

LAX
WITH:

PROJECT ID: 1071-07-77

COUNTY: LA CROSSE

FEB 13
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 = 204



DESIGN DESIGNATION

A.A.D.T.	= 24700
A.A.D.T.	= 31900
D.H.V.	= 3828
D.D.	= 60/40
T.	= 16.5%
DESIGN SPEED	= 70 MPH
ESALS	= 11,220,100

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	
MARSH AREA	
WOODED OR SHRUB AREA	

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

BEGIN PROJECT 1071-07-77
STA 370+00 EB STA 370+A'+01 WB
X=465515.42 X=465512.79
Y=155025.31 Y=155086.63

B-32-0024 STA 456'A'+67 TO STA 459'A'+93 WB
EXCEPTION TO NET CENTERLINE LENGTH

B-32-0023 STA 456+59 TO STA 459+92 EB
EXCEPTION TO NET CENTERLINE LENGTH

B-32-0026 STA 475'A'+49 TO STA 478'A'+83 WB
EXCEPTION TO NET CENTERLINE LENGTH

B-32-0028 STA 590'A'+55 TO STA 591'A'+88 WB
EXCEPTION TO NET CENTERLINE LENGTH

END PROJECT 1071-07-77

STA 696+65 EB STA 697'A'+10 WB
X=495329.75 X=495332.64
Y=160565.87 Y=160626.68

B-32-0027 STA 590+03 TO STA 591+36 EB
EXCEPTION TO NET CENTERLINE LENGTH

B-32-0025 STA 475+35 TO STA 478+71 EB
EXCEPTION TO NET CENTERLINE LENGTH

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 6.04 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), LA CROSSE COUNTY.

STATE PROJECT

1071-07-77

FEDERAL PROJECT

PROJECT

WISC 2013042

CONTRACT

1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	ARTHUR SOMMERFIELD
Project Manager	JAMES SAVOLDELLI
Regional Examiner	BRIAN MEYER
Regional Supervisor	JOHN VONRUDEN
C.O. Examiner	JE

APPROVED FOR THE DEPARTMENT

DATE: 10-1-12

E

GENERAL NOTES

DNR CONTACT: KAREN KALVELAGE - LA CROSSE OFFICE, 3550 MORMON COULEE RD., LA CROSSE, WI 54601 - PHONE: (608) 785-9115

CURVE DATA IS BASED ON ARC DEFINITION.

LOCATION OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

ALL RADII ARE MEASURED TO EDGE OF PAVEMENT UNLESS OTHERWISE SHOWN OR NOTED ON THE PLAN.

NO TREES OR SHRUBS SHALL BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE BEEN DESIGNATED FOR REMOVAL BY THE ENGINEER.

WHEN PORTIONS OF EXISTING ASPHALTIC SURFACES ARE TO BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION, THE LINE OF SUCH REMOVAL SHALL BE NEATLY DELINEATED WITH A SAW CUT JOINT THROUGH THE ASPHALTIC SURFACE SO THAT REMOVAL OF THE ASPHALT SHALL BE ACCOMPLISHED WITHOUT DAMAGE TO REMAINING PORTIONS. THE LOCATION OF SAW JOINTS AND THE AMOUNT REMOVED AT SIDE ROADS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

PAVEMENT REMOVAL WILL BE TO THE NEAREST JOINT OR A SAWED EDGE WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.

IN PERFORMANCE OF THE WORK UNDER THE ITEM "REMOVING FENCE", THE FENCE SHALL BE REMOVED TO A PULL OR STRETCHER POST ASSEMBLY AS DETERMINED IN THE FIELD BY THE ENGINEER.

THE BORROW EXCAVATION SHALL NOT BE COMPLETED UNTIL ALL AVAILABLE COMMON EXCAVATION HAS BEEN USED.

THE EXPANDED FILL, AS SHOWN ON THE PLAN AND PROFILE SHEETS, INCLUDES THE FILL EXPANDED BY 1.25.

EXISTING DRAINAGE DITCHES AND CULVERT PIPES WILL REMAIN FUNCTIONAL DURING EXCAVATION OPERATIONS.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD

DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED (SALVAGED), FERTILIZED, SEEDED, AND MULCHED OR SODDED AS DIRECTED BY THE ENGINEER.

TOPSOIL OR SALVAGED TOPSOIL WHERE REQUIRED, IS TO BE PLACED ON ALL CUT AND FILL SLOPES TO AN APPROXIMATE DEPTH OF 3 INCHES AT THE TIME OF PLACING.

DIMENSIONS OF RIPRAP PLACEMENT SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

IN THE PERFORMANCE OF THE WORK UNDER THE ITEM "MULCHING", ALL AREAS SEEDED AND FERTILIZED SHALL BE MULCHED AS DIRECTED BY THE ENGINEER.

PRIOR TO THE PLACEMENT OF MGS BEAM GUARD, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE.

SHAPING, TRIMMING AND DISPOSAL OF EXISTING SHOULDERS WILL BE INCIDENTAL TO THE BID ITEM OF BASE AGGREGATE DENSE.

PLAN ELEVATIONS = NAVD 88.

WHEN THE QUANTITIES OF HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OF THICKNESS OF THE MATERIAL THAT IS SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE RATE OF APPLICATION FOR TACK COAT IS COMPUTED AT 0.025 GAL/SY.

ASPHALT MATERIAL PG58-28 HAS BEEN ESTIMATED AT 5.5% OF HMA PAVEMENT TYPE E-30, E-3 AND E-0.3.

ASPHALT MATERIAL PG70-28 HAS BEEN ESTIMATED AT 6.0% OF HMA PAVEMENT TYPE SMA.

HMA PAVEMENT WEIGHT CALCULATIONS BASED ON 112 LB/SY/IN

4 INCH HMA PAVEMENT, MAINLINE AND 4 FOOT SHOULDER, TYPE SMA, SHALL BE CONSTRUCTED WITH 1-3/4 INCH UPPER LAYER AND TYPE E30, 2-1/4 INCH LOWER LAYER.

4 INCH HMA PAVEMENT, 10 FOOT SHOULDER, TYPE E-0.3, SHALL BE CONSTRUCTED WITH 1-3/4 INCH UPPER LAYER AND 2-1/4 INCH LOWER LAYER

3-1/2 INCH HMA PAVEMENT, INTERCHANGE RAMPS, TYPE E-3, SHALL BE CONSTRUCTED WITH 1-3/4 INCH UPPER LAYER AND 1-3/4 INCH LOWER LAYER

STANDARD ABBREVIATIONS

AC.	ACRE	MAX.	MAXIMUM
AGG.	AGGREGATE	MGAL	1000 GALLONS
AH	AHEAD	MIN.	MINIMUM
<	ANGLE	N.C.	NORMAL CROWN OR NO CHANGE
AE, AEW	APRON ENDWALL	N	NORTH
ASPH.	ASPHALTIC	NO.	NUMBER
A.D.T.	AVERAGE DAILY TRAFFIC	PAV'T	PAVEMENT
B.F.	BACK FACE	P.L.E.	PERMANENT LIMITED EASEMENT
BK.	BACK	P.C.	POINT OF CURVATURE
BEG.	BEGIN	P.I.	POINT OF INTERSECTION
B.M.	BENCH MARK	P.T.	POINT OF TANGENCY
C/L	CENTER LINE	V.P.C.	VERTICAL POINT OF CURVATURE
D	CENTRAL ANGLE OR DELTA	V.P.I.	VERTICAL POINT OF INTERSECTION
C.M.C.P.	CORRUGATED METAL CULVERT PIPE	V.P.T.	VERTICAL POINT OF TANGENCY
C.M.P.	CORRUGATED METAL PIPE	PCC	PORTLAND CEMENT CONCRETE
CO.	COUNTY	P.E.	PRIVATE ENTRANCE
CTH	COUNTY TRUNK HIGHWAY	P.L.	PROPERTY LINE
CR.	CREEK	R	RADIUS OR RANGE
C.A.B.C.	CRUSHED AGGREGATE BASE COURSE	R/L	REFERENCE LINE
C.Y.	CUBIC YARD	R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
C.P.	CULVERT PIPE	RT	RIGHT
C. & G.	CURB AND GUTTER	REQ'D	REQUIRED
D	DEGREE OF CURVE	R.H.F.	RIGHT HAND FORWARD
D.H.V.	DESIGN HOUR VOLUME	R/W	RIGHT OF WAY
DIA.	DIAMETER	R.	RIVER
DISCH.	DISCHARGE	RD.	ROAD
EA	EACH	SHLD.	SHOULDER(S)
E	EAST	SHR.	SHRINKAGE
ELEC.	ELECTRIC(AL), ELEC. CABLE	S	SOUTH
EL., ELEV.	ELEVATION	S.F.	SQUARE FOOT (FEET)
EXC.	EXCAVATION	SDD	STANDARD DETAIL DRAWING(S)
F.F.	FACE TO FACE	STH	STATE TRUNK HIGHWAY
FERT.	FERTILIZER	STA.	STATION
F.E.	FIELD ENTRANCE	S.E.	SUPERELEVATION
F/L, F.L.	FLOW LINE	S/L	SURVEY LINE
CWT.	HUNDRED WEIGHT	T	TANGENT
INL	INLET	TEL.	TELEPHONE
INTER.	INTERSECTION	TEMP.	TEMPORARY
JT.	JOINT	T.L.E.	TEMPORARY LIMITED EASEMENT
LT	LEFT	T.O.C.	TOP OF CURB
L.H.F.	LEFT HAND FORWARD	T.	(TRUCKS) PERCENT OF
L.	LENGTH OF CURVE	TYP.	TYPICAL
L.F.	LINEAR FOOT(FEET)	UNCL.	UNCLASSIFIED
LC.	LONG CHORD	U.G.	UNDERGROUND (CABLE)
LS	LUMP SUM	V.C.	VERTICAL CURVE
M.P.	MARKER POST	W	WEST

UTILITY CONTACTS

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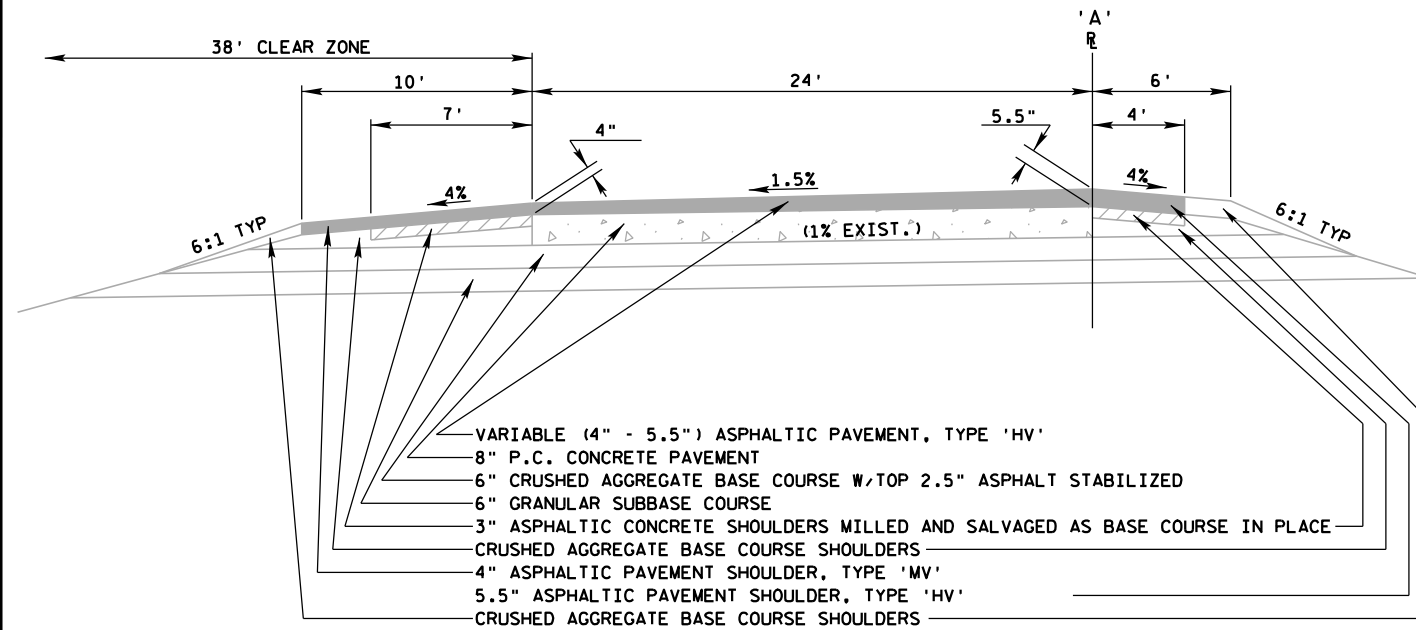
Toll Free (800) 242-8511
Milwaukee Area (414) 259-1181
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www.DiggersHotline.com

DESIGN CONTACTS

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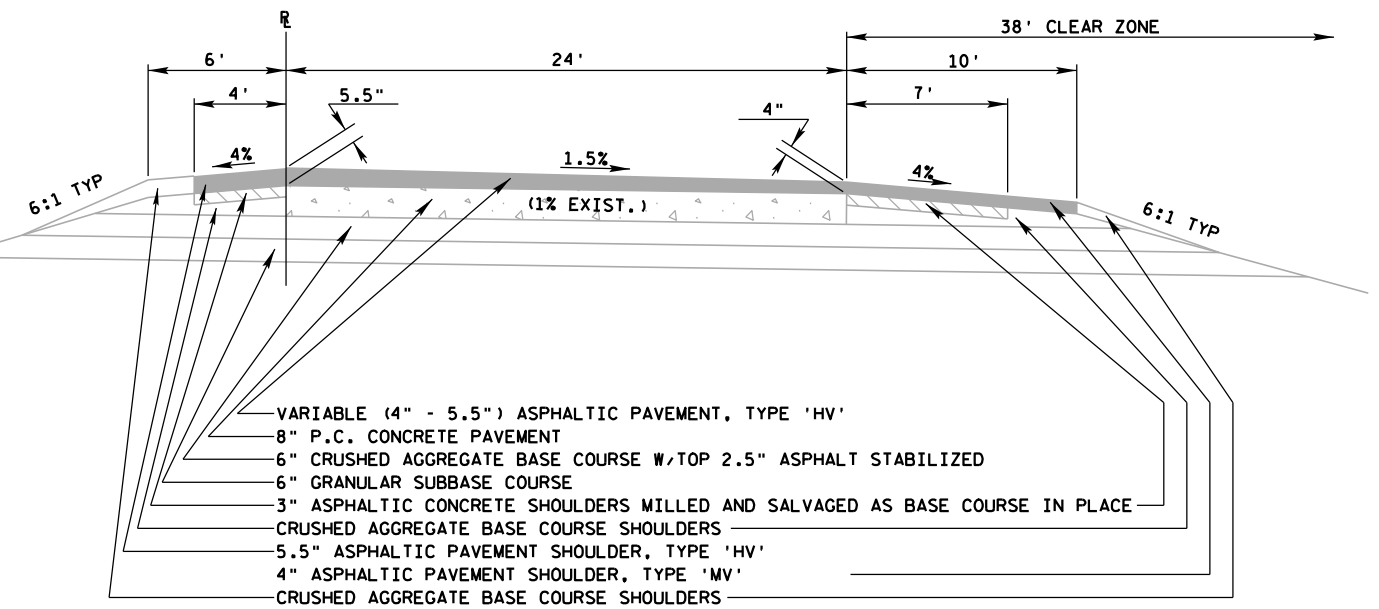


WESTBOUND

STA 395'A'+21 - STA 433'A'+27
STA 447'A'+01 - STA 455'A'+64
STA 560'A'+83 - STA 574'A'+31
STA 587'A'+50 - STA 589'A'+57
STA 593'A'+08 - STA 608'A'+43
STA 626'A'+34 - STA 671'A'+92
STA 682'A'+38 - STA 689'A'+83

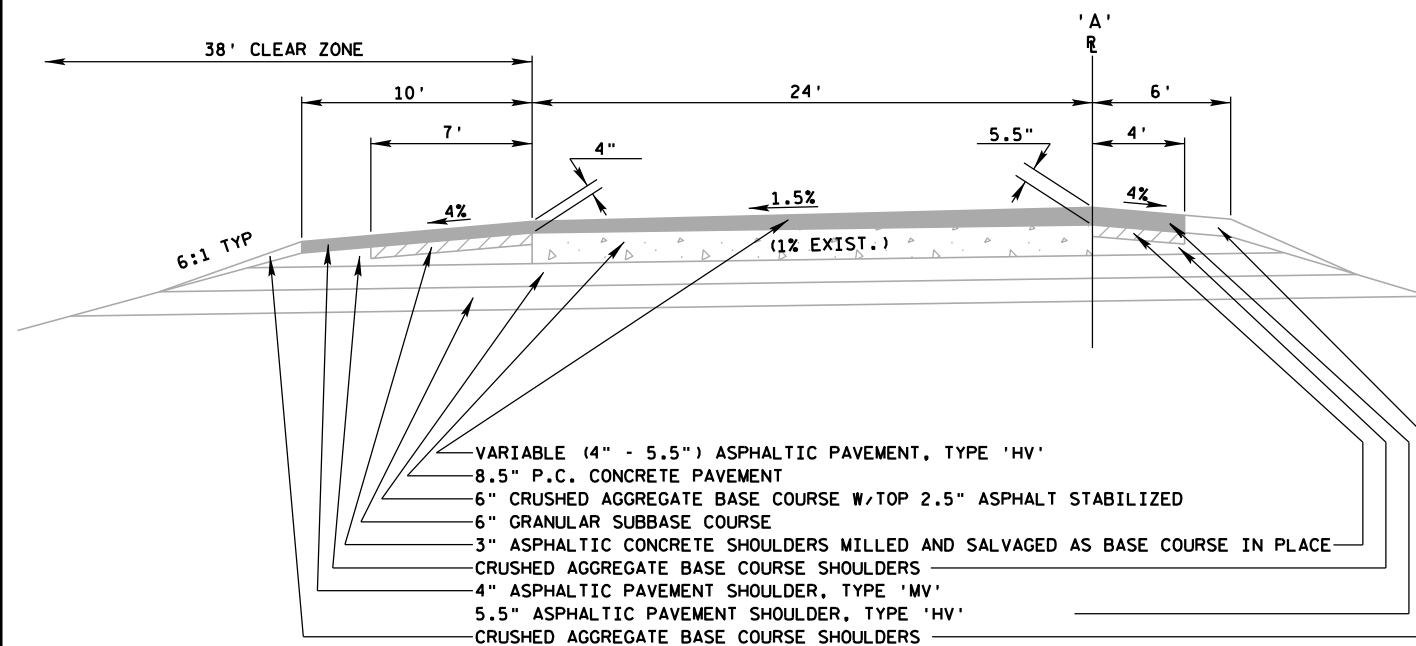
EXISTING UNILATERAL TYPICAL SECTION

IH 90



EASTBOUND

STA 399+08 - STA 426+25
STA 444+36 - STA 455+41
STA 572+80 - STA 588+88
STA 592+42 - STA 607+15
STA 627+26 - STA 671+55
STA 682+02 - STA 689+43

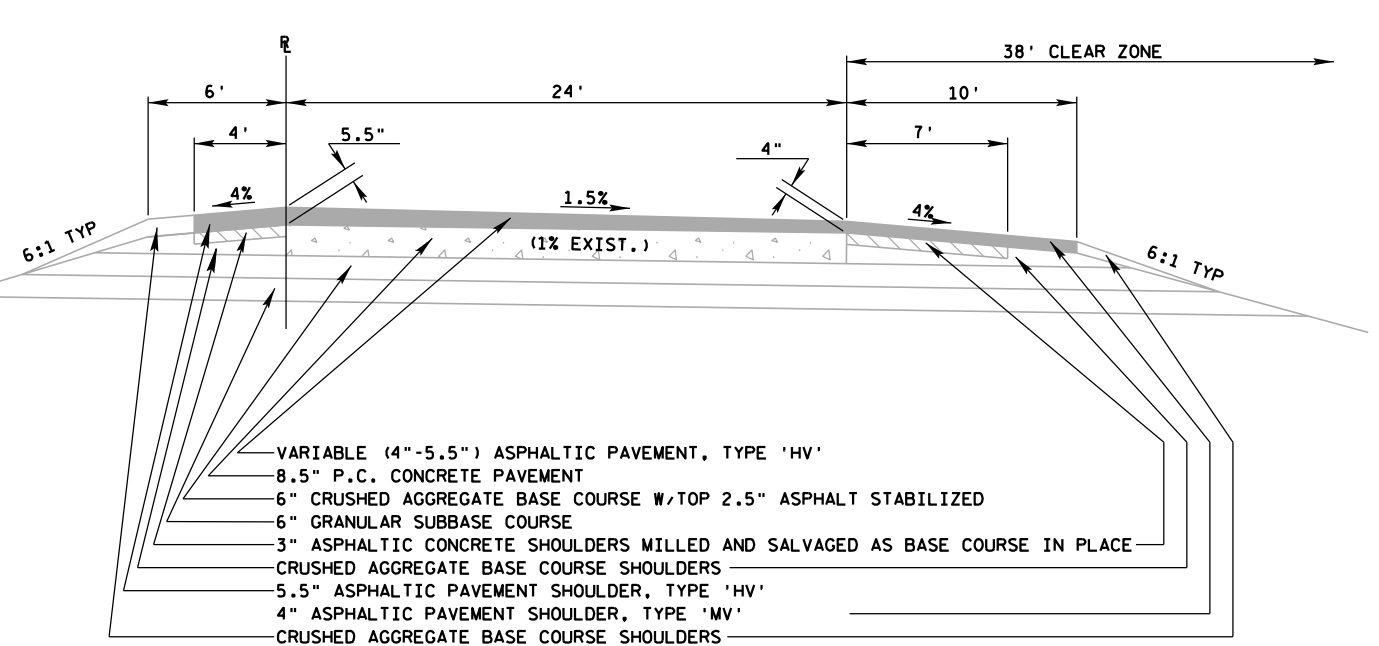


WESTBOUND

STA 455'A'+64 - STA 456'A'+63
STA 459'A'+91 - STA 473'A'+33
STA 589'A'+57 - STA 590'A'+55
STA 591'A'+86 - STA 593'A'+08

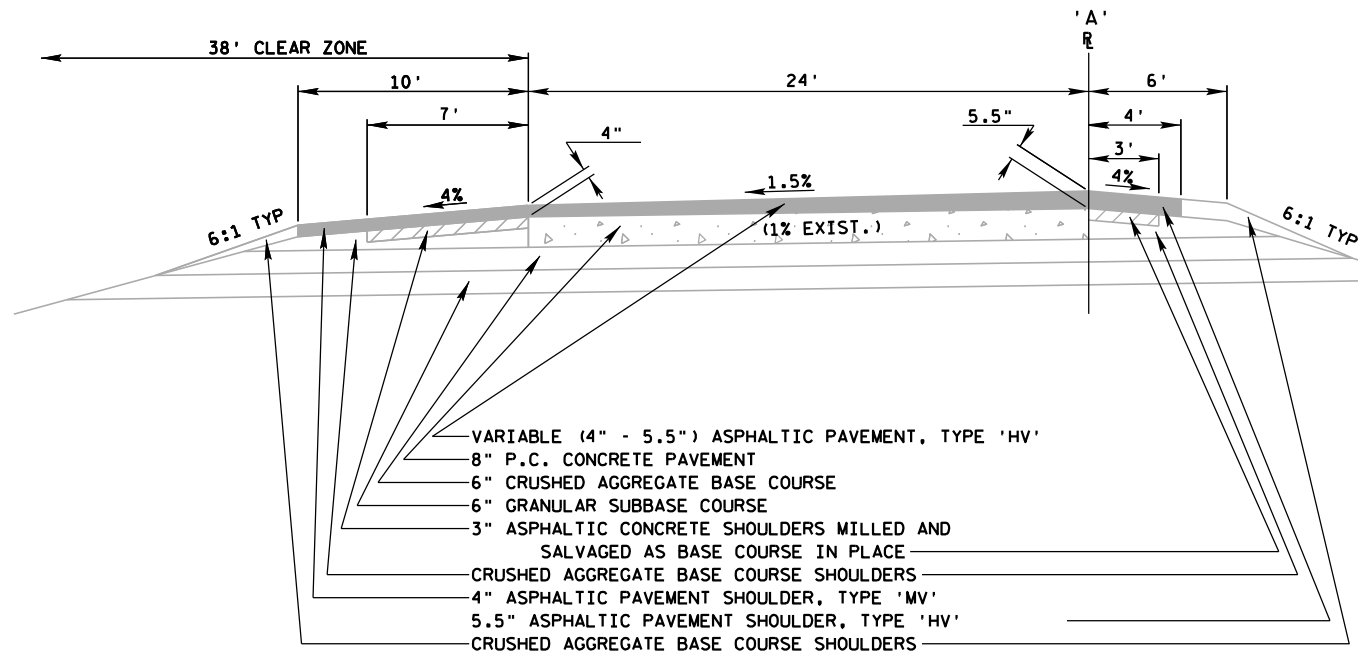
EXISTING UNILATERAL TYPICAL SECTION

IH 90



EASTBOUND

STA 455+41 - STA 456+56
STA 459+87 - STA 473+92
STA 588+88 - STA 590+06
STA 591+40 - STA 592+42

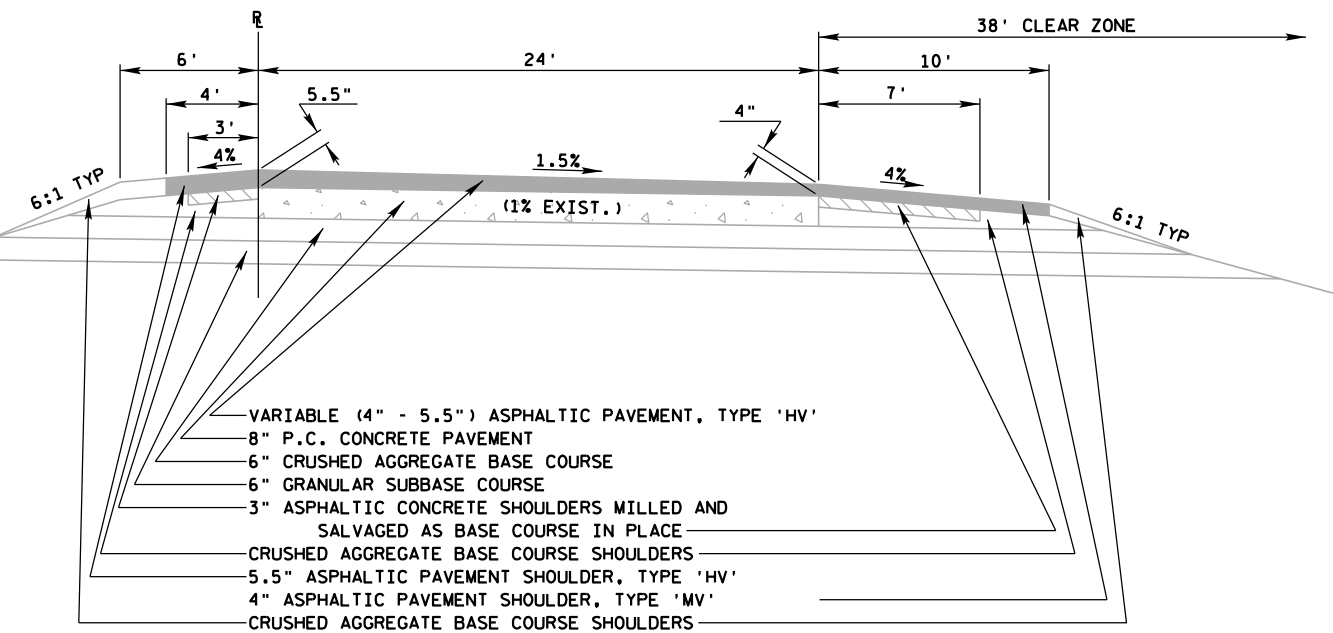


WESTBOUND

STA 494'A'+85 - STA 543'A'+73
STA 559'A'+02 - STA 560'A'+83

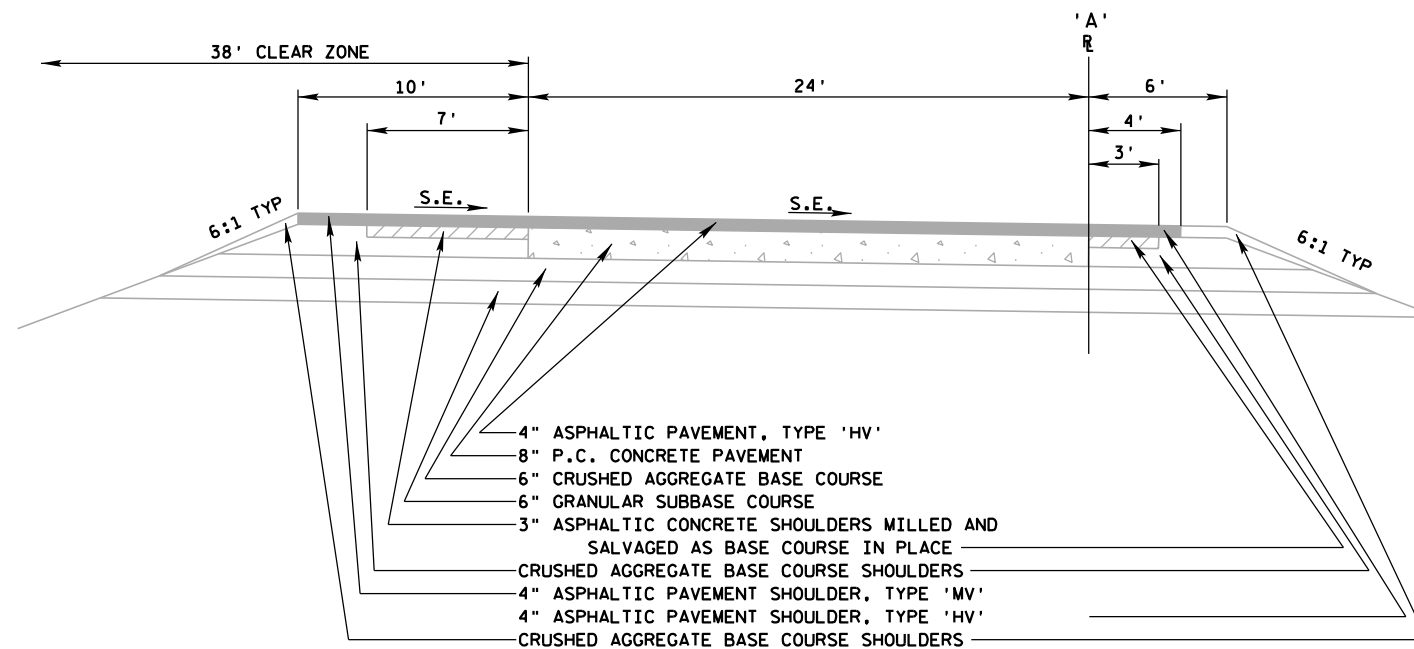
EXISTING UNILATERAL TYPICAL SECTION

IH 90



EASTBOUND

STA 496+23 - STA 537+93

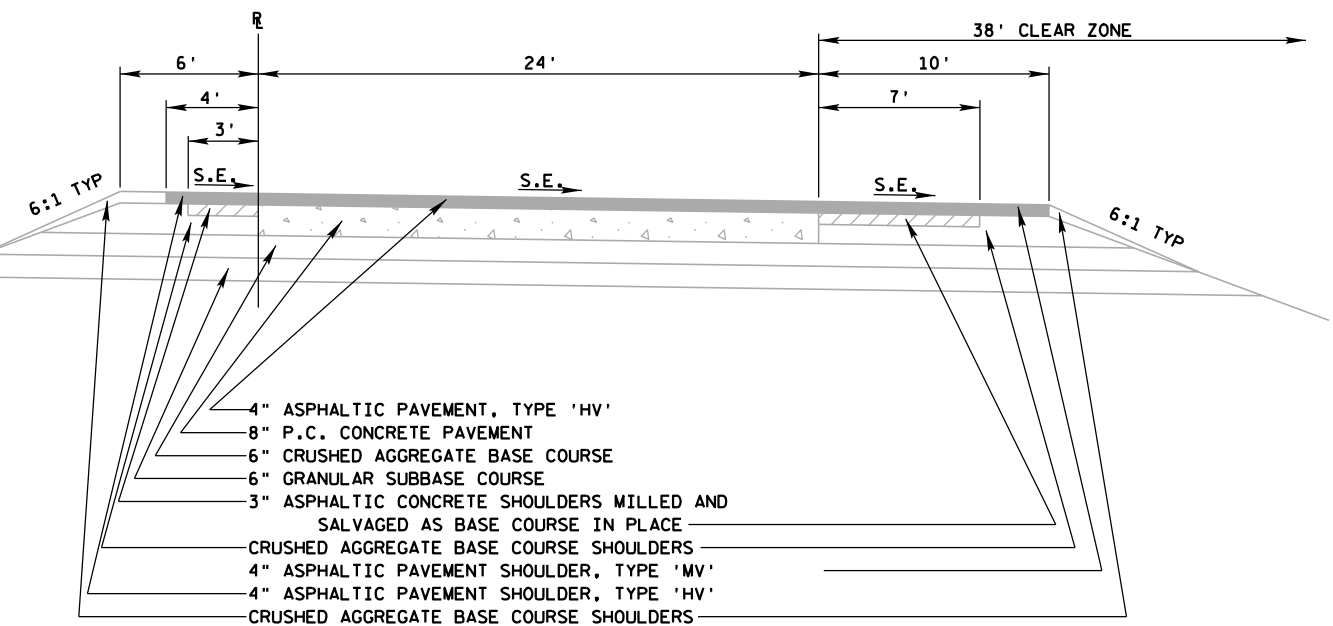


WESTBOUND

* STA 478'A'+84 - STA 480'A'+05
STA 480'A'+05 - STA 494'A'+85
STA 543'A'+73 - STA 559'A'+02
* 8.5" EXISTING P.C. CONCRETE PAVEMENT

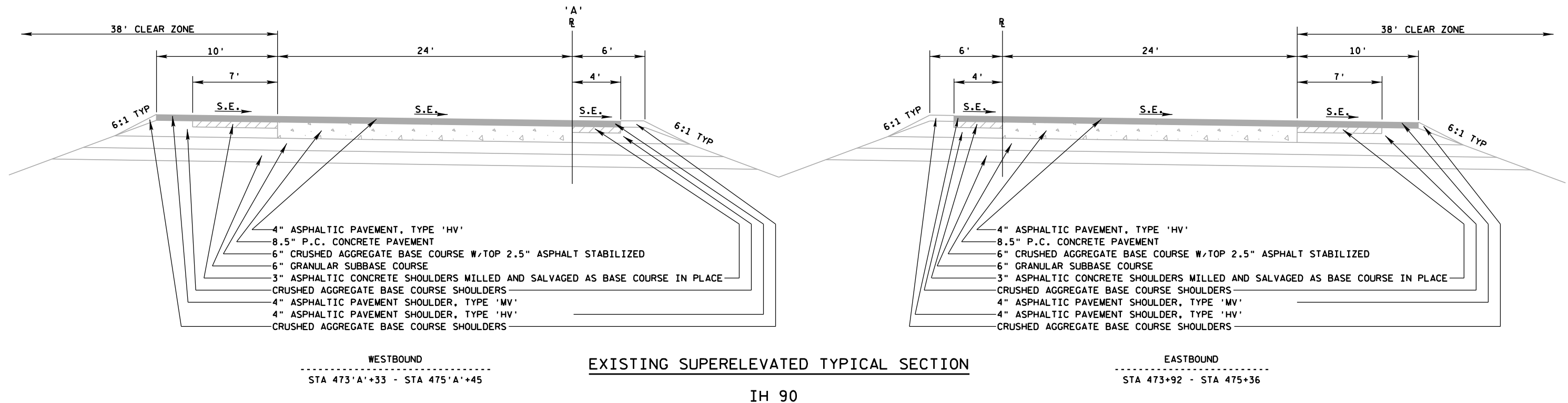
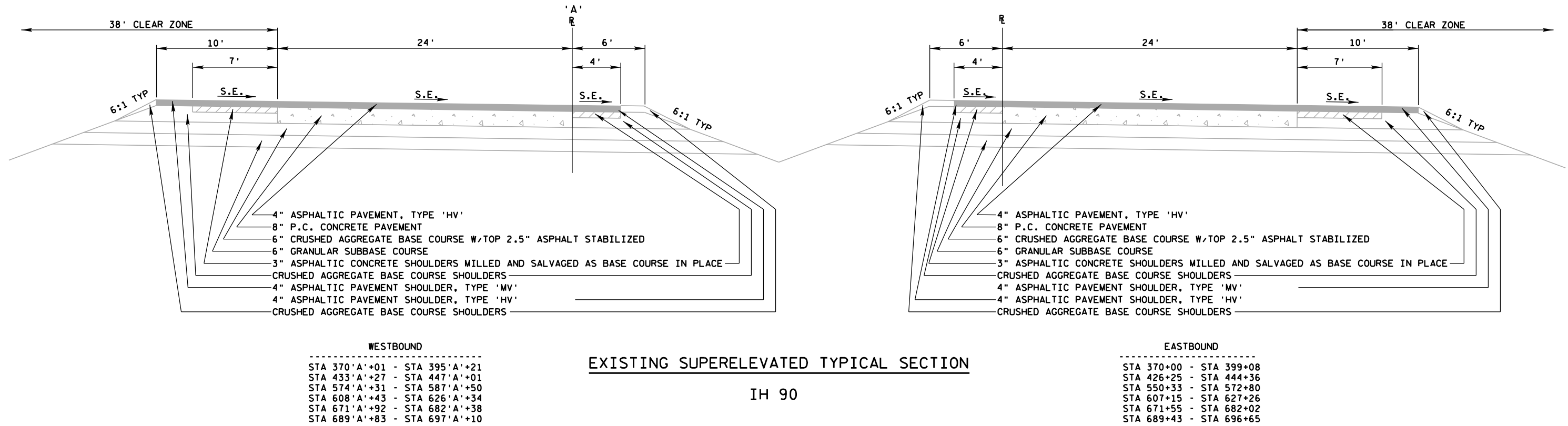
EXISTING SUPERELEVATED TYPICAL SECTION

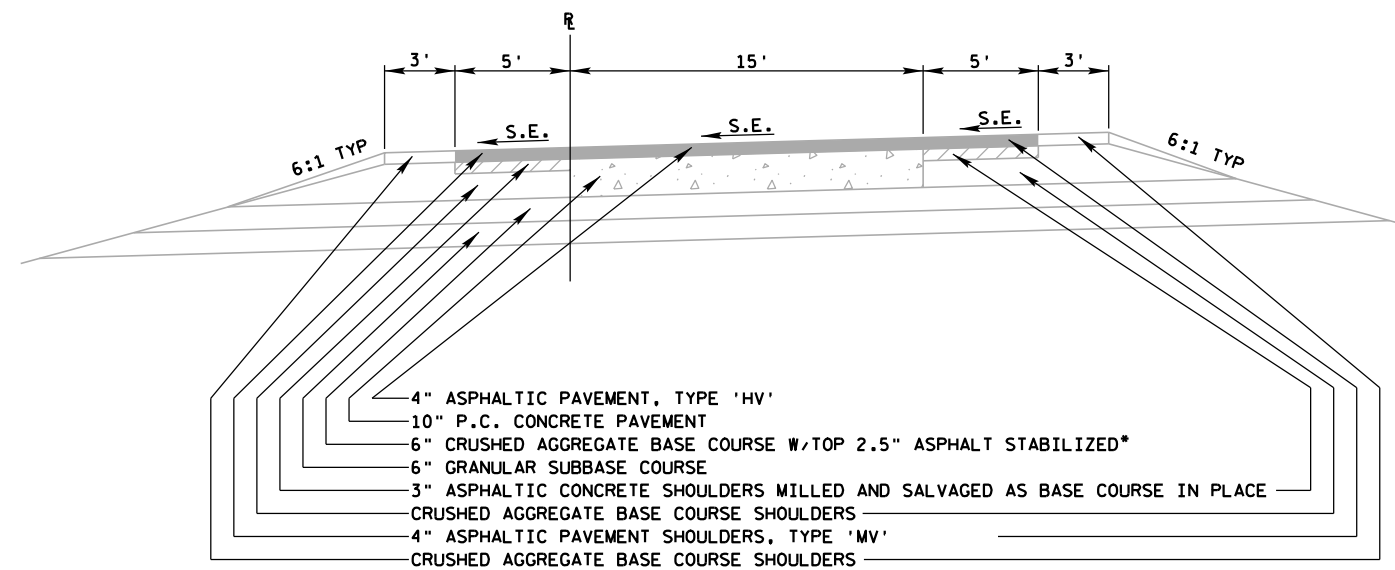
IH 90



EASTBOUND

* STA 478+74 - STA 479+76
STA 479+76 - STA 496+23
STA 537+93 - STA 550+33
* 8.5" EXISTING P.C. CONCRETE PAVEMENT

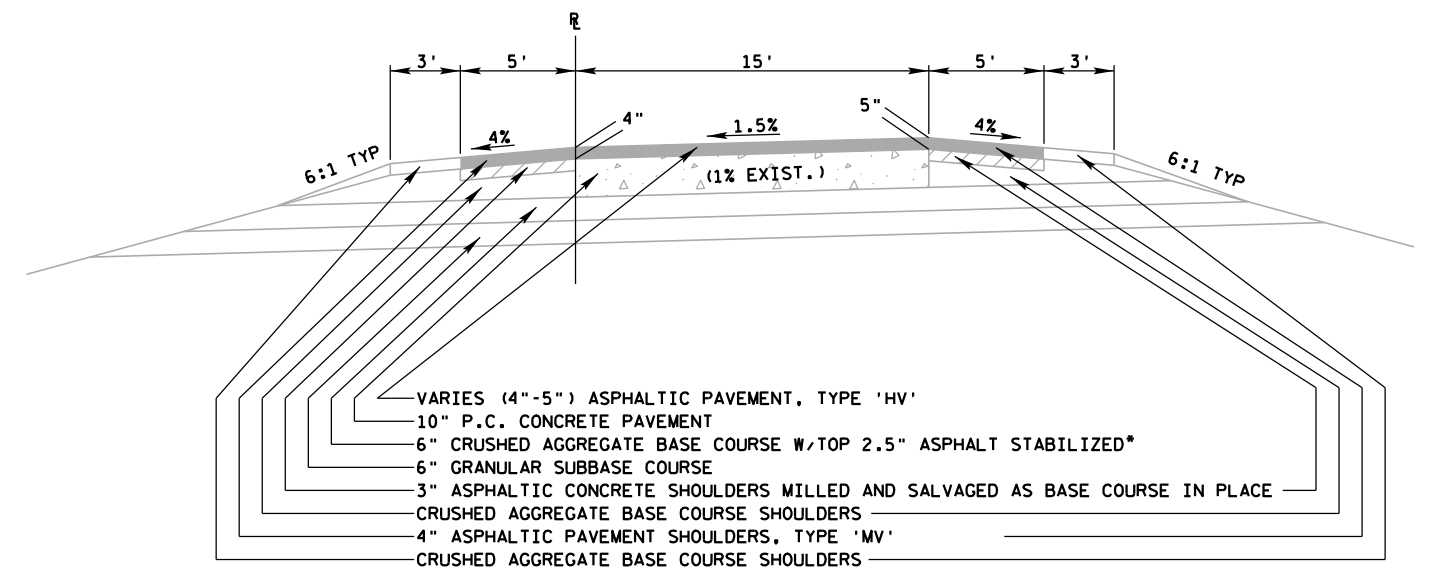




* PAVEMENT WIDTH PLUS 4'

EXISTING TYPICAL SUPERELEVATED RAMP SECTION

IH90

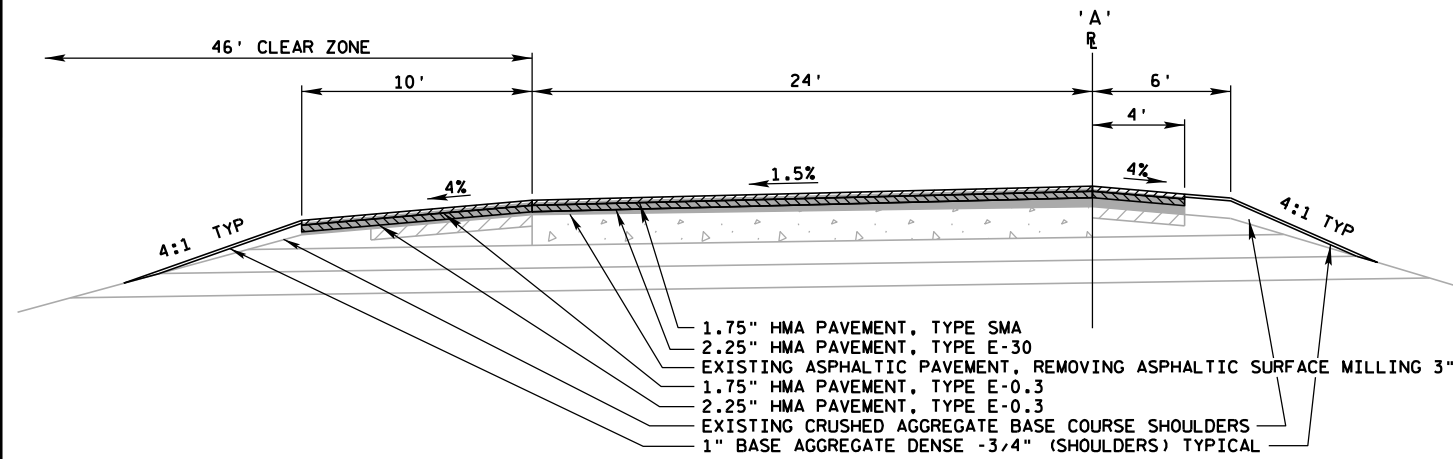


* PAVEMENT WIDTH PLUS 4'

EXISTING TYPICAL FINISHED RAMP SECTION

IH90

2

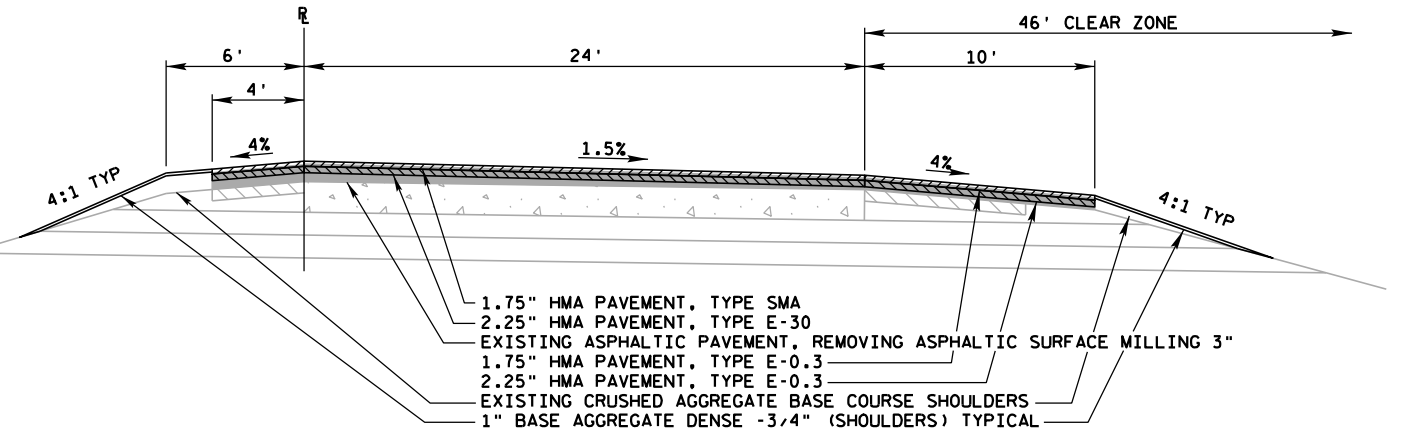


WESTBOUND

STA 395'A'+21 - STA 433'A'+27
STA 447'A'+01 - STA 455'A'+64
STA 560'A'+83 - STA 574'A'+31
STA 587'A'+50 - STA 589'A'+57
STA 593'A'+08 - STA 608'A'+43
STA 626'A'+34 - STA 671'A'+92
STA 682'A'+38 - STA 689'A'+83

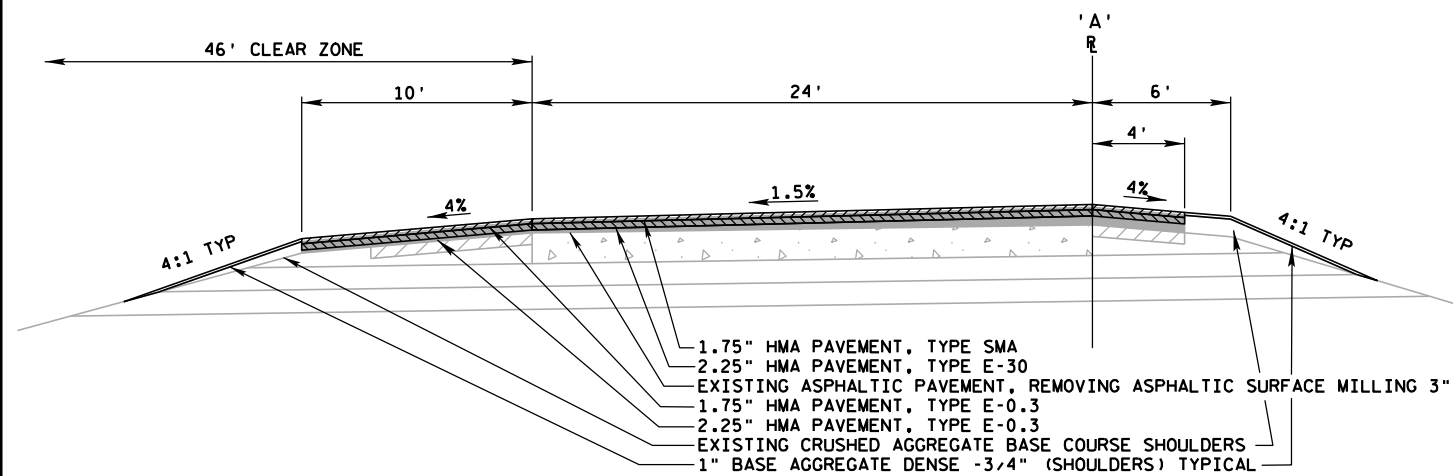
PROPOSED UNILATERAL TYPICAL SECTION

IH 90



EASTBOUND

STA 399+08 - STA 426+25
STA 444+36 - STA 455+41
STA 572+80 - STA 588+88
STA 592+42 - STA 607+15
STA 627+26 - STA 671+55
STA 682+02 - STA 689+43

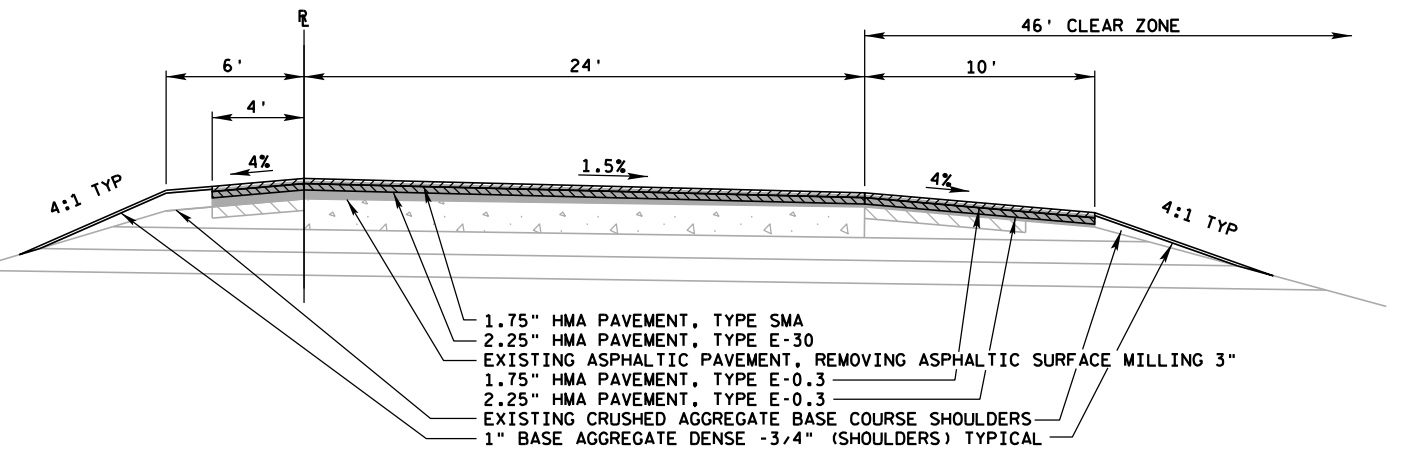


WESTBOUND

STA 455'A'+64 - STA 456'A'+63
STA 459'A'+91 - STA 473'A'+33
STA 589'A'+57 - STA 590'A'+55
STA 591'A'+86 - STA 593'A'+08

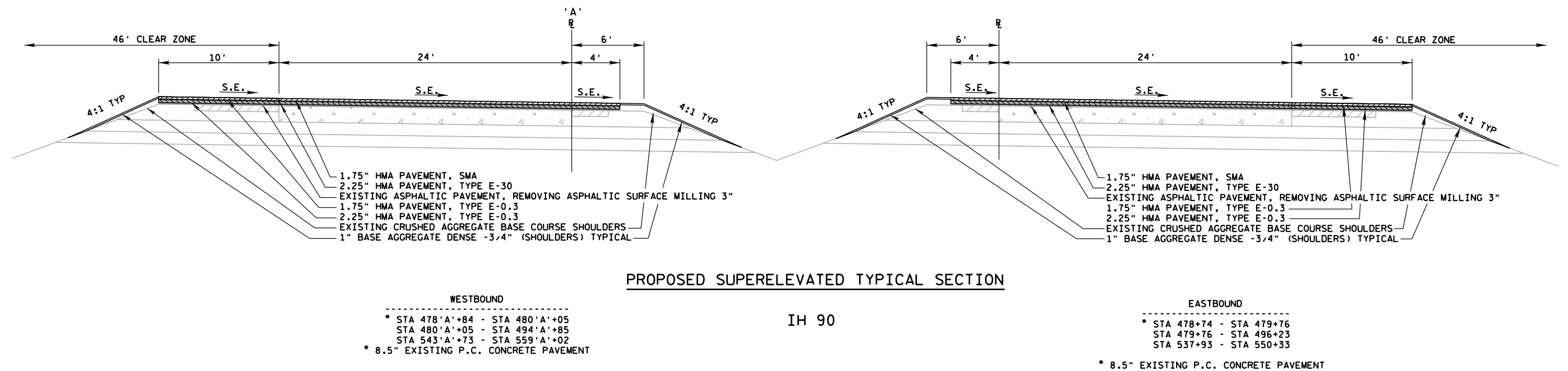
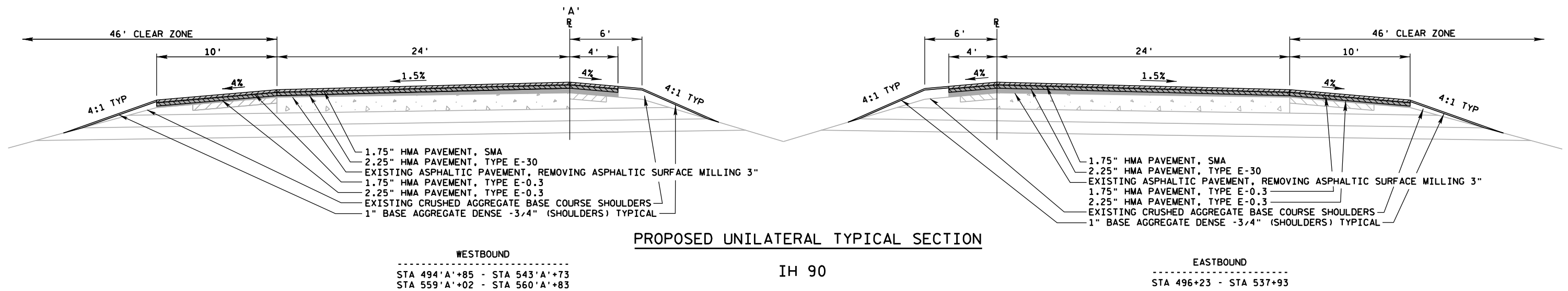
PROPOSED UNILATERAL TYPICAL SECTION

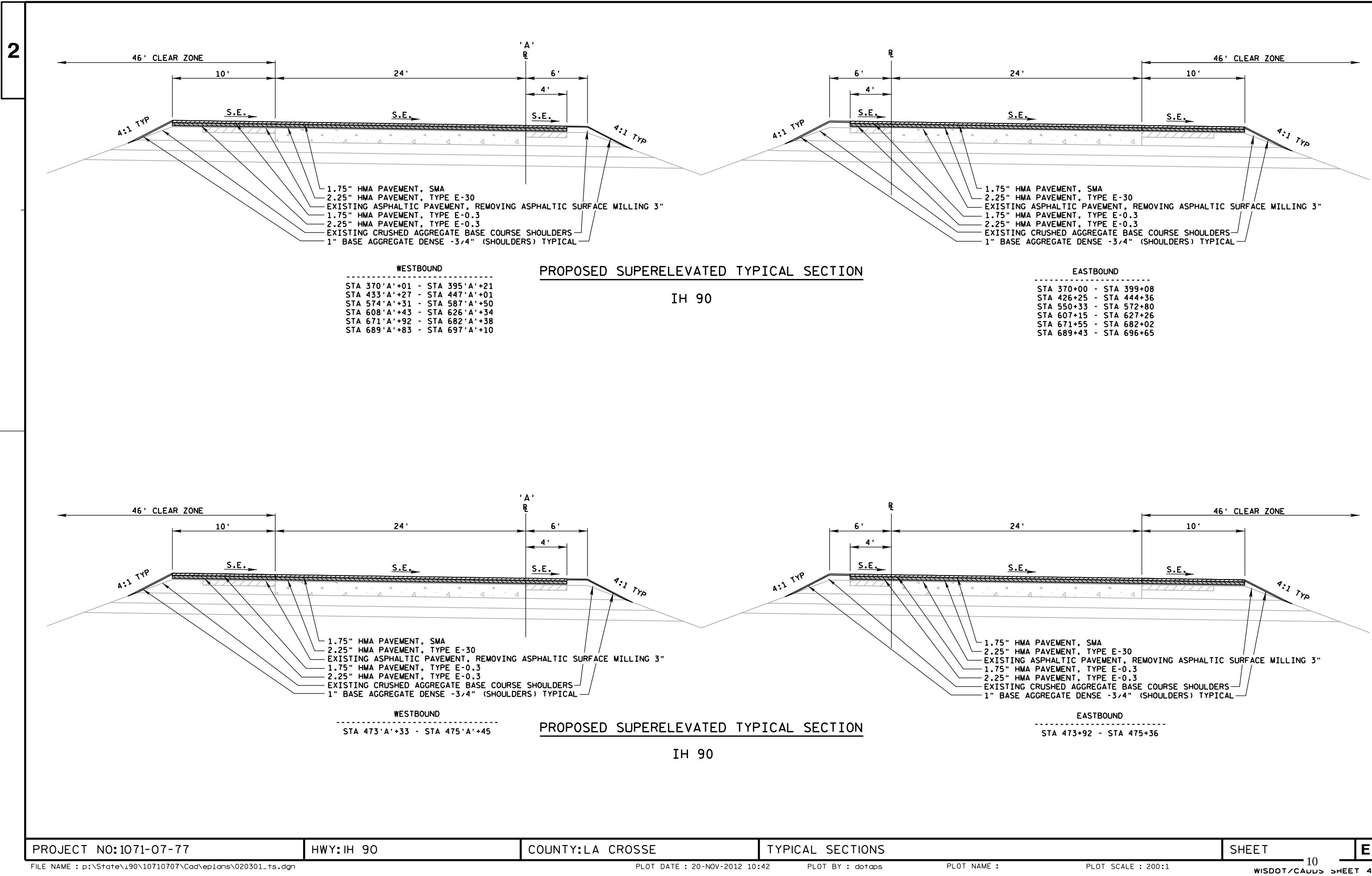
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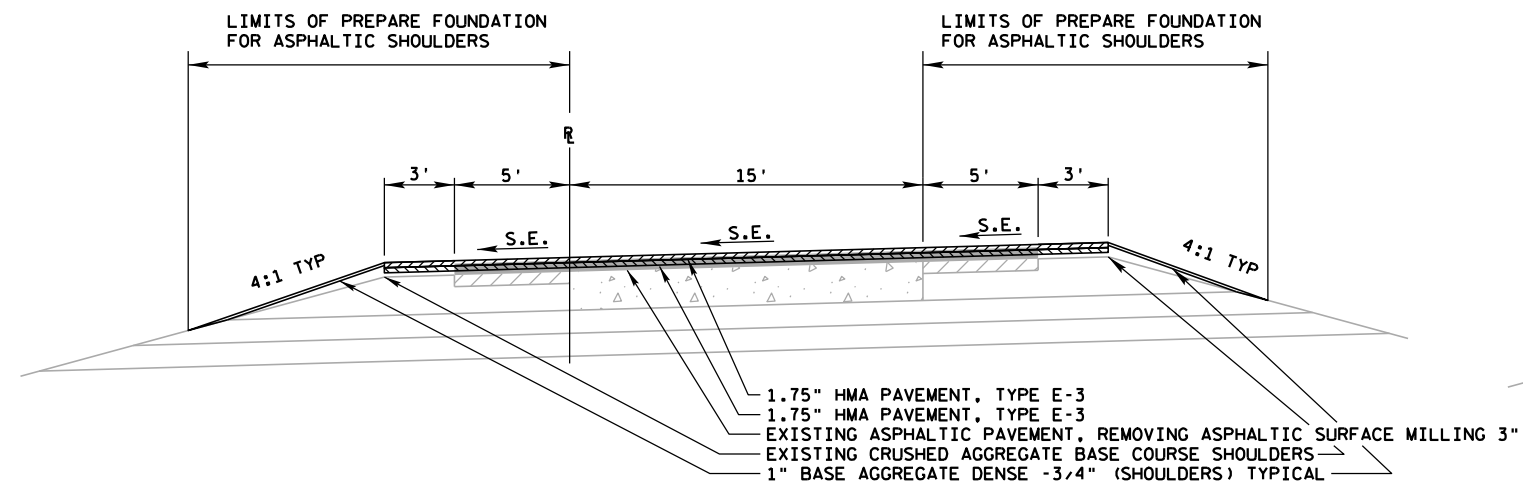


EASTBOUND

STA 455+41 - STA 456+56
STA 459+87 - STA 473+92
STA 588+88 - STA 590+06
STA 591+40 - STA 592+42



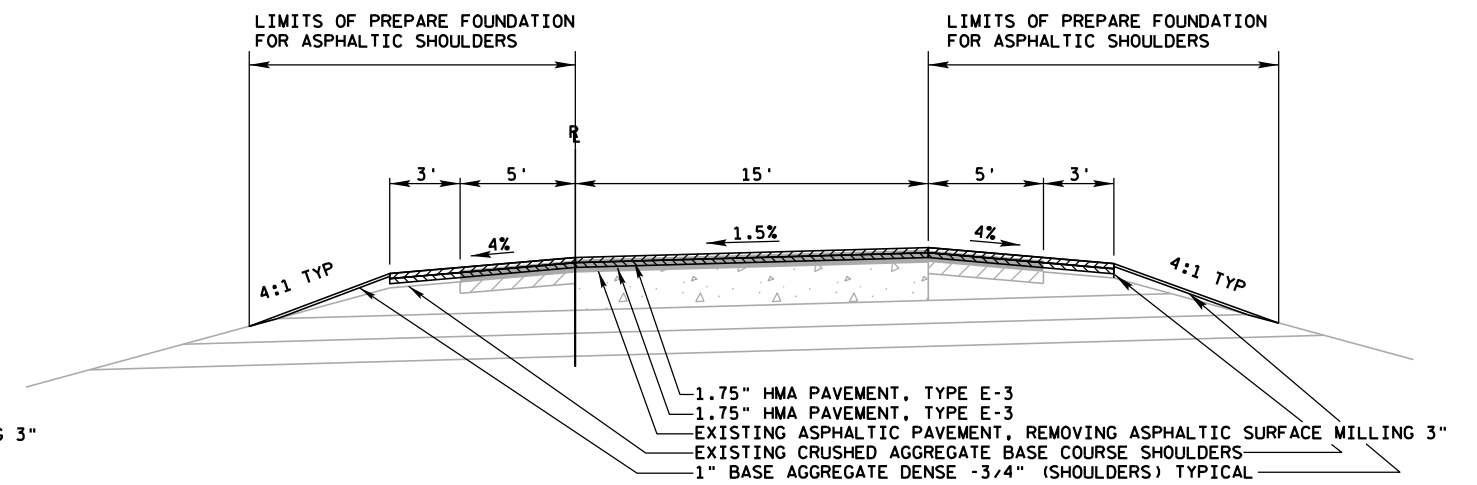




PROPOSED SUPERELEVATED RAMP TYPICAL SECTION

IH 90

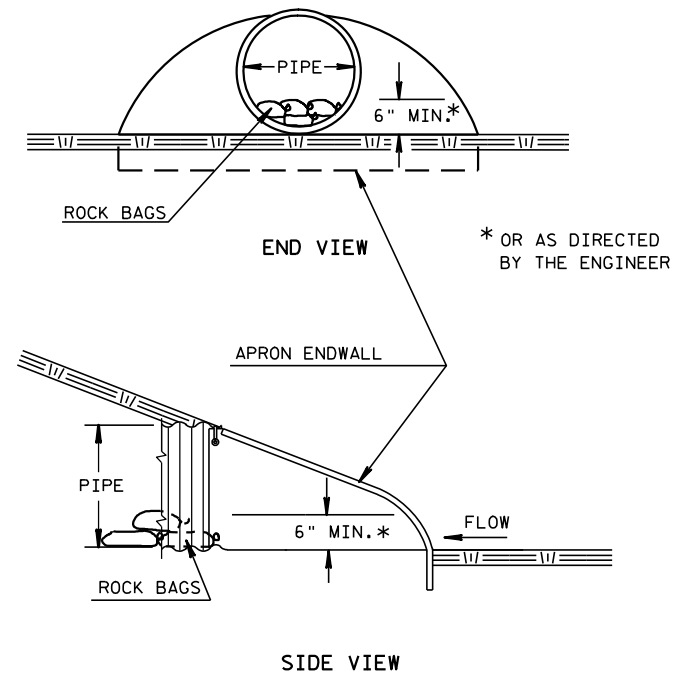
STA 647+75B - STA 650+85B
STA 655+44B - STA 658+88B
STA 648+98C - STA 652+39C
STA 669+56D - STA 673+00D
STA 660+33E - STA 663+30E
STA 667+90E - STA 671+57E



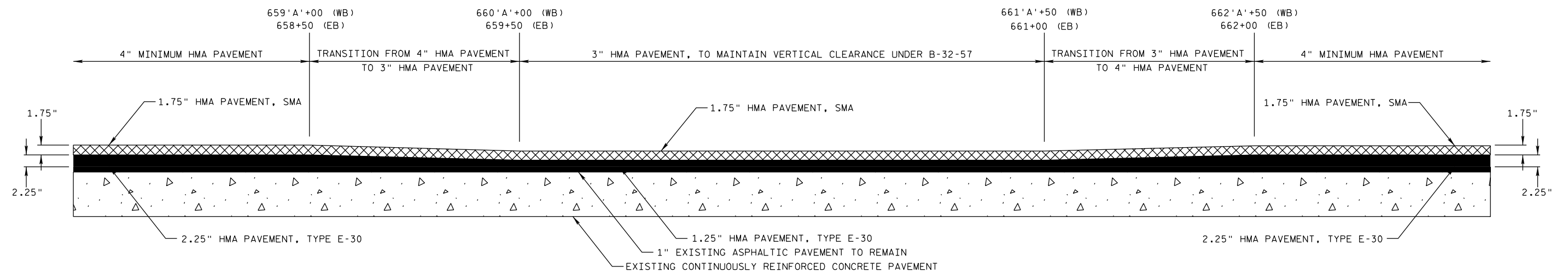
PROPOSED FINISHED RAMP TYPICAL SECTION

IH 90

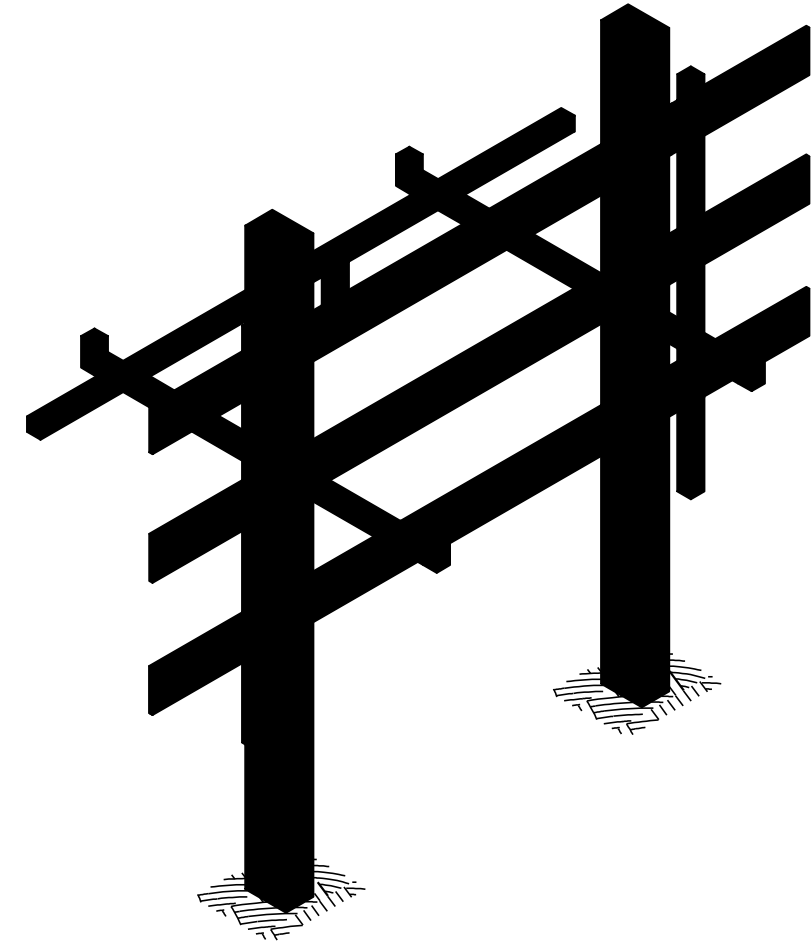
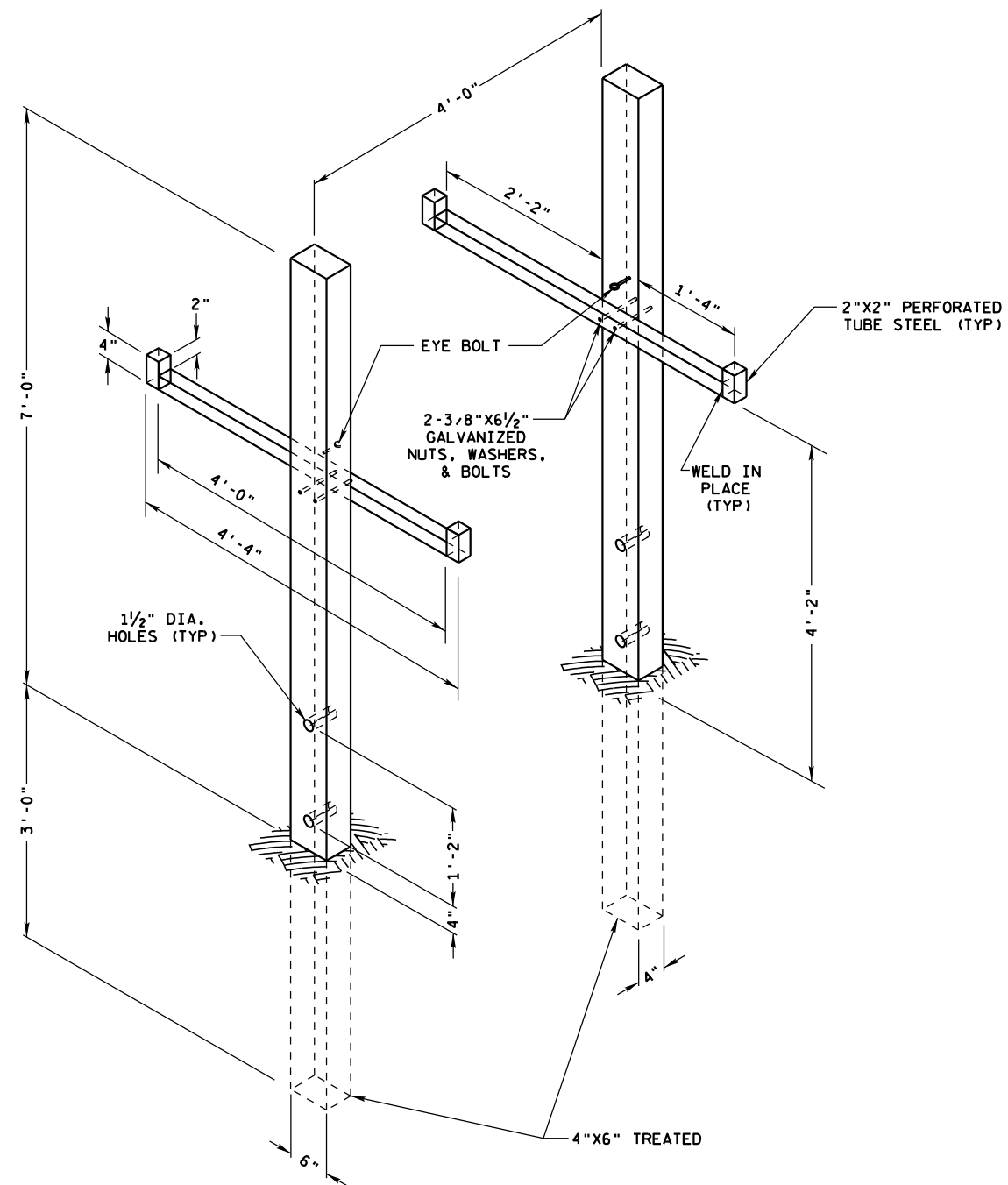
STA 650+85B - STA 655+44B
STA 658+88B - STA 660+41B
STA 652+39C - STA 660+86C
STA 660+67D - STA 669+56D
STA 660+23E - STA 660+33E
STA 663+30E - STA 667+90E



CULVERT PIPE CHECKS

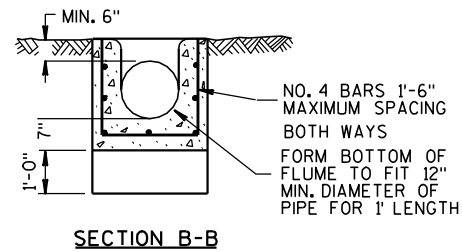


PAVEMENT TRANSITION ON IH90 UNDER B-32-57



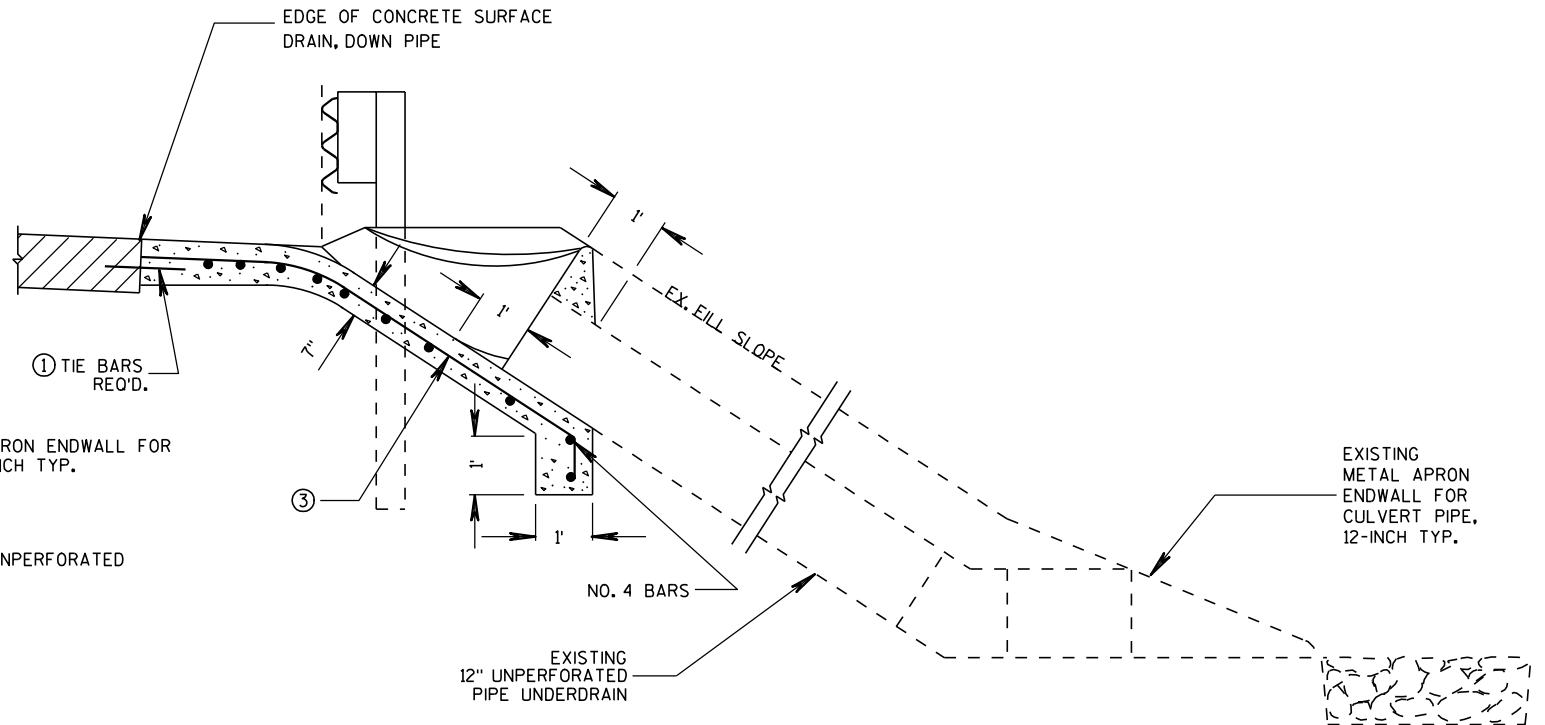
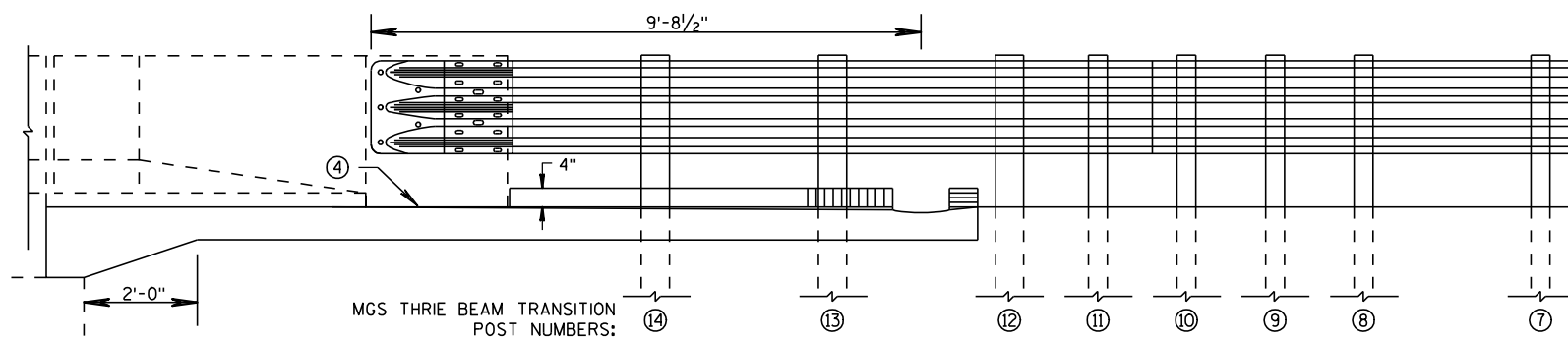
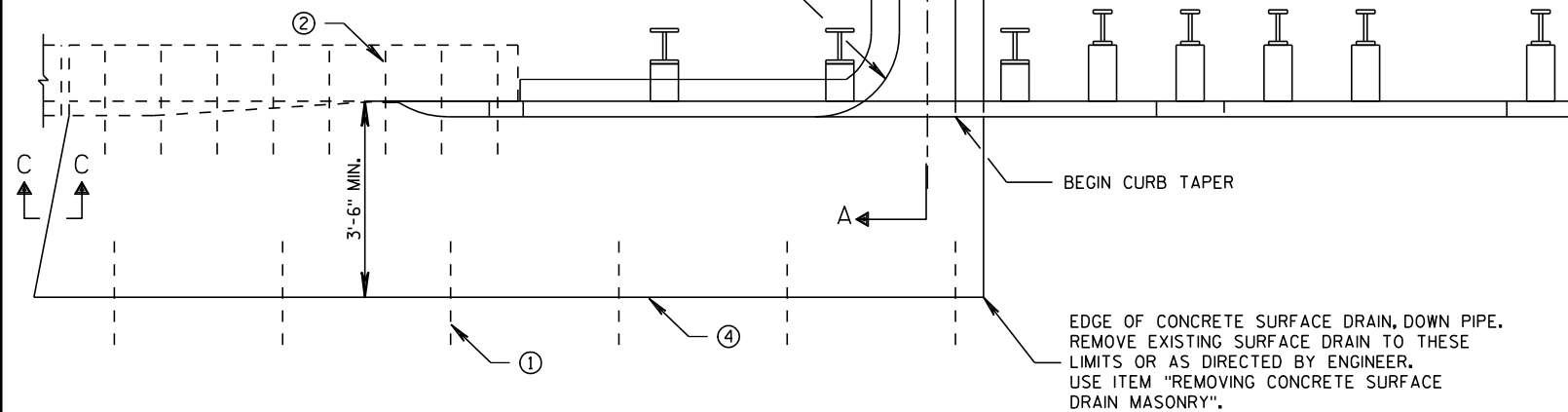
BARRICADE RACK DETAIL

TO BE LOCATED IN FIELD BY ENGINEER

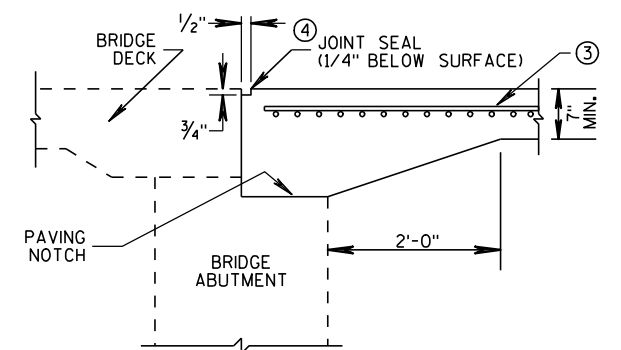


REMOVE EXISTING PIPE COLLAR. INCLUDED IN ITEM "REMOVING CONCRETE SURFACE DRAIN, MASONRY".

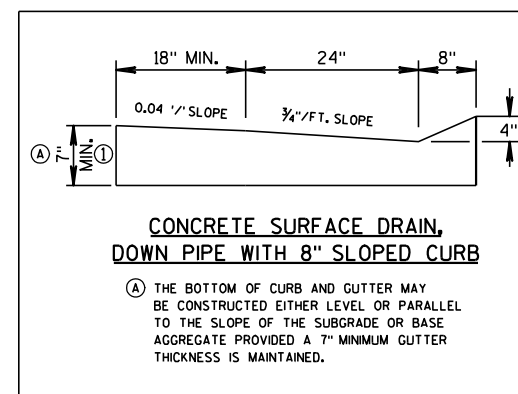
1'-6" RADIUS TRANSITION FROM 8" SLOPED HEAD TO 6" VERTICAL HEAD.



SECTION A-A



SECTION C-C

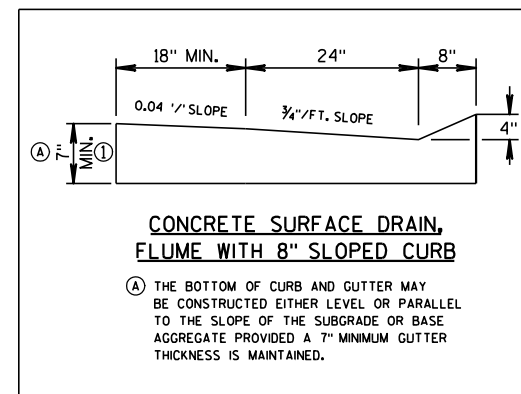
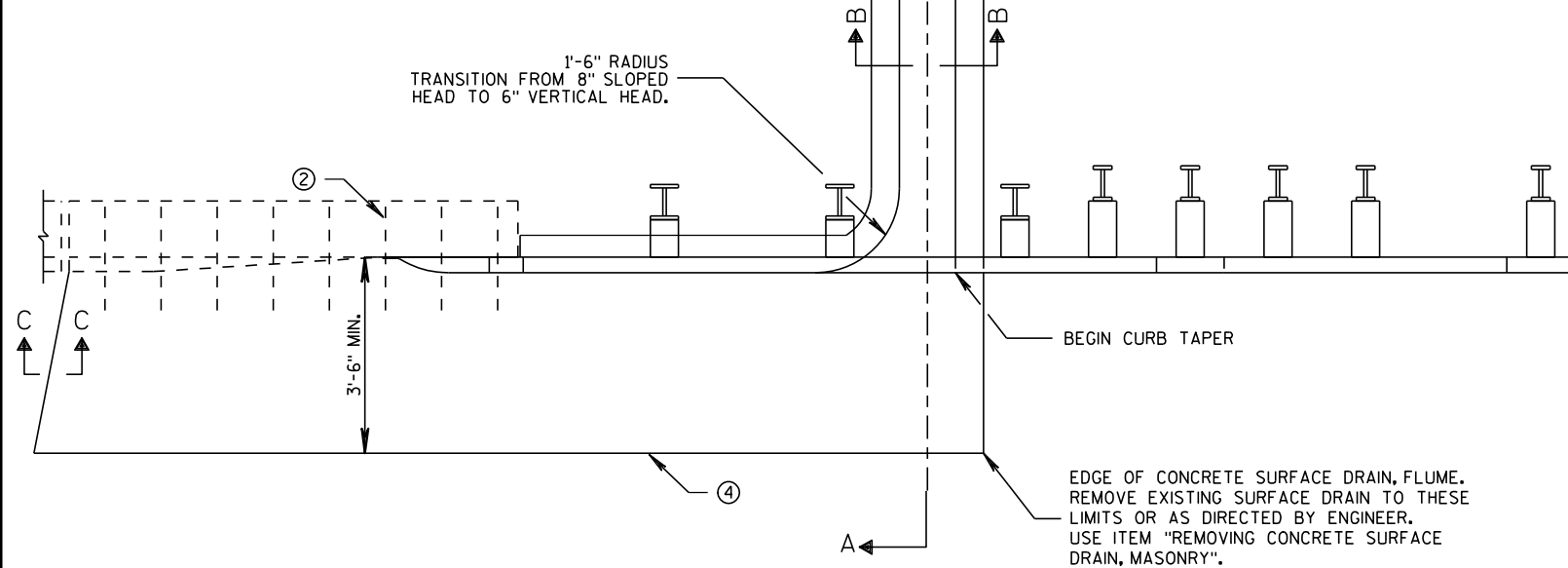
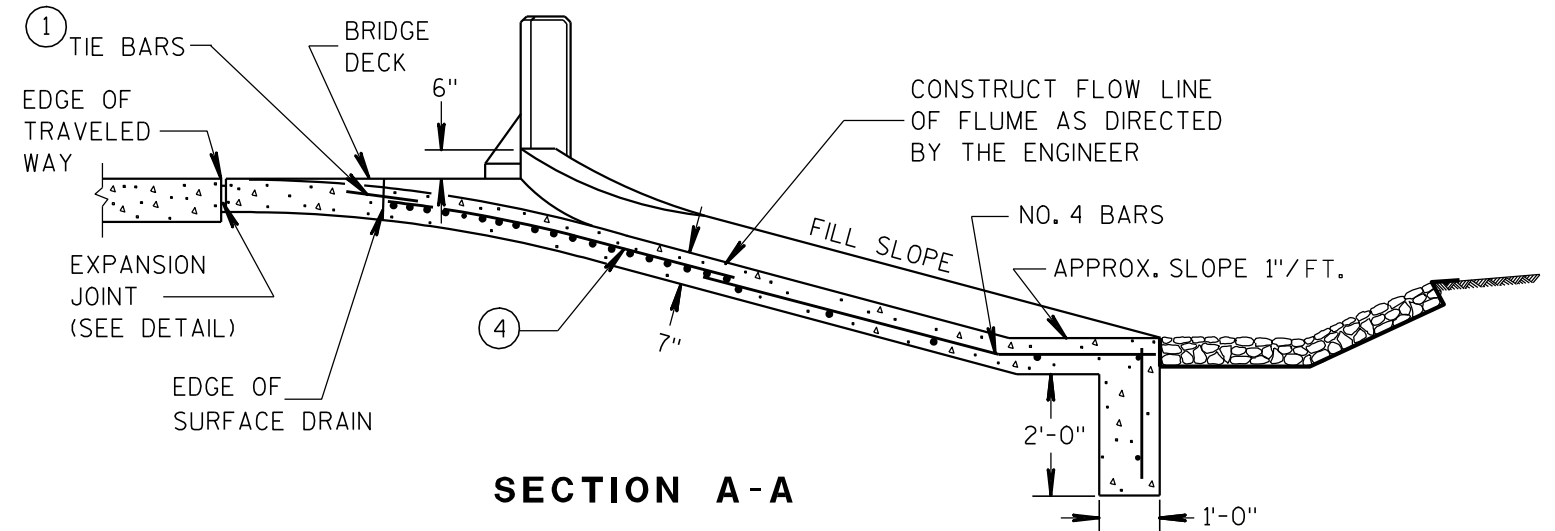
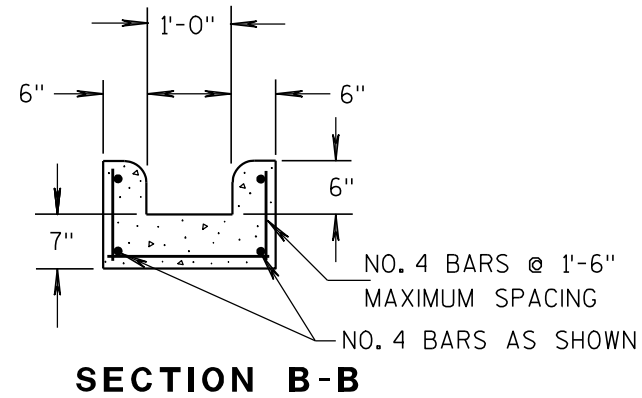


GENERAL NOTES

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.

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

- ① NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.
- ② NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ④ HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.



GENERAL NOTES

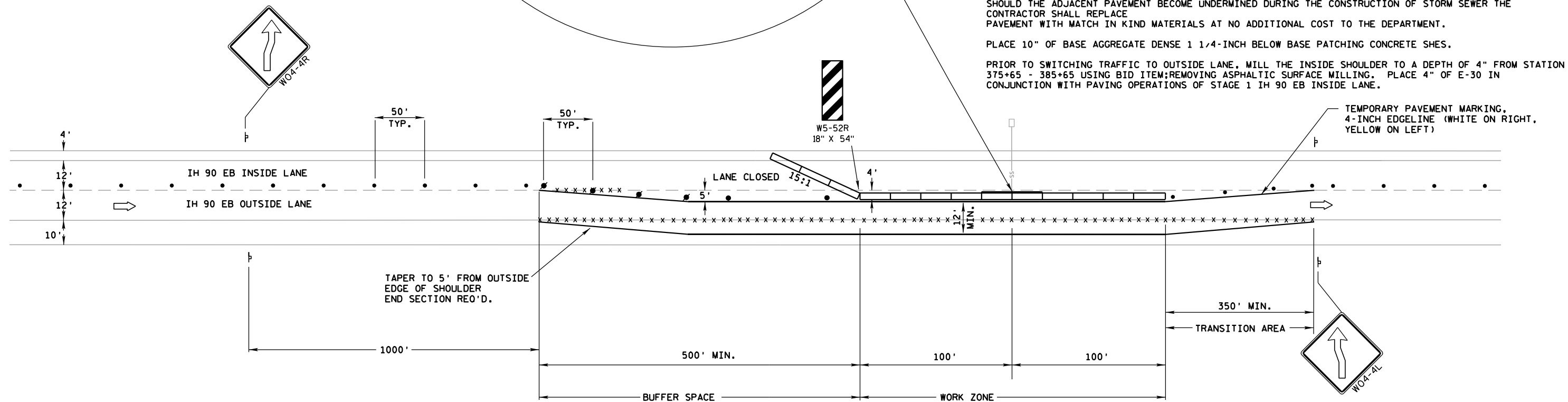
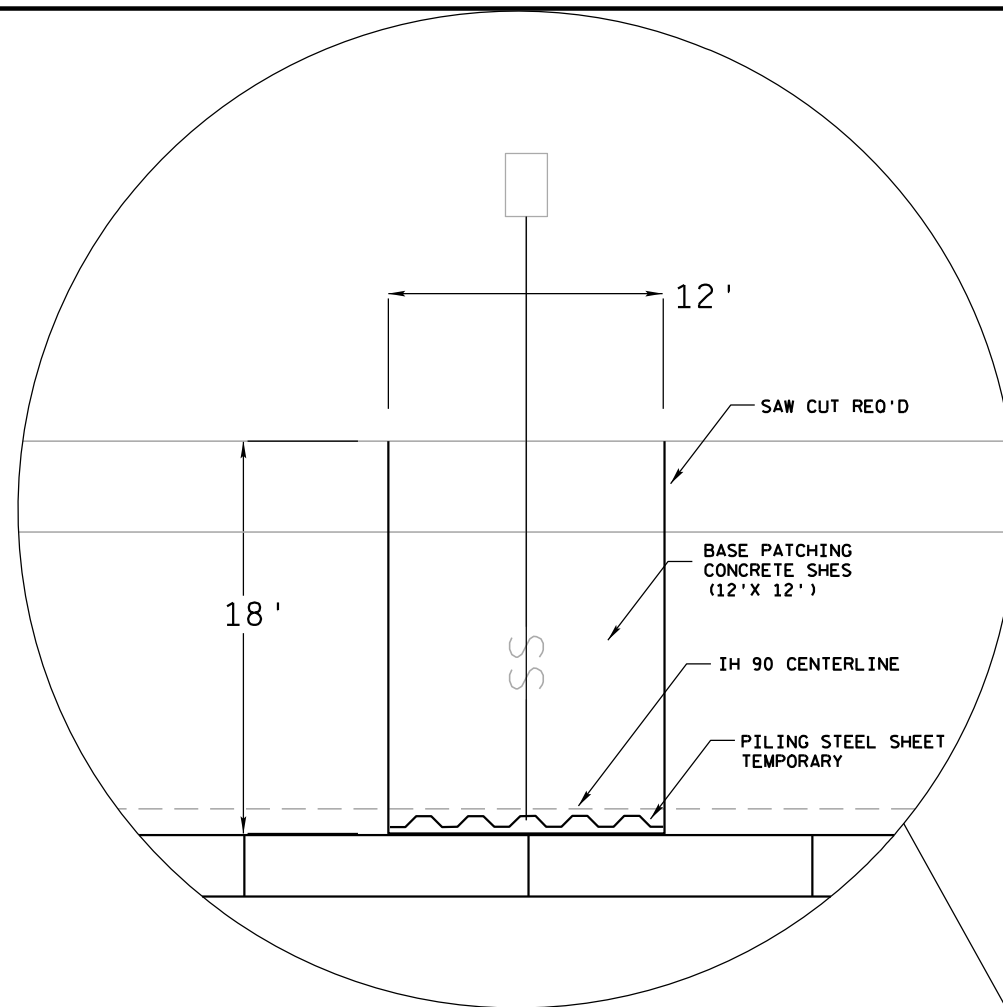
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

- ① NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.
- ② NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ④ HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC



GENERAL NOTES

THIS LANE CLOSURE IS FOR CLOSING LEFT LANE.

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 DESIRABLE) CLEARANCE TO EXISTING SIGNS.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"W0" 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.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE 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.

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED WITHIN THE WORK ZONE OTHER THAN BEHIND THE PRECAST CONCRETE BARRIER.

STAGE 1A CONSTRUCTION OPERATIONS SHALL BE COMPLETED PRIOR TO STORM SEWER CONSTRUCTION. PILING STEEL SHEET TEMPORARY SHALL BE INSTALLED TO ALLOW BASE PATCHING, CONCRETE SHES TO BE CONSTRUCTED TO THE CENTERLINE OF IH 90 EB.

CONSTRUCTION OF STORM SEWER SHALL START AT PILING STEEL SHEET TEMPORARY AND PROCEED TO INLETS MEDIAN 1 GRATE.

SHOULD THE ADJACENT PAVEMENT BECOME UNDERMINED DURING THE CONSTRUCTION OF STORM SEWER THE CONTRACTOR SHALL REPLACE PAVEMENT WITH MATCH IN KIND MATERIALS AT NO ADDITIONAL COST TO THE DEPARTMENT.

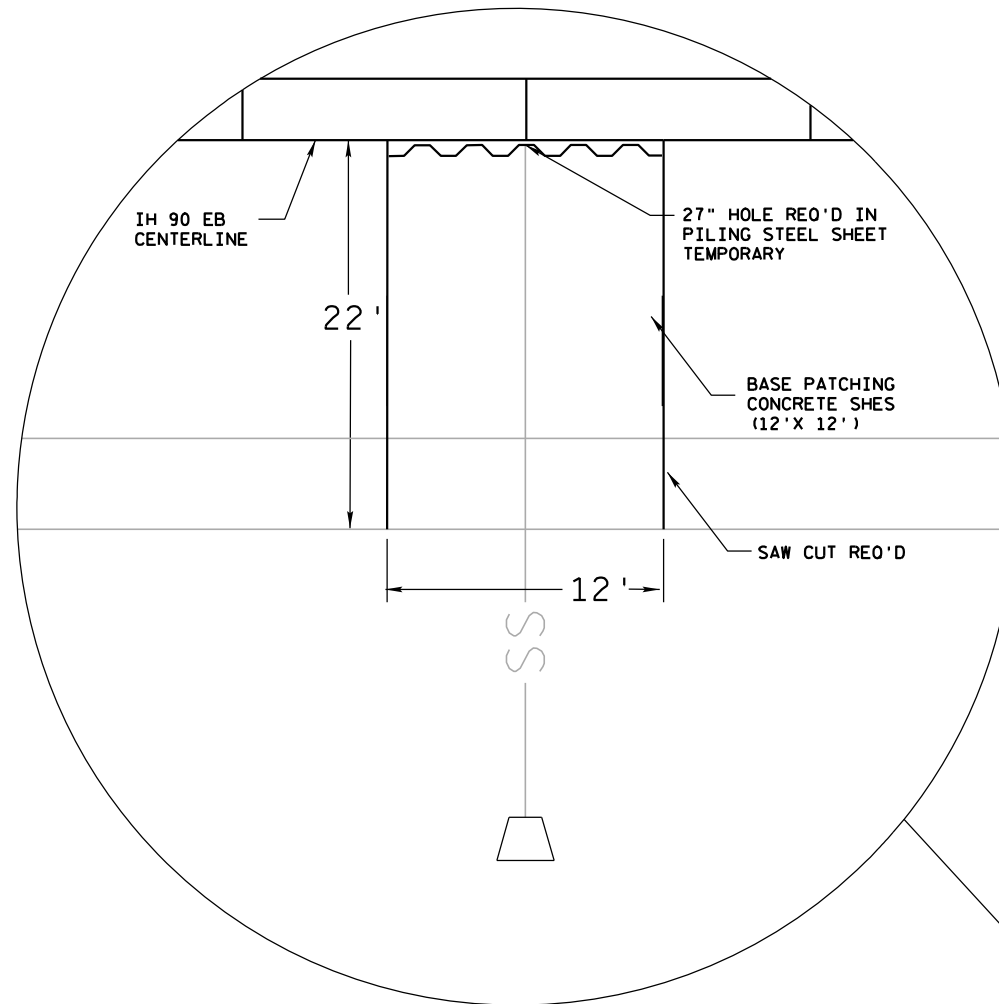
PLACE 10" OF BASE AGGREGATE DENSE 1 1/4-INCH BELOW BASE PATCHING CONCRETE SHES.

PRIOR TO SWITCHING TRAFFIC TO OUTSIDE LANE, MILL THE INSIDE SHOULDER TO A DEPTH OF 4" FROM STATION 375+65 - 385+65 USING BID ITEM; REMOVING ASPHALTIC SURFACE MILLING. PLACE 4" OF E-30 IN CONJUNCTION WITH PAVING OPERATIONS OF STAGE 1 IH 90 EB INSIDE LANE.

2

LEGEND

-  POST WITH ATTACHED SIGN
-  DRUM WITH WARNING LIGHT (TYPE C)
-  DRUM
-  REMOVING PAVEMENT MARKING
-  TEMPORARY PRECAST CONCRETE BARRIER
-  DIRECTION OF TRAFFIC



GENERAL NOTES

THIS LANE CLOSURE IS FOR CLOSING RIGHT LANE.

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 DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS,
THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL
DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE 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 MANUEVER.

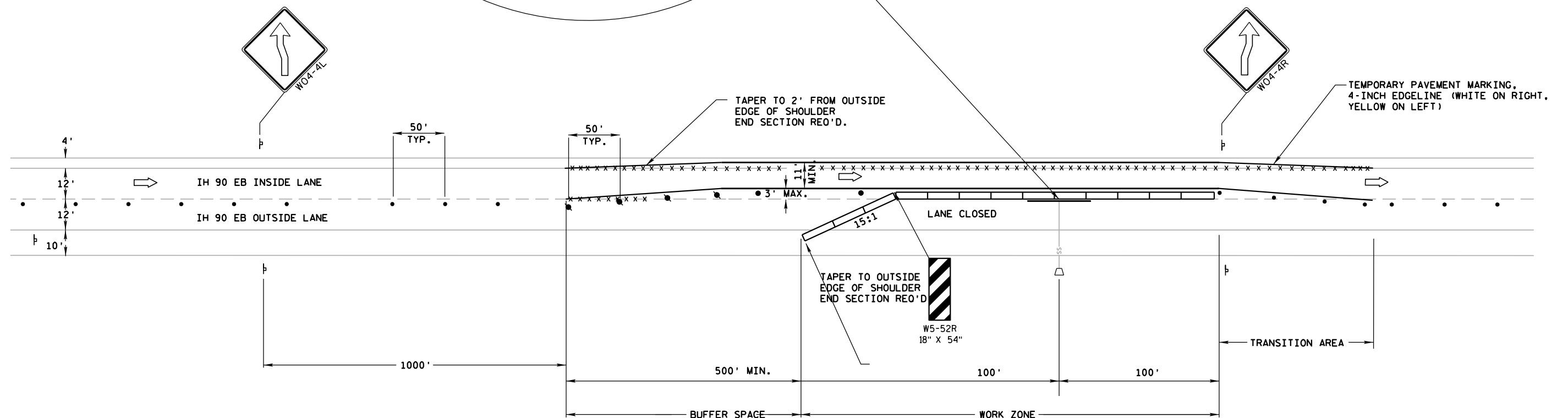
NO EQUIPMENT OR MATERIAL SHALL BE LOCATED WITHIN THE WORK ZONE OTHER THAN BEHIND THE PRECAST CONCRETE BARRIER.

CONTRACTOR TO CUT 27" DIAMETER (MAX.) IN PILING STEEL SHEET TEMPORARY TO FINISHED CONSTRUCTION OF STORM SEWER. CONTRACTOR TO CONSTRUCT STORM SEWER FROM PILING STEEL SHEET TEMPORARY TO APRON ENDWALL DOWN GRADIENT.

PILING STEEL SHEET TEMPORARY TO REMAIN INPLACE 2.5' BELOW FINISHED IH 90 CENTERLINE ELEVATION.

SHOULD THE ADJACENT PAVEMENT BECOME UNDERMINED DURING THE CONSTRUCTION OF STORM SEWER THE CONTRACTOR SHALL REPLACE PAVEMENT WITH MATCH IN KIND MATERIALS AT NO ADDITIONAL COST TO THE DEPARTMENT.

PLACE 10" OF BASE AGGREGATE DENSE 1 1/4-INCH BELOW BASE PATCHING CONCRETE SHES.



PROJECT NO:1071-02-61

HWY: IH 90

COUNTY: MONROE

CONSTRUCTION DETAIL; STORM SEWER MAINLINE (2)

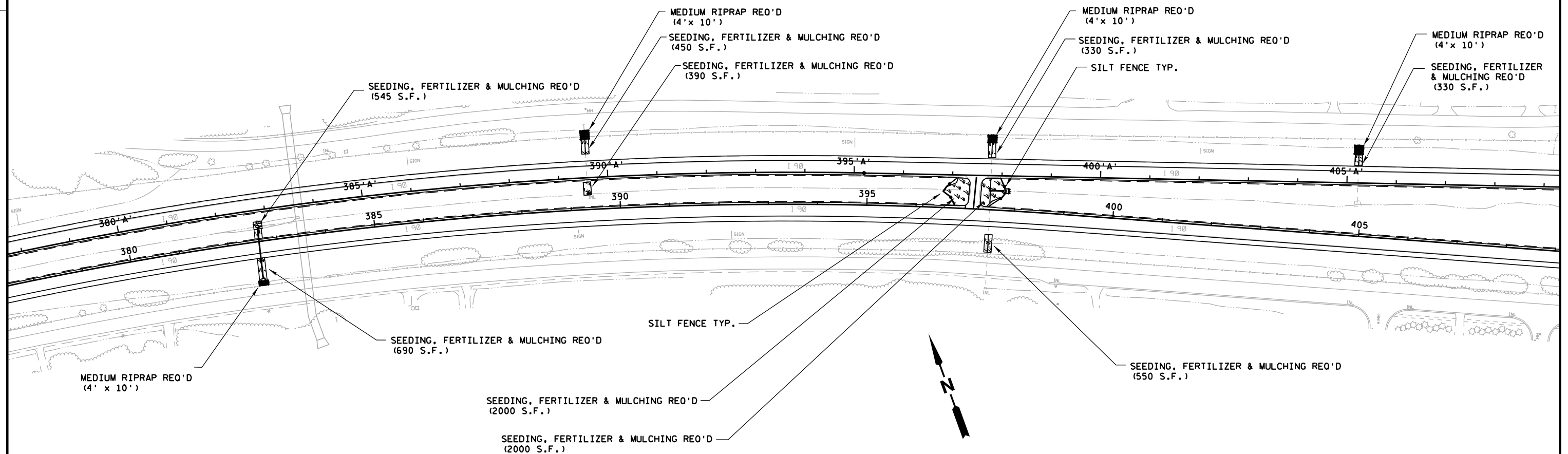
SHEET

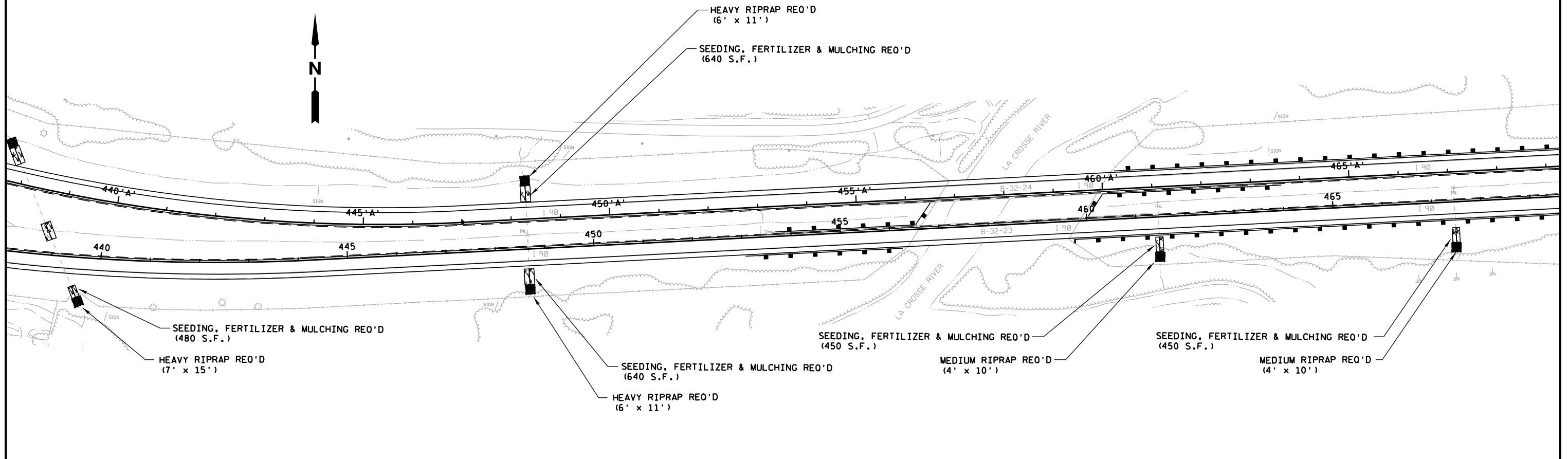
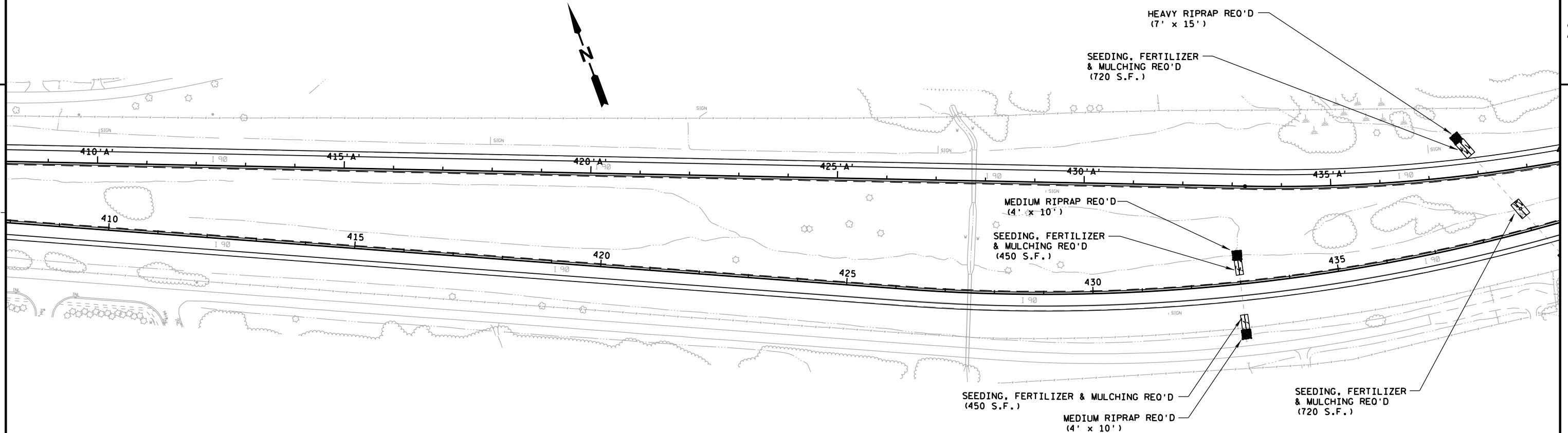
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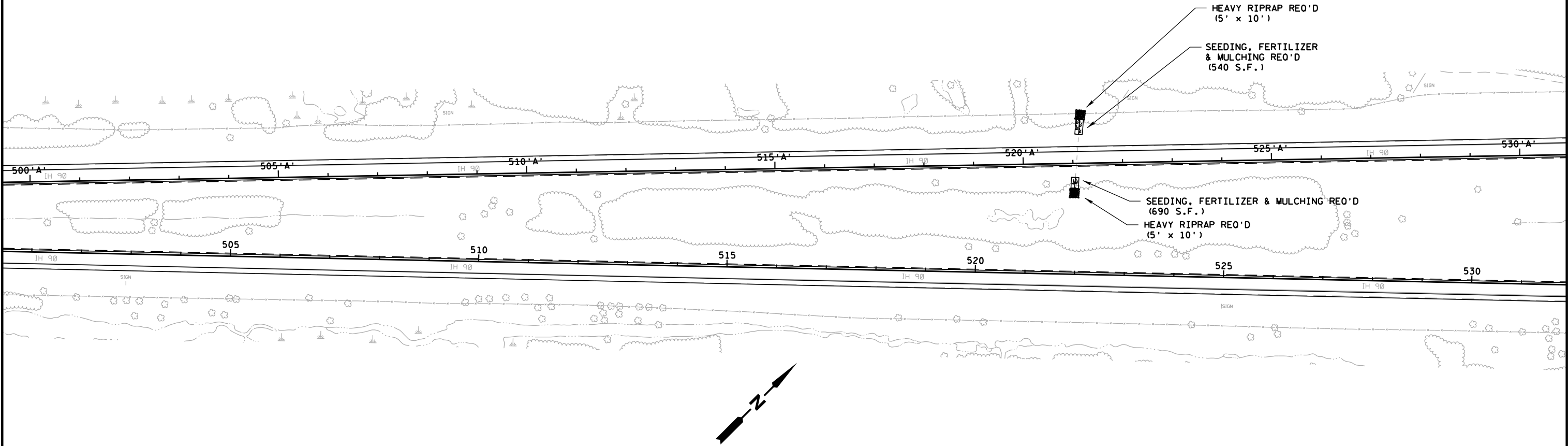
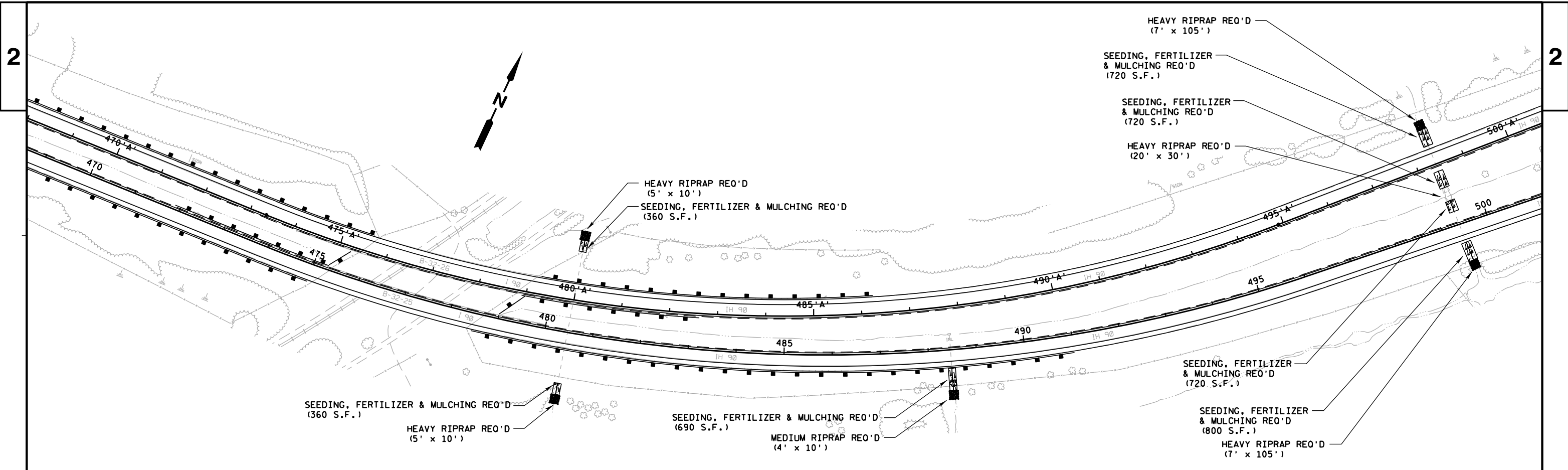
STH 16 INTERCHANGE
(ONALASKA)

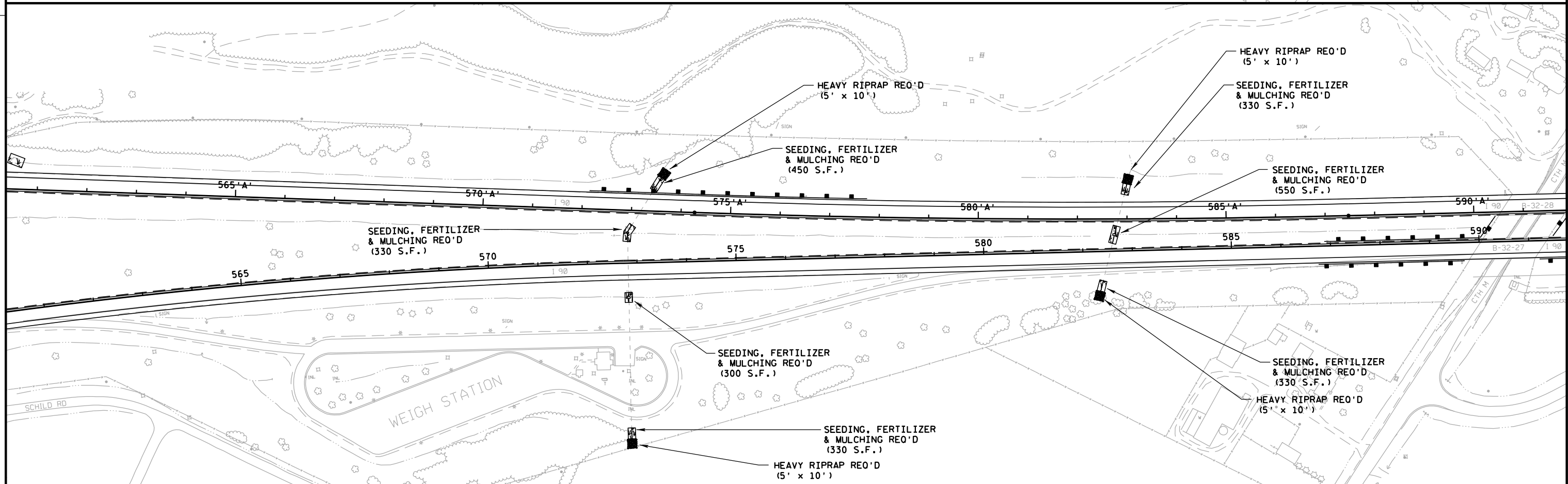
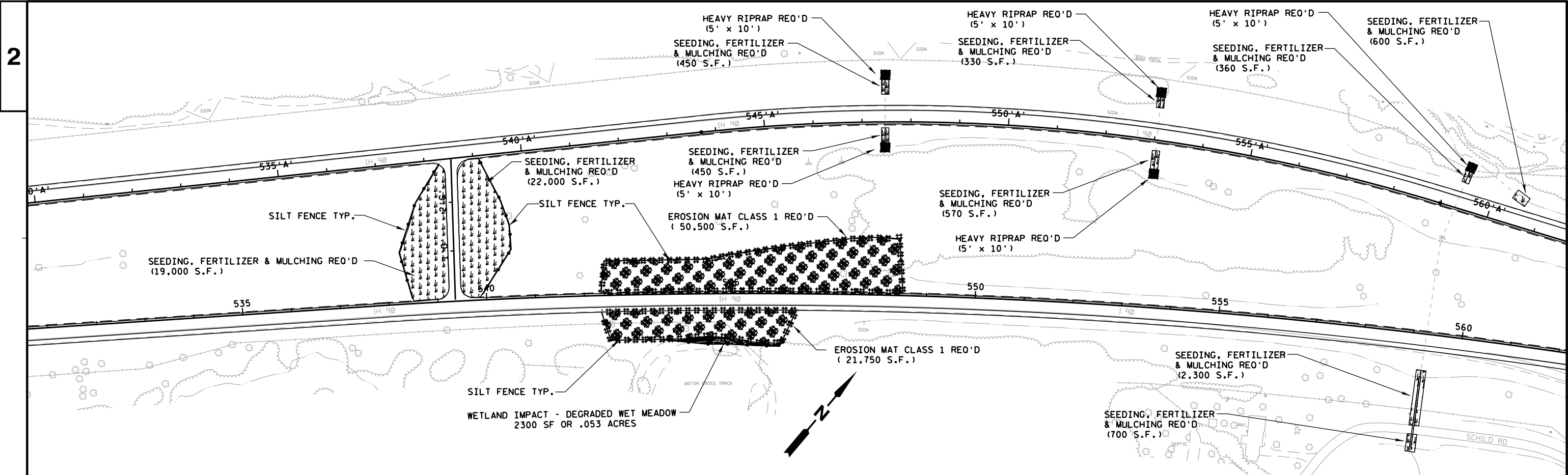
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- NOTES:
1. MEDIUM RIPRAP SHALL BE PLACED TO A DEPTH OF 1½'
 2. HEAVY RIPRAP SHALL BE PLACED TO A DEPTH OF 2'

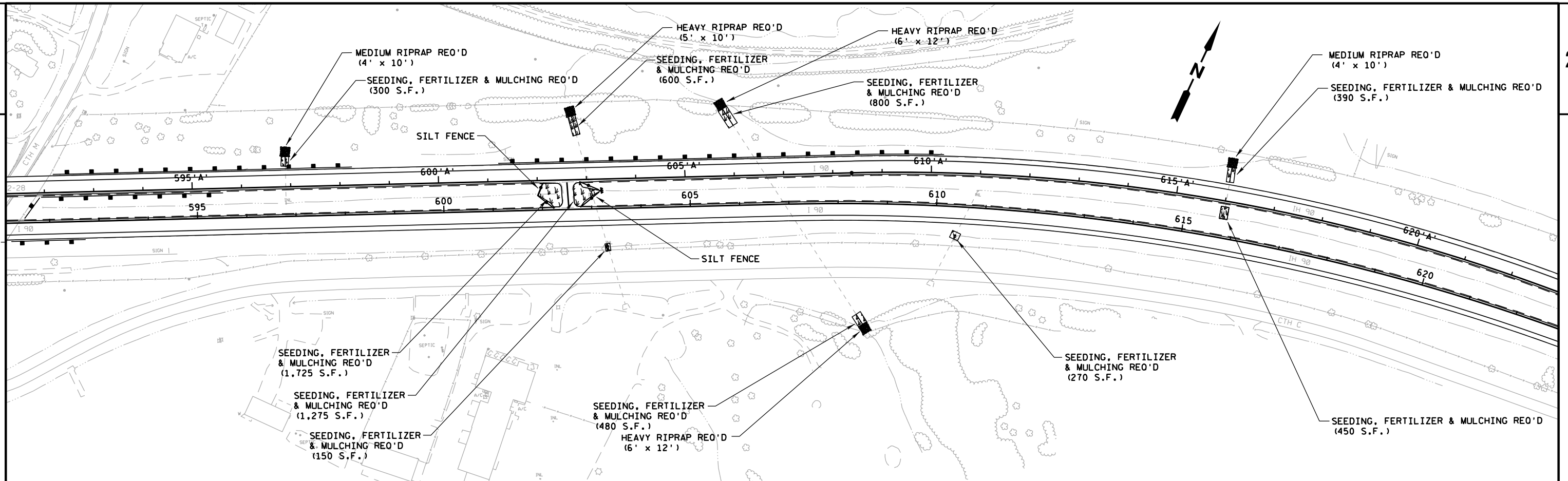




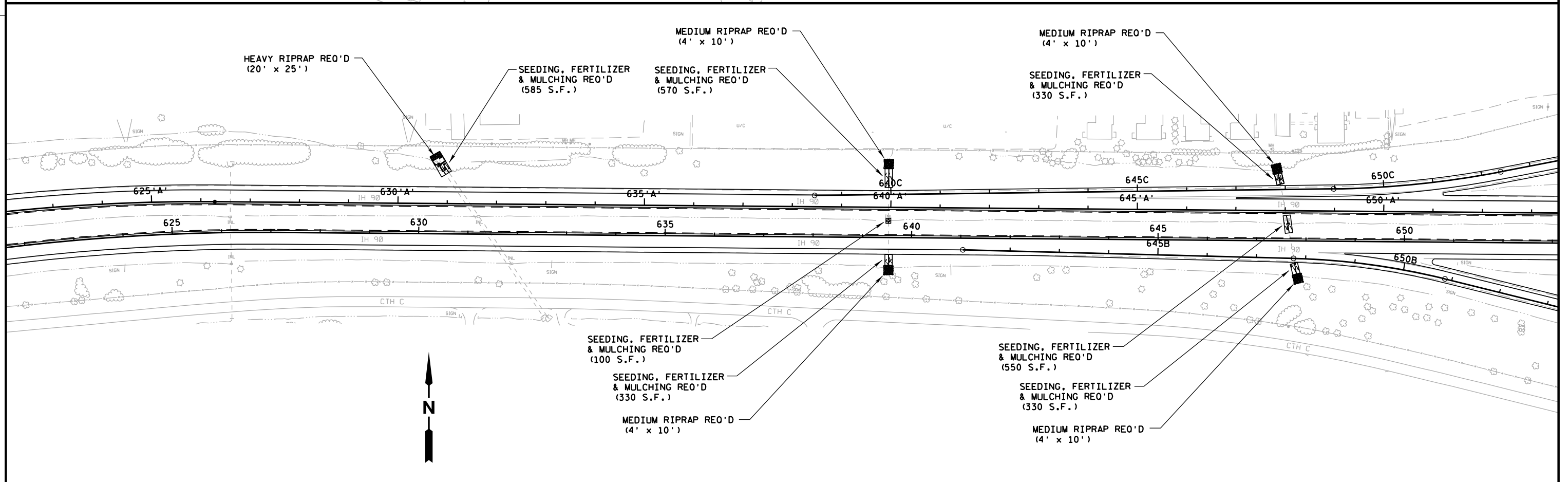


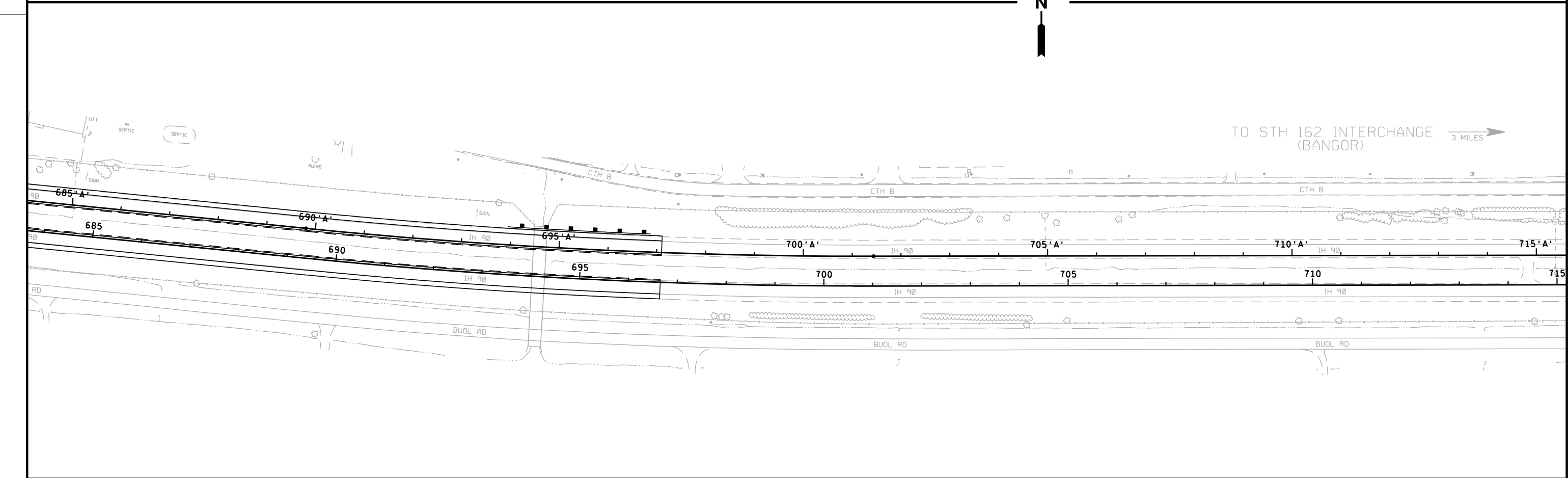
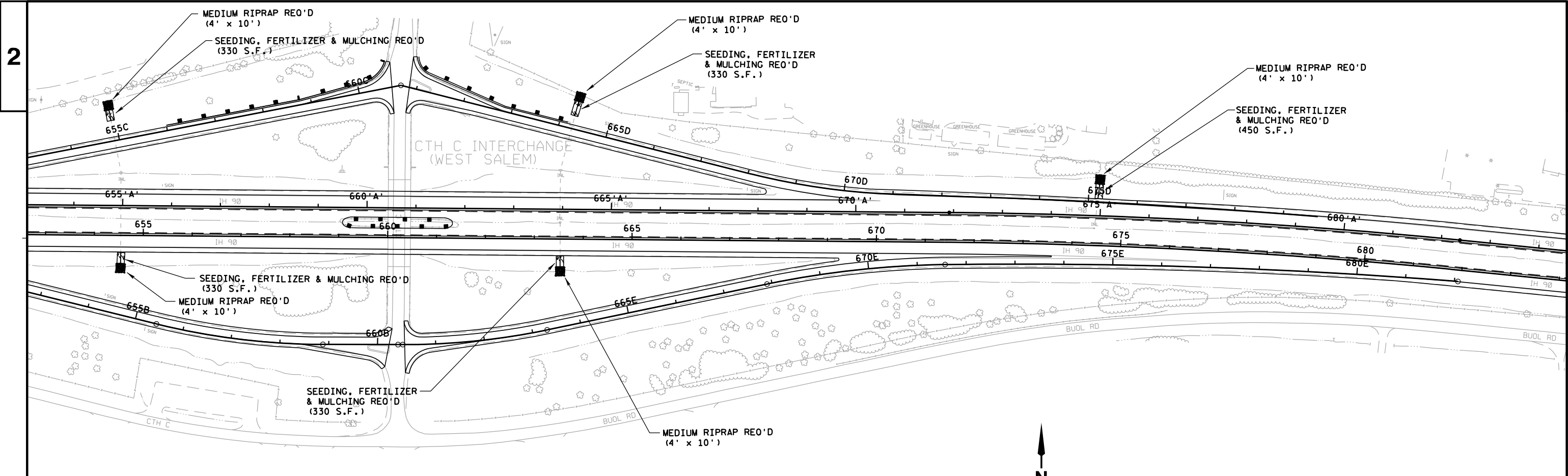


