EAU

PROJECT ID: 7146-00-76

WITH: N/A

COUNTY: TREMPEALEAU

MAY 2025

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.	6	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 88

N

DESIGN DESIGNATION

A.A.D.T.	2022	=	270
A.A.D.T.	2044	=	310
D.H.V.		=	25
D.D.		=	50/50
T.		=	15%
DESIGN SPEED		=	40 MPH
ESALS		=	95,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE		UTILITIES	
CORPORATE LIMITS		GRADE LINE		ELECTRIC	E
PROPERTY LINE		ORIGINAL GROUND		FIBER OPTIC	FO
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK	GAS	G
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL	SANITARY SEWER	SAN
EXISTING RIGHT OF WAY		GRADE ELEVATION	995.36	STORM SEWER	SS
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)		TELEPHONE	T
SLOPE INTERCEPT				WATER	W
REFERENCE LINE	300'EB'			UTILITY PEDESTAL	
EXISTING CULVERT				POWER POLE	
PROPOSED CULVERT (Box or Pipe)				TELEPHONE POLE	
COMBUSTIBLE FLUIDS	CAUTION				
MARSH AREA					
WOODED OR SHRUB AREA					

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WHITEHALL - STRUM

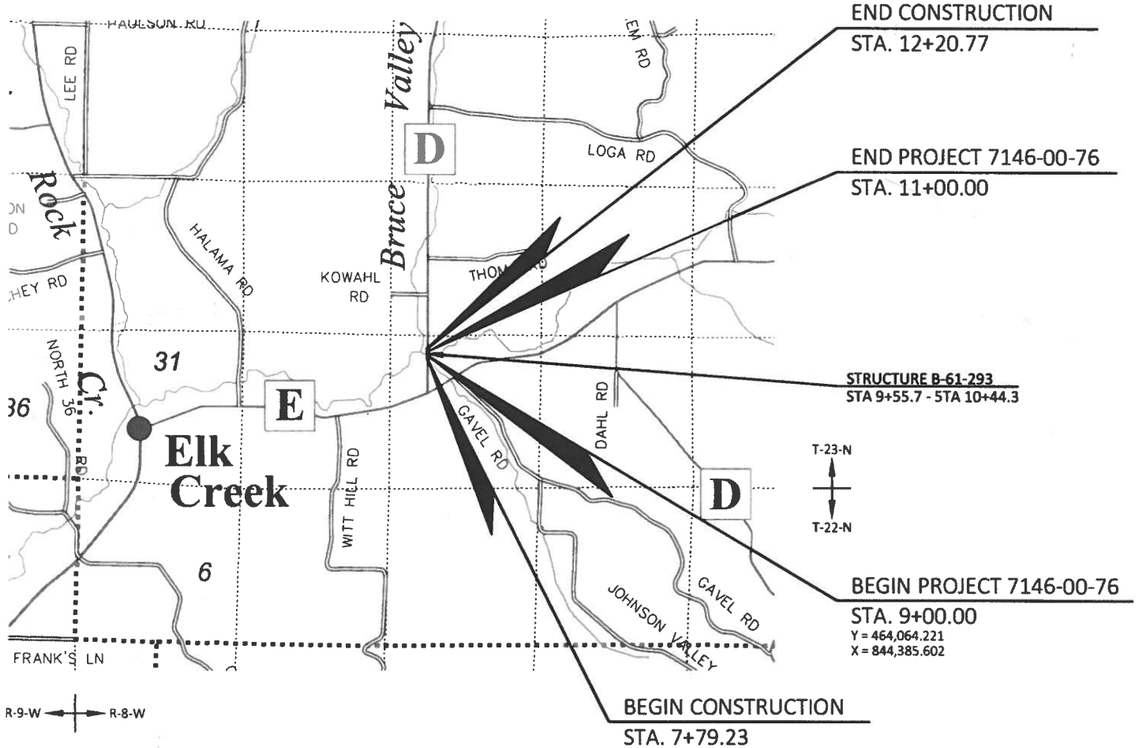
ELK CREEK BRIDGE B-61-0038

CTH D

TREMPEALEAU COUNTY

STATE PROJECT NUMBER
7146-00-76

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7146-00-76	WISC 2025481	1



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.084 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), TREMPEALEAU COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIDNS ARE BASED ON GEOID 12A

