BY : MSCDYB PLOT NAME : 090503_xs_cr1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

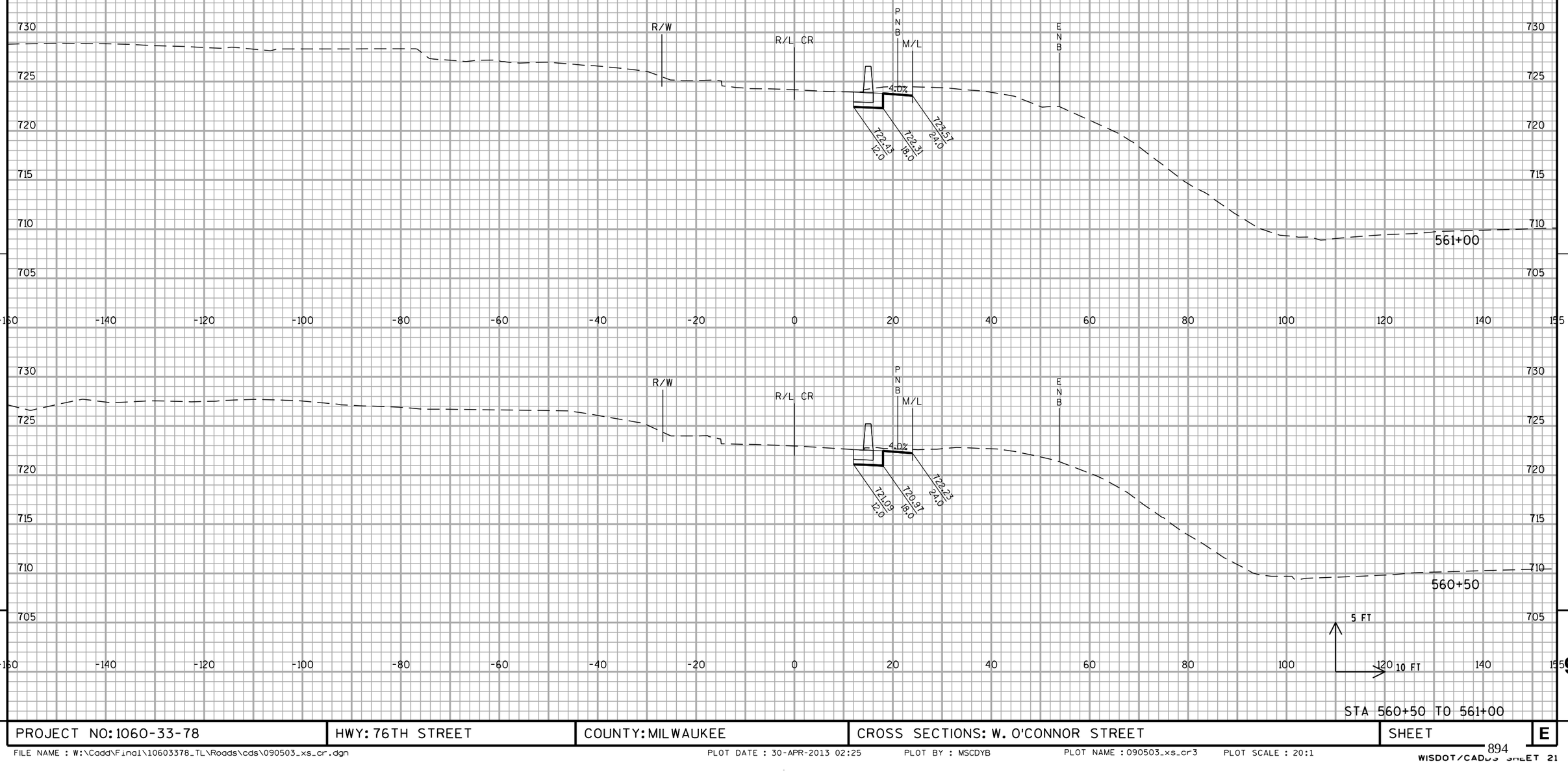
ALL WORK DONE IN STAGES 3 AND 4



STA 559+50 TO 560+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

ALL WORK DONE IN STAGES 3 AND 4



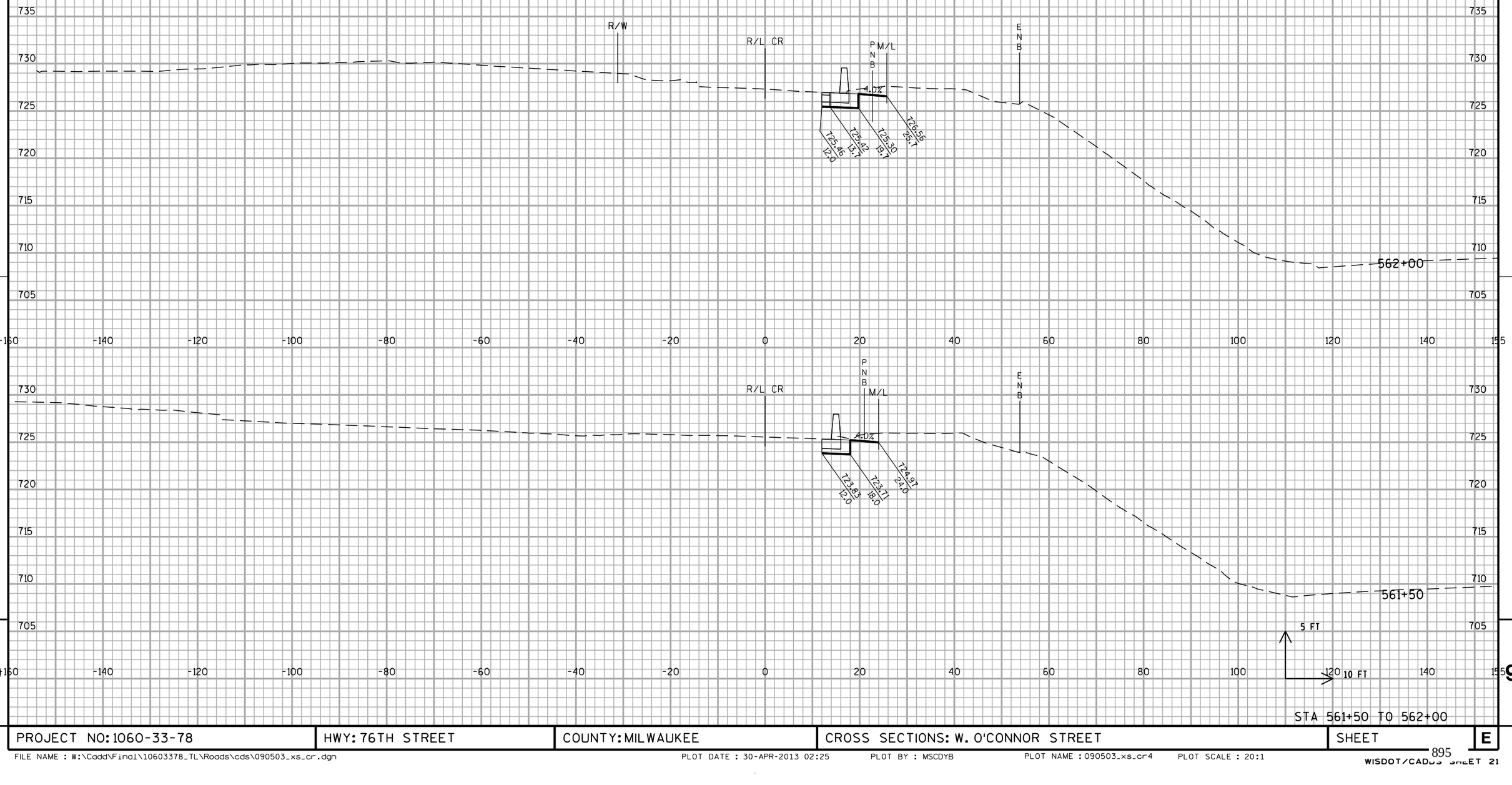
STA 560+50 TO 561+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090503_xs_cr.dgn PLOT DATE : 30-APR-2013 02:25 PLOT BY : MSCDYB PLOT NAME : 090503_xs_cr3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGES 3 AND 4



STA 561+50 TO 562+00

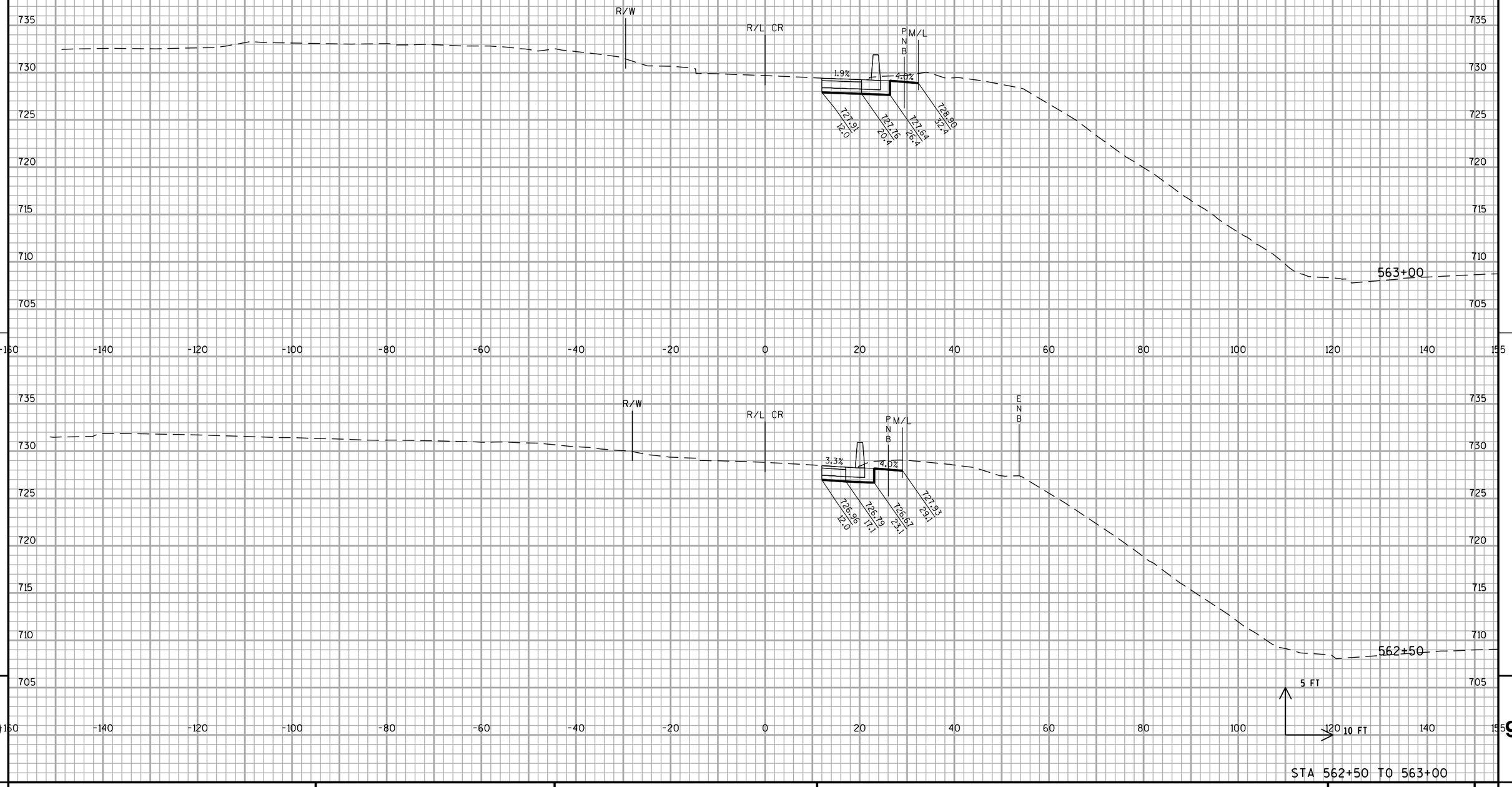
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090503_xs_cr.dgn PLOT DATE : 30-APR-2013 02:25 PLOT BY : MSCDYB PLOT NAME : 090503_xs_cr4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGES 3 AND 4



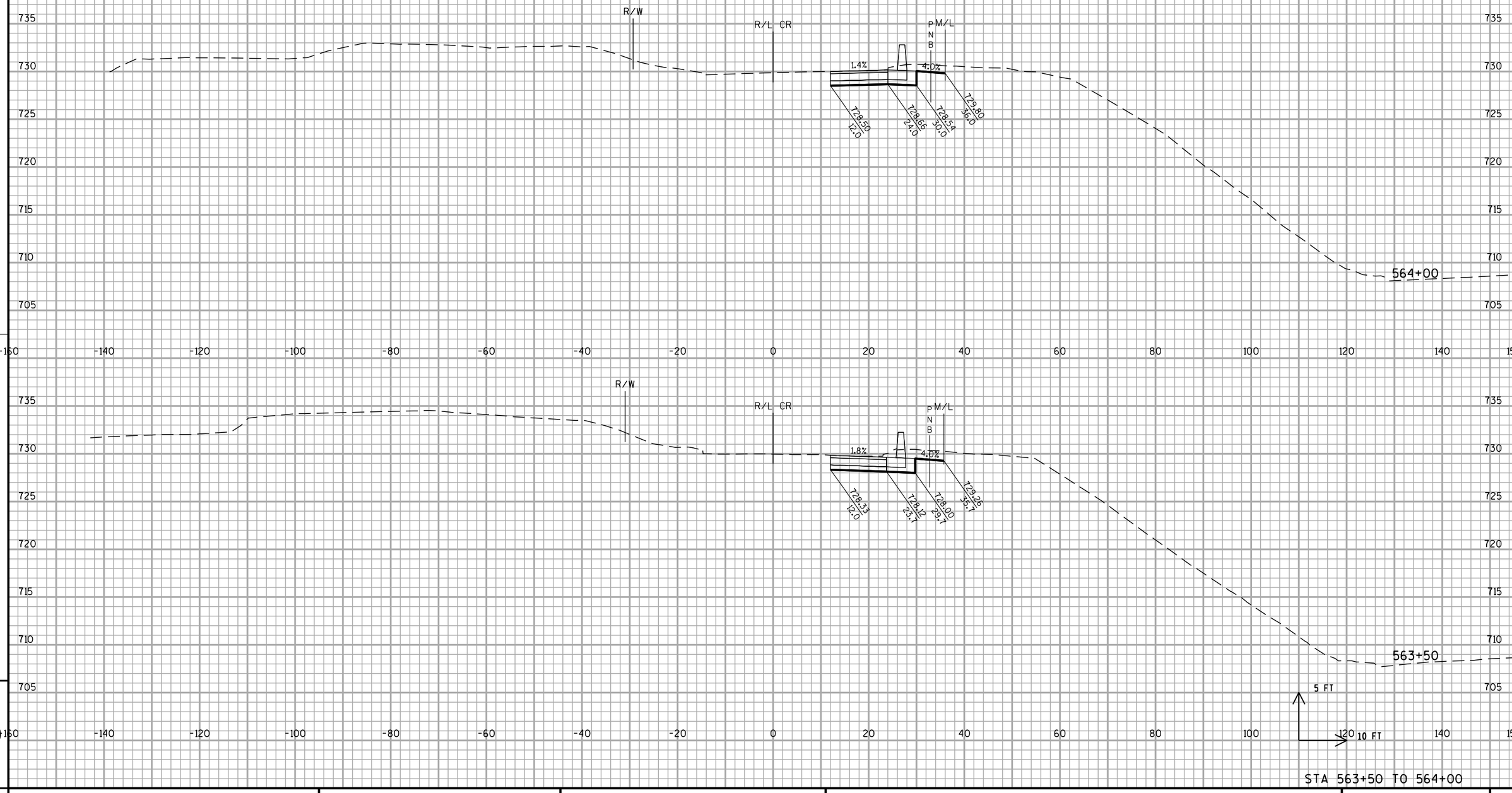
STA 562+50 TO 563+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090503_xs_cr.dgn PLOT DATE : 30-APR-2013 02:25 PLOT BY : MSCDYB PLOT NAME : 090503_xs_cr5 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGES 3 AND 4



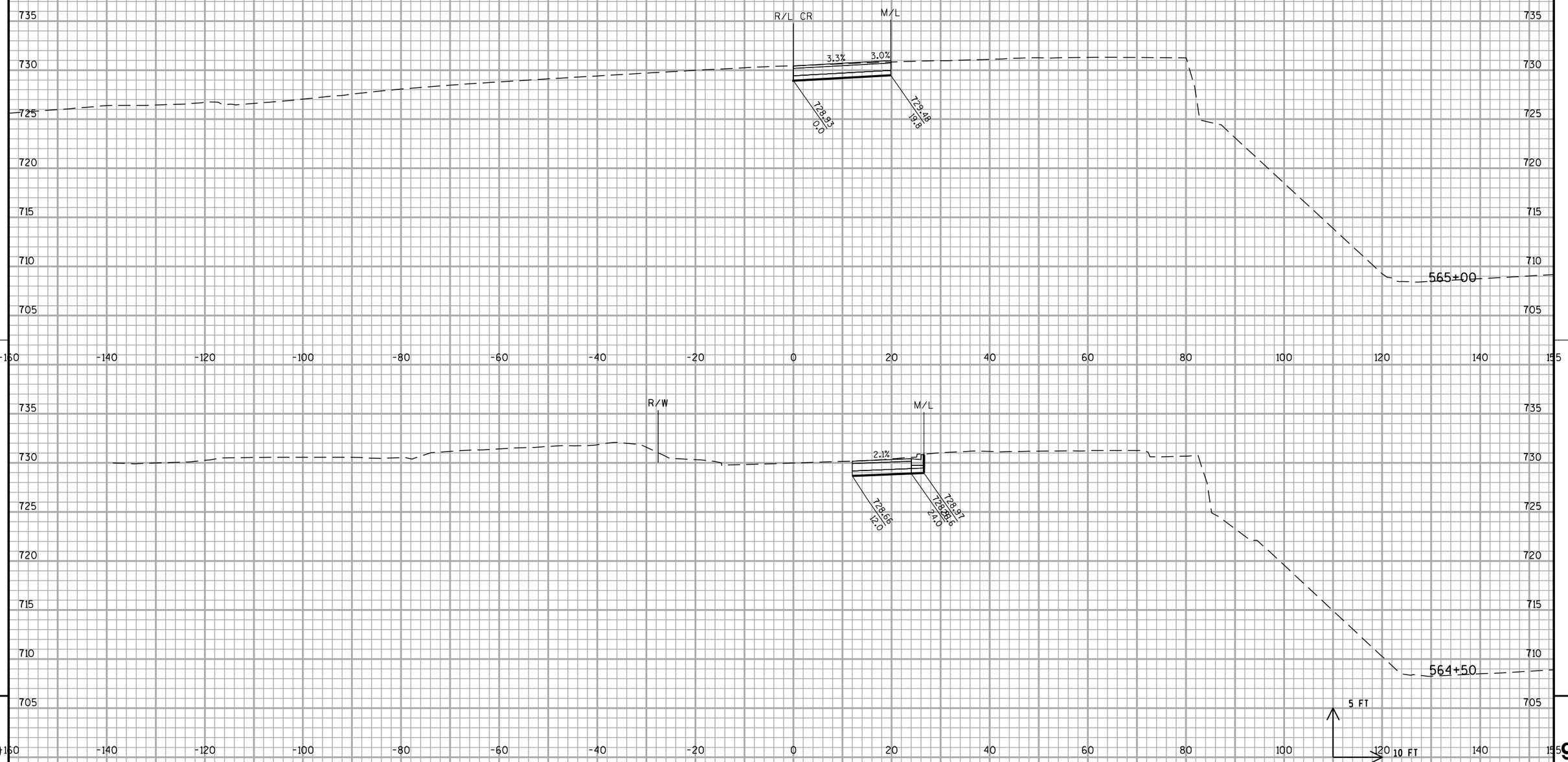
STA 563+50 TO 564+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090503_xs_cr.dgn PLOT DATE : 30-APR-2013 02:25 PLOT BY : MSCDYB PLOT NAME : 090503_xs_cr6 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGES 3 AND 4



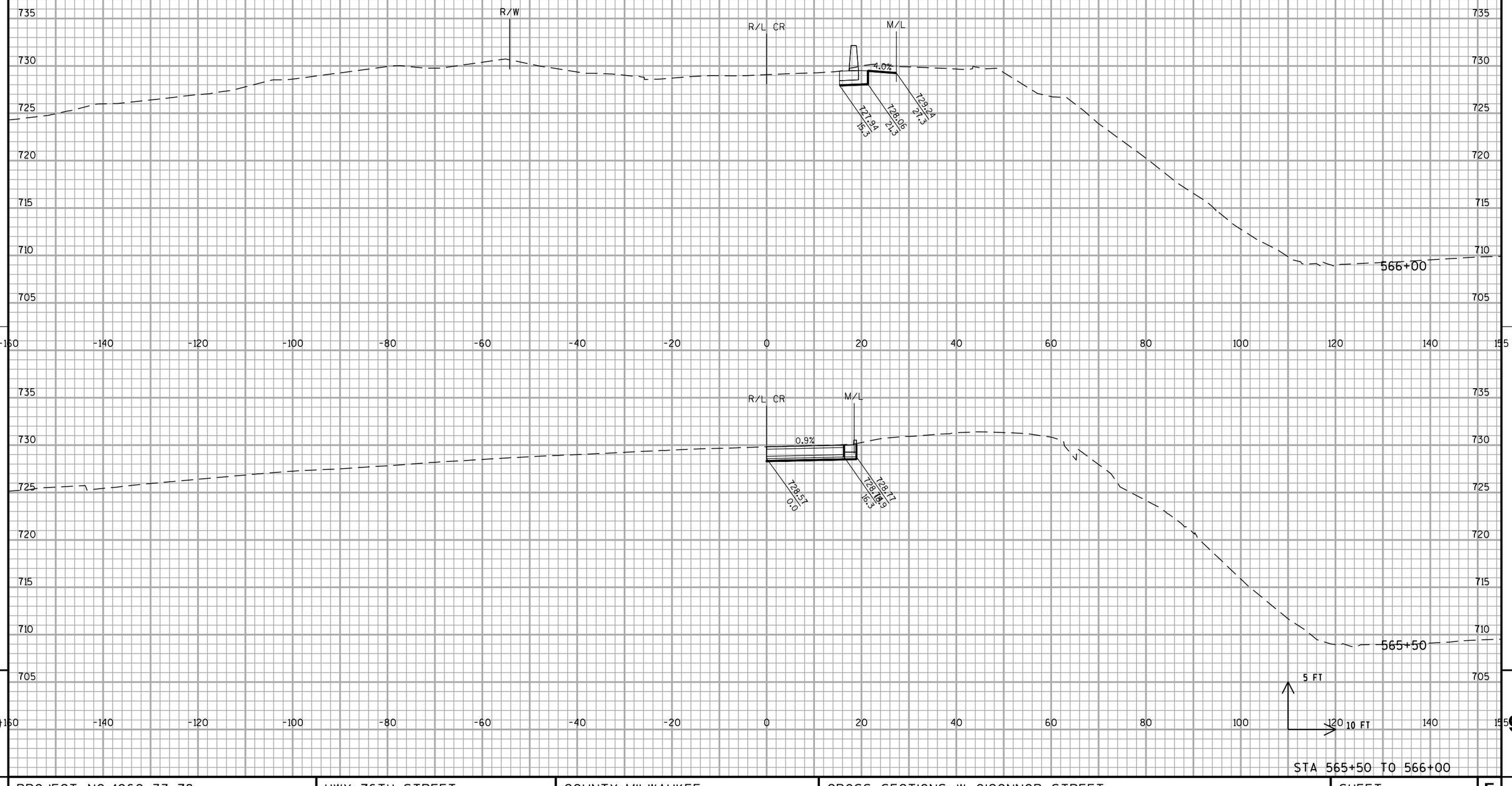
STA 564+50 TO 565+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090503_xs_cr.dgn PLOT DATE : 30-APR-2013 02:25 PLOT BY : MSCDYB PLOT NAME : 090503_xs_cr7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGES 3 AND 4



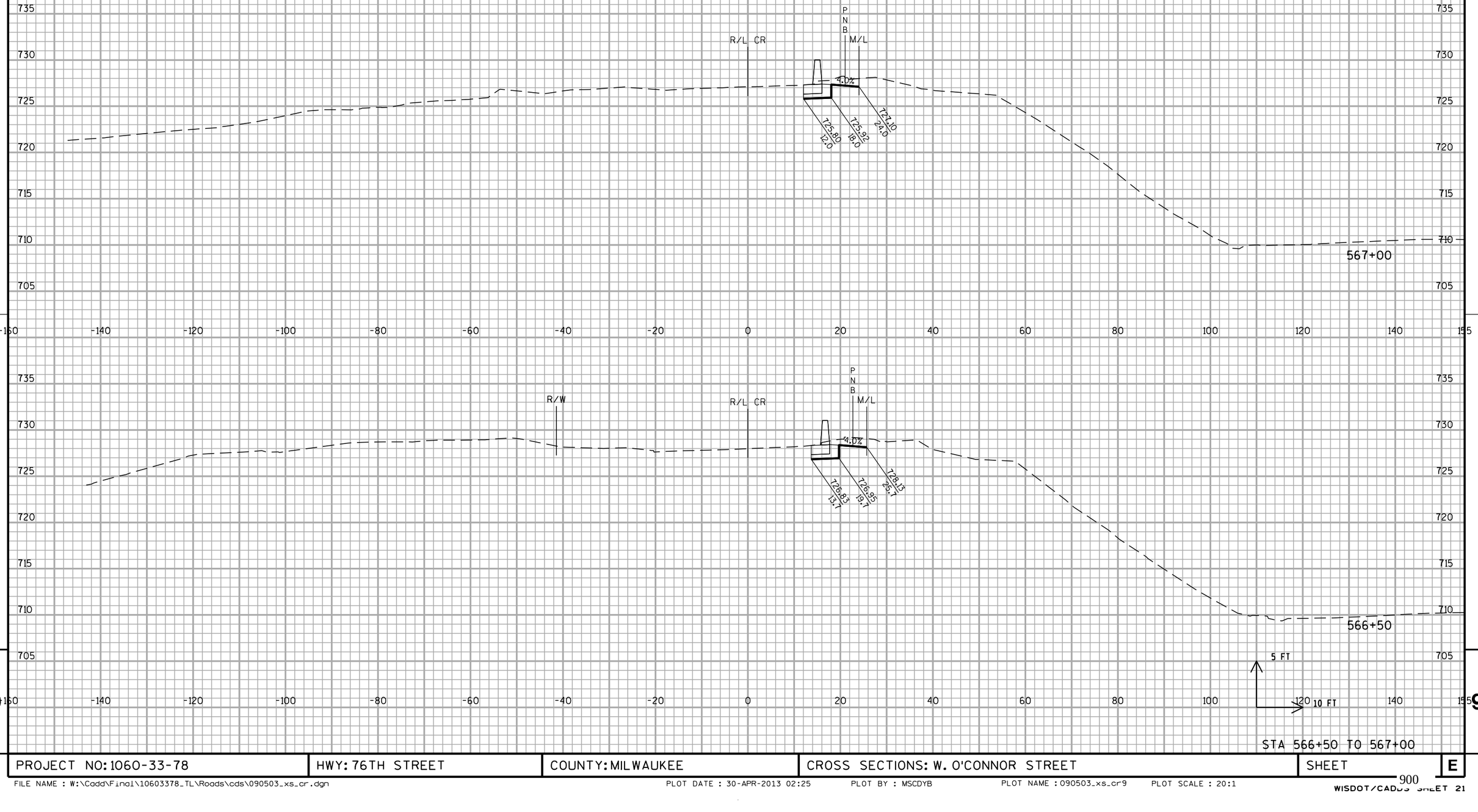
STA 565+50 TO 566+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090503_xs_cr.dgn PLOT DATE : 30-APR-2013 02:25 PLOT BY : MSCDYB PLOT NAME : 090503_xs_cr8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGES 3 AND 4

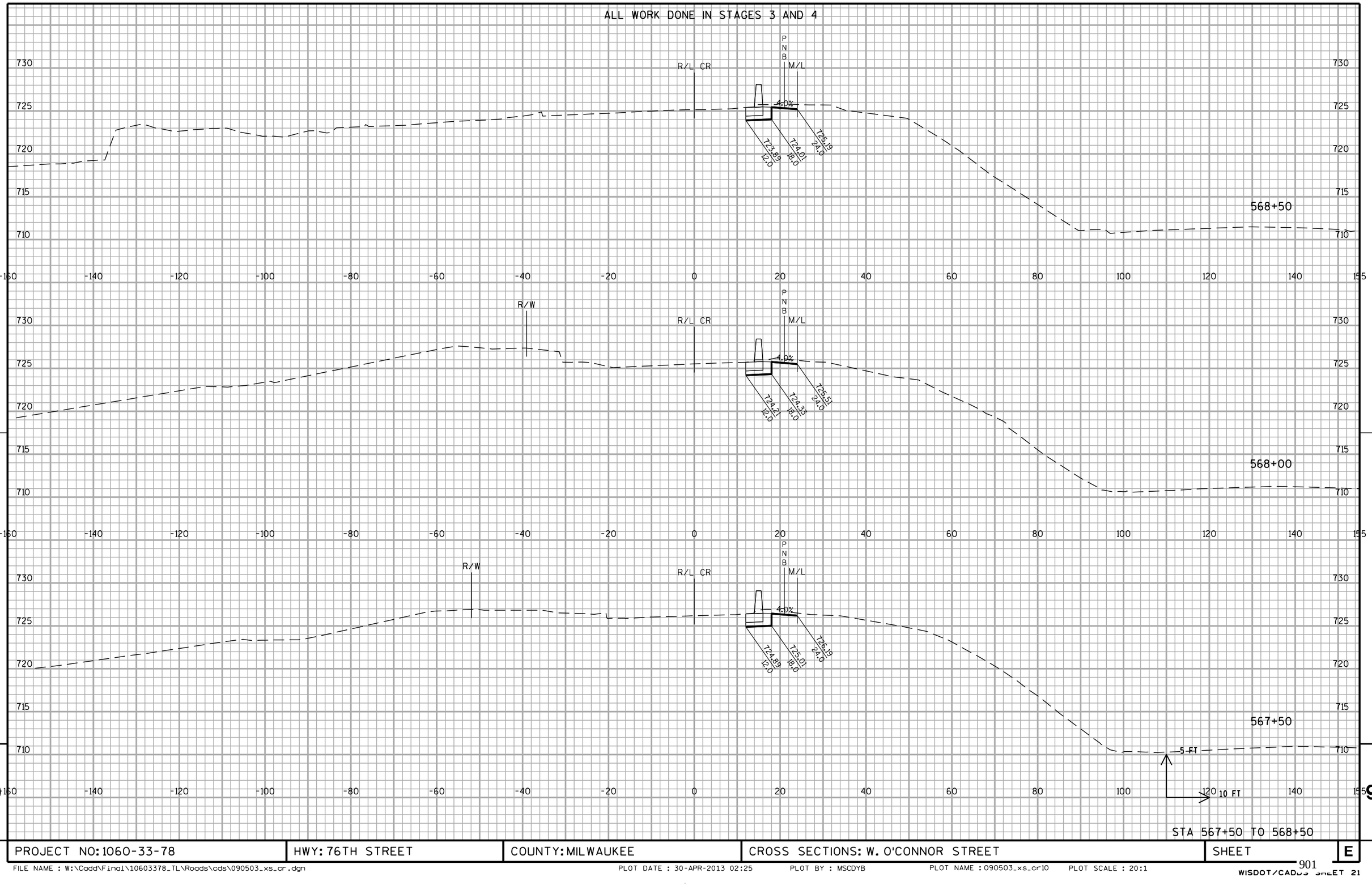


STA 566+50 TO 567+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090503_xs_cr.dgn PLOT DATE : 30-APR-2013 02:25 PLOT BY : MSCDYB PLOT NAME : 090503_xs_cr9 PLOT SCALE : 20:1

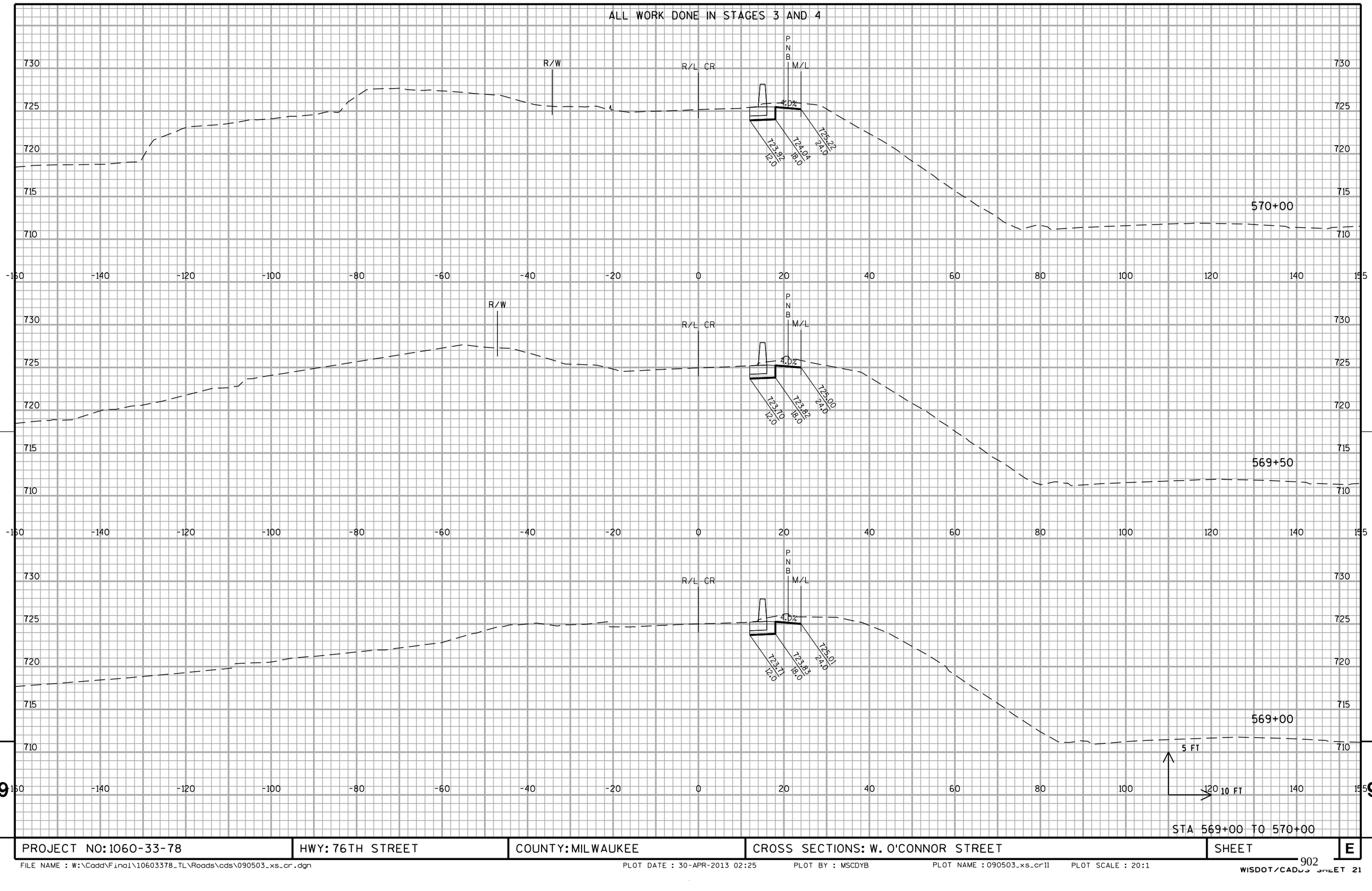
ALL WORK DONE IN STAGES 3 AND 4



STA 567+50 TO 568+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

ALL WORK DONE IN STAGES 3 AND 4

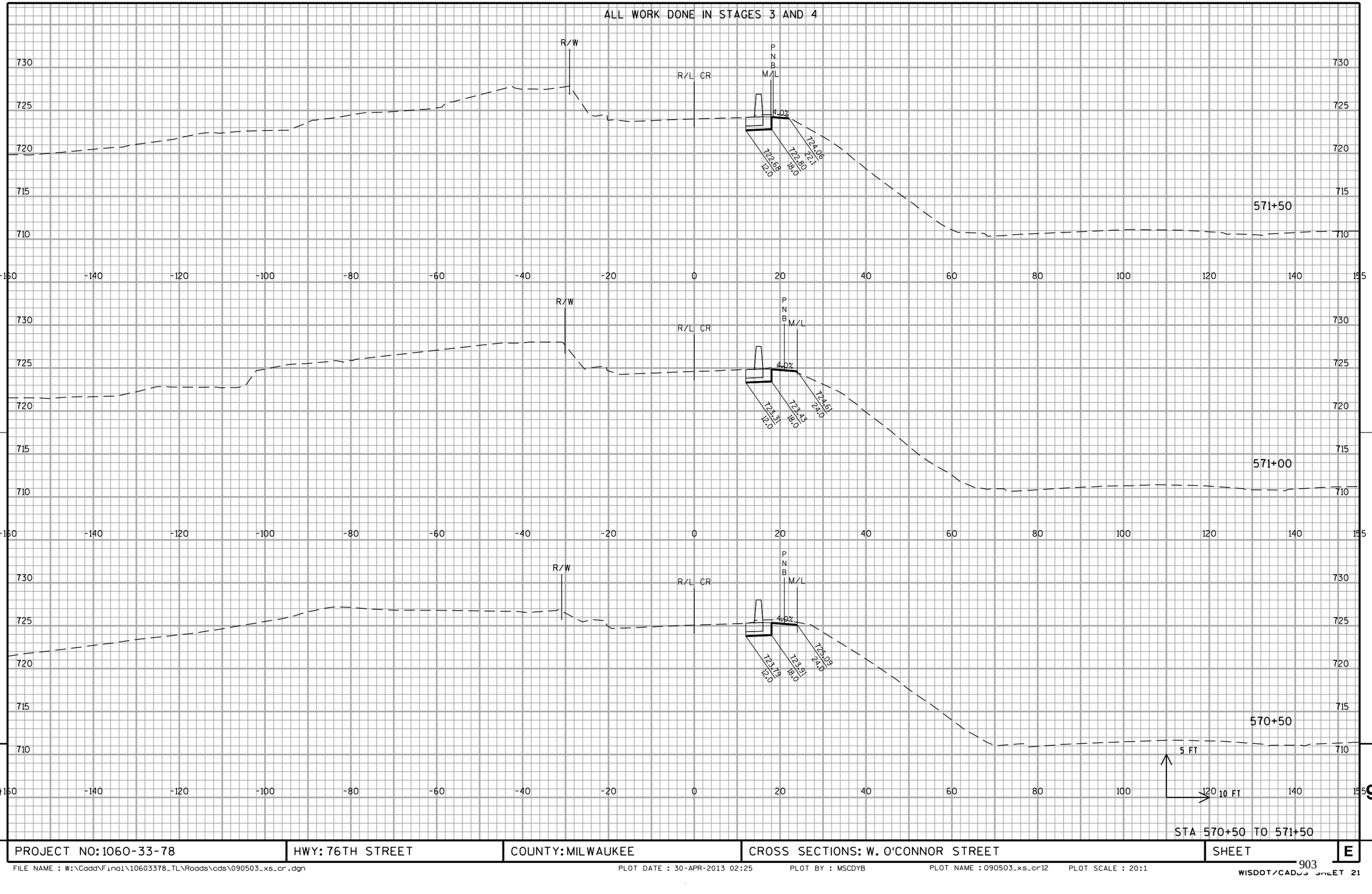


STA 569+00 TO 570+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

9 9

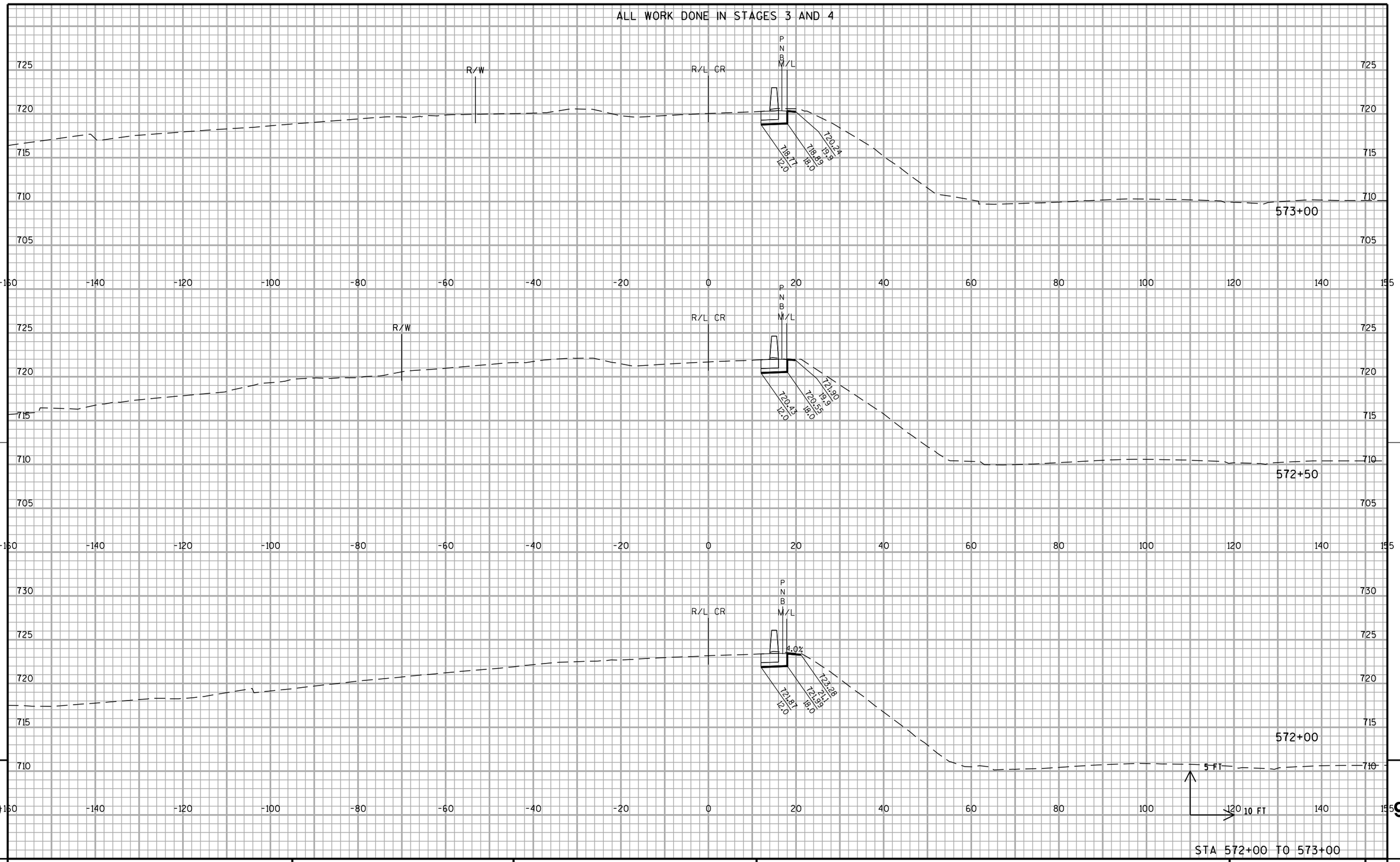
ALL WORK DONE IN STAGES 3 AND 4



STA 570+50 TO 571+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

ALL WORK DONE IN STAGES 3 AND 4

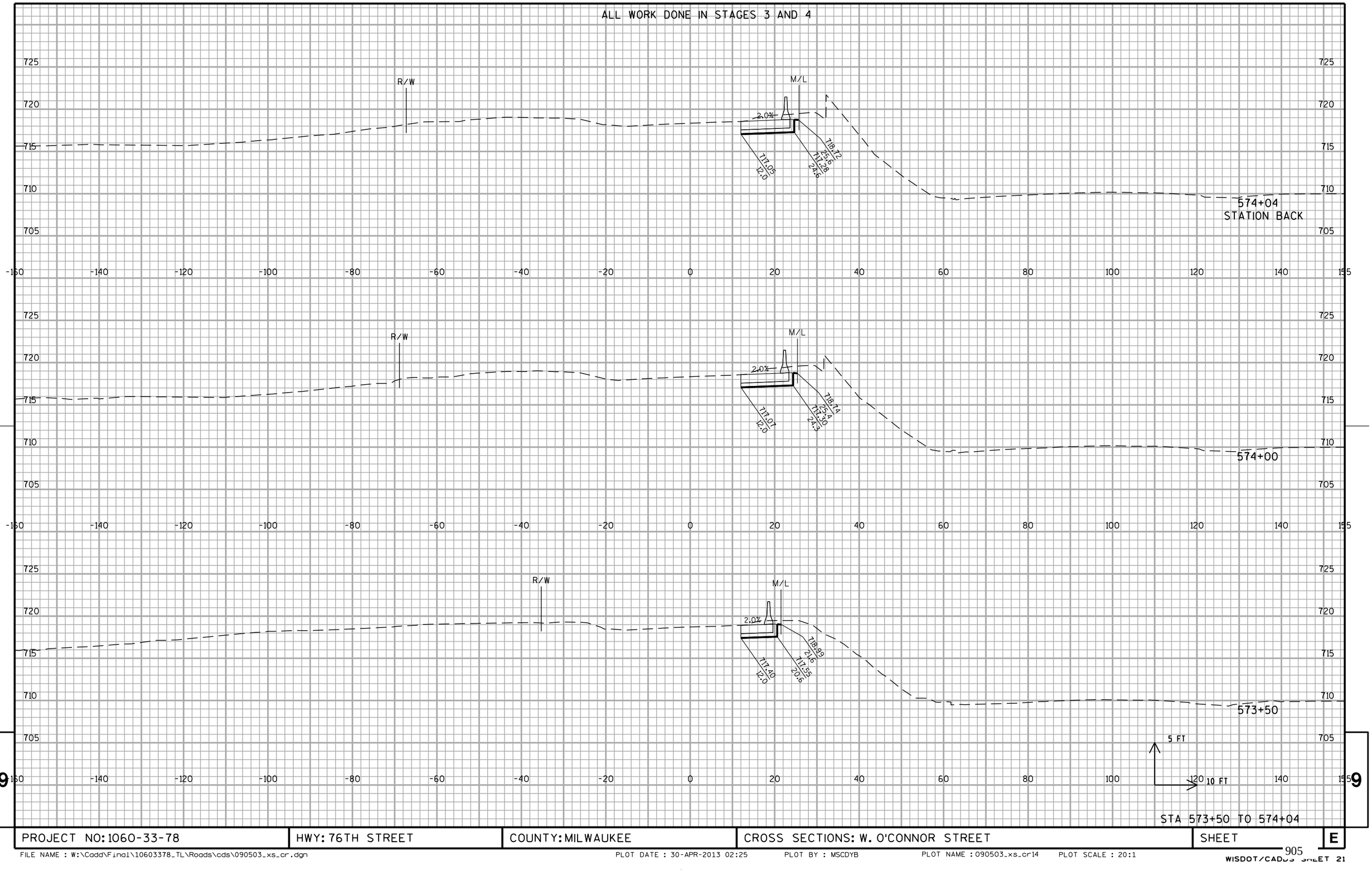


STA 572+00 TO 573+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

9 9

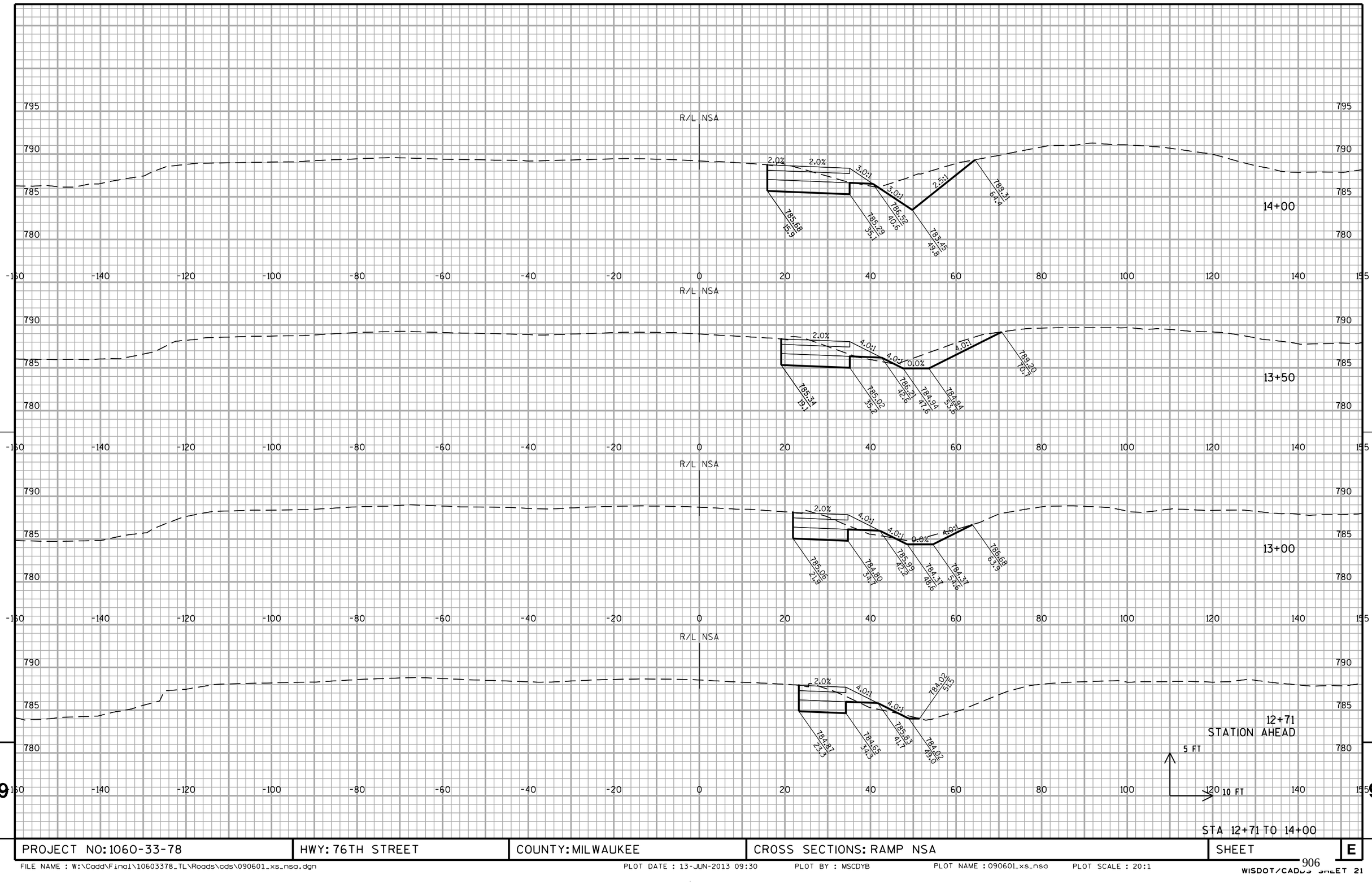
ALL WORK DONE IN STAGES 3 AND 4



STA 573+50 TO 574+04

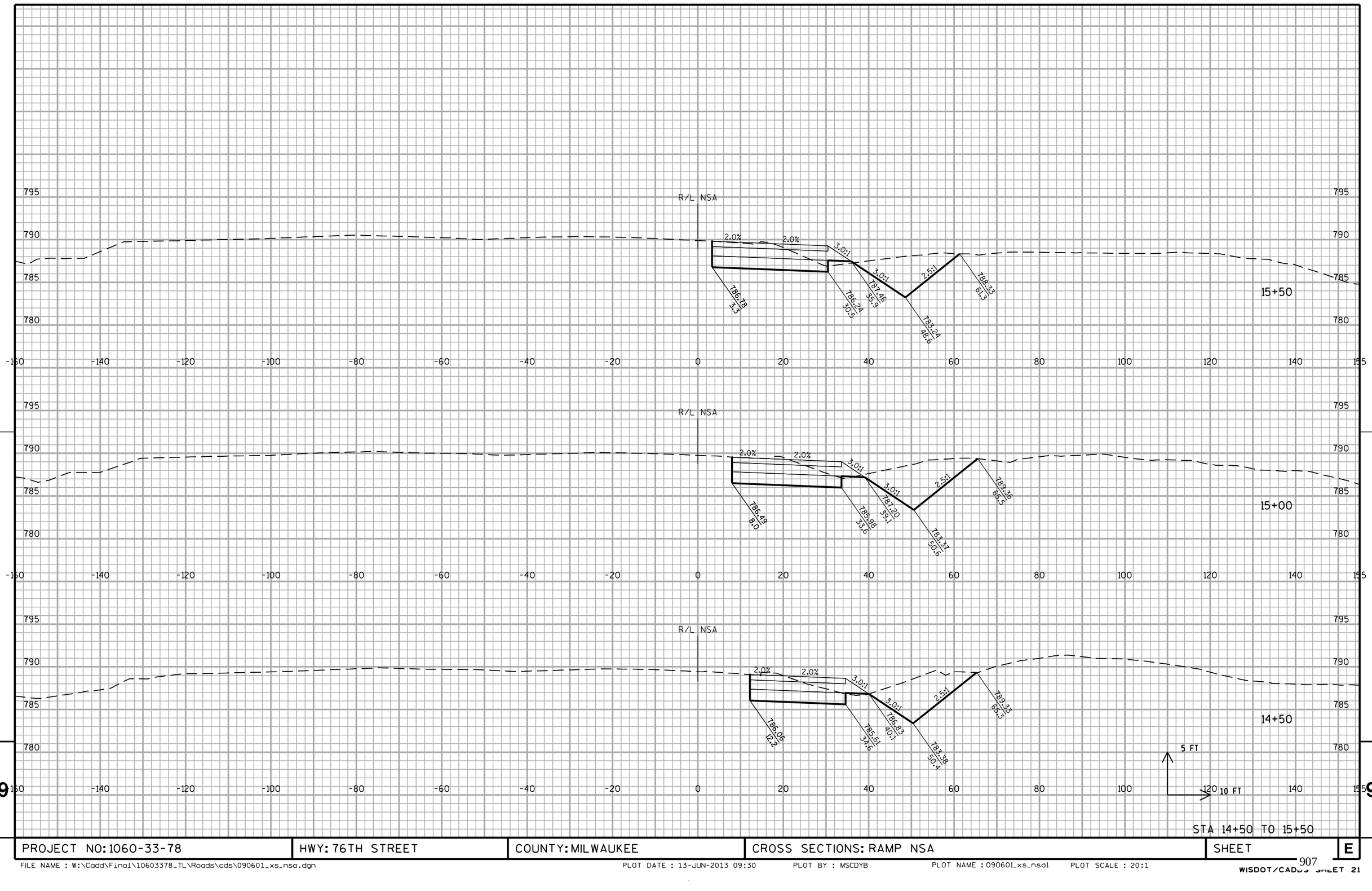
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: W. O'CONNOR STREET	SHEET	E

9 9

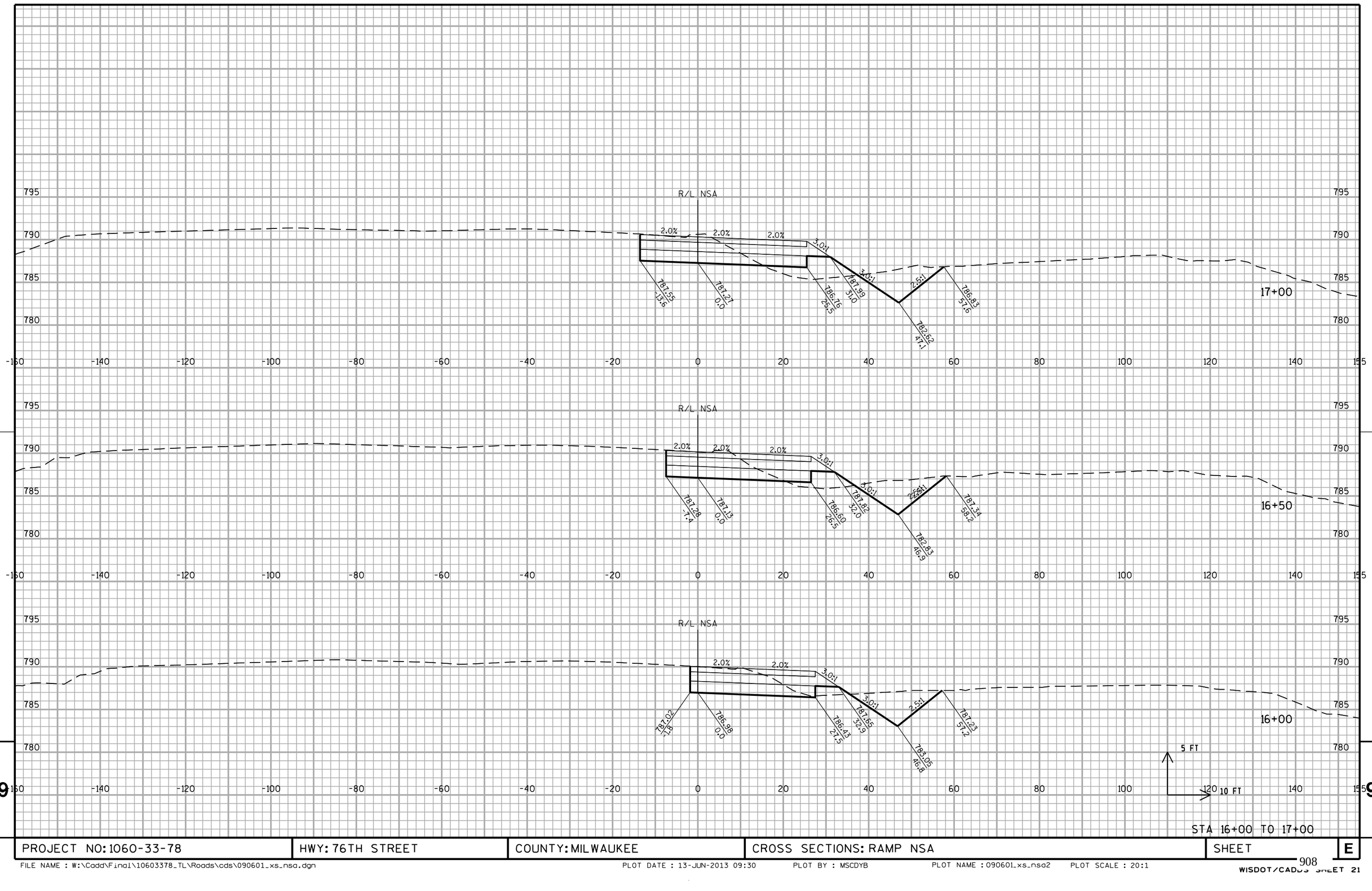


PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa PLOT SCALE : 20:1



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E



9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

STA 16+00 TO 17+00

9

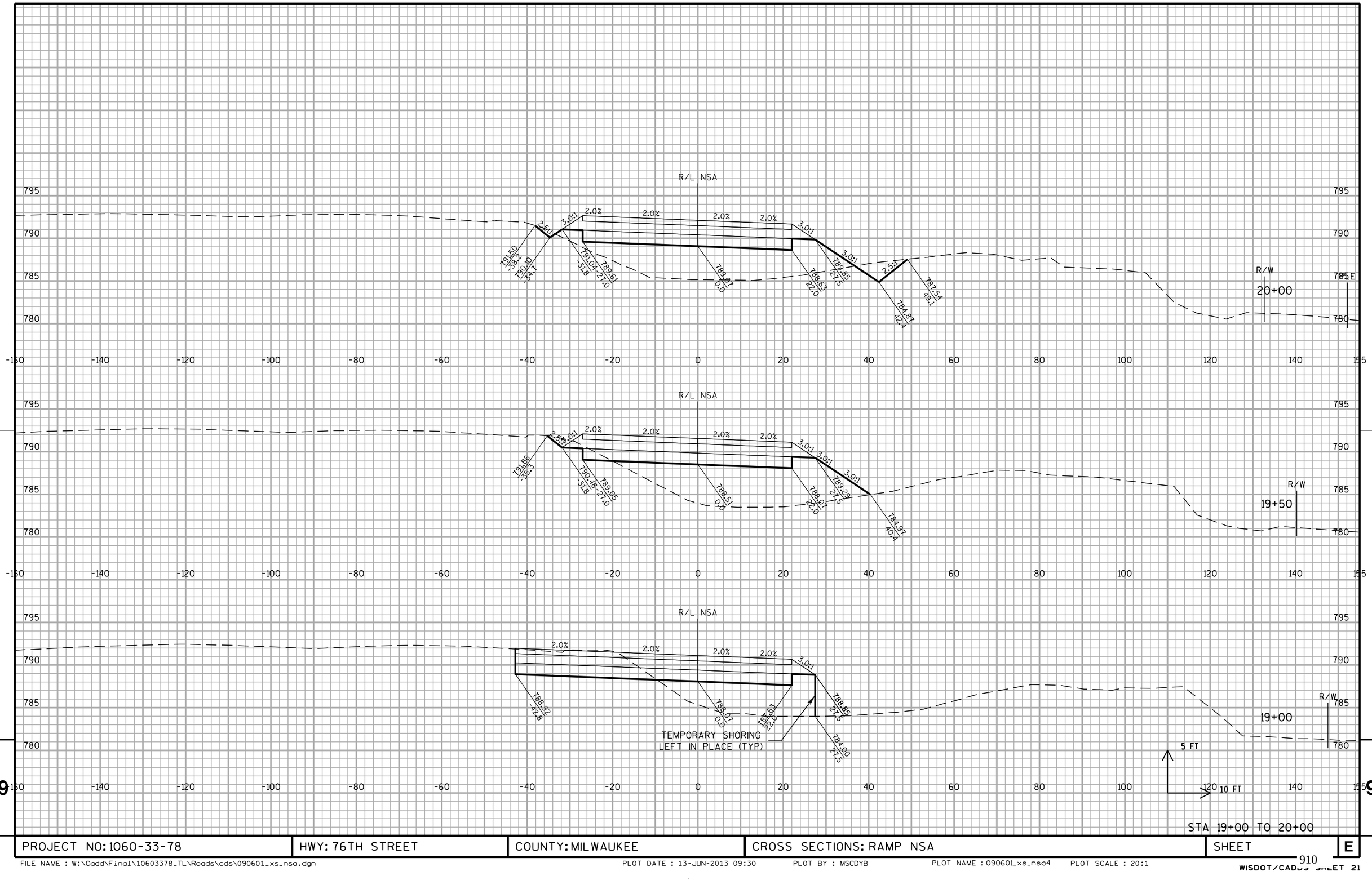
FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa2 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

STA 17+50 TO 18+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

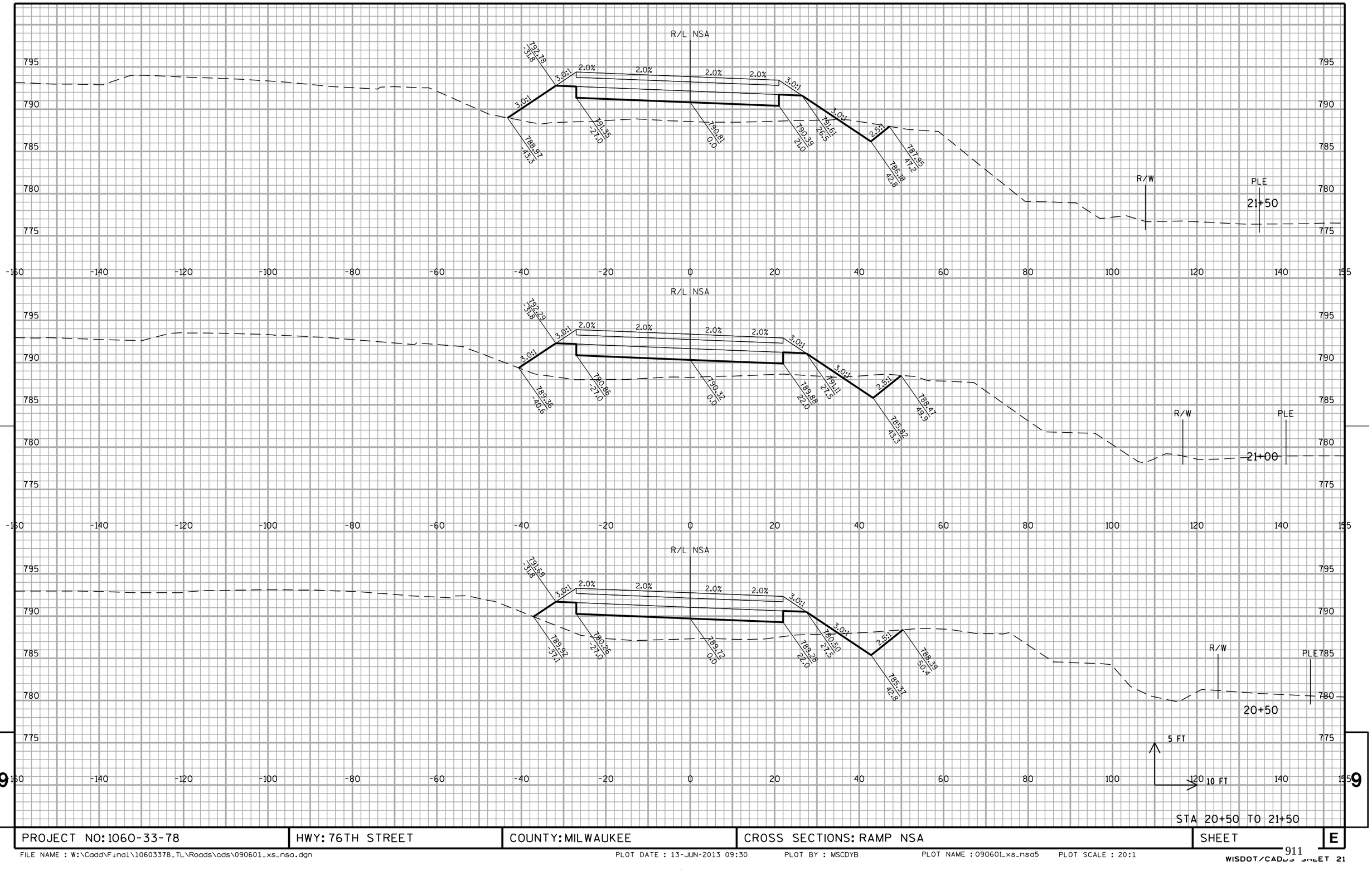
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WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa4 PLOT SCALE : 20:1



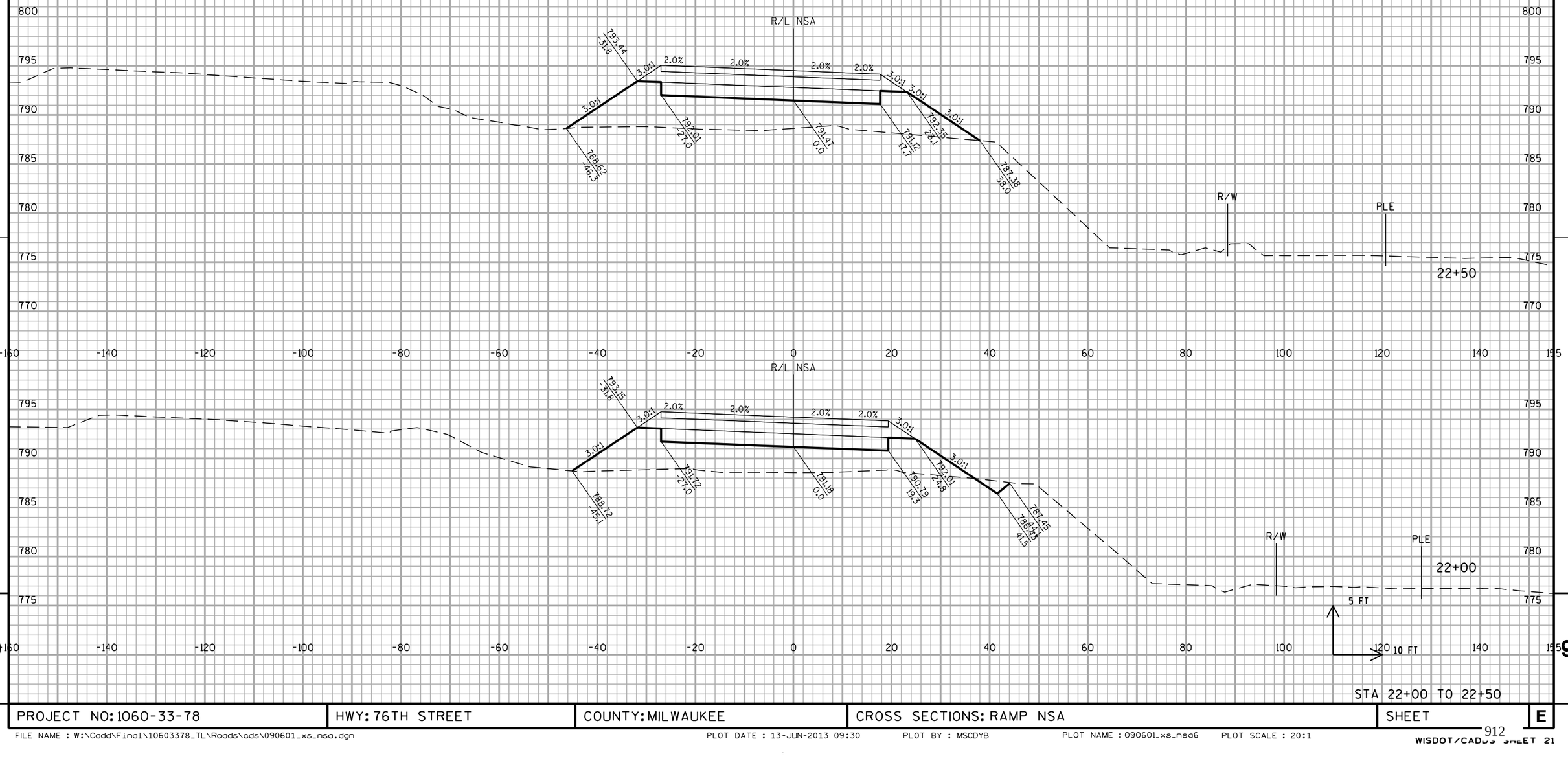
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

STA 20+50 TO 21+50

9

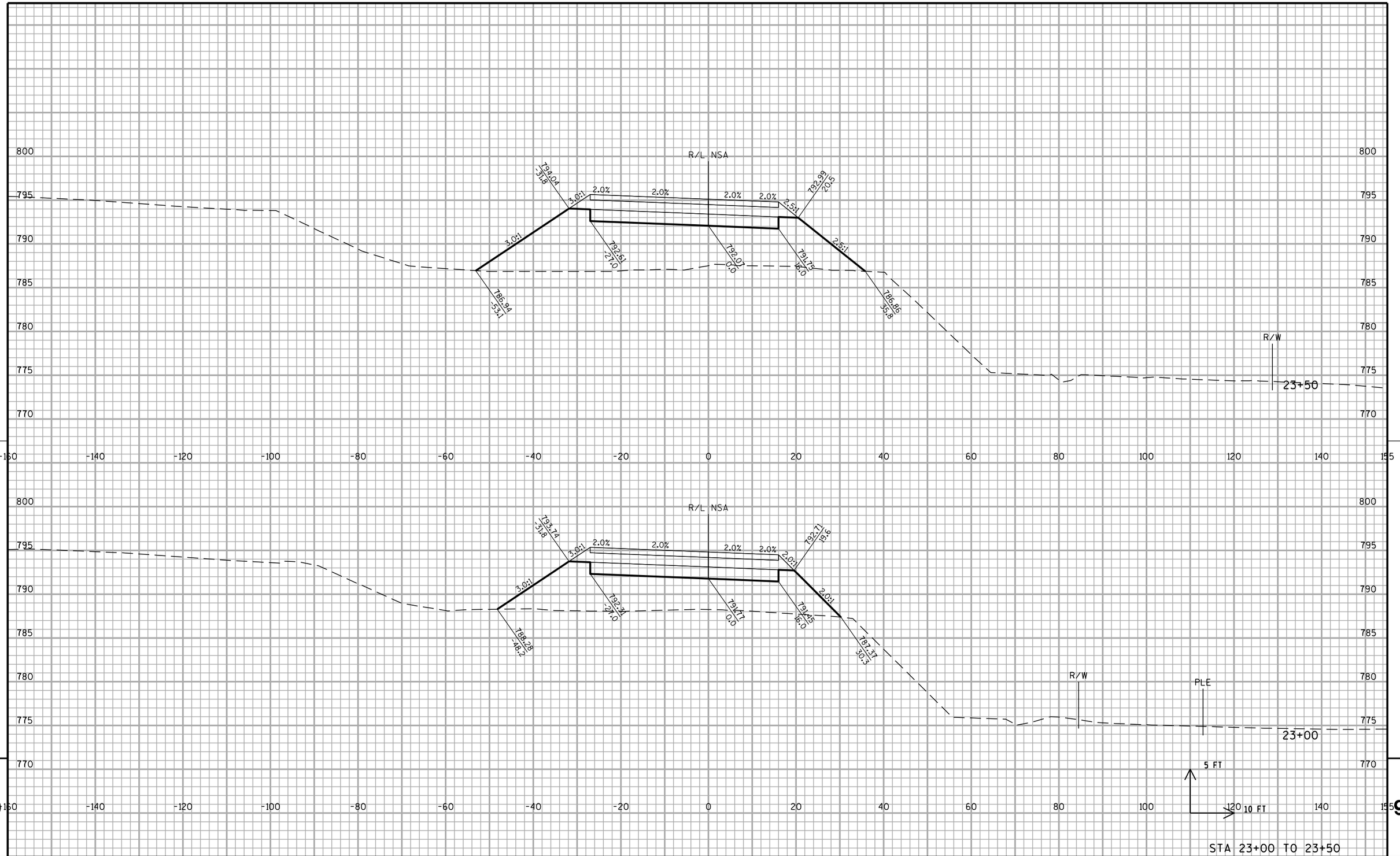
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9 9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

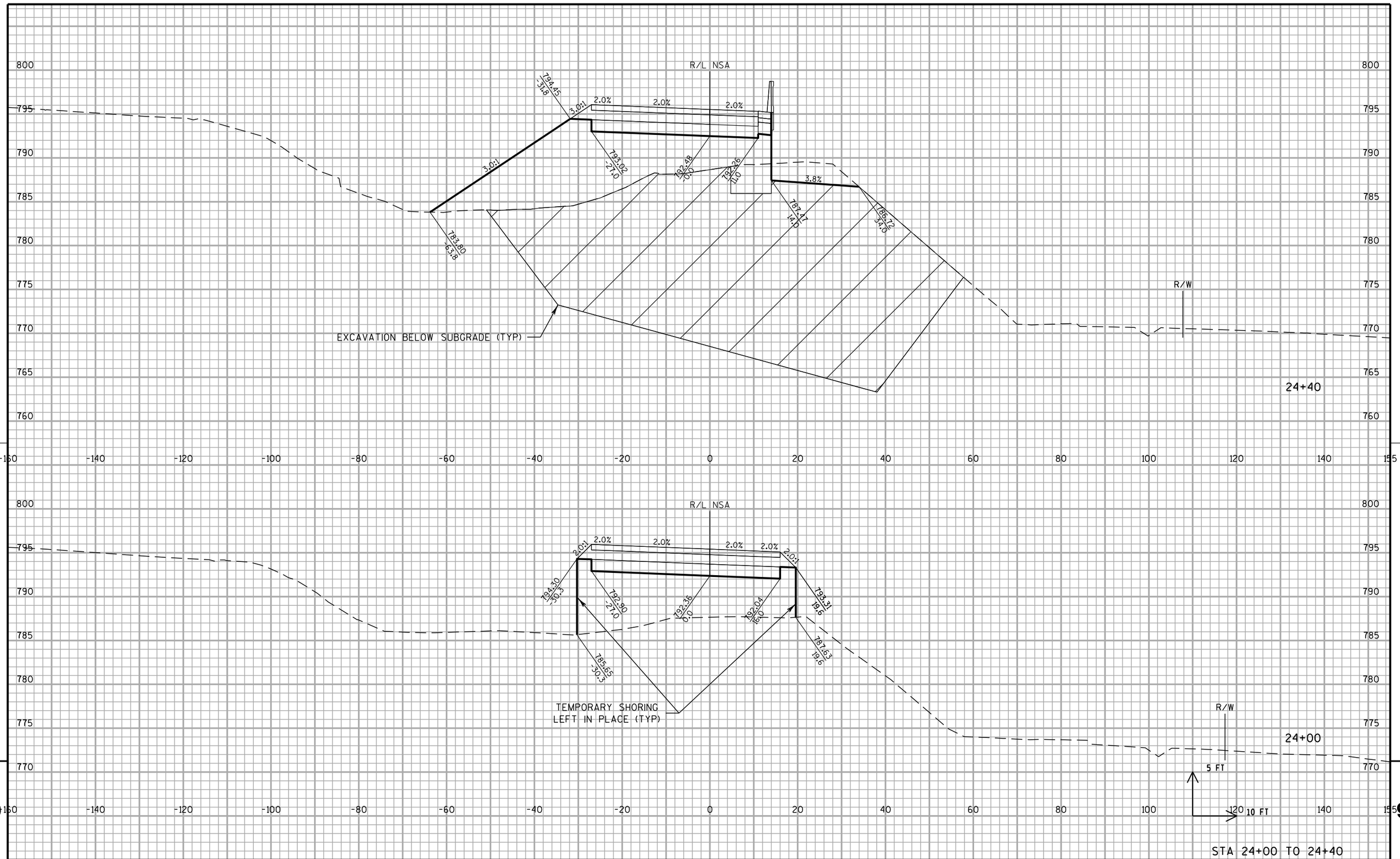
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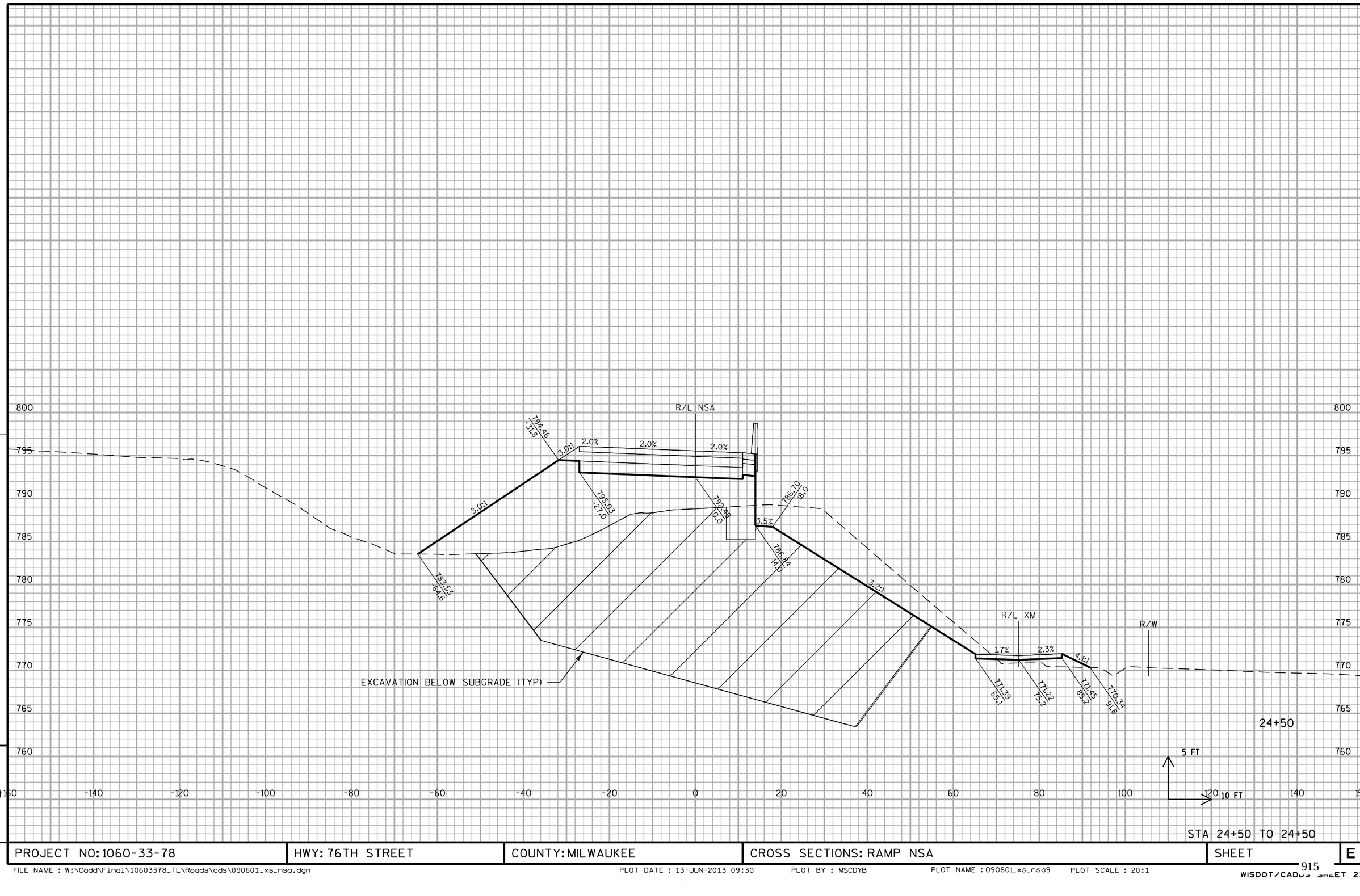
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