2



2





PROJECT NO:1071-07-77

HWY: IH 90

COUNTY: LA CROSSE

EROSION CONTROL

SHEET

23

E

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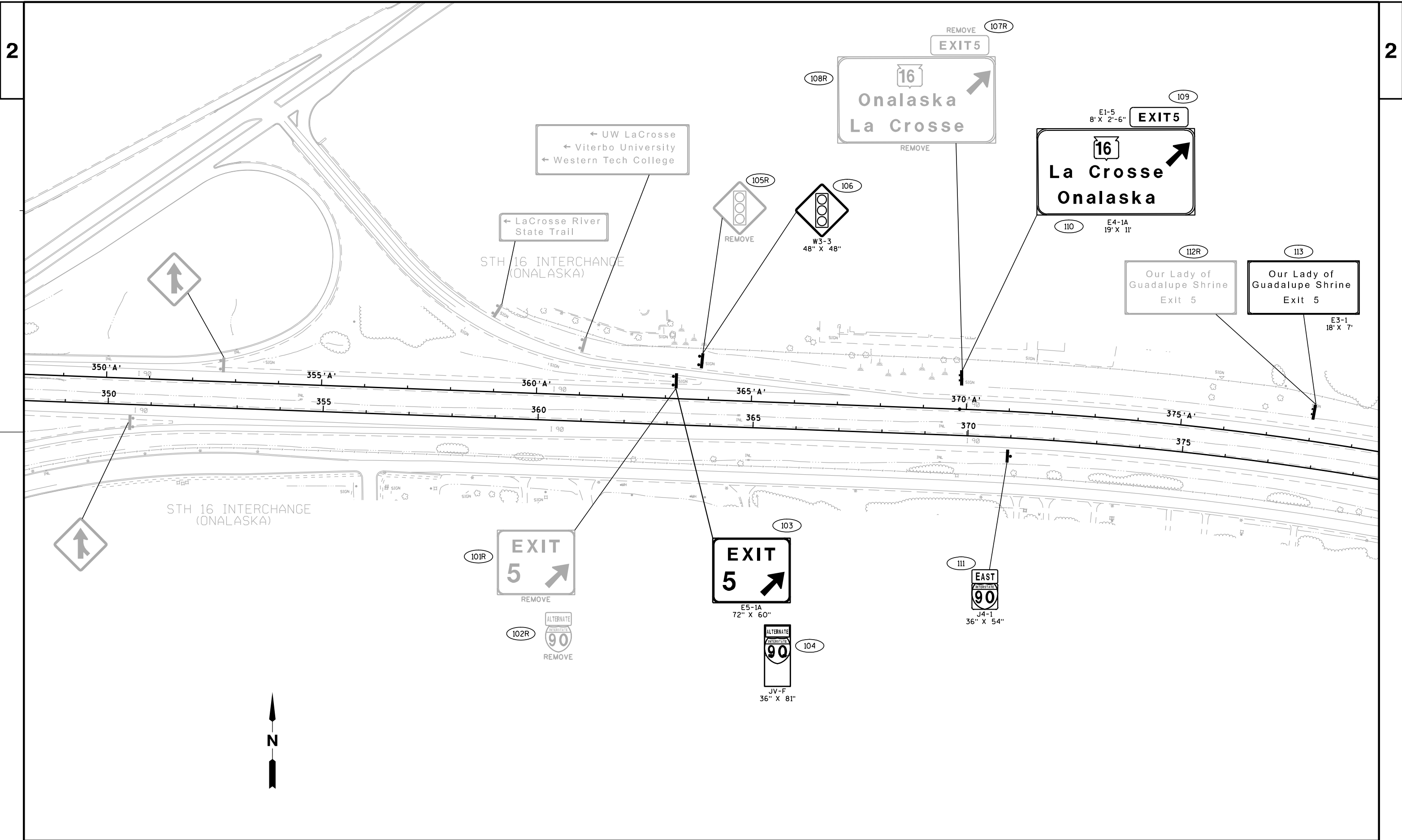
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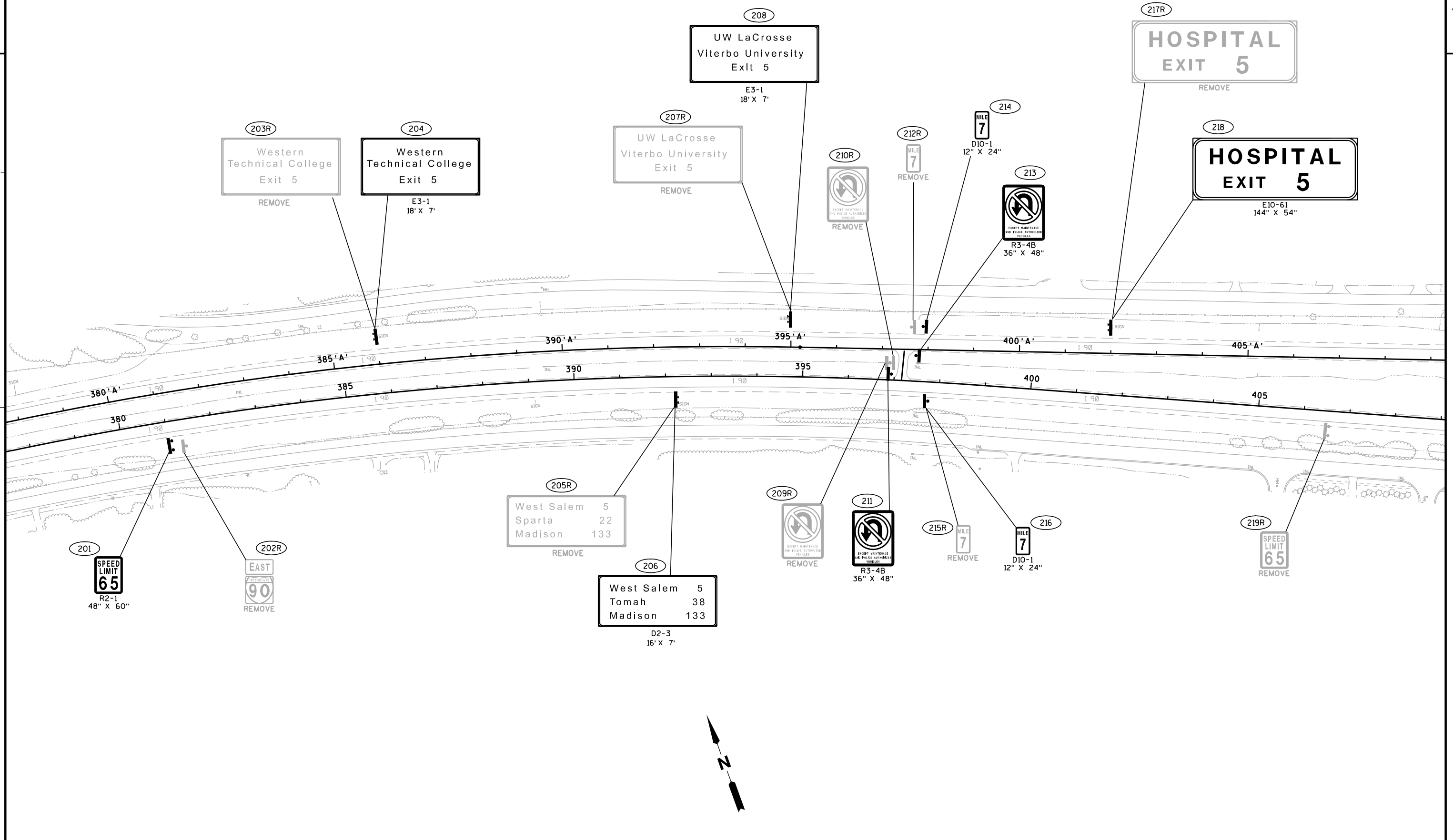
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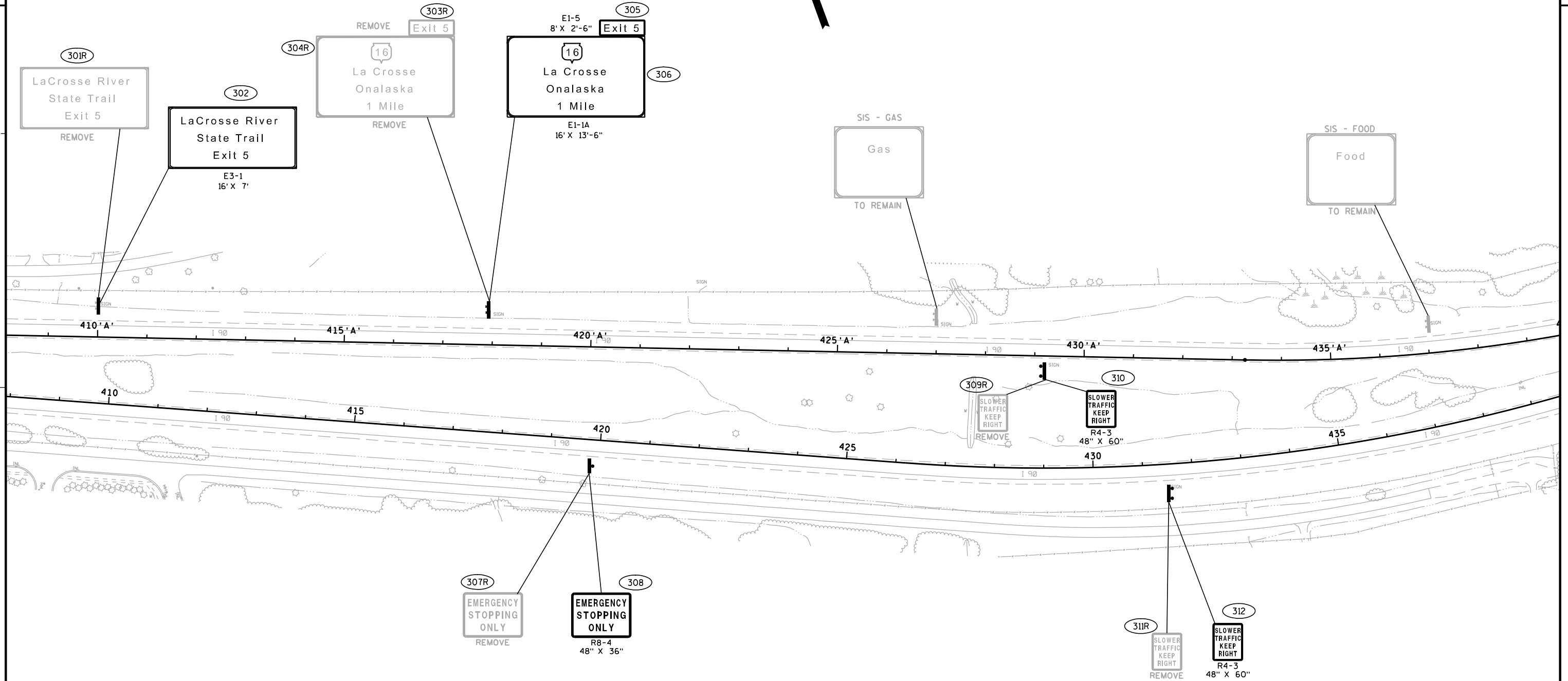
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PLOT SCALE : 200:1

WISDOT/CAADS SHEET 42









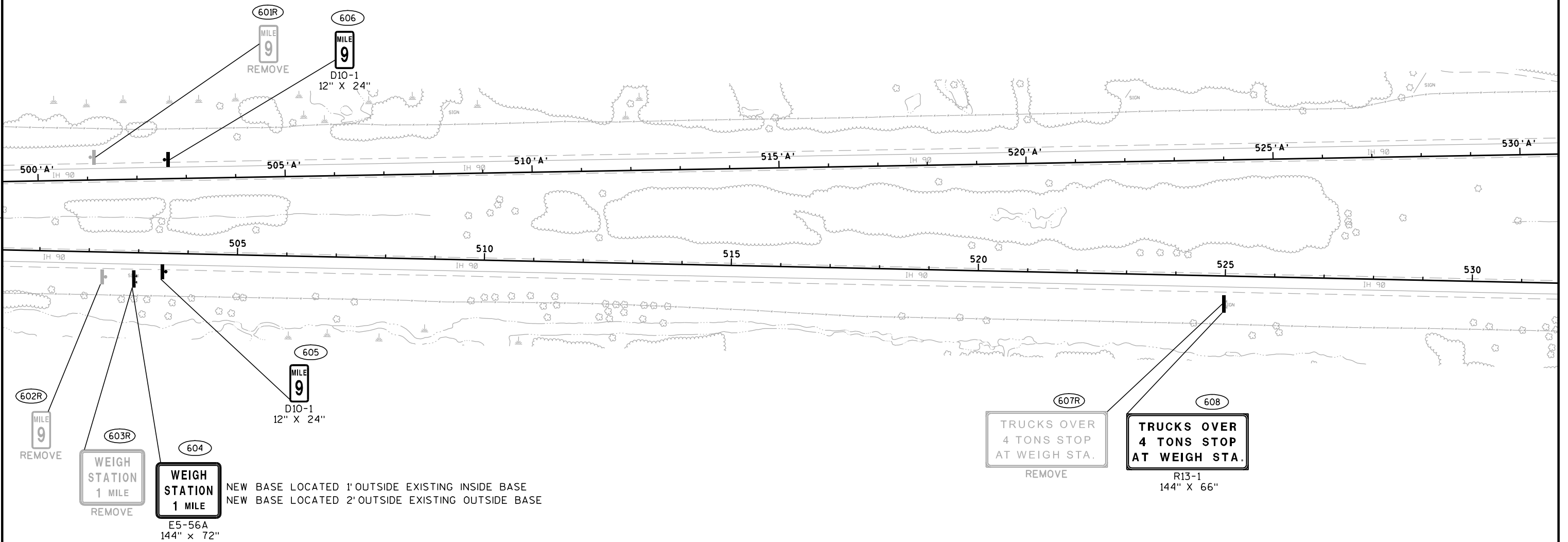
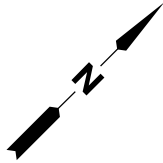
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La Crosse Area
Tourist Info
TUNE TO 530 AM
REMOVE

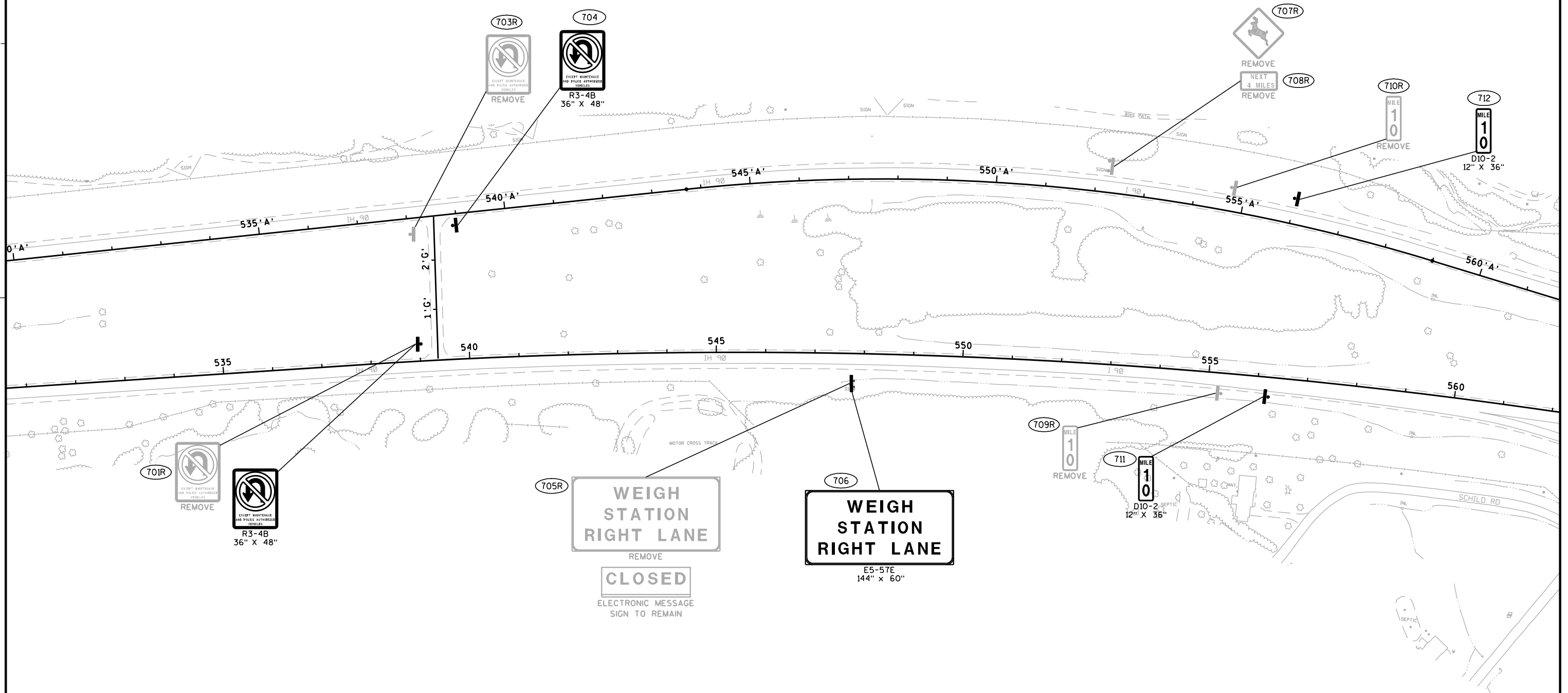
503R
REMOVE

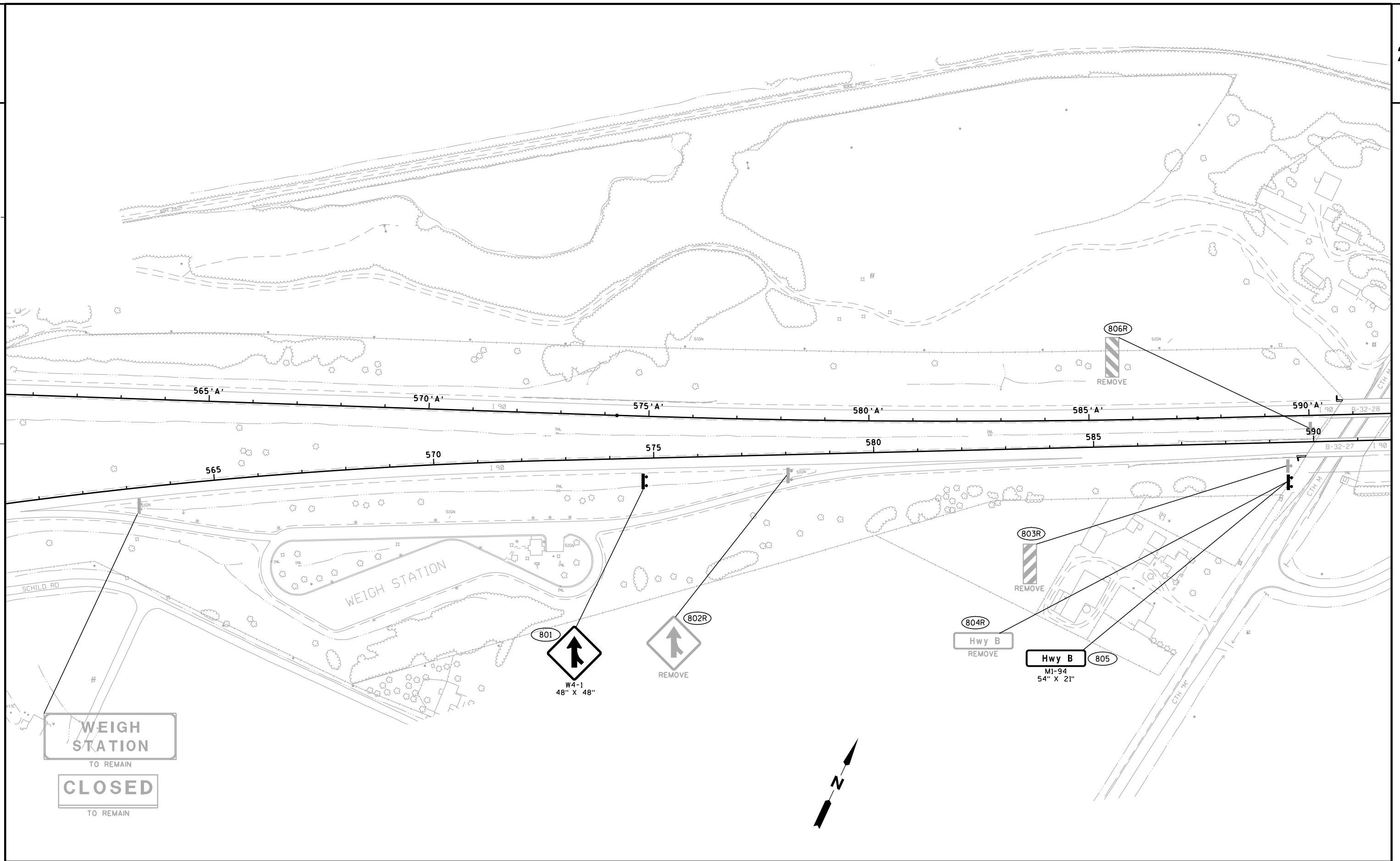
502R
REMOVE

505R
REMOVE

504R
REMOVE







2

2



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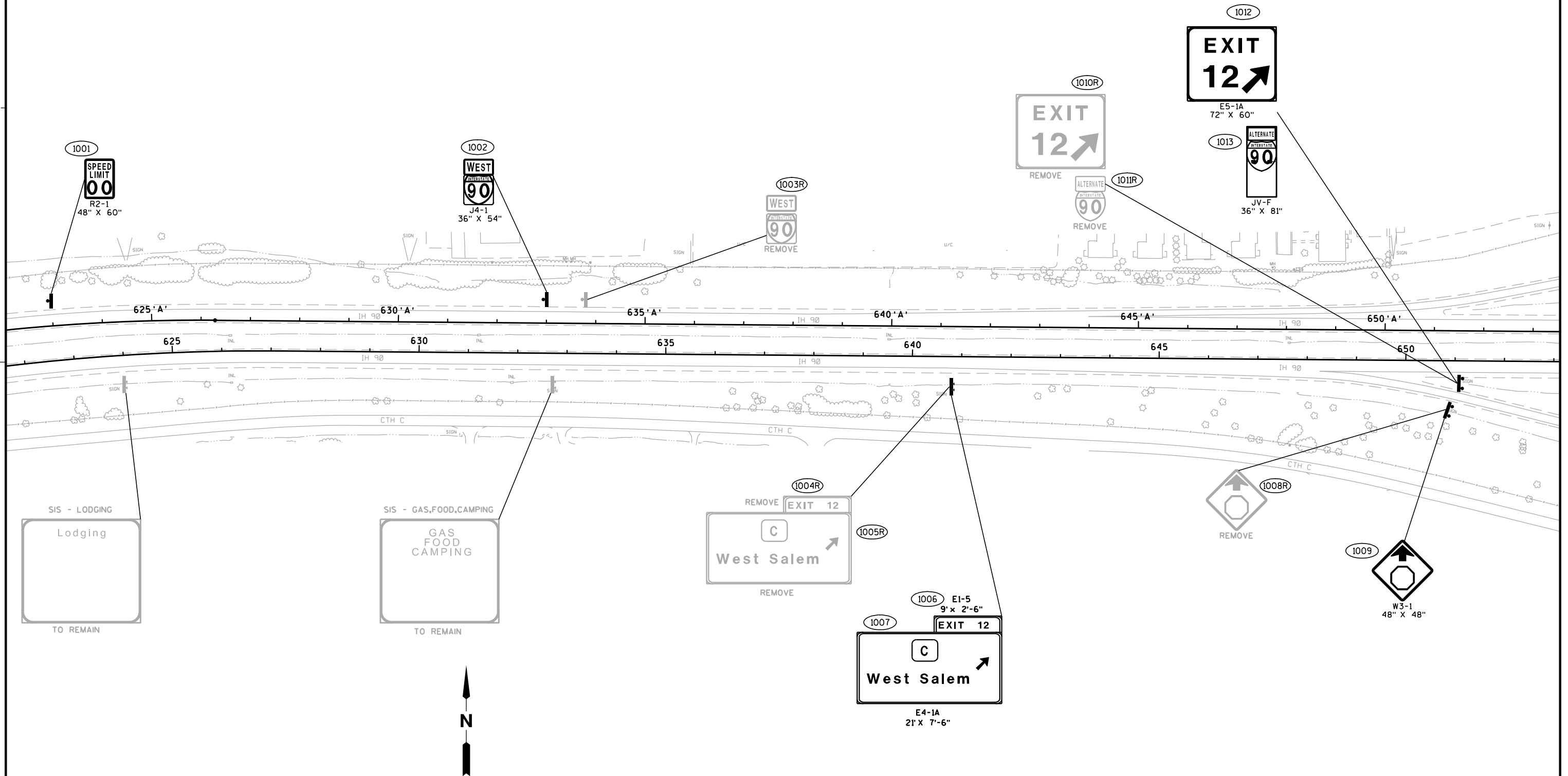
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WISDOT/CALTRANS

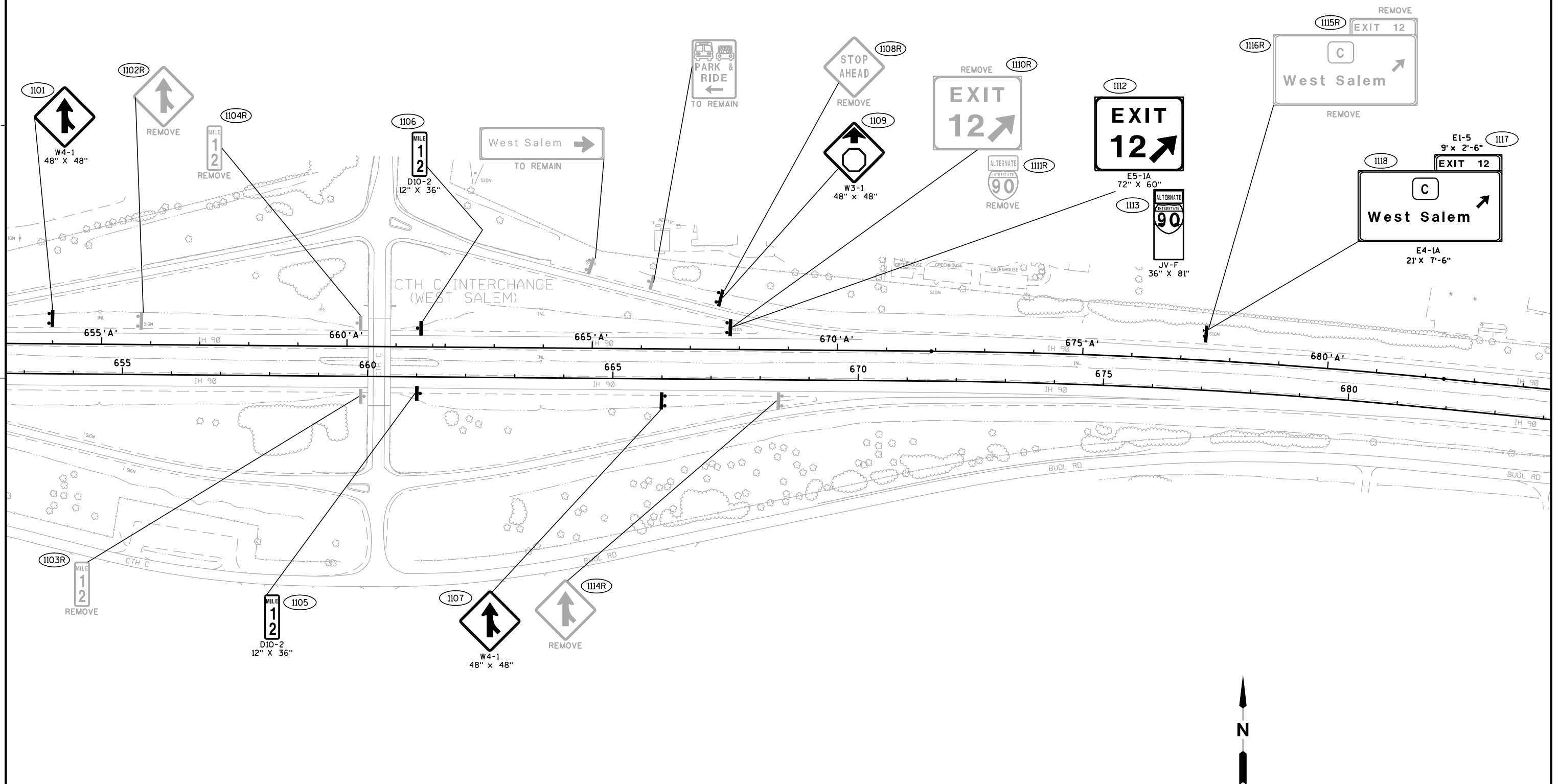
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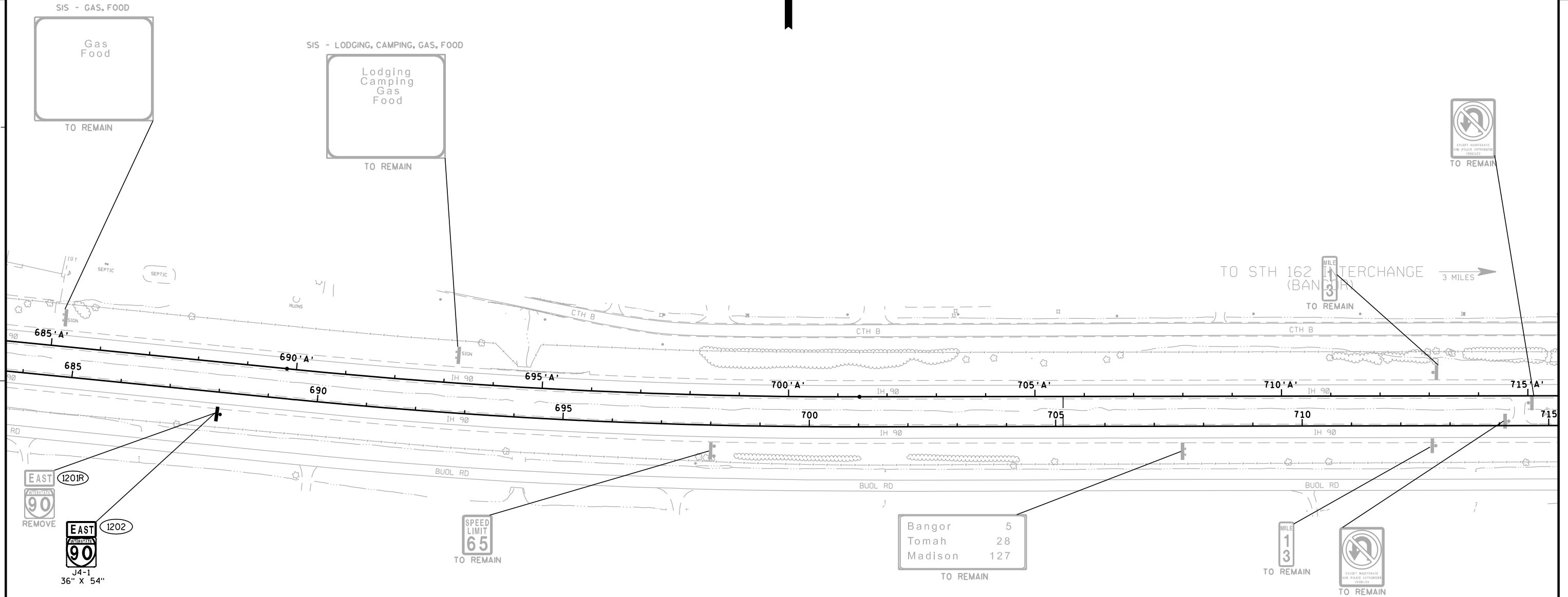
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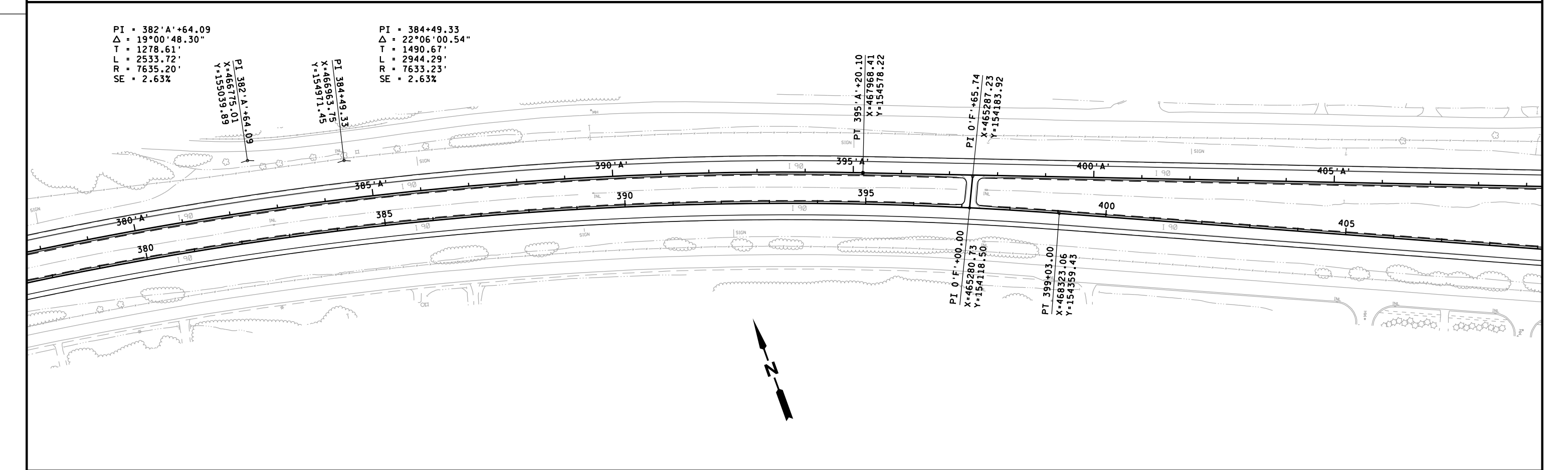
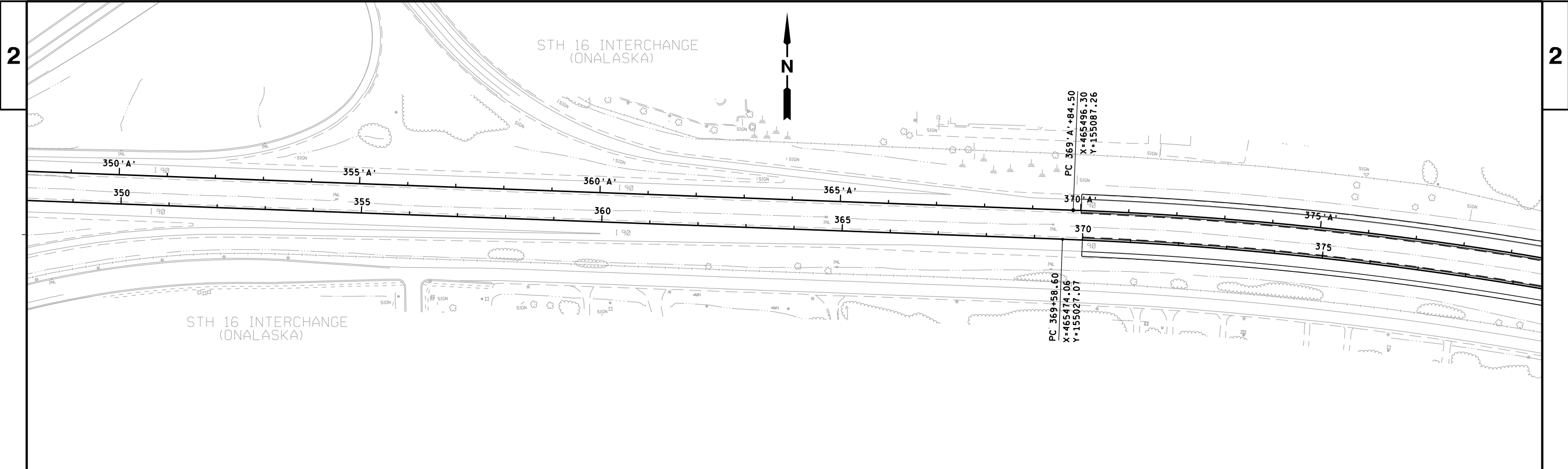
PLOT NAME :

WISDOT/CADD SHEET 42









PROJECT NO:1071-07-77

HWY: IH 90

COUNTY: LA CROSSE

ALIGNMENT PLAN

SHEET

36

E

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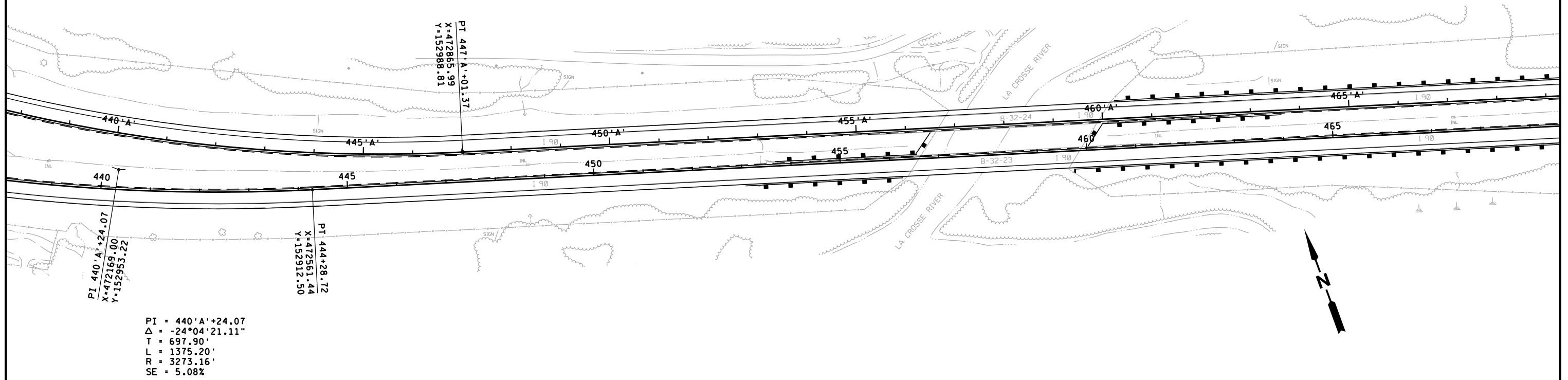
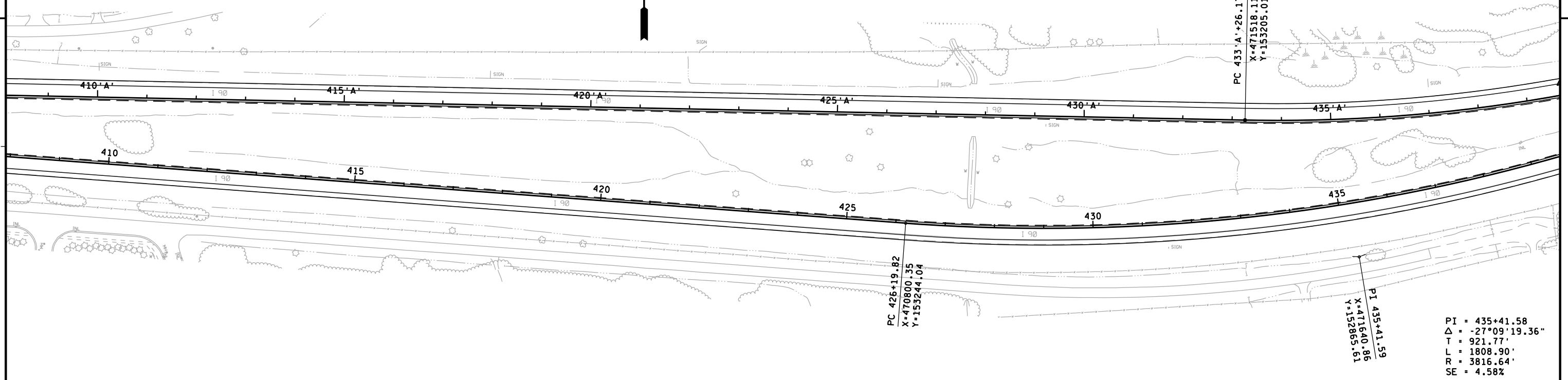
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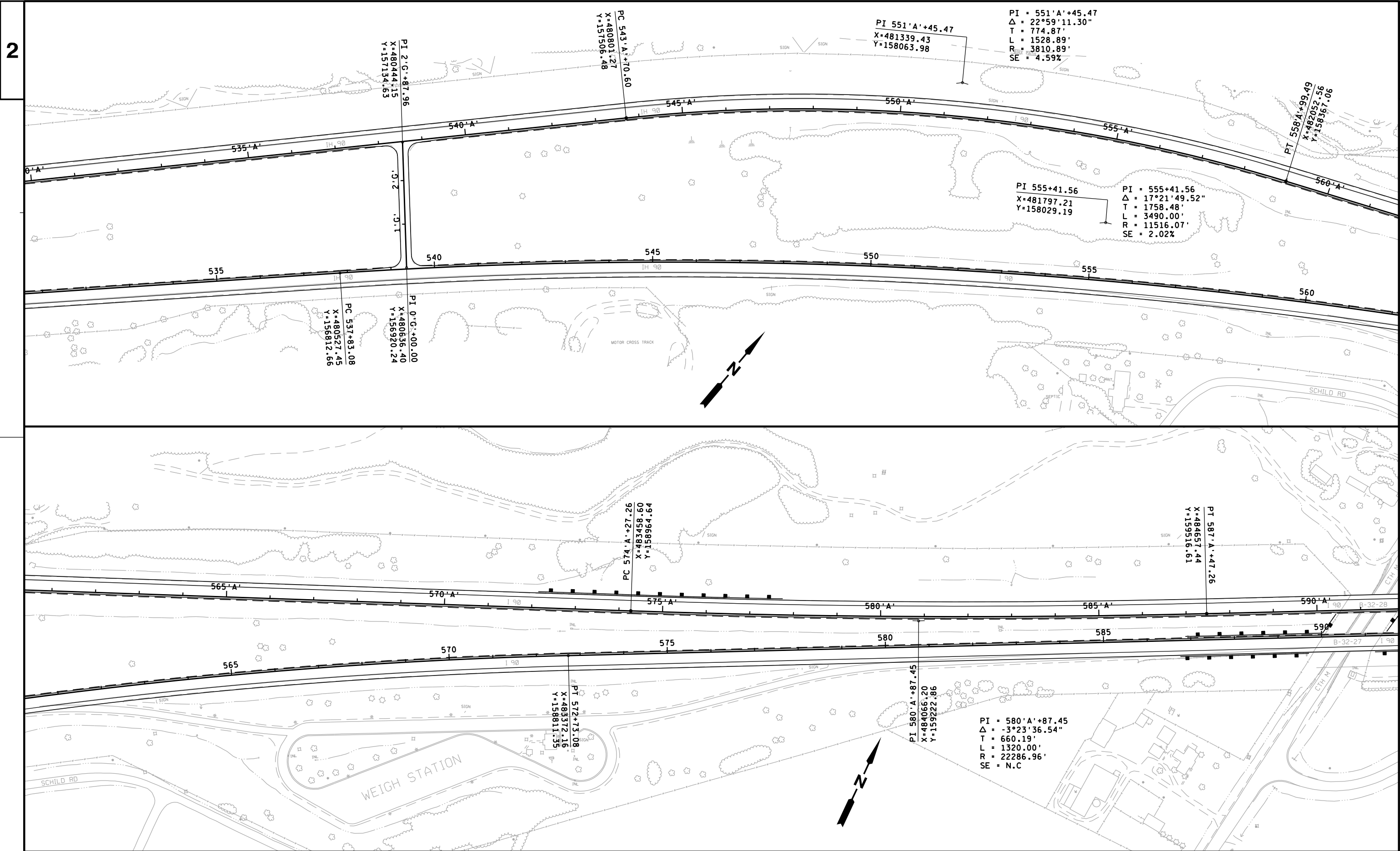
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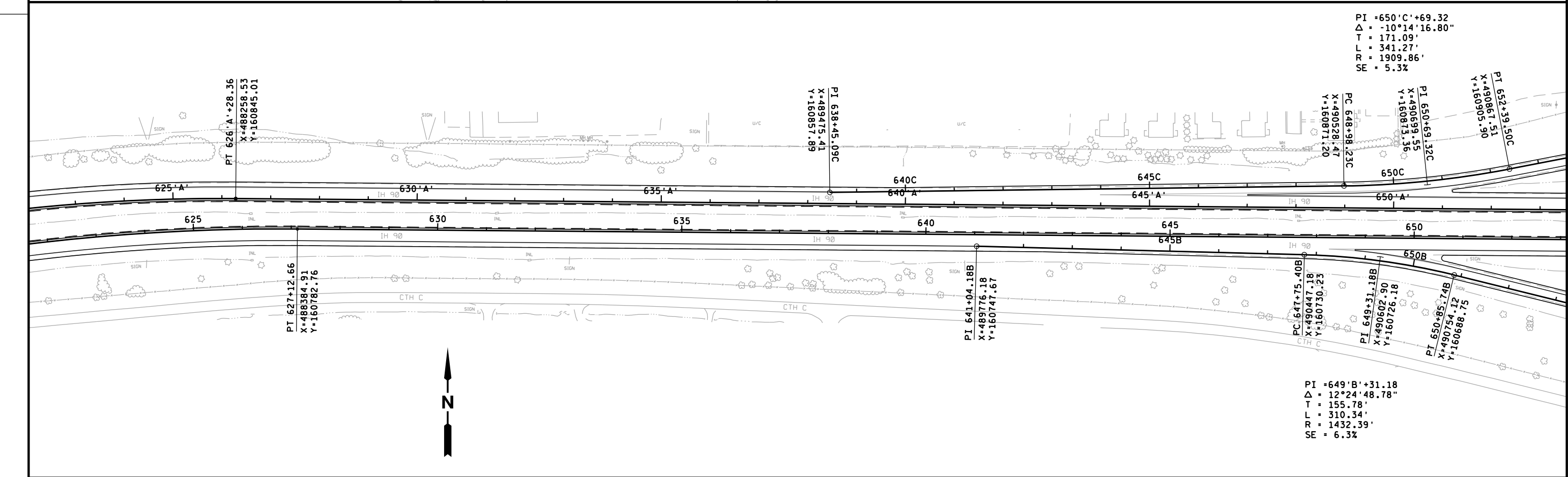
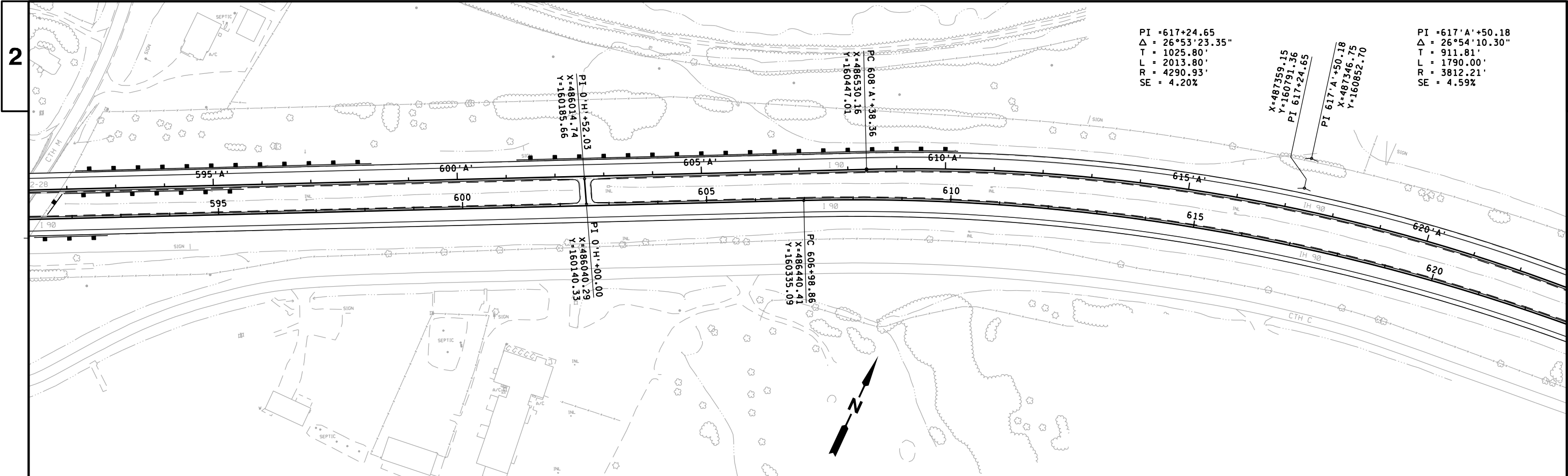
PLOT NAME :

PLOT SCALE : 200:1

WISDOT/CAADS SHEET 42







PROJECT NO:1071-07-77

HWY: IH 90

COUNTY: LA CROSSE

ALIGNMENT PLAN

SHEET

40

E

FILE NAME : p:\State\190\10710707\Cad\ep\ans\027209_.ad.dgn

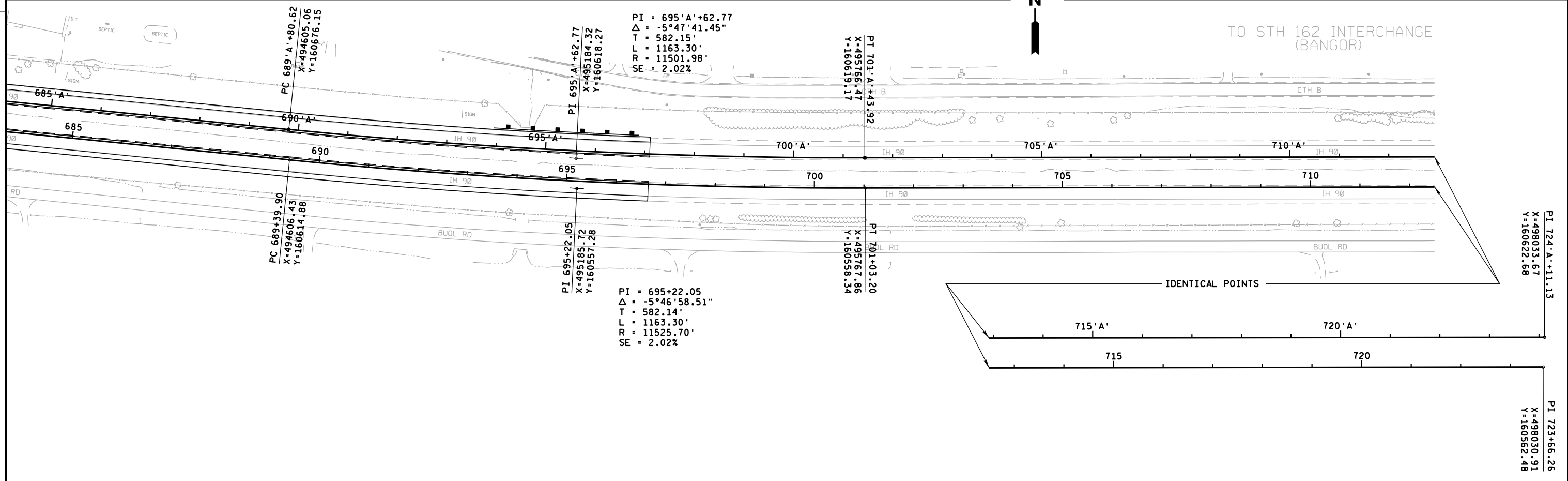
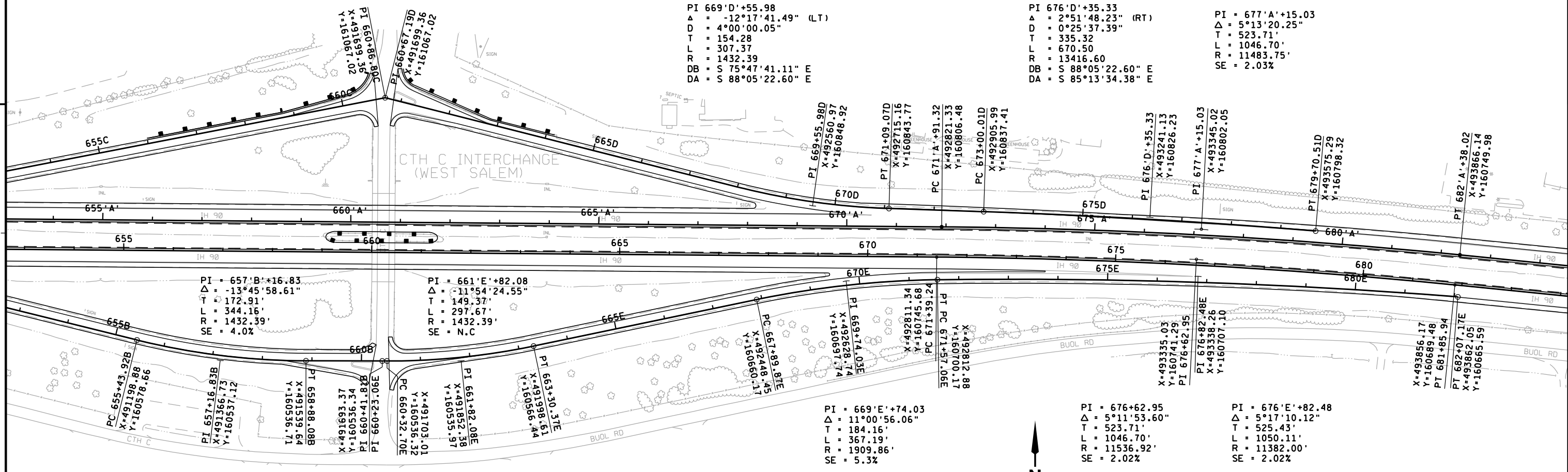
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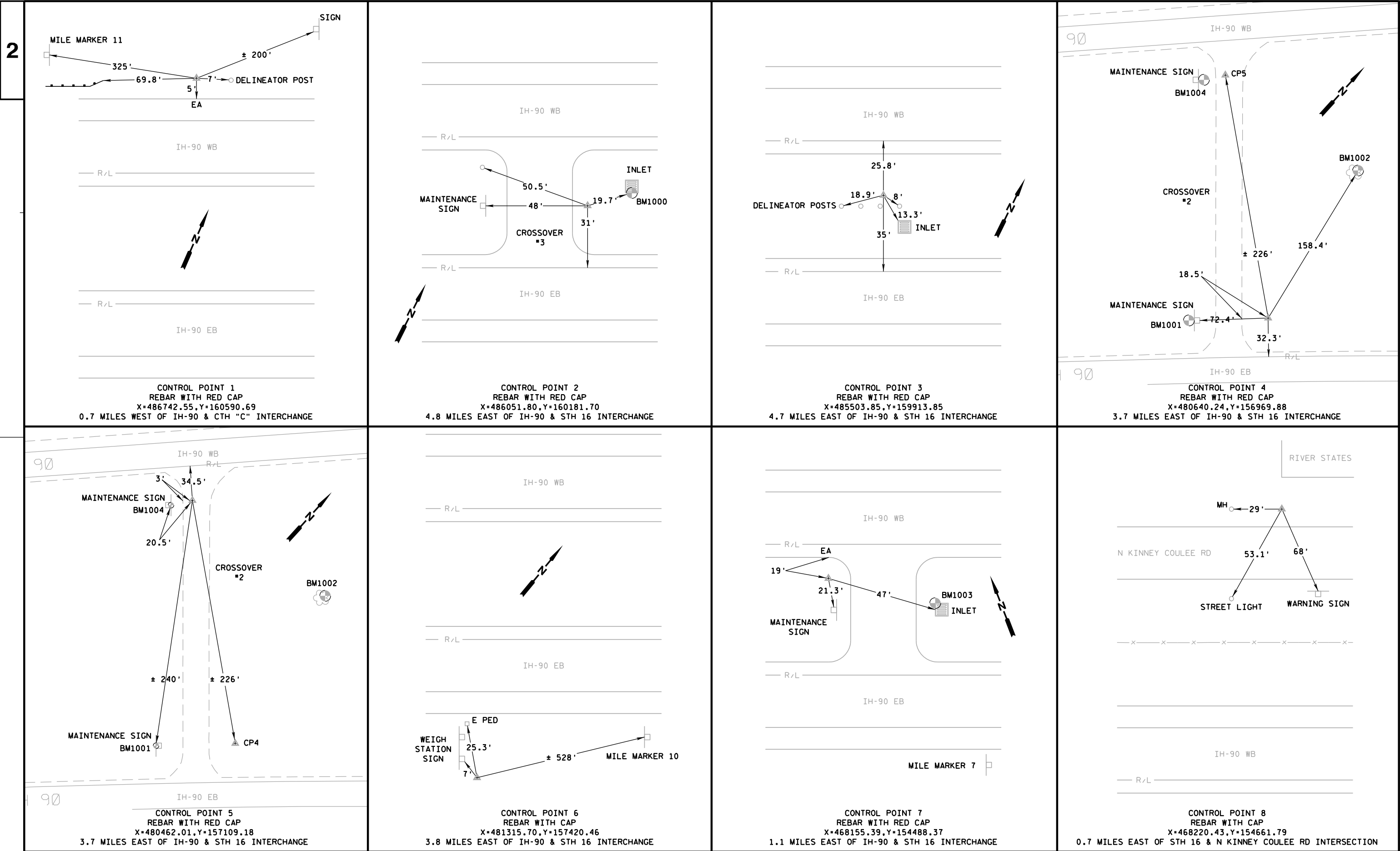
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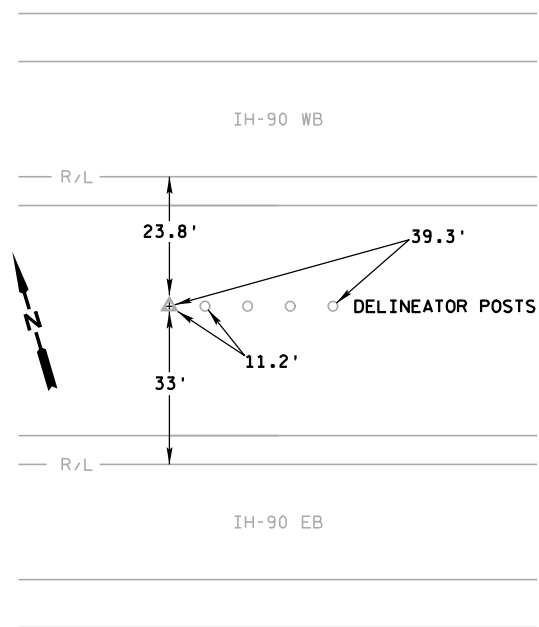
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PLOT SCALE : 200:1

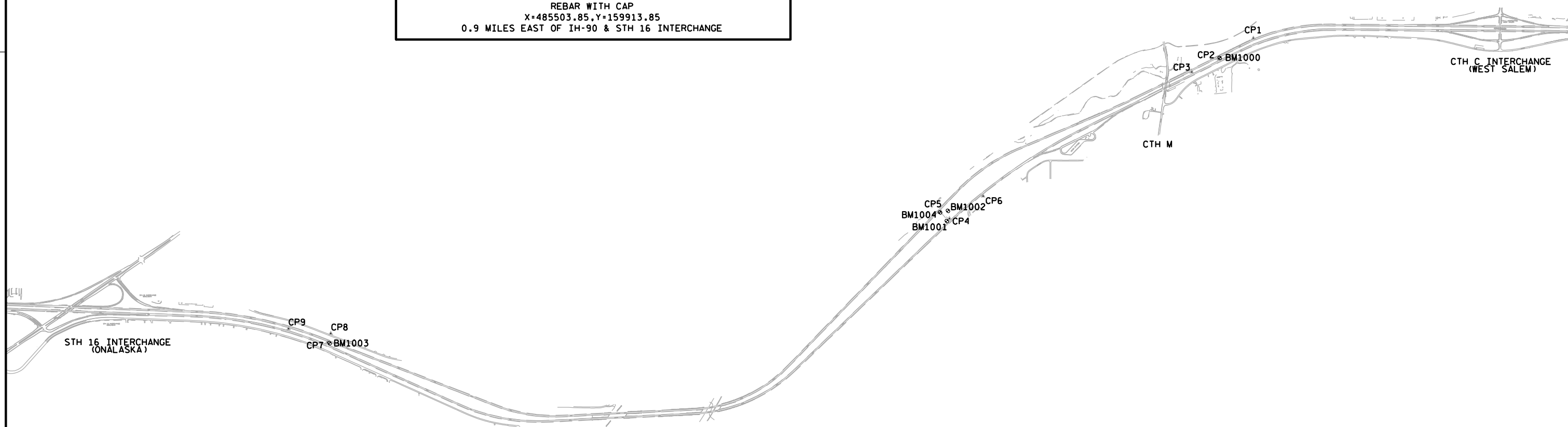
WISDOT/CAADS SHEET 42







CONTROL POINT 9
REBAR WITH CAP
X=485503.85, Y=159913.85
0.9 MILES EAST OF IH-90 & STH 16 INTERCHANGE



3

DATE 29NOV12		E S T I M A T E O F Q U A N T I T I E S			
LINE		1071-07-77			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	201.0105	CLEARING	STA	92.000	92.000
0020	204.0100	REMOVING PAVEMENT	SY	53.000	53.000
0030	204.0120	REMOVING ASPHALTIC SURFACE MILLING	SY	286,450.000	286,450.000
0040	204.0165	REMOVING GUARDRAIL	LF	6,310.000	6,310.000
0050	204.0170	REMOVING FENCE	LF	61,500.000	61,500.000
0060	204.0180	REMOVING DELINEATORS AND MARKERS	EACH	102.000	102.000
0070	204.0190	REMOVING SURFACE DRAINS	EACH	2.000	2.000
0080	204.0220	REMOVING INLETS	EACH	2.000	2.000
0090	204.0245	REMOVING STORM SEWER (SIZE) 01. 36-INCH	LF	152.000	152.000
0100	204.0270	ABANDONING CULVERT PIPES	EACH	1.000	1.000
0110	205.0100	EXCAVATION COMMON	CY	1,521.000	1,521.000
0120	208.0100	BORROW	CY	2,015.000	2,015.000
0130	211.0400	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	STA	239.000	239.000
0140	213.0100	FINISHING ROADWAY (PROJECT) 01. 1071-07-77	EACH	1.000	1.000
0150	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	6,850.000	6,850.000
0160	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	69.000	69.000
0170	390.0403	BASE PATCHING CONCRETE SHES	SY	652.000	652.000
0180	416.0620	DRILLED DOWEL BARS	EACH	1,216.000	1,216.000
0190	440.4410.S	INCENTIVE IRI RIDE	DOL	67,066.000	67,066.000
0200	455.0105	ASPHALTIC MATERIAL PG58-28	TON	2,500.000	2,500.000
0210	455.0125	ASPHALTIC MATERIAL PG70-28	TON	1,050.000	1,050.000
0220	455.0605	TACK COAT	GAL	17,500.000	17,500.000
0230	460.1100	HMA PAVEMENT TYPE E-0.3	TON	15,610.000	15,610.000
0240	460.1103	HMA PAVEMENT TYPE E-3	TON	4,210.000	4,210.000
0250	460.1130	HMA PAVEMENT TYPE E-30	TON	25,150.000	25,150.000
0260	460.1700	HMA PAVEMENT TYPE SMA	TON	17,370.000	17,370.000
0270	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	24,090.000	24,090.000
0280	460.4110.S	REHEATING HMA LONGITUDINAL JOINTS	LF	65,374.000	65,374.000
0290	465.0400	ASPHALTIC SHOULDER RUMBLE STRIP	LF	126,500.000	126,500.000
0300	512.1000	PILING STEEL SHEET TEMPORARY	SF	544.000	544.000
0310	520.7000	CLEANING CULVERT PIPES	EACH	30.000	30.000
0320	520.8000	CONCRETE COLLARS FOR PIPE	EACH	212.000	212.000
0330	521.1624	APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 24-INCH 10 TO 1	EACH	1.000	1.000
0340	522.1018	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	EACH	1.000	1.000
0350	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	1.000	1.000
0360	524.0618	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 18-INCH	EACH	8.000	8.000
0370	524.0624	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 24-INCH	EACH	9.000	9.000
0380	524.0630	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 30-INCH	EACH	10.000	10.000
0390	524.0636	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 36-INCH	EACH	6.000	6.000
0400	524.0642	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 42-INCH	EACH	2.000	2.000
0410	524.0648	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 48-INCH	EACH	2.000	2.000
0420	524.0660	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 60-INCH	EACH	5.000	5.000
0430	603.8000	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	LF	440.000	440.000

3

3

DATE 29NOV12		E S T I M A T E O F Q U A N T I T I E S			
LINE					1071-07-77
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0440	603.8125	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	LF	880.000	880.000
0450	606.0200	RIPRAP MEDIUM	CY	51.000	51.000
0460	606.0300	RIPRAP HEAVY	CY	192.000	192.000
0470	608.0518	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 18-INCH	LF	136.000	136.000
0480	608.0536	STORM SEWER PIPE REINFORCED CONCRETE CLASS V 36-INCH	LF	140.000	140.000
0490	609.0118	RELAID STORM SEWER 18-INCH	LF	208.000	208.000
0500	609.0124	RELAID STORM SEWER 24-INCH	LF	160.000	160.000
0510	609.0130	RELAID STORM SEWER 30-INCH	LF	208.000	208.000
0520	609.0136	RELAID STORM SEWER 36-INCH	LF	112.000	112.000
0530	609.0142	RELAID STORM SEWER 42-INCH	LF	48.000	48.000
0540	609.0148	RELAID STORM SEWER 48-INCH	LF	48.000	48.000
0550	609.0160	RELAID STORM SEWER 60-INCH	LF	144.000	144.000
0560	611.0430	RECONSTRUCTING INLETS	EACH	1.000	1.000
0570	611.0642	INLET COVERS TYPE MS	EACH	4.000	4.000
0580	611.3901	INLETS MEDIAN 1 GRATE	EACH	2.000	2.000
0590	611.3902	INLETS MEDIAN 2 GRATE	EACH	1.000	1.000
0600	614.0010	BARRIER SYSTEM GRADING SHAPING FINISHING	EACH	15.000	15.000
0610	614.0220	STEEL THRIE BEAM BULLNOSE TERMINAL	EACH	2.000	2.000
0620	614.0230	STEEL THRIE BEAM	LF	250.000	250.000
0630	614.0920	SALVAGED RAIL	LF	4,820.000	4,820.000
0640	614.2300	MGS GUARDRAIL 3	LF	11,040.000	11,040.000
0650	614.2500	MGS THRIE BEAM TRANSITION	LF	640.000	640.000
0660	614.2610	MGS GUARDRAIL TERMINAL EAT	EACH	17.000	17.000
0670	614.2620	MGS GUARDRAIL TERMINAL TYPE 2	EACH	17.000	17.000
0680	616.0100	FENCE WOVEN WIRE (HEIGHT) 01. 4-FT	LF	43,900.000	43,900.000
0690	616.0206	FENCE CHAIN LINK 6-FT	LF	17,500.000	17,500.000
0700	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1071-07-77	EACH	1.000	1.000
0710	619.1000	MOBILIZATION	EACH	1.000	1.000
0720	625.0100	TOPSOIL	SY	210.000	210.000
0730	625.0500	SALVAGED TOPSOIL	SY	16,744.000	16,744.000
0740	627.0200	MULCHING	SY	13,749.000	13,749.000
0750	628.1504	SILT FENCE	LF	2,225.000	2,225.000
0760	628.1520	SILT FENCE MAINTENANCE	LF	2,225.000	2,225.000
0770	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	6.000	6.000
0780	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	4.000	4.000
0790	628.2004	EROSION MAT CLASS I TYPE B	SY	9,000.000	9,000.000
0800	628.7010	INLET PROTECTION TYPE B	EACH	12.000	12.000
0810	628.7504	TEMPORARY DITCH CHECKS	LF	60.000	60.000
0820	628.7555	CULVERT PIPE CHECKS	EACH	47.000	47.000
0830	629.0210	FERTILIZER TYPE B	CWT	177.000	177.000
0840	630.0130	SEEDING MIXTURE NO. 30	LB	402.000	402.000
0850	630.0200	SEEDING TEMPORARY	LB	458.000	458.000
0860	633.0200	DELINEATORS FLEXIBLE	EACH	250.000	250.000
0870	633.5200	MARKERS CULVERT END	EACH	88.000	88.000
0880	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	16.000	16.000
0890	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	13.000	13.000
0900	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	29.000	29.000
0910	635.0200	SIGN SUPPORTS STRUCTURAL STEEL HS	LB	1,213.000	1,213.000
0920	635.0300	SIGN SUPPORTS REPLACING BASE CONNECTION BOLTS	EACH	30.000	30.000

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DATE 29NOV12		E S T I M A T E O F Q U A N T I T I E S			
LINE					1071-07-77
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0930	636.0100	SIGN SUPPORTS CONCRETE MASONRY	CY	1.200	1.200
0940	636.0500	SIGN SUPPORTS STEEL REINFORCEMENT	LB	68.000	68.000
0950	637.0101	SIGNS TYPE I	SF	2,366.000	2,366.000
0960	637.0202	SIGNS REFLECTIVE TYPE II	SF	548.000	548.000
0970	638.2601	REMOVING SIGNS TYPE I	EACH	23.000	23.000
0980	638.2602	REMOVING SIGNS TYPE II	EACH	56.000	56.000
0990	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	64.000	64.000
1000	638.3100	REMOVING STRUCTURAL STEEL SIGN SUPPORTS	EACH	6.000	6.000
1010	642.5401	FIELD OFFICE TYPE D	EACH	1.000	1.000
1020	643.0200	TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1071-07-77	DAY	90.000	90.000
1030	643.0300	TRAFFIC CONTROL DRUMS	DAY	38,220.000	38,220.000
1040	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	2,600.000	2,600.000
1050	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	5,196.000	5,196.000
1060	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	3,350.000	3,350.000
1070	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	180.000	180.000
1080	643.0900	TRAFFIC CONTROL SIGNS	DAY	4,814.000	4,814.000
1090	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	2.000	2.000
1100	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	90.000	90.000
1110	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	281.000	281.000
1120	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	132,900.000	132,900.000
1130	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	260.000	260.000
1140	646.0600	REMOVING PAVEMENT MARKINGS	LF	7,526.000	7,526.000
1150	646.0790.S	REMOVING RAISED PAVEMENT MARKERS	EACH	602.000	602.000
1160	646.0881.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH	LF	16,800.000	16,800.000
1170	646.0883.S	PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	LF	5,600.000	5,600.000
1180	647.0566	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	LF	48.000	48.000
1190	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	167,035.000	167,035.000
1200	649.0400	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	LF	5,460.000	5,460.000
1210	649.0701	TEMPORARY PAVEMENT MARKING 8-INCH	LF	6,734.000	6,734.000
1220	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	2.000	2.000
1230	650.8000	CONSTRUCTION STAKING RESURFACING REFERENCE	LF	73,592.000	73,592.000
1240	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1071-07-77	LS	1.000	1.000
1250	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	1,539.000	1,539.000
1260	690.0150	SAWING ASPHALT	LF	1,583.000	1,583.000
1270	690.0250	SAWING CONCRETE	LF	2,776.000	2,776.000
1280	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT \$5.00/HR	HRS	2,400.000	2,400.000
1290	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT \$5.00/HR	HRS	3,200.000	3,200.000
1300	SPV.0035	SPECIAL 01. CONCRETE SURFACE DRAIN, DOWN PIPE	CY	10.500	10.500
1310	SPV.0035	SPECIAL 02. CONCRETE SURFACE DRAIN, FLUME	CY	3.500	3.500
1320	SPV.0060	SPECIAL 01. PERMANENT BARRICADE TYPE III	EACH	26.000	26.000
1330	SPV.0060	SPECIAL 02. BARRICADE RACK	EACH	7.000	7.000
1340	SPV.0060	SPECIAL 03. REMOVING CONCRETE BASE, TRAFFIC COUNTER	EACH	1.000	1.000
1350	SPV.0060	SPECIAL 04. BARRIER SYSTEM GRADING SHAPING FINISHING FOR MEDIAN BULLNOSES SPECIAL	EACH	1.000	1.000

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DATE 29NOV12

ESTIMATE OF QUANTITIES

LINE					1071-07-77
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
1360	SPV.0180	SPECIAL 01. REMOVING CONCRETE SURFACE DRAIN MASONRY	SY	63.000	63.000

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CLEARING					
CATEGORY	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA
0010	374+00	-	375+00	IH 90 EB RT	1
0010	380+00	-	381+00	IH 90 EB RT	1
0010	383+00	-	384+00	IH 90 EB RT	1
0010	386+00	-	387+00	IH 90 EB RT	1
0010	388+00	-	389+00	IH 90 EB RT	1
0010	397+00	-	399+00	IH 90 EB RT	2
0010	410+00	-	411+00	IH 90 EB RT & LT	2
0010	422+00	-	423+00	IH 90 EB LT	1
0010	436+00	-	438+00	IH 90 EB LT	2
0010	448+00	-	449+00	IH 90 EB RT	1
0010	502+00	-	506+00	IH 90 EB LT	4
0010	514+00	-	517+00	IH 90 EB LT	3
0010	522+00	-	525+00	IH 90 EB LT	3
0010	547+00	-	548+00	IH 90 EB LT	1
0010	581+00	-	582+00	IH 90 EB RT	1
0010	603+00	-	604+00	IH 90 EB RT	1
0010	611+00	-	612+00	IH 90 EB RT	1
0010	625+00	-	626+00	IH 90 EB RT	1
TOTAL STAGE 1					28
0010	375'A+00	-	376'A+00	IH 90 WB LT	1
0010	425'A+00	-	426'A+00	IH 90 WB RT	1
0010	501'A+00	-	505'A+00	IH 90 WB RT	4
0010	510'A+00	-	522'A+00	IH 90 WB RT & LT	24
0010	534'A+00	-	537'A+00	IH 90 WB RT	3
0010	549'A+00	-	553'A+00	IH 90 WB RT & LT	8
0010	559'A+00	-	560'A+00	IH 90 WB LT	1
0010	582'A+00	-	583'A+00	IH 90 WB LT	1
0010	596'A+00	-	597'A+00	IH 90 WB LT	1
0010	602'A+00	-	603'A+00	IH 90 WB LT	1
0010	617'A+00	-	626'A+00	IH 90 WB LT	9
0010	630'A+00	-	632'A+00	IH 90 WB LT	2
0010	678'A+00	-	686'A+00	IH 90 WB LT	8
TOTAL STAGE 3					64
TOTAL					92

REMOVING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 REMOVING PAVEMENT SY
0010	559+10	-	559+30	SCHILD ROAD	53
TOTAL					53

REMOVING ASPHALTIC SURFACE MILLING

CATEGORY	STATION	TO	STATION	LOCATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	REMARKS
STAGE 1A:						
0010	375+65	-	385+65	IH 90 EB	1,150	OUTSIDE SHOULDER
STAGE 1:						
0010	370+00	-	456+58	IH 90 EB	36,556	MAINLINE
0010	459+86	-	475+35	IH 90 EB	6,540	MAINLINE
0010	478+74	-	590+06	IH 90 EB	47,002	MAINLINE
0010	591+40	-	696+65	IH 90 EB	44,439	MAINLINE
0010	453+49	-	456+22	IH 90 EB LT	78	BEAM GUARD AREAS
0010	459+89	-		IH 90 EB LT	12	BEAM GUARD AREAS
0010	459+92	-	461+20	IH 90 EB LT	28	BEAM GUARD AREAS
0010	472+29	-	475+02	IH 90 EB LT	11	BEAM GUARD AREAS
0010	586+99	-	589+75	IH 90 EB LT	78	BEAM GUARD AREAS
0010	453+20	-	455+92	IH 90 EB RT	11	BEAM GUARD AREAS
0010	466+49	-	474+69	IH 90 EB RT	188	BEAM GUARD AREAS
0010	478+46	-	486+37	IH 90 EB RT	11	BEAM GUARD AREAS
0010	585+68	-	589+42	IH 90 EB RT	11	BEAM GUARD AREAS
0010	637'B'+96	-	660'B'+25	IH 90 RAMP	3,715	OFF RAMP
0010	660'E'+54	-	671'E'+42	IH 90 RAMP	3,967	ON RAMP
SUBTOTAL					142,700	
STAGE 3:						
0010	370'A+01	-	456'A+62	IH 90 WB	36,569	MAINLINE
0010	459'A+91	-	475'A+43	IH 90 WB	6,553	MAINLINE
0010	478'A+82	-	590'A+54	IH 90 WB	47,171	MAINLINE
0010	591'A+87	-	697'A+10	IH 90 WB	44,432	MAINLINE
0010	460'A+22	-	462'A+94	IH 90 WB RT	78	BEAM GUARD AREAS
0010	460'A+55	-	462'A+25	IH 90 WB LT	11	BEAM GUARD AREAS
0010	474'A+10	-	475'A+38	IH 90 WB RT	28	BEAM GUARD AREAS
0010	479'A+15	-	481'A+91	IH 90 WB RT	78	BEAM GUARD AREAS
0010	479'A+48	-	484'A+24	IH 90 WB LT	11	BEAM GUARD AREAS
0010	572'A+98	-	577'A+41	IH 90 WB LT	11	BEAM GUARD AREAS
0010	592'A+17	-	594'A+93	IH 90 WB RT	78	BEAM GUARD AREAS
0010	592'A+50	-	596'A+24	IH 90 WB LT	11	BEAM GUARD AREAS
0010	601'A+85	-	609'A+99	IH 90 WB LT	11	BEAM GUARD AREAS
0010	659'A+36	-	661'A+86	IH 90 WB RT	67	BEAM GUARD AREAS
0010	634'C'+68		660'C'+68	IH 90 RAMP	4,333	ON RAMP
0010	660'D'+67	-	679'D'+52	IH 90 RAMP	3,141	OFF RAMP
SUBTOTAL					142,600	
TOTAL					286,450	

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REMOVING FENCE

					204.0170 REMOVING FENCE LF
CATEGORY	STATION	TO	STATION	LOCATION	
0010	370+00	-	456+00	IH 90 EB RT	8,600
0010	460+00	-	476+00	IH 90 EB RT	1,600
0010	479+00	-	562+00	IH 90 EB RT	8,300
0010	583+00	-	589+00	IH 90 EB RT	600
0010	591+00	-	660+00	IH 90 EB RT	6,900
0010	661+00	-	696+65	IH 90 EB RT	3,565
SUBTOTAL					29,565
0010	370'A+01	-	457'A+00	IH 90 WB LT	8,699
0010	460'A+00	-	476'A+00	IH 90 WB LT	1,600
0010	479'A+00	-	591'A+00	IH 90 WB LT	11,200
0010	592'A+00	-	660'A+00	IH 90 WB LT	6,800
0010	661'A+00	-	697'A+10	IH 90 WB LT	3,610
SUBTOTAL					31,909
TOTAL					61,500

REMOVING DELINEATORS AND MARKERS

					204.0180 REMOVING DELINEATORS AND MARKERS EACH
CATEGORY	STATION	TO	STATION	LOCATION	
0010	370+00	-	696+65	IH 90 EB	55
0010	370'A+01	-	697'A+10	IH 90 WB	47
TOTAL					102

REMOVING INLETS

						204.0220 REMOVING INLETS EACH	REMARKS
CATEGORY	STATION	TO	STATION	LOCATION			
0010	382+71	-	382+71	IH 90 EB	1		MEDIAN
0010	559+24	-	559+24	EB IH 90 RT	1		SCHILD ROAD NEAR WEIGH STATION
TOTAL						2	

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REMOVING STORM SEWER

							201.0245 REMOVING STORM SEWER 36-INCH LF	REMARKS
CATEGORY	STATION	TO	STATION	LOCATION				
0010	559+21	-	559+24	EB IH 90 RT	152			SCHILD ROAD NEAR WEIGH STATION
TOTAL							152	

ABANDONING CULVERT PIPES

							204.0270 ABANDONING CULVERT PIPES EACH	REMARKS
CATEGORY	STATION	TO	STATION	LOCATION				
0010	382+71	-	383+43	IH 90 EB	1			MEDIAN
TOTAL							1	

Division	From / To Station	Location	Common Excavation (1) (item # 205.0100)		Unexpanded Fill	Expanded Fill (13)	Mass Ordinate + / - (14)	Borrow	Comment:
			Cut (2)	EBS Excavation (3)		Factor 1.25			
1	542+50 to 548+50	East Bound Mainline	1,500	0	1,717	2,147	-647	-647	
Division 1 Subtotal			1,500	0	1,717	2,147	-647	647	
2	0 'F'+00 to 0 'F'+60	Maintenance Cross-over 1	4		65	81	-77	-77	
Division 2 Subtotal			4	0	65	81	-77	77	
3	0 'G'+00 to 2 'G'+50	Maintenance Cross-over 2	16		928	1,160	-1,144	-1,144	
Division 3 Subtotal			16	0	928	1,160	-1,144	1,144	
4	0 'H'+00 to 0 'H'+50	Maintenance Cross-over 3	1		58	73	-72	-72	
Division 4 Subtotal			1	0	58	73	-72	72	
5	370+00 - 696+65	UNDISTRIBUTED	0		60	75	-75	-75	
Division 5 Subtotal			0	0	60	75	-75	75	
Grand Total			1,521.00	0.00	2,768.00	3,461.00	-1,940.00	2,015.00	
			Total Common Exc		1,521.00				

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Available Material = Cut
- 3) Expanded Fill. Factor = 1.25
- 4) Expanded Fill = Unexpanded Fill * Fill Factor
- 5) 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.

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SURFACE DRAIN SUMMARY

CAT.	STATION / BRIDGE	LOCATION	REMOVING SURFACE DRAINS 204.0190 EACH	REMOVING CONCRETE SURFACE DRAIN, MASONRY SPV.0180.01 SY	CONCRETE SURFACE DRAIN, DOWN PIPE SPV.0035.01 CY	CONCRETE SURFACE DRAIN, FLUME SPV.0035.02 CY	RIPRAP MEDIUM 606.0200 CY	REMARKS
0010	560'A+48	IH 90 WB LT		10.00				DRAINAGE PIPE
0010	B-32-23	SW CORNER		9.00	1.75		1.00	MATCH INTO EXISTING PIPE
0010	B-32-24	NW CORNER		8.50	1.75		1.00	MATCH INTO EXISTING PIPE
0010	B-32-25	NW CORNER	1.00			1.75	1.00	MATCH INTO EXISTING BREAKER
0010	B-32-25	NE CORNER	1.00			1.75	1.00	MATCH INTO EXISTING BREAKER
0010	B-32-26	NW CORNER		8.75	1.75		1.00	MATCH INTO EXISTING PIPE
0010	B-32-26	NE CORNER		8.75	1.75		1.00	MATCH INTO EXISTING PIPE
0010	B-32-27	SW CORNER		10.25	2.00		1.00	MATCH INTO EXISTING PIPE
0010	B-32-28	NW CORNER		7.75	1.50		1.00	MATCH INTO EXISTING PIPE
TOTALS			2.00	63.00	10.50	3.5	**8.0**	

** QUANTITY LISTED ELSEWHERE**



BASE AGGREGATE DENSE 3/4-INCH

BASE AGGREGATE DENSE 1 1/4-INCH

BASE AGGREGATE DENSE 1 1/4-INCH						305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON				211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	REMARKS	
CATEGORY	STATION	TO	STATION	LOCATION		CATEGORY	STATION	TO	STATION	LOCATION			
STAGE 1:							STAGE 2:						
0010	382+59	-	382+71	IH 90 EB	12	0010	370+00	-	696+65	IH 90 EB		3,000	Mainline Shoulder
0010	382+59	-	382+71	IH 90 EB	17	0010	644'B'+50	-	660'B'+00	IH 90 RAMP	31		CTH "C" Ramp Shoulders
				SUBTOTAL	29	0010	650'B'+00	-	660'B'+00	IH 90 RAMP	20		CTH "C" Ramp Shoulders
						0010	660'E'+20	-	687'E'+03	IH 90 RAMP	54		CTH "C" Ramp Shoulders
						0010	660'E'+20	-	669'E'+00	IH 90 RAMP	18		CTH "C" Ramp Shoulders
										SUBTOTAL	122	3,000	
0010	559+10		559+30	SCHILD ROAD	20								
				SUBTOTAL	20								
STAGE 2:							STAGE 4:						
0010	UNDISTRIBUTED				20	0010	370'A'+01	-	697'A'+10	IH 90 WB		3,000	Mainline Shoulder
				SUBTOTAL	20	0010	633'C'+27	-	660'C'+75	IH 90 RAMP	55		CTH "C" Ramp Shoulders
						0010	651'C'+00	-	660'C'+75	IH 90 RAMP	20		CTH "C" Ramp Shoulders
						0010	661'D'+00	-	668'D'+90	IH 90 RAMP	16		CTH "C" Ramp Shoulders
				TOTAL	69	0010	661'D'+00	-	674'D'+45	IH 90 RAMP	27		CTH "C" Ramp Shoulders
										SUBTOTAL	117	3,000	
						0010	UNDISTRIBUTED / EAT's					850	Project
TOTALS											239	6,850	

BASE PATCHING CONCRETE SUMMARY

390.0403 416.0620					
BASE PATCHING CONCRETE DRILLED DOWEL					
CATEGORY	STATION	LOCATION	SHES SY	BARS EACH	REMARKS
STAGE 1:					
0010	376+33	EB IH 90	8	16	6X12 RT LANE
0010	378+32	EB IH 90	8	16	6X12 RT LANE
0010	378+46	EB IH 90	8	16	6X12 RT LANE
0010	378+76	EB IH 90	16	16	12X12 RT LANE
0010	382+65	EB IH 90	16	16	12X12 RT LANE
0010	383+05	EB IH 90	11	16	8X12 RT LANE
0010	386+28	EB IH 90	8	16	6X12 RT LANE
0010	393+93	EB IH 90	8	16	6X12 RT LANE
0010	400+37	EB IH 90	8	16	6X12 RT LANE
0010	418+70	EB IH 90	8	16	6X12 RT LANE
0010	432+05	EB IH 90	8	16	6X12 RT LANE
0010	435+57	EB IH 90	8	16	6X12 RT LANE
0010	487+28	EB IH 90	8	16	6X12 RT LANE
0010	540+28	EB IH 90	8	16	6X12 RT LANE
0010	559+45	EB IH 90	8	16	6X12 RT LANE
0010	562+35	EB IH 90	8	16	6X12 RT LANE
0010	595+11	EB IH 90	8	16	6X12 RT LANE
0010	595+35	EB IH 90	8	16	6X12 RT LANE
0010	600+28	EB IH 90	20	16	30X12 RT LANE
0010	600+76	EB IH 90	8	16	6X12 RT LANE
0010	601+85	EB IH 90	8	16	6X12 RT LANE
0010	618+75	EB IH 90	8	16	6X12 RT LANE
0010	637+94	EB IH 90	8	16	6X12 RT LANE
0010	665+44	EB IH 90	8	16	6X12 RT LANE
0010	690+62	EB IH 90	8	16	6X12 RT LANE
0010	693+71	EB IH 90	8	16	6X12 RT LANE
0010	702+38	EB IH 90	8	16	6X12 RT LANE
0010	377+71	EB IH 90	8	16	6X12 LT LANE
0010	386+28	EB IH 90	8	16	6X12 LT LANE
0010	388+18	EB IH 90	8	16	6X12 LT LANE
0010	400+37	EB IH 90	8	16	6X12 LT LANE
0010	435+47	EB IH 90	8	16	6X12 LT LANE
0010	473+47	EB IH 90	8	16	6X12 LT LANE
0010	559+37	EB IH 90	8	16	6X12 LT LANE
0010	663+03	EB IH 90	8	16	6X12 LT LANE
0010	672+34	EB IH 90	8	16	6X12 LT LANE
0010	673+69	EB IH 90	11	16	8X12 LT LANE
0010	682+00	EB IH 90	8	16	6X12 LT LANE
0010	683+95	EB IH 90	8	16	6X12 LT LANE
0010	690+62	EB IH 90	8	16	6X12 LT LANE
0010	702+38	EB IH 90	8	16	6X12 LT LANE
0010		EB IH 90	72	144	UNDISTRIBUTED
SUBTOTAL			217	416	

390.0403 416.0620					
BASE PATCHING CONCRETE DRILLED DOWEL					
CATEGORY	STATION	LOCATION	SHES SY	BARS EACH	
STAGE 3:					
0010	403'A+68	WB IH 90	8	16	6X12 RT LANE
0010	417'A+60	WB IH 90	8	16	6X12 RT LANE
0010	426'A+79	WB IH 90	8	16	6X12 RT LANE
0010	436'A+20	WB IH 90	8	16	6X12 RT LANE
0010	401'A+23	WB IH 90	8	16	6X12 RT LANE
0010	421'A+81	WB IH 90	8	16	6X12 RT LANE
0010	506'A+58	WB IH 90	8	16	6X12 RT LANE
0010	519'A+26	WB IH 90	8	16	6X12 RT LANE
0010	525'A+64	WB IH 90	8	16	6X12 RT LANE
0010	592'A+90	WB IH 90	8	16	6X12 RT LANE
0010	614'A+25	WB IH 90	8	16	6X12 RT LANE
0010	372'A+94	WB IH 90	8	16	6X12 LT LANE
0010	400'A+63	WB IH 90	8	16	6X12 LT LANE
0010	415'A+69	WB IH 90	8	16	6X12 LT LANE
0010	425'A+13	WB IH 90	8	16	6X12 LT LANE
0010	426'A+20	WB IH 90	8	16	6X12 LT LANE
0010	409'A+92	WB IH 90	8	16	6X12 LT LANE
0010	421'A+03	WB IH 90	8	16	6X12 LT LANE
0010	421'A+81	WB IH 90	8	16	6X12 LT LANE
0010	481'A+48	WB IH 90	13	16	10X12 LT LANE
0010	507'A+41	WB IH 90	8	16	6X12 LT LANE
0010	688'A+98	WB IH 90	8	16	6X12 LT LANE
0010		WB IH 90	36	64	UNDISTRIBUTED
SUBTOTAL			434	800	
TOTALS			652	1216	

ASPHALT SUMMARY												
CATEGORY	STATION	TO	STATION	LOCATION	455.0105 PG58-28 TON	455.0125 PG70-28 TON	455.0605 TACK GAL	460.1100 HMA E-0.3 TON	460.1103 HMA E-3 TON	460.1130 HMA E-30 TON	460.1700 HMA SMA TON	REMARKS
0010	375+65	-	385+65	STAGE 1A:								
				IH 90 EB	14	-	110	-	-	244	-	OUTSIDE SHOULDER
0010	370+00	-	456+58	STAGE 1:								
				IH 90 EB	255	-	920	1,190	-	3,433	-	Mainline
0010	459+86	-	475+35	IH 90 EB	45	-	170	213	-	596	-	Mainline
0010	478+74	-	590+06	IH 90 EB	320	-	1,180	1,531	-	4,286	-	Mainline
0010	591+40	-	696+65	IH 90 EB	303	-	1,120	1,447	-	4,052	-	Mainline
0010	644'B'+50	-	660+25	CTH 'C' EB OFF-RAMP	14	-	140	-	253	-	-	OFF-RAMP
0010	644'B'+50	-	660+25	CTH 'C' EB OFF-RAMP	8	-	140	-	135	-	-	RIGHT SHOULDER
0010	649'B'+38	-	660+25	CTH 'C' EB OFF-RAMP	6	-	100	-	93	-	-	LEFT SHOULDER
0010	660'E'+54	-	687+03	CTH 'C' EB ON-RAMP	13	-	230	-	227	-	-	ON-RAMP
0010	660'E'+54	-	687+03	CTH 'C' EB ON-RAMP	13	-	230	-	227	-	-	RIGHT SHOULDER
0010	660'E'+54	-	671+42	CTH 'C' EB ON-RAMP	6	-	100	-	93	-	-	LEFT SHOULDER
0010	559+10	-	559+30	IH 90 EB	1	-	10	7	-	-	-	SCHILD ROAD
SUBTOTAL					998	-	4,450	4,388	1,027	12,612	-	
0010	370+00	-	456+58	STAGE 2:								
				IH 90 EB	51	142	920	926	-	-	2,357	Mainline
0010	459+86	-	475+35	IH 90 EB	10	26	170	166	-	-	422	Mainline
0010	478+74	-	590+06	IH 90 EB	66	182	1,180	1,191	-	-	3,030	Mainline
0010	591+40	-	696+65	IH 90 EB	62	172	1,120	1,126	-	-	2,865	Mainline
0010	644'B'+50	-	660+25	CTH 'C' EB OFF-RAMP	14	-	140	-	253	-	-	OFF-RAMP
0010	644'B'+50	-	660+25	CTH 'C' EB OFF-RAMP	8	-	140	-	135	-	-	RIGHT SHOULDER
0010	649'B'+38	-	660+25	CTH 'C' EB OFF-RAMP	6	-	100	-	93	-	-	LEFT SHOULDER
0010	660'E'+54	-	687+03	CTH 'C' EB ON-RAMP	13	-	230	-	227	-	-	ON-RAMP
0010	660'E'+54	-	687+03	CTH 'C' EB ON-RAMP	13	-	230	-	227	-	-	RIGHT SHOULDER
0010	660'E'+54	-	671+42	CTH 'C' EB ON-RAMP	6	-	100	-	93	-	-	LEFT SHOULDER
0010	559+10	-	559+30	IH 90 EB	1	-	10	5	-	-	-	SCHILD ROAD
SUBTOTAL					250	522	4,340	3,413	1,027	-	8,674	

ASPHALT SUMMARY (CONTINUED)												
CATEGORY	STATION	TO	STATION	LOCATION	455.0105 PG58-28 TON	455.0125 PG70-28 TON	455.0605 TACK GAL	460.1100 HMA E-0.3 TON	460.1103 HMA E-3 TON	460.1130 HMA E-30 TON	460.1700 HMA SMA TON	REMARKS
STAGE 3:												
0010	370'A+01	-	456'A+62	IH 90 WB	249	-	920	1,191	-	3,334	-	Mainline
0010	459'A+91	-	475'A+43	IH 90 WB	45	-	170	213	-	598	-	Mainline
0010	478'A+82	-	590'A+54	IH 90 WB	322	-	1,180	1,536	-	4,301	-	Mainline
0010	591'A+87	-	697'A+10	IH 90 WB	303	-	1,120	1,447	-	4,051	-	Mainline
0010	633'C+27	-	660+68	CTH 'C' WB ON-RAMP	25	-	240	-	440	-	-	ON-RAMP
0010	651'C+04	-	660+68	CTH 'C' WB ON-RAMP	5	-	90	-	82	-	-	LEFT SHOULDER
0010	633'C+27	-	660+68	CTH 'C' WB ON-RAMP	13	-	240	-	235	-	-	RIGHT SHOULDER
0010	660'D+17	-	668+90	CTH 'C' WB OFF-RAMP	5	-	80	-	75	-	-	OFF-RAMP
0010	660'D+17	-	674+45	CTH 'C' WB OFF-RAMP	7	-	130	-	122	-	-	RIGHT SHOULDER
0010	660'D+17	-	674+45	CTH 'C' WB OFF-RAMP	7	-	130	-	122	-	-	LEFT SHOULDER
SUBTOTAL					981	-	4,300	4,387	1,076	12,285	-	
STAGE 4:												
0010	370'A+01	-	456'A+62	IH 90 WB	51	142	920	926	-	-	2,358	Mainline
0010	459'A+91	-	475'A+43	IH 90 WB	10	26	170	166	-	-	422	Mainline
0010	478'A+82	-	590'A+54	IH 90 WB	66	183	1,180	1,195	-	-	3,041	Mainline
0010	591'A+87	-	697'A+10	IH 90 WB	62	172	1,120	1,125	-	-	2,865	Mainline
0010	633'C+27	-	660+68	CTH 'C' WB ON-RAMP	25	-	240	-	440	-	-	ON-RAMP
0010	651'C+04	-	660+68	CTH 'C' WB ON-RAMP	5	-	90	-	82	-	-	LEFT SHOULDER
0010	633'C+27	-	660+68	CTH 'C' WB ON-RAMP	13	-	240	-	235	-	-	RIGHT SHOULDER
0010	660'D+17	-	668+90	CTH 'C' WB OFF-RAMP	5	-	80	-	75	-	-	OFF-RAMP
0010	660'D+17	-	674+45	CTH 'C' WB OFF-RAMP	7	-	130	-	122	-	-	RIGHT SHOULDER
0010	660'D+17	-	674+45	CTH 'C' WB OFF-RAMP	7	-	130	-	122	-	-	LEFT SHOULDER
SUBTOTAL					251	523	4,300	3,412	1,076	-	8,686	
TOTALS					2,500	1,050	17,500	15,610	4,210	25,150	17,370	

REHEATING HMA PAVEMENT LONGITUDINAL JOINTS

					460.4110.S REHEATING HMA PAVEMENT LONGITUDINAL JOINTS LF
CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	370+00	-	696+65	IH 90 EB	32665
0010	370'A+01	-	697'A+10	IH 90 WB	32709
TOTAL					65374

PILING STEEL SHEET TEMPORARY

						512.1000 PILING STEEL SHEET TEMPORARY SF	
CATEGORY	STATION	TO	STATION	LOCATION	DEPTH		REMARKS
0010	382+59	-	382+71	2' RT CL	12'	144	EB STAGE 1
0010	UNDISTRIBUTED					400	PIPE WORK
TOTAL						544	

NOTE: UNDISTRIBUTED PILING STEEL SHEET TEMPORARY MAY BE NEEDED AT APPROXIMATELY FIVE LOCATIONS TO PERFORM PIPE WORK. LOCATIONS FOR PILING WILL BE DETERMINED BY THE FIELD ENGINEER.

ASPHALTIC SHOULDER RUMBLE STRIP

					465.0400 ASPHALTIC SHOULDER RUMBLE STRIP LF	REMARKS
CATEGORY	STATION	TO	STATION	LOCATION	LF	
STAGE 2:						
0010	370+00	-	456+58	IH 90 EB LT	8,658	MEDIAN SHOULDER
0010	459+87	-	475+35	IH 90 EB LT	1,548	MEDIAN SHOULDER
0010	478+74	-	590+06	IH 90 EB LT	11,132	MEDIAN SHOULDER
0010	591+40	-	705+15	IH 90 EB LT	11,375	MEDIAN SHOULDER
0010	369+97	-	456+58	IH 90 EB RT	8,661	OUTSIDE SHOULDER
0010	459+87	-	475+35	IH 90 EB RT	1,548	OUTSIDE SHOULDER
0010	478+74	-	560+50	IH 90 EB RT	8,176	OUTSIDE SHOULDER
0010	562+50	-	578+50	IH 90 EB RT	1,600	OUTSIDE SHOULDER
0010	584+75	-	590+06	IH 90 EB RT	531	OUTSIDE SHOULDER
0010	591+40	-	648+25	IH 90 EB RT	5,685	OUTSIDE SHOULDER
0010	650+25	-	669+00	IH 90 EB RT	1,875	OUTSIDE SHOULDER
0010	676+50	-	696+65	IH 90 EB RT	2,015	OUTSIDE SHOULDER
SUBTOTAL					62,804	
STAGE 4:						
0010	370'A+01	-	456'A+62	IH 90 WB LT	8,661	OUTSIDE SHOULDER
0010	459'A+91	-	475'A+43	IH 90 WB LT	1,552	OUTSIDE SHOULDER
0010	478'A+82	-	590'A+54	IH 90 WB LT	11,172	OUTSIDE SHOULDER
0010	591'A+87	-	705'A+15	IH 90 WB LT	11,328	OUTSIDE SHOULDER
0010	369'A+97	-	456'A+63	IH 90 WB RT	8,666	MEDIAN SHOULDER
0010	459'A+91	-	475'A+43	IH 90 WB RT	1,552	MEDIAN SHOULDER
0010	478'A+82	-	590'A+54	IH 90 WB RT	11,172	MEDIAN SHOULDER
0010	591'A+87	-	644'A+00	IH 90 WB RT	5,213	MEDIAN SHOULDER
0010	651'A+25	-	668'A+40	IH 90 WB RT	1,715	MEDIAN SHOULDER
0010	670'A+50	-	697'A+10	IH 90 WB RT	2,660	MEDIAN SHOULDER
SUBTOTAL					63,691	
TOTAL					126,500	

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CLEANING CULVERT PIPES

CATEGORY	STATION	TO	STATION	LOCATION	520.7000 CLEANING CULVERT PIPES EACH
0010	369+38	-	369+38	IH 90 EB	1
0010	389'A+57	-	389'A+57	IH 90 WB	1
0010	397+49	-	397+49	IH 90 EB	1
0010	405'A+22	-	405'A+22	IH 90 WB	1
0010	433+00	-	433+00	IH 90 EB	1
0010	439+50	-	439+50	IH 90 EB	1
0010	448+66	-	448+66	IH 90 EB	1
0010	461+46	-	461+46	IH 90 EB	1
0010	467+46	-	467+46	IH 90 EB	1
0010	480+45	-	480+45	IH 90 EB	1
0010	488+46	-	488+46	IH 90 EB	1
0010	499+43	-	499+43	IH 90 EB	1
0010	498'A+39	-	498'A+39	IH 90 WB	1
0010	553'A+08	-	553'A+08	IH 90 WB	1
0010	559'A+39	-	559'A+39	IH 90 WB	1
0010	573'A+58	-	573'A+58	IH 90 WB	1
0010	582+50	-	582+50	IH 90 EB	1
0010	596'A+90	-	596'A+90	IH 90 WB	1
0010	602'A+74	-	602'A+74	IH 90 WB	1
0010	606+92	-	606+92	IH 90 EB	1
0010	610+66	-	610+66	IH 90 EB	1
0010	616'A+02	-	616'A+02	IH 90 WB	1
0010	626+19	-	626+19	IH 90 EB	1
0010	631+47	-	631+47	IH 90 EB	1
0010	631+40	-	631+40	IH 90 EB	1
0010	639+52	-	639+52	IH 90 EB	1
0010	647+69	-	647+69	IH 90 EB	1
0010	654+54	-	654+54	IH 90 EB	1
0010	663+30	-	663+30	IH 90 EB	1
0010	674'A+91	-	674'A+91	IH 90 WB	1
TOTAL					30

CULVERT SUMMARY

CATEGORY	STATION	LOCATION	521.1624 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 24-INCH EACH
0010	560'A+47	IH 90 WB LT	1
TOTAL			1

CONCRETE BARRIER TEMPORARY PRECAST

CATEGORY	STATION	TO	STATION	LOCATION	CONCRETE BARRIER TEMPORARY PRECAST DELIVERED 603.8000 LF	CONCRETE BARRIER TEMPORARY PRECAST INSTALLED 603.8125 LF	REMARKS
0010	379+25	-	383+65	2' RT CL	440	440	EB STAGE 1
0010	379+25	-	383+65	2' LT CL		440	EB STAGE 2
TOTALS					440	880	

STORM SEWER SUMMARY

CATEGORY	STATION	LOCATION	EACH	611.0430 RECONSTRUCTING INLETS	608.0518 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 18-INCH LF	522.1018 APRON ENDWALL CULVERT PIPE REINFORCED CONCRETE 18-INCH EACH	522.1024 APRON ENDWALL CULVERT PIPE REINFORCED CONCRETE 24-INCH EACH	608.0536 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 36-INCH LF
0010	382+64	IH 90 EB RT			106	1	-	-
0010	397+49	IH 90 EB LT	1		30	-	-	-
0010	559+24	IH 90 EB RT			-	-	-	140
0010	647+81	IH 90 EB RT			-	-	1	-
TOTALS			1		136	1	1	140

INLETS AND COVERS

CATEGORY	STATION	LOCATION	DEPTH (FT.)	611.3901 INLET MEDIAN 1 GRATE EACH	611.3902 INLET MEDIAN 2 GRATE EACH	611.0642 INLET COVER TYPE MS EACH	REMARKS
0010	382+64	31' LT	2.30	1	-	1	IH 90 EB
0010	397+79	39' LT	3.10	1	-	1	IH 90 EB
0010	559+24	233' RT	5.70	-	1	2	IH 90 EB
TOTALS				2	1	4	

RELAID STORM SEWER, 18",24",30",36"												
			609.0118 RELAID STORM SEWER 18-INCH	524.0618 APRON ENDWALL CULVERT PIPE SALVAGED 18-INCH	609.0124 RELAID STORM SEWER 24-INCH	524.0624 APRON ENDWALL CULVERT PIPE SALVAGED 24-INCH	609.0130 RELAID STORM SEWER 30-INCH	524.0630 APRON ENDWALL CULVERT PIPE SALVAGED 30-INCH	609.0136 RELAID STORM SEWER 36-INCH	524.0636 APRON ENDWALL CULVERT PIPE SALVAGED 36-INCH	520.8000 CONCRETE COLLARS FOR PIPE	
CATEGORY	STATION	LOCATION	LF	EACH	LF	EACH	LF	EACH	LF	EACH	EACH	REMARKS
		EASTBOUND										
0010	397+49	IH 90 MEDIAN	-	-	-	-	-	-	-	-	6	INLET AND 4 PIPE JOINTS
0010	397+49	IH 90 EB RT	-	-	-	-	-	-	-	-	6	INLET AND 4 PIPE JOINTS
0010	433+00	IH 90 EB LT	-	-	16	1	-	-	-	-	3	RELAY AT SAME LOCATION
0010	433+00	IH 90 EB RT	-	-	16	1	-	-	-	-	3	RELAY AT SAME LOCATION
0010	461+46	IH 90 EB RT	24	1	-	-	-	-	-	-	4	RELAY AT SAME LOCATION
0010	467+46	IH 90 EB RT	24	1	-	-	-	-	-	-	4	RELAY AT SAME LOCATION
0010	480+45	IH 90 EB RT	-	-	-	-	-	-	16	1	3	RELAY AT SAME LOCATION
0010	488+46	IH 90 EB RT	40	1	-	-	-	-	-	-	6	RELAY AT SAME LOCATION
0010	559+24	IH 90 EB RT	-	-	-	-	-	-	-	-	3	INLET
0010	572+82	IH 90 EB RT	-	-	-	-	16	1	-	-	3	RELAY AT SAME LOCATION
0010	582+34	IH 90 EB RT	-	-	-	-	16	1	-	-	3	RELAY AT SAME LOCATION
0010	582+65	IH 90 MEDIAN	-	-	-	-	-	-	-	-	4	INLET AND 2 PIPE JOINTS
0010	559+24	IH 90 EB RT	-	-	-	-	-	-	-	-	3	INLET
0010	603+00	IH 90 MEDIAN	-	-	-	-	-	-	-	-	2	INLET
0010	603+31	IH 90 EB RT	-	-	-	-	-	-	-	-	2	INLET
0010	610+41	IH 90 EB RT	-	-	-	-	-	-	-	-	2	INLET
0010	639+53	IH 90 EB RT	-	-	16	1	-	-	-	-	3	RELAY AT SAME LOCATION
0010	639+53	IH 90 MEDIAN	-	-	-	-	-	-	-	-	2	INLET
0010	647+63	IH 90 MEDIAN	-	-	-	-	-	-	-	-	6	INLET AND 4 PIPE JOINTS
0010	647+81	IH 90 EB RT	-	-	16	-	-	-	-	-	2	RELAY AT SAME LOCATION
0010	654+54	IH 90 EB RT	-	-	16	1	-	-	-	-	3	RELAY AT SAME LOCATION
0010	663+53	IH 90 EB RT	-	-	16	1	-	-	-	-	3	RELAY AT SAME LOCATION
		SUBTOTALS	88	3	96	5	32	2	16	1	76	

RELAI D STORM SEWER, 18",24",30",36" (CONTINUED)

		609.0118	524.0618	609.0124	524.0624	609.0130	524.0630	609.0136	524.0636	520.8000	
		RELAI D STORM	APRON ENDWALL	RELAI D STORM	APRON ENDWALL	RELAI D STORM	APRON ENDWALL	RELAI D STORM	APRON ENDWALL	CONCRETE	
		SEWER	CULVERT PIPE	SEWER	CULVERT PIPE	SEWER	CULVERT PIPE	SEWER	CULVERT PIPE	COLLARS	
		18-INCH	SALVAGED	24-INCH	SALVAGED	30-INCH	SALVAGED	36-INCH	SALVAGED	FOR PIPE	
		18-INCH	18-INCH	24-INCH	24-INCH	30-INCH	30-INCH	36-INCH	36-INCH		
WESTBOUND											
0010	389'A+57	IH 90 WB LT	24	1	-	-	-	-	-	4	RELAY AT SAME LOCATION
0010	389'A+35	IH 90 MEDIAN	-	-	-	-	-	-	-	3	INLET AND 2 PIPE JOINTS
0010	397'A+78	IH 90 WB LT	-	-	16	1	-	-	-	3	RELAY AT SAME LOCATION
0010	405'A+22	IH 90 WB LT	24	1	-	-	-	-	-	4	RELAY AT SAME LOCATION
0010	480'A+04	IH 90 WB LT	-	-	-	-	-	16	1	3	RELAY AT SAME LOCATION
0010	521'A+03	IH 90 WB RT	-	-	-	-	16	1	-	3	RELAY AT SAME LOCATION
0010	521'A+15	IH 90 WB LT	-	-	-	-	24	1	-	4	RELAY AT SAME LOCATION
0010	547'A+47	IH 90 WB RT	-	-	-	-	24	1	-	4	RELAY AT SAME LOCATION
0010	547'A+48	IH 90 WB LT	-	-	-	-	24	1	-	4	RELAY AT SAME LOCATION
0010	553'A+01	IH 90 WB LT	-	-	-	-	16	1	-	3	RELAY AT SAME LOCATION
0010	553'A+08	IH 90 WB RT	-	-	-	-	32	1	-	5	RELAY AT SAME LOCATION
0010	559'A+39	IH 90 WB LT	-	-	-	-	-	16	1	3	RELAY AT SAME LOCATION
0010	572'A+92	IH 90 MEDIAN	-	-	-	-	-	-	-	4	INLET AND 2 PIPE JOINTS
0010	573'A+58	IH 90 WB LT	-	-	-	-	24	1	-	4	RELAY AT SAME LOCATION
0010	583'A+01	IH 90 WB LT	-	-	-	-	16	1	-	3	RELAY AT SAME LOCATION
0010	596'A+90	IH 90 WB LT	24	1	-	-	-	-	-	4	RELAY AT SAME LOCATION
0010	602'A+74	IH 90 WB LT	-	-	-	-	-	32	1	5	RELAY AT SAME LOCATION
0010	616'A+02	IH 90 WB LT	24	1	-	-	-	-	-	4	RELAY AT SAME LOCATION
0010	616'A+02	IH 90 MEDIAN	-	-	-	-	-	-	-	3	INLET AND 2 PIPE JOINTS
0010	630'A+81	IH 90 WB LT	-	-	-	-	-	16	1	3	RELAY AT SAME LOCATION
0010	630'A+90	IH 90 WB LT	-	-	-	-	-	16	1	3	RELAY AT SAME LOCATION
0010	639'A+95	IH 90 WB LT	-	-	-	-	-	-	-	4	RELAY AT SAME LOCATION
0010	647'A+85	IH 90 WB LT	-	-	16	1	-	-	-	3	RELAY AT SAME LOCATION
0010	654'A+70	IH 90 WB LT	-	-	16	1	-	-	-	3	RELAY AT SAME LOCATION
0010	664'A+31	IH 90 WB LT	-	-	16	1	-	-	-	3	RELAY AT SAME LOCATION
0010	674'A+91	IH 90 WB LT	24	1	-	-	-	-	-	4	RELAY AT SAME LOCATION
SUBTOTALS		120	5	64	4	176	8	96	5	93	
ITEM TOTALS		208	8	160	9	208	10	112	6	**169**	

** QUANTITY LISTED ELSEWHERE**

RELAID STORM SEWER, 42",48",60"										
			609.0142	524.0642	609.0148	524.0648	609.0160	524.0660	520.8000	REMARKS
			RELAID STORM	APRON ENDWALL	RELAID STORM	APRON ENDWALL	RELAID STORM	APRON ENDWALL	CONCRETE	
			SEWER	CULVERT PIPE	SEWER	CULVERT PIPE	SEWER	CULVERT PIPE	COLLARS	
			42-INCH	SALVAGED	48-INCH	SALVAGED	60-INCH	SALVAGED	FOR PIPE	
CATEGORY	STATION	LOCATION	LF	42-INCH	LF	48-INCH	LF	60-INCH	EACH	
			EACH		EACH		EACH			
EASTBOUND										
0010	438+90	IH 90 EB RT	-	-	-	-	-	-	2	INLET
0010	439+54	IH 90 EB RT	-	-	-	-	16	1	3	RELAY AT SAME LOCATION
0010	448+66	IH 90 EB RT	24	1	-	-	-	-	4	RELAY AT SAME LOCATION
0010	448+66	IH 90 MEDIAN	-	-	-	-	-	-	2	INLET
0010	499+43	IH 90 EB RT	-	-	-	-	40	1	6	RELAY AT SAME LOCATION
0010	608+52	IH 90 EB RT	-	-	16	1	-	-	3	RELAY AT SAME LOCATION
SUBTOTALS			24	1	16	1	56	2	20	
WESTBOUND										
0010	437'A+70	IH 90 WB LT	-	-	-	-	24	1	4	RELAY AT SAME LOCATION
0010	448'A+31	IH 90 WB LT	24	1	-	-	-	-	4	RELAY AT SAME LOCATION
0010	498'A+39	IH 90 WB LT	-	-	-	-	32	1	5	RELAY AT SAME LOCATION
0010	498'A+40	IH 90 MEDIAN	-	-	-	-	32	1	5	RELAY AT SAME LOCATION
0010	605'A+80	IH 90 WB LT	-	-	32	1	-	-	5	RELAY AT SAME LOCATION
SUBTOTALS			24	1	32	1	88	3	23	
ITEM TOTALS			48	2	48	2	144	5	**43**	
** QUANTITY LISTED ELSEWHERE**										

GRADING SHAPING & FINISHING FOR BARRIER TERMINALS

								ESTIMATED QUANTITIES FOR EACH TERMINAL (INFORMATIONAL PURPOSES ONLY)									
								ENERGY ABSORBING TERMINAL					BULLNOSE TERMINAL				
CATEGORY	STATION	TO	STATION	LOCATION	614.0010 BARRIER SYSTEM GRADING SHAPING FINISHING EACH	SPV.0060.04 GRADING SHAPING FINISHING FOR MEDIAN BULLNOSES EACH	REMARKS	FILL CY	TOPSOIL SY	SEED LBS	FERTILIZER CWT	MULCH SY	FILL CY	TOPSOIL SY	SEED LBS	FERTILIZER CWT	MULCH SY
STAGE 2:																	
0020	452+30.5	-	454+00.5	IH90 EB LT	1		E.A.T.	2.31	75	1.35	0.05	75					
0020	470+68	-	472+38	IH90 EB LT	1		E.A.T.	20.63	153	2.75	0.10	153					
0020	584+57	-	586+27	IH90 EB LT	1		E.A.T.	0.50	88	1.58	0.06	88					
0020	451+86	-	453+56	IH90 EB RT	1		E.A.T.	0.43	103	1.85	0.06	103					
0020	585+74.5	-	587+44.5	IH90 EB RT	1		E.A.T.	1.54	75	1.35	0.05	75					
SUBTOTALS					5	0											
STAGE 4:																	
0020	462'A'+54.5	-	464'A'+24.5	IH90 WB RT	1		E.A.T.	0.97	80	1.44	0.05	80					
0020	481'A'+46.5	-	483'A'+16.5	IH90 WB RT	1		E.A.T.	3.25	82	1.48	0.05	82					
0020	594'A'+48.5	-	596'A'+18.5	IH90 WB RT	1		E.A.T.	3.56	109	1.96	0.07	109					
0020	655'A'+00	-	664'A'+00	IH90 WB RT		1	BULLNOSE						1024	4156	74.80	2.62	4156
0020	485'A'+30.5	-	487'A'+00.5	IH90 WB LT	1		E.A.T.	8.77	125	2.25	0.08	125					
0020	576'A'+80.5	-	578'A'+50.5	IH90 WB LT	1		E.A.T.	33.79	234	4.21	0.15	234					
0020	597'A'+23.5	-	598'A'+93.5	IH90 WB LT	1		E.A.T.	19.03	153	2.75	0.10	153					
0020	609'A'+26	-	610'A'+96	IH90 WB LT	1		E.A.T.	6.98	105	1.89	0.07	105					
0020	695'A'+84.5	-	697'A'+54.5	IH90 WB LT	1		E.A.T.	4.46	92	1.66	0.06	92					
0020	662'D'+47	-	664'D'+17	NE RAMP LT	1		E.A.T.	5.00	100	1.80	0.06	100					
0020	FRONTAGE ROAD				1		E.A.T.	5.00	100	1.80	0.06	100					
SUBTOTALS					10	1											
TOTALS					15	1											

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STEEL PLATE GUARDRAIL REMOVAL SUMMARY

					204.0165	614.0920	
					REMOVING	SALVAGED	
					GUARDRAIL	RAIL	
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	REMARKS
STAGE 2:							
0020	453+47	-	456+56	IH 90 EB LT	309		
0020	453+32	-	456+26	IH 90 EB RT	294		
0020	456+54	-		IH 90 EB LT	52		MEDIAN
0020	459+73	-	460+98	IH 90 EB RT	125		
0020	460+00	-	461+24	IH 90 EB LT	124		REMOVAL ONLY
0020	460+03	-		IH 90 EB LT	52		MEDIAN
0020	466+55	-	474+99	IH 90 EB RT	844		
0020	472+36	-	475+31	IH 90 EB LT	295		
0020	475+31	-		IH 90 EB LT	52		MEDIAN
0020	478+51	-	486+32	IH 90 EB RT	781		
0020	479+00	-		IH 90 EB LT	52		MEDIAN
0020	478+88	-	479+99	IH 90 EB LT	111		REMOVAL ONLY
0020	585+77	-	589+70	IH 90 EB RT	401		
0020	586+92	-	590+00	IH 90 EB LT	308		
0020	590+02	-		IH 90 EB LT	52		MEDIAN
0020	591+22	-	592+72	IH 90 EB RT	150		
0020	591+50	-		IH 90 EB LT	52		MEDIAN
0020	659+02	-	661+45	IH 90 EB LT	243		MEDIAN BULLNOSE
SUBTOTALS					4,300	0	
STAGE 4:							
0020	455'A'+29	-	456'A'+54	IH 90 WB RT		125	REMOVAL ONLY
0020	455'A'+43	-	456'A'+81	IH 90 WB LT		138	REMOVAL ONLY
0020	459'A'+99	-	463'A'+05	IH 90 WB RT		306	
0020	460'A'+25	-	463'A'+20	IH 90 WB LT		295	
0020	468'A'+85	-	475'A'+63	IH 90 WB LT		678	
0020	474'A'+05	-	475'A'+30	IH 90 WB RT		125	REMOVAL ONLY
0020	478'A'+91	-	481'A'+97	IH 90 WB RT		306	
0020	479'A'+25	-	485'A'+27	IH 90 WB LT		602	
0020	572'A'+14	-	576'A'+53	IH 90 WB LT		439	
0020	591'A'+93	-	594'A'+98	IH 90 WB RT		305	
0020	592'A'+18	-	596'A'+14	IH 90 WB LT		396	
0020	601'A'+22	-	610'A'+21	IH 90 WB LT		899	
0020	693'A'+93	-	695'A'+95	IH 90 WB LT		202	
0020	656'C'+00	-	Frontage Road	CTH C NW RAMP B-32-69	1185		
0020	664'D'+17	-	B-32-69	CTH C NE RAMP B-32-69	825		
SUBTOTALS					2,010	4,820	
ITEM TOTALS					6,310	4,820	

MGS GUARDRAIL SUMMARY											
					614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL EACH	614.0230 STEEL THRIE BEAM LF	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH	614.2620 MGS GUARDRAIL TYPE 2 TERMINAL EACH	
CATEGORY	STATION	TO	STATION	LOCATION							REMARKS
				STAGE 2:							
0020	453+69	-	456+56	IH 90 EB LT	-	-	197.0	40	1	-	INSTALL BRIDGE TO BRIDGE
0020	453+06	-	456+26	IH 90 EB RT	-	-	230.0	40	1	-	
0020	456+54	-		IH 90 EB LT Median	-	-	52	-	-	2	
0020	459+73	-	474+99	IH 90 EB RT	-	-	1,436.0	40	1	-	
0020	460+03	-		IH 90 EB LT Median	-	-	52	-	-	2	
0020	471+87.5	-	475+31	IH 90 EB LT	-	-	253.5	40	1	-	
0020	475+31	-		IH 90 EB LT Median	-	-	52	-	-	2	
0020	478+51	-	491+00	IH 90 EB RT	-	-	1,209.0	40	-	1	
0020	479+00	-		IH 90 EB LT Median	-	-	52	-	-	2	
0020	586+75	-	589+70	IH 90 EB RT	-	-	205.0	40	1	-	
0020	586+87.5	-	590+00	IH 90 EB LT	-	-	222.5	40	1	-	
0020	590+02	-		IH 90 EB LT Median	-	-	52.0	0	-	2	
0020	591+22	-	592+72	IH 90 EB RT	-	-	60.0	40	1	-	
0020	591+50	-		IH 90 EB LT Median	-	-	52.0	-	-	2	
SUBTOTALS							4,130.0	320	7	13	
				STAGE 4:							
0020	459'A'+99		463'A'+62.5	IH 90 WB RT	-	-	273.5	40	1	-	INSTALL BRIDGE TO BRIDGE
0020	460'A'+25	-	475'A'+63	IH 90 WB LT	-	-	1,458.0	80	-	-	
0020	478'A'+91	-	482'A'+62.5	IH 90 WB RT	-	-	281.5	40	1	-	
0020	479'A'+25	-	486'A'+25	IH 90 WB LT	-	-	610.0	40	1	-	
0020	572'A'+14	-	577'A'+75	IH 90 WB LT	-	-	511.0	-	1	1	
0020	591'A'+93	-	595'A'+62.5	IH 90 WB RT	-	-	279.5	40	1	-	
0020	592'A'+18	-	598'A'+25	IH 90 WB LT	-	-	517.0	40	1	-	
0020	601'A'+22	-	610'A'+25	IH 90 WB LT	-	-	853.0	-	1	1	
0020	659'A'+50		661'A'+75	IH 90 WB RT	2	250	-	-	-	-	
0020	693'A'+93	-	696'A'+86.5	IH 90 WB LT	-	-	243.5	-	1	1	
0020	656'C'+00	-	Frontage Road	CTH C NW RAMP B-32-69	-	-	1,138.5	-	1	1	REPLACE IN KIND
0020	664'D'+17	-	B-32-69	CTH C NW RAMP B-32-57	-	-	737.5	40	1	-	REPLACE IN KIND
SUBTOTALS					2	250	6,910.0	320	10	4	
TOTALS					2	250	11,040	640	17	17	

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FENCE CHAIN LINK 6-FT

616.0206 FENCE CHAIN LINK 6-FT LF						REMARKS
CATEGORY	STATION	TO	STATION	LOCATION	LF	
0010	370+00	-	412+25	IH 90 EB	4,225	ROW FENCE
0010	630+00	-	660+00	IH 90 EB	3,000	ROW FENCE
0010	661+00	-	669+00	IH 90 EB	800	ROW FENCE
SUBTOTAL					8,025	
0010	371'A+01	-	408'A+60	IH 90 WB	3,759	ROW FENCE
0010	630'A+00	-	660'A+00	IH 90 WB	3,000	ROW FENCE
0010	661'A+00	-	688'A+00	IH 90 WB	2,700	ROW FENCE
SUBTOTAL					9,459	
TOTAL					17,500	

FENCE WOVEN WIRE (4-FT)

616.0100 FENCE WOVEN WIRE 4-FT LF						REMARKS
CATEGORY	STATION	TO	STATION	LOCATION	LF	
0010	412+25	-	456+00	EB IH 90	4,375	ROW FENCE
0010	460+00	-	476+00	EB IH 90	1,600	ROW FENCE
0010	479+00	-	562+00	EB IH 90	8,300	ROW FENCE
0010	583+00	-	589+00	EB IH 90	600	ROW FENCE
0010	591+00	-	630+00	EB IH 90	3,900	ROW FENCE
0010	669+00	-	696+65	EB IH 90	2,765	ROW FENCE
SUBTOTAL					21,540	
0010	408'A+60	-	457'A+00	WB IH 90	4,840	ROW FENCE
0010	460'A+00	-	476'A+00	WB IH 90	1,600	ROW FENCE
0010	479'A+00	-	591'A+00	WB IH 90	11,200	ROW FENCE
0010	592'A+00	-	630'A+00	WB IH 90	3,800	ROW FENCE
0010	688'A+00	-	697'A+10	WB IH 90	910	ROW FENCE
SUBTOTAL					22,350	
TOTAL					43,900	

SILT FENCE

					628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINENANCE LF
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF
0010	396+53	-	396+85	IH 90 MEDIAN	80	80
0010	397+38	-	397+81	IH 90 MEDIAN	90	90
0010	538+27	-	539+18	IH 90 MEDIAN	300	300
0010	539+96	-	540+55	IH 90 MEDIAN	310	310
0010	542+34	-	548+51	IH 90 EB LT	775	775
0010	542+34	-	546+35	IH 90 EB RT	500	500
0010	601+99	-	602+24	IH 90 MEDIAN	70	70
0010	602+77	-	603+19	IH 90 MEDIAN	100	100
TOTALS					2225	2225

MOBILIZATIONS EROSION CONTROL

				628.1905 MOBILIZATION EROSION CONTROL EACH
CATEGORY	STATION	TO	STATION	LOCATION
0010	UNDISTRIBUTED		1071-07-07	6
TOTAL				6

MOBILIZATIONS EMERGENCY EROSION CONTROL

				628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
CATEGORY	STATION	TO	STATION	LOCATION
0010	UNDISTRIBUTED			1071-07-07
				4
TOTAL				4

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EROSION CONTROL SUMMARY

CATEGORY	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	606.0300 RIPRAP HEAVY CY	625.0100 TOPSOIL SY	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.2004 EROSION MAT CLASS I TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	645.0120 GEOTEXTILE FABRIC TYPE HR SY	REMARKS
0010	UNDISTRIBUTED	IH90	3	4	205	50	6	1,000	30	4	1	11	8	11	PROJECT
0010	382+68	EB IH90 RT	2	-	-	137	343	-	-	-	2.8	6	4	4	18" APRON ENDWALL
0010	389+35	EB IH90 LT	-	-	-	43	108	-	-	-	0.9	2	-	-	JOINT REPAIR
0010	461+46	EB IH90 RT	2	-	-	50	125	-	-	-	1.0	2	1	4	18" APRON ENDWALL
0010	467+46	EB IH90 RT	2	-	-	50	125	-	-	-	1.0	2	1	4	18" APRON ENDWALL
0010	488+46	EB IH90 RT	2	-	-	77	193	-	-	-	1.6	3	2	4	18" APRON ENDWALL
0010	610+41	EB IH90 RT	-	-	-	30	75	-	-	-	0.6	1	1	-	JOINT REPAIR
0010	389'A+57	WB IH90 LT	2	-	-	50	125	-	-	-	1.0	2	1	4	18" APRON ENDWALL
0010	405'A+22	WB IH90 LT	2	-	-	37	93	-	-	1	0.7	2	1	4	18" APRON ENDWALL
0010	596'A+90	WB IH90 LT	2	-	-	33	83	-	-	-	0.7	1	1	4	18" APRON ENDWALL
0010	616'A+02	WB IH90 LT	2	-	-	43	108	-	-	-	0.9	2	1	4	18" APRON ENDWALL
0010	616'A+02	WB IH90 RT	-	-	-	50	125	-	-	-	1.0	2	1	-	JOINT REPAIR
0010	674'A+91	WB IH90 LT	2	-	-	50	125	-	-	-	1.0	2	1	4	18" APRON ENDWALL
0010	397+49	EB IH90 RT	-	-	-	61	153	-	-	-	1.2	3	2	-	24" APRON ENDWALL
0010	433+00	EB IH90 RT	2	-	-	50	125	-	-	2	1.0	2	1	4	24" APRON ENDWALL
0010	433+00	EB IH90 LT	2	-	-	50	125	-	-	2	1.0	2	1	4	24" APRON ENDWALL
0010	639+53	EB IH90 RT	2	-	-	37	93	-	-	-	0.7	2	1	4	24" APRON ENDWALL
0010	639+53	EB IH90 LT	-	-	-	11	28	-	-	-	0.2	0	0	-	JOINT REPAIR
0010	647+63	EB IH90 LT	-	-	-	61	153	-	-	-	1.2	3	2	-	JOINT REPAIR
0010	647+81	EB IH90 RT	2	-	-	37	93	-	-	-	0.7	2	1	4	24" APRON ENDWALL
0010	654+54	EB IH90 RT	2	-	-	37	93	-	-	-	0.7	2	1	4	24" APRON ENDWALL
0010	663+53	EB IH90 RT	2	-	-	37	93	-	-	-	0.7	2	1	4	24" APRON ENDWALL
0010	397'A+78	WB IH90 LT	2	-	-	37	93	-	-	-	0.7	2	1	4	24" APRON ENDWALL
0010	639'A+95	WB IH90 LT	2	-	-	63	158	-	-	-	1.3	3	2	4	24" APRON ENDWALL
0010	647'A+85	WB IH90 LT	2	-	-	37	93	-	-	-	0.7	2	1	4	24" APRON ENDWALL
0010	654'A+70	WB IH90 LT	2	-	-	37	93	-	-	-	0.7	2	1	4	24" APRON ENDWALL
0010	664'A+31	WB IH90 LT	2	-	-	37	93	-	-	-	0.7	2	1	4	24" APRON ENDWALL
0010	572+82	EB IH 90 RT	-	4	-	37	93	-	-	-	0.7	2	1	5	30" APRON ENDWALL
0010	572+82	EB IH 90 RT	-	-	-	33	83	-	-	-	0.7	1	1	-	JOINT REPAIR
0010	582+34	EB IH 90 RT	-	4	-	37	93	-	-	-	0.7	2	1	5	30" APRON ENDWALL
0010	582+65	EB IH 90 LT	-	-	-	61	153	-	-	-	1.2	3	2	-	JOINT REPAIR
0010	521'A+03	WB IH 90 RT	-	4	-	77	193	-	-	-	1.6	3	2	5	30" APRON ENDWALL
0010	521'A+15	WB IH 90 LT	-	4	-	60	150	-	-	-	1.2	3	2	5	30" APRON ENDWALL
0010	547'A+47	WB IH 90 RT	-	4	-	50	125	-	-	3	1.0	2	1	5	30" APRON ENDWALL
0010	547'A+48	WB IH 90 LT	-	4	-	50	125	-	-	-	1.0	2	1	5	30" APRON ENDWALL
		SUBTOTAL	43	28	205	1,697	4,124	1,000	30	12	34	85	51	121	

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EROSION CONTROL SUMMARY (CONTINUED)

			608.0254	606.0300	630.0170	625.0500	627.0200	628.2004	628.7504	628.7555	629.0210	630.0130	630.0200	645.0120	
			RIPRAP	RIPRAP	TOPSOIL	SALVAGED	MULCHING	EROSION MAT	TEMPORARY	CULVERT	FERTILIZER	SEEDING	SEEDING	GEOTEXTILE	
			MEDIUM	HEAVY		TOPSOIL		CLASS I	DITCH CHECKS	PIPE	TYPE B	MIXTURE	TEMPORARY	FABRIC	
								TYPE B		CHECKS		NO. 30		TYPE HR	
CATEGORY	STATION	LOCATION	CY	CY	SY	SY	SY	SY	LF	EACH	CWT	LB	LB	SY	REMARKS
0010	553'A+01	WB IH 90 LT	-	4	-	37	93	-	-	3	0.7	2	1	5	30" APRON ENDWALL
0010	553'A+03	WB IH 90 RT	-	4	-	63	158	-	-	-	1.3	3	2	5	30" APRON ENDWALL
0010	572'A+92	WB IH 90 RT	-	-	-	37	93	-	-	-	0.7	2	1	-	JOINT REPAIR
0010	573'A+58	WB IH 90 LT	-	4	-	50	125	-	-	-	1.0	2	1	5	30" APRON ENDWALL
0010	583'A+01	WB IH 90 LT	-	4	-	37	93	-	-	-	0.7	2	1	5	30" APRON ENDWALL
0010	480+45	EB IH 90 RT	-	4	-	40	100	-	-	-	0.8	2	1	6	36" APRON ENDWALL
0010	559+24	EB IH 90 RT	-	-	-	255	638	-	-	4	5.2	11	7	-	JOINT REPAIR
0010	603+31	EB IH 90 RT	-	-	-	17	43	-	-	-	0.3	1	0	-	JOINT REPAIR
0010	480'A+04	WB IH 90 LT	-	4	-	40	100	-	-	4	0.8	2	1	6	36" APRON ENDWALL
0010	559'A+39	WB IH 90 LT	-	4	-	40	100	-	-	-	0.8	2	1	6	36" APRON ENDWALL
0010	602'A+74	WB IH 90 LT	-	4	-	67	168	-	-	-	1.4	3	2	6	36" APRON ENDWALL
0010	630'A+81	WB IH 90 LT	-	18	-	33	83	-	-	-	0.7	1	1	6	36" APRON ENDWALL
0010	630'A+90	WB IH 90 LT	-	18	-	32	80	-	-	-	0.6	1	1	6	36" APRON ENDWALL
0010	448+66	EB IH 90 RT	-	5	-	71	178	-	-	-	1.4	3	2	7	42" APRON ENDWALL
0010	448'A+31	WB IH 90 LT	-	5	-	71	178	-	-	6	1.4	3	2	7	42" APRON ENDWALL
0010	608+52	EB IH 90 RT	-	5	-	53	133	-	-	-	1.1	2	1	8	48" APRON ENDWALL
0010	605'A+80	WB IH 90 LT	-	5	-	89	223	-	-	-	1.8	4	2	8	48" APRON ENDWALL
0010	438+90	EB IH 90 RT	-	-	-	80	200	-	-	-	1.6	4	2	-	JOINT REPAIR
0010	439+54	EB IH 90 RT	-	8	-	53	133	-	-	-	1.1	2	1	12	60" APRON ENDWALL
0010	499+37	EB IH 90 RT	-	8	-	89	223	-	-	-	1.8	4	2	12	60" APRON ENDWALL
0010	499+37	EB IH 90 LT	-	22	-	80	200	-	-	-	1.6	4	2	12	60" APRON ENDWALL
0010	437'A+70	WB IH 90 LT	-	8	-	80	200	-	-	9	1.6	4	2	12	60" APRON ENDWALL
0010	498'A+39	WB IH 90 LT	-	8	-	80	200	-	-	9	1.6	4	2	12	60" APRON ENDWALL
0010	498'A+40	WB IH 90 RT	-	22	-	80	200	-	-	-	1.6	4	2	12	60" APRON ENDWALL
0010	559+24	EB IH90 RT	-	-	-	78	195	-	-	-	1.6	4	2	6	36" STORM SEWER
0010	396+53	IH 90 MEDIAN	-	-	-	222	222	-	-	-	1.8	4	6	-	MAINTENANCE CROSSEOVERS
0010	397+38	IH 90 MEDIAN	-	-	-	222	222	-	15	-	2	4	6	-	MAINTENANCE CROSSEOVERS
0010	538+27	IH 90 MEDIAN	-	-	-	2,100	2,100	-	-	-	17	38	57	-	MAINTENANCE CROSSEOVERS
0010	539+96	IH 90 MEDIAN	-	-	-	2,450	2,450	-	-	-	20	44	66	-	MAINTENANCE CROSSEOVERS
0010	542+34	IH 90 EB LT	-	-	-	5,600	-	5,600	-	-	45	101	151	-	CLEARZONE GRADING
0010	542+34	IH 90 EB RT	-	-	-	2,400	-	2,400	-	-	19	43	65	-	CLEARZONE GRADING
0010	560'A+36	IH 90 WB LT	-	-	5	67	168	-	-	-	1.4	3	2	-	24" CMP STEEL ENDWALL (10:1)
0010	601+99	IH 90 MEDIAN	-	-	-	192	192	-	-	-	2	3	5	-	MAINTENANCE CROSSEOVERS
0010	602+77	IH 90 MEDIAN	-	-	-	142	142	-	15	-	1	3	4	-	MAINTENANCE CROSSEOVERS
SUBTOTAL			0	164	5	15,047	9,626	8,000	30	35	143	317	406	160	
ITEM TOTAL S			**43**	192	210	16,744	13,749	9,000	60	47	177	402	458	281	

** QUANTITY LISTED ELSEWHERE**

3

INLET PROTECTION TYPE B

628.7010					
INLET					
PROTECTION					
TYPE B					
CATEGORY	STATION	LOCATION	TYPE B	EACH	REMARKS
0010	397+49	39' LT	1		EAST BOUND
0010	397+49	68' RT	1		EAST BOUND
0010	438+90	48' LT	1		EAST BOUND
0010	448+67	28' LT	1		EAST BOUND
0010	582+65	33' LT	1		EAST BOUND
0010	596+23	26' LT	1		EAST BOUND
0010	603+00	39' LT	1		EAST BOUND
0010	603+31	79' RT	1		EAST BOUND
0010	610+41	58' RT	1		EAST BOUND
0010	639+53	34' LT	1		EAST BOUND
0010	647+63	34' LT	1		EAST BOUND
0010	572'A+82	44' RT	1		WEST BOUND
TOTAL			12		

DELINEATOR SUMMARY

633.0200						
DELINEATORS						
FLEXIBLE						
CATEGORY	STATION	TO	STATION	LOCATION	EACH	REMARKS
0010	370+00	-	553+97	IH 90 EB	47	OUTSIDE SHOULDER
0010	557+35	-	560+35	IH 90 EB	4	OUTSIDE SHOULDER-DOUBLE REFLECTIVE POST
0010	564+54	-	576+54	IH 90 EB	4	OUTSIDE SHOULDER
0010	585+73	-	588+73	IH 90 EB	4	OUTSIDE SHOULDER-DOUBLE REFLECTIVE POST
0010	589+73	-	641+73	IH 90 EB	14	OUTSIDE SHOULDER
0010	642+41	-	648+24	IH 90 EB	7	OUTSIDE SHOULDER-DOUBLE REFLECTIVE POST
0010	649+24	-	660+24	EXIT RAMP	11	OUTSIDE SHOULDER
0010	652+27	-	668+27	IH 90 EB	9	OUTSIDE SHOULDER
0010	660+50	-	675+50	ENT. RAMP	16	OUTSIDE SHOULDER
0010	676+56	-	682+56	IH 90 EB	4	OUTSIDE SHOULDER-DOUBLE REFLECTIVE POST
0010	686+56	-	696+65	IH 90 EB	5	OUTSIDE SHOULDER
0010	371'A+01	-	635'A+00	IH 90 WB	67	OUTSIDE SHOULDER
0010	639'A+00	-	644'A+00	IH 90 WB	6	OUTSIDE SHOULDER-DOUBLE REFLECTIVE POST
0010	652'A+50	-	668'A+50	ENT. RAMP	21	OUTSIDE SHOULDER
0010	652'A+50	-	666'A+50	IH 90 WB	8	OUTSIDE SHOULDER
0010	670'A+50	-	678'A+50	EXIT RAMP	9	OUTSIDE SHOULDER
0010	676'A+66	-	670'A+66	IH 90 WB	5	OUTSIDE SHOULDER-DOUBLE REFLECTIVE POST
0010	677'A+57	-	697'A+10	IH 90 WB	9	OUTSIDE SHOULDER
TOTAL					250	

STATE PROJECT NO: 1071-07-77

HWY IH 90

COUNTY: LA CROSSE

MISCELLANEOUS QUANTITIES

SHEET NO: 66

E

FILE NAME :

PLOT DATE :

PLOT BY :

PLOT NAME :

ORG DATE :

ORIGINATOR : DIST _

PLOT SCALE : 1:1

3

MARKERS CULVERT END (CONTINUED)

MARKERS CULVERT END				633.5200 MARKERS CULVERT END EACH
CATEGORY	STATION	LOCATION	END EACH	
0010	369+35	30' LT EB	1	
0010	369+35	62' RT EB	1	
0010	369+35	185' RT EB	1	
0010	382+69	30' LT EB	1	
0010	382+69	70' RT EB	1	
0010	383+98	89' RT EB	1	
0010	397+46	39' LT EB	1	
0010	397+46	68' RT EB	1	
0010	397+46	159' RT EB	1	
0010	427+43	38' LT EB	1	
0010	427+43	150' RT EB	1	
0010	432+92	49' LT EB	1	
0010	432+96	93' RT EB	1	
0010	438+70	47' LT EB	1	
0010	439+49	84' RT EB	1	
0010	448+62	72' RT EB	1	
0010	448+64	28' LT EB	1	
0010	461+45	30' LT EB	1	
0010	461+45	70' RT EB	1	
0010	467+42	29' LT EB	1	
0010	467+42	82' RT EB	1	
0010	480+53	131' RT EB	1	
0010	488+30	32' LT EB	1	
0010	488+30	84' RT EB	1	
0010	499+35	53' LT EB	1	
0010	499+40	79' RT EB	1	
0010	559+19	233' RT EB	1	
0010	559+21	87' RT EB	1	
0010	582+32	80' RT EB	1	
0010	582+61	32' LT EB	1	
0010	603+03	38' LT EB	1	
0010	603+29	77' RT EB	1	
0010	603+58	196' RT EB	1	
0010	608+48	247' RT EB	1	
0010	609+92	151' RT EB	1	
0010	610+39	57' RT EB	1	
0010	610+79	34' LT EB	1	
0010	626+15	174' RT EB	1	
0010	626+17	30' LT EB	1	
0010	626+18	62' RT EB	1	
0010	631+19	34' LT EB	1	
0010	631+85	58' RT EB	1	
0010	632+49	167' RT EB	1	
		SUBTOTAL	43	
0010	639+49	33' LT EB	1	
0010	639+49	56' RT EB	1	
0010	647+61	34' LT EB	1	
0010	647+76	68' RT EB	1	
0010	654+51	57' LT EB	1	
0010	663+51	32' LT EB	1	
0010	663+51	56' RT EB	1	
0010	389'A+59	32' RT WB	1	
0010	389'A+62	79' LT WB	1	
0010	397'A+81	67' LT WB	1	
0010	405'A+24	36' RT WB	1	
0010	405'A+26	57' LT WB	1	
0010	427'A+81	44' RT WB	1	
0010	427'A+81	63' LT WB	1	
0010	437'A+72	71' LT WB	1	
0010	448'A+34	68' LT WB	1	
0010	480'A+06	125' LT WB	1	
0010	498'A+41	77' LT WB	1	
0010	498'A+42	52' RT WB	1	
0010	521'A+18	88' LT WB	1	
0010	521'A+05	50' RT WB	1	
0010	553'A+05	90' LT WB	1	
0010	553'A+10	58' RT WB	1	
0010	559'A+27	72' RT WB	1	
0010	559'A+41	79' LT WB	1	
0010	560'A+58	53' LT WB	1	
0010	573'A+60	67' LT WB	1	
0010	583'A+03	70' LT WB	1	
0010	596'A+91	61' LT WB	1	
0010	596'A+91	32' RT WB	1	
0010	605'A+82	138' LT WB	1	
0010	616'A+04	69' LT WB	1	
0010	616'A+04	31' RT WB	1	
0010	626'A+62	72' LT WB	1	
0010	630'A+83	83' LT WB	1	
0010	630'A+91	83' LT WB	1	
0010	638'A+98	79' LT WB	1	
0010	647'A+88	76' LT WB	1	
0010	654'A+73	196' LT WB	1	
0010	654'A+99	66' LT WB	1	
0010	664'A+34	220' LT WB	1	
0010	674'A+90	25' RT WB	1	
0010	675'A+00	65' LT WB	1	
0010	685'A+03	67' LT WB	1	
0010	685'A+04	26' RT WB	1	
		SUBTOTAL	45	
ITEM TOTAL			88	

TRAFFIC CONTROL SUMMARY										
CATEGORY	LOCATION	SURVEILLANCE AND MAINT. 643.0200	DRUMS 643.0300	BARRICADES TYPE 3 643.0420	LIGHTS TYPE A 643.0705	LIGHTS TYPE C 643.0715	ARROW BOARD 643.0800	SIGNS 643.0900	PCMS 643.1050	REMARKS
		DAYS	DAYS	DAYS	DAYS	DAYS	DAYS	DAYS	DAYS	
0010	IH 90 EB Stage 1A	2	90	2	-	32	4	8	2	RIGHT LANE
0010	IH 90 EB Stage 1	30	13,500	900	1,800	1,260	60	1,710	30	MAINLINE
0010	IH 90 EB Stage 2	16	7,200	480	960	672	32	912	16	MAINLINE
0010	IH 90 WB Stage 3	26	10,790	754	1,508	858	52	1,352	26	MAINLINE
0010	IH 90 WB Stage 4	16	6,640	464	928	528	32	832	16	MAINLINE
TOTALS		90	38220	2600	5196	3350	180	4814	90	

NOTE: TRAFFIC CONTROL QUANTITIES WERE BASED ON THE CAL. DAYS CALCULATED FOR EACH STAGE OF THE PROJECT.