ACCEPTED FOR

TREMPEALEAU COUNTY

1-22-25 Date *Neil Olson* (Signature and Title of Official)

ORIGINAL PLANS PREPARED BY

Mead & Hunt

WISCONSIN JAY P. WHEATON E-36779 LA CROSSE, WI PROFESSIONAL ENGINEER

DATE: 1-22/2025 *Jay P Wheaton* (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MEAD & HUNT
Designer	MEAD & HUNT
Project Manager	TOU YANG
Regional Examiner	NW REGION
Regional Supervisor	TOU YANG

APPROVED FOR THE DEPARTMENT

DATE: Tou X. Yang Digitally signed by Tou X. Yang Date: 2025.01.23 09:06:55-06'00' (Signature)

E

FILE NAME : X:\200S800\231697.01\TECH\CAD\71460006\SHEETSPLAN\010101_TI.DWG PLOT DATE : 1/9/2025 1:30 PM PLOT BY : JEFF BREU PLOT NAME :

UTILITIES CONTACTS

CHARTER COMMUNICATION
COMMUNICATION
MR PERRY McCLELLAN
1228 12TH AVENUE SOUTH
ONALASKA, WI 54650
PHONE: 608-317-6213
EMAIL: PERRY.McCLELLAN@CHARTER.COM

RIVERLAND ENERGY COOPERATIVE
ELECTRIC
MR JOSH ABRAMCZAK
PO BOX 277
ACADIA, WI 54612
PHONE: 608-323-3381
EMAIL: JABRAMCZAK@RIVERLANDENERGY.COM

TRI-COUNTY COMMUNICATIONS COOPERATIVE
COMMUNICATION
MR BUCK WEBB
PO BOX 578
STRUM, WI 54770
PHONE: 715-695-2691
EMAIL: BWEBB@TCCPRO.NET

DAIRYLAND POWER COOPERATIVE
ELECTRIC
MR MICHAEL LYDON
PO BOX 817
LA CROSSE, WI 54602
PHONE: 608-787-1381
EMAIL: MICHAEL.LYDON@DAIRYLANDPOWER.COM

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
EROSION CONTROL
PAVEMENT MARKING
TRAFFIC CONTROL

CTH D 5-INCHES		
LAYER	THICKNESS	TYPE
UPPER	1 3/4-INCHES	ASPHALTIC SURFACE
LOWER	3 1/4-INCHES	ASPHALTIC SURFACE

WISCONSIN DNR LIAISON

MS AMY LESIK
DNR WEST CENTRAL REGION HEADQUARTERS
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: (715) 495-1903
EMAIL: AMY.LESIK@WISCONSIN.GOV

COUNTY HIGHWAY COMMISSIONER

MR NEIL OLSON
TREMPEALEAU COUNTY
20699 STATE ROAD 121
WHITEHALL, WI 54773
PHONE: (715) 538-4977
EMAIL: NEIL.OLSON@CO.TREMPEALEAU.WI.US

DESIGN PROJECT LEADER

MR JAY P. WHEATON, P.E.
MEAD & HUNT INC.
750 NORTH THIRD STREET
LA CROSSE, WI 54601
PHONE: (608) 386-0212
EMAIL: JAY.WHEATON@MEADHUNT.COM

GENERAL NOTES

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

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS, OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.

ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

SAWCUTS, AS SHOWN ON THE PLANS, ARE SUGGESTED LOCATIONS AND MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER TO BETTER SUIT FIELD CONDITIONS.