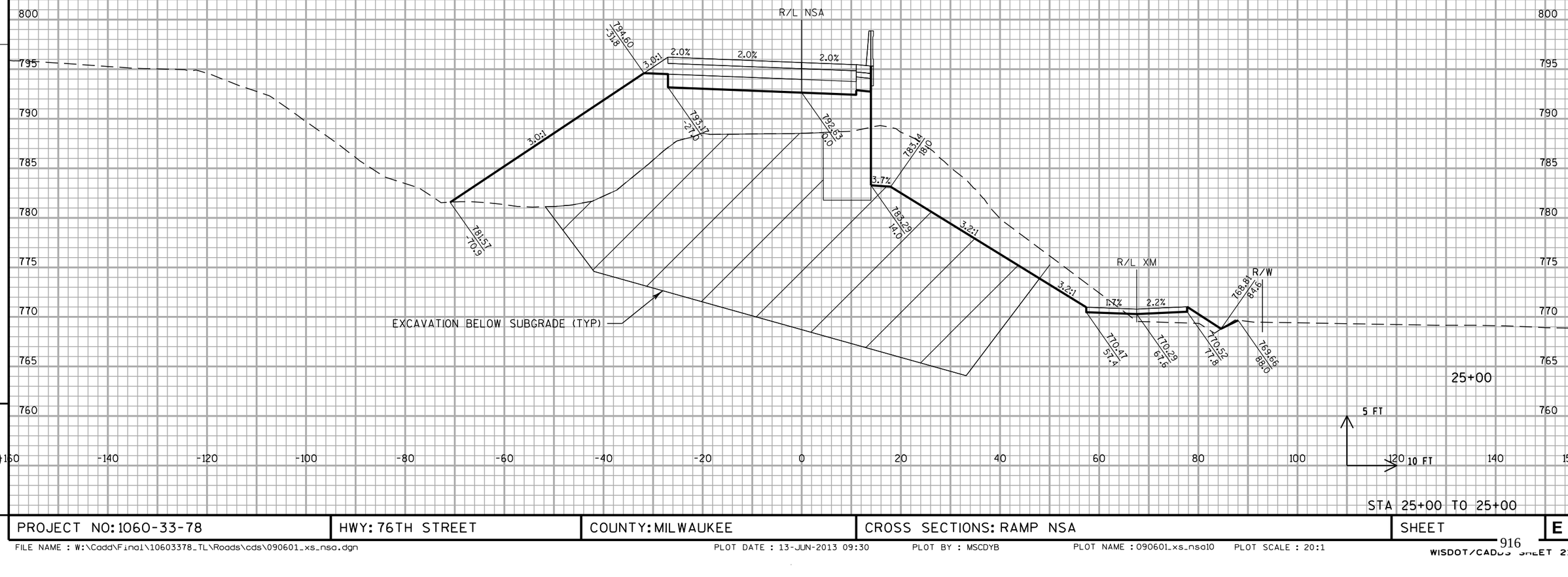


STA 24+50 TO 24+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

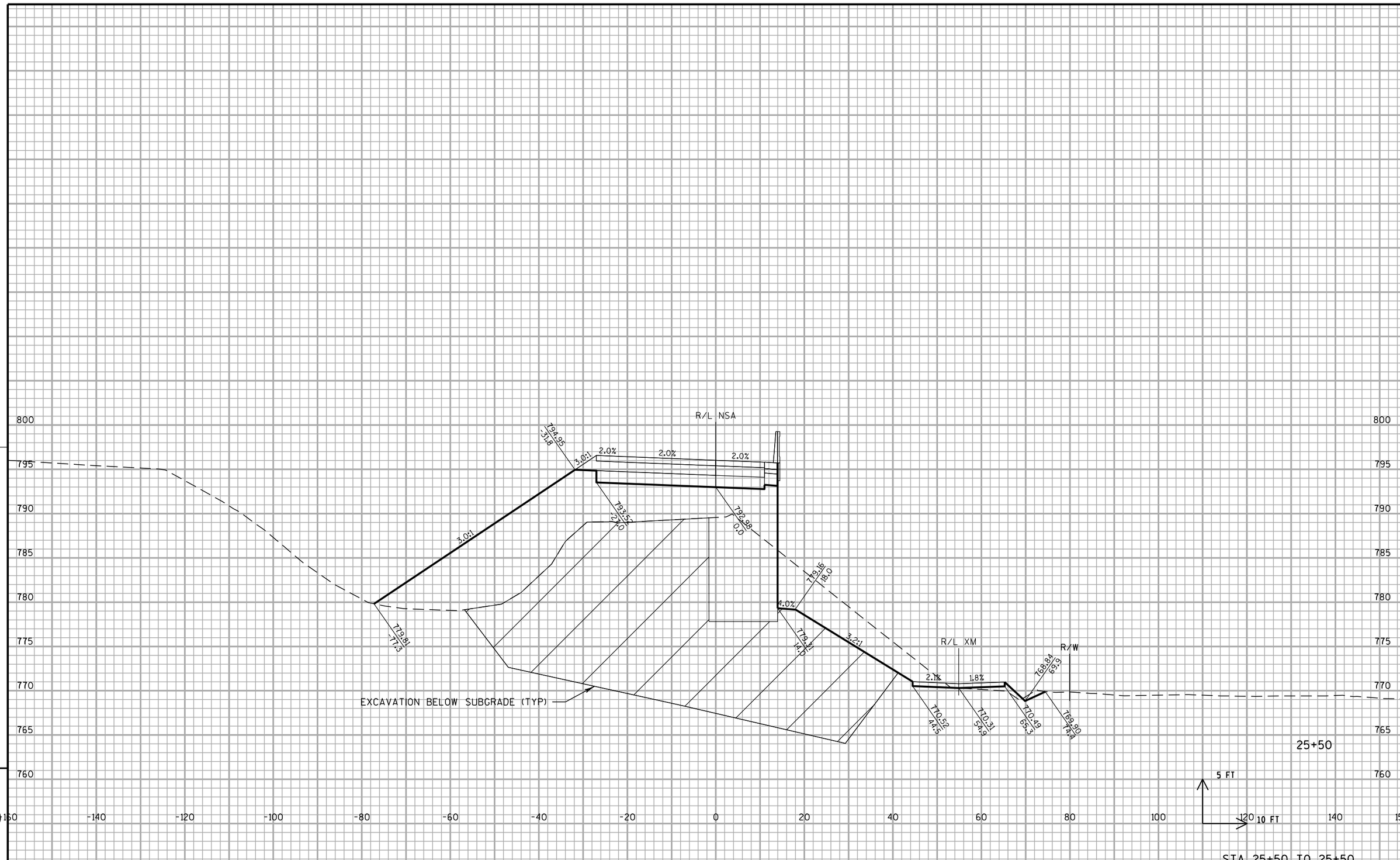
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WISDOT/CADDS SHEET 21



STA 25+00 TO 25+00

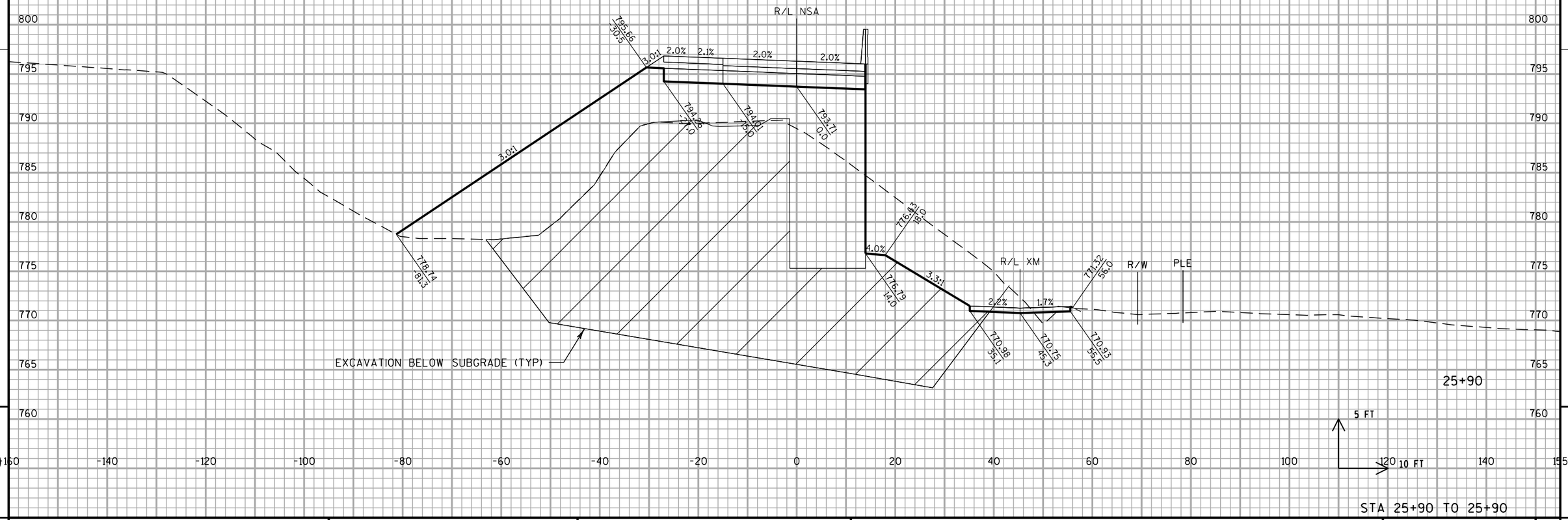
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E



STA 25+50 TO 25+50

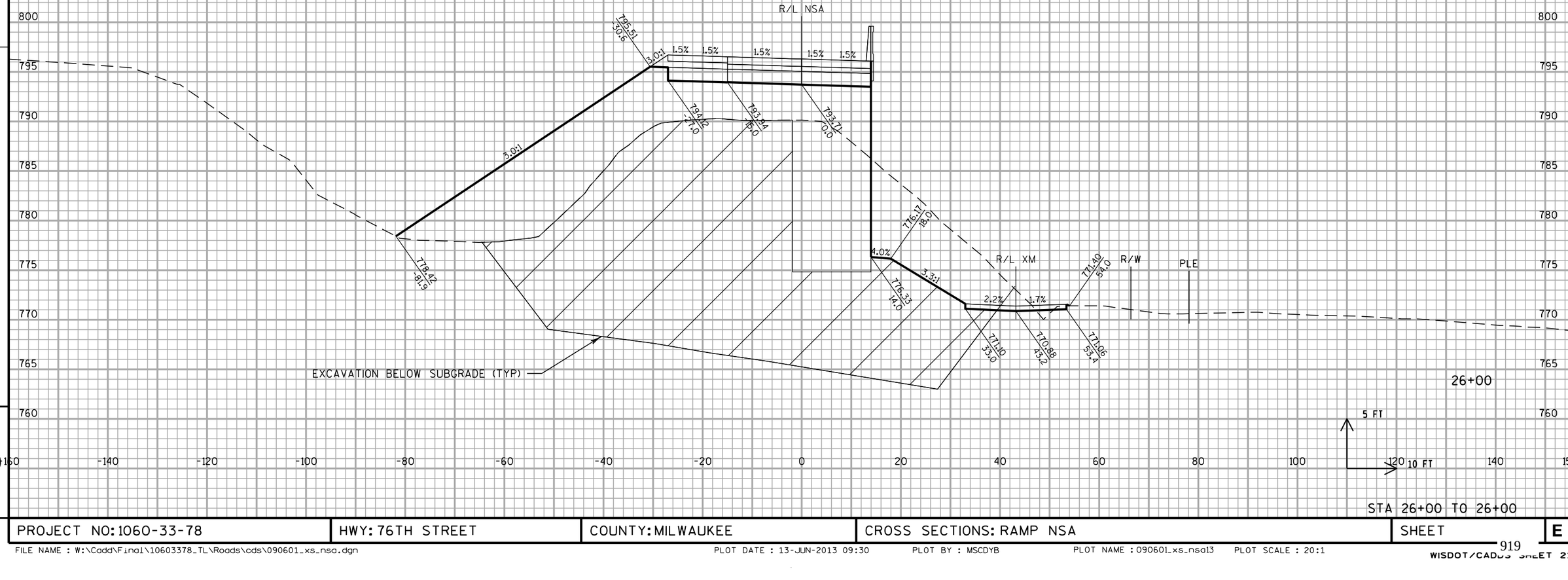
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa11 PLOT SCALE : 20:1



STA 25+90 TO 25+90

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

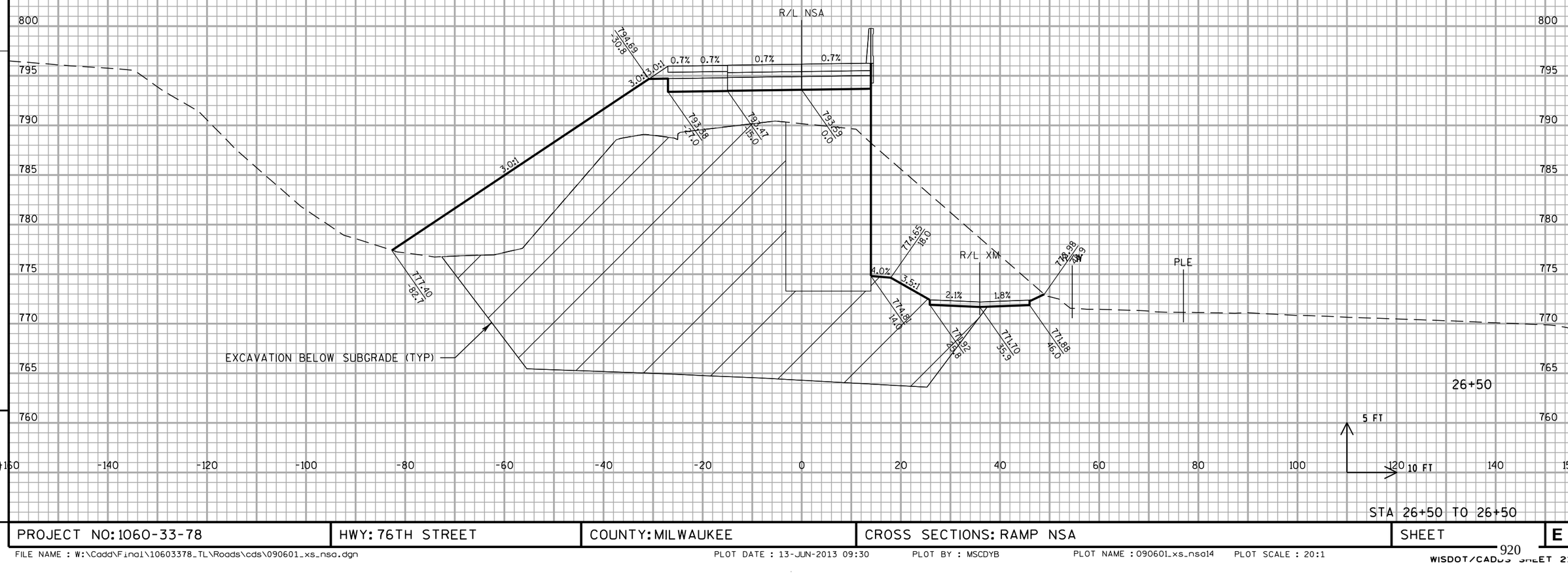


STA 26+00 TO 26+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa13 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

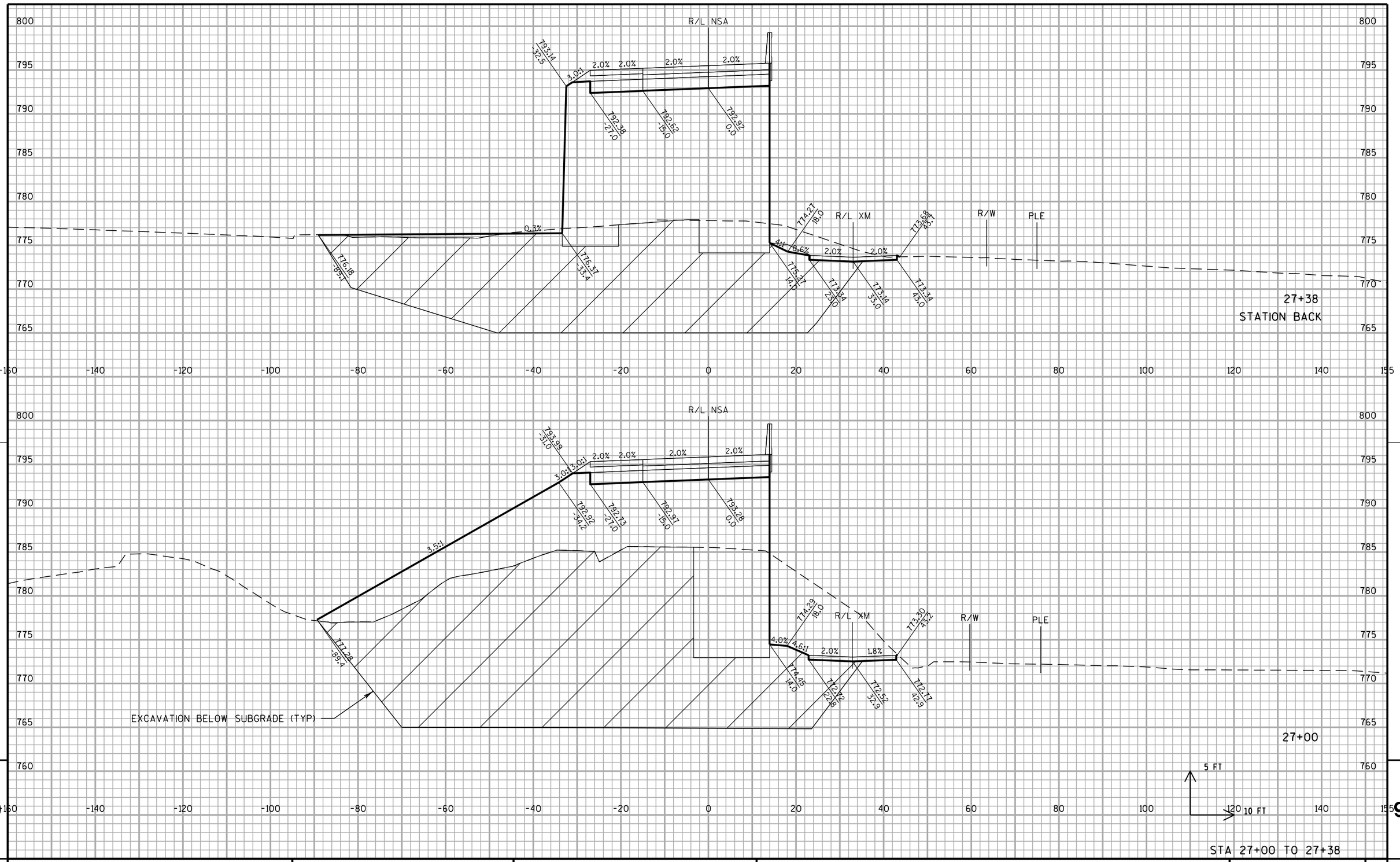


STA 26+50 TO 26+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa14 PLOT SCALE : 20:1

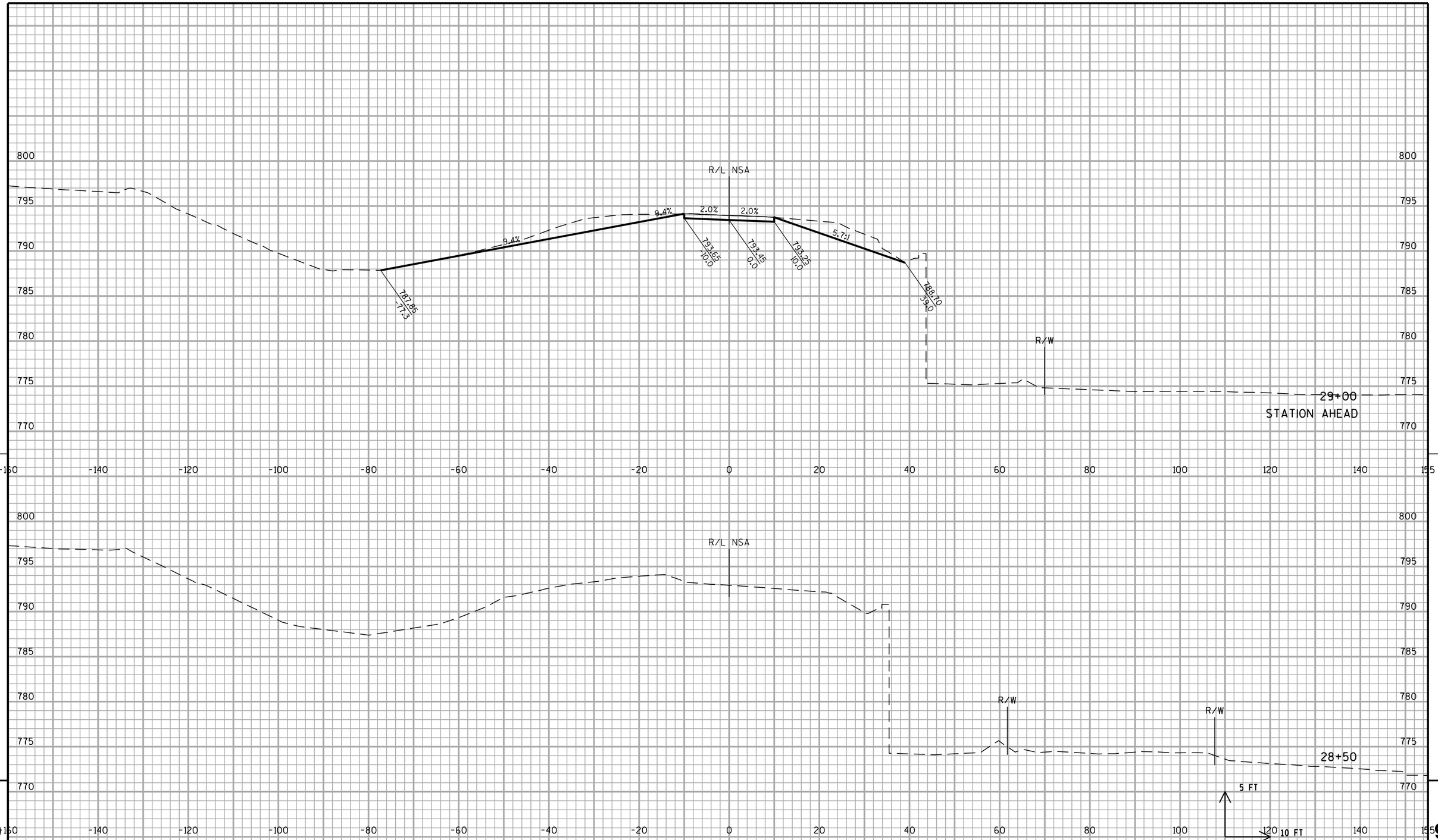
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa15 PLOT SCALE : 20:1

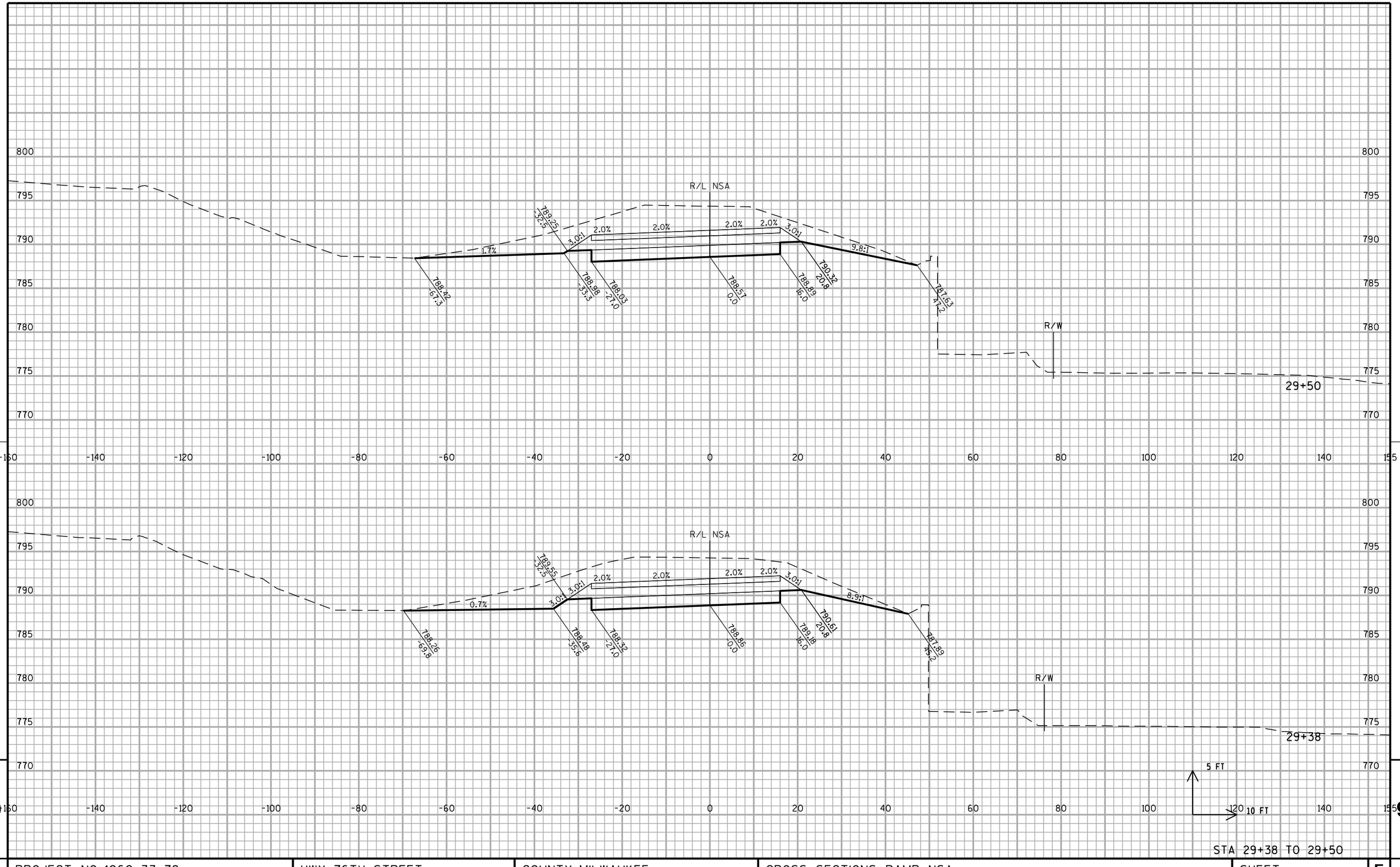
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa16 PLOT SCALE : 20:1

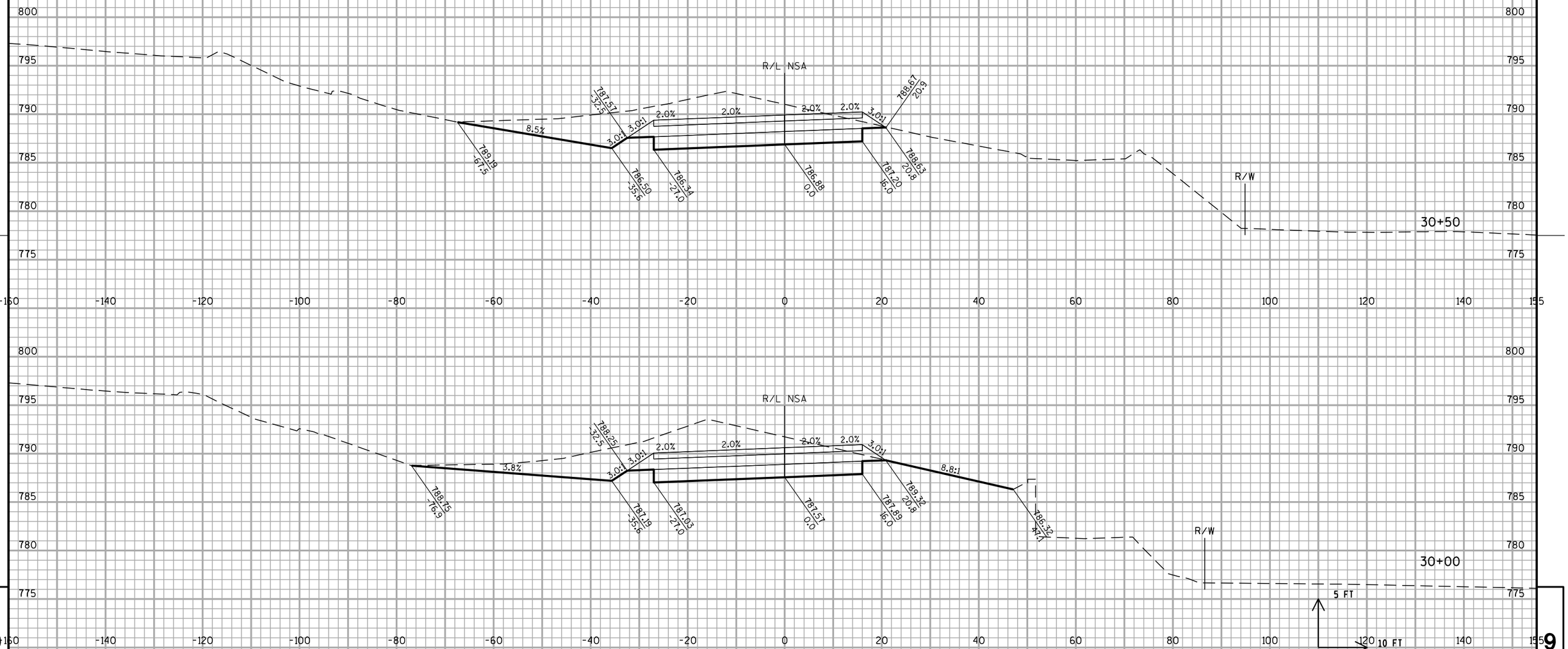
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa17 PLOT SCALE : 20:1

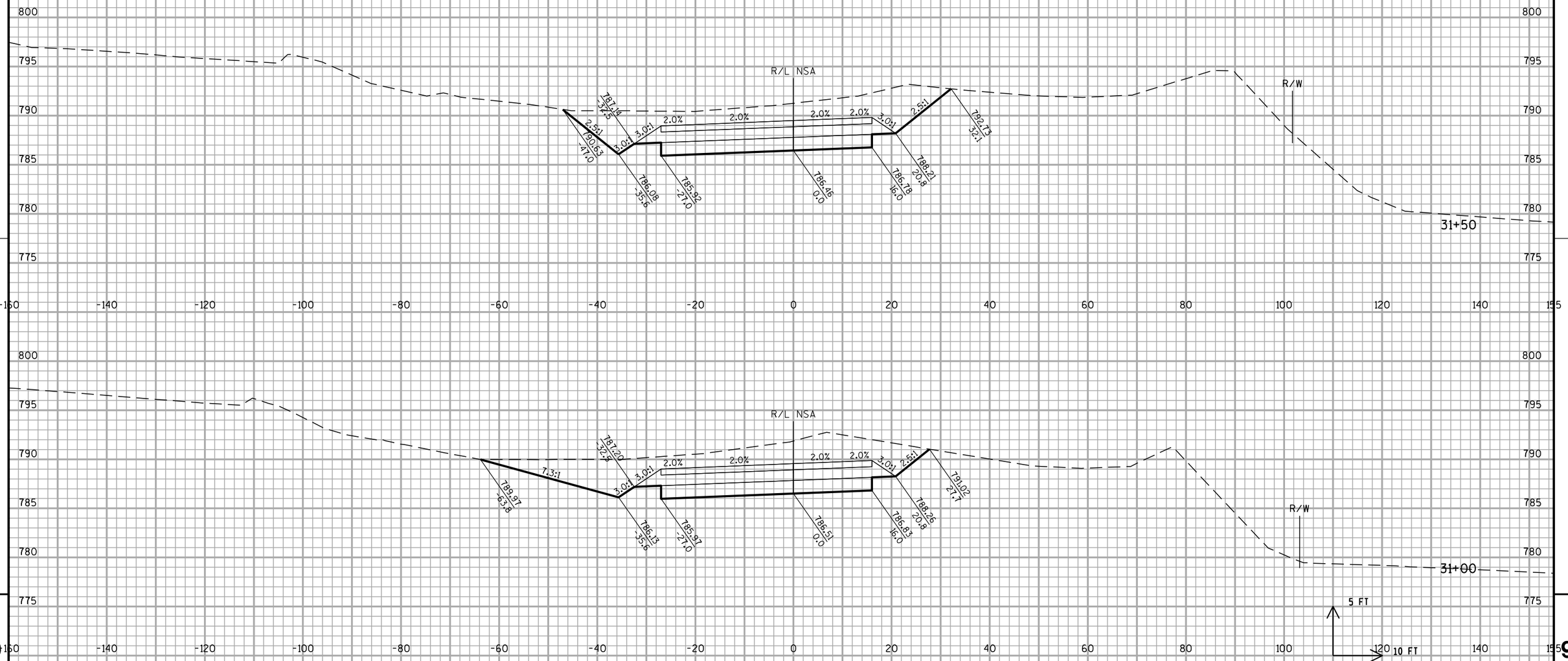
WISDOT/CADDS SHEET 21



STA 30+00 TO 30+50

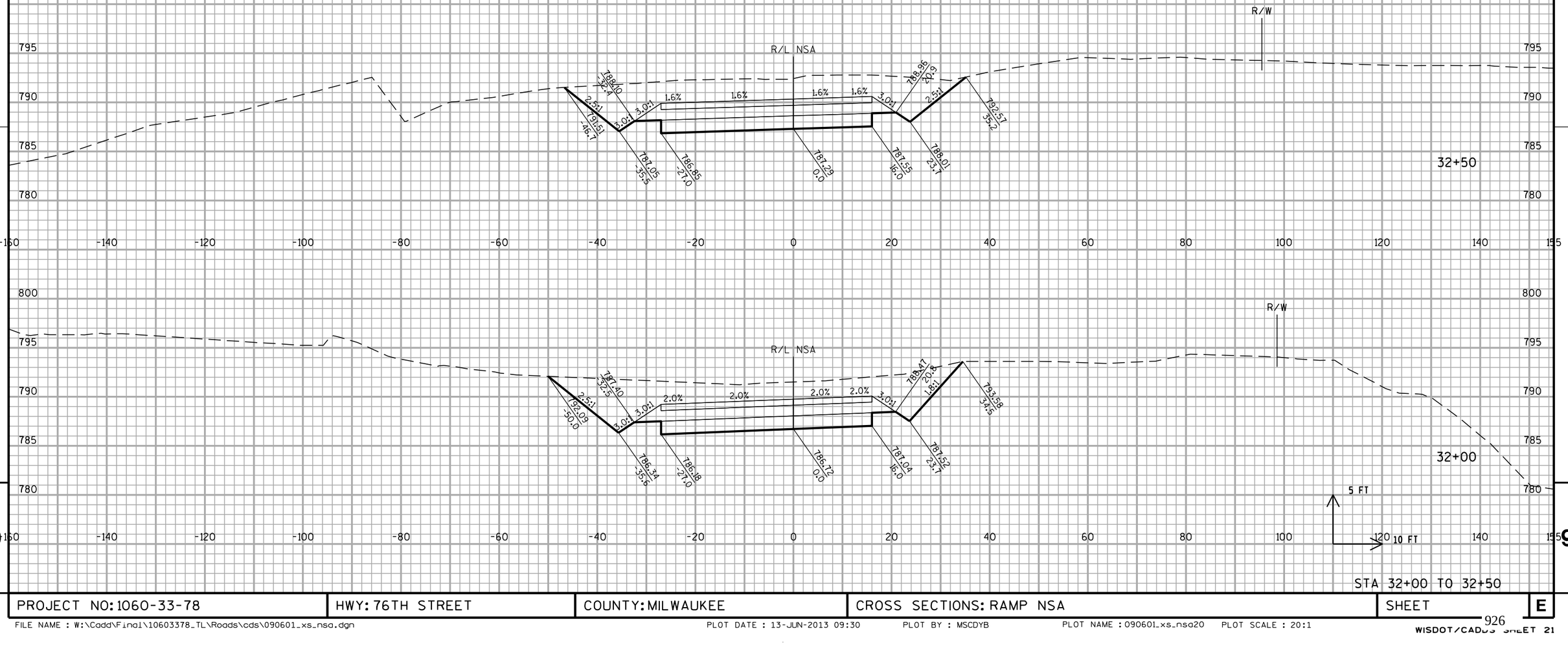
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa18 PLOT SCALE : 20:1



STA 31+00 TO 31+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

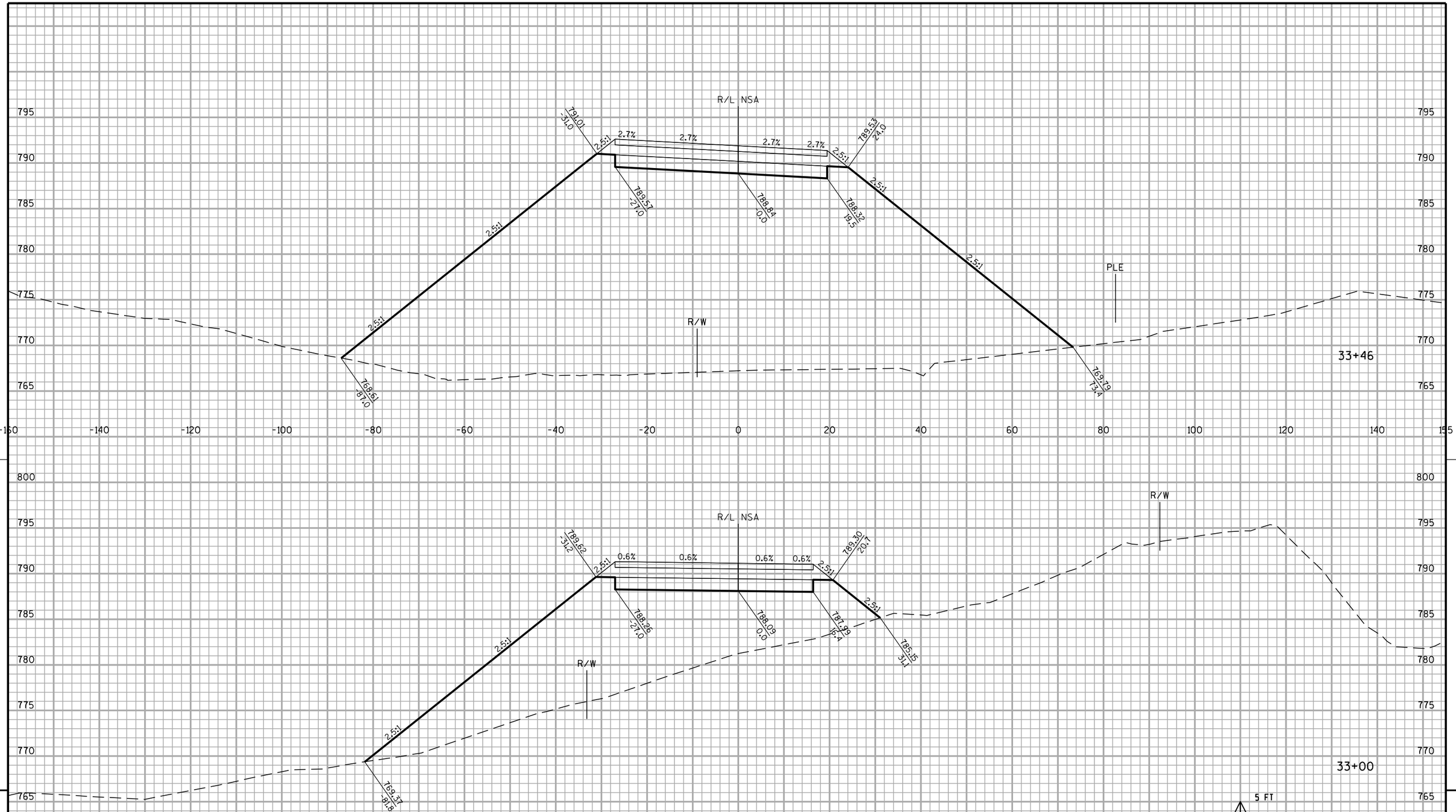


STA 32+00 TO 32+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

9 9

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa20 PLOT SCALE : 20:1

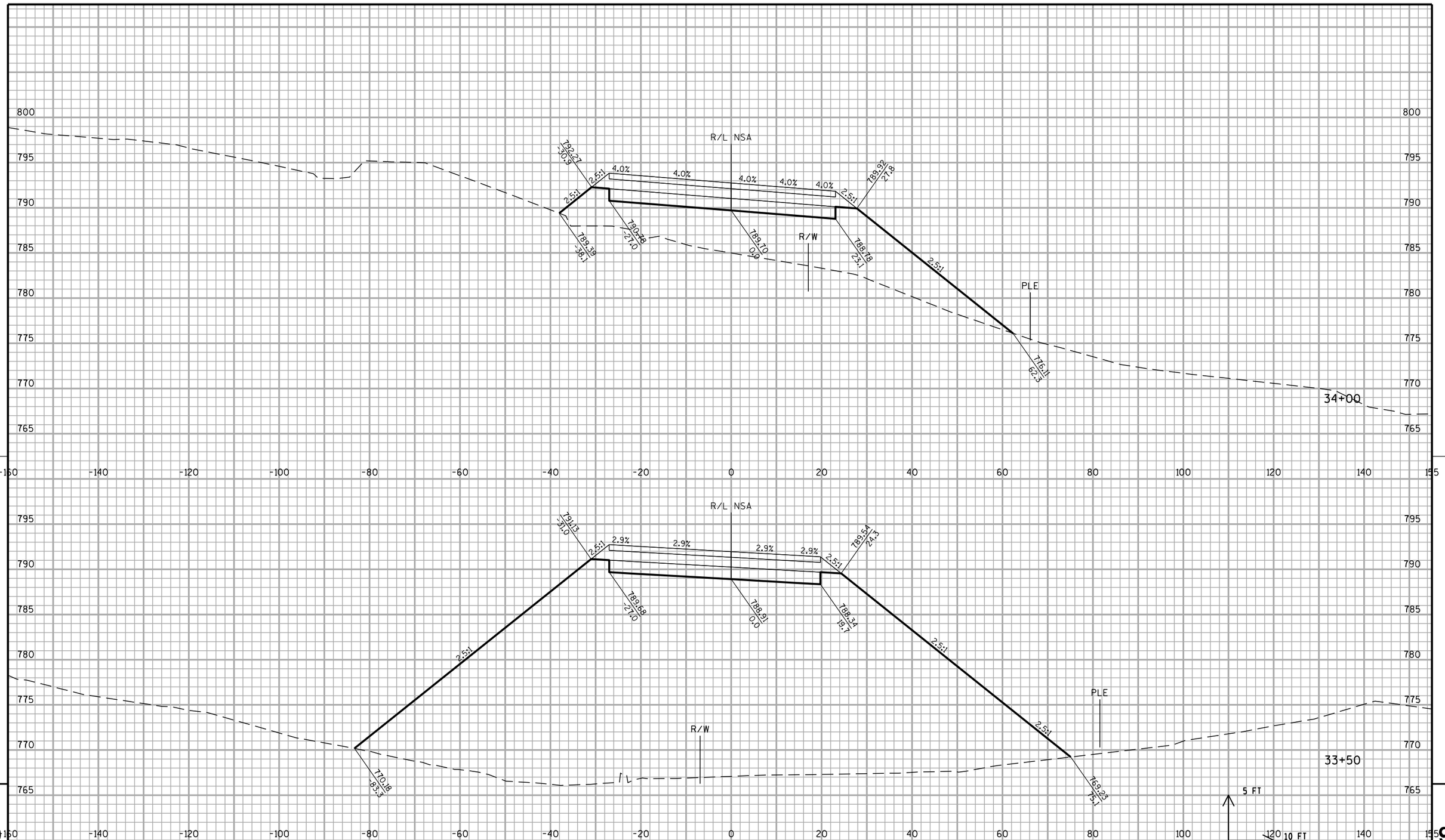


STA 33+00 TO 33+46

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

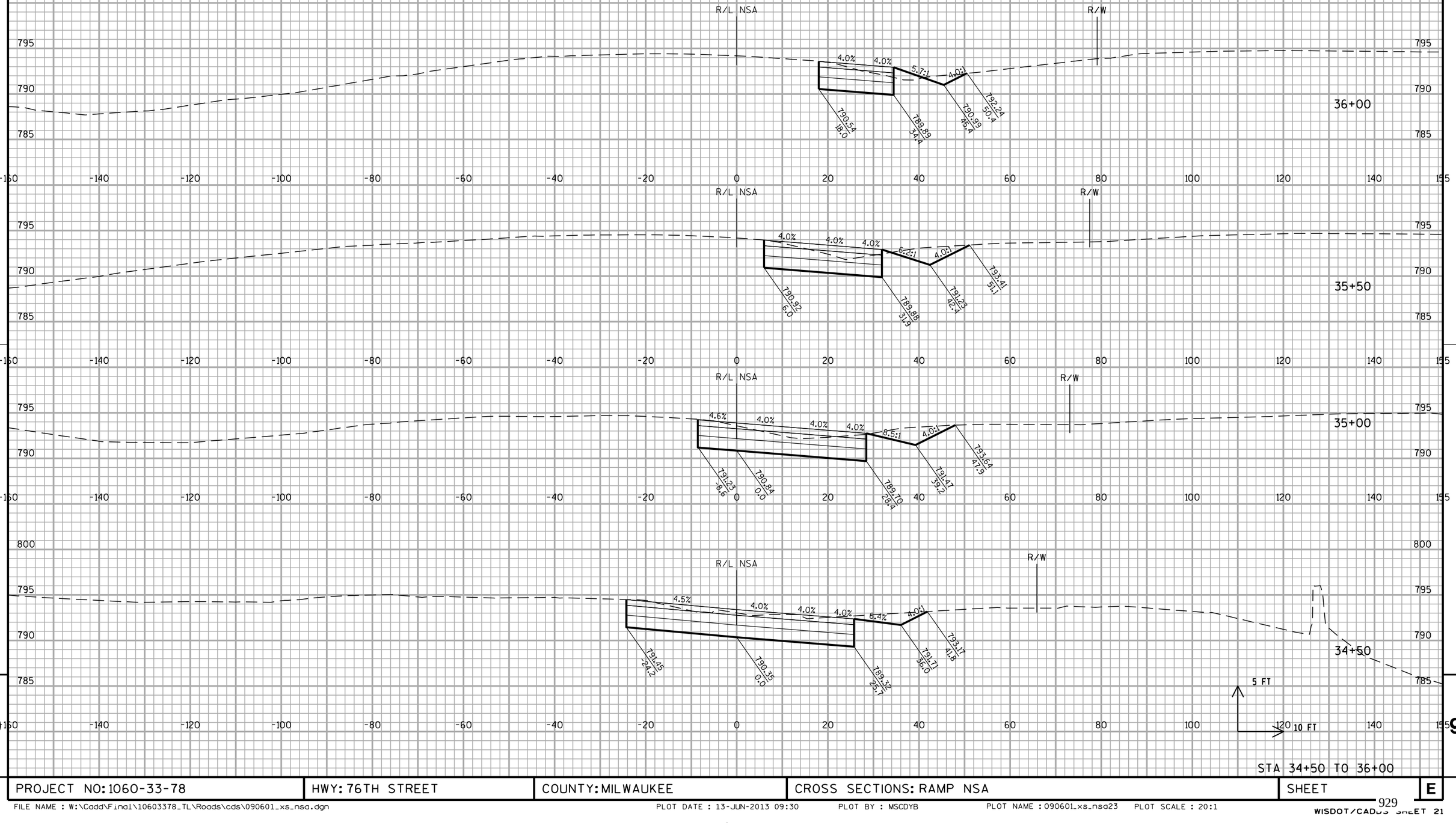
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WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

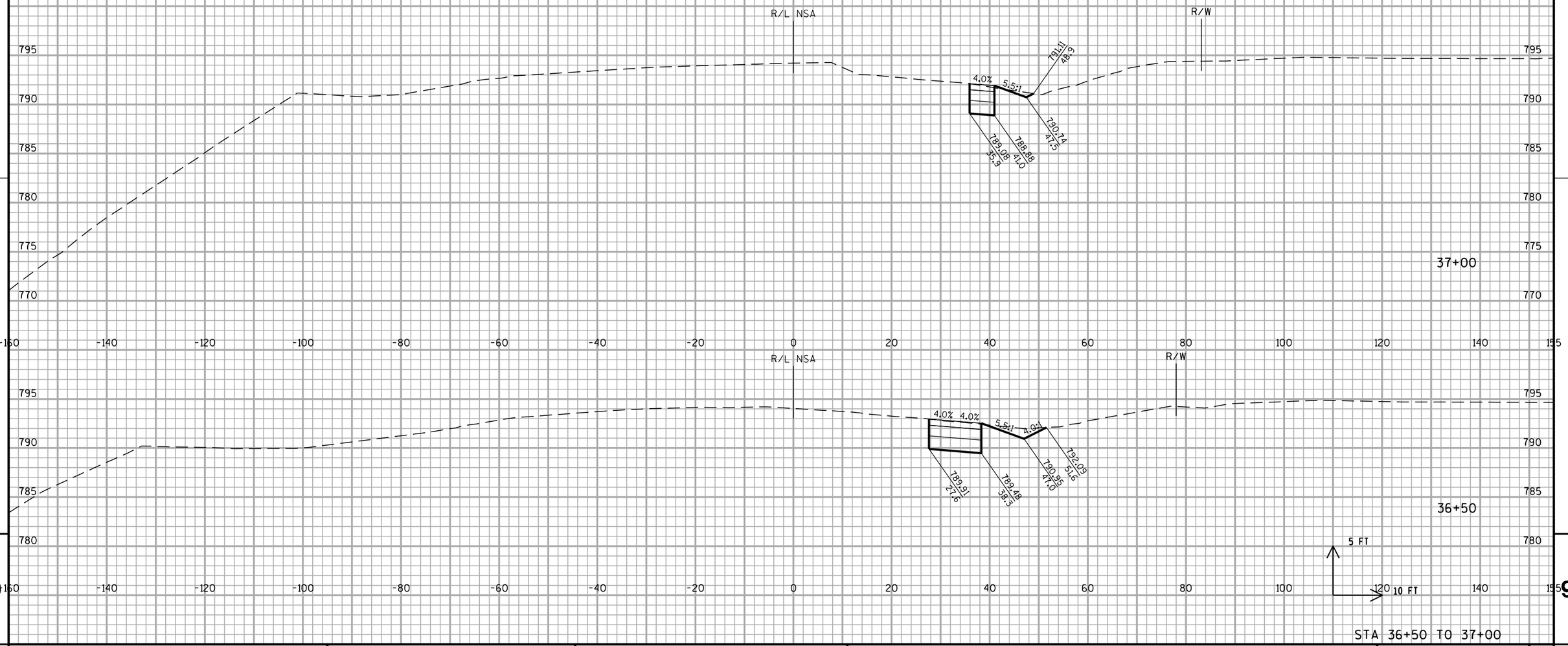
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STA 34+50 TO 36+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

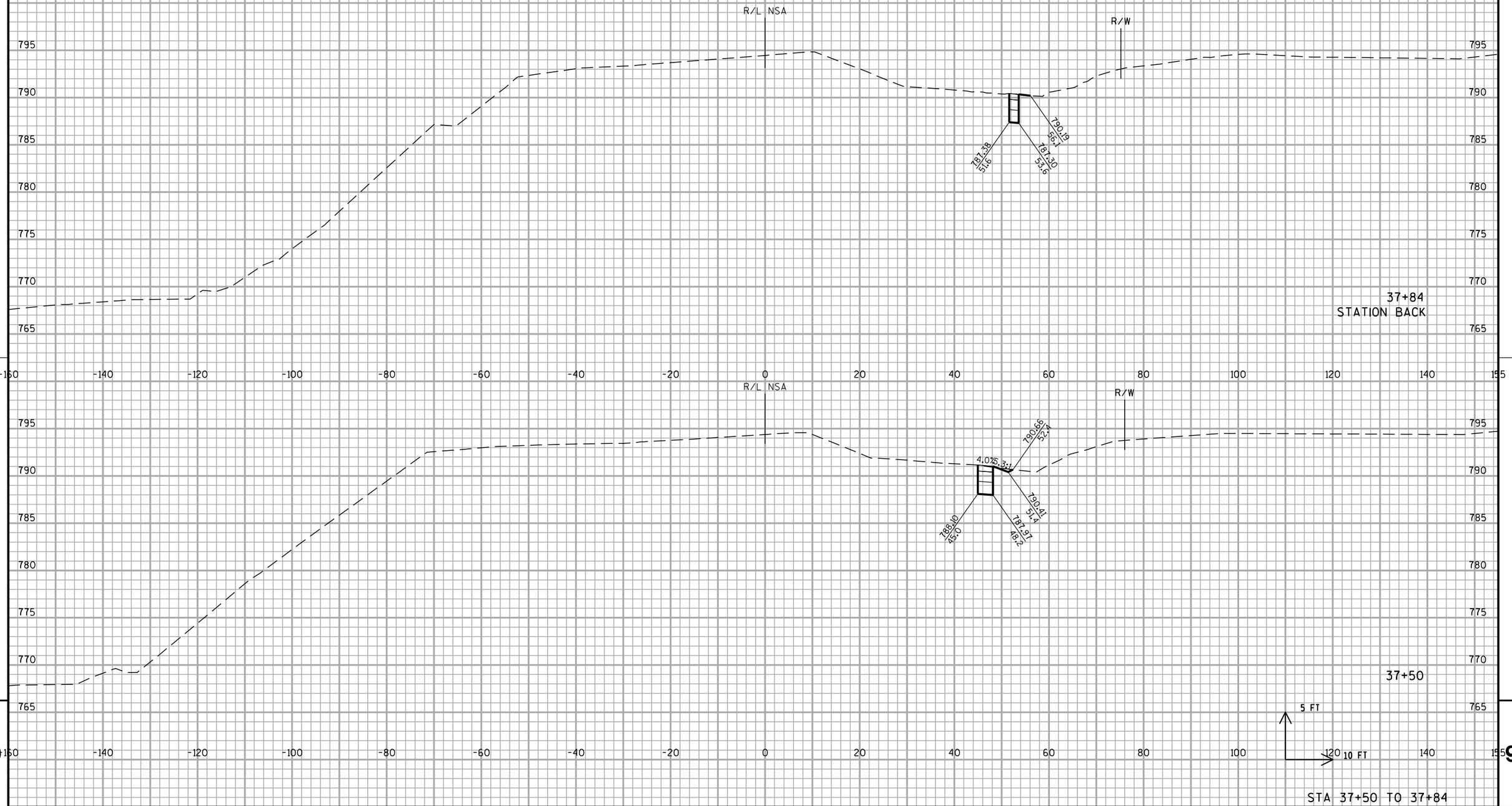
FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa23 PLOT SCALE : 20:1



STA 36+50 TO 37+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa24 PLOT SCALE : 20:1



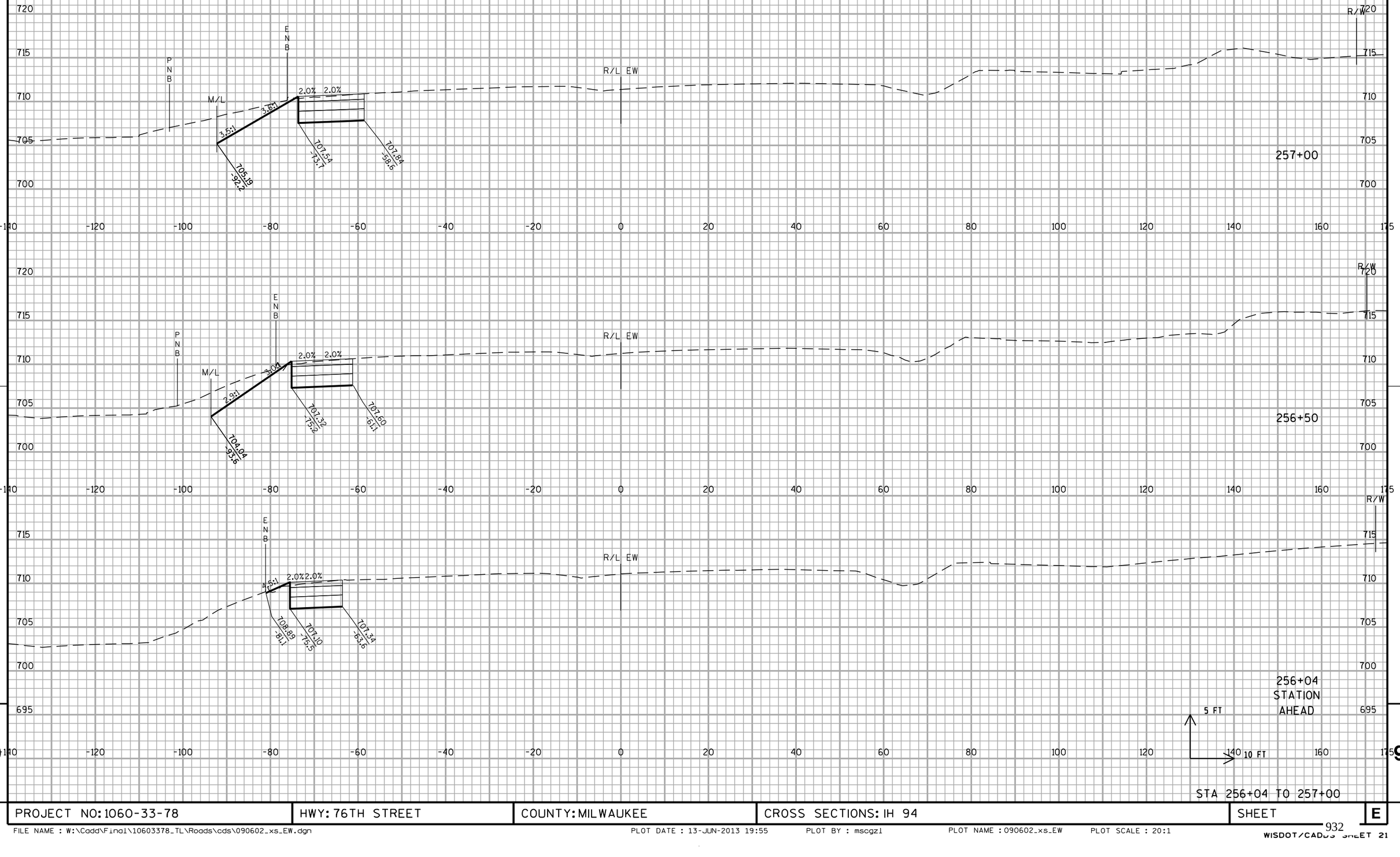
9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NSA	SHEET	E

9

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090601_xs_nsa.dgn PLOT DATE : 13-JUN-2013 09:30 PLOT BY : MSCDYB PLOT NAME : 090601_xs_nsa25 PLOT SCALE : 20:1

ALL WORK DONE STAGE 1

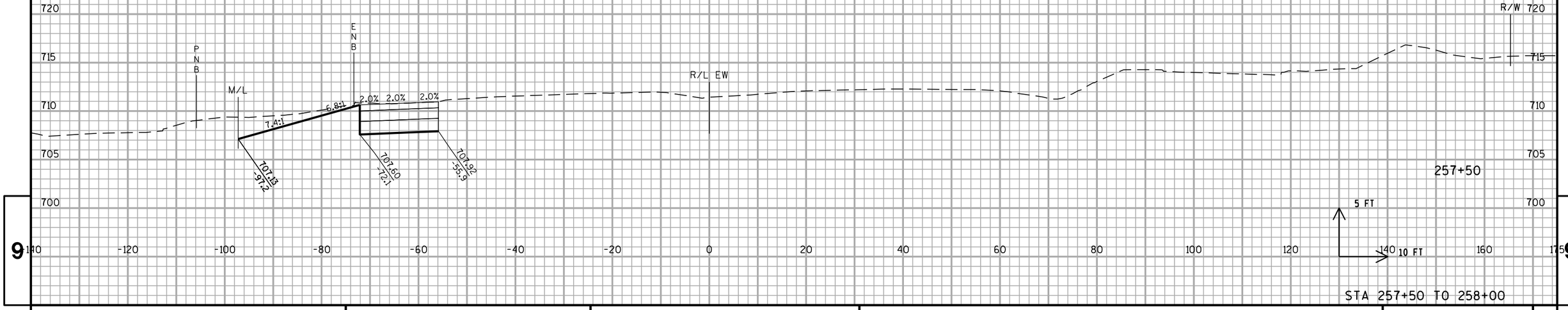


PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW PLOT SCALE : 20:1

ALL WORK DONE STAGE 1





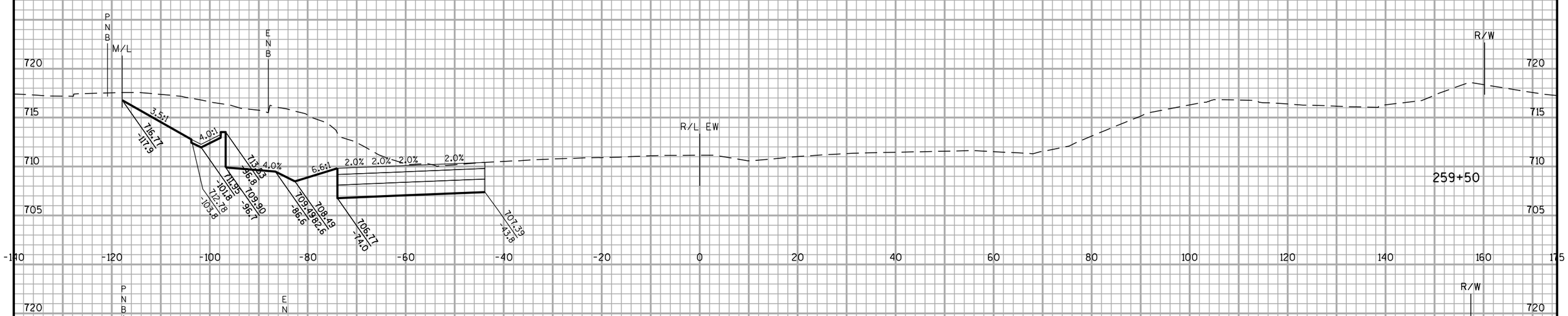
STA 257+50 TO 258+00

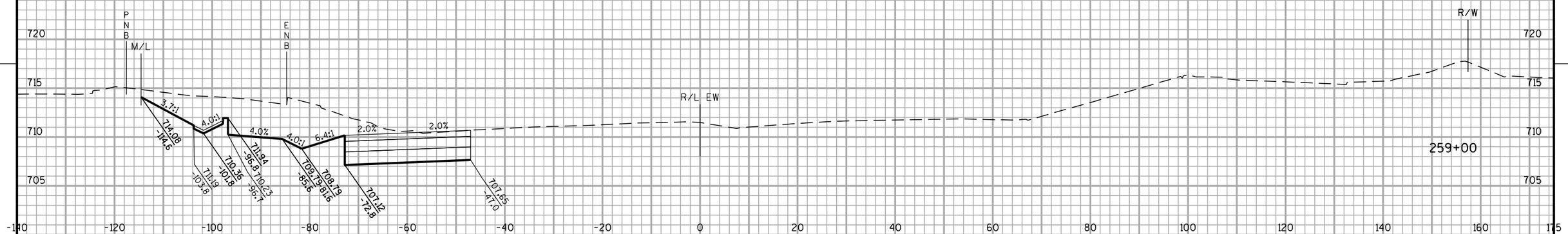
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

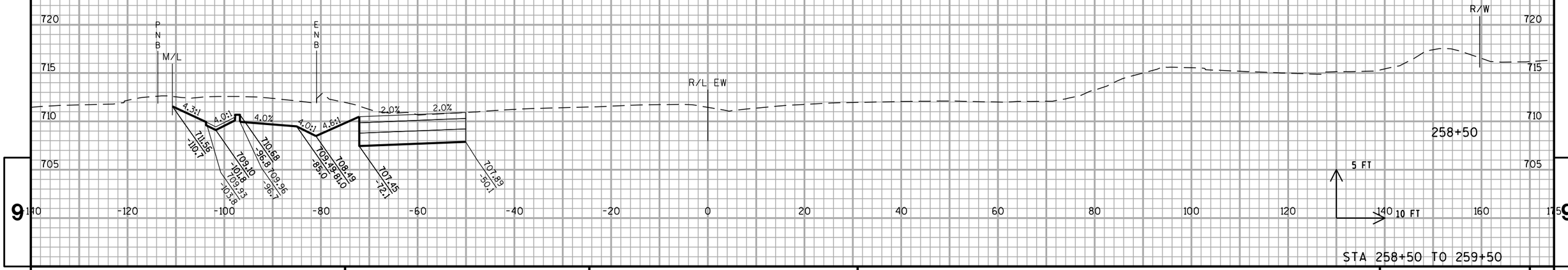
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WISDOT/CADDS SHEET 21

ALL WORK DONE STAGE 1





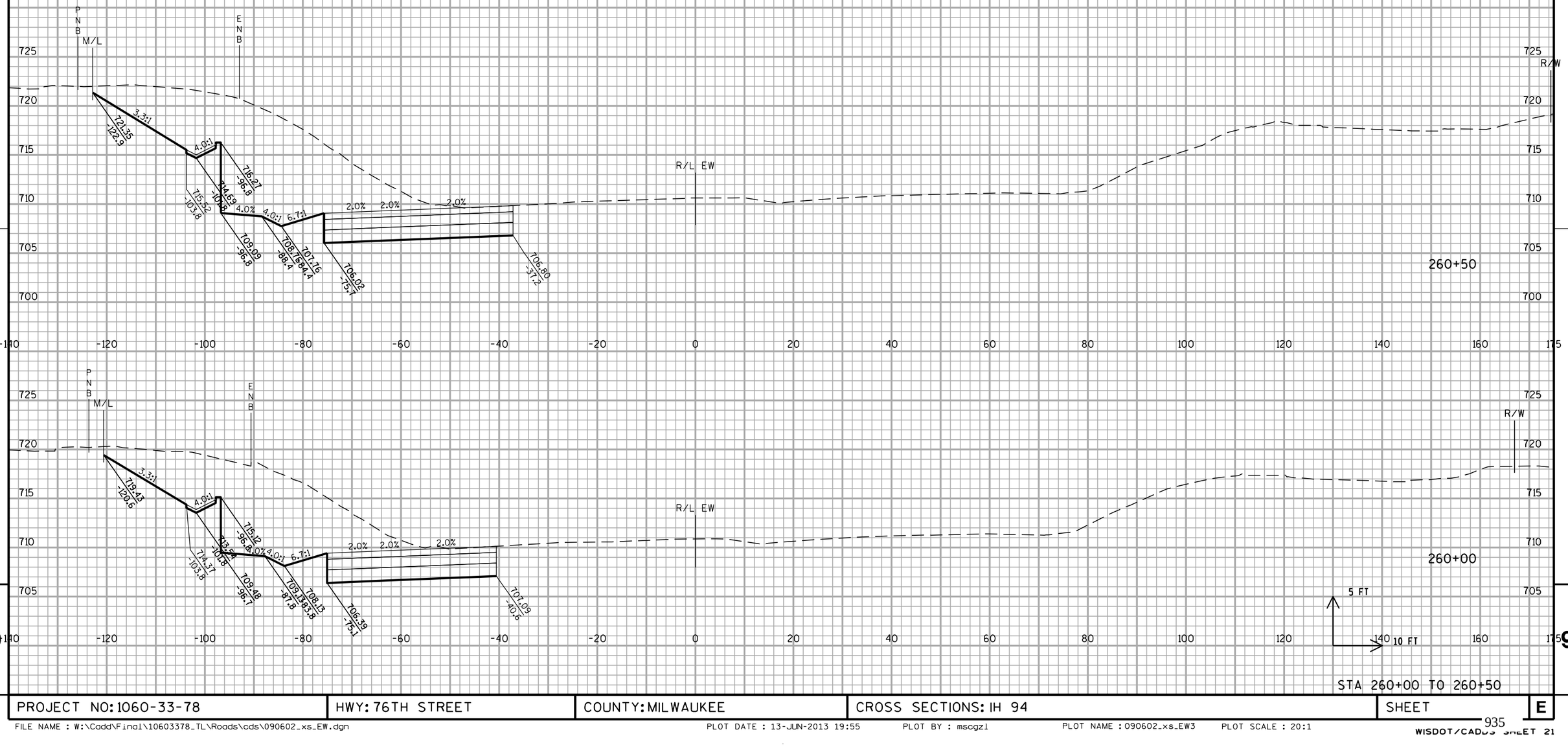


STA 258+50 TO 259+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

9 9

ALL WORK DONE STAGE 1

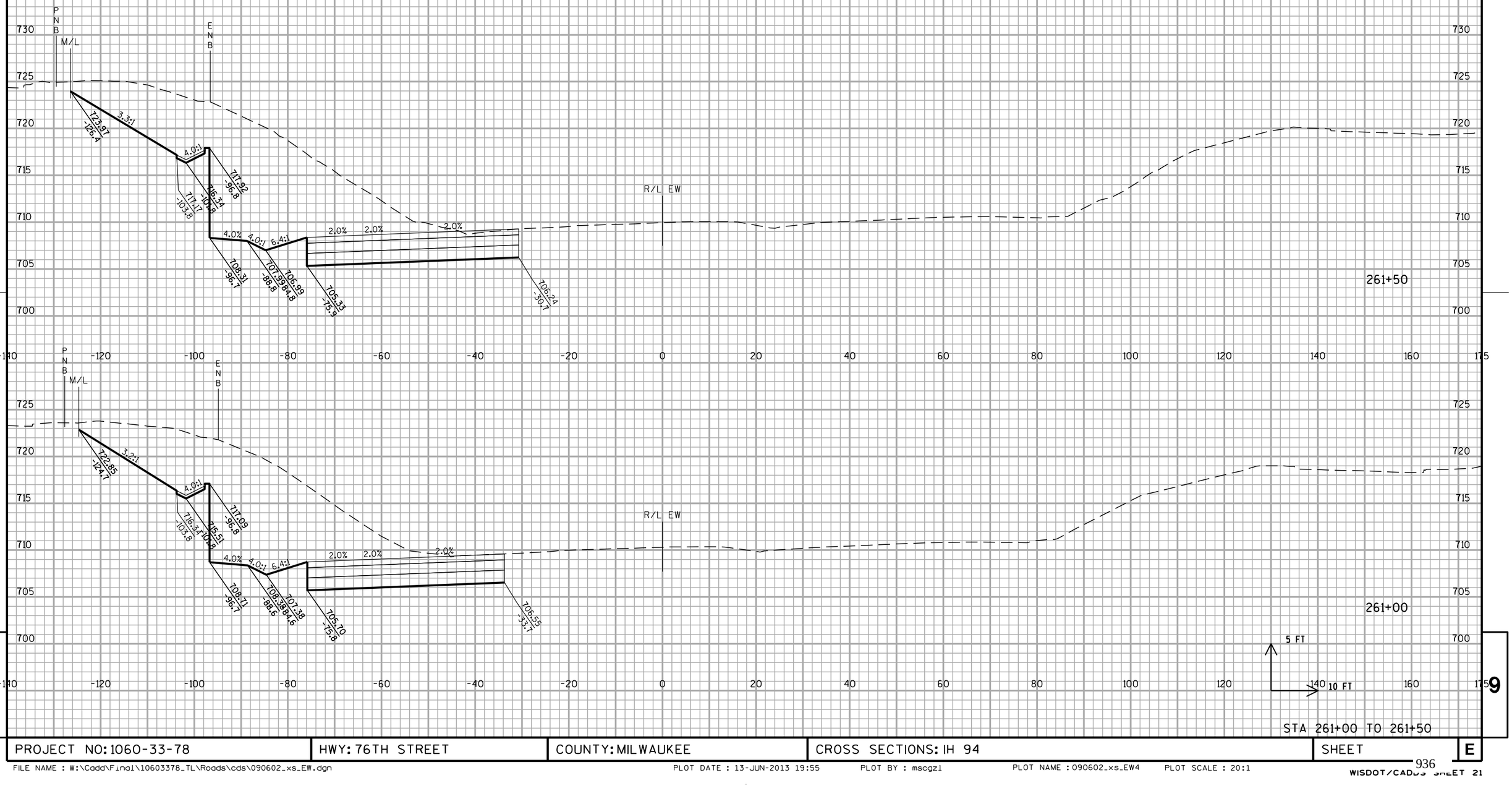


STA 260+00 TO 260+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW3 PLOT SCALE : 20:1