3

3

PAVEMENT MARKING SUMMARY

					646.0106	646.0881.S	646.0883.S	646.0126	647.0566	
					PAVEMENT MARKING EPOXY 4-INCH	GROOVED WET REFELECTIVE 4-INCH TAPE	GROOVED WET REFELECTIVE 8-INCH TAPE	PAVEMENT MARKING EPOXY 8-INCH	PAVEMENT MARKING STOP LINE EPOXY 18-INCH	
STAGE/ CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	LF	EACH	LF	REMARKS
STAGE 2:										
0010	370+00	-	696+65	IH 90 EB	32,665	-	-	-	-	YELLOW LT EDGELINE
0010	370+00	-	696+65	IH 90 EB	-	8,375	-	-	-	WHITE DASHED CENTERLINE
0010	370+00	-	696+65	IH 90 EB	29,167	-	-	-	-	WHITE RT EDGELINE
0010	560+55	-	562+99	IH 90 EB	-	-	244	-	-	WHITE RT GORE AREA
0010	560+55	-	561+70	WEIGH STATION ENT.	-	-	115	-	-	WHITE RT GORE AREA
0010	578+66	-	584+73	WEIGH STATION ENT.	-	-	607	-	-	WHITE RT GORE AREA
0010	580+09	-	584+73	WEIGH STATION EXIT	-	-	464	-	-	WHITE RT GORE AREA
0010	648+26	-	650+86	IH 90 EB EXIT RAMP	-	-	260	-	-	WHITE RT GORE AREA
0010	648'B'+24	-	650'B'+84	IH 90 EB EXIT RAMP	-	-	260	-	-	WHITE RT GORE AREA
0010	669+09	-	676+57	IH 90 EB ENTRANCE RAMP	-	-	748	-	-	WHITE RT GORE AREA
0010	668'E'+68	-	676'E'+58	IH 90 EB ENTRANCE RAMP	-	-	790	-	-	WHITE RT GORE AREA
0010	650'B'+84	-	660'B'+25	IH 90 EB EXIT RAMP	950	-	-	-	-	YELLOW LT EDGELINE
0010	650'B'+84	-	660'B'+25	IH 90 EB EXIT RAMP	950	-	-	-	-	WHITE RT EDGELINE
0010	662'E'+00	-	668'E'+68	IH 90 EB ENTRANCE RAMP	850	-	-	-	-	YELLOW LT EDGELINE
0010	662'E'+00	-	668'E'+68	IH 90 EB ENTRANCE RAMP	850	-	-	-	-	WHITE RT EDGELINE
0010	659'B'+25	-	660'B'+23	IH 90 EB EXIT RAMP	-	-	-	130	-	WHITE CHANNELIZING
0010	659'B'+27	-		IH 90 EB EXIT RAMP	-	-	-		24	STOP BARS
					65,500	8,400	3,500	130	24	
STAGE 4:										
0010	370'A'+01	-	697'A'+10	IH 90 WB	32,709	-	-	-	-	YELLOW LT EDGELINE
0010	370'A'+01	-	697'A'+10	IH 90 WB	-	8,388	-	-	-	WHITE DASHED CENTERLINE
0010	370'A'+01	-	697'A'+10	IH 90 WB	31,345	-	-	-	-	WHITE RT EDGELINE
0010	644'A'+00	-	651'A'+73	IH 90 WB ENTRANCE RAMP	-	-	773	-	-	WHITE LT GORE AREA
0010	644'C'+00	-	651'C'+71	IH 90 WB ENTRANCE RAMP	-	-	771	-	-	WHITE RT GORE AREA
0010	667'A'+68	-	670'A'+50	IH 90 WB EXIT RAMP	-	-	282	-	-	WHITE RT GORE AREA
0010	667'D'+90	-	670'D'+10	IH 90 WB EXIT RAMP	-	-	220	-	-	WHITE RT GORE AREA
0010	651'C'+71	-	660'C'+68	IH 90 WB ENTRANCE RAMP	910	-	-	-	-	YELLOW LT EDGELINE
0010	651'C'+71	-	660'C'+68	IH 90 WB ENTRANCE RAMP	930	-	-	-	-	WHITE RT EDGELINE
0010	660'D'+17	-	667'D'+90	IH 90 WB EXIT RAMP	730	-	-	-	-	YELLOW LT EDGELINE
0010	660'D'+17	-	667'D'+90	IH 90 WB EXIT RAMP	760	-	-	-	-	WHITE RT EDGELINE
0010	660'D'+51	-	661'D'+16	IH 90 WB EXIT RAMP	-	-	-	130	-	WHITE CHANNELIZING
0010	660'D'+75	-		IH 90 WB EXIT RAMP	-	-	-	-	24	STOP BARS
					67,400	8,400	2,100	130	24	
TRAFFIC CONTROL COVERING SIGNS TYPE II					TOTALS	132,900	16,800	5,600	260	48

643.0920
TRAFFIC
CONTROL
COVERING
SIGNS
TYPE II

REMOVE RAISED PAVEMENT MARKINGS

646.0790.S
REMOVING RAISED
PAVEMENT MARKERS

CATEGORY	STATION	LOCATION	EACH	REMARKS
0010	431+50	EB IH 90	1	SLOWER TRAFFIC KEEP RIGHT
0010	429'A'+00	WB IH 90	1	SLOWER TRAFFIC KEEP RIGHT
TOTAL			2	

CATEGORY	STATION	TO	STATION	LOCATION	EACH	REMARKS
0010	370+00	-	696+65	IH 90 EB	300	-
0010	370'A'+01	-	697'A'+10	IH 90 WB	302	-
TOTAL					602	

TEMPORARY PAVEMENT MARKING									

TEMPORARY PAVEMENT MARKING (CONTINUED)									
		646.0600	649.0100	649.0400	649.0701				
		REMOVING	TEMPORARY	TEMPORARY	TEMPORARY				
		PAVEMENT	PAVEMENT	PAVEMENT	PAVEMENT				
		MARKINGS	MARKING 4-INCH	MARKING	MARKING 8-INCH				
				REMOVABLE					
				TAPE 4-INCH					
STAGE/ CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	LF	LF	REMARKS
STAGE 3:									
0010	713'A+15	-	720'A+95	IH 90 WB CL	113	-	-	-	WB TAPER
0010	713'A+15	-	720'A+95	IH 90 WB RT	-	-	780	-	WB TAPER
0010	668'A+00	-	670'A+00	IH 90 WB GORE	900	-	-	-	WB CTH 'C' EXIT RAMP
0010	668'A+00	-	670'A+00	IH 90 WB GORE	-	-	-	400	WB CTH 'C' EXIT RAMP
0010	670'A+00	-	674'A+00	IH 90 WB CL	50	-	-	-	WB CTH 'C' EXIT RAMP
0010	672'A+00	-	674'A+00	IH 90 WB RT	-	200	-	-	WB CTH 'C' EXIT RAMP
0010	644'A+00	-	652'A+50	IH 90 WB GORE	1,600	-	-	-	WB CTH 'C' ENTERANCE RAMP
0010	645'A+50	-	650'A+00	IH 90 WB RT	-	450	-	-	WB CTH 'C' ENTERANCE RAMP
0010	646'A+00	-	650'A+00	IH 90 WB CL	50	-	-	-	WB CTH 'C' ENTERANCE RAMP
0010	650'A+00	-	651'A+00	IH 90 WB GORE	-	-	-	200	WB CTH 'C' ENTERANCE RAMP
0010	370'A+01	-	697'A+10	IH 90 WB LT		32,709			SOLID YELLOW EDGE LINE FOR STAGE 3 SWITCH
0010	370'A+01	-	697'A+10	IH 90 WB CL		8,177			WHITE SKIPS FOR STAGE 3 SWITCH
0010	370'A+01	-	697'A+10	IH 90 WB RT		32,709			SOLID WHITE EDGE LINE FOR SWITCH TO STAGE 4
				SUBTOTAL	2,713	74,245	780	600	
STAGE 4:									
0010	713'A+15	-	720'A+95	IH 90 WB LT	-	-	780	-	WB TAPER
0010	644'A+00	-	651'A+73	IH 90 WB ENTRANCE RAMP	-	-	-	773	WHITE RT GORE AREA - PER STANDARD DETAIL DRAWING
0010	644'C+00	-	651'C+71	IH 90 WB ENTRANCE RAMP	-	-	-	771	WHITE RT GORE AREA - PER STANDARD DETAIL DRAWING
0010	667'A+68	-	670'A+50	IH 90 WB EXIT RAMP	-	-	-	282	WHITE RT GORE AREA - PER STANDARD DETAIL DRAWING
0010	667'D+90	-	670'D+10	IH 90 WB EXIT RAMP	-	-	-	220	WHITE RT GORE AREA - PER STANDARD DETAIL DRAWING
0010	370'A+01	-	697'A+10	IH 90 WB CL	-	8,177	-	-	WHITE SKIPS - PER STANDARD DETAIL DRAWING
				SUBTOTAL	0	8,177	780	2,046	
ITEM TOTALS					7,526	167,035	5,460	6,734	

CONSTRUCTION STAKING			
650.4000 CONSTRUCTION STAKING STORM SEWER			
CATEGORY	STATION	LOCATION	EACH
EAST BOUND			
0010	382+64	IH 90 EB RT	1
0010	559+24	IH 90 EB RT	1
TOTAL			2

SAWING ASPHALT					
690.0150 SAWING ASPHALT					
CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	559+12	-	559+12	SCHILD ROAD	24
0010	559+32	-	559+32	SCHILD ROAD	24
0010	559+00	-	562+50	IH 90 EB	350
0010	578+70	-	586+20	IH 90 EB	750
0010	660'B'+25	-	660'B'+25	IH 90 RAMP	115
0010	660'C'+68	-	660'C'+68	IH 90 RAMP	105
0010	660'D'+17	-	660'D'+17	IH 90 RAMP	110
0010	662'E'+00	-	662'E'+00	IH 90 RAMP	105
TOTAL					1,583

CONSTRUCTION STAKING SUMMARY							
650.8000 CONSTRUCTION STAKING RESURFACING				650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL		650.9920 CONSTRUCTION STAKING SLOPE STAKES	
CATEGORY	STATION	TO	STATION	LOCATION	LF	LS	LF
0010	PROJECT			IH 90	-	1	-
0010	370+00	-	696+65	IH 90 EB	32,665	-	-
0010	542+34	-	548+51	IH 90 EB LT	-	-	617
0010	542+34	-	546+36	IH 90 EB RT	-	-	402
0010	370'A'+01	-	697'A'+10	IH 90 WB	32,709	-	-
0010	641'B'+04	-	660'B'+42	CTH 'C' EB OFF-RAMP	1,938	-	-
0010	638'C'+45	-	660'C'+67	CTH 'C' WB ON-RAMP	2,222	-	-
0010	660'C'+87	-	679'C'+70	CTH 'C' WB OFF-RAMP	1,884	-	-
0010	660'E'+33	-	682'E'+07	CTH 'C' EB ON-RAMP	2,174	-	-
0010	000'F'+20	-	000'F'+50	IH 90 MEDIAN	-	-	30
0010	000'F'+20	-	000'F'+50	IH 90 MEDIAN	-	-	30
0010	000'G'+10	-	002'G'+50	IH 90 MEDIAN	-	-	200
0010	000'G'+10	-	002'G'+50	IH 90 MEDIAN	-	-	200
0010	000'H'+10	-	000'H'+40	IH 90 MEDIAN	-	-	30
0010	000'H'+10	-	000'H'+40	IH 90 MEDIAN	-	-	30
TOTALS					73,592	1	1,539

3

SAWING CONCRETE (EASTBOUND)

690.0250
SAWING
CONCRETE

CATEGORY	STATION	LOCATION	LF
0010	376+33	IH 90 EB	36
0010	377+71	IH 90 EB	36
0010	378+32	IH 90 EB	36
0010	378+46	IH 90 EB	36
0010	378+76	IH 90 EB	42
0010	382+65	IH 90 EB	76
0010	383+05	IH 90 EB	38
0010	386+28	IH 90 EB	36
0010	386+28	IH 90 EB	36
0010	388+18	IH 90 EB	36
0010	393+93	IH 90 EB	36
0010	400+37	IH 90 EB	36
0010	400+37	IH 90 EB	36
0010	418+70	IH 90 EB	36
0010	432+05	IH 90 EB	36
0010	435+47	IH 90 EB	36
0010	435+57	IH 90 EB	36
0010	473+47	IH 90 EB	36
0010	487+28	IH 90 EB	36
0010	540+28	IH 90 EB	36
0010	559+37	IH 90 EB	36
0010	559+45	IH 90 EB	36
0010	562+35	IH 90 EB	36
0010	595+11	IH 90 EB	42
0010	595+35	IH 90 EB	42
0010	600+28	IH 90 EB	45
0010	600+43	IH 90 EB	45
0010	600+76	IH 90 EB	36
0010	601+85	IH 90 EB	36
0010	618+75	IH 90 EB	36
0010	637+94	IH 90 EB	36
0010	663+03	IH 90 EB	36
0010	665+44	IH 90 EB	36
0010	672+34	IH 90 EB	36
0010	673+69	IH 90 EB	38
0010	678+64	IH 90 EB	36
0010	683+95	IH 90 EB	36
0010	690+62	IH 90 EB	36
0010	690+62	IH 90 EB	36
0010	693+71	IH 90 EB	36
UNDISTRIBUTED		IH 90 EB	300
SUBTOTAL			1,820

SAWING CONCRETE (WESTBOUND)

690.0250
SAWING
CONCRETE

CATEGORY	STATION	LOCATION	LF
0010	391'A+70	IH 90 WB	36
0010	422'A+57	IH 90 WB	36
0010	455'A+42	IH 90 WB	36
0010	506'A+82	IH 90 WB	36
0010	492'A+36	IH 90 WB	36
0010	485'A+98	IH 90 WB	36
0010	474'A+13	IH 90 WB	36
0010	473'A+30	IH 90 WB	36
0010	606'A+60	IH 90 WB	40
0010	599'A+73	IH 90 WB	36
0010	599'A+73	IH 90 WB	36
0010	598'A+95	IH 90 WB	36
0010	587'A+84	IH 90 WB	36
0010	579'A+15	IH 90 WB	36
0010	666'A+92	IH 90 WB	36
0010	657'A+51	IH 90 WB	36
0010	656'A+92	IH 90 WB	36
0010	655'A+85	IH 90 WB	36
0010	648'A+32	IH 90 WB	36
0010	646'A+41	IH 90 WB	36
0010	631'A+40	IH 90 WB	36
0010	631'A+35	IH 90 WB	36
UNDISTRIBUTED		IH 90 WB	160
SUBTOTAL			956
TOTAL			2,776

REMOVING CONCRETE BASE, TRAFFIC COUNTER

SPV.0060.03
REMOVING
CONCRETE BASE,
TRAFFIC
COUNTER

CATEGORY	STATION	LOCATION	LF
0010	369+81	IH 90 EB, 93'RT	1

PERMANENT BARRICADE

SPV.0060.01
PERMANENT
BARRICADE
TYPE III
EACH

SPV.0060.02
BARRICADE
RACK
EACH

CATEGORY	LOCATION	EACH	EACH	REMARKS
0010	WB ON RAMP	3	1	STH 162 Interchange (Bangor)
0010	EB ON RAMP	3	1	STH 162 Interchange (Bangor)
0010	WB ON RAMP	3	1	CTH C Interchange (West Salem)
0010	EB ON RAMP	3	1	CTH C Interchange (West Salem)
0010	WB ON RAMP #1	3	1	STH 16 Interchange (Onalaska)
0010	WB ON RAMP #2	3	1	STH 16 Interchange (Onalaska)
0010	EB ON RAMP	8	1	STH 16 Interchange (Onalaska)
TOTALS		26	7	

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TYPE 1 SIGNS SUMMARY

SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	635.0200	635.0300	636.0100	636.0500	637.0101	638.2601	638.3100	NOTES
							SIGN SUPPORTS STEEL HS LB	REPLACING BASE CONNECTION BOLTS EACH	SIGN SUPPORTS CONCRETE MASONRY CY	SIGNS SUPPORTS STEEL REINFORCEMENT LB		REMOVING SIGNS TYPE I EACH	REMOVING STRUCURAL SIGN SUPPORTS EACH	
107R	369'A+80	IH 90 WB LT	E1-5	96" x 30"	Exit Number for E4-1	5						1.0		Mounted with .107R
108R	362'A+60	IH 90 WB LT	E4-1A	228" x 132"	Exit Direction Sign with Arrow	STH 16 Arrow Tilt Right Onalaska La Crosse						1.0		Existing Bases and Supports to Remain
109	369'A+80	IH 90 WB LT	E1-5	96" x 30"	Exit Number for E4-1	5					7.5			Mount with 110
110	362'A+60	IH 90 WB LT	E4-1A	228" x 132"	Exit Direction Sign with Arrow	STH 16 Arrow Tilt Right La Crosse Onalaska Our Lady of Guadalupe Shrine Exit 5		2.0			209.0			Use Existing Bases and Supports
112R	378'A+00	IH 90 WB LT	E3-1	240" x 84"	Destination - Exit Number	Our Lady of Guadalupe Shrine Exit 5						1.0		Existing Bases and Supports to Remain
113	378'A+00	IH 90 WB LT	E3-1	216" x 84"	Destination - Exit Number	Our Lady of Guadalupe Shrine Exit 5		2.0			126.0			Use Existing Bases and Supports
203R	386'A+00	IH 90 WB LT	E3-1	216" x 84"	Destination - Exit Number	Western Technical College Exit 5						1.0		Existing Bases and Supports to Remain
204	386'A+00	IH 90 WB LT	E3-1	216" x 84"	Destination - Exit Number	Western Technical College Exit 5		2.0			126.0			Use Existing Bases and Supports
205R	392+25	IH 90 EB RT	D2-3	192" x 84"	Destination/Distance (Three)	West Salem 5 Sparta 22 Madison 133						1.0		Existing Bases and Supports to Remain
206	392+25	IH 90 EB RT	D2-3	192" x 84"	Destination/Distance (Three)	West Salem 5 Tomah 38 Madison 133		2.0			112.0			Use Existing Bases and Supports
207R	394'A+95	IH 90 WB LT	E3-1	216" x 84"	Destination - Exit Number	UW La Crosse Viterbo University Exit 5						1.0		Existing Bases and Supports to Remain
208	394'A+95	IH 90 WB LT	E3-1	216" x 84"	Destination - Exit Number	UW La Crosse Viterbo University Exit 5		2.0			126.0			Use Existing Bases and Supports
217R	402'A+00	IH 90 WB LT	E10-61	144" x 54"	Destination - Exit Number	Hospital Exit 5						1.0		
218	402'A+00	IH 90 WB LT	E10-61	144" x 54"	Destination - Exit Number	Hospital Exit 5		2.0			54.0			
301R	410'A+00	IH 90 WB LT	E3-1	192" x 84"	Destination - Exit Number	La Crosse River State Trail Exit 5						1.0		Existing Bases and Supports to Remain
302	410'A+00	IH 90 WB LT	E3-1	192" x 84"	Destination - Exit Number	La Crosse River State Trail Exit 5		2.0			112.0			Use Existing Bases and Supports
303R	417'A+90	IH 90 WB LT	E1-5	96" x 30"	Exit Number for E1-1	5						1.0		Mounted with 304R
304R	417'A+90	IH 90 WB LT	E1-1A	192" x 162"	Advance Exit Guide Sign, _ Mile	STH 16 Onalaska La Crosse 1 Mile						1.0		Existing Bases and Supports to Remain
305	417'A+90	IH 90 WB LT	E1-5	96" x 30"	Exit Number for E1-1	5					7.5			Mount with 306
306	417'A+90	IH 90 WB LT	E1-1A	192" x 162"	Advance Exit Guide Sign, _ Mile	STH 16 Onalaska La Crosse 1 Mile		2.0			216.0			Use Existing Bases and Supports
401R	444'A+05	IH 90 WB LT	E1-1A	264" x 150"	Advance Exit Guide Sign, _ Mile	La Crosse Onalaska Exits Hwy 16 1 1/2 Hwy 53-157 3 Hwy 53-35 4 1/2						1.0		Existing Bases and Supports to Remain
402	444'A+05	IH 90 WB LT	E1-1A	300" x 144"	Advance Exit Guide Sign, _ Mile	La Crosse-Onalaska Exits STH 16 1 1/2 USH 53 North STH 157 3 USH 53 South STH 35 4 1/2		2.0			300.0			Use Existing Bases and Supports
SUBTOTAL							0.0	18.0	0.0	0.0	1396.0	11.0	0.0	

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TYPE 1 SIGNS SUMMARY (CONTINUED)															
SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	635.0200 SIGN SUPPORTS STEEL HS LB	635.0300 REPLACING BASE CONNECTION BOLTS EACH	636.0100 SIGN SUPPORTS CONCRETE MASONRY CY	636.0500 SIGNS SUPPORTS STEEL REINFORCEMENT LB	637.0101 SIGNS TYPE I SF	638.2601 REMOVING SIGNS TYPE I EACH	638.3100 REMOVING STRUCURAL SIGN SUPPORTS EACH	NOTES	
501R	471'A+40	IH 90 WB LT	D12-3	192" x 84"	Wisconsin Tourist Information	La Crosse Area Tourist Info Turn to 530 AM						1.0	2.0	Existing Bases to be removed (incidental)	
603R	502+95	IH 90 EB RT	E5-56A	108" X 72"	Weigh Station 1 Mile							1.0	2.0	Existing Bases to be removed (incidental)	
604	502+95	IH 90 EB RT	E5-56A	144" X 72"	Weigh Station 1 Mile		281.0	0.6		34.0	72.0			Inside Struct Steel Sign Support (17'-1")	
							300.0	0.6		34.0				Oustide Struct. Steel Sign Support (18'-8")	
														New inside base placed 1' out from existing	
														New outside base placed 2' out from existing	
607R	525+00	IH 90 EB RT	R13-1	120" X 48"	Trucks over 4 Tons Stop at Weigh Station							1.0		Existing Bases and Supports to Remain	
608	525+00	IH 90 EB RT	R13-1	144" X 66"	Trucks over 4 Tons Stop at Weigh Station			2.0			66.0			Use Existing Bases and Supports	
705R	547+75	IH 90 EB RT	E5-57E	120" X 72"	Weigh Station Right Lane							1.0		Existing Bases and Supports to Remain	
706	547+75	IH 90 EB RT	E5-57E	144" X 60"	Weigh Station Right Lane			2.0			60.0			Use Existing Bases and Supports	
														Electronic Message Sign to Remian	
905R	594+45	IH 90 EB RT	E1-5	108" X 30"	Exit Number for E1-1	12						1.0		Mounted with 908R	
906R	594+45	IH 90 EB RT	E1-1A	216" x 120"	Advance Exit Guide Sign, _ Mile	C						1.0		Existing Bases and Supports to Remain	
						West Salem									
						1 Mile									
907	594+45	IH 90 EB RT	E1-5	108" X 30"	Exit Number for E1-1	12					22.5			Mount with 910	
908	594+45	IH 90 EB RT	E1-1A	216" x 120"	Advance Exit Guide Sign, _ Mile	C		2.0			180.0			Use Existing Bases and Supports	
						West Salem									
						1 Mile									
909R	601'A+40	IH 90 WB LT	D2-3	180" x 96"	Destination/Distance (Three)	Onalaska 9						1.0	2.0	Existing Bases to Remain	
						La Crosse 13									
						Rochester 76									
910	601'A+40	IH 90 WB LT	D2-3	204" x 84"	Destination/Distance (Three)	Onalaska 9	300.0				119.0			Inside Struct Steel Sign Support (17'-4")	
						La Crosse 13	332.0							Oustide Struct. Steel Sign Support (19'-4")	
						Albert Lea 129								Use Existing Bases	
915R	603+05	IH 90 EB RT	D4-4	144" X 90"	Park and Ride-Car Symbol Only (Exit Number)	12						1.0		Existing Bases and Supports to Remain	
916	603+05	IH 90 EB RT	D4-4	144" X 90"	Park and Ride-Car Symbol Only (Exit Number)	12		2.0			90.0			Use Existing Bases and Supports	
1004R	640+80	IH 90 EB RT	E1-5	108" X 30"	Exit Number for E4-1	12						1.0		Mounted with 1004R	
1005R	640+80	IH 90 EB RT	E4-1A	252" x 90"	Advance Exit Guide Sign, _ Mile	C						1.0		Existing Bases and Supports to Remain	
						Arrow Tilt Right									
						West Salem									
1006	640+80	IH 90 EB RT	E1-5	108" X 30"	Exit Number for E4-1	12					22.5			Mount with 1006	
1007	640+80	IH 90 EB RT	E4-1A	252" x 90"	Advance Exit Guide Sign, _ Mile	C		2.0			157.5			Use Existing Bases and Supports	
						Arrow Tilt Right									
						West Salem									
1115R	677'A+45	IH 90 WB LT	E1-5	108" X 30"	Exit Number for E4-1	12						1.0		Mounted with 1004R	
1116R	677'A+45	IH 90 WB LT	E4-1A	252" x 90"	Advance Exit Guide Sign, _ Mile	C						1.0		Existing Bases and Supports to Remain	
						Arrow Tilt Right									
						West Salem									
1117	677'A+45	IH 90 WB LT	E1-5	108" X 30"	Exit Number for E4-1	12					22.5			Mount with 1020	
1118	677'A+45	IH 90 WB LT	E4-1A	252" x 90"	Advance Exit Guide Sign, _ Mile	C		2.0			157.5			Use Existing Bases and Supports	
						Arrow Tilt Right									
						West Salem									
SUBTOTAL							1213.0	12.0	1.2	68.0	969.5	12.0	6.0		
TOTAL							1213.0	30.0	1.2	68.0	2366.0	23.0	6.0		

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TYPE II SIGNS SUMMARY

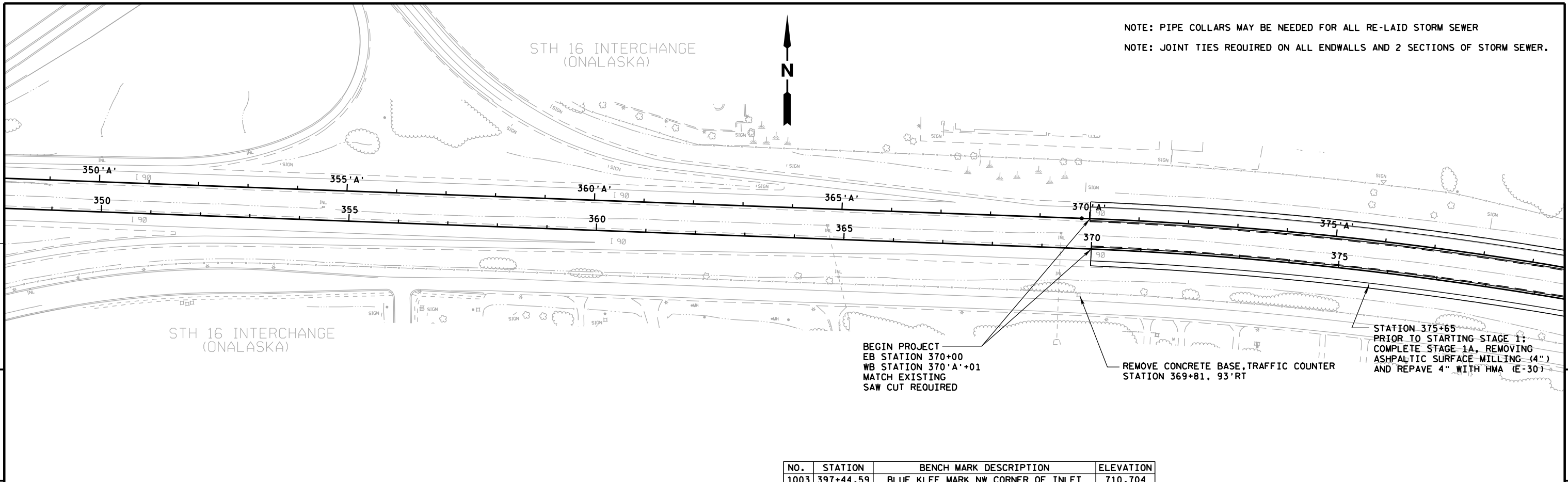
SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	634.0614	634.0616	634.0618	637.0202	638.2602	638.3000
							WOOD POSTS 14' EACH	WOOD POSTS 16' EACH	WOOD POSTS 18' EACH	SIGNS REFLECTIVE TYPE II SF	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
101R	363'A+15	IH 90 WB LT	E5-1A	72" x 60"	Exit Number with no Letters (Arrow) 1-4 Digits	5					1.0	2.0
102R	363'A+15	IH 90 WB LT	J4-1	36" x 54"	Reassurance Assembly (1 Headed Route Panel)	Alternate Interstate 90					1.0	
												Mounted on 101R Sign Support
103	363'A+15	IH 90 WB LT	E5-1A	72" x 60"	Exit Number with no Letters (Arrow) 1-4 Digits	5			2.0	30.0		
104	363'A+15	IH 90 WB LT	JV-F	36" x 81"	Folding J Panel	Alternate 90				20.3		
												Mount on 103 Sign Support
105R	363'A+75	IH 90 WB LT	W3-3	48" x 48"	Signal Ahead						1.0	2.0
106	363'A+75	IH 90 WB LT	W3-3	48" x 48"	Signal Ahead				2.0	16.0		
111	381+40	IH 90 EB RT	J4-1	36" x 54"	Reassurance Assembly (1 Headed Route Panel)	East 90			1.0	13.5		
201	406+50	IH 90 EB RT	R2-1	48" x 60"	Speed Limit_MPH	65			2.0	20.0		
202R	381+40	IH 90 EB RT	J4-1	36" x 54"	Reassurance Assembly (1 Headed Route Panel)	East 90					1.0	1.0
209R	396+90	IH 90 EB LT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles						1.0	1.0
210R	396+90	IH 90 EB LT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles						1.0	
211	396+90	IH 90 EB LT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles			1.0		12.0		
212R	397'A+65	IH 90 WB LT	D10-1	12" x 24"	Milepost Marker	7					1.0	1.0
213	397'A+80	IH 90 WB RT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles			1.0		12.0		
214	397'A+90	IH 90 WB LT	D10-1	12" x 24"	Milepost Marker	7	1.0			2.0		
215R	397+80	IH 90 EB RT	D10-1	12" x 24"	Milepost Marker	7					1.0	1.0
216	397+80	IH 90 EB RT	D10-1	12" x 24"	Milepost Marker	7	1.0			2.0		
219R	406+50	IH 90 EB RT	R2-1	48" x 60"	Speed Limit_MPH	65					1.0	2.0
307R	419+85	IH 90 EB RT	R8-7	48" x 36"	Emergency Stopping Only						1.0	2.0
308	419+85	IH 90 EB RT	R8-7	48" x 36"	Emergency Stopping Only			1.0		12.0		
309R	429'A+15	IH 90 WB RT	R4-3	48" x 60"	Slower Traffic Keep Right						1.0	2.0
310	429'A+15	IH 90 WB RT	R4-3	48" x 60"	Slower Traffic Keep Right				2.0	20.0		
311R	431+50	IH 90 EB RT	R4-3	48" x 60"	Slower Traffic Keep Right						1.0	2.0
312	431+50	IH 90 EB RT	R4-3	48" x 60"	Slower Traffic Keep Right				2.0	20.0		
403R	450+15	IH 90 EB RT	D10-1	12" x 24"	Milepost Marker	8					1.0	1.0
404	450+75	IH 90 EB RT	D10-1	12" x 24"	Milepost Marker	8	1.0			2.0		
405R	449'A+80	IH 90 WB LT	D10-1	12" x 24"	Milepost Marker	8					1.0	1.0
406	450'A+25	IH 90 WB LT	D10-1	12" x 24"	Milepost Marker	8	1.0			2.0		
407	456+15	IH 90 EB RT	I3-1	72" x 36"	River Name	La Crosse River		2.0		18.0		
408R	456+25	IH 90 EB RT	W5-52R	18" x 54"	Clearance Stripper Down Left						1.0	1.0
409R	456+50	IH 90 EB LT	W5-52L	18" x 54"	Clearance Stripper Down Right						1.0	1.0
410R	456'A+20	IH 90 WB RT	I-55-56	30" x 36"	Adopt-A-Highway	SAMS CLUB 6436 ONALASKA, WI					1.0	1.0
411	456'A+20	IH 90 WB RT	I-55-56	30" x 36"	Adopt-A-Highway	SAMS CLUB 6436 ONALASKA, WI		1.0		7.5		
412R	456'A+20	IH 90 WB LT	I-55-56	30" x 36"	Adopt-A-Highway	SAMS CLUB 6436 ONALASKA, WI					1.0	1.0
413	456'A+20	IH 90 WB LT	I-55-56	30" x 36"	Adopt-A-Highway	SAMS CLUB 6436 ONALASKA, WI		1.0		7.5		
414R	460'A+05	IH 90 WB RT	W5-52L	18" x 54"	Clearance Stripper Down Right						1.0	1.0
415R	460'A+40	IH 90 WB LT	W5-52R	18" x 54"	Clearance Stripper Down Left						1.0	1.0
416	460'A+45	IH 90 WB LT	I3-1	72" x 36"	River Name	La Crosse River		2.0		18.0		
502R	474+95	IH 90 EB RT	W5-52R	18" x 54"	Clearance Stripper Down Left						1.0	1.0
503R	475+40	IH 90 EB LT	W5-52L	18" x 54"	Clearance Stripper Down Right						1.0	1.0
504R	478'A+80	IH 90 WB RT	W5-52L	18" x 54"	Clearance Stripper Down Right						1.0	1.0
505R	479'A+30	IH 90 WB LT	W5-52R	18" x 54"	Clearance Stripper Down Left						1.0	1.0
601R	501'A+05	IH 90 WB LT	D10-1	12" x 24"	Milepost Marker	9					1.0	1.0
602R	502+30	IH 90 EB RT	D10-1	12" x 24"	Milepost Marker	9					1.0	1.0
605	503+50	IH 90 EB RT	D10-1	12" x 24"	Milepost Marker	9	1.0			2.0		
606	502'A+60	IH 90 WB LT	D10-1	12" x 24"	Milepost Marker	9	1.0			2.0		
SUBTOTAL							6.0	9.0	11.0	238.8	26.0	30.0

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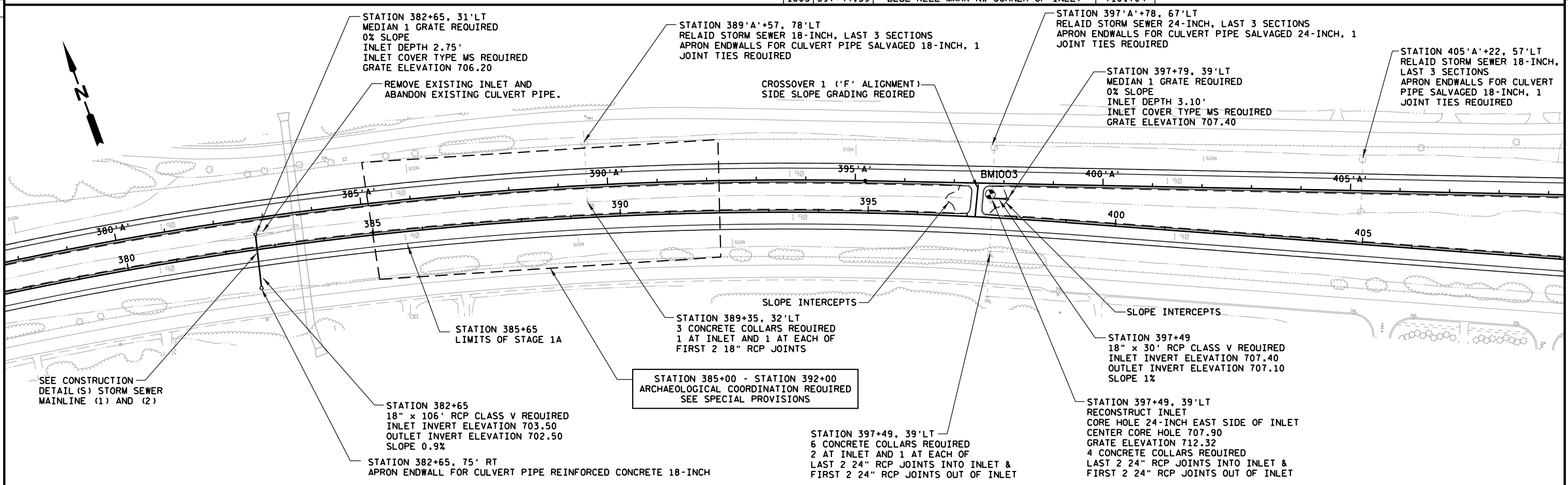
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TYPE II SIGNS SUMMARY (CONTINUED)

SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	ORDER LINES	634.0614	634.0616	634.0618	637.0202	638.2602	638.3000
							WOOD POSTS 14' EACH	WOOD POSTS 16' EACH	WOOD POSTS 18' EACH	SIGNS REFLECTIVE TYPE II SF	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
701R	539+00	IH 90 EB LT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles						1.0	1.0
702	539+00	IH 90 EB LT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles			1.0		12.0		
703R	538'A+15	IH 90 WB RT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles						1.0	1.0
704	539'A+00	IH 90 WB RT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles			1.0		12.0		
707R	552'A+25	IH 90 WB LT		48" x 48"	Deer Crossing Symbol						1.0	1.0
708R	552'A+25	IH 90 WB LT	W57-51	48" x 24"	Next _ Miles	4					1.0	Mounted with 707R
709R	555+20	IH 90 EB RT	D10-2	12" x 36"	Milepost Marker	10					1.0	1.0
710R	554'A+75	IH 90 WB LT	D10-2	12" x 36"	Milepost Marker	10					1.0	1.0
711	556+20	IH 90 EB RT	D10-2	12" x 36"	Milepost Marker	10	1.0			3.0		
712	556'A+00	IH 90 WB LT	D10-2	12" x 36"	Milepost Marker	10	1.0			3.0		
801	574+75	IH 90 EB RT	W4-1	48" x 48"	Merging Traffic Symbol (Right)				2.0	16.0		
802R	578+05	IH 90 EB RT	W4-1	48" x 48"	Merging Traffic Symbol (Right)						1.0	2.0
803R	589+45	IH 90 EB RT	W5-52R	18" x 54"	Clearance Stripper Down Left						1.0	1.0
804R	589+45	IH 90 EB RT	M1-94	54" x 21"	Crossroad Name	Hwy B					1.0	1.0
805	589+45	IH 90 EB RT	M1-94	54" x 21"	Crossroad Name	Hwy B	2.0			7.9		
806R	589+90	IH 90 EB LT	W5-52L	18" x 54"	Clearance Stripper Down Right						1.0	1.0
901R	591'A+95	IH 90 WB RT	W5-52L	18" x 54"	Clearance Stripper Down Right						1.0	1.0
902R	592'A+20	IH 90 WB LT	W5-52R	18" x 54"	Clearance Stripper Down Left						1.0	1.0
903R	592'A+20	IH 90 WB LT	M1-94	54" x 21"	Crossroad Name	Hwy B					1.0	1.0
904	592'A+20	IH 90 WB LT	M1-94	54" x 21"	Crossroad Name	Hwy B	2.0			7.9		
911R	602+20	IH 90 EB LT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles						1.0	1.0
912	602+20	IH 90 EB LT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles			1.0		12.0		
913R	602'A+40	IH 90 WB RT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles						1.0	Mounted on back of 913R
914	603'A+00	IH 90 WB RT	R3-4B	36" x 48"	No U Turn Sign Combined with Maint. And Police Vehicles			1.0		12.0		
917R	606'A+95	IH 90 WB LT	D10-2	12" x 36"	Milepost Marker	11					1.0	1.0
918R	607+75	IH 90 EB RT	D10-2	12" x 36"	Milepost Marker	11					1.0	1.0
919	609+00	IH 90 EB RT	D10-2	12" x 36"	Milepost Marker	11	1.0			3.0		
920	609'A+00	IH 90 WB LT	D10-2	12" x 36"	Milepost Marker	11	1.0			3.0		
921R	612'A+40	IH 90 WB LT	R2-1	48" x 60"	Speed Limit_MPH	65					1.0	2.0
1001	623'A+00	IH 90 WB LT	R2-1	48" x 60"	Speed Limit_MPH	65			2.0	20.0		
1002	633'A+00	IH 90 WB LT	J4-1	36" x 54"	Reassurance Assembly(1 Headed Route Panel)	West 90			1.0	13.5		
1003R	633'A+75	IH 90 WB LT	J4-1	36" x 54"	Reassurance Assembly(1 Headed Route Panel)	West 90					1.0	1.0
1008R	650+90	IH 90 EB RT	W3-1	48" x 48"	Stop Ahead						1.0	2.0
1009	650+90	IH 90 EB RT	W3-1	48" x 48"	Stop Ahead				2.0	16.0		
1010R	651+10	IH 90 EB RT	E5-1A	72" x 60"	Exit Number with no Letters (Arrow) 1-4 Digits	12					1.0	2.0
1011R	651+10	IH 90 EB RT	J4-1	36" x 54"	Reassurance Assembly (1 Headed Route Panel)	Alternate Interstate 90					1.0	Mounted on 1009R Sign Support
1012	651+10	IH 90 EB RT	E5-1A	72" x 60"	Exit Number with no Letters (Arrow) 1-4 Digits	12			2.0	30.0		
1013	651+10	IH 90 EB RT	JV-F	36" x 81"	Folding J Panel	Alternate 90				20.3		Mount on 1011 Sign Support
1101	654'A+00	IH 90 WB LT	W4-1	48" x 48"	Merging Traffic Symbol (Right)				2.0	16.0		
1102R	655'A+75	IH 90 WB LT	W4-1	48" x 48"	Merging Traffic Symbol (Right)						1.0	2.0
1103R	659+90	IH 90 EB RT	D10-2	12" x 36"	Milepost Marker	12					1.0	1.0
1104R	660'A+25	IH 90 WB LT	D10-2	12" x 36"	Milepost Marker	12					1.0	1.0
1105	661+00	IH 90 EB RT	D10-2	12" x 36"	Milepost Marker	12	1.0			3.0		
1106	661'A+50	IH 90 WB LT	D10-2	12" x 36"	Milepost Marker	12	1.0			3.0		
1107	666+00	IH 90 EB RT	W4-1	48" x 48"	Merging Traffic Symbol (Right)				2.0	16.0		
1108R	667'A+55	IH 90 WB LT	W3-1	48" x 48"	Stop Ahead						1.0	2.0
1109	667'A+55	IH 90 WB LT	W3-1	48" x 48"	Stop Ahead				2.0	16.0		
11101R	667'A+75	IH 90 WB LT	E5-1A	72" x 60"	Exit Number with no Letters (Arrow) 1-4 Digits	12					1.0	2.0
1111R	667'A+76	IH 90 WB LT	J4-1	36" x 54"	Reassurance Assembly (1 Headed Route Panel)	Alternate Interstate 90					1.0	Mounted on 1111R Sign Support
1112	667'A+76	IH 90 WB LT	E5-1A	72" x 60"	Exit Number with no Letters (Arrow) 1-4 Digits	12			2.0	30.0		
1113	667'A+76	IH 90 WB LT	JV-F	36" x 81"	Folding J Panel	Alternate 90				20.3		Mount on 1113 Sign Support
1114R	668+40	IH 90 EB RT	W4-1	48" x 48"	Merging Traffic Symbol (Right)						1.0	2.0
1201R	688+00	IH 90 EB RT	J4-1	36" x 54"	Reassurance Assembly(1 Headed Route Panel)	East 90					1.0	1.0
1202	688+00	IH 90 EB RT	J4-1	36" x 54"	Reassurance Assembly(1 Headed Route Panel)	East 90			1.0	13.5		
SUBTOTAL							10.0	4.0	18.0	309.3	30.0	34.0
TOTALS							16.0	13.0	29.0	548.0	56.0	64.0



NO.	STATION	BENCH MARK DESCRIPTION	ELEVATION
1003	397+44.59	BLUE KLEE MARK NW CORNER OF INLET	710.704



PROJECT NO:1071-07-77	HWY: IH 90	COUNTY: LA CROSSE	SPLIT PLAN SHEET	SHEET 78	E
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FILE NAME : p:\State\190\10710707\Cad\ep\lans\050201.pn.dgn

PLOT DATE : 20-NOV-2012 11:01

PLOT BY : dotaps

PLOT NAME :

PLOT SCALE : 200:1

WISDOT/CAUUS SHEET 44

NOTE: JOINT TIES REQUIRED ON ALL ENDWALLS AND 2 SECTIONS OF STORM SEWER.



STATION 433+00, 49'LT
RELAID STORM SEWER 24-INCH, LAST 2 SECTIONS
APRON ENDWALLS FOR CULVERT PIPE SALVAGED 24-INCH, 1
JOINT TIES REQUIRED

STATION 437'A'+70, 70'LT
RELAID STORM SEWER 60-INCH, LAST 3 SECTIONS
APRON ENDWALLS FOR CULVERT PIPE SALVAGED 60-INCH, 1
JOINT TIES REQUIRED

STATION 433+00, 92'RT
RELAID STORM SEWER 24-INCH,
LAST 2 SECTIONS
APRON ENDWALLS FOR CULVERT
PIPE SALVAGED 24-INCH, 1
JOINT TIES REQUIRED

STATION 430+00 - STATION 440+00
ARCHAEOLOGICAL COORDINATION REQUIRED
SEE SPECIAL PROVISIONS

STATION 448'A'+31, 68'LT
RELAID STORM SEWER 42-INCH, LAST 3 SECTIONS
APRON ENDWALLS FOR CULVERT PIPE SALVAGED 42-INCH, 1
JOINT TIES REQUIRED

456+54, LT, MEDIAN
REMOVE GUARDRAIL
MGS GUARDRAIL REQUIRED

455'A'+43 - 456'A'+81, LT
SALVAGE GUARDRAIL

453+47 - 456+56, LT
REMOVE GUARDRAIL
453+68.5 - 456+56, LT
MGS GUARDRAIL REQUIRED

460+03, LT, MEDIAN
REMOVE GUARDRAIL
MGS GUARDRAIL REQUIRED

460+00 - 461+24, LT
REMOVE GUARDRAIL

460'A'+25 - 463'A'+20, LT
468'A'+85 - 475'A'+63, LT
SALVAGE GUARDRAIL
460'A'+25 - 475'A'+63, LT
MGS GUARDRAIL REQUIRED

STATION 438+90, 48'LT
2 CONCRETE COLLARS REQUIRED
AT INLET

STATION 439+54, 91'RT
RELAID STORM SEWER 60-INCH, LAST 2 SECTIONS
APRON ENDWALLS FOR CULVERT PIPE SALVAGED 60-INCH, 1
JOINT TIES REQUIRED

STATION 430+00 - STATION 440+00
ARCHAEOLOGICAL COORDINATION REQUIRED
SEE SPECIAL PROVISIONS

453+32 - 456+26, RT
REMOVE GUARDRAIL
453+06 - 456+26, RT
MGS GUARDRAIL REQUIRED

455'A'+29 - 456'A'+54, RT
SALVAGE GUARDRAIL

STATION 448+66, 72'RT
RELAID STORM SEWER 42-INCH, LAST 3 SECTIONS
APRON ENDWALLS FOR CULVERT PIPE SALVAGED 42-INCH, 1
JOINT TIES REQUIRED

459'A'+99 - 463'A'+05, RT
SALVAGE GUARDRAIL
459'A'+99 - 463'A'+62.5, RT
MGS GUARDRAIL REQUIRED

STATION 461+46, 62'RT
RELAID STORM SEWER 18-INCH,
LAST 3 SECTIONS
APRON ENDWALLS FOR CULVERT
PIPE SALVAGED 18-INCH, 1
JOINT TIES REQUIRED

459+73 - 460+98, RT
466+55 - 474+99, RT
REMOVE GUARDRAIL
459+73 - 474+99, RT
MGS GUARDRAIL REQUIRED

STATION 467+46, 92'RT
RELAID STORM SEWER 18-INCH,
LAST 3 SECTIONS
APRON ENDWALLS FOR CULVERT
PIPE SALVAGED 18-INCH, 1
JOINT TIES REQUIRED

PROJECT NO:1071-07-77

HWY: IH 90

COUNTY: LA CROSSE

SPLIT PLAN SHEET

SHEET

79

E

FILE NAME : p:\State\190\10710707\Cad\ep\lans\050203.pn.dgn

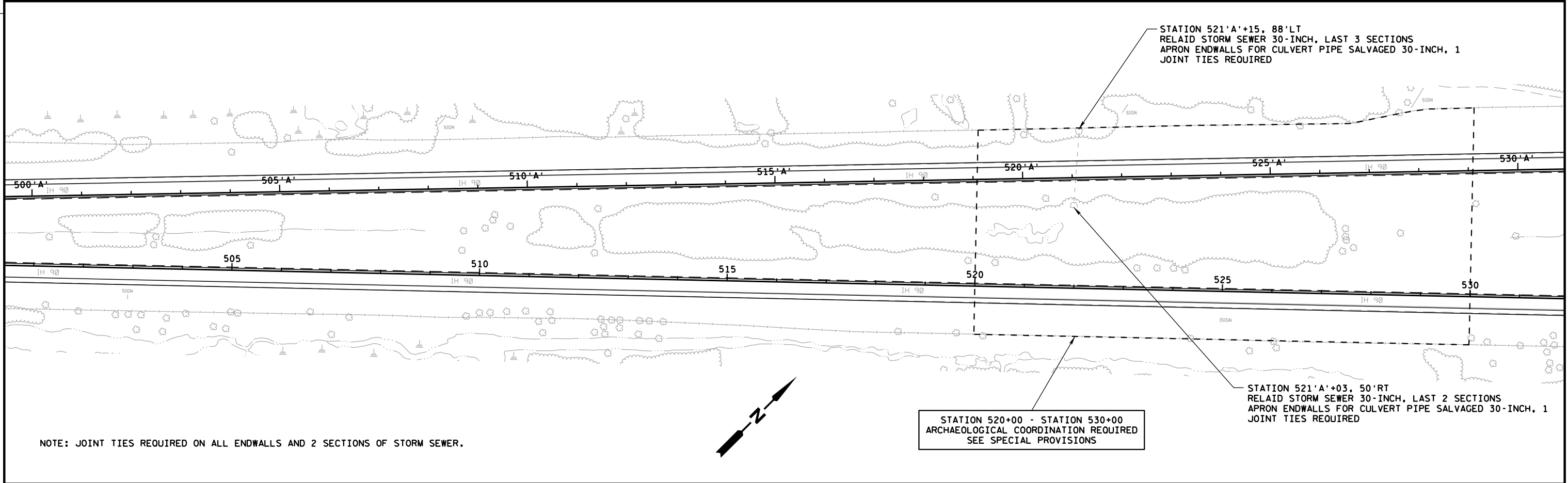
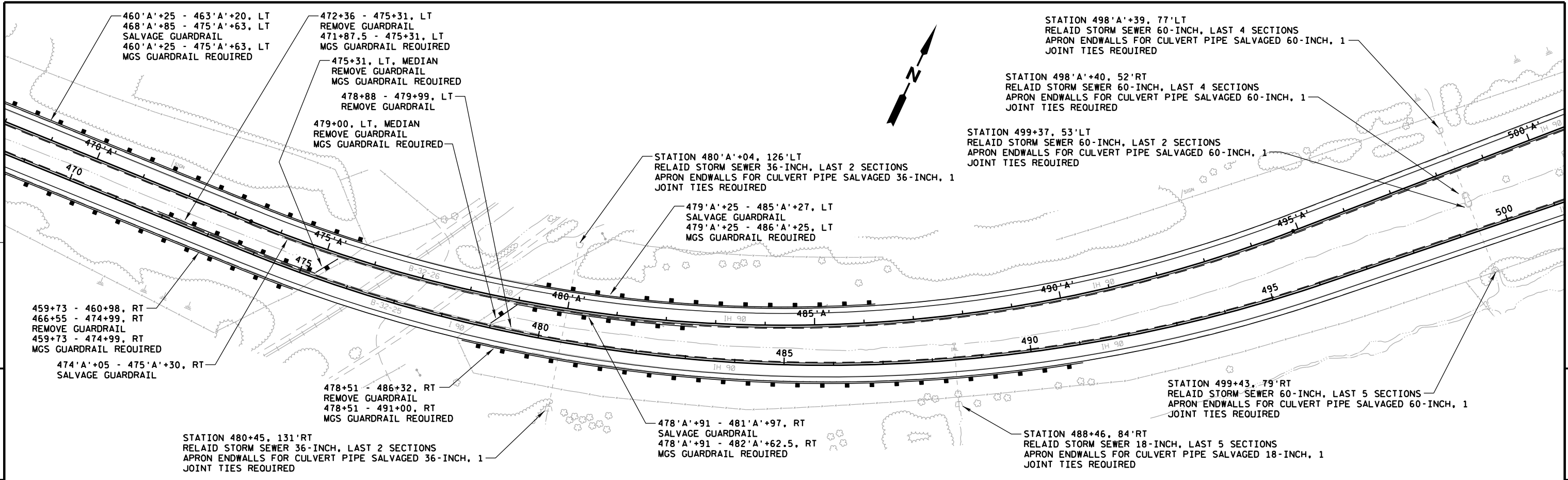
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PLOT BY : dotaps

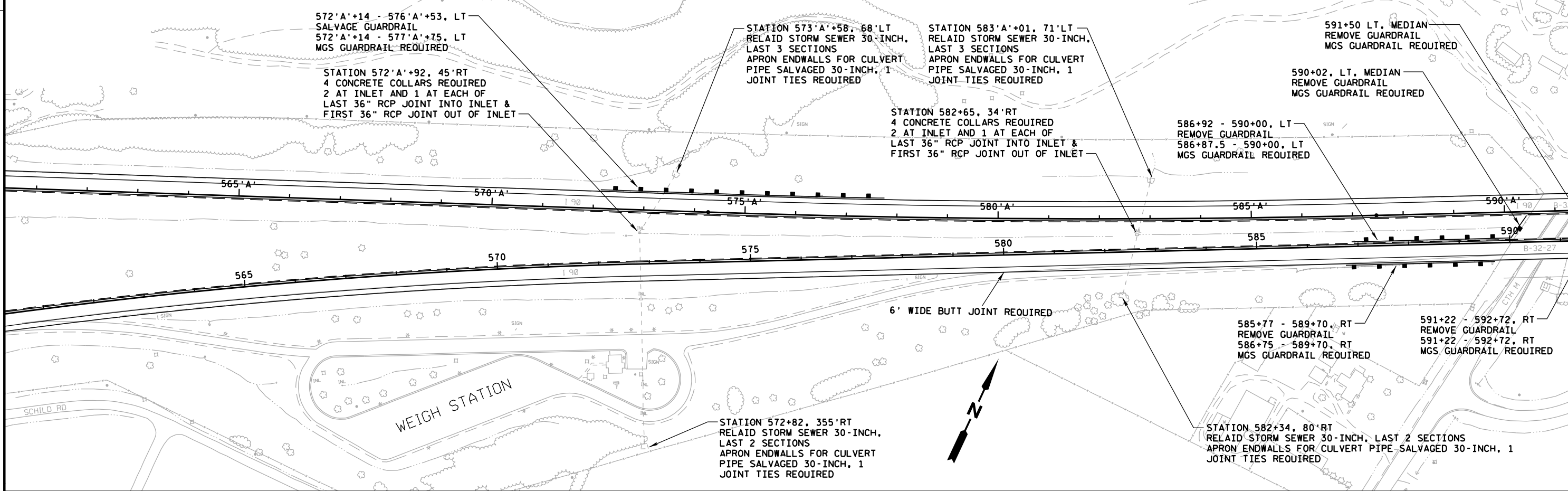
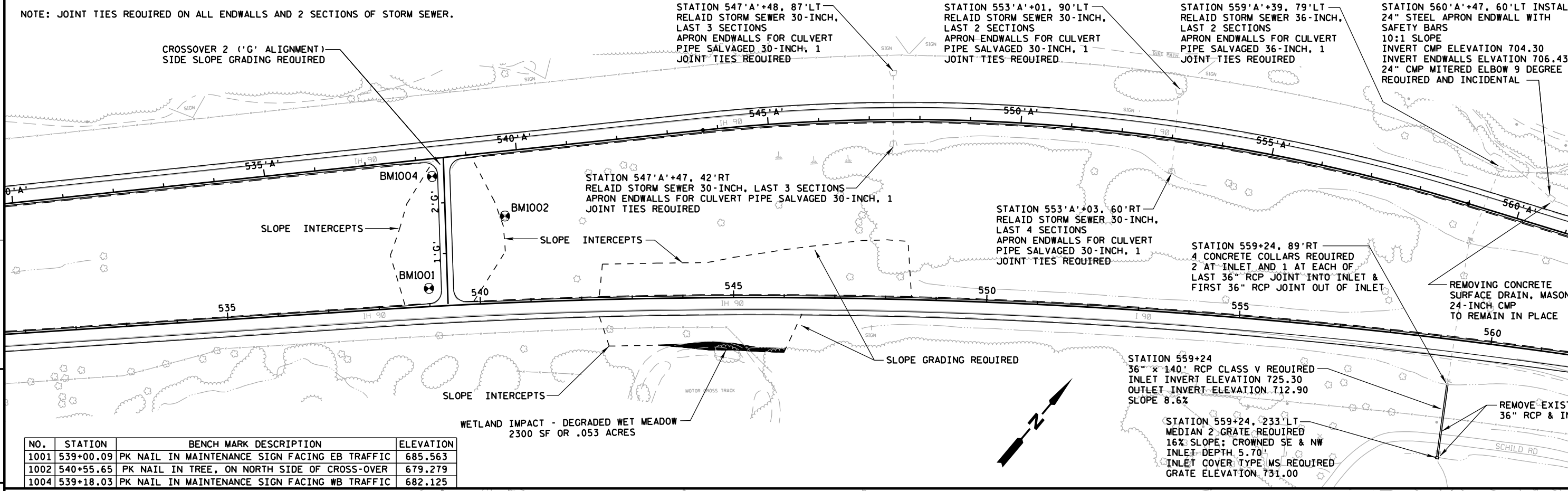
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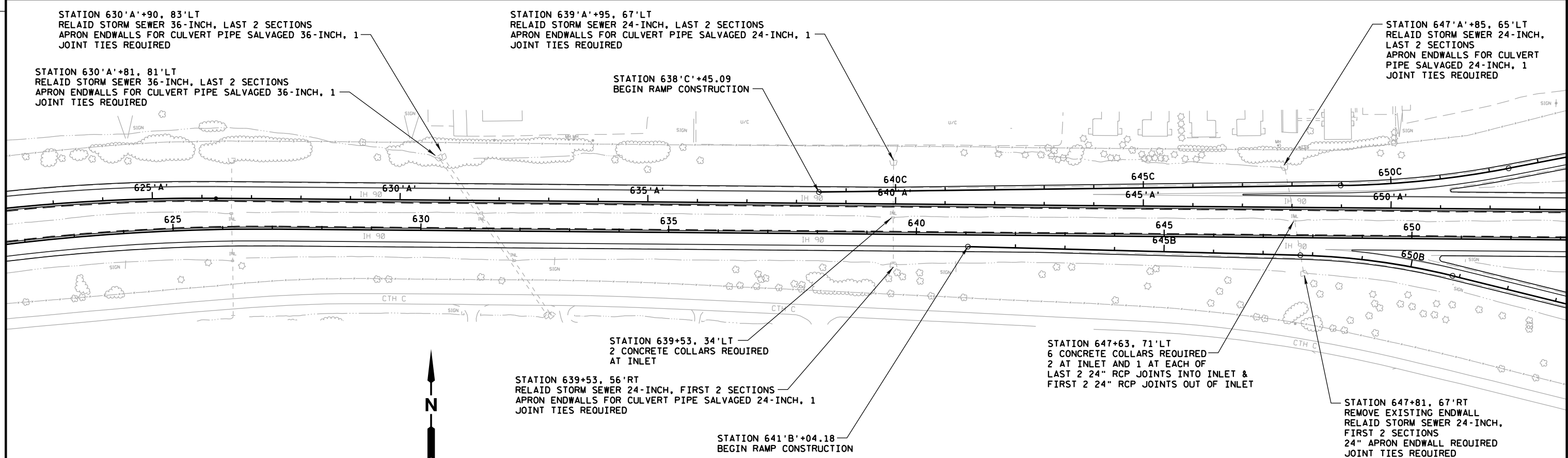
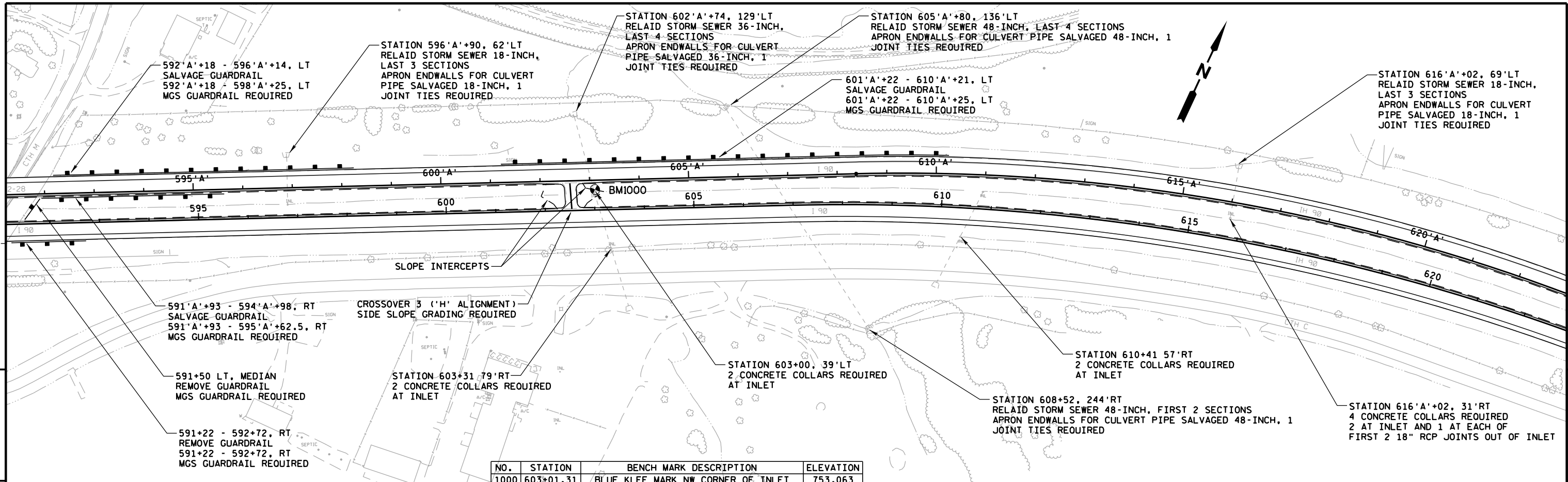
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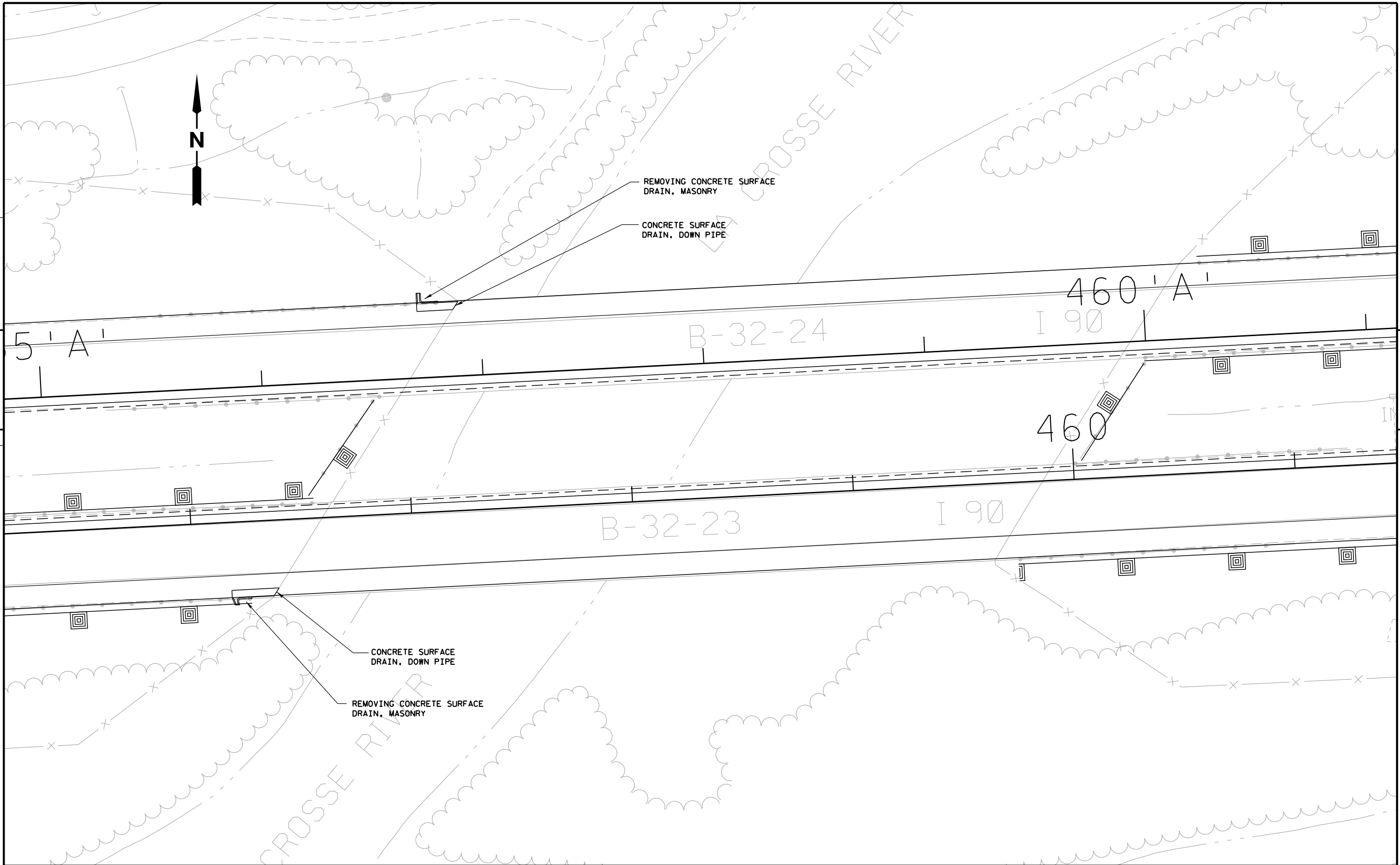
WISDOT/CAADS SHEET 44

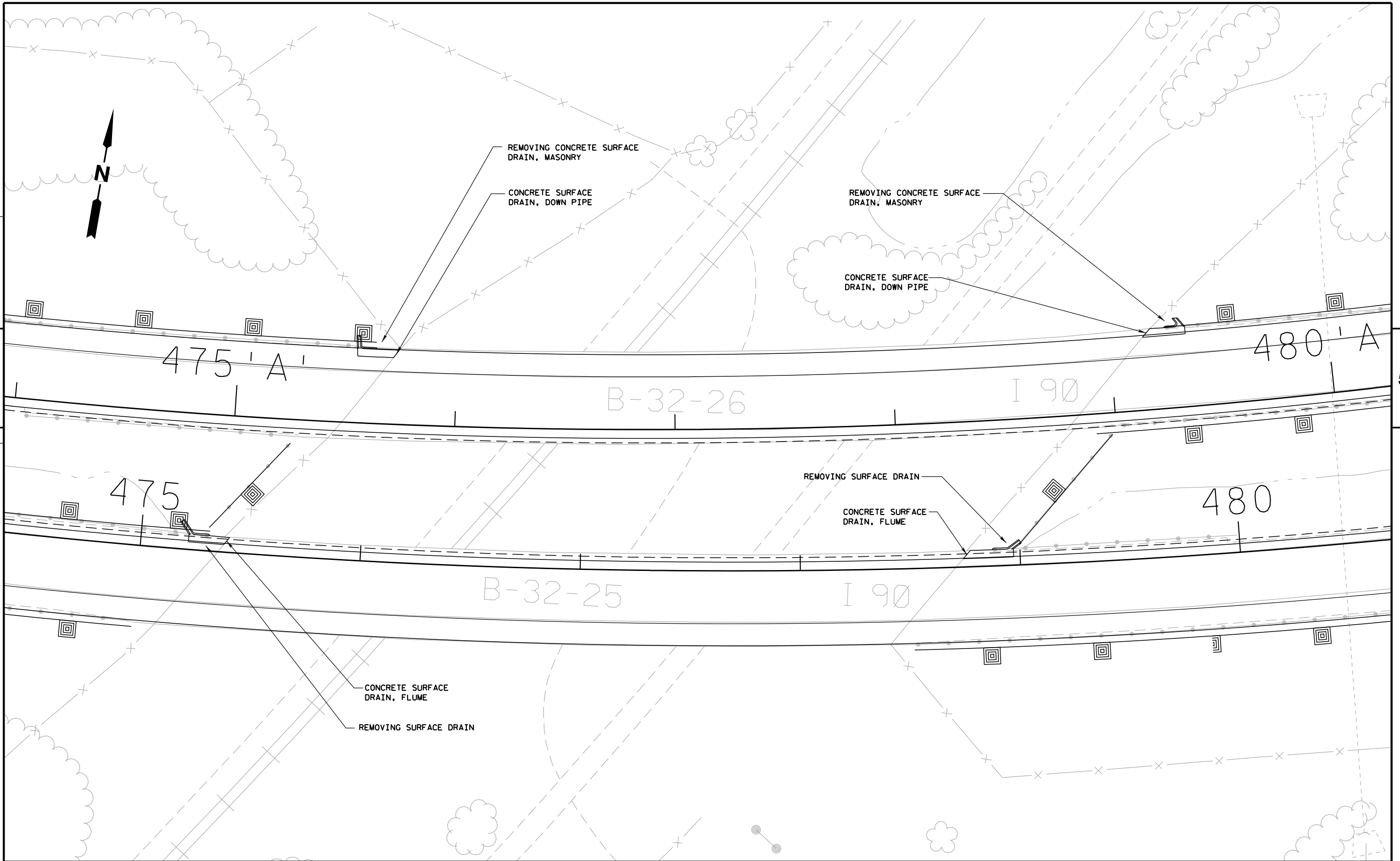


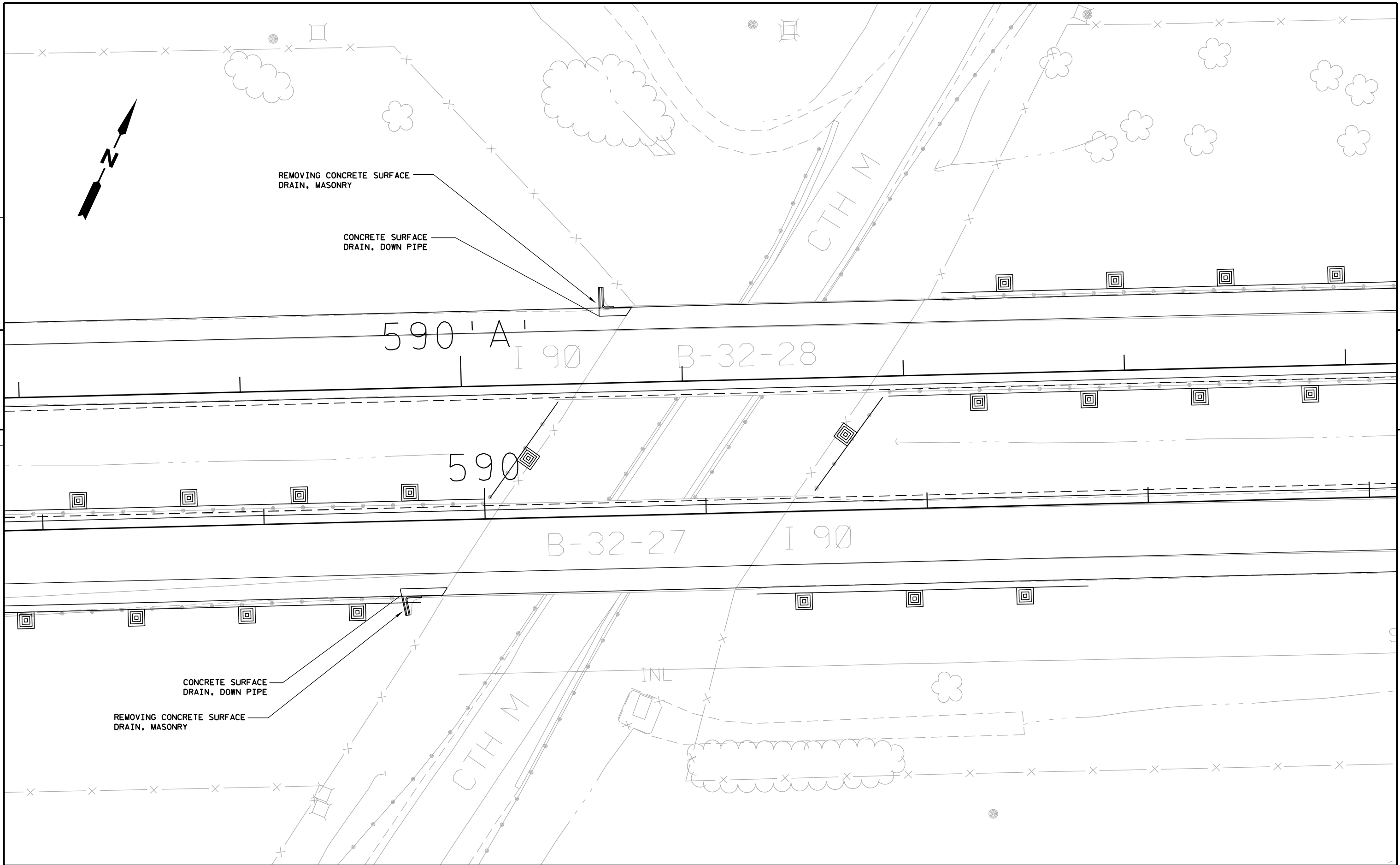
NOTE: JOINT TIES REQUIRED ON ALL ENDWALLS AND 2 SECTIONS OF STORM SEWER.





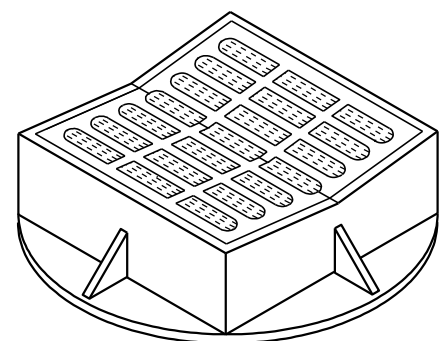
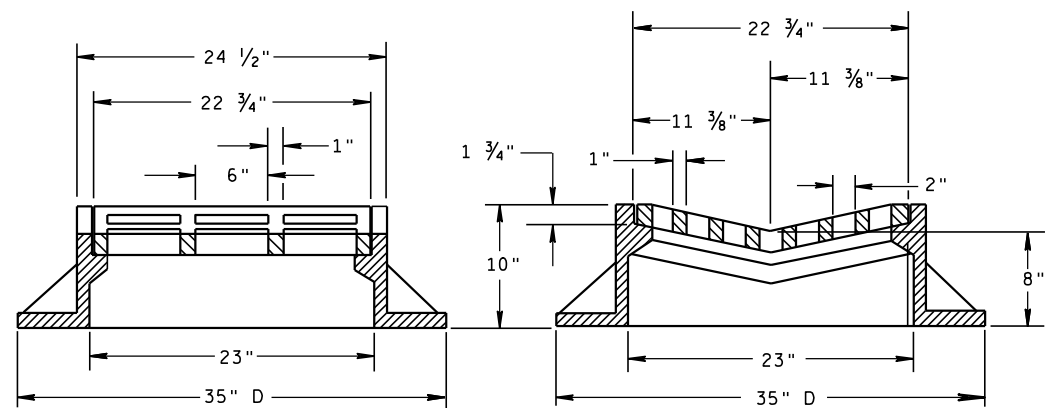




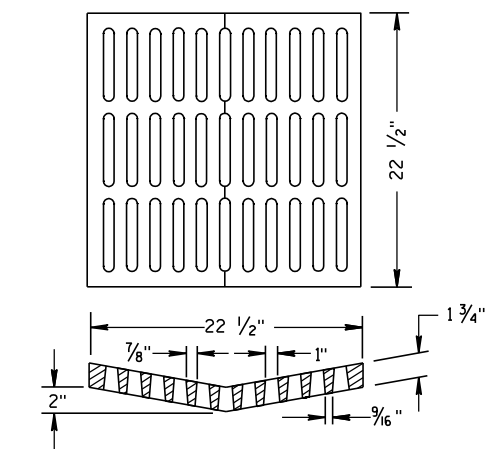


Standard Detail Drawing ListStandard Detail Drawing List

08A05-18B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F07-04	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE FRAINS
11A01-04	MAINTENANCE CROSSOVER FOR FREEWAYS
13A05-04A	SHOULDER RUMBLE STRIP, MILLING
13A05-04B	SHOULDER RUMBLE STRIP, MILLING
13C14-04A	BASE PATCHING CONCRETE
13C14-04B	BASE PATCHING CONCRETE
13C14-04C	BASE PATCHING CONCRETE
14B07-12A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-12B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-12C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-12D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B26-02A	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02B	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02C	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02D	STEEL THRIE BEAM BULLNOSE TERMINAL
14B26-02E	STEEL THRIE BEAM BULLNOSE TERMINAL
14B42-02A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-02C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-01A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-01C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-02A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-02J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-01A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-01C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-01	MARKER POSTS, FLEXIBLE, FOR CULVERT END
15A04-01	FLEXIBLE DELINEATOR POST
15A06-02	DELINEATOR LAYOUT
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15B03-12A	CHAIN LINK FENCE
15B03-12B	CHAIN LINK FENCE
15C08-14A	PAVEMENT MARKING (MAINLINE)
15C08-14F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15D03-01	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER
15D04-01	TRAFFIC CONTROL, RAMP CONSTRUCTION STAGING
15D12-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D15-01	TRAFFIC CONTROL, EXIT AND ENTRANCE RAMP WITHIN LANE CLOSURE



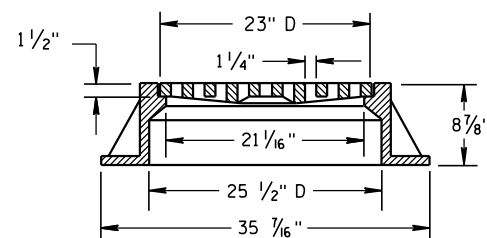
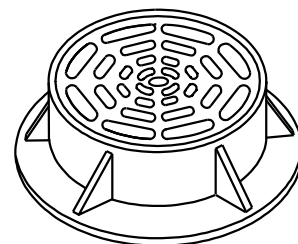
TYPE "B"
(APPROXIMATE WEIGHT 405 LBS.)
FRAME..... 294 LBS.
GRATE..... 111 LBS.



**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.

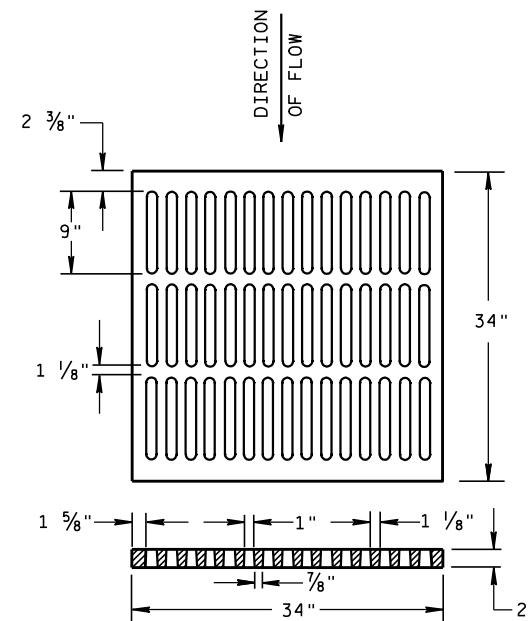
GENERAL NOTES

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.

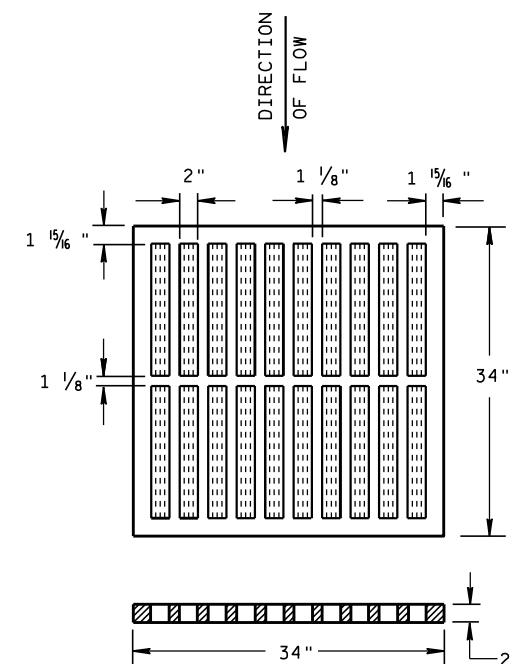
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



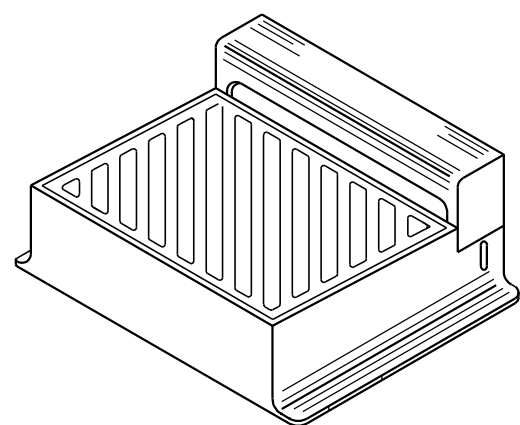
ALTERNATIVE TYPE "MS"
(APPROXIMATE GRATE WEIGHT 329 LBS.)

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



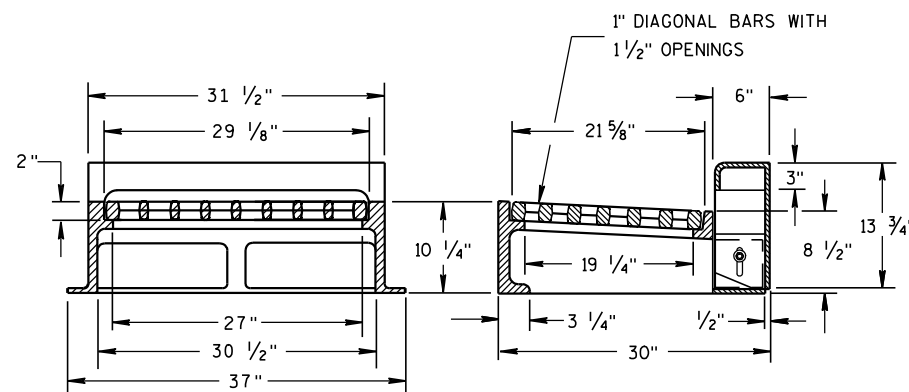
TYPE "MS"
(APPROXIMATE GRATE WEIGHT 268 LBS.)

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

FHWA

/S/ Jerry H. Zopp

ROADWAY STANDARDS 88

ENGINEER

ENT



Technical drawing of a rectangular structure, likely a foundation or wall section, showing dimensions and a cross-section view.

Dimensions:

- Overall width: $6'-8"$
- Overall height: $3'-10"$
- Top horizontal segments: $5\frac{3}{4}"$, $2'-10\frac{1}{4}"$, $2'-10\frac{1}{4}"$, $5\frac{3}{4}"$
- Left vertical segments: $5\frac{3}{4}"$, $2'-10\frac{1}{2}"$, $5\frac{3}{4}"$
- Right vertical segments: $8"$, $2'-5"$, $8"$
- Internal horizontal segment: $2'-10\frac{1}{4}"$
- Internal vertical segment: $2\frac{1}{4}"$

Structural Features:

- A central rectangular area with horizontal hatching.
- A curved boundary separating the hatched area from the right side.
- A cross-section view (B-B) is indicated by a line with arrows pointing to the structure.
- A detail view (1 OR 2) is shown at the bottom right corner, illustrating a corner joint with reinforcement (dashed lines and dots).
- The word "DITCH" is labeled on the right side, indicating a feature on the exterior wall.

PLAN VIEW

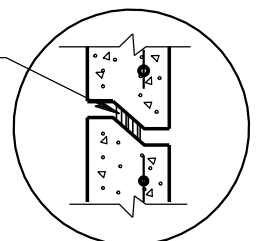
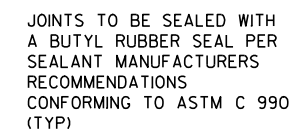


INLETS MEDIAN 1 GRATE



INLETS MEDIAN 2 GRATE

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



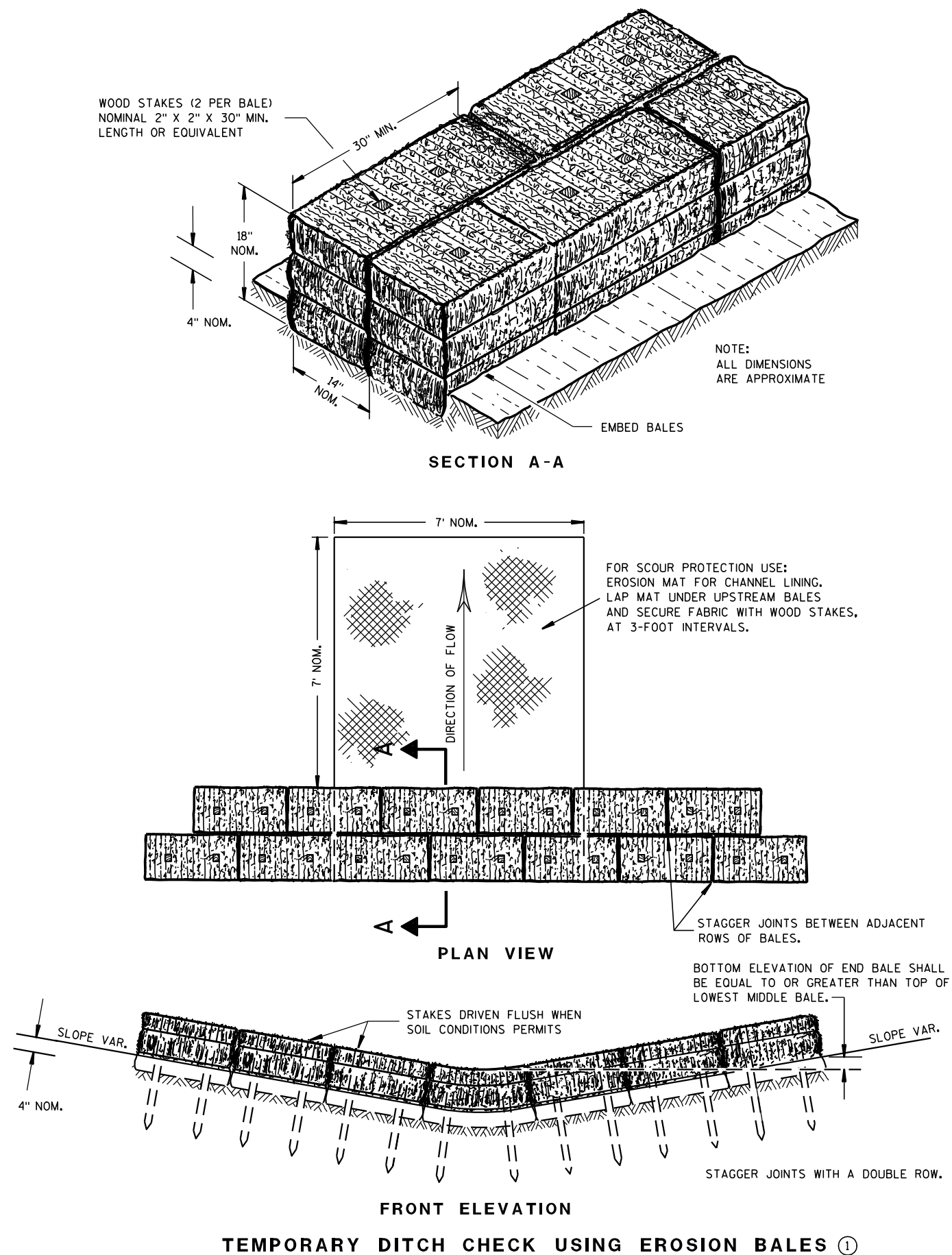
DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE

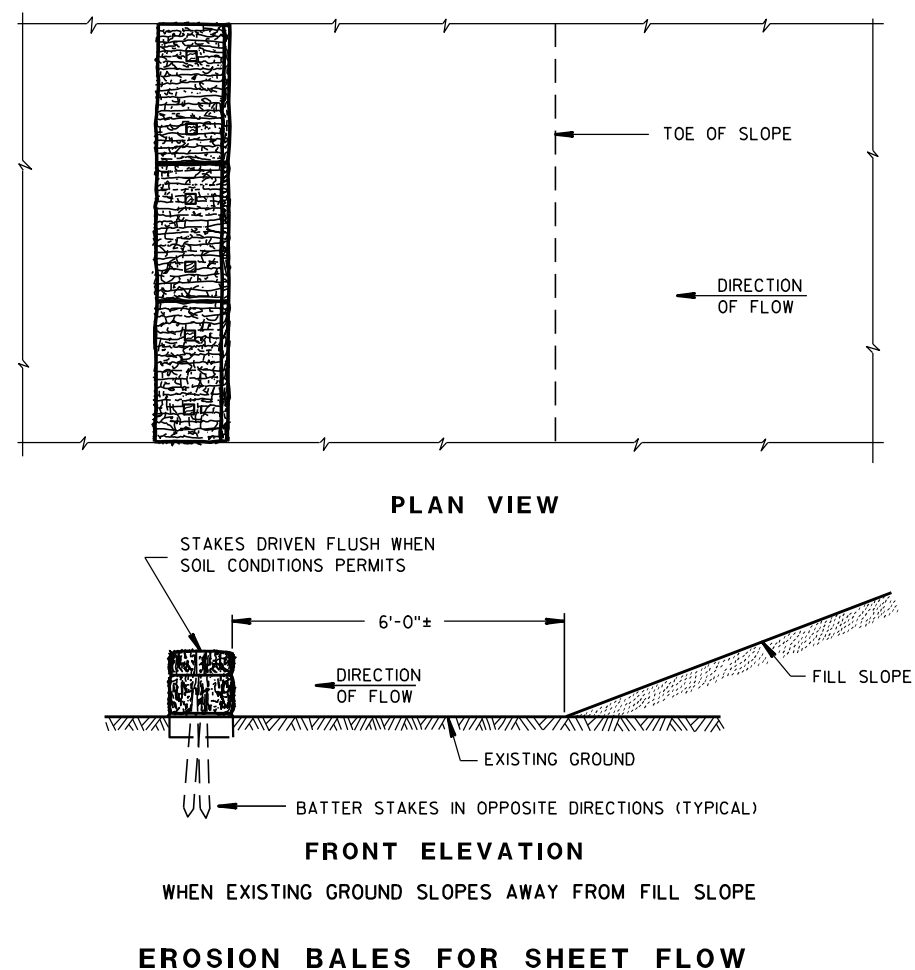
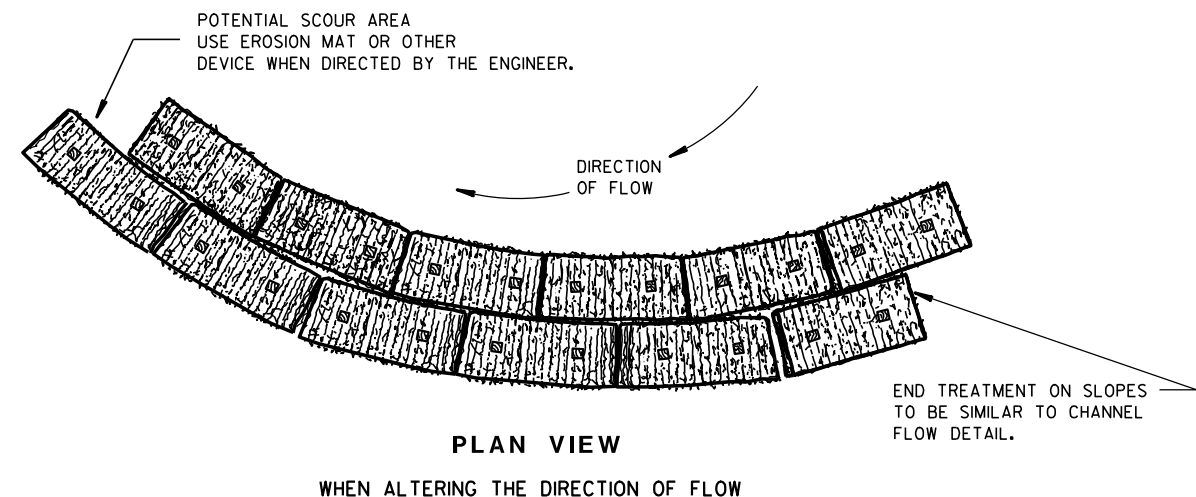
/S/ Jerry H. Zogg
ROADWAY STANDARDS [89
ENGINEER



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.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

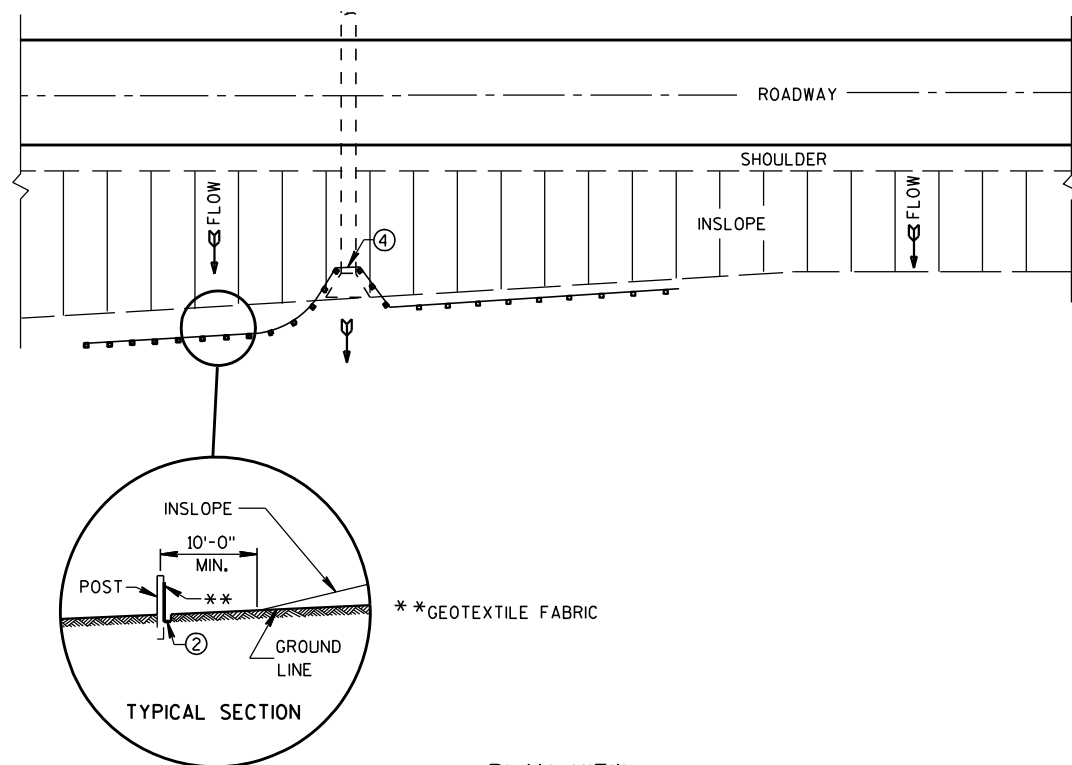
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

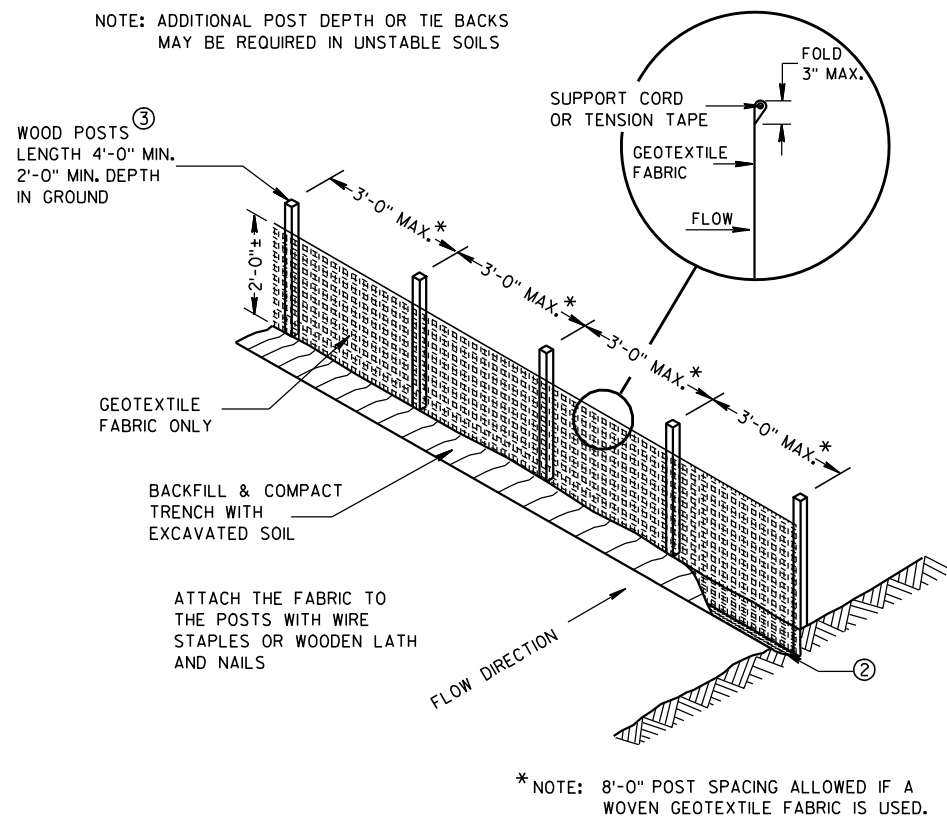
6/04/02
DATE/S/ Beth Connolly
CHIEF ROADWAY DEVELOPER

ENGINEER

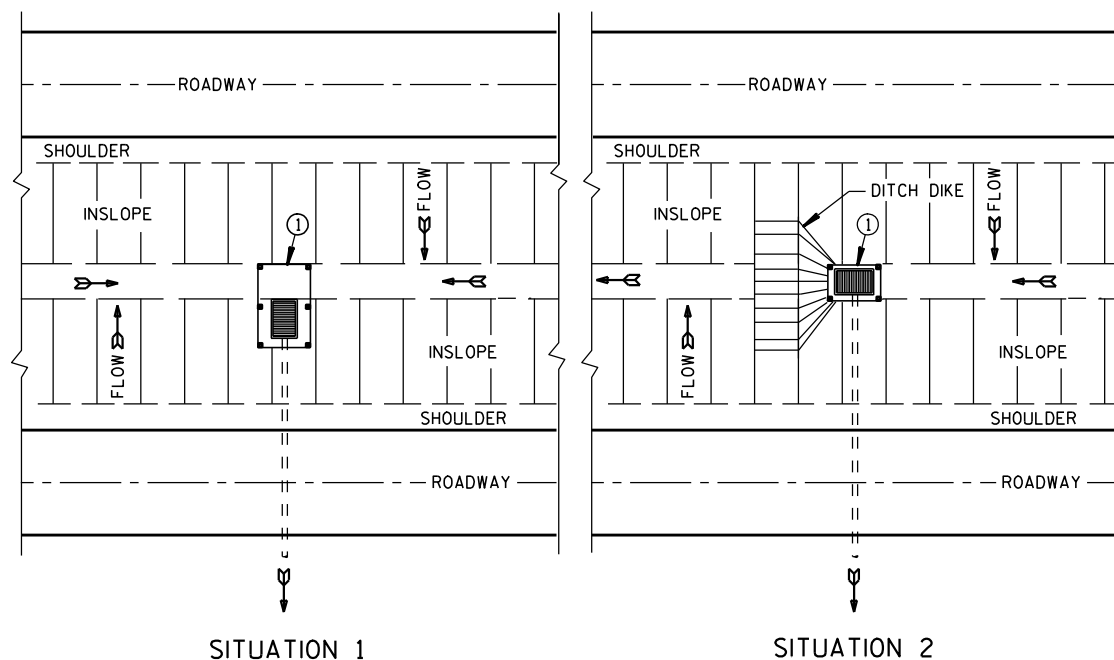
FHWA



TYPICAL APPLICATION OF SILT FENCE

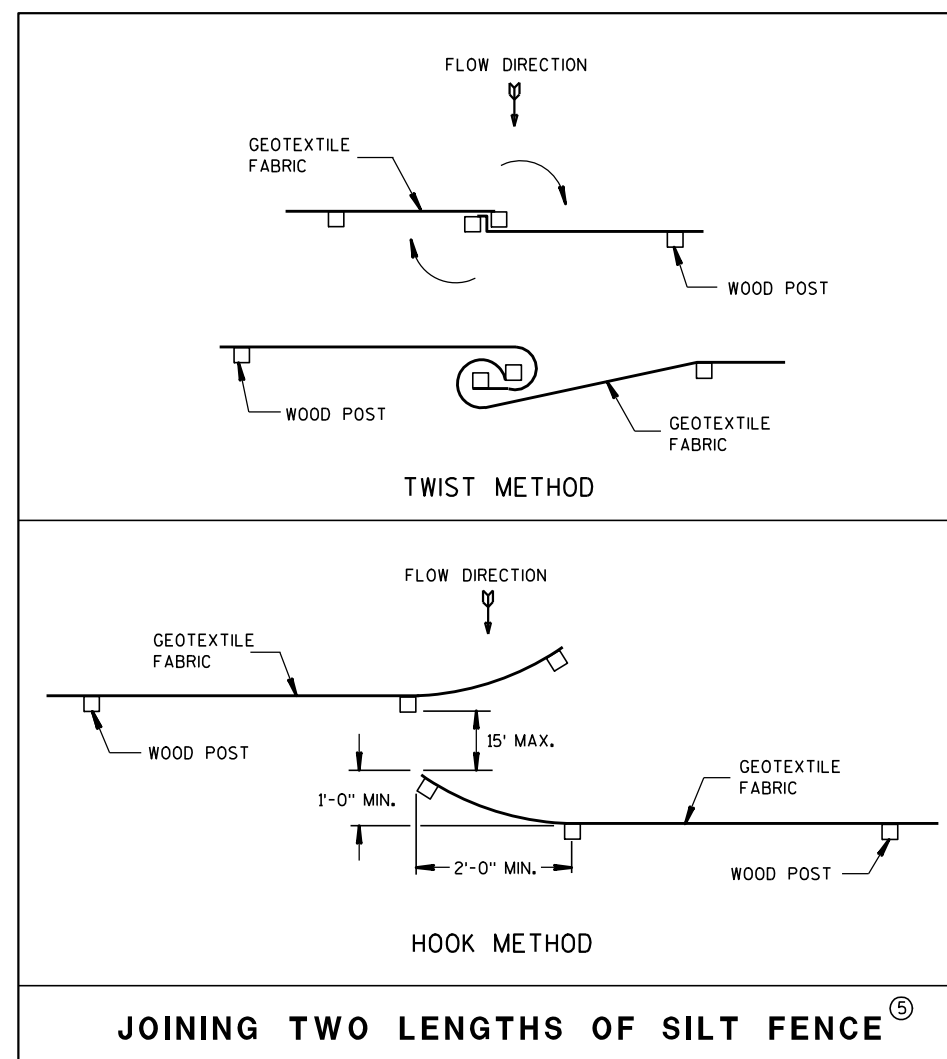


SILT FENCE



PLAN VIEW

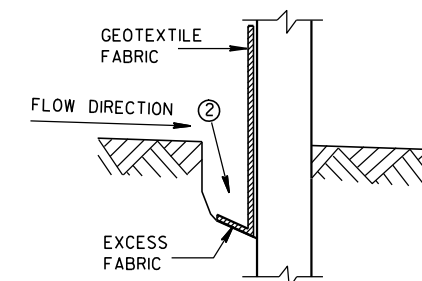
SILT FENCE AT MEDIAN SURFACE DRAINS



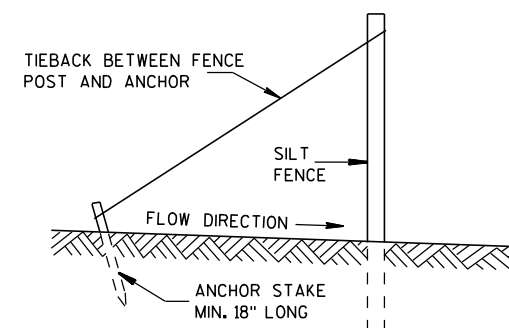
GENERAL NOTES

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 1 1/8" X 1 1/8" 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 TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05

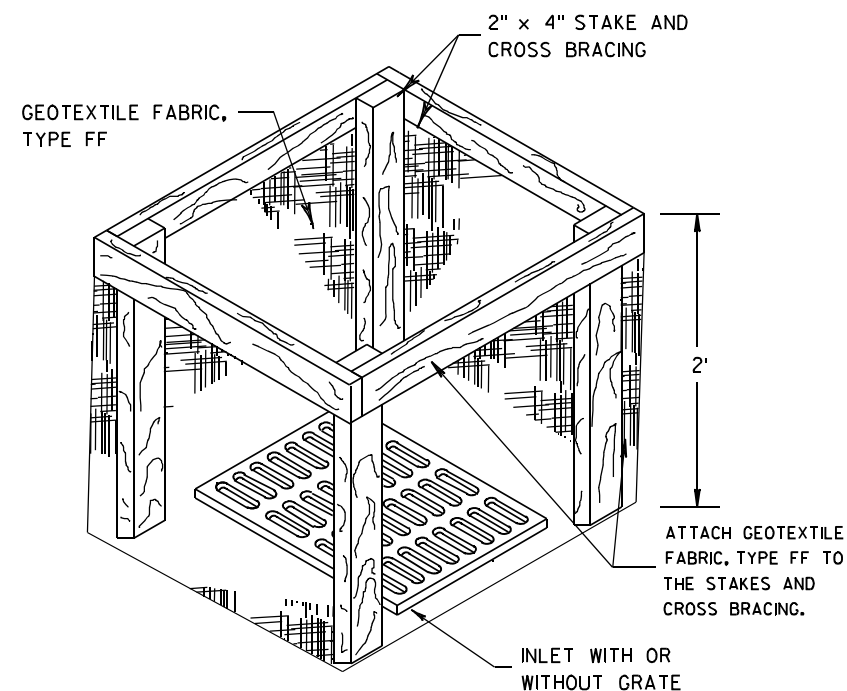
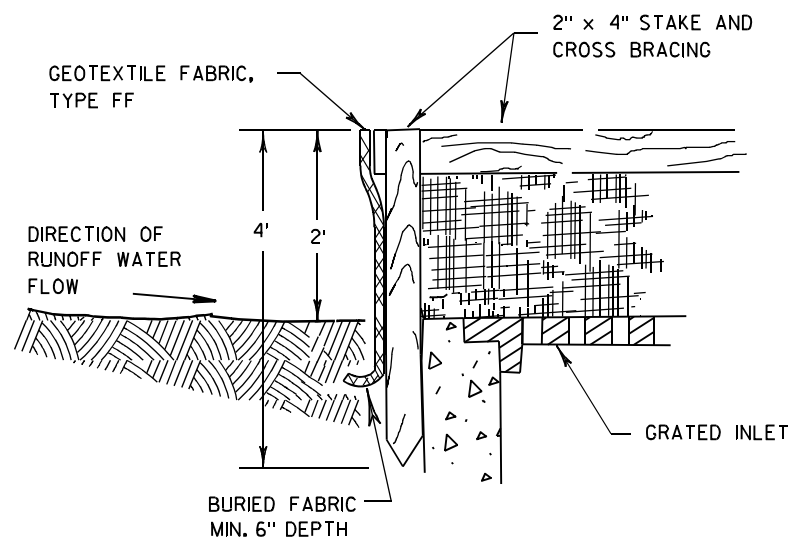
DATE

/S/ Beth Conn

CHIEF ROADWAY DEVELOPER

FHWA

ENGINEER



INLET PROTECTION, TYPE A

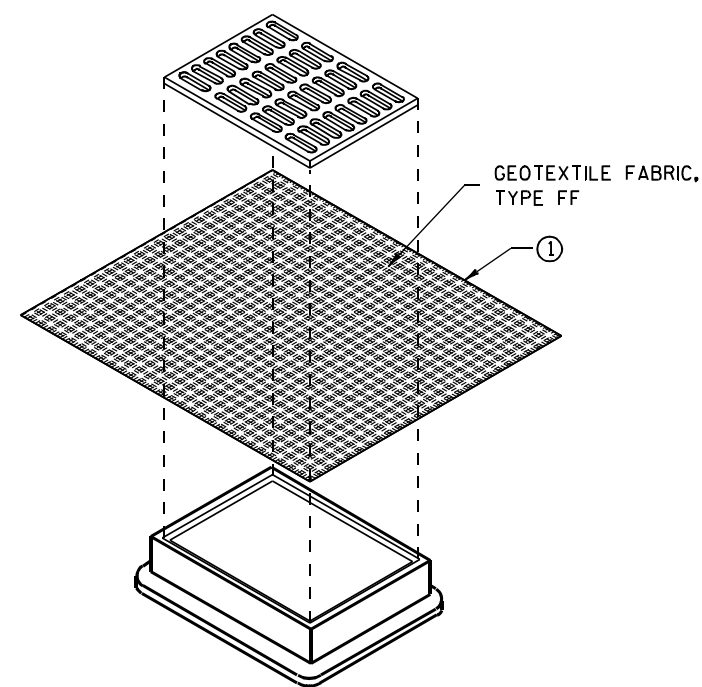
GENERAL NOTES

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.