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

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

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

2

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIPTURF:	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPETURF:			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT:	.70 - .95											
CONCRETE:	.80 - .95											
BRICK:	.70 - .80											
DRIVES, WALKS:	.75 - .85											
ROOFS:	.75 - .95											
GRAVEL ROADS, SHOULDERS:	.40 - .60											

TOTAL PROJECT AREA = 1.43 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.71 ACRES

DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

2

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
AH	AHEAD
∠	ANGLE
AADT	ANNUAL AVERAGE DAILY TRAFFIC
AEW	APRON ENDWALL
ASPH	ASPHALTIC
BK	BACK
BC	BACK OF CURB
BAD	BASE AGGREGATE DENSE
BL OR B/L	BASE LINE
BM	BENCH MARK
CB	CATCH BASIN
CL OR C/L	CENTER LINE
Δ	CENTRAL ANGLE OR DELTA
CE	COMMERCIAL ENTRANCE
CONC	CONCRETE
CSW	CONCRETE SIDEWALK
CONST	CONSTRUCTION
CP	CONTROL POINT
CO	COUNTY
CTH	COUNTY TRUCK HIGHWAY
CY	CUBIC YARD
CP	CULVERT PIPE
CPCA	CULVERT PIPE CORRUGATED ALUMINUM
CPCPE	CULVERT PIPE CORRUGATED POLYETHYLENE
CPCPP	CULVERT PIPE CORRUGATED POLYPROPYLENE
CPCS	CULVERT PIPE CORRUGATED STEEL
CPCSAC	CULVERT PIPE CORRUGATED STEEL ALUMINUM COATED
CPCSPC	CULVERT PIPE CORRUGATED STEEL POLYMER COATED
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CPS	CULVERT PIPE SALVAGED
CPT	CULVERT PIPE TEMPORARY
C & G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
DE	DRAINAGE EASEMENT
DWY	DRIVEWAY
EA	EACH
EB	EASTBOUND
EL OR ELEV	ELEVATION
EMB	EMBANKMENT
EW	ENDWALL
EAT	ENERGY ABSORBING TERMINAL
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FERT	FERTILIZER
FE	FIELD ENTRANCE
FL OR F/L	FLOW LINE
FT	FOOT
FTMS	FREE TRAFFIC MANAGEMENT SYSTEM
HES	HIGH EARLY STRENGTH
HE	HIGHWAY EASEMENT
CWT	HUNDRED WEIGHT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
INTERS	INTERSECTION
IH	INTERSTATE HIGHWAY
INV	INVERT
JT	JOINT
LT	LEFT
LHF	LEFT HAND FORWARD
L	LENGTH OF CURVE
LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LS	LUMP SUM
MGAL	ONE THOUSAND GALLONS
MH	MANHOLE
ML OR M/L	MATCH LINE
NOM	NOMINAL
NC	NORMAL CROWN
NB	NORTHBOUND
NO	NUMBER
OD	OUTSIDE DIAMETER
PAVT	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
LB	POUND
PSI	POUNDS PER SQUARE INCH
PE	PRIVATE ENTRANCE
PROJ	PROJECT
PL	PROPERTY LINE
PRW	PROPOSED RIGHT OF WAY
R	RADIUS
RL OR R/L	REFERENCE LINE
REQD	REQUIRED
RT	RIGHT
RHF	RIGHT HAND FORWARD
R/W	RIGHT OF WAY
RD	ROAD
RDWY	ROADWAY
SHLDR	SHOULDER
SW	SIDEWALK
SB	SOUTHBOUND
SPECS	SPECIFICATIONS
SF	SQUARE FEET
SY	SQUARE YARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAY
STA	STATION
SSPC	STORM SEWER PIPE COMPOSITE
SSCPE	STORM SEWER PIPE CORRUGATED POLYETHYLENE
SSCPP	STORM SEWER PIPE CORRUGATED POLYPROPYLENE
SSPNRC	STORM SEWER PIPE NON-REINFORCED CONCRETE
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
SSPRCHE	STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
SE	SUPERELEVATION
SL OR S/L	SURVEY LINE
TEMP	TEMPORARY
TI	TEMPORARY INTEREST
TLE	TEMPORARY LIMITED EASEMENT
TC	TOP OF CURB
TL OR T/L	TRANSIT LINE
T	TRUCKS (PERCENT OF)
TYP	TYPICAL
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VC	VERTICAL CURVE
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WEST
WB	WESTBOUND