ALL WORK DONE STAGE 1

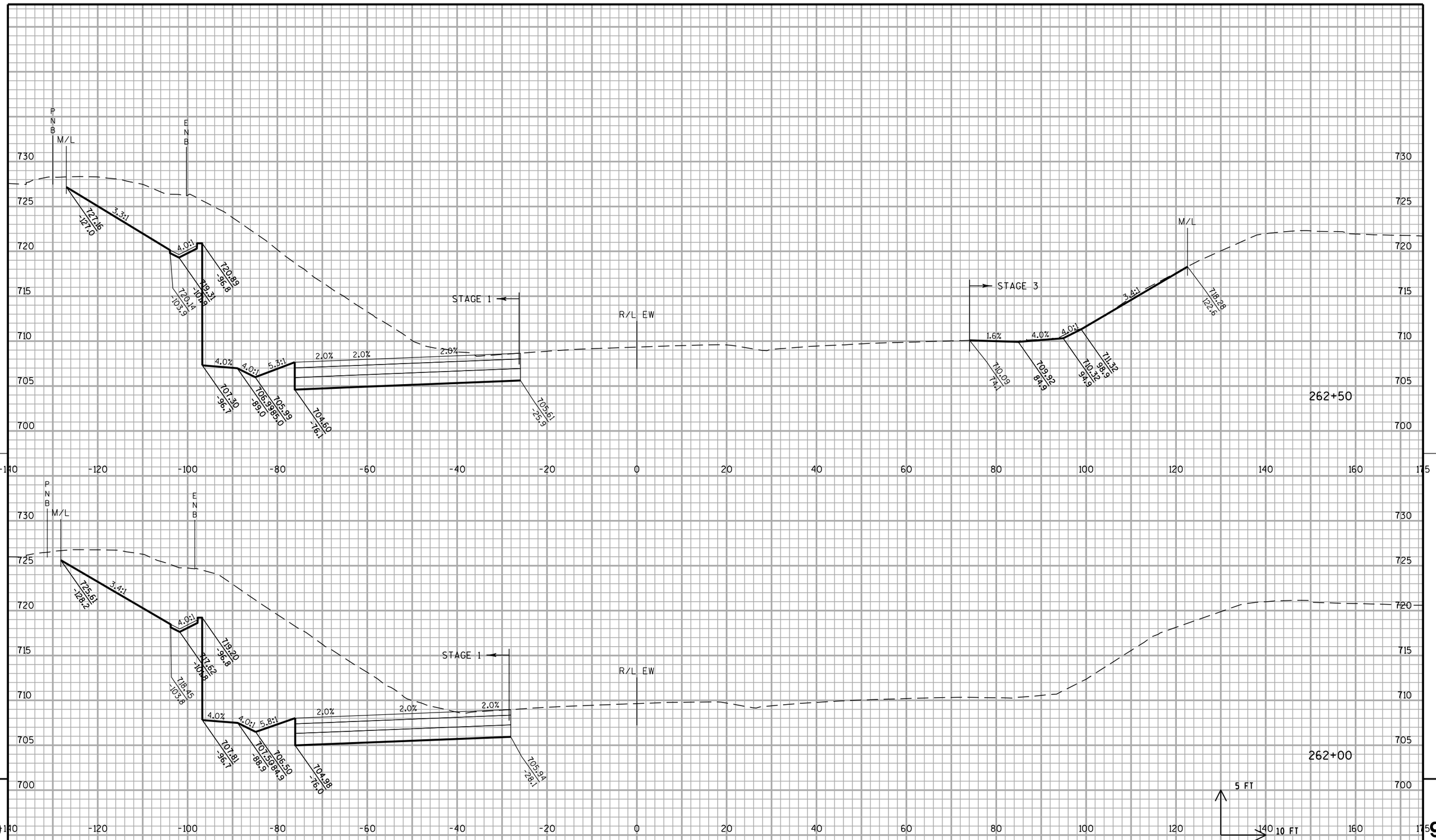


STA 261+00 TO 261+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

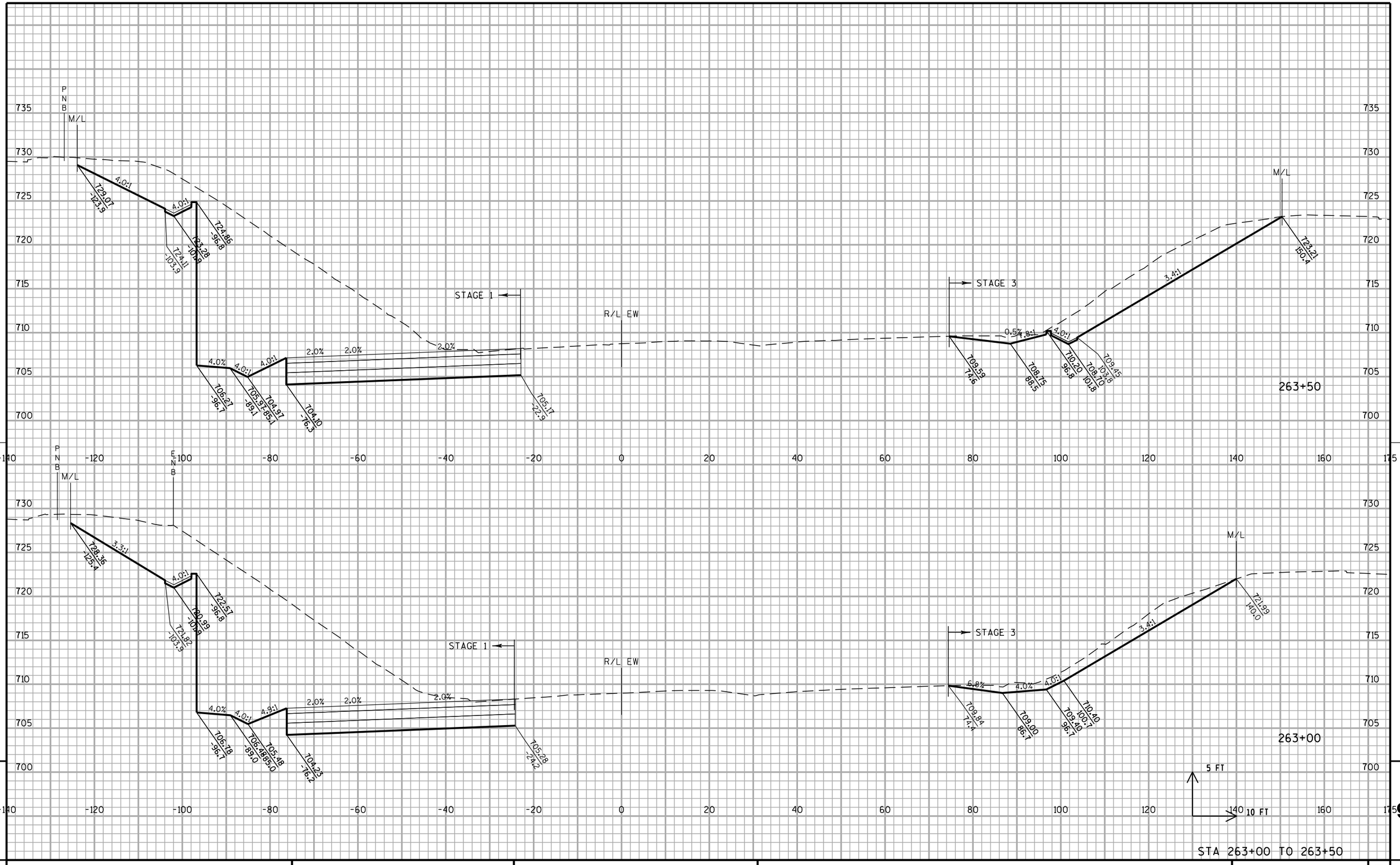


STA 262+00 TO 262+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

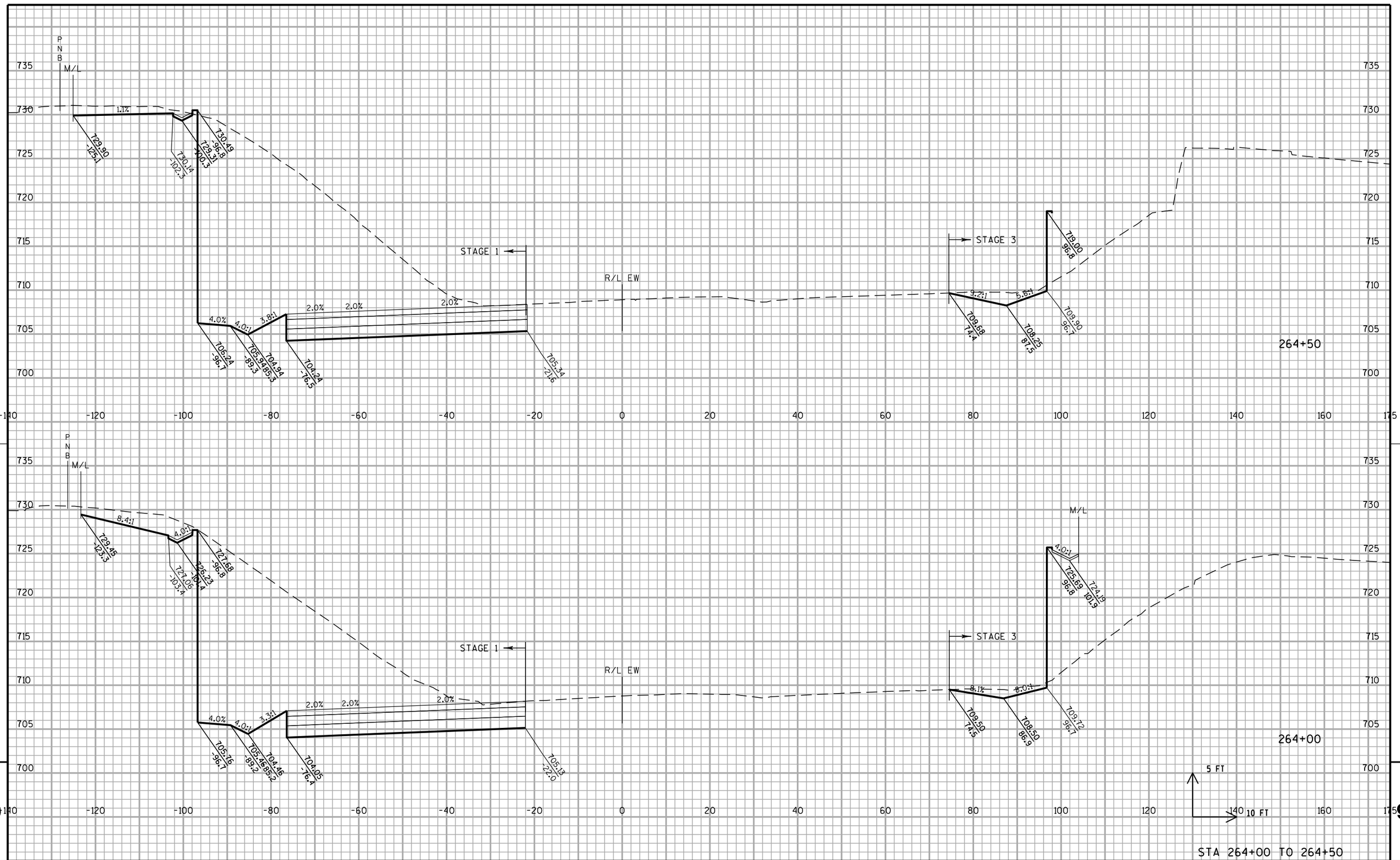
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WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

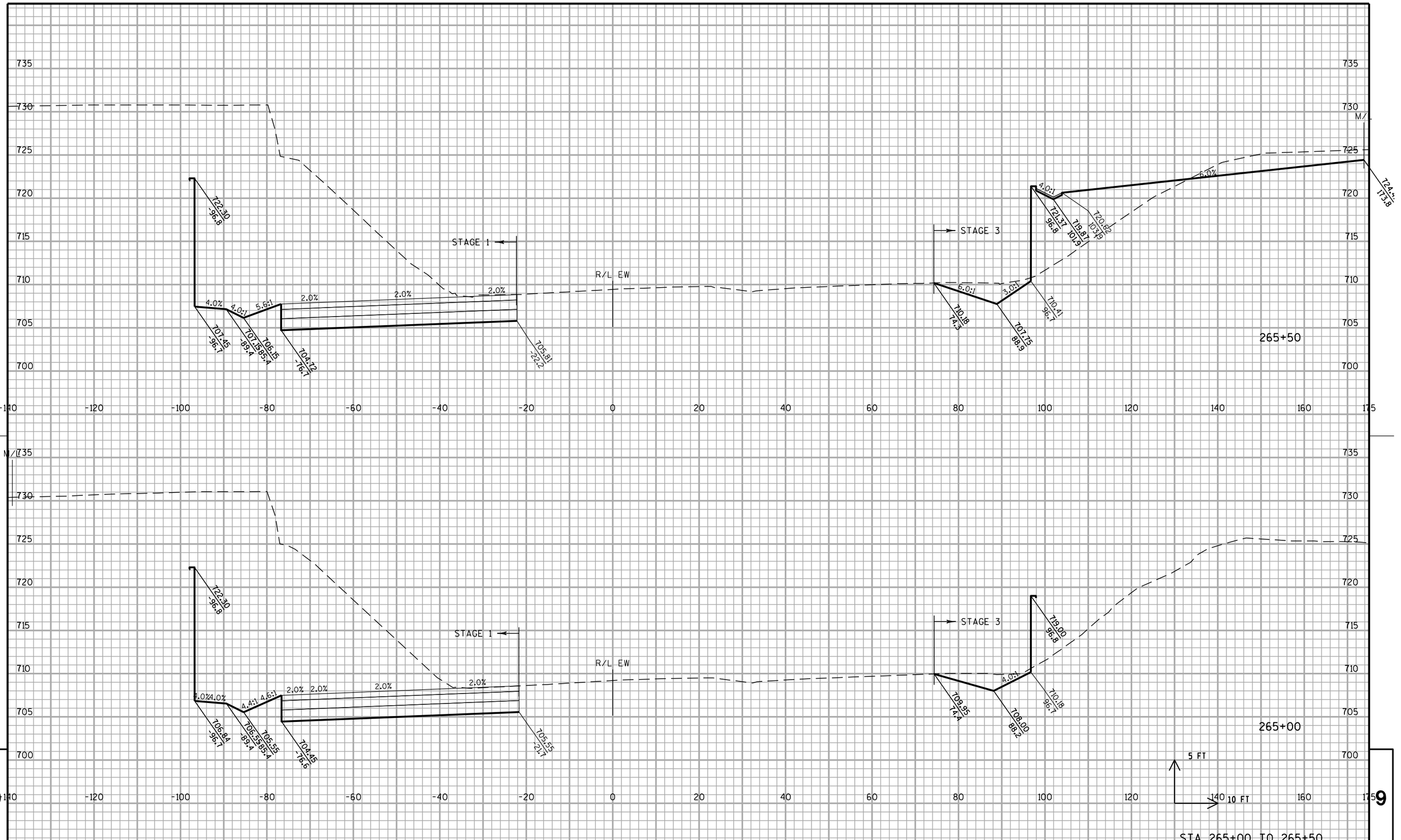
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW7 PLOT SCALE : 20:1

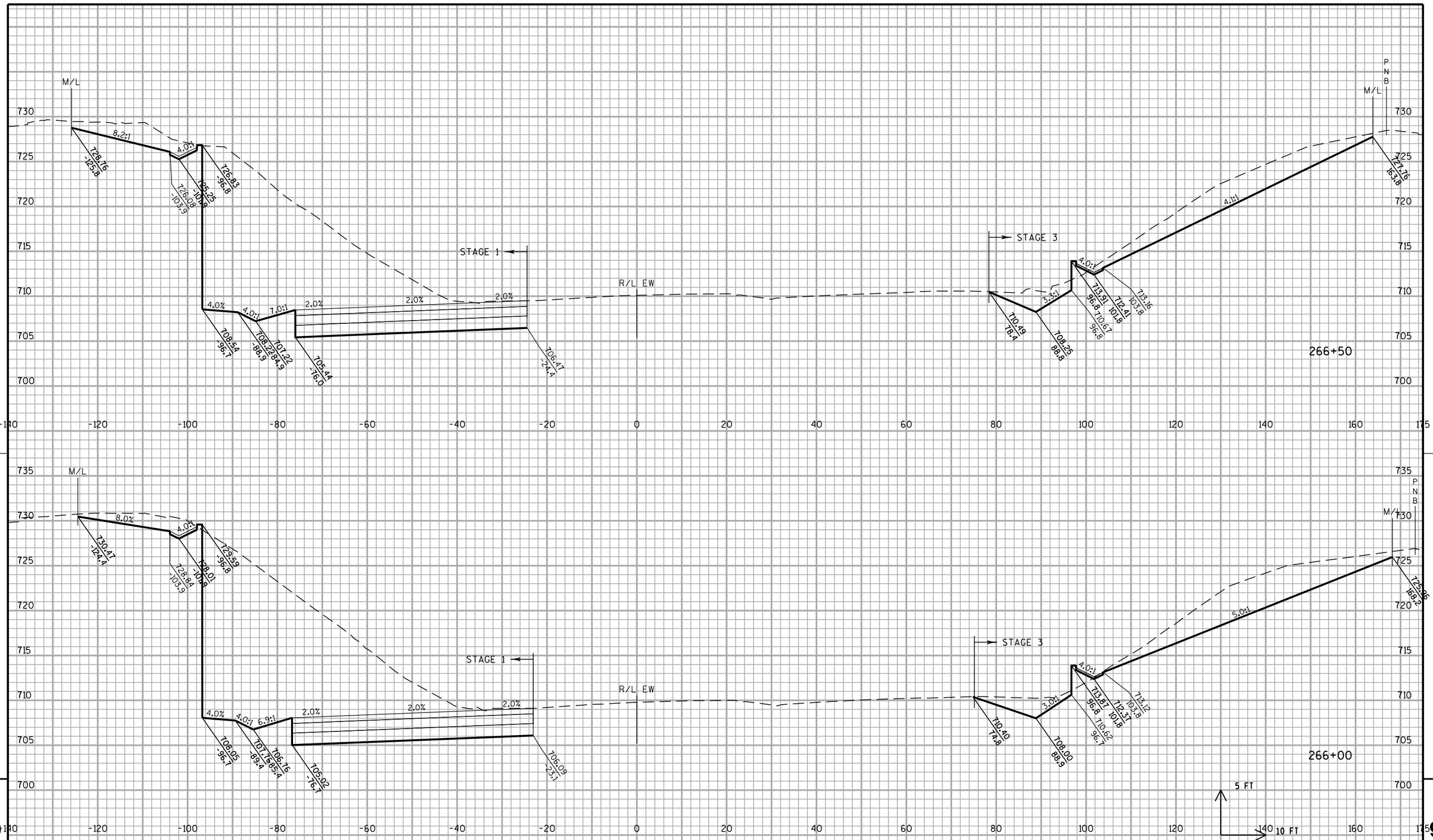
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

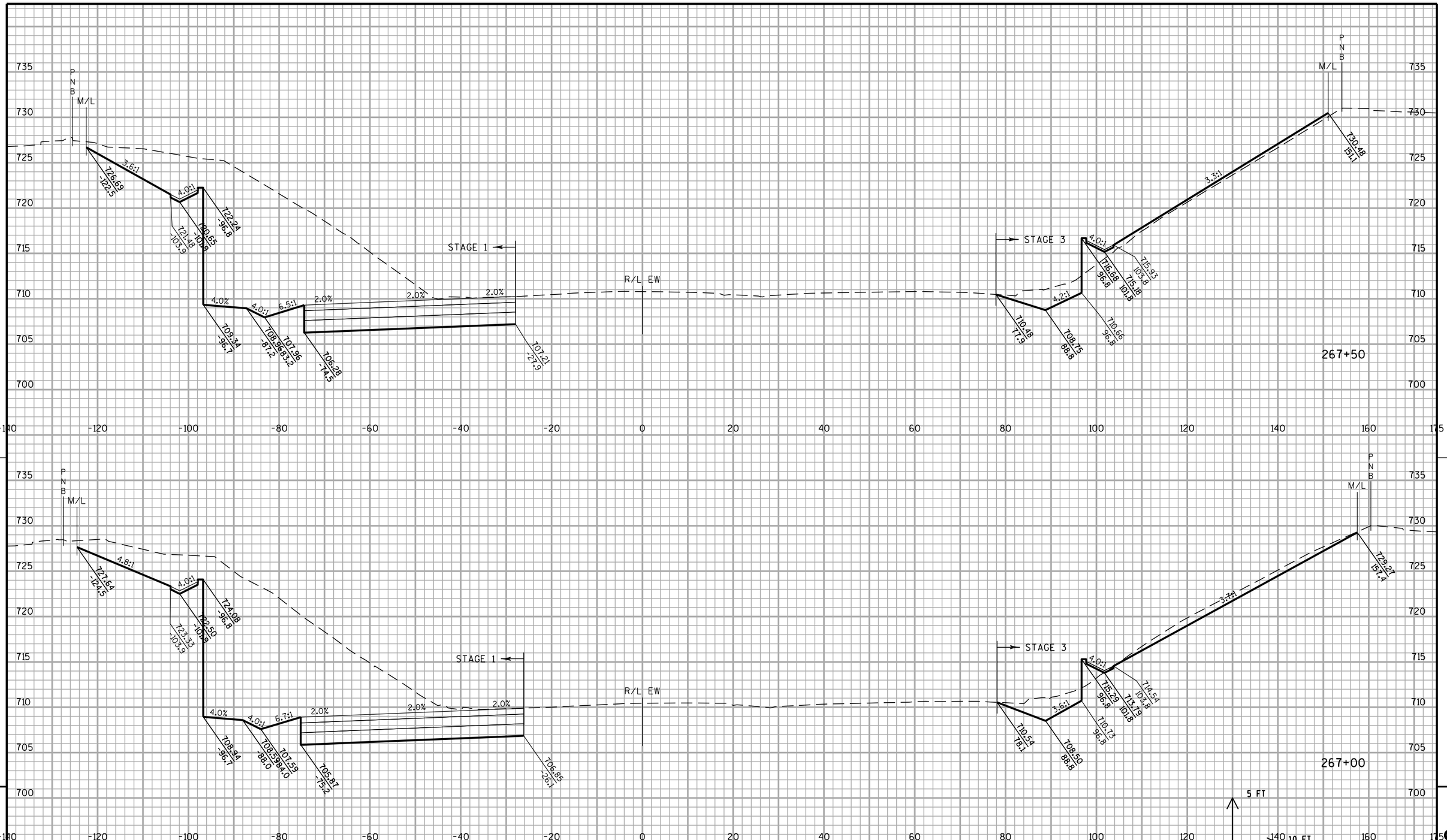
FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW8 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW9 PLOT SCALE : 20:1



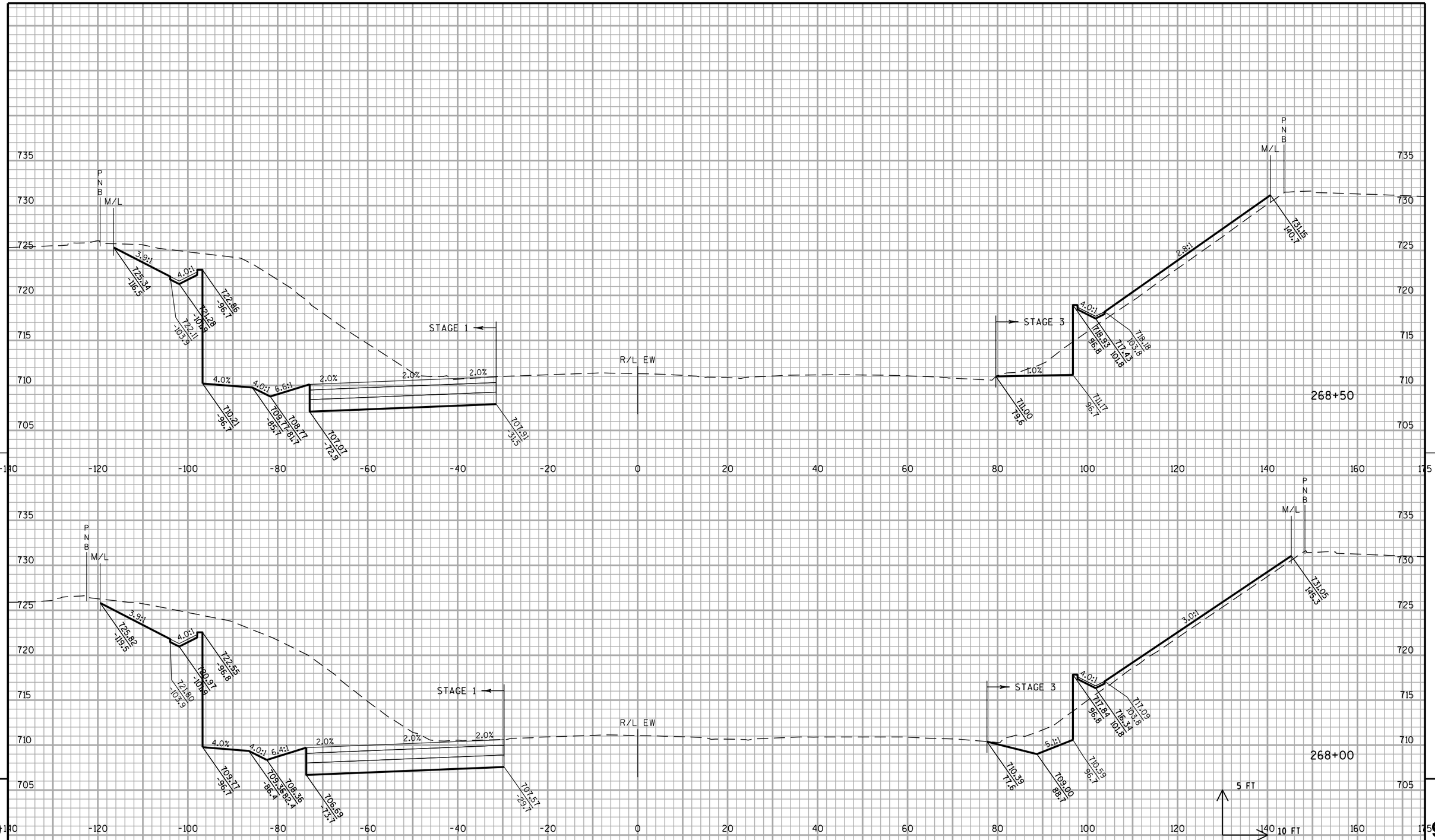
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9

STA 267+00 TO 267+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

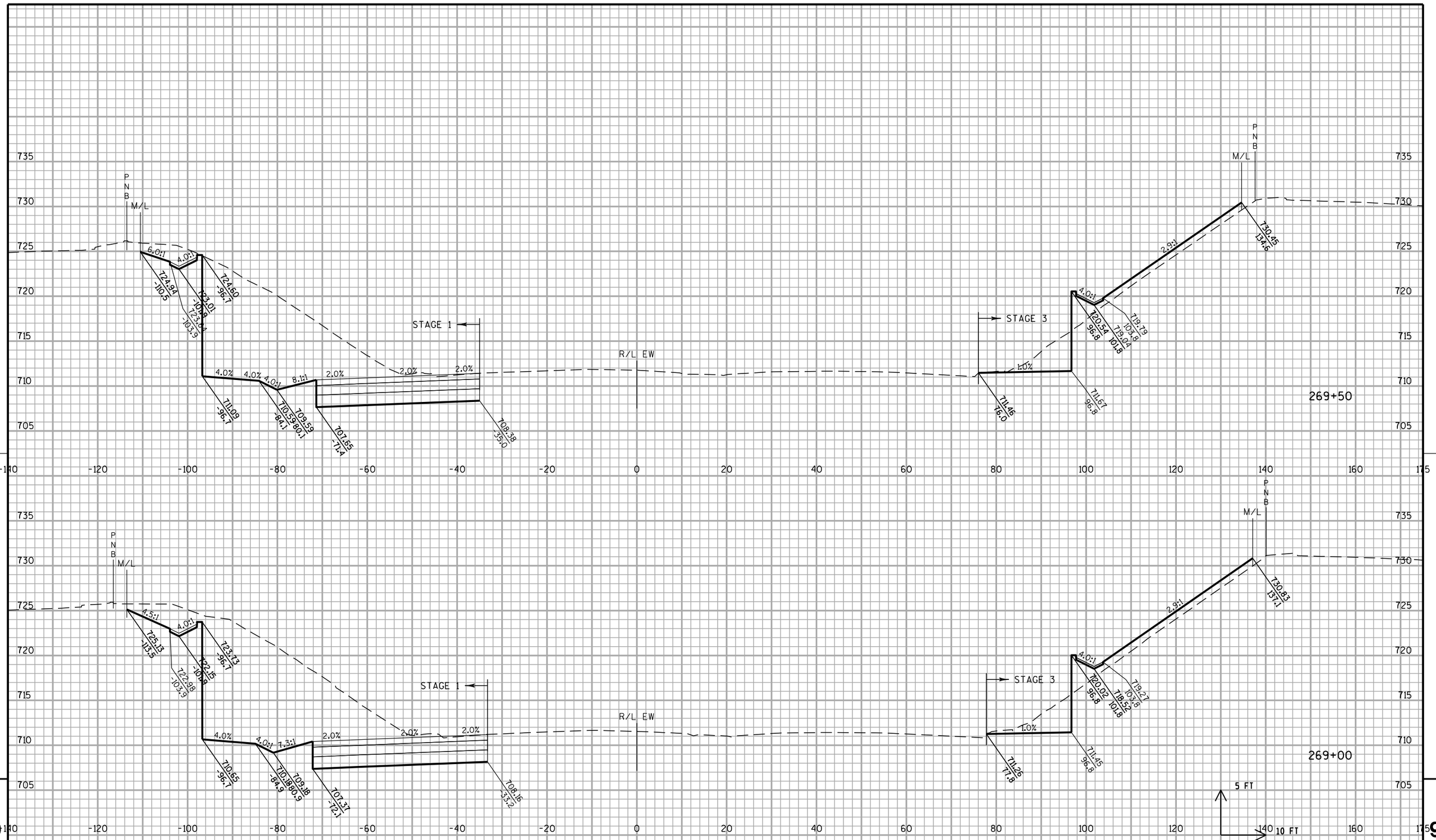
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PLOT DATE : 13-JUN-2013 19:55
PLOT BY : mscgzl
PLOT NAME : 090602_xs_EW10
PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW11 PLOT SCALE : 20:1

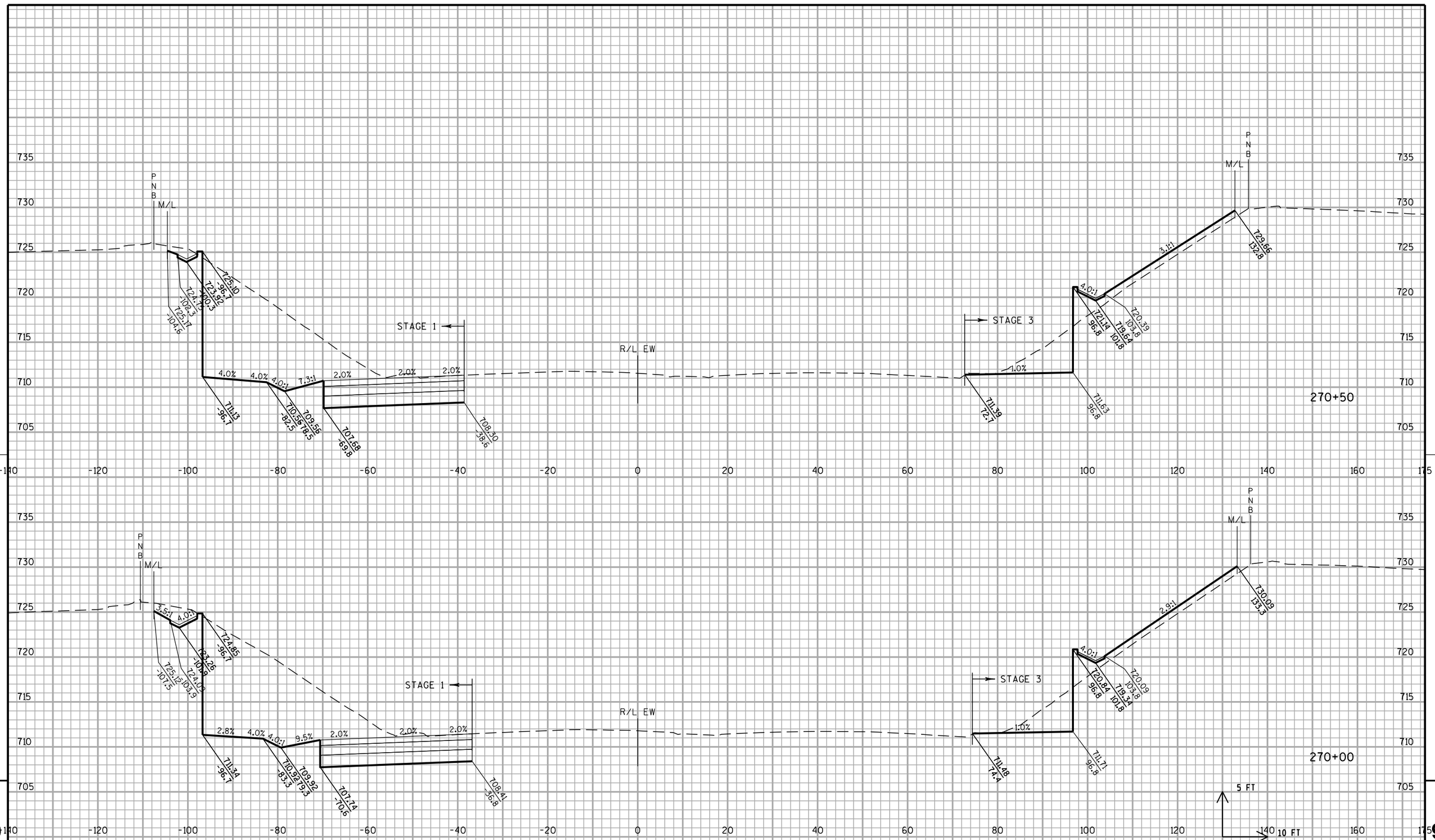
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

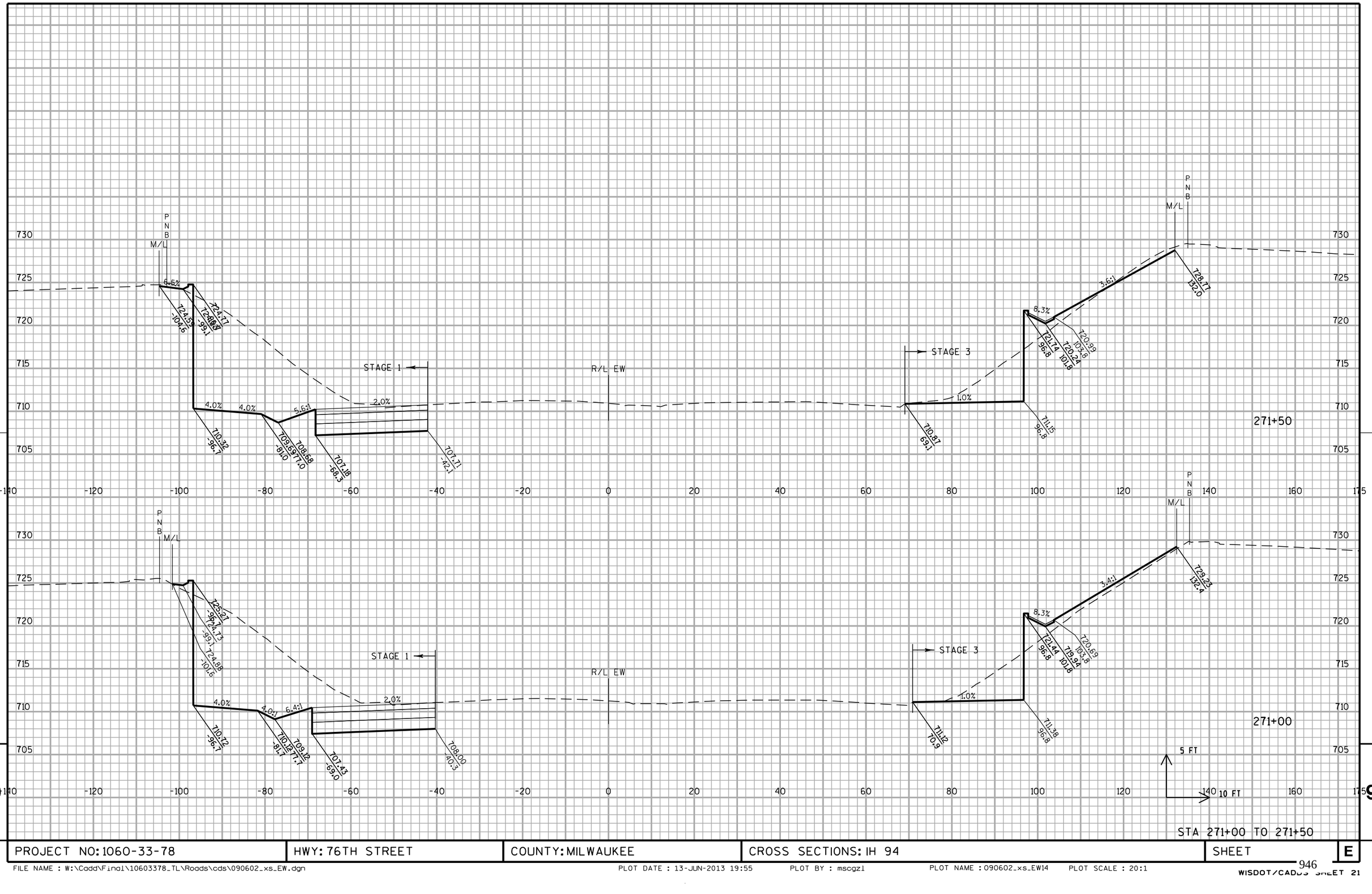
STA 269+00 TO 269+50

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW12 PLOT SCALE : 20:1



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

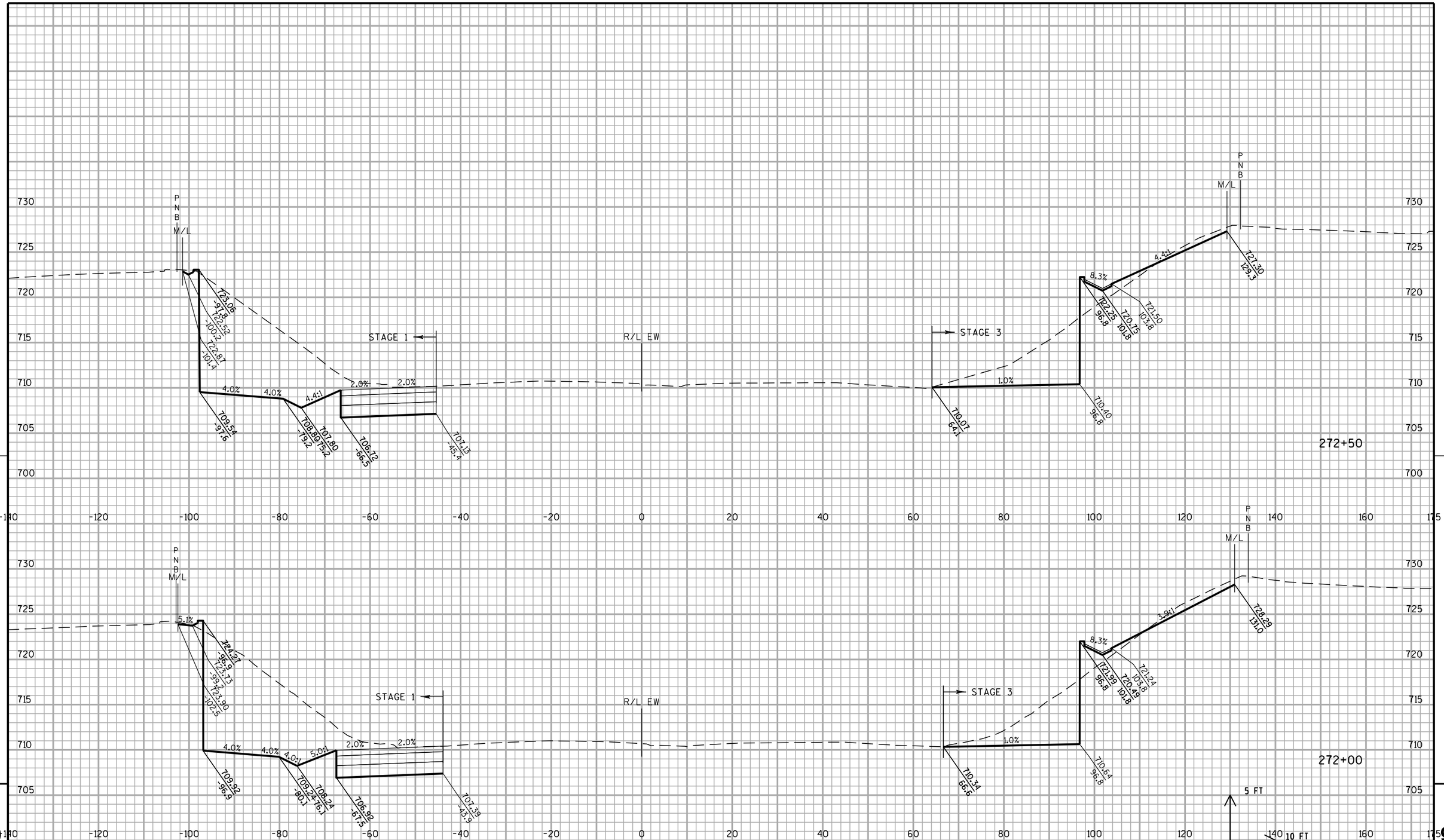
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STA 271+00 TO 271+50

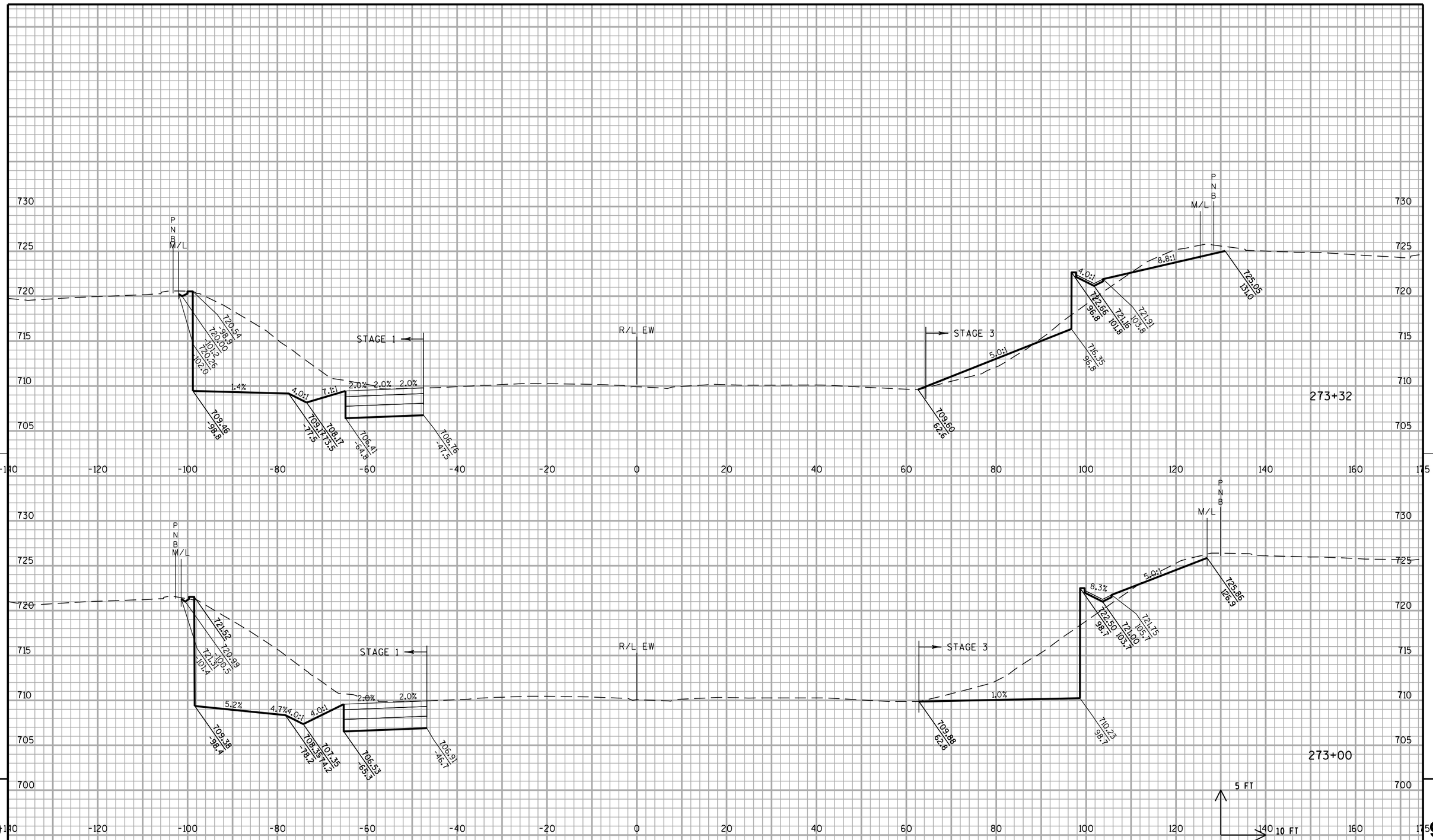
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW14 PLOT SCALE : 20:1



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

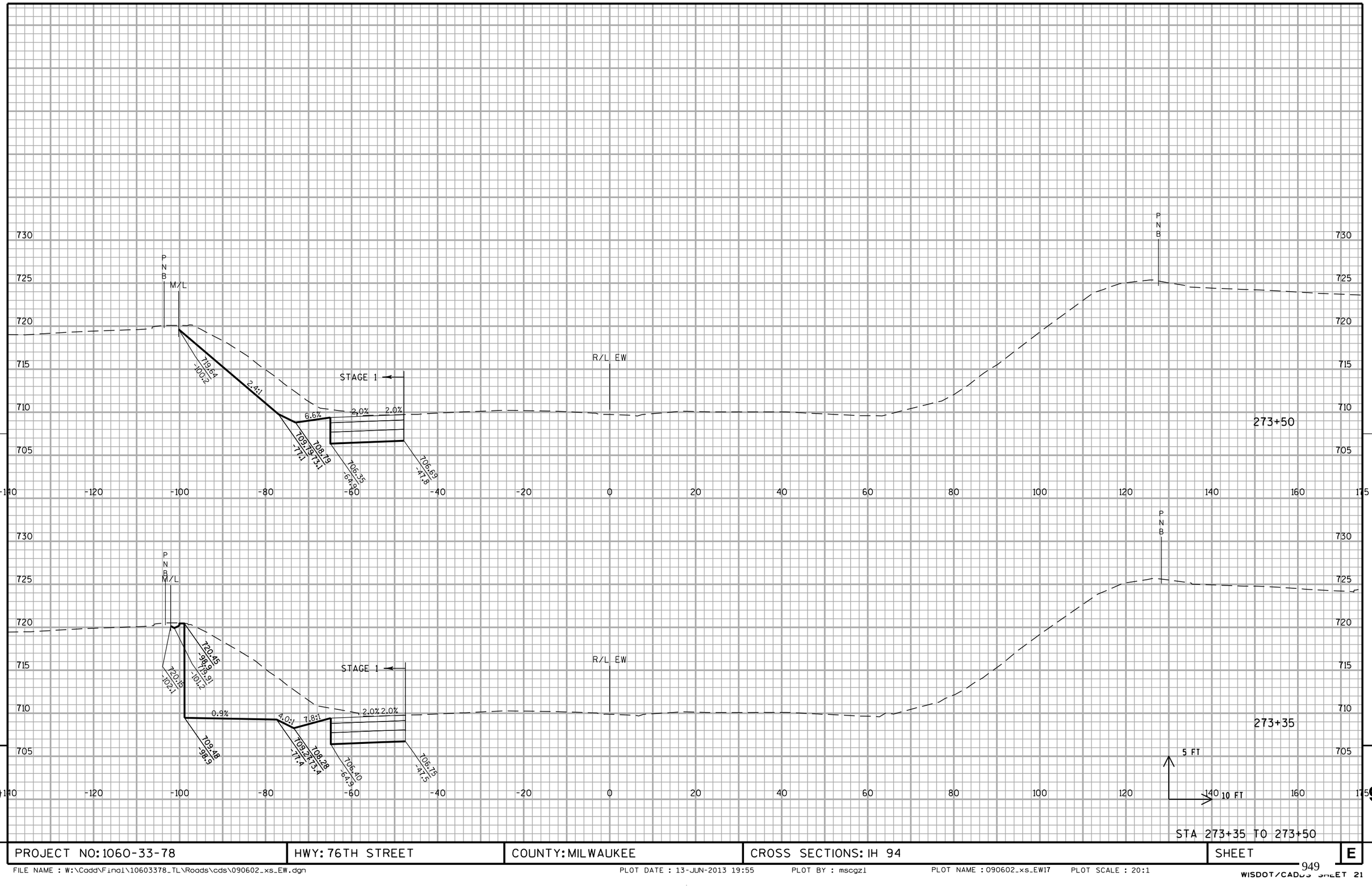
FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW15 PLOT SCALE : 20:1



9

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

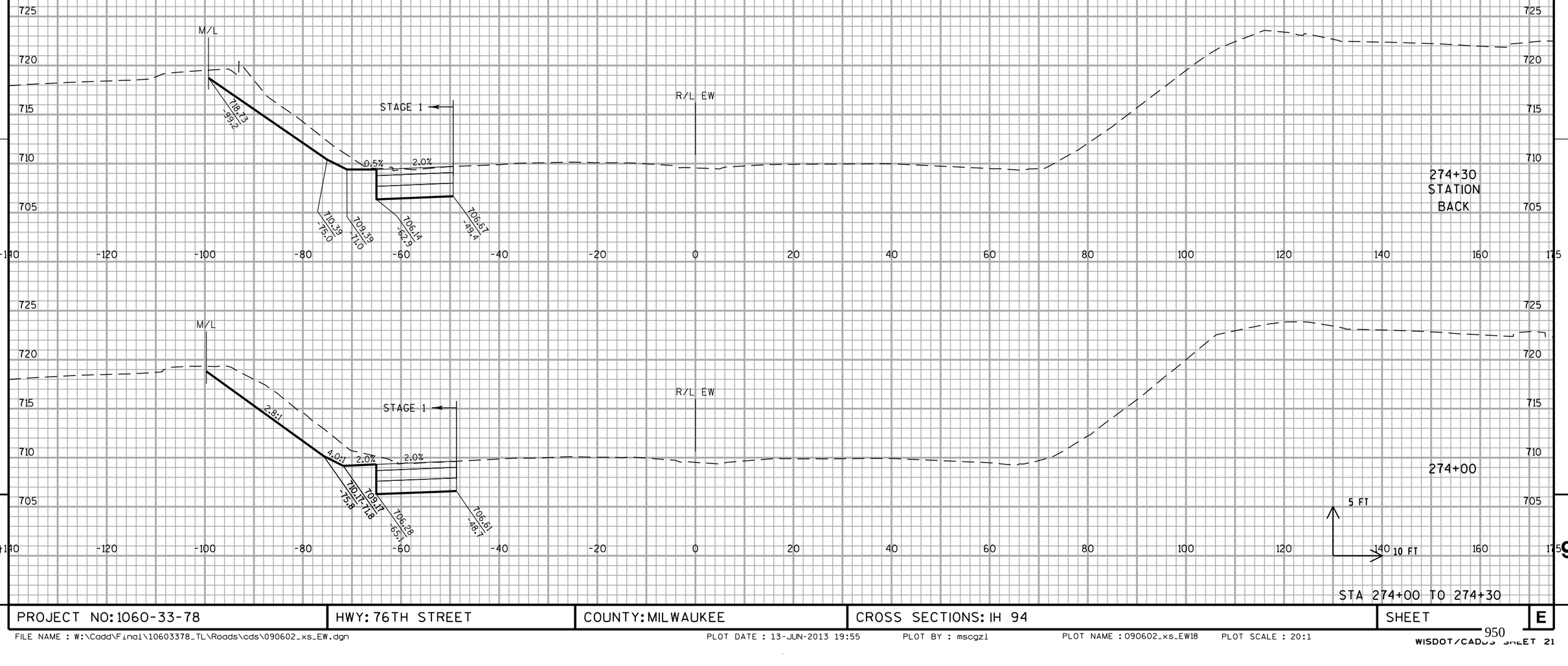
STA 273+00 TO 273+32



9

STA 273+35 TO 273+50

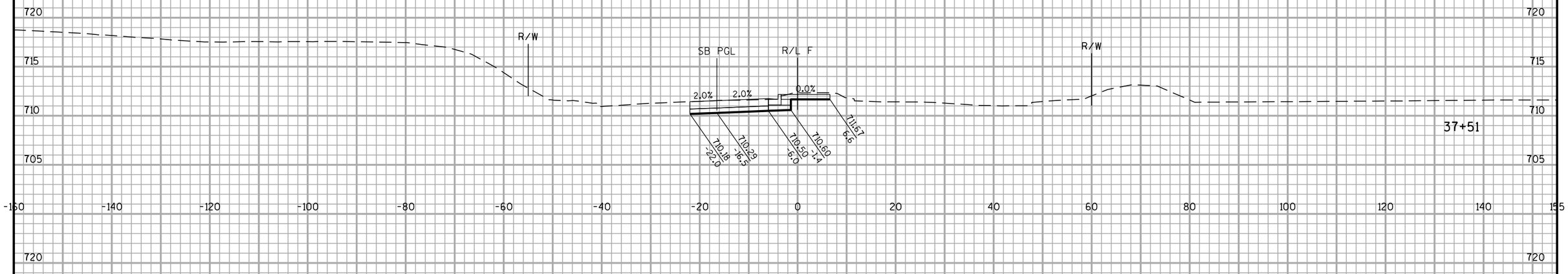
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

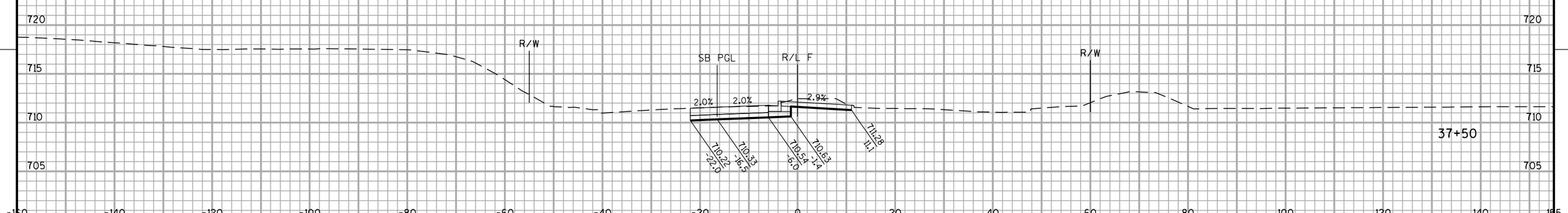


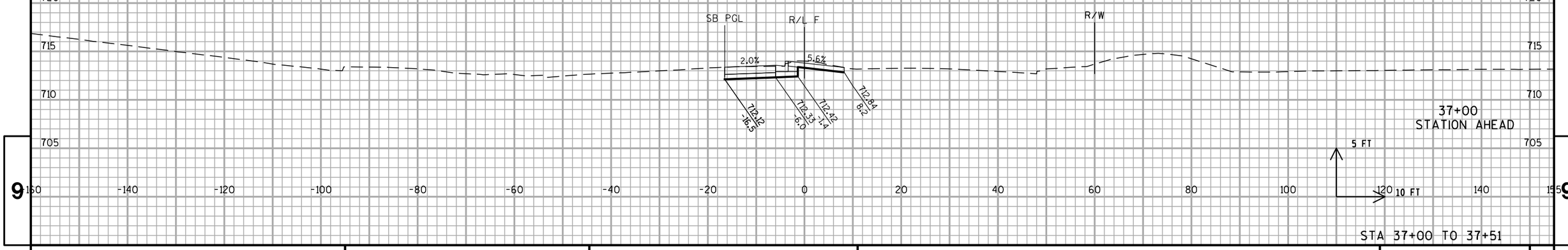
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: IH 94	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090602_xs_EW.dgn PLOT DATE : 13-JUN-2013 19:55 PLOT BY : mscgzl PLOT NAME : 090602_xs_EW18 PLOT SCALE : 20:1

ALL WORK DONE STAGE 1





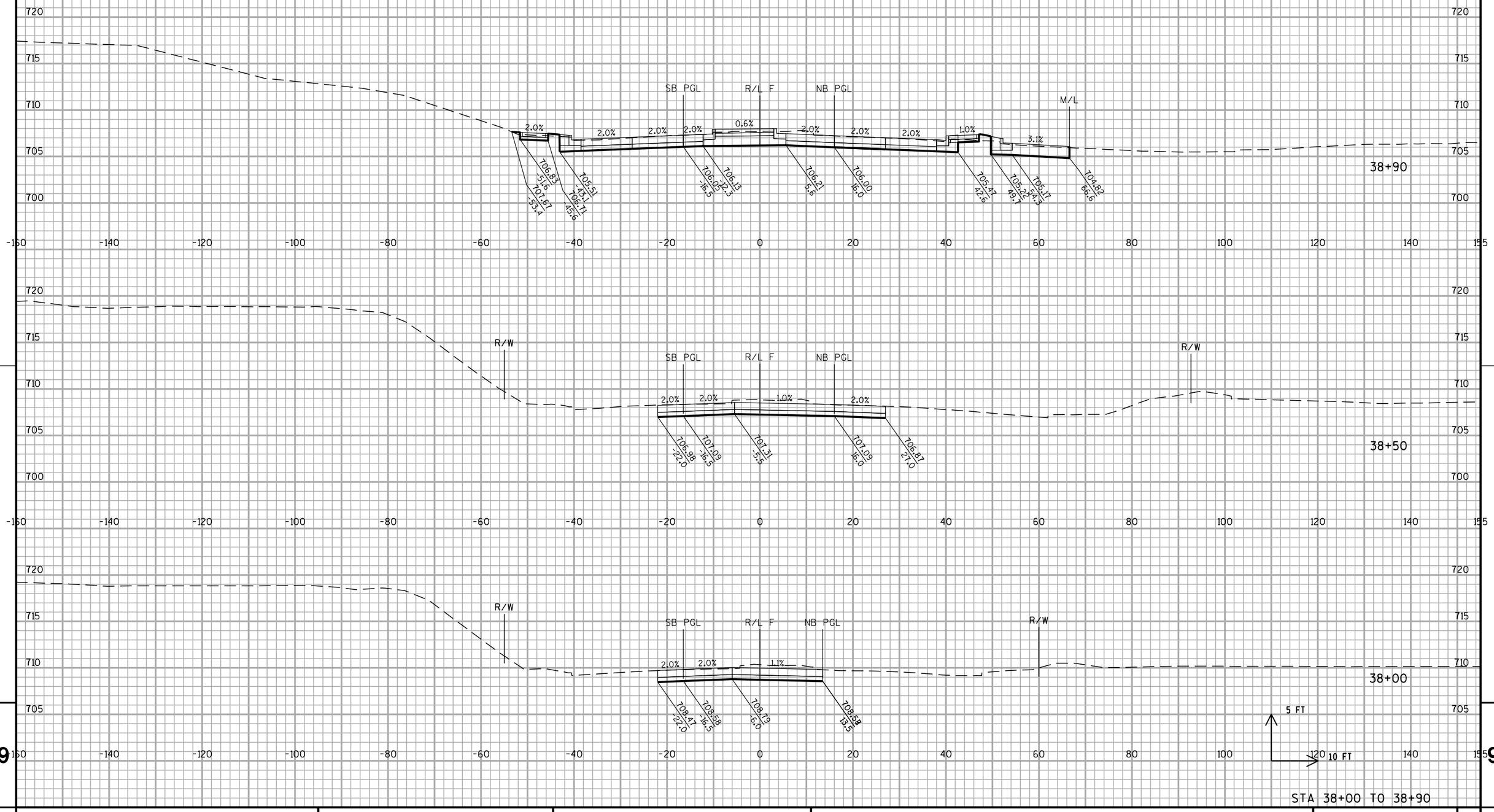


STA 37+00 TO 37+51

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

9 9

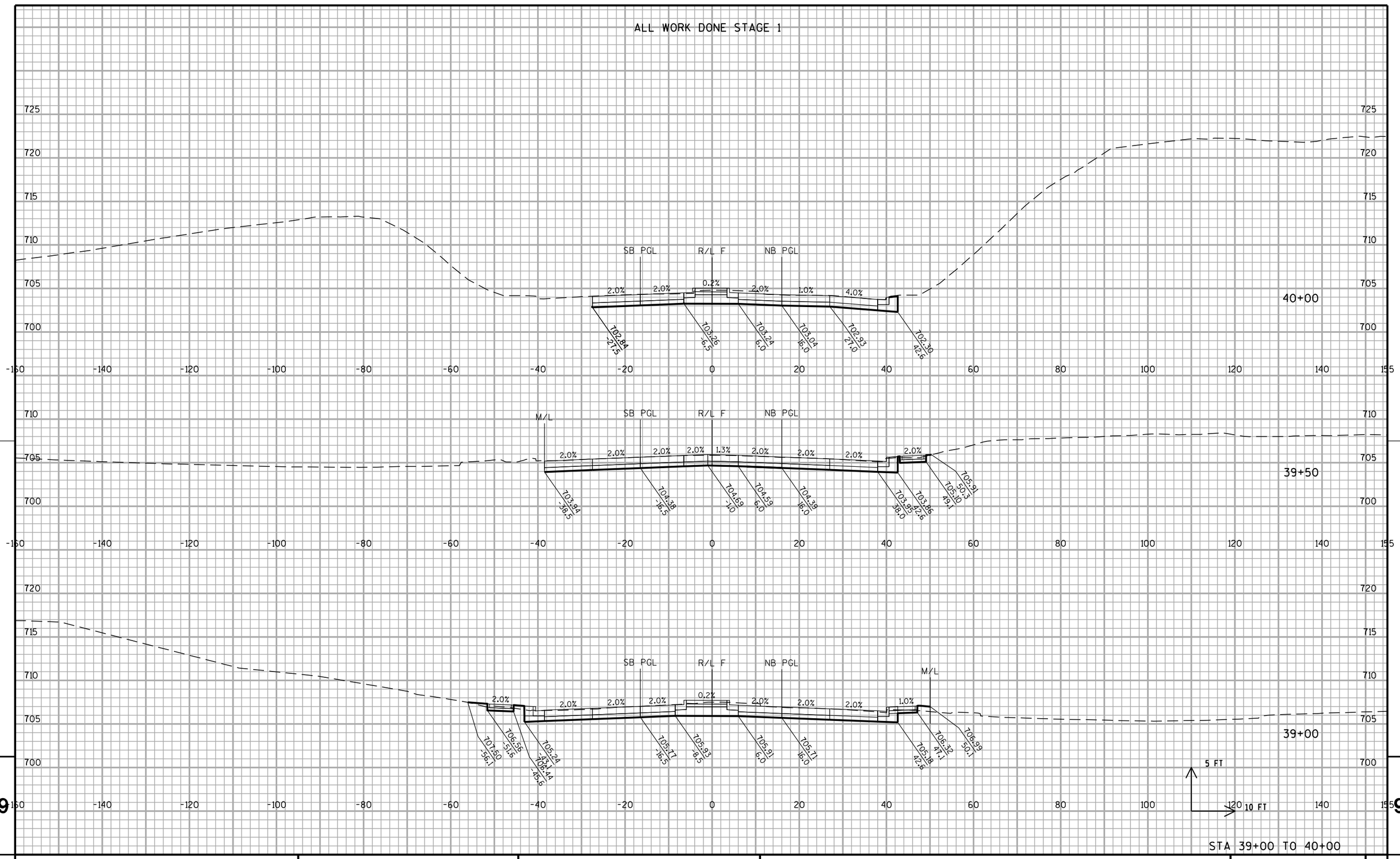
ALL WORK DONE STAGE 1



STA 38+00 TO 38+90

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

ALL WORK DONE STAGE 1



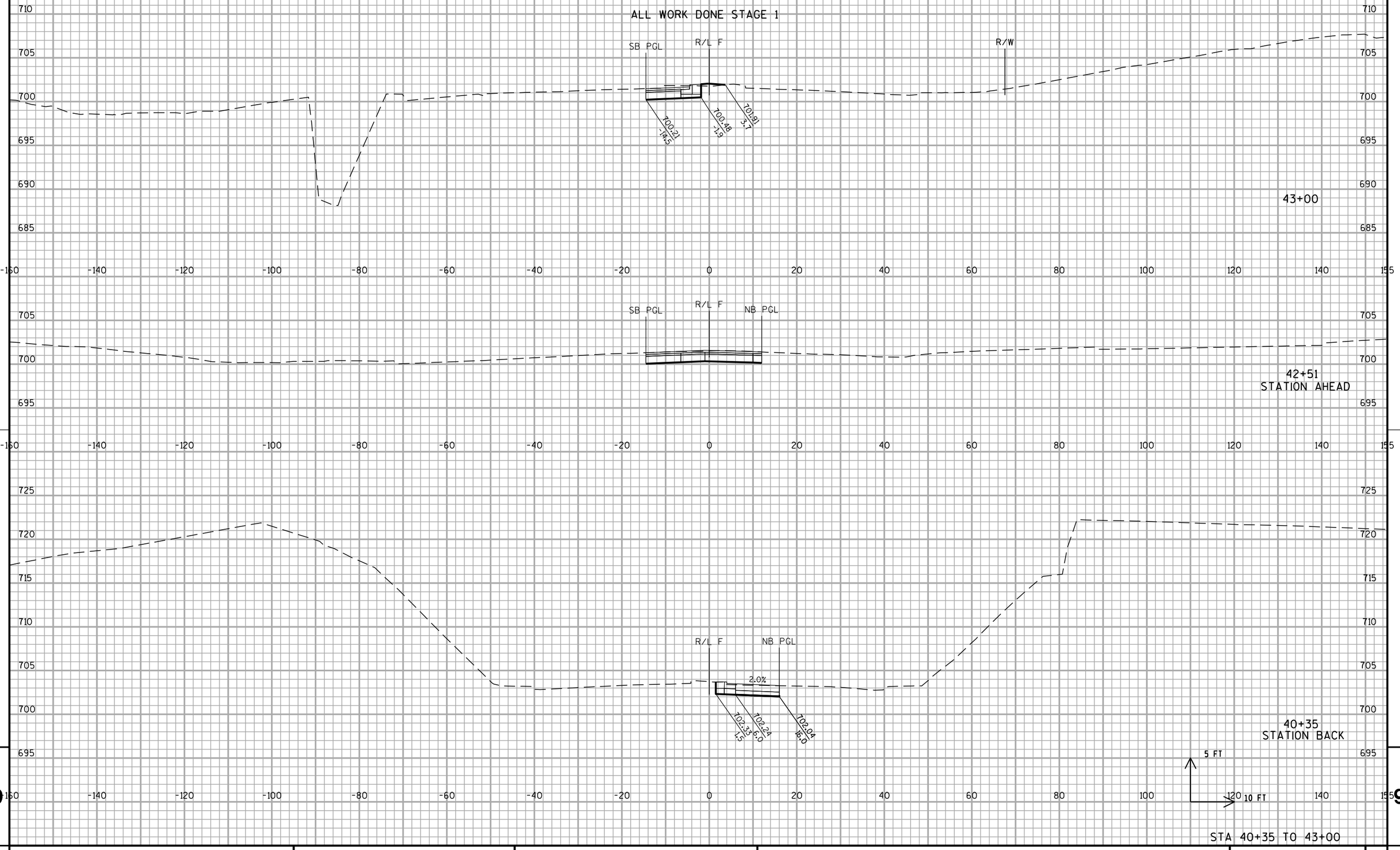
STA 39+00 TO 40+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090603_xs_f.dgn PLOT DATE : 30-APR-2013 02:27 PLOT BY : MSCDYB PLOT NAME : 090603_xs_f2 PLOT SCALE : 20:1

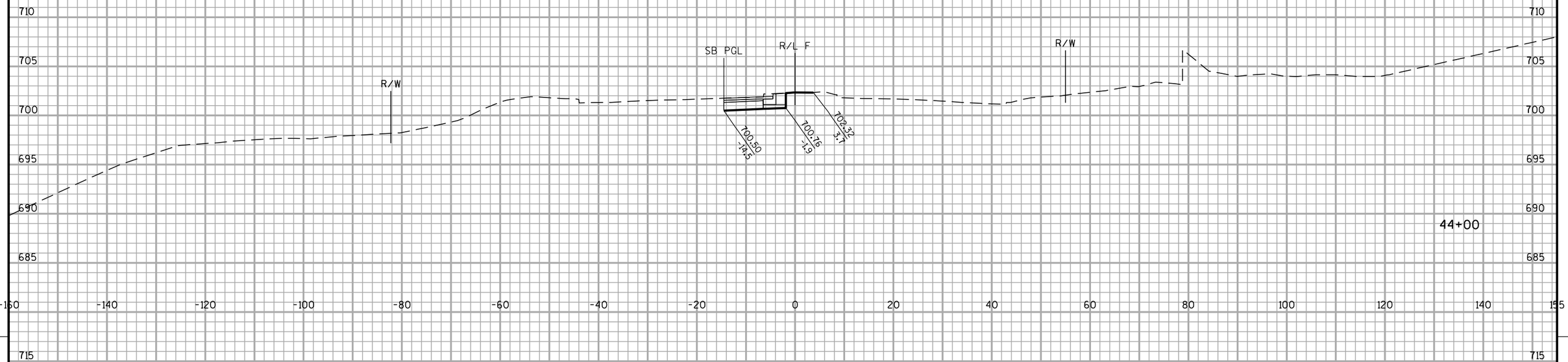
WISDOT/CADDS SHEET 21

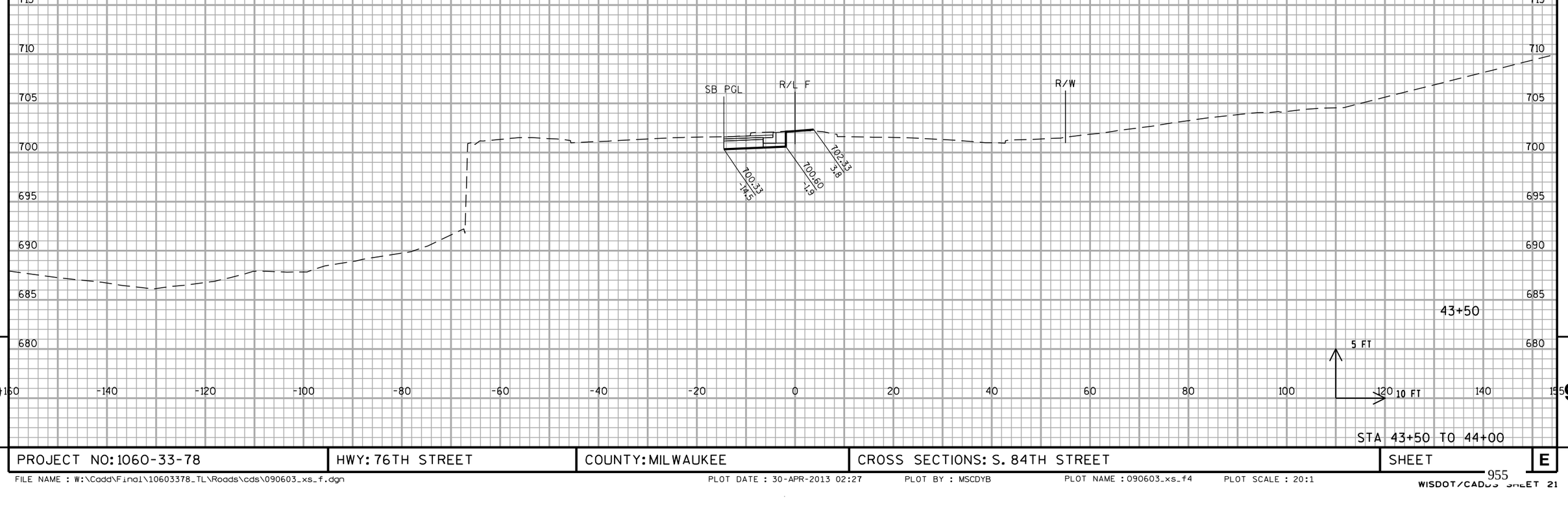
ALL WORK DONE STAGE 1



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

ALL WORK DONE STAGE 1

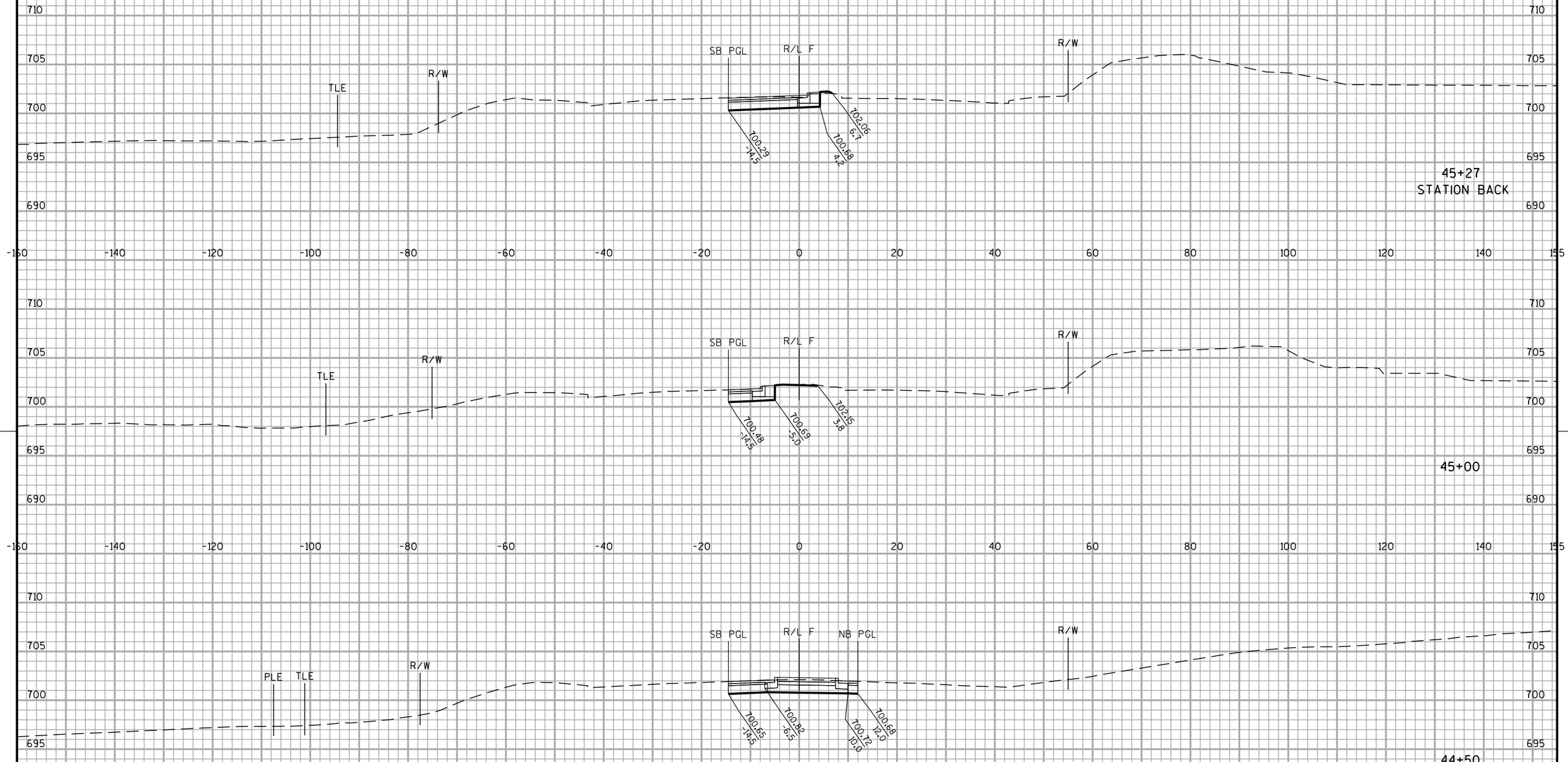




STA 43+50 TO 44+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

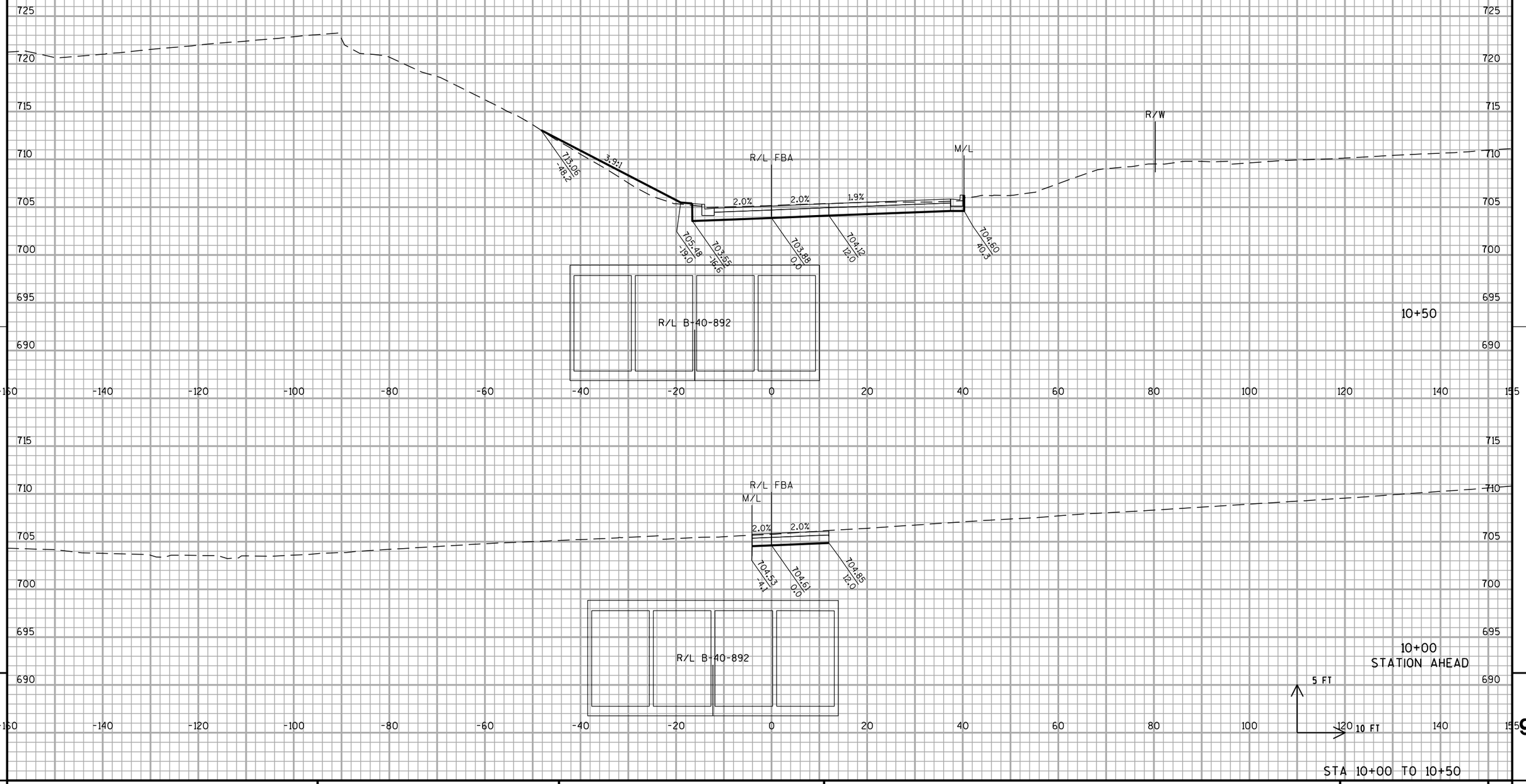
ALL WORK DONE STAGE 1



STA 44+50 TO 45+27

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: S. 84TH STREET	SHEET	E

ALL WORK DONE STAGE 1

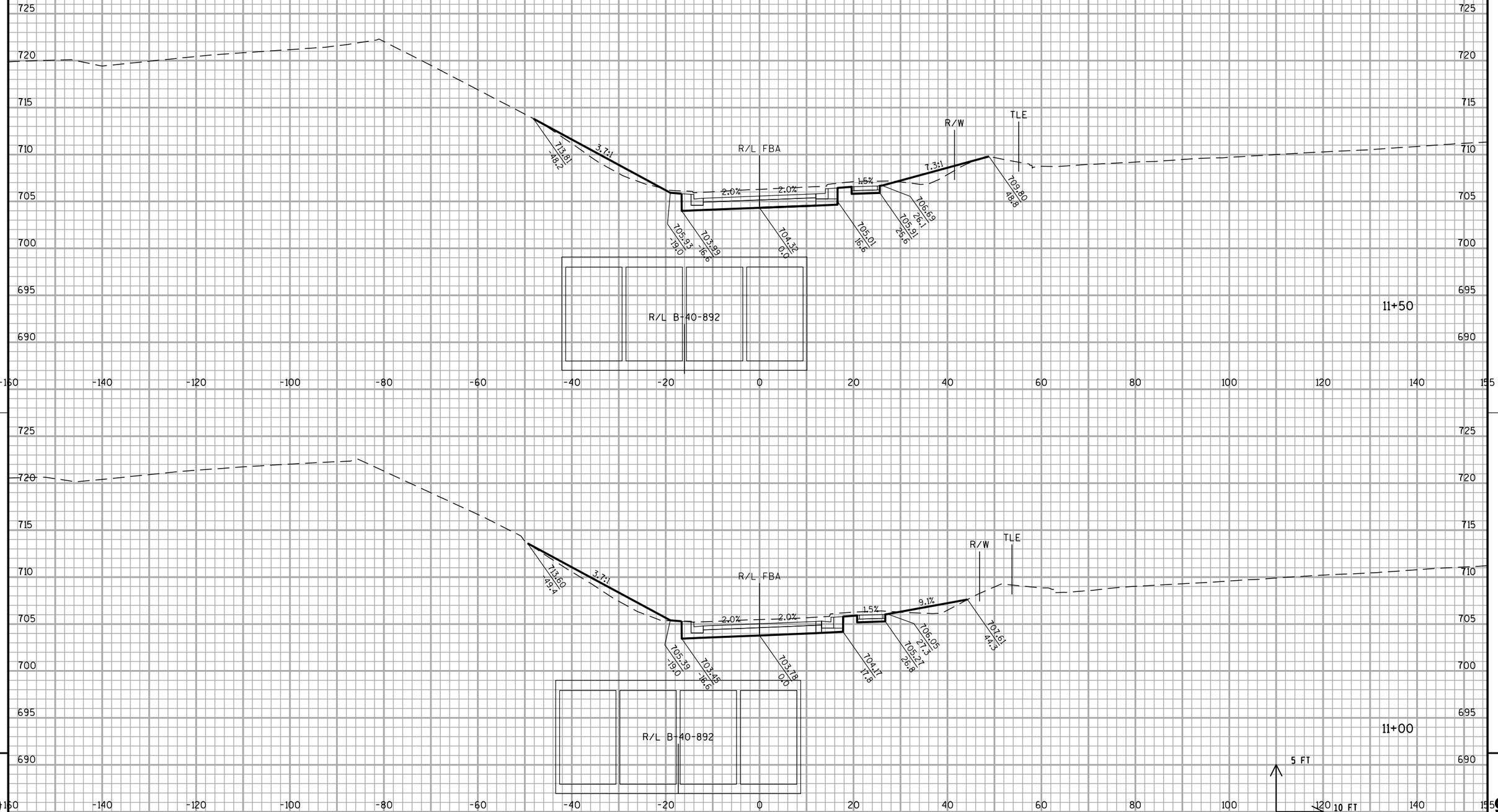


STA 10+00 TO 10+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FBA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090604_xs_fba.dgn PLOT DATE : 30-APR-2013 02:27 PLOT BY : MSCDYB PLOT NAME : 090604_xs_fba PLOT SCALE : 20:1