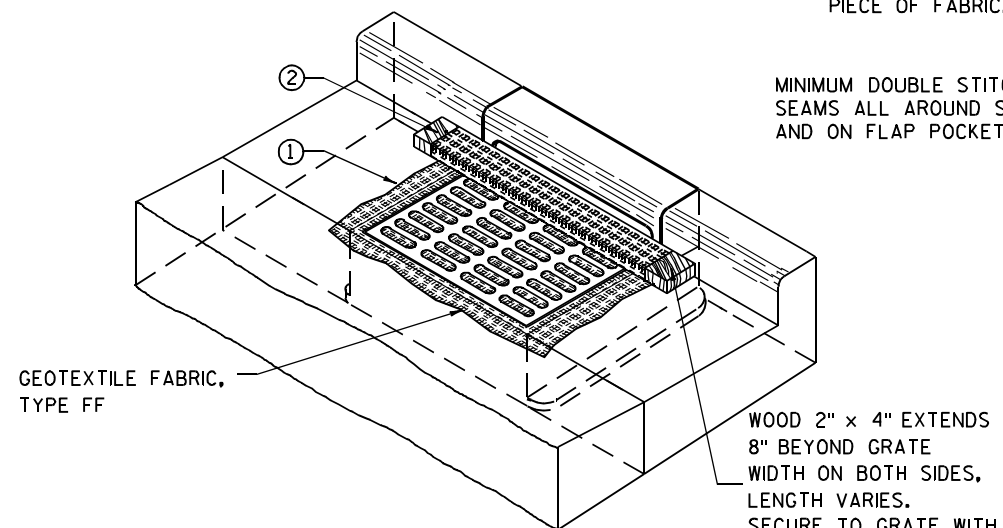
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- 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.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

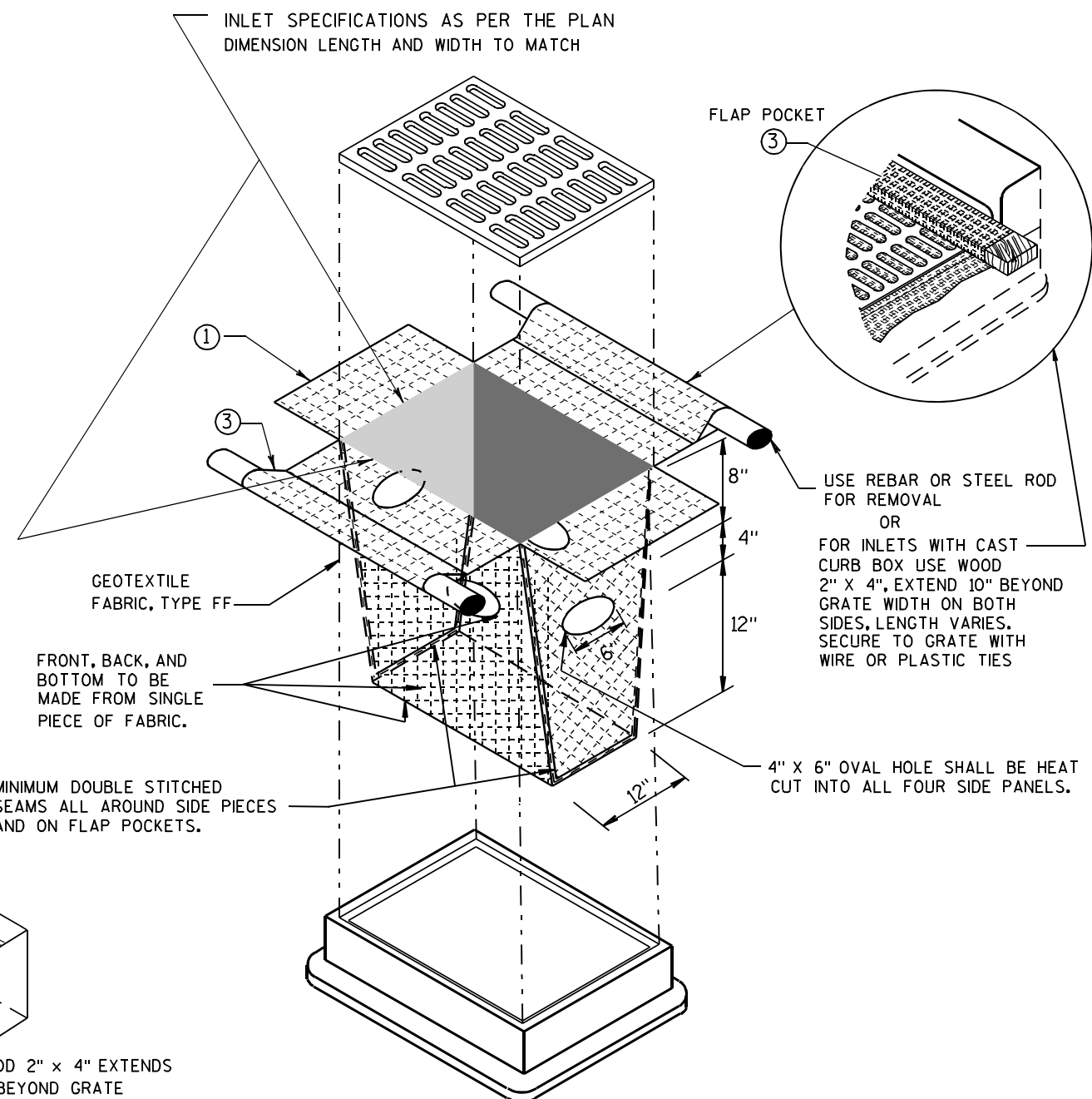
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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.



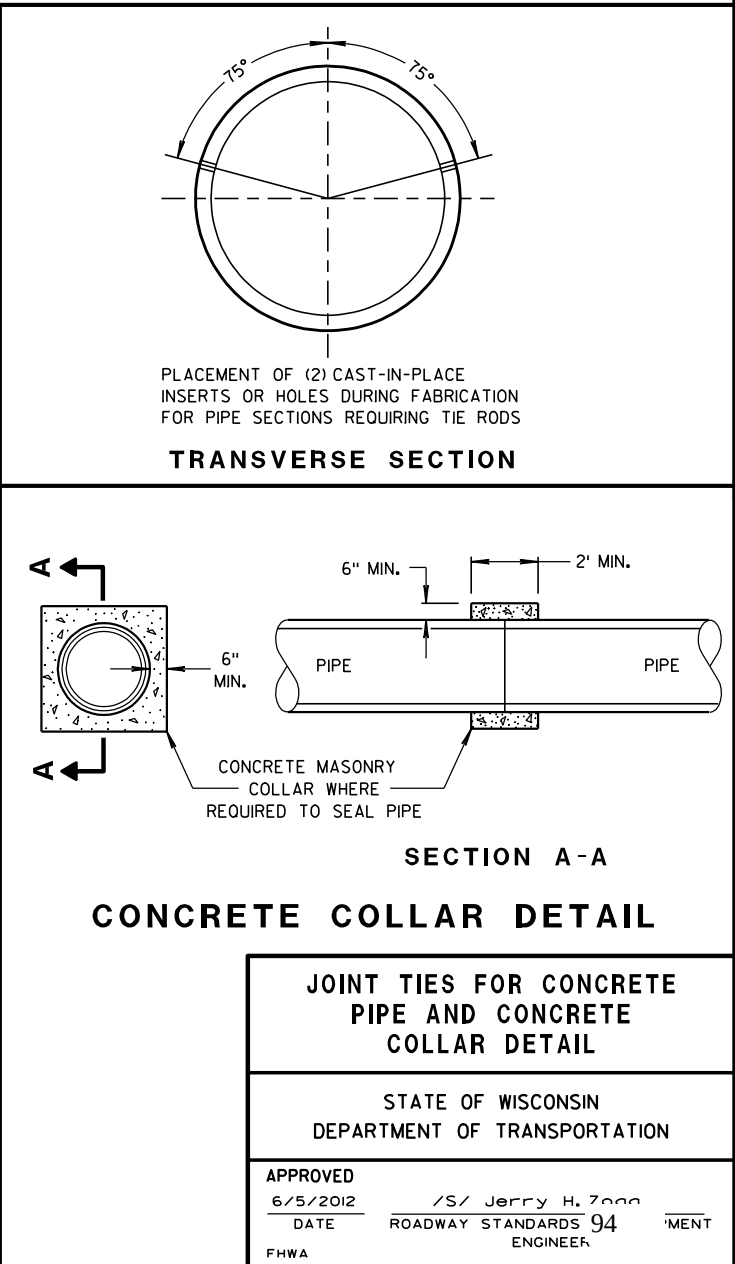
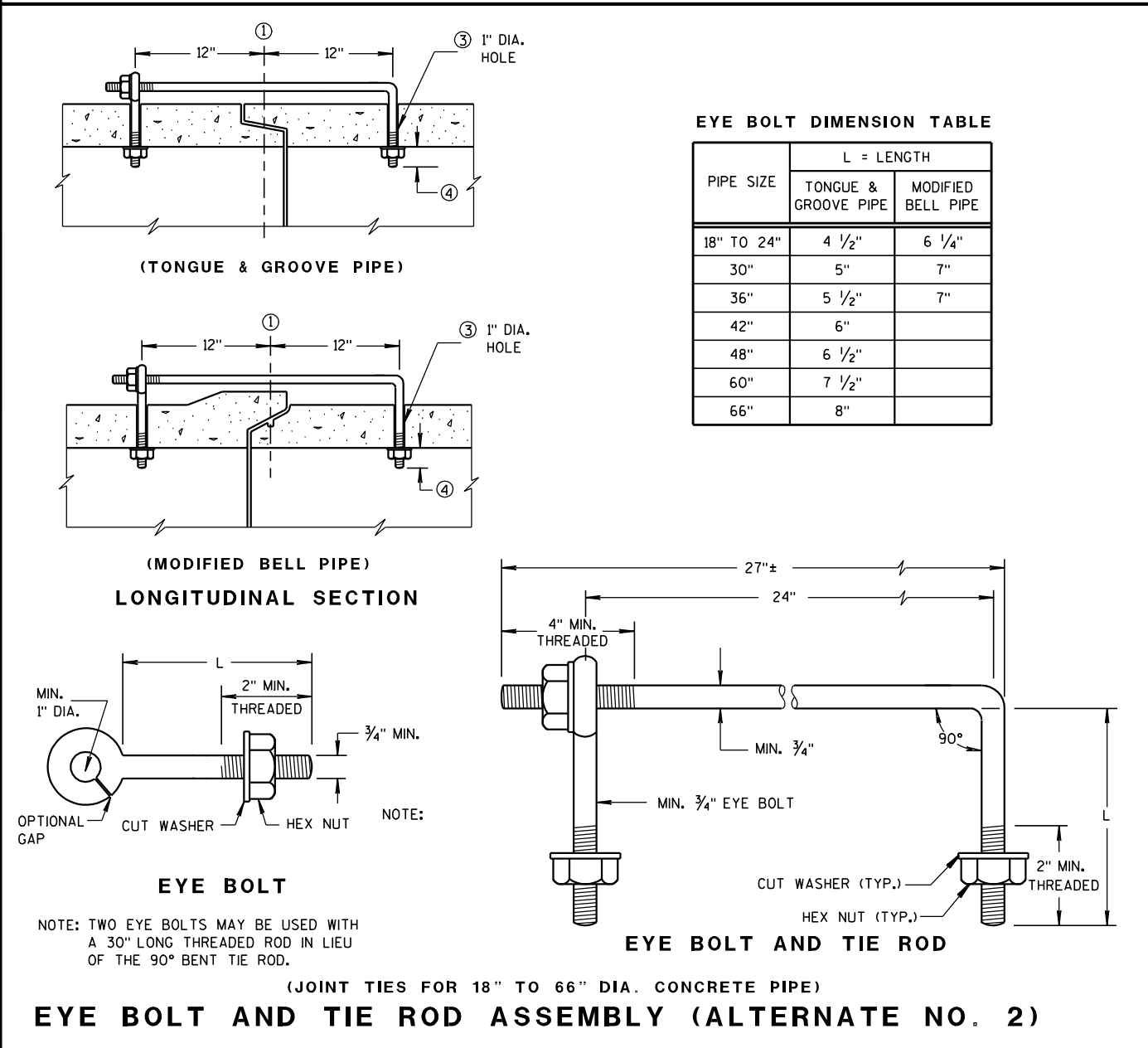
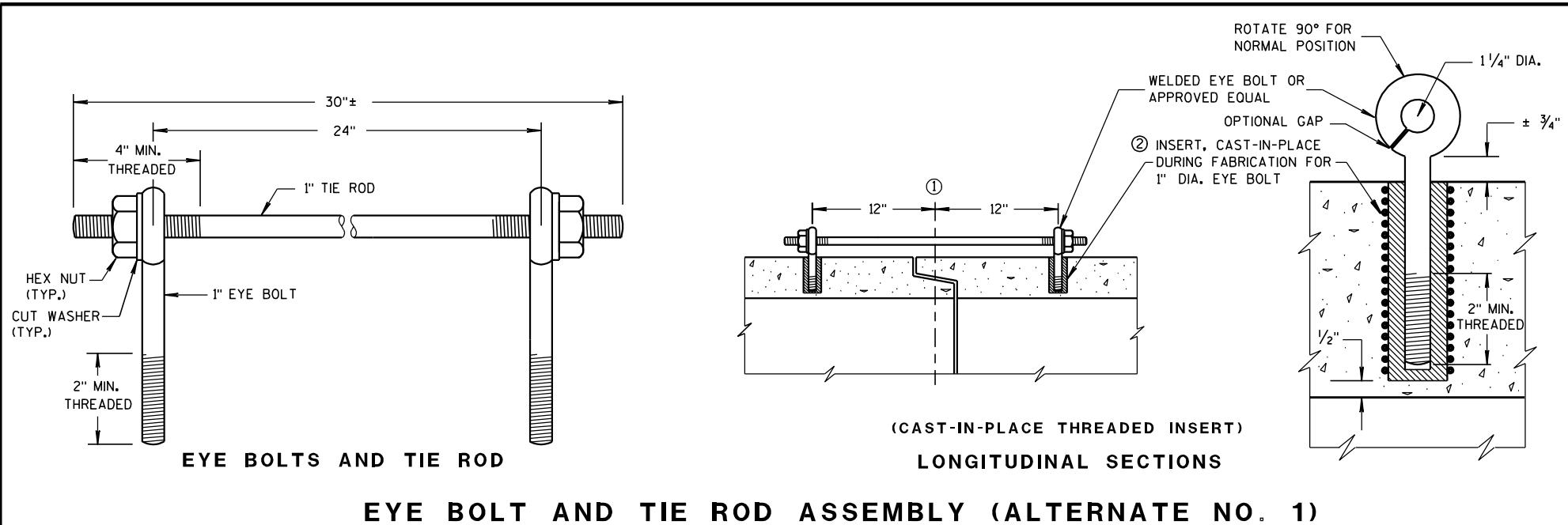
INLET PROTECTION, TYPE D

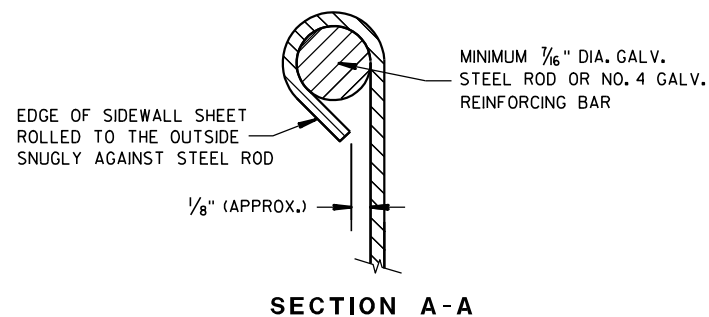
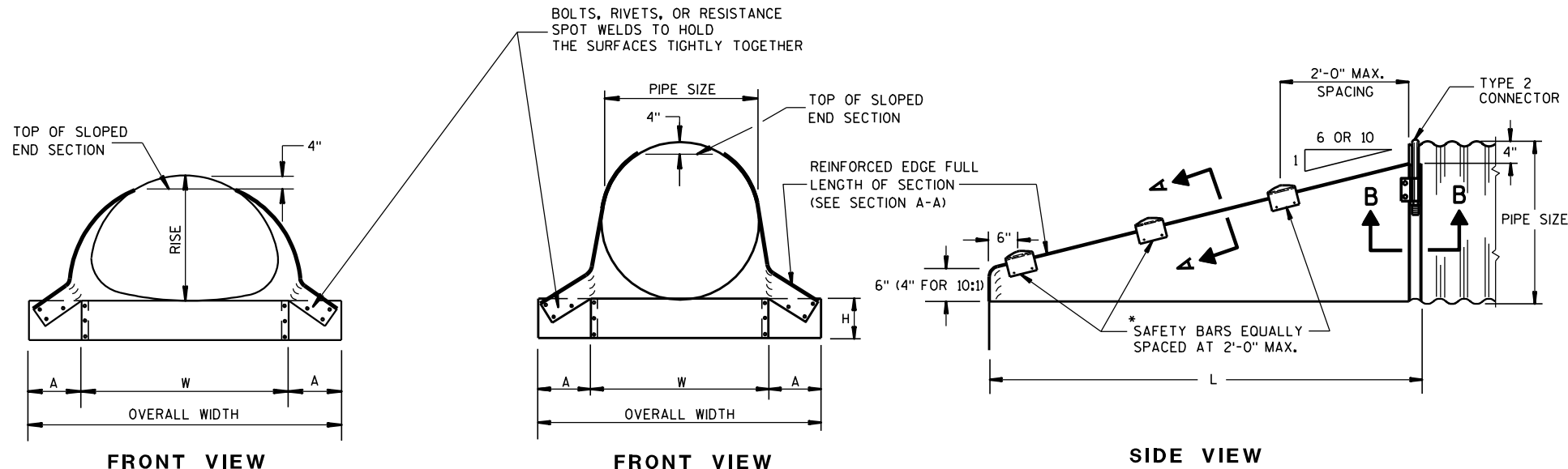
(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

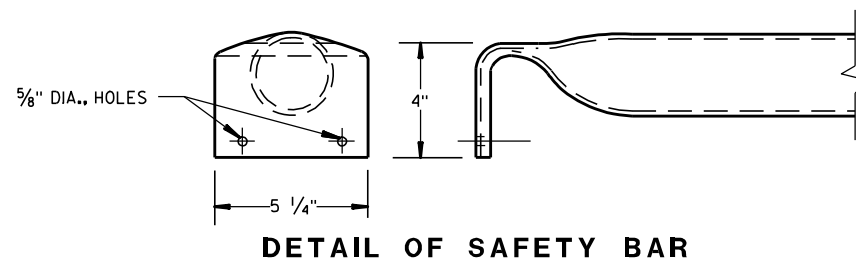
APPROVED
10/16/02 /S/ Beth Connolly
DATE 92
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



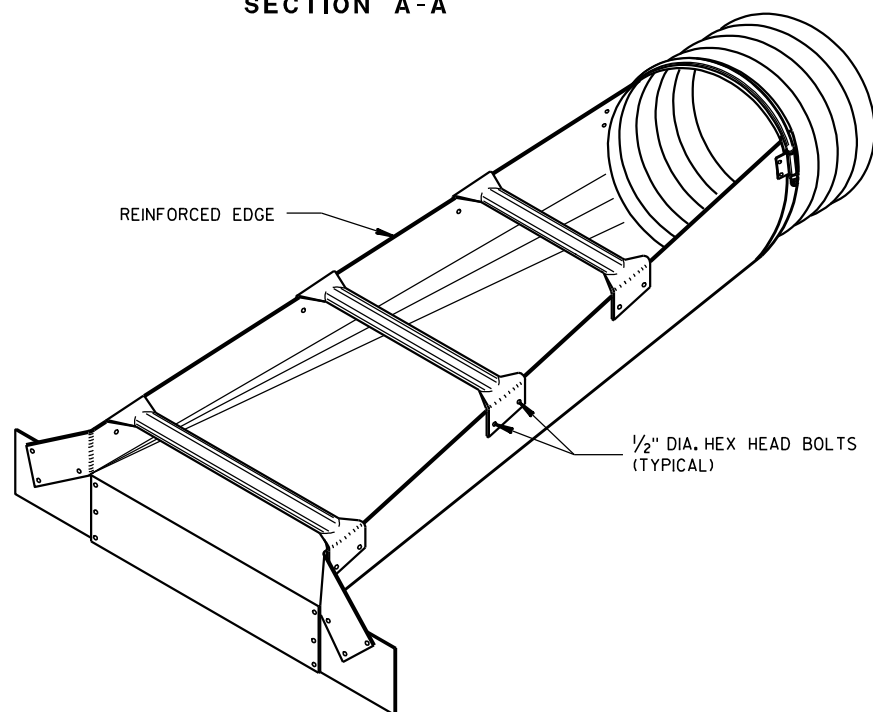


*NOTE: THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

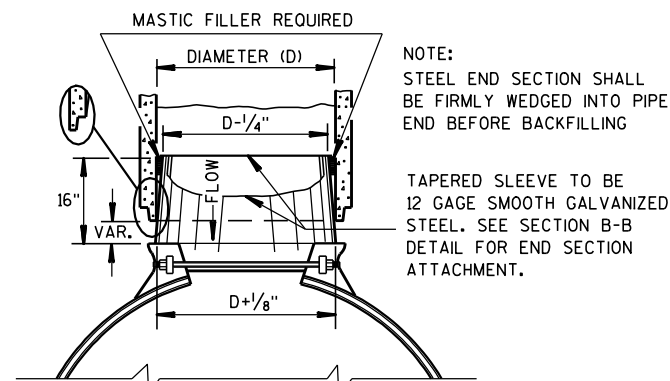
3" GALVANIZED PIPE, FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.



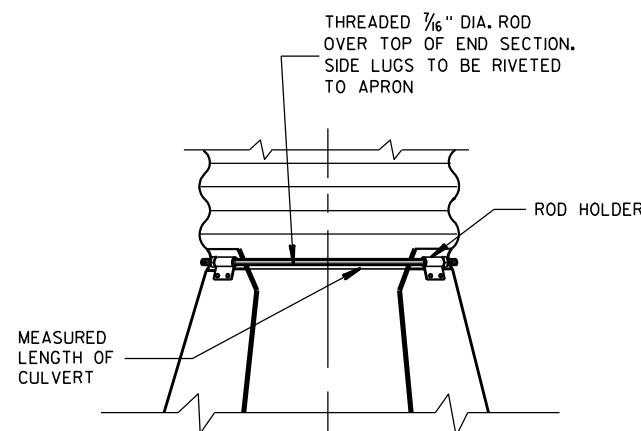
DETAIL OF SAFETY BAR



ISOMETRIC VIEW



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



TYPE 2 CONNECTION 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.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

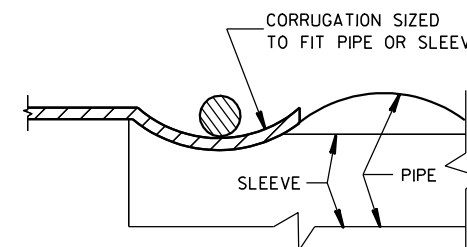
SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS									
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS			
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	6:1	30	10:1	70
18	.064	8	6	24	40	6:1	48	10:1	100
21	.064	8	6	27	43	6:1	66	10:1	130
24	.064	8	6	30	46	6:1	84	10:1	160
30	.109	12	9	36	60	6:1	120	10:1	220
36	.109	12	9	42	66	6:1	156	10:1	280
42	.109	16	12	48	80	6:1	192	—	—
48	.109	16	12	54	86	6:1	228	—	—
54	.109	16	12	60	92	6:1	264	—	—
60	.109	16	12	66	98	6:1	300	—	—

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS											
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches) ①	DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	6:1	138	—	—
48	57	38	.109	16	12	63	95	6:1	168	—	—
54	64	43	.109	16	12	70	102	6:1	198	—	—

① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".

② ACTUAL SLOPE GREATER THAN 10:1.

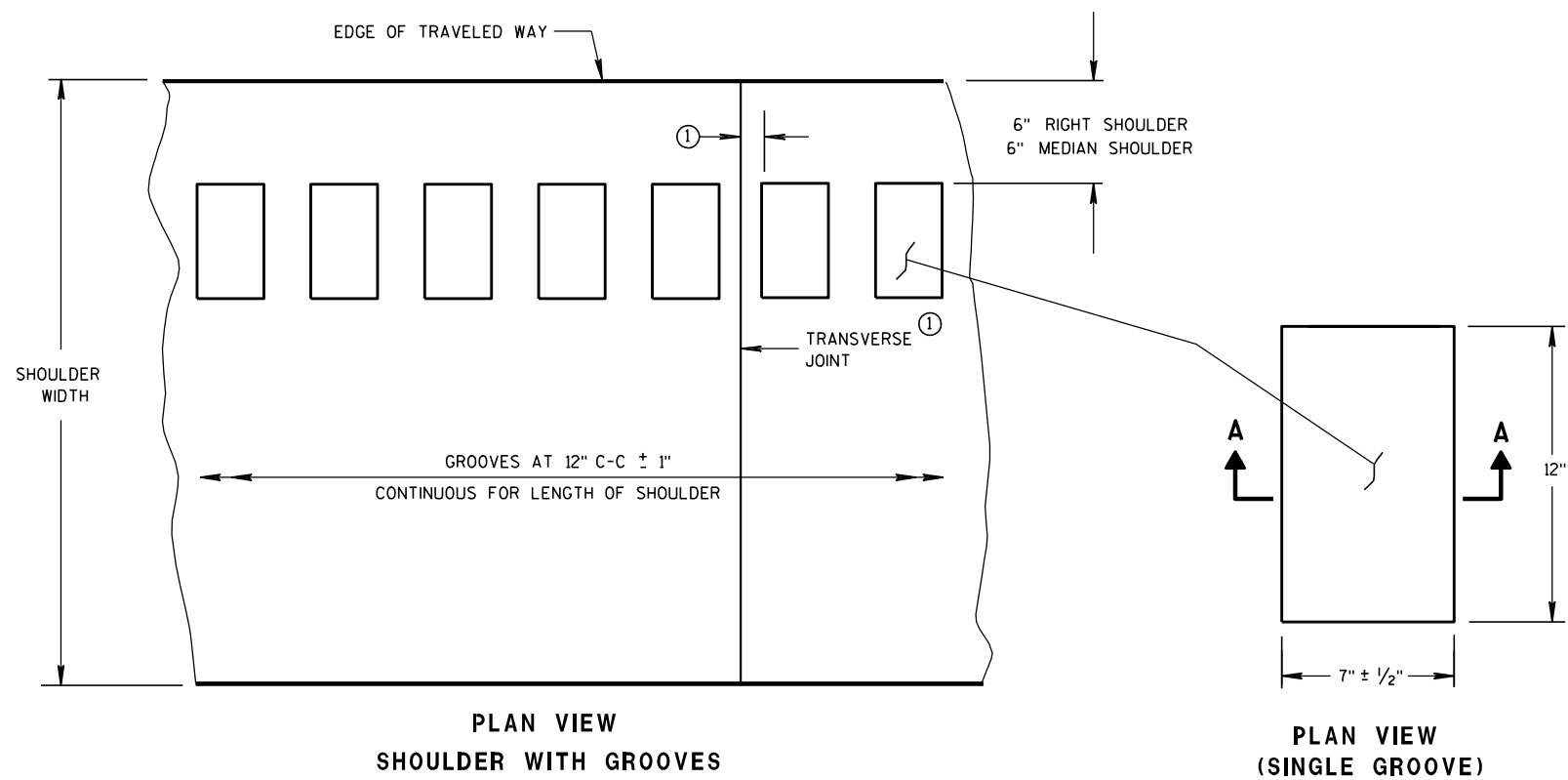


SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 DATE
/S/ Jerry H. 7-95 ROADWAY STANDARDS ENGINEER
ENT



6" RIGHT SHOULDER
6" MEDIAN SHOULDER

EDGE OF TRAVELED WAY

SHOULDER WIDTH

GROOVES AT 12" C-C $\pm$ 1"
CONTINUOUS FOR LENGTH OF SHOULDER

TRANSVERSE JOINT

7" $\pm$ 1/2"

12"

6" RIGHT SHOULDER
6" MEDIAN SHOULDER

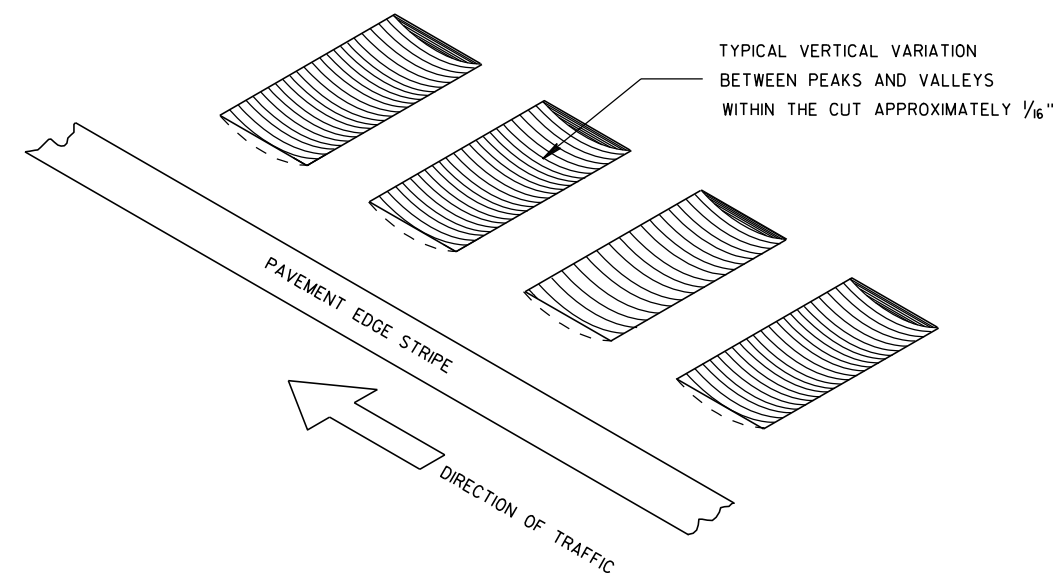
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

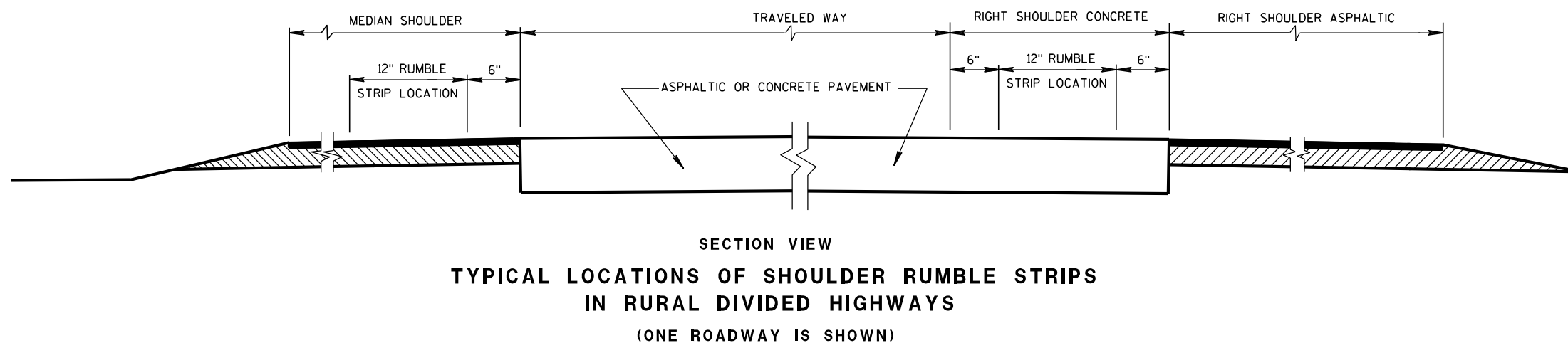
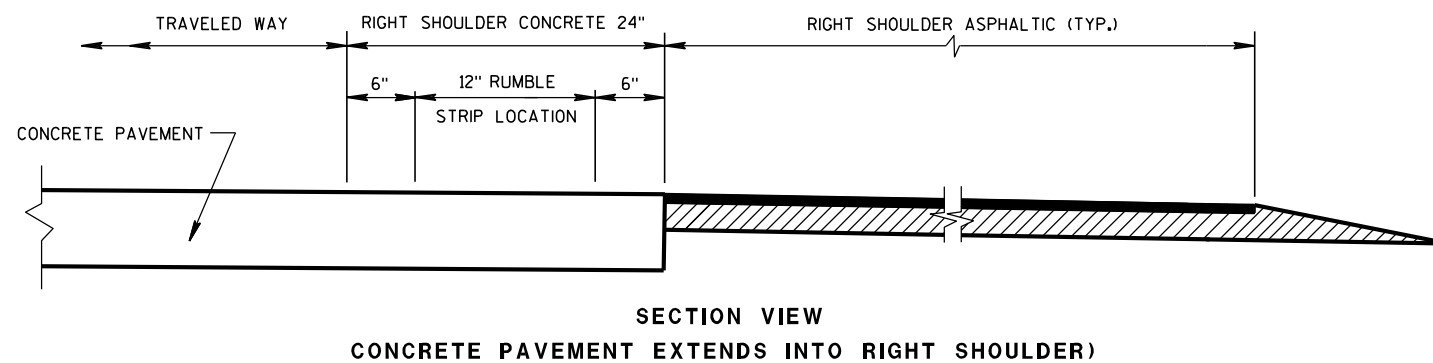
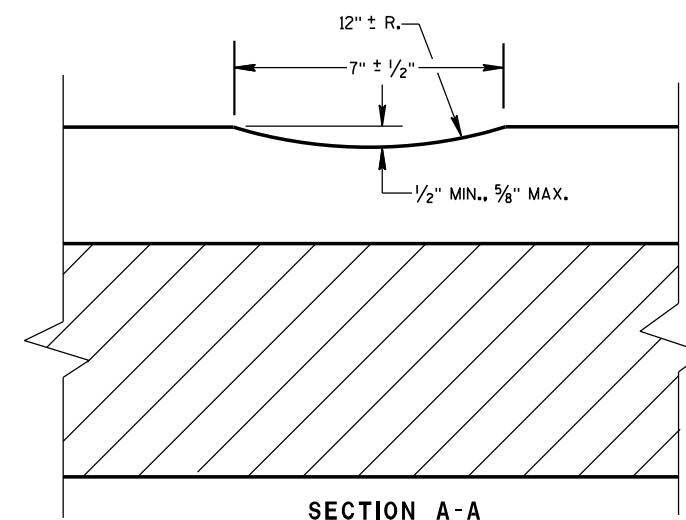
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES OR TURN LANE TAPERS. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.

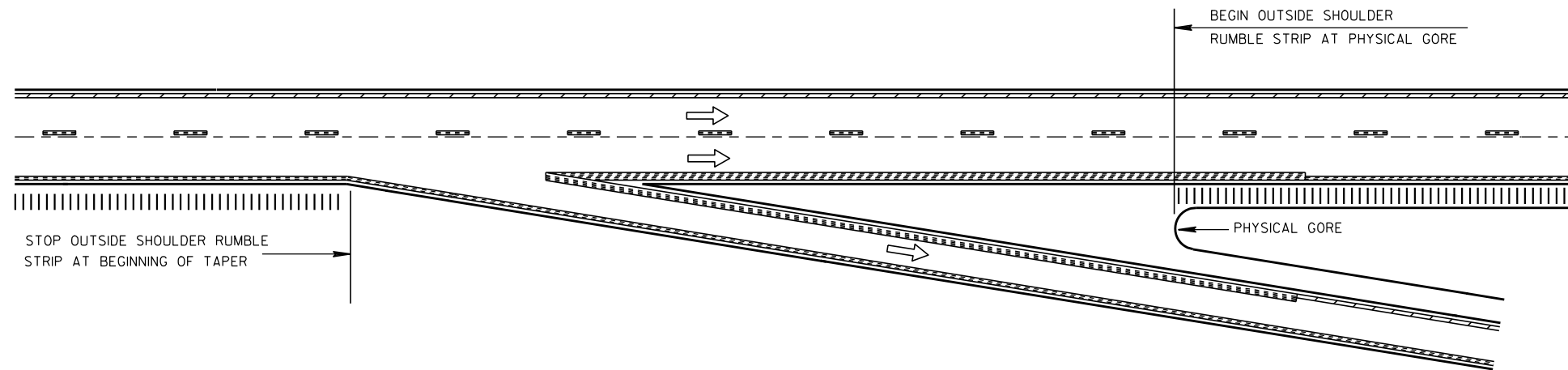


ISOMETRIC



**SHOULDER RUMBLE STRIP,
MILLING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

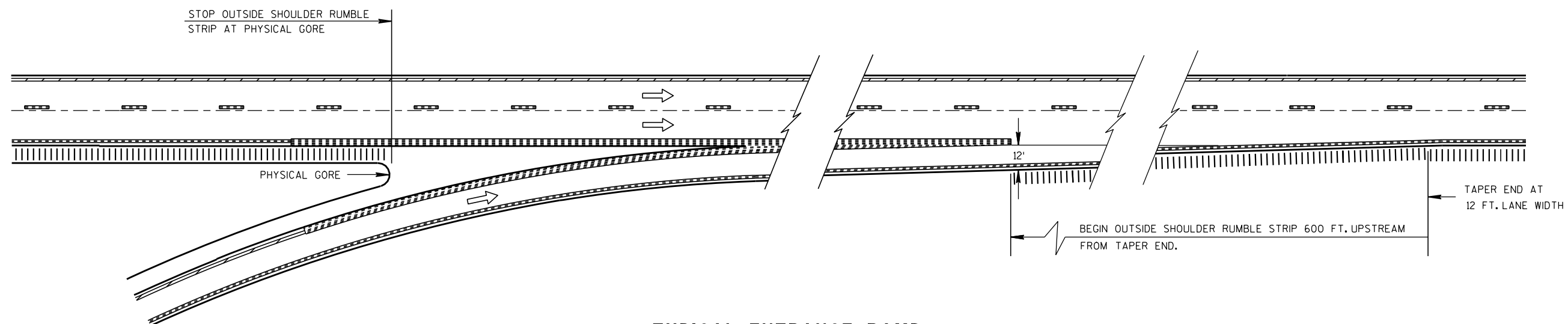


TYPICAL EXIT RAMP

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AS SHOWN.
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

TYPICAL ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONSSHOULDER RUMBLE STRIP,
MILLINGSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/17/2011

DATE

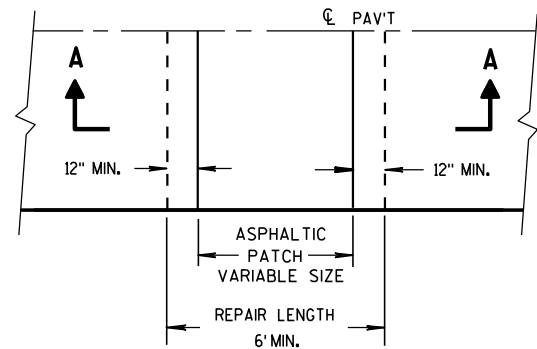
/S/ Jerry H. Zogg

ROADWAY STANDARDS 98

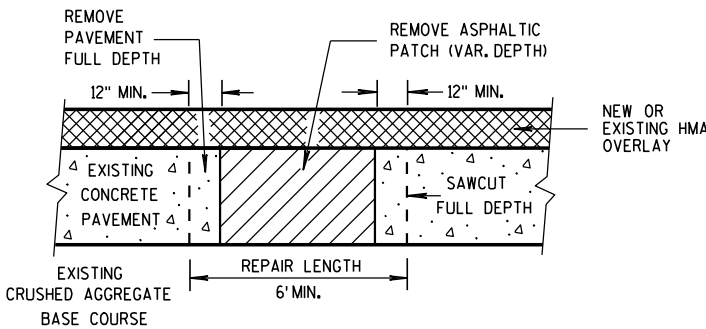
ENGINEER

101

FHWA

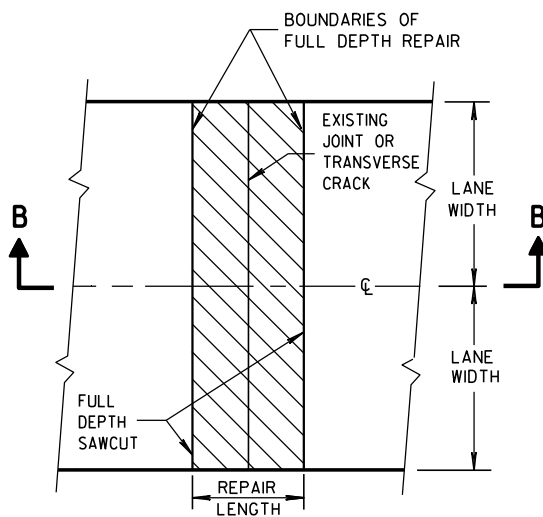


PLAN VIEW

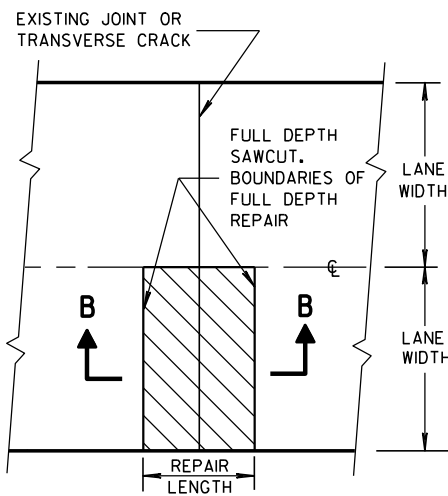


SECTION A-A

HMA PATCH REMOVAL



PLAN VIEW
(DOUBLE LANE REPAIR)



PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL

(SEE NOTE)

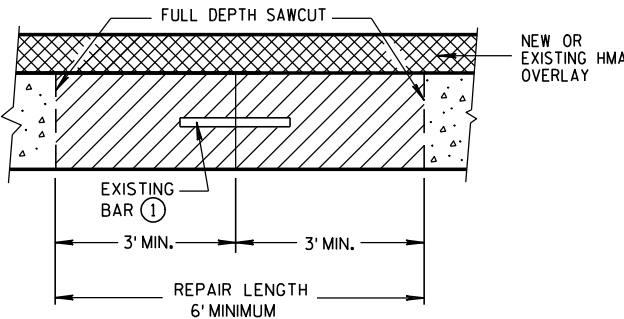
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES. ADDITIONAL SAW CUTS ARE NOT PAID FOR BY THE DEPARTMENT.

PROVIDE 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

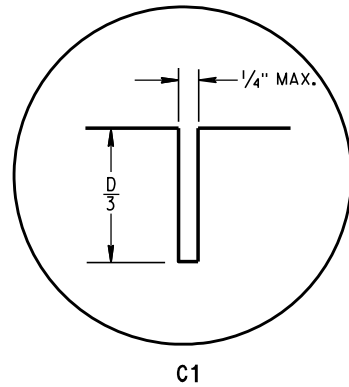
① DOWEL BARS MIGHT NOT EXIST.



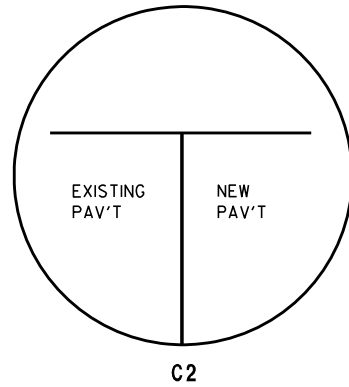
SECTION B-B
CONCRETE REMOVAL

BASE PATCHING CONCRETE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

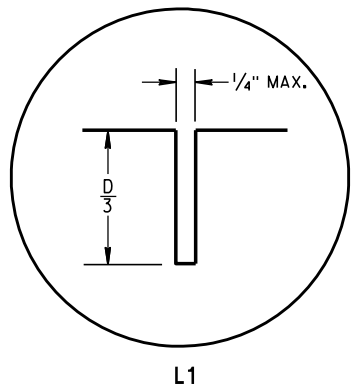


C1

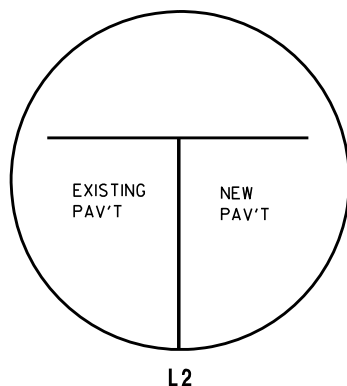


C2

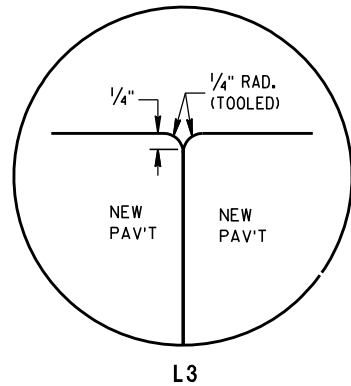
TRANSVERSE JOINTS



L1

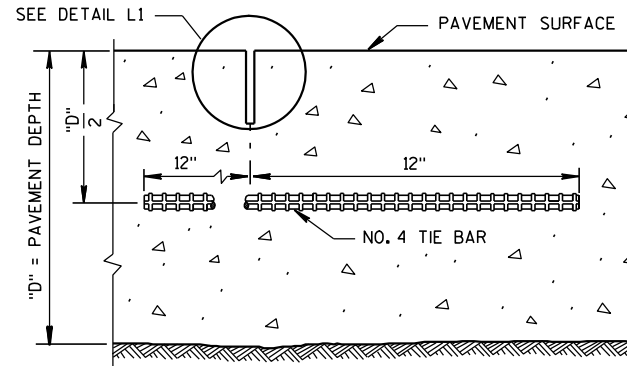


L2

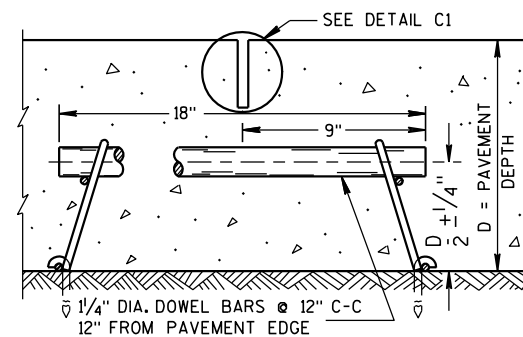


L3

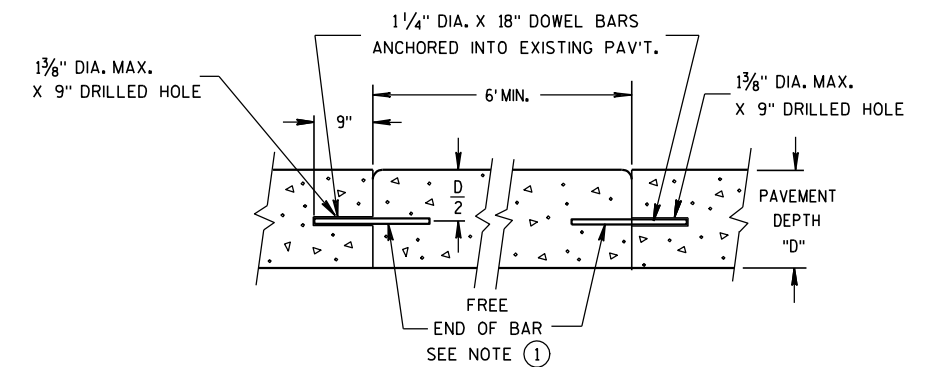
LONGITUDINAL JOINTS



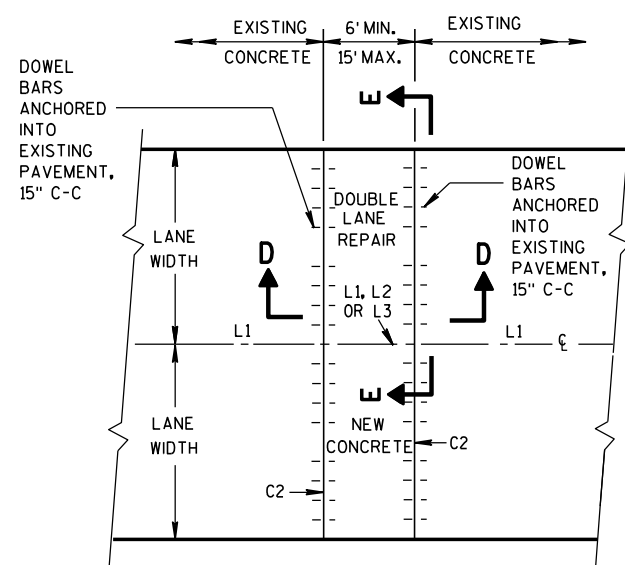
SECTION C-C
SAWED LONGITUDINAL JOINT



SECTION F-F
CONTRACTION JOINT

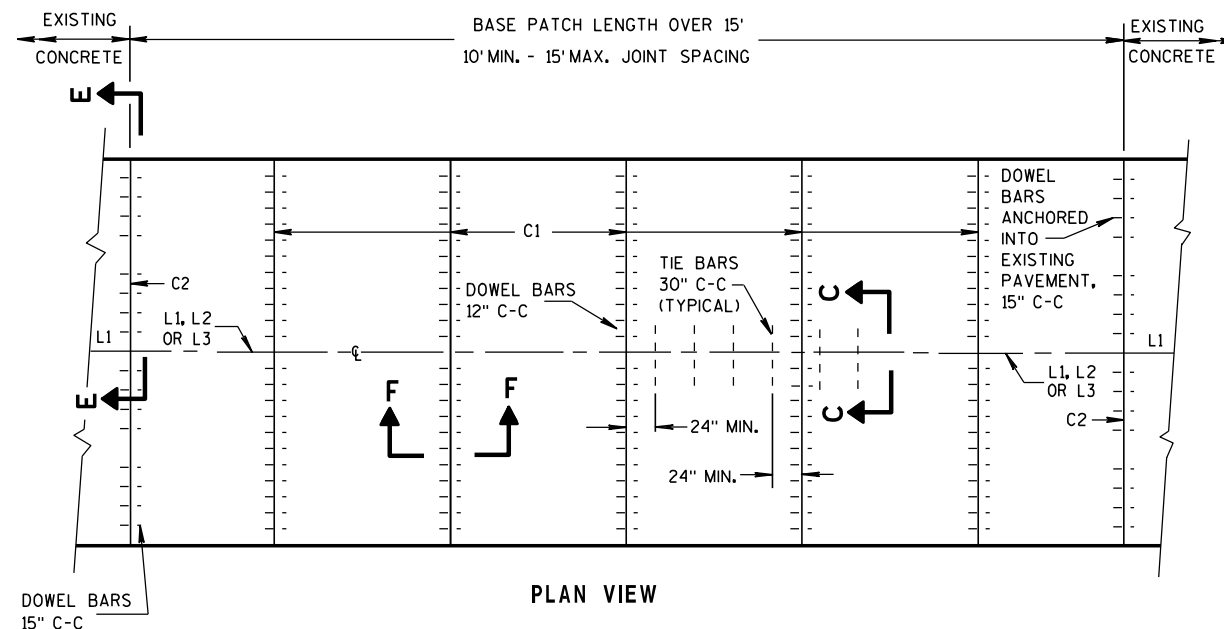


SECTION D-D



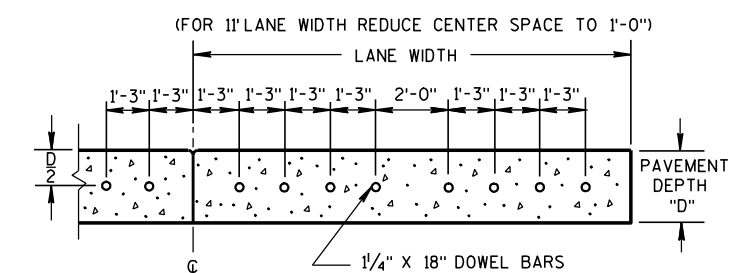
PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



PLAN VIEW

MULTI-LANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH



SECTION E-E

SPACING OF DOWEL BARS
ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

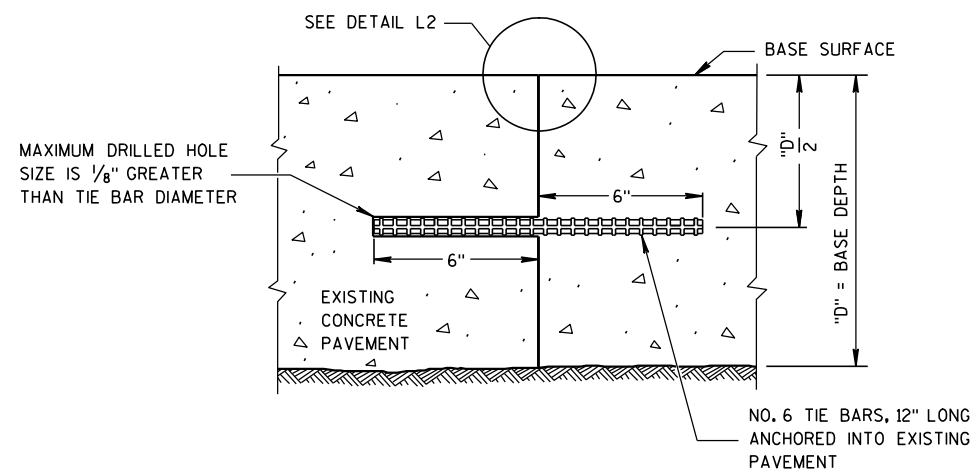
CONCRETE BASE PATCHES OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

PROVIDE A MINIMUM DISTANCE OF 24 INCHES FROM AN EXISTING TRANSVERSE JOINT OR THE EDGE OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

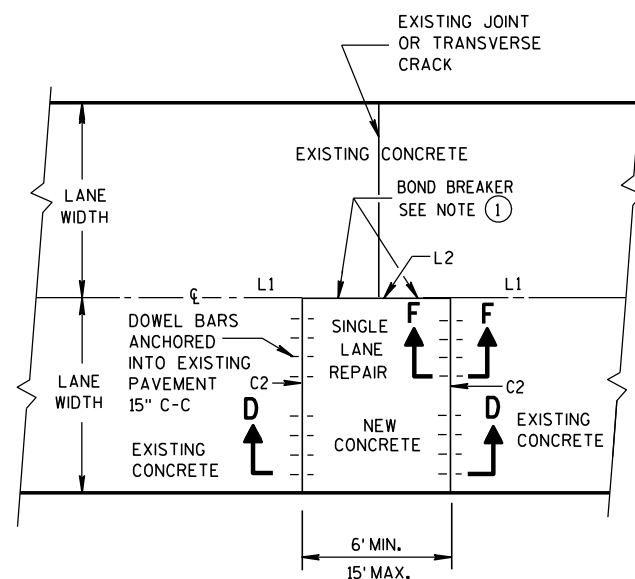
- APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.



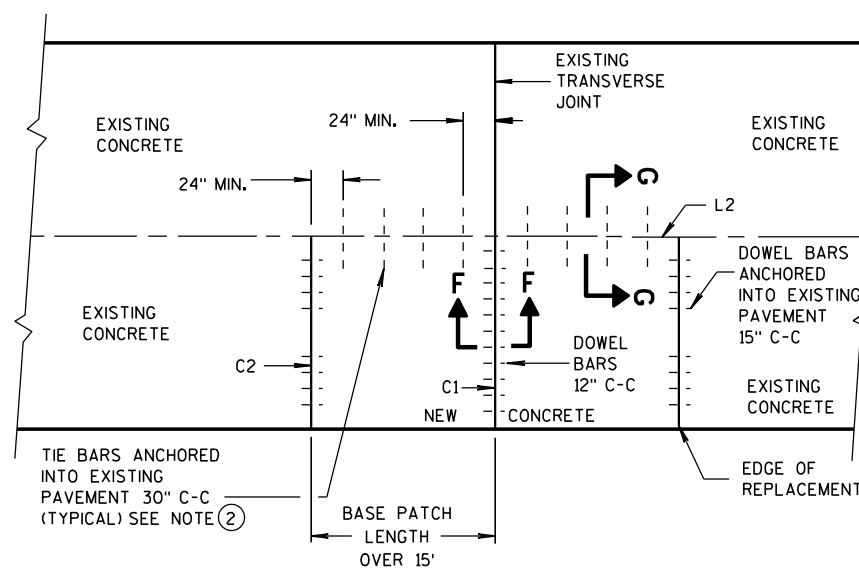
SECTION G-G
TIE BARS ANCHORED
INTO EXISTING PAVEMENT

GENERAL NOTES

- ① USE AN ENGINEER-APPROVED BOND BREAKER FOR SINGLE LANE BASE PATCHES UP TO 15 FEET IN LENGTH.
- ② WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, DRILLED TIE BARS MAY BE INSTALLED ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.



PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
15' MAXIMUM LENGTH



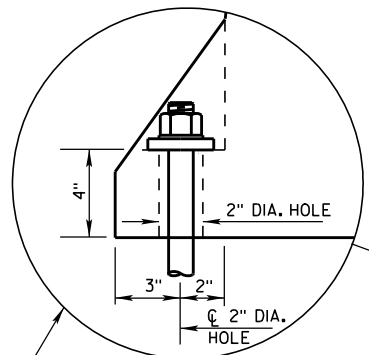
PLAN VIEW
SINGLE LANE CONCRETE BASE PATCH
GREATER THAN 15' IN LENGTH

BASE PATCHING CONCRETE

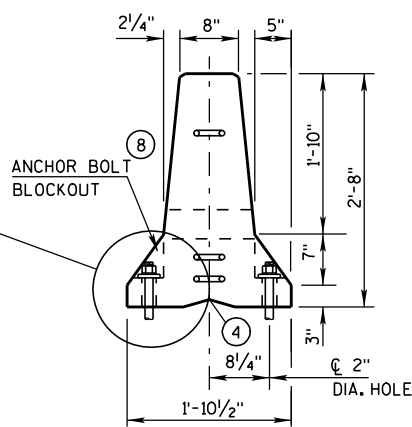
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

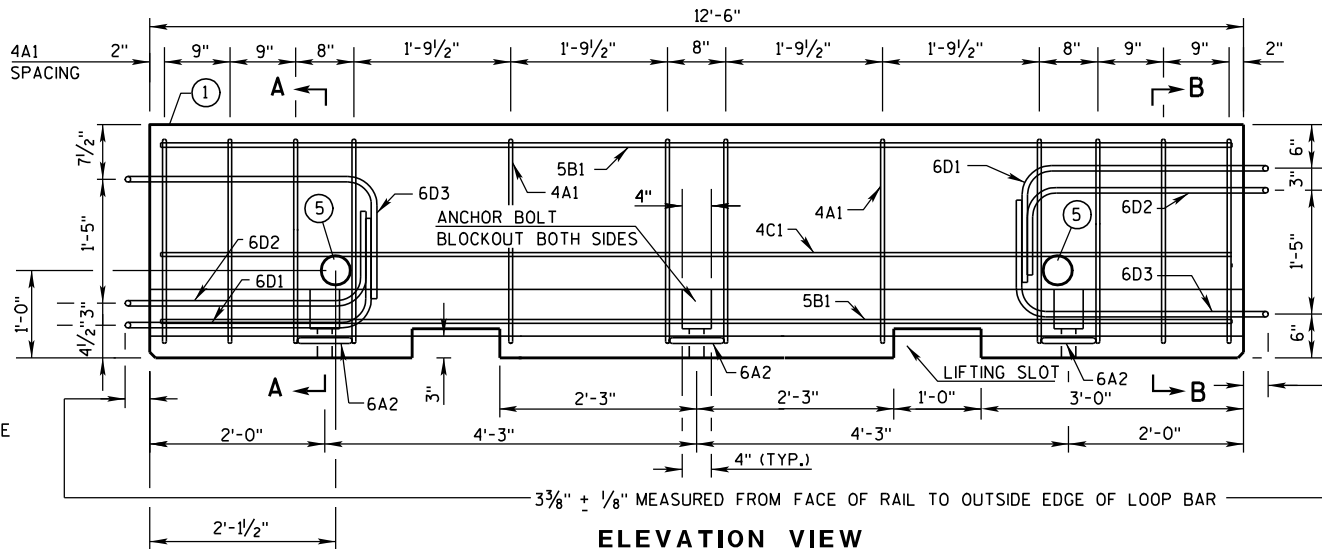
12-11-2009 /S/ Deb Bischoff
DATE PAVEMENT POLICY & DE 101 NEER
FHWA



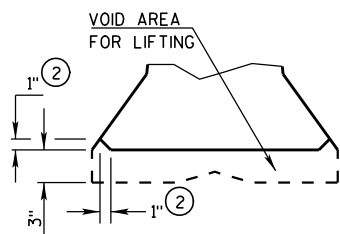
ANCHOR ON TRAFFIC SIDE ONLY WHEN REQUIRED (SEE SHEET D FOR ADDITIONAL ANCHOR DETAIL)



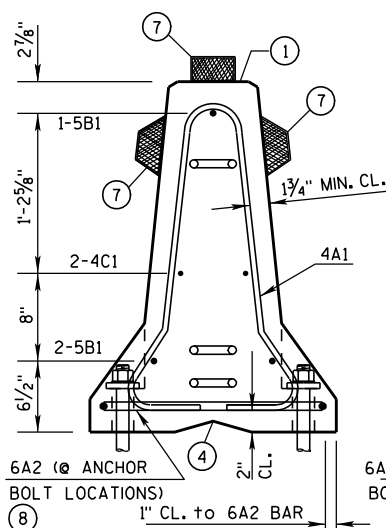
END VIEW



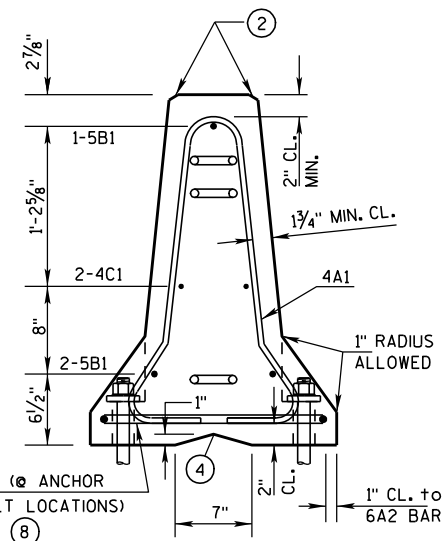
ELEVATION VIEW



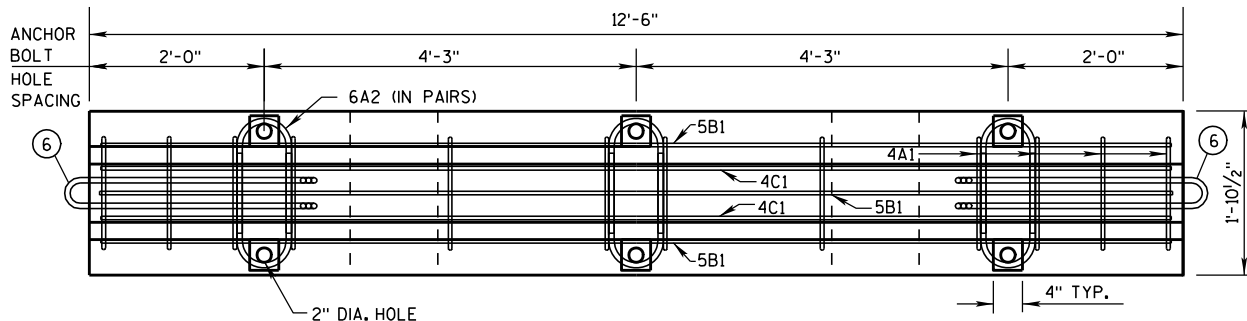
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

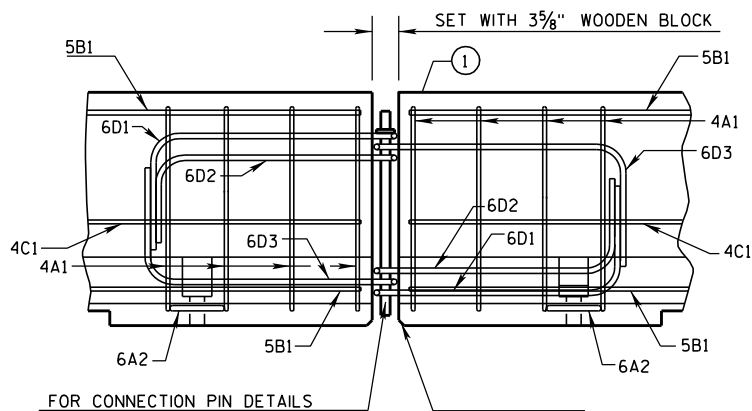


SECTION B-B
(STIRRUP PLACEMENT)



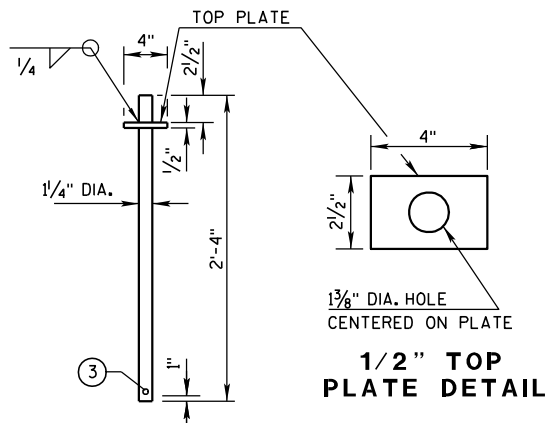
PLAN VIEW

DETAILS OF BARRIER SECTION



FOR CONNECTION PIN DETAILS SEE DETAIL "A"

DETAILS OF BARRIER CONNECTION



DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))

GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-12(a) THRU 14B7-12(d).

DETAILS AND REQUIREMENTS FOR THE FABRICATION AND INSTALLATION OF CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" (CBTP12.5) ARE SHOWN ON 4 SHEETS, 14B7-12(a) THRU 14B7-12(d)

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRECAST, 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 3/4" 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 3-1/2" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN 1/8" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

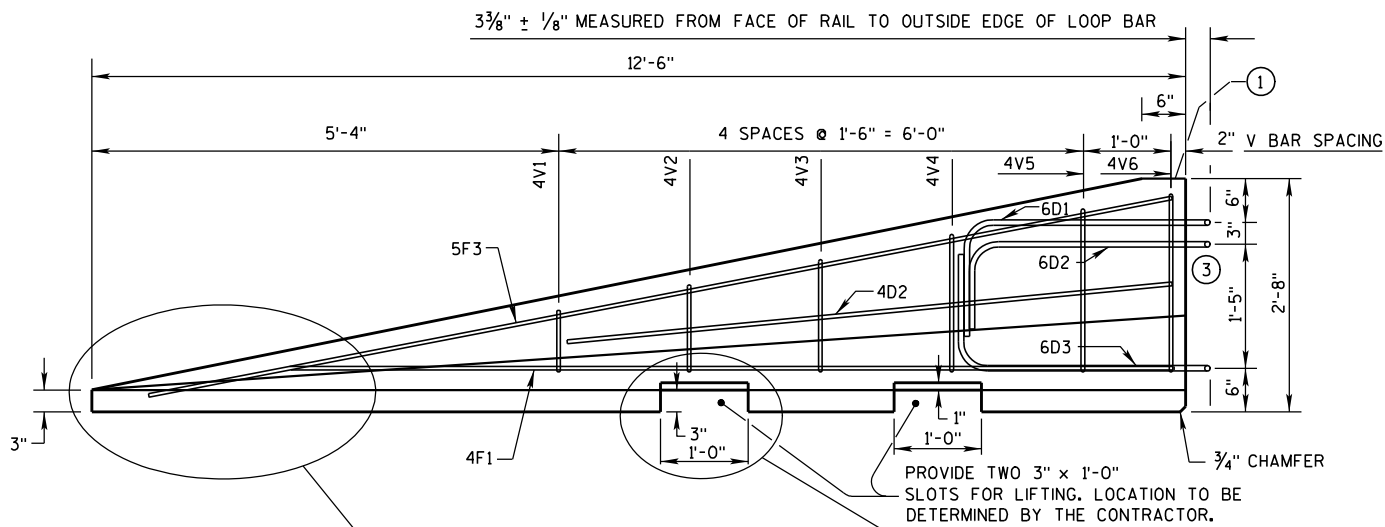
PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

- 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 3/8" 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.

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

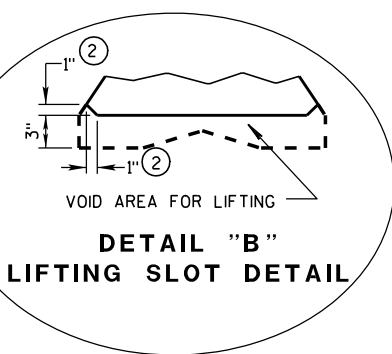
102



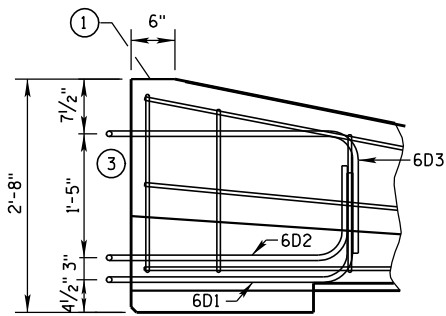
SIDE ELEVATION
(FOR CONNECTION TO LEFT END OF BARRIER)

SEE DETAIL "C", BENT BAR DETAIL

PROVIDE TWO 3" x 1'-0" SLOTS FOR LIFTING. LOCATION TO BE DETERMINED BY THE CONTRACTOR.



DETAIL "B"
LIFTING SLOT DETAIL

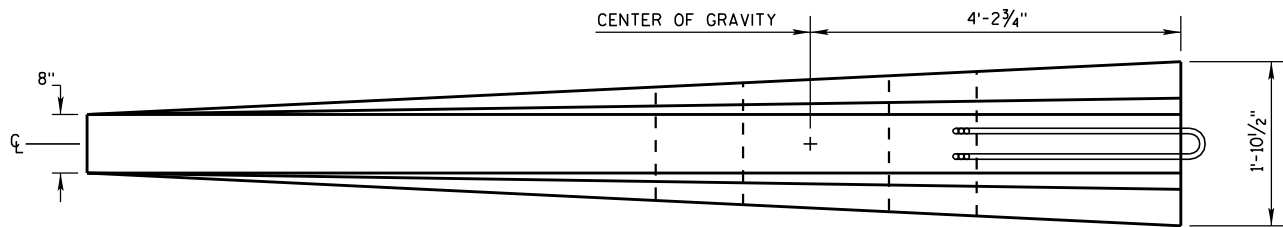


SIDE ELEVATION

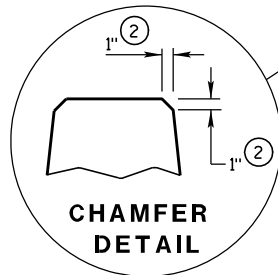
LOOP BAR ASSEMBLY INVERTED
FOR OPPOSITE END.
(FOR CONNECTION TO RIGHT END OF BARRIER)

GENERAL NOTES

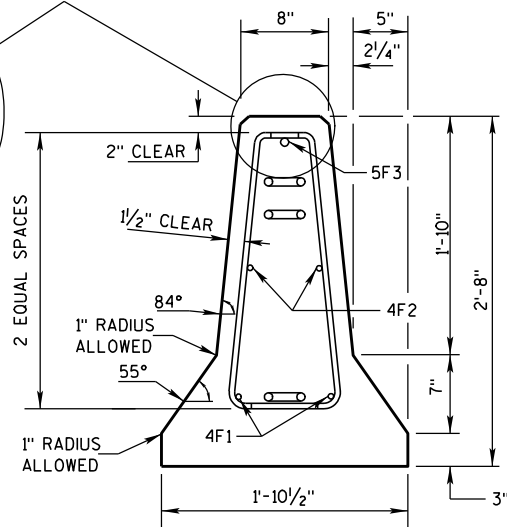
- ① MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
a. TYPE WICBTP
b. MANUFACTURER
c. DATE MANUFACTURED (MONTH AND YEAR)
- ② 1" CHAMFER TO PREVENT SPALLING.
- ③ NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.



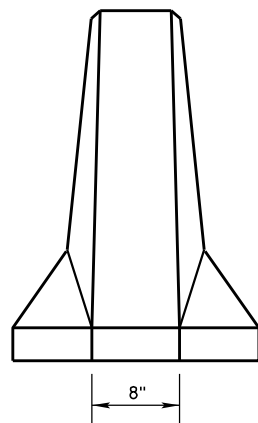
PLAN VIEW



**CHAMFER
DETAIL**

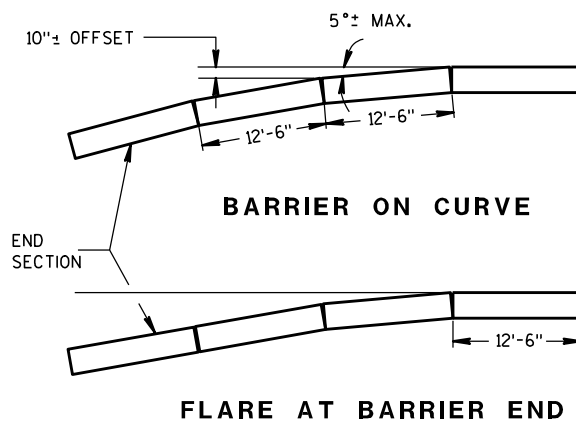


END SECTION



FRONT ELEVATION

DETAILS OF BARRIER TAPER SECTION



BARRIER ON CURVE

FLARE AT BARRIER END

POSTED SPEED, (MPH)	FLARE RATE
40 OR LESS	6:1
45 OR GREATER	8:1

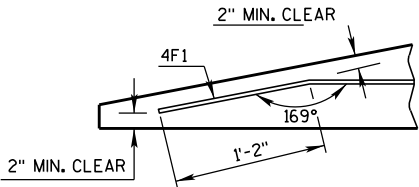
**CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

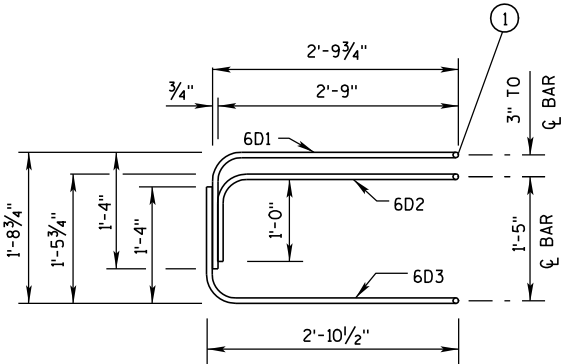
BARRIER TAPER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

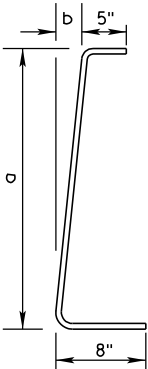
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

BAR	a	b
V1	10"	1"
V2	1'-1"	1 1/4"
V3	1'-5"	1 5/8"
V4	1'-8"	1 7/8"
V5	2'-0 1/2"	2 3/8"
V6	2'-3"	2 3/4"

TAPER BARRIER SECTION

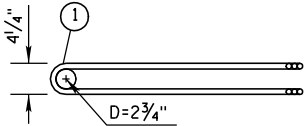
GENERAL NOTES

1 NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION
BILL OF MATERIALS

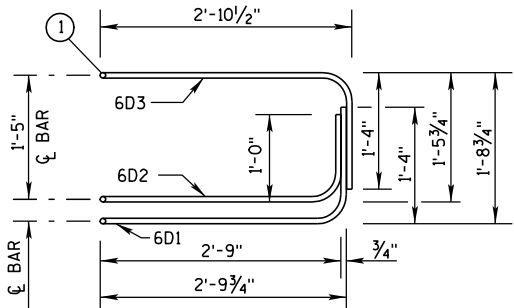
(PER 12'-6" BARRIER SECTION)

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"

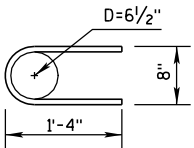


PLAN VIEW
LOOP BAR ASSEMBLY

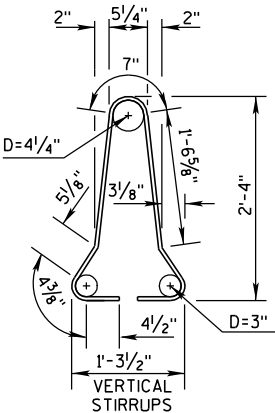
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2

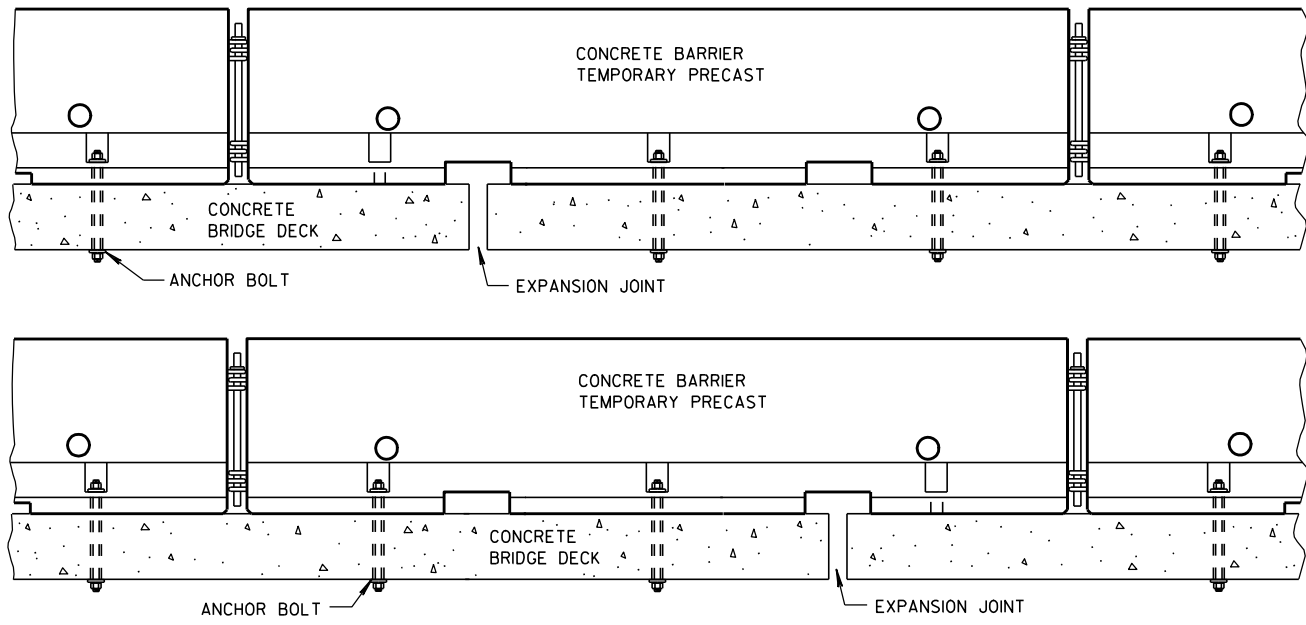


4A1

BARRIER SECTION

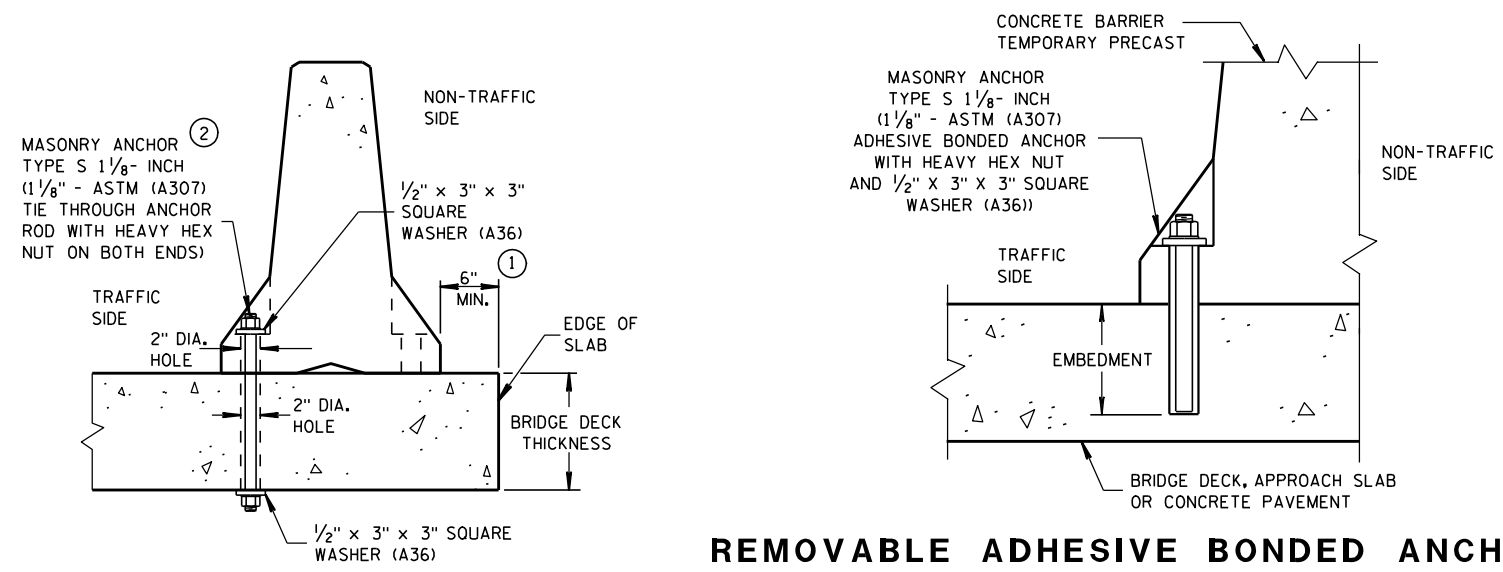
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.)

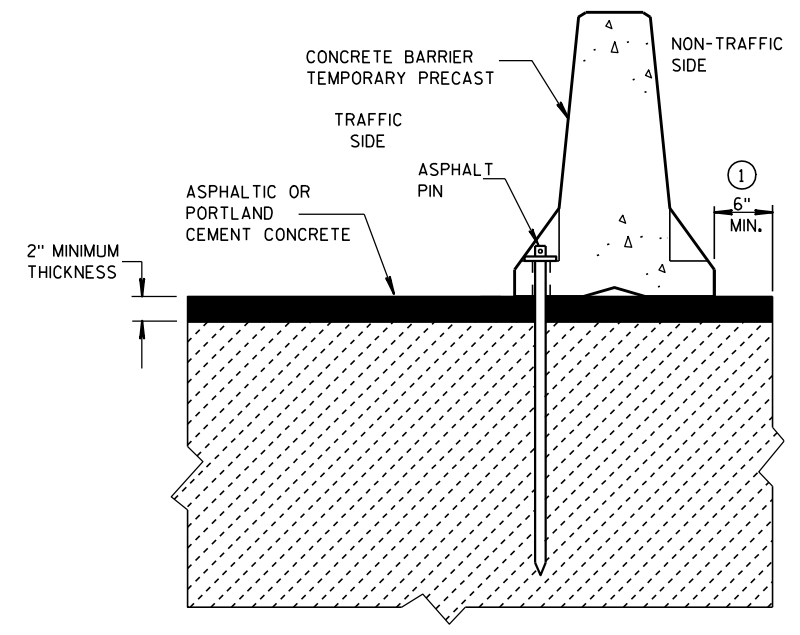


THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)

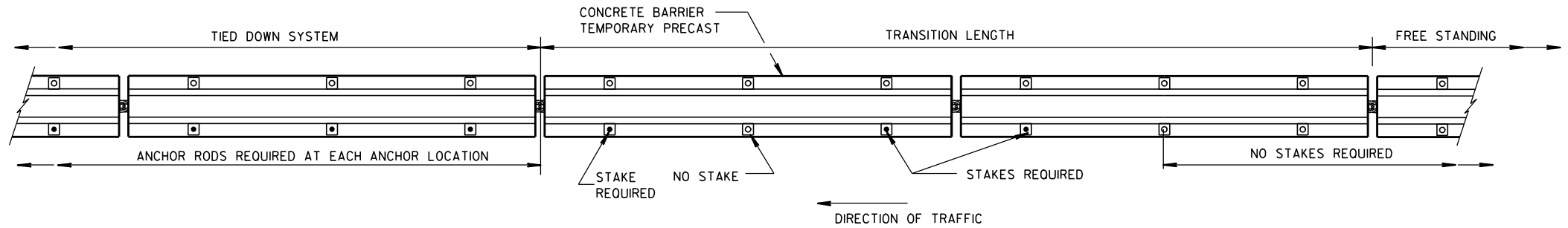
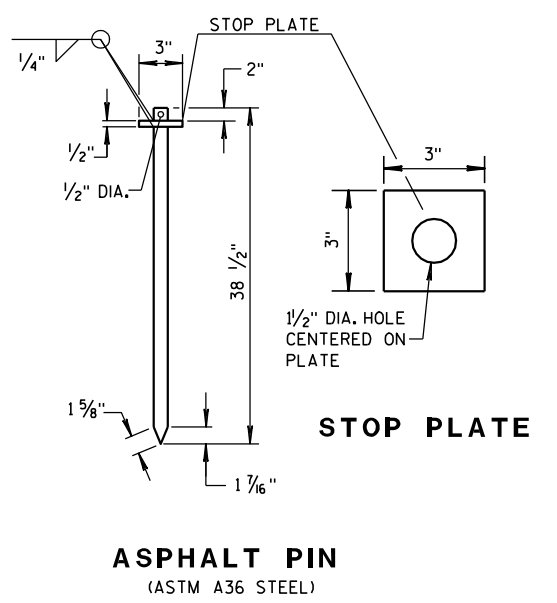
REMOVABLE ADHESIVE BONDED ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



STAKE DOWN INSTALLATION FOR ASPHALTIC OR PORTLAND CEMENT CONCRETE SURFACE

(STAKING IS INCIDENTAL TO CONCRETE BARRIER TEMPORARY PRECAST)



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.)

GENERAL NOTES

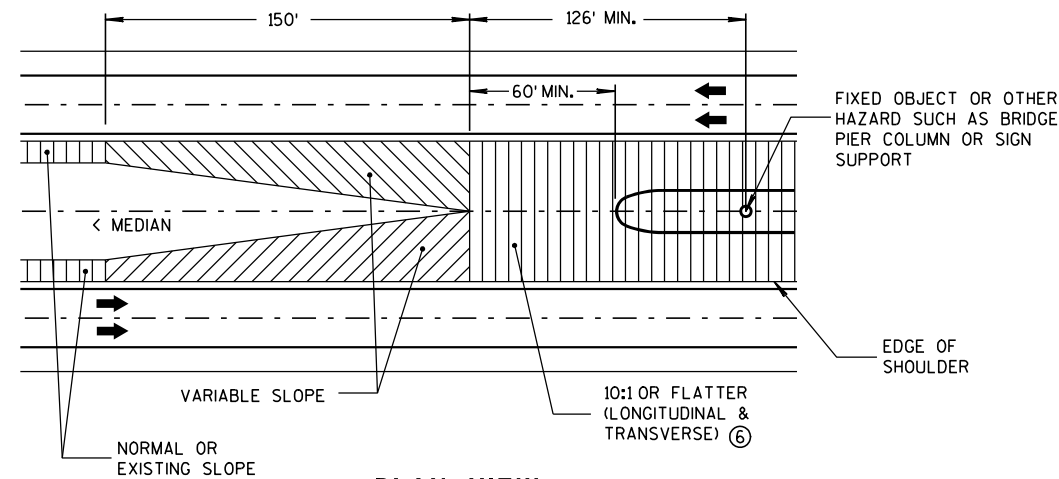
- ① CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" SHALL BE ANCHORED IF:
THE DISTANCE TO A 2 FOOT OR GREATER DROPOFF THAT IS STEEPER THAN 3H : 1V, FOR EXAMPLE THE EDGE OF A BRIDGE DECK OR A DROPOFF AT THE EDGE OF PAVEMENT, IS LESS THAN 4 FEET FROM THE SIDE OF THE BARRIER CLOSEST TO THE DROPOFF AND THE POSTED 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.

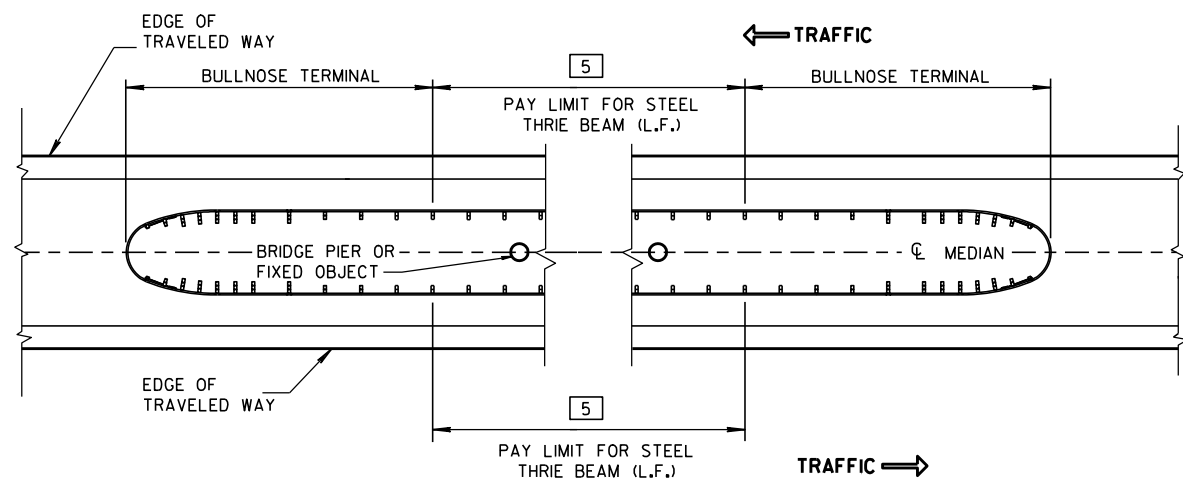
WITH THE APPROVAL OF THE ENGINEER, REMOVABLE ADHESIVE BONDED (EPOXY) ANCHOR BOLT INSTALLATION MAY BE USED IN LIEU OF THROUGH BOLTED ANCHOR INSTALLATION. THE ADHESIVE BONDED ANCHOR BOLT MUST BE REMOVABLE. USE ASTM (A307) MASONRY ANCHORS TYPE S 1 1/8-INCH, EMBEDDED TO A DEPTH SUFFICIENT TO DEVELOP THE ULTIMATE CAPACITY OF THE ANCHOR BOLT AND PROVIDE DOCUMENTATION TO CONFIRM THIS.

UPON REMOVAL OR RELOCATION OF THE BARRIER UNITS, REMOVE ALL ANCHOR 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 COMMERCIAL GROUT OR EPOXY MATERIAL IDENTIFIED ON THE CURRENT WISDOT APPROVED PRODUCTS LIST.

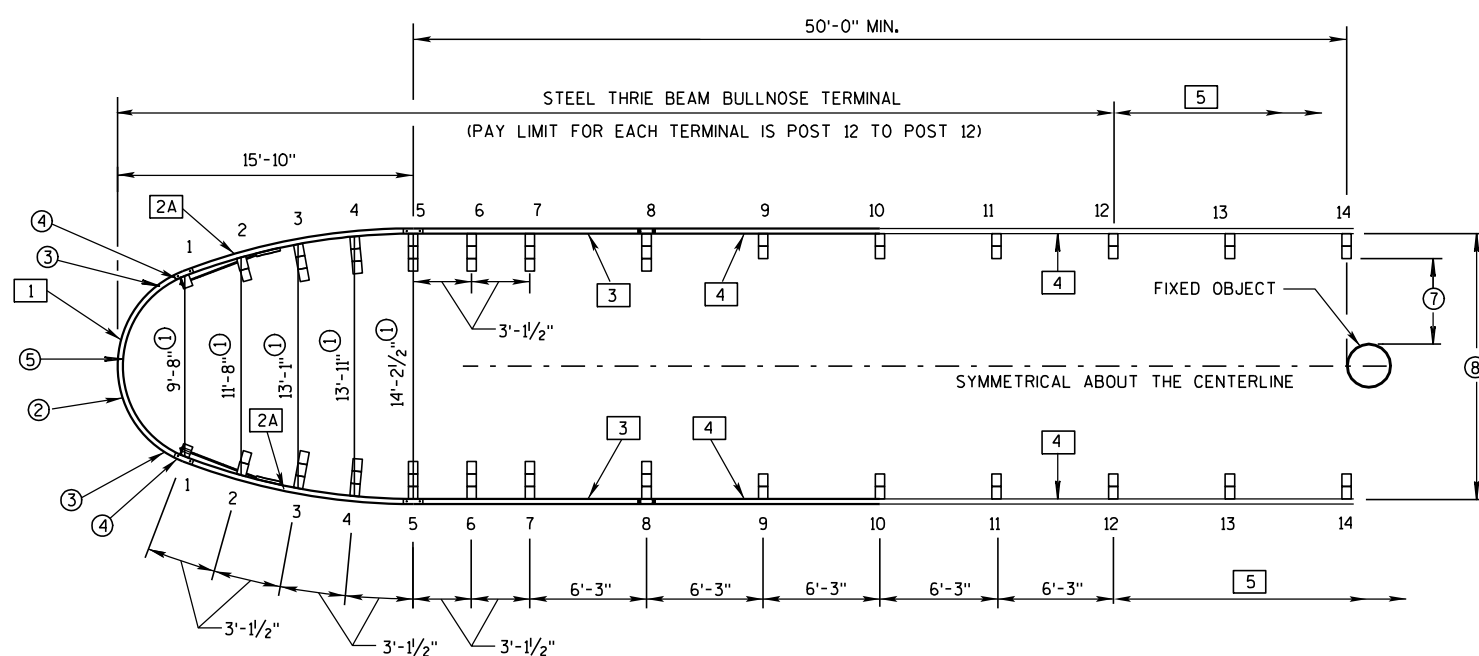
CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6-3-2010 DATE	/s/ Jerry H. 7-12d ROADWAY STANDARD 105 ENGINEER
FHWA	



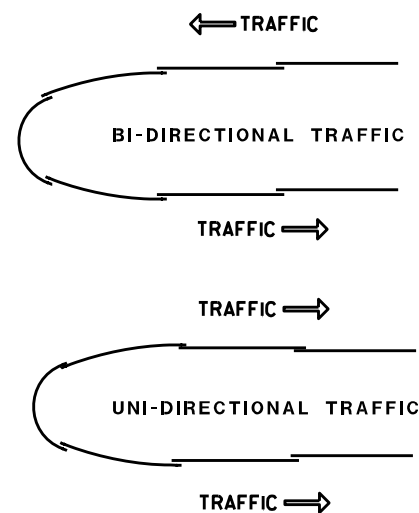
**PLAN VIEW
GRADING AT BULLNOSE
(ALL INSTALLATIONS)**



MEDIAN HAZARD PROTECTION PAY LIMITS



**PLAN VIEW
TYPICAL BULLNOSE LAYOUT**



**LAPPING DETAIL
(ALL INSTALLATIONS)**

GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

PUNCHING, DRILLING, CUTTING OR WELDING IS NOT PERMITTED ON ANY GALVANIZED THRIE BEAM ACCESSORY OR TERMINAL ACCESSORY.

OTHER ANCHOR CABLE ASSEMBLIES HAVING 40,000 LBS. MIN. BREAKING STRENGTH MAY BE USED.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

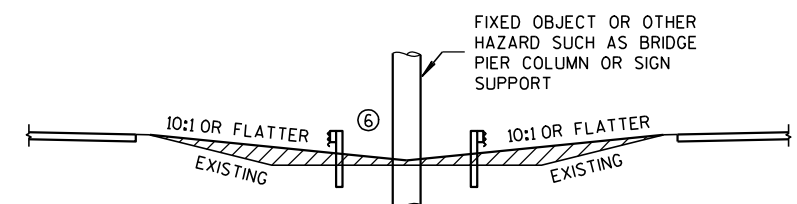
THE USE OF STEEL POSTS ON THE BULLNOSE IS NOT ALLOWED.

BOLTS AND ALL NECESSARY HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

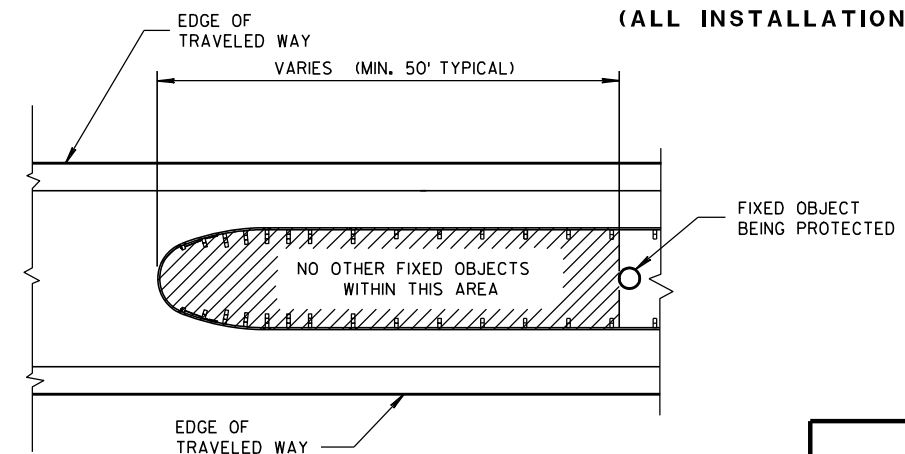
ALL THRIE BEAM SHALL BE 12-GAUGE.

- 1 SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)
- 2A SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)
- 3 SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)
- 4 UNBENT STANDARD THRIE-BEAM RAIL NO. 4. (POST 8 TO POST 10 & POST 10 TO POST 12)
- 5 BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

- ① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST OR BLOCK.
- ② U-BOLT CABLE CLIPS (3 PER CABLE) SPACED OUT ON NOSE, TO HOLD CABLE TO BACKSIDE OF THE RAIL.
- ③ NOSE CABLE W/SWAGGED END BUTTONS.
- ④ NOSE CABLE ANCHOR PLATE (BACKSIDE OF SPLICE).
- ⑤ THE SLACK IN THE NOSE CABLES SHALL BE EVENLY DISTRIBUTED BETWEEN THE CABLE CLIP FASTENERS AND POST NO. 1 ON EITHER SIDE OF THE NOSE.
- ⑥ PROVIDE SUITABLE DRAINAGE WHEN MEDIAN GRADING IMPEDES NORMAL FLOW.
- ⑦ 2'-6" MINIMUM LATERAL DISTANCE BETWEEN BACK OF POST AND FACE OF FIXED OBJECT.
- ⑧ MAXIMUM WIDTH OF SYSTEM IS 14'-2 1/2" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



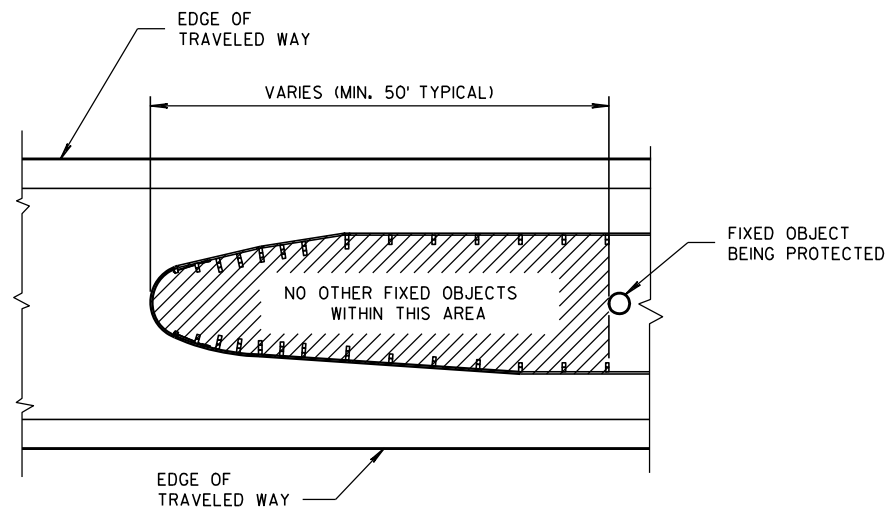
**MEDIAN GRADING SECTION
(ALL INSTALLATIONS)**



**HAZARD FREE
AREA INSIDE BULLNOSE**

**STEEL THRIE BEAM
BULLNOSE TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



HAZARD FREE AREA INSIDE BULLNOSE

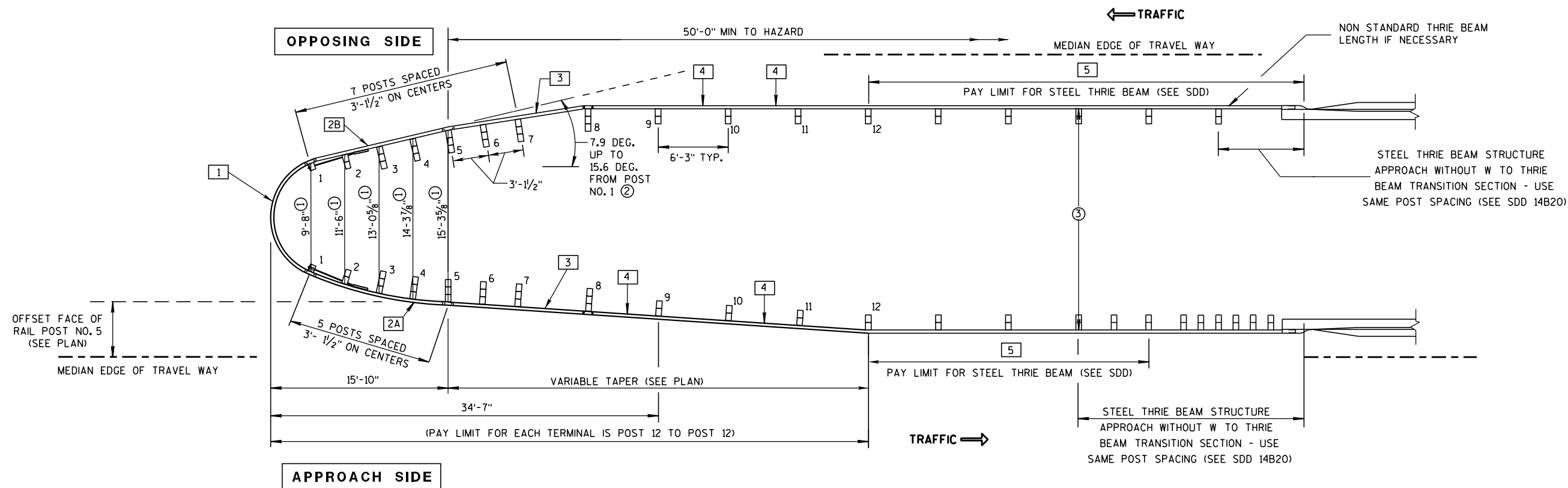
GENERAL NOTES

SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FOR POSTS 2 THROUGH 14, IF POST CANNOT BE INSTALLED AT SPECIFIED LOCATION 1 EXTRA STANDARD WOOD BLOCK MAY BE ADDED.

- 1 SLOTTED THRIE BEAM RAIL NO. 1. (POST 1 TO POST 1)
- 2A SLOTTED THRIE BEAM RAIL NO. 2A. (POST 1 TO POST 5)
- 2B SLOTTED THRIE BEAM RAIL NO. 2B. (POST 1 TO POST 5)
- 3 SLOTTED THRIE BEAM RAIL NO. 3. (POST 5 TO POST 8)
- 4 UNBENT STANDARD THRIE-BEAM RAIL NO. 4. (POST 8 TO POST 10 & POST 10 TO POST 12)
- 5 BEYOND POST 12: CONSTRUCT STEEL THRIE BEAM - USE UNBENT STANDARD THRIE BEAM RAIL NO. 5.

- ① DIMENSIONS ARE FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO POST.
- ② TAPER BEGINNING AT POST NO. 1 MUST CONTINUE TO POST NO. 5. PAST POST NO. 5 TAPER MAY END OR BE EXTENDED UP TO 15.6 DEGREES TO FIT VARIABLE MEDIAN WIDTHS. (SEE PLAN)
- ③ FOR MEDIANS WIDER THAN 14'-2 1/2" MEASURED FROM BACK OF RAIL TO BACK OF RAIL WHERE RAIL IS BOLTED TO A POST OR BLOCK.



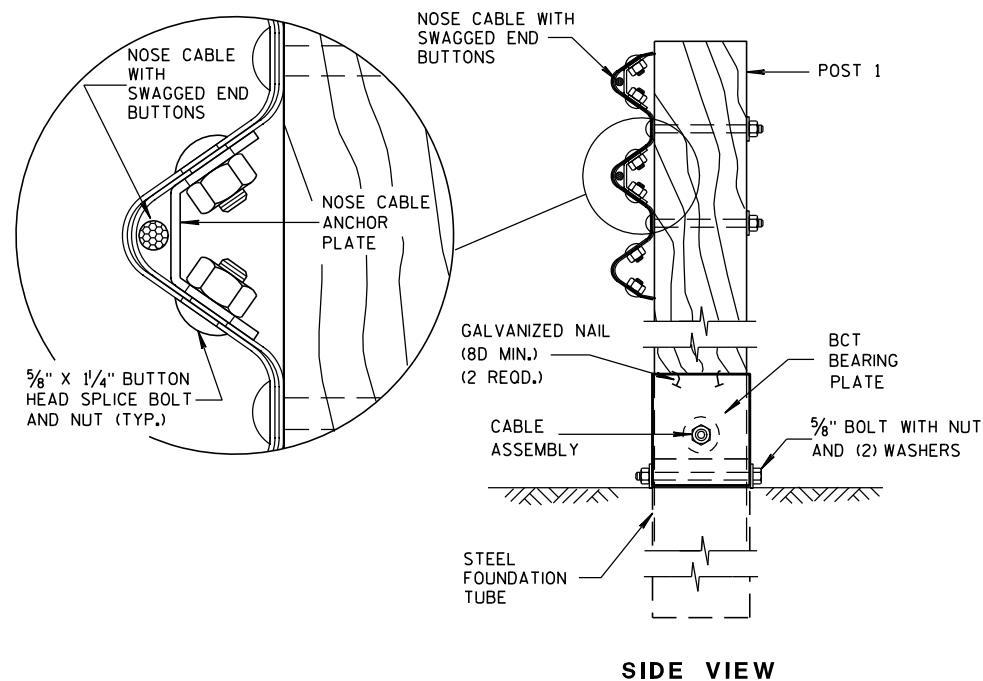
PLAN VIEW

WIDENED BULLNOSE DESIGN

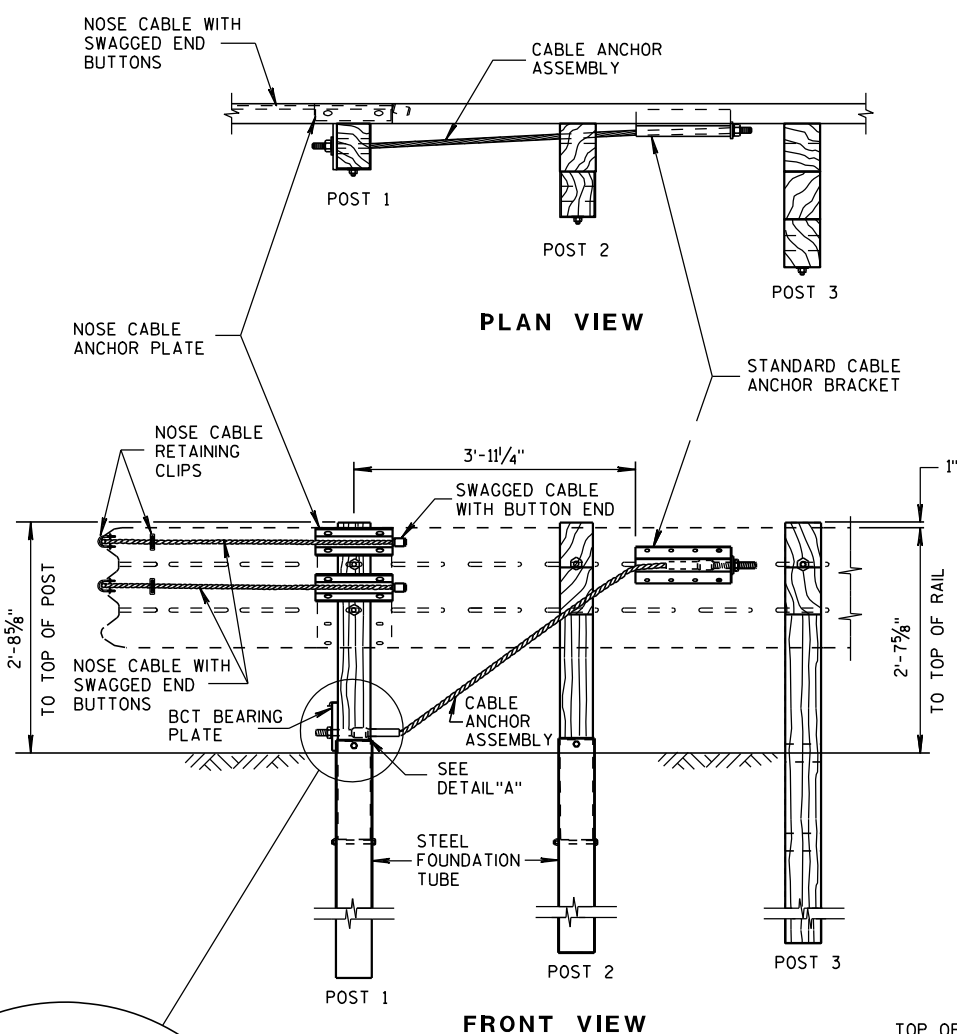
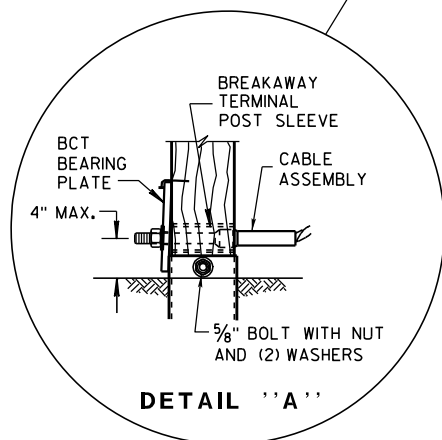
(INSTALLATION AT TWIN BRIDGES WITH BI-DIRECTIONAL TRAFFIC SHOWN)

STEEL THRIE BEAM
BULLNOSE TERMINAL

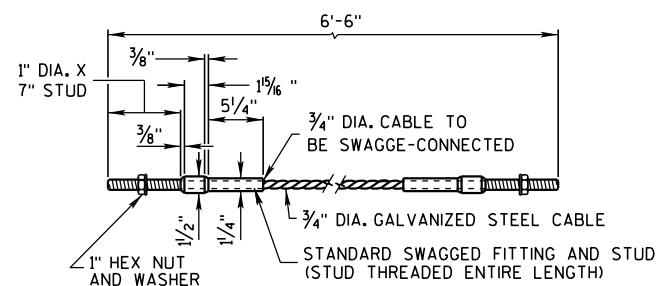
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



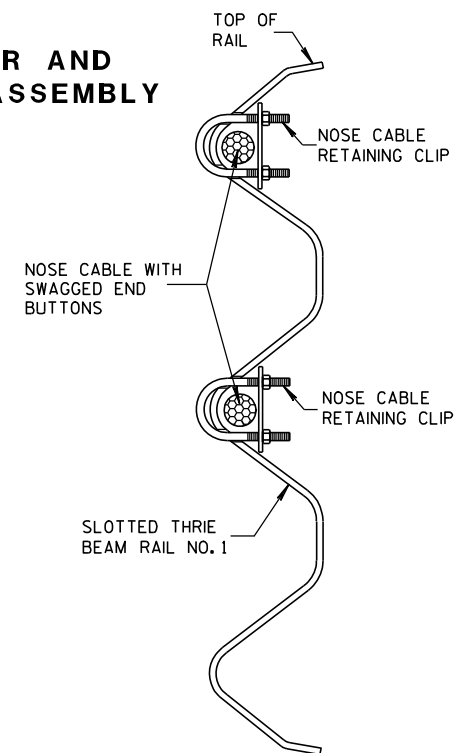
NOSE CABLE ASSEMBLY AT POST NO. 1

FRONT VIEW
NOSE CABLE ANCHOR AND
STANDARD BRACKET ASSEMBLY

DETAIL 'A'

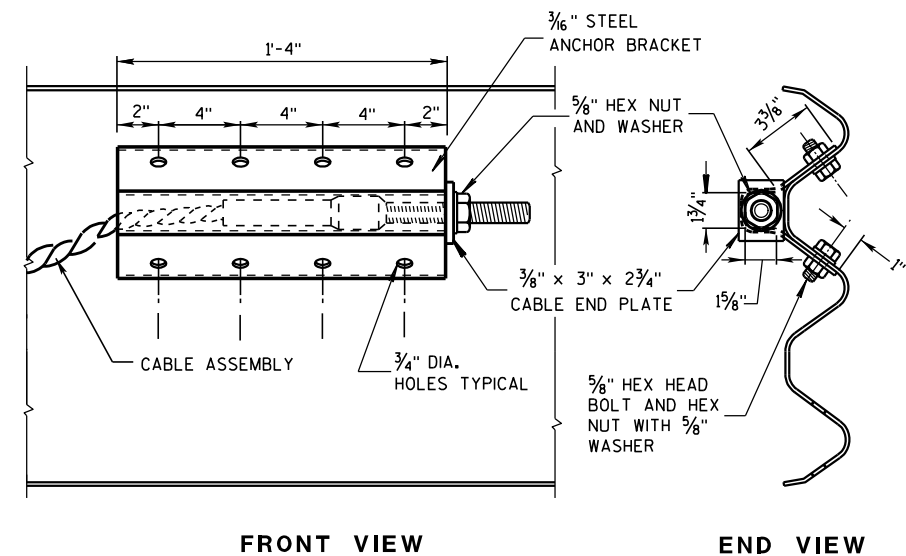


DETAILS OF CABLE ANCHOR ASSEMBLY

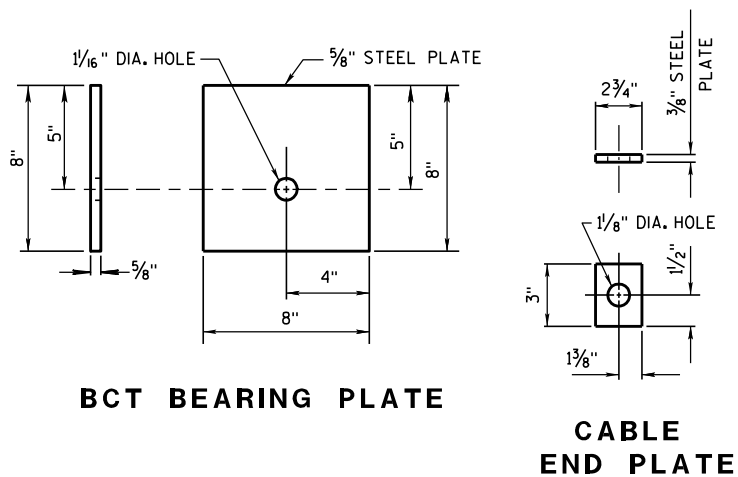
PLACEMENT OF NOSE
CABLE RETAINING CLIP

GENERAL NOTES

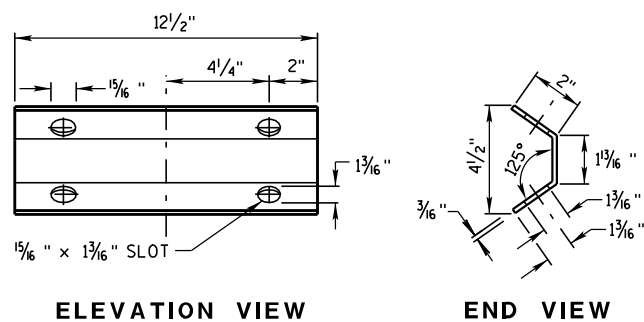
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.

FRONT VIEW
DETAILS OF CABLE ANCHOR BRACKET

END VIEW



BCT BEARING PLATE

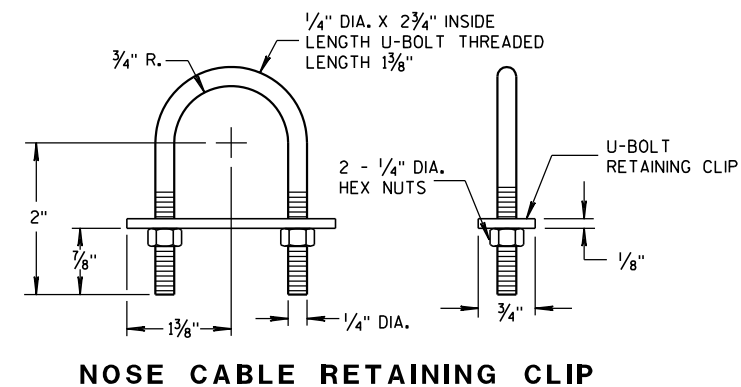
CABLE
END PLATE

ELEVATION VIEW

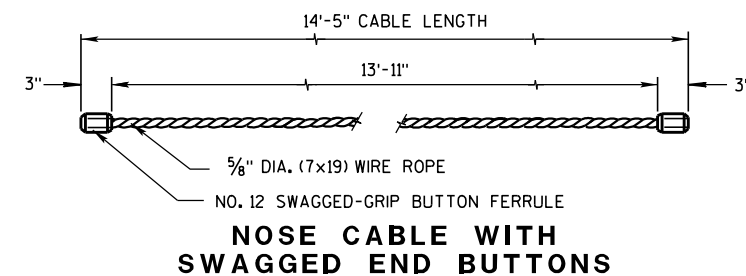
END VIEW

NOSE CABLE ANCHOR PLATE

NOTE: 12 1/2" x 5 3/16" x 3/16" STEEL PLATE (A306)

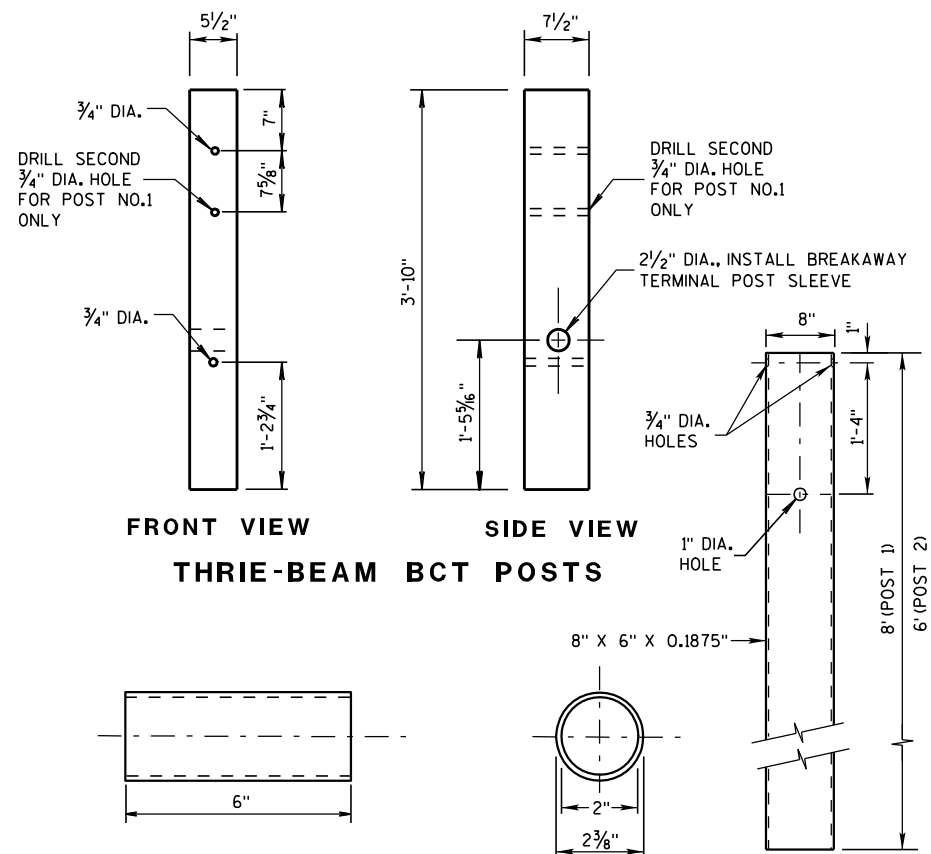


NOSE CABLE RETAINING CLIP

NOSE CABLE WITH
SWAGGED END BUTTONS

TO PULL OFF SWAGGED GRIP BUTTON FERRULE FROM WIRE ROPE REQUIRES A FORCE EQUAL TO 98% OF THE WIRE ROPE'S BREAKING STRENGTH.

STEEL THRIE BEAM
BULLNOSE TERMINALSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



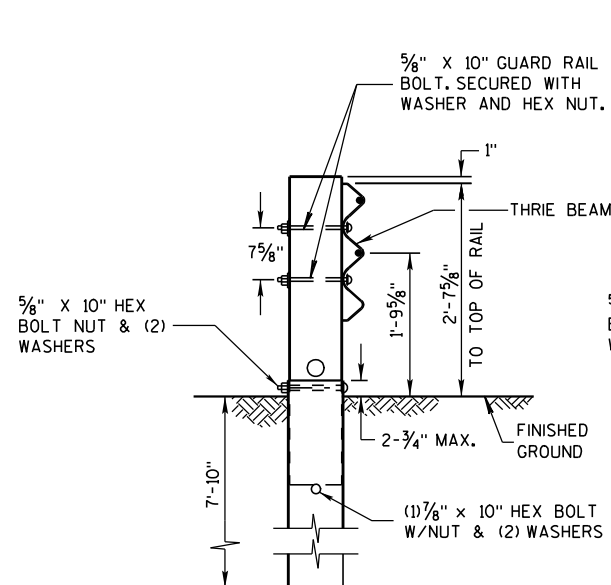
FRONT VIEW SIDE VIEW

THREE-BEAM BCT POSTS

SIDE VIEW

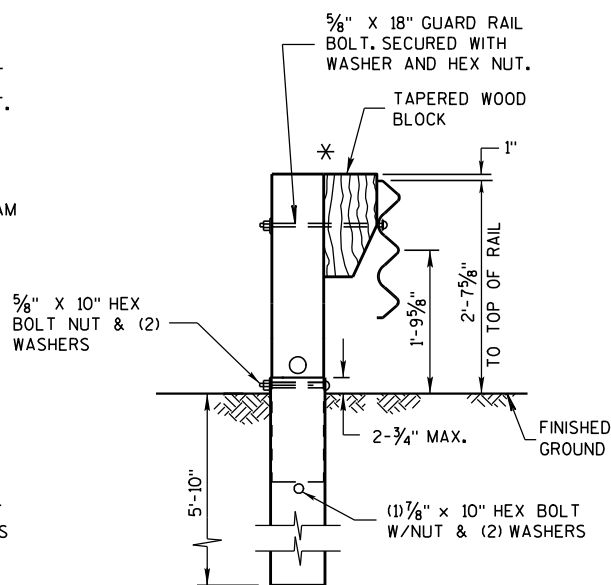
BREAKAWAY TERMINAL POST SLEEVE

STEEL FOUNDATION TUBE



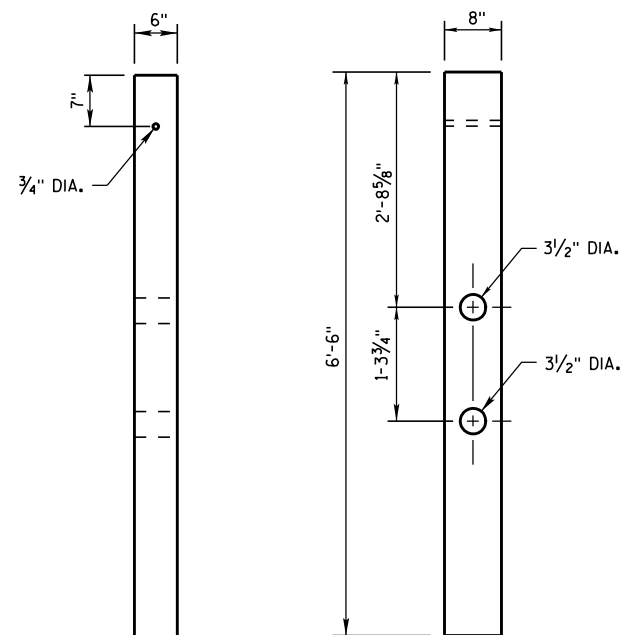
**THRIE-BEAM BCT POST
(WITH 8'-0" FOUNDATION TUBE)**

POST NO. 1



THREE-BEAM BCT POST
(WITH 6'-0" FOUNDATION TUBE
AND 1'-2" TAPERED BLOCK)

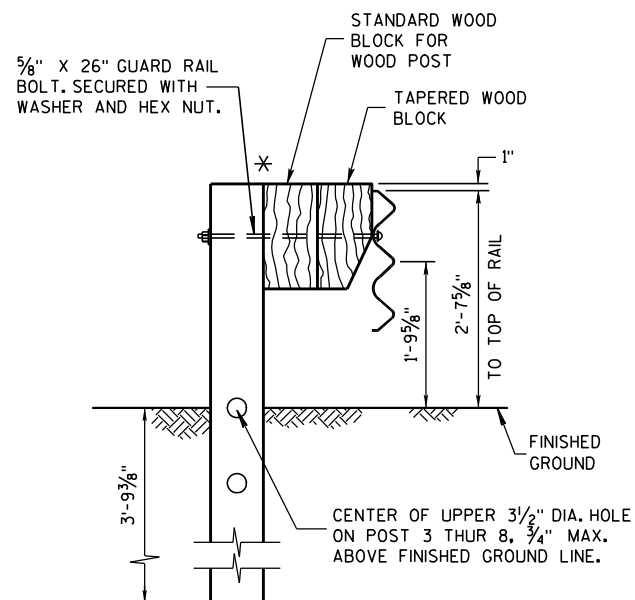
POST NO. 2



FRONT VIEW

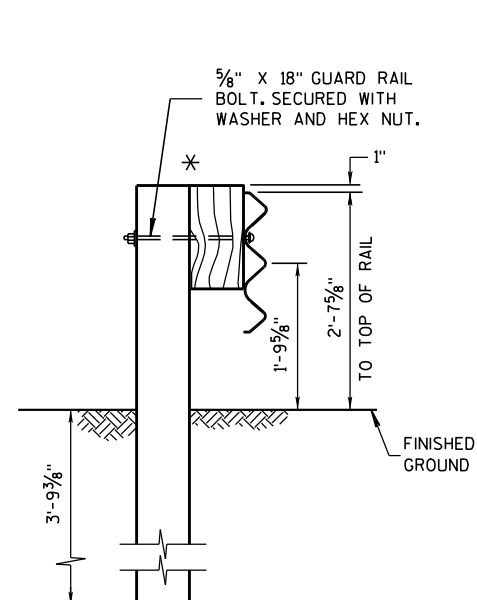
SIDE VIEW

THRIE-BEAM CRT WOOD POSTS



THRIE-BEAM CRT POST
(6'-6" LONG POST WITH 1'-2" BLOCK
AND 1'-2" TAPERED BLOCK)

POST NO. 3,4,5,6,7, & 8

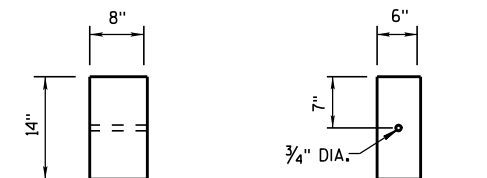


THRIE-BEAM POST
(6'-6" LONG POST
WITH 1'-2" BLOCK)

POST NO. 9,10,11,& 12
(ALSO USE FOR STEEL
THRIE BEAM BEYOND POST 12)

GENERAL NOTES

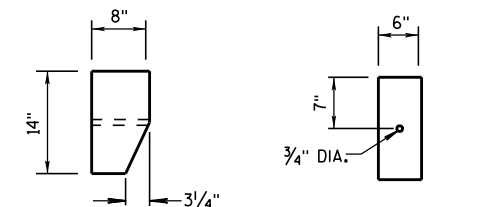
SEE STANDARD DETAIL DRAWINGS 14 B 26a-e.