ALL WORK DONE STAGE 1



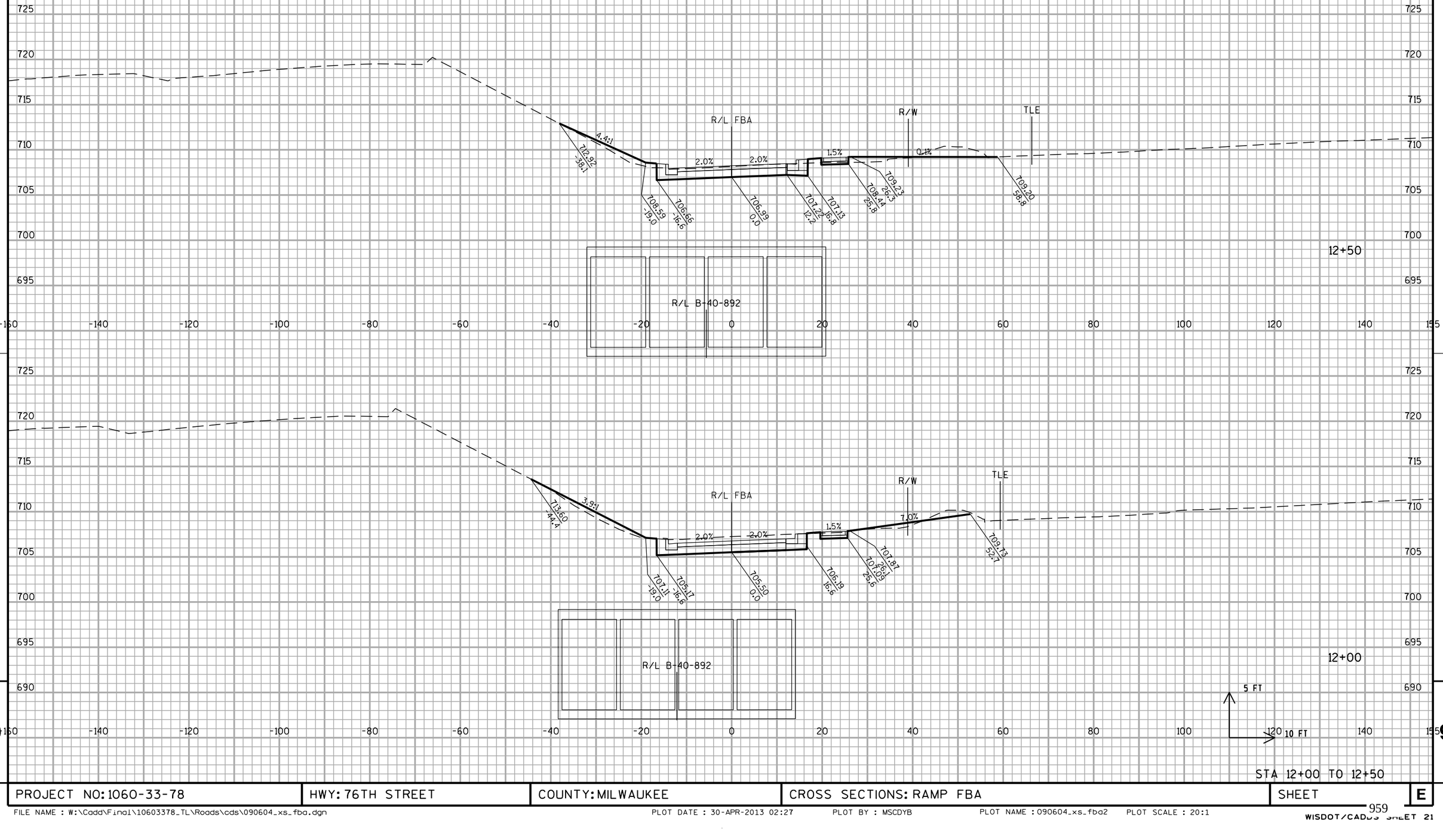
STA 11+00 TO 11+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FBA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090604_xs_fba.dgn PLOT DATE : 30-APR-2013 02:27 PLOT BY : MSCDYB PLOT NAME : 090604_xs_fba1 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE STAGE 1

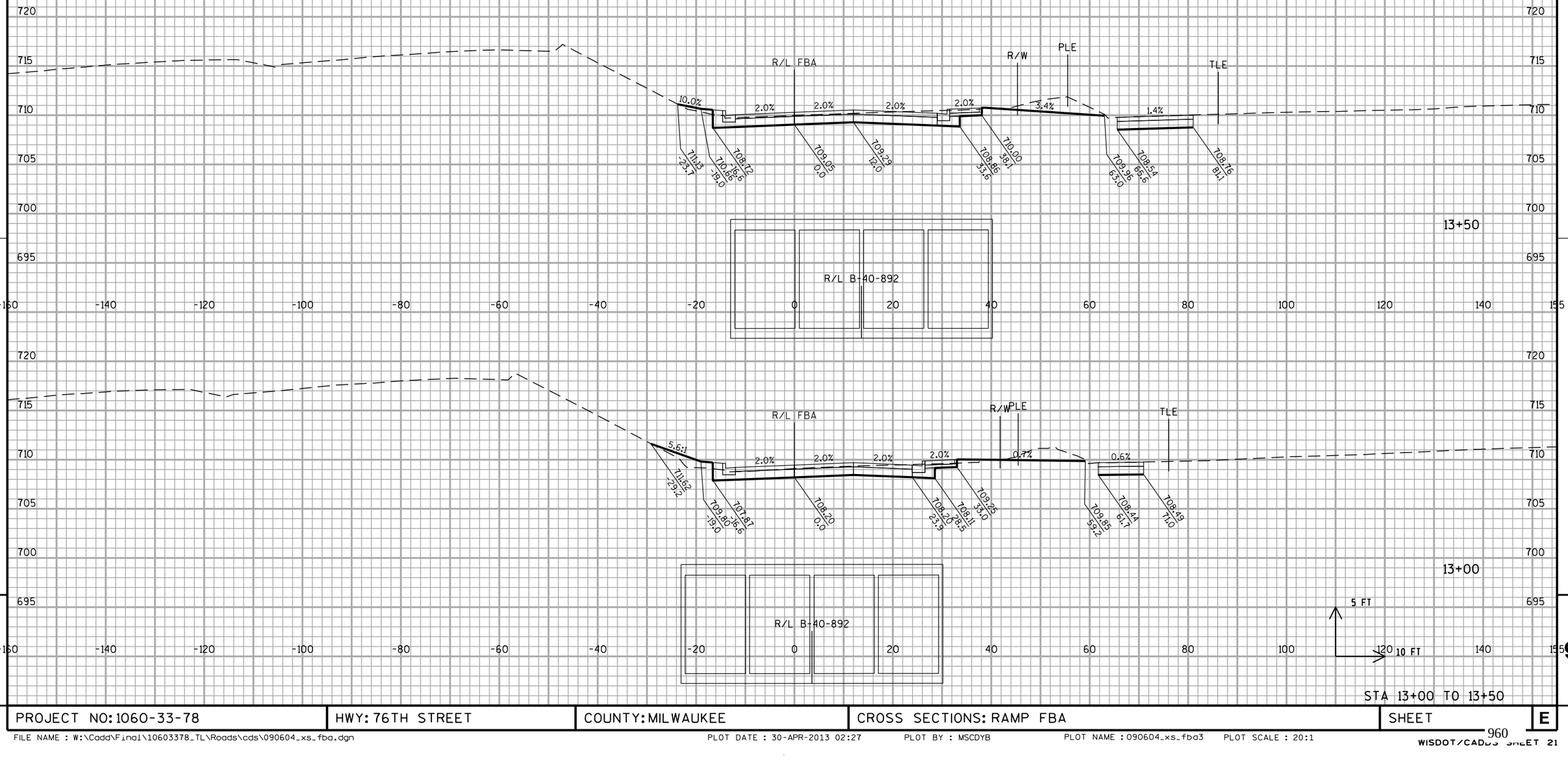


STA 12+00 TO 12+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FBA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090604_xs_fba.dgn PLOT DATE : 30-APR-2013 02:27 PLOT BY : MSCDYB PLOT NAME : 090604_xs_fba2 PLOT SCALE : 20:1

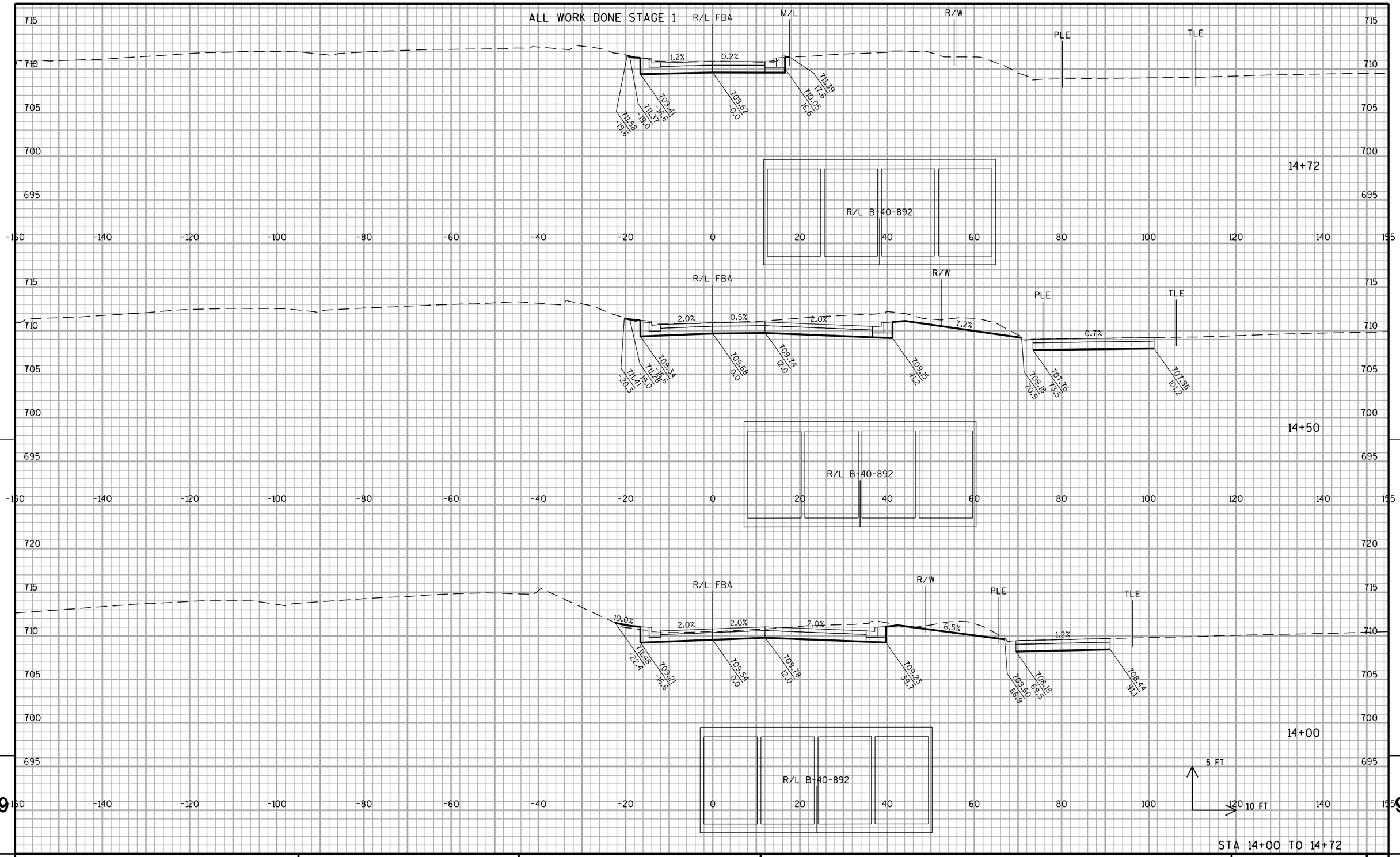
ALL WORK DONE STAGE 1



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FBA	SHEET	E

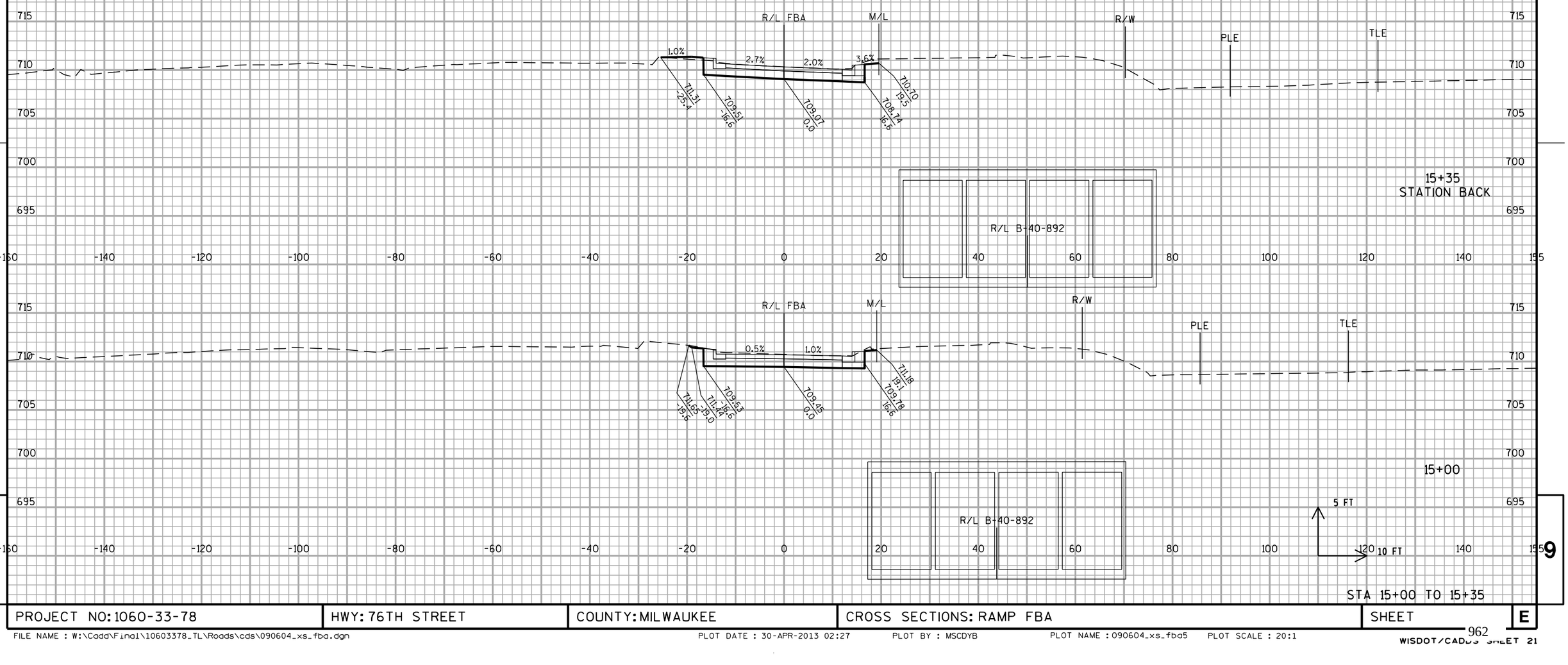
FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090604_xs_fba.dgn PLOT DATE : 30-APR-2013 02:27 PLOT BY : MSCDYB PLOT NAME : 090604_xs_fba3 PLOT SCALE : 20:1

ALL WORK DONE STAGE 1



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FBA	SHEET	E

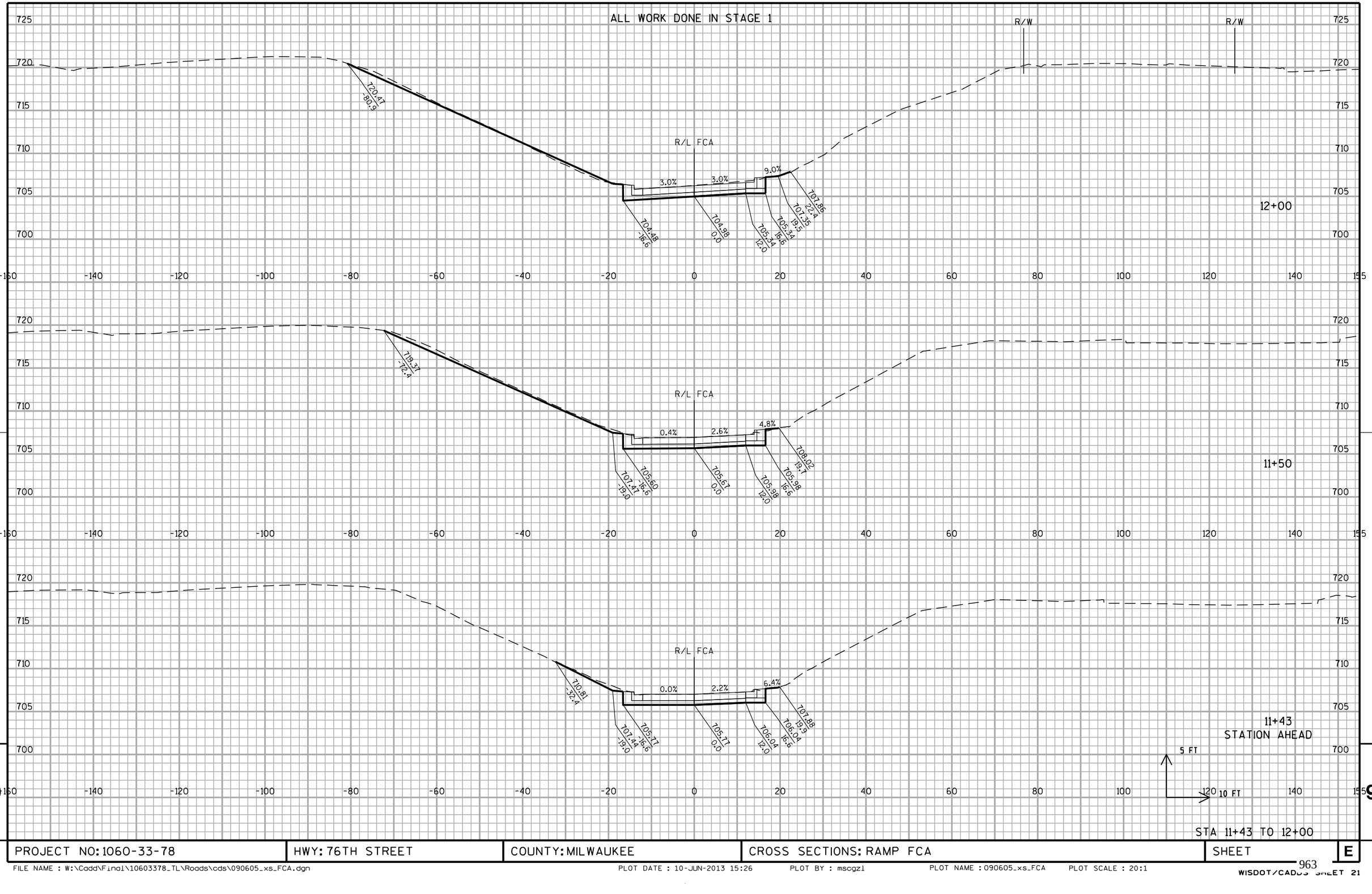
ALL WORK DONE STAGE 1



STA 15+00 TO 15+35

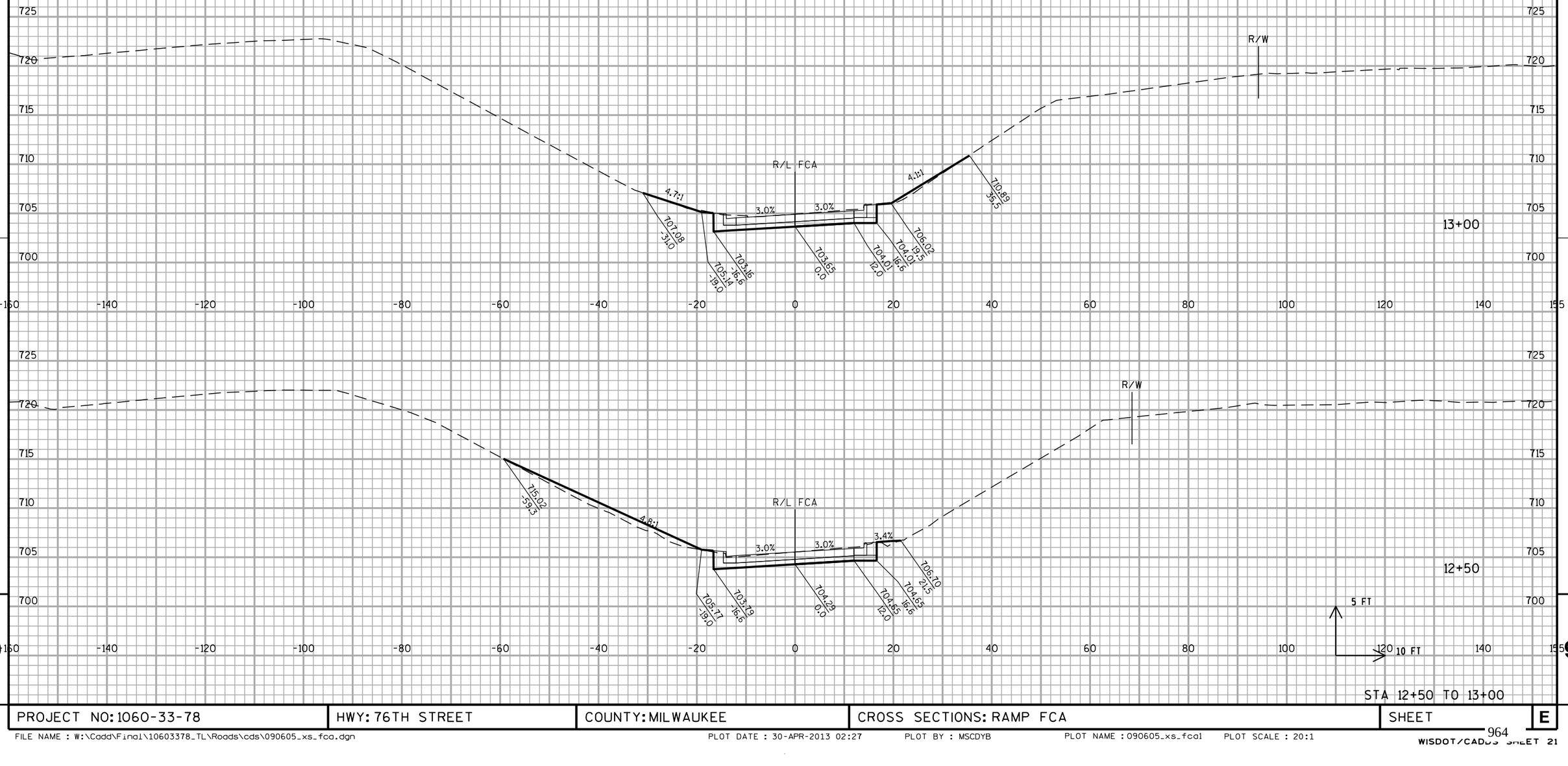
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FBA	SHEET	E

ALL WORK DONE IN STAGE 1



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCA	SHEET	E

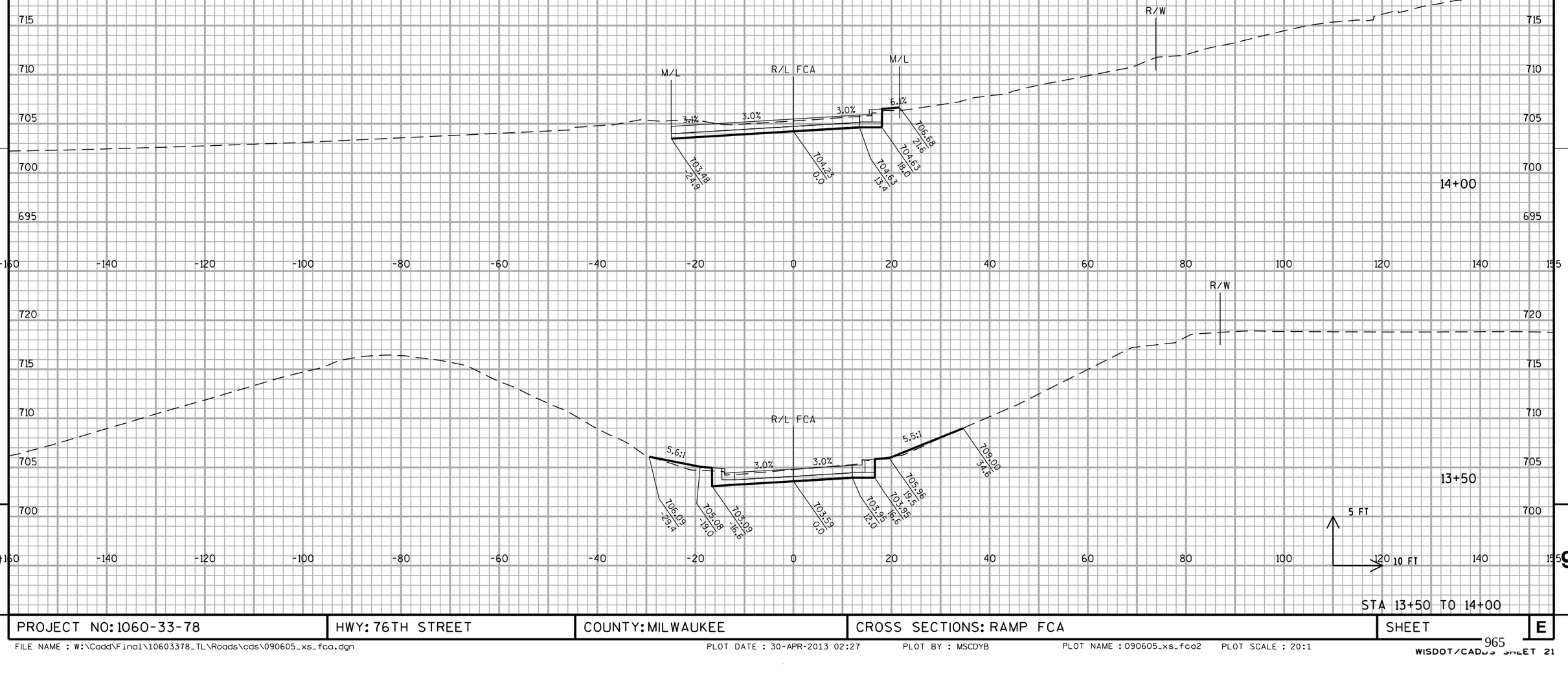
ALL WORK DONE IN STAGE 1



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090605_xs_fca.dgn PLOT DATE : 30-APR-2013 02:27 PLOT BY : MSCDYB PLOT NAME : 090605_xs_fca1 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 1



9

9

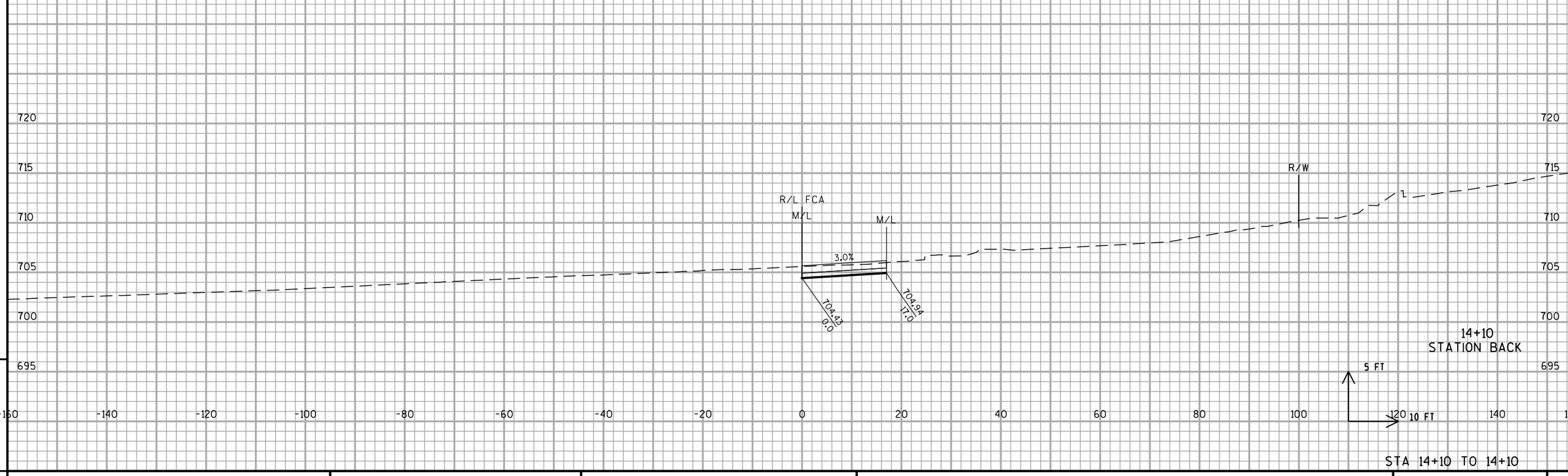
STA 13+50 TO 14+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090605_xs_fca.dgn PLOT DATE : 30-APR-2013 02:27 PLOT BY : MSCDYB PLOT NAME : 090605_xs_fca2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

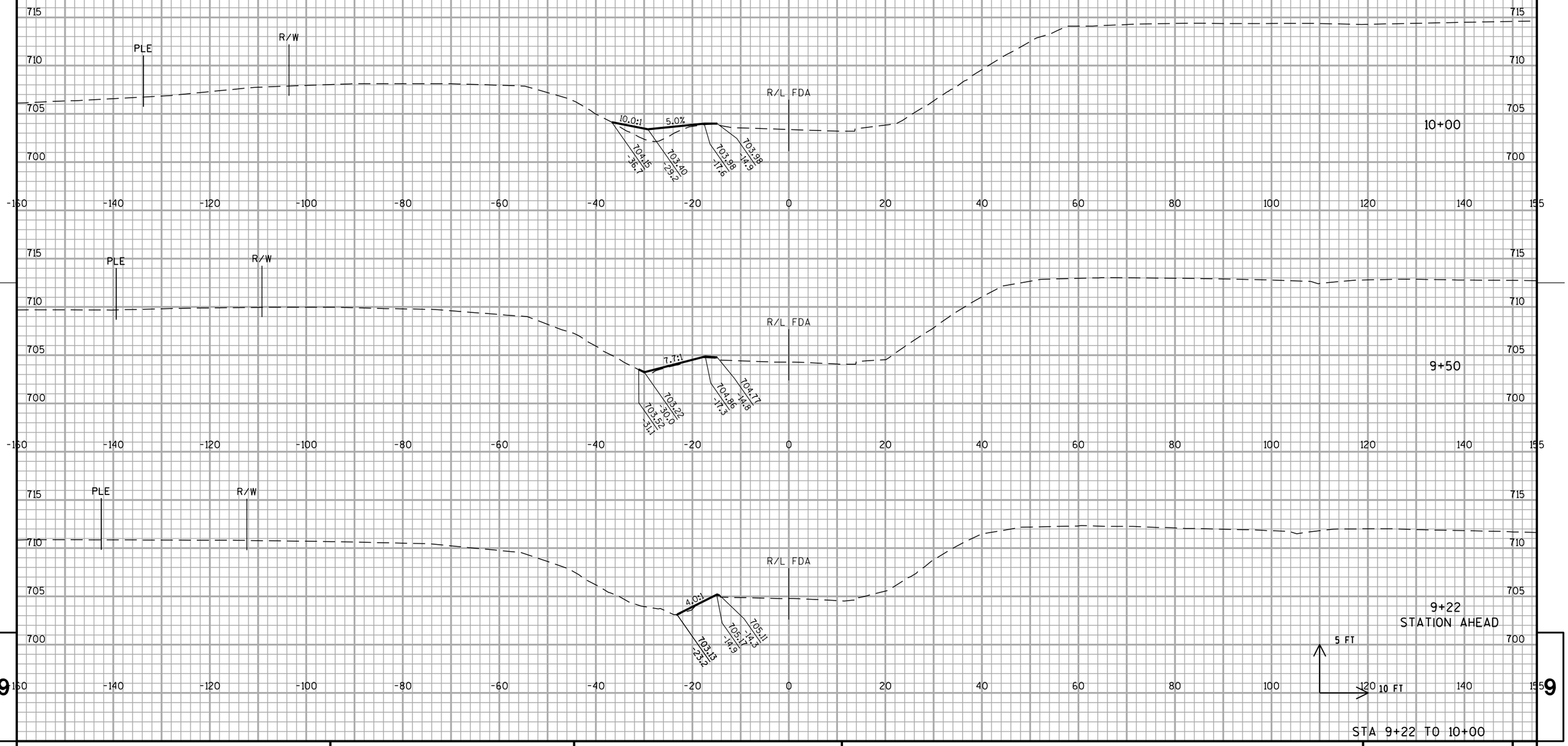
ALL WORK DONE IN STAGE 1



STA 14+10 TO 14+10

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FCA	SHEET	E

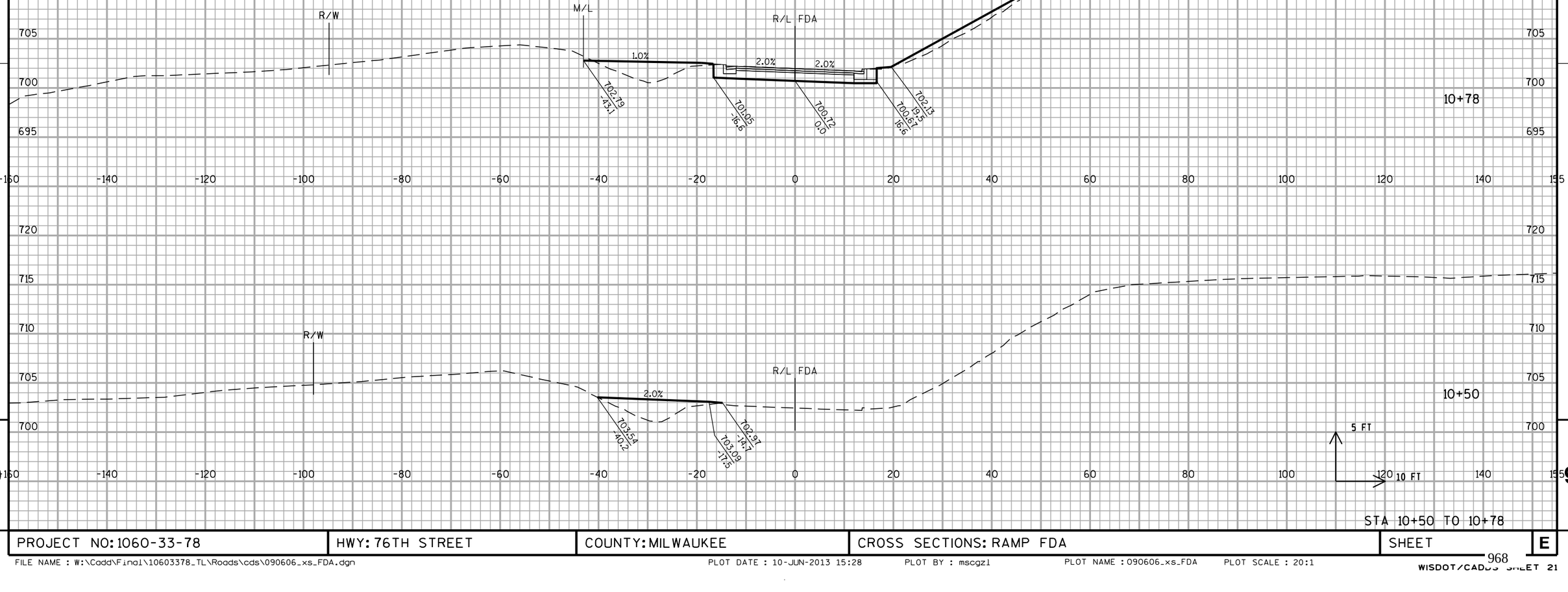
ALL WORK DONE IN STAGE 1



STA 9+22 TO 10+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FDA	SHEET	E

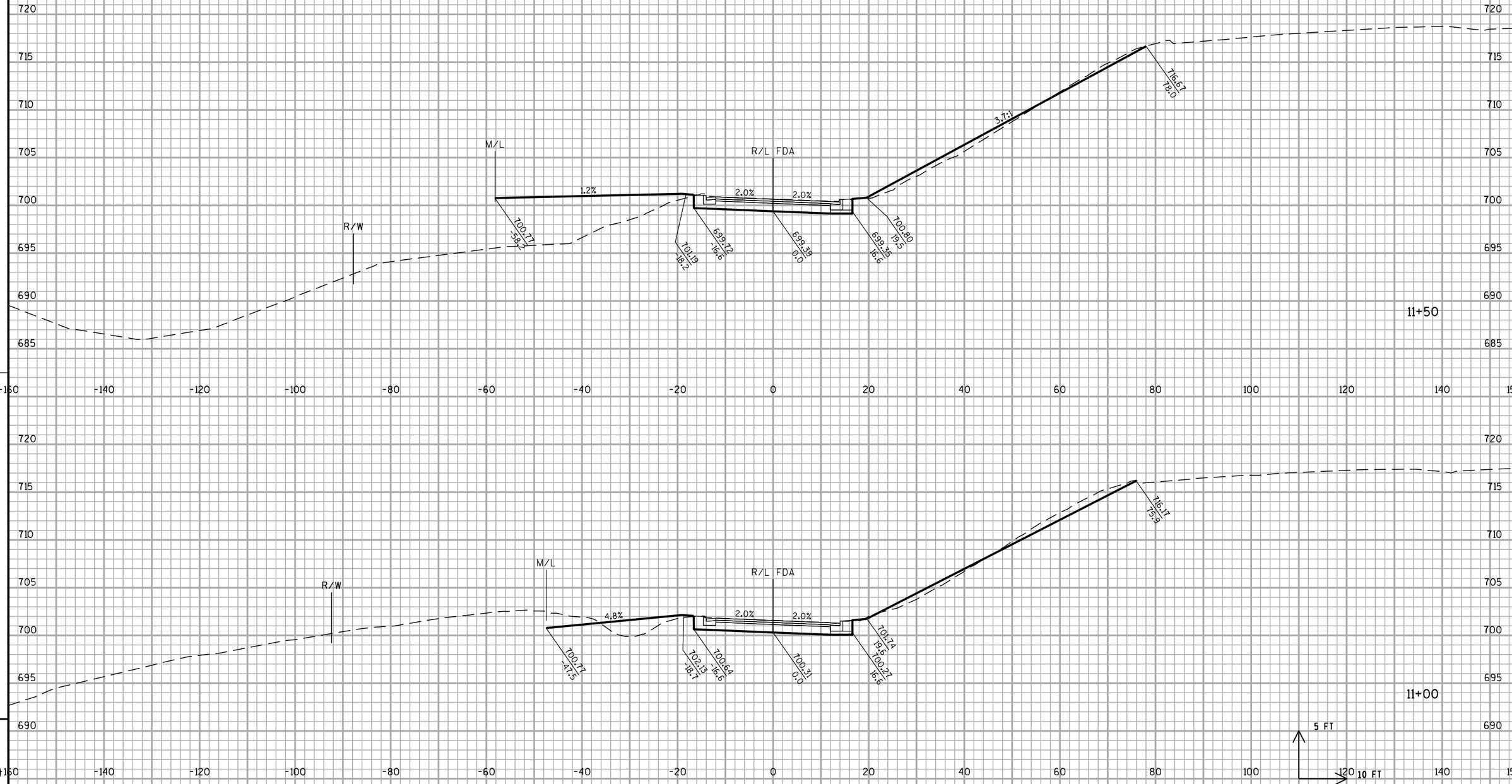
ALL WORK DONE IN STAGE 1



STA 10+50 TO 10+78

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FDA	SHEET	E

ALL WORK DONE IN STAGE 1



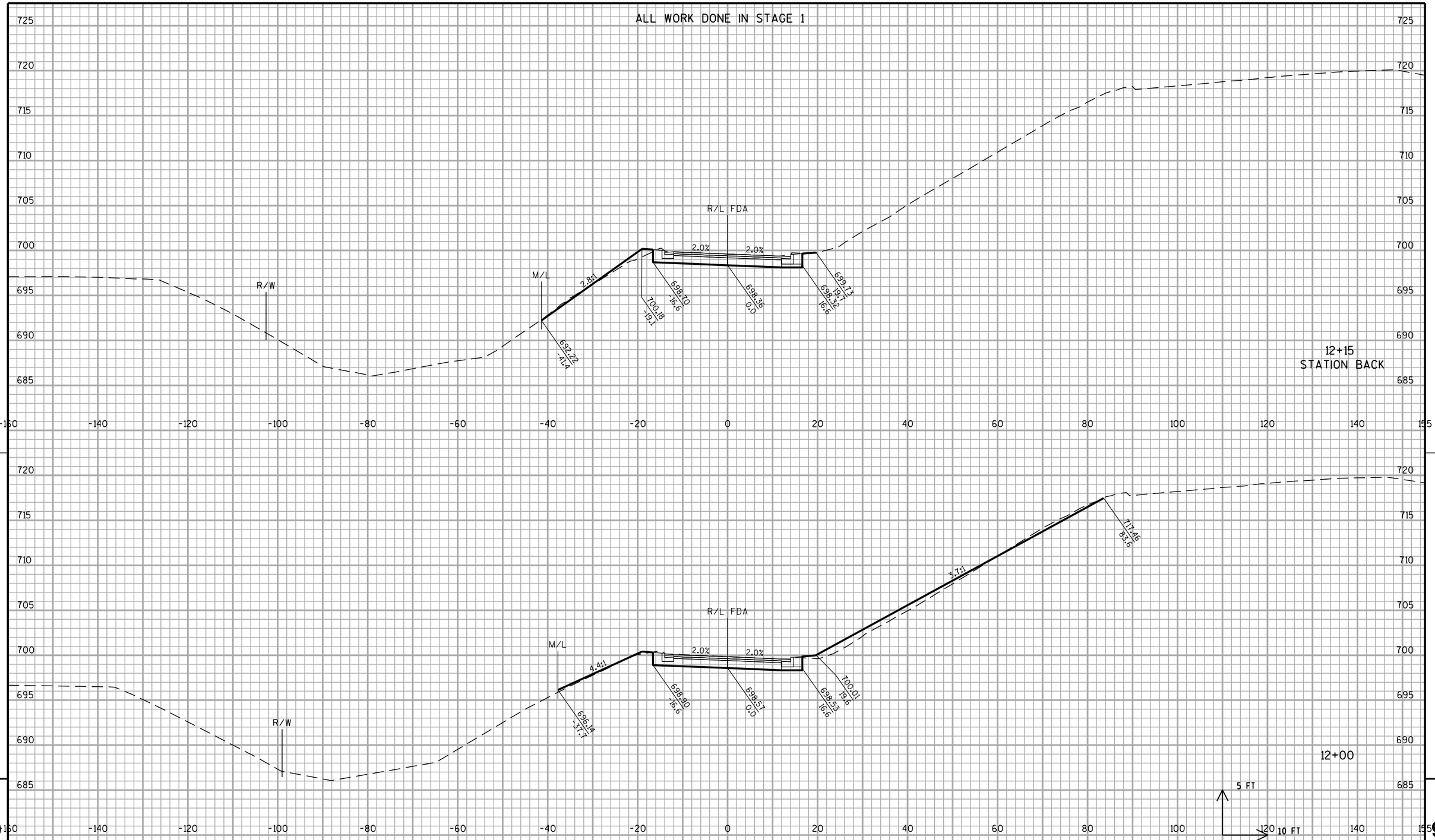
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FDA	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090606_xs_fda.dgn PLOT DATE : 30-APR-2013 02:27 PLOT BY : MSCDYB PLOT NAME : 090606_xs_fda2 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGE 1



12+15
STATION BACK

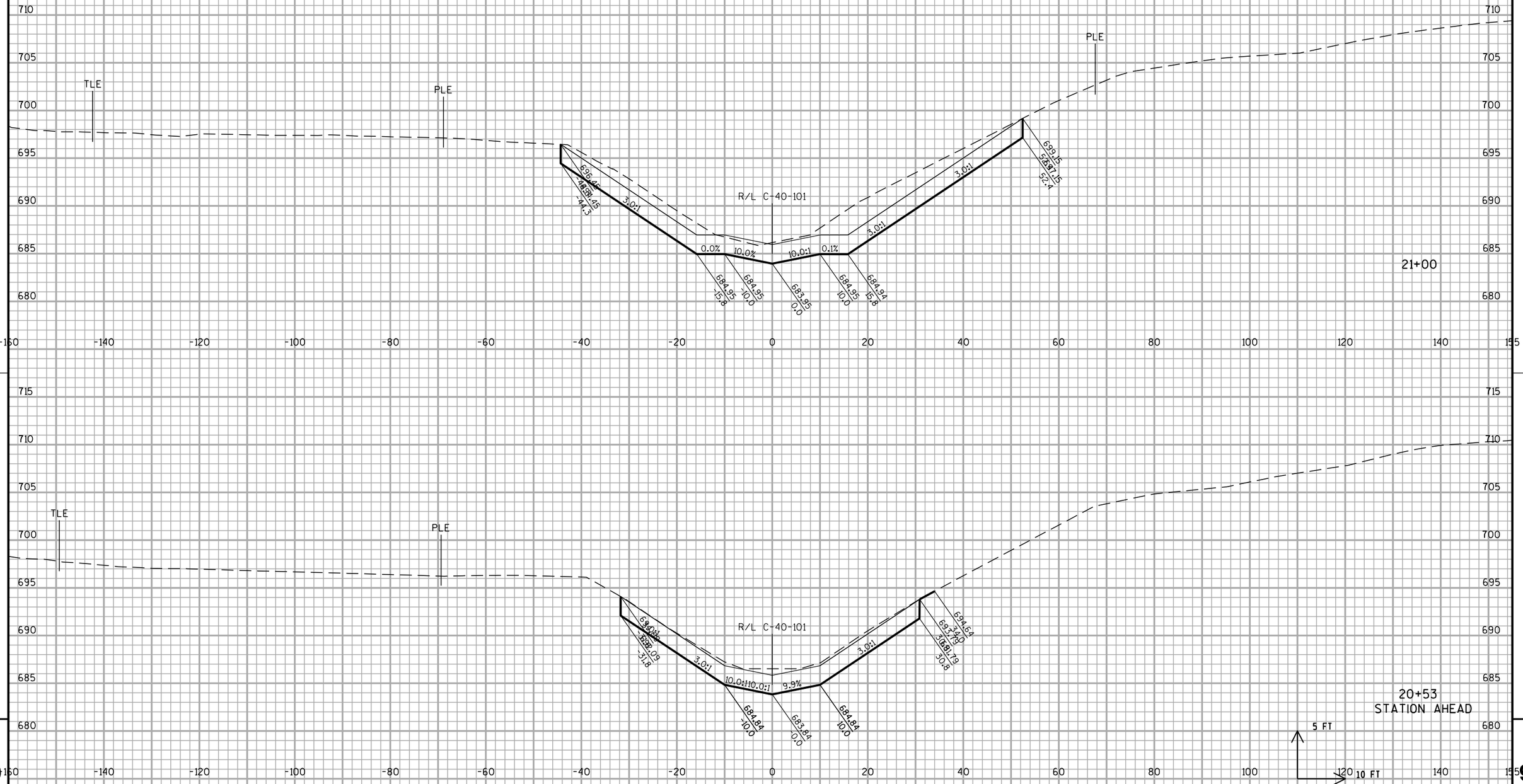
12+00

5 FT
10 FT

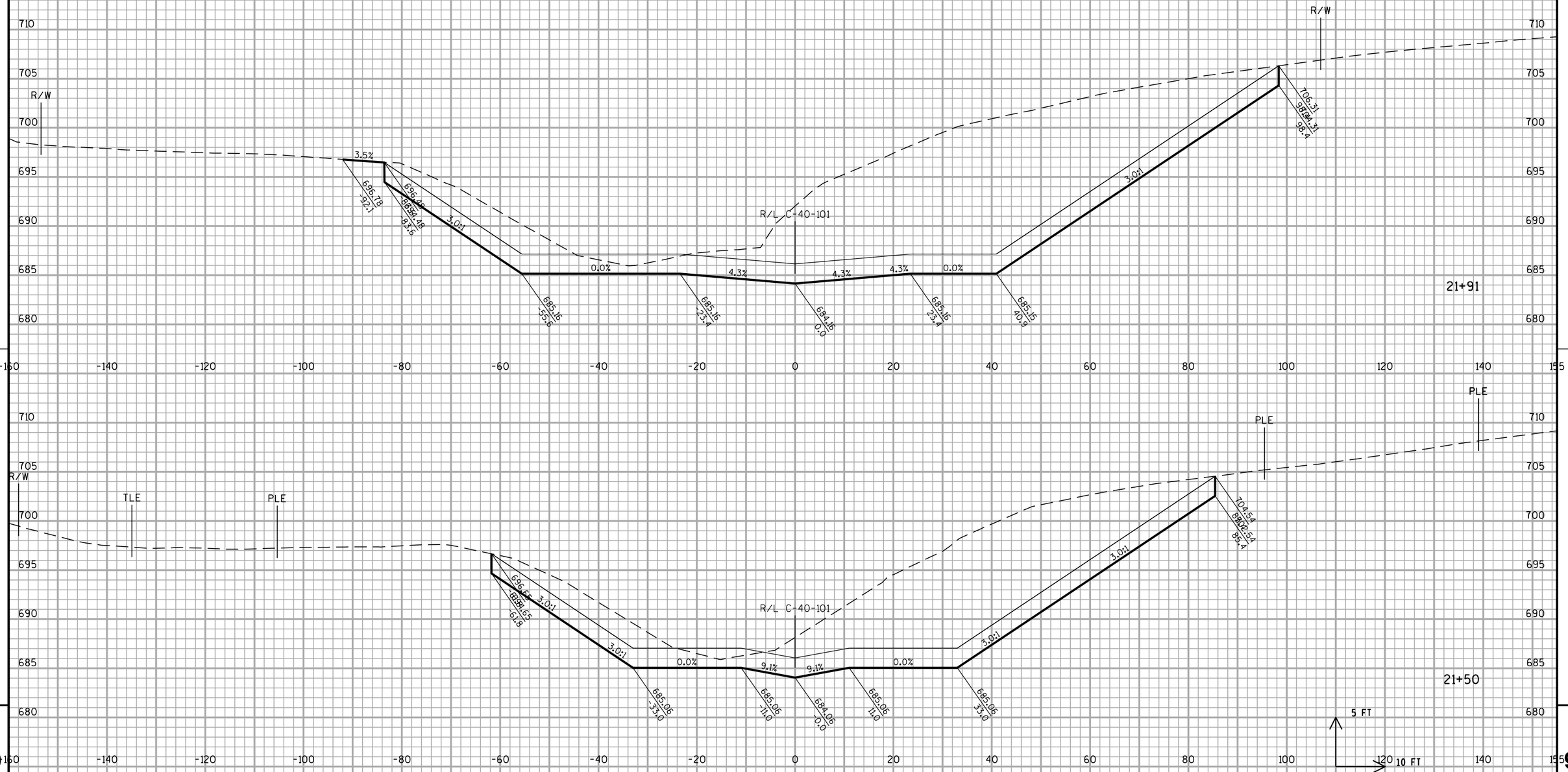
STA 12+00 TO 12+15

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP FDA	SHEET	E

ALL WORK DONE IN STAGE 1


TLE
PLE
PLE
R/L C-40-101
3.0:1
3.0:1
3.0:1
3.0:1
0.0%
10.0%
10.0:1
0.1%
684.95
15.8
684.95
10.0
683.95
0.0
684.95
10.0
684.94
15.8
693.15
52.4
693.15
52.4
693.15
52.4

ALL WORK DONE IN STAGE 1

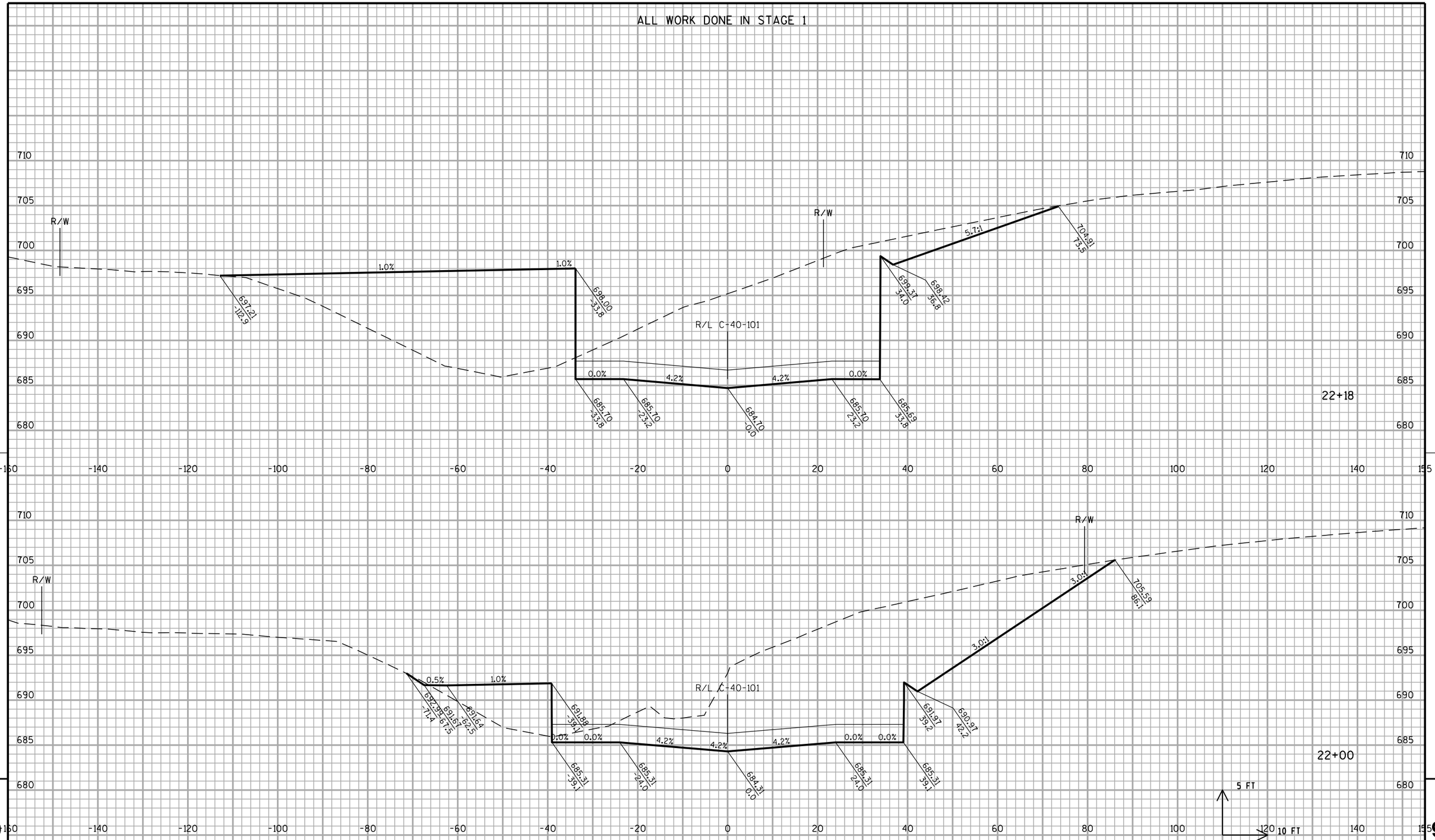


STA 21+50 TO 21+91

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101 CHANNEL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090607_xs_channel.dgn PLOT DATE : 30-APR-2013 02:28 PLOT BY : MSCDYB PLOT NAME : 090607_xs_channel1 PLOT SCALE : 20:1

ALL WORK DONE IN STAGE 1



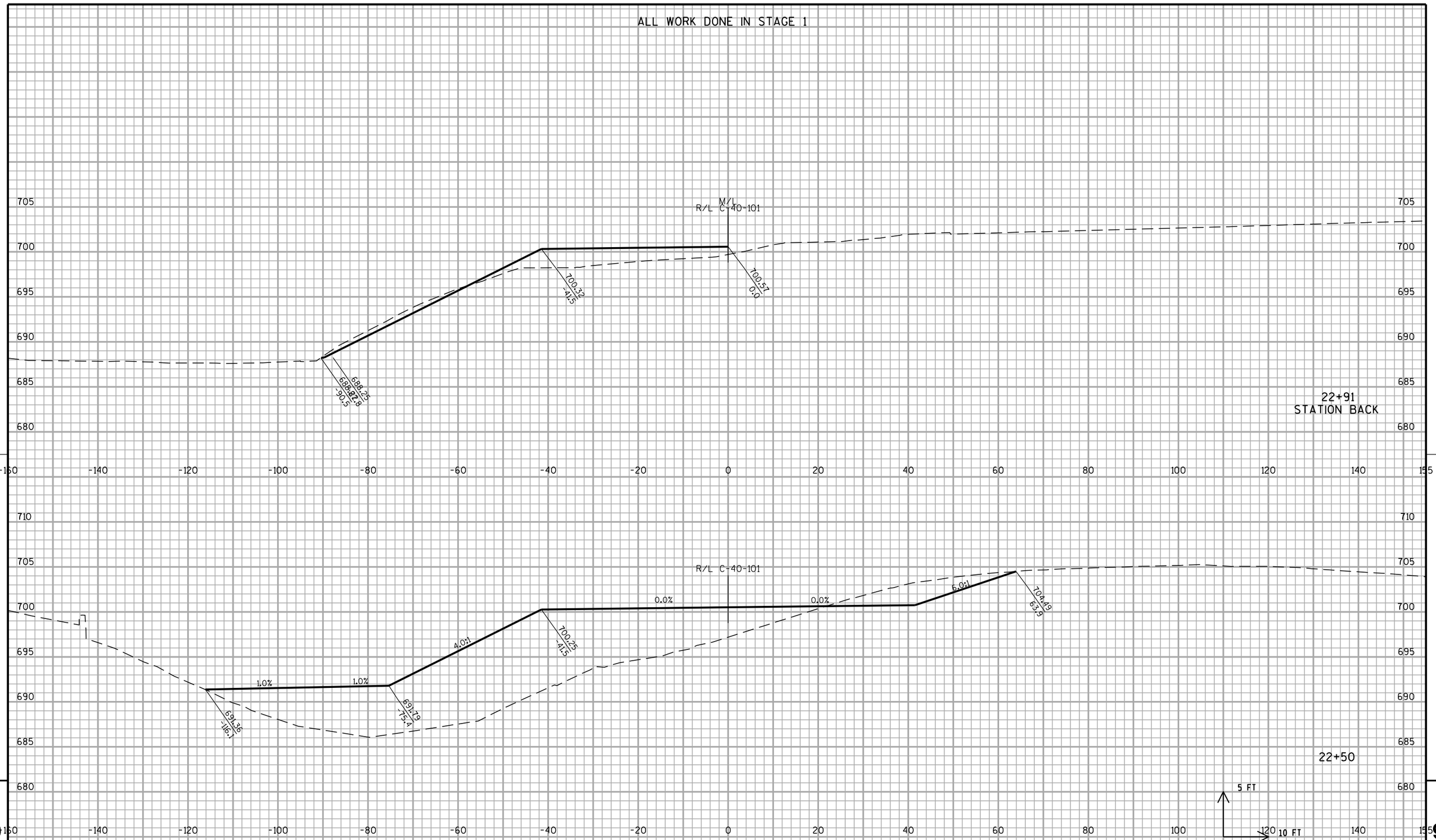
STA 22+00 TO 22+18

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101 CHANNEL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090607_xs_channel.dgn PLOT DATE : 30-APR-2013 02:28 PLOT BY : MSCDYB PLOT NAME : 090607_xs_channel2PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE IN STAGE 1

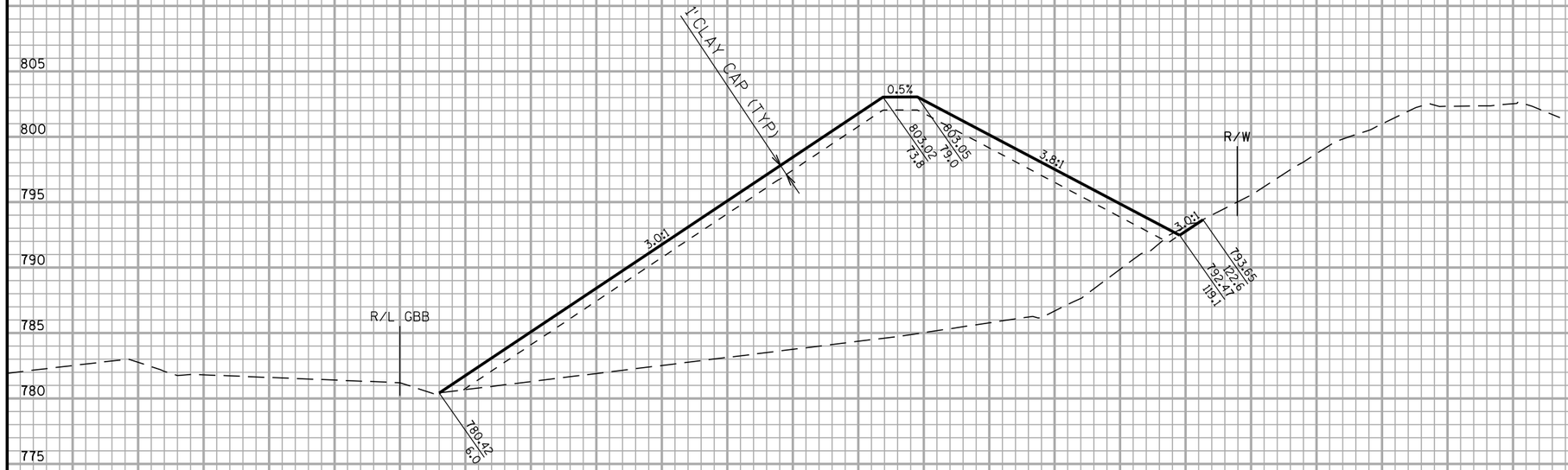


PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101 CHANNEL	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090607_xs_channel.dgn PLOT DATE : 30-APR-2013 02:28 PLOT BY : MSCDYB PLOT NAME : 090607_xs_channel3PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

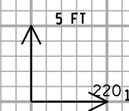
ALL WORK DONE STAGES 1 - 3



746+50



746+00
STATION AHEAD

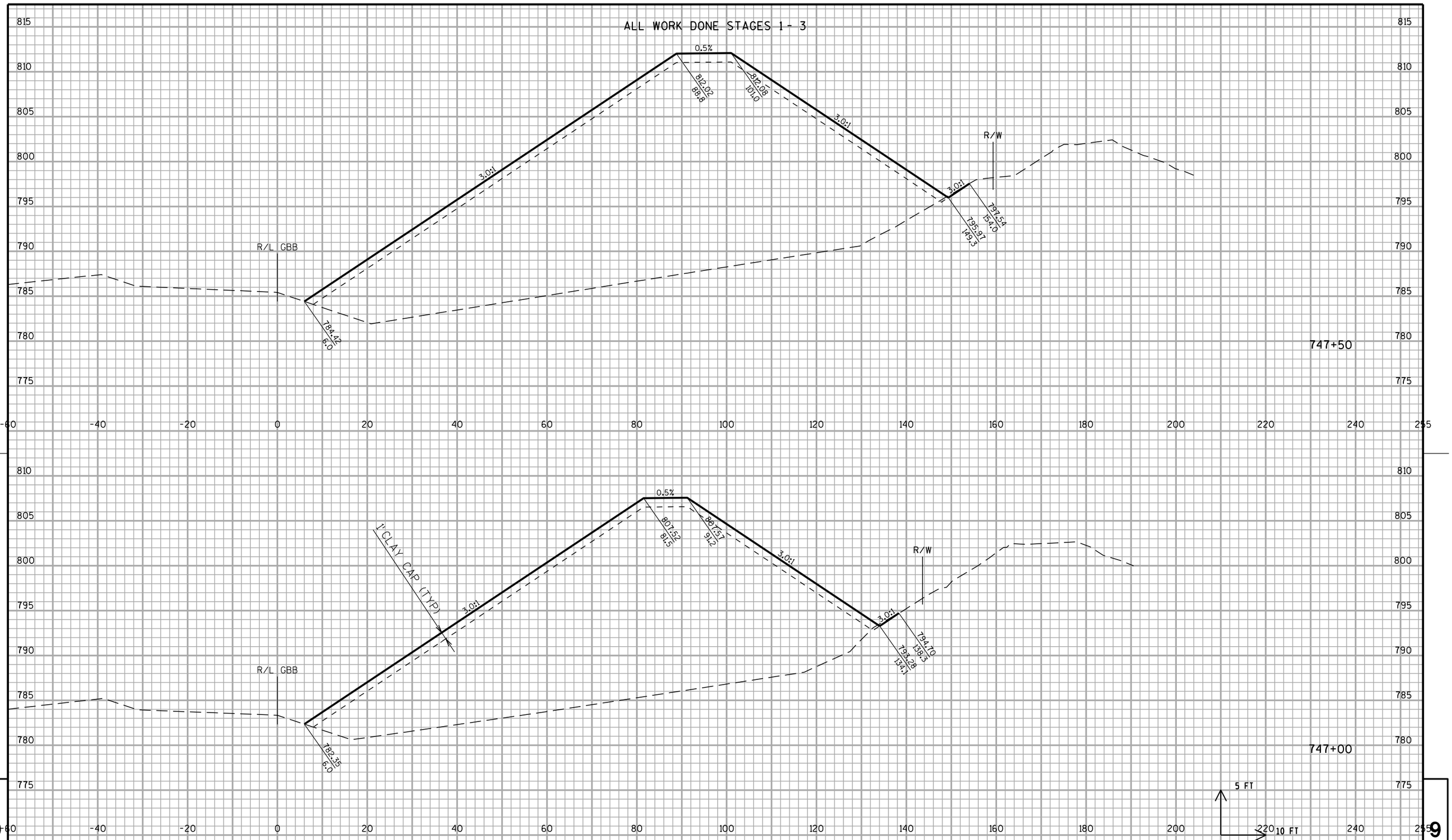


STA 746+00 TO 746+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090608_xs_GB_Berm.dgn PLOT DATE : 06-JUN-2013 12:58 PLOT BY : mscgzl PLOT NAME : 090608_xs_GB_Berm PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

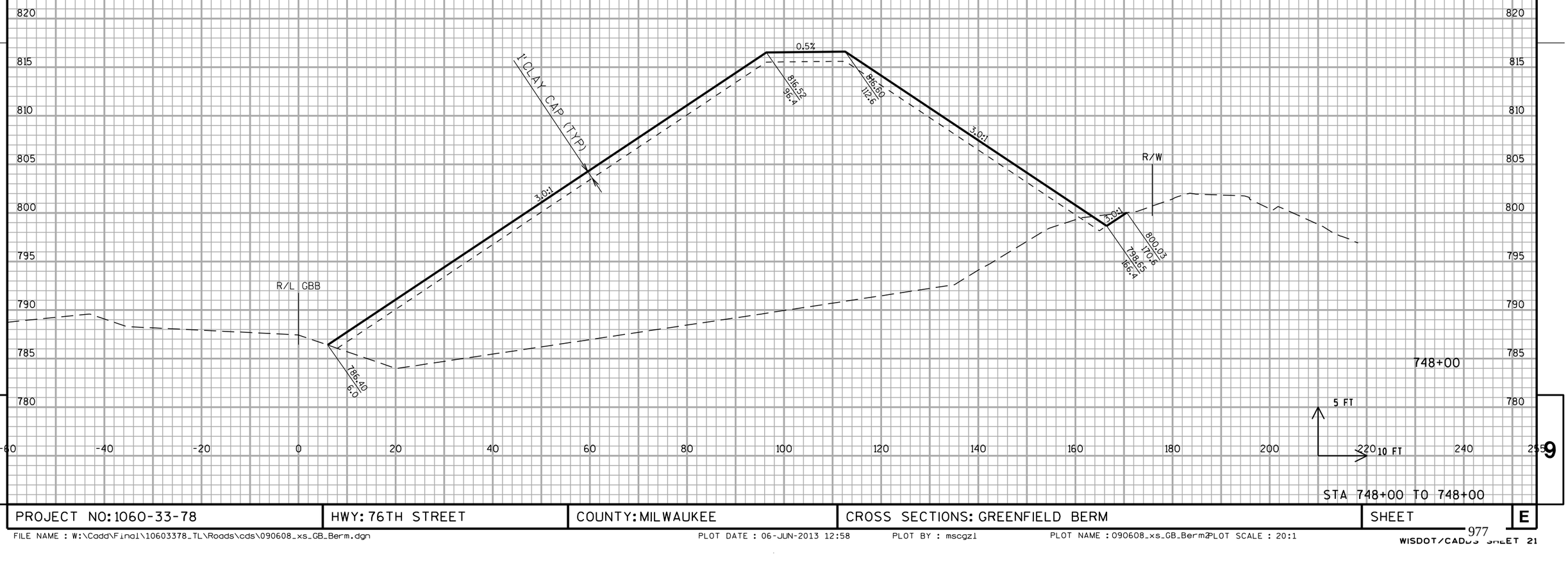
ALL WORK DONE STAGES 1 - 3



STA 747+00 TO 747+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

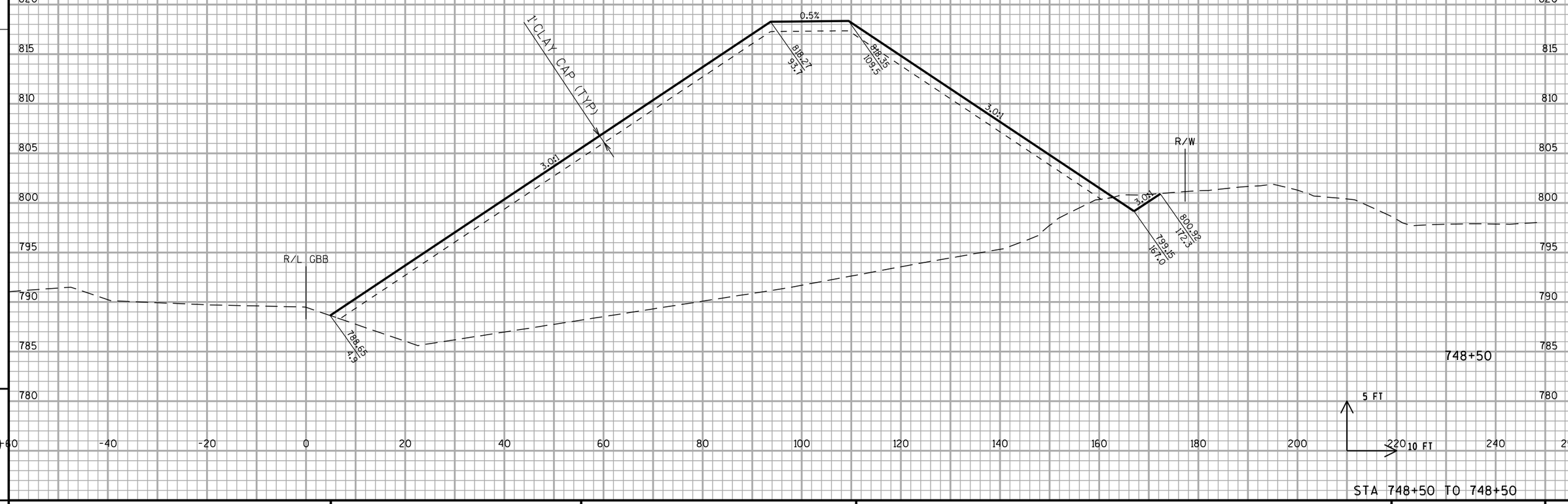
ALL WORK DONE STAGES 1 - 3



STA 748+00 TO 748+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

ALL WORK DONE STAGES 1 - 3



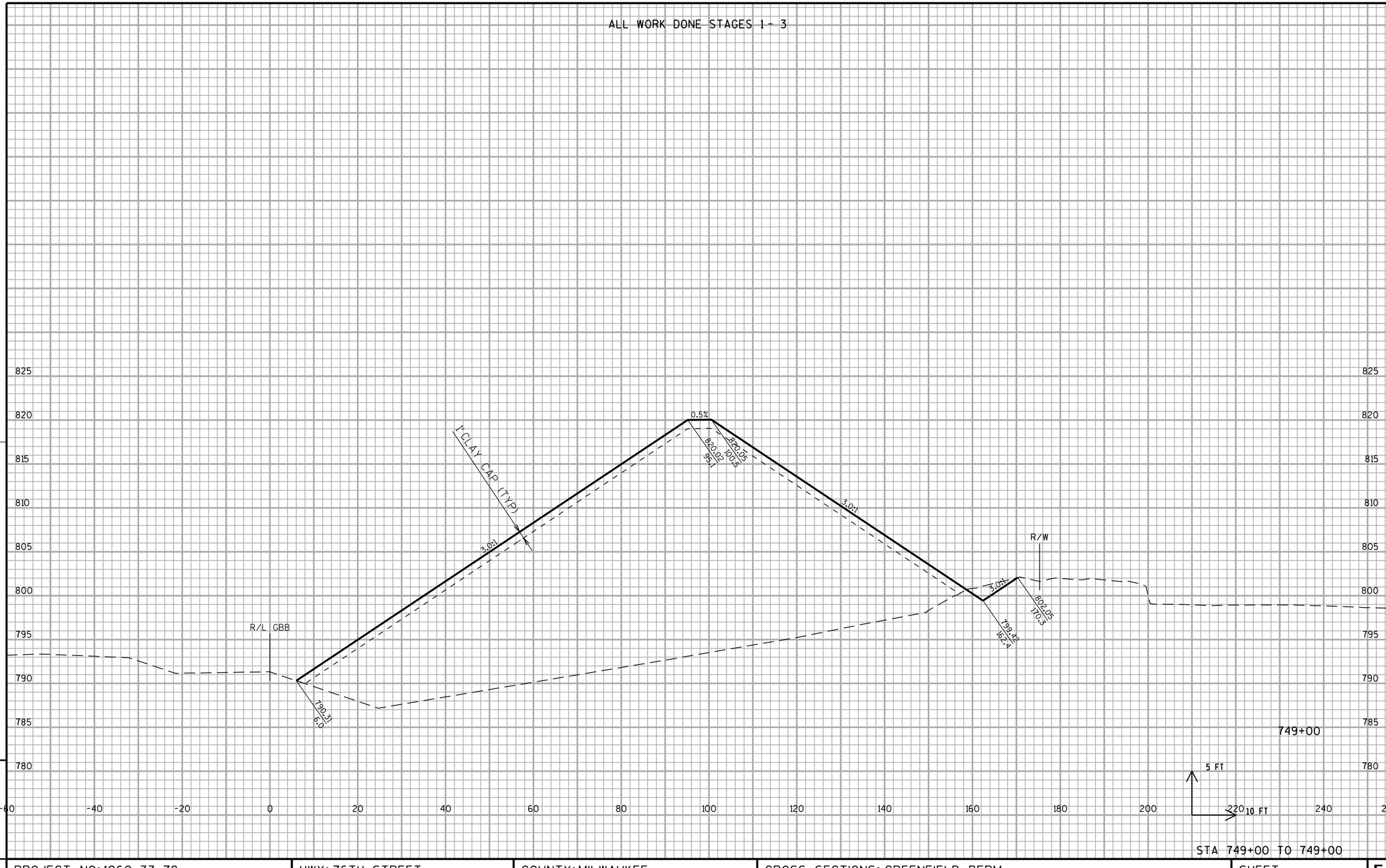
STA 748+50 TO 748+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090608_xs_GB_Berm.dgn PLOT DATE : 06-JUN-2013 12:58 PLOT BY : mscgzl PLOT NAME : 090608_xs_GB_Berm3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE STAGES 1 - 3

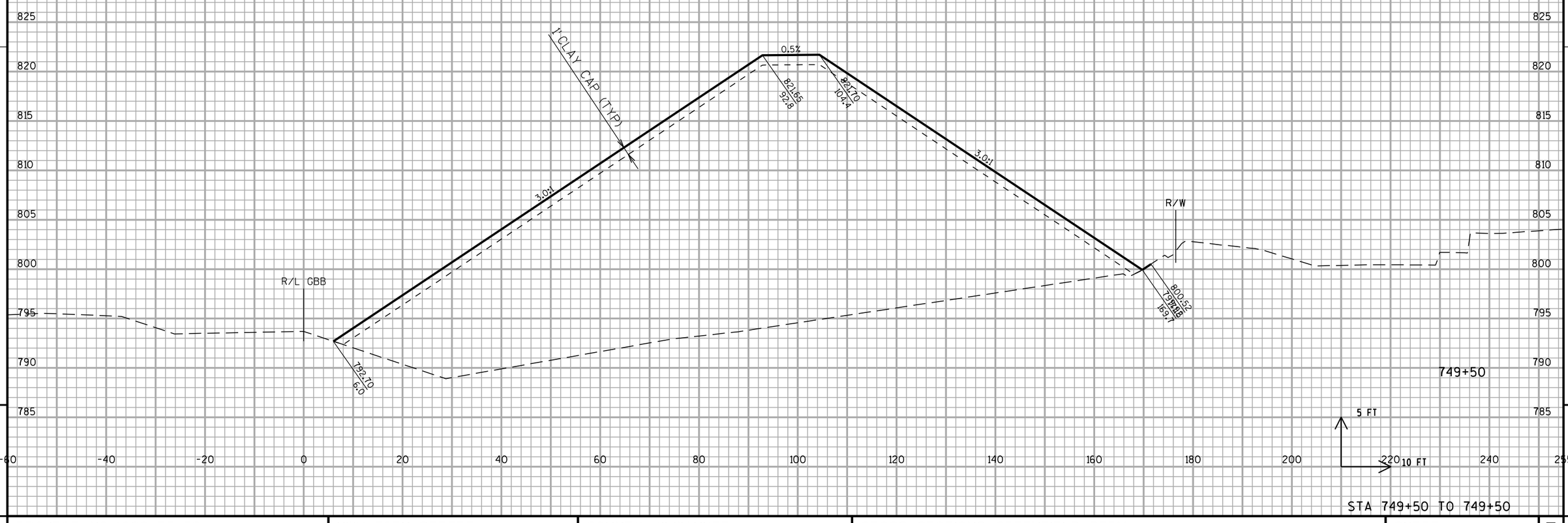


STA 749+00 TO 749+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090608_xs_GB_Berm.dgn PLOT DATE : 06-JUN-2013 12:58 PLOT BY : mscgzl PLOT NAME : 090608_xs_GB_Berm4PLOT SCALE : 20:1

ALL WORK DONE STAGES 1 - 3



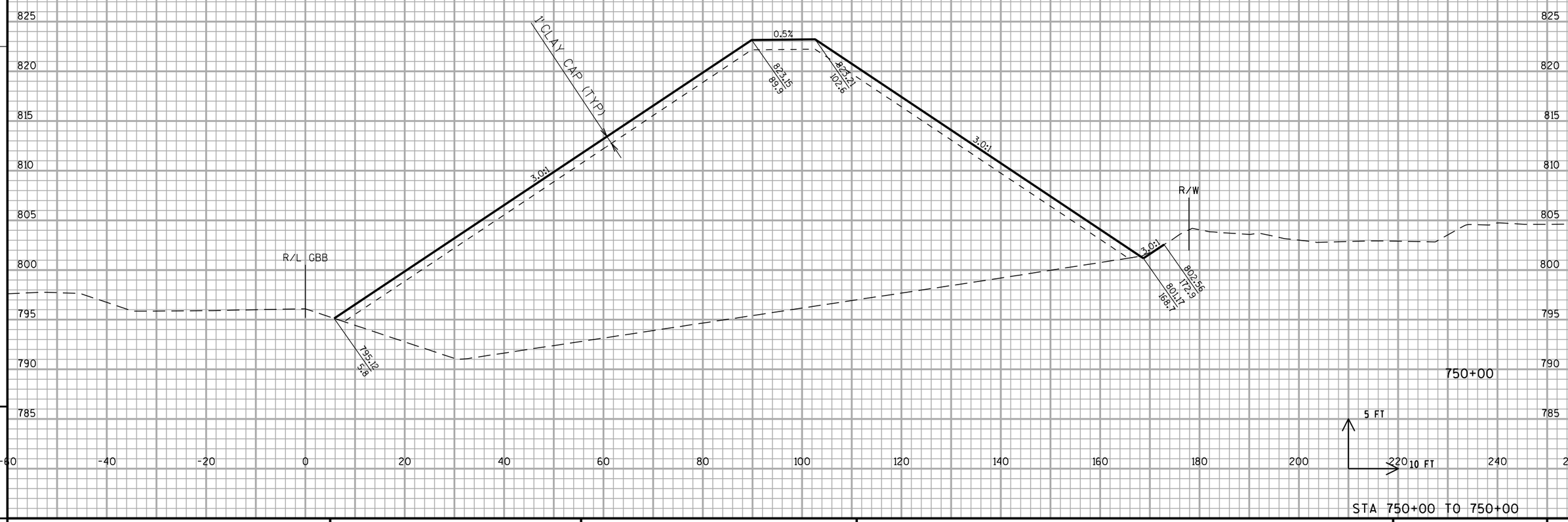
STA 749+50 TO 749+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090608_xs_GB_Berm.dgn PLOT DATE : 06-JUN-2013 12:58 PLOT BY : mscgzl PLOT NAME : 090608_xs_GB_Berm5 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

ALL WORK DONE STAGES 1 - 3

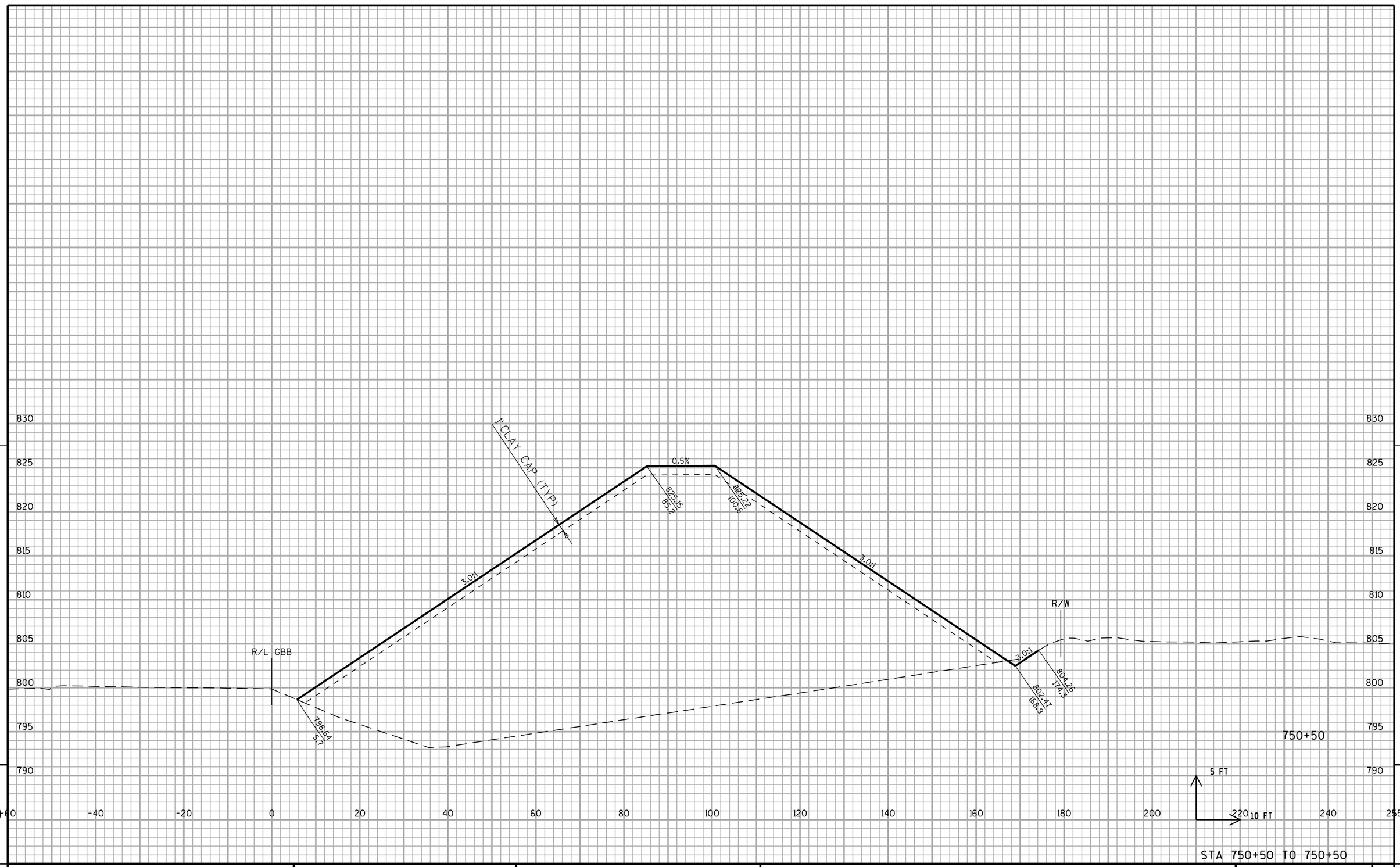


STA 750+00 TO 750+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090608_xs_GB_Berm.dgn PLOT DATE : 06-JUN-2013 12:58 PLOT BY : mscgzl PLOT NAME : 090608_xs_GB_Berm PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

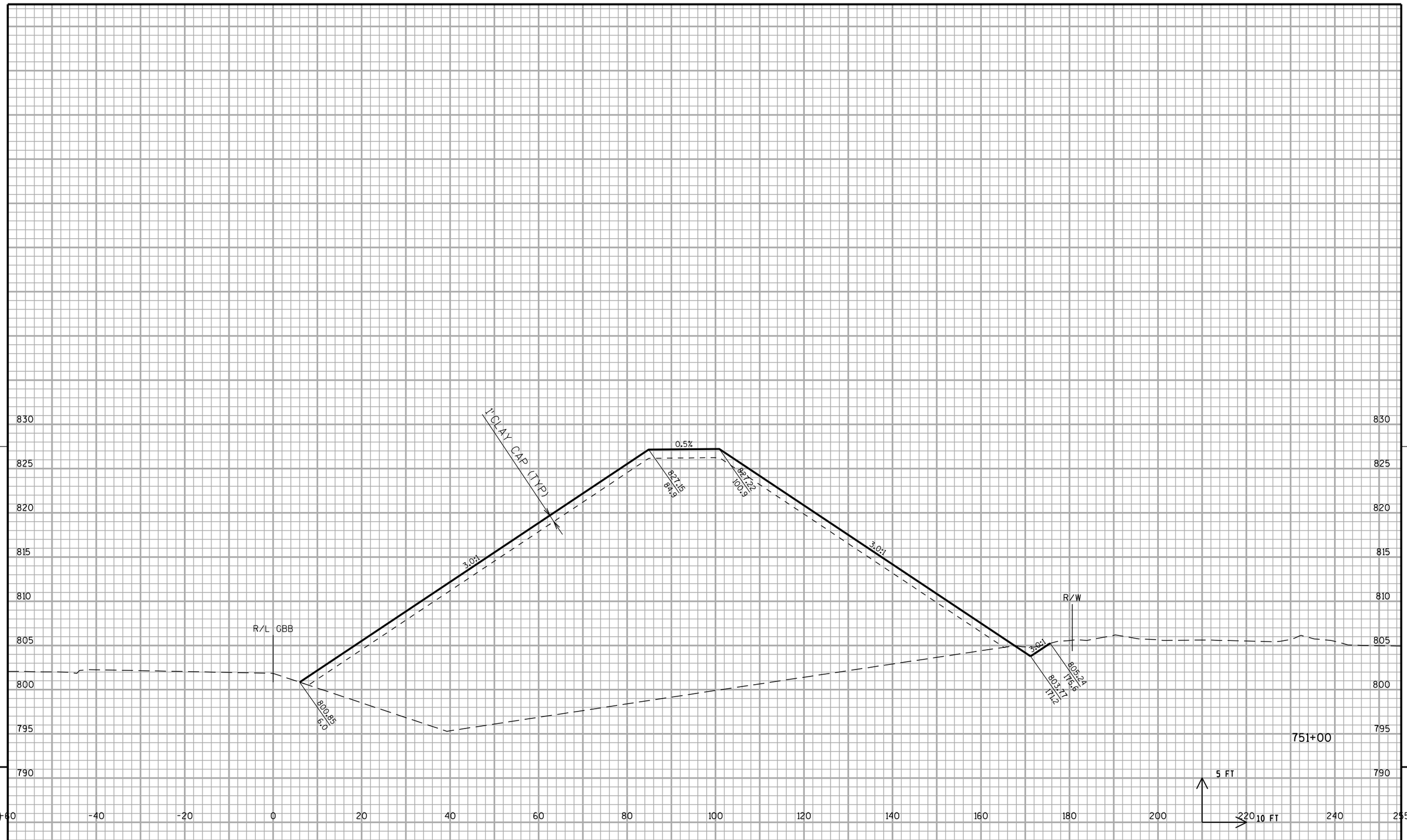


STA 750+50 TO 750+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090608_xs_GB_Berm.dgn PLOT DATE : 06-JUN-2013 12:58 PLOT BY : mscgzl PLOT NAME : 090608_xs_GB_Berm PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



9

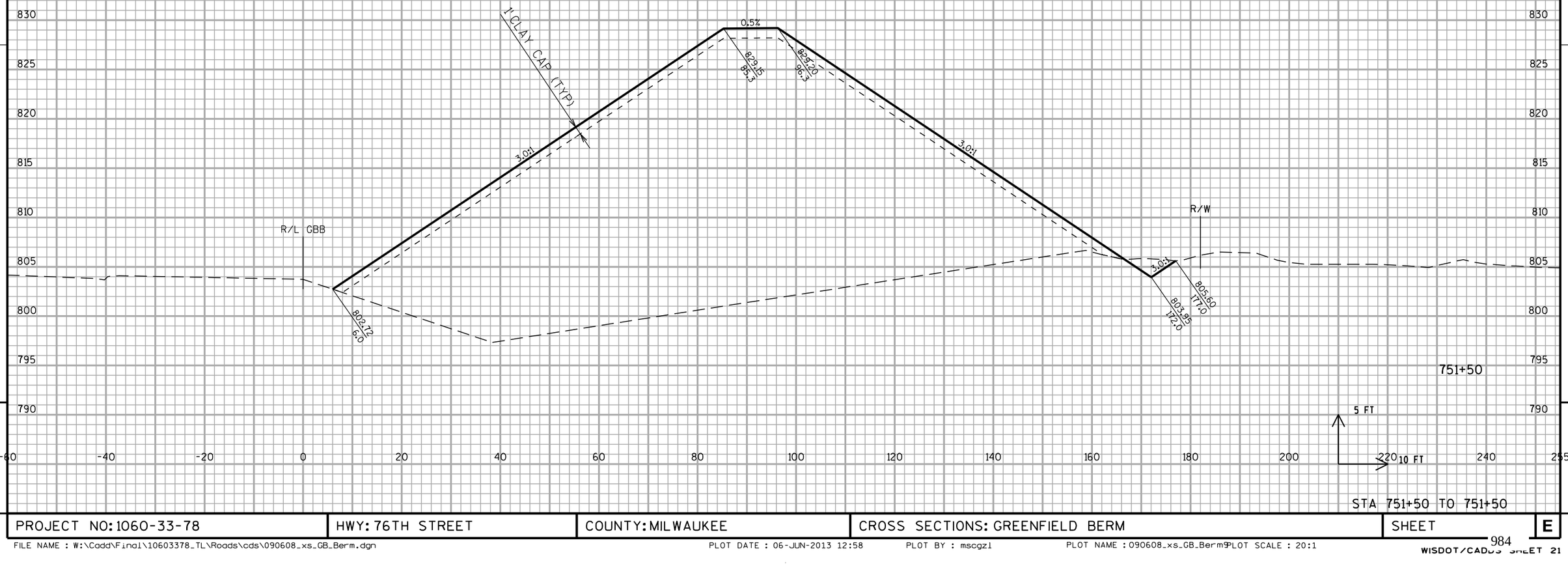
9

STA 751+00 TO 751+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090608_xs_GB_Berm.dgn PLOT DATE : 06-JUN-2013 12:58 PLOT BY : mscgzl PLOT NAME : 090608_xs_GB_Berm PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

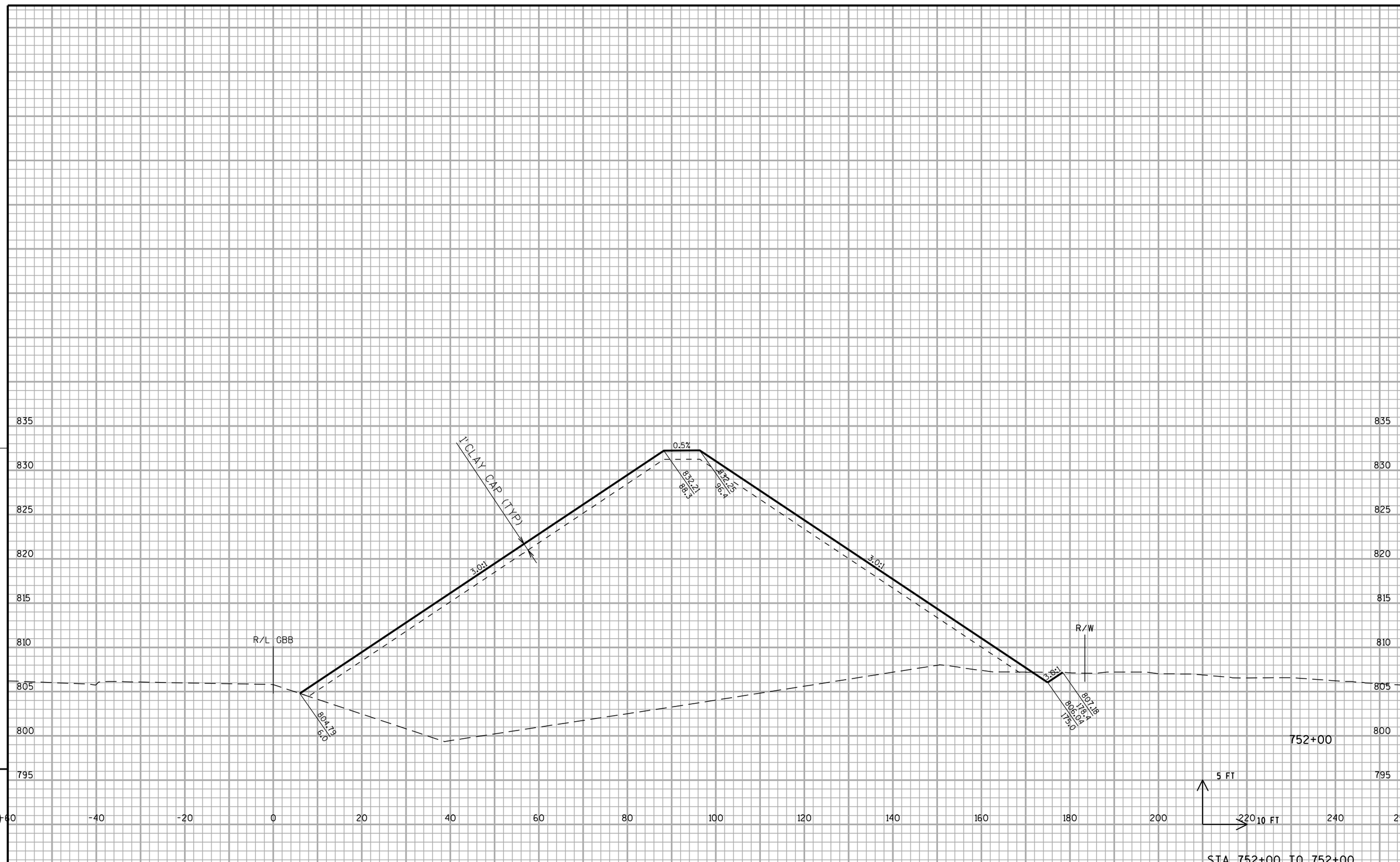


STA 751+50 TO 751+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090608_xs_GB_Berm.dgn PLOT DATE : 06-JUN-2013 12:58 PLOT BY : mscgzl PLOT NAME : 090608_xs_GB_Berm PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21



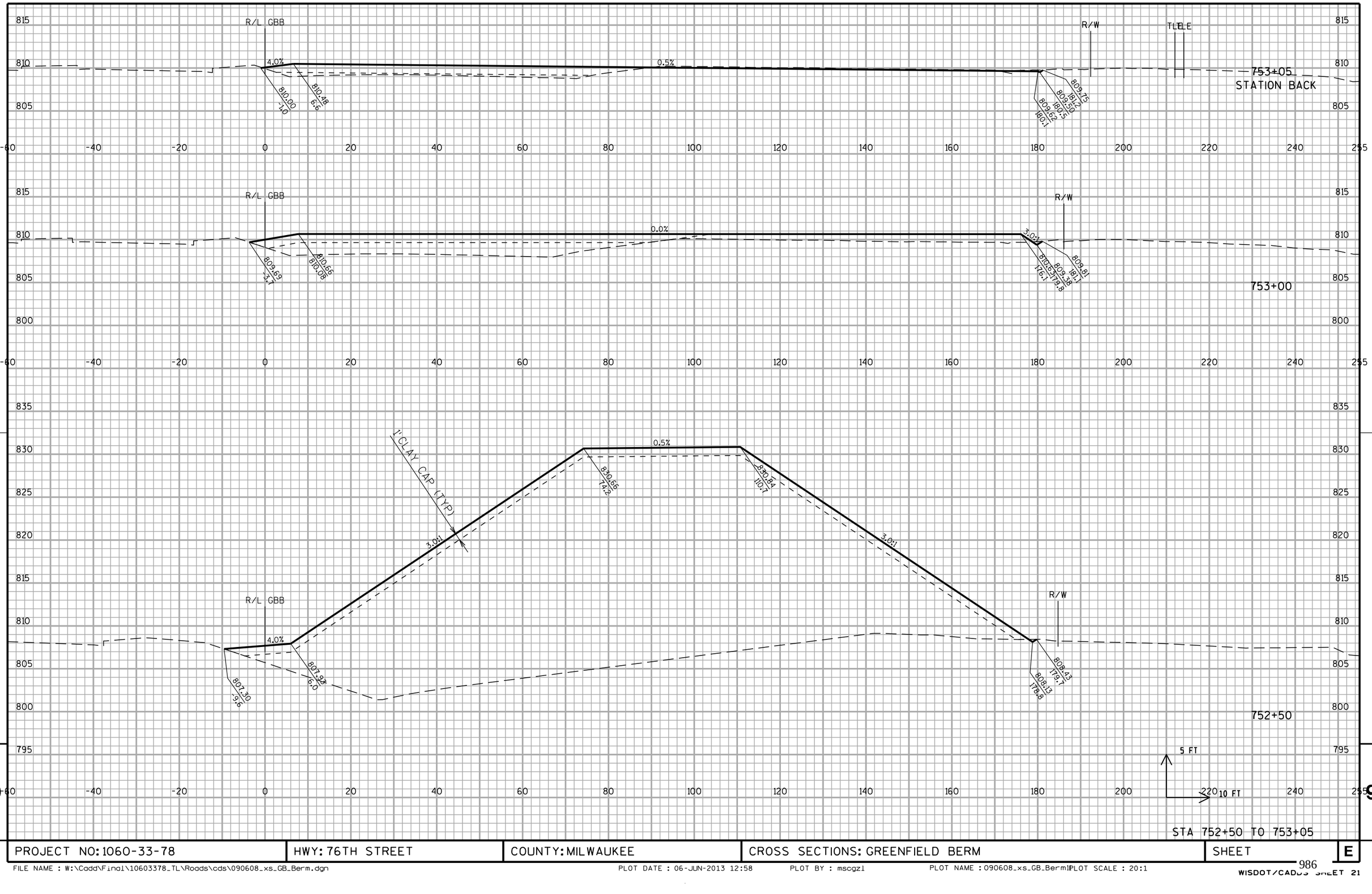
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STA 752+00 TO 752+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090608_xs_GB_Berm.dgn PLOT DATE : 06-JUN-2013 12:58 PLOT BY : mscgzl PLOT NAME : 090608_xs_GB_Berm1 PLOT SCALE : 20:1

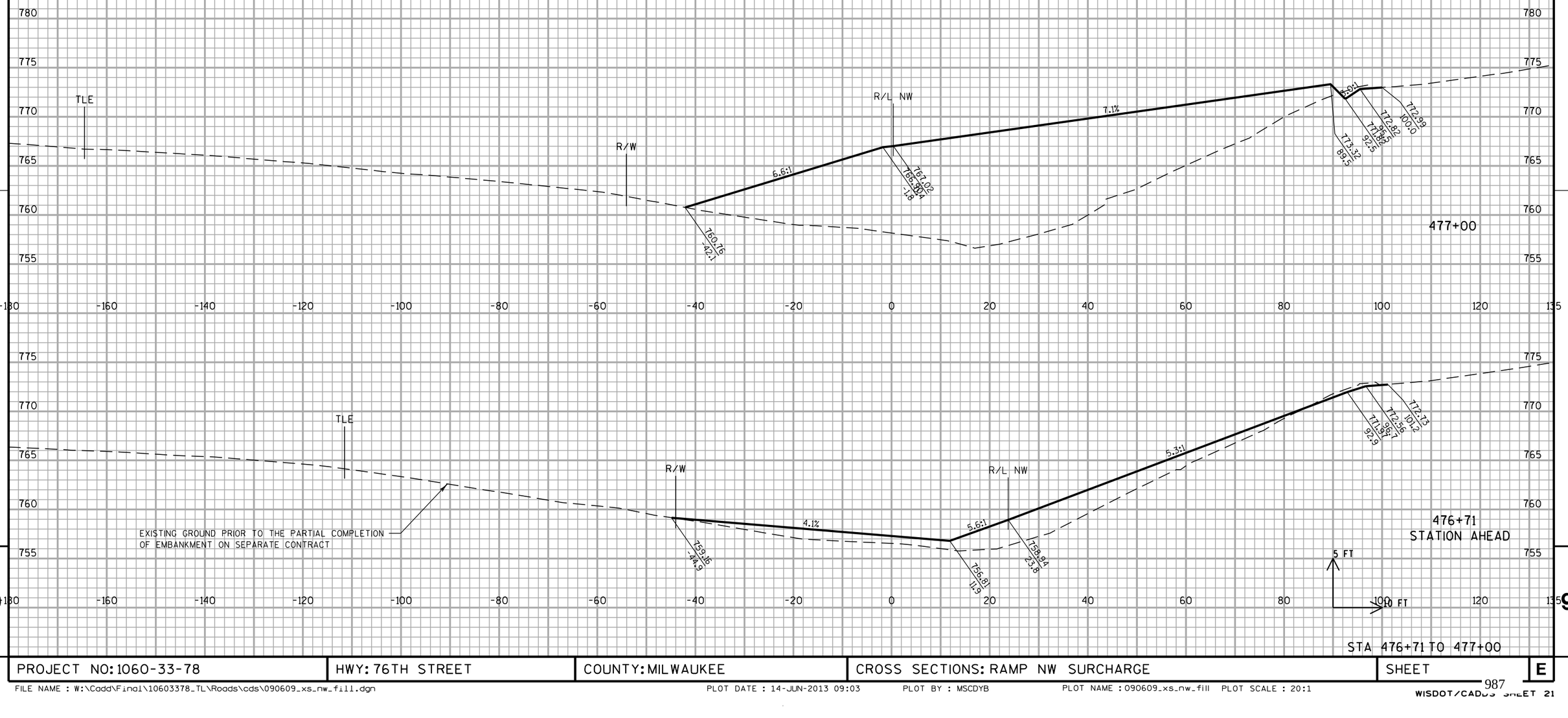
WISDOT/CADDS SHEET 21



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: GREENFIELD BERM	SHEET	E

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

ALL WORK DONE IN STAGE 1

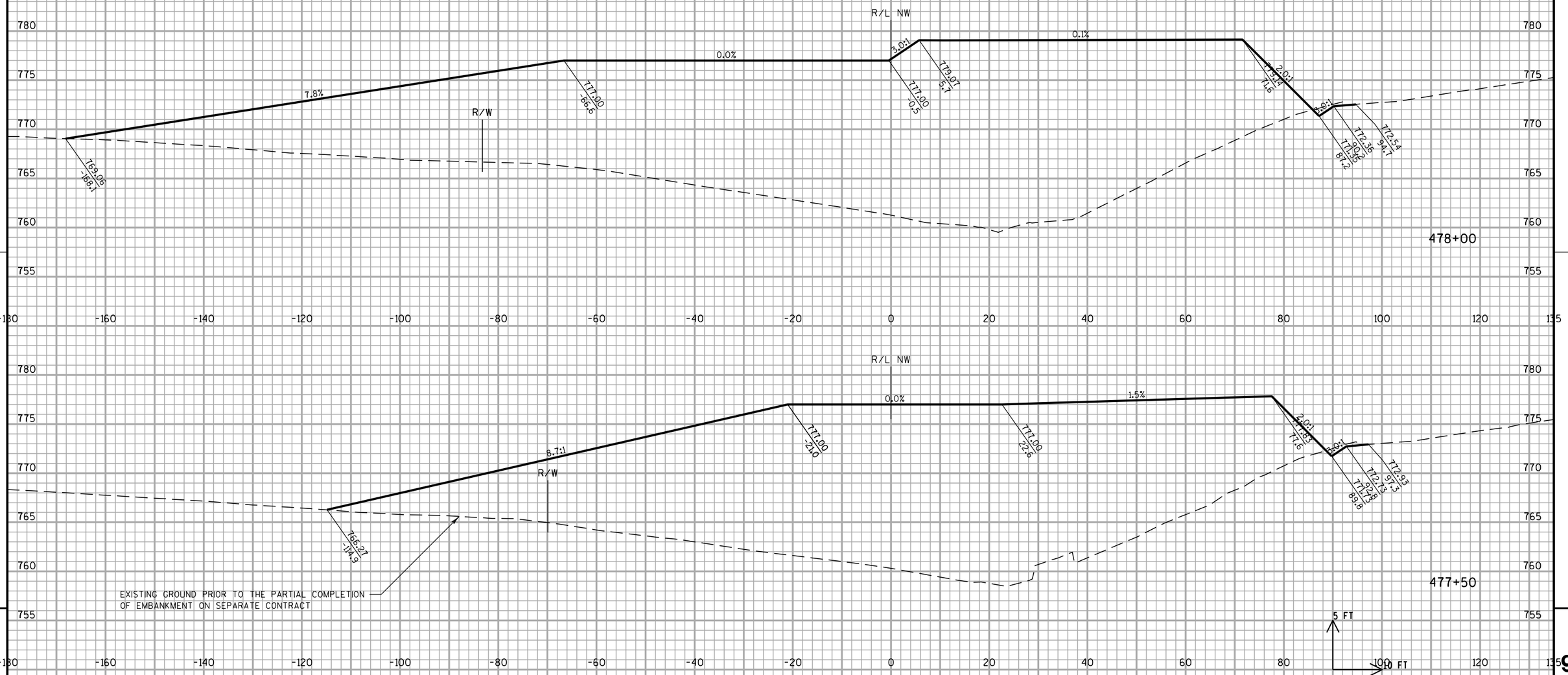


STA 476+71 TO 477+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

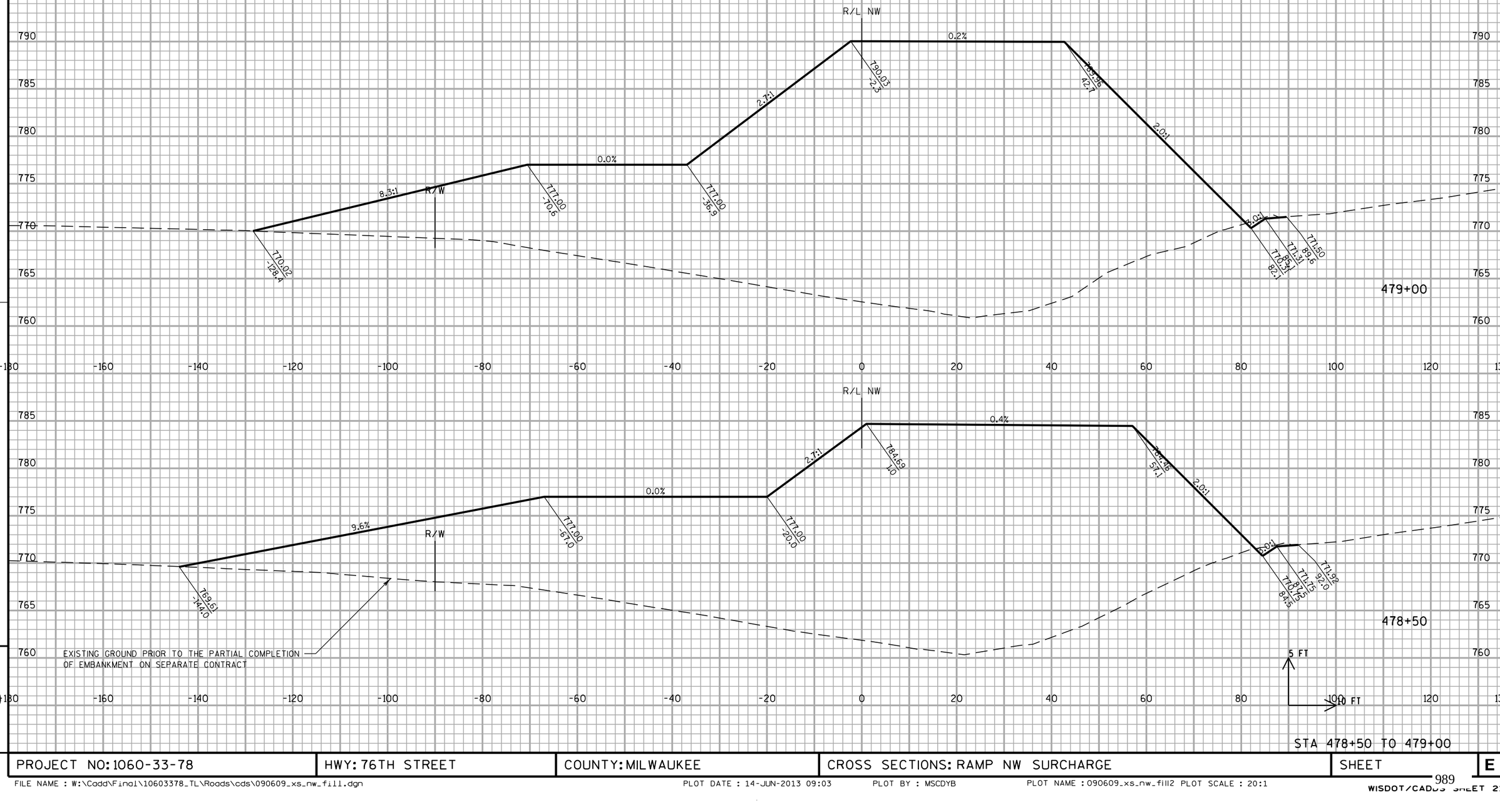
ALL WORK DONE IN STAGE 1



PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

ALL WORK DONE IN STAGE 1

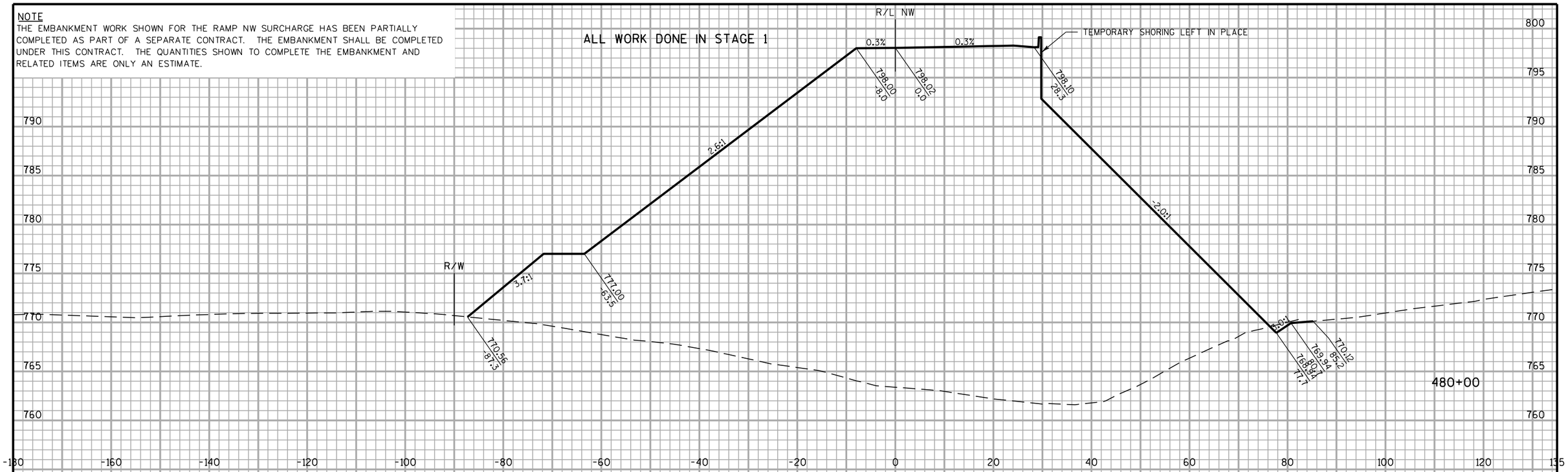


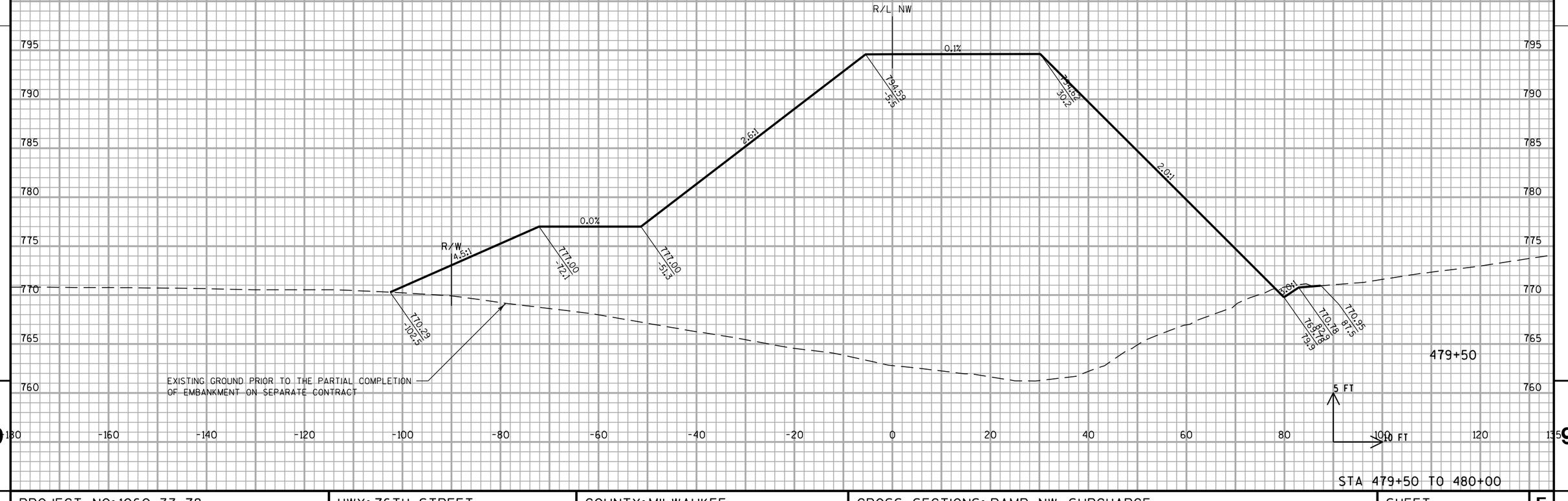
STA 478+50 TO 479+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090609_xs_nw_fill.dgn PLOT DATE : 14-JUN-2013 09:03 PLOT BY : MSCDYB PLOT NAME : 090609_xs_nw_fill2 PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.





STA 479+50 TO 480+00

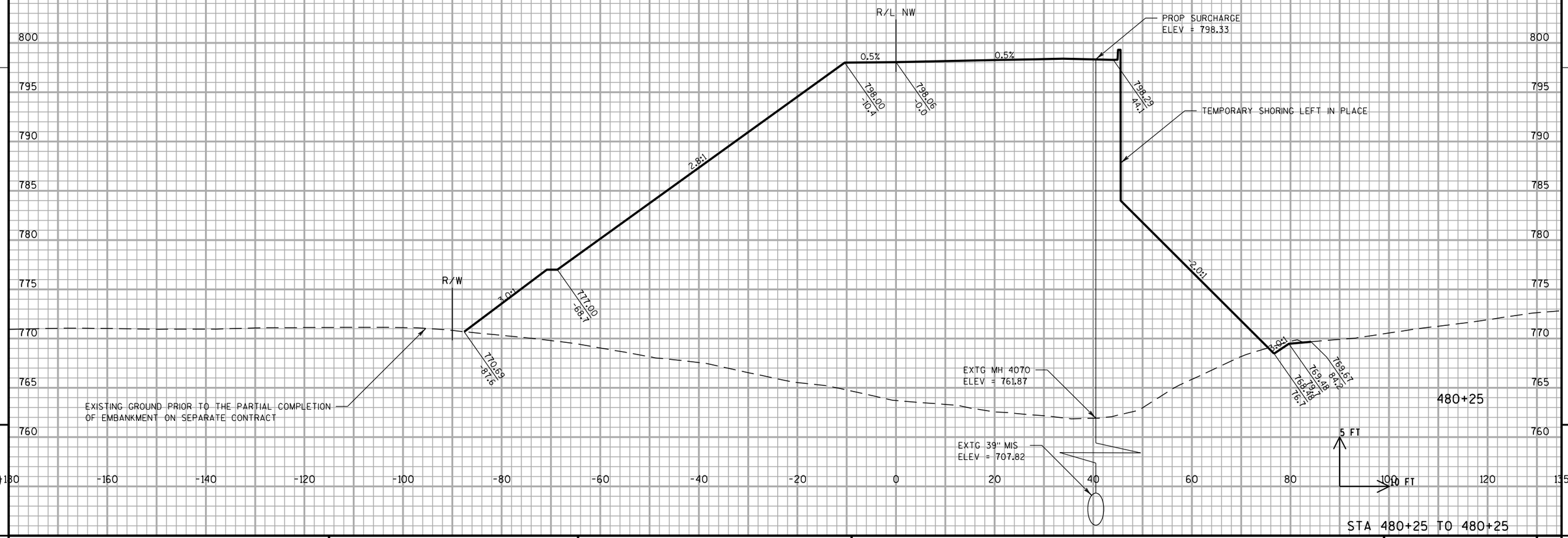
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090609_xs_nw_fill.dgn PLOT DATE : 14-JUN-2013 09:03 PLOT BY : MSCDYB PLOT NAME : 090609_xs_nw_fill3 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

ALL WORK DONE IN STAGE 1



STA 480+25 TO 480+25

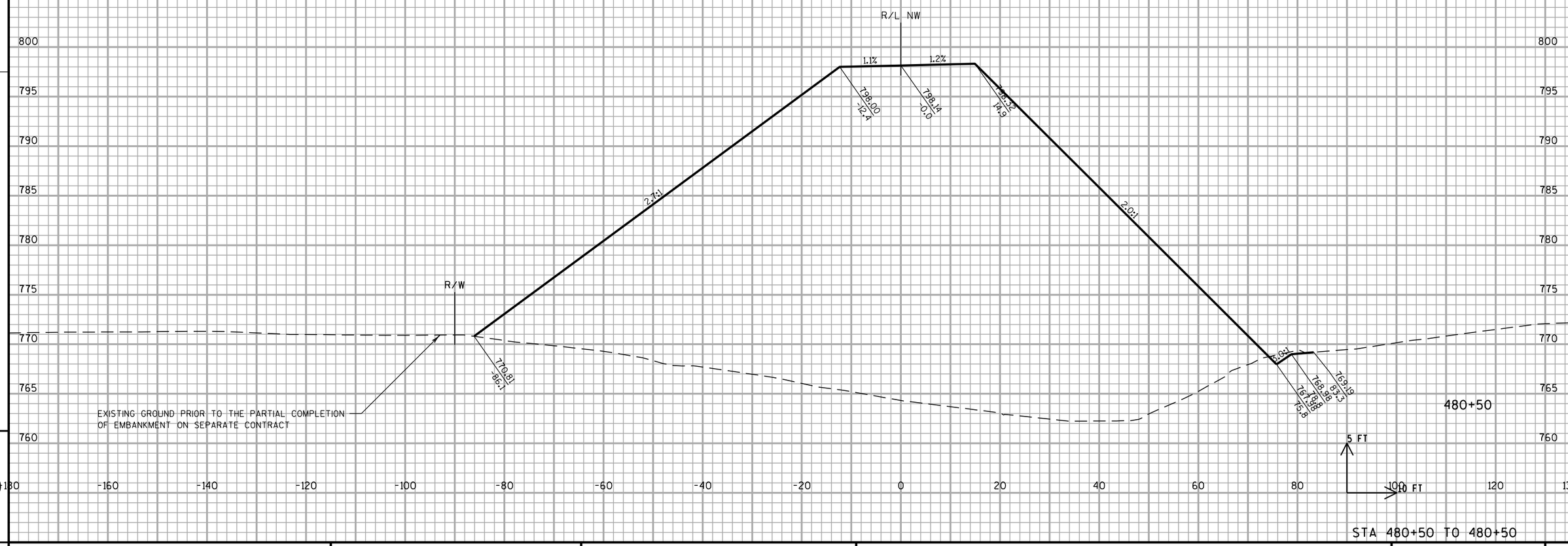
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090609_xs_nw_fill.dgn PLOT DATE : 14-JUN-2013 09:03 PLOT BY : MSCDYB PLOT NAME : 090609_xs_nw_fill4 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

ALL WORK DONE IN STAGE 1



STA 480+50 TO 480+50

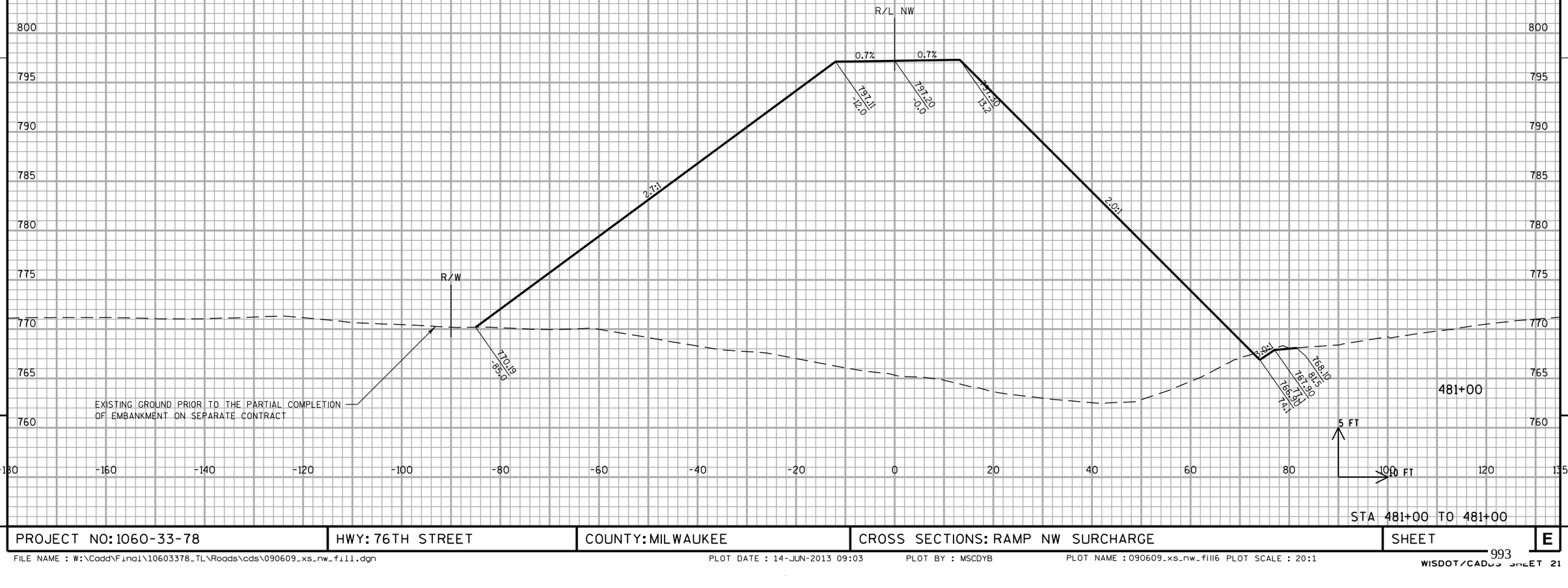
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090609_xs_nw_fill.dgn PLOT DATE : 14-JUN-2013 09:03 PLOT BY : MSCDYB PLOT NAME : 090609_xs_nw_fill5 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

ALL WORK DONE IN STAGE 1

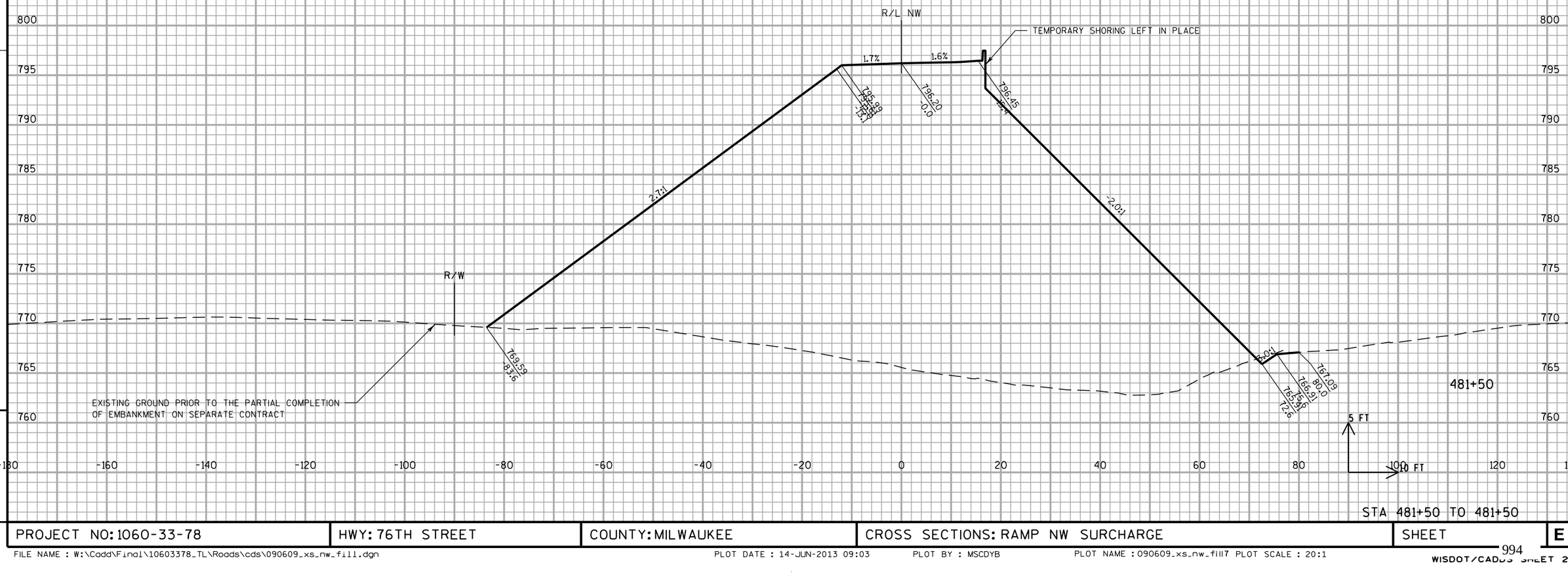


STA 481+00 TO 481+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

ALL WORK DONE IN STAGE 1



STA 481+50 TO 481+50

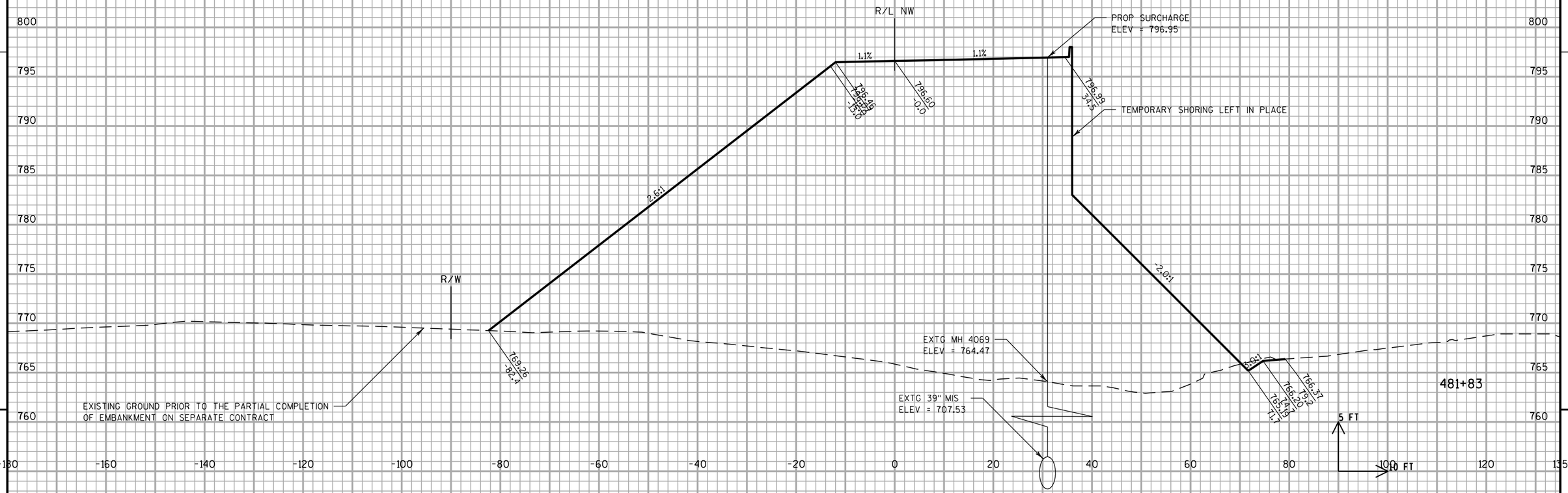
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090609_xs_nw_fill.dgn PLOT DATE : 14-JUN-2013 09:03 PLOT BY : MSCDYB PLOT NAME : 090609_xs_nw_fill7 PLOT SCALE : 20:1

WISDOT/CADDS SHEET 21

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

ALL WORK DONE IN STAGE 1



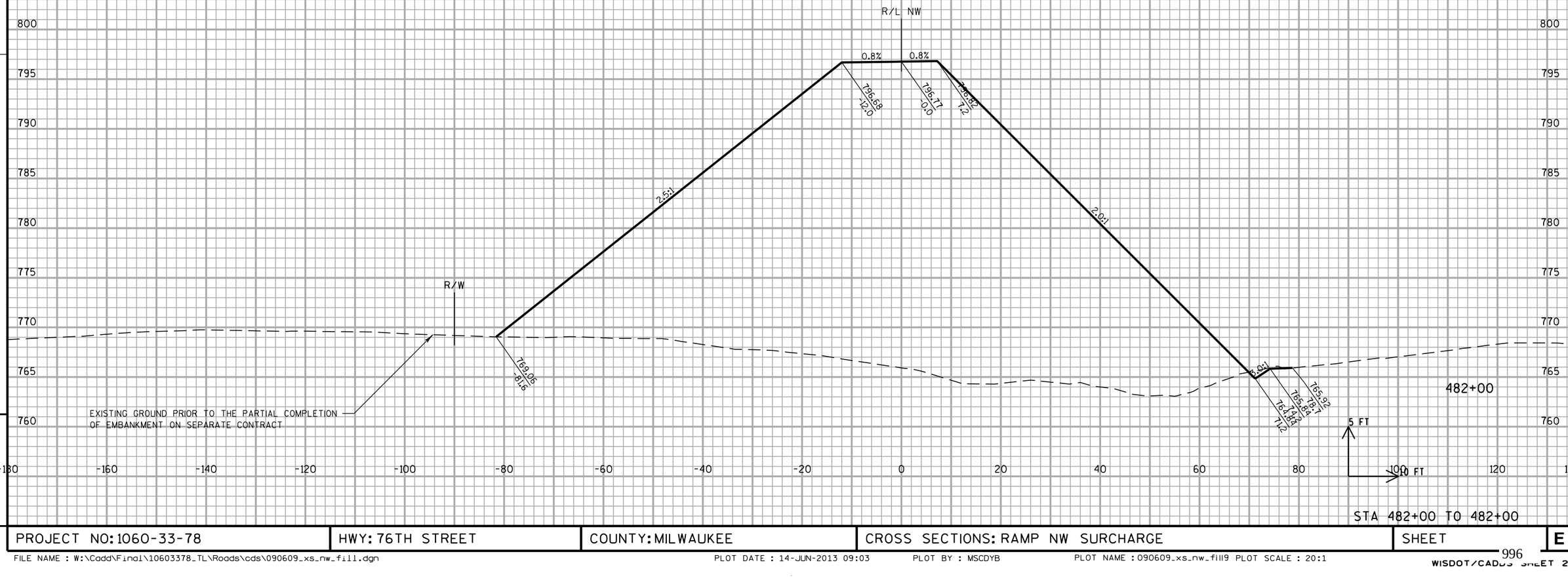
STA 481+83 TO 481+83

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090609_xs_nw_fill.dgn PLOT DATE : 14-JUN-2013 09:03 PLOT BY : MSCDYB PLOT NAME : 090609_xs_nw_fill8 PLOT SCALE : 20:1

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

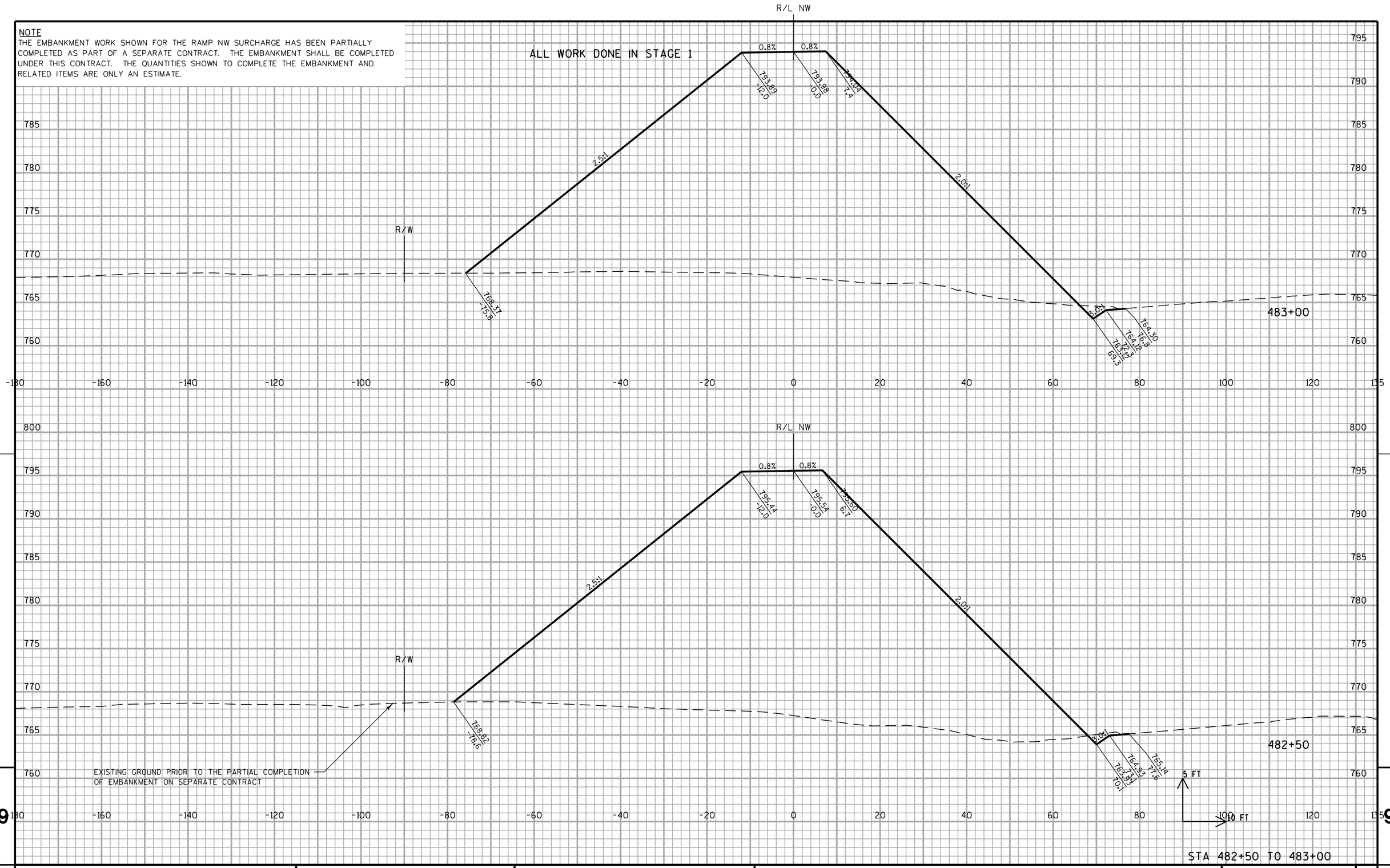
ALL WORK DONE IN STAGE 1



STA 482+00 TO 482+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

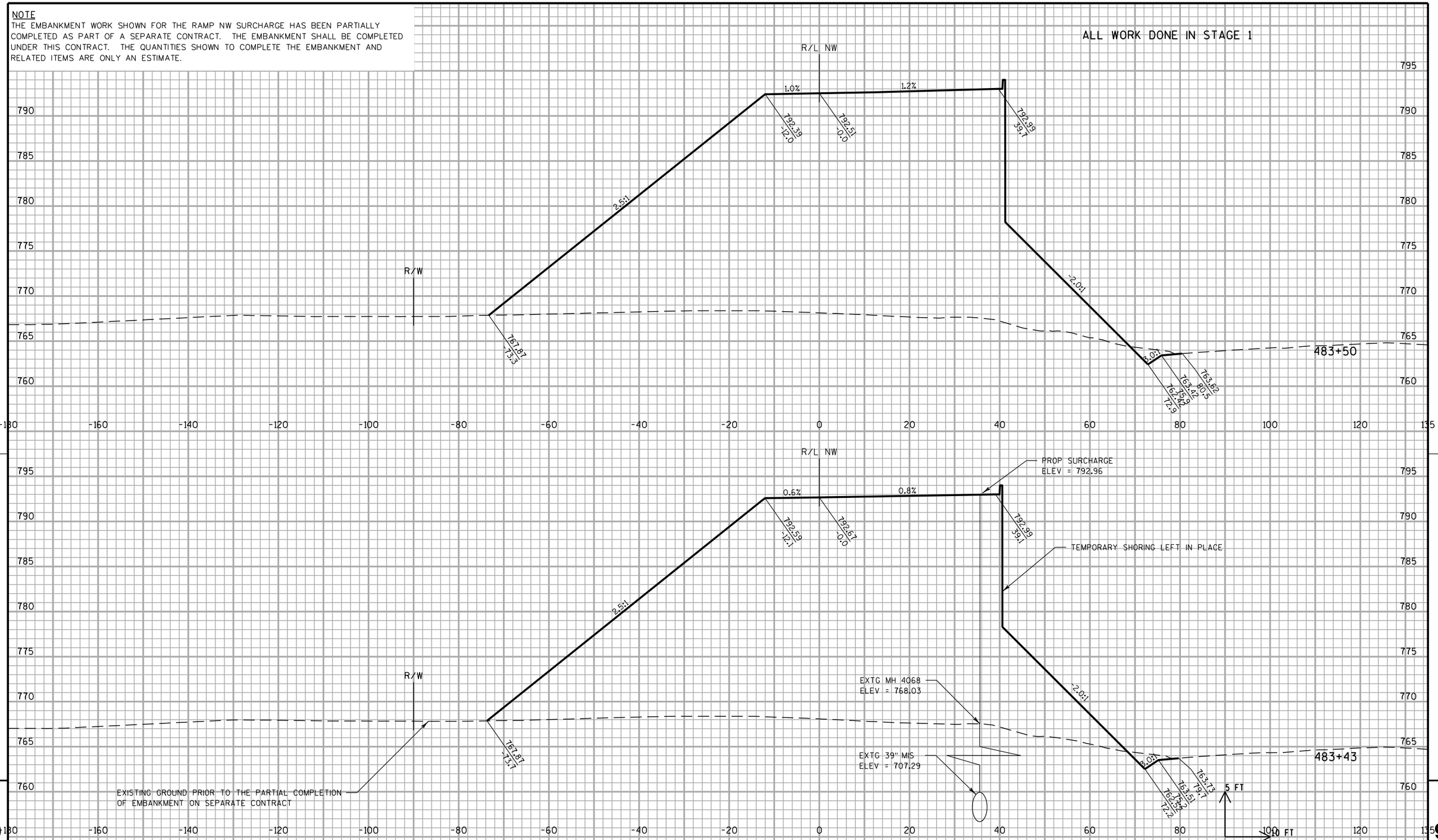
NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.



STA 482+50 TO 483+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

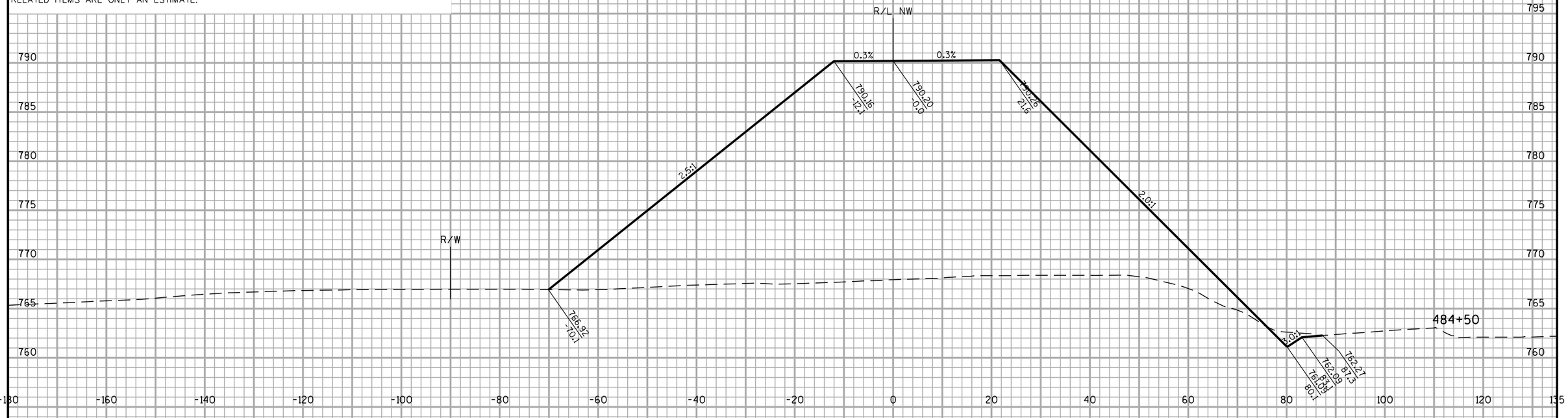


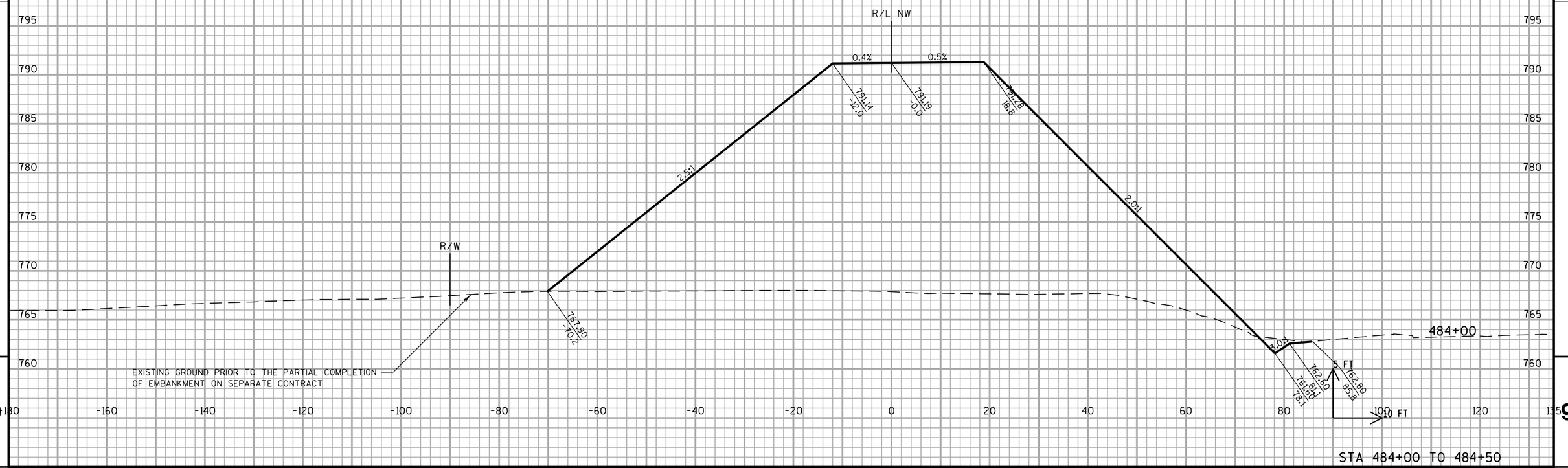
STA 483+43 TO 483+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

ALL WORK DONE IN STAGE 1



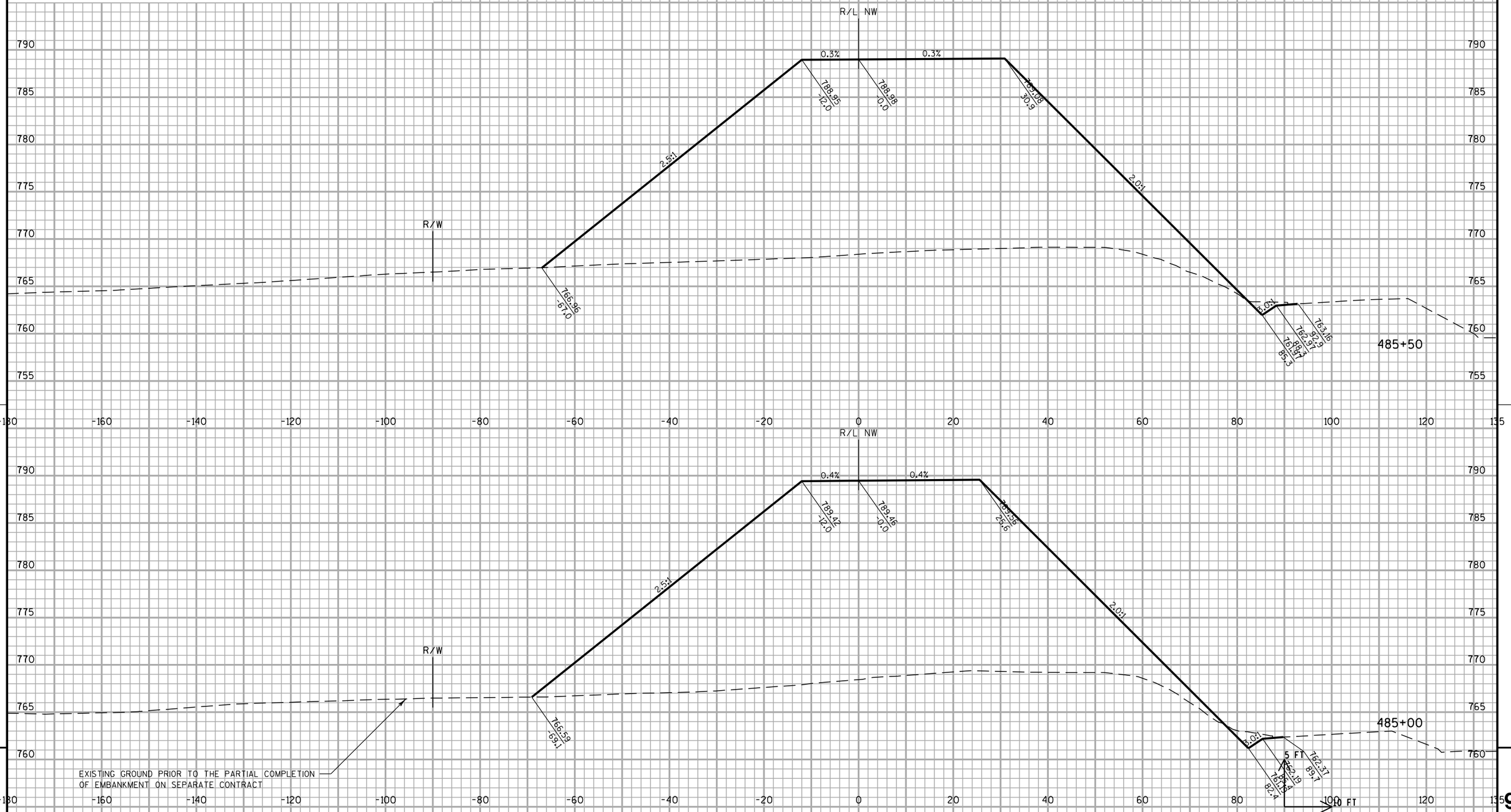


STA 484+00 TO 484+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

ALL WORK DONE IN STAGE 1

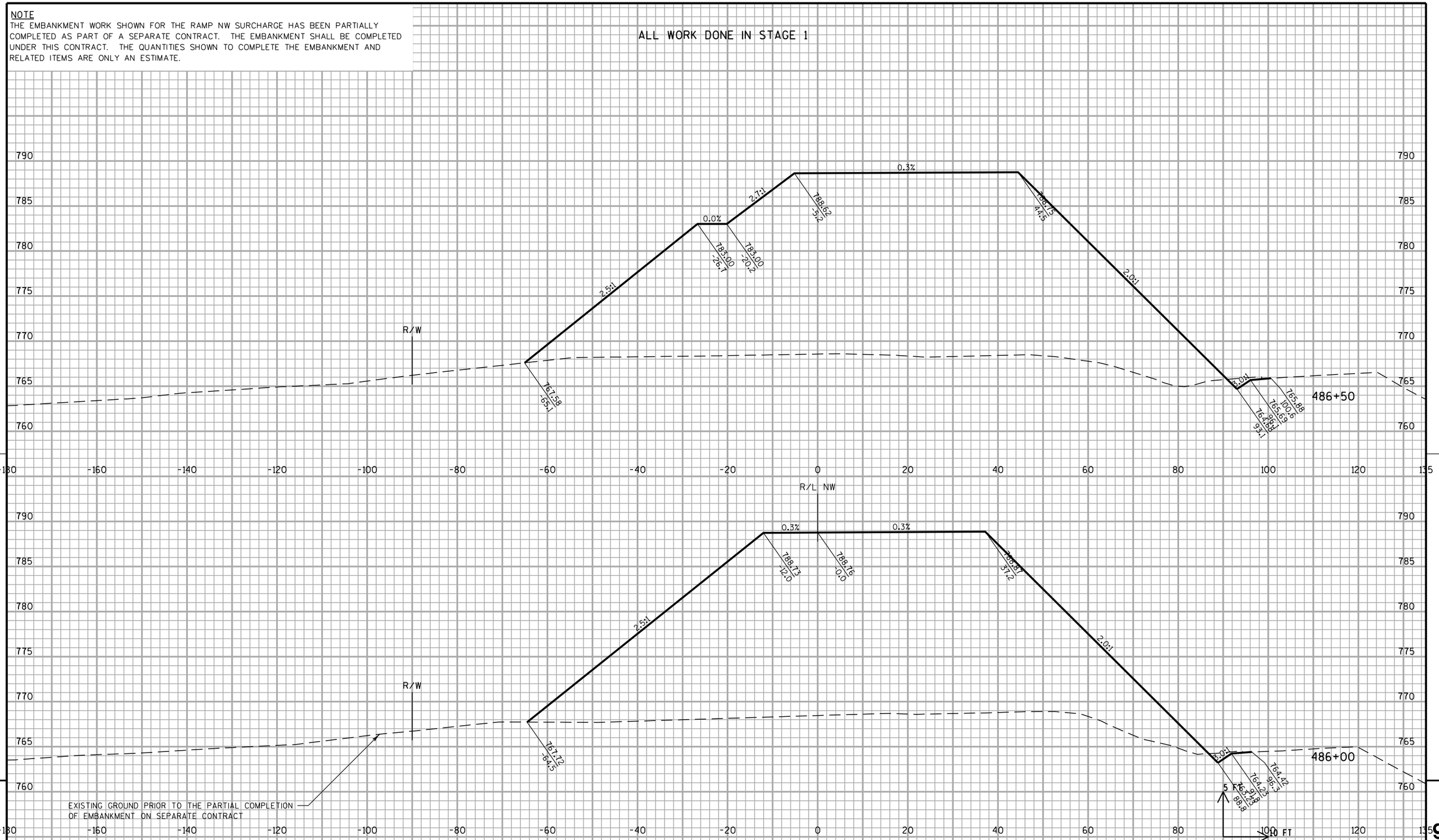


STA 485+00 TO 485+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090609_xs_nw_fill.dgn PLOT DATE : 14-JUN-2013 09:04 PLOT BY : MSCDYB PLOT NAME : 090609_xs_nw_fill3 PLOT SCALE : 20:1

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

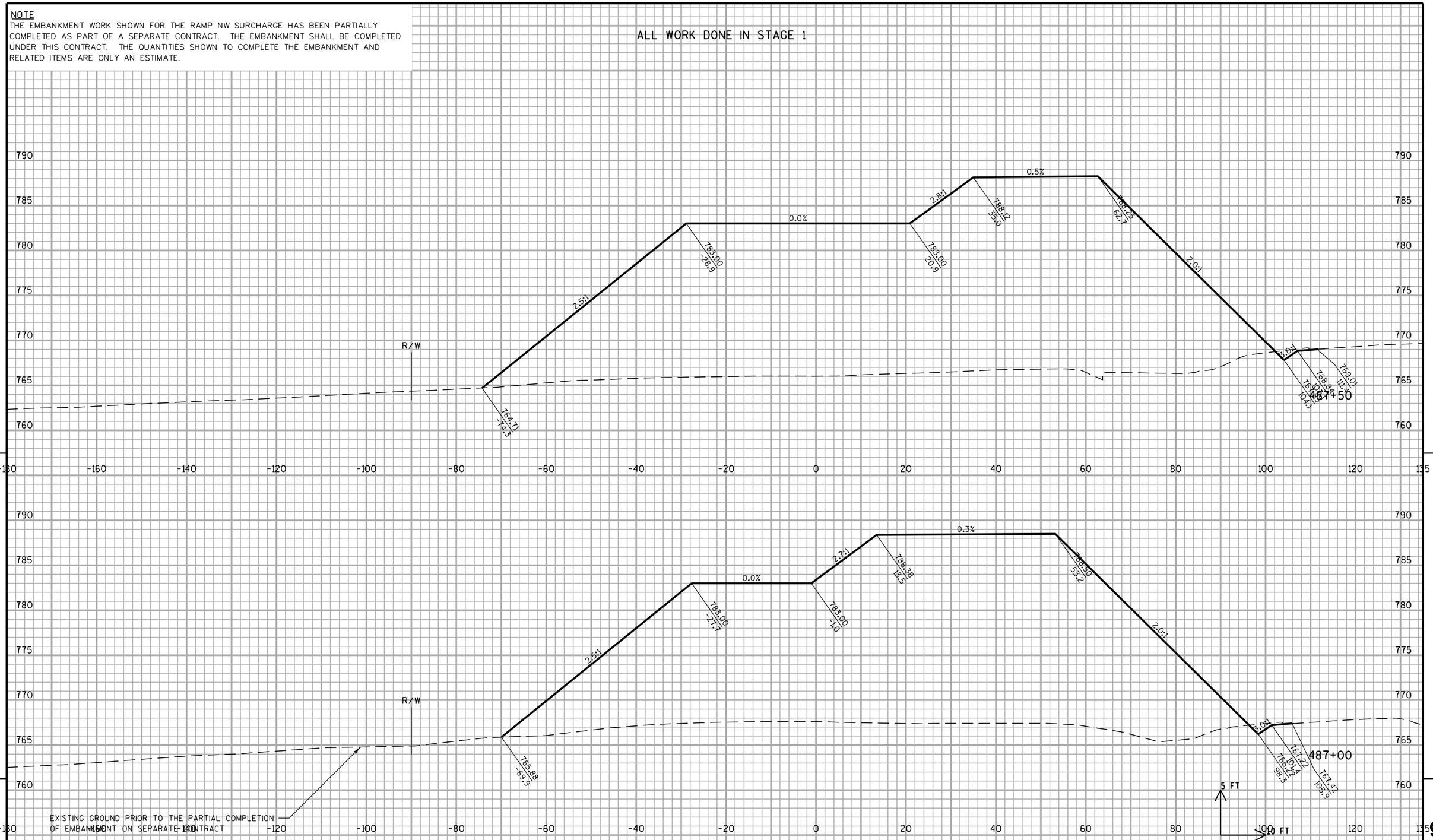


STA 486+00 TO 486+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

ALL WORK DONE IN STAGE 1



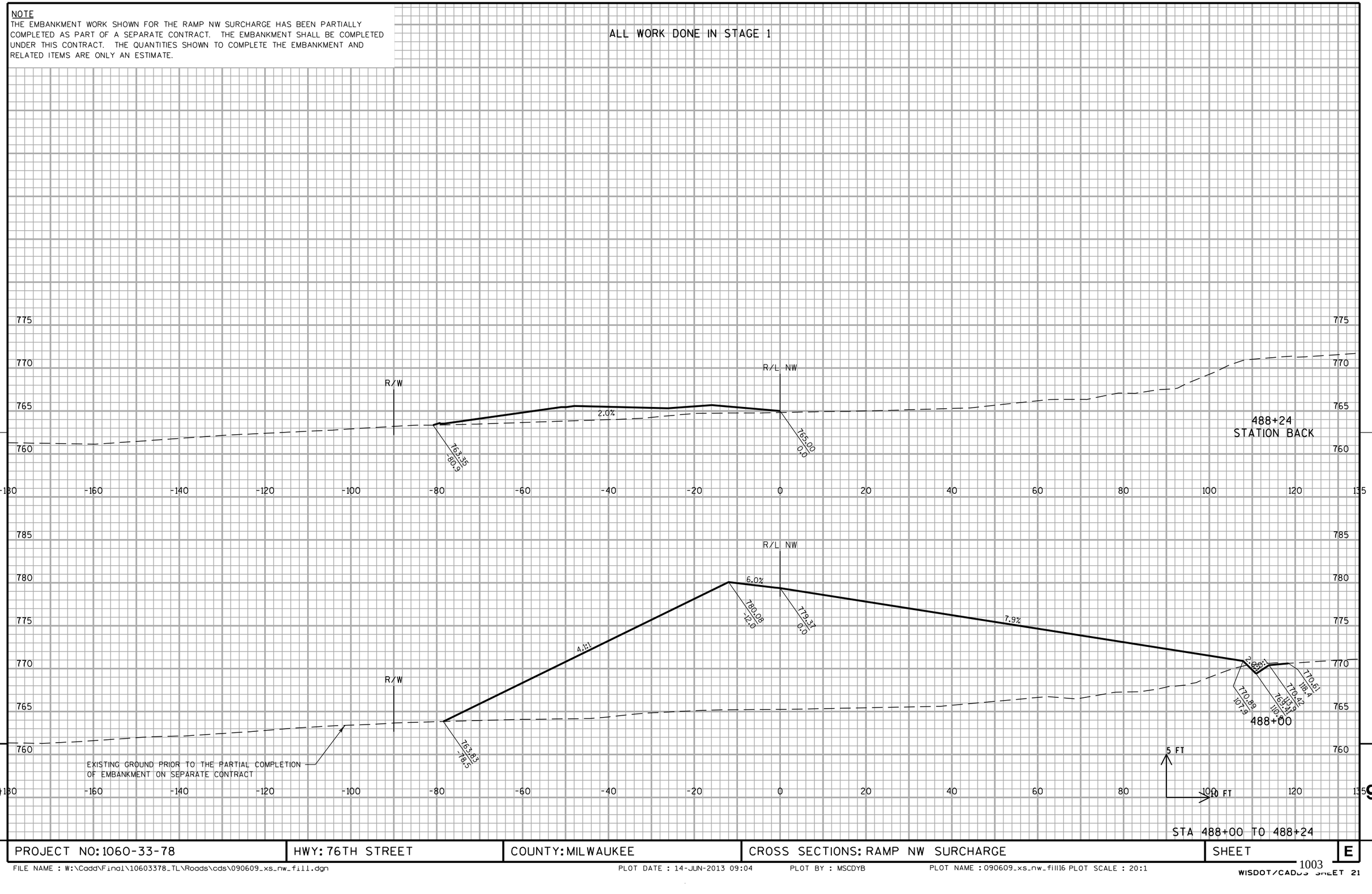
STA 487+00 TO 487+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Roads\cds\090609_xs_nw_fill.dgn PLOT DATE : 14-JUN-2013 09:04 PLOT BY : MSCDYB PLOT NAME : 090609_xs_nw_fill5 PLOT SCALE : 20:1

NOTE
THE EMBANKMENT WORK SHOWN FOR THE RAMP NW SURCHARGE HAS BEEN PARTIALLY COMPLETED AS PART OF A SEPARATE CONTRACT. THE EMBANKMENT SHALL BE COMPLETED UNDER THIS CONTRACT. THE QUANTITIES SHOWN TO COMPLETE THE EMBANKMENT AND RELATED ITEMS ARE ONLY AN ESTIMATE.