SIDE VIEW

FRONT VIEW

STANDARD WOOD BLOCK



SIDE VIEW

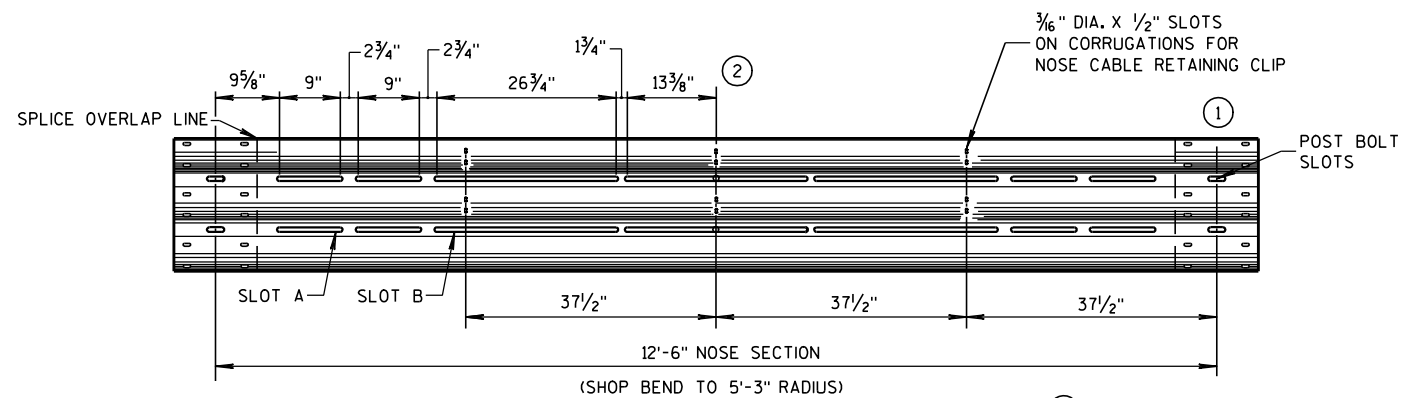
FRONT VIEW

TAPERED WOOD BLOCK

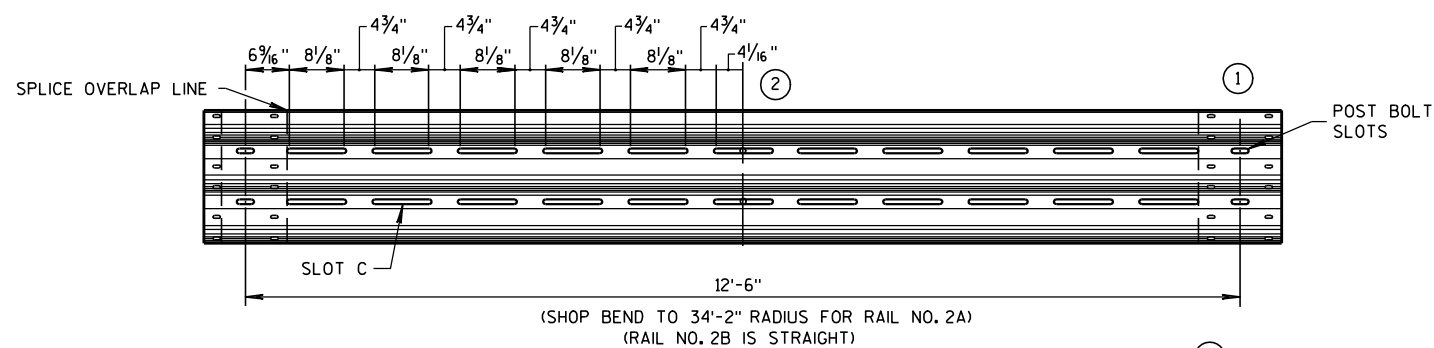
* IF NEEDED DUE TO AN UNDERGROUND OBSTACLE ADD 1 ADDITIONAL STANDARD BLOCKOUT TO POST.

STEEL THRIE BEAM BULLNOSE TERMINAL

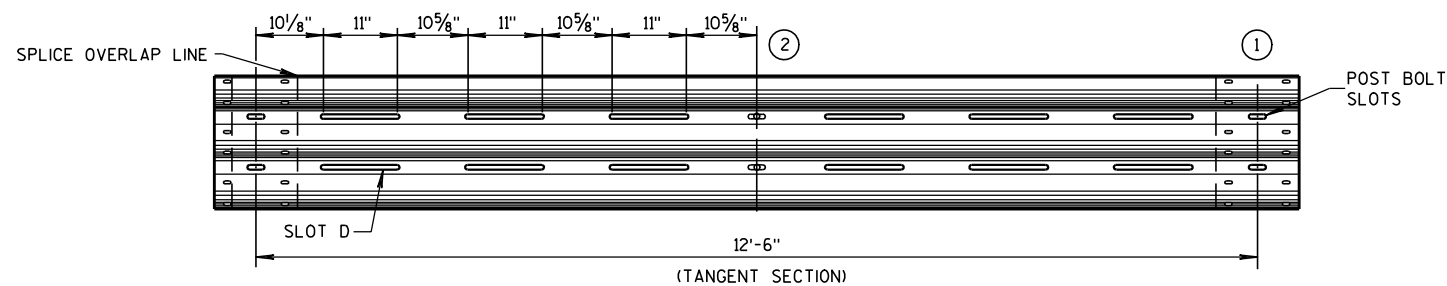
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



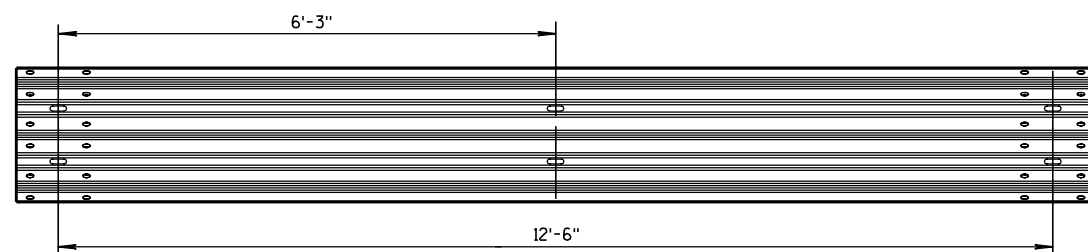
SLOTTED THRIE BEAM RAIL NO. 1 ③



SLOTTED THRIE BEAM RAILS NO. 2A AND NO. 2B ④



SLOTTED THRIE BEAM RAIL NO. 3 ⑤

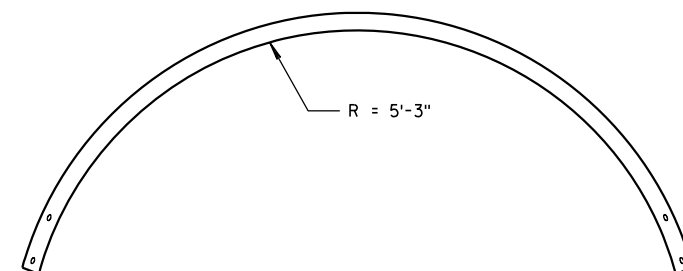


UNBENT STANDARD THRIE BEAM RAIL NO. 4 AND NO. 5

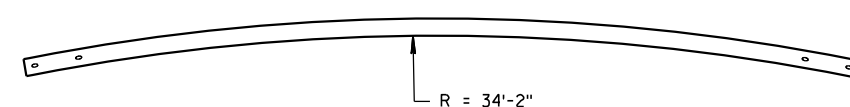
GENERAL NOTES

SEE STANADRD DETAIL DRAWINGS 14 B 26a-e.

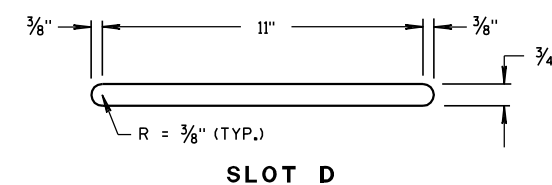
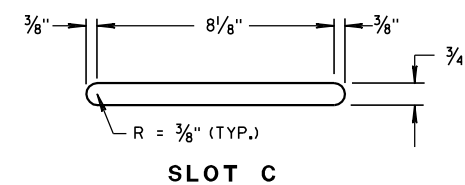
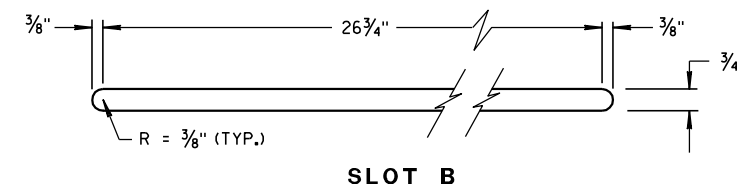
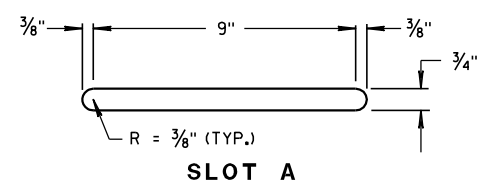
- ① SLOTTED THRIE BEAM RAIL DIMENSIONS SHOWN ARE BEFORE BENDING TO THE RADIUS SHOWN.
- ② SLOT SIZE AND SPACING SYMMETRIC.
- ③ SLOTTED THRIE BEAM RAIL NO. 1, 12'-6", SHOP BEND TO R=5'-3".
- ④ SLOTTED THRIE BEAM RAIL NO. 2A, 12'-6", SHOP BEND TO R=34'-2".
SLOTTED THRIE BEAM RAIL NO. 2B, 12'-6", RAIL IS STRAIGHT.
- ⑤ SLOTTED THRIE BEAM RAIL NO. 3, 12'-6", TANGENT.



**PLAN VIEW
SLOTTED THRIE BEAM RAIL NO. 1**



**PLAN VIEW
SLOTTED THRIE BEAM RAIL NO. 2A**



SLOT DETAILS

**STEEL THRIE BEAM
BULLNOSE TERMINAL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-16-2010

DATE

FHWA

/S/ Jerry H. Zogg

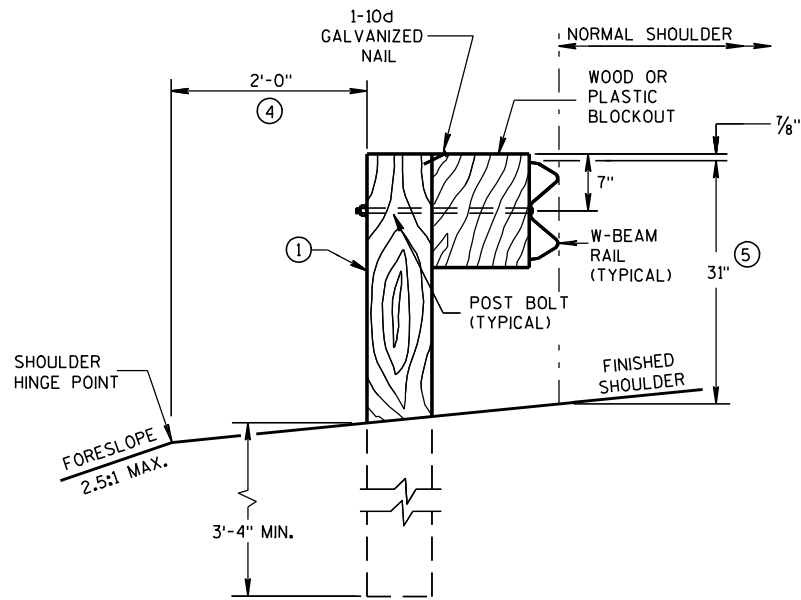
ROADWAY STANDARDS 110

ENGINEER

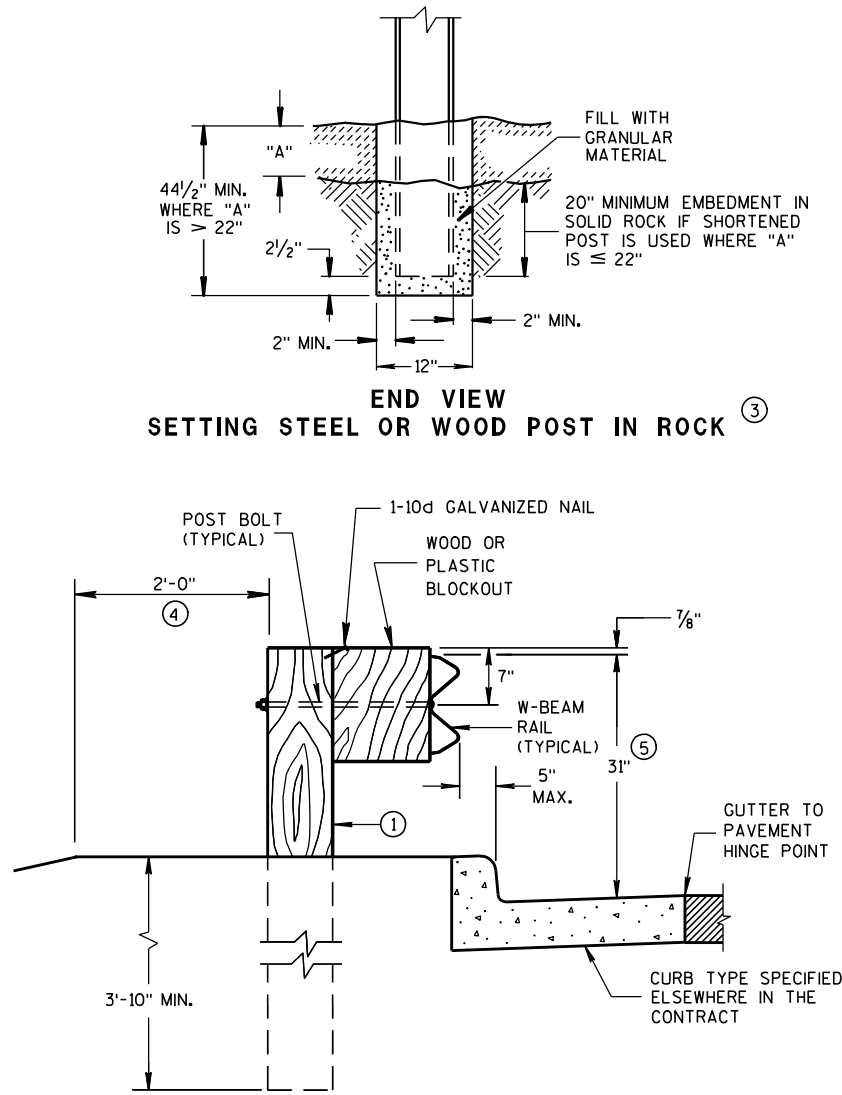
ENT

GENERAL NOTES

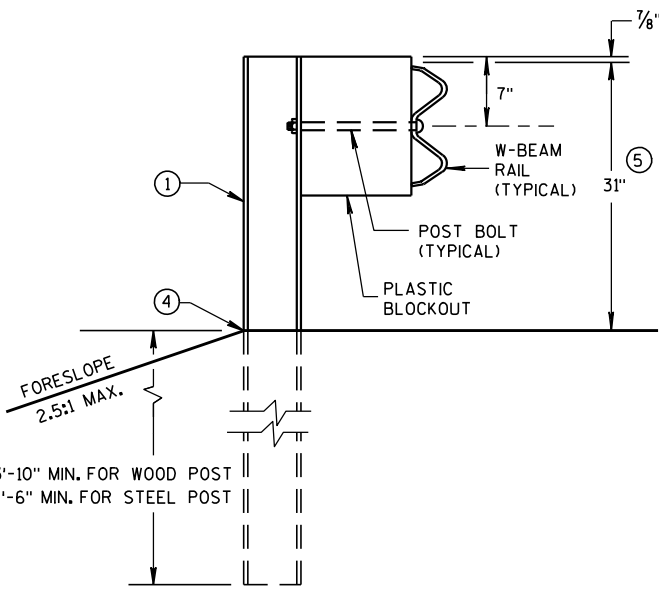
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".



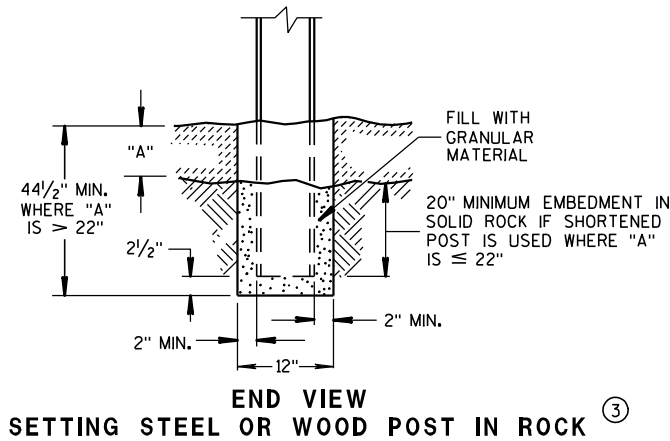
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



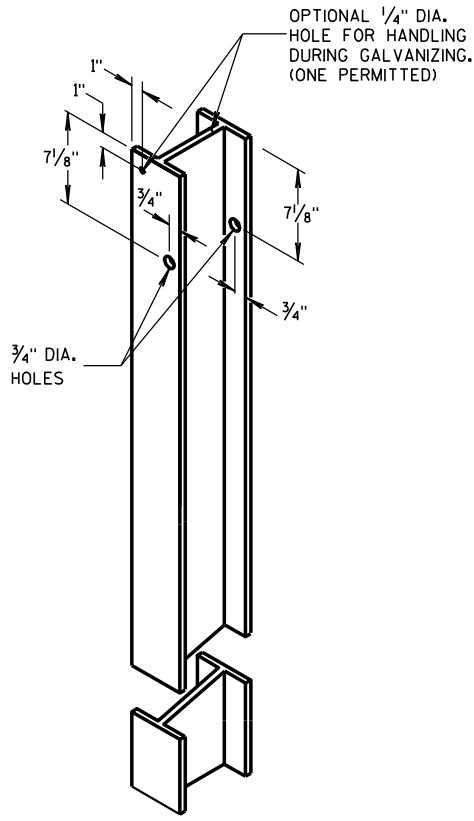
END VIEW
LOCATED ALONG A CURBED ROADWAY



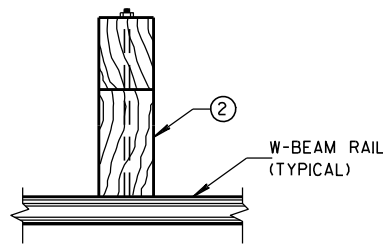
END VIEW
MGS LONGER POST AT HALFPST SPACING W BEAM (K)



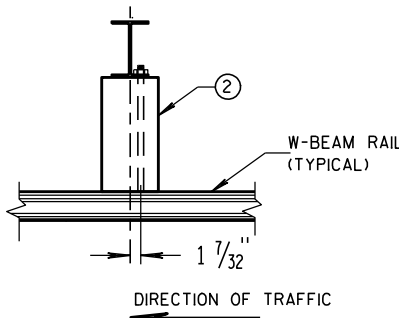
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



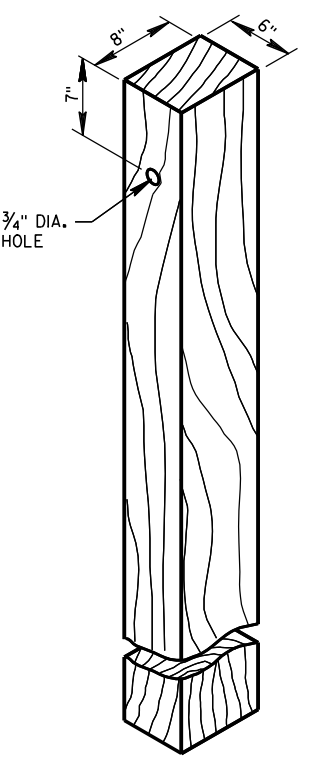
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



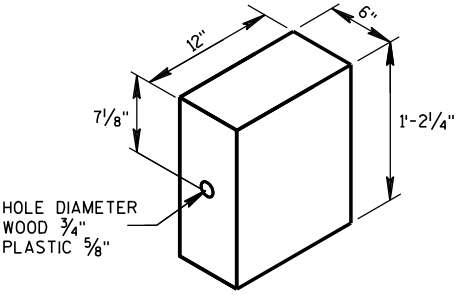
PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM



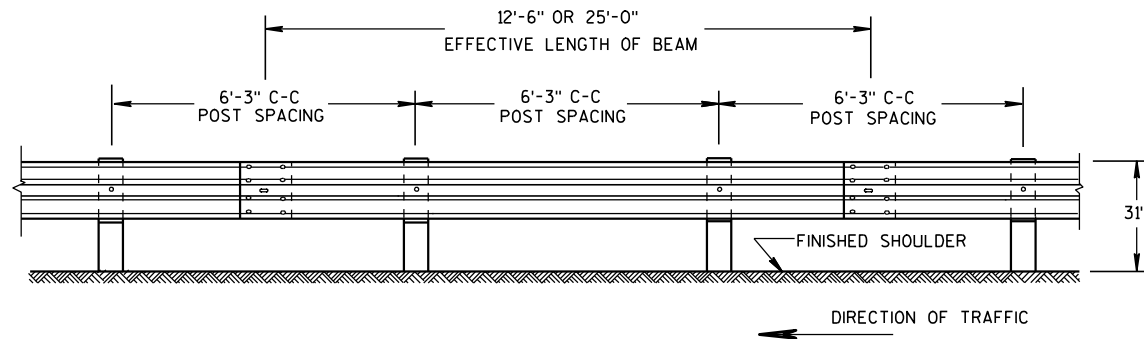
WOOD POST
(6" X 8") NOMINAL ①



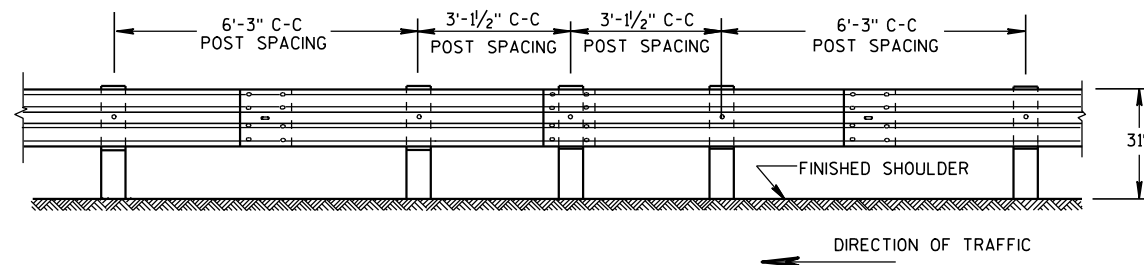
WOOD OR
PLASTIC BLOCKOUT ②

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

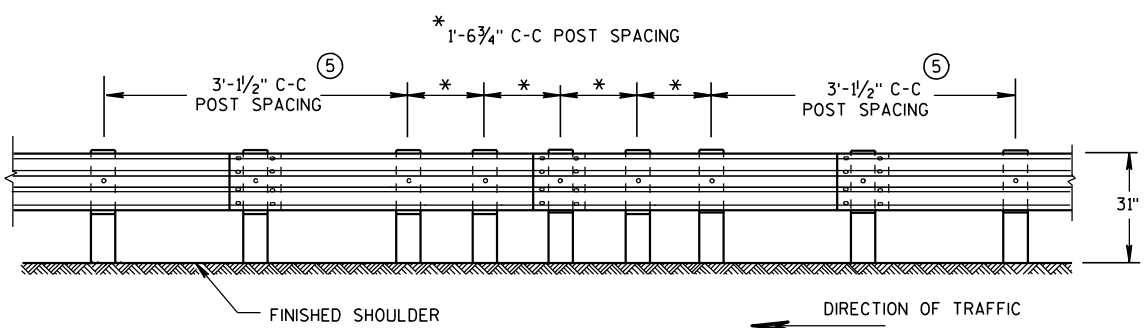
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



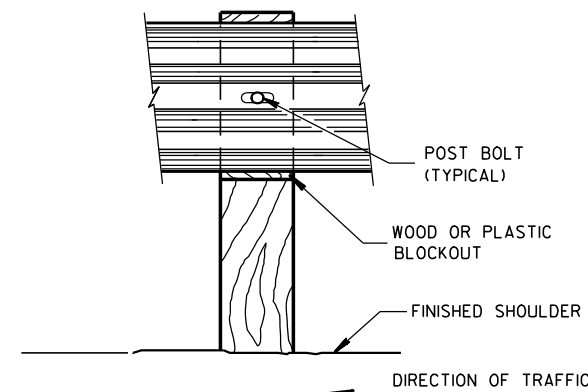
FRONT VIEW
POST SPACING STANDARD INSTALLATION



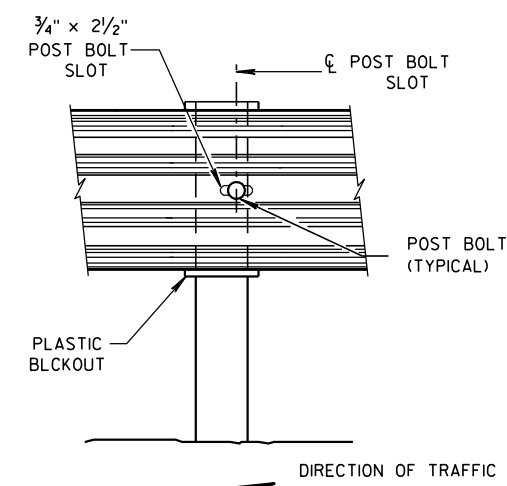
FRONT VIEW
**HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



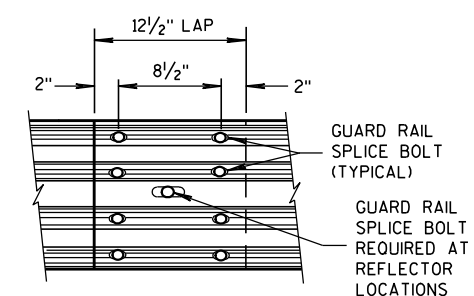
FRONT VIEW
QUARTER POST SPACING (QS)



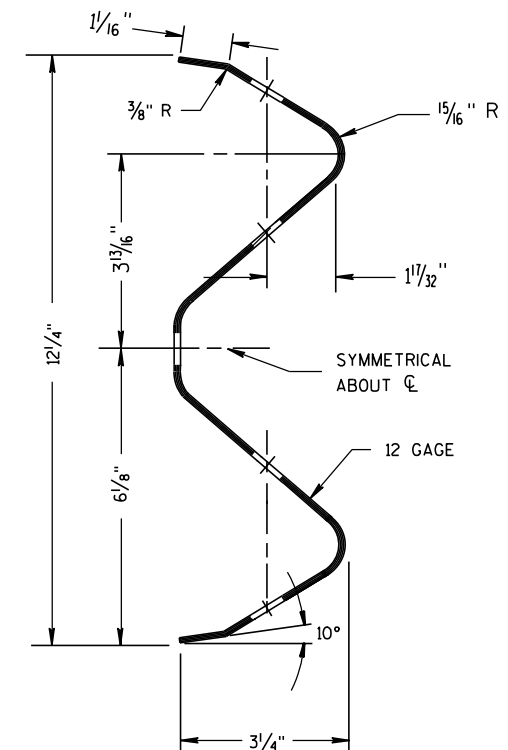
FRONT VIEW AT WOOD POST



FRONT VIEW AT STEEL POST



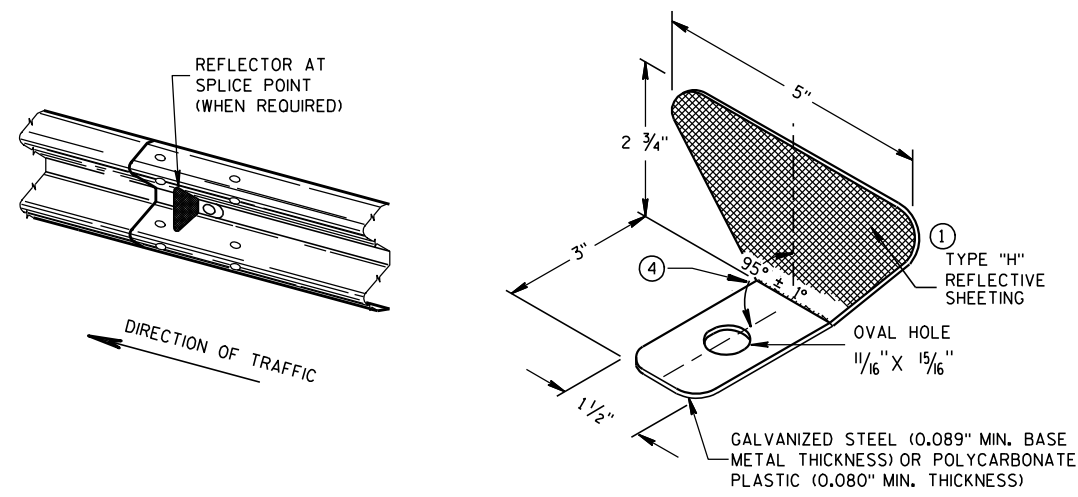
FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL

REFLECTOR SPACING

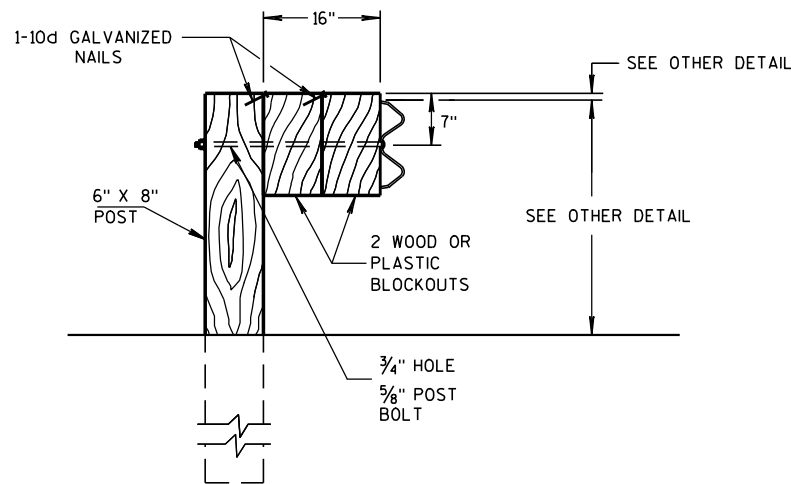
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2	



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

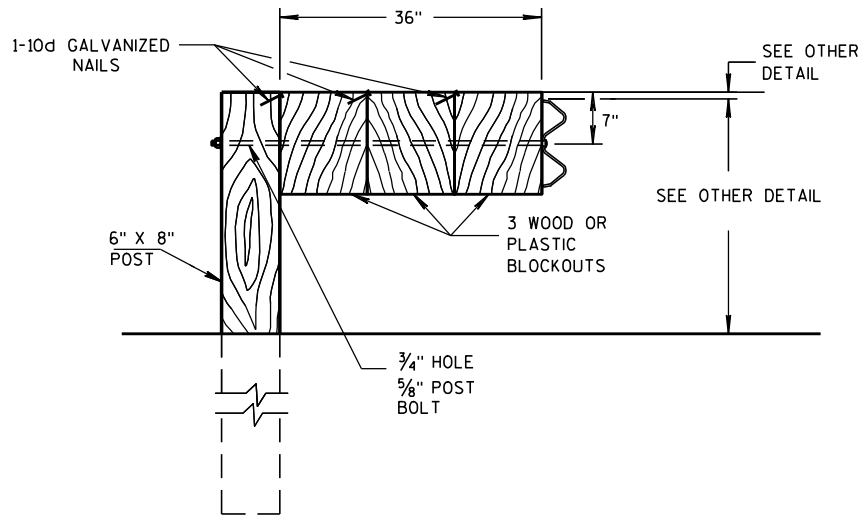
GENERAL NOTES

- 1 PROVIDE TYPE "H" SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH TYPE "H" YELLOW REFLECTIVE SHEETING.
 - 2 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
 - 3 REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
 - 4 PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.
 - 5 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



DETAIL FOR 16" BLOCKOUT DEPTH

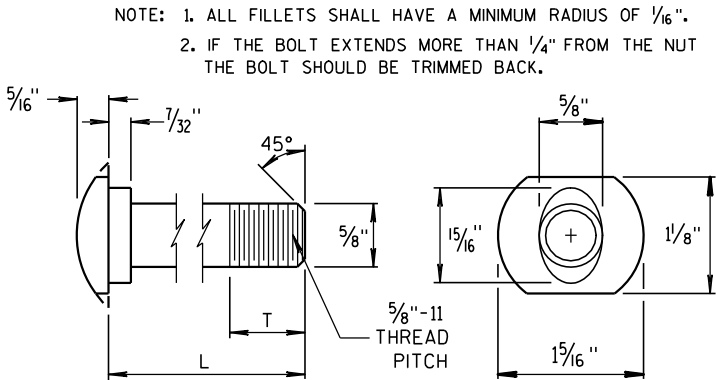
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



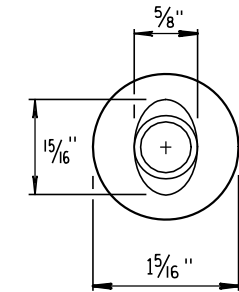
DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

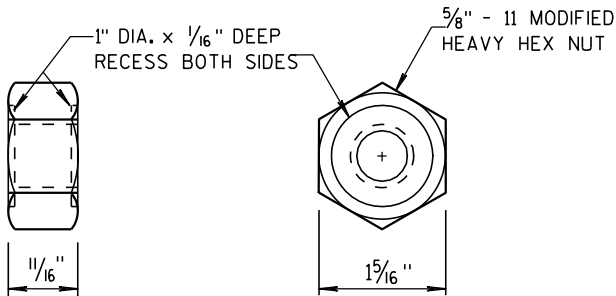
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



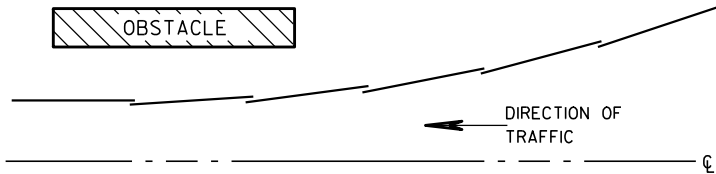
POST BOLT TABLE



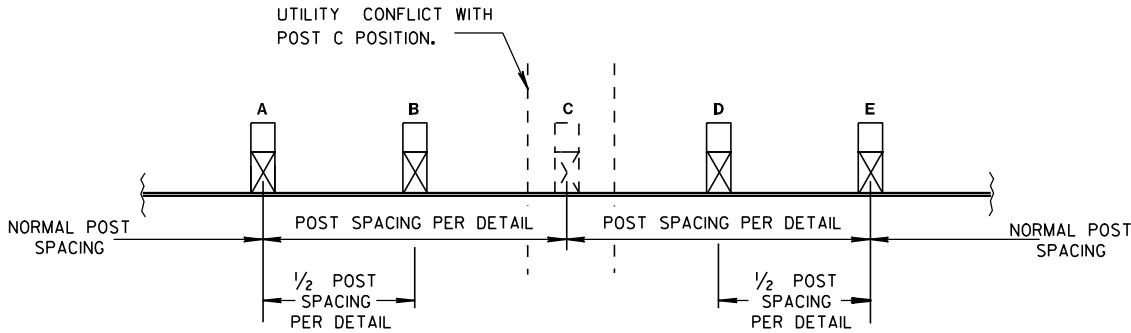
ALTERNATE BOLT HEAD



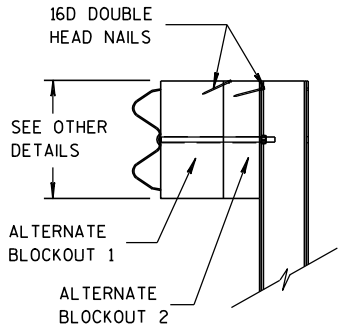
POST BOLT AND RECESS NUT



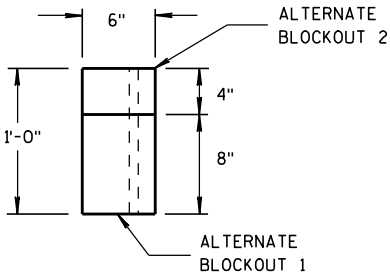
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 11/15/2011
FHW

15/ Jerry H. 2000
ROADWAY STANDARDS 113
ENGINEER ENT

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE EXTENDED VEHICLE RUNOUT PATH (EVRP), THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.
- (D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (F) SHEETING IS ATTACHED TO 0.040 ALUMINUM SHEET AND ATTACHED TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER OF E.A.T.
- (G) 1/2" DIAMETER X 3" LONG LAG BOLT AND WASHER.
- (H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.
- (I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

SEE SDD 14B42 FOR MORE INFORMATION.

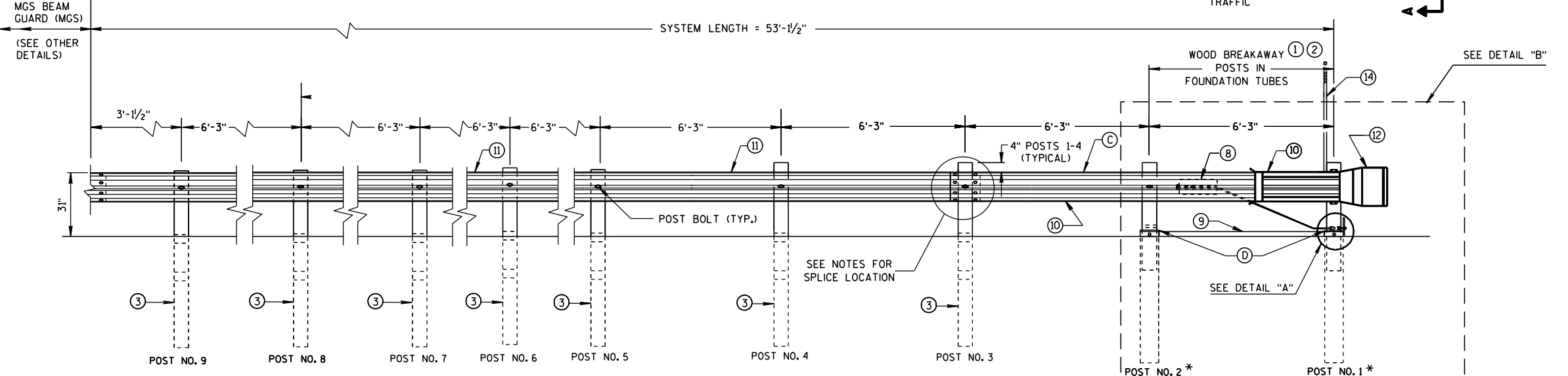
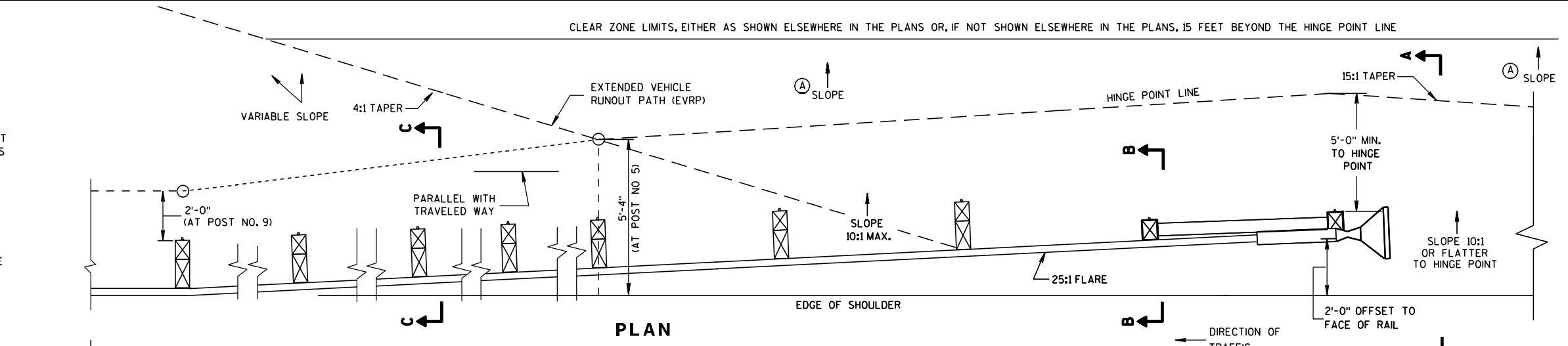
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

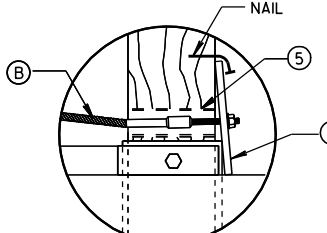
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

PATTERN AND COLORS ON REFLECTIVE SHEETING TYPE H ARE TO CONFORM TO OM3-L OR OM3-R OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

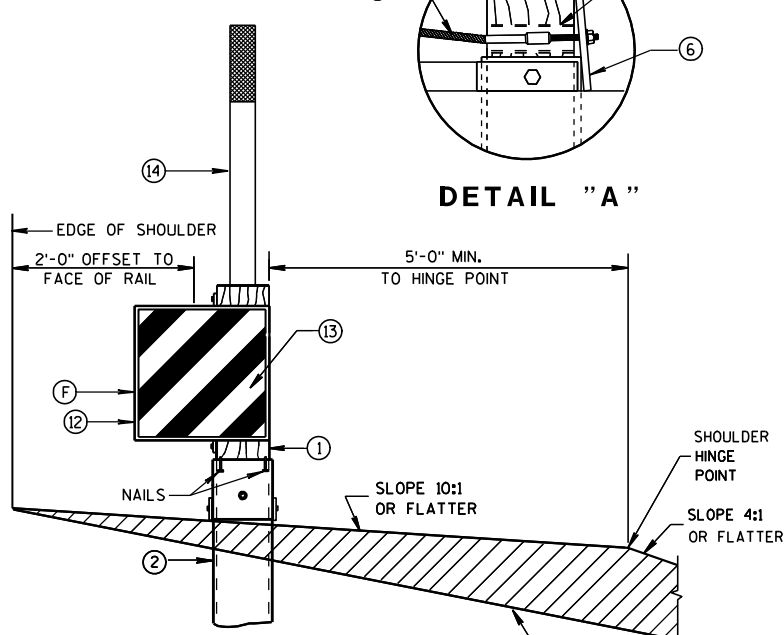
THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE ($\pm \frac{3}{4}$ ")



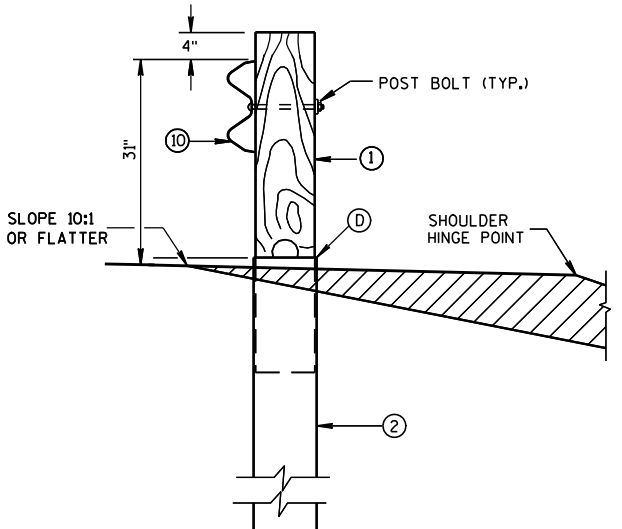
ELEVATION



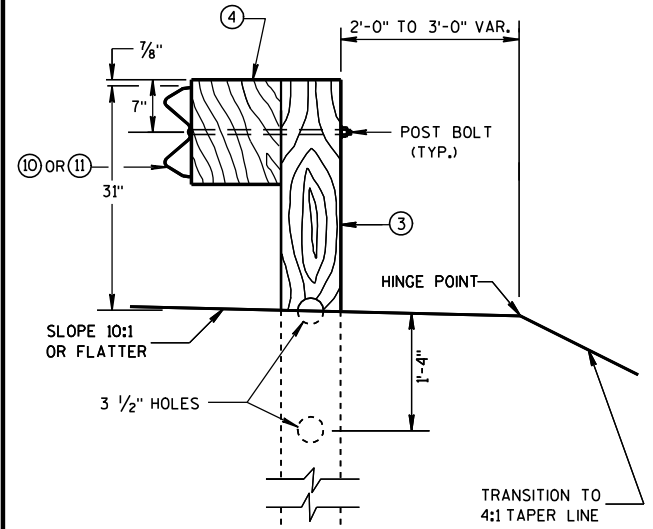
DETAIL "A"



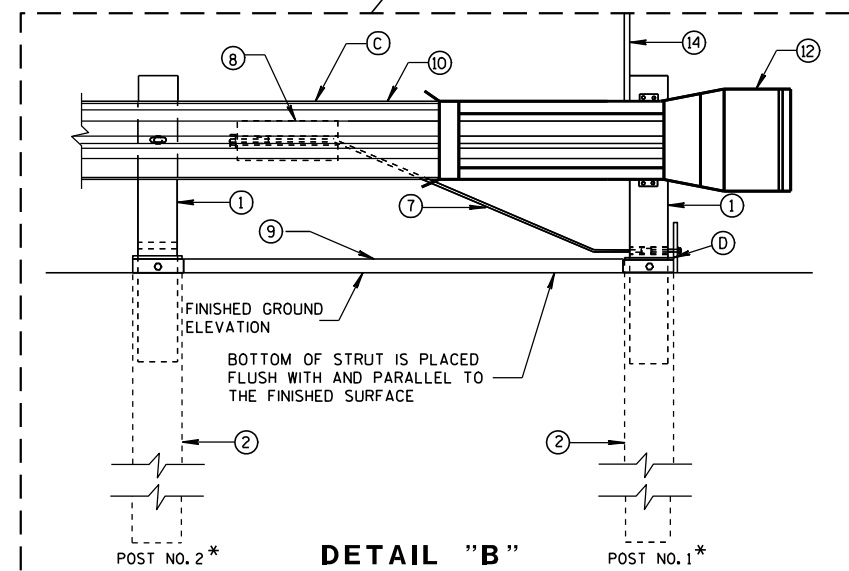
SECTION A-A
TYPICAL AT POST NO. 1*



SECTION B-B
TYPICAL AT POST NO. 2*



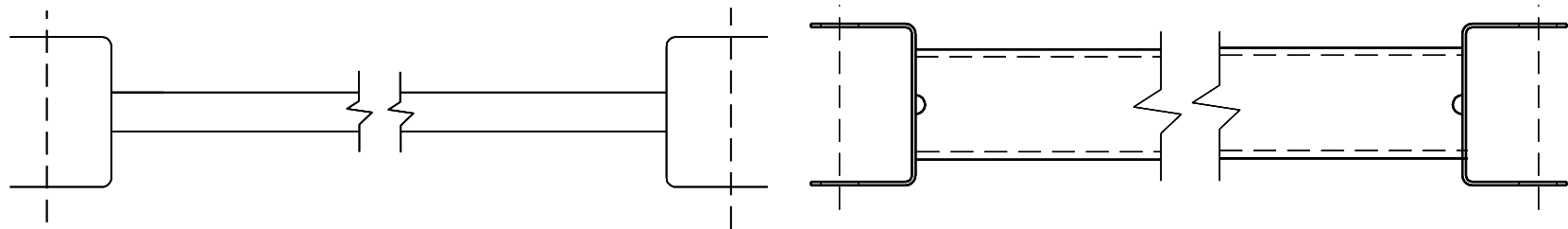
SECTION C-C
TYPICAL AT POST NOS. 3-9



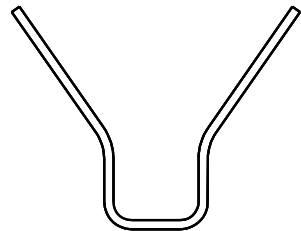
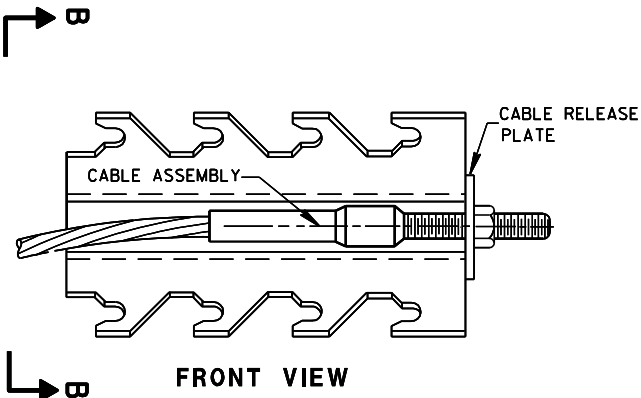
DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

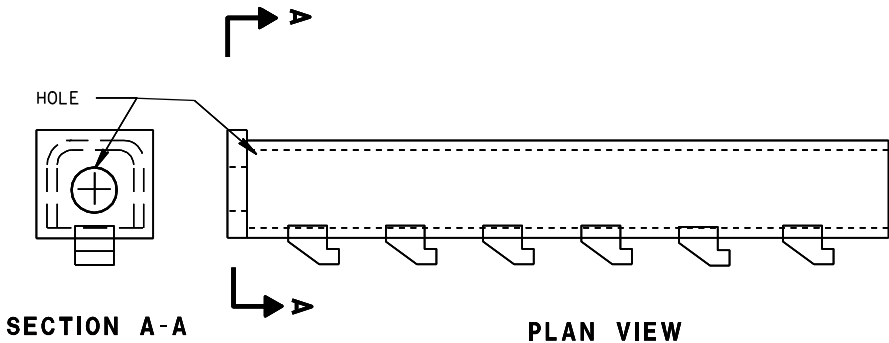
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



9 H
GENERIC GROUND STRUT

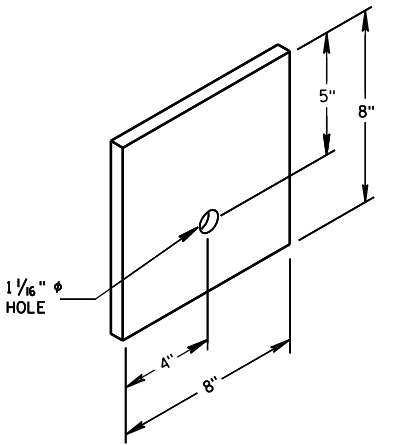


SECTION B-B
8 H
GENERIC ANCHOR CABLE BOX



BILL OF MATERIALS

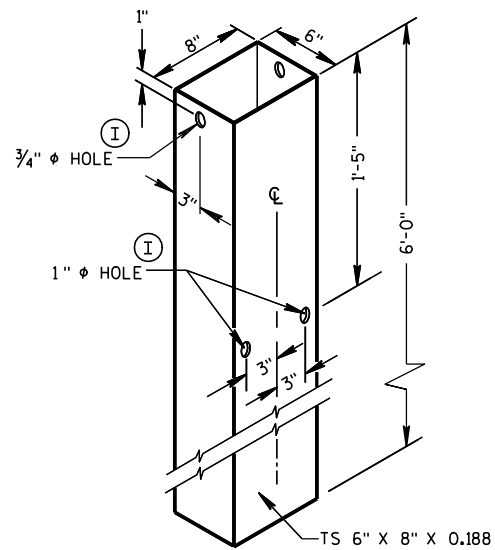
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL, MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	END SECTION EAT
⑬	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE H (ONLY THE SHEETING IS SUPPLIED BY THE MANUFACTURER)
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



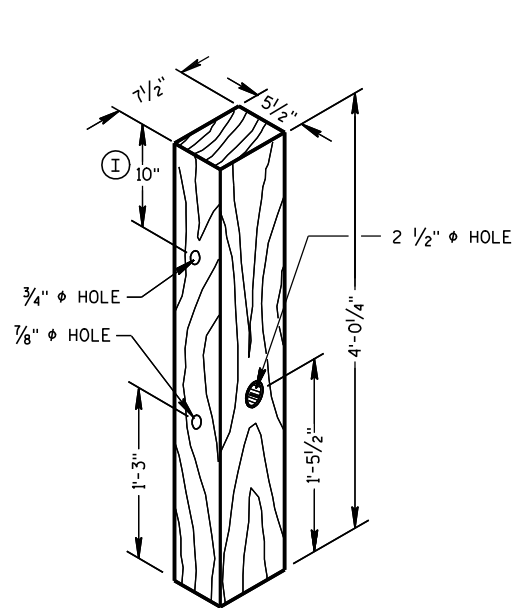
6
BEARING PLATE

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

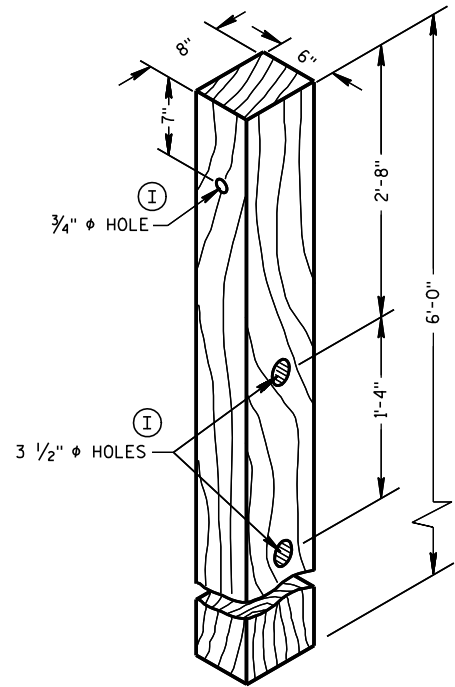
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



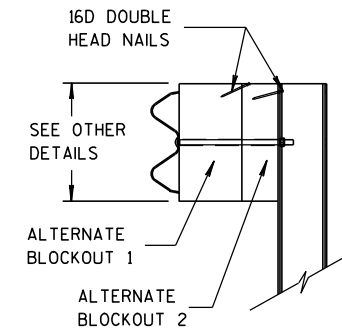
FOUNDATION TUBE ②



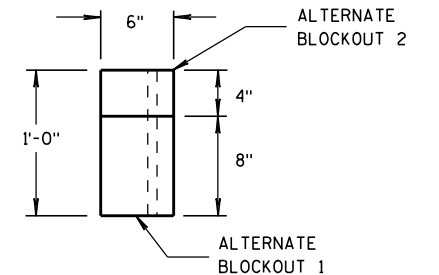
WOOD BREAKAWAY POST ①



WOOD CRT POST ③

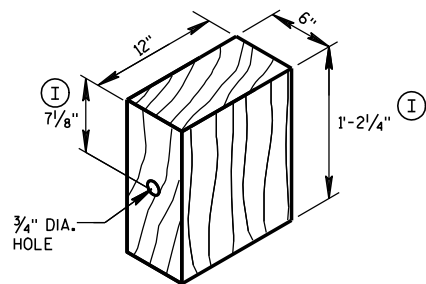


SIDE VIEW



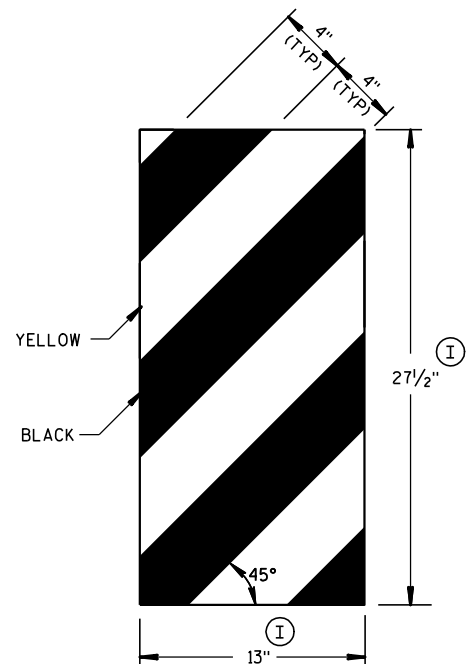
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

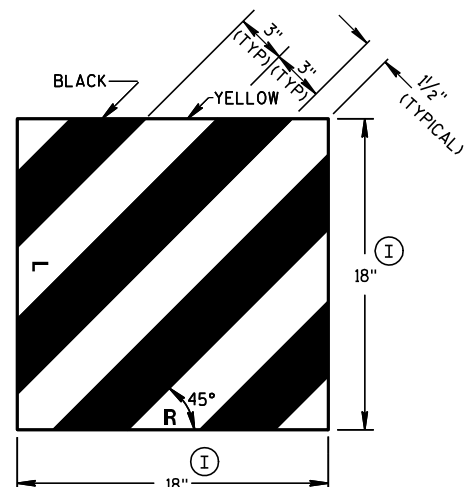


WOOD BLOCKOUT ④

YELLOW REFLECTIVE TAPE
3" X 9" TYPE H
REFLECTIVE SHEETING



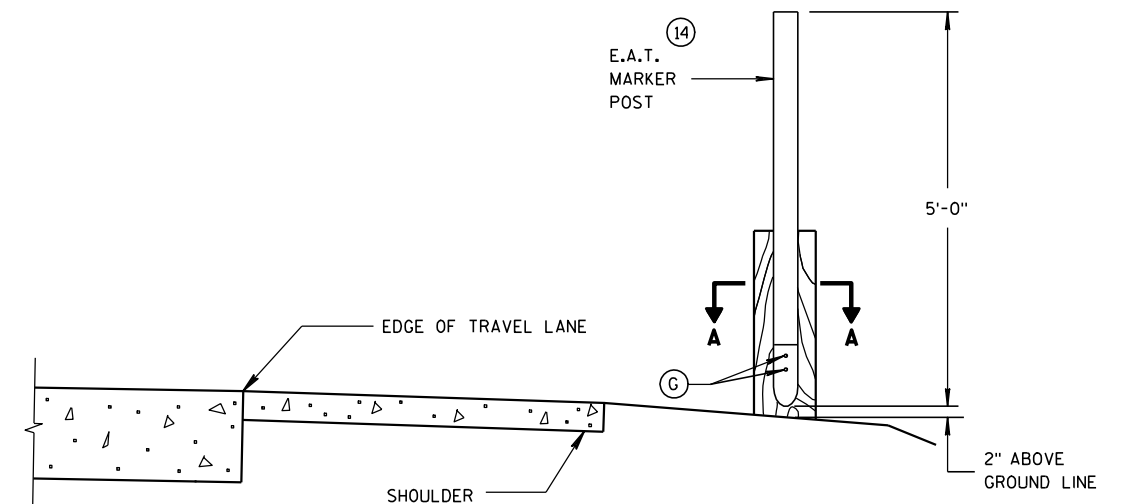
GENERIC REFLECTIVE SHEETING ⑬ ④



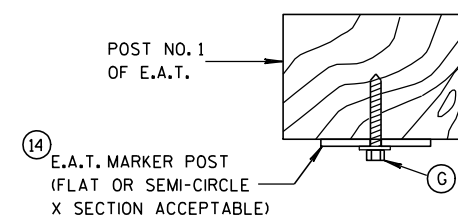
FRONT VIEW

SIDE VIEW

E.A.T. MARKER POST ⑭



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1
(E.A.T. AND RAIL REMOVED FOR CLARITY)

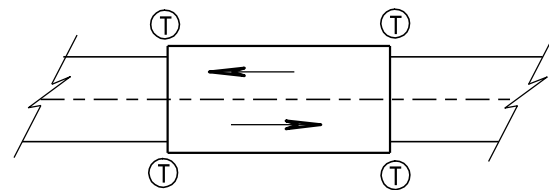


SECTION A-A

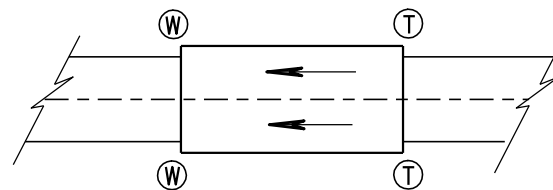
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/2011 /S/ Jerry H. 3000
DATE ROADWAY STANDARDS 116
FHWA ENGINEER



TWO WAY TRAFFIC



ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

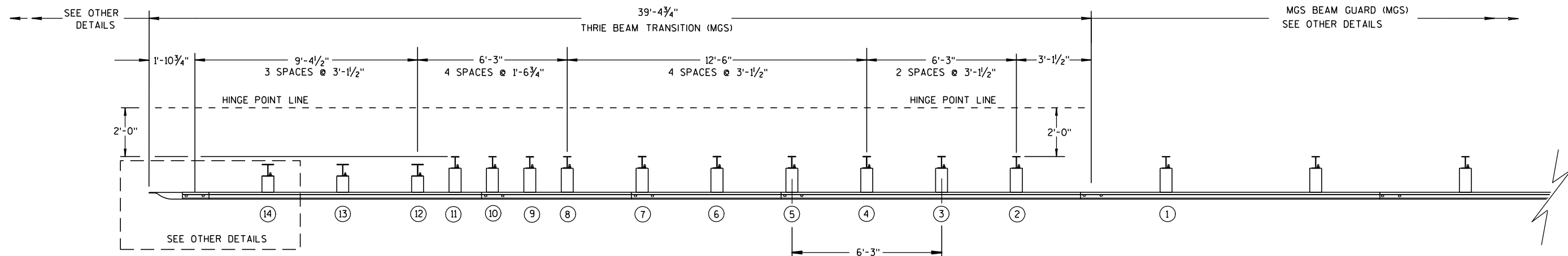
IF ROCK IS ENCOUNTERED DURING EXCAVATION, SEE STANDARD DETAIL DRAWING 14 B 42.

TRANSITION USES STEEL POSTS ONLY.

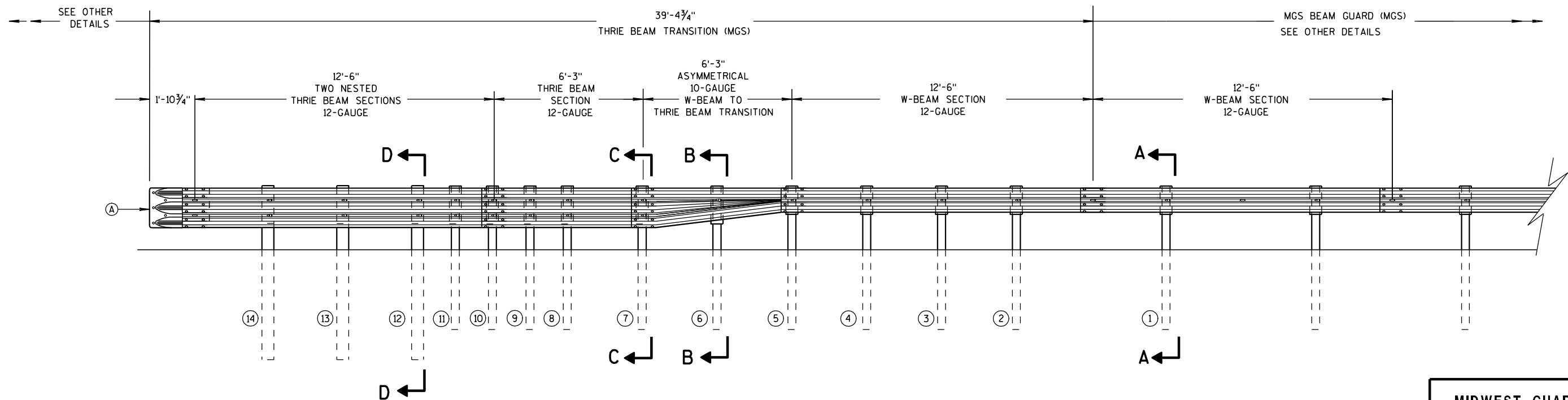
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

Ⓐ BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
117

6

S.D.D. 14 B 45-2b



S.D.D. 14 B 45-2b



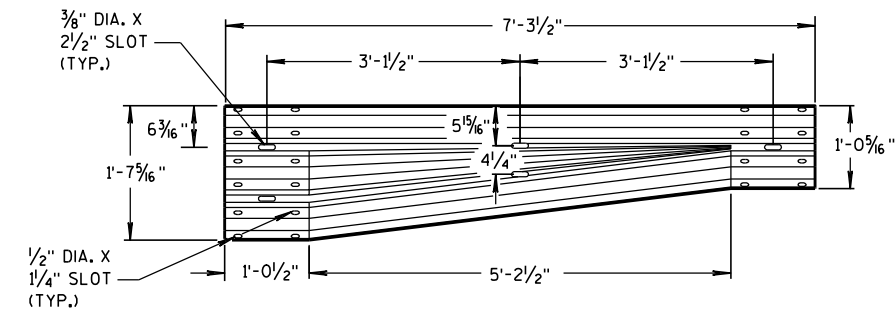
S.D.D. 14 B 45-2b

SECTION THRU THIRIE
AM RAIL ELEMENT

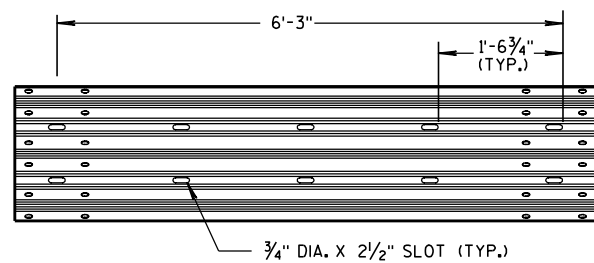
MIDWEST GUARDRAIL SYSTEM
THIRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

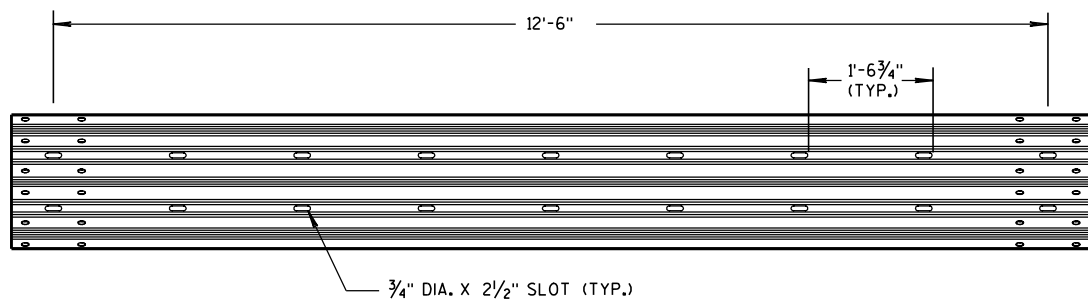
S.D.D. 14 B 45-2b



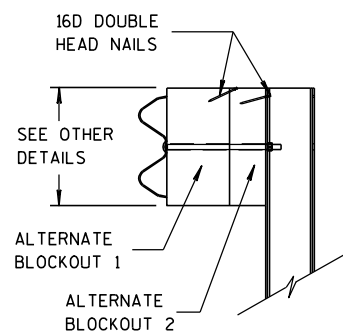
W-BEAM TO THRIE BEAM TRANSITION SECTION



6'-3" THRIE BEAM SECTION

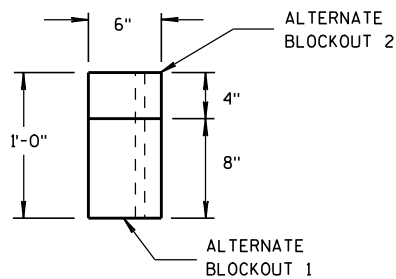


12'-6" THRIE BEAM SECTION

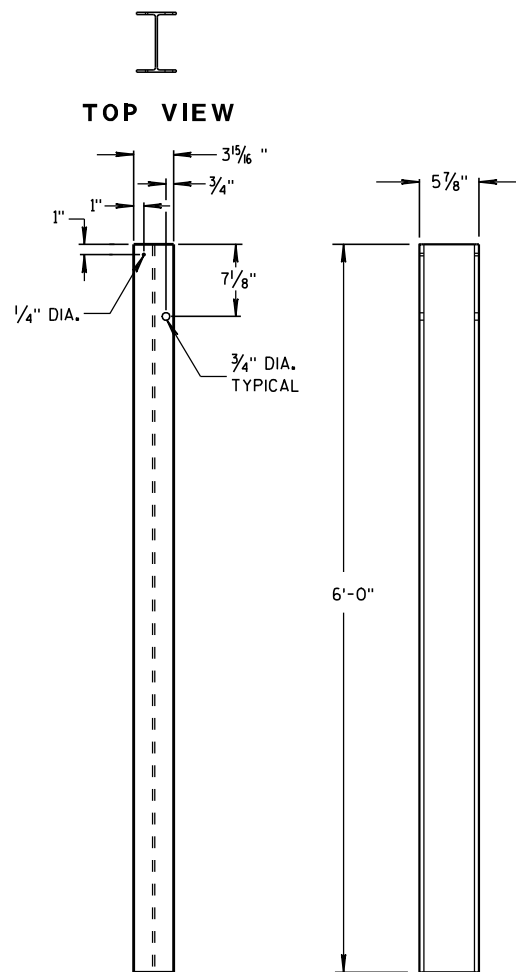


SIDE VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL



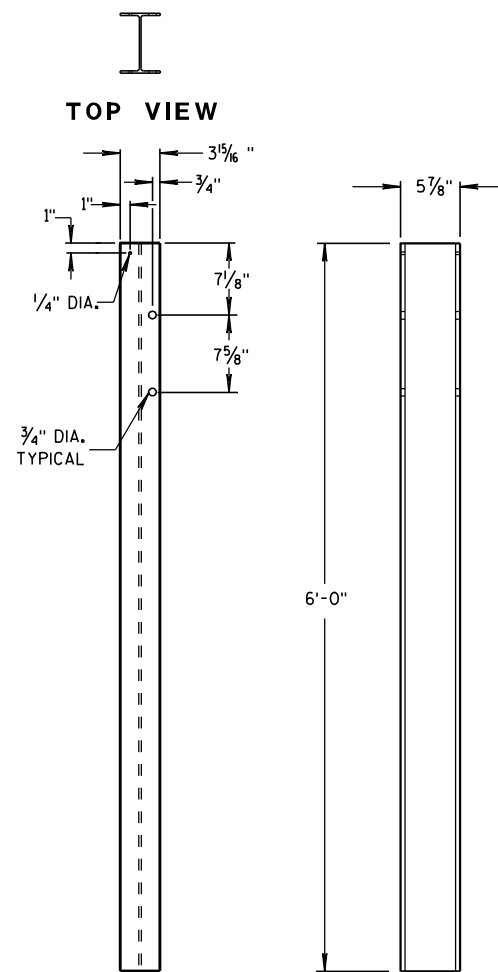
TOP VIEW



FRONT VIEW

SIDE VIEW

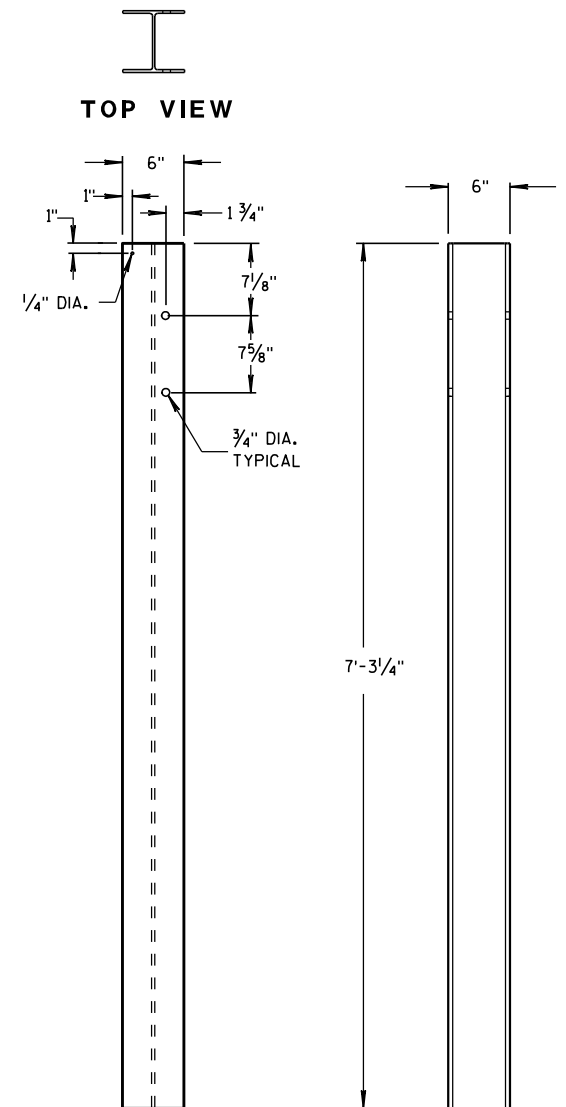
STEEL POSTS 1-5



FRONT VIEW

SIDE VIEW

STEEL POSTS 6-11

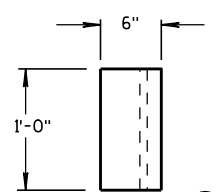


FRONT VIEW

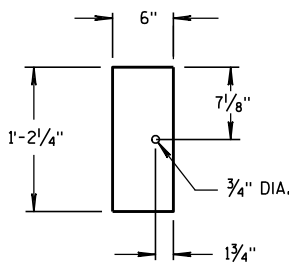
SIDE VIEW

STEEL POSTS 12-14

① WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

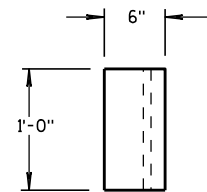


TOP VIEW

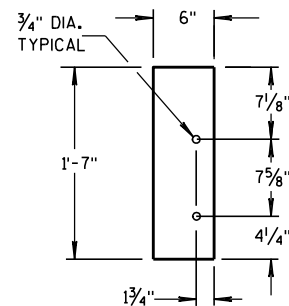


FRONT VIEW

BLOCKOUT
POSTS 1-5

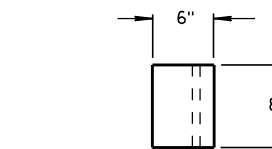


TOP VIEW

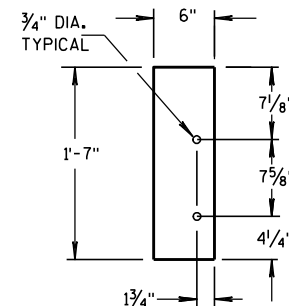


FRONT VIEW

BLOCKOUT
POSTS 6-11



TOP VIEW



FRONT VIEW

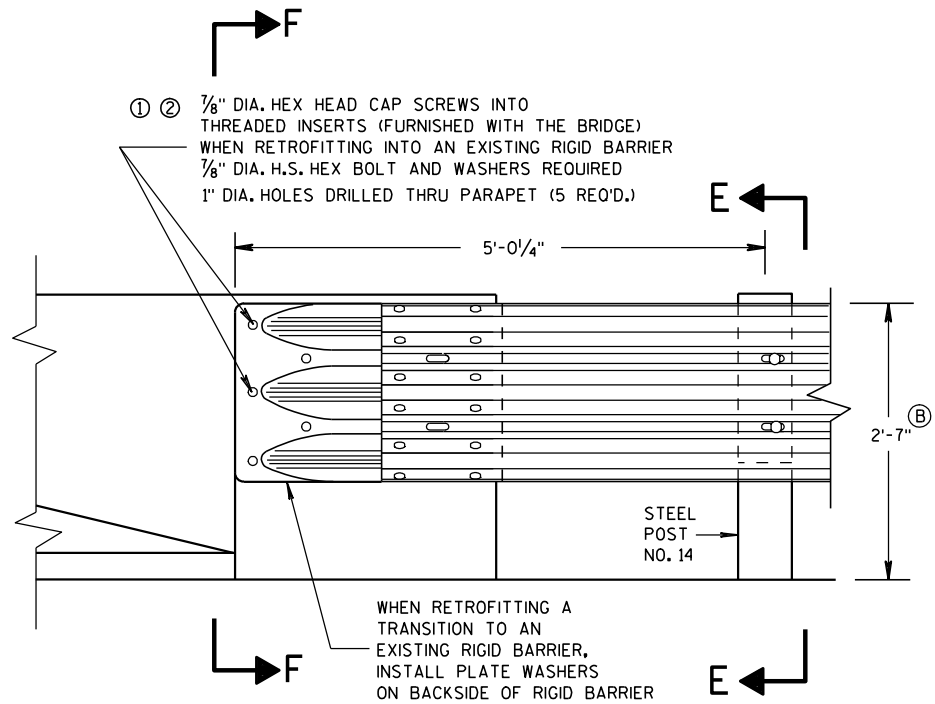
BLOCKOUT
POSTS 12-14

STEEL POST SIZES

POST NUMBER	SECTION TYPE	LENGTH
①	W6x9	72"
②	W6x9	72"
③	W6x9	72"
④	W6x9	72"
⑤	W6x9	72"
⑥	W6x9	72"
⑦	W6x9	72"
⑧	W6x9	72"
⑨	W6x9	72"
⑩	W6x9	72"
⑪	W6x9	72"
⑫	W6x15	87 1/8"
⑬	W6x15	87 1/8"
⑭	W6x15	87 1/8"

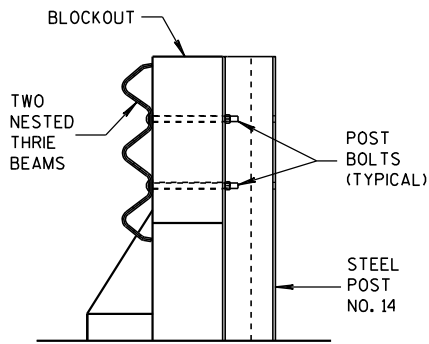
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE
PARAPET WITH SQUARE ENDS

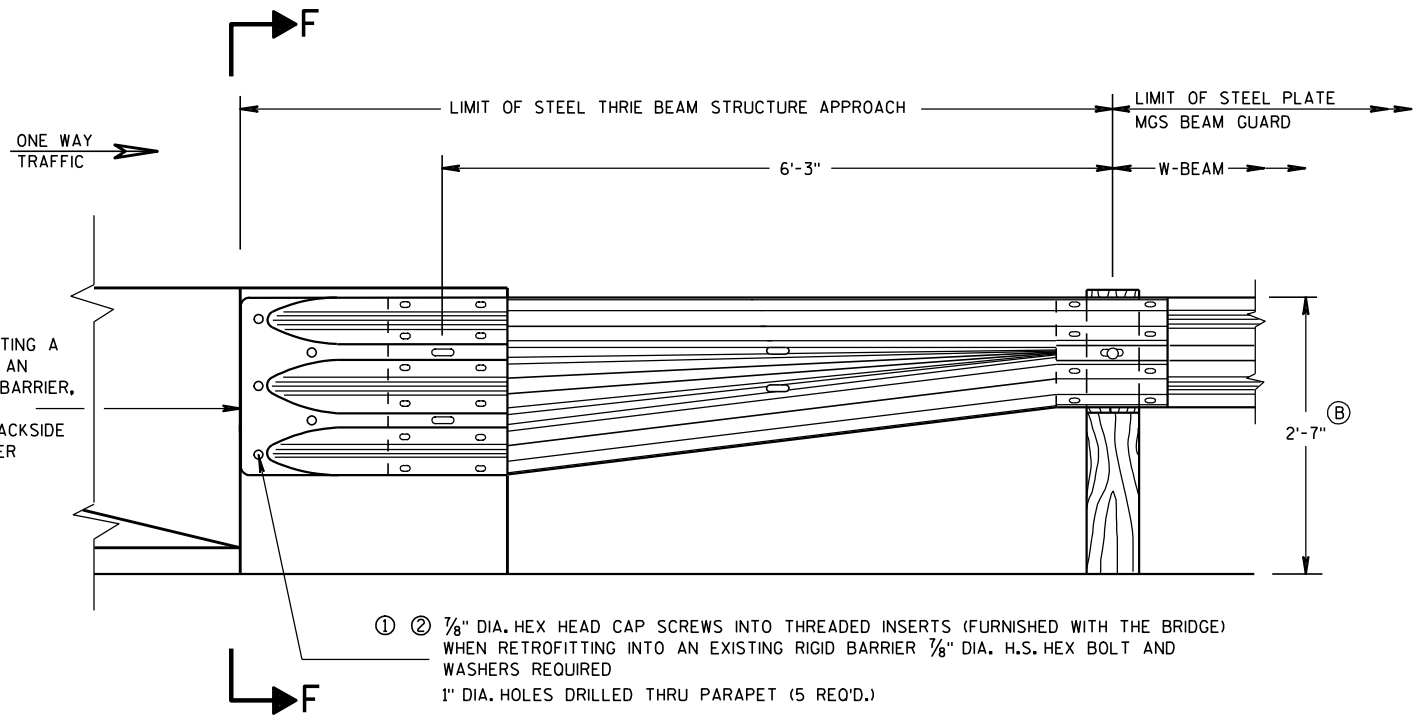


SECTION E-E

GENERAL NOTES

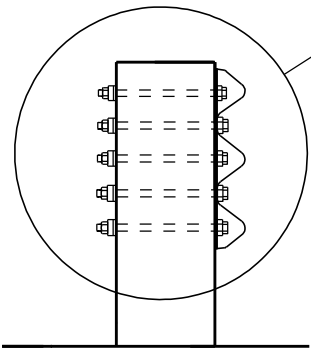
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- ① INCLUDE THE PAYMENT FOR DRILLING BOLT HOLES THROUGH THE PARAPET, AND ALL BOLTS, NUTS AND WASHERS IN THE ITEM "STEEL THRIE BEAMSTRUCTURAL APPROACH".
 - ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM. CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
 - ③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".
- (B) TOLERANCE FOR TOP OF BEAM IS ± 1".

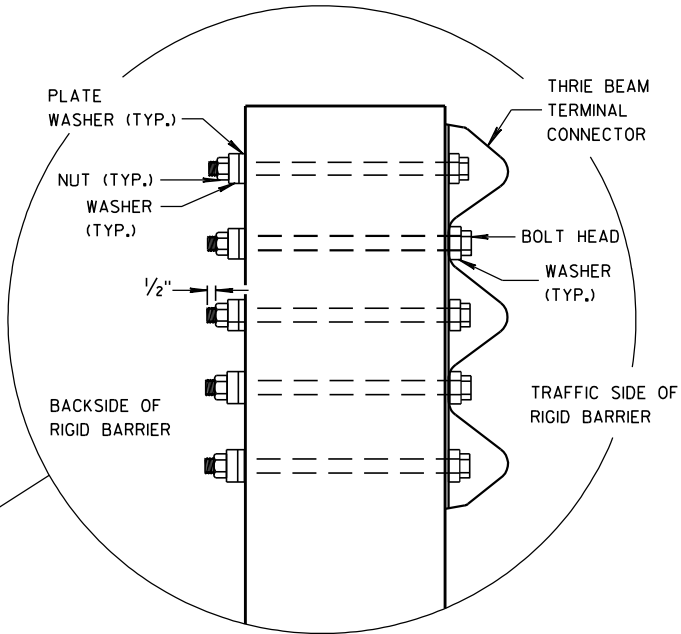


FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO
BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION F-F



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

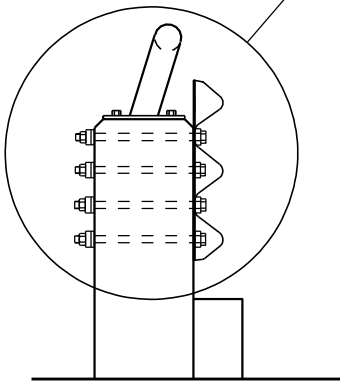
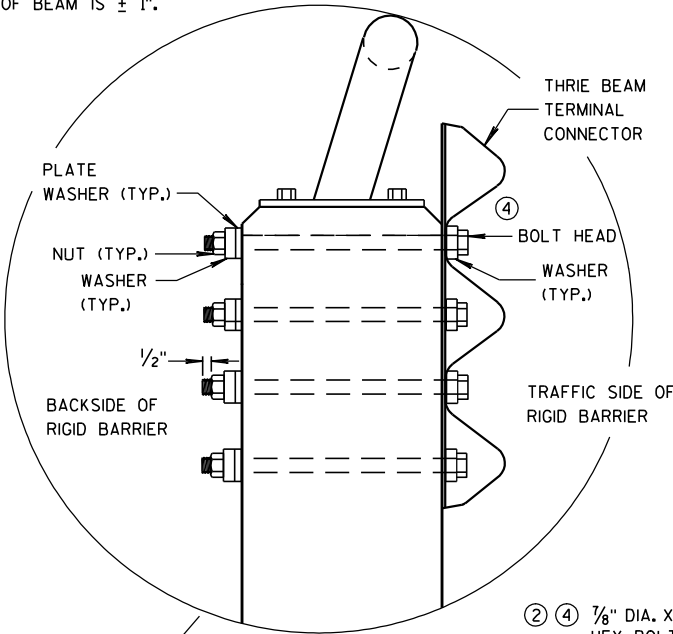
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/8/2012 DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS i 120 ENT
ENGINEER
FHWA

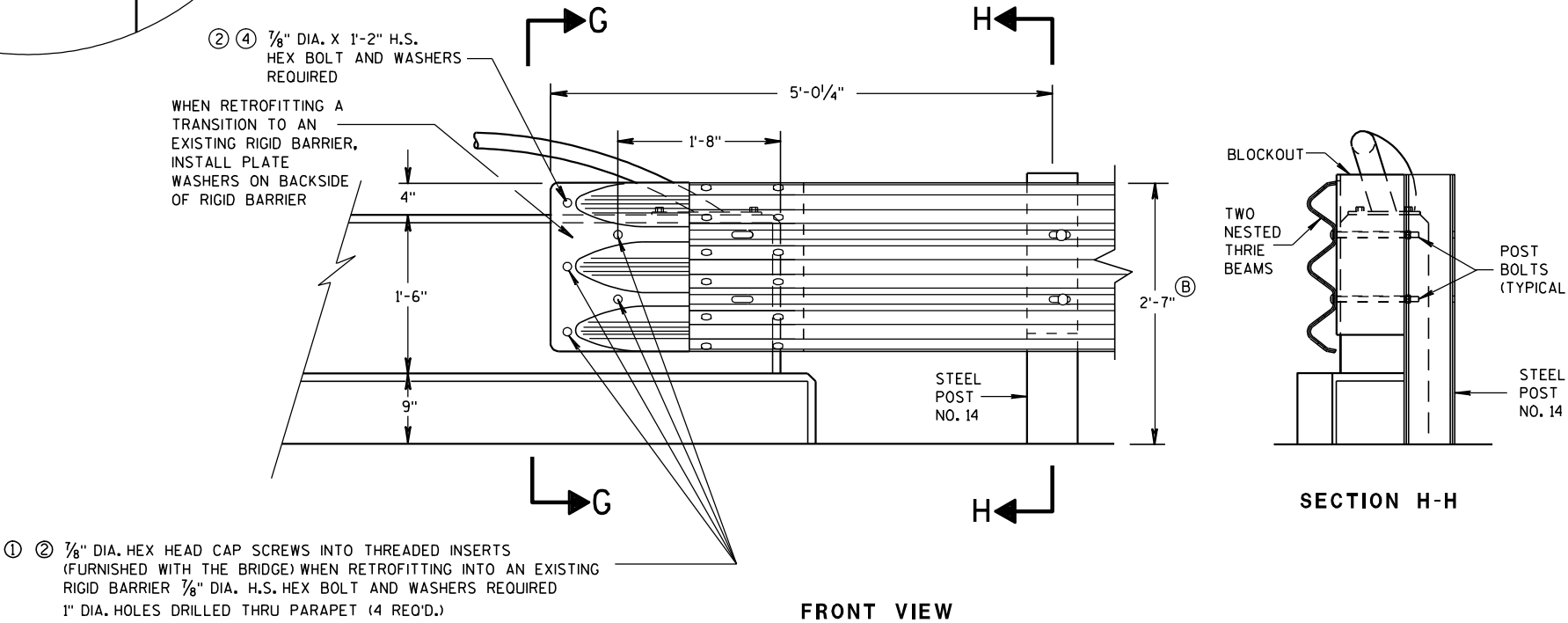
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

- ① INCLUDE THE PAYMENT FOR DRILLING BOLT HOLES THROUGH THE PARAPET, AND ALL BOLTS, NUTS AND WASHERS IN THE ITEM "STEEL THRIE BEAMSTRUCTURAL APPROACH".
- ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X $\frac{5}{8}$ " THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 $\frac{1}{2}$ ".
- ④ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.
- ⑤ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.

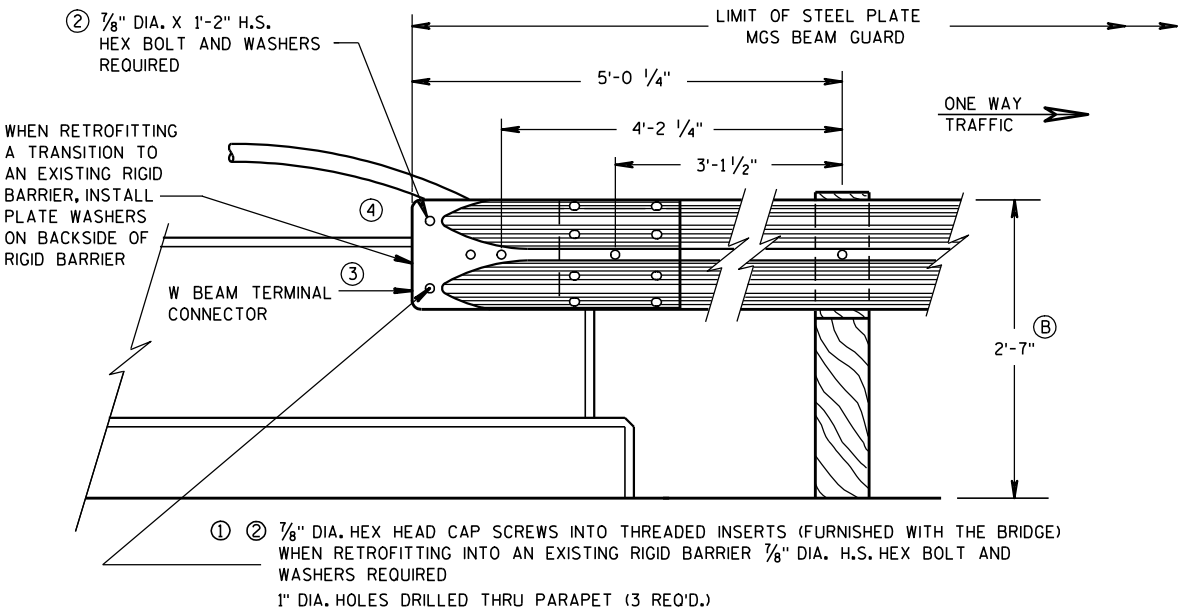


SECTION G-G



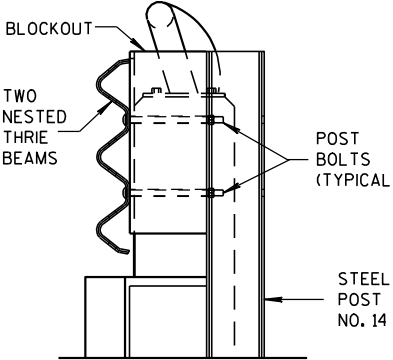
FRONT VIEW

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

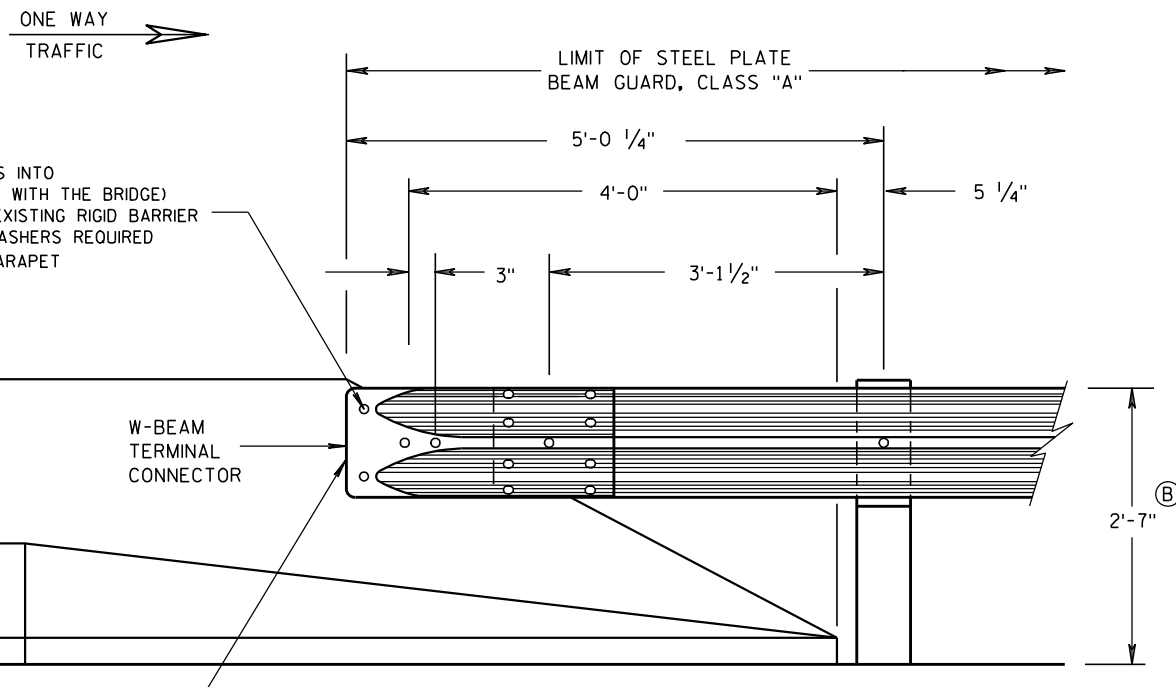


SECTION H-H

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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DATE 2-8-2012
ROADWAY STANDARDS ENGINEER
/S/ Jerry H. [Signature]
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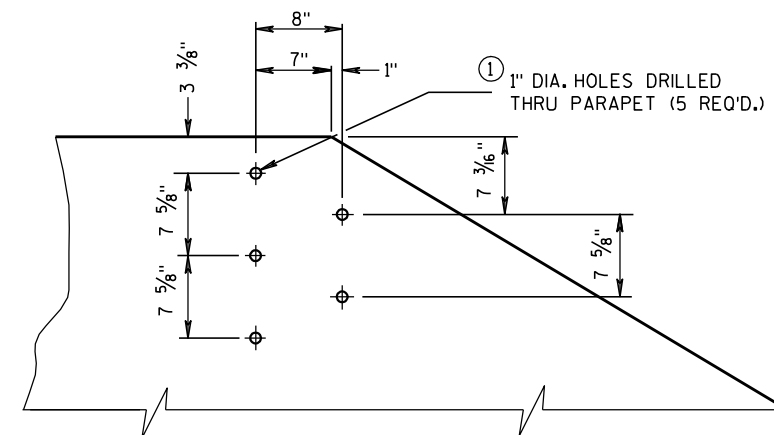
FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

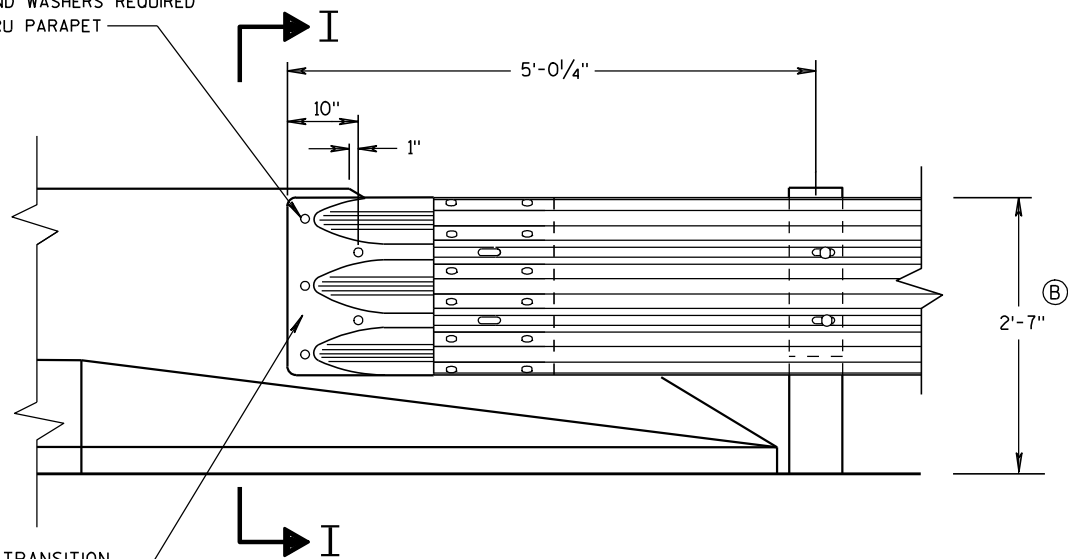
GENERAL NOTES

- ① INCLUDE THE PAYMENT FOR DRILLING BOLT HOLES THROUGH THE PARAPET, AND ALL BOLTS, NUTS AND WASHERS IN THE ITEM "STEEL THRIE BEAM STRUCTURAL APPROACH".
- ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.



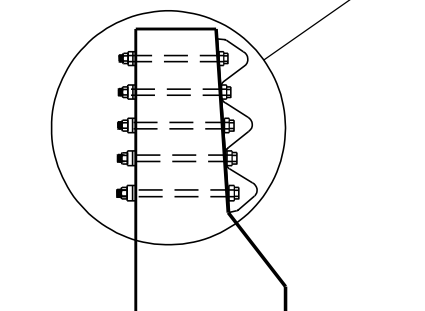
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION

- ① ② 1/8" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER 7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED 1" DIA. HOLES DRILLED THRU PARAPET (5 REQ'D.).

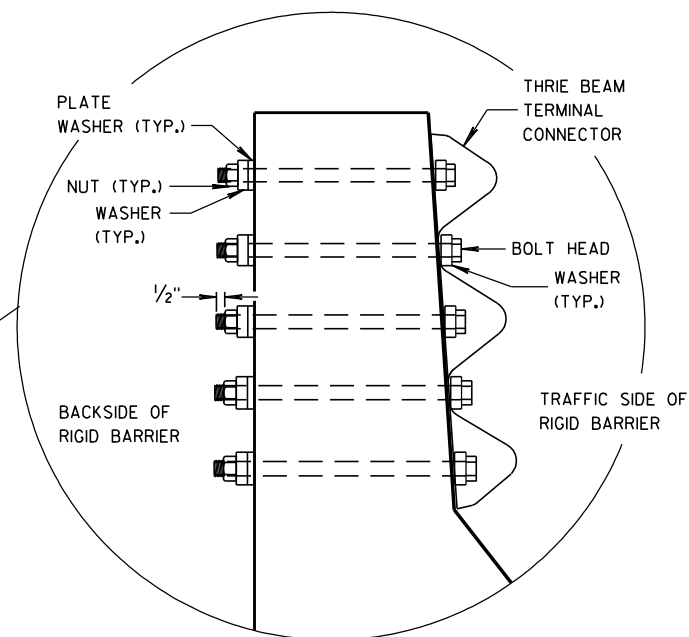


FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS



SECTION I-I



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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DATE

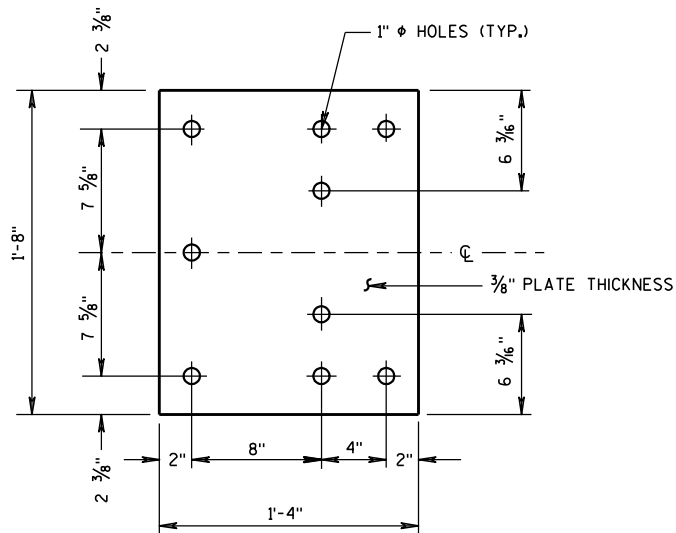
FHWA

/S/ Jerry H. Zoon

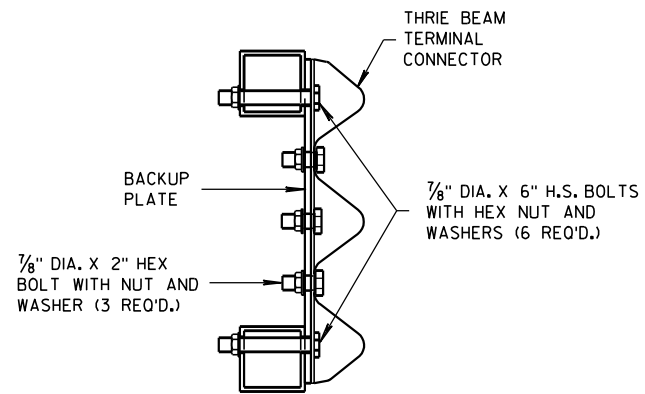
ROADWAY STANDARDS 122

ENGINEER

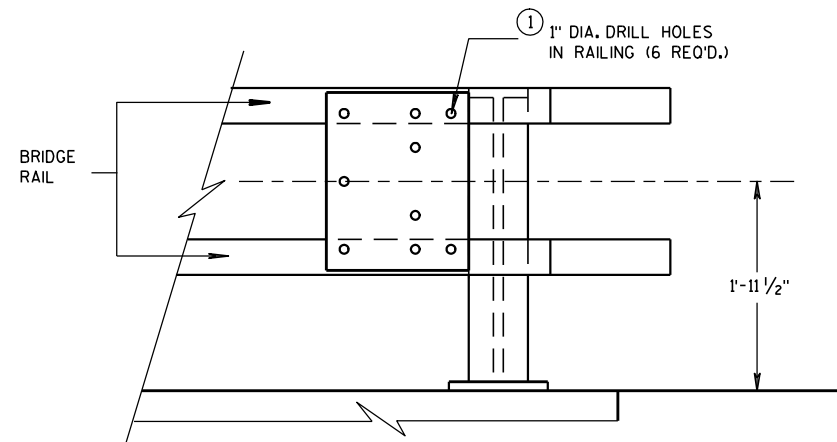
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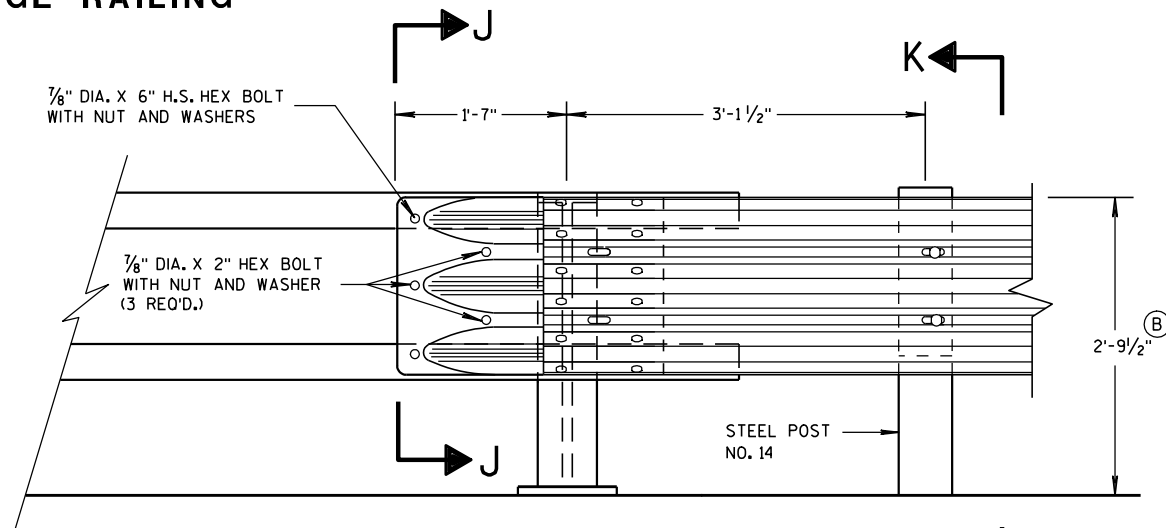
BACK-UP PLATE DETAIL



SECTION J-J

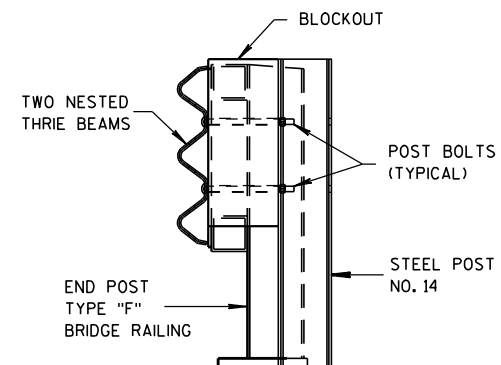


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



FRONT VIEW

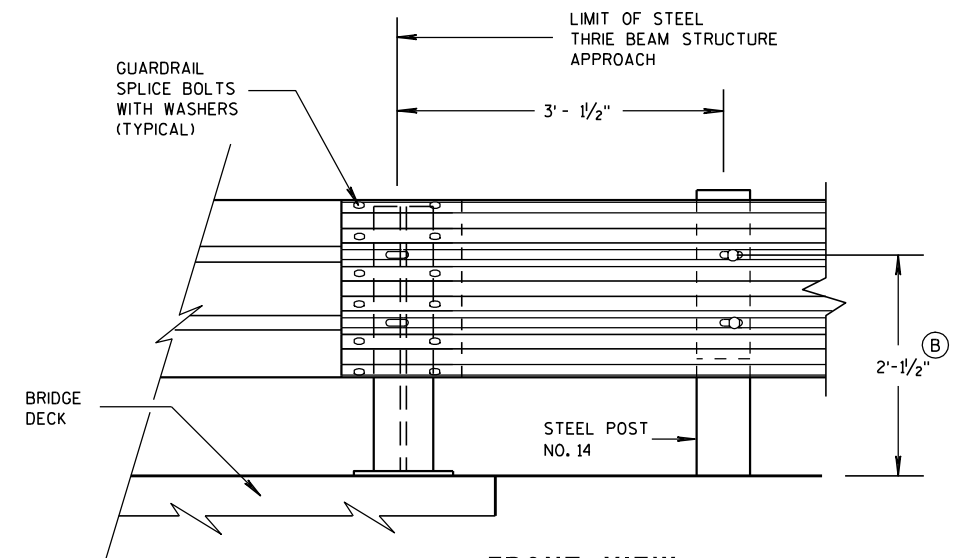
THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"



SECTION K-K

GENERAL NOTES

- ① INCLUDE THE PAYMENT FOR DRILLING HOLES IN RAILING IN THE ITEM "STEEL THRIE BEAM STRUCTURE APPROACH".
- ② TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.



FRONT VIEW
THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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ROADWAY STANDARDS

123
ENGINEER

ENT

(B) TOLERANCE FOR TOP OF W-BEAM RAIL IS $\pm 1"$.



ANCHOR PLATE DETAIL, TYPE "M"



ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

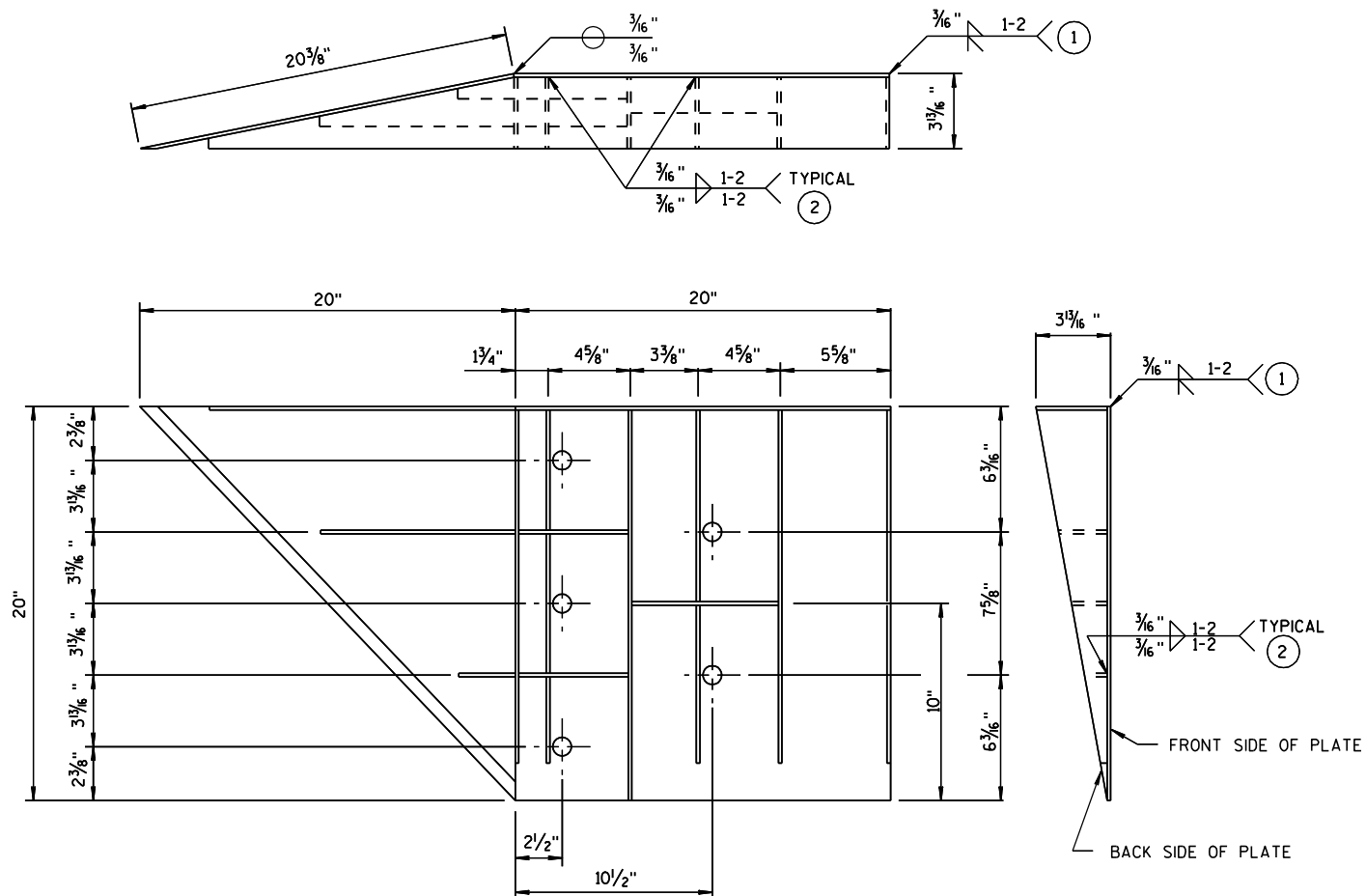
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED

<u>2-8-2012</u>	<u>/S/ Jerry H. Tapp</u>	
DATE	ROADWAY STANDARDS ENGINEER	124 ENT

FWHA



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 7/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 1/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 9/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 1/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 1/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 1/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

- ① STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- ② STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

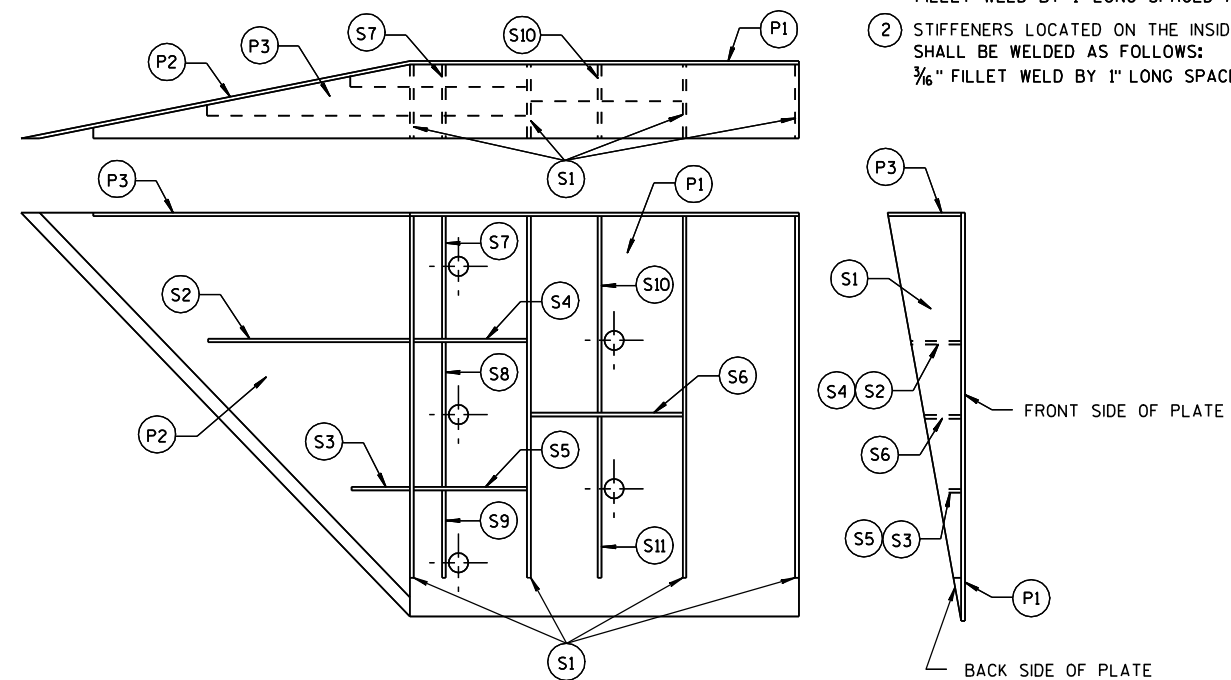


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

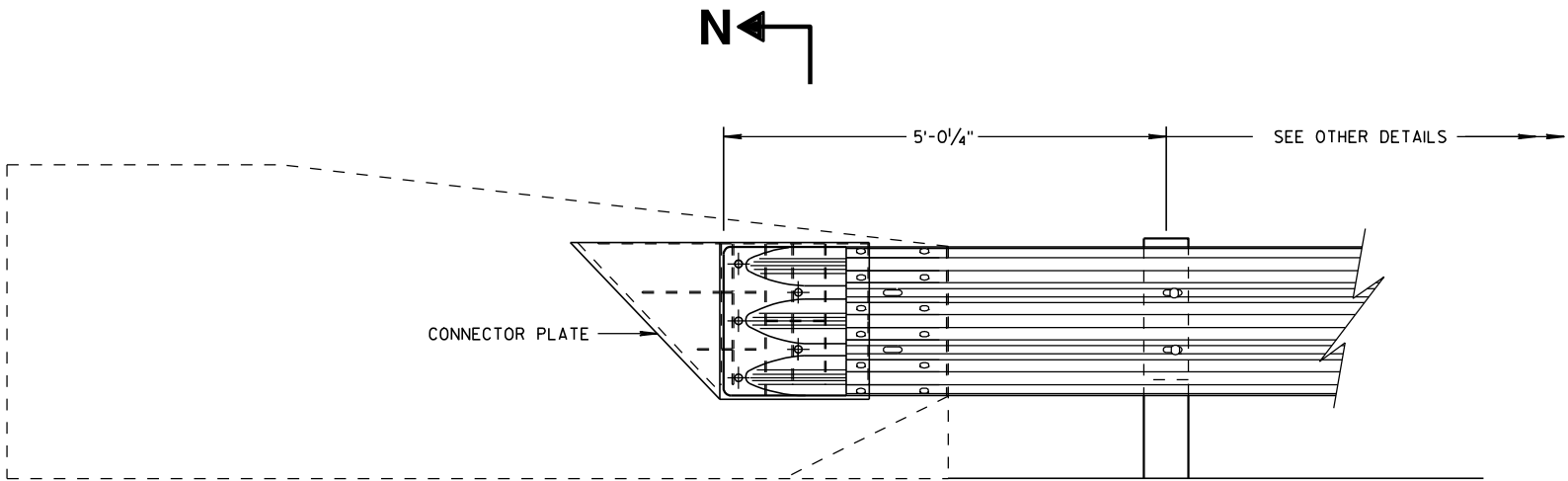
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2-8-2012

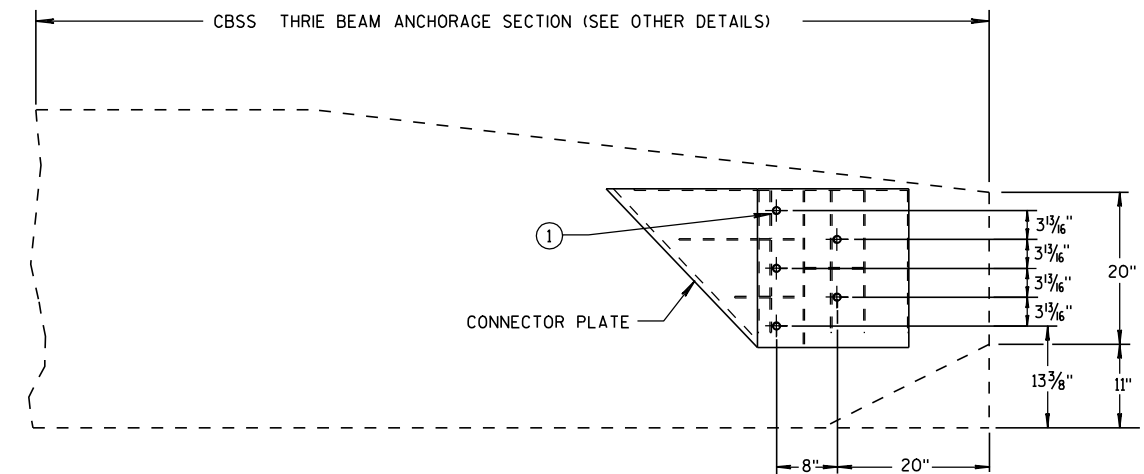
DATE

FHWA

/S/ Jerry H. Zapp
ROADWAY STANDARDS 125
ENGINEER



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER

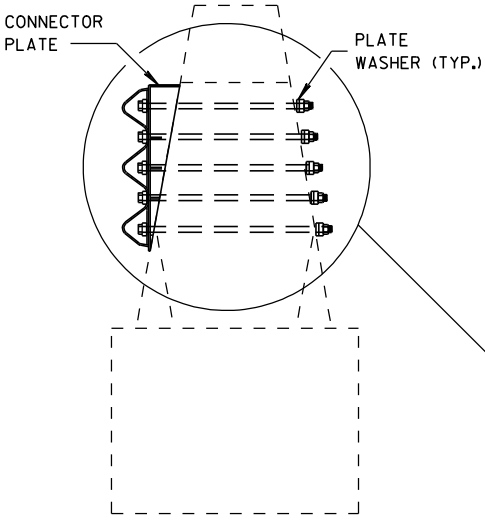


SINGLE SLOPE CONNECTION PLATE PLACEMENT

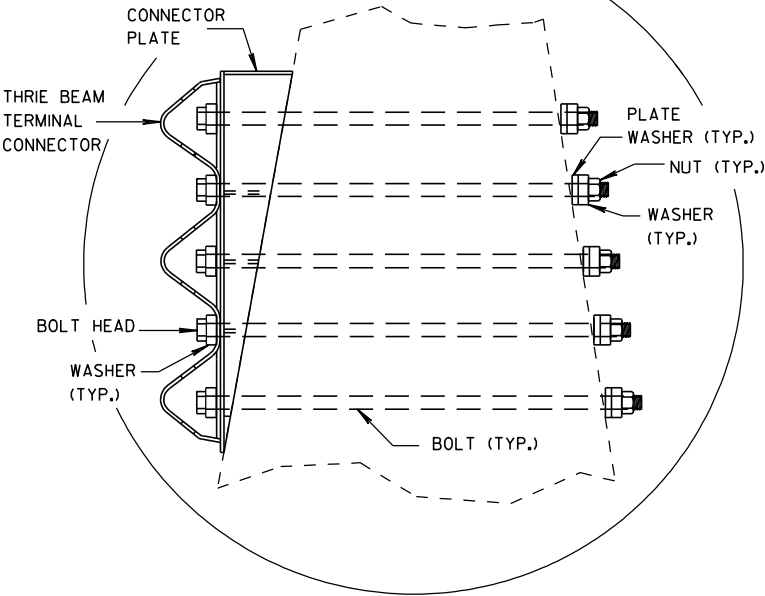
GENERAL NOTES

CONNECTION PLATE INCIDENTAL TO STEEL THRIE BEAM TRANSITION.

① BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



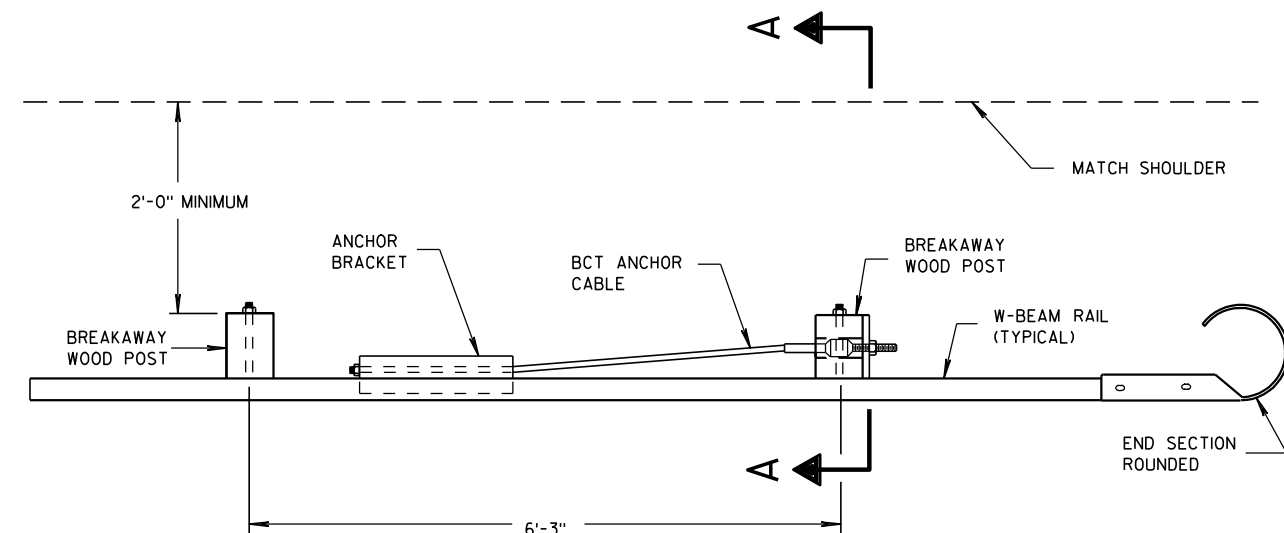
SECTION N-N



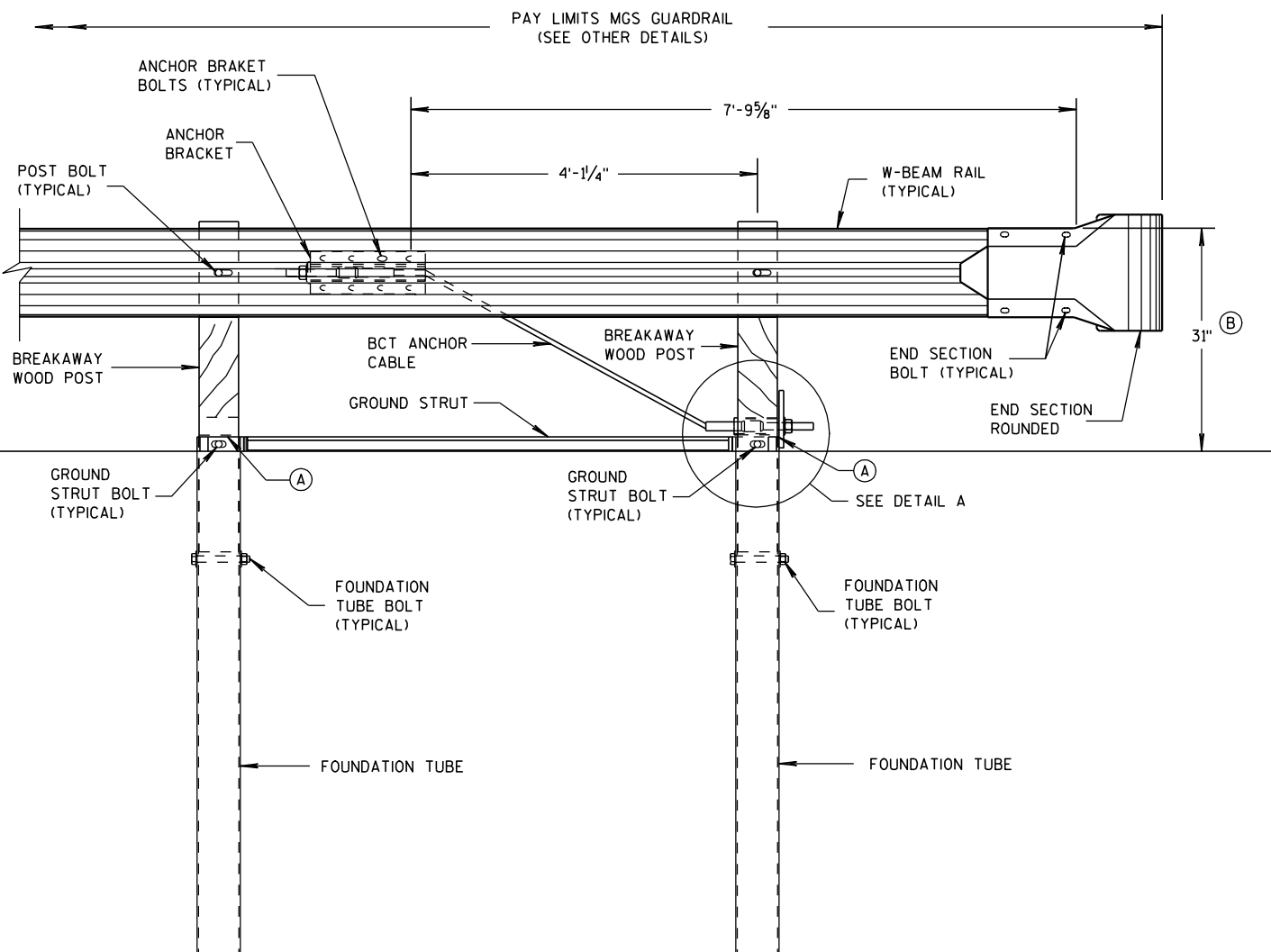
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 2-8-2012
/s/ Jerry H. [Signature]
ROADWAY STANDARDS ENGINEER
ENT

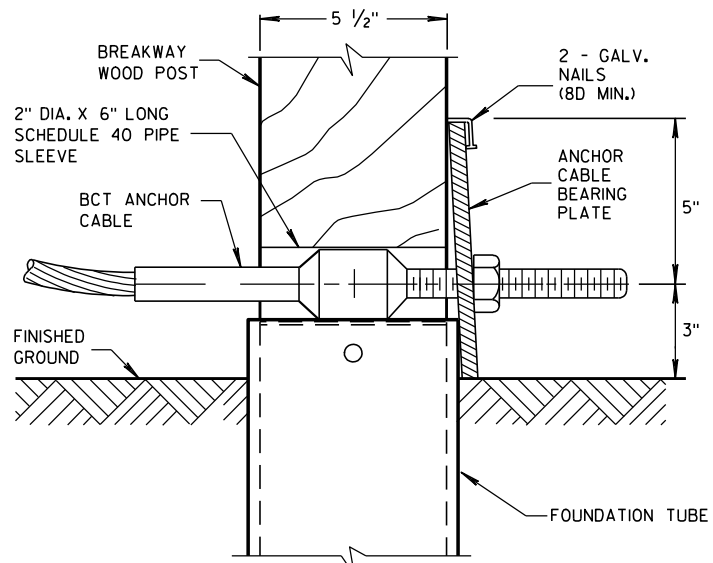


PLAN VIEW



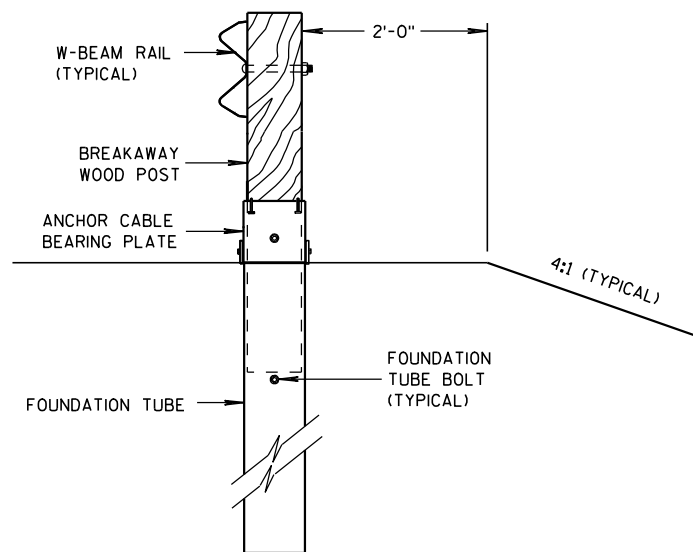
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUND STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

POST BOLTS ARE A 5/8" DIAMETER X 10" LONG GUARDRAIL BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER DH MODIFIED (RECESSED) HEAVY HEX NUT AND 5/8" DIAMETER FLAT WASHER.

FOUNDATION TUBE BOLTS ARE A 7/8" DIAMETER X 7 1/2" LONG HEAVY HEX HEAD BOLT. A FOUNDATION TUBE BOLT REQUIRES A 7/8" DIAMETER DH HEAVY HEX NUT AND A 5/8" DIAMETER FLAT WASHER.

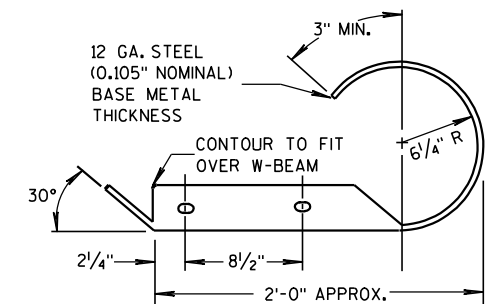
GROUND STRUT BOLTS ARE A 5/8" DIAMETER X 10" LONG HEAVY HEX HEAD BOLT. A GROUND STRUT BOLT REQUIRES A 5/8" DIAMETER DH HEAVY HEX NUT AND A 5/8" DIAMETER FLAT WASHER.

ANCHOR BRACKET BOLTS ARE A 5/8" DIAMETER X 1 1/2" LONG HEAVY HEX HEAD BOLT. AN ANCHOR BRACKET BOLT REQUIRES A 5/8" DIAMETER DH HEAVY HEX NUT AND A FLAT WASHER.