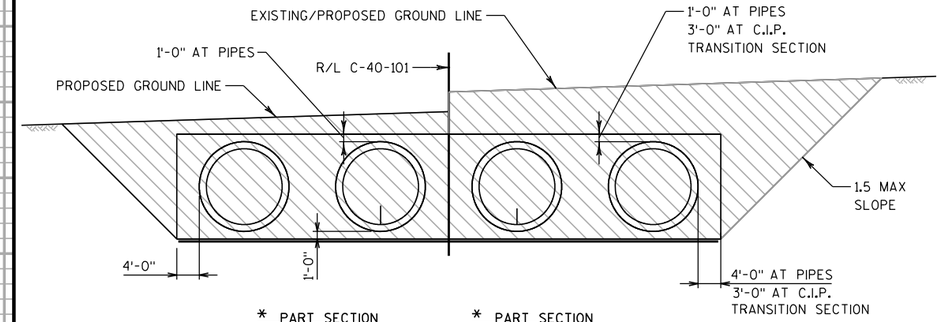
ALL WORK DONE IN STAGE 1



STA 488+00 TO 488+24

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: RAMP NW SURCHARGE	SHEET	E

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



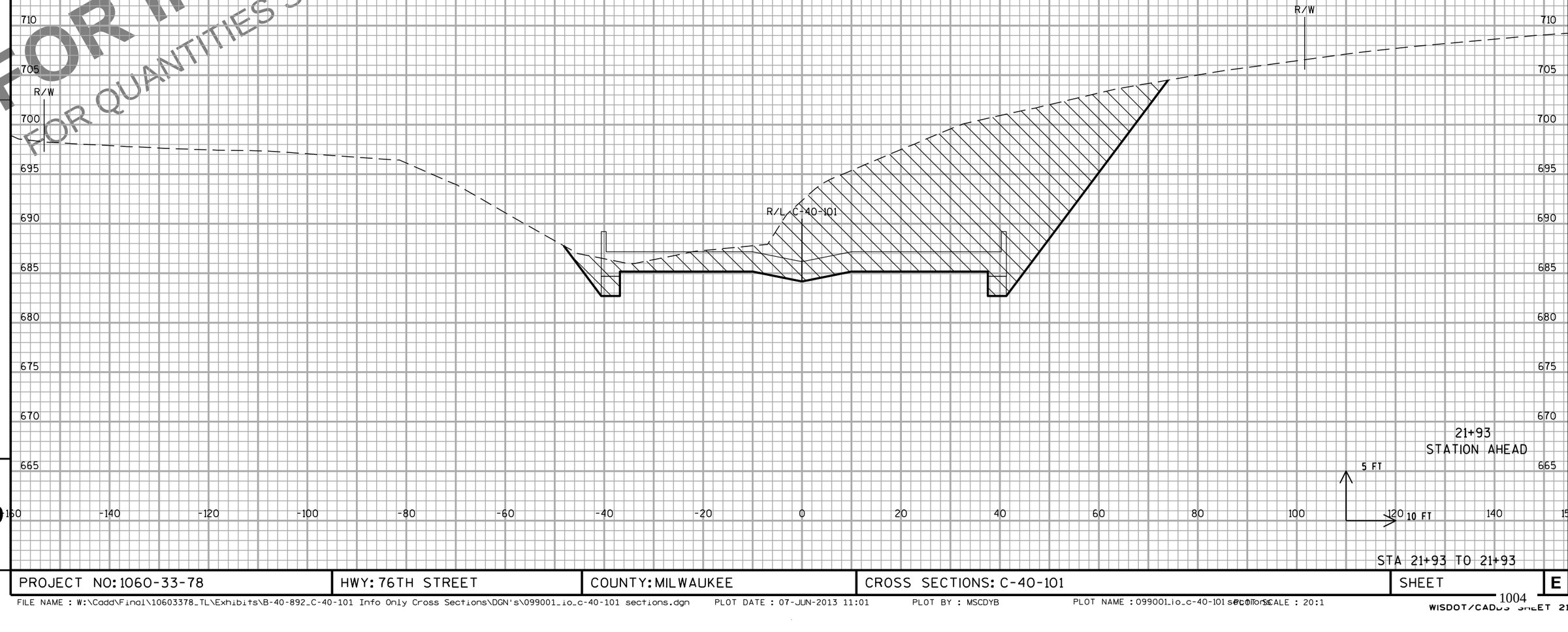
* PART SECTION
STA. 22+18.06 - STA. 23+30

* PART SECTION
STA. 23+30 - 25+66.06

CULVERT EXCAVATION DETAIL
LOOKING UPSTATION
SHOWN FOR PIPES, SIMILAR FOR C.I.P. TRANSITION SECTION

LEGEND
LIMITS OF STRUCTURE EXCAVATION

* SEE STRUCTURE PLANS FOR DETAILED INFORMATION

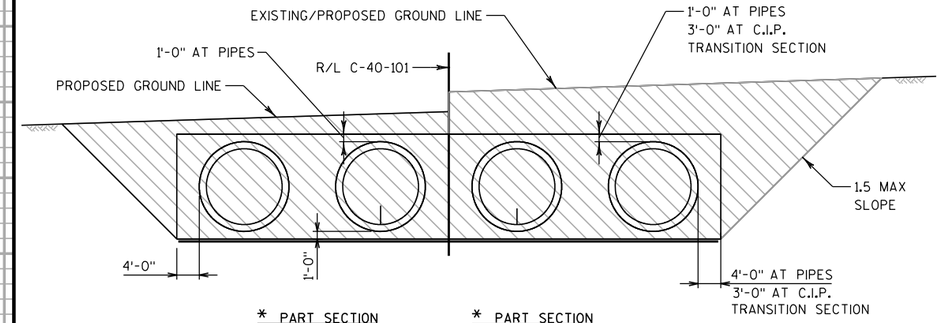


STA 21+93 TO 21+93

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099001_io_c-40-101 sections.dgn PLOT DATE : 07-JUN-2013 11:01 PLOT BY : MSCDYB PLOT NAME : 099001_io_c-40-101 sections.pltPLOT SCALE : 20:1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



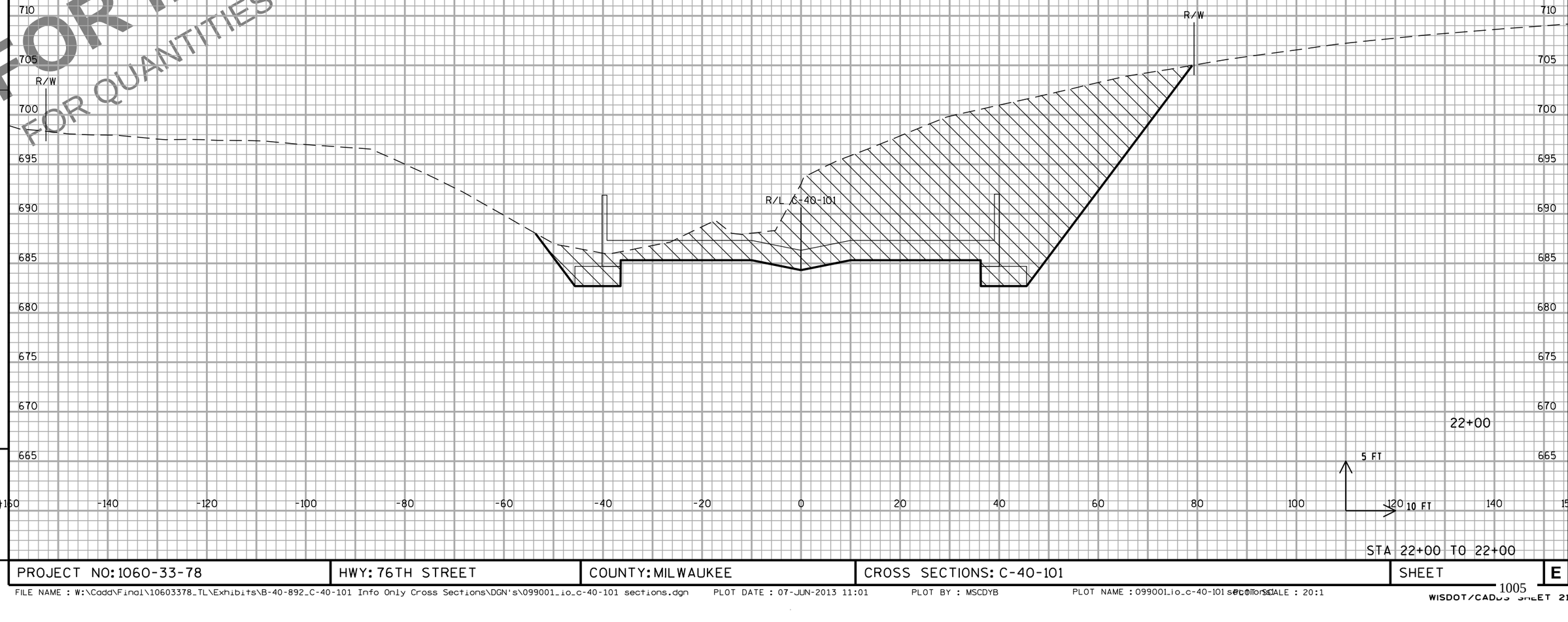
* PART SECTION
STA. 22+18.06 - STA. 23+30

* PART SECTION
STA. 23+30 - 25+66.06

CULVERT EXCAVATION DETAIL
LOOKING UPSTATION
SHOWN FOR PIPES, SIMILAR FOR C.I.P. TRANSITION SECTION

LEGEND
LIMITS OF STRUCTURE EXCAVATION

* SEE STRUCTURE PLANS FOR DETAILED INFORMATION

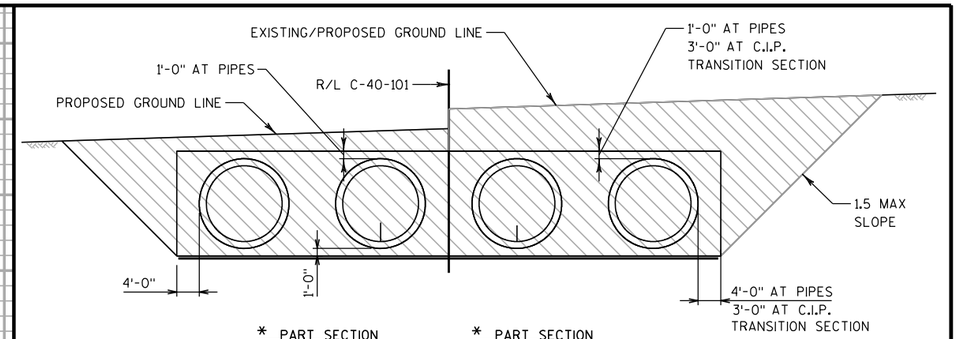


STA 22+00 TO 22+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099001_io_c-40-101 sections.dgn PLOT DATE : 07-JUN-2013 11:01 PLOT BY : MSCDYB PLOT NAME : 099001_io_c-40-101 sections.pdf PLOT SCALE : 20:1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



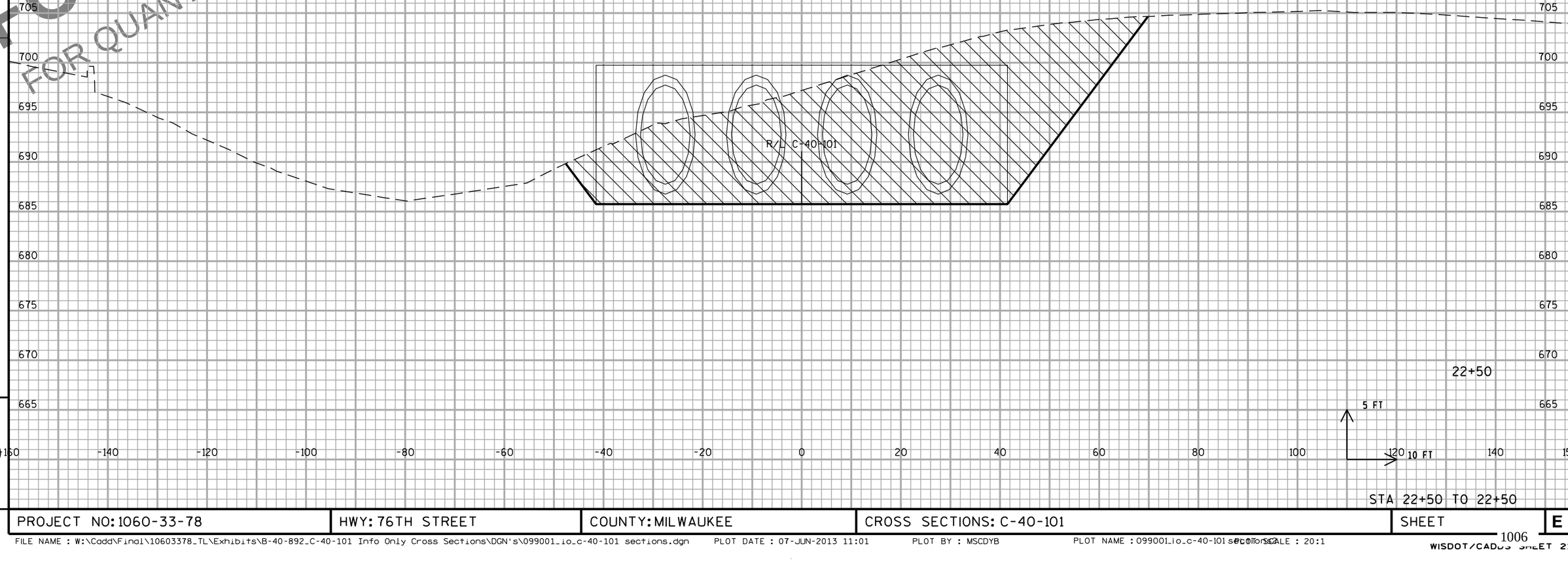
* PART SECTION
STA. 22+18.06 - STA. 23+30

* PART SECTION
STA. 23+30 - 25+66.06

CULVERT EXCAVATION DETAIL
LOOKING UPSTATION
SHOWN FOR PIPES, SIMILAR FOR C.I.P. TRANSITION SECTION

LEGEND
LIMITS OF STRUCTURE EXCAVATION

* SEE STRUCTURE PLANS FOR DETAILED INFORMATION

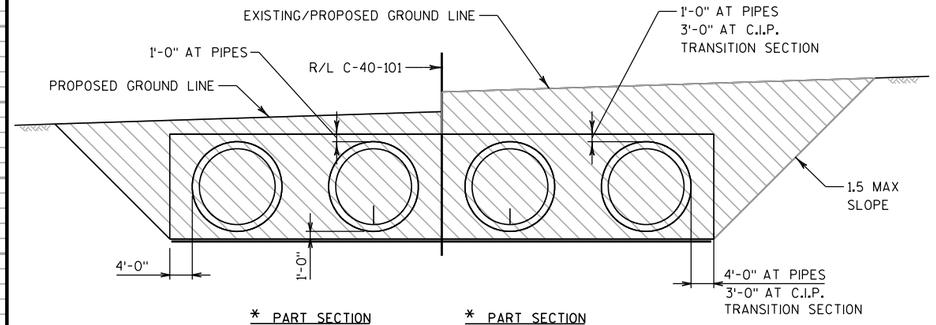


STA 22+50 TO 22+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099001_io_c-40-101 sections.dgn PLOT DATE : 07-JUN-2013 11:01 PLOT BY : MSCDYB PLOT NAME : 099001_io_c-40-101 sections.pltPLOT SCALE : 20:1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



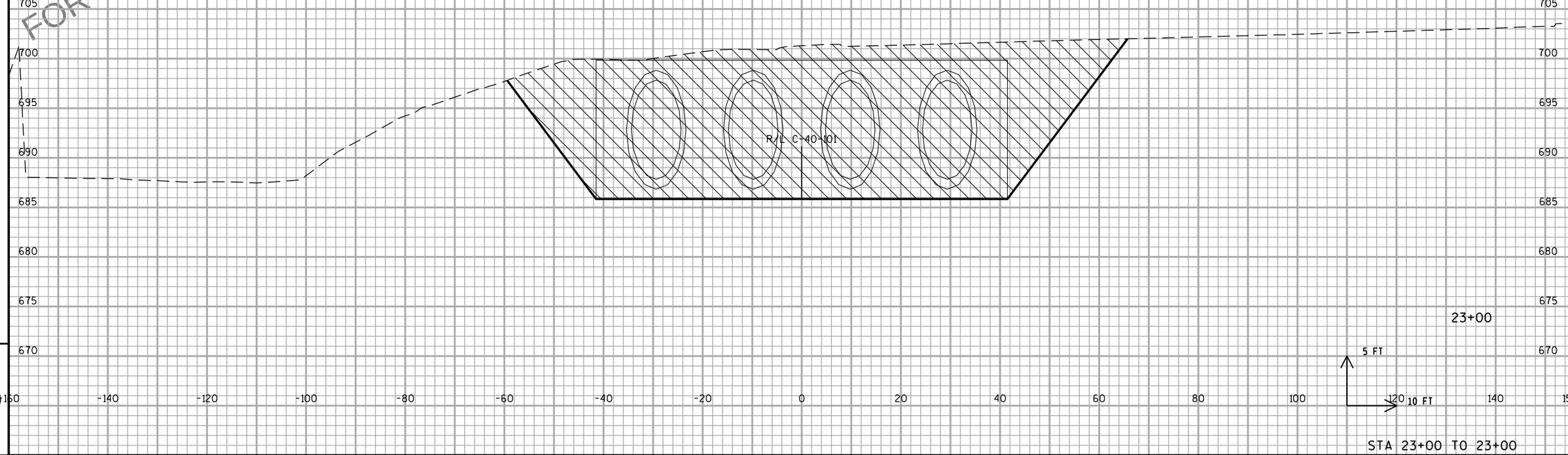
* PART SECTION
STA. 22+18.06 - STA. 23+30

* PART SECTION
STA. 23+30 - 25+66.06

CULVERT EXCAVATION DETAIL
LOOKING UPSTATION
SHOWN FOR PIPES, SIMILAR FOR C.I.P. TRANSITION SECTION

LEGEND
▨ LIMITS OF STRUCTURE EXCAVATION

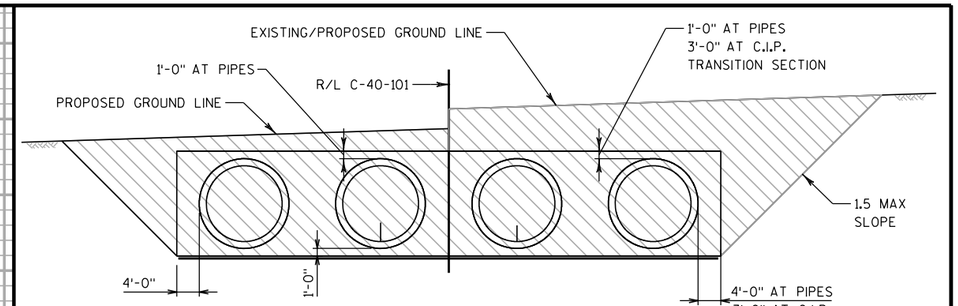
* SEE STRUCTURE PLANS FOR DETAILED INFORMATION



STA 23+00 TO 23+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



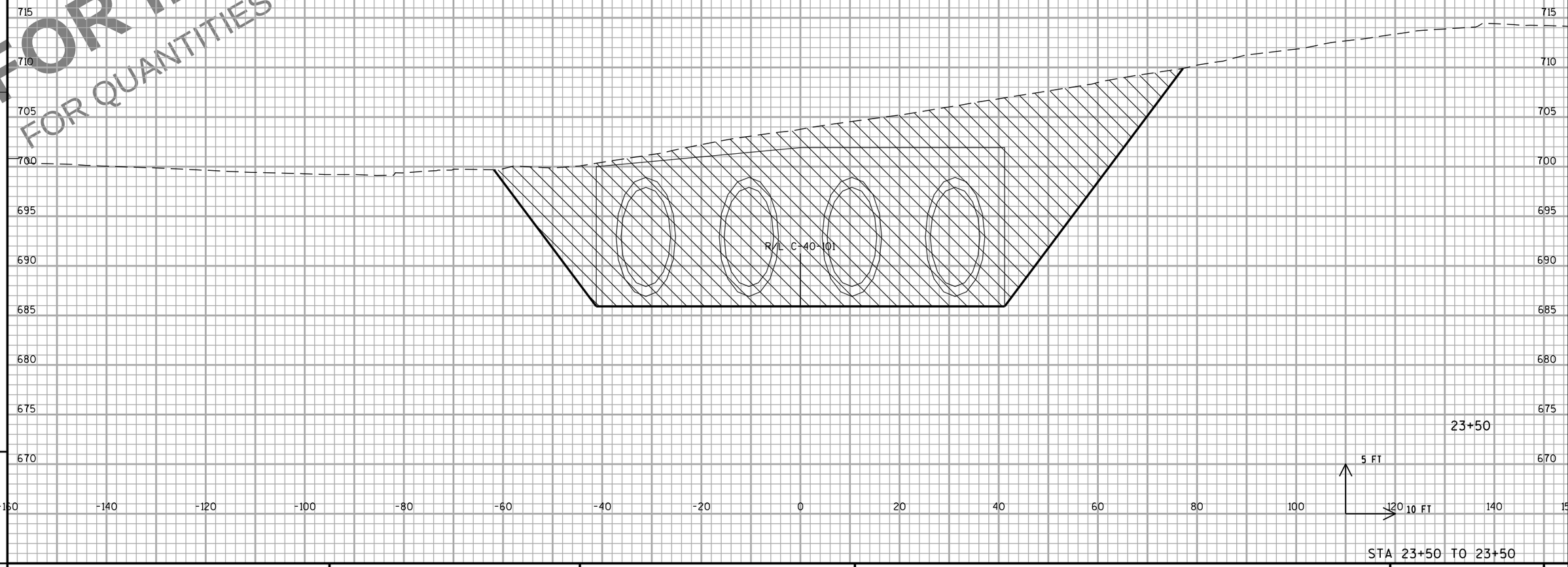
* PART SECTION
STA. 22+18.06 - STA. 23+30

* PART SECTION
STA. 23+30 - 25+66.06

CULVERT EXCAVATION DETAIL
LOOKING UPSTATION
SHOWN FOR PIPES, SIMILAR FOR C.I.P. TRANSITION SECTION

LEGEND
▨ LIMITS OF STRUCTURE EXCAVATION

* SEE STRUCTURE PLANS FOR DETAILED INFORMATION

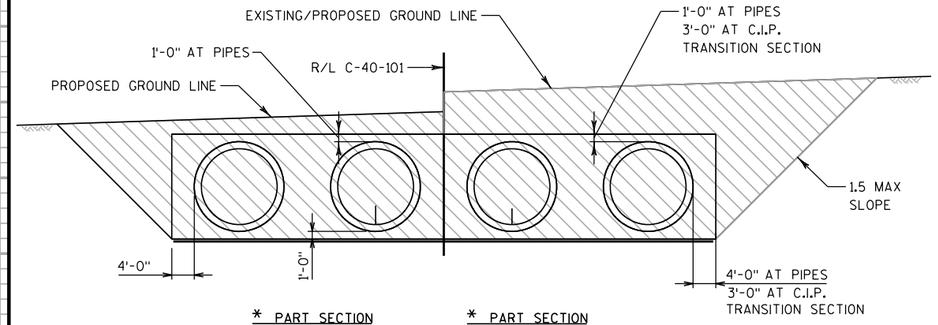


STA 23+50 TO 23+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099001_io_c-40-101 sections.dgn PLOT DATE : 07-JUN-2013 11:01 PLOT BY : MSCDYB PLOT NAME : 099001_io_c-40-101 sections.dgn PLOT SCALE : 20:1

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



* PART SECTION
STA. 22+18.06 - STA. 23+30

* PART SECTION
STA. 23+30 - 25+66.06

CULVERT EXCAVATION DETAIL
LOOKING UPSTATION
SHOWN FOR PIPES, SIMILAR FOR C.I.P. TRANSITION SECTION

LEGEND
▨ LIMITS OF STRUCTURE EXCAVATION

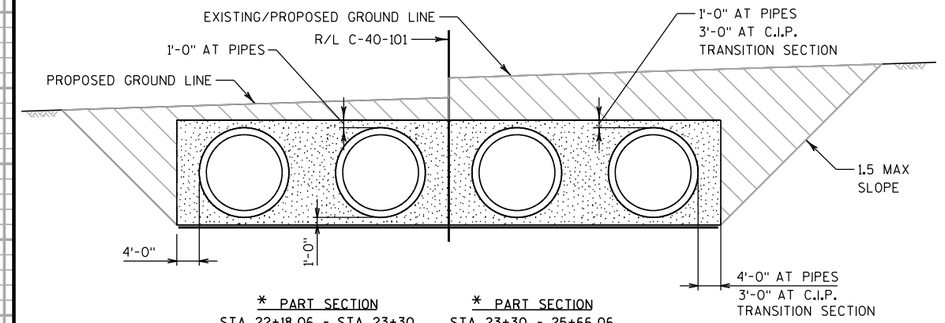
* SEE STRUCTURE PLANS FOR DETAILED INFORMATION

STA 23+70 TO 24+00

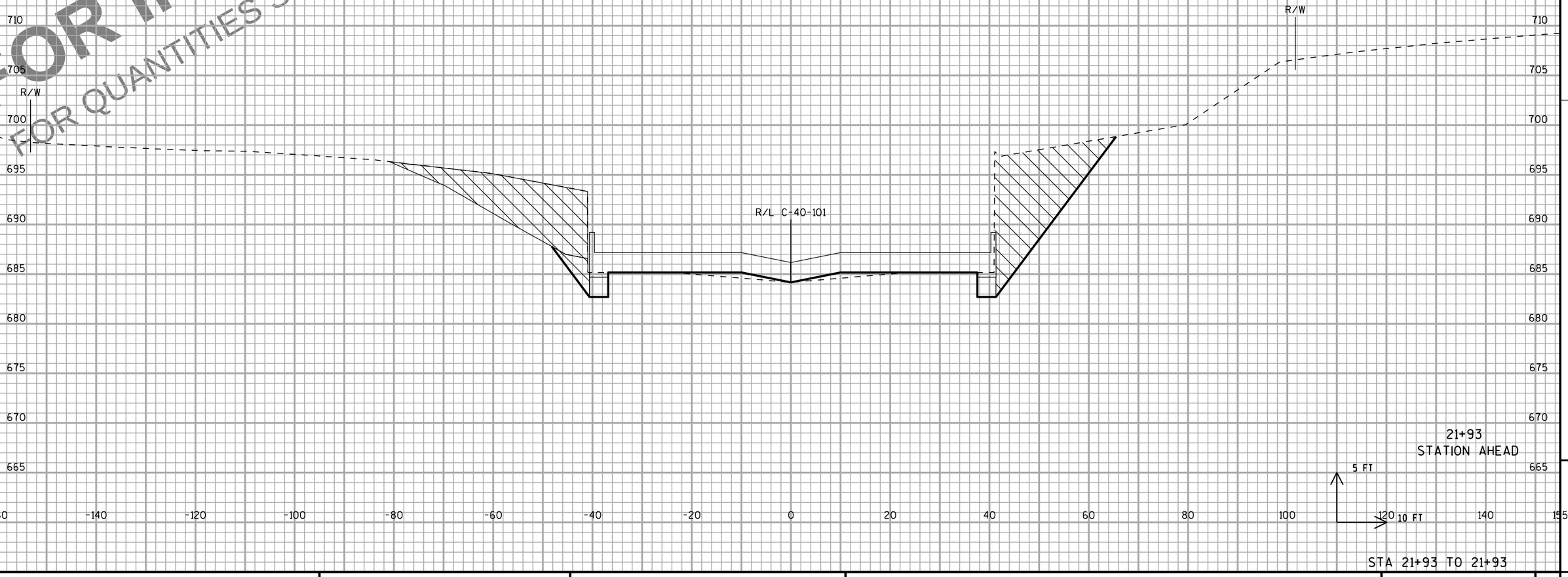
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099001_io_c-40-101 sections.dgn PLOT DATE : 07-JUN-2013 11:01 PLOT BY : MSCDYB PLOT NAME : 099001_io_c-40-101 sections.dgn PLOT SCALE : 20:1
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



* SEE STRUCTURE PLANS FOR DETAILED INFORMATION



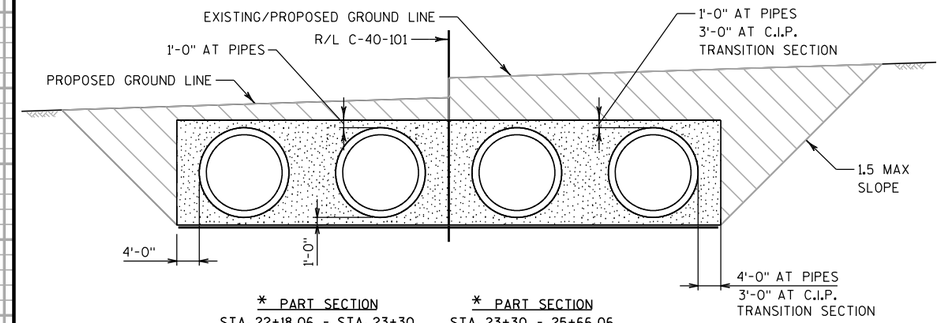
STA 21+93 TO 21+93

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

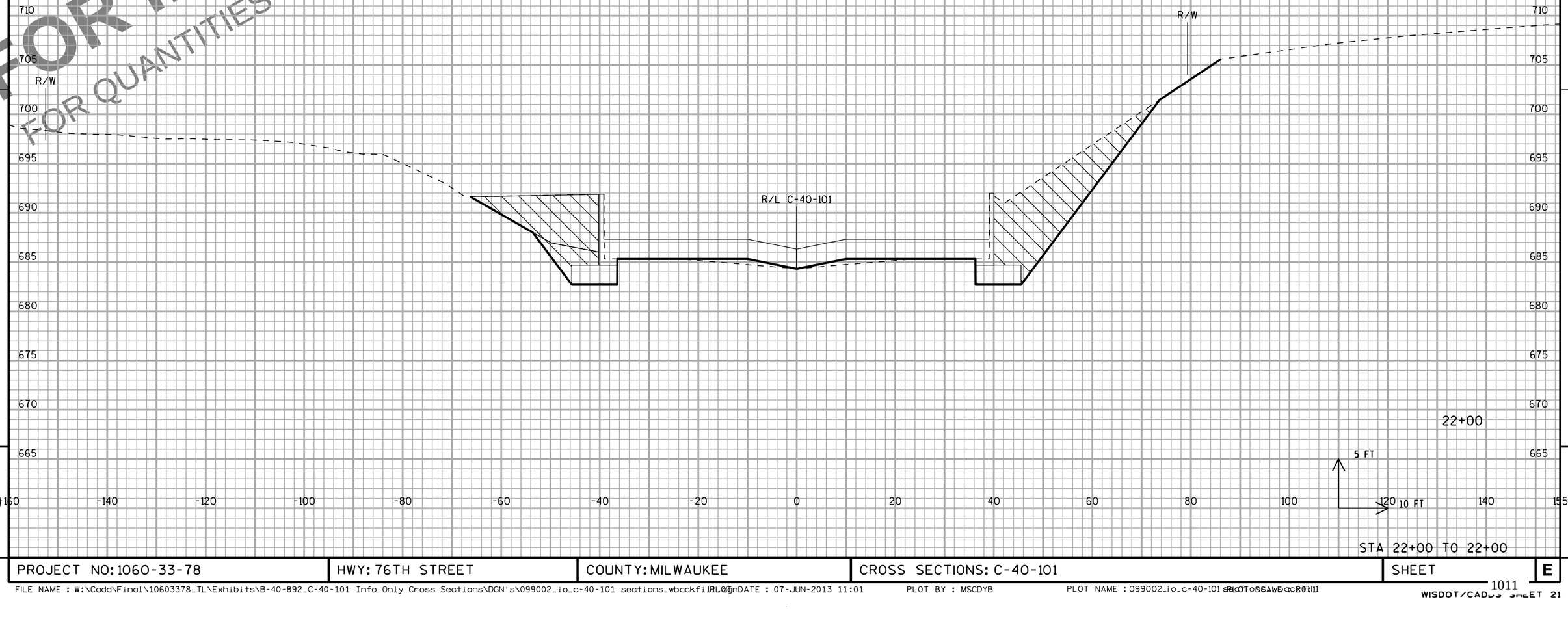
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WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



* SEE STRUCTURE PLANS FOR DETAILED INFORMATION



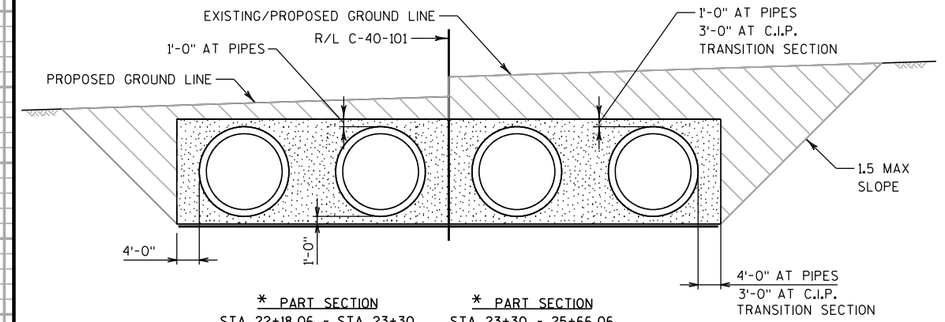
STA 22+00 TO 22+00

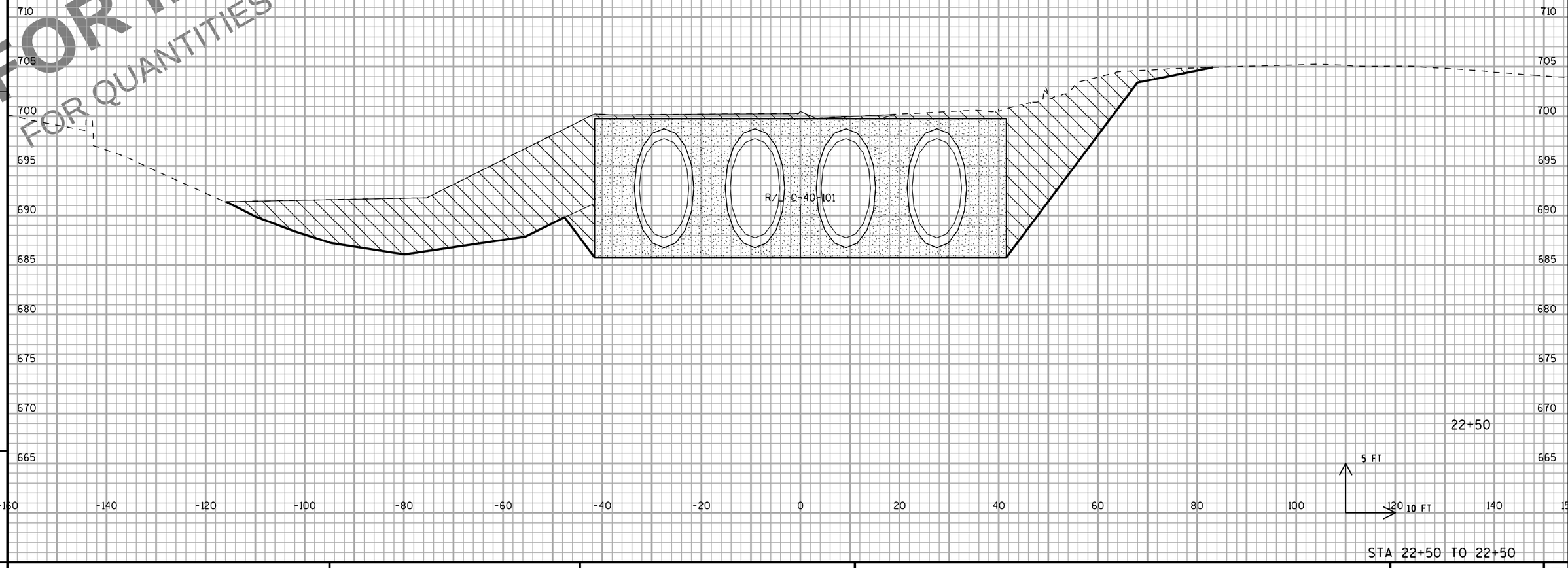
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

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WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

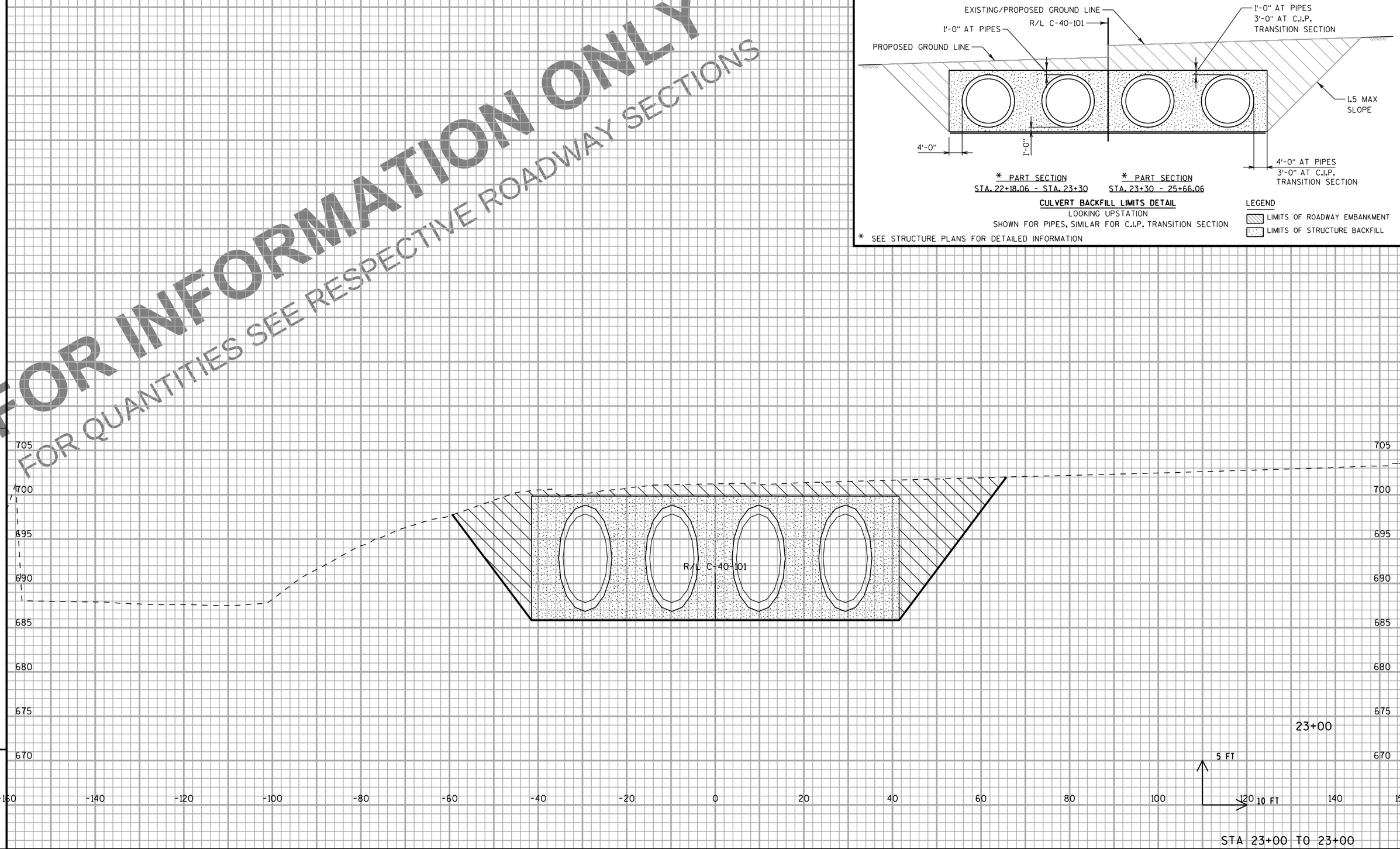




STA 22+50 TO 22+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

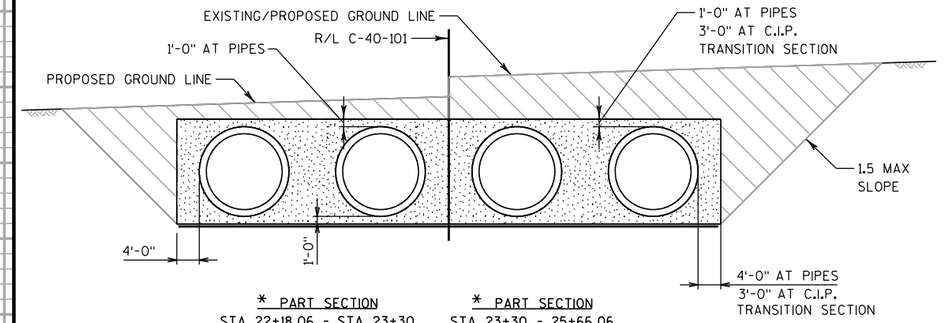


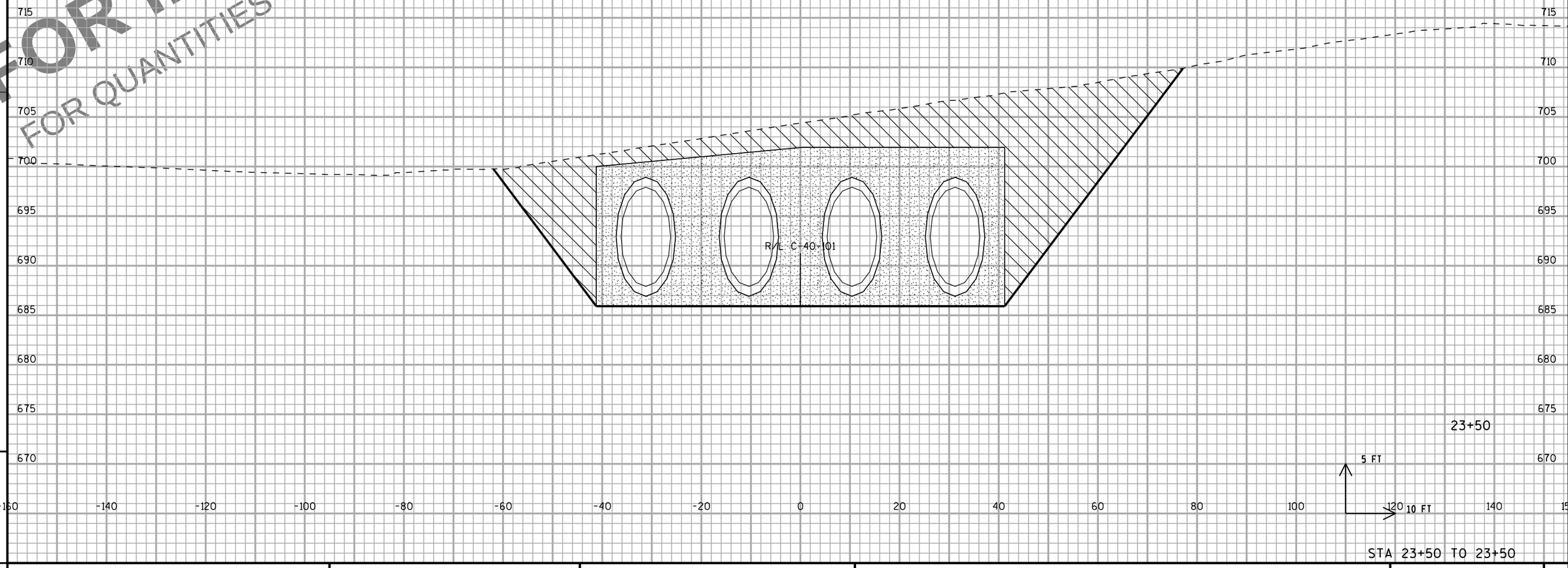
STA 23+00 TO 23+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099002_io_c-40-101 sections_wbackfill.dgn PLOT DATE : 07-JUN-2013 11:01 PLOT BY : MSCDYB PLOT NAME : 099002_io_c-40-101 sections_wbackfill.pdf PLOT SCALE : 1.0'
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

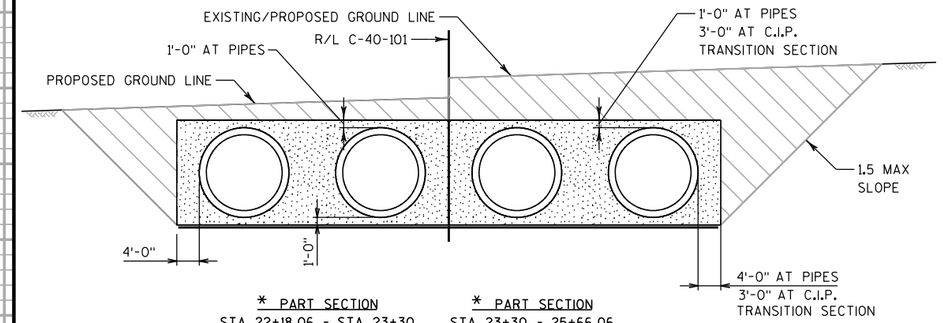




PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099002_io_c-40-101 sections_wbackfill.dgn PLOT DATE : 07-JUN-2013 11:01 PLOT BY : MSCDYB PLOT NAME : 099002_io_c-40-101 sections_wbackfill.pdf PLOT SCALE : 1.000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



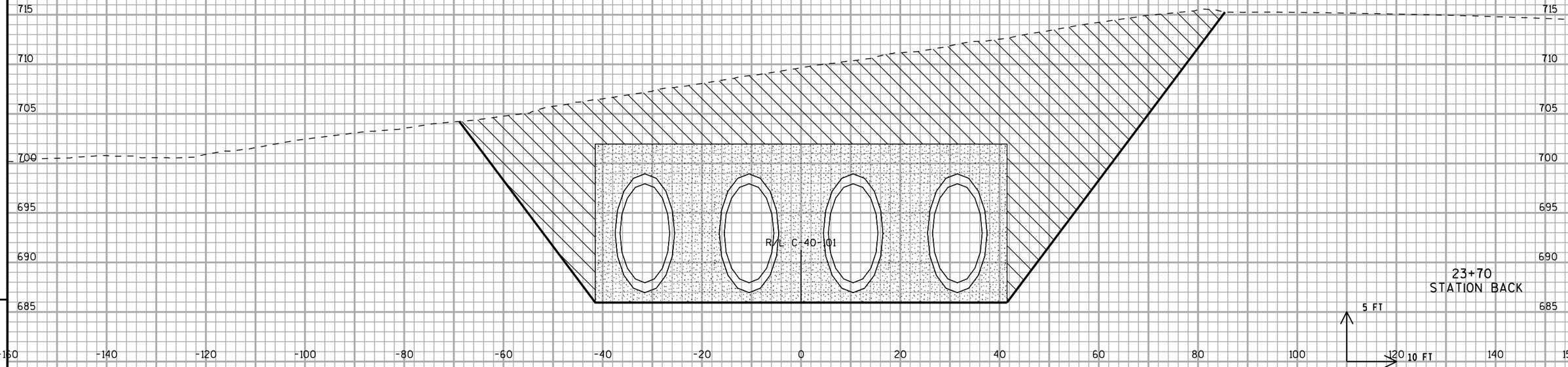
* PART SECTION
STA. 22+18.06 - STA. 23+30

* PART SECTION
STA. 23+30 - 25+66.06

CULVERT BACKFILL LIMITS DETAIL
LOOKING UPSTATION
SHOWN FOR PIPES, SIMILAR FOR C.I.P. TRANSITION SECTION

LEGEND
LIMITS OF ROADWAY EMBANKMENT
LIMITS OF STRUCTURE BACKFILL

* SEE STRUCTURE PLANS FOR DETAILED INFORMATION

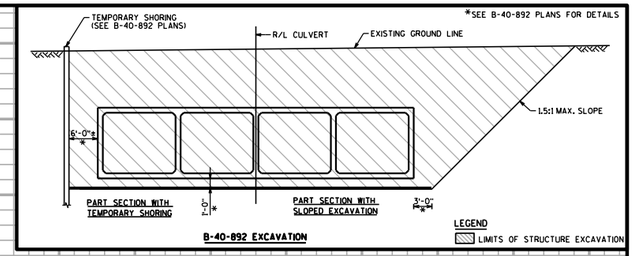


STA 23+70 TO 24+00

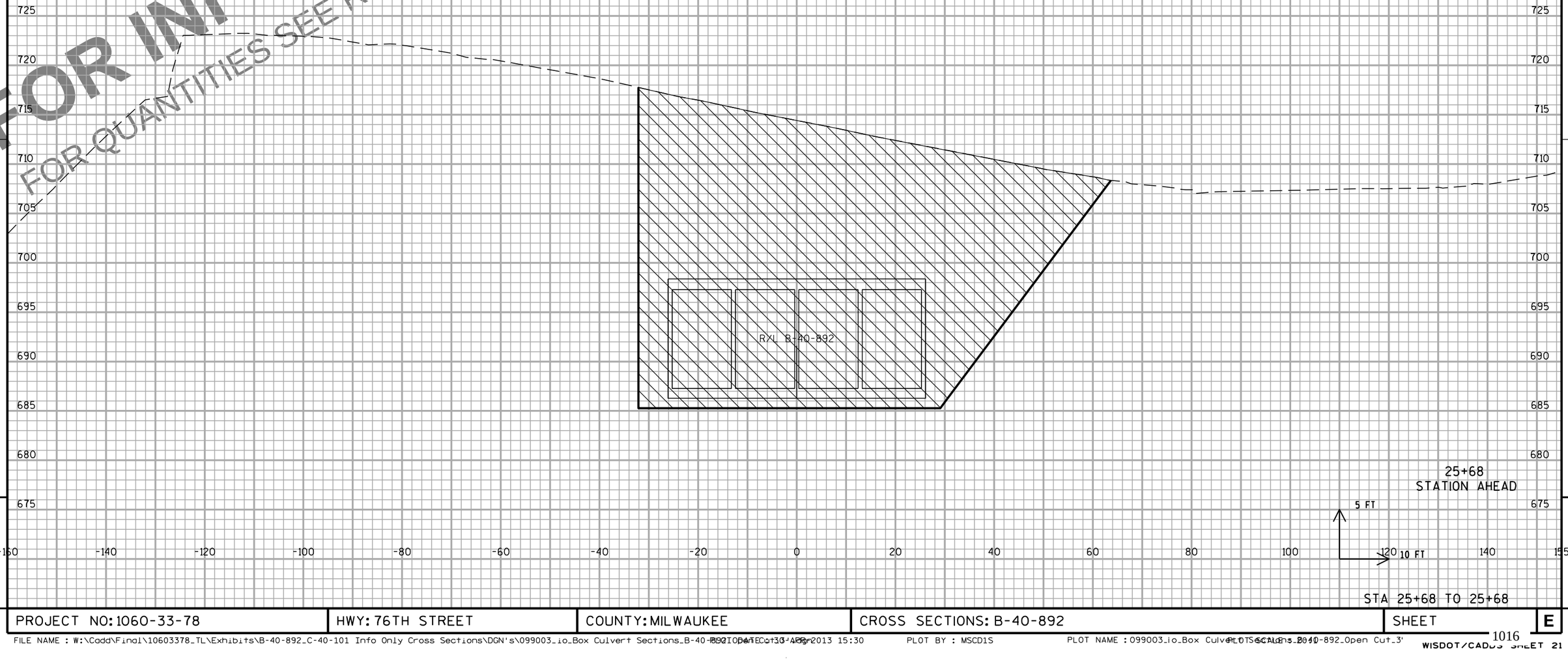
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: C-40-101	SHEET	E

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WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION



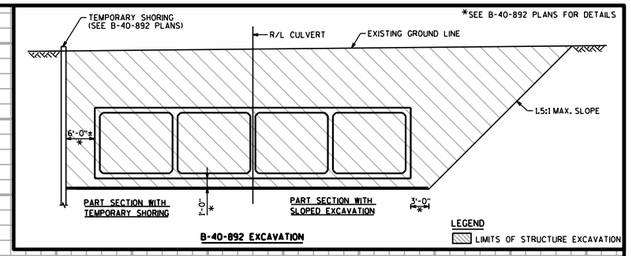
STA 25+68 TO 25+68

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

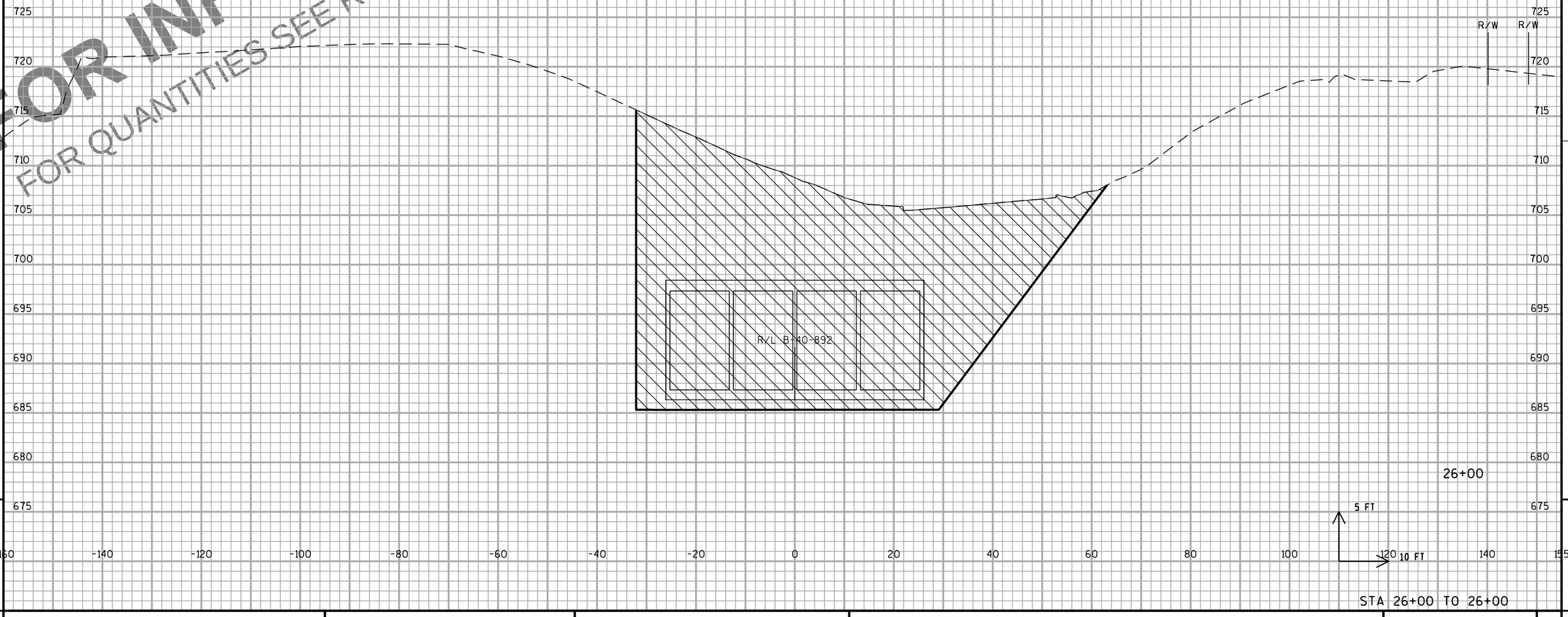
FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'.dgn PLOTTED : 30 APR 2013 15:30 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3' PLOT SCALE : 2.000

WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION



26+00

5 FT
10 FT

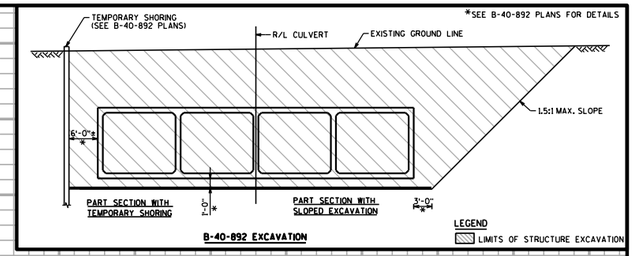
STA 26+00 TO 26+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

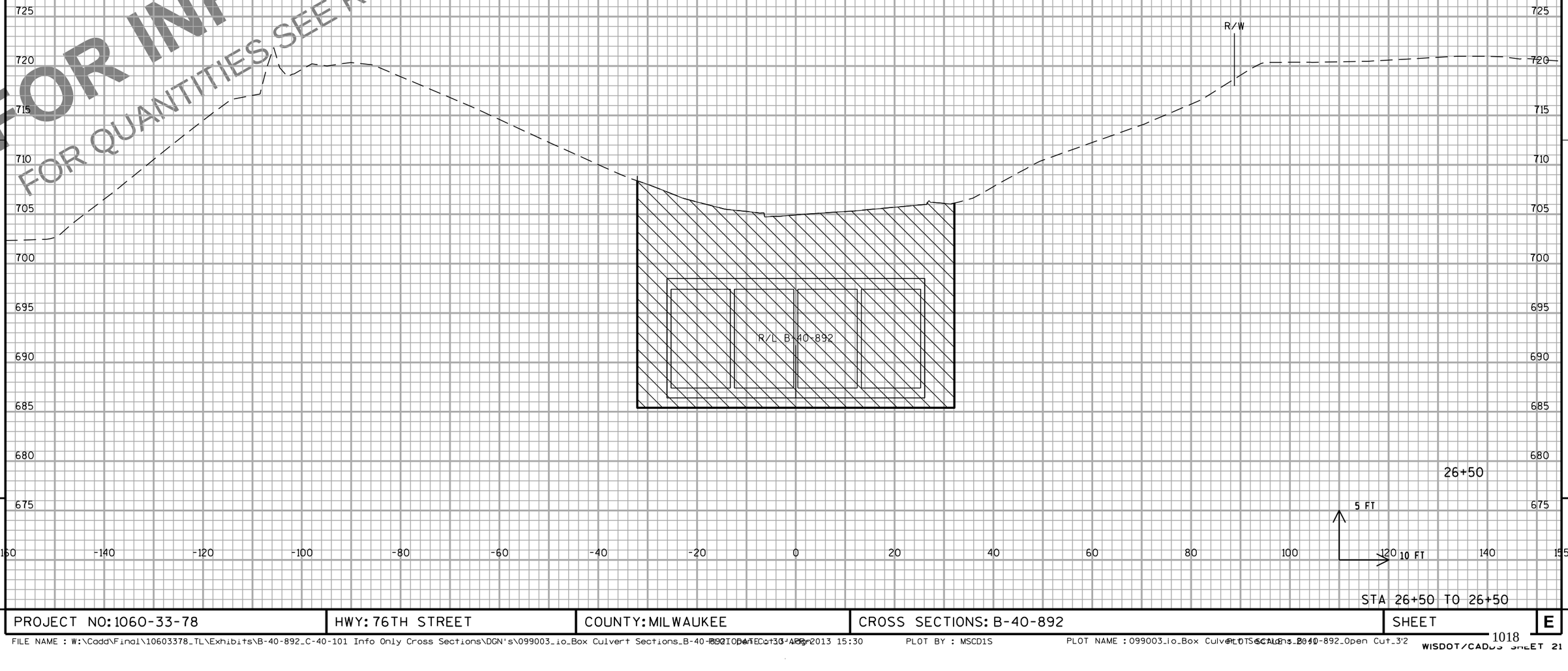
FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'1.dgn PLOT DATE : 30 APR 2013 15:30 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'1 PLOT SCALE : 2.000

WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION



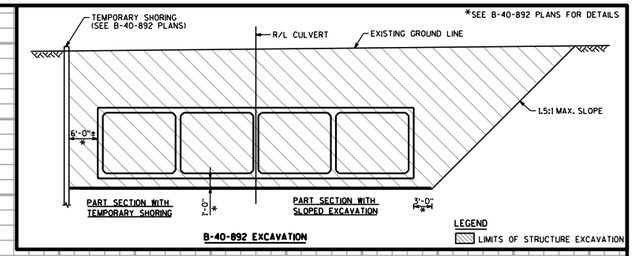
STA 26+50 TO 26+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

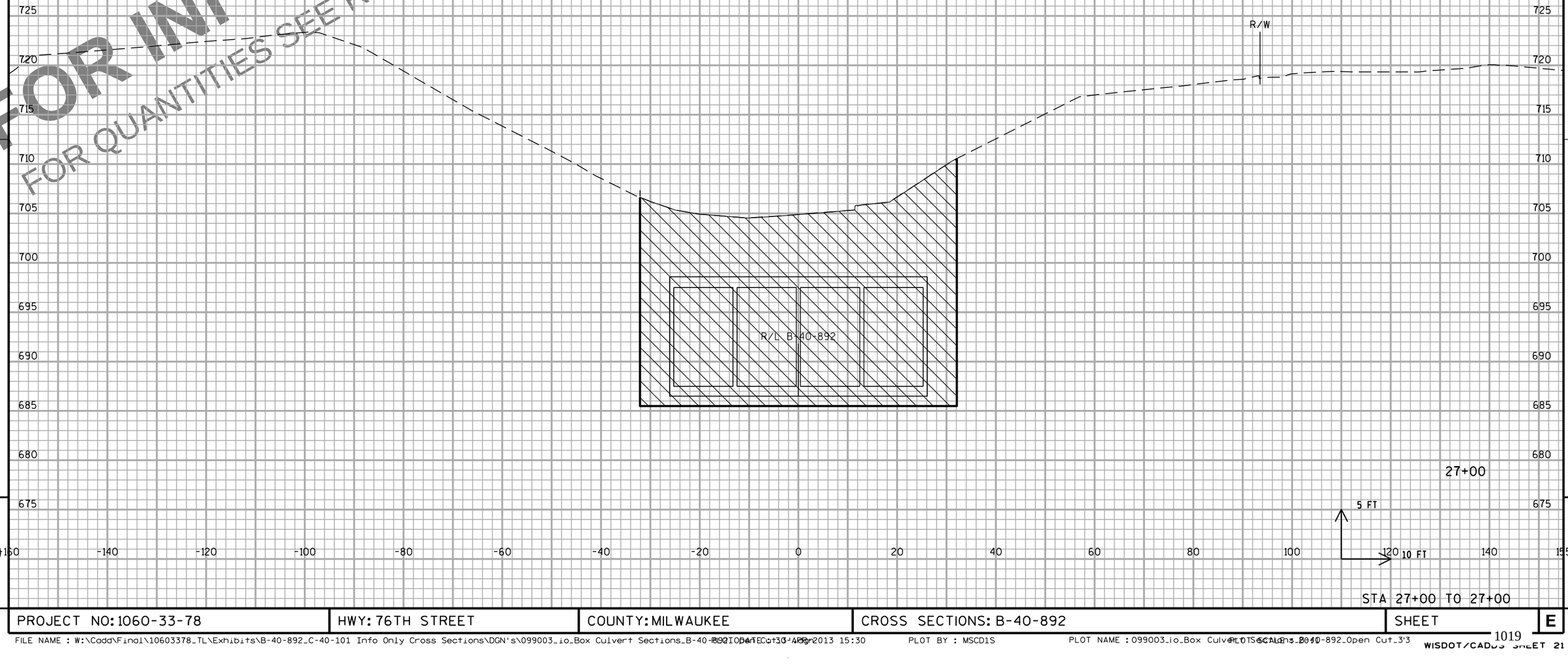
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WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION



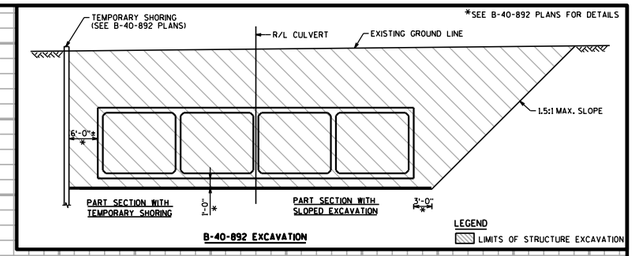
STA 27+00 TO 27+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

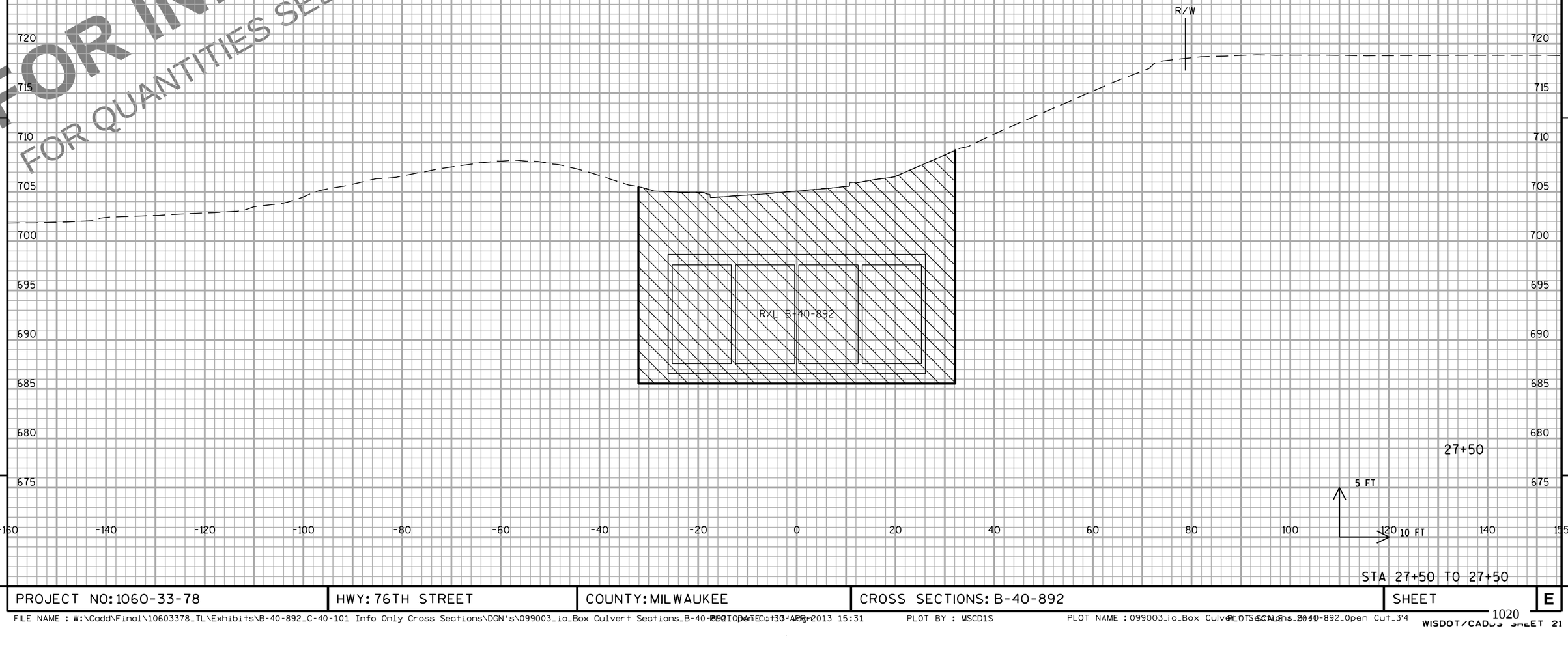
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WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION



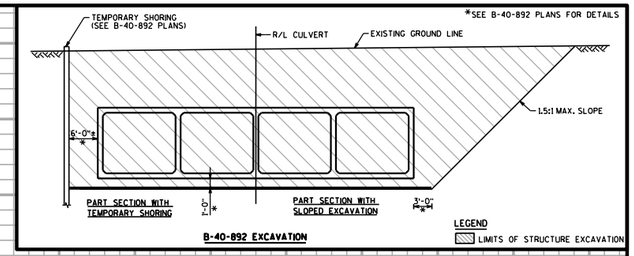
STA 27+50 TO 27+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

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WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

715

710

705

700

695

690

685

680

675

R/L B-40-892

28+00

5 FT

10 FT

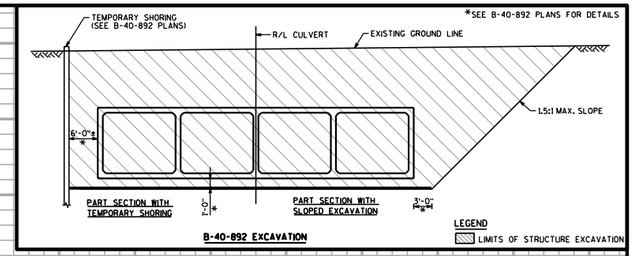
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STA 28+00 TO 28+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'5 APR 2013 15:31
PLOT BY : MSCD1S
PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'5
PLOT SCALE = 2.000
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

715

710

705

700

695

690

685

680

675

R/L B-40-892

28+50

5 FT

10 FT

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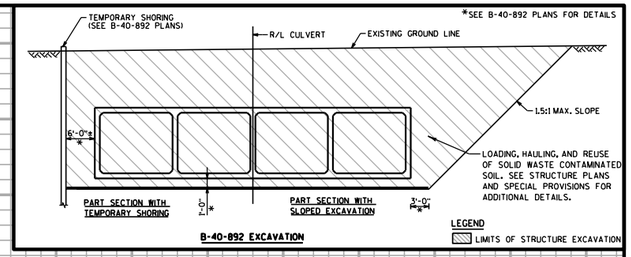
STA 28+50 TO 28+50

9

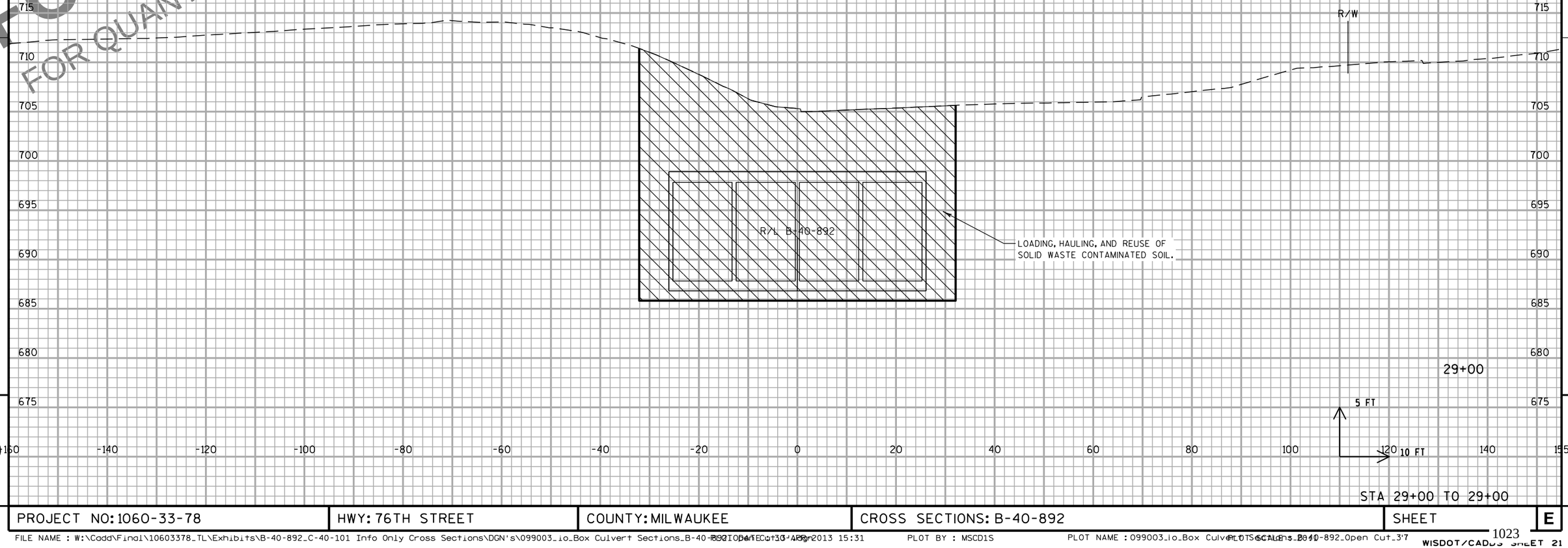
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FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'6 DATE : 30 APR 2013 15:31 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'6 PLOT SCALE : 2.000
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

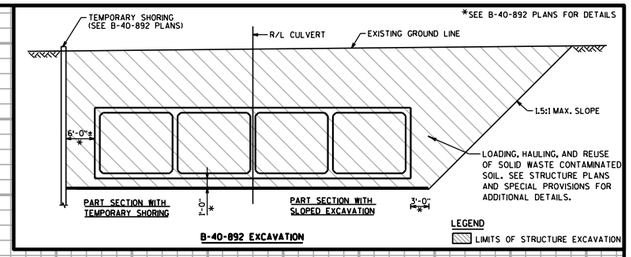


STA 29+00 TO 29+00

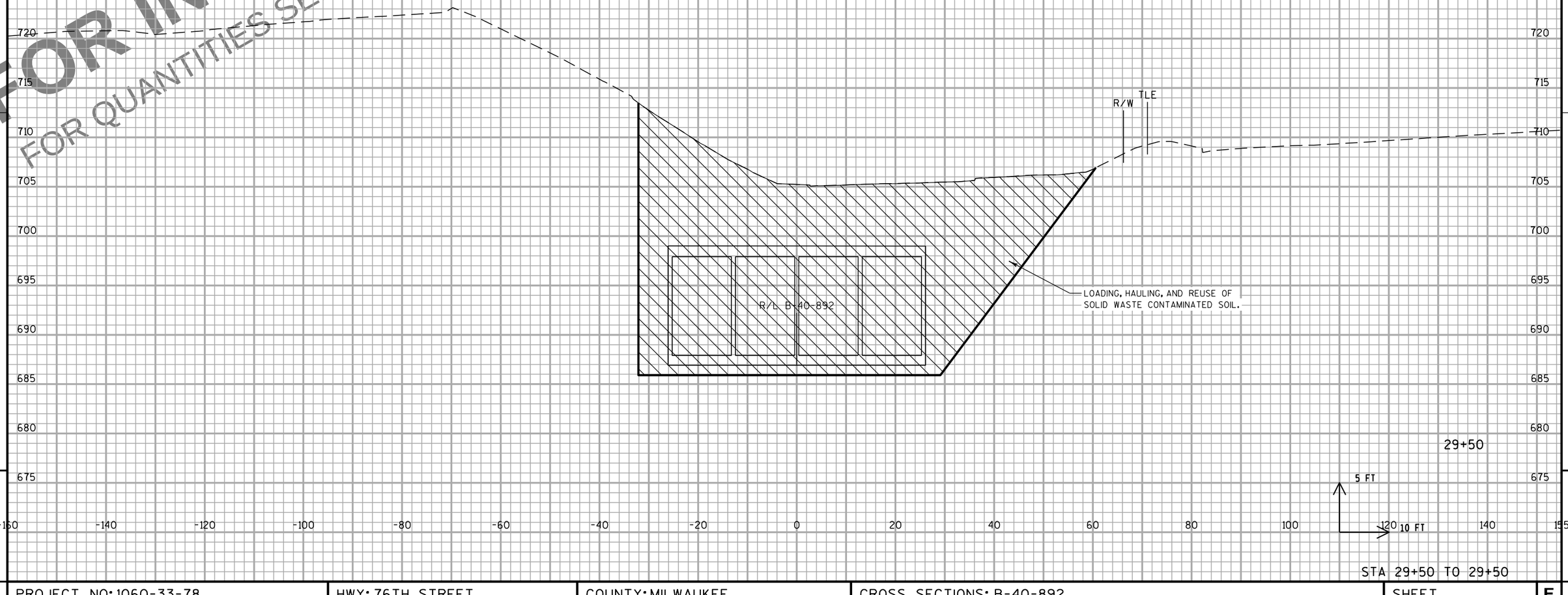
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'.dgn
PLOTTED : 30-APR-2013 15:31
PLOT BY : MSCD1S
PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'.pltcfg
PLOT SCALE : 2.0000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

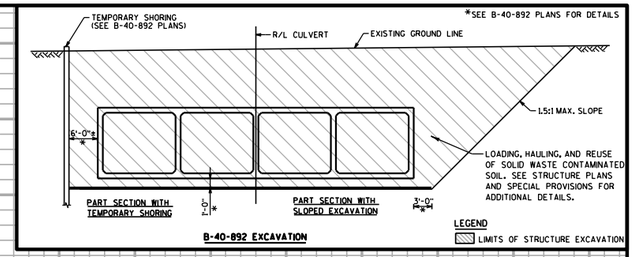


STA 29+50 TO 29+50

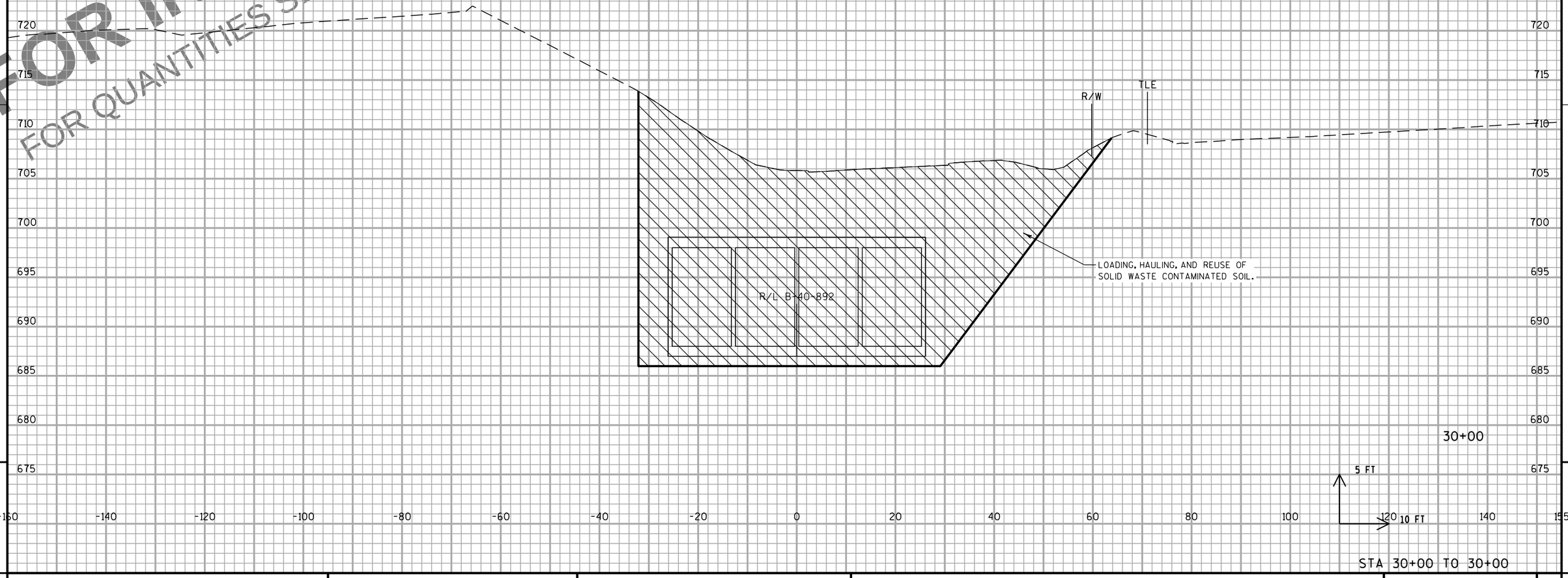
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'8.dgn PLOT DATE : 30 APR 2013 15:31 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'8 PLOT SCALE : 2.0000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

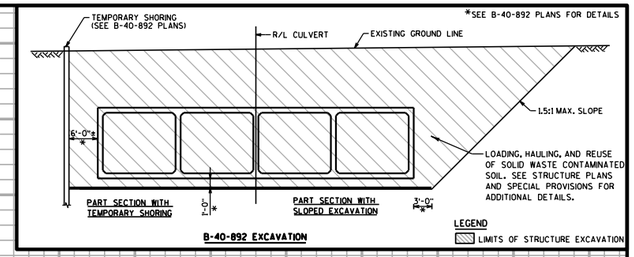


STA 30+00 TO 30+00

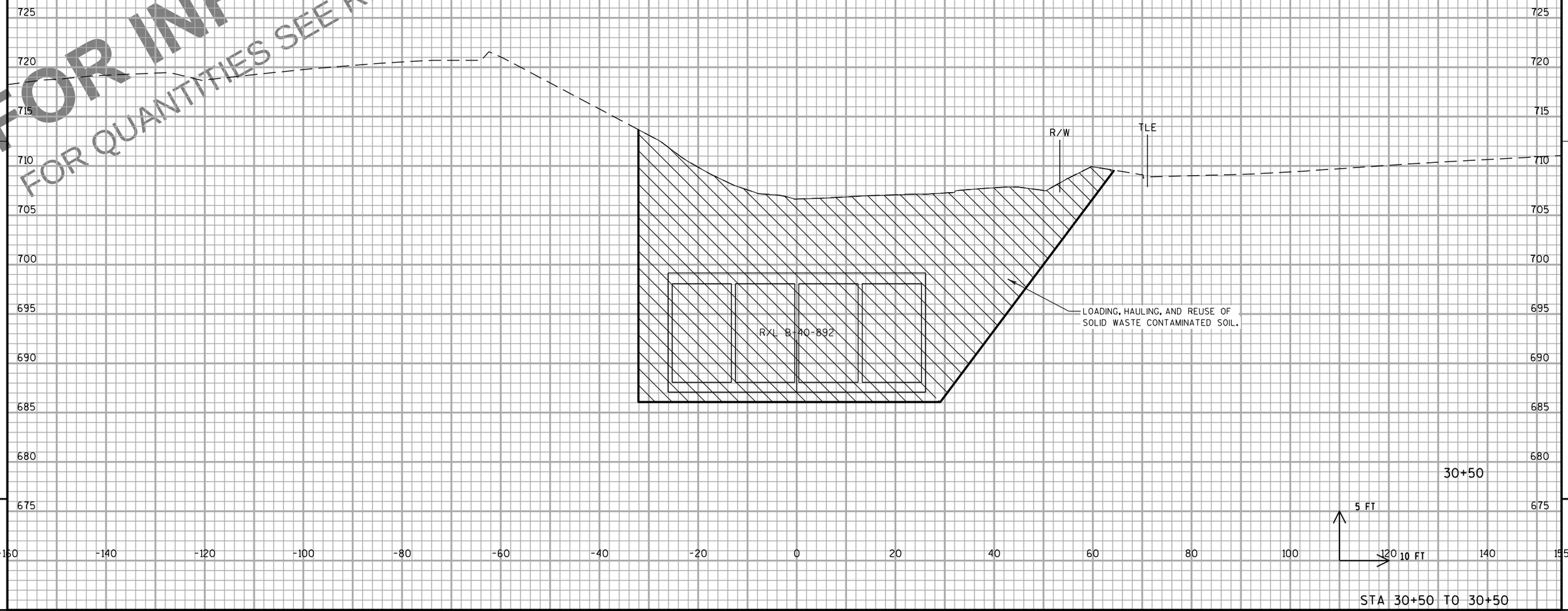
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FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'9.dgn
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PLOT BY : MSCD1S
PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'9
PLOT SCALE : 2.0000
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

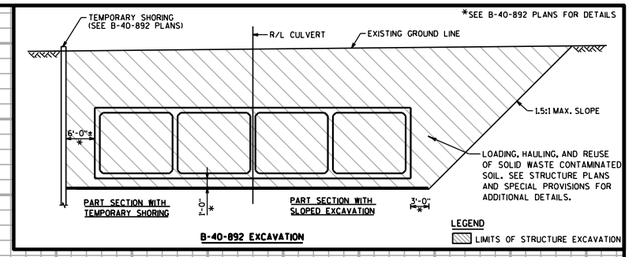


STA 30+50 TO 30+50

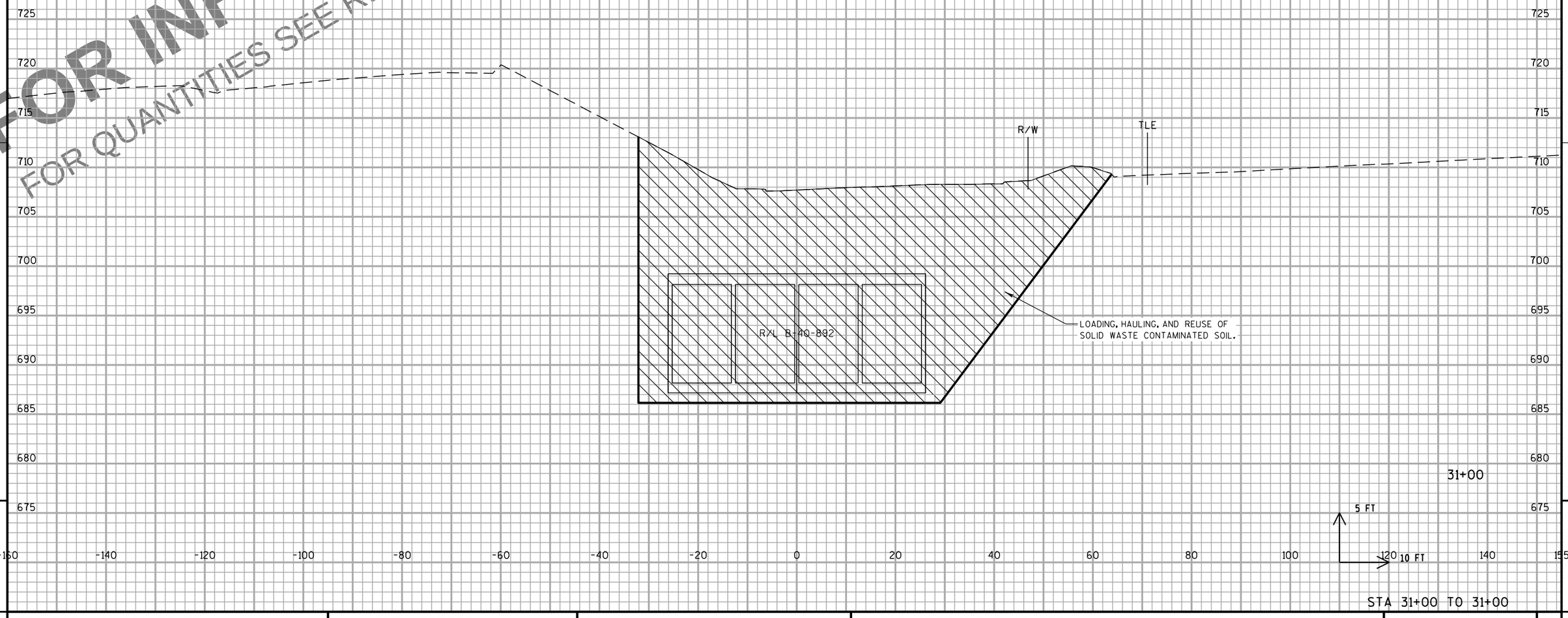
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'0".dgn
PLOTTED : 30-APR-2013 15:31
PLOT BY : MSCD1S
PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'0"
PLOT SCALE : 2.0000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION



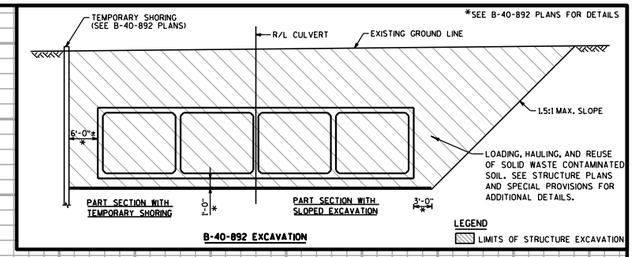
STA 31+00 TO 31+00

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

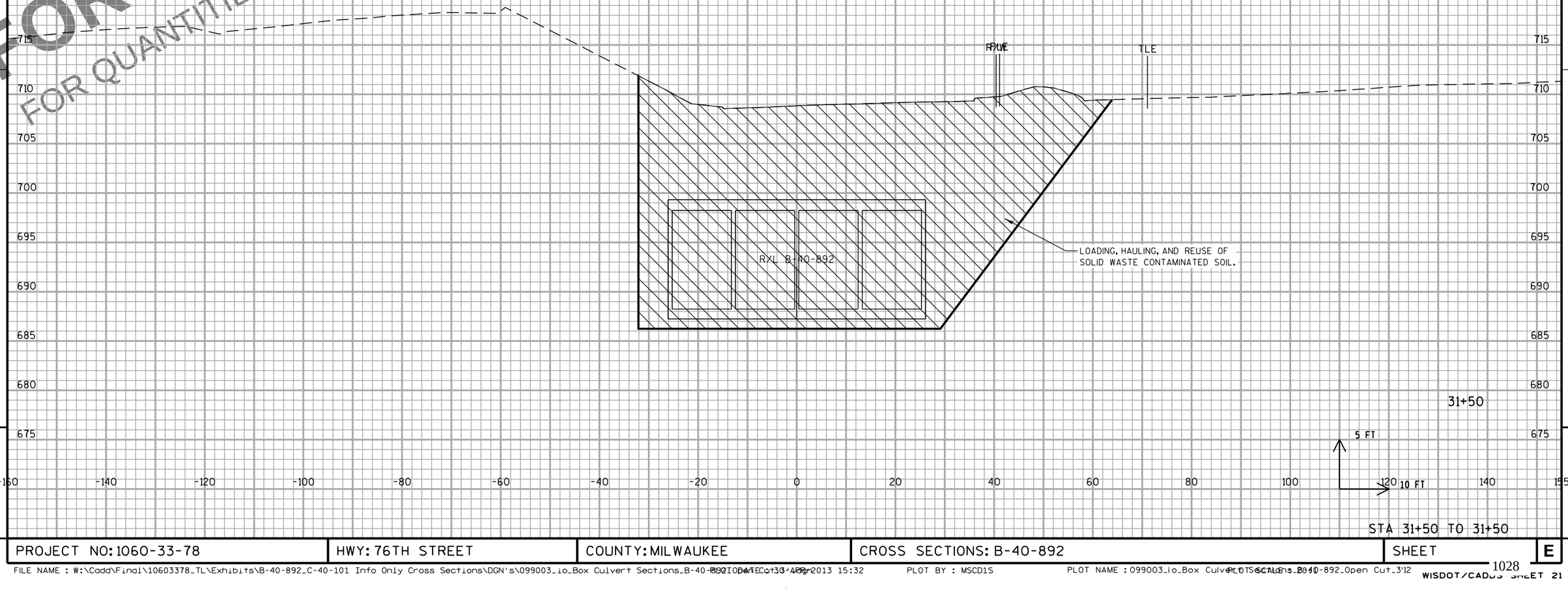
FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'11 Apr 2013 15:31 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'11 PLOT SCALE = 2.000

WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

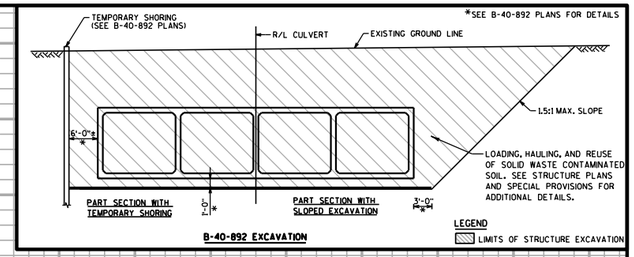


STA 31+50 TO 31+50

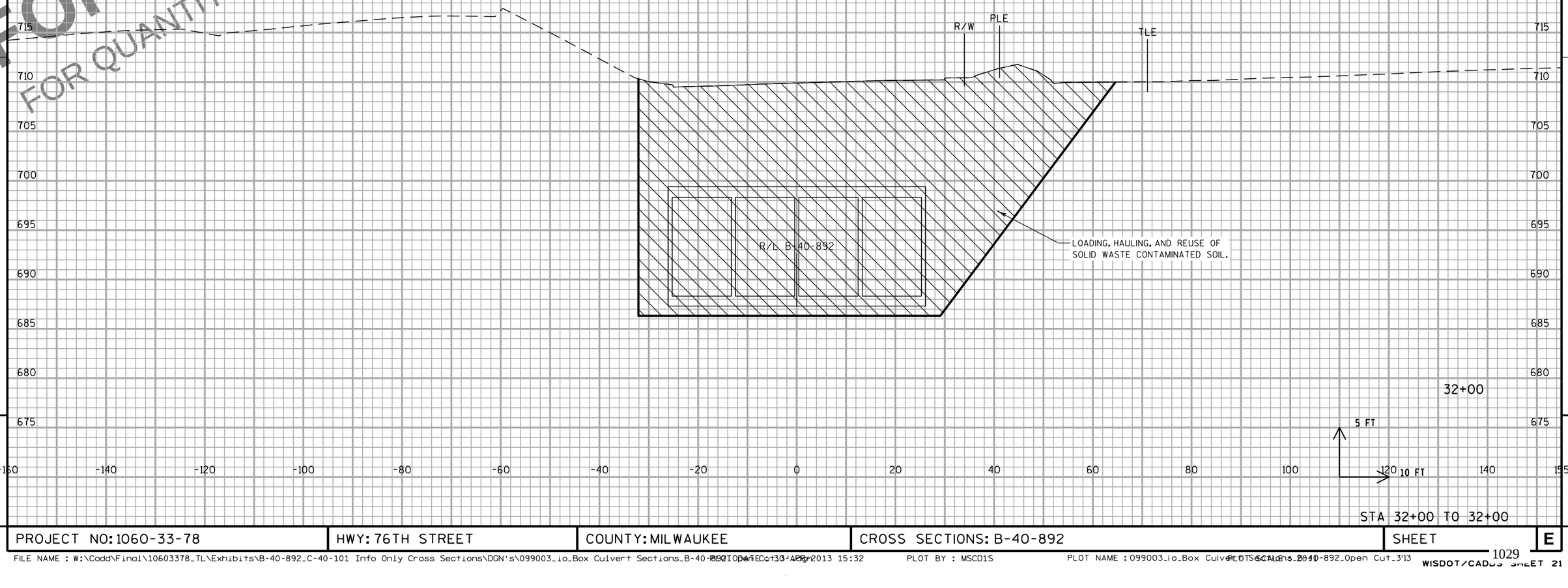
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3-12.dgn
DATE : 3/6/2013 15:32
PLOT BY : MSCD1S
PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'12
PLOT SCALE : 2.0000 '/ IN
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS
FOR QUAN



B-40-892 EXCAVATION

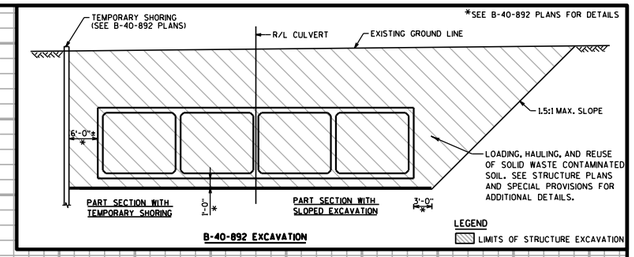


STA 32+00 TO 32+00

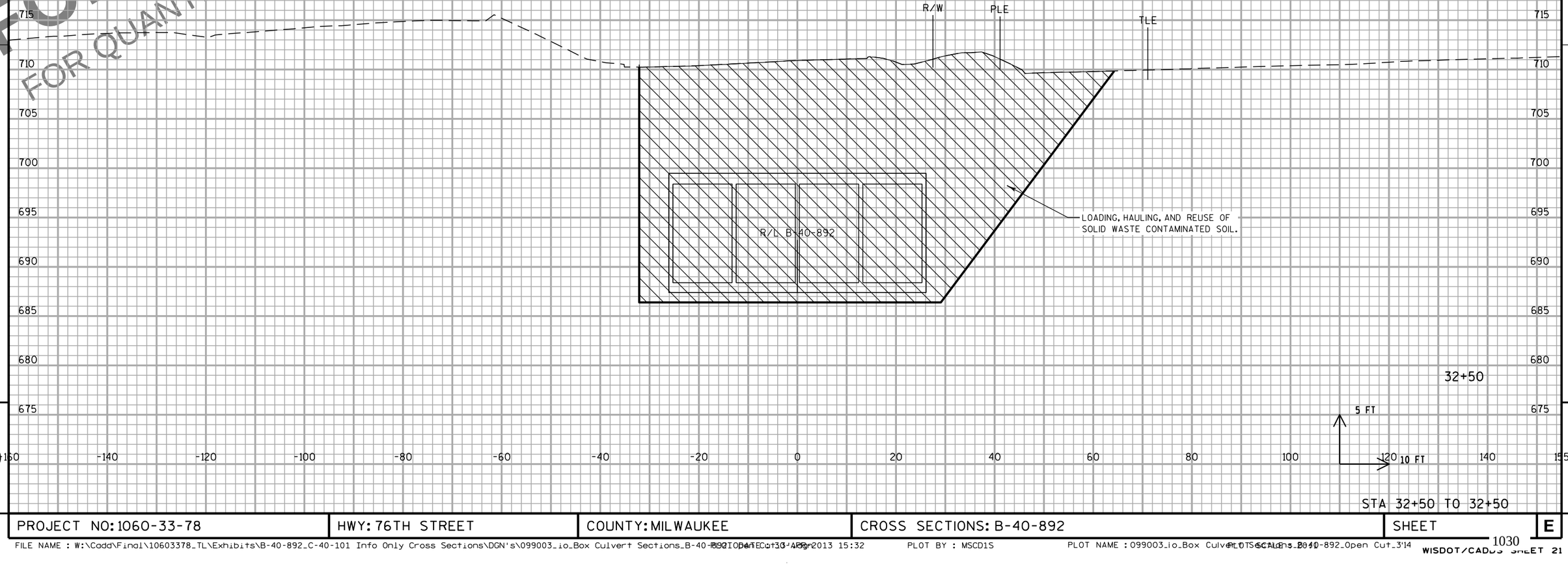
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3.dgn
PLOT DATE : 3 APR 2013 15:32
PLOT BY : MSCD1S
PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3.plt
PLOT SCALE : 2.000
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

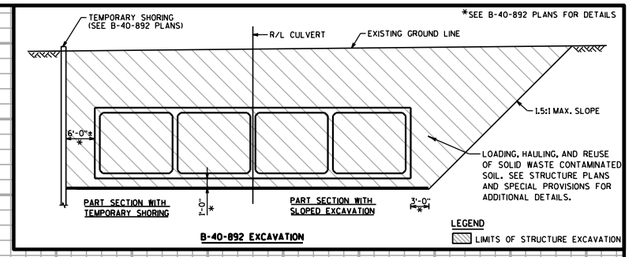


STA 32+50 TO 32+50

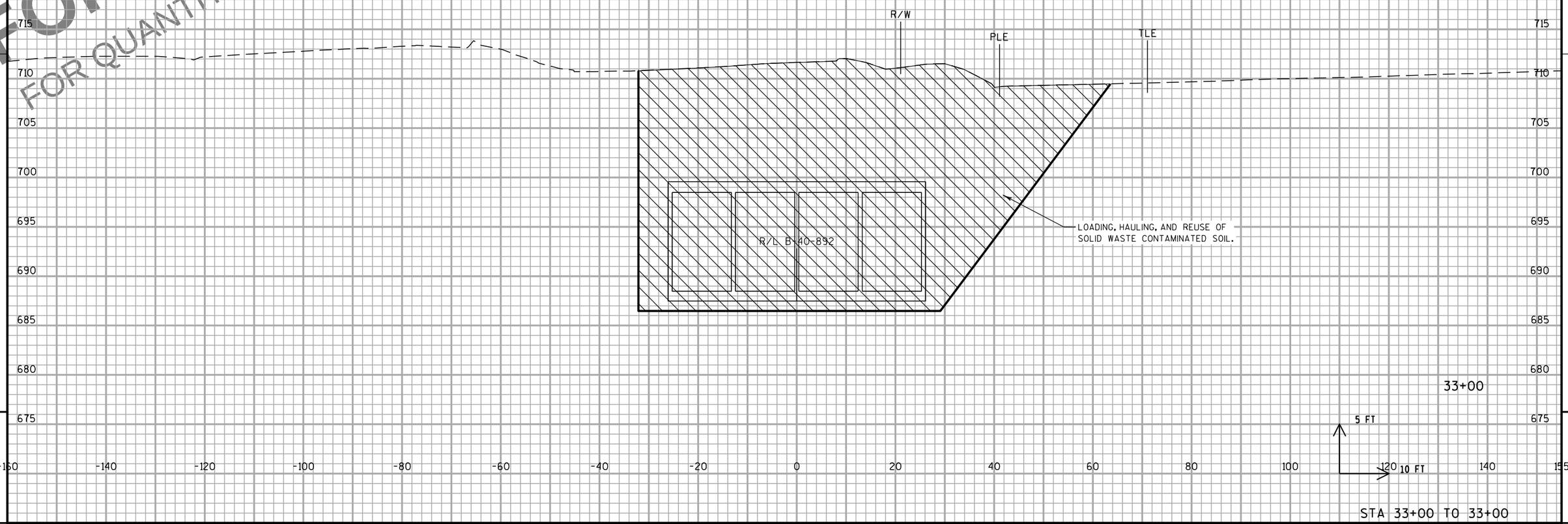
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3.dgn DATE : 4/30/2013 15:32 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'14 PLOT SCALE : 2.000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

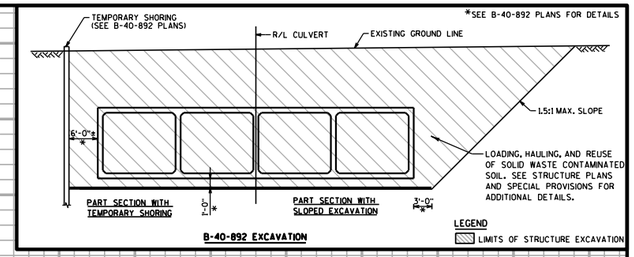


STA 33+00 TO 33+00

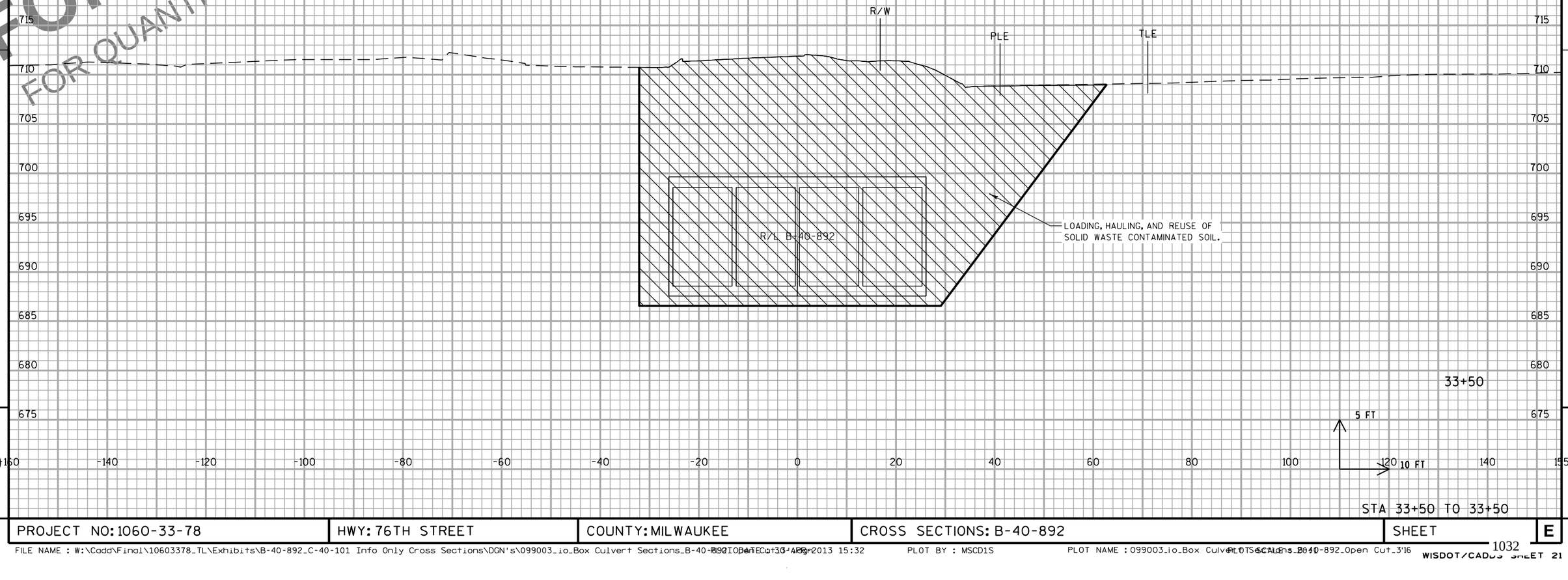
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3.dgn
PLOTTED : 30-APR-2013 15:32
PLOT BY : MSCD1S
PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'15
PLOT SCALE : 2.0'' = 1'-0''
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

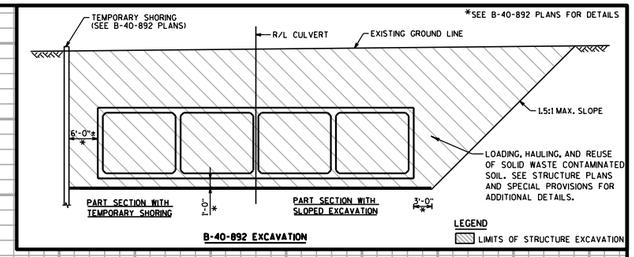


STA 33+50 TO 33+50

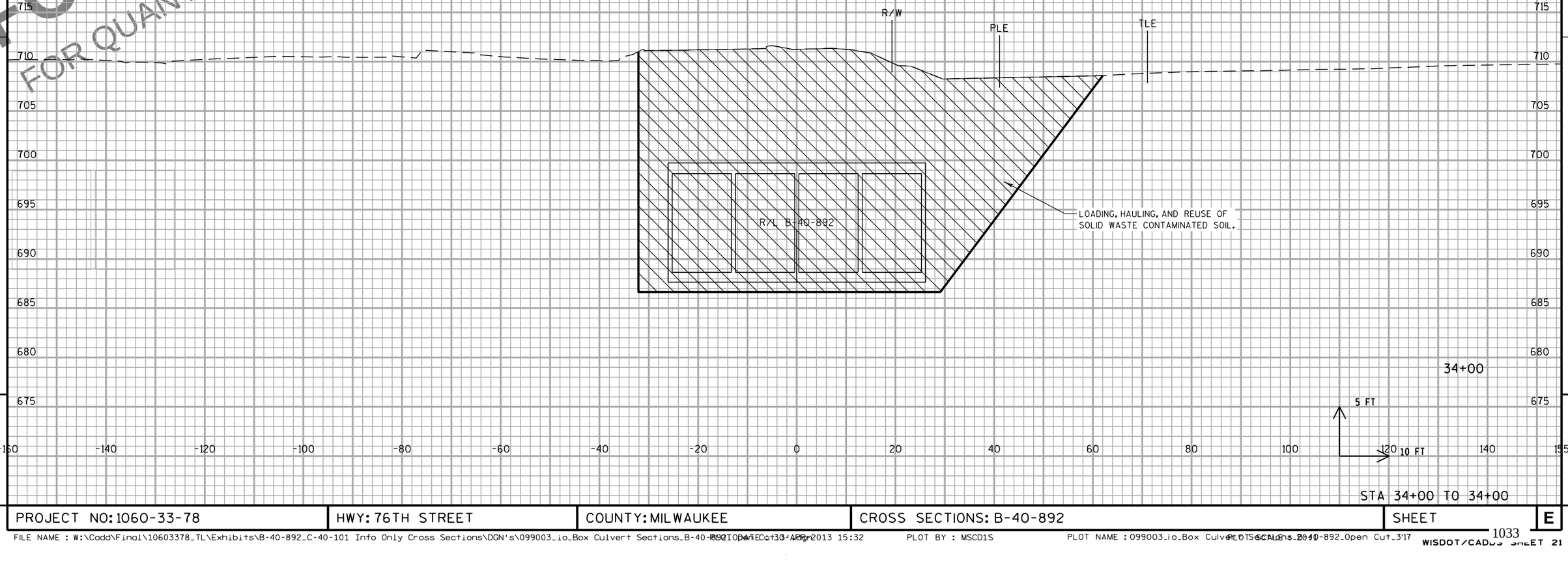
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3.dgn PLOT DATE : 30 APR 2013 15:32 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'16 PLOT SCALE : 2.000
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 EXCAVATION

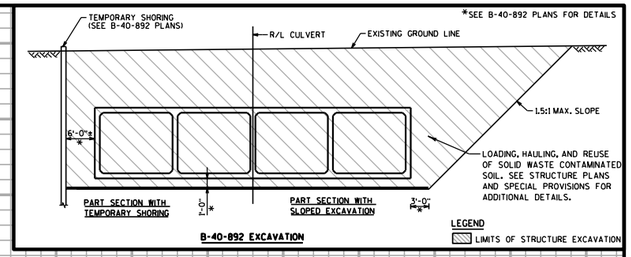


STA 34+00 TO 34+00

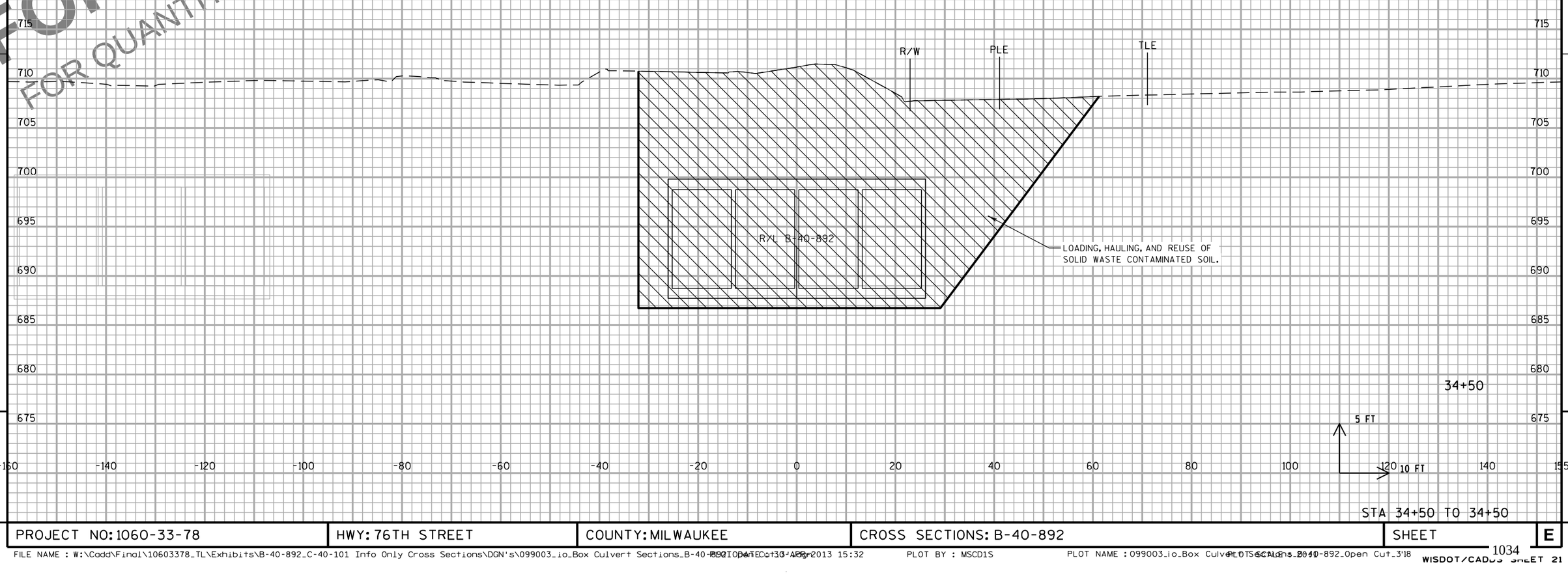
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3.dgn
PLOTTED : 30-APR-2013 15:32
PLOT BY : MSCD1S
PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'17
PLOT SCALE : 2.0'' = 1'-0''
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS
FOR QUANTITIES



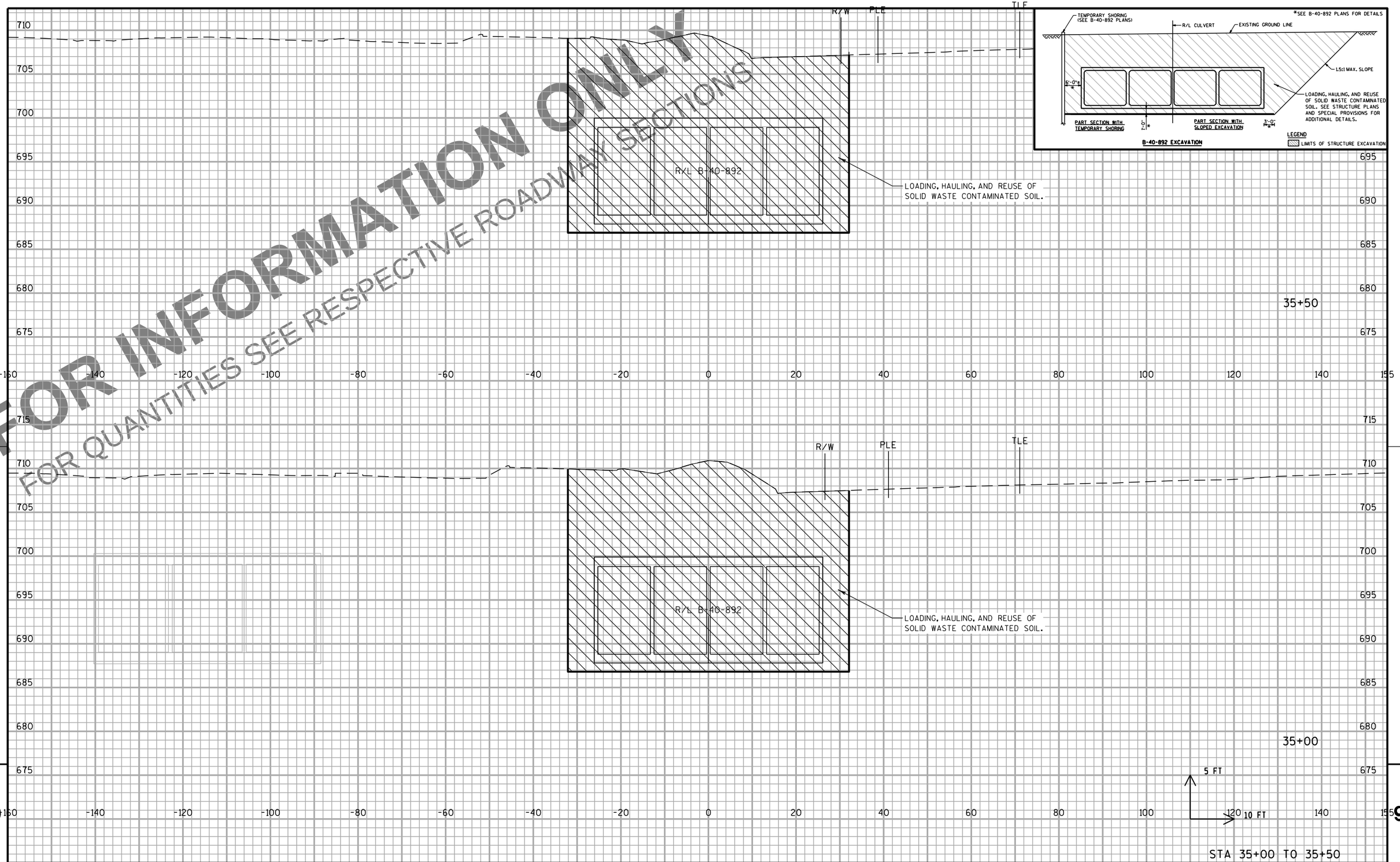
B-40-892 EXCAVATION



STA 34+50 TO 34+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FOR INFORMATION ONLY
QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



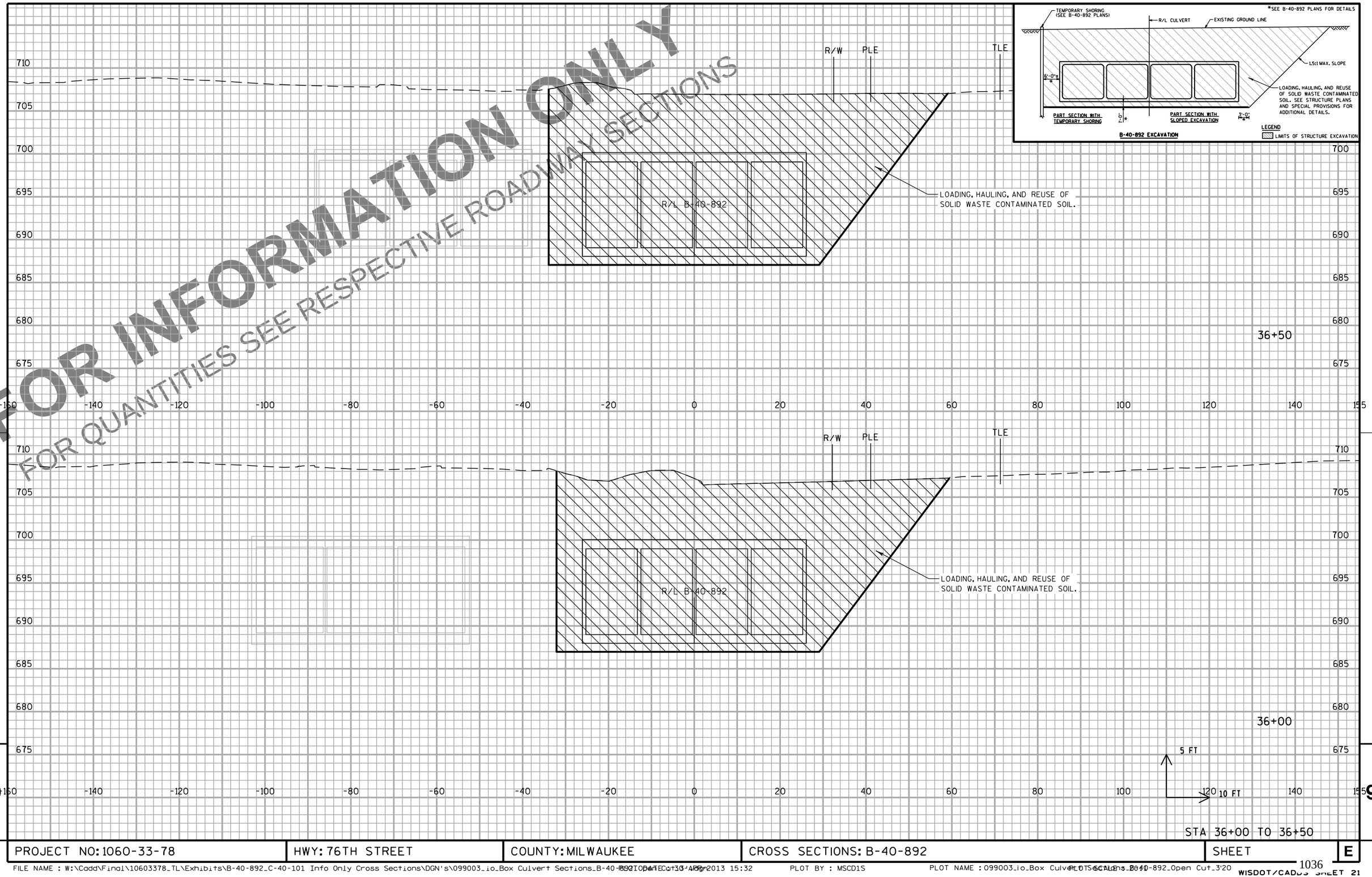
B-40-892 EXCAVATION

STA 35+00 TO 35+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3.dgn PLOTTED : 13-APR-2013 15:32 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3.tif PLOT SCALE : 2.0000 '/ IN
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

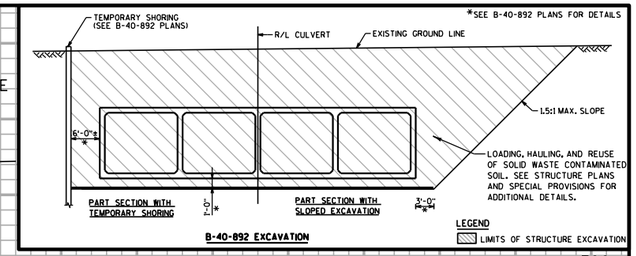


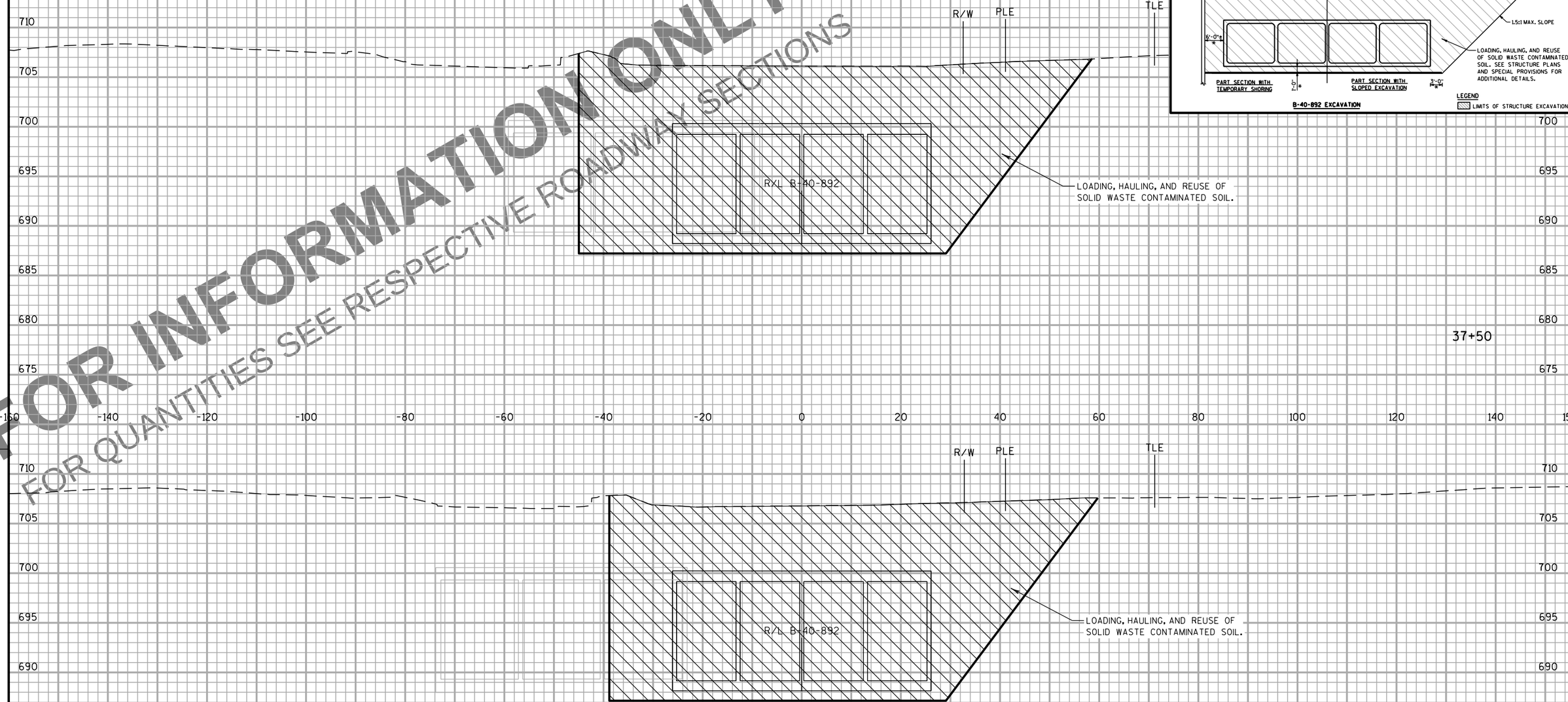
STA 36+00 TO 36+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'20 DATE : 30 APR 2013 15:32 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'20 PLOT SCALE : 2.000 WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



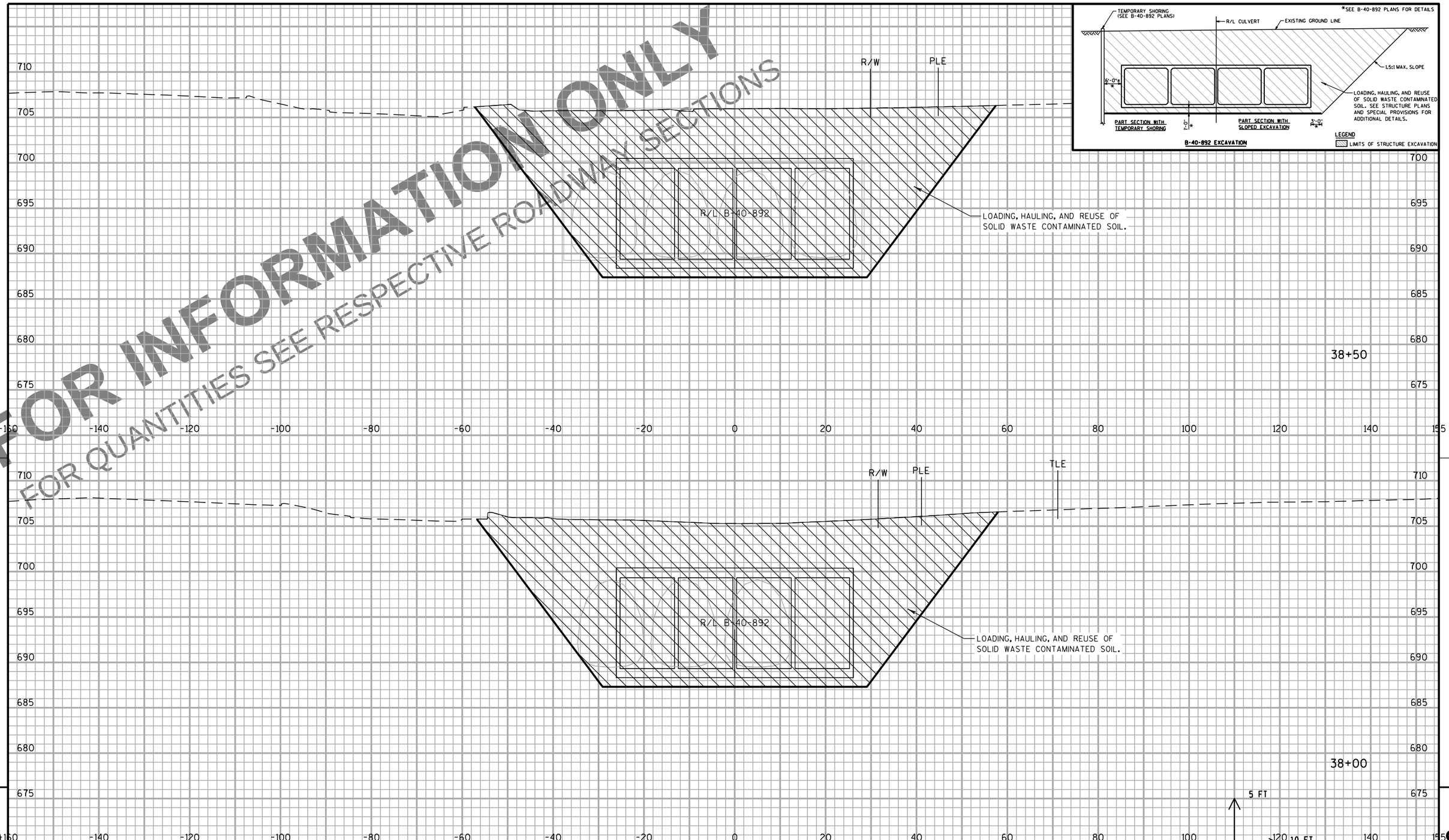


STA 37+00 TO 37+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'21 DATE : 17 APR 2013 15:33 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'21 PLOT SCALE : 2.0'/IN
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



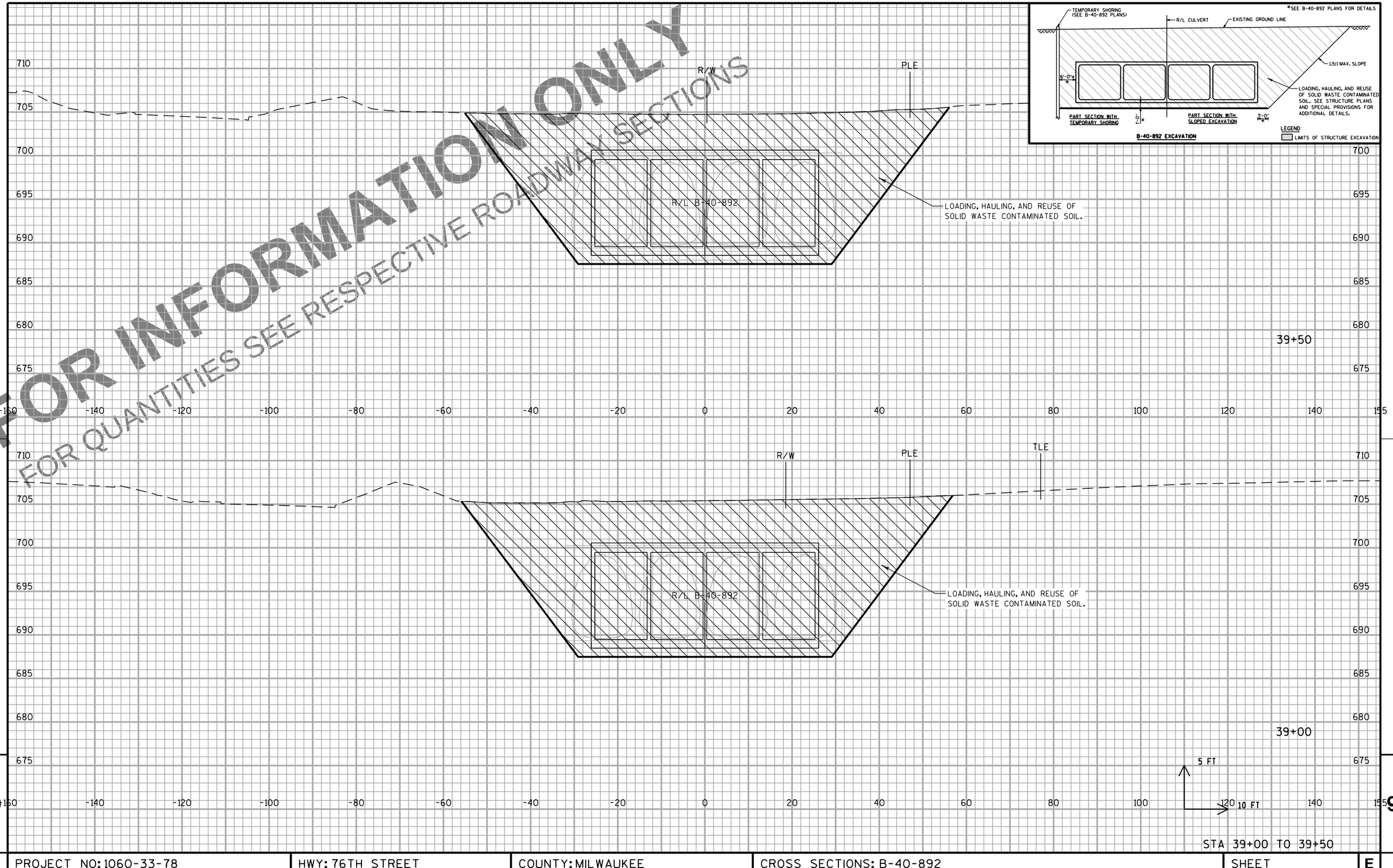
9

STA 38+00 TO 38+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'22 PLOT DATE : 30 APR 2013 15:33
PLOT BY : MSCD1S
PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'22 PLOT SCALE : 2.0'/IN
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



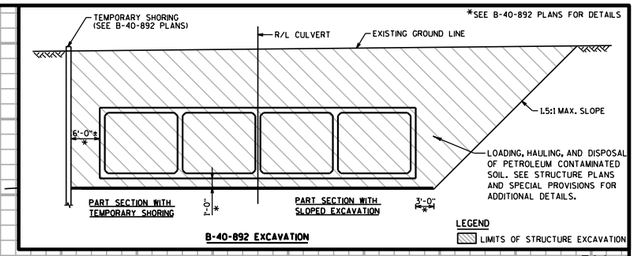
B-40-892 EXCAVATION

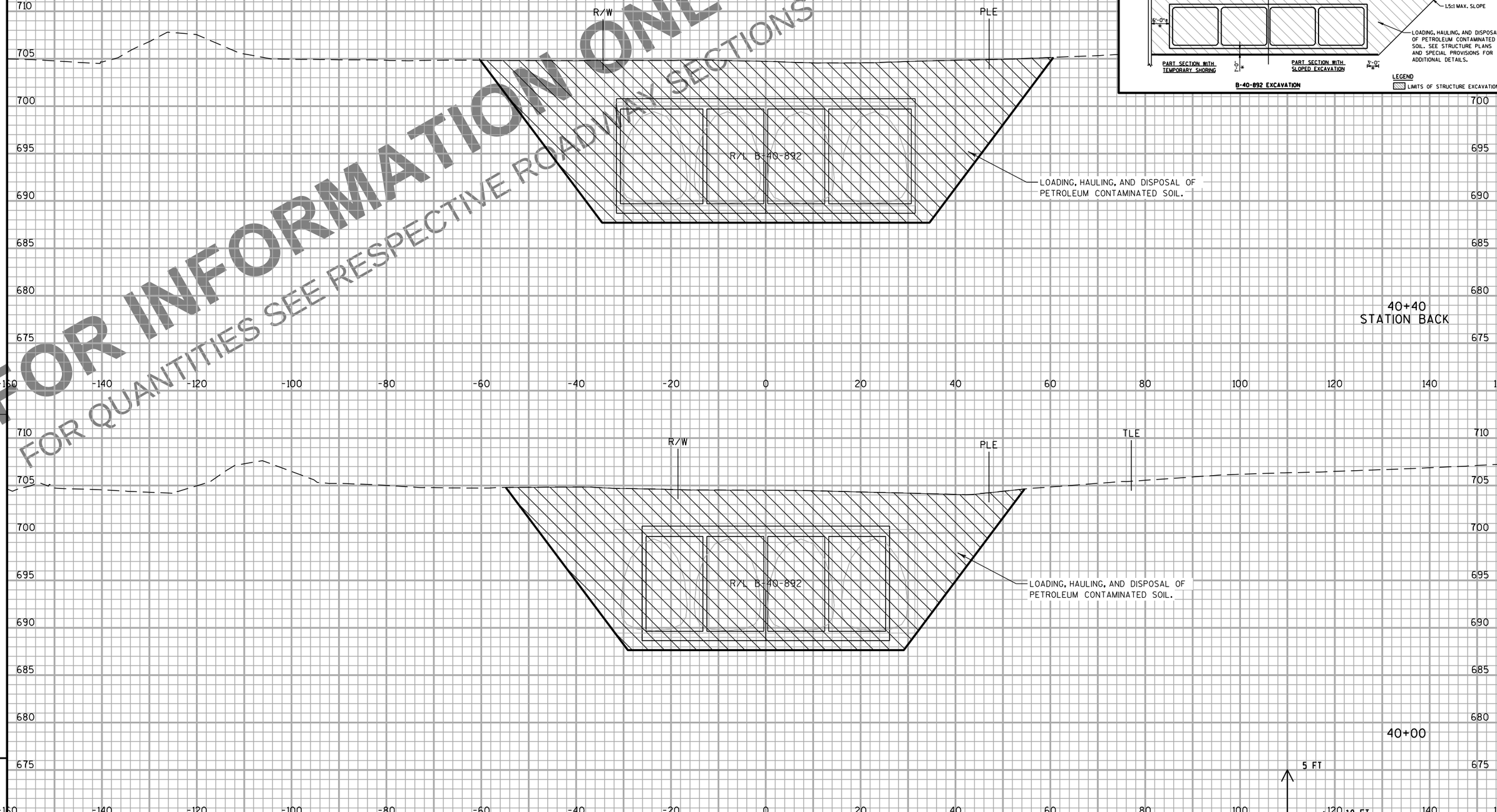
STA 39+00 TO 39+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'23.dgn PLOT DATE : 30 APR 2013 15:33 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'23 PLOT SCALE : 2.0000 '/ IN
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



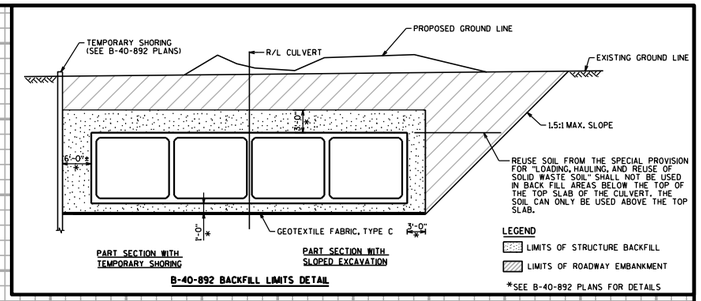


PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892	SHEET	E

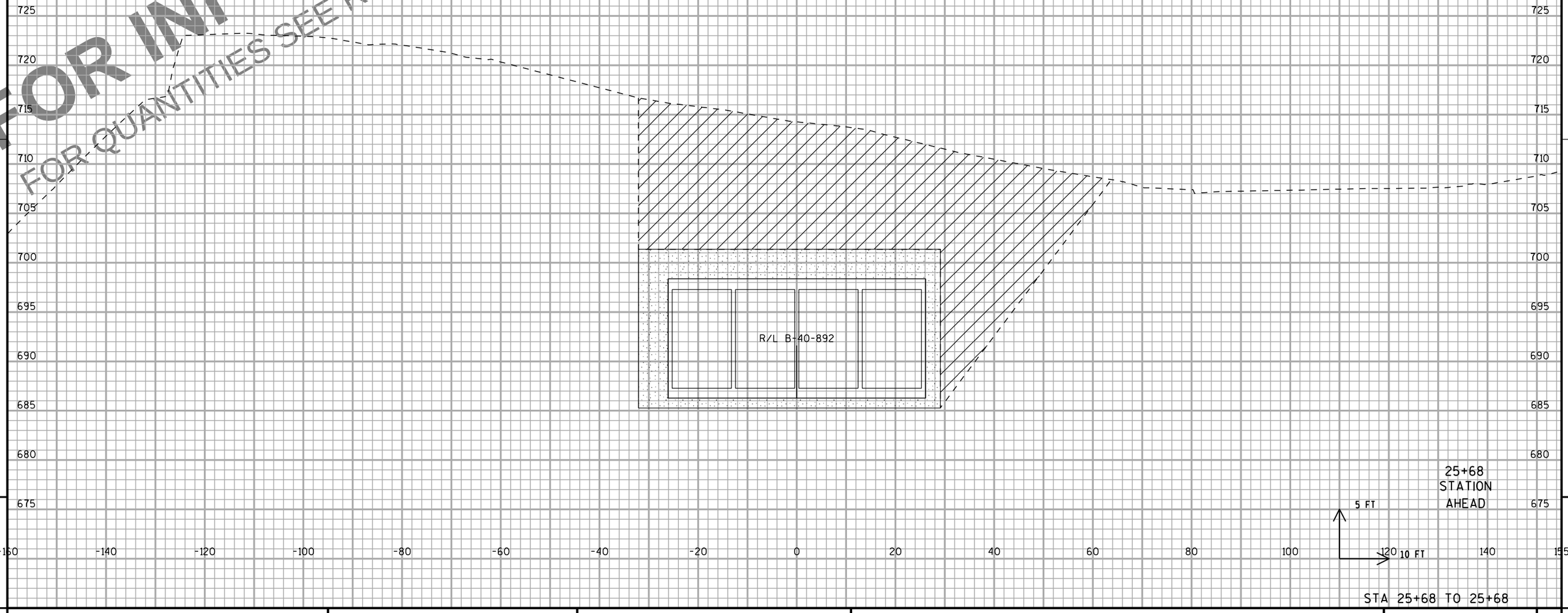
FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099003_io_Box Culvert Sections_B-40-892_Open Cut_3'.dgn 22-APR-2013 15:33 PLOT BY : MSCD1S PLOT NAME : 099003_io_Box Culvert Sections_B-40-892_Open Cut_3'24 PLOT SCALE = 2.000

WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL



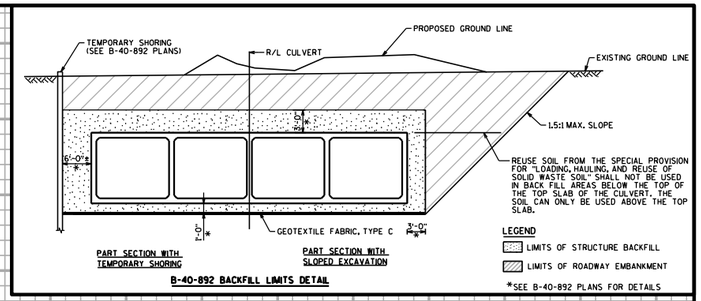
STA 25+68 TO 25+68

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

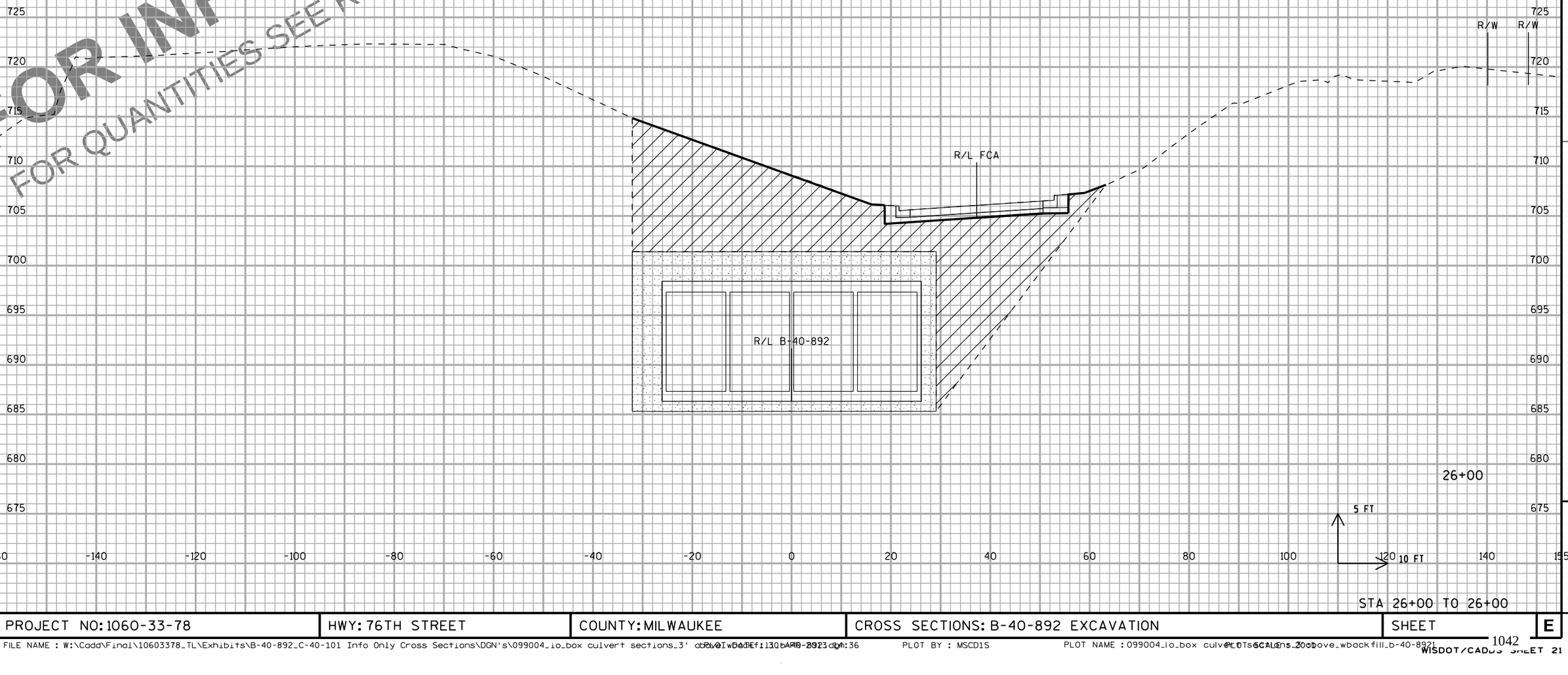
FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-892.dgn PLOT BY : MSCD1S PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-892

WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

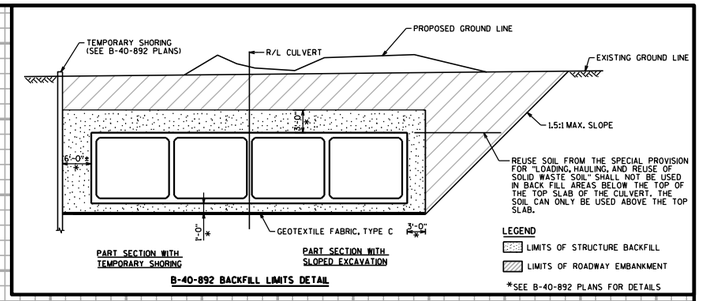


STA 26+00 TO 26+00

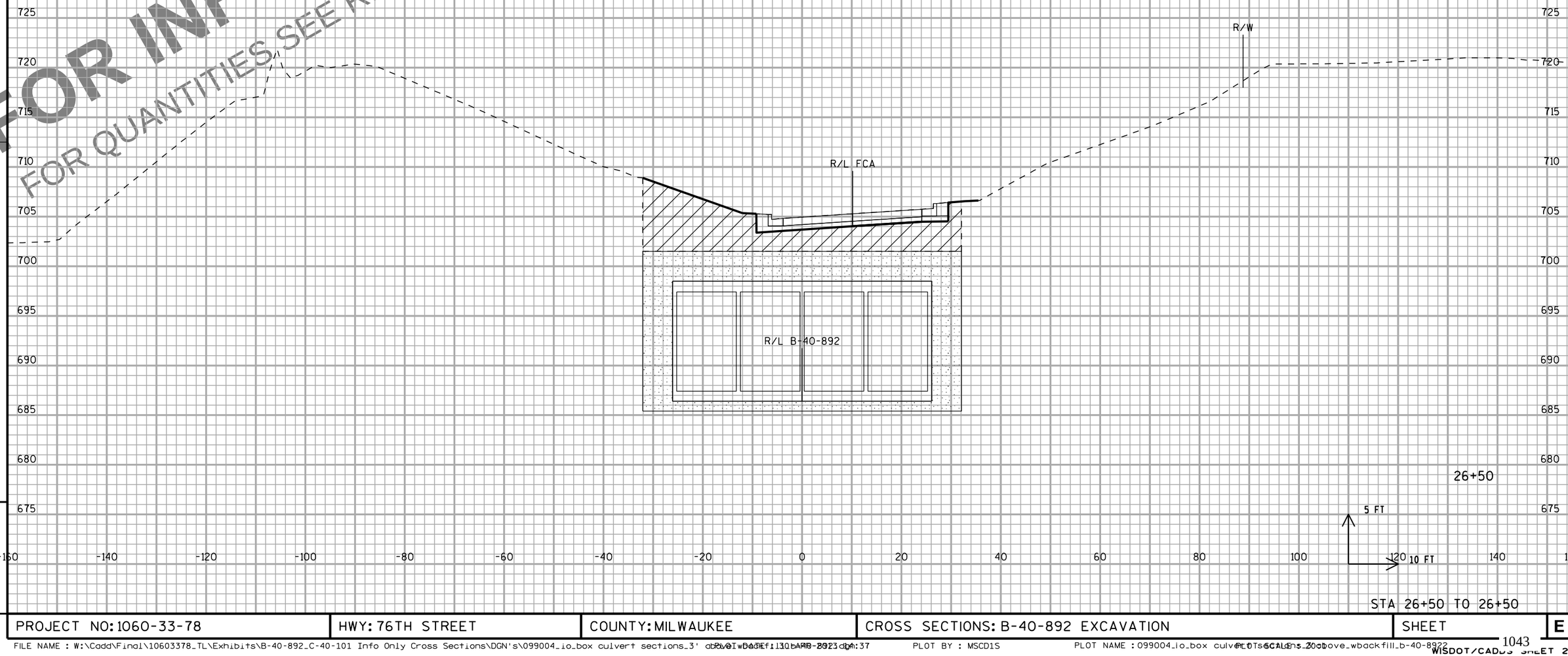
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' abv@wbackfill_b-40-892.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' abv@wbackfill_b-40-892
PLOT SCALE = 2.000
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL



26+50

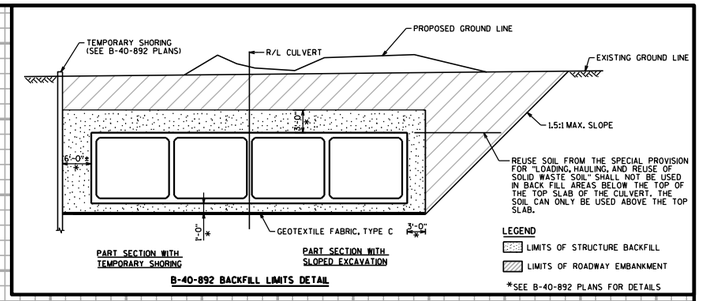
5 FT
10 FT

STA 26+50 TO 26+50

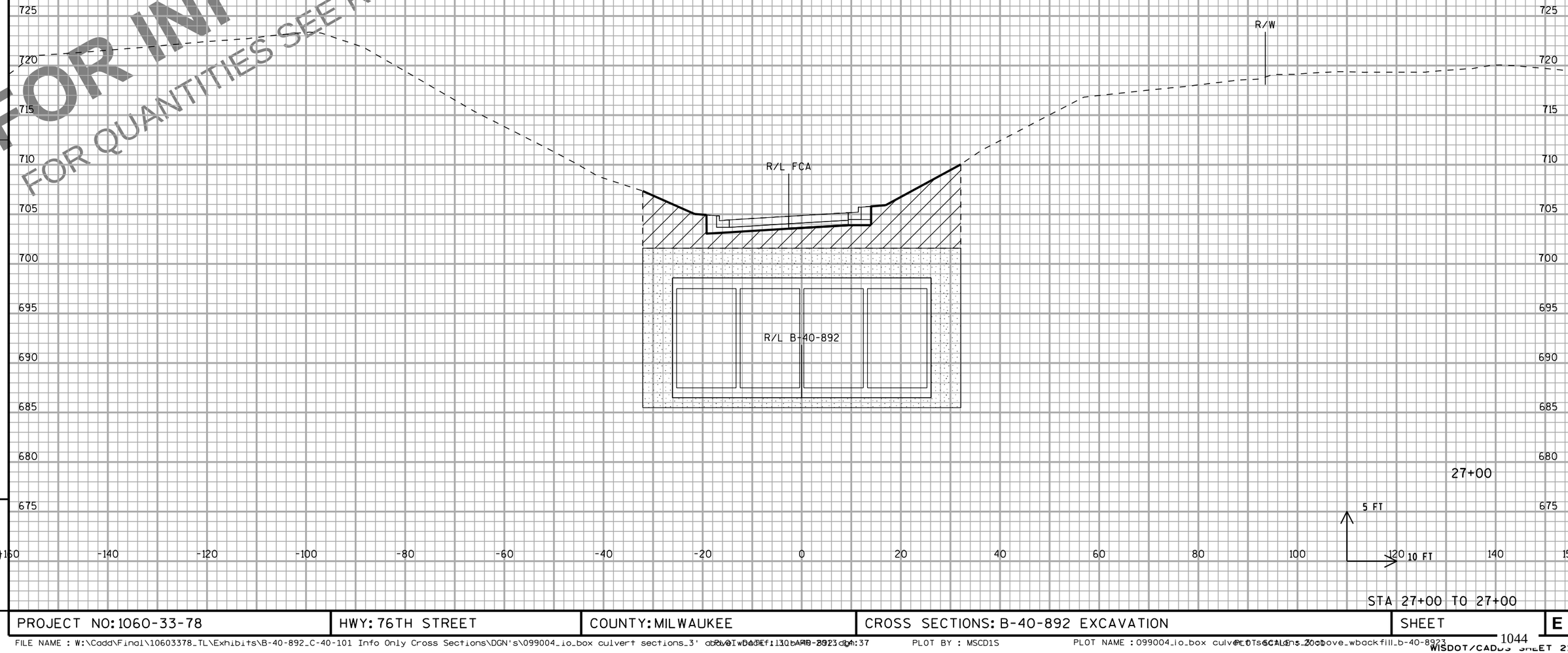
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-8922.dgn
PLOT DATE : 10 APR 2023 04:37
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-8922
PLOT SCALE : 2.0000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