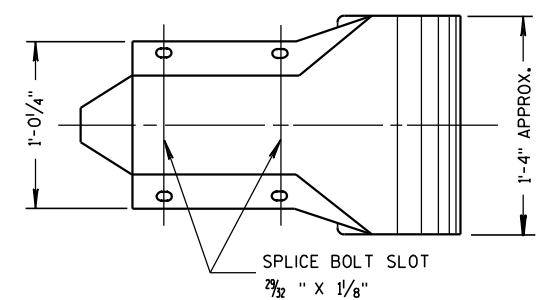
END SECTION BOLTS ARE A 5/8" DIAMETER X 1 1/2" HEAVY HEX HEAD BOLT. AN END SECTION BOLT REQUIRES 5/8" DIAMETER DH HEAVY HEX NUT AND A 5/8" DIAMETER FLAT WASHER.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

- (A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.
- (B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1". FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27 3/4" TO 32" ± 1".



PLAN VIEW

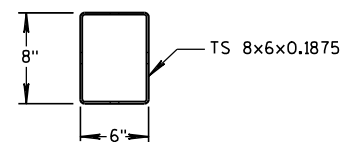


FRONT VIEW

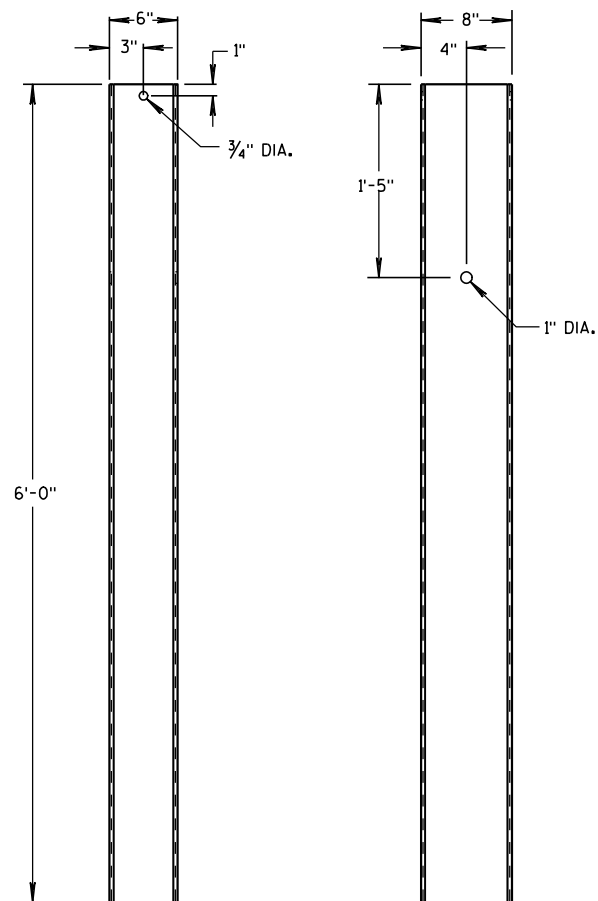
W BEAM END
SECTION ROUNDED

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



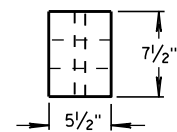
PLAN VIEW



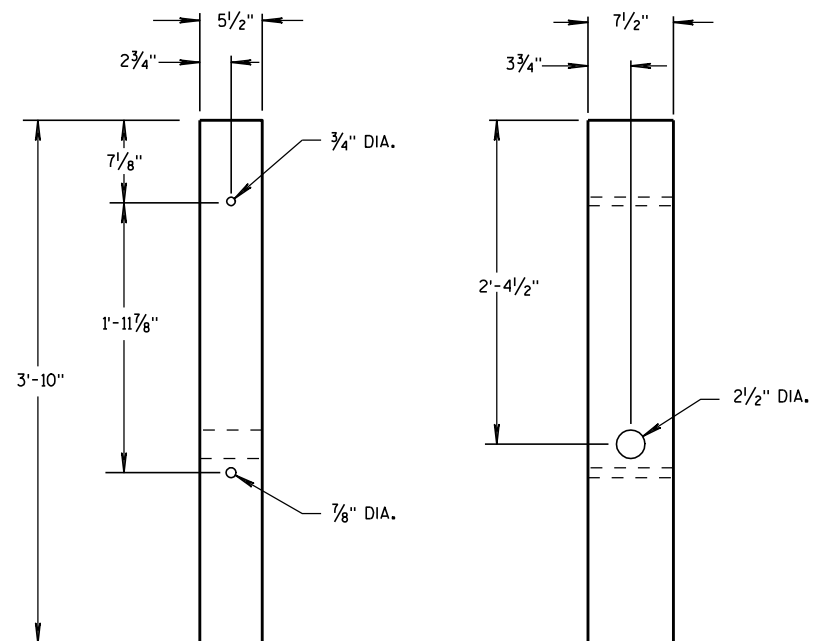
FRONT VIEW

SIDE VIEW

FOUNDATION TUBE



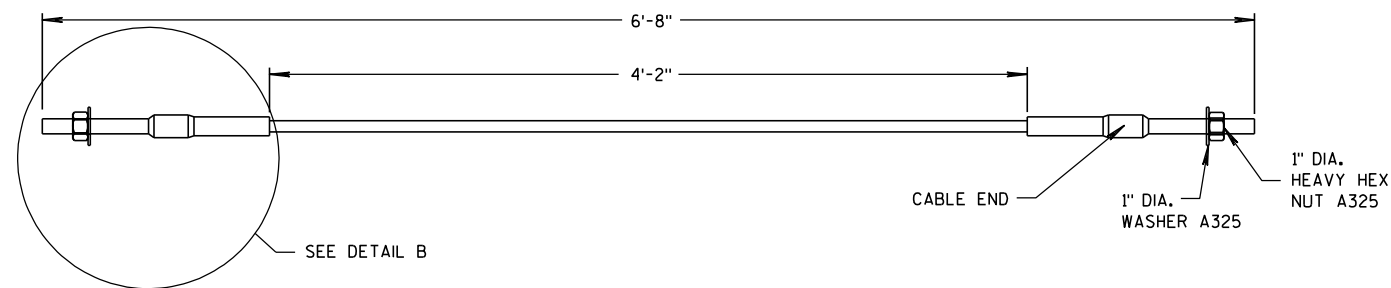
PLAN VIEW



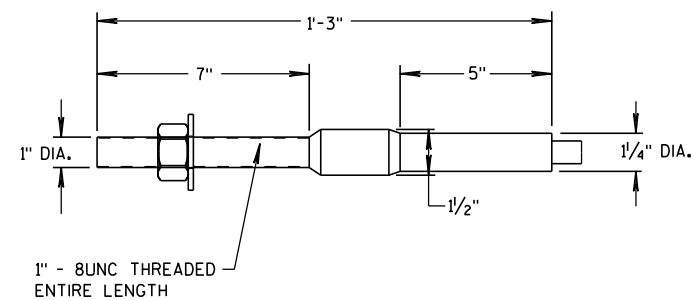
FRONT VIEW

SIDE VIEW

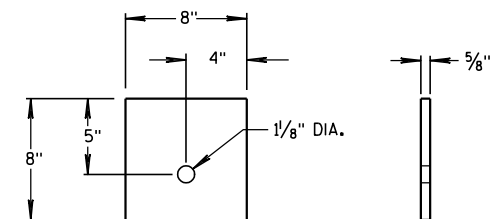
BREAKAWAY WOOD POST



BCT ANCHOR CABLE



DETAIL B



SIDE VIEW

FRONT VIEW

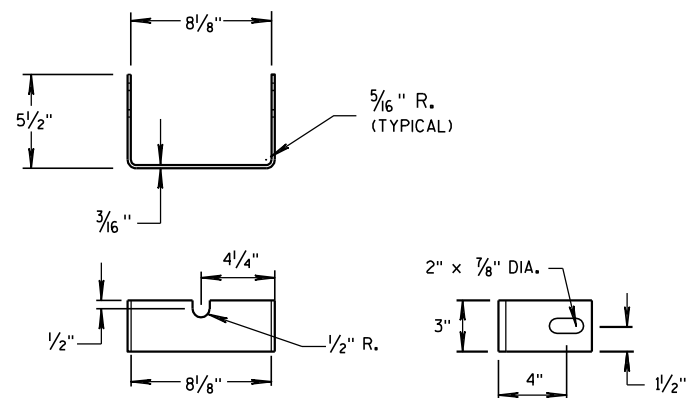
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

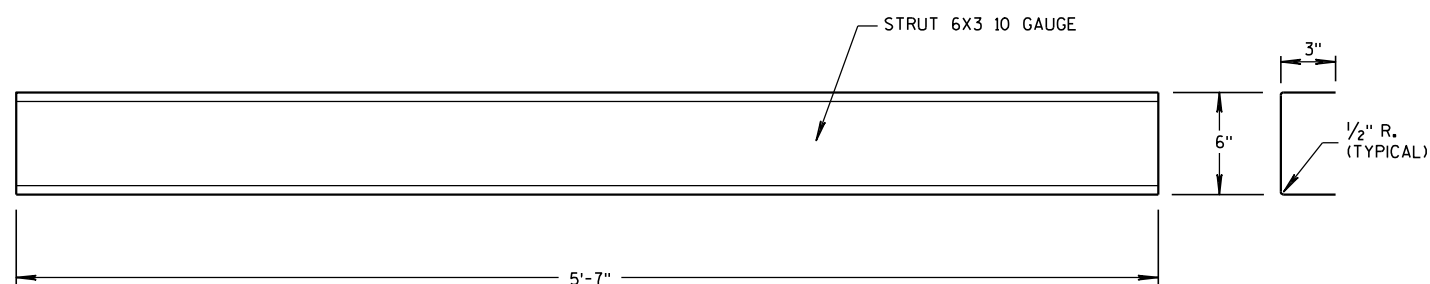
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

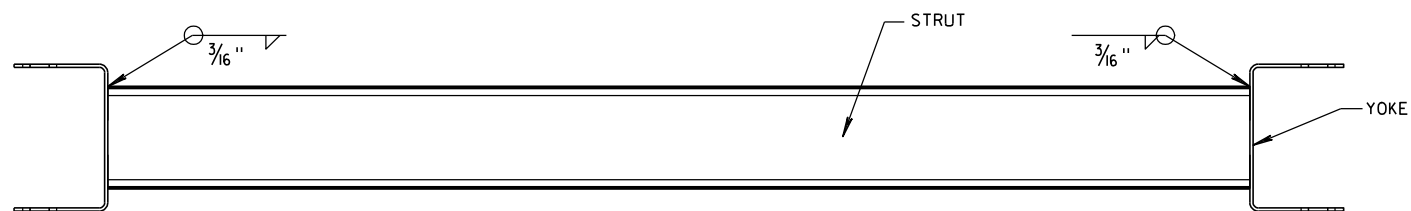
BCT ANCHOR CABLE IS A $\frac{3}{8}$ " DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. THE END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. THE TREADED STUD SHOULD CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. TIGHTEN WIRE ROPE TO TAUT.



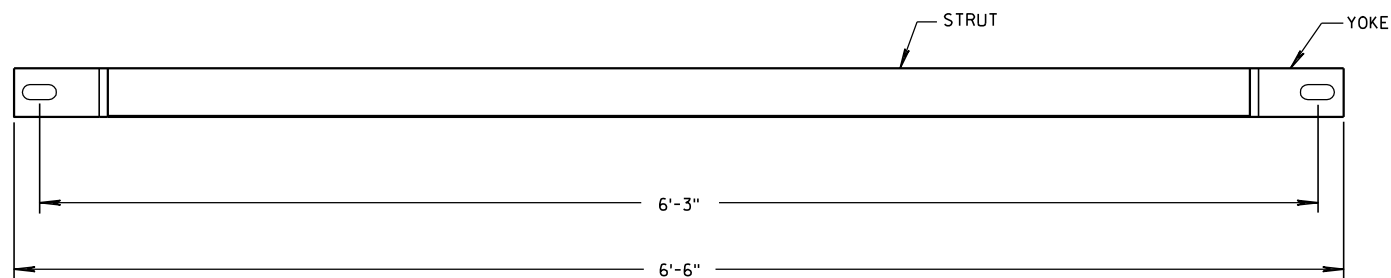
YOKE DETAIL



STRUT DETAIL

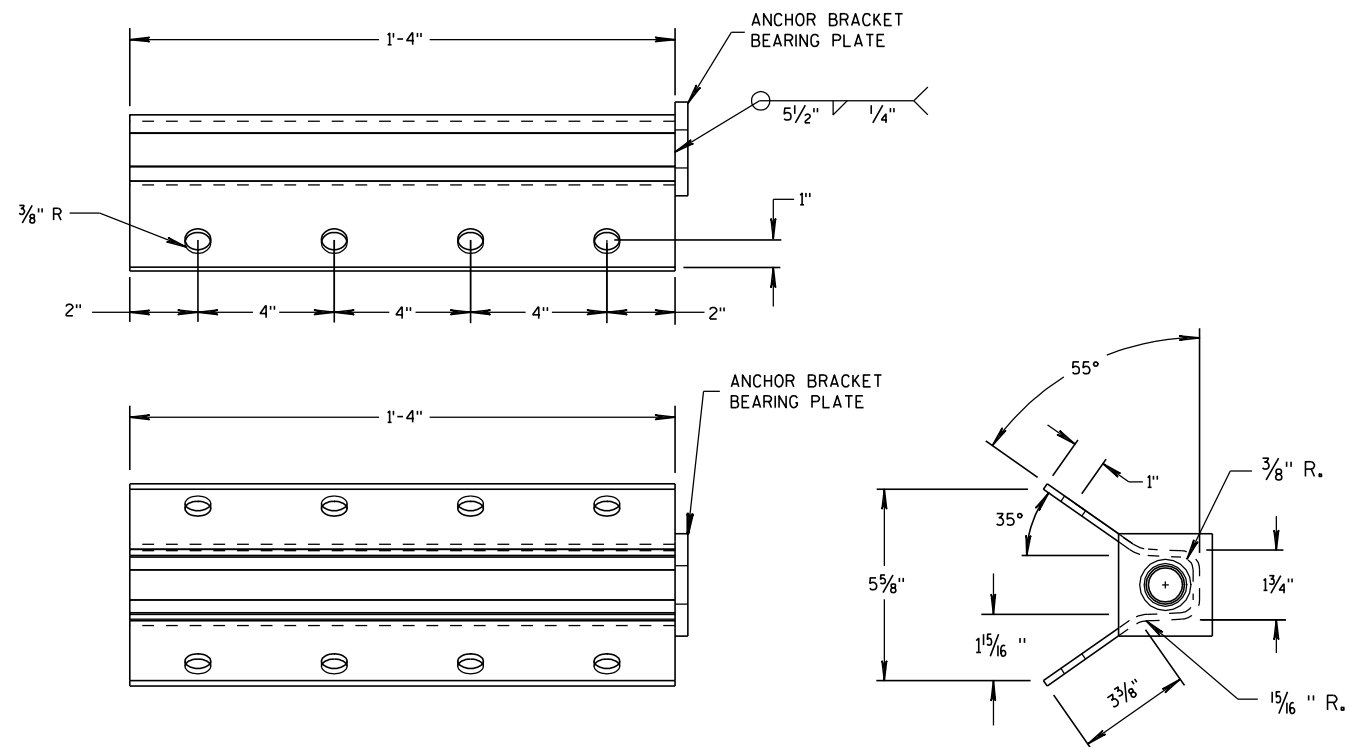


PLAN VIEW

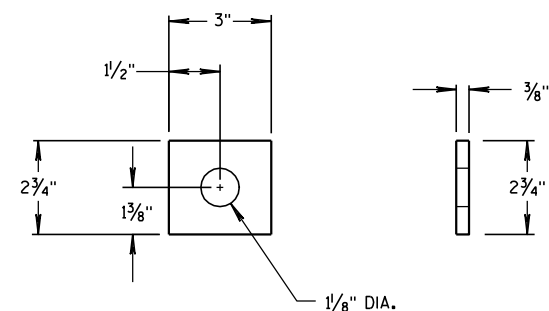


FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET

ANCHOR BRACKET
BEARING PLATEMIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINALSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

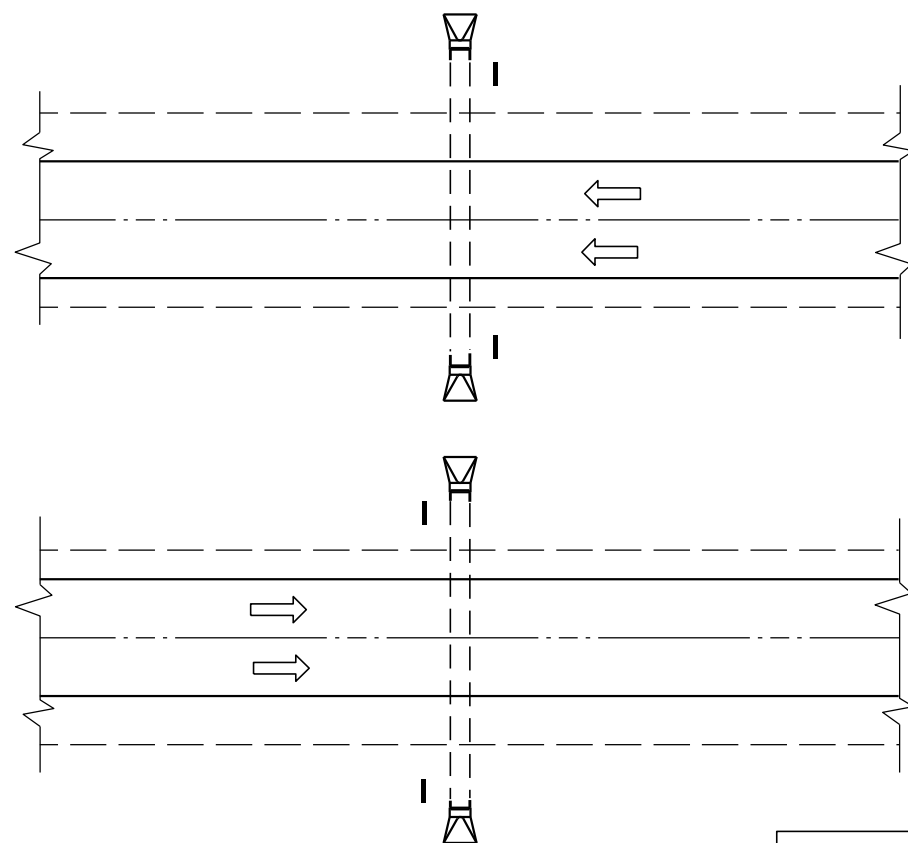
APPROVED

5/23/2011
DATE

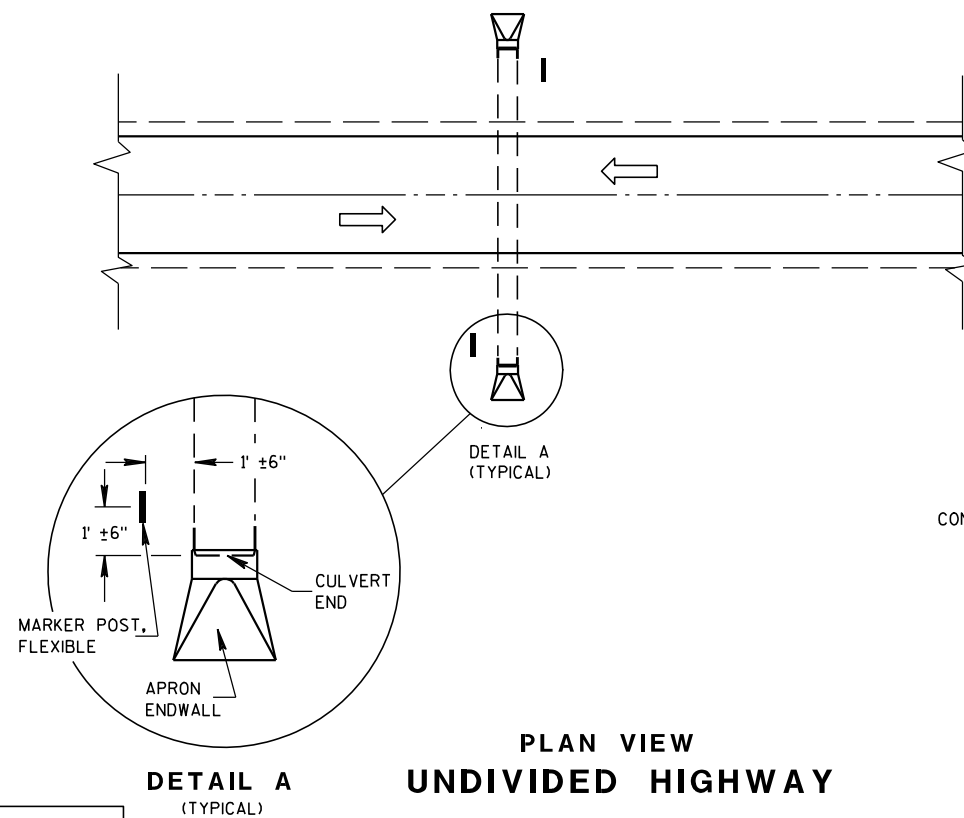
FHWA

/S/ Jerry H. 7---
ROADWAY STANDARDS 129
ENGINEER

10/11

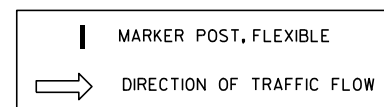


PLAN VIEW
DIVIDED HIGHWAY

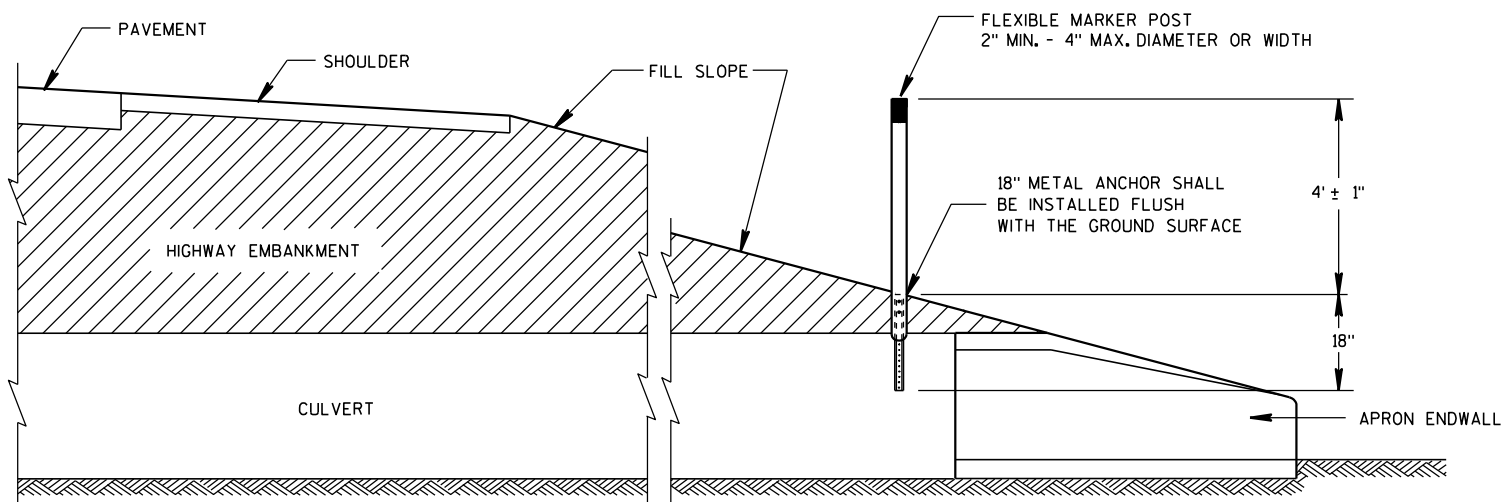


PLAN VIEW
UNDIVIDED HIGHWAY

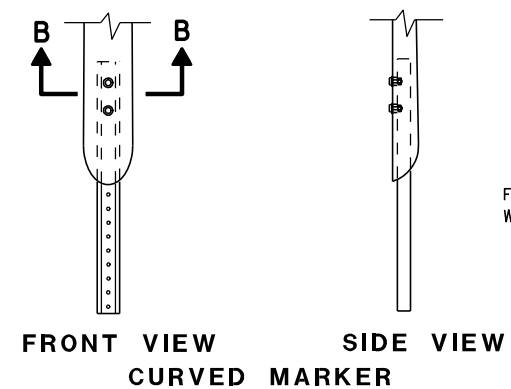
DETAIL A
(TYPICAL)



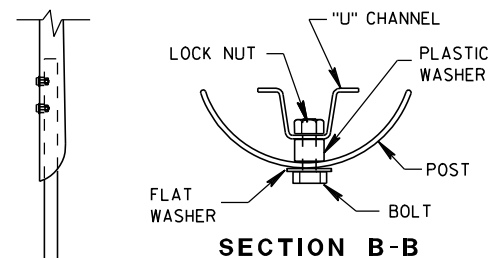
FLEXIBLE MARKER POST LOCATION



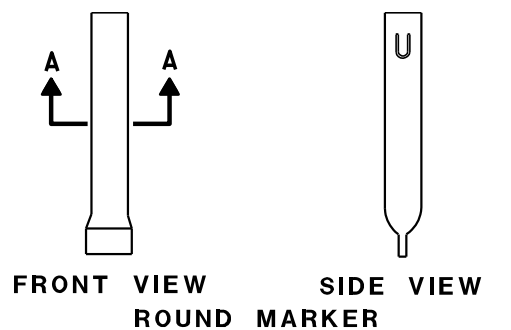
CROSS SECTION
FLEXIBLE MARKER POST



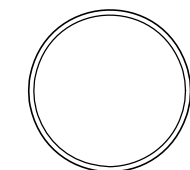
FRONT VIEW
CURVED MARKER



SECTION B-B



FRONT VIEW
ROUND MARKER

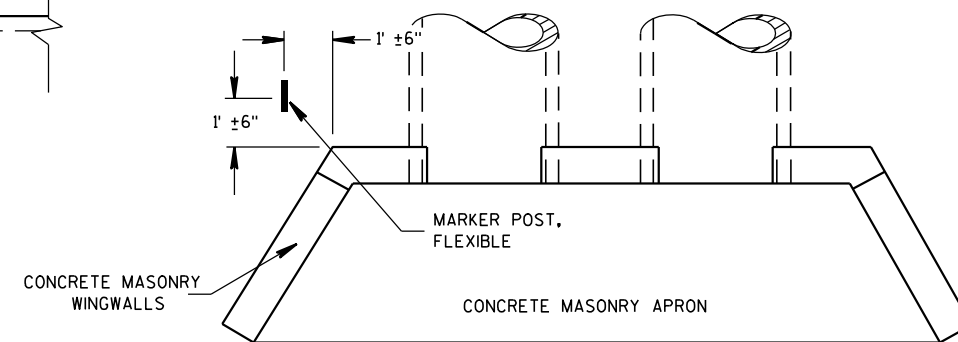


SECTION A-A

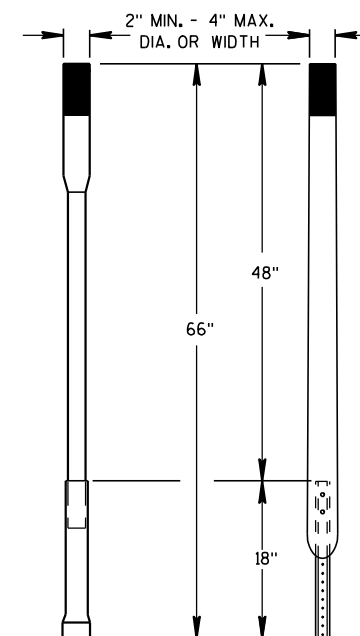
FLEXIBLE MARKER POST ANCHORS

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



ALTERNATE 1 ALTERNATE 2
FLEXIBLE MARKER POST

MARKER POST, FLEXIBLE,
FOR CULVERT END

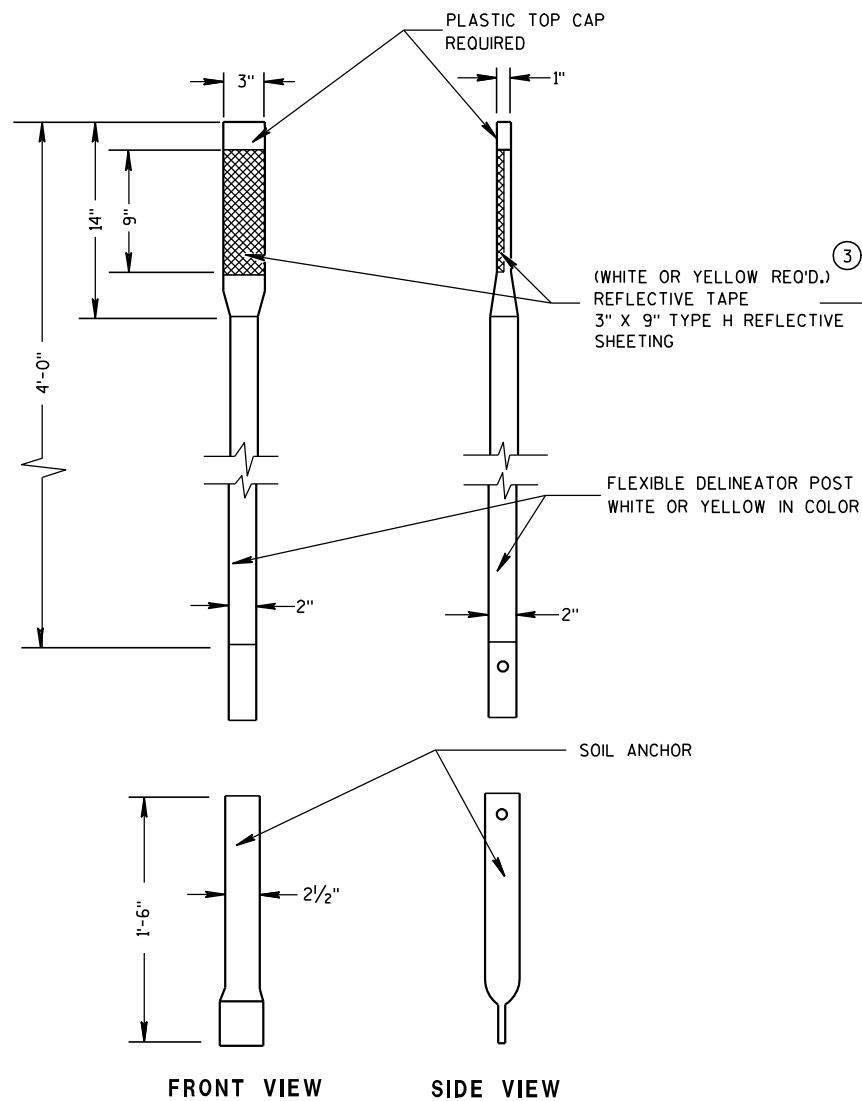
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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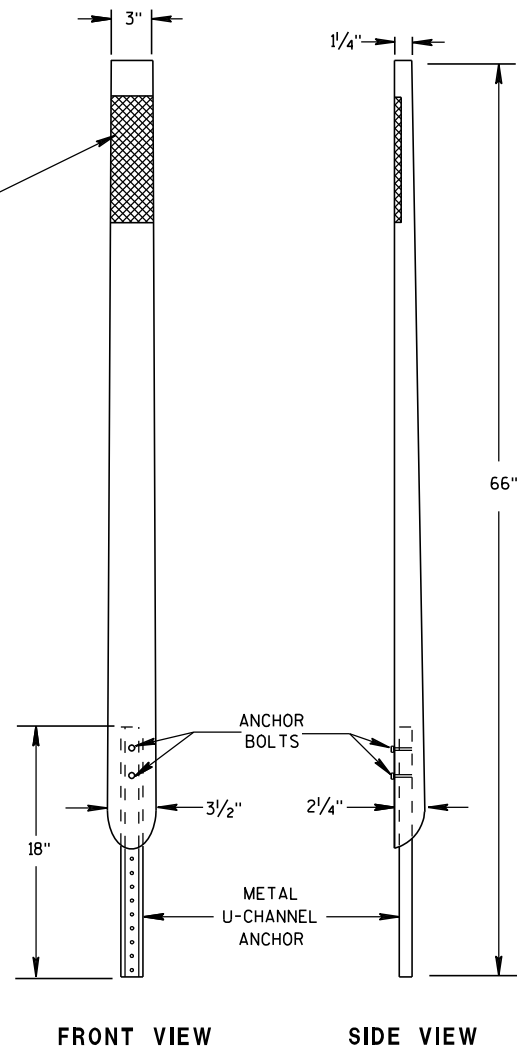
10/1/98
DATE

FHWA

/S/ Rory L. Rhin...
CHIEF ROADWAY DEVELOP 130 INEER

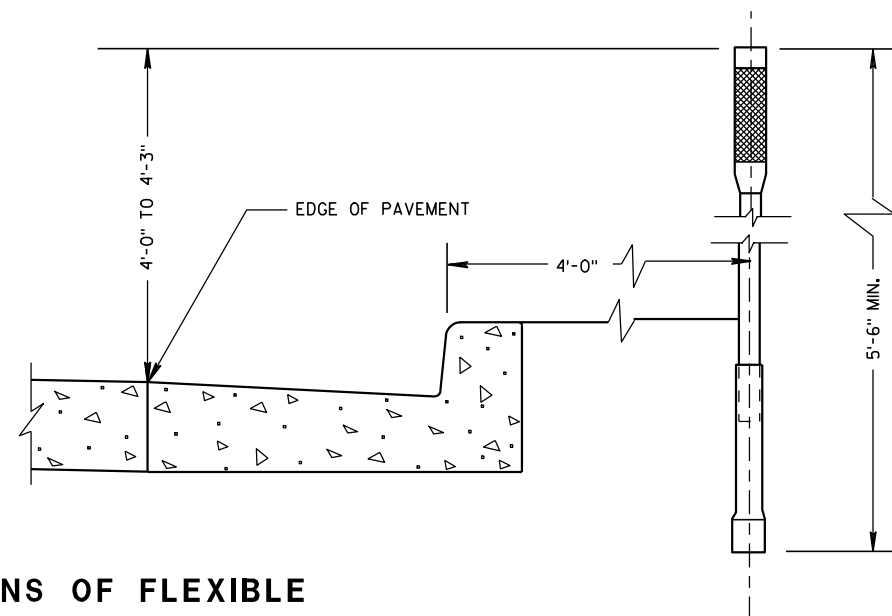
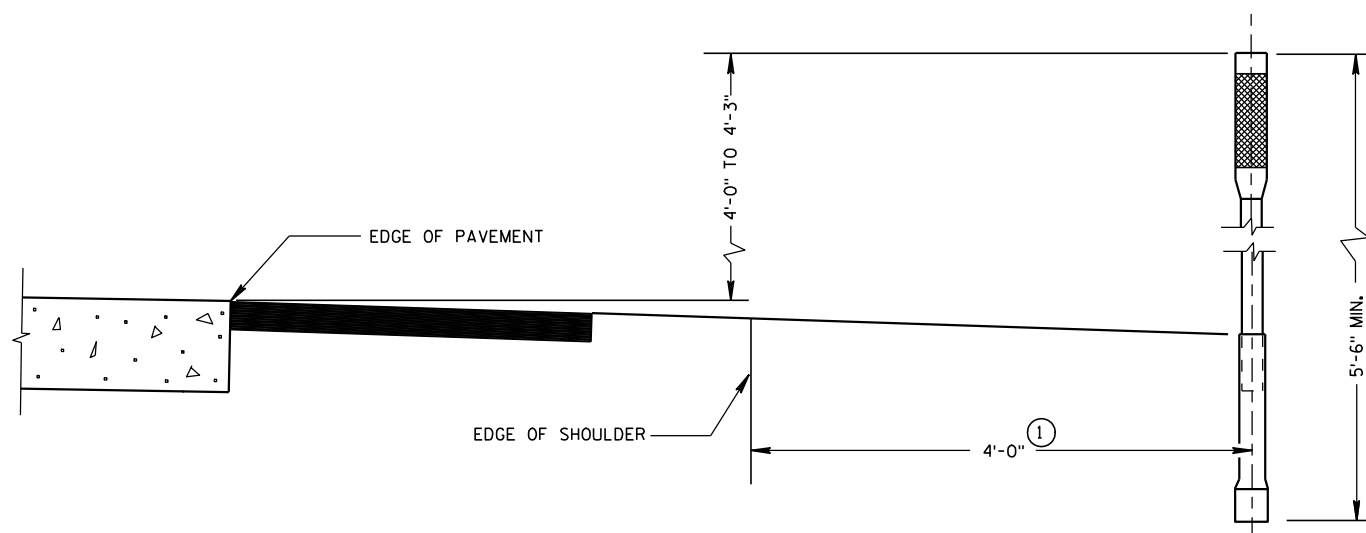


ALTERNATE 1



ALTERNATE 2

FLEXIBLE DELINEATOR POST

TYPICAL INSTALLATIONS OF FLEXIBLE
DELINEATOR POSTS

GENERAL NOTES

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

- ① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.
- ② EITHER ALTERNATE NO. 1 OR NO. 2 MAY BE FURNISHED.
- ③ AS PER SECTION 637.2.2.2. OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

FLEXIBLE DELINEATOR POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11-6-01

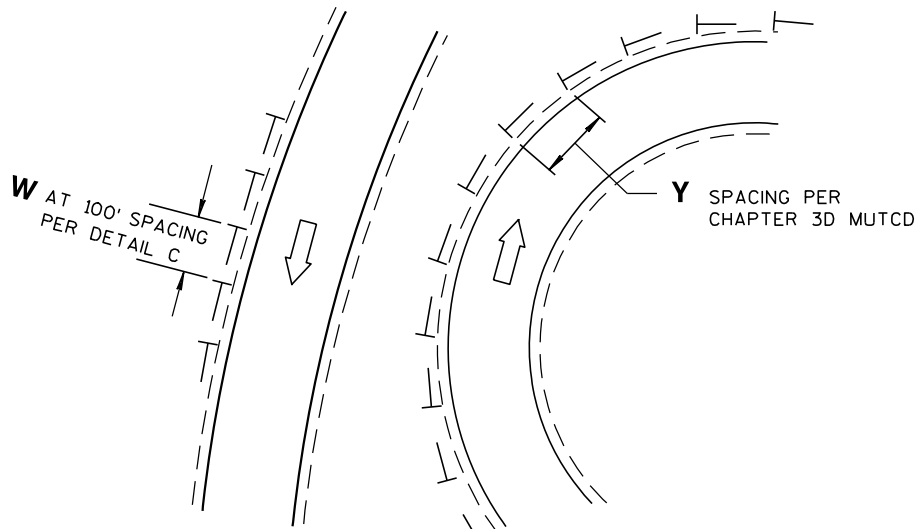
DATE

/S/ Chester J. [Signature]

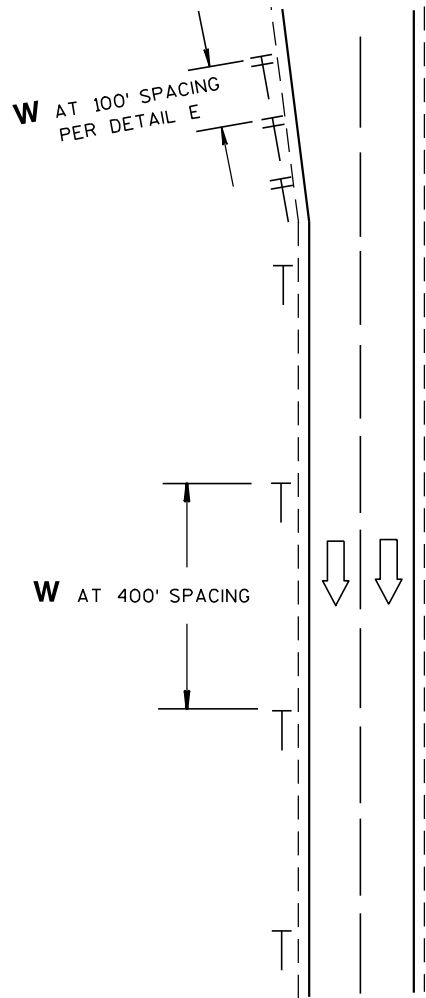
CHIEF SIGNS AND MARK 131

FHWA

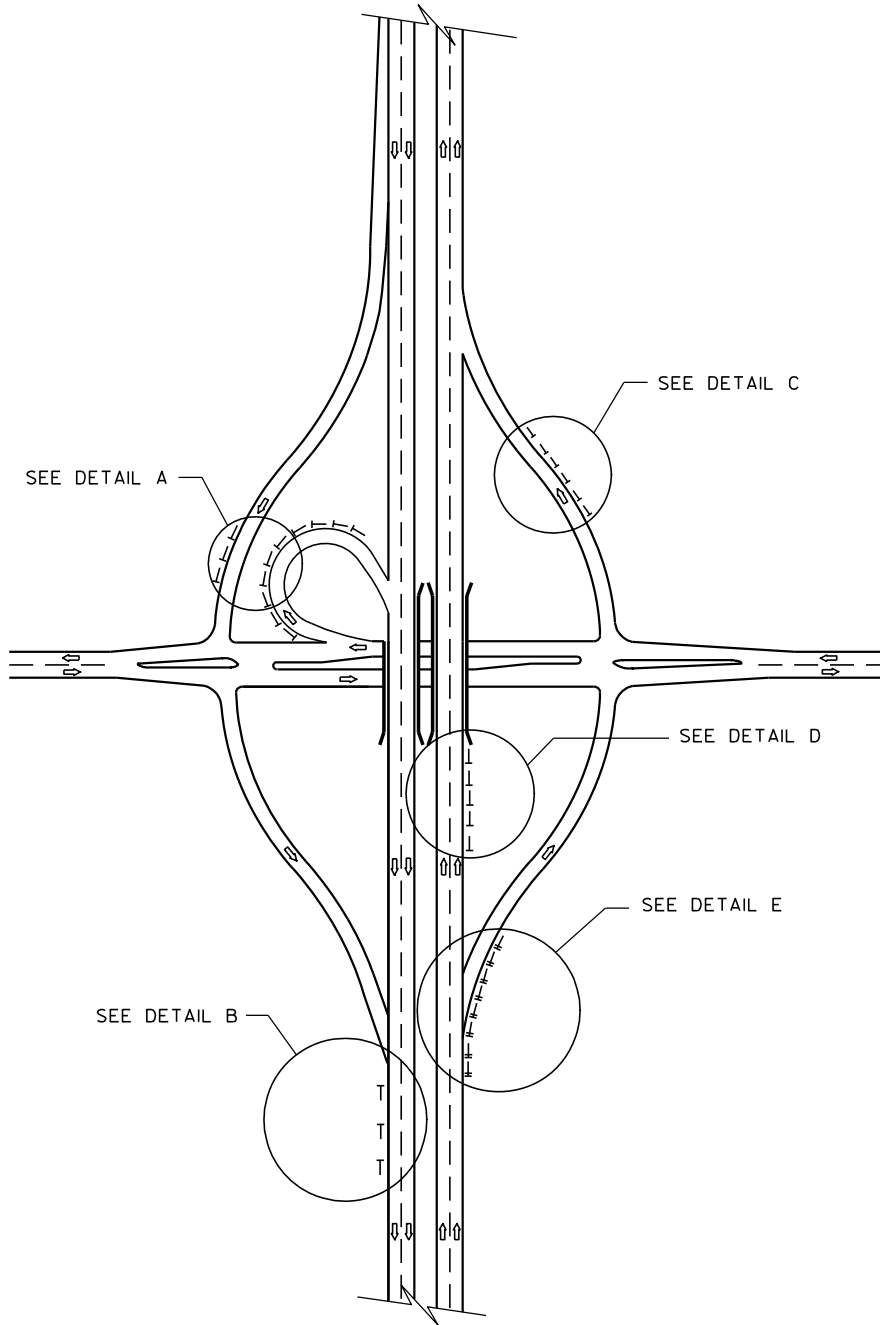
ER



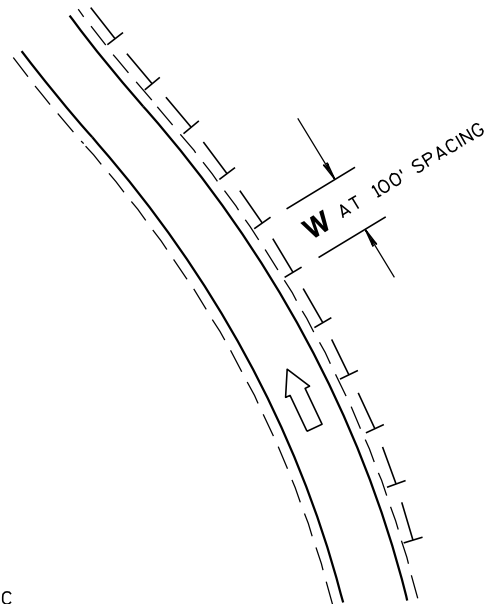
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



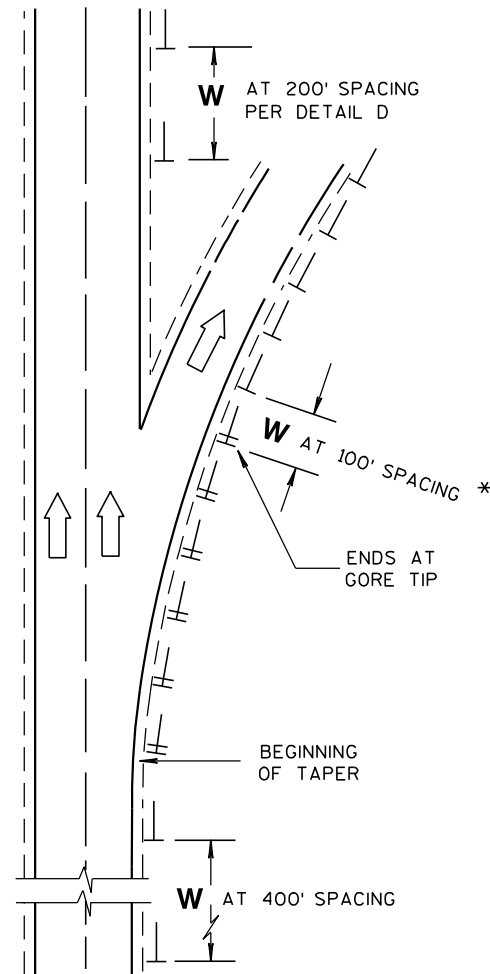
DETAIL B
DELINEATOR LAYOUT
ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL C
DELINEATOR LAYOUT ALONG RAMP



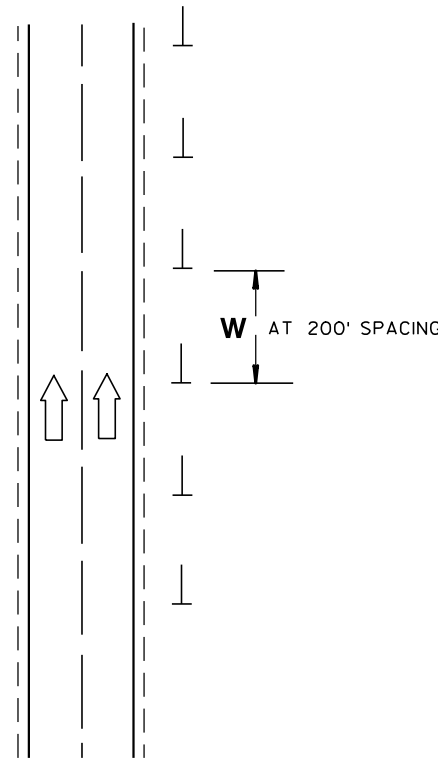
DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION
- DECELERATION LANES AND TAPERS AT RAMPS

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS.
USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.

LEGEND

- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W** WHITE
- Y** YELLOW



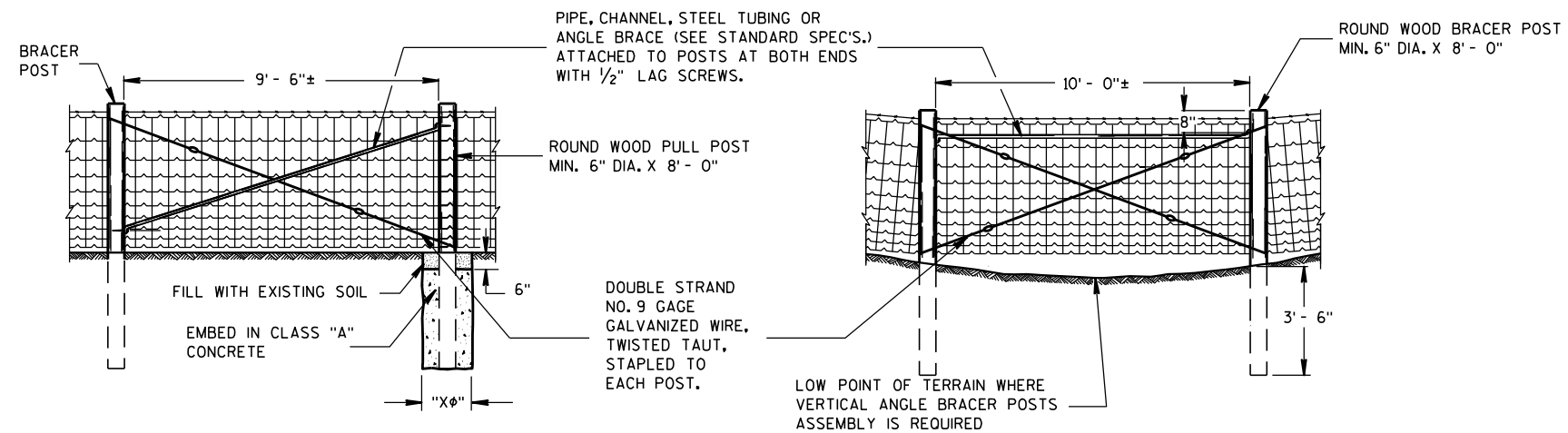
DETAIL D
DELINEATOR LAYOUT
BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/5/09 /S/ Thomas N. Nothmann
DATE STATE TRAFFIC ENGINEER 132 SIGN
FHWA

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY

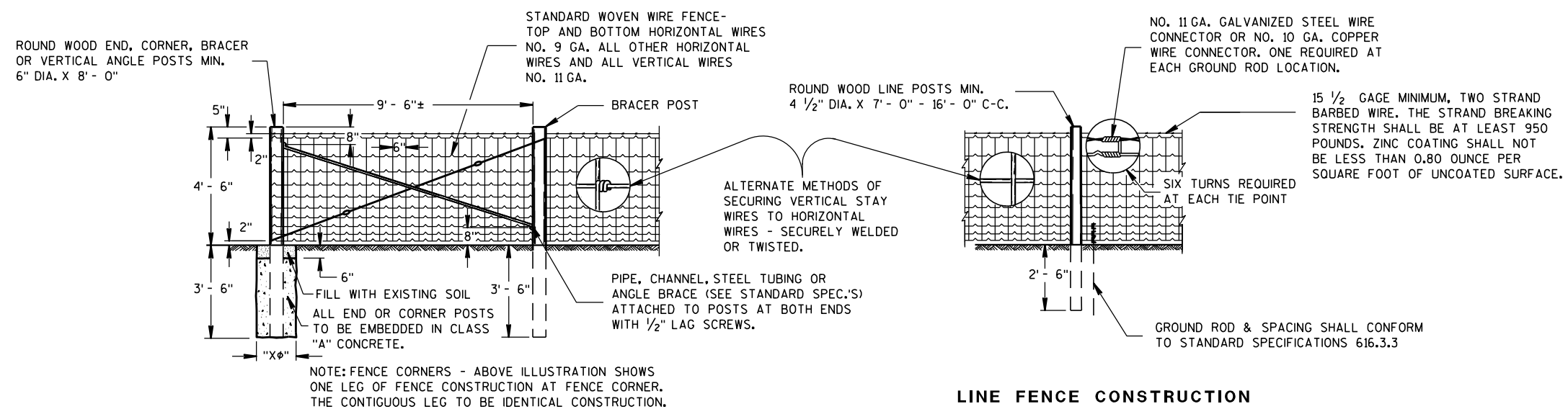
VERTICAL ANGLE BRACER POSTS ASSEMBLY

"X ϕ " = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

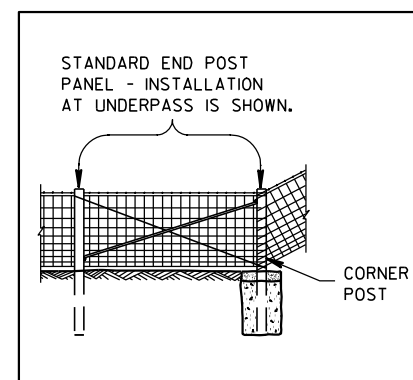
FENCE SHALL BE LOCATED 3'-0" INSIDE
THE RIGHT OF WAY LINE UNLESS
OTHERWISE INDICATED ON THE PLANS.



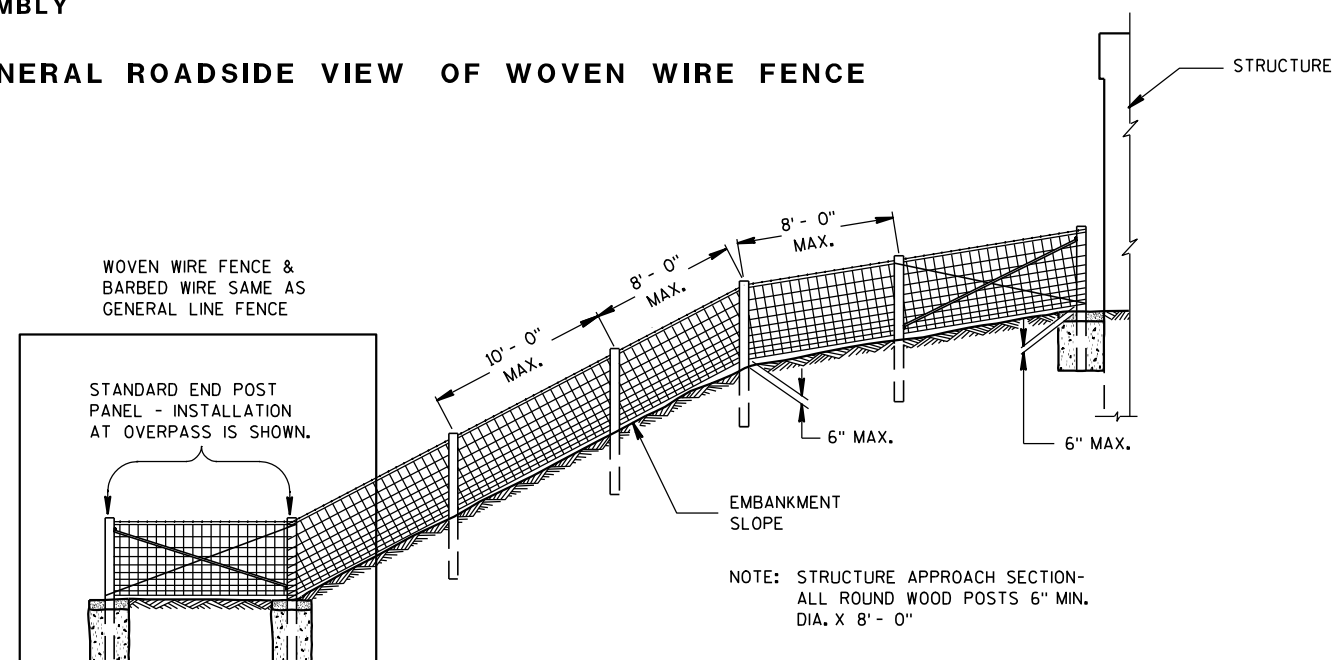
LINE FENCE CONSTRUCTION

END OR CORNER POSTS ASSEMBLY

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



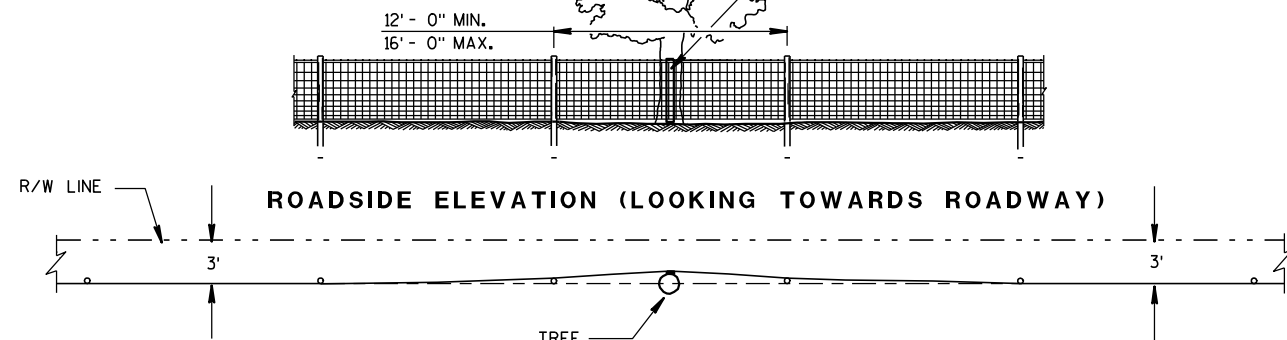
FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

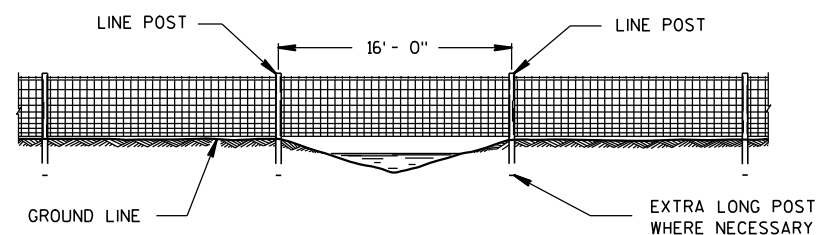
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 133

NOTE: TREE IN NORMAL FENCE LINE SPECIFICALLY ORDERED BY ENGINEER TO REMAIN IN PLACE.

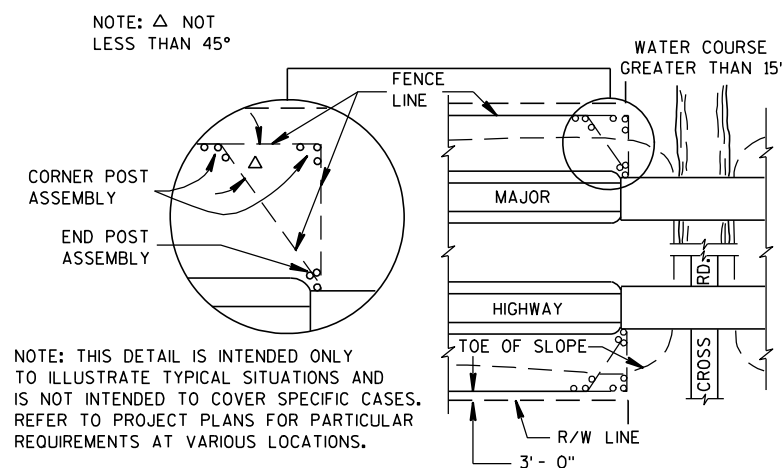
2" X 6" DOUGLAS FIR OR SO. YELLOW PINE PLACED BETWEEN TREE AND WOVEN WIRE FENCE. WOVEN WIRE FENCE AND BARBED WIRE TO BE STAPLED TO 2" X 6" LIKE AS TO LINE POST. 2" X 6" NOT FASTENED TO TREE.



PLAN VIEW
FENCE DESIGN AT TREES REMAINING
IN NORMAL FENCE LINE

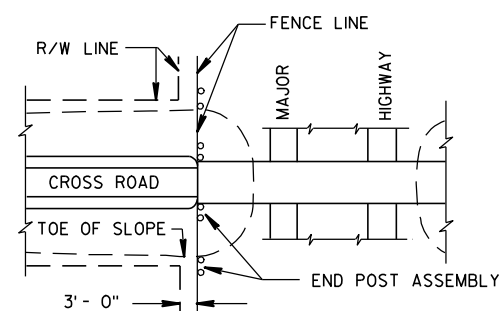


FENCE CONSTRUCTION OVER STREAM
COURSES OF 15 FT. OR LESS IN WIDTH

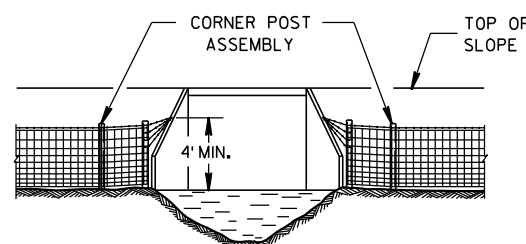


PLAN VIEW
MAJOR HIGHWAY OVERPASS OR STREAM COURSE
CROSSING OF GREATER THAN 15 FT. IN WIDTH

FENCE LOCATION AT STRUCTURES

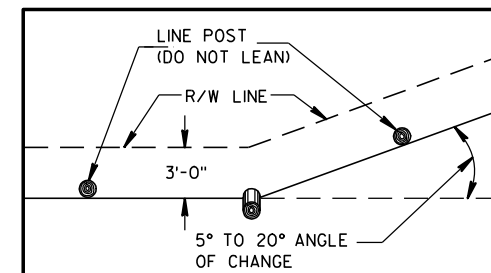
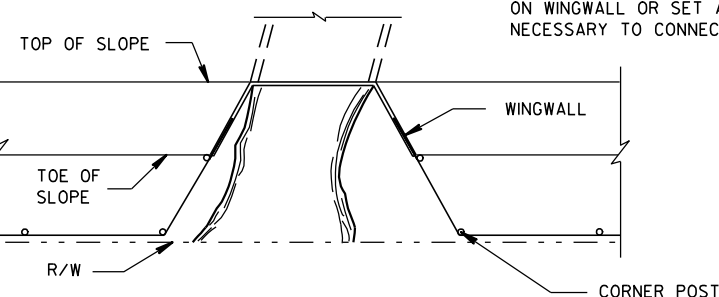


PLAN VIEW
MAJOR HIGHWAY UNDERPASS

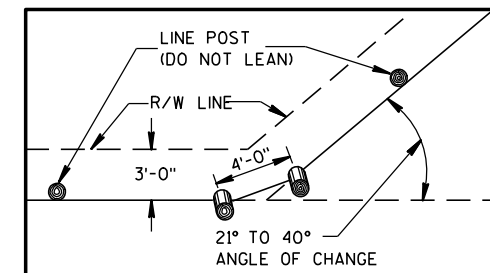


FENCE INSTALLATION TO WINGWALLS

NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



PLAN VIEW
SINGLE POST CORNER

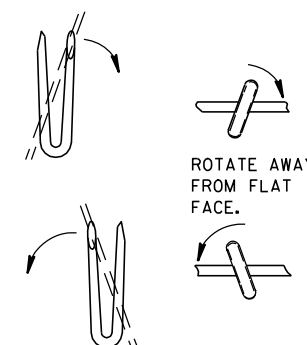


PLAN VIEW
DOUBLE POST CORNER

RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



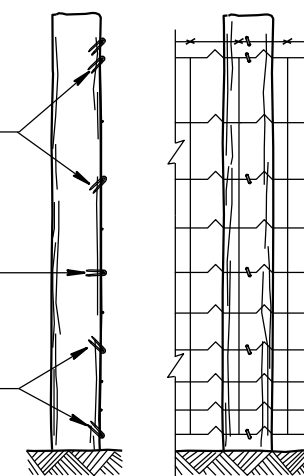
LINE POST

NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.

STAPLES SLOPED DOWNWARD FOR SUSTAINED GRADES AND OVER KNOLLS.

STAPLES LEVEL FOR LEVEL GROUND.

SLOPE UPWARDS WHEN FENCE TENDS TO LIFT.



END ELEVATION
FARM SIDE ELEVATION
FENCE MOUNTING DETAIL

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/4/2008

DATE

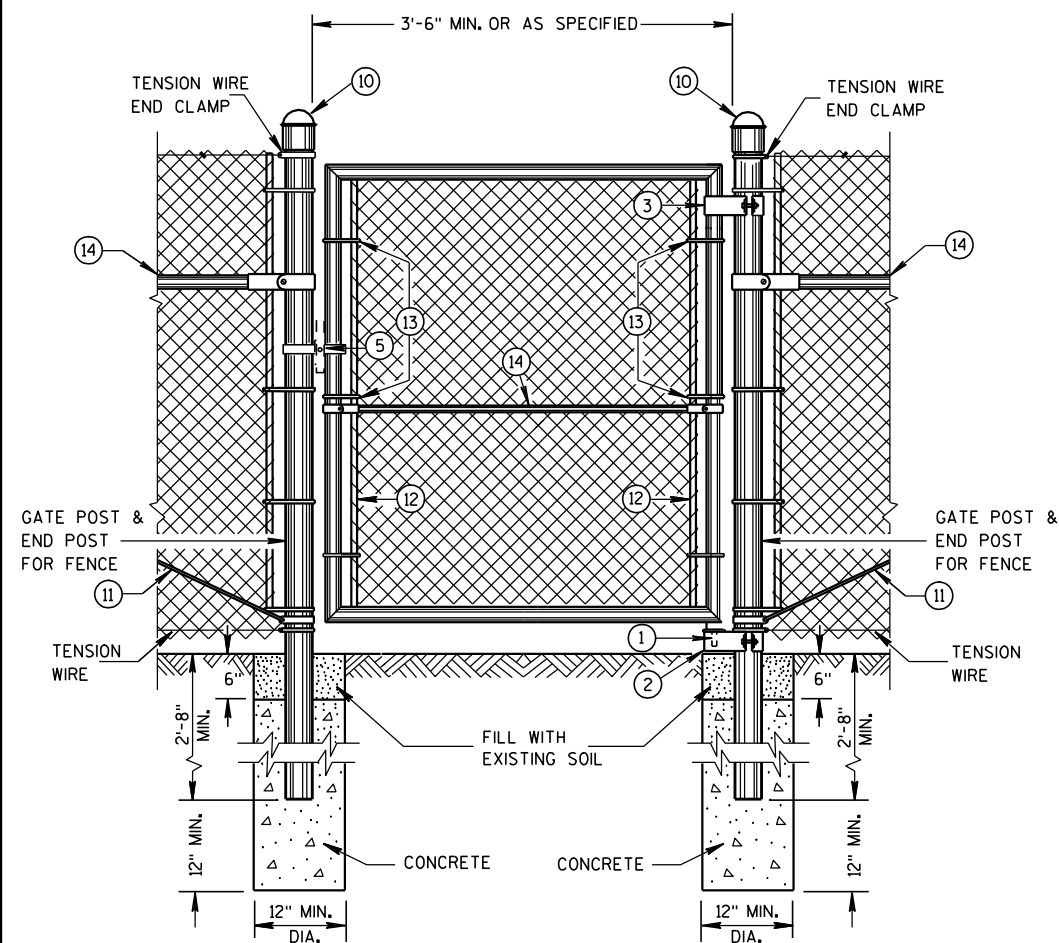
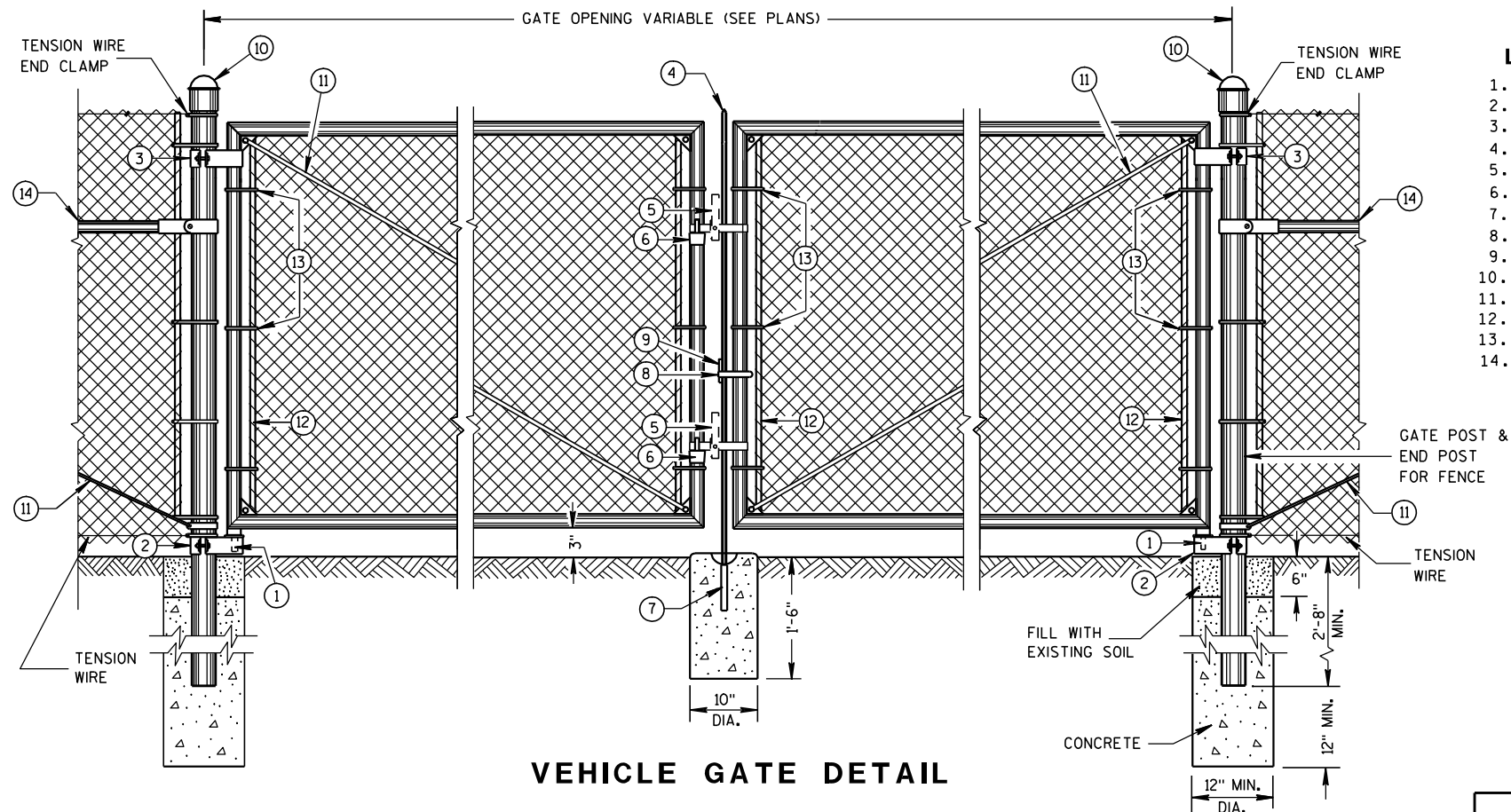
FHWA

/S/ Jerry H. 7----

ROADWAY STANDARDS 134

ENGINEER

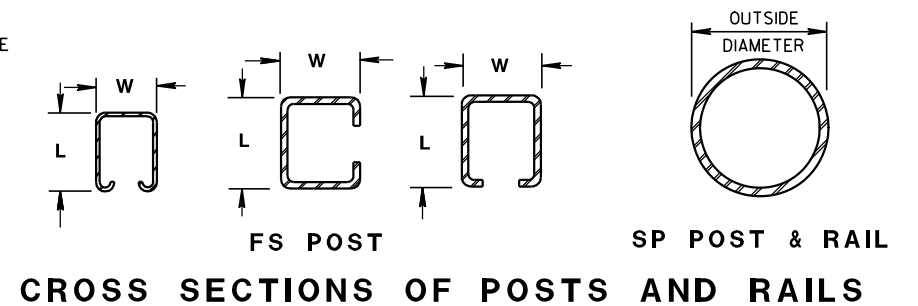
ENT



- ## 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



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

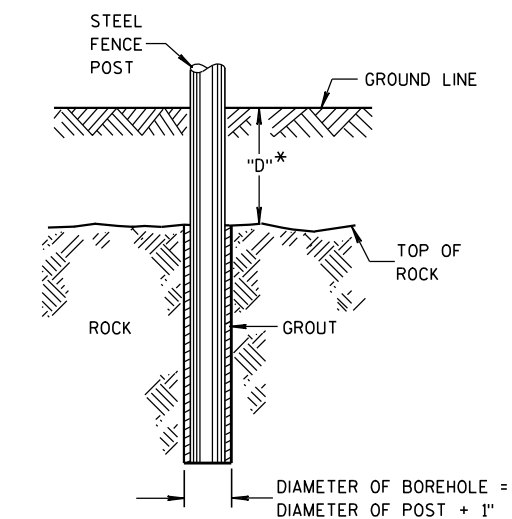
REQUIRED POST SIZE FOR GATES

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

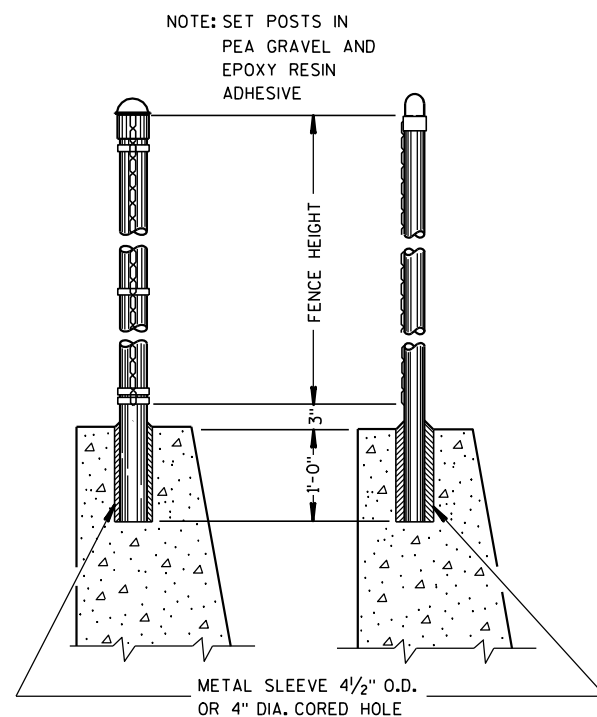
USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND
INTERMEDIATE BRACED POSTS



* IF "D" IS LESS THAN 2'-6",
DRILL ROCK AND INSTALL GROUT

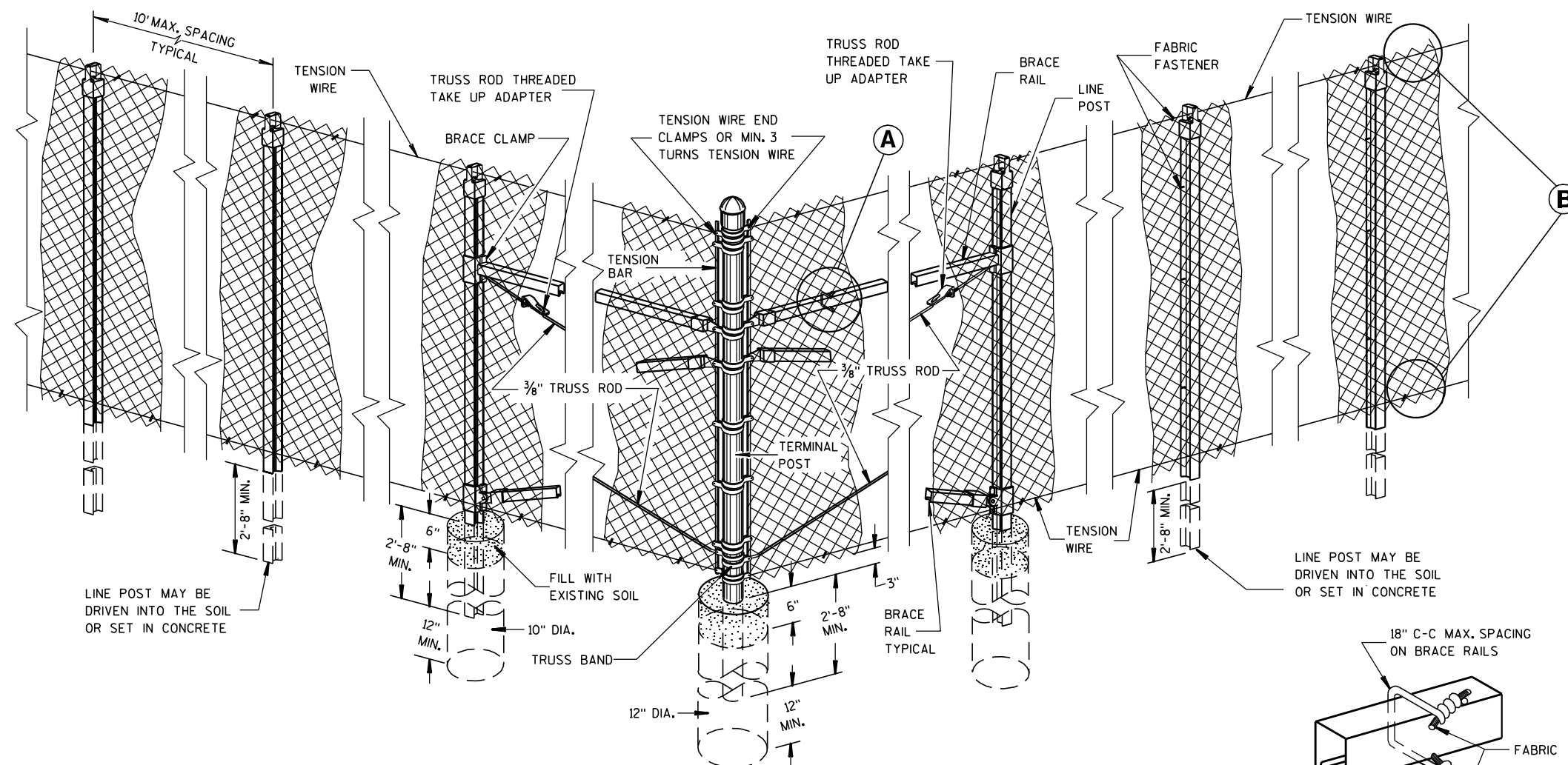
ROCK INSTALLATION OF LINE POST



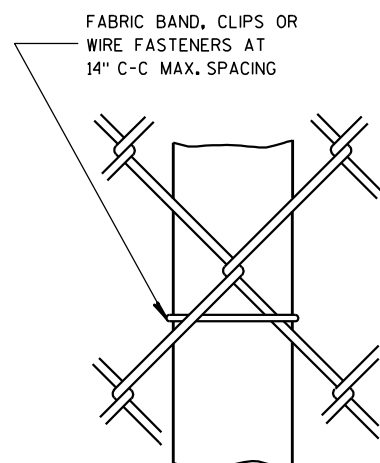
END POST &
CORNER POST

LINE POST

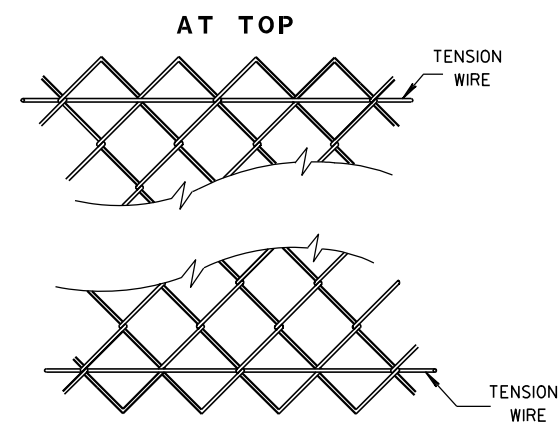
DETAILS OF FENCE ON WALL



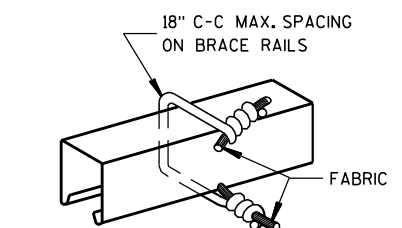
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



LINE POST
FABRIC FASTENER

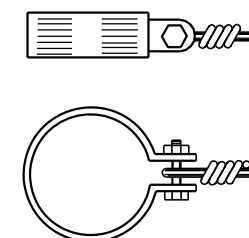


(B)



BRACE RAIL
FABRIC FASTENER

(A)



TENSION WIRE END CLAMP

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/19/2010

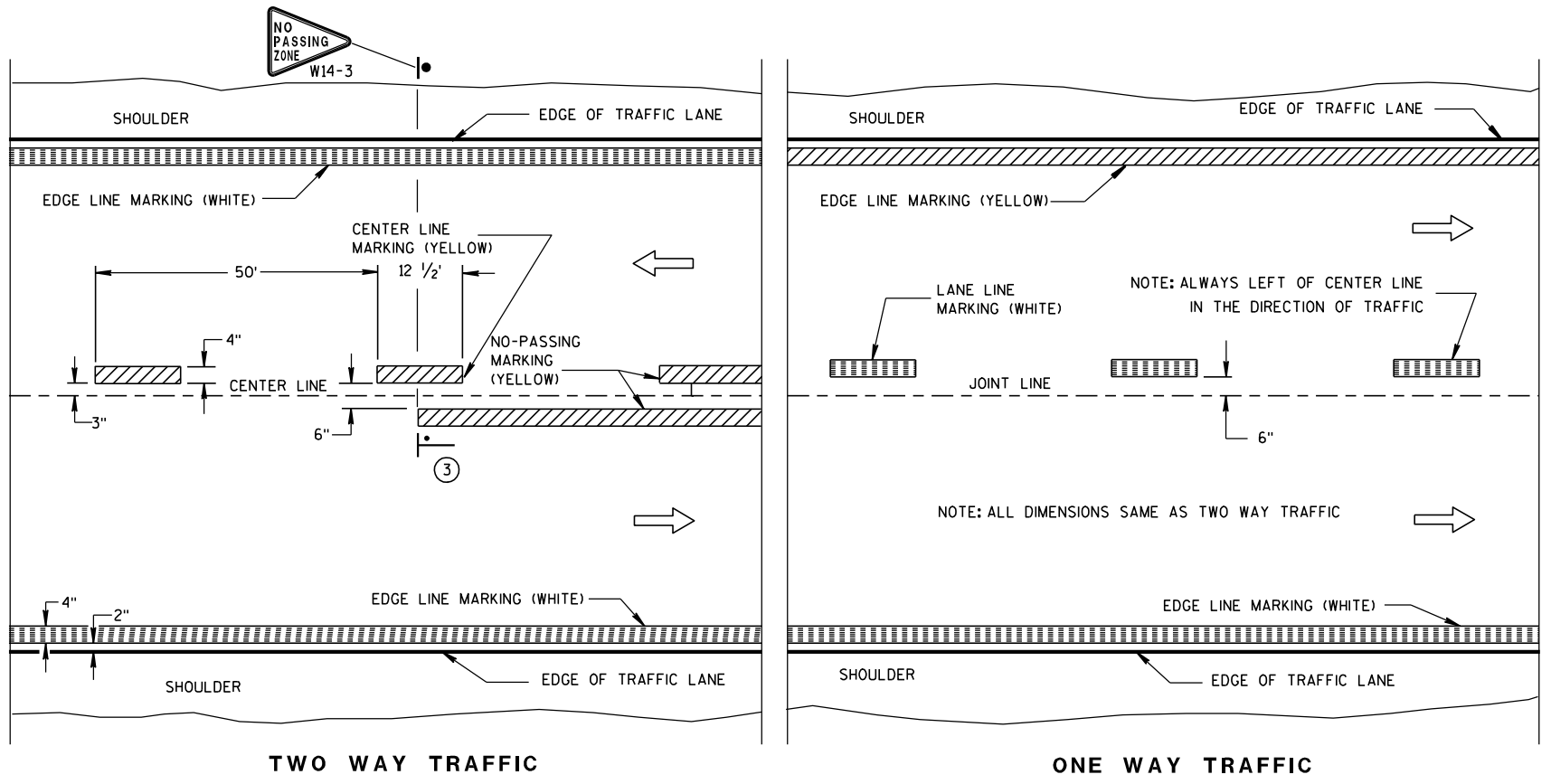
DATE

FHWA

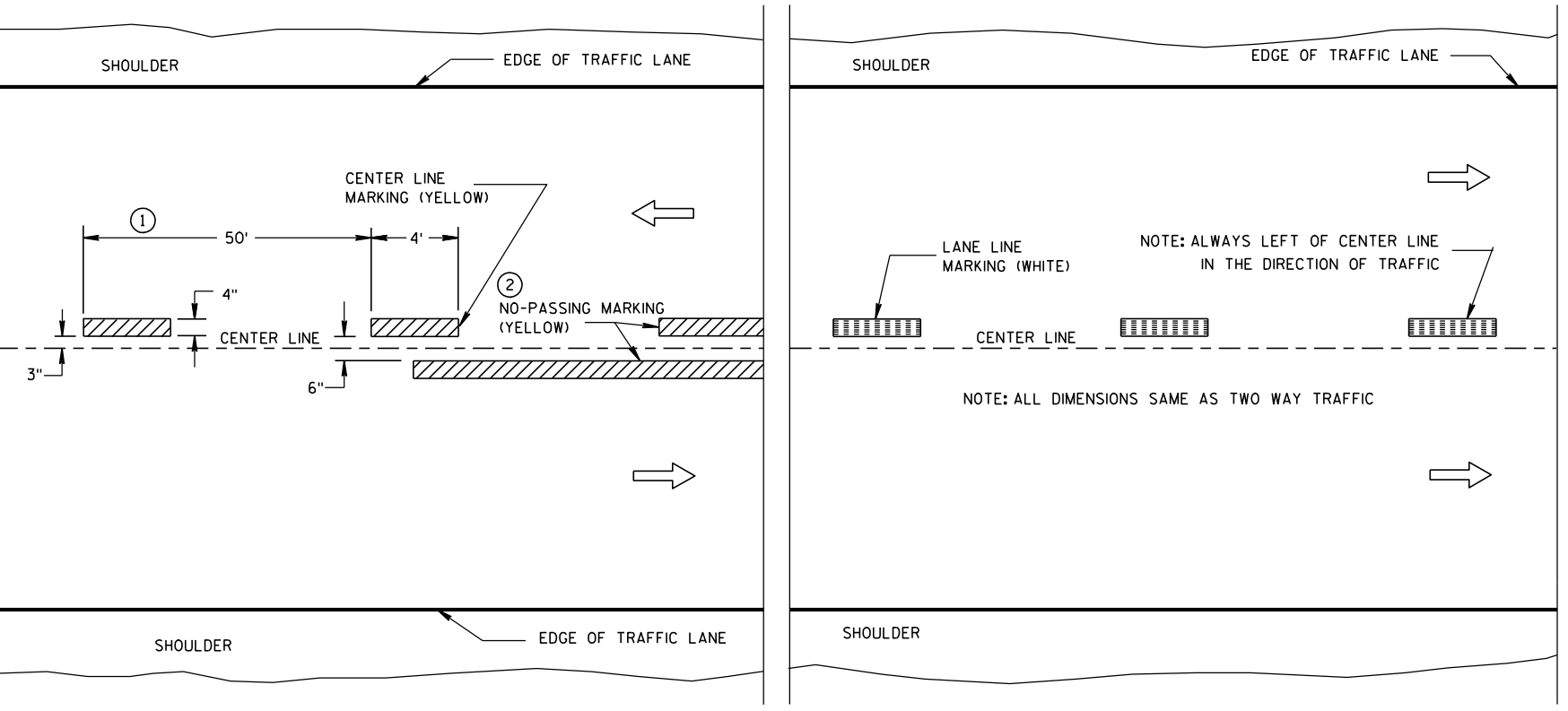
/S/ Jerry H. 7-
ROADWAY STANDARDS 136

ENGINEER

ENT



PERMANENT PAVEMENT MARKING



TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

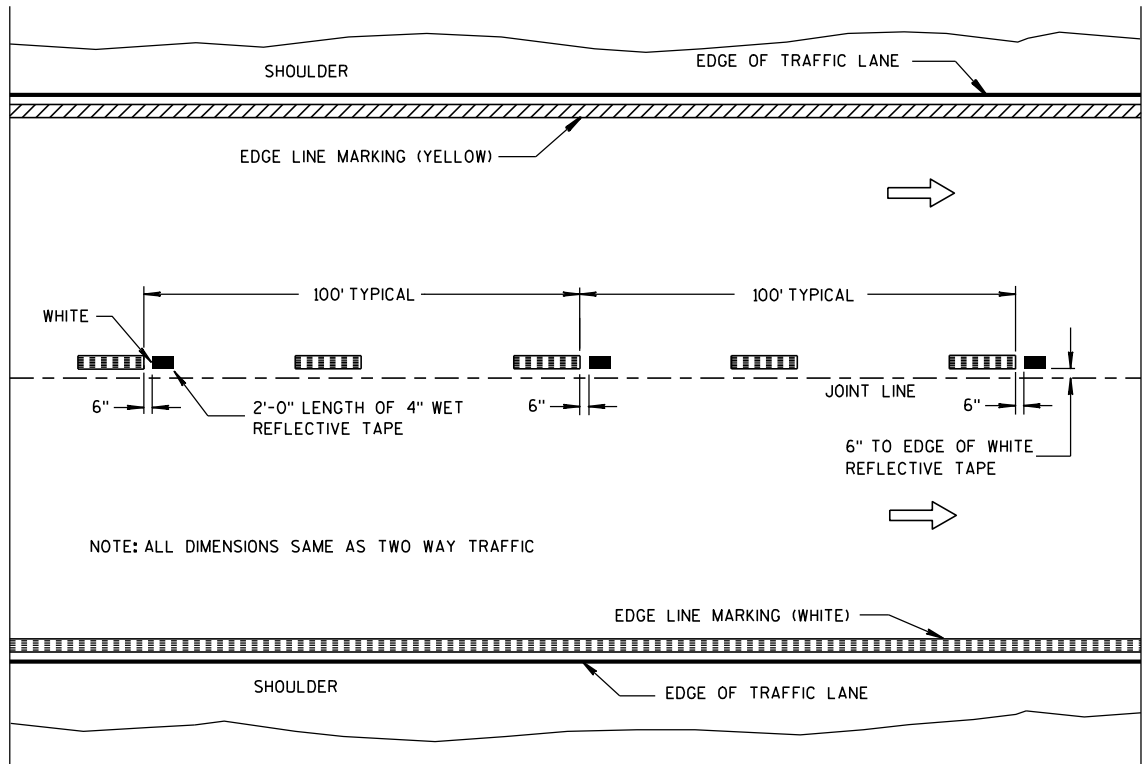
GENERAL NOTES

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.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

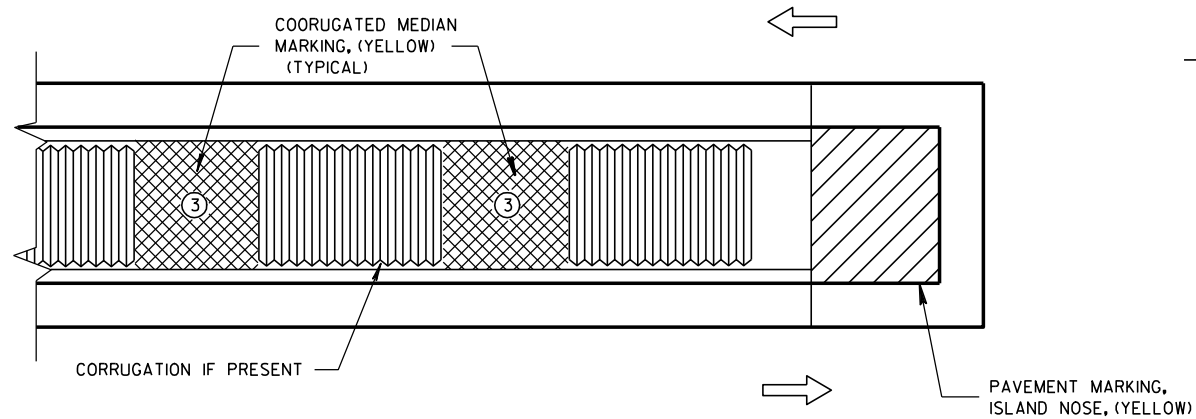


WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

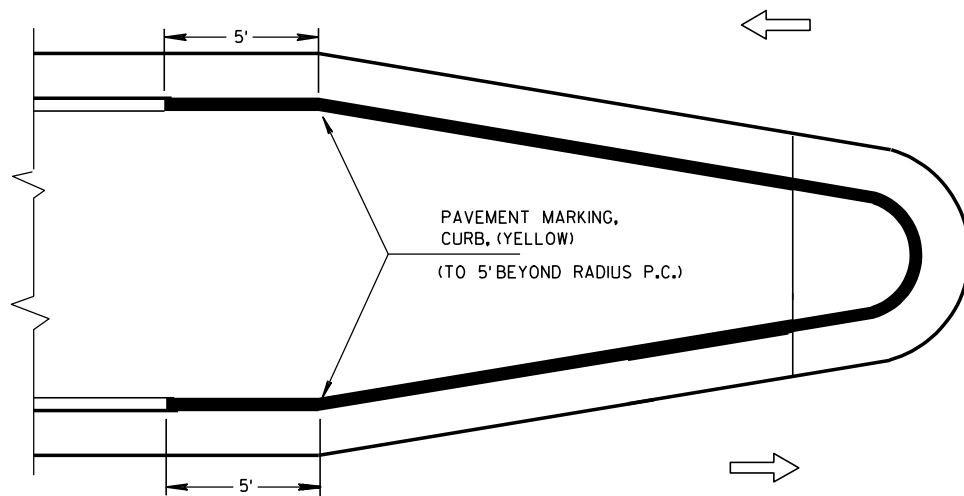
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

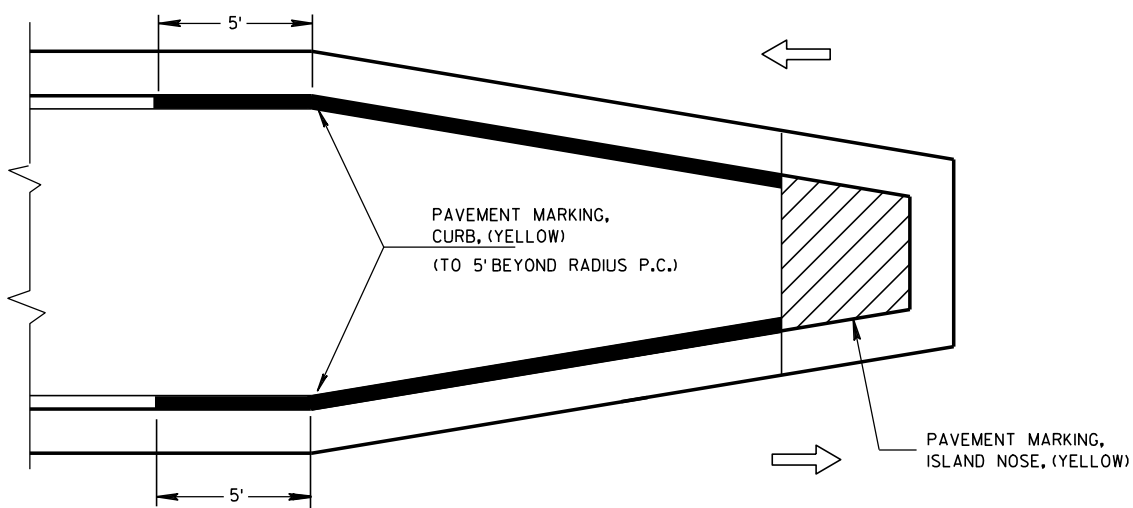
PAVEMENT MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6-23-11 DATE	/S/ Thomas N. Notbohm STATE TRAFFIC ENGINE 137 ESIGN
FHWA	



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

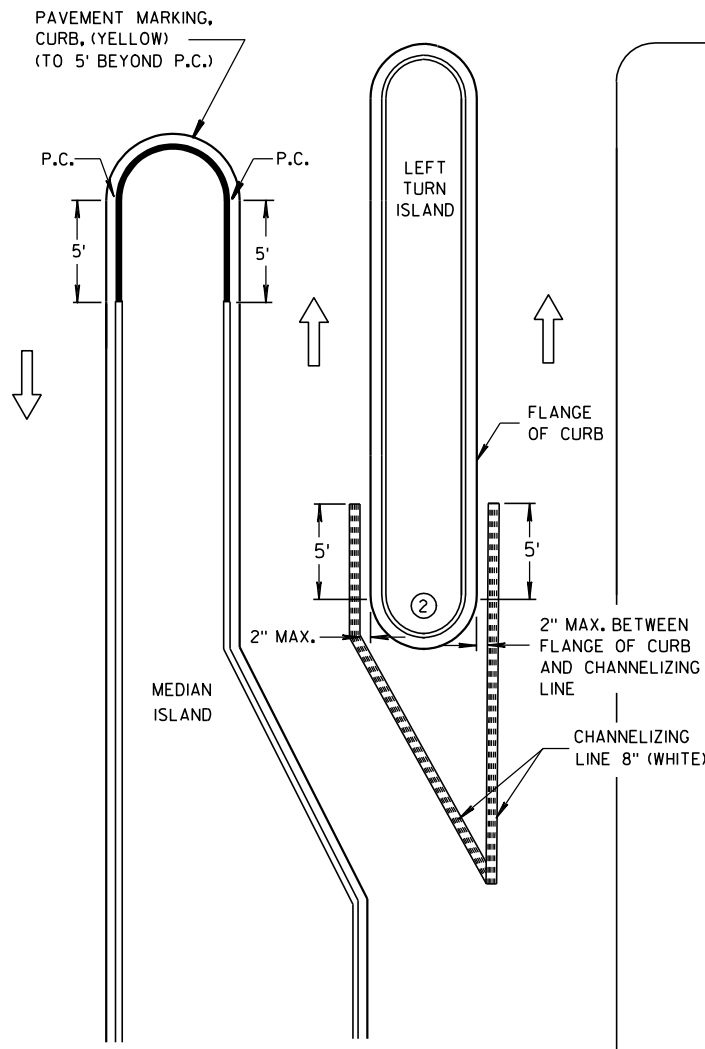


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

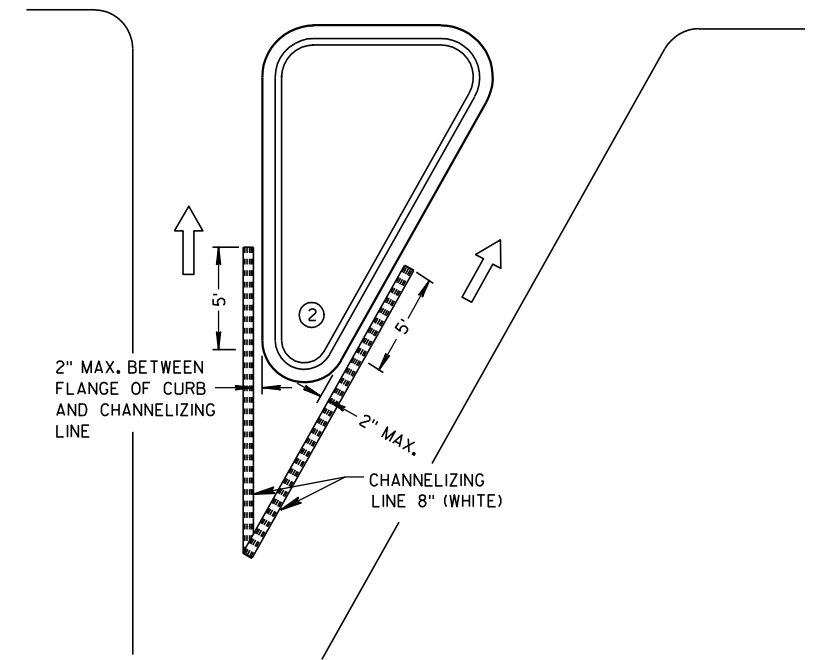
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

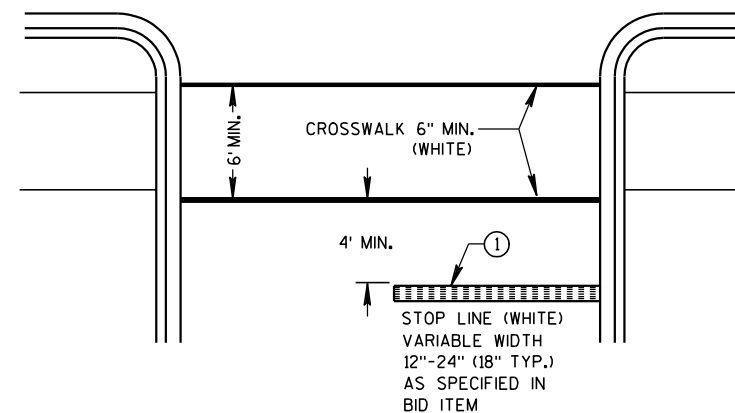
- ① STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- ③ WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED 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

LEGEND

- ISLAND NOSE MARKING
- CURB MAKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL



STOP LINE AND CROSSWALK

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TWO-LANE ROADWAY

SYMBOLS



WORK AREA



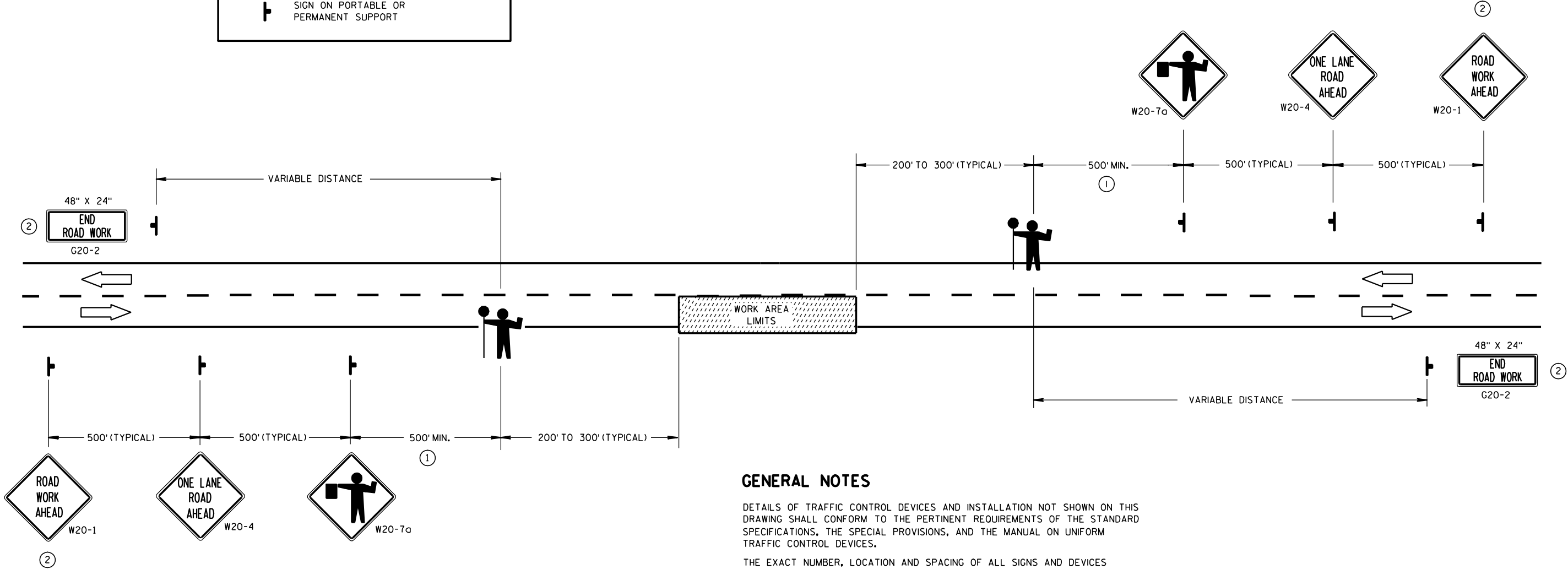
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



SIGN ON PORTABLE OR PERMANENT SUPPORT



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR 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.

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. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

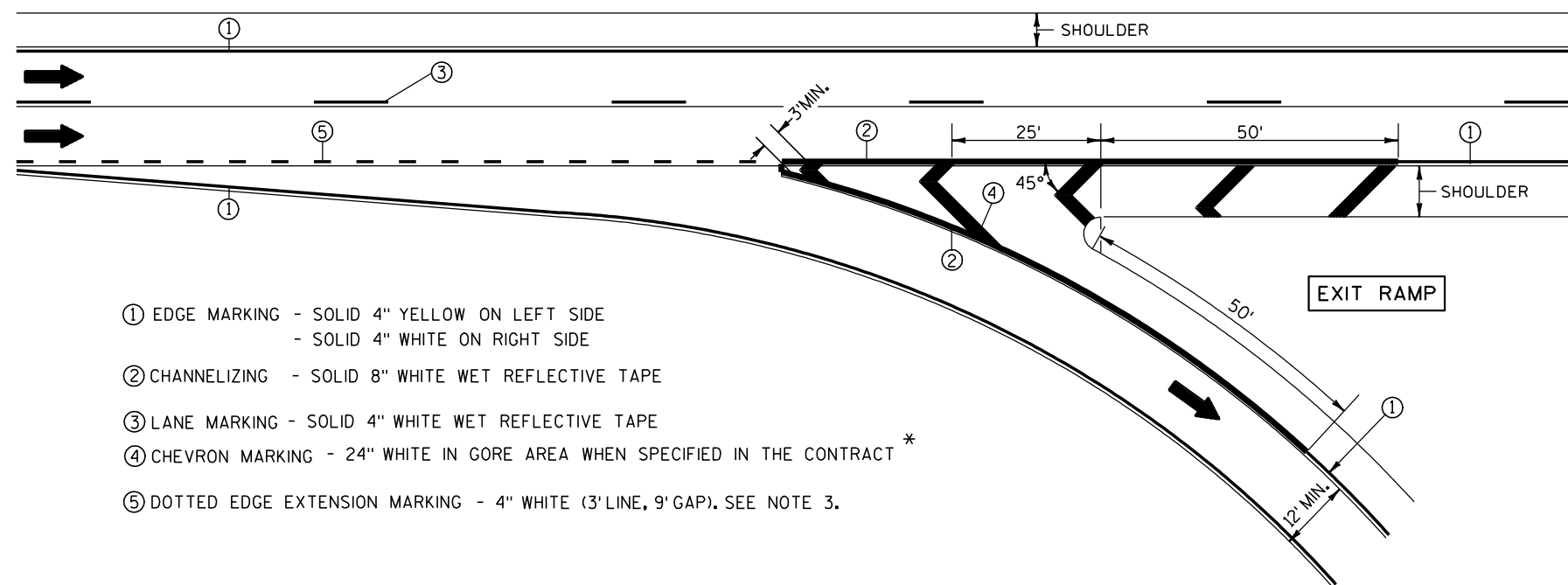
- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

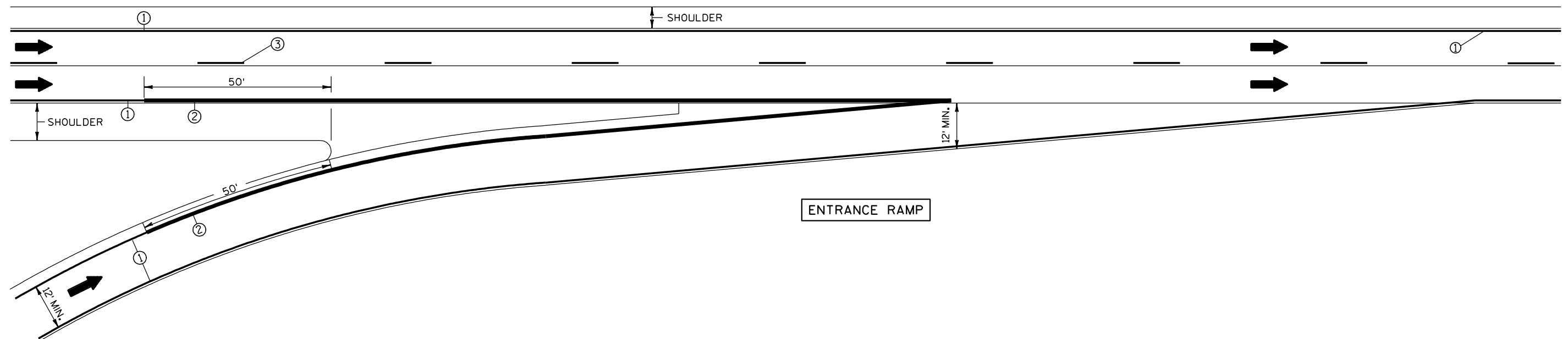
APPROVED	/S/ Thomas N. Nethehm
9/5/06	DATE
STATE TRAFFIC ENGINE 139	DESIGN

FHWA



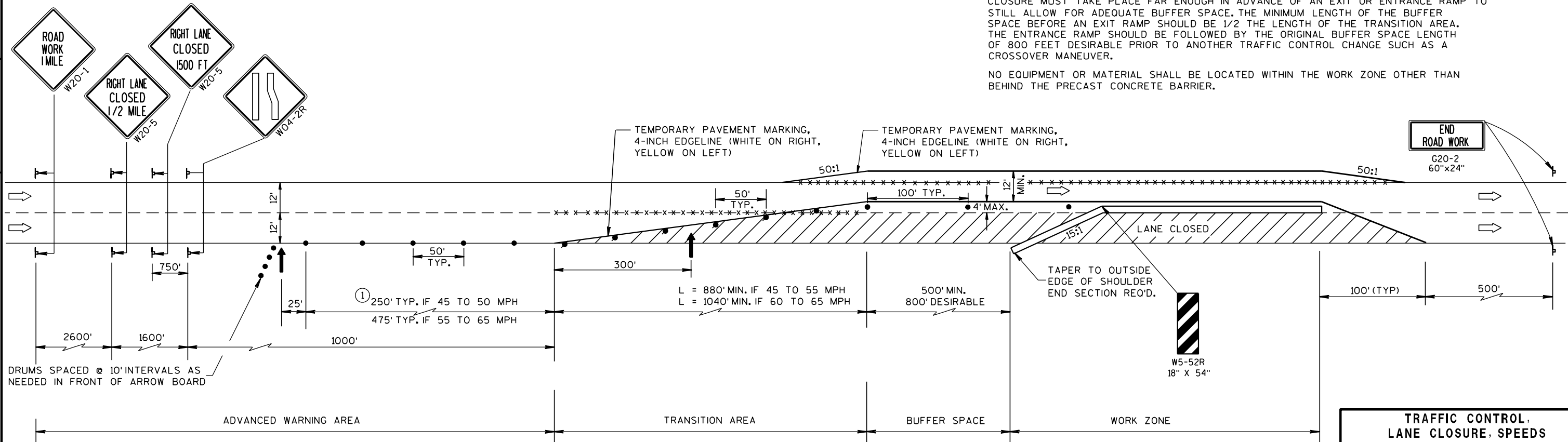
- NOTES:

* REFER TO DESIGN NOTES.



LEGEND

- POST WITH ATTACHED SIGN
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- REMOVING PAVEMENT MARKING
- TEMPORARY PRECAST CONCRETE BARRIER
- DIRECTION OF TRAFFIC
- WORK ZONE



GENERAL NOTES :

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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 DESIRABLE) CLEARANCE TO EXISTING SIGNS.

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.

① CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

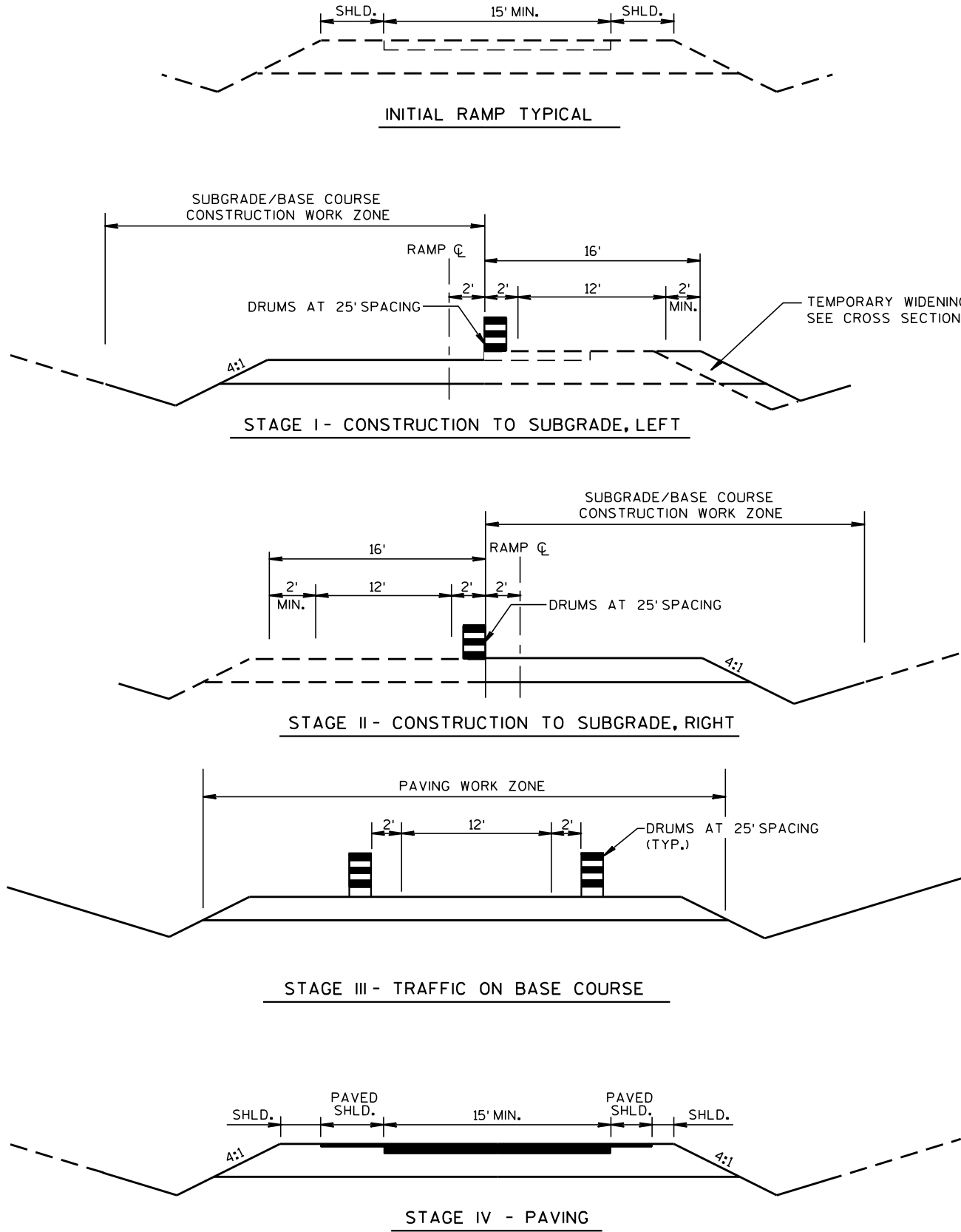
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE 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.

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED WITHIN THE WORK ZONE OTHER THAN BEHIND THE PRECAST CONCRETE BARRIER.

TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H. WITH BARRIER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7-14-94 DATE	/S/ Chester J. DIRECTOR, OFFICE (141 ic
FHWA	



GENERAL NOTES :

WORK SHALL BE SCHEDULED FOR ALL STAGES TO MINIMIZE INCONVENIENCE TO THE TRAFFIC USING THE RAMP WHILE IT IS ONLY BASE COURSE.

IN STAGE III, A MINIMUM 12' LANE WIDTH SHALL BE DELINEATED WITH DRUMS ALONG BOTH EDGES AT ALL TIMES UNTIL PAVED AND PAVEMENT MARKINGS ARE PLACED.

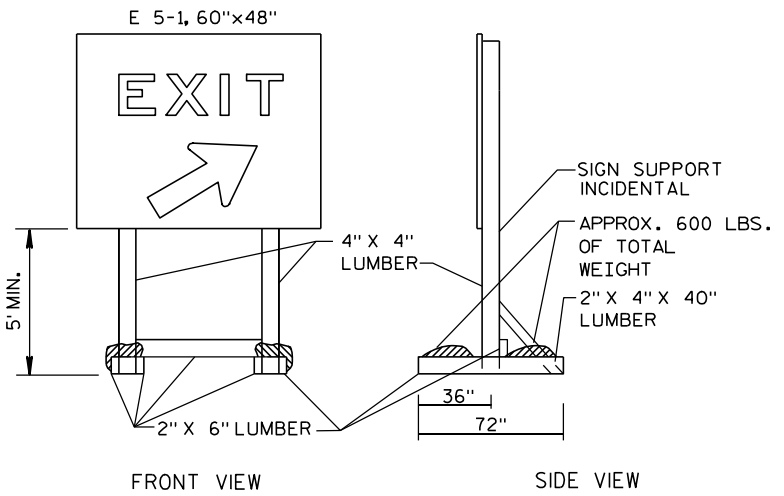
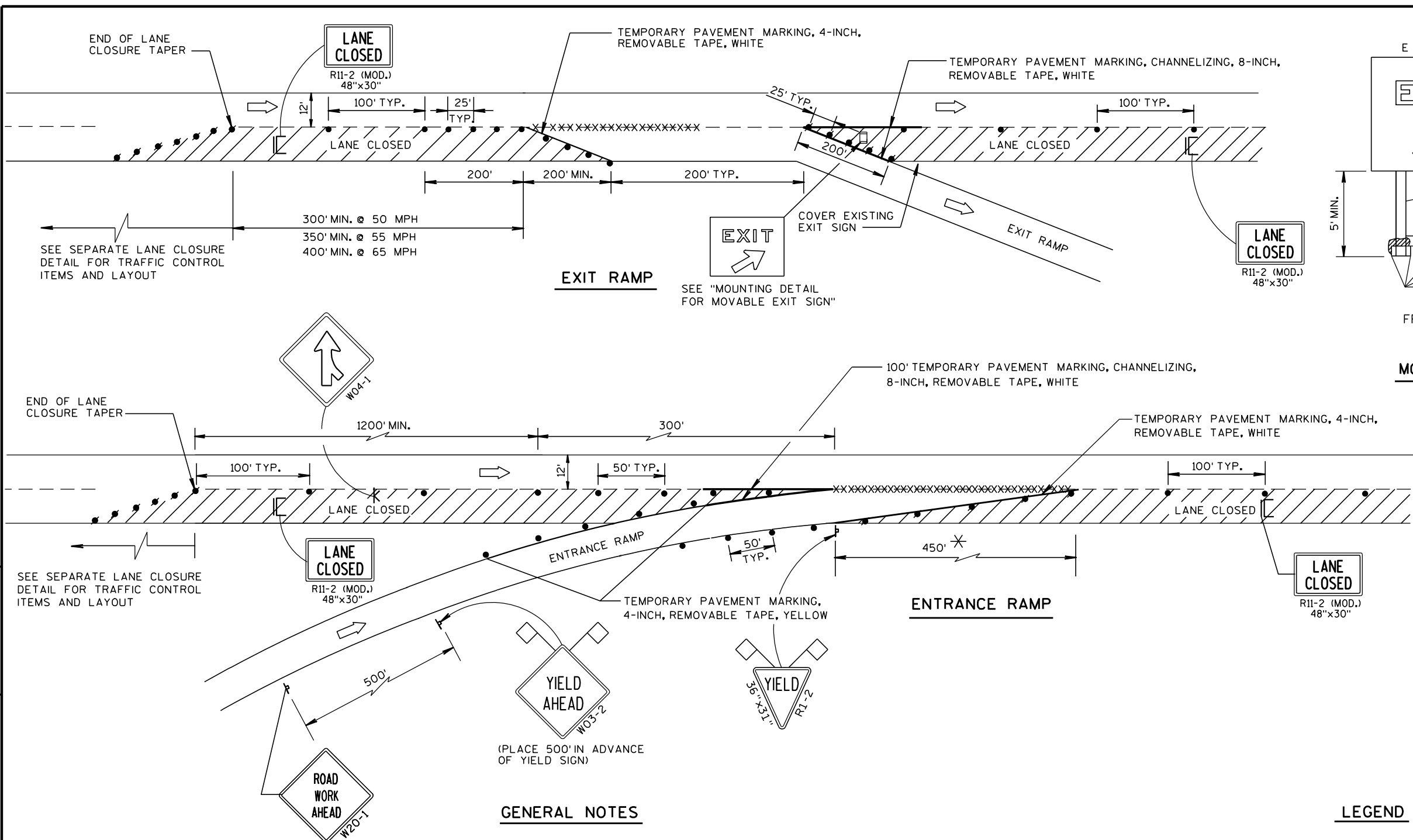
**TRAFFIC CONTROL,
RAMP CONSTRUCTION STAGING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 7-14-94 /S/ Chester J. [Signature]
DIRECTOR, OFFICE 142 IC
FHWA

6

- S.D.D. 15 D 12-2**



FRONT VIEW SIDE VIEW
NOTE: ALL LUMBER DIMENSIONS ARE NOMINAL
MOUNTING DETAIL FOR MOVABLE EXIT SIGN

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.