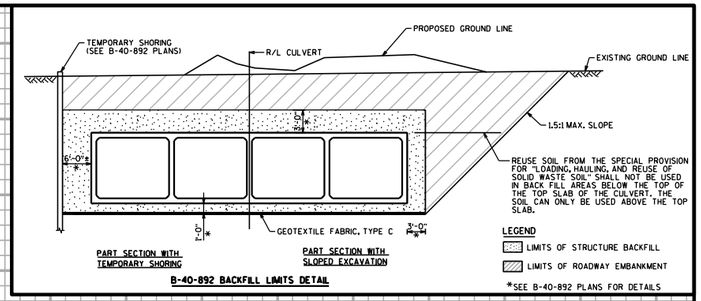


STA 27+00 TO 27+00

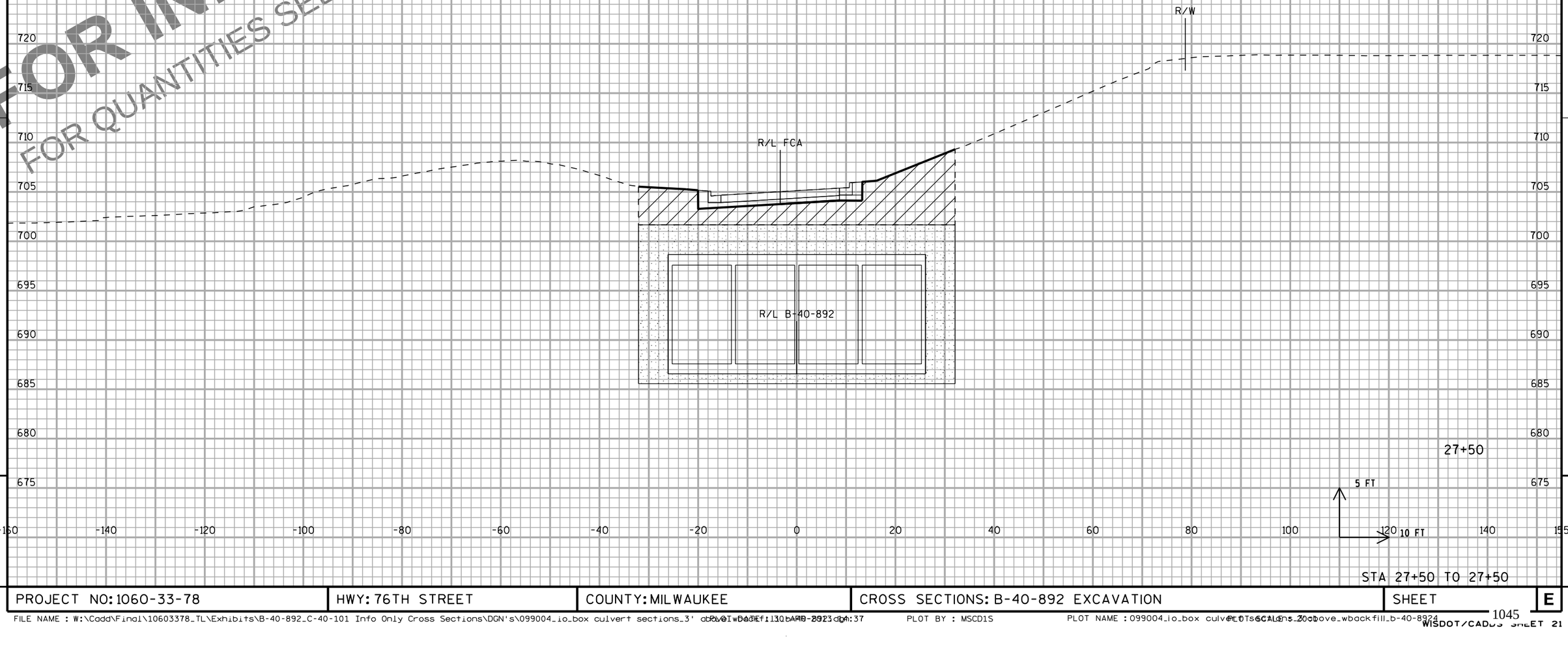
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' abv wbackfill_10 APR 2023 04:37 PLOT DATE : 10 APR 2023 PLOT BY : MSCD1S PLOT NAME : 099004_io_box culvert sections_3'abv wbackfill_b-40-892 PLOT SCALE : 2.000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL



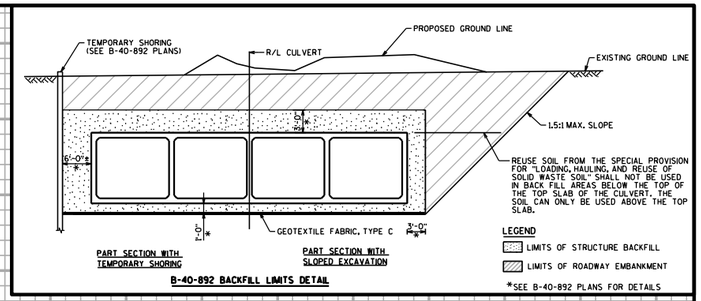
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PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

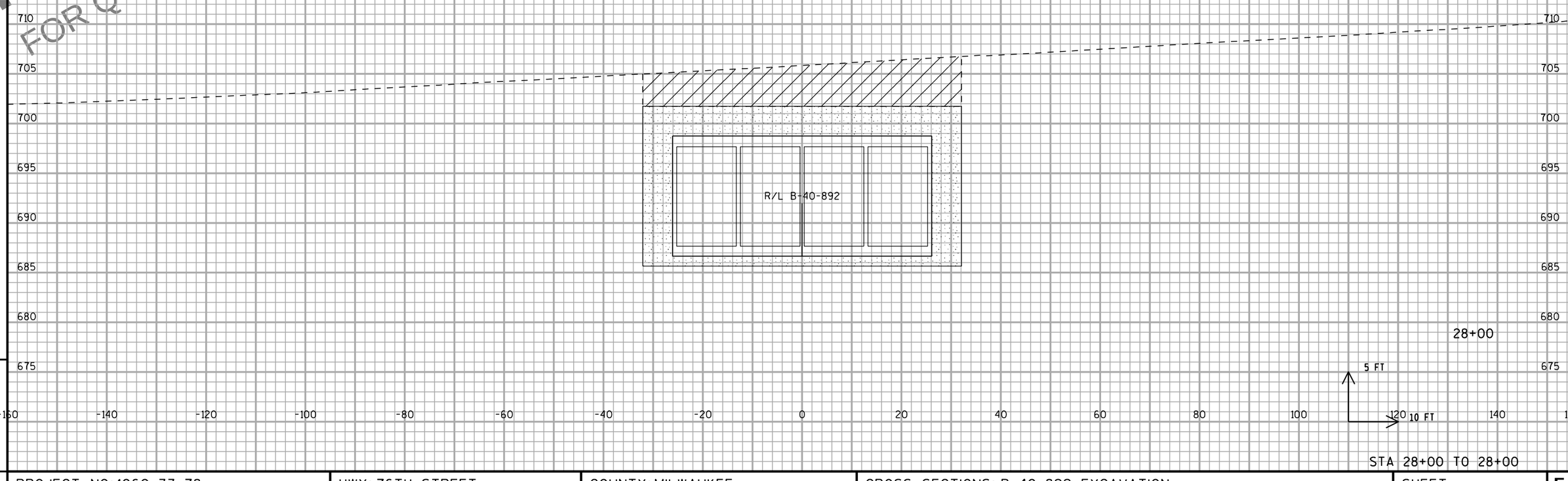
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PLOT DATE : 10 APR 2023 04:37
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' abv@wbackfill_b-40-892
PLOT SCALE : 2.000

WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

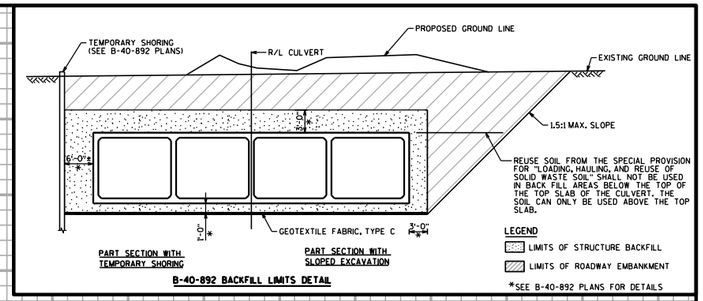


STA 28+00 TO 28+00

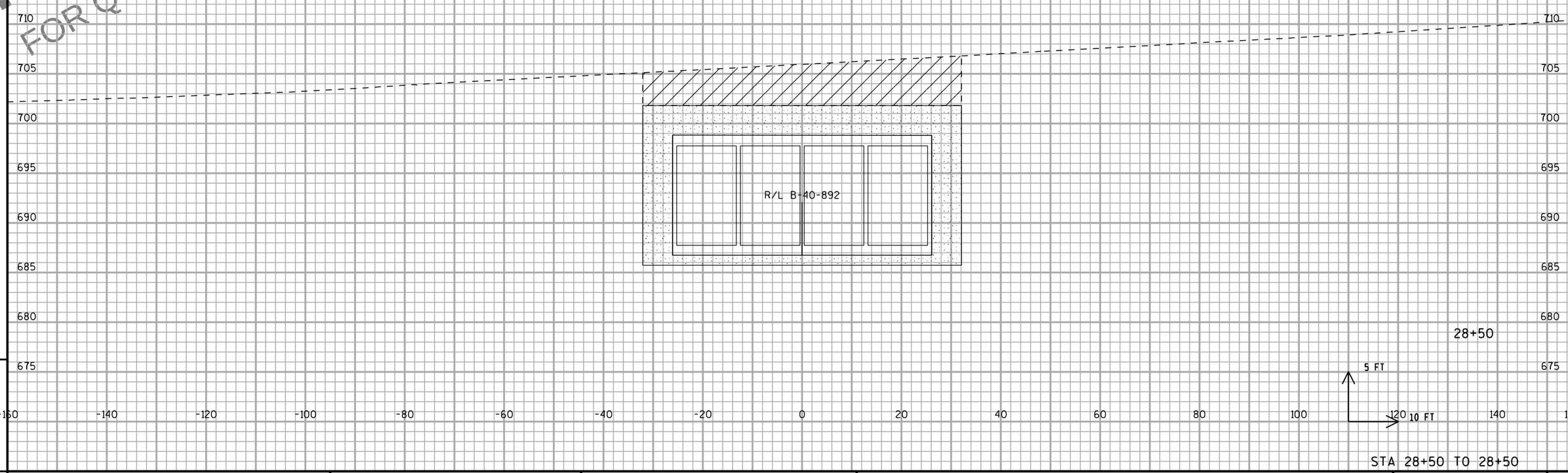
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' abv@lwbackfill_10_APR_2023.dgn PLOT BY : MSCD1S PLOT NAME : 099004_io_box culvert sections_3'abv_wbackfill_b-40-892 PLOT SCALE : 2.000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

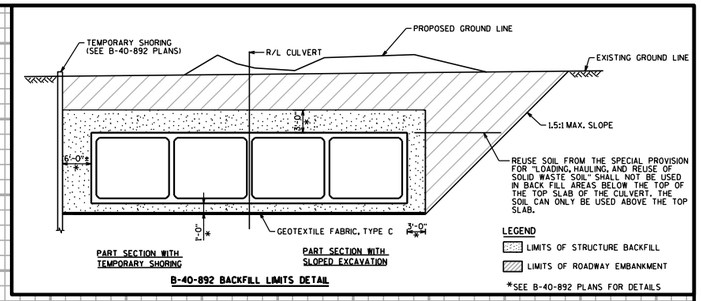


STA 28+50 TO 28+50

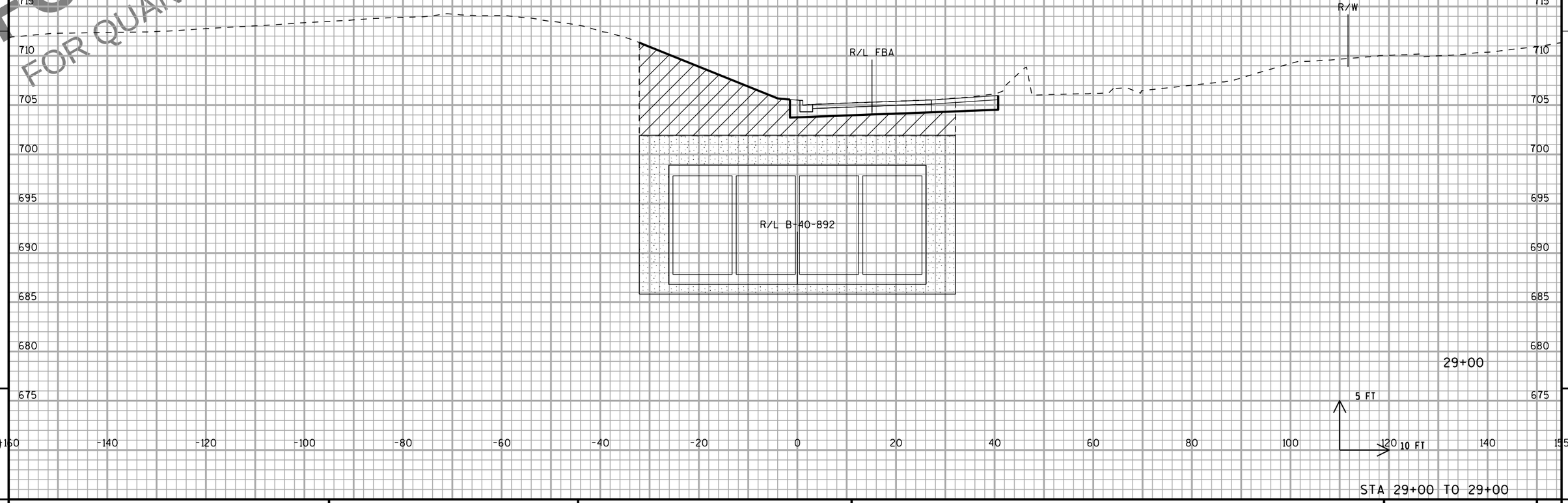
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FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-892.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-892
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

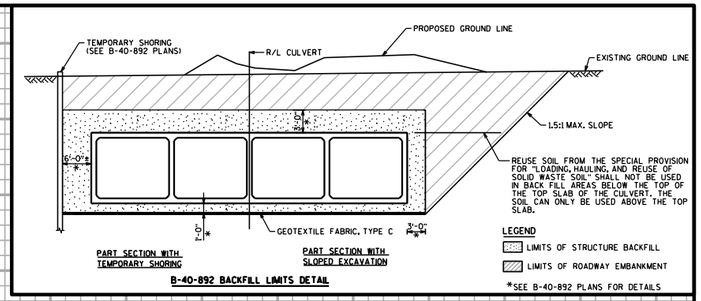


STA 29+00 TO 29+00

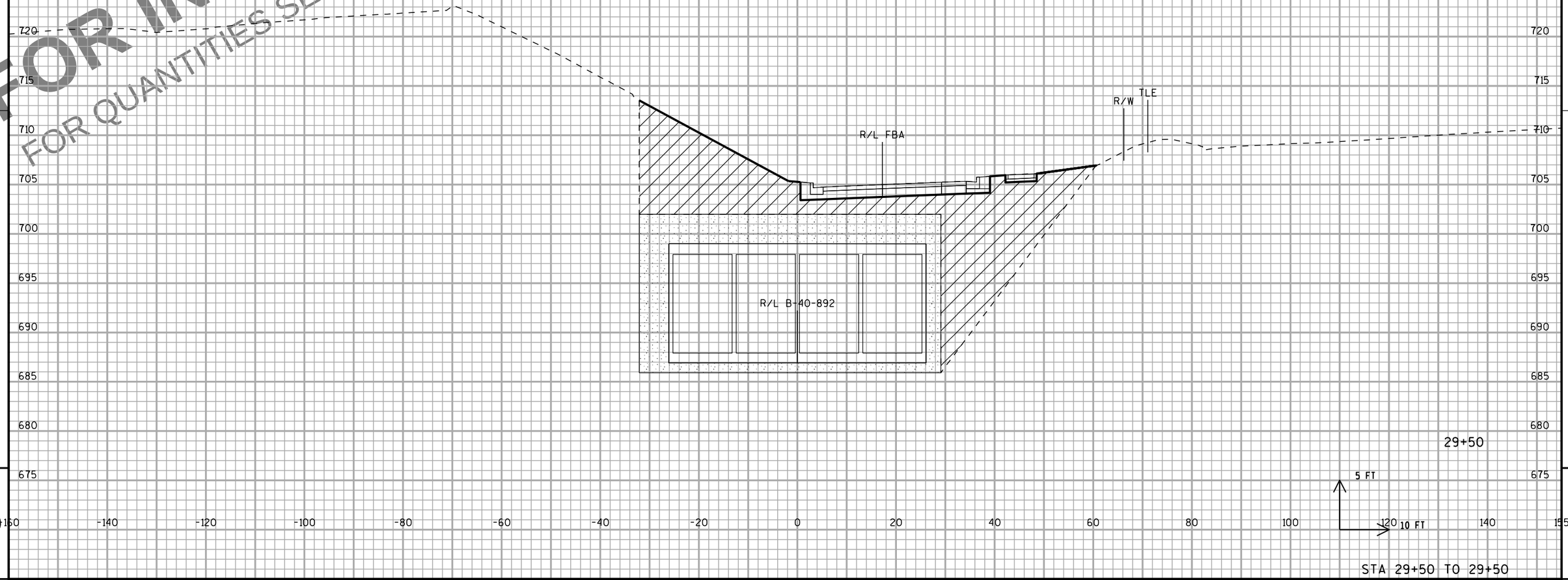
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above wbackfill_b-40-892.dgn
PLOT DATE : 10 APR 2023 04:37
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-892
PLOT SCALE : 2.0000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL



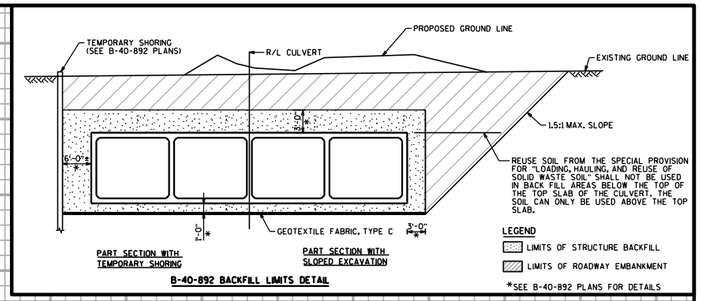
STA 29+50 TO 29+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

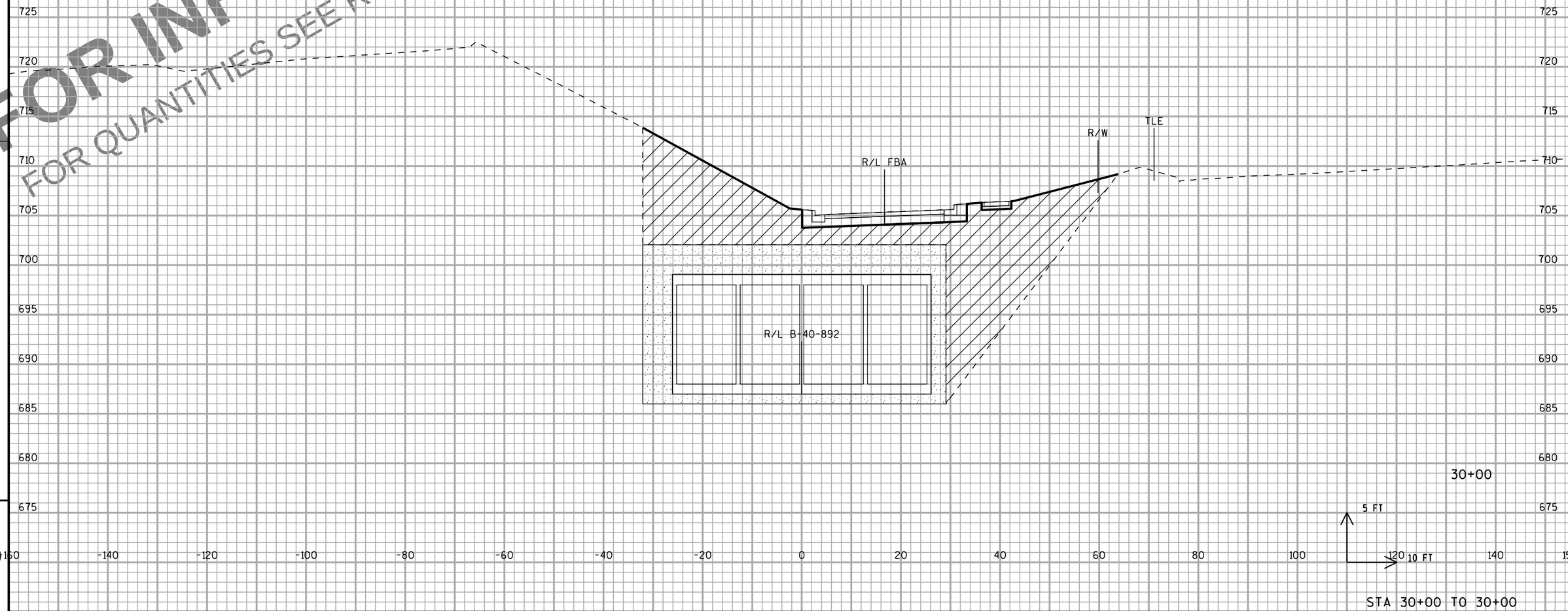
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PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-8928
PLOT SCALE : 2.0000

WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

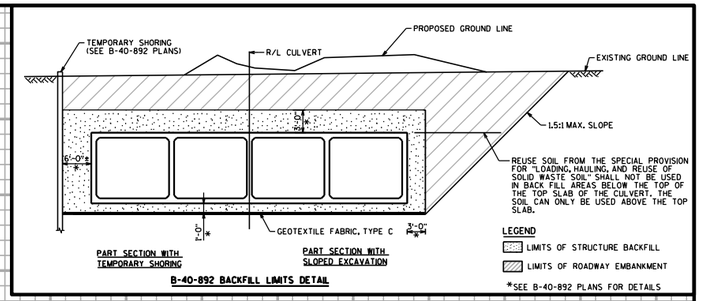


STA 30+00 TO 30+00

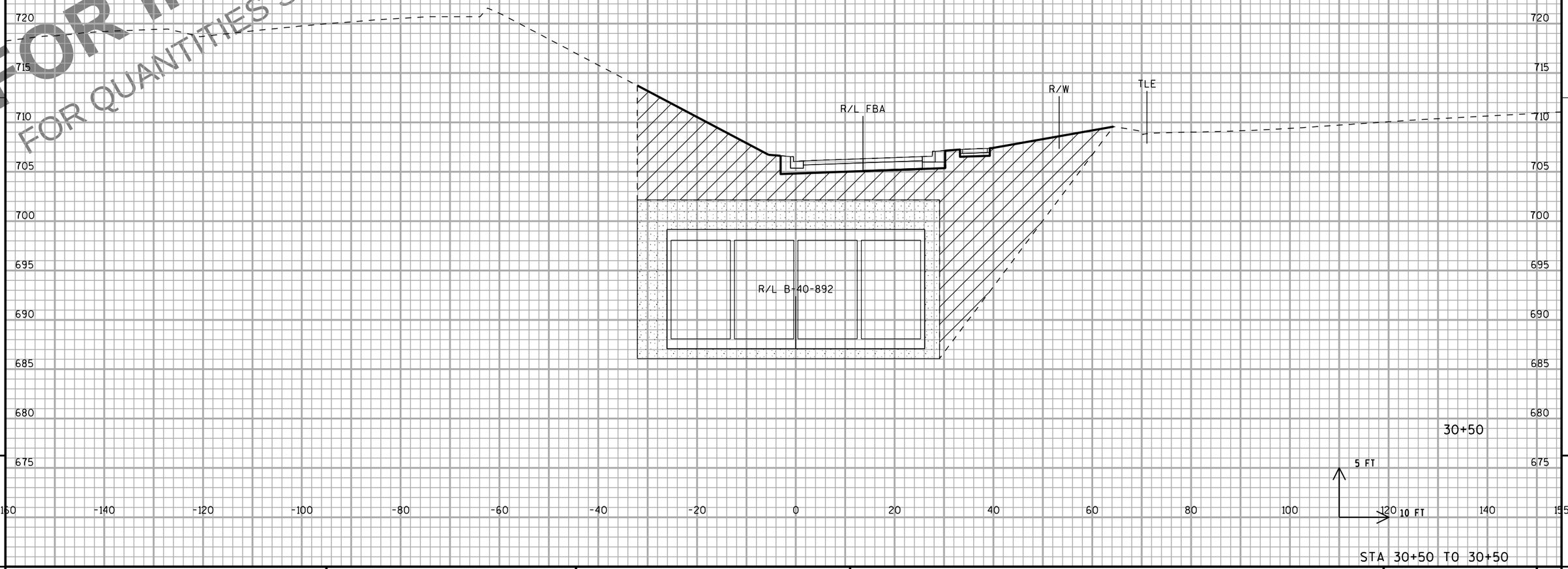
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-8929.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-8929

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

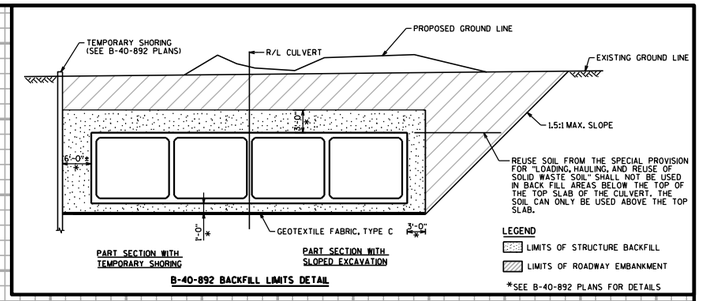


STA 30+50 TO 30+50

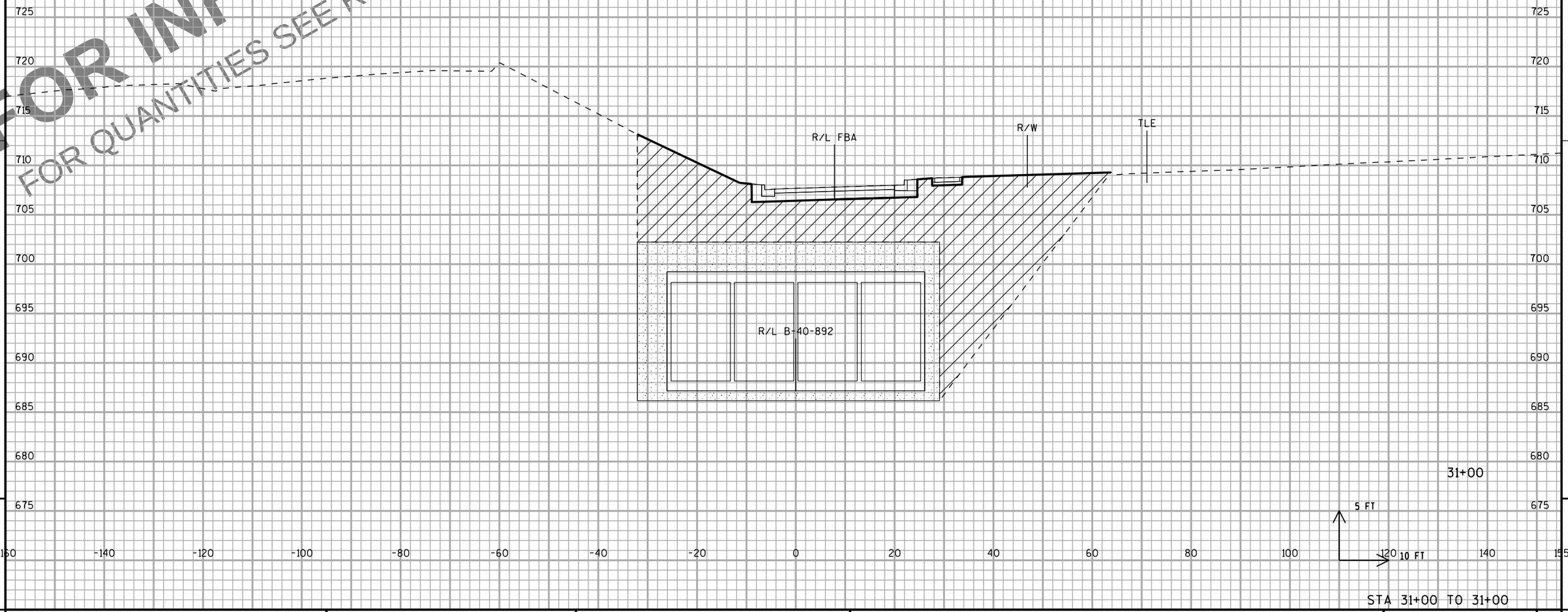
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FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-8921.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-8921.pdf
PLOT SCALE : 2.000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

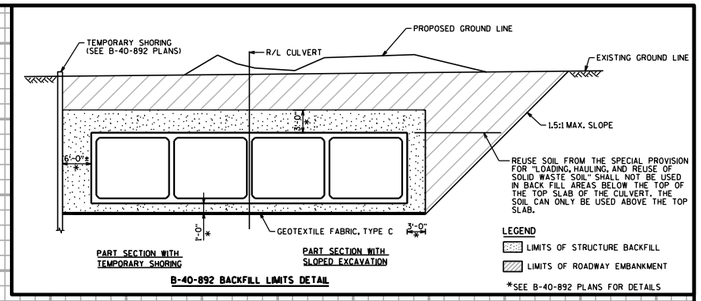


STA 31+00 TO 31+00

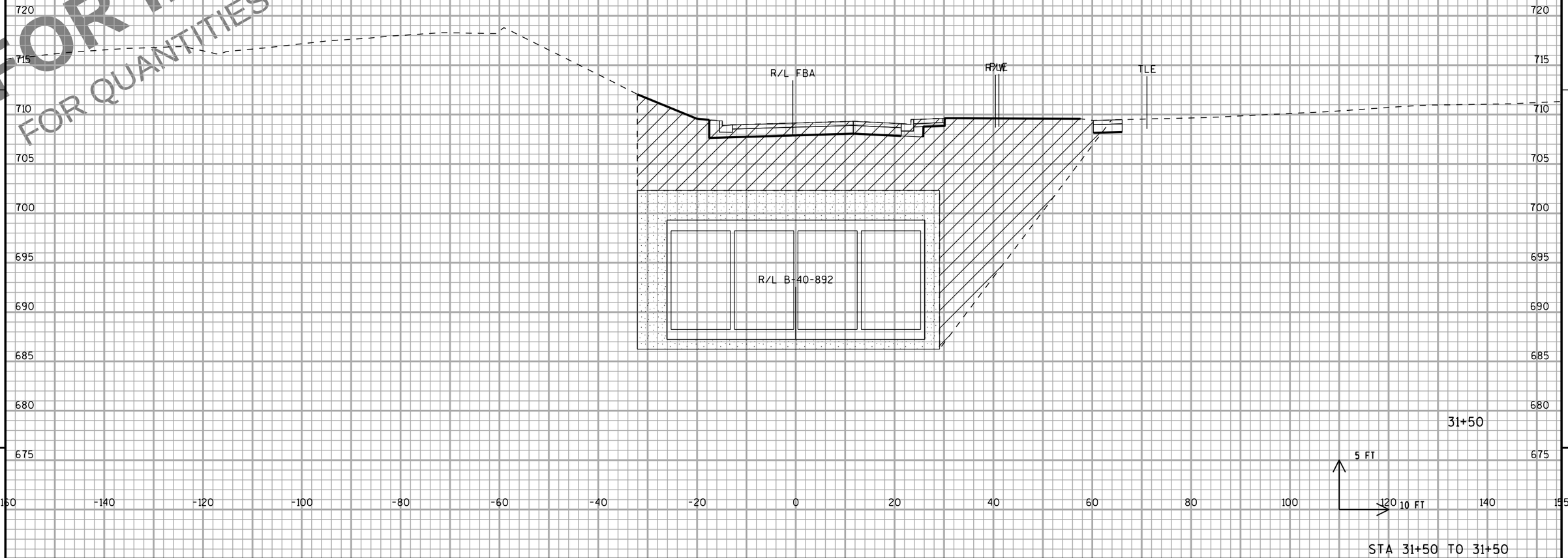
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-892.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-892
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

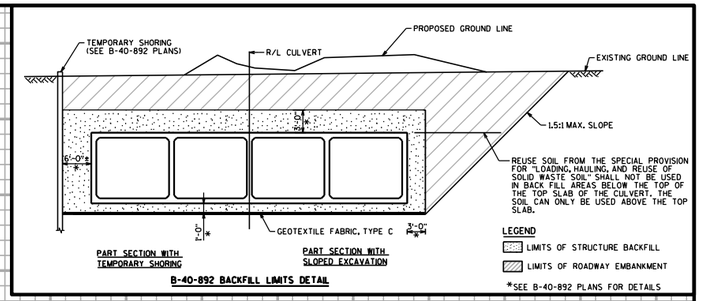


STA 31+50 TO 31+50

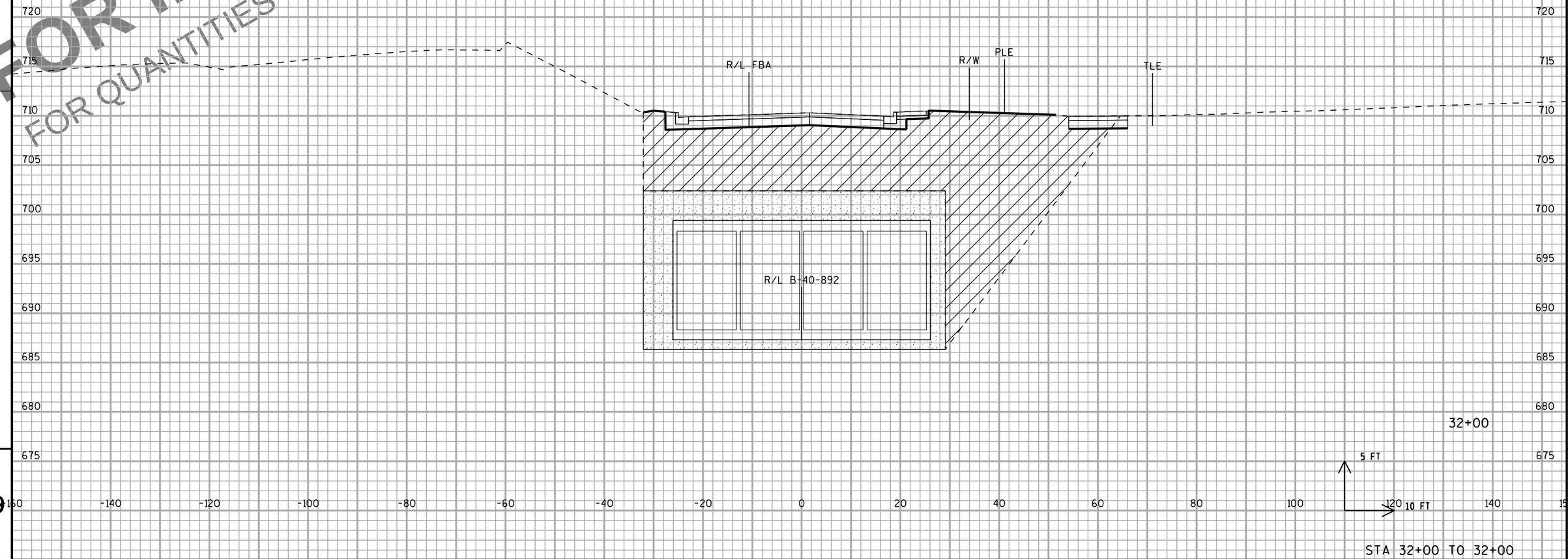
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' abv lwbackfill_30_APR_2023.dgn
PLOT DATE : 30 APR 2023 04:38
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' abv lwbackfill_b-40-89212
PLOT SCALE : 2.000
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

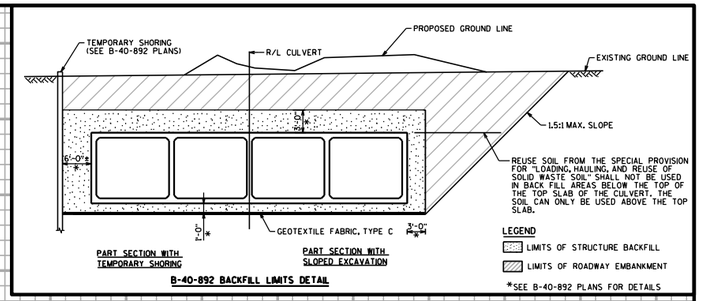


STA 32+00 TO 32+00

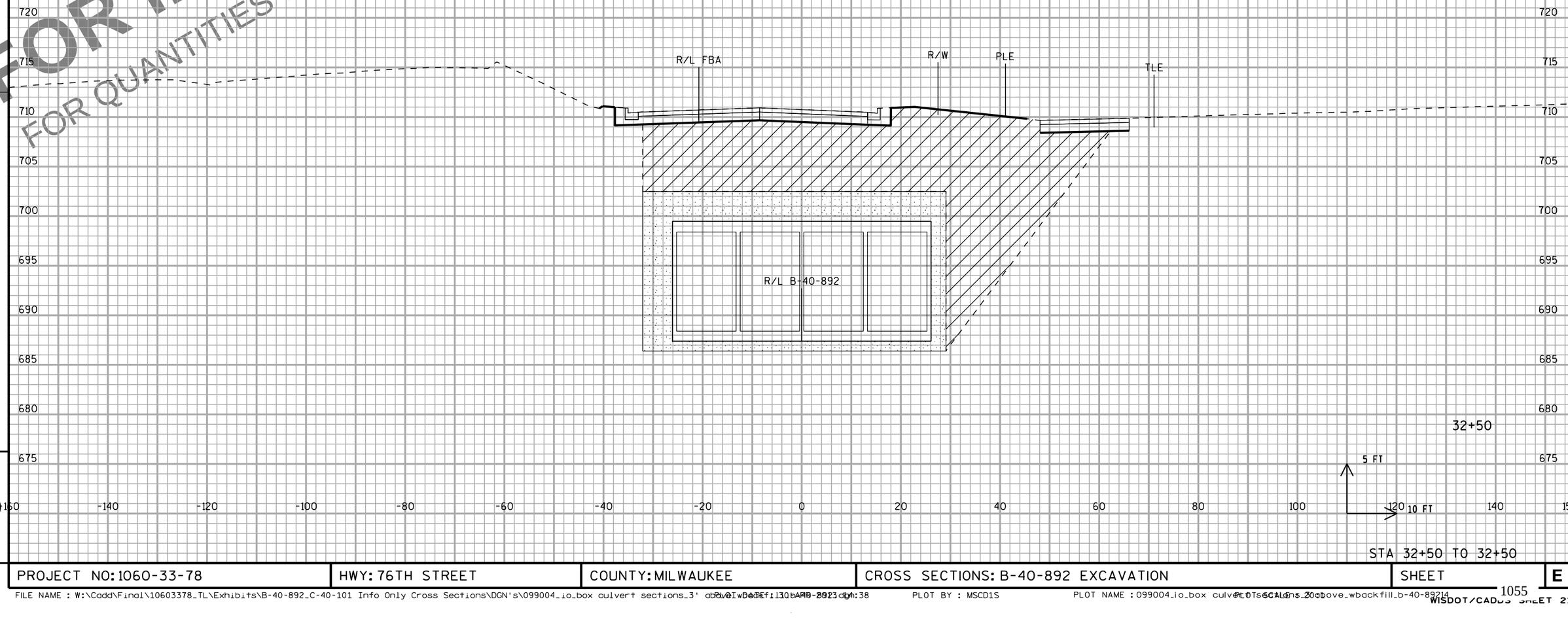
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-8923.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-89213

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

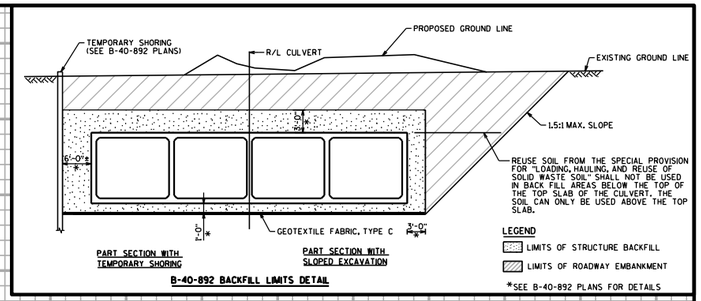


STA 32+50 TO 32+50

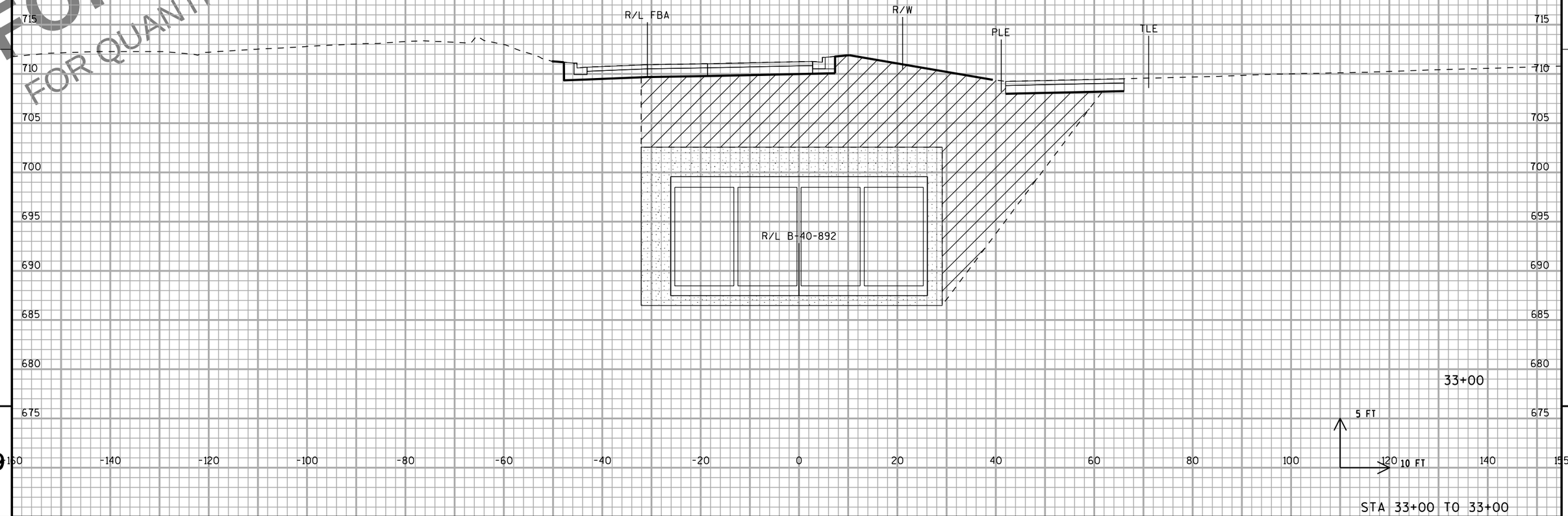
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FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-89214.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-89214

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

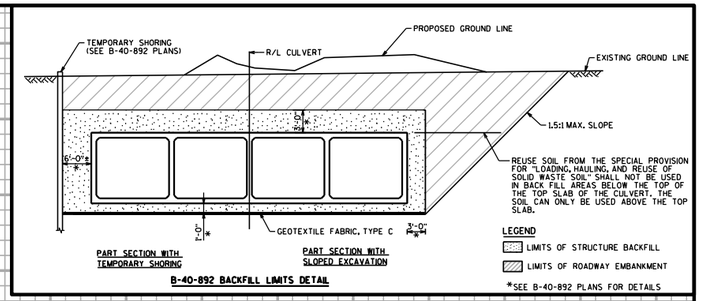


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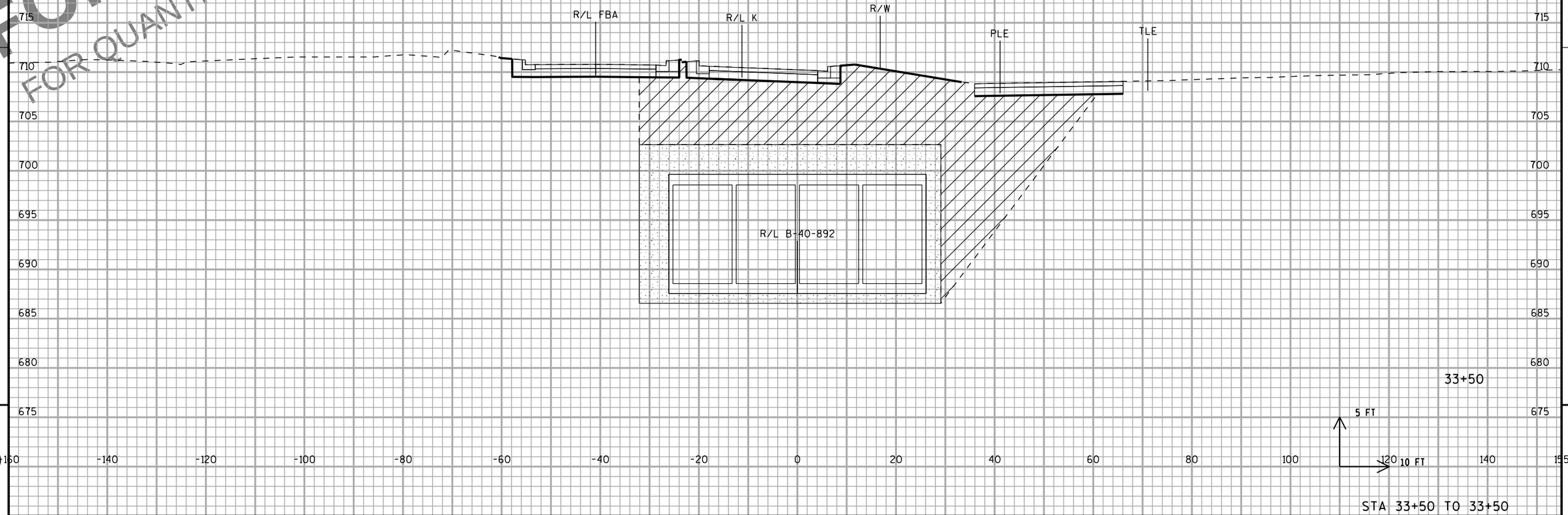
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FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-8921.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-8921.dgn

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

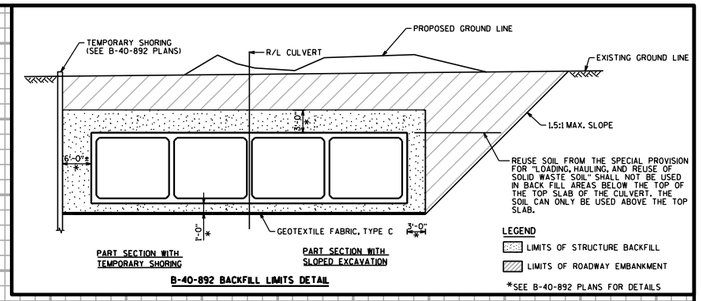


STA 33+50 TO 33+50

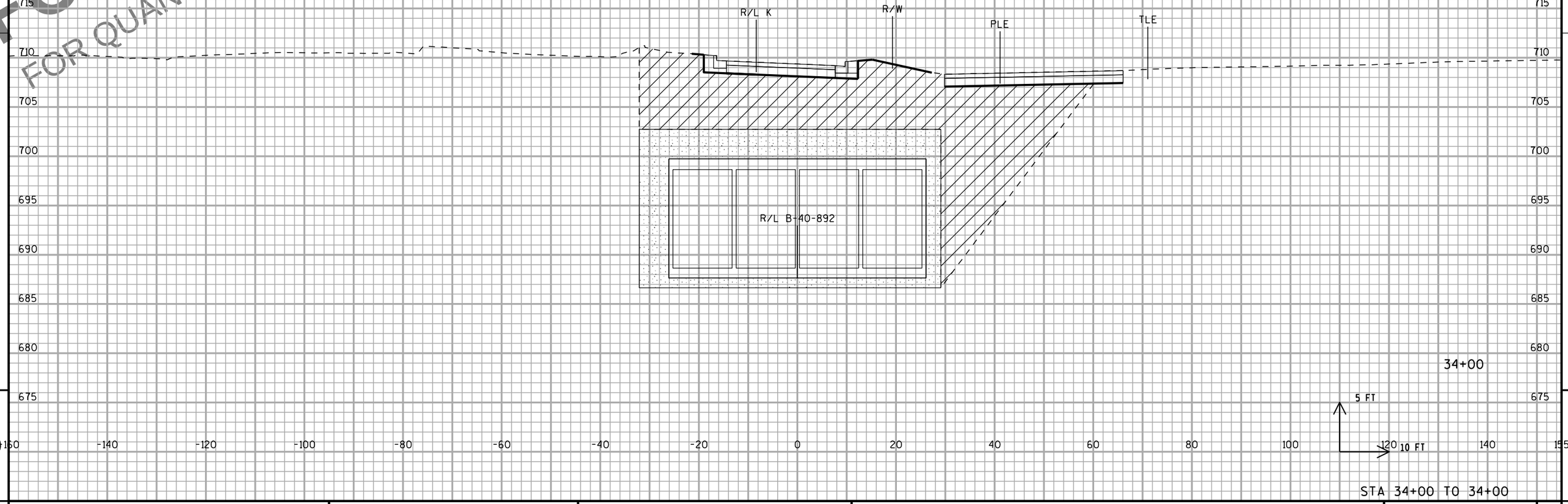
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FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-89216.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3'above_wbackfill_b-40-89216
PLOT SCALE : 2.000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

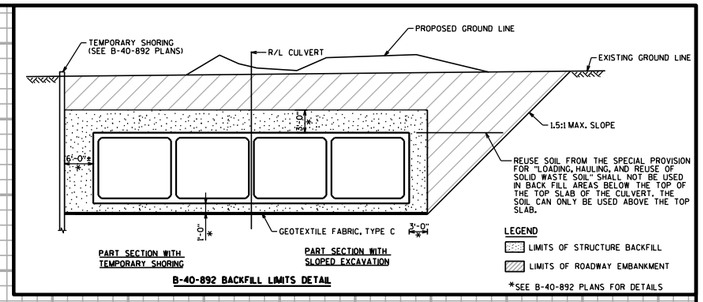


STA 34+00 TO 34+00

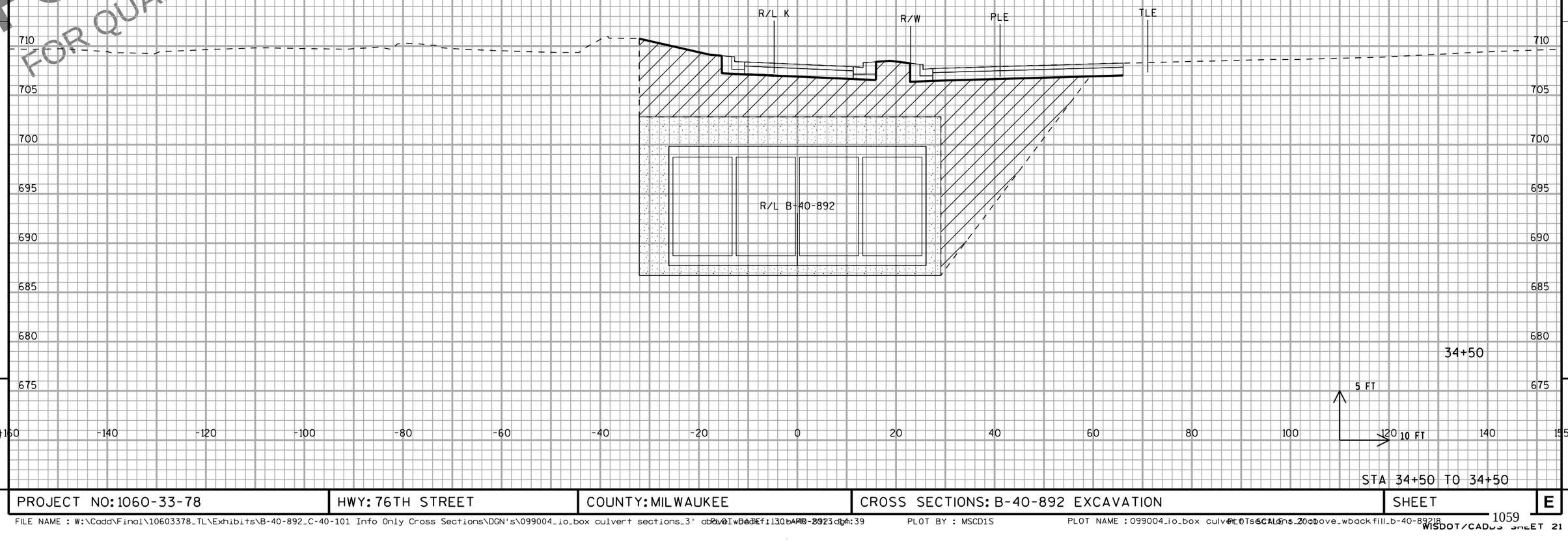
PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' above_wbackfill_b-40-89217.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' above_wbackfill_b-40-89217

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



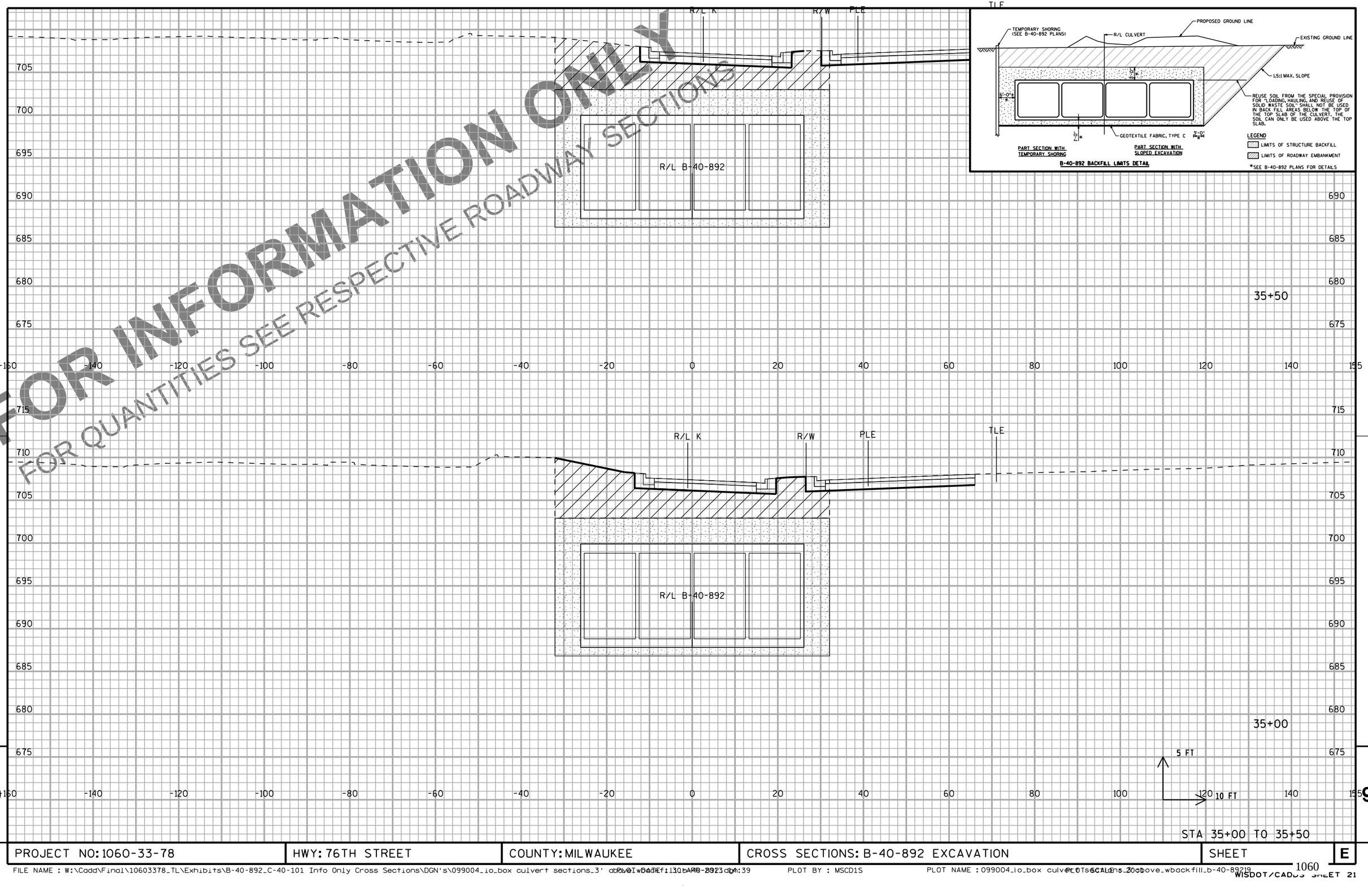
B-40-892 BACKFILL LIMITS DETAIL



STA 34+50 TO 34+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS

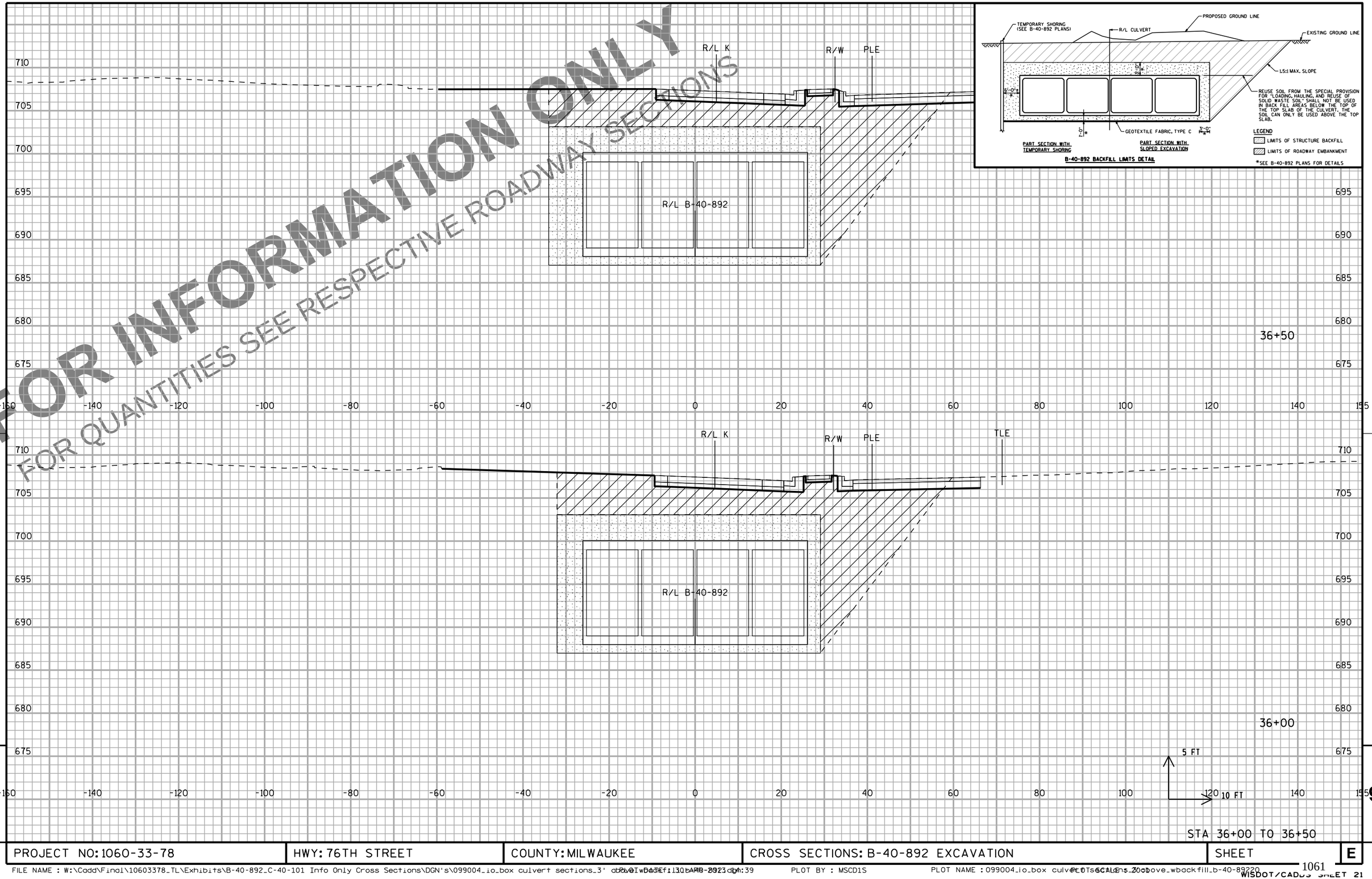


STA 35+00 TO 35+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

FILE NAME : W:\Cadd\Final\10603378_TL\Exhibits\B-40-892_C-40-101 Info Only Cross Sections\DGN's\099004_io_box culvert sections_3' abv wbackfill_bars-2023.dgn
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3ft abv wbackfill_b-40-89219
PLOT SCALE : 2.000
WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

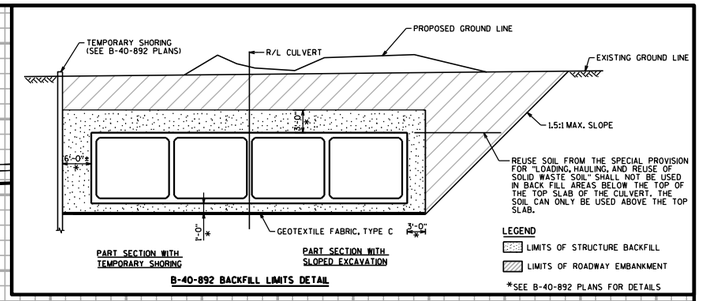
STA 36+00 TO 36+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

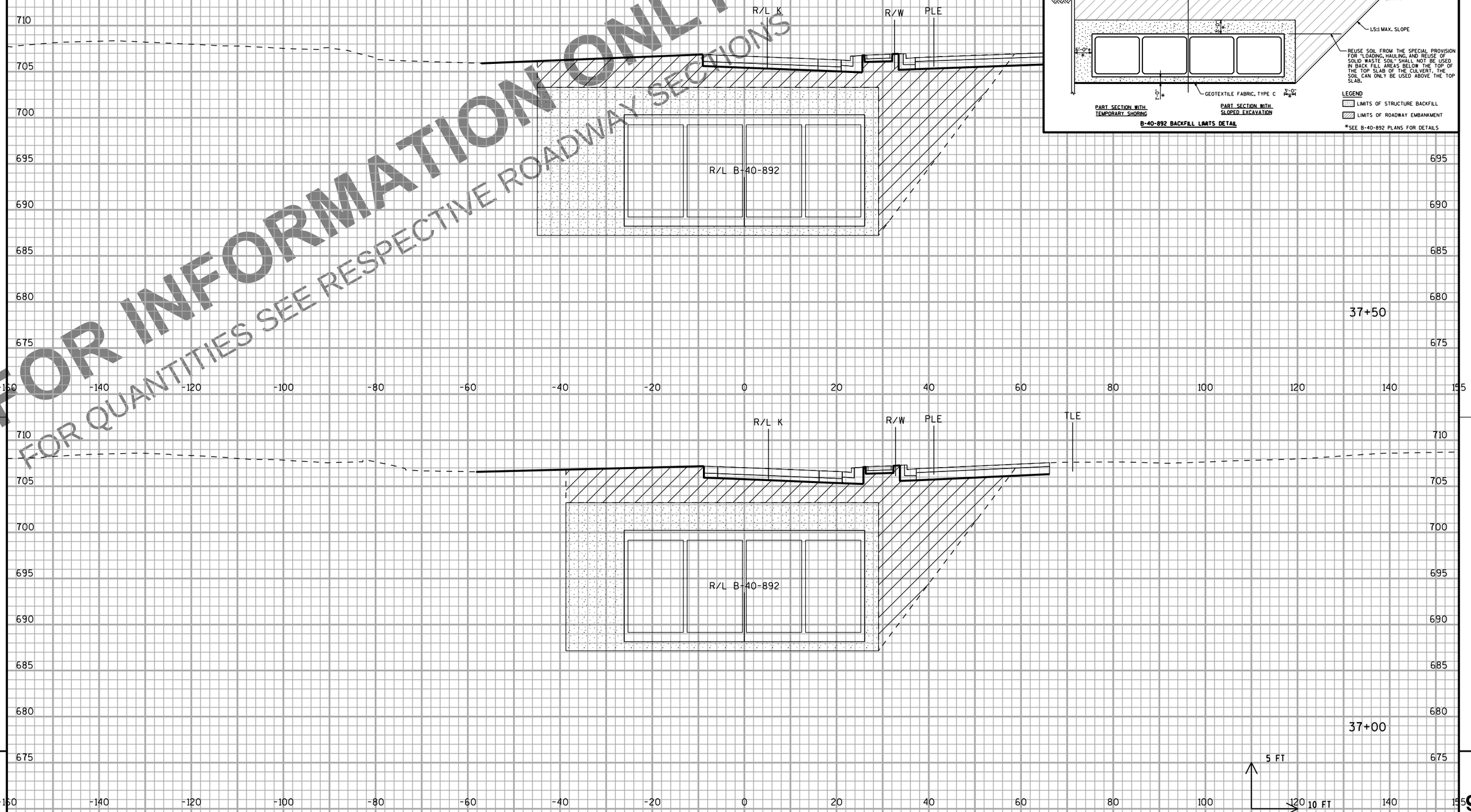
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PLOT BY : MSCD1S
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PLOT SCALE : 2.000

WISDOT/CADDS SHEET 21

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B-40-892 BACKFILL LIMITS DETAIL



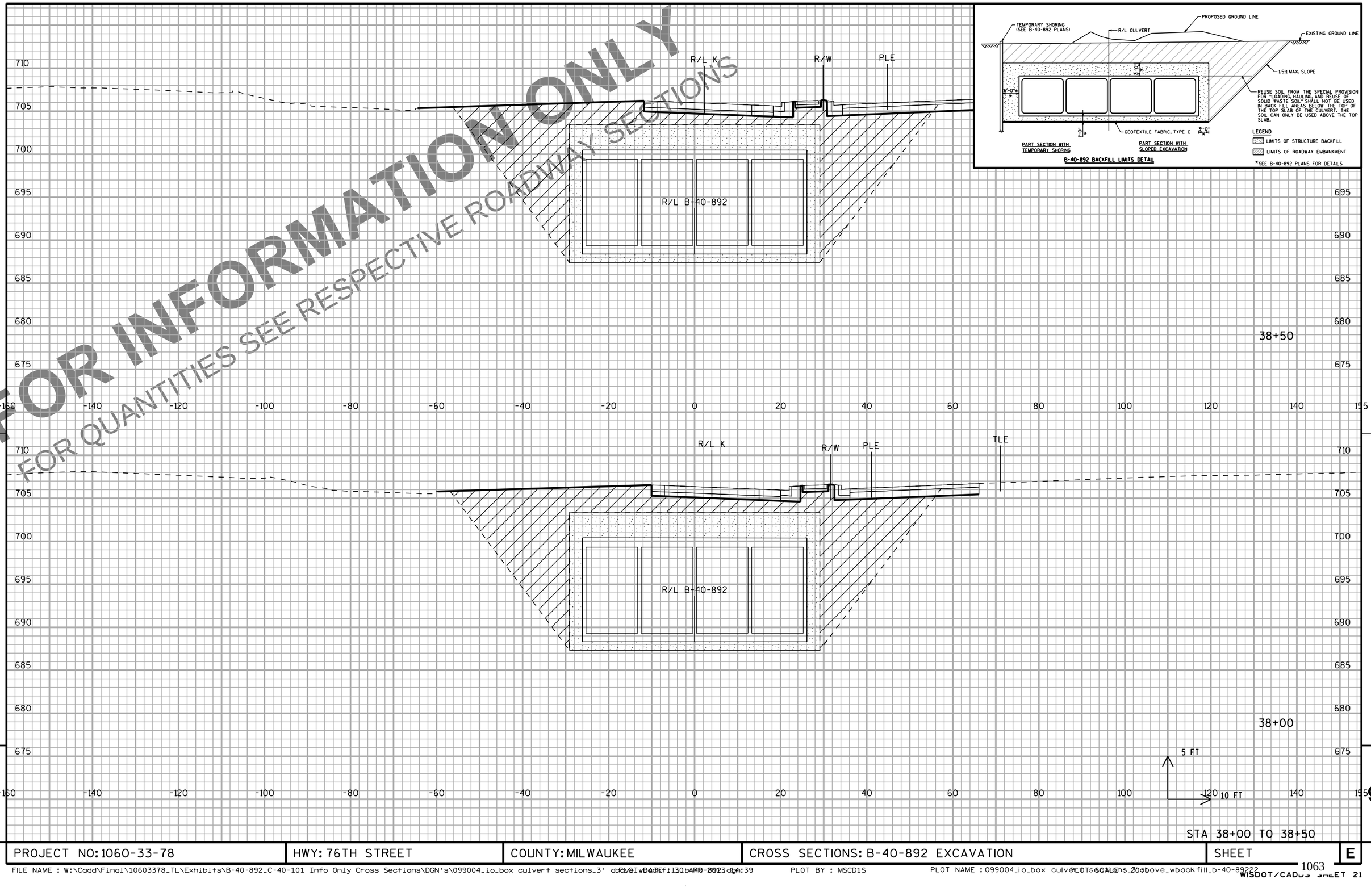
STA 37+00 TO 37+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

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WISDOT/CADDS SHEET 21

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

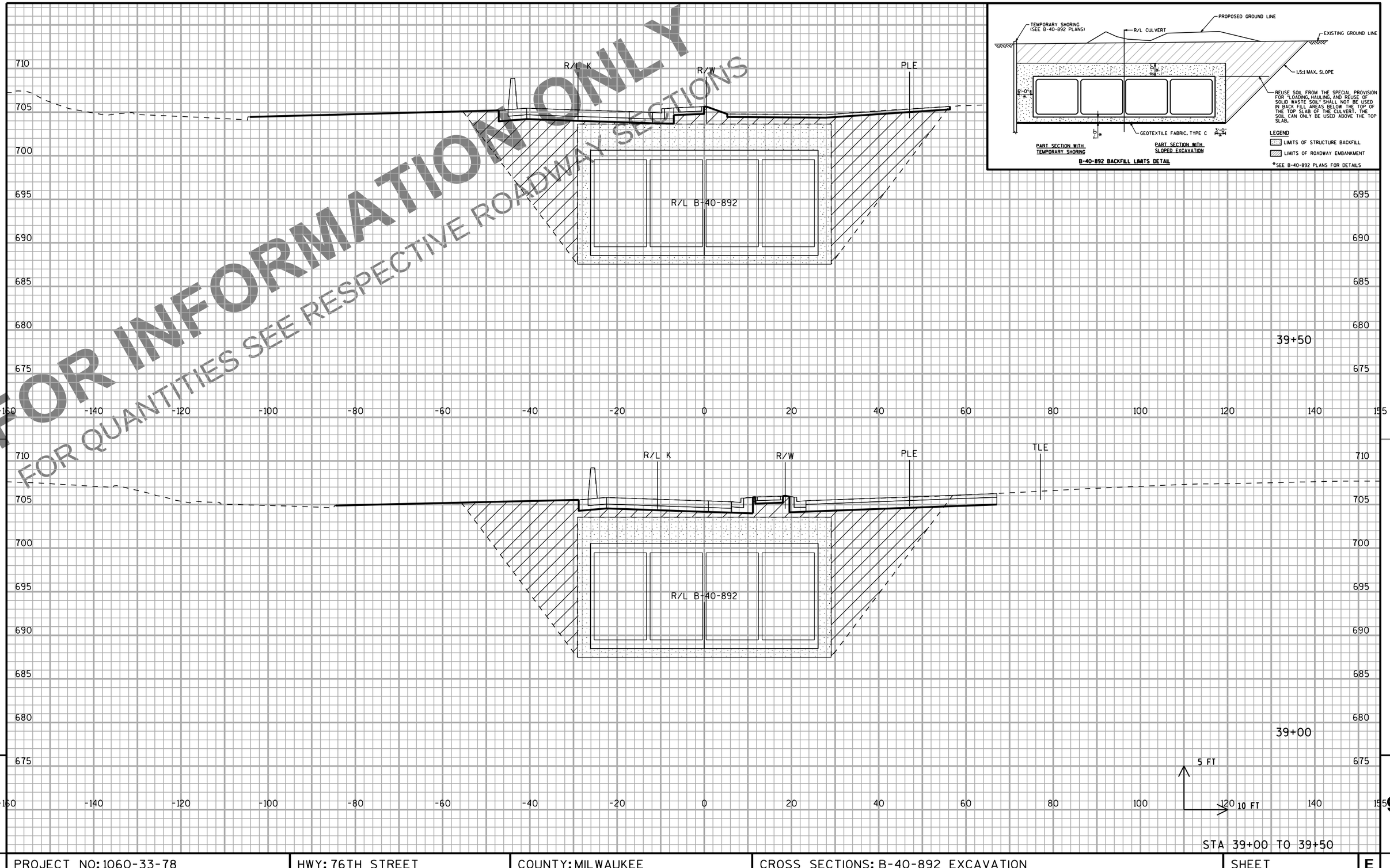
STA 38+00 TO 38+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

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PLOT DATE : 10 APR 2023 14:39
PLOT BY : MSCD1S
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PLOT SCALE : 2.000

WISDOT/CADDS SHEET 21

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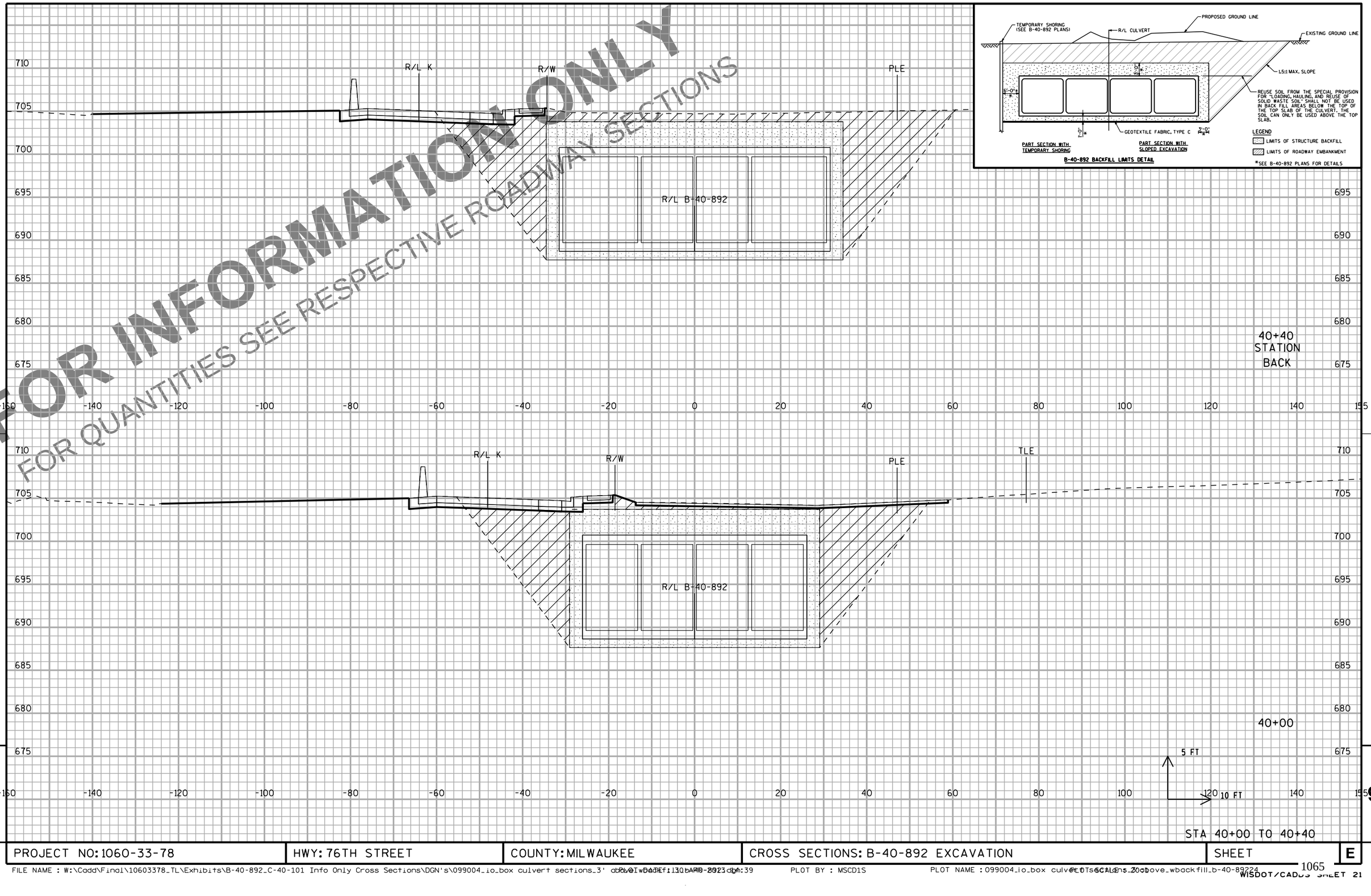
B-40-892 BACKFILL LIMITS DETAIL

STA 39+00 TO 39+50

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

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PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' abv&wbackfill_b-40-89223
PLOT SCALE : 2.000

FOR INFORMATION ONLY
FOR QUANTITIES SEE RESPECTIVE ROADWAY SECTIONS



B-40-892 BACKFILL LIMITS DETAIL

STA 40+00 TO 40+40

PROJECT NO: 1060-33-78	HWY: 76TH STREET	COUNTY: MILWAUKEE	CROSS SECTIONS: B-40-892 EXCAVATION	SHEET	E

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PLOT DATE : 10 APR 2023 04:39
PLOT BY : MSCD1S
PLOT NAME : 099004_io_box culvert sections_3' abv wbackfill_b-40-89224
PLOT SCALE : 2.0000

Wisconsin Department of Transportation

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