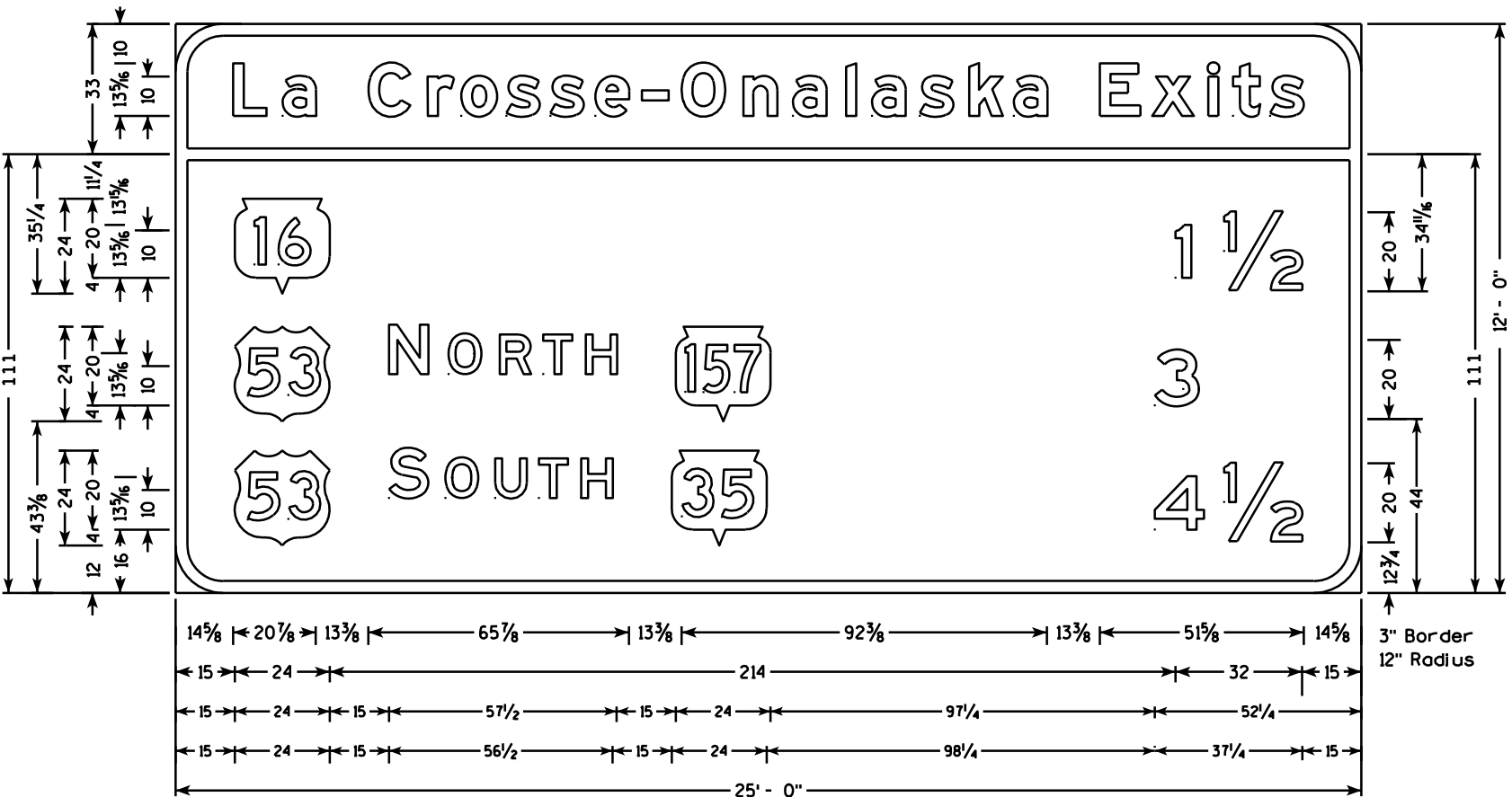
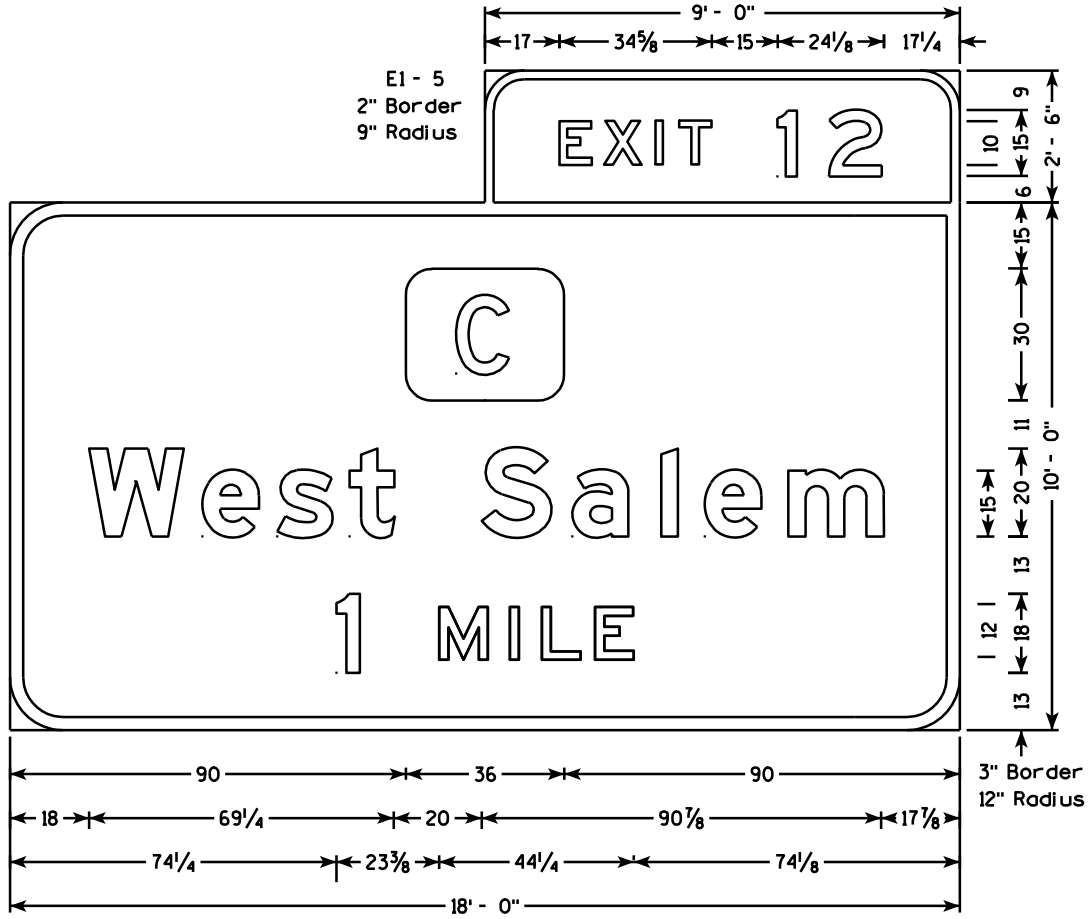
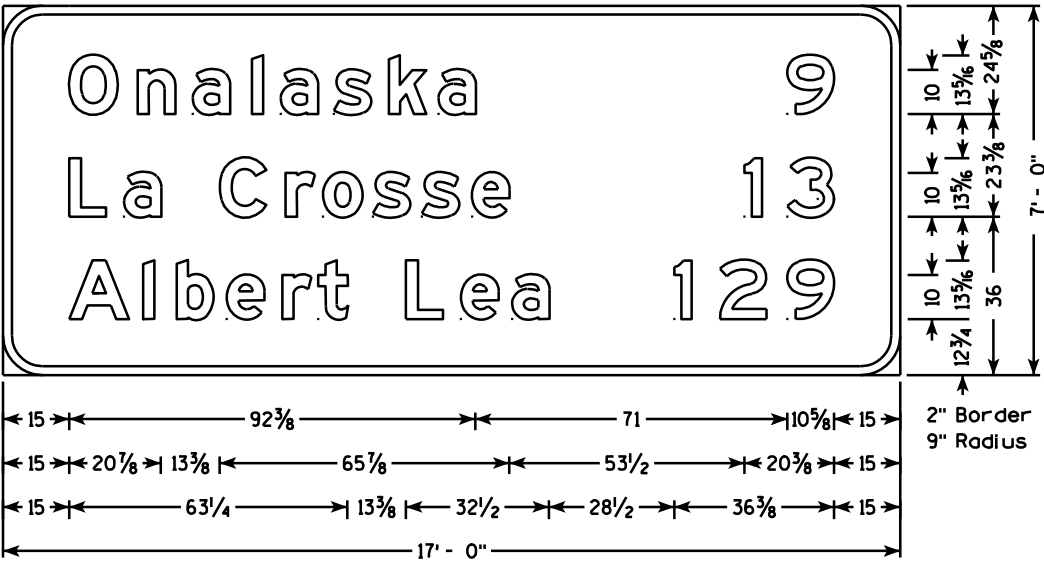
LEGEND

- 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	/S/ Chester J. ...	CHIEF SIGNS AND MAR 144
DATE			INER
FHWA			

NOTES

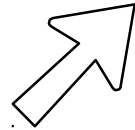
1. All Signs are Type I - Type SH Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E Modified



E1 - 5
2" Border
9" Radius

EXIT 12

C
West Salem



87 36 129
14 7/8 69 1/4 20 90 7/8 14 28 15
21' - 0"

2" Border
9" Radius

NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E Modified

E1 - 5
2" Border
9" Radius

EXIT 5

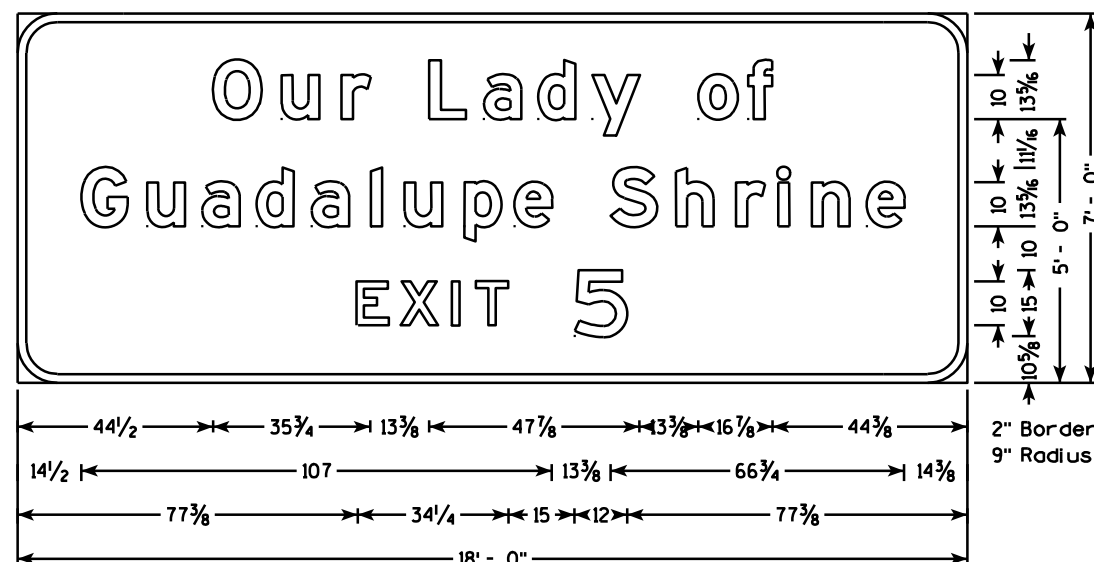
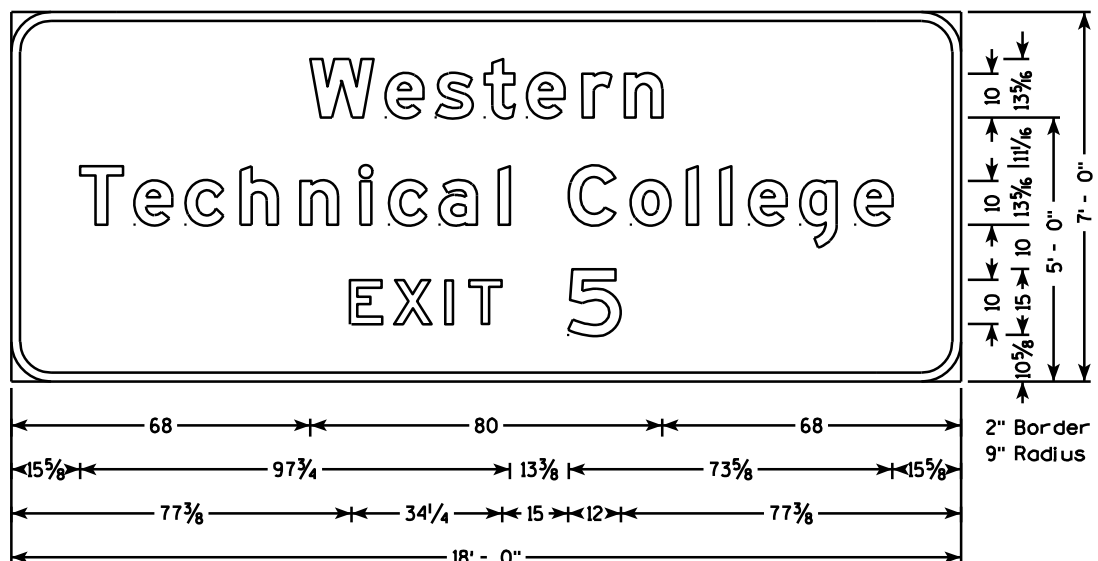
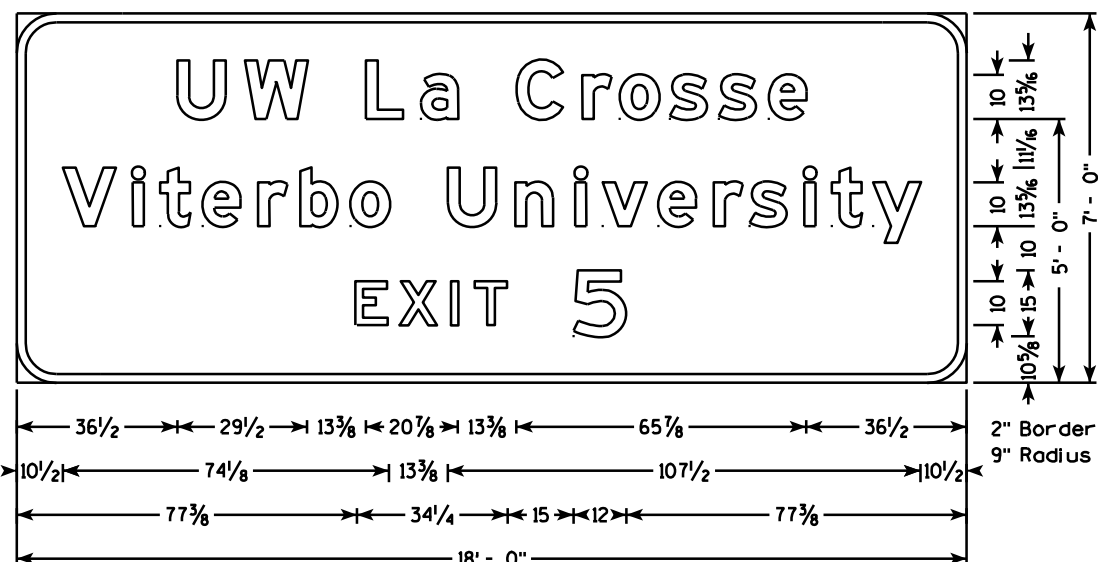
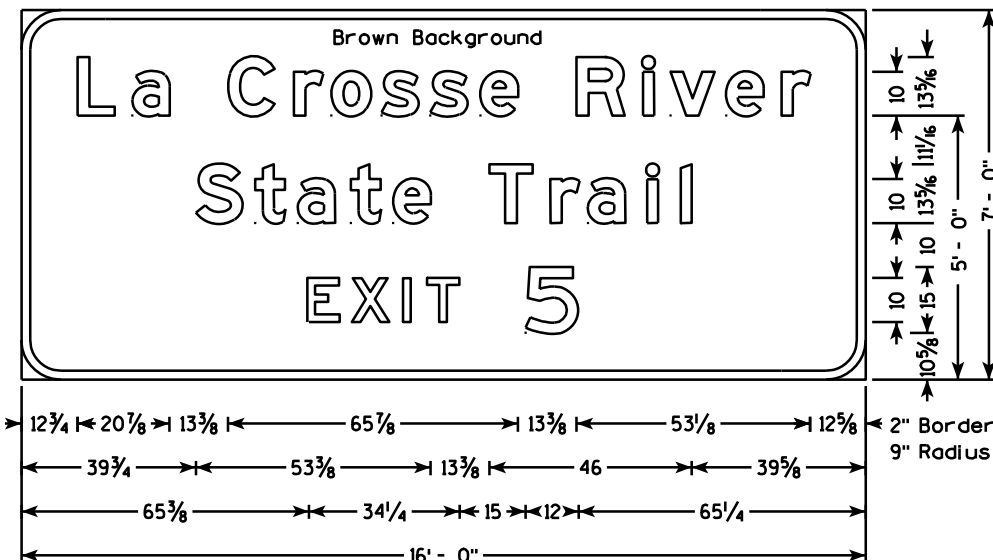
16
La Crosse
Onalaska
1 MILE

78 36 78
21 1/8 31 3/8 20 98 3/8 21 1/8
26 1/2 139 26 1/2
62 7/8 23 3/8 44 1/4 62 7/8
16' - 0"

3" Border
12" Radius

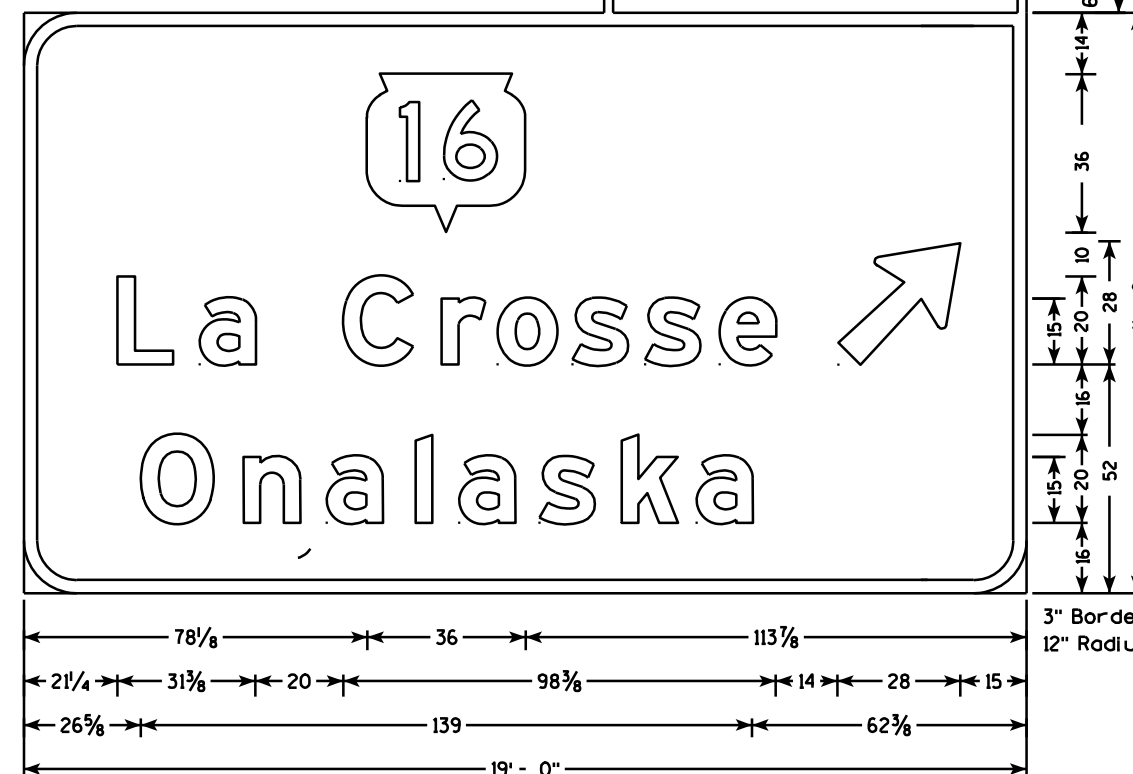
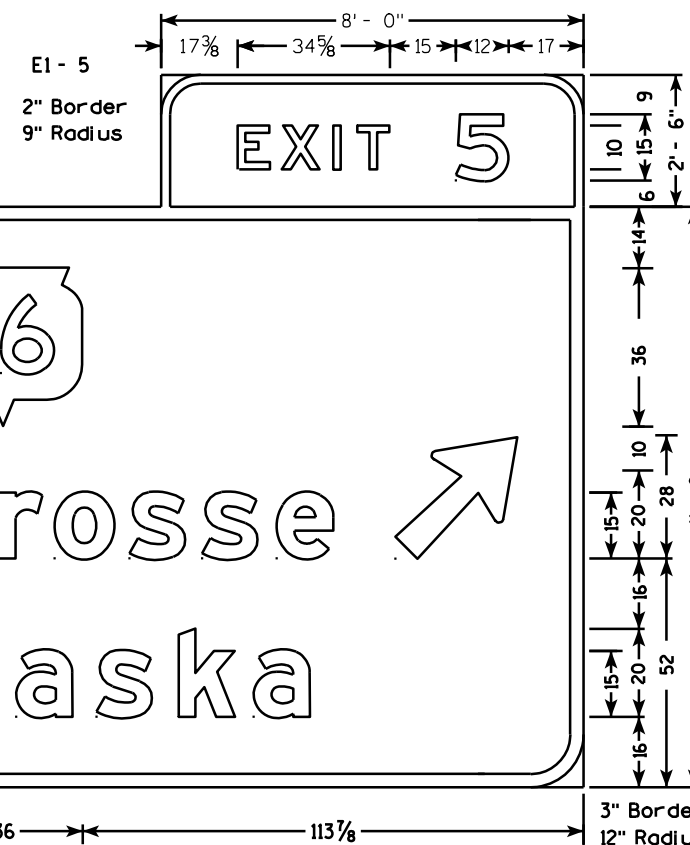
7

7



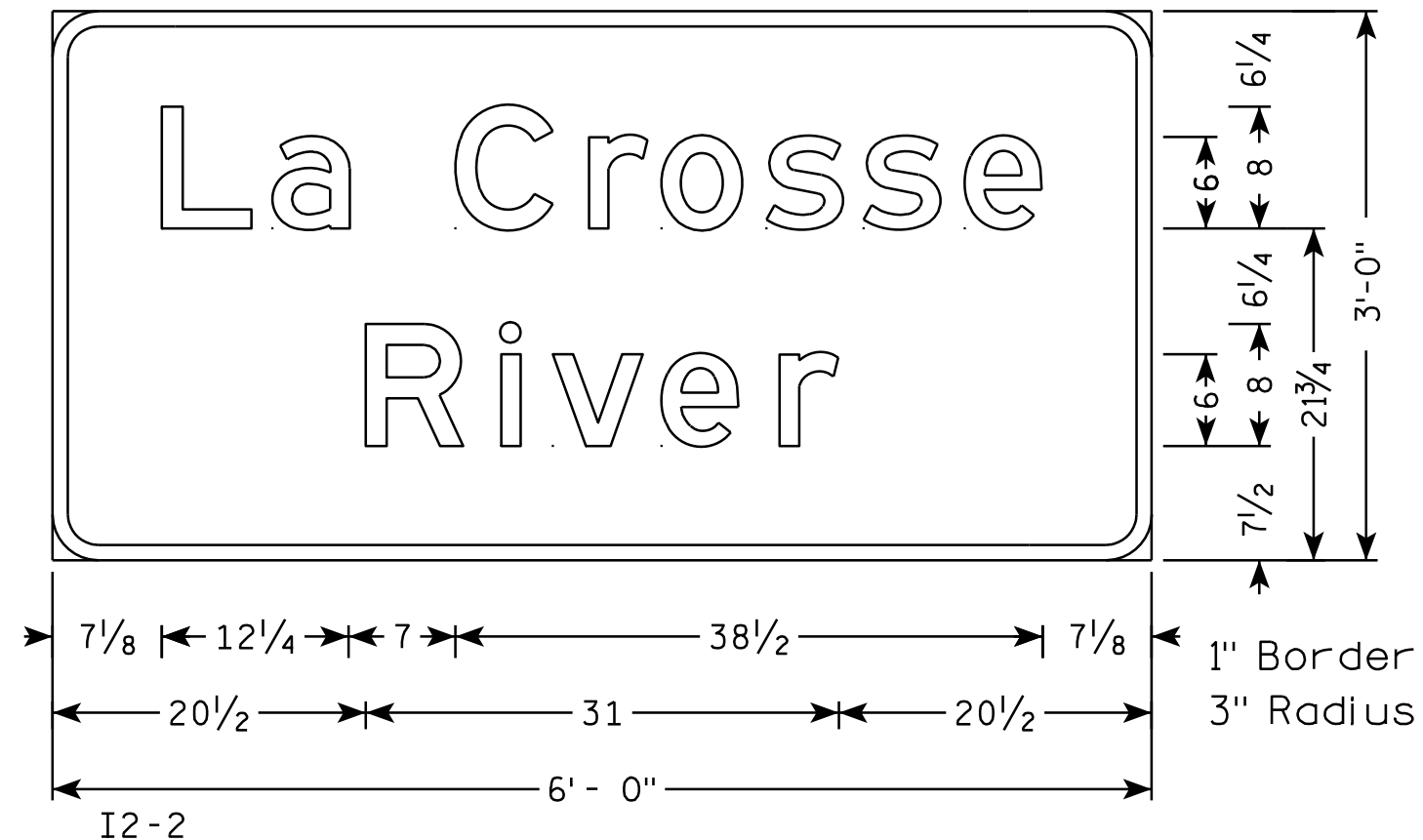
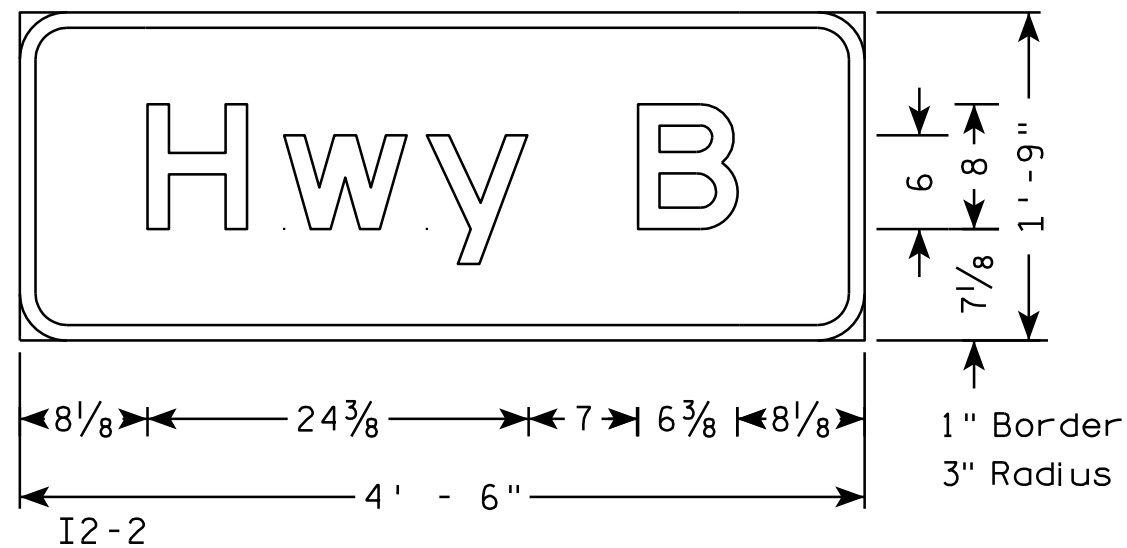
NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green except as noted
Message - White
3. Message Series - E Modified

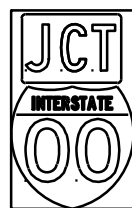


NOTES

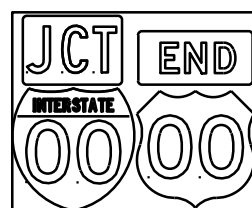
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E



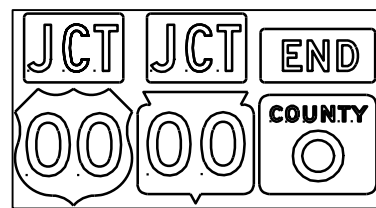
TYPICAL ASSEMBLIES



J1-1



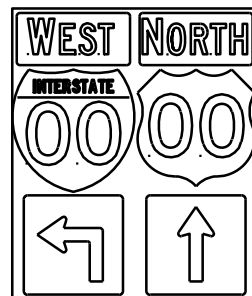
J1-2



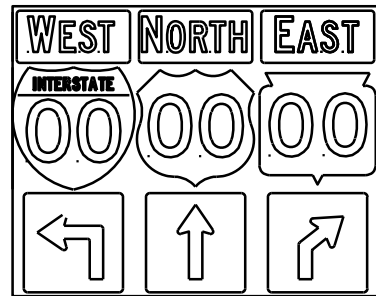
J1-3



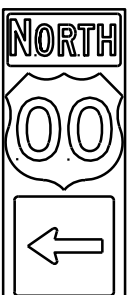
J2-1



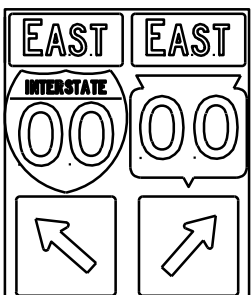
J2-2



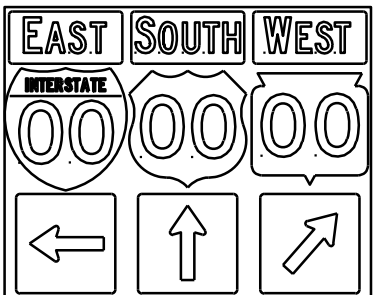
J2-3



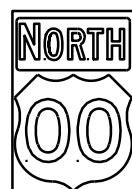
J3-1



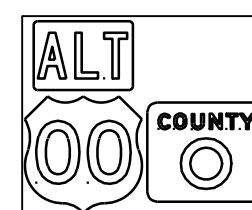
J3-2



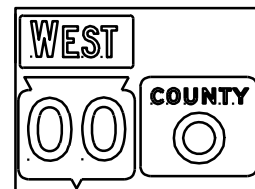
J3-3



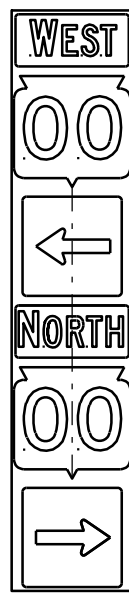
J4-1



J4-2

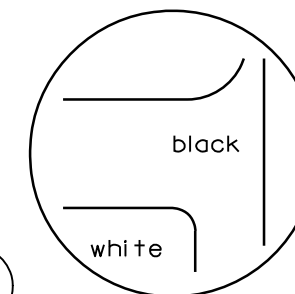
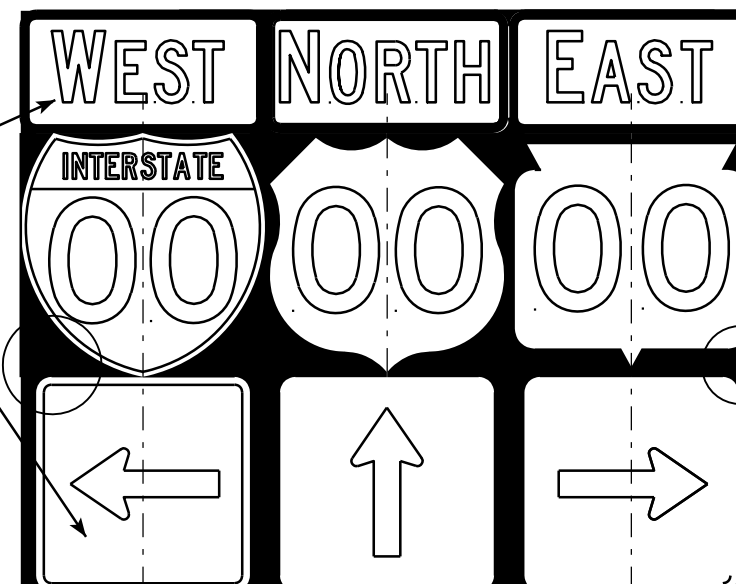
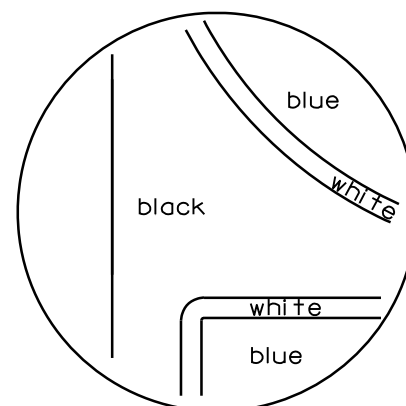


J4-2



JV

[blue background with interstate]



[black background]



J13-1



J12-1



J32-1



J33-1



J23-1



J22-1

NOTES

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Black Non-reflective
Message - see Note 5
- Message Series - See Note 5
- Corners shall be square since base material is plywood.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- 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.
- 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.
- 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.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (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.

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
For State Traffic Engineer

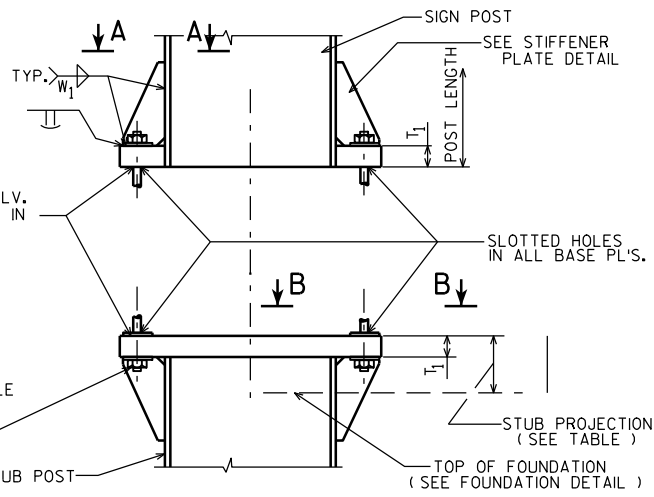
DATE 10/21/09

PLATE NO. A2-1S.6

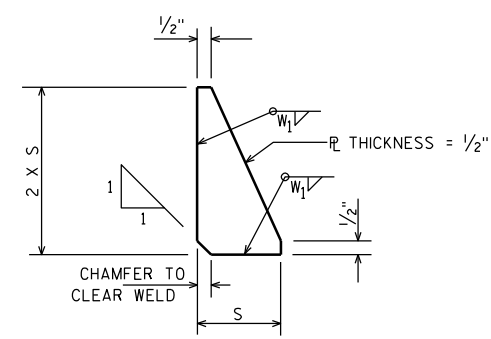
PROJECT NO:

SHEET NO: 149

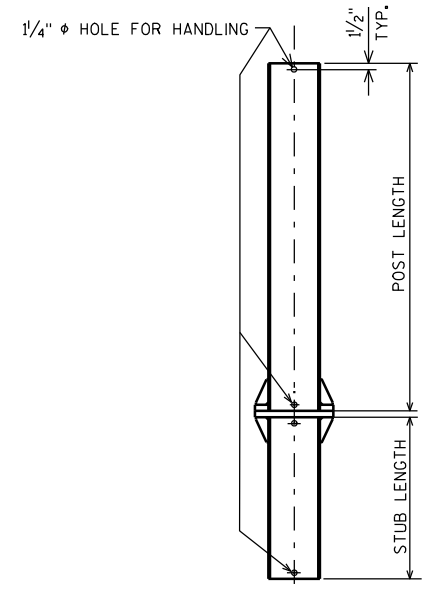
E



SIGN POST AND STUB POST ELEVATION



STIFFENER PLATE DETAIL
(SEE TABLE FOR DIMENSIONS)



POST DETAIL

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

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

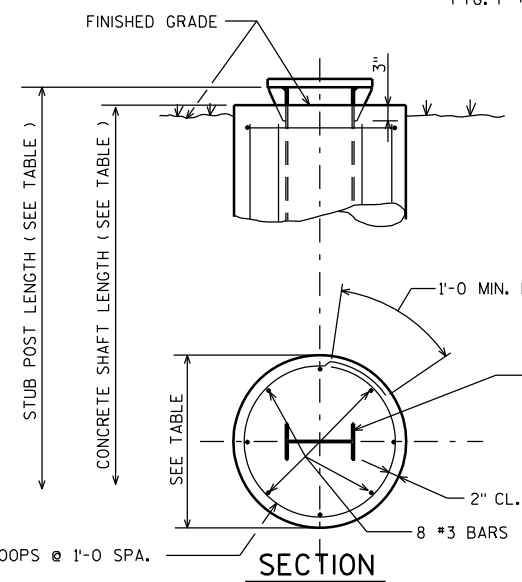
REINF.	TYPE	#3	#4
⑦	A	8 @ 4'-5"	5 @ 6'-3"
	B	8 @ 6'-5"	7 @ 6'-3"
	C	8 @ 6'-11"	7 @ 6'-3"
	D	8 @ 7'-5"	8 @ 6'-3"
	E	8 @ 7'-11"	9 @ 6'-3"

		BASE CONNECTION DATA TABLE											FOUNDATION DATA				K
TYPE	DIMENSION POST SIZE	BOLT SIZE & TORQUE	A	B	C	D	E	T ₁	T ₄	W ₁	R	S	STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	
④	A	W10"X12.0 #/FT.	¾" φ @ 75#-FT.	5¼"	1'-0⅜	⅞"	3½"	⅞"	1"	⅜"	⅝" ⅝"	2⅝"	3'-6	3"	2'-0 φ	5'-0	76.0#
④	B	W12"X16.0 #/FT.	⅞" φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1¼"	¼"	⅝" ⅝"	3"	5'-6	3"	2'-0 φ	7'-0	146.5#
	C	W12"X19.0 #/FT.	⅞" φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅝"	⅝" ⅝"	3"	6'-0	3"	2'-0 φ	7'-6	182.1#
	D	W12"X22.0 #/FT.	⅞" φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅜"	⅝" ⅝"	3"	6'-6	3"	2'-0 φ	8'-0	210.5#
③	E	W12"X26.0 #/FT.	1" φ @ 90#-FT.	7"	1'-4¼"	1¼"	4"	1½"	1½"	⅝"	⅝" ⅝"	3"	7'-0	3"	2'-0 φ	8'-6	293.0#

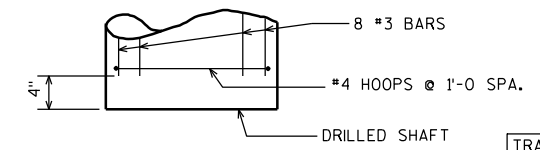
① ⑥ ①

STRUCTURAL CARBON STEEL PAY WTS. (1POST) = K + (POST LENGTH X POST WT.)
"K" INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

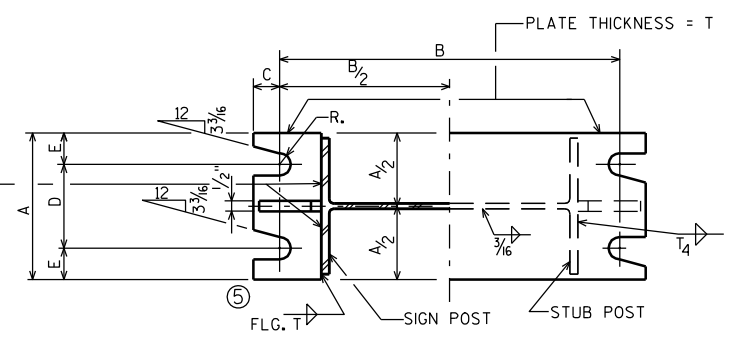
FTG. T + 1/16
FTG. T + 1/16



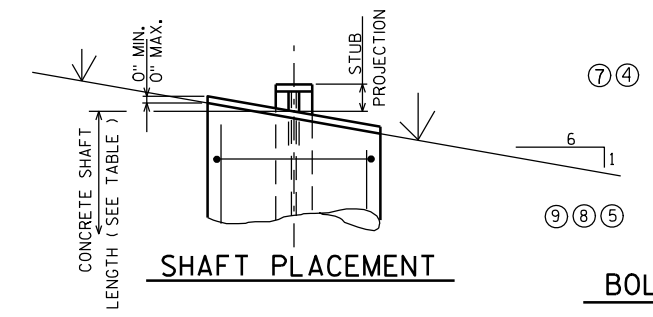
FOUNDATION DETAIL



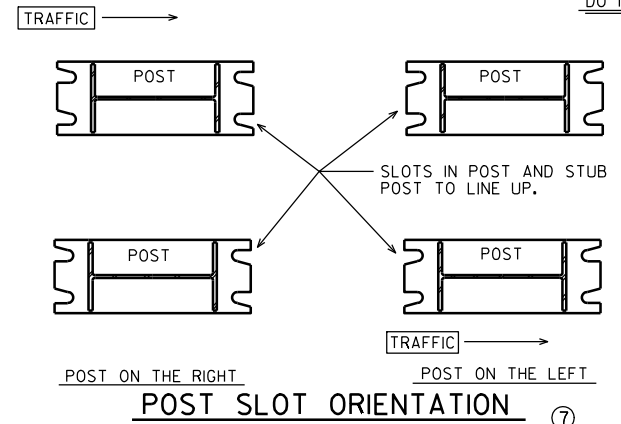
FOUNDATION DETAIL



SECTION A-A SECTION B-B



SHAFT PLACEMENT



POST SLOT ORIENTATION

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 Δ 140 Δ25 P.S.F. MIN.
ALLOWABLE SOIL PRESSURE = 1/2 T / 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.
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPICE 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.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 4/26/11 PLATE NO. A3-1.13

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 PL. WASHERS

④ 10-19-79 POST A & B, A572 GR. 50, & K

② 11-28-78 "K" ③ 4-23-79 TYPE "E"

① 5-4-78 T₁ • T₂ & W₁

NO. DATE REVISION

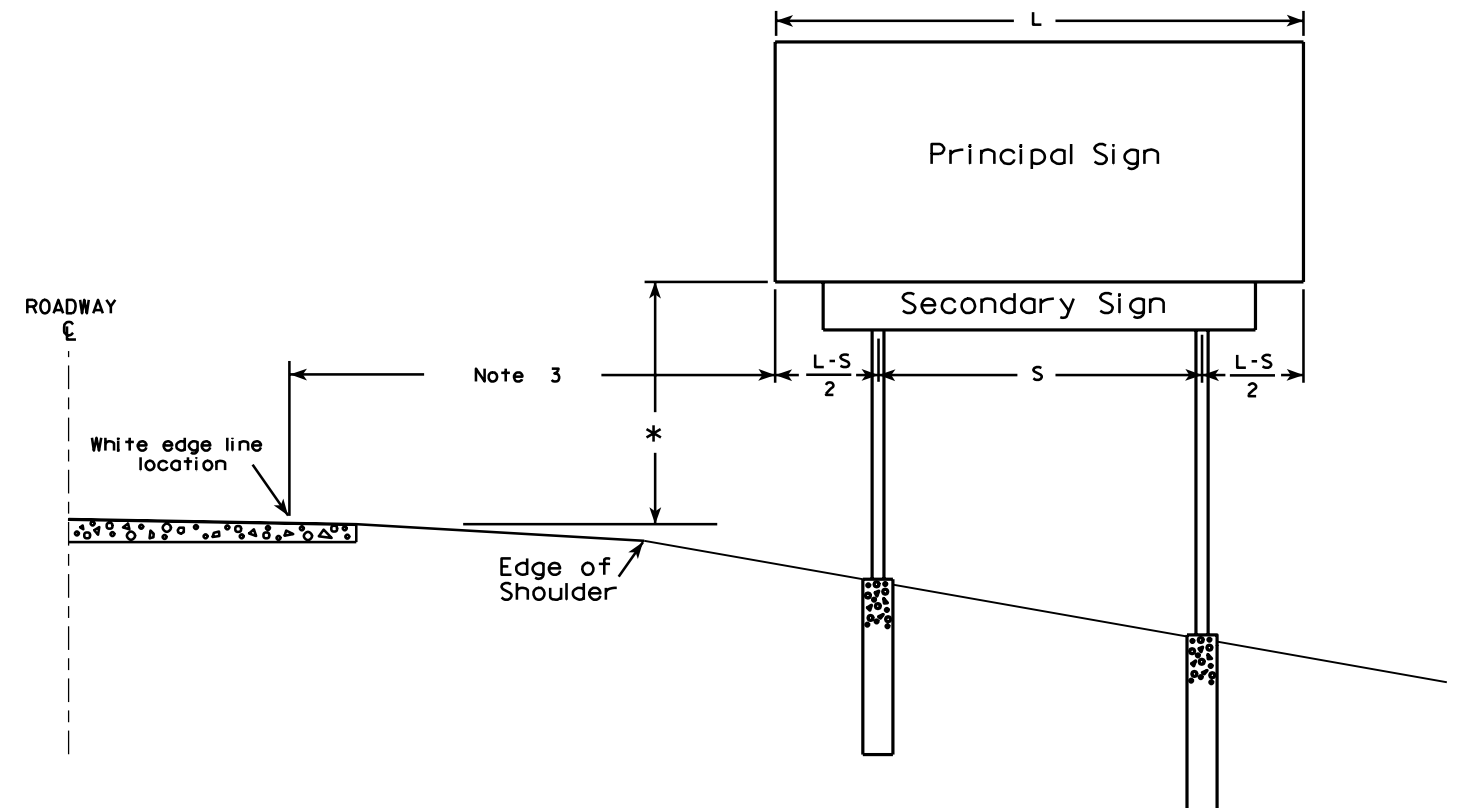
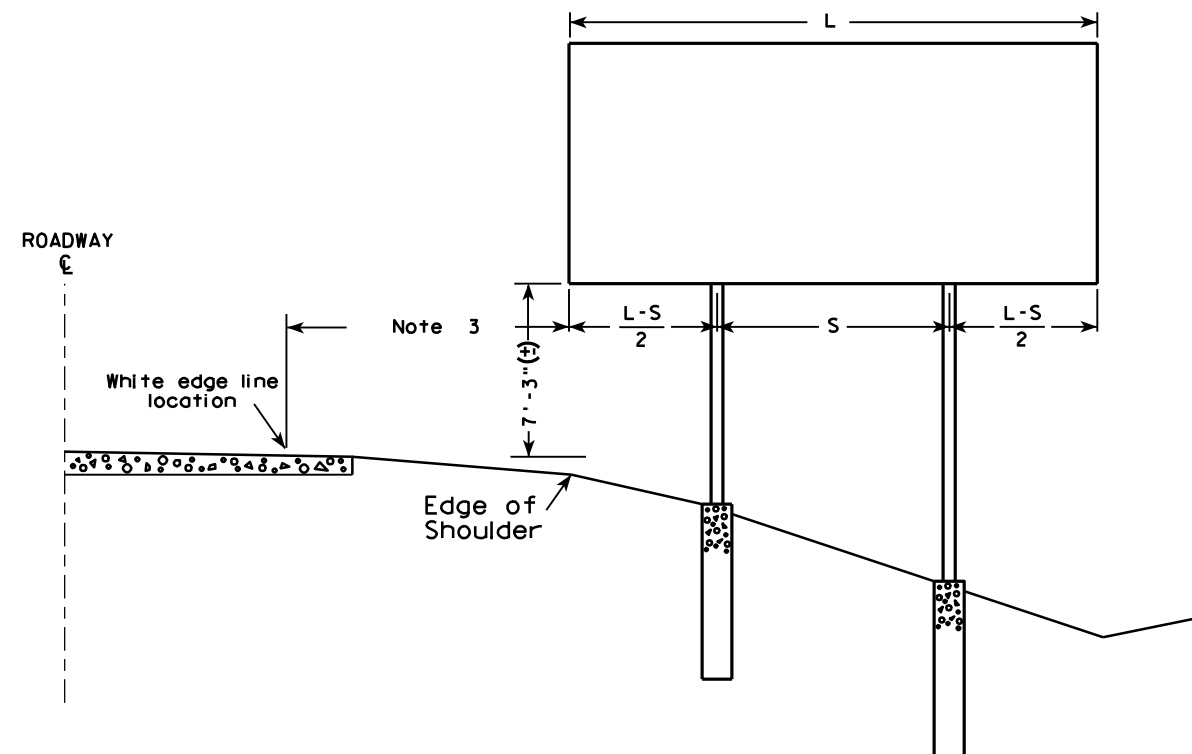
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

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



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" (±).

TYPICAL INSTALLATION OF TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

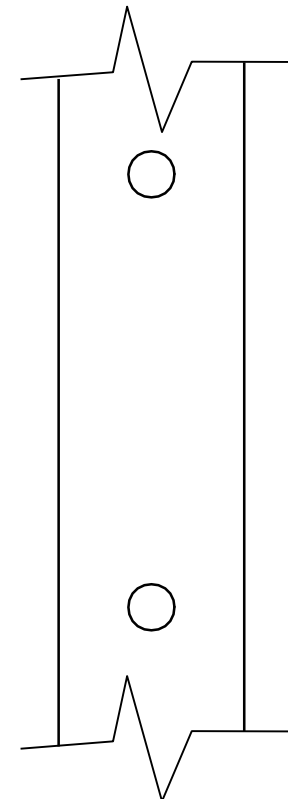
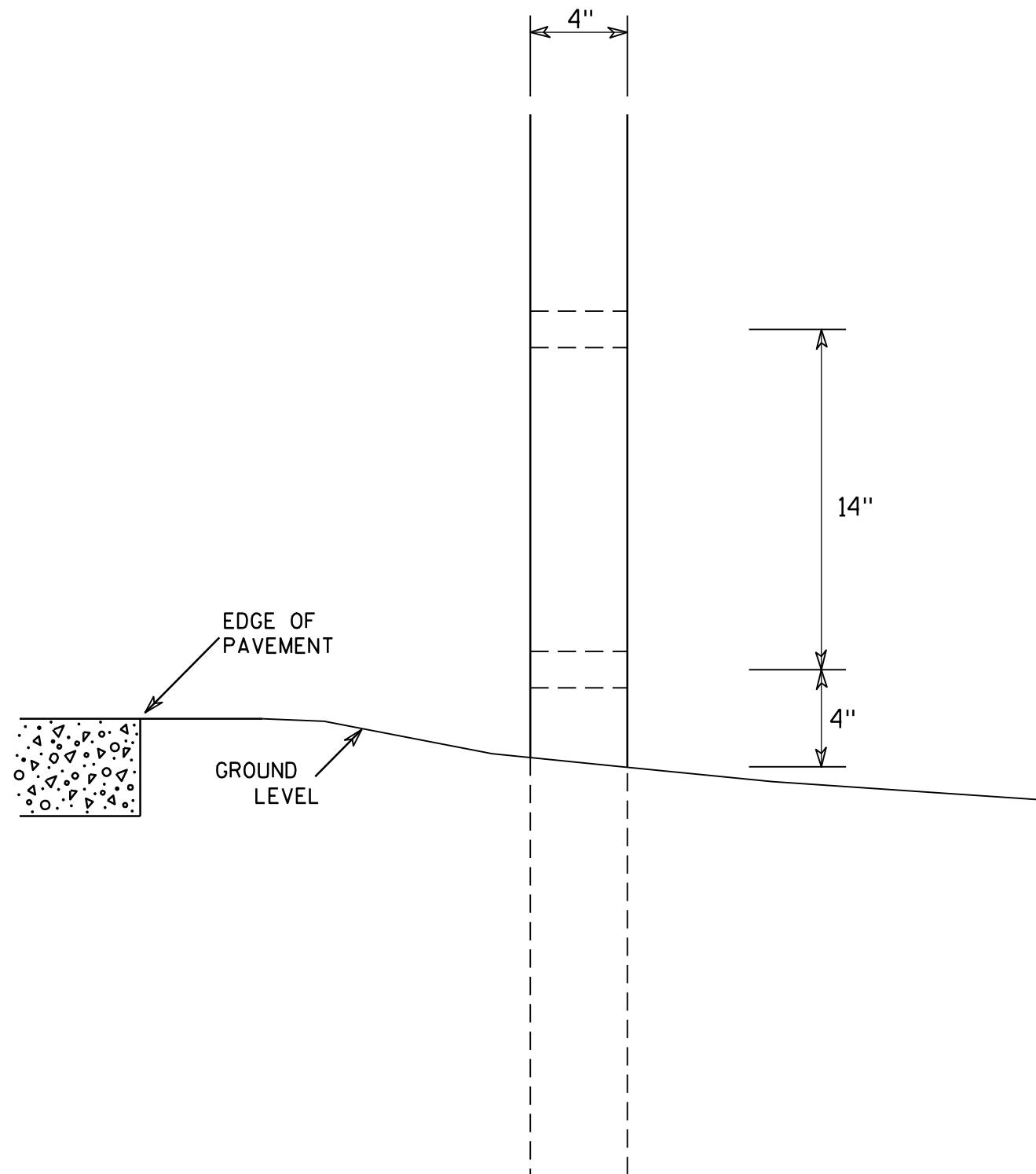
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/02/08 PLATE NO. A4-1.9

PROJECT NO:

SHEET NO: 151

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.

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

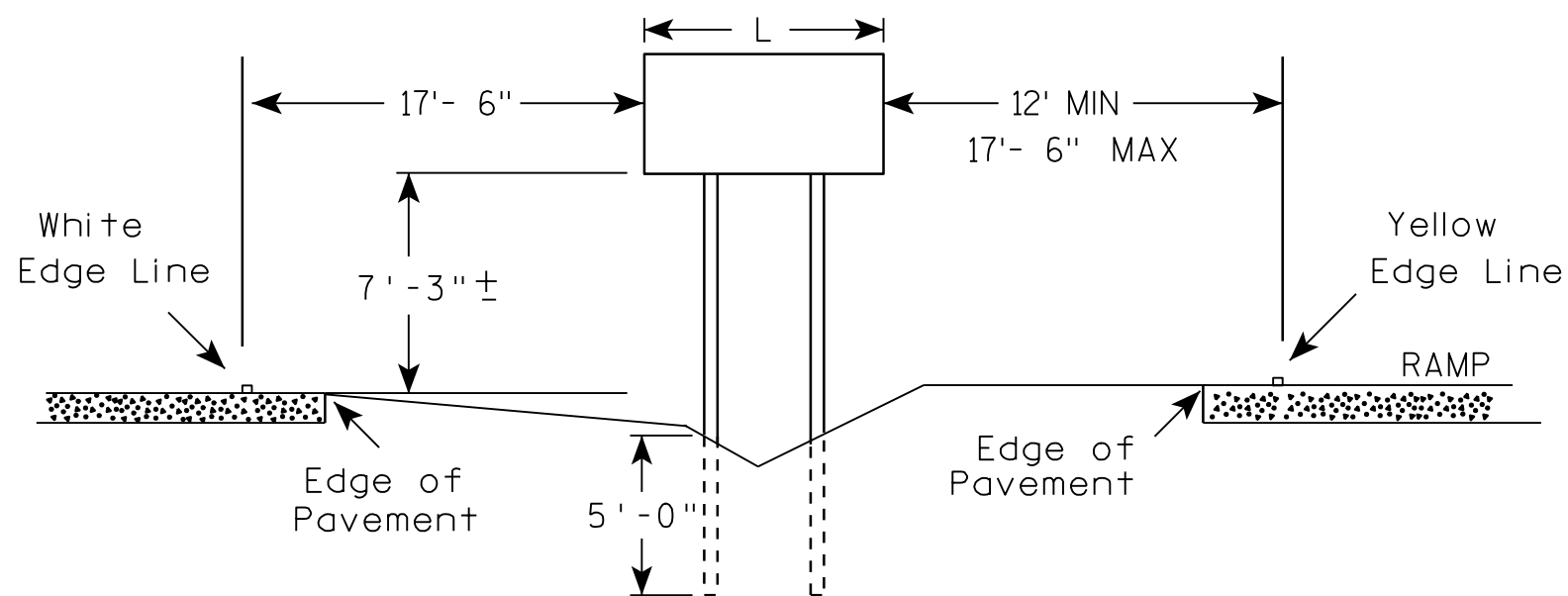
PROJECT NO:

HWY:

COUNTY:

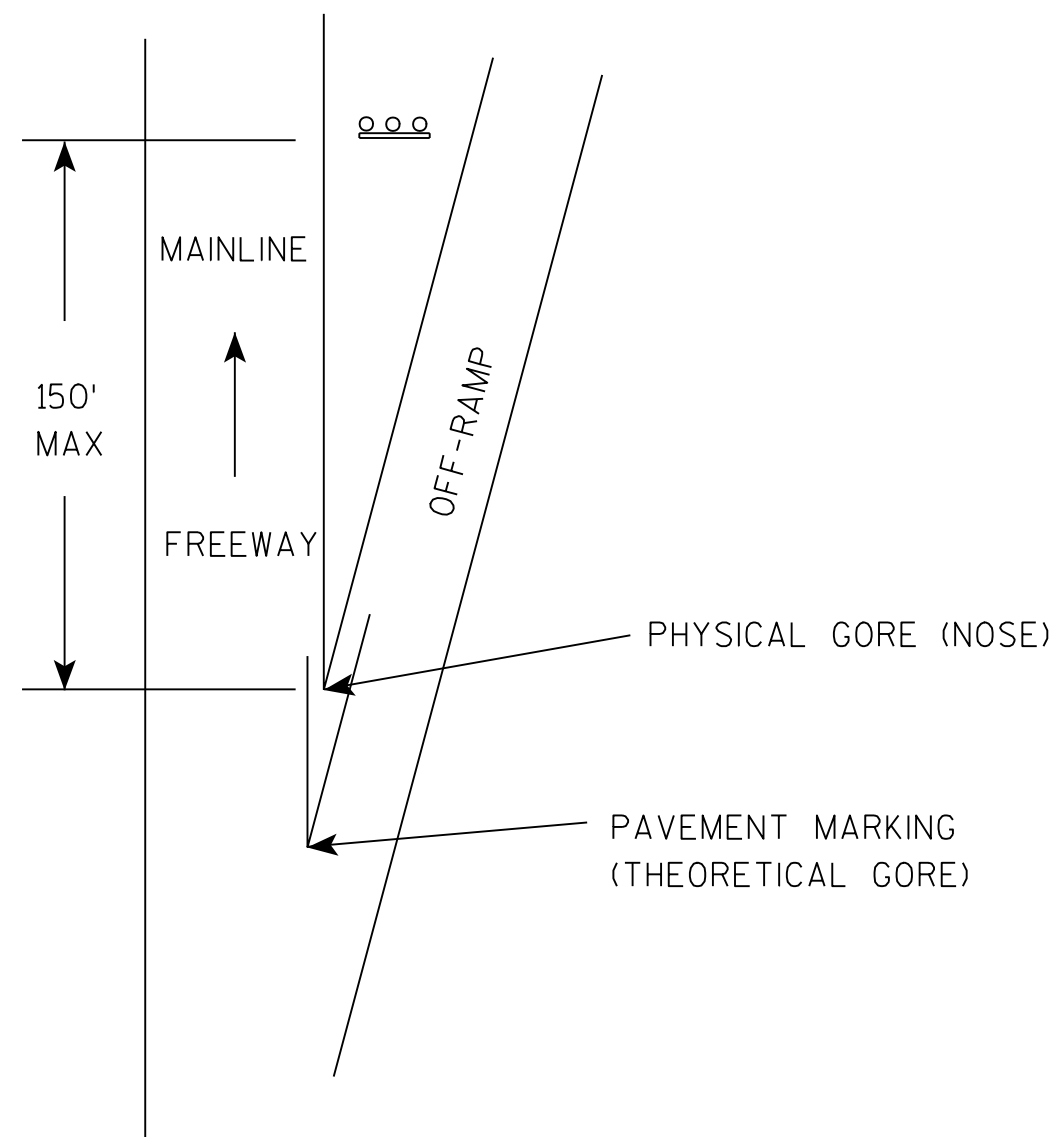
SHEET NO: 152

E



GENERAL NOTES

1. The 150 foot distance from the physical gore (where pavement ends) will normally provide the offsets as shown.
2. If roadway geometrics permit, the sign may be closer than the 150 foot distance as long as the offsets are maintained.
3. At no time shall the location be greater than 150 feet. If the normal offsets cannot be maintained, they can be reduced to 6 feet from the edge of the paved shoulder (both freeway and ramp).
4. The offset from edge of sign to the yellow edge line on the ramp is shown as a minimum of 12 feet and a maximum of 17 feet, 6 inches. Preference is adhering to the maximum rather than the minimum dimension.
5. When L is equal to or exceeds 9 feet, use 3 posts as per A4-4.
6. The ($\mp$) tolerance for the mounting height is 3 inches.



TYPICAL INSTALLATION
OF TYPE II SIGNS ON
WOOD POSTS IN GORE

WISCONSIN DEPT OF TRANSPORTATION

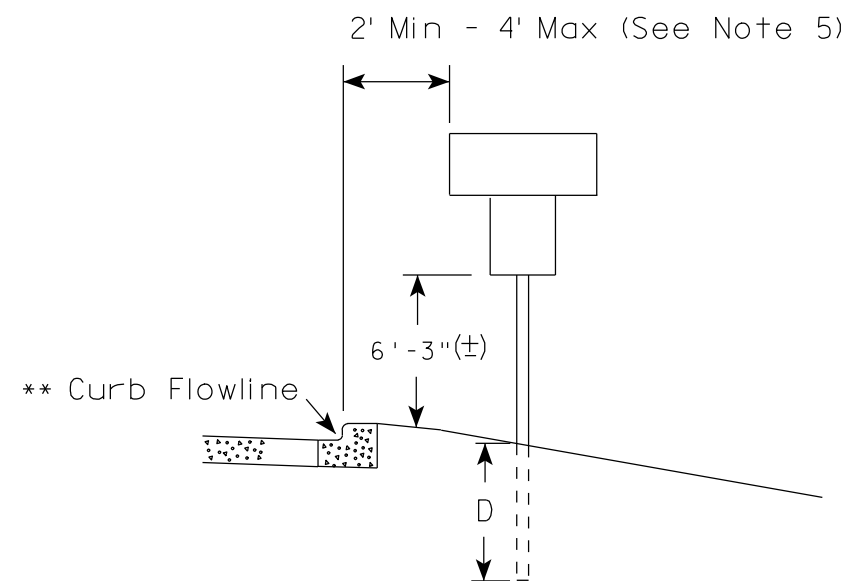
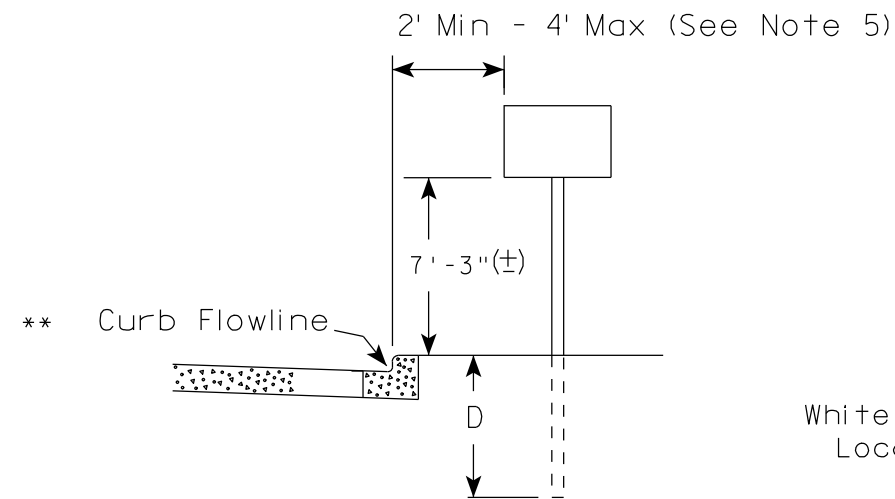
APPROVED *Chester J. Spang*
for State Traffic Engineer
DATE 4/4/00 PLATE NO. A4-2.2

PROJECT NO:

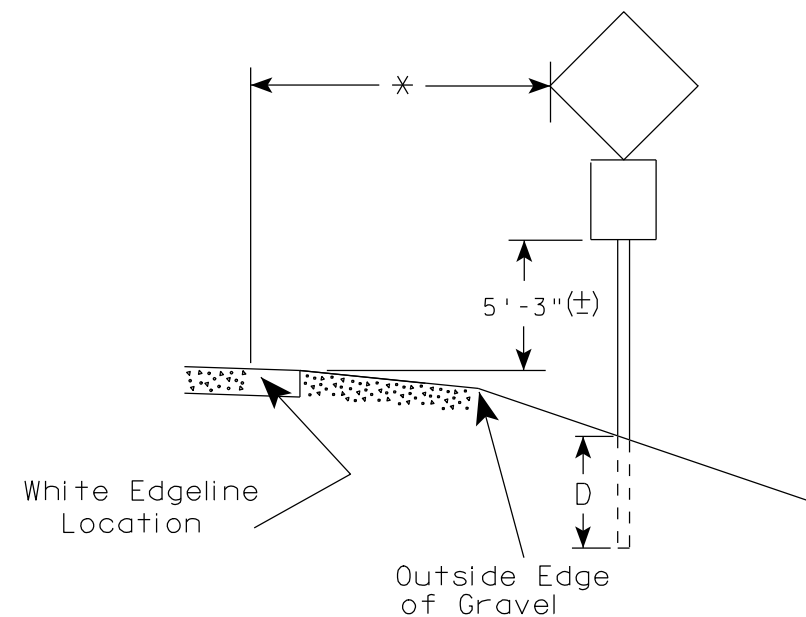
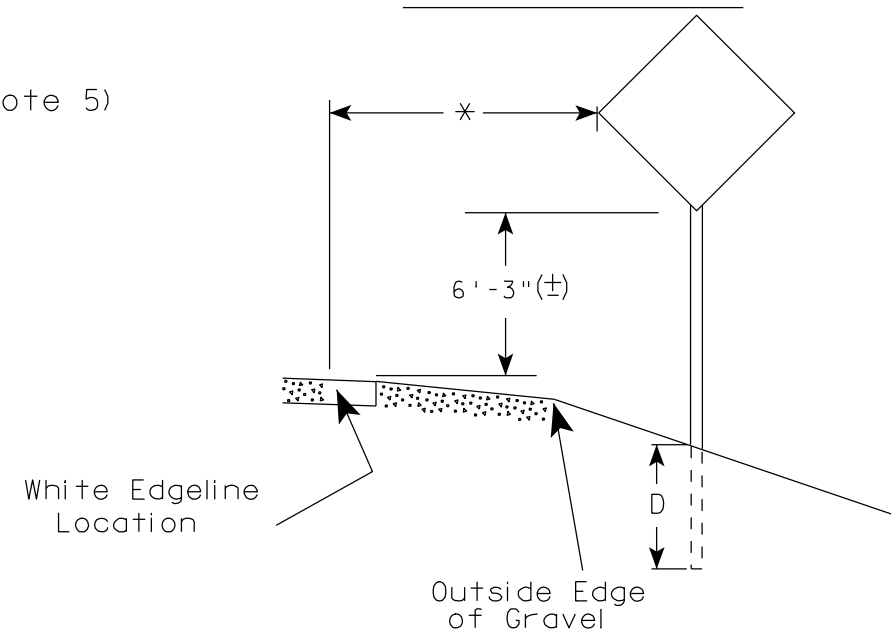
SHEET NO: 153

E

URBAN AREA



RURAL AREA (See Note 2)



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'

✱✱ 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.

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

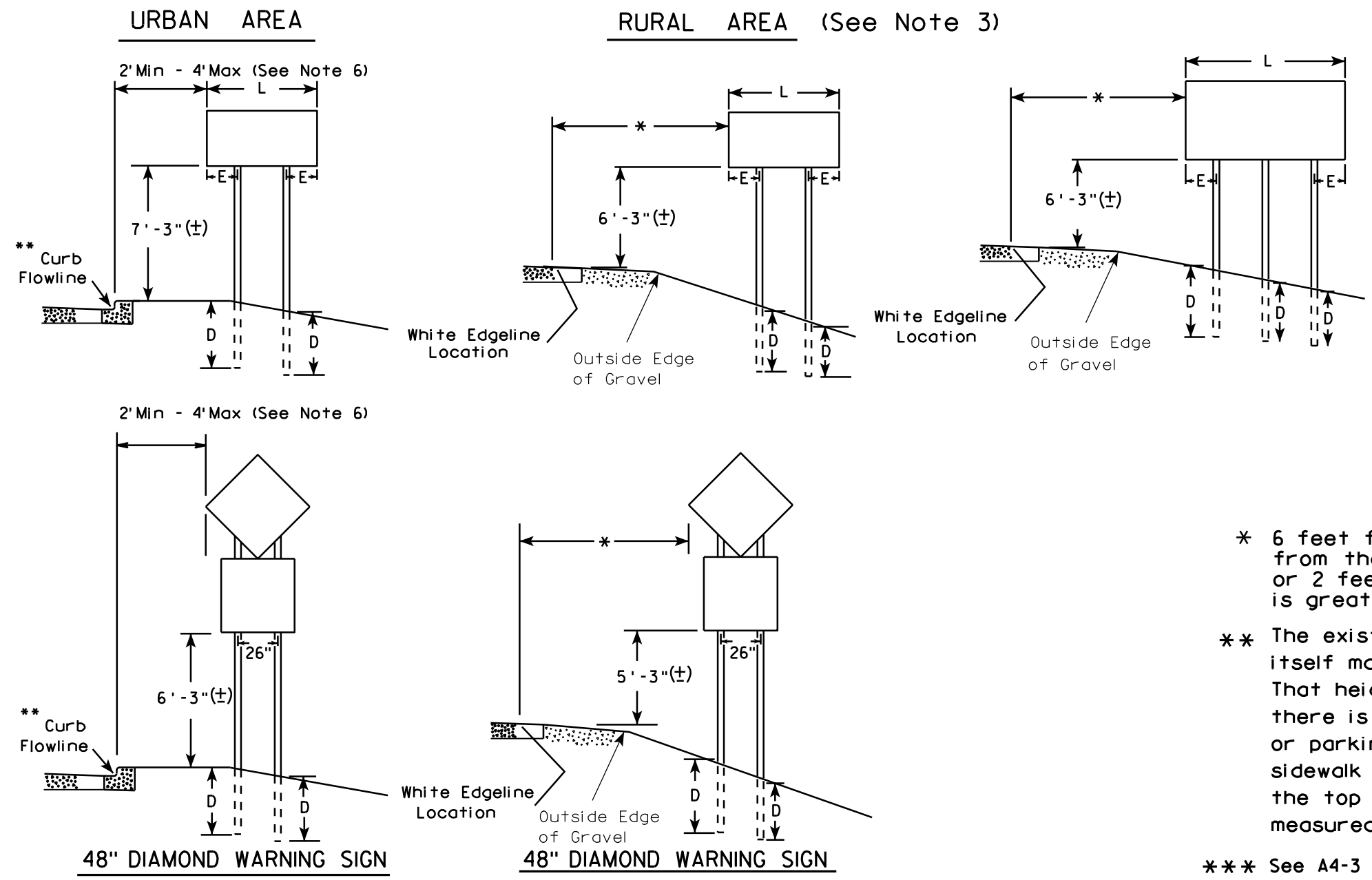
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 154

E



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.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

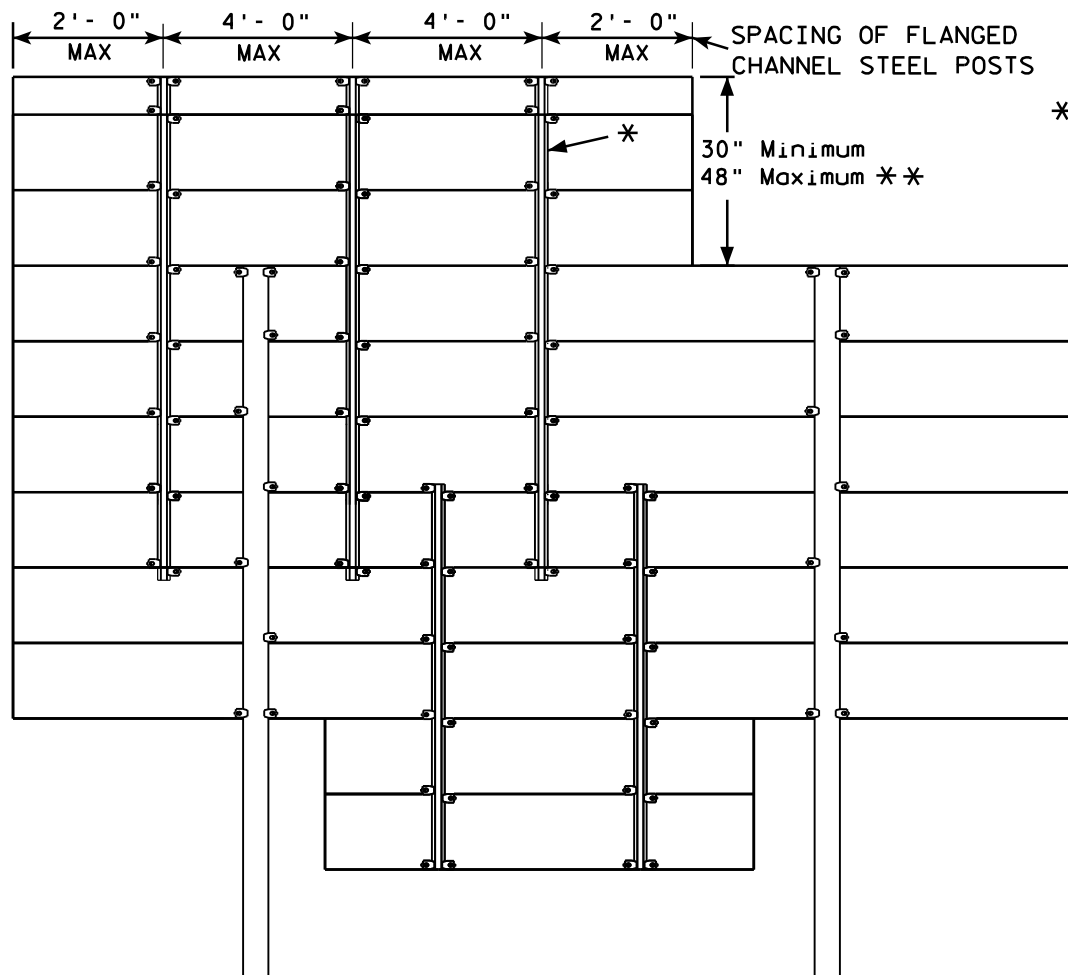
SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH	
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/21/2011	PLATE NO. A4-4.11

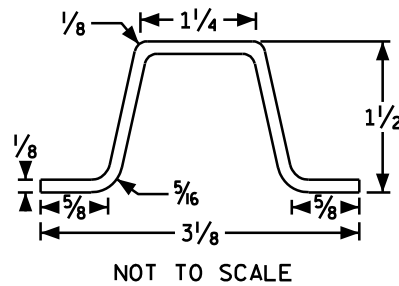
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 155	E
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GROUND MOUNTED SIGN



* = 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

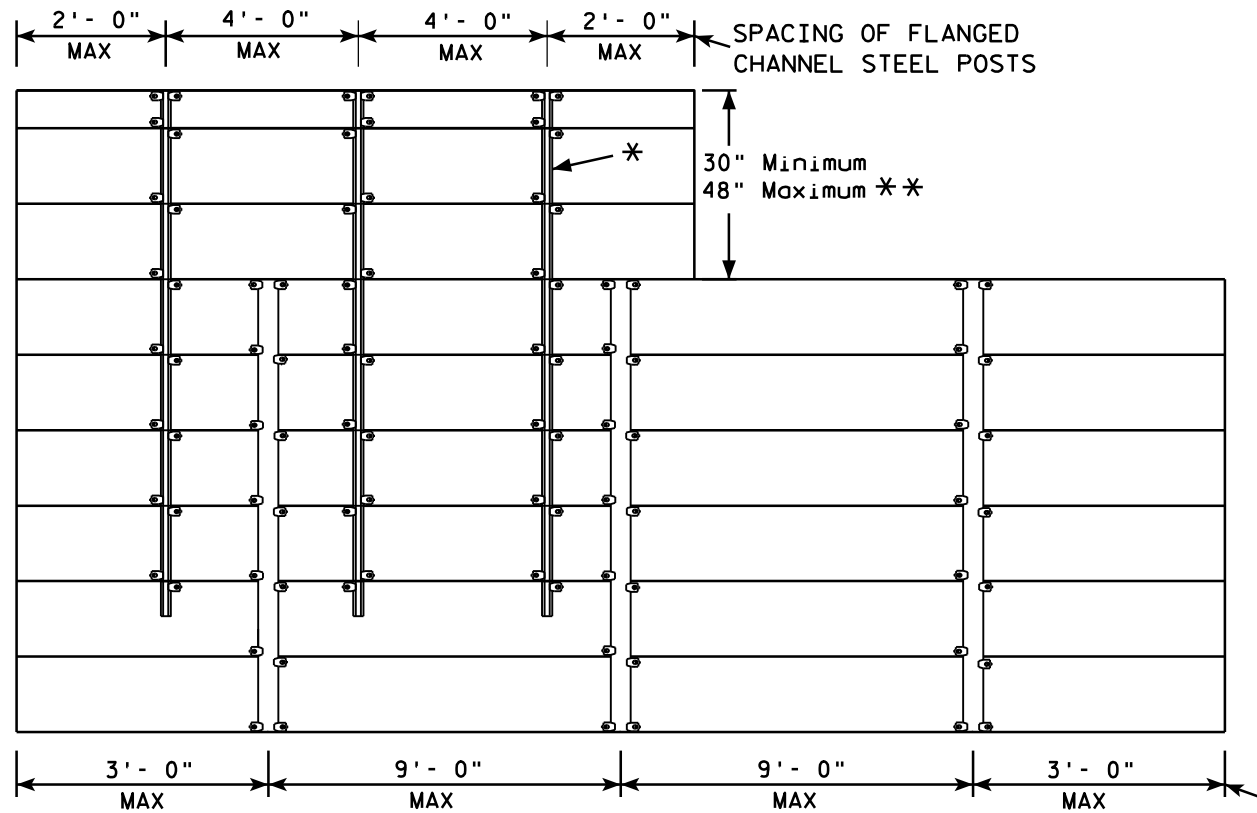


GENERAL NOTES

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)

SIGN BRIDGE MOUNTED SIGN



SPACING OF ALUMINUM SIGN SUPPORTS
5" X 3.5" X 3.7 LBS./ft.

ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

WISCONSIN DEPT OF TRANSPORTATION

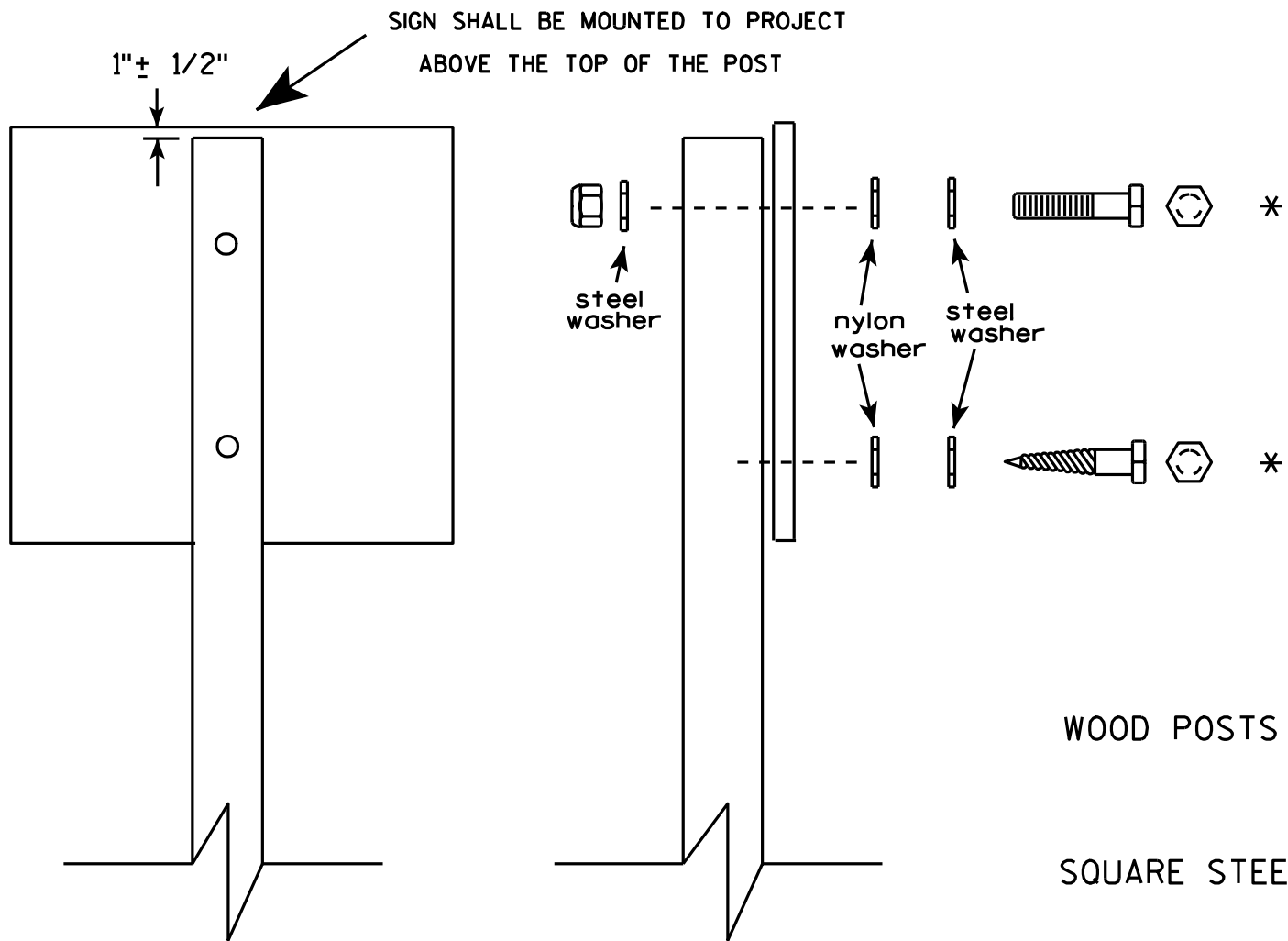
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. A4-6.11

PROJECT NO:

SHEET NO: 156

E

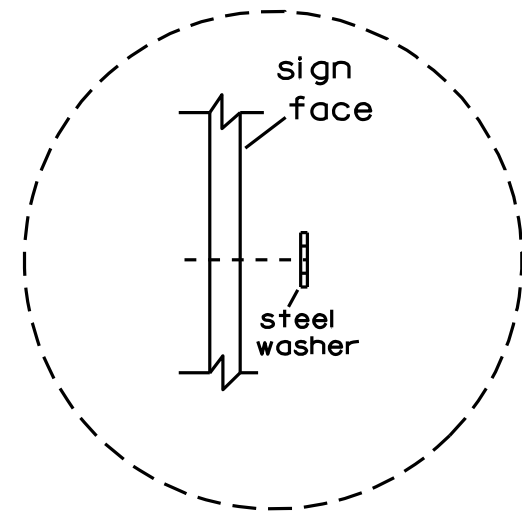


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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.



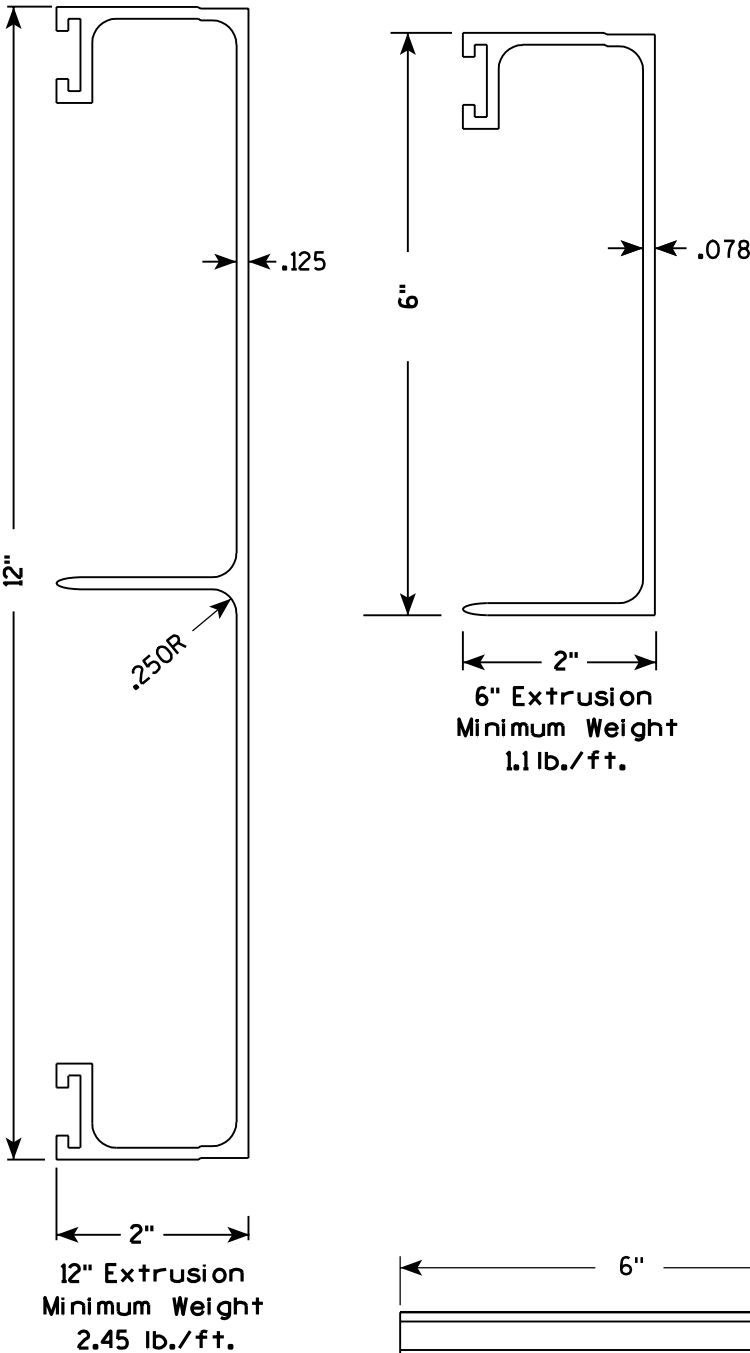
Washer Placement when Sign Has Other Than Type H or Type F Face

* 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	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7

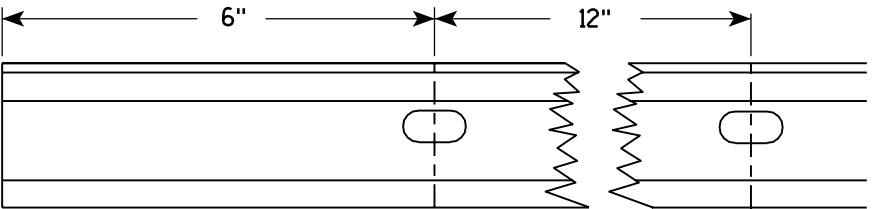
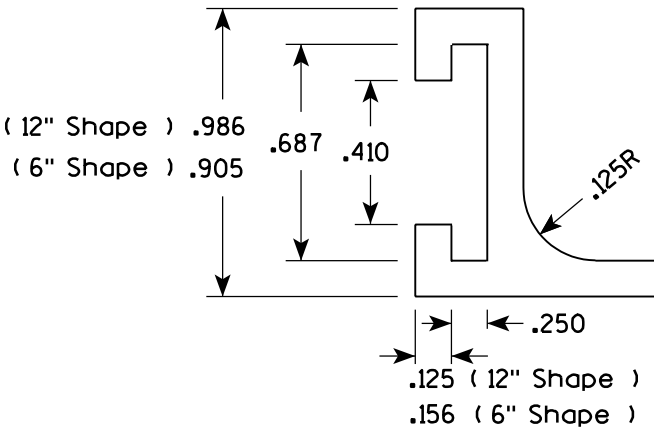
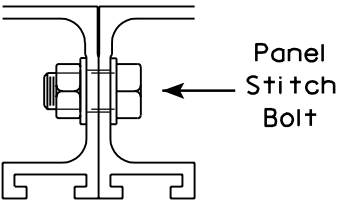
Extruded Shape

Hardware

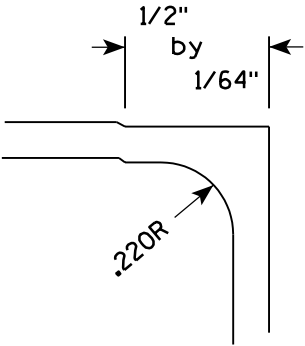


STITCH BOLT, WASHER & NUT

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

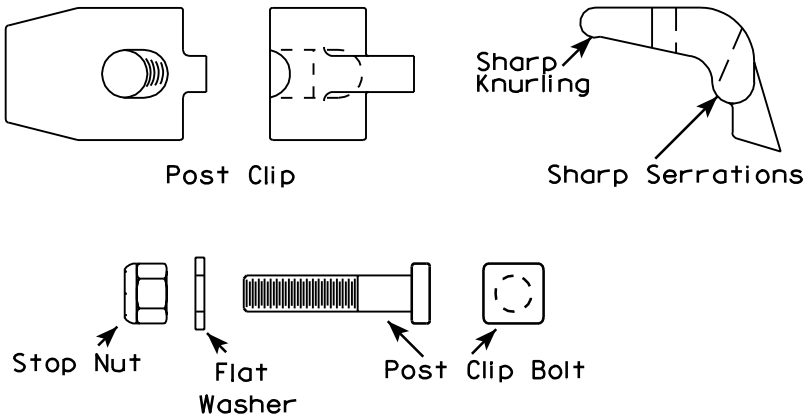


Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.



NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR
TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 11/18/99

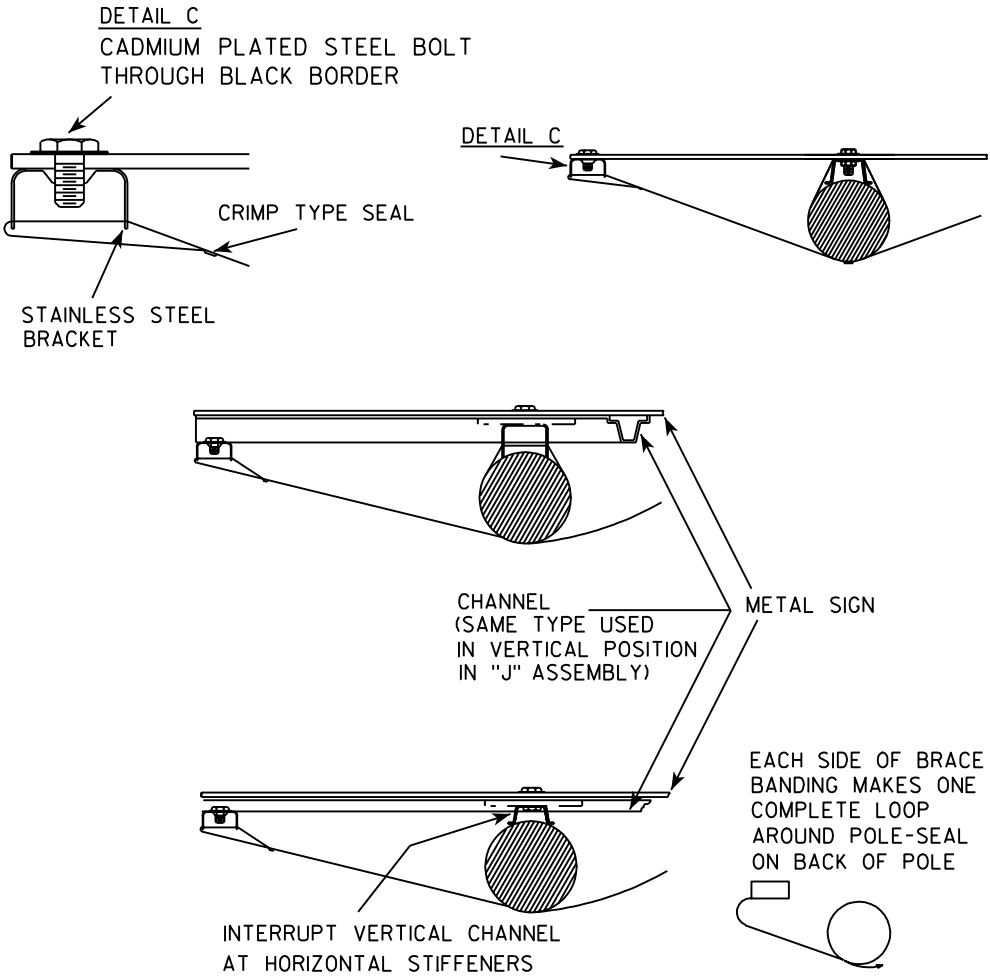
PLATE NO. A5-2.9

PROJECT NO:

SHEET NO: 158

E

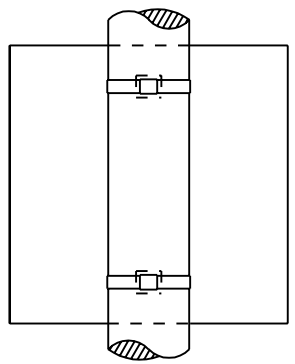
BRACE BANDING



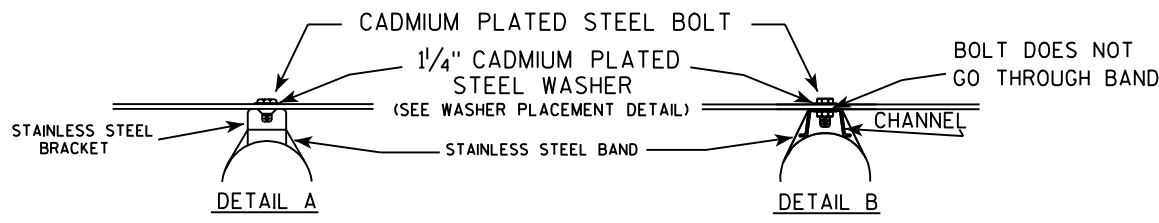
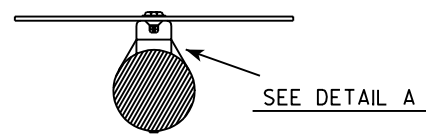
BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY
BUT NOT SO TIGHT AS TO APPRECIABLY
CURVE FACE OF SIGN.

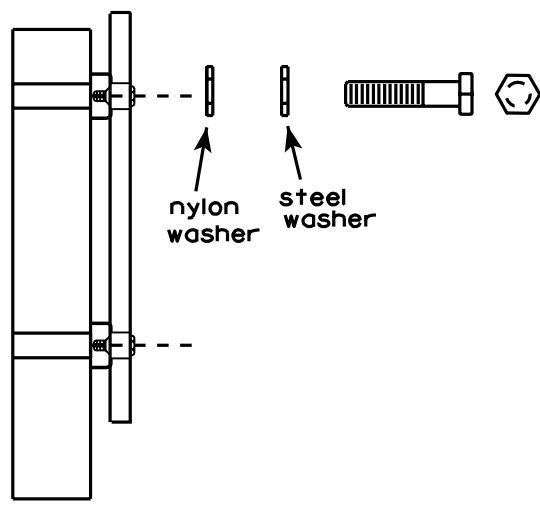
SINGLE SIGN



BRACKET BANDING

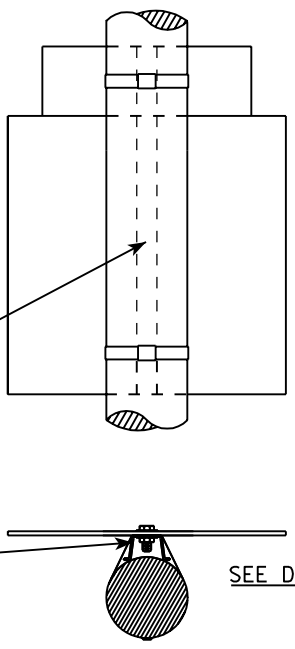


WASHER PLACEMENT



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

"J" ASSEMBLY



SEE DETAIL B

GENERAL NOTES

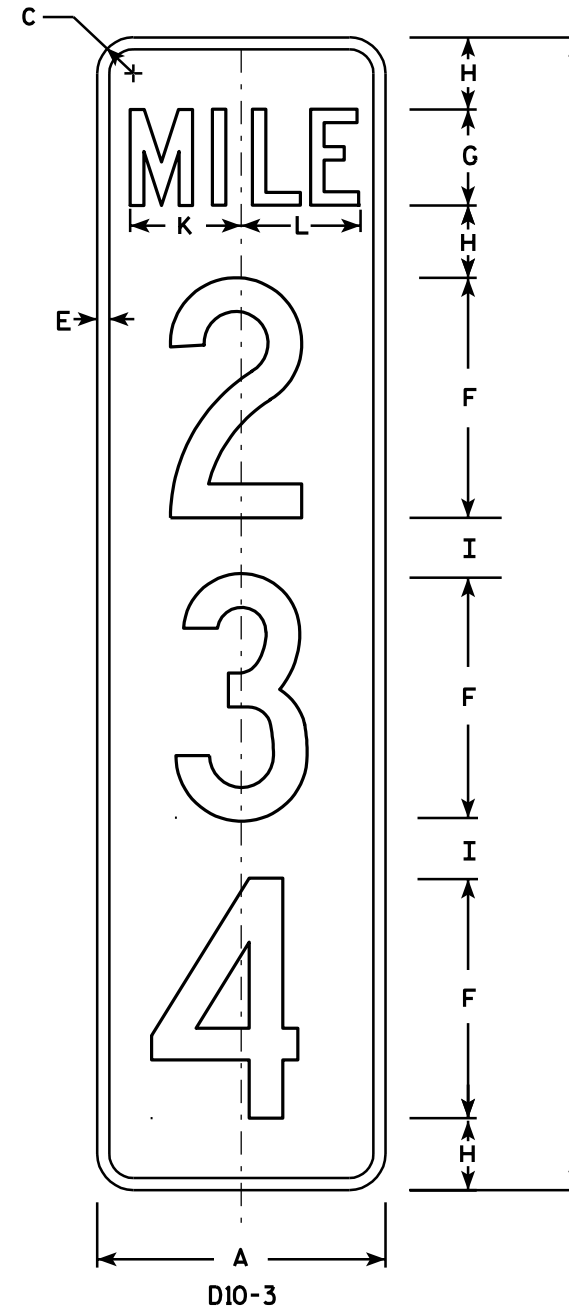
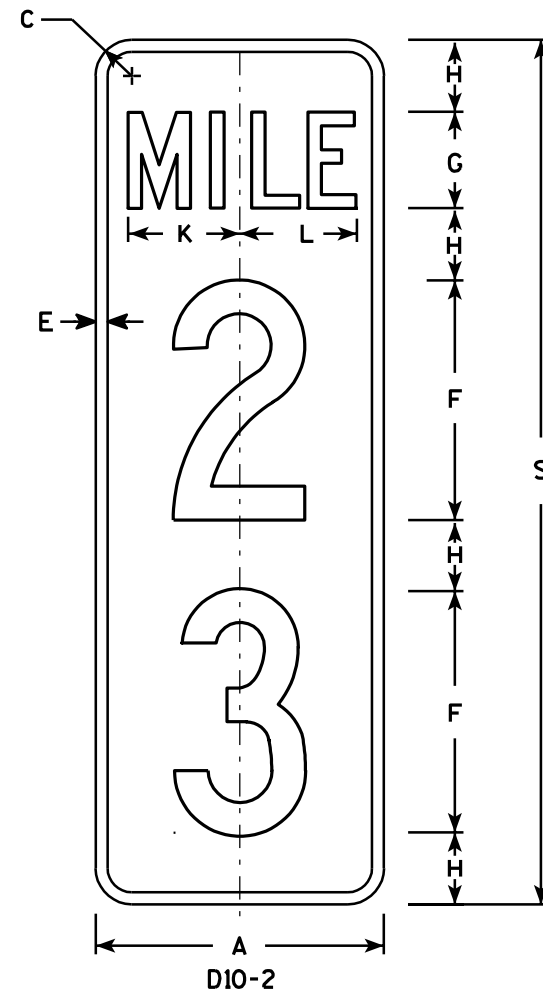
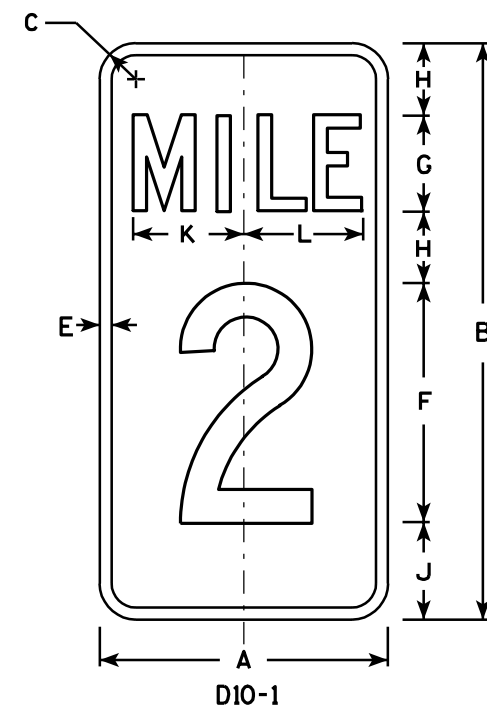
1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

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



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 - 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. Optically adjust numerals about the centerline of the sign to achieve proper balance.

7

Metric equivalent
for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1																										
2																										
3																										
4	12	24	1 1/2		1/2	10	4	3	2 1/2	4	4 5/8	4 7/8							36	48						
5	12	24	1 1/2		1/2	10	4	3	2 1/2	4	4 5/8	4 7/8							36	48						

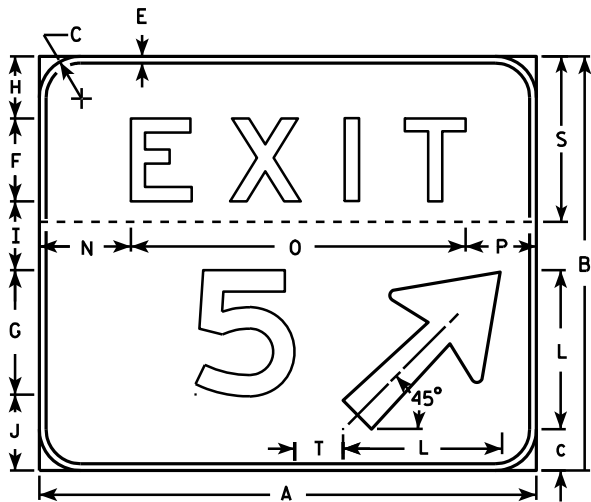
D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m ²	Area m ²	Area m ²
.19	.28	.38

STANDARD SIGN	
D10-1 , D10-2 & D10-3	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Chester J. Spang</u> for Director, Office of Traffic
DATE <u>1/16/02</u>	PLATE NO. <u>D10-3.2</u>

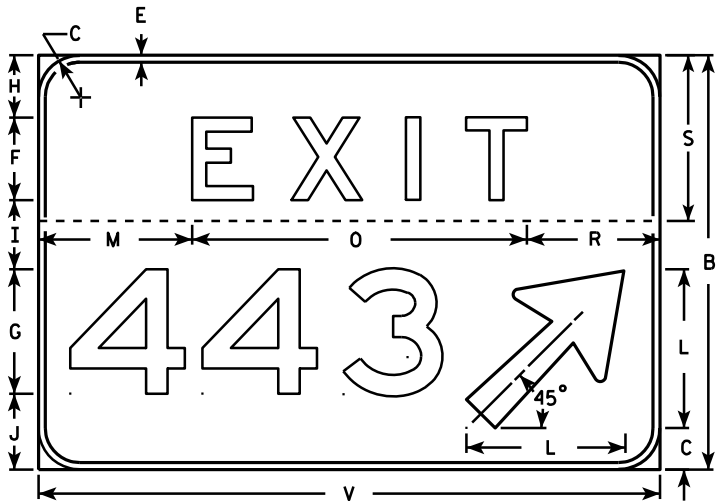
PROJECT NO:

SHEET NO: 160

E



NOTE: T dimension shall be measured from the back of the number to the front of the arrow



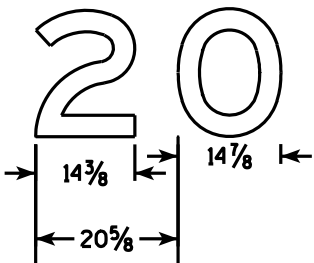
NOTES

1. Sign is Type II - Type H reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White (Type H reflective)
3. Message Series - E
4. Corners may be square or rounded but the border shall be rounded as shown.
5. Base material for this sign shall be plywood and shall be split into two separate pieces as shown on each detail by the dashed line (-----).
6. Arrow is Type "A" from sign plate A1-1.
7. Substitute appropriate message, space per the table and adjust placement on sign to achieve proper balance.
8. As per the Standard Spec's, these signs shall not have a vertical joint.

SPACING CHART FOR 18" NUMERALS

NUMBERS	WIDTH	0	1	2	3	4	5	6	7	8	9	A	B	C
0	14 7/8	21 5/8	21 5/8	21 1/4	20 3/8	21 1/4	21 1/4	21 5/8	19 7/8	22 1/8	21 5/8			
1	5 7/8	14	14	14	13 1/8	12 1/8	14	14	12 1/4	14	14			
2	14 3/8	20 5/8	21 1/8	20 5/8	19 3/4	20 1/4	20 5/8	20 5/8	18 7/8	21 1/8	20 5/8			
3	14 3/8	20 3/4	21 1/8	20 3/4	20 1/4	19 3/4	20 3/4	20 3/4	19 3/8	21 1/8	20 3/4			
4	16 5/8	22 7/8	22	22 1/2	21 5/8	21 5/8	22 7/8	22 7/8	20 5/8	23 3/8	22 7/8			
5	14 1/4	20 5/8	20 5/8	20 1/8	18 3/4	18 3/4	20 5/8	20 5/8	18 3/8	20 5/8	20 5/8			
6	14 1/2	21 1/4	20 3/4	20 3/4	19 7/8	19 1/2	20 3/8	20 3/4	19	20 3/4	20 3/8			
7	14 3/8	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4			
8	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8			
9	14 1/2	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4			
A	18	19 3/4	19 3/4	20 1/4	19 3/4	17	19 3/4	20 5/8	18 7/8	20 5/8	19 3/4	21 5/8	23 7/8	23
B	14 1/4	21 1/2	21 1/2	20 5/8	19 1/4	19 3/4	20 5/8	21 1/2	19 5/8	21 1/2	20 5/8	19 1/2	22 3/8	21 1/2
C	14 1/4	21 1/4	21 1/4	20 7/8	20	20 7/8	20 7/8	21 1/4	19 1/2	21 3/4	21 1/4	18 3/8	21	19 3/4

EXAMPLE FOR USING SPACING CHART



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
2																										
3																										
4																										
5	72	60	6		1	12	18	9	10	11	8 ⁷ / ₈	23	22 ¹ / ₄	13 ¹ / ₄	48 ¹ / ₂	10 ¹ / ₄		19 ¹ / ₄	24	7		90		96	7 ¹ / ₂	

1-2 Digit Bid Area	3 Digit Bid Area
Sq. Ft.	
30	37.5

STANDARD SIGN
E5-1A

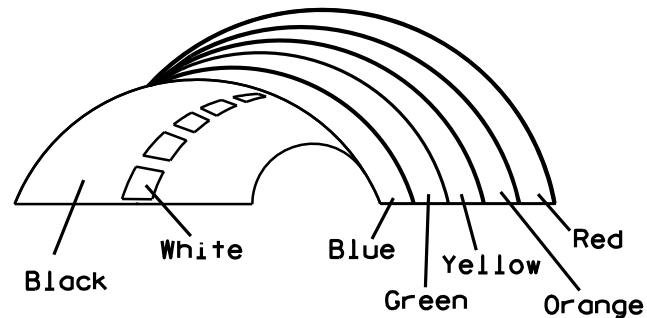
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 5/11/10 PLATE NO. E5-1A.12



* VARIES

Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

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 - (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. Border - Blue
Line 1 - Red
Line 2 - Black
Line 3-5 - Blue
6. Line 1 - Dutch 8011L
Line 2 - Series E
Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign 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																											
2	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 162
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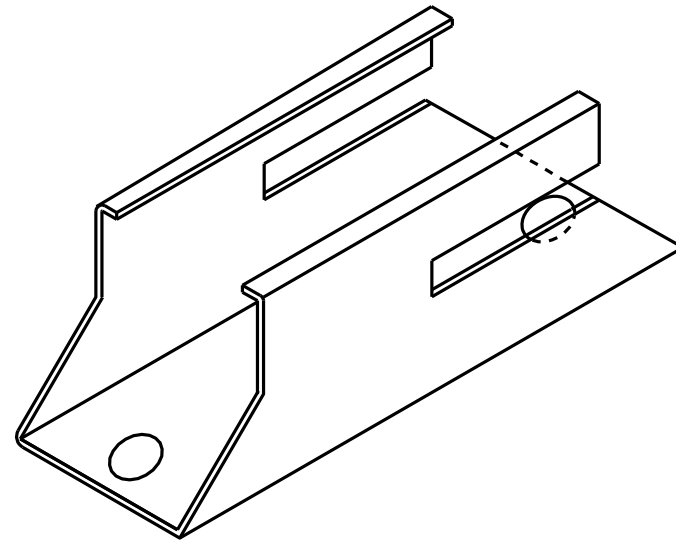
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

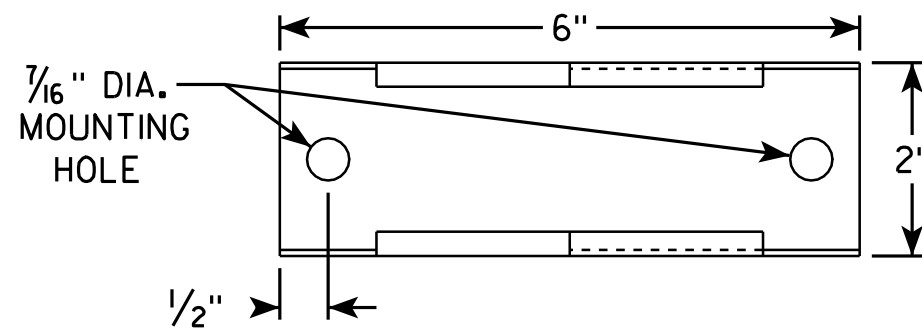
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/27/11 PLATE NO. I55-56.3

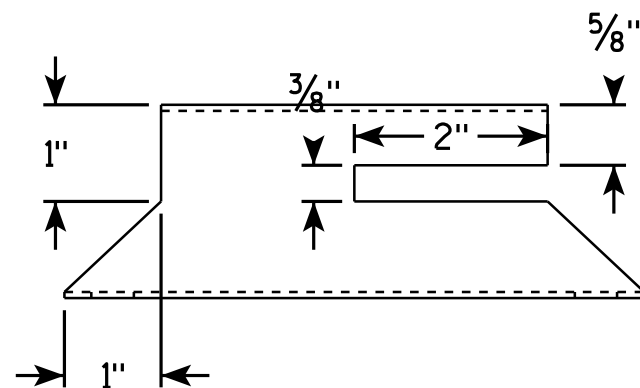
ISOMETRIC VIEW



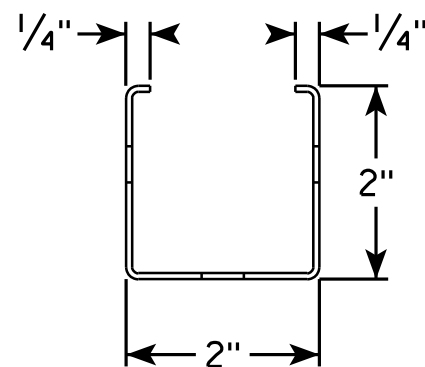
TOP VIEW



SIDE VIEW



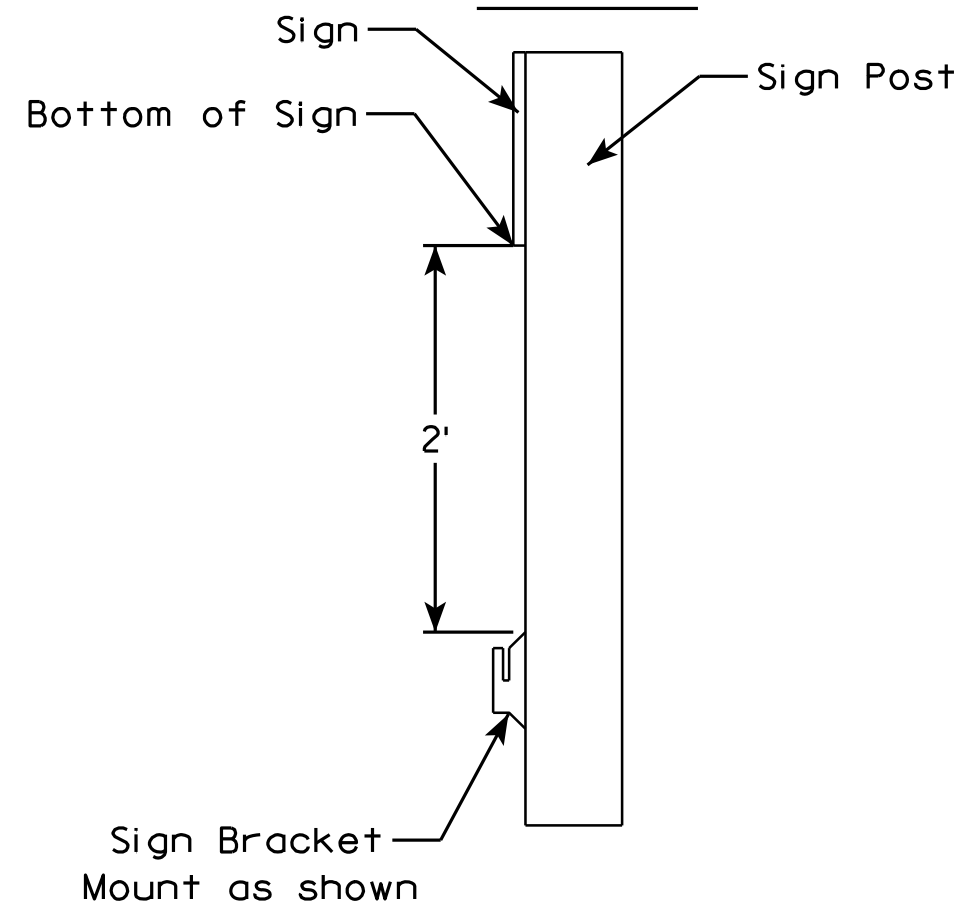
END VIEW



NOTES

1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET
I55-56B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/5/10 PLATE NO. I55-56B.1

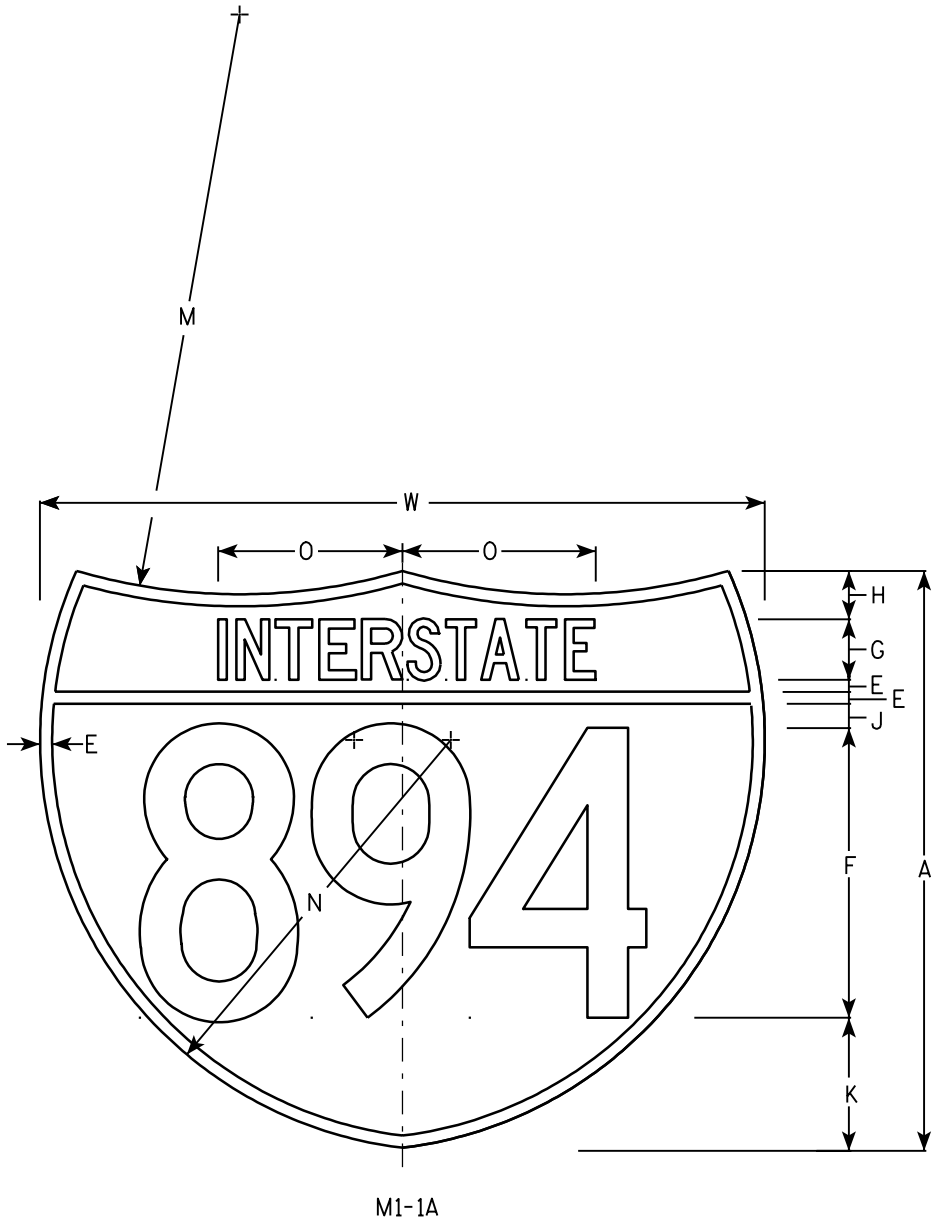
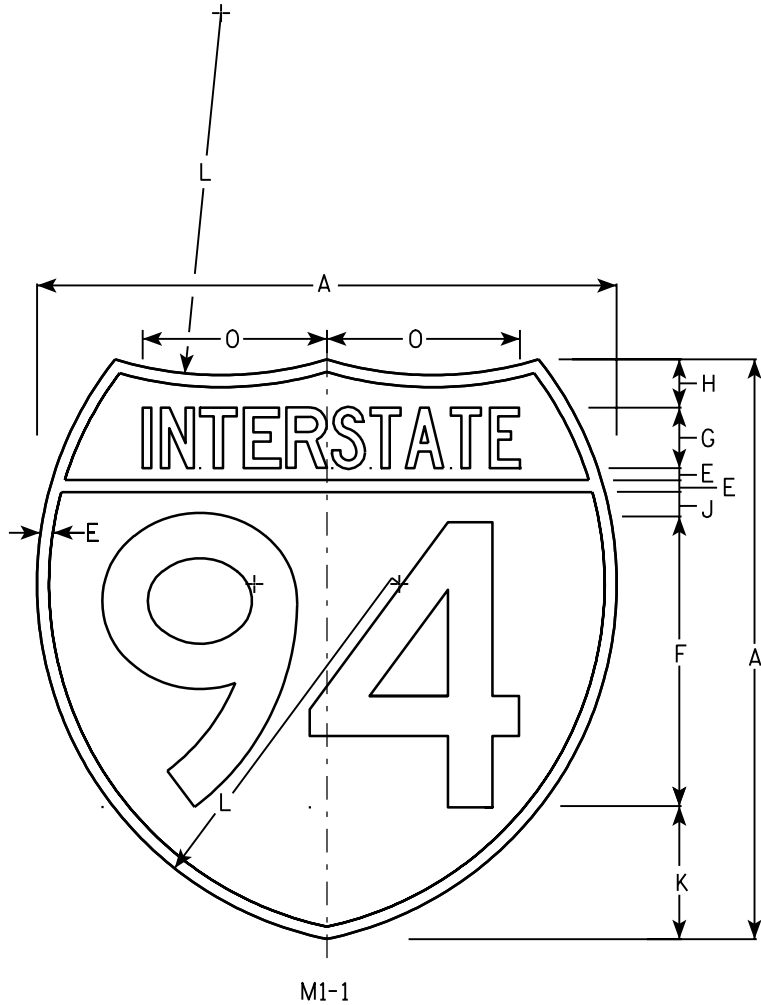
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 163

E



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 & adjust 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

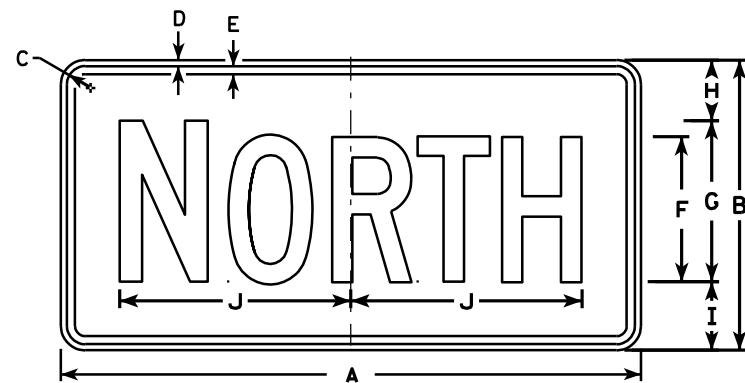
Metric equivalent for these signs are:

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	Area sq. ft.	Area sq. ft.	Area m ²	Area m ²
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

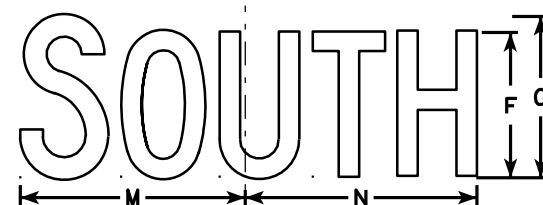
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 08/23/05 PLATE NO. M1-1.8



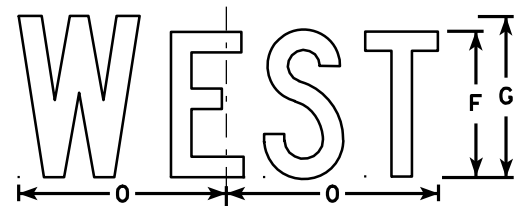
M3-1
MK3-1
M03-1



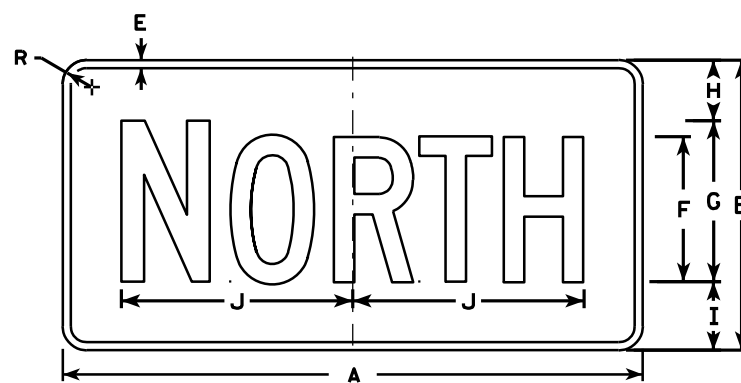
M3-2
MK3-2
M03-2



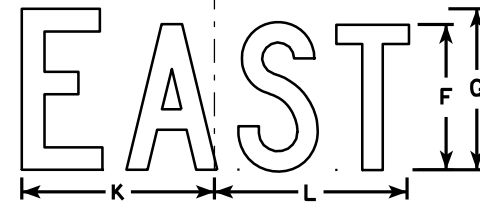
M3-3
MK3-3
M03-3



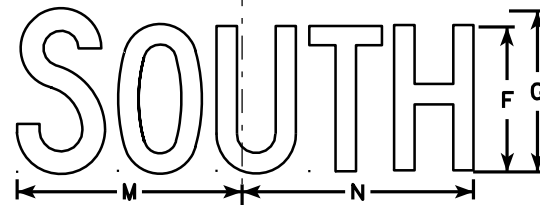
M3-4
MK3-4
M03-4



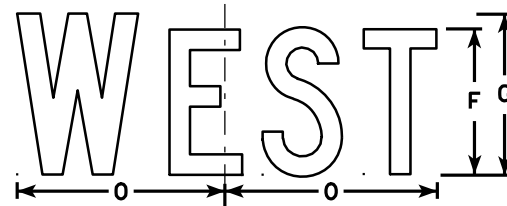
MB3-1
MG3-1
MM3-1
MN3-1



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

PROJECT NO: HWY: COUNTY: SHEET NO: 165 E

STANDARD SIGNS M3-1 thru M3-4 SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

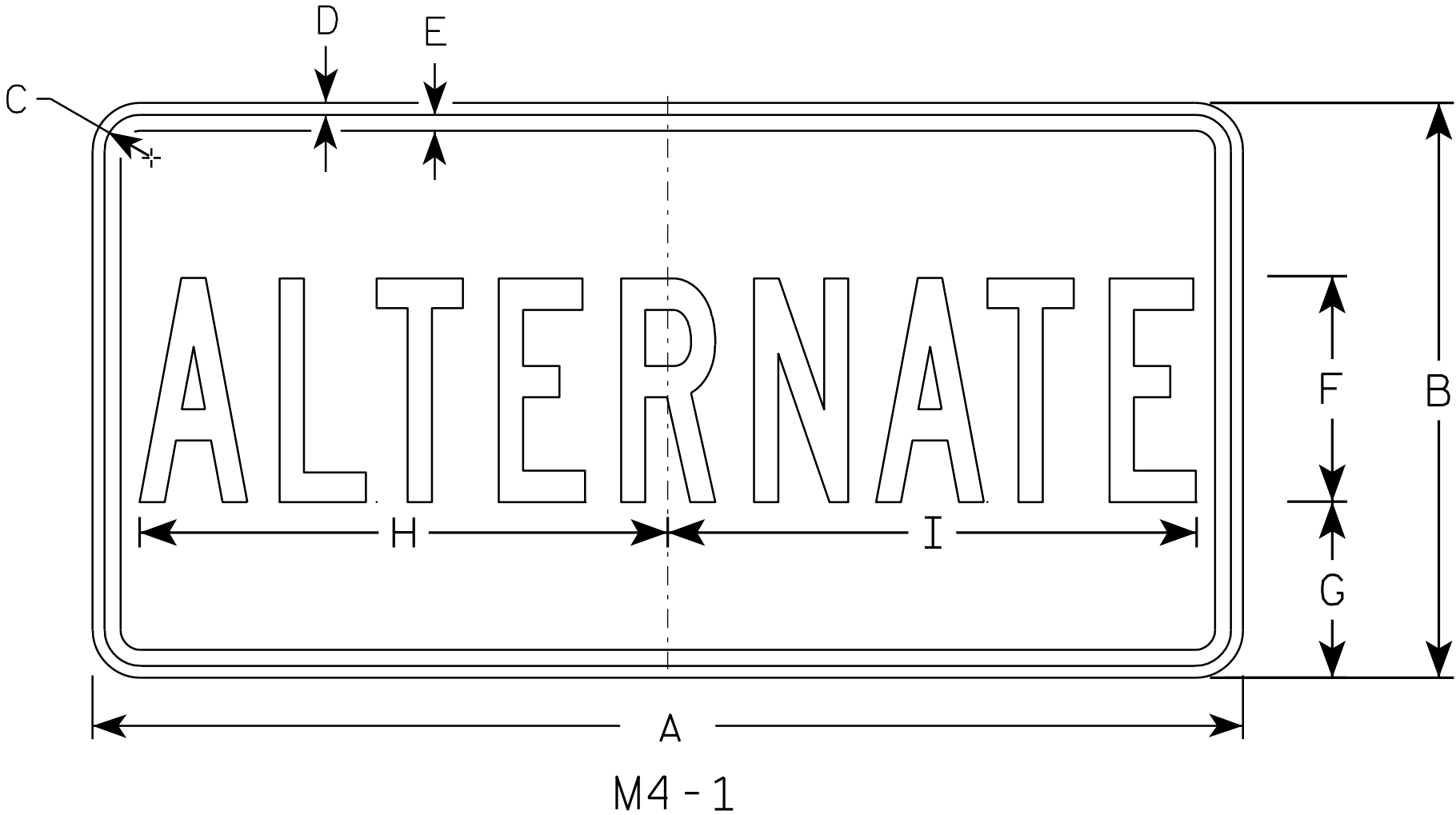
DATE 11/10/10 PLATE NO. M3-1.12

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 - 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.
5. M4-1 Background - White - Type H Reflective
Message - Black

MB4-1 Background - Blue
Message - White - Type H Reflective

M04-1 Background - Orange - Reflective
Message - Black



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 1/2	3/8	3/8	4	4	9 3/4	9 1/2																		2.00
3	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	7	5 1/2	16 3/8	16 1/2																		4.5

STANDARD SIGN

M4 - 1

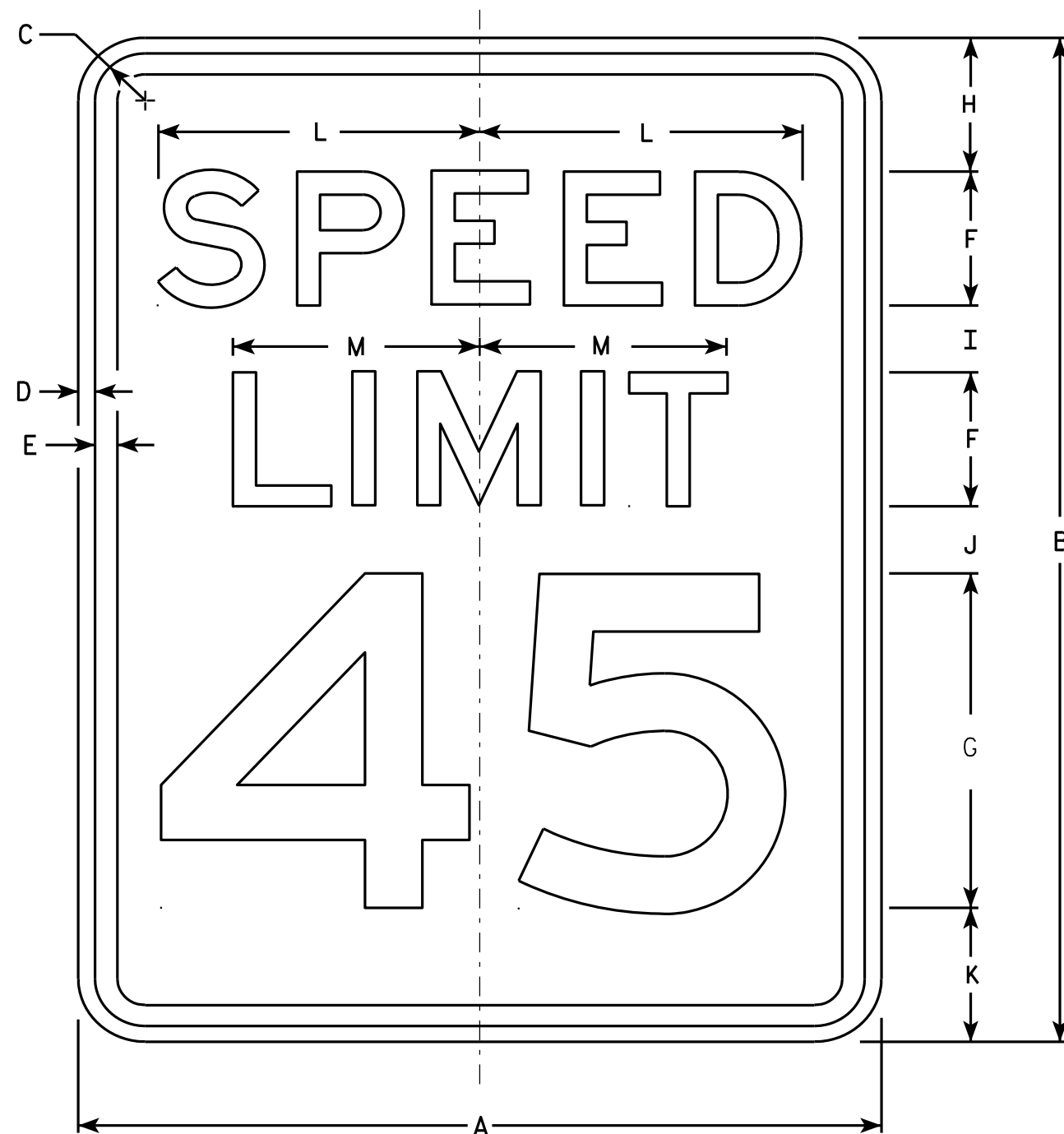
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 11/10/10

PLATE NO. M4-1.7



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

R2-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

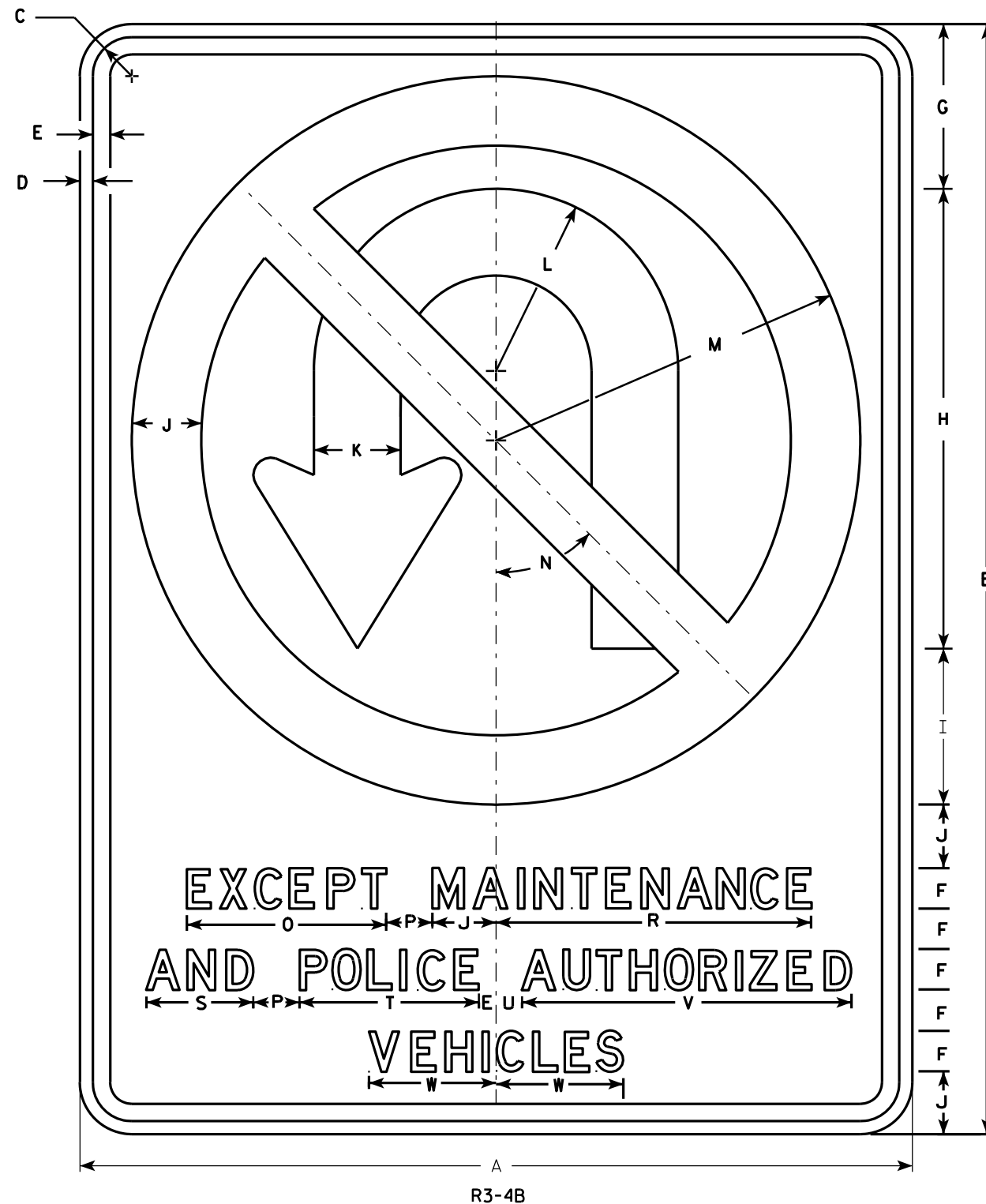
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

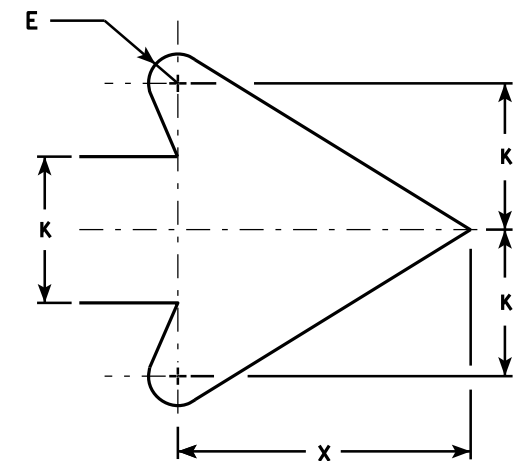
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: 167 E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - 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																											
2S																											
2M																											
3																											
4	36	48	1 5⁄8	5⁄8	¾	1 ¾	7 1⁄8	19 7⁄8	6 ¾	2 ¾	3 ¾	7 7⁄8	15 ¾	45°	8 5⁄8	2		13 5⁄8	4 5⁄8	7 ¾	1 1⁄8	14 1⁄4	5 1⁄2	7 5⁄8			12.0
5	36	48	1 5⁄8	5⁄8	¾	1 ¾	7 1⁄8	19 7⁄8	6 ¾	2 ¾	3 ¾	7 7⁄8	15 ¾	45°	8 5⁄8	2		13 5⁄8	4 5⁄8	7 ¾	1 1⁄8	14 1⁄4	5 1⁄2	7 5⁄8			12.0

STANDARD SIGN R3-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/17/2011 PLATE NO. R3-4B.2

PROJECT NO: HWY: COUNTY: SHEET NO: 168



R4-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

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	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 3/4	10	6 1/4	6 3/4	7 1/8	7 5/8													5.0
3	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
4	36	48	1 5/8	5/8	3/4	6	6	4	14 5/8	15	9 3/8	10	10 3/4	11 3/8													12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/2	20	12 1/2	13 1/2	14 1/4	15 1/4													20.0

STANDARD SIGN

R4-3

WISCONSIN DEPT OF TRANSPORTATION

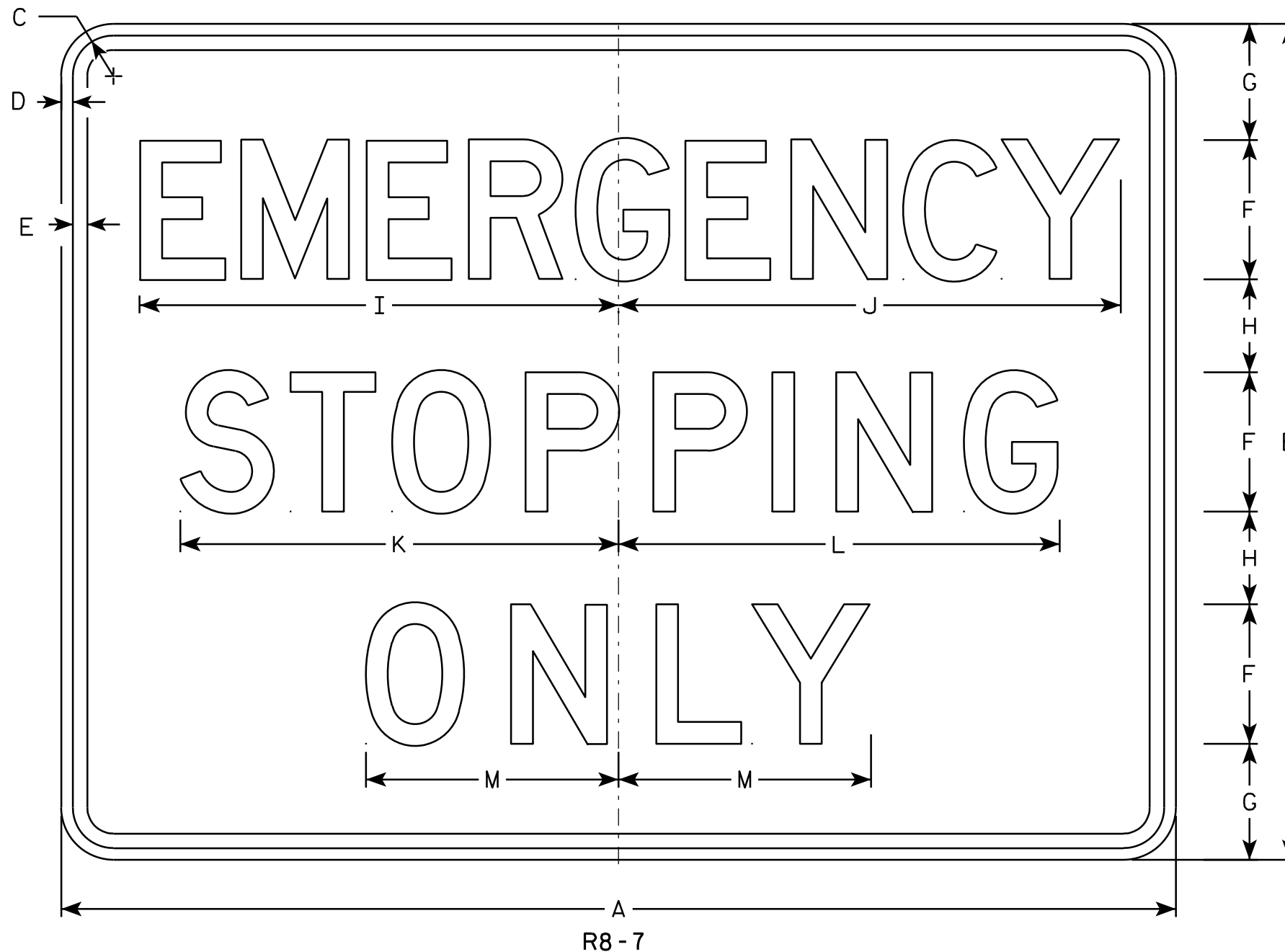
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-3.8

PROJECT NO:

SHEET NO: 169

E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0
5	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0

STANDARD SIGN

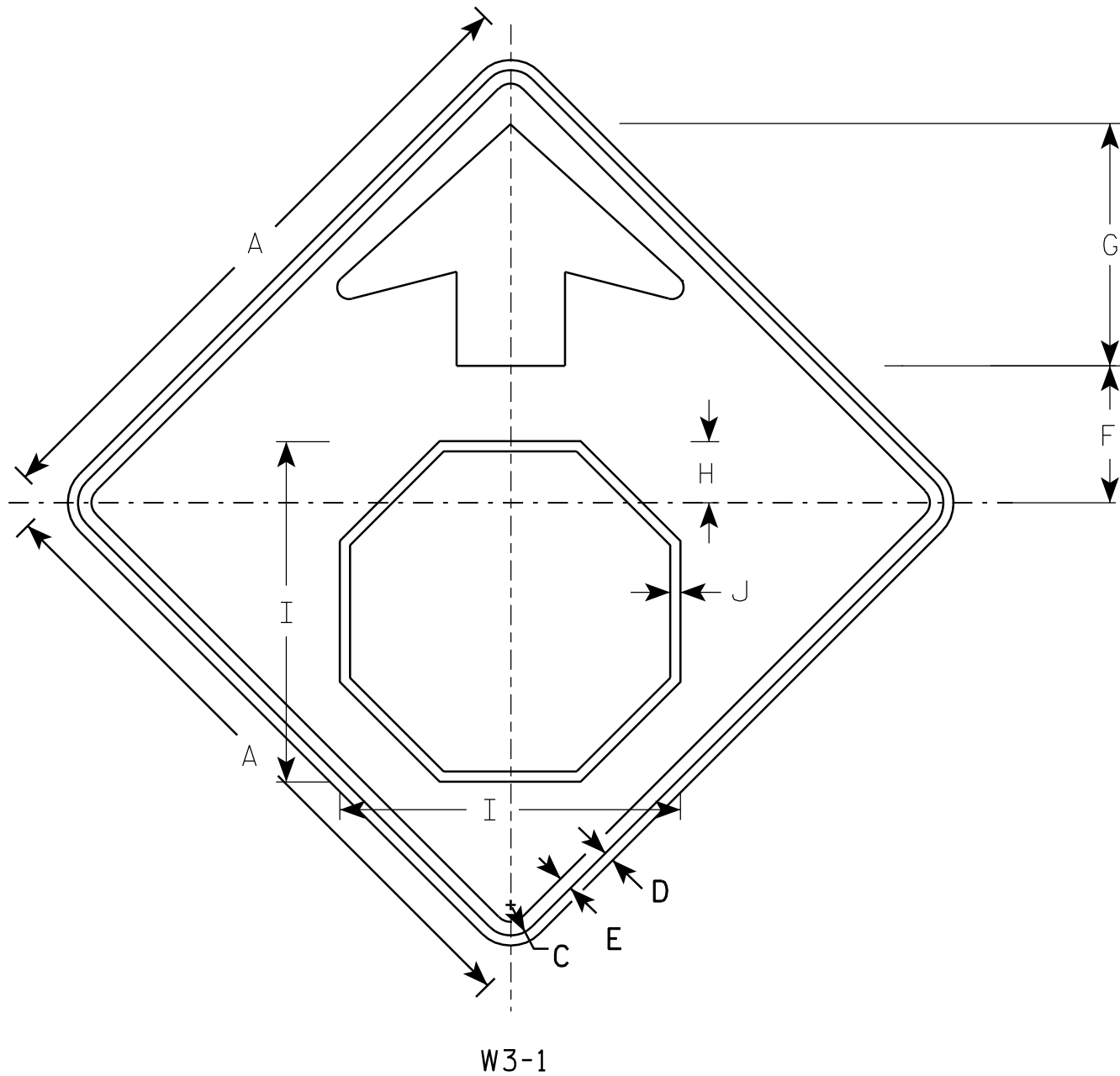
R8 - 7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

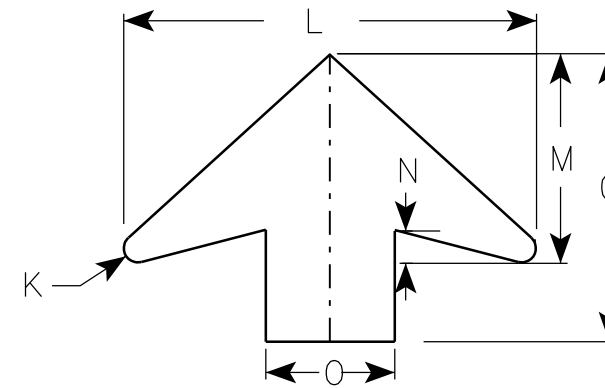
DATE 3/31/2011 PLATE NO. R8-7.6

PROJECT NO: HWY: COUNTY: SHEET NO: 170 E



NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - YELLOW
Arrow & Border - BLACK
Stop Symbol - WHITE BORDER ON RED BACKGROUND



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	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

PROJECT NO:

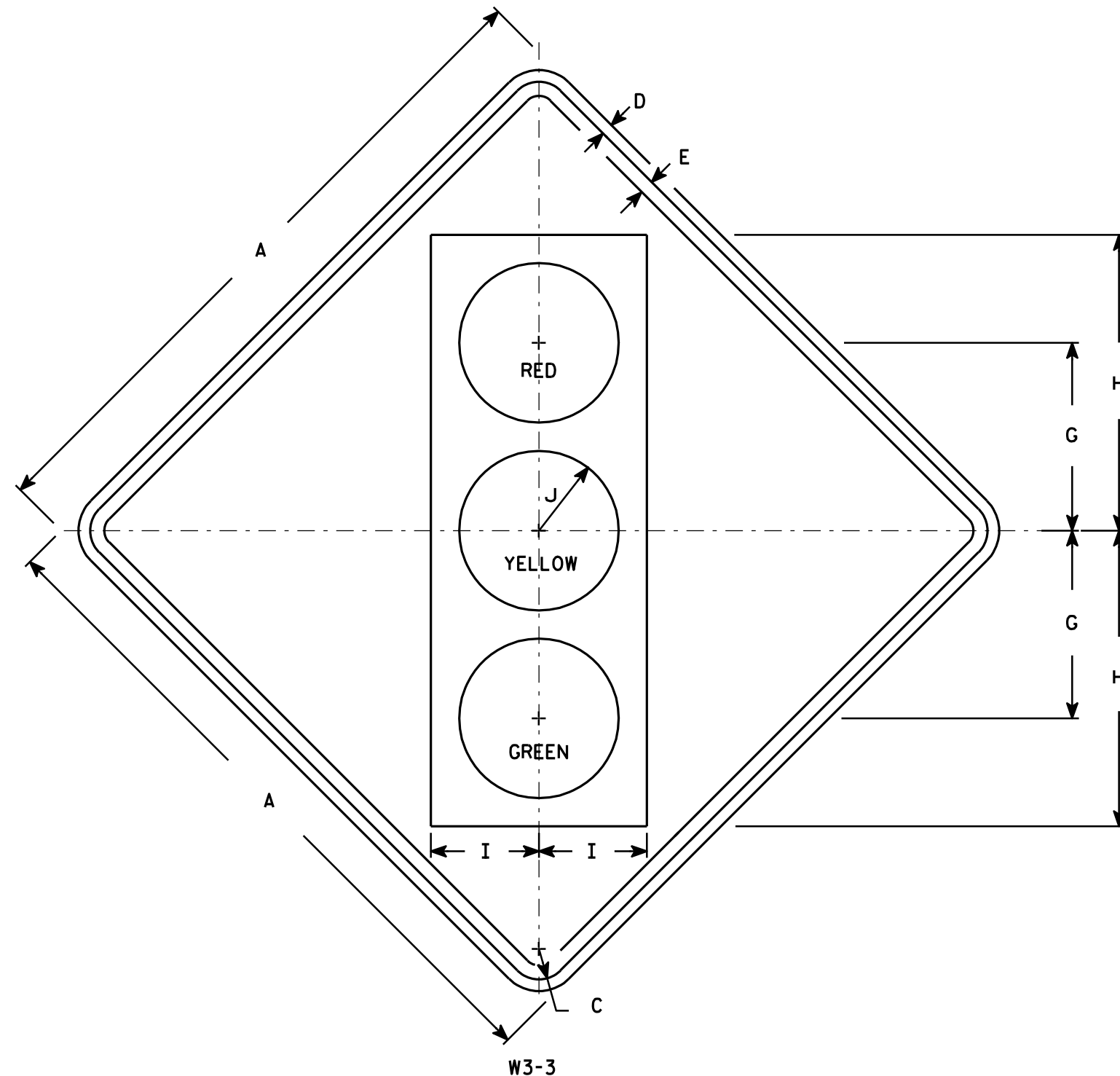
STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W3-1.12

SHEET NO: 171

E



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - See Note 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.
- Symbol and border are non-reflective black.
Top circle - Type H Reflectorized Red
Center circle - Same as background
Bottom circle - Type H Reflectorized Green

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8		8 3/4	13 3/4	5	3 3/4																	6.25
2S	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
2M	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
3	36		1 5/8	5/8	3/4		10	15 3/4	5 3/4	4 1/4																	9.0
4	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0
5	48		2 1/4	3/4	1		12 1/2	20	7 1/2	5																	16.0

STANDARD SIGN W3-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 6/7/10

PLATE NO. W3-3.11

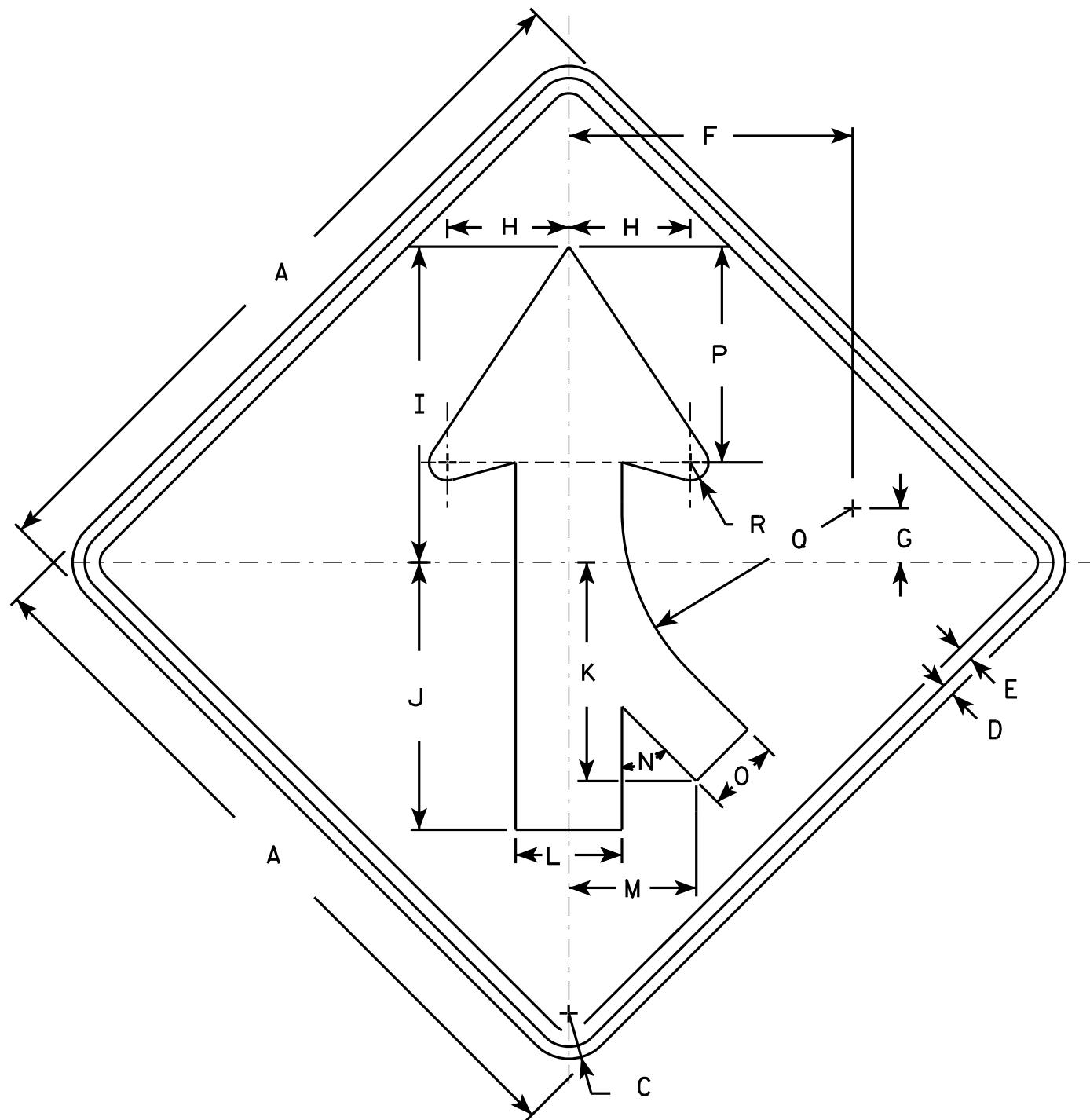
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 172

E



W4-1R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

STANDARD SIGN

W4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/21/11 PLATE NO. W4-1.13

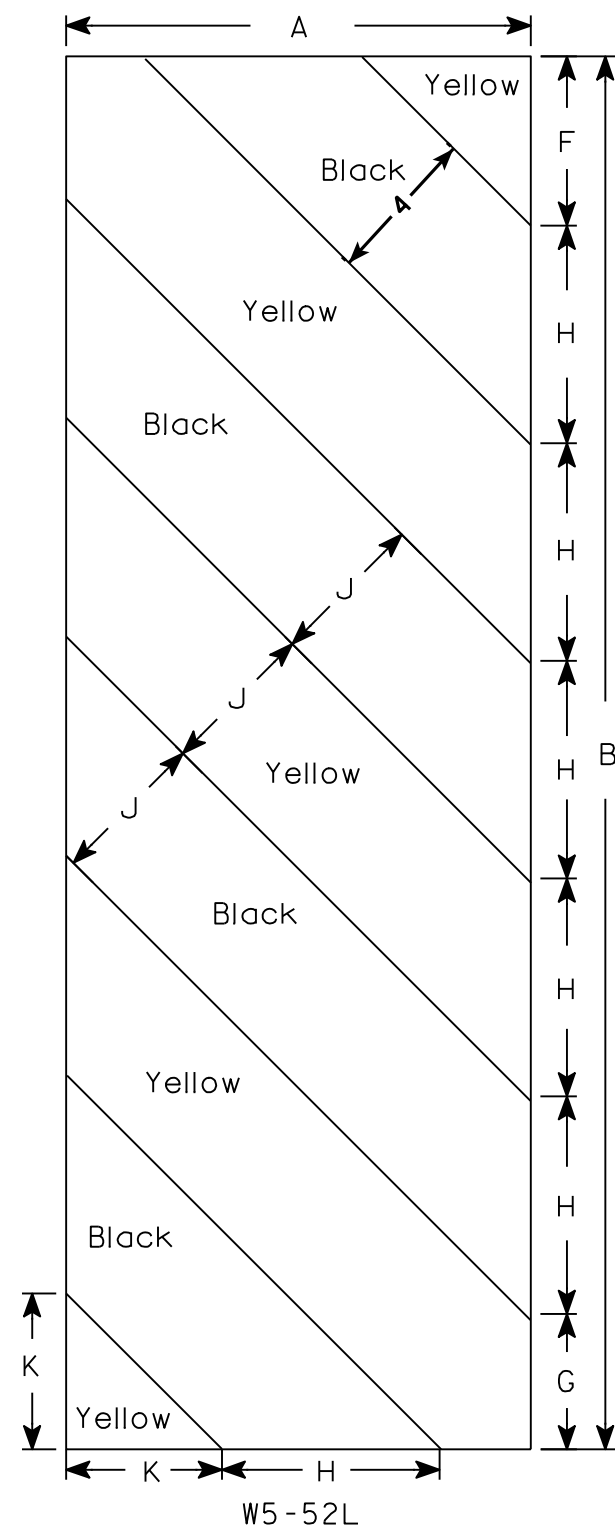
PROJECT NO:

HWY:

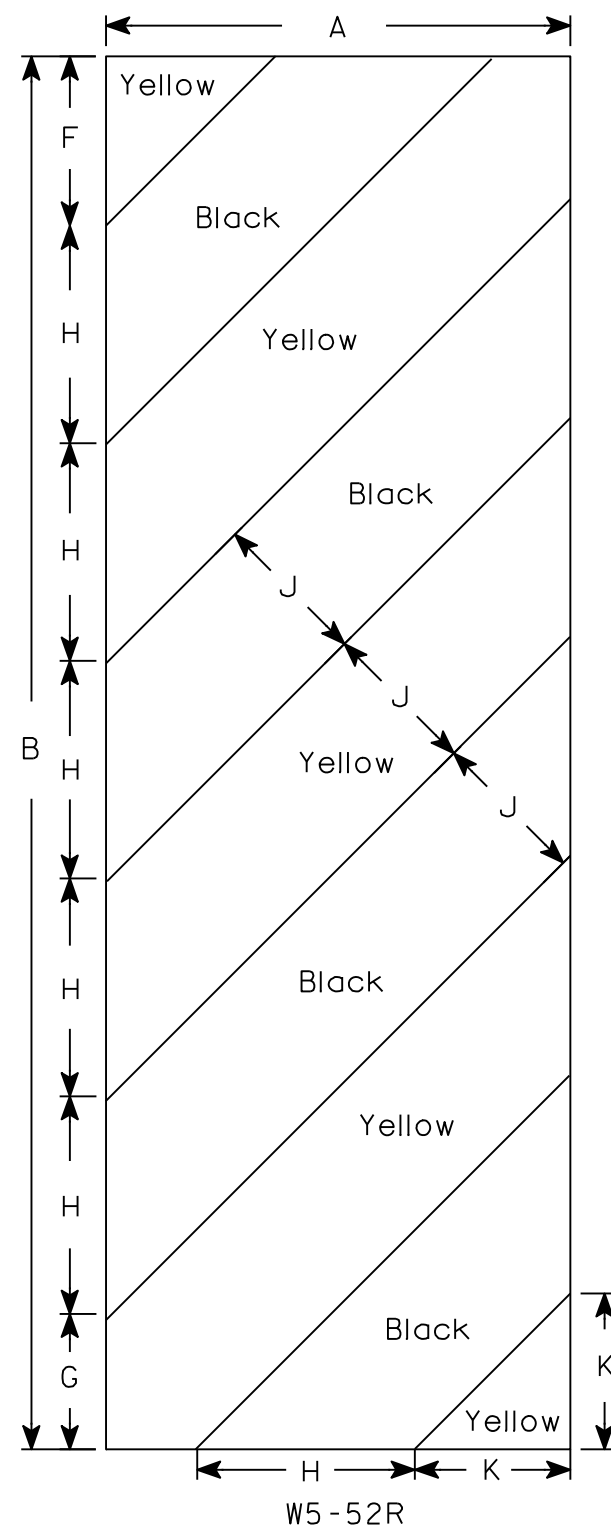
COUNTY:

SHEET NO: 173

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.

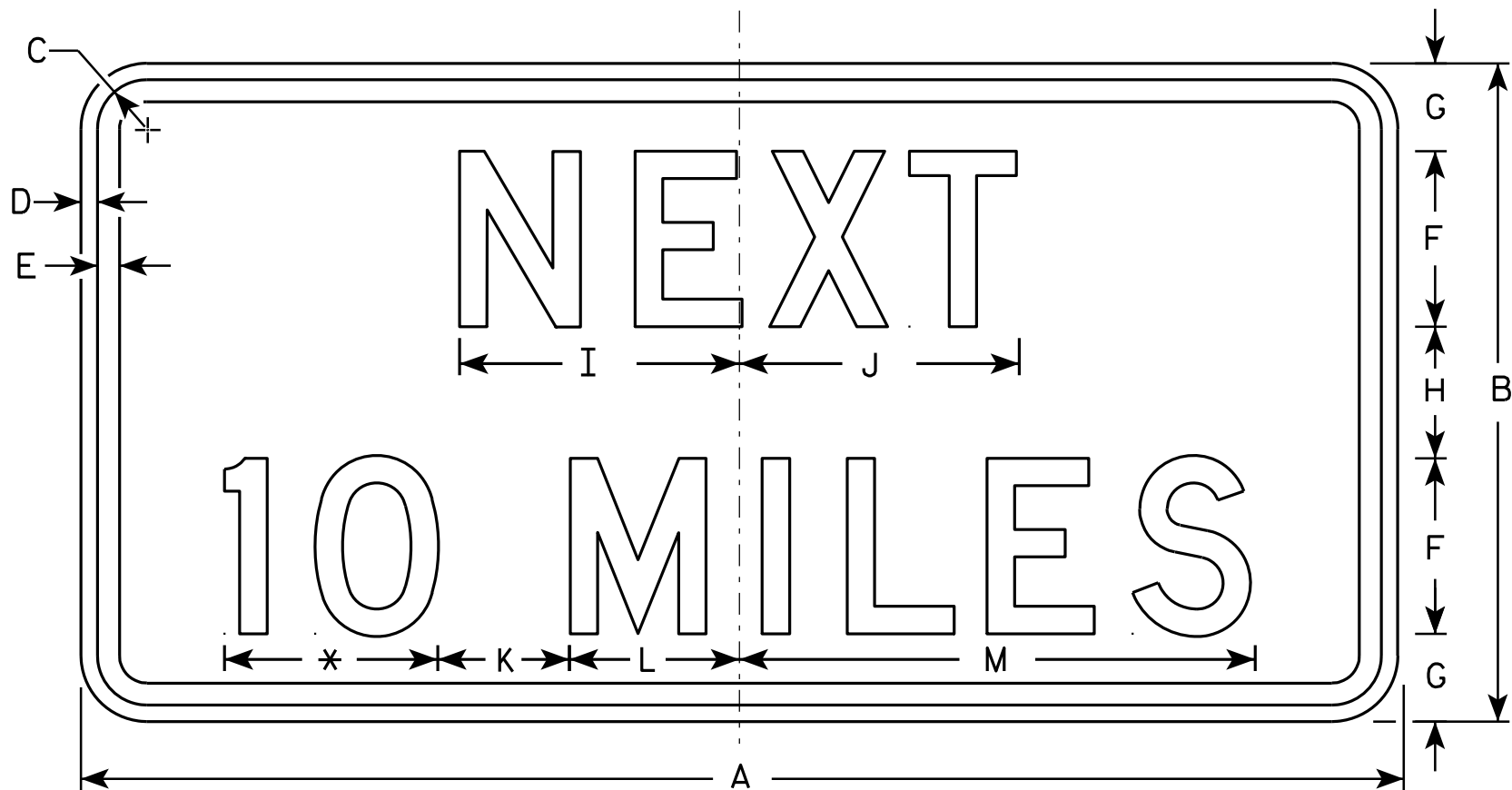
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
2M	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
3	18	54				6	5 1⁄2	8 1⁄2	45°	6	6 5⁄6																6.75
4																											
5																											

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



W57-51

- NOTES**
- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 - 2. Color:
Background - Yellow
Message - Black
 - 3. Message Series - D
 - 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 - 5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	12	1 1/8	3/8	3/8	3	1 3/4	2 1/2	5	5 1/8	3	2 3/4	9 5/8														2.0
2S	30	15	1 1/8	3/8	1/2	4	2	3	6 3/8	6 3/8	3	3 7/8	11 3/4														3.13
2M	36	18	1 1/8	3/8	1/2	5	2 5/8	2 3/4	7 7/8	8	5	4 1/8	15 3/8														4.5
3	36	18	1 1/8	3/8	1/2	5	2 5/8	2 3/4	7 7/8	8	5	4 1/8	15 3/8														4.5
4	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0
5	48	24	1 3/8	1/2	5/8	6	3 1/2	5	10	10 1/8	6	5 5/8	19														8.0

STANDARD SIGN
W57-51

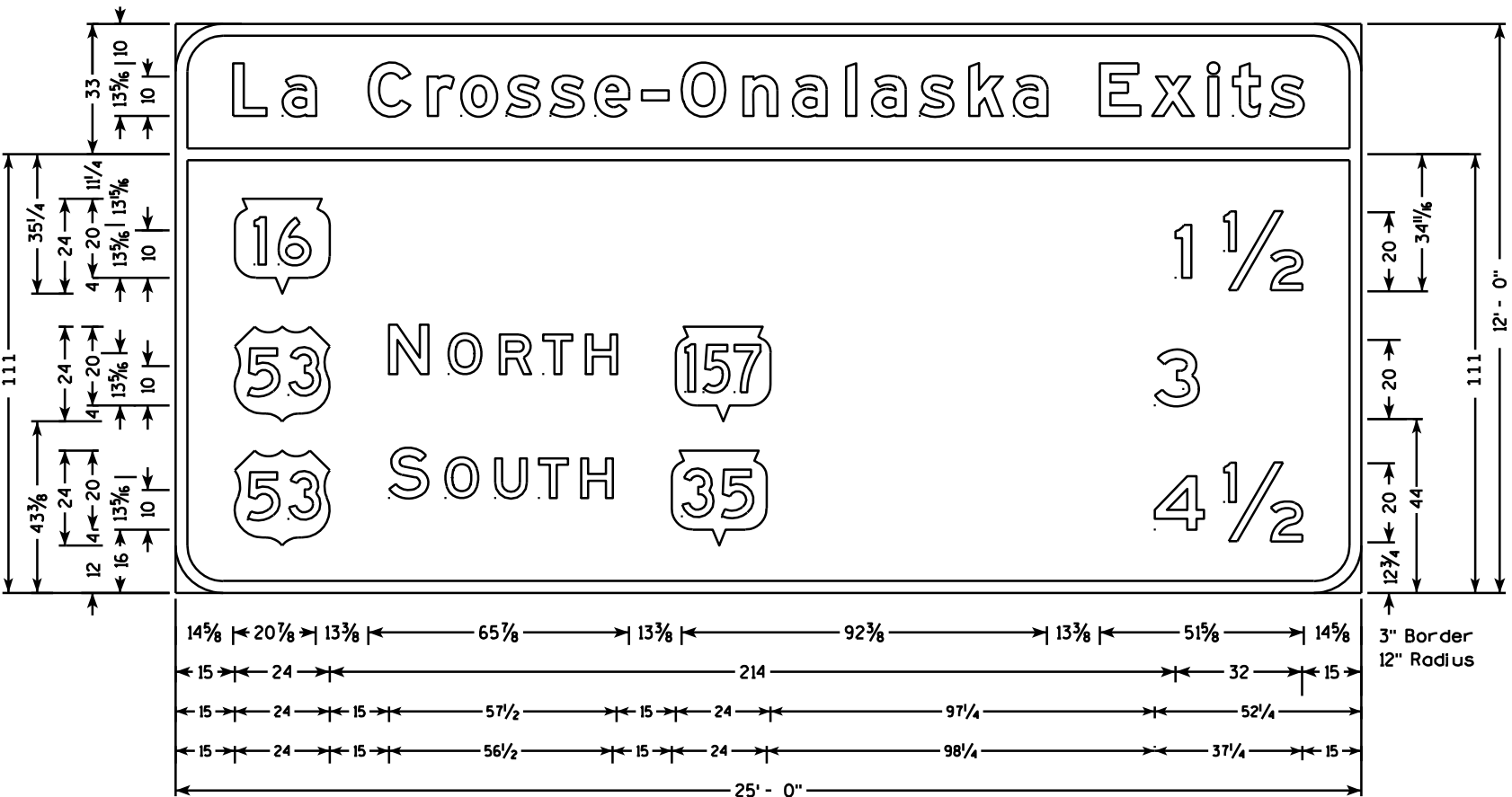
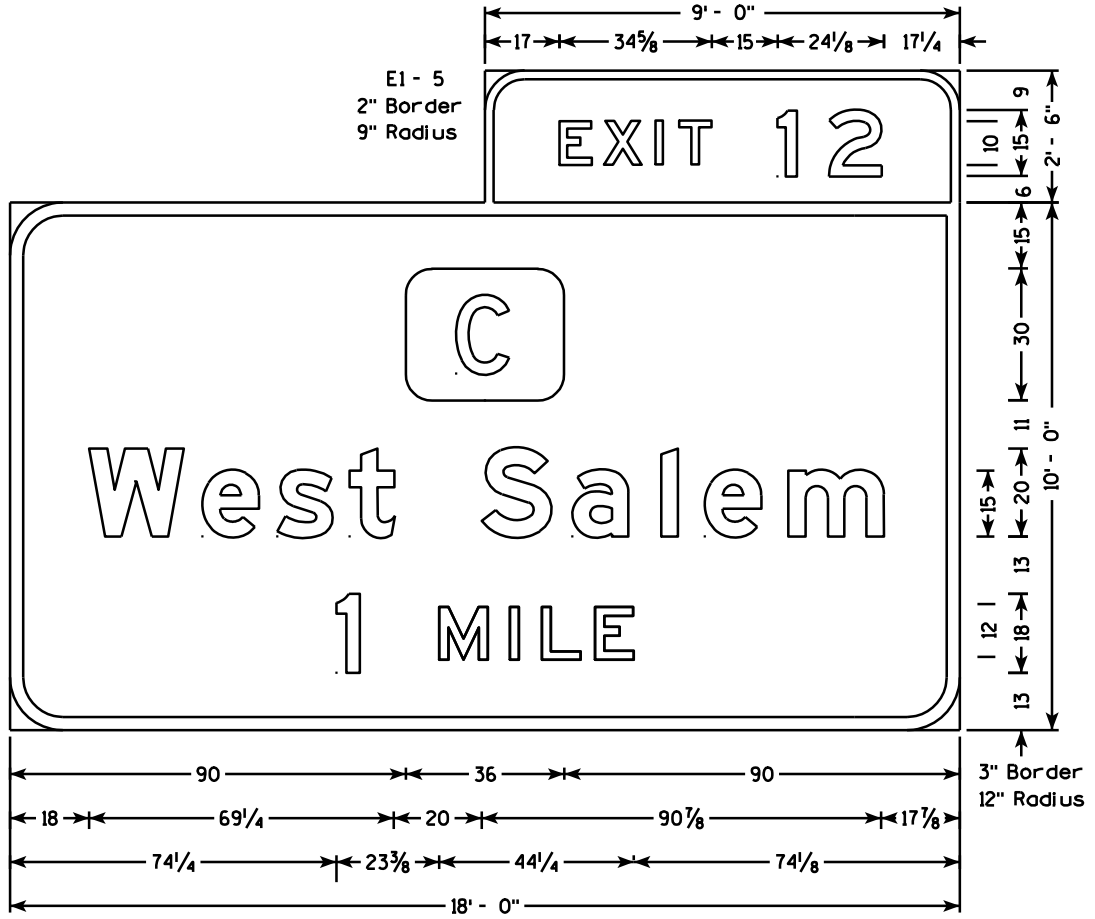
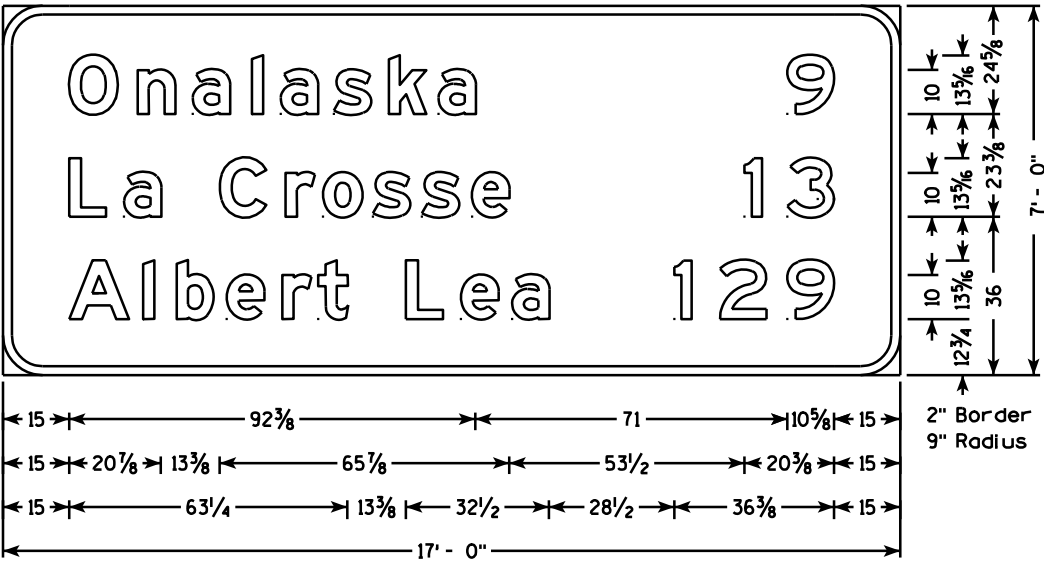
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/18/11 PLATE NO. W57-51.8

NOTES

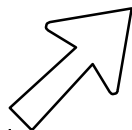
1. All Signs are Type I - Type SH Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E Modified



E1 - 5
2" Border
9" Radius

EXIT 12

C
West Salem



87 36 129
14 7/8 69 1/4 20 90 7/8 14 28 15
21' - 0"

2" Border
9" Radius

NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E Modified

E1 - 5
2" Border
9" Radius

EXIT 5

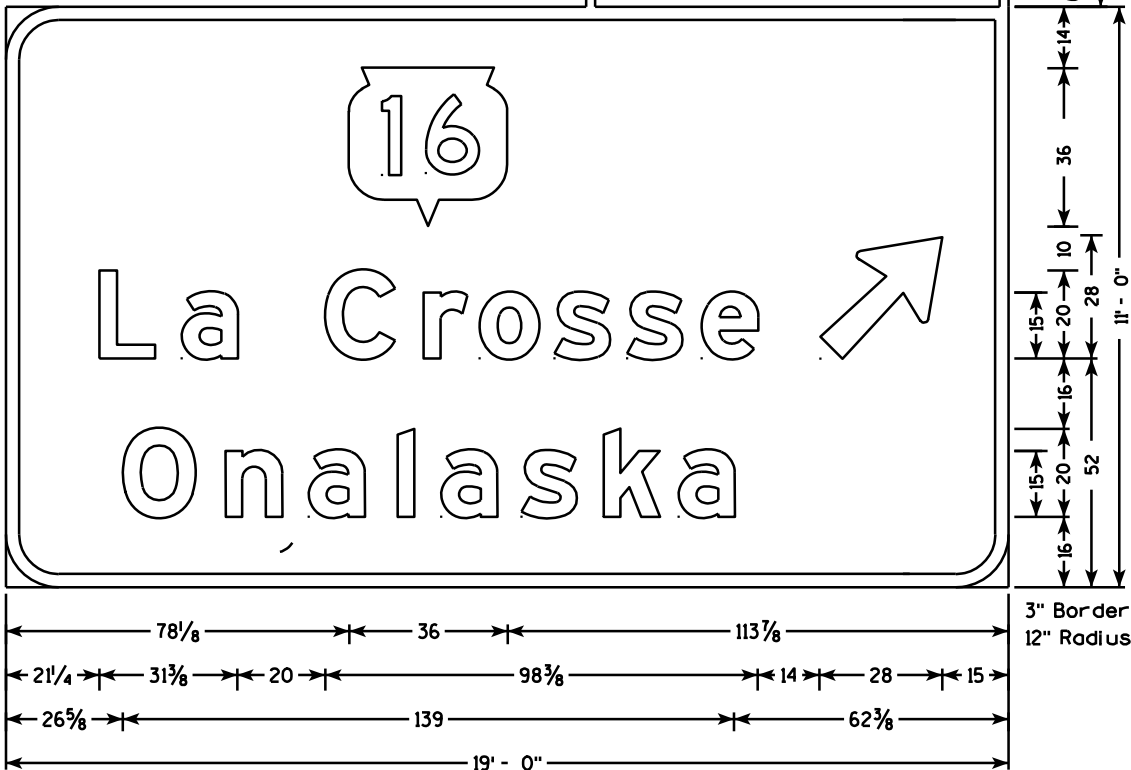
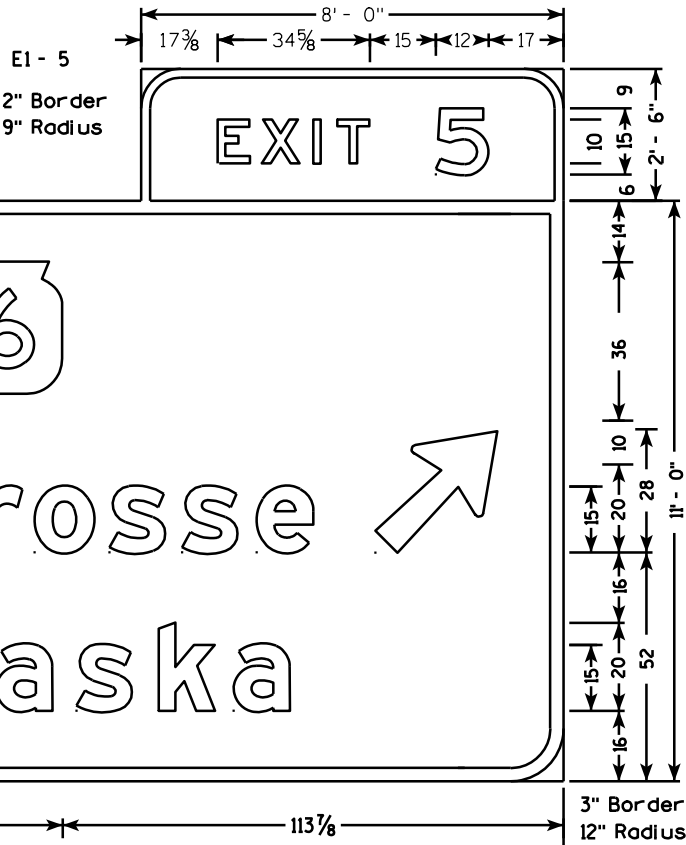
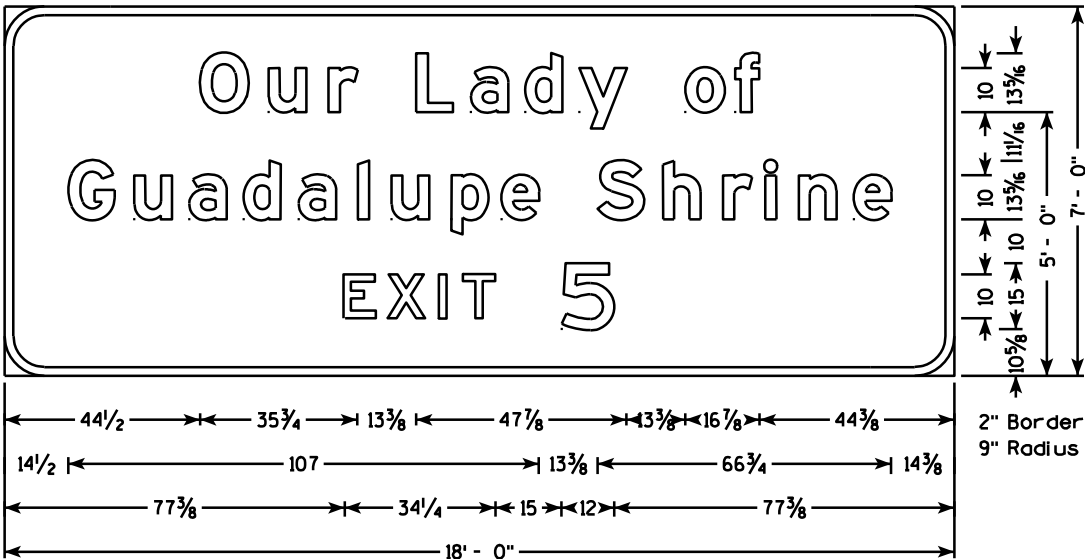
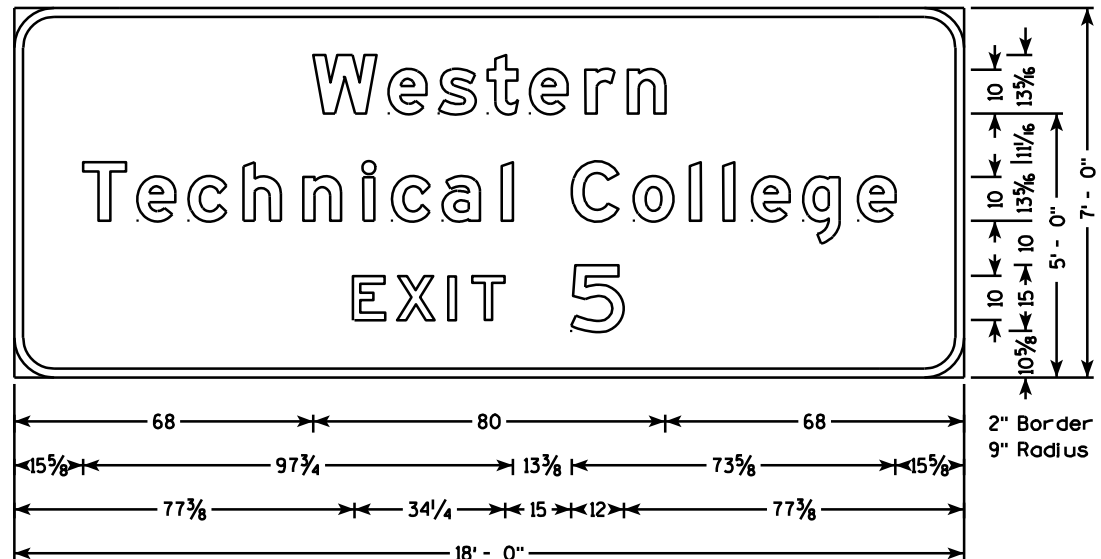
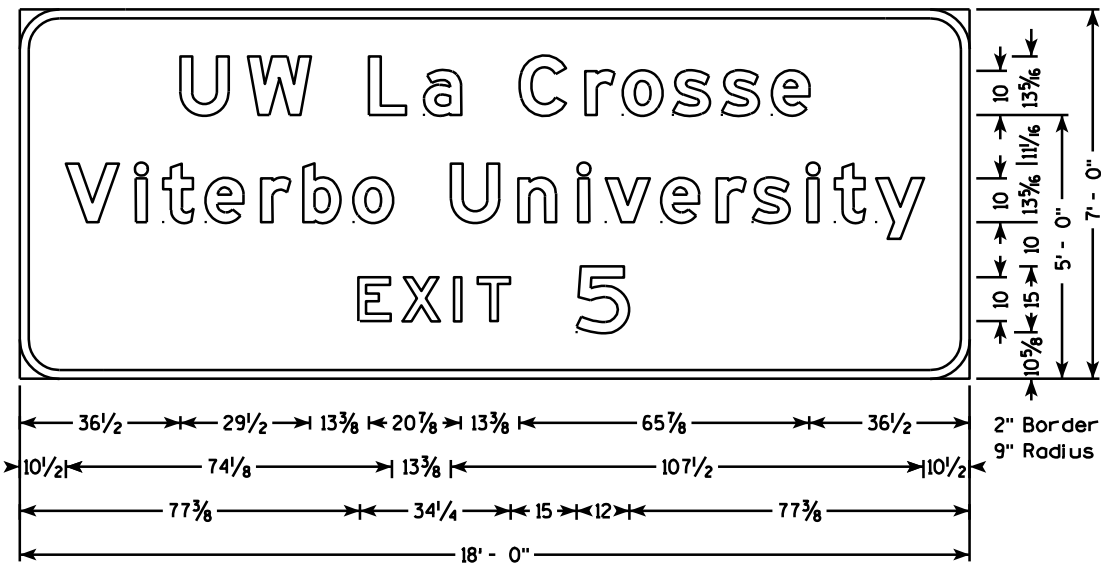
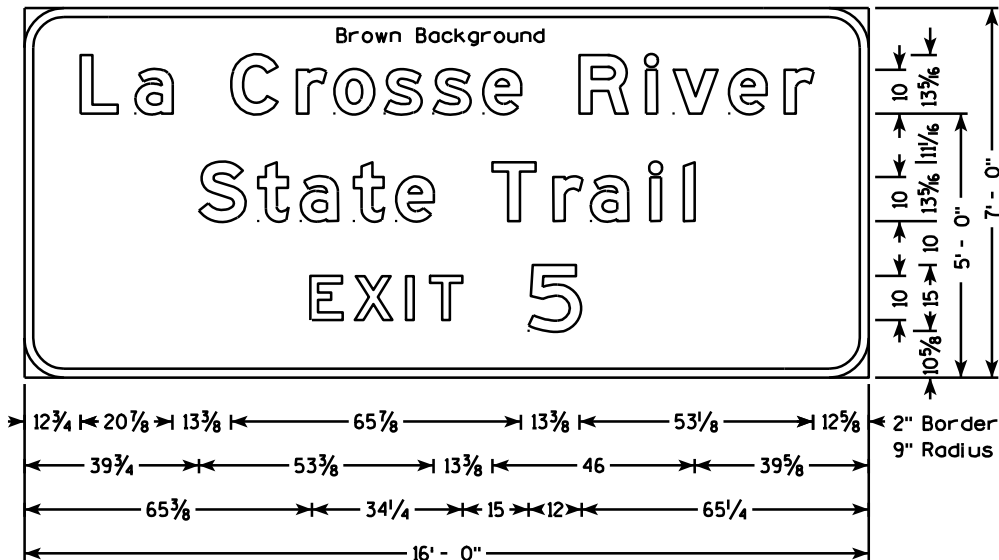
16
La Crosse
Onalaska
1 MILE

78 36 78
21 1/8 31 3/8 20 98 3/8 21 1/8
26 1/2 139 26 1/2
62 1/8 23 3/8 44 1/4 62 1/8
16' - 0"

3" Border
12" Radius

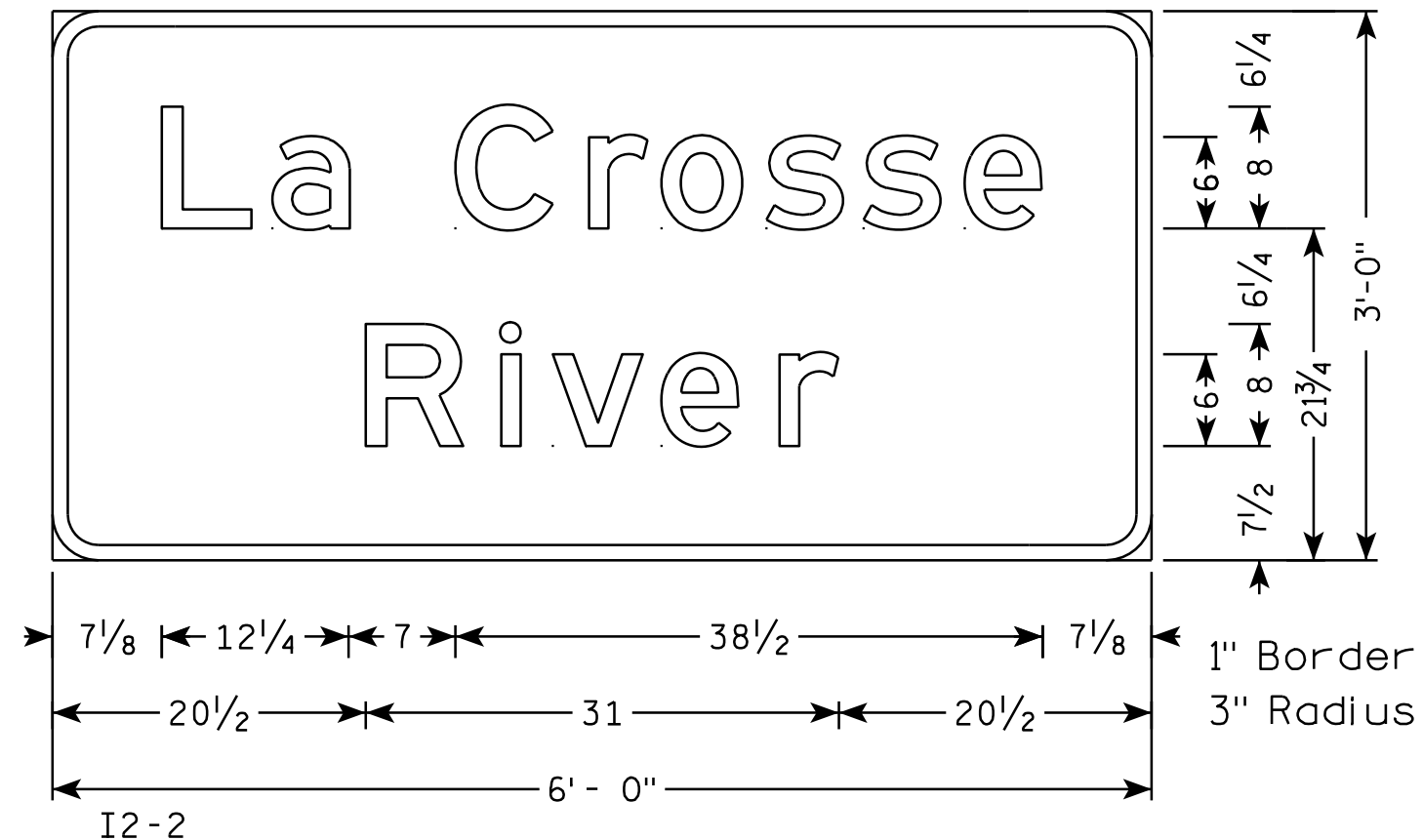
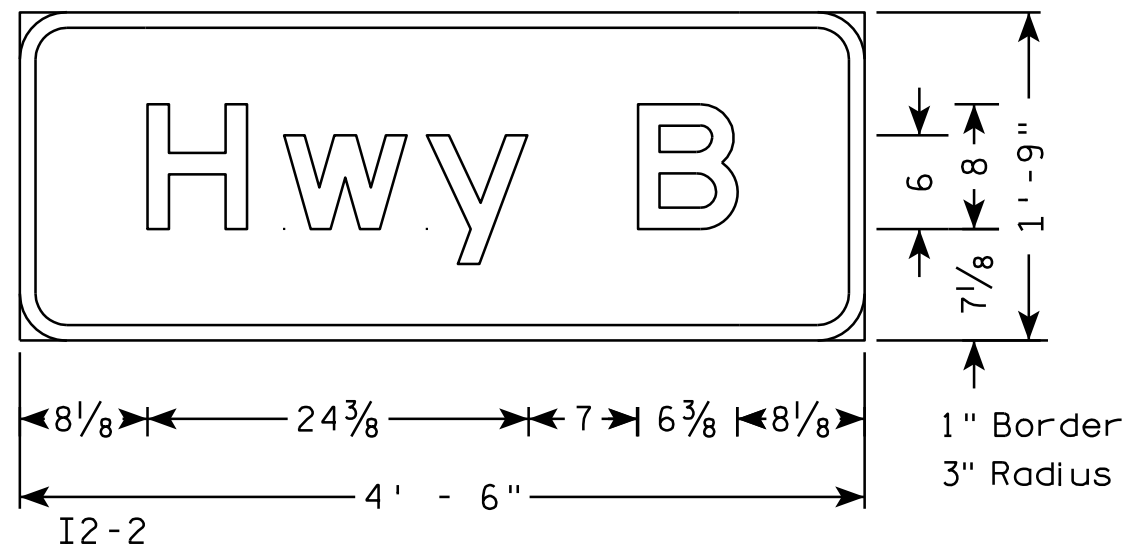
NOTES

1. All Signs are Type I - Type SH Reflective - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green except as noted
Message - White
3. Message Series - E Modified



NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E

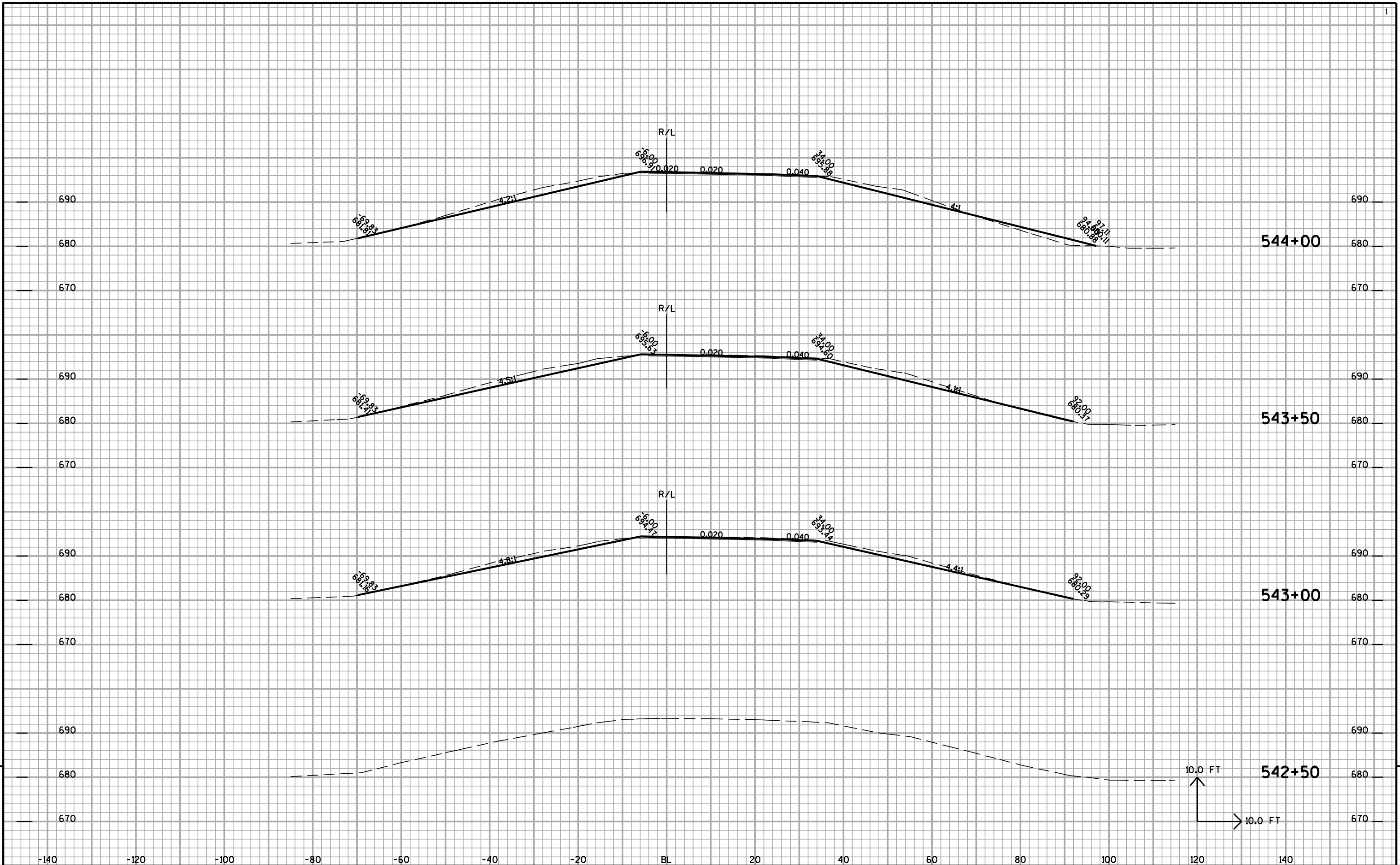


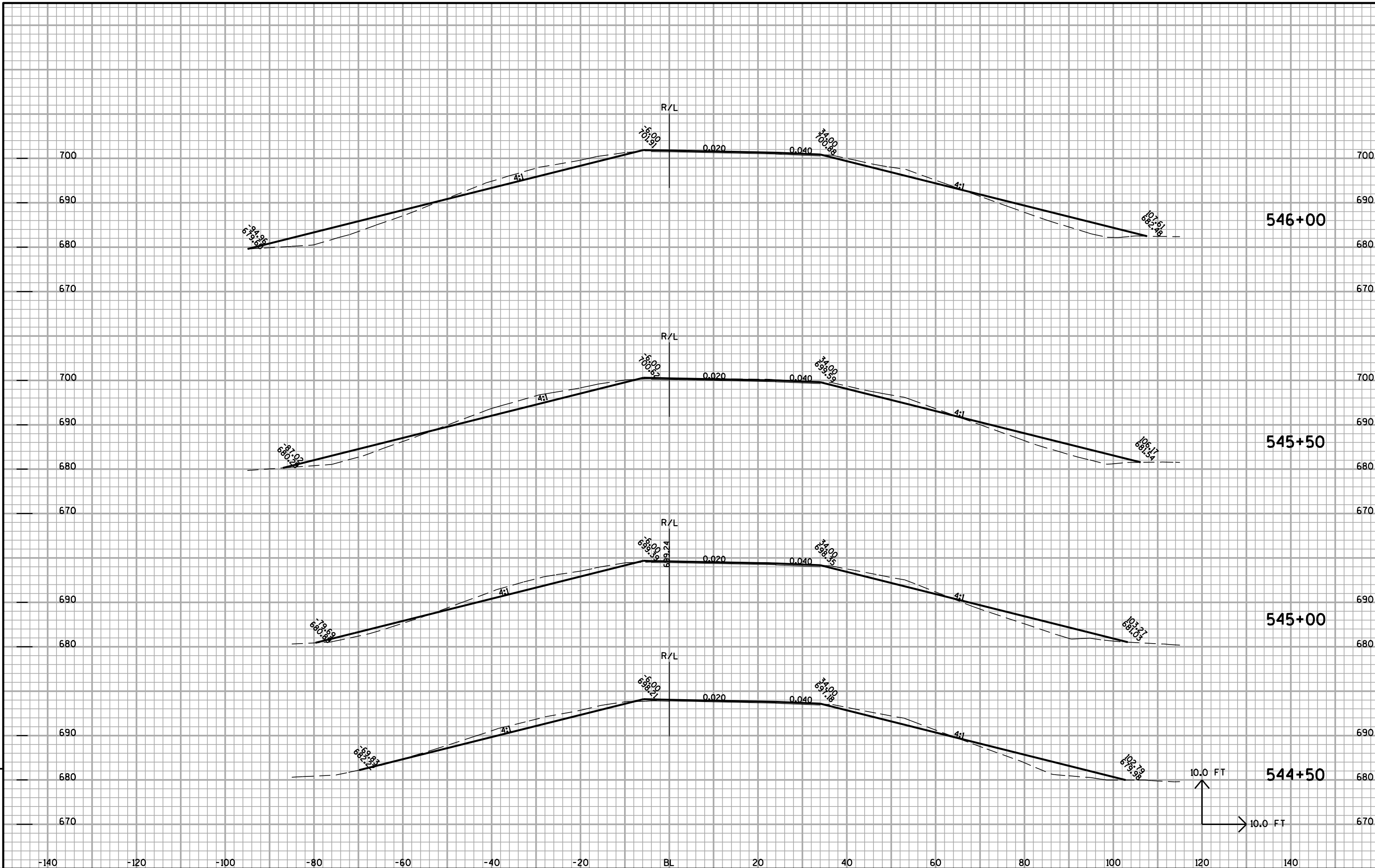
			AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
	Real Station								
STATION		Distance	Cut	Fill	Cut	Fill	Cut	Expanded Fill	Mass Ordinate
					Note 1	Note 3	Note 1	1.25	Note 8
542+50.00	54,250		0	0					
543+00.00	54,300	50	74	1	68	1	68	1	66.93
543+50.00	54,350	50	93	2	154	3	222	4	217.82
544+00.00	54,400	50	83	21	163	21	385	31	353.72
544+50.00	54,450	50	76	56	147	71	532	120	412.03
545+00.00	54,500	50	84	69	149	115	681	264	416.74
545+50.00	54,550	50	83	100	155	156	835	459	376.46
546+00.00	54,600	50	79	134	150	216	985	729	255.62
546+50.00	54,650	50	55	104	123	220	1,108	1,004	104.16
547+00.00	54,700	50	55	138	102	224	1,210	1,284	-73.83
547+50.00	54,750	50	58	146	105	263	1,315	1,613	-297.85
548+00.00	54,800	50	71	158	119	281	1,434	1,964	-529.91
548+50.00	54,850	50	0	0	66	146	1,500	2,147	-646.68
				TOTAL	1,500	1,717			

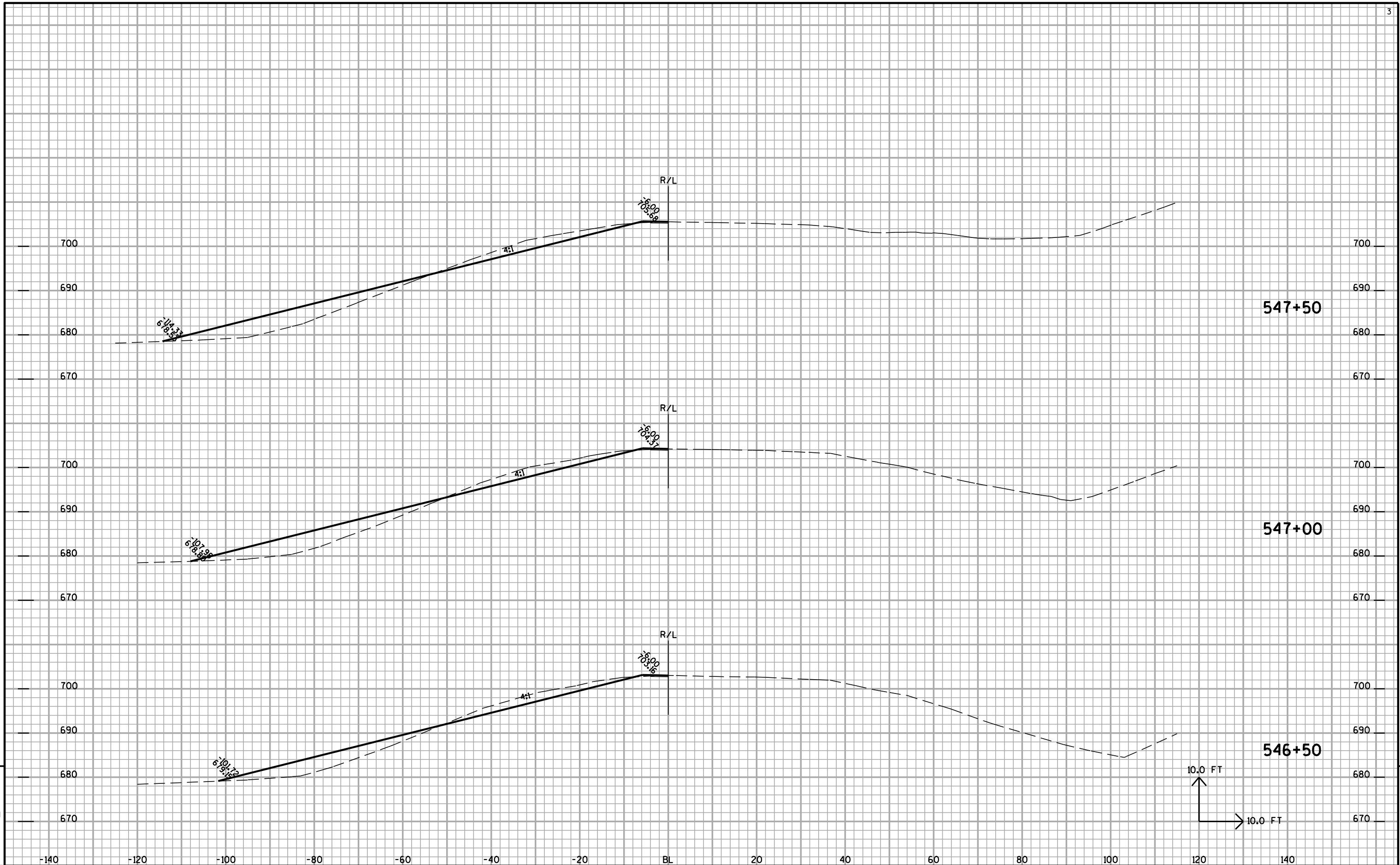
			AREA (SF)	Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)			
	Real Station		Cut	Fill	Cut	Fill	Cut	Expanded Fill	Mass Ordinate
STATION		Distance					1.00	1.25	
					Note 1	Note 3	Note 1		Note 8
0 'F'+00.00	0		0	0					
0 'F'+10.00	10	10	0	0	0	0	0	0	0.00
0 'F'+20.00	20	10	1	11	0	2	0	3	-2.34
0 'F'+30.00	30	10	0	63	0	14	0	20	-19.24
0 'F'+40.00	40	10	4	77	1	26	1	52	-50.88
0 'F'+50.00	50	10	4	23	2	19	3	75	-72.60
0 'F'+60.00	60	10	0	0	1	4	4	81	-77.25
				TOTAL	4	65			

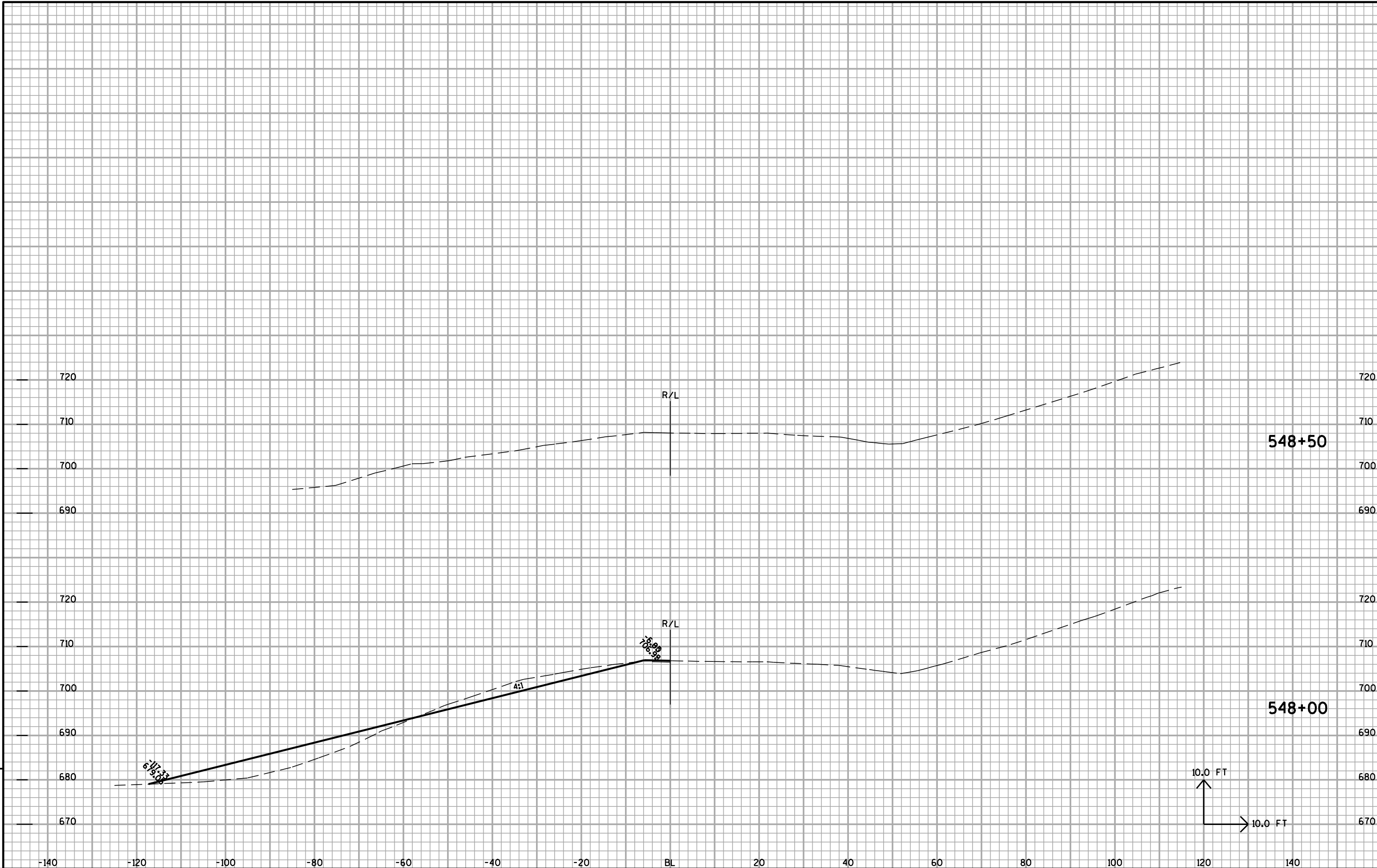
			AREA (SF)	Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
	Real Station							
	Real Station		Cut	Fill	Cut	Fill	Cut	Expanded Fill
STATION		Distance					1.00	1.25
					Note 1	Note 3	Note 1	
								Note 8
0 'G'+00.00	0		0	0				
0 'G'+50.00	50	50	0	91	0	84	0	105
1 'G'+00.00	100	50	1	185	1	255	2	424
1 'G'+50.00	150	50	2	143	2	304	4	804
2 'G'+00.00	200	50	4	69	5	197	9	1,050
2 'G'+50.00	250	50	3	25	7	88	16	1,160
				TOTAL	16	928		

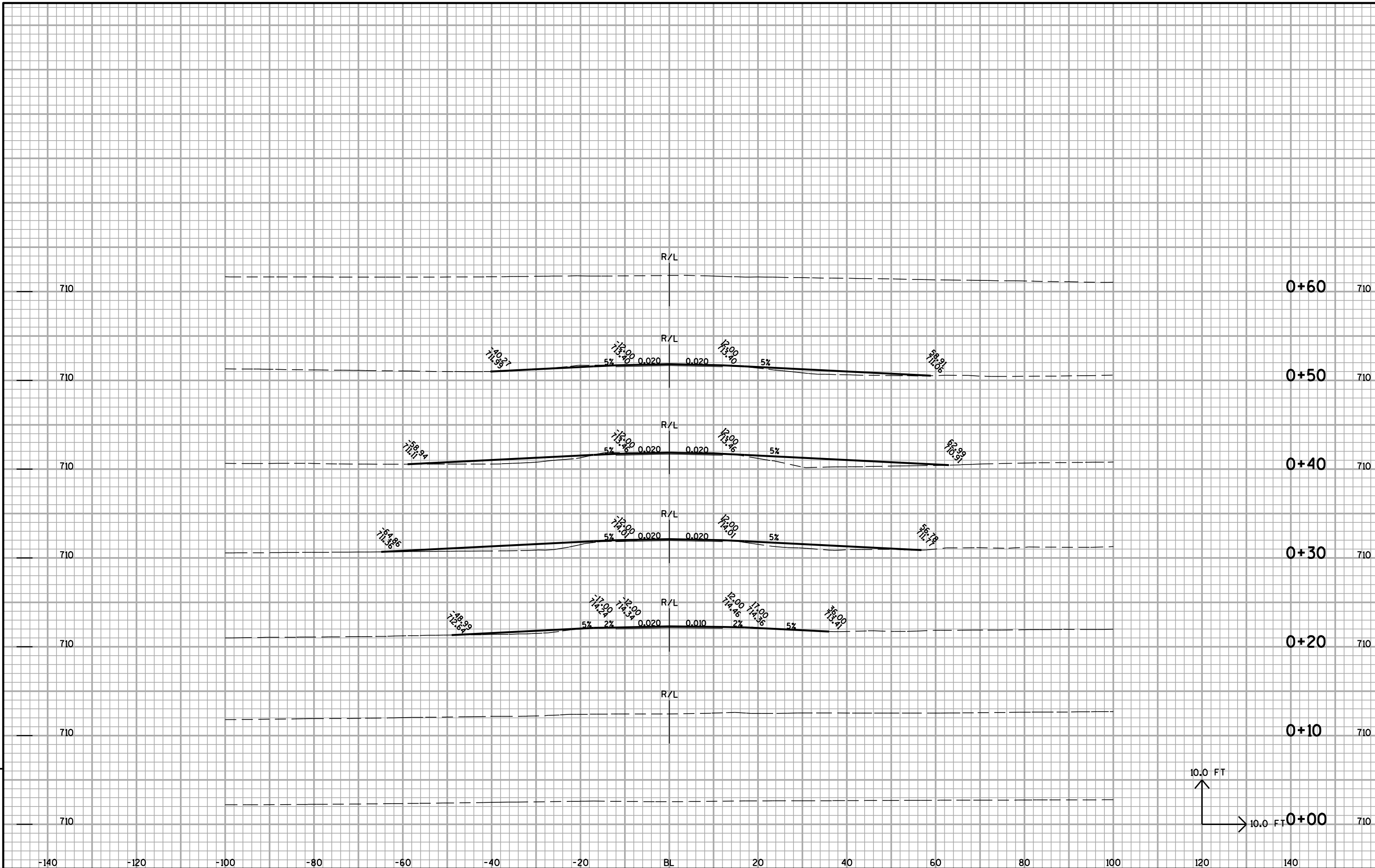
			AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
	Real Station		Cut	Fill	Cut	Fill	Cut	Expanded Fill	Mass Ordinate
STATION		Distance					1.00	1.25	
					Note 1	Note 3	Note 1		Note 8
0 'H'+00.00	0		0	0					
0 'H'+10.00	10	10	0	2	0	0	0	1	-0.47
0 'H'+20.00	20	10	0	38	0	7	0	10	-9.69
0 'H'+30.00	30	10	0	78	0	21	0	37	-36.34
0 'H'+40.00	40	10	1	38	0	22	1	64	-63.03
0 'H'+50.00	50	10	0	0	0	7	1	72	-71.81
				TOTAL	1	58			

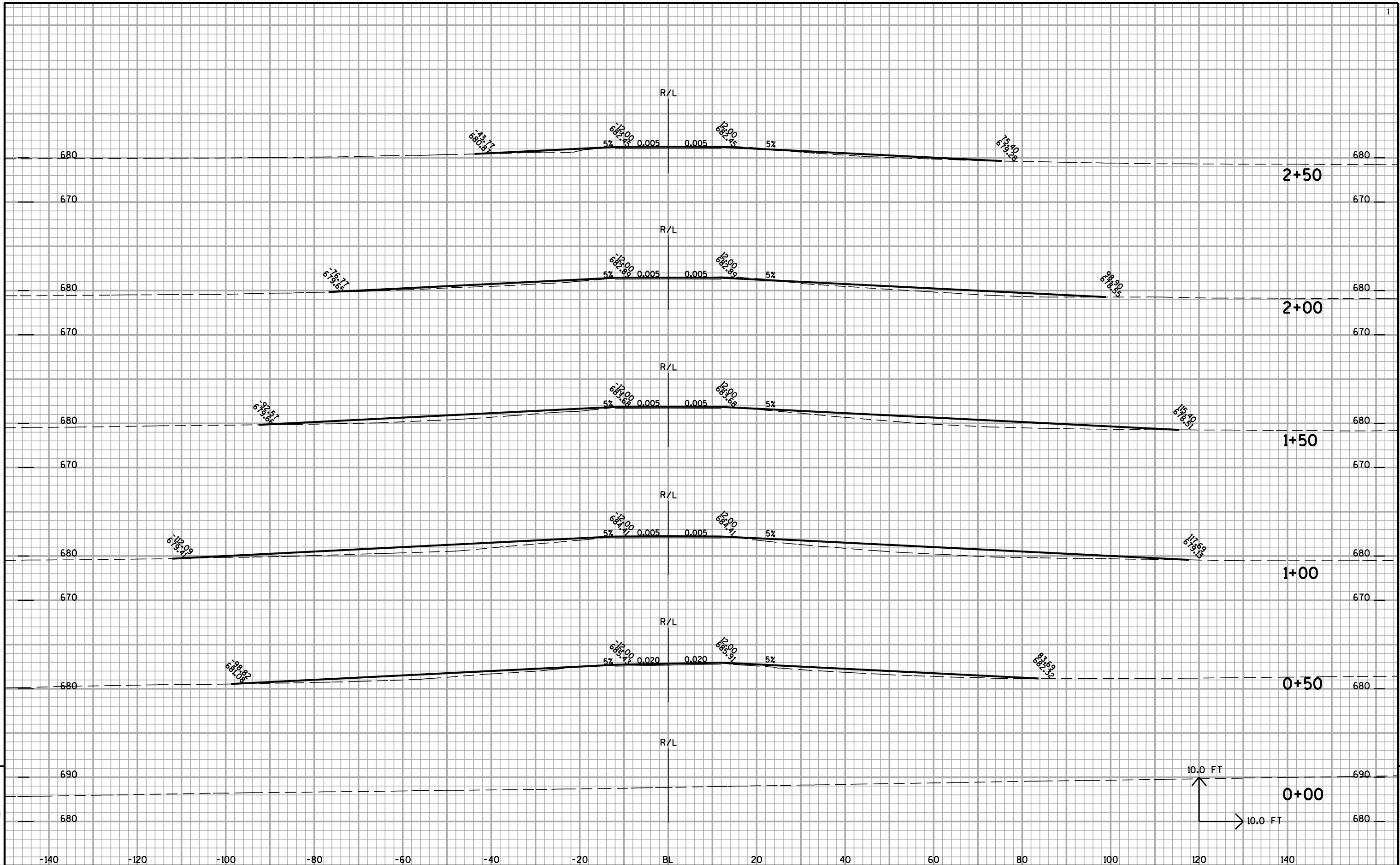


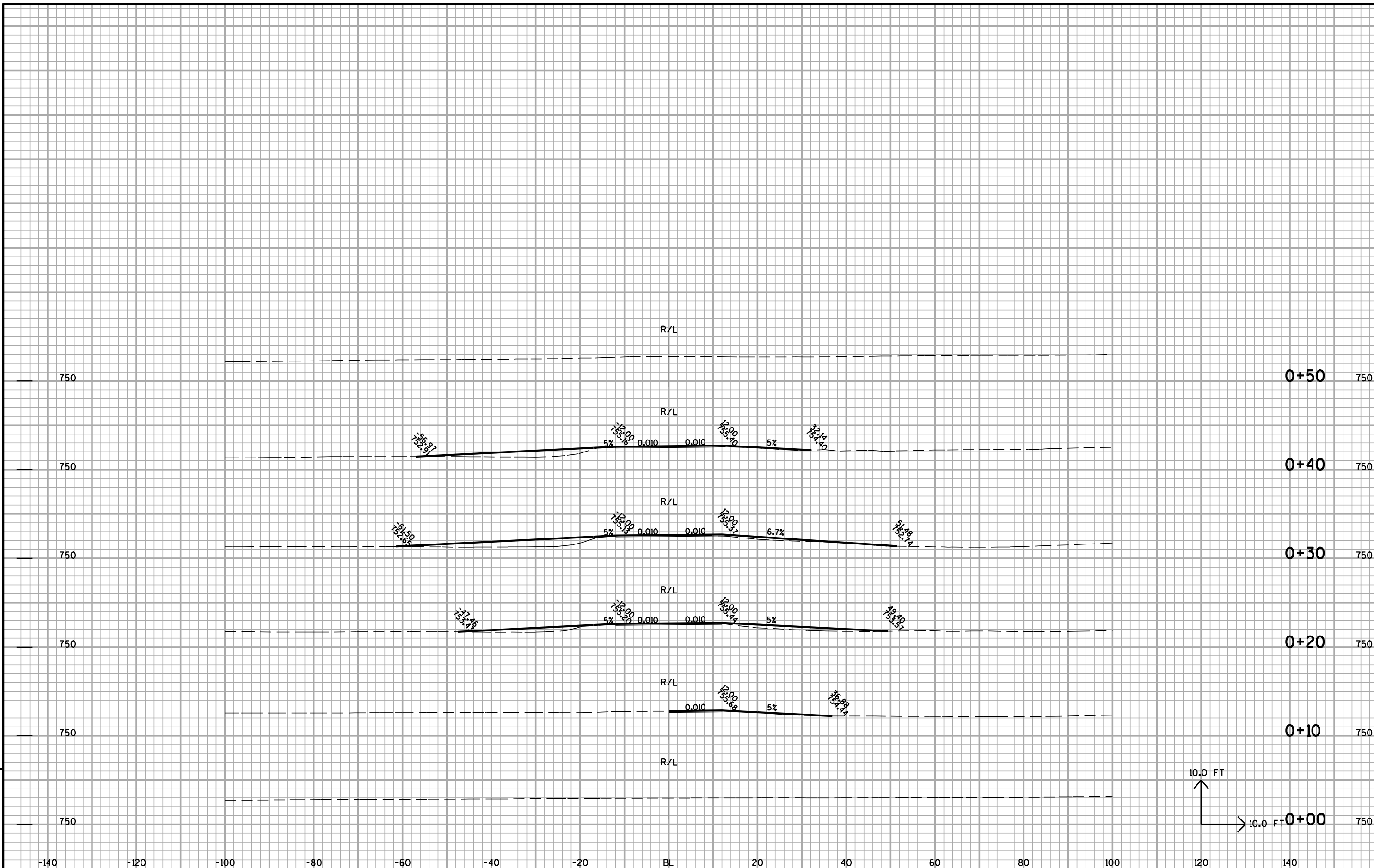


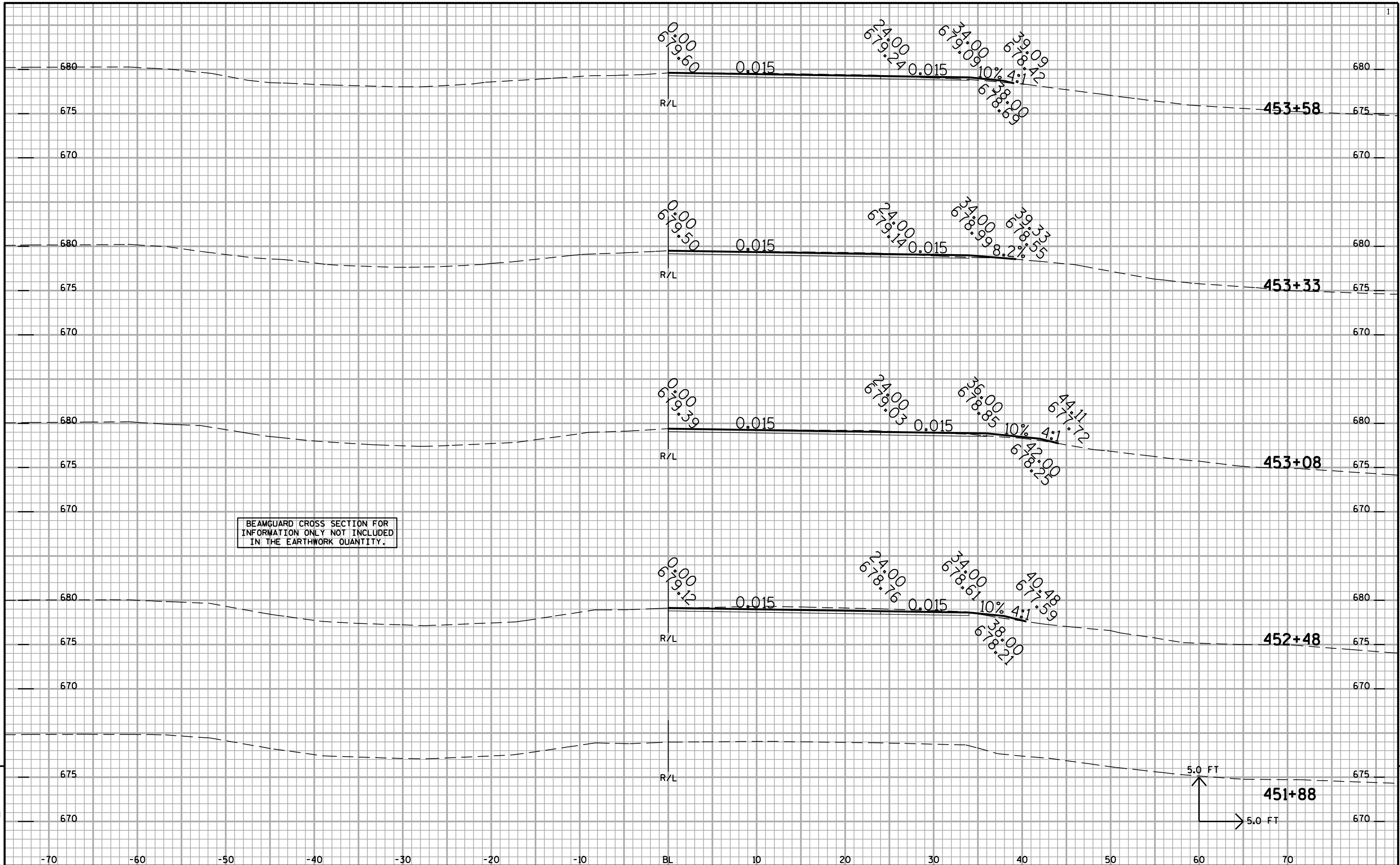


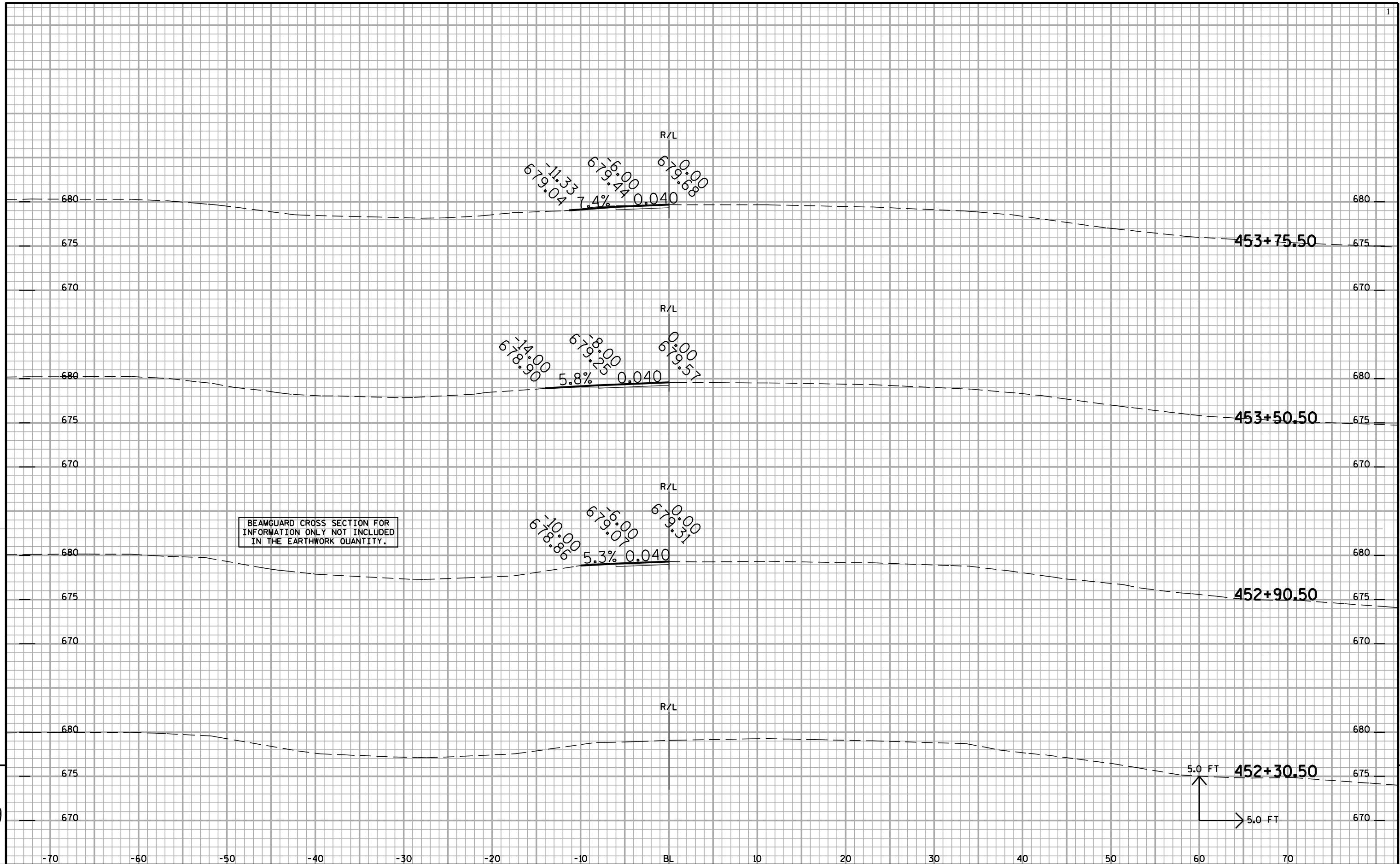












BEAMGUARD CROSS SECTION FOR
INFORMATION ONLY NOT INCLUDED
IN THE EARTHWORK QUANTITY.

R/L
679.400
679.500
679.600
679.700
679.800
679.900
680.000
2.6%
0.04%

5.0 FT

454+00.50

5.0 FT

9

9

PROJECT NO: 1071-07-77

HWY: IH 90

COUNTY: LA CROSSE

BEAMGUARD CROSS SECTIONS

SHEET NO:

191

E

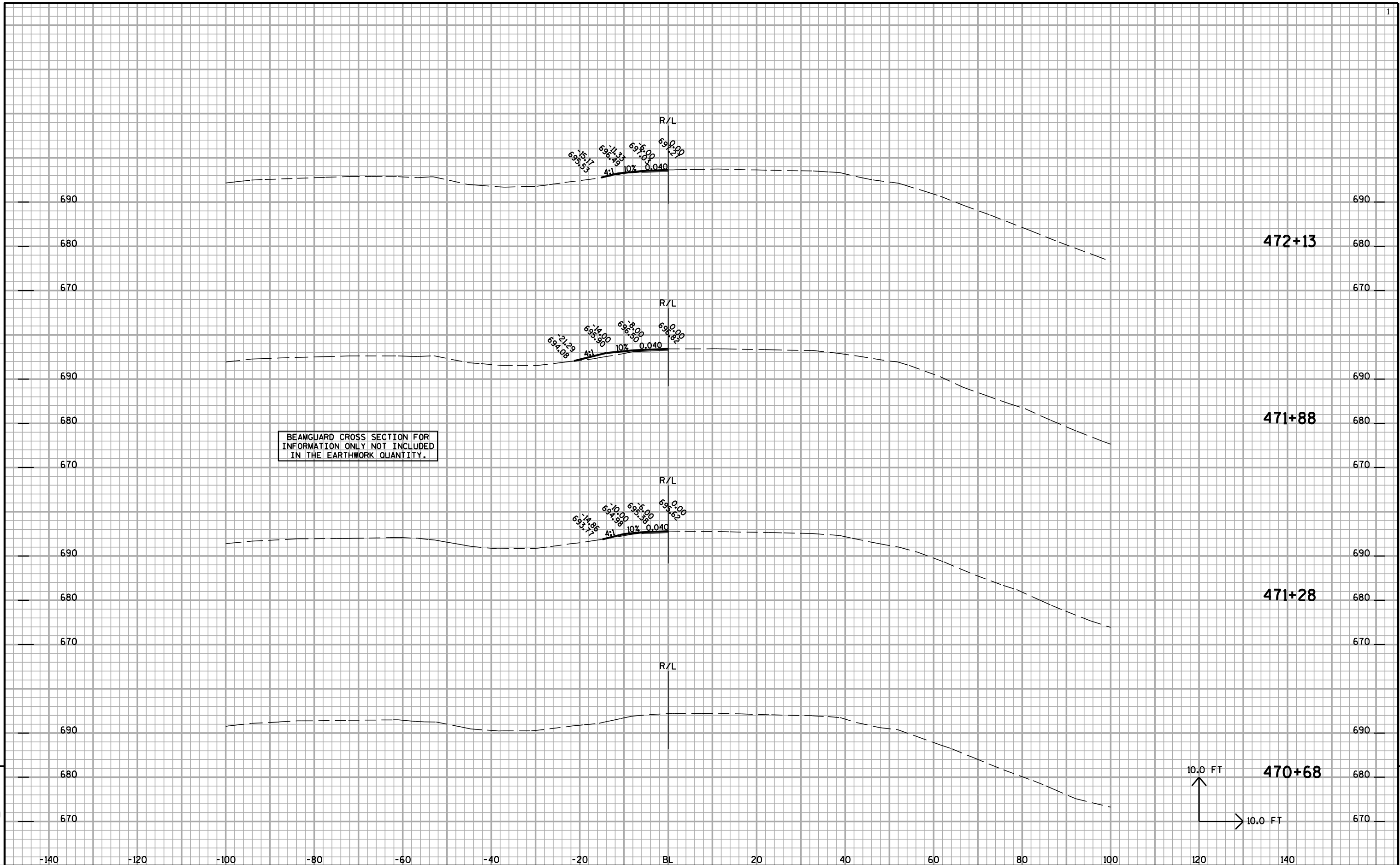
FILE NAME : p:\State\190\10710707\Cad\plans\090206_XS.DGN

PLOT DATE : 20-NOV-2012 11:06

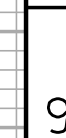
PLOT BY : dotaps

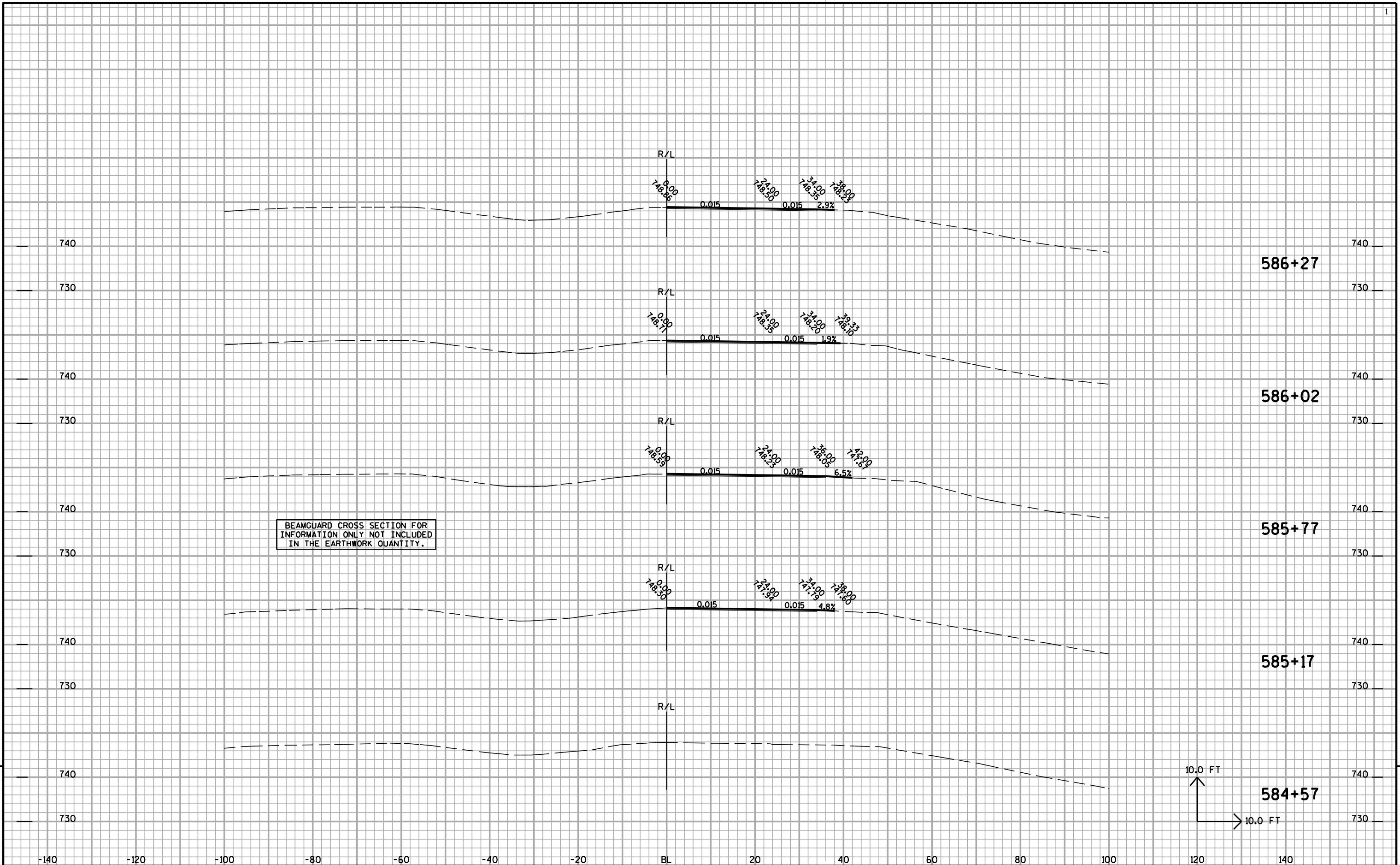
PLOT NAME :

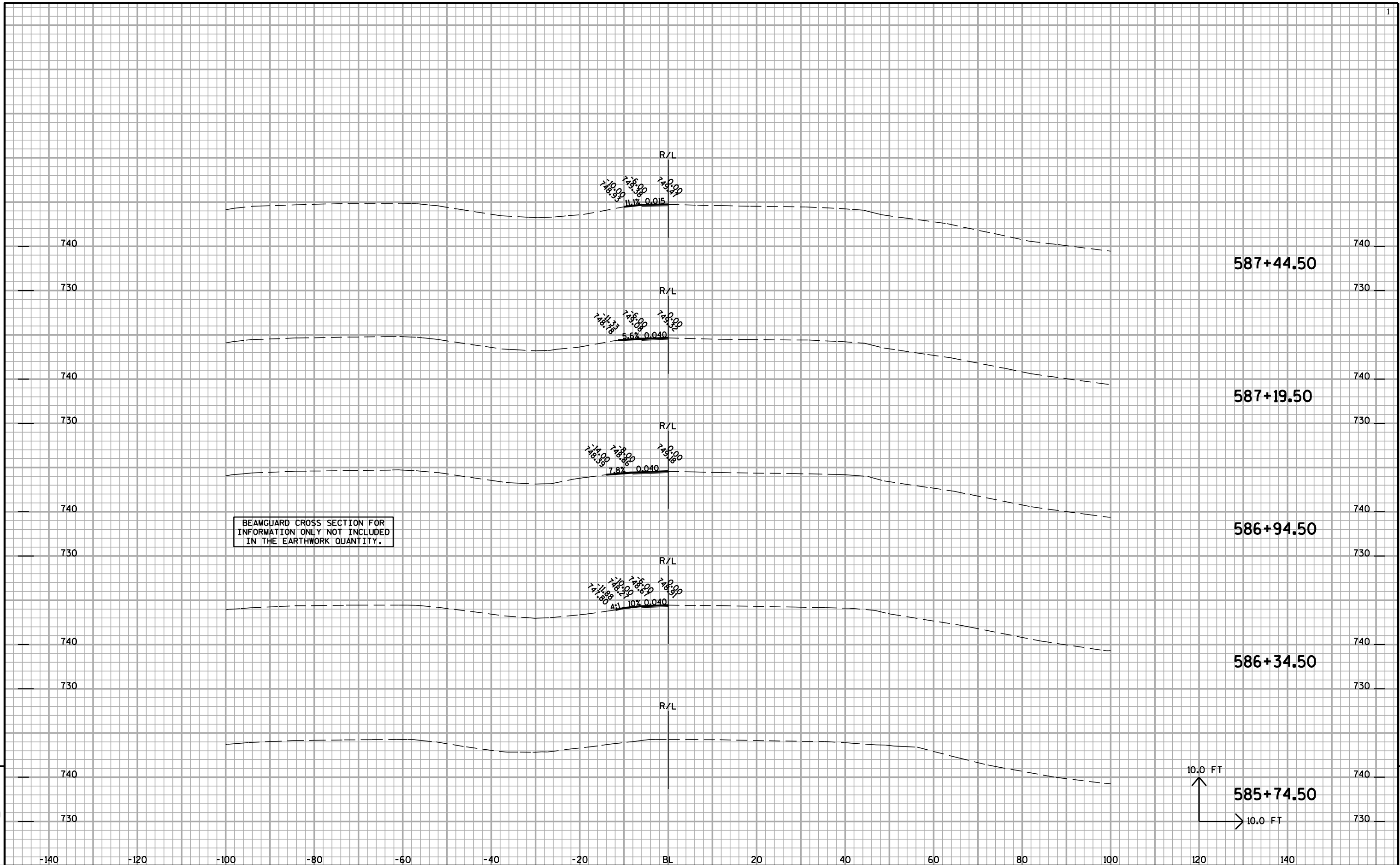
PLOT SCALE : 2:1

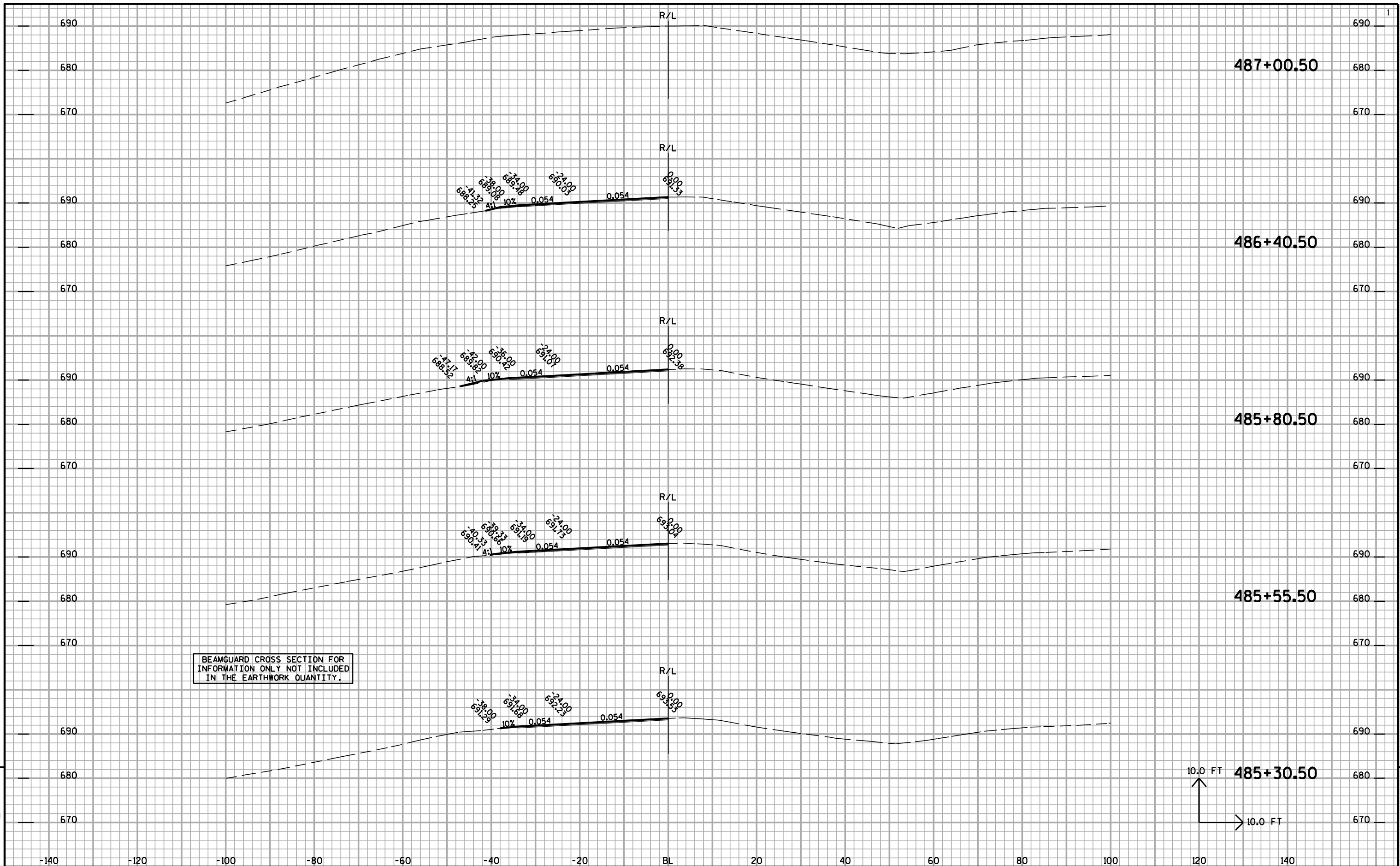


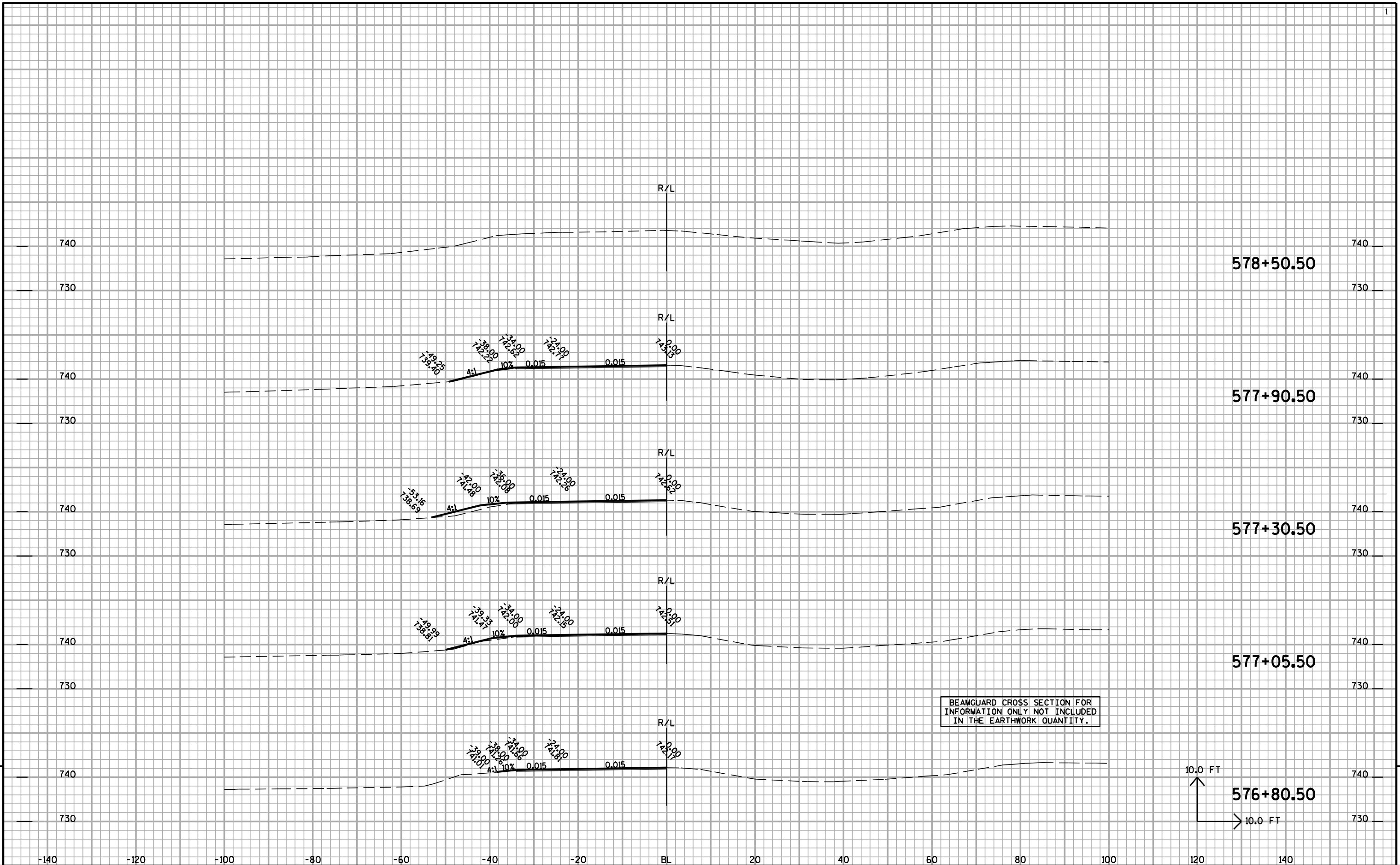
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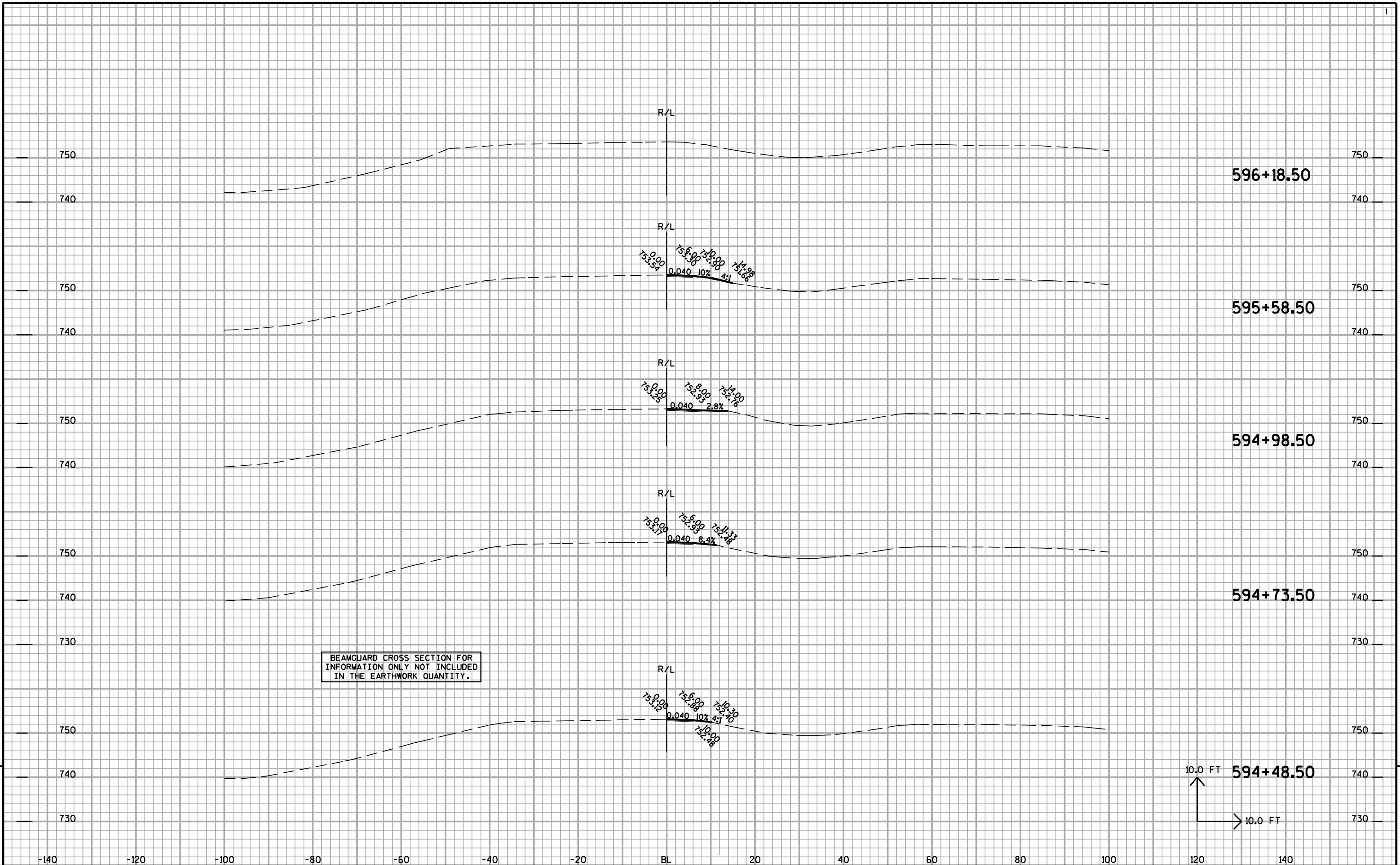


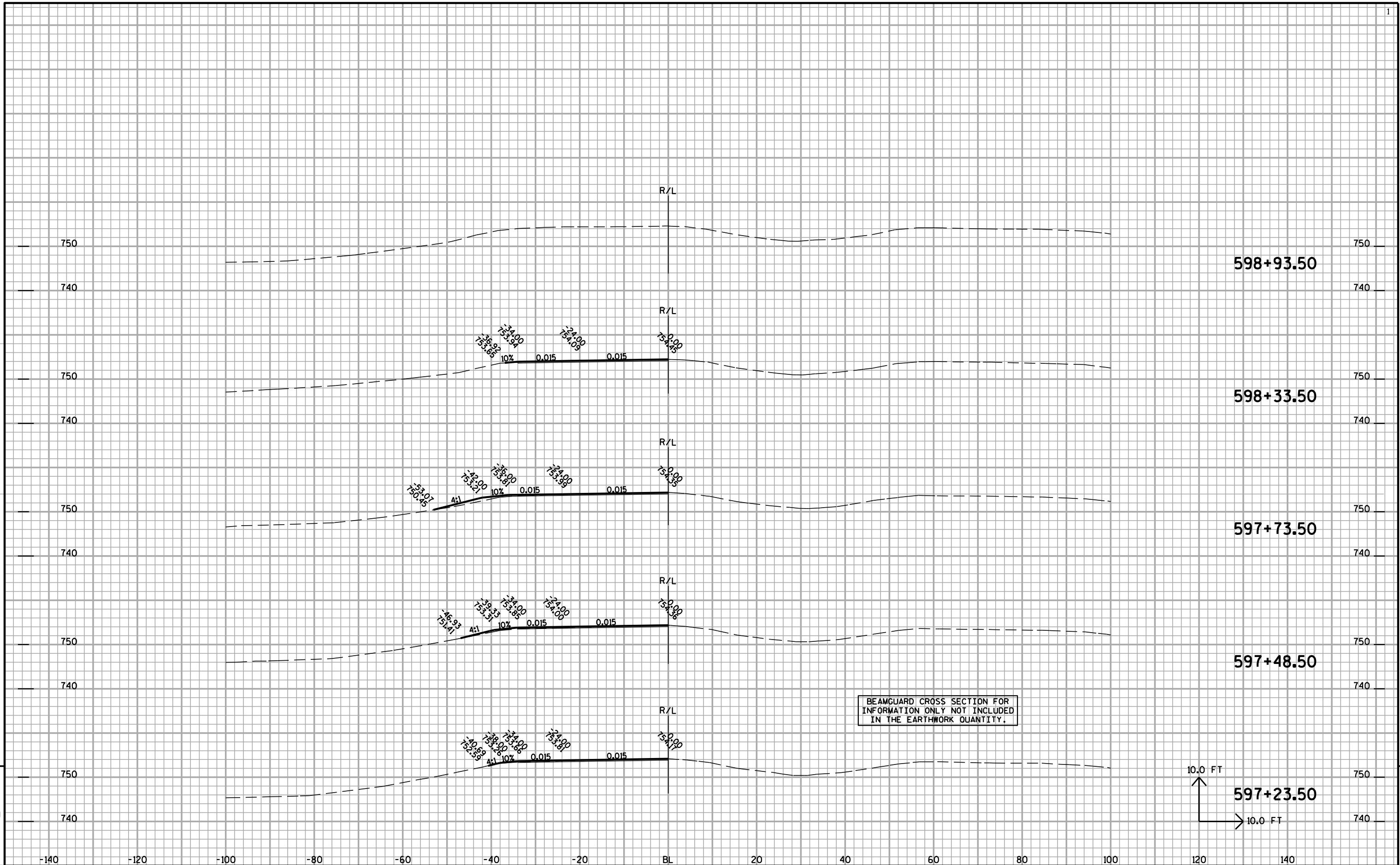


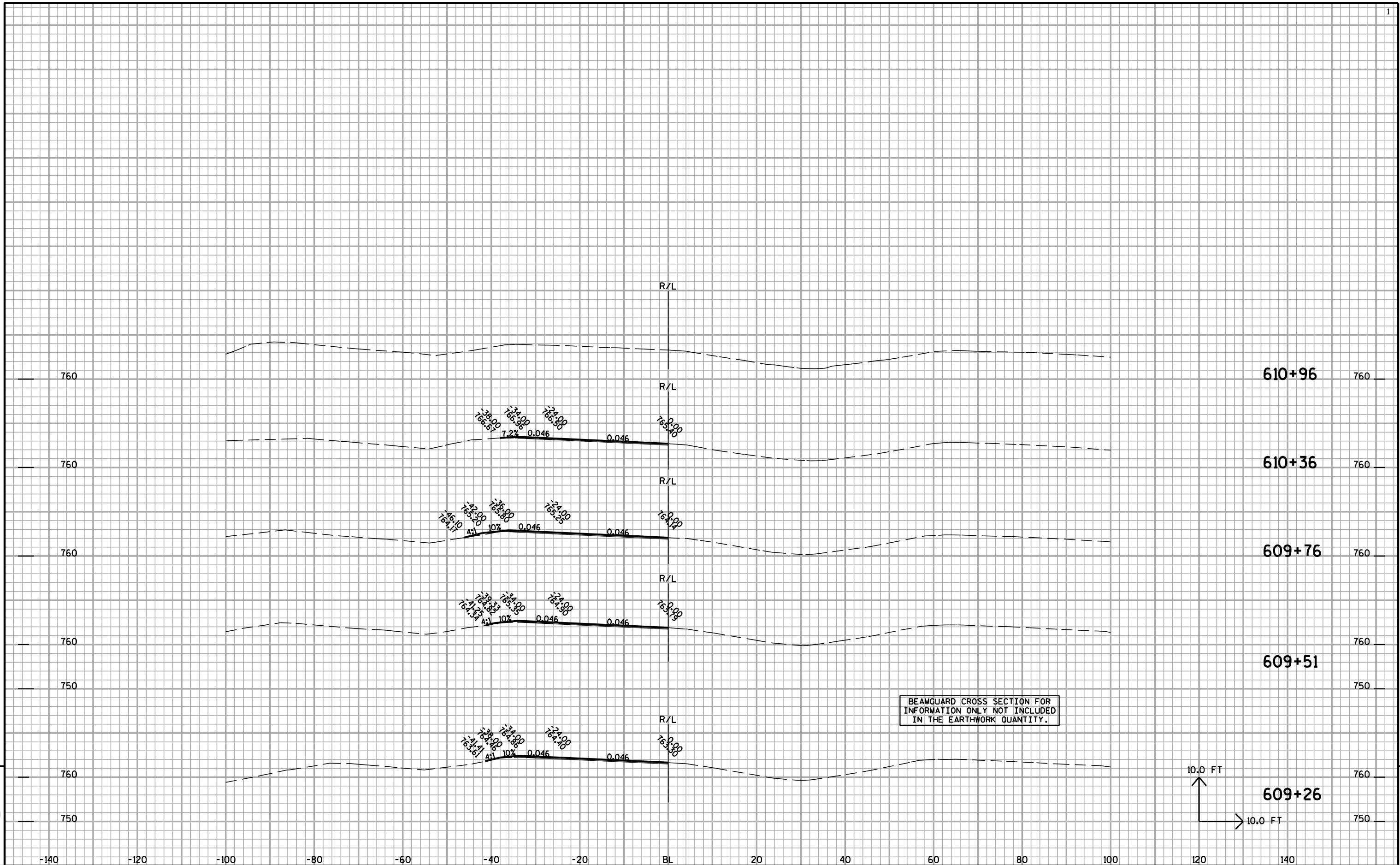


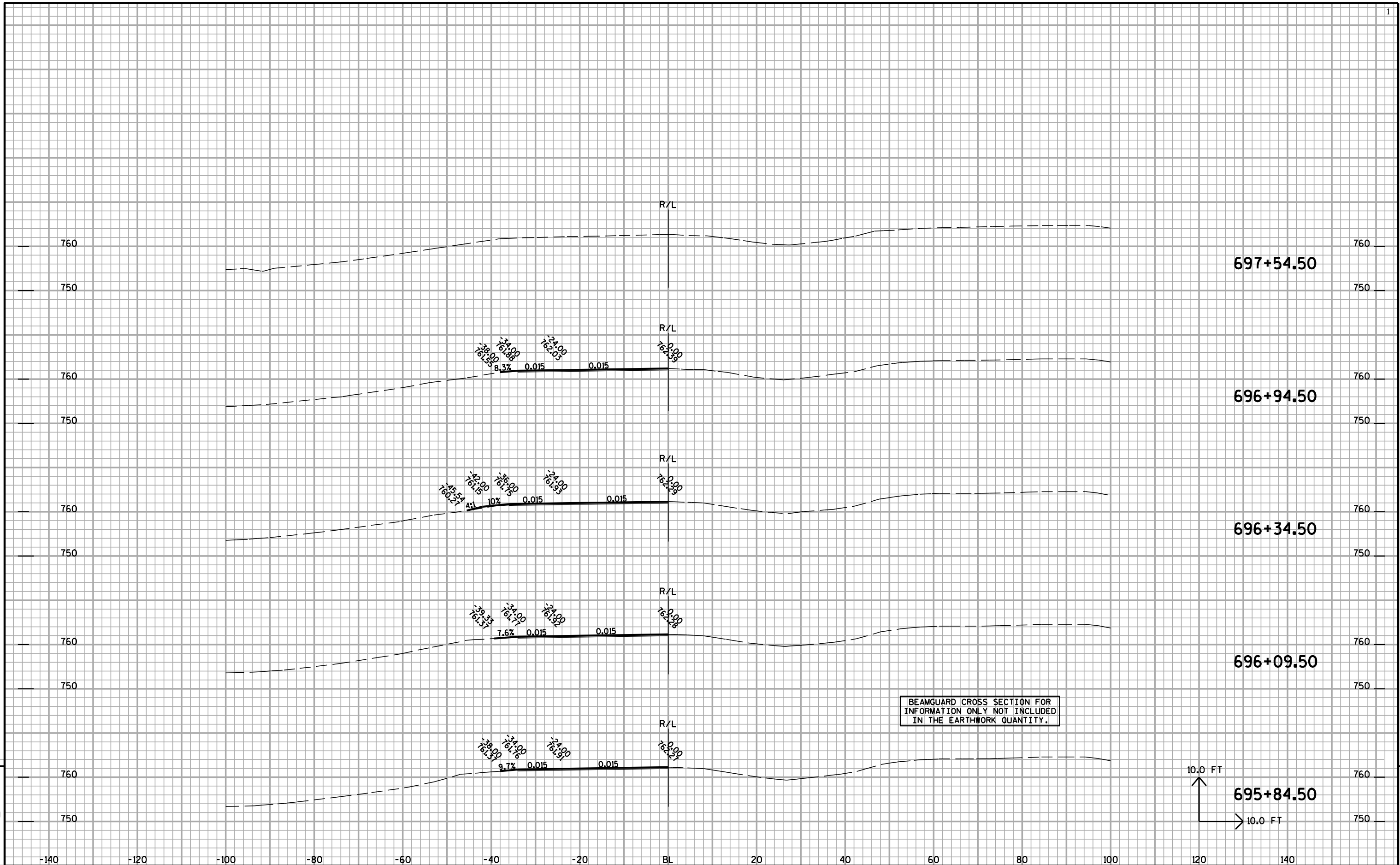


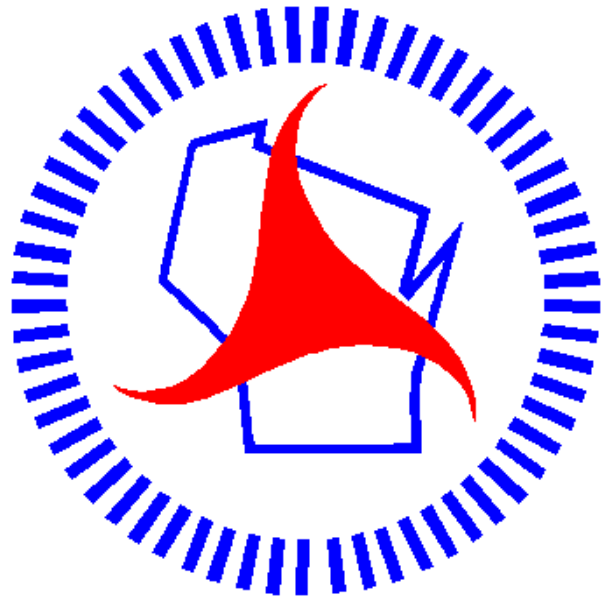












Wisconsin Department of Transportation

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