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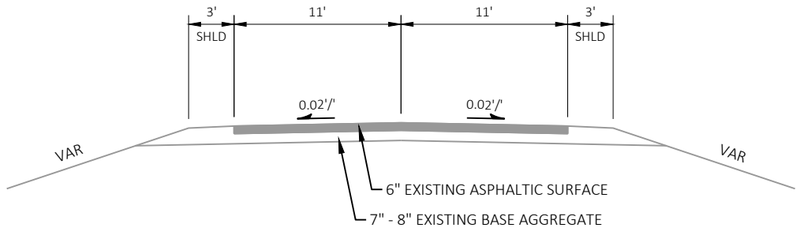
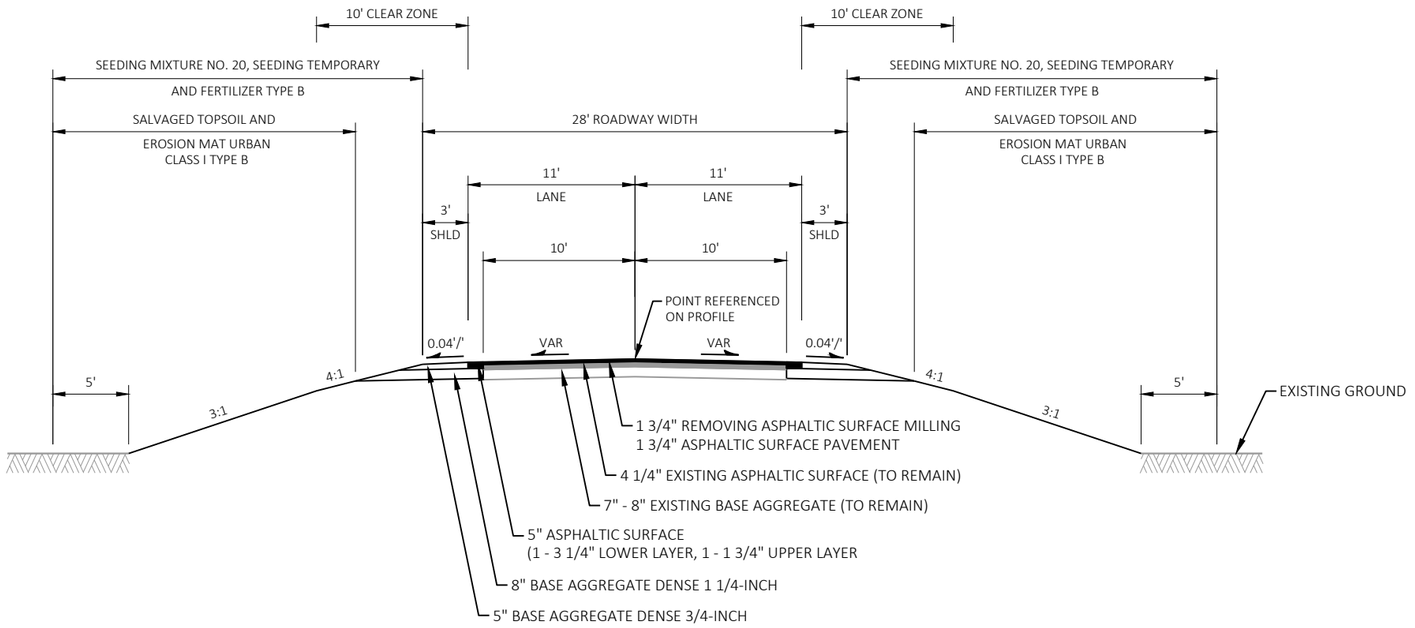
LAYOUT NAME - 02
PLOT DATE : 1/23/2025 11:39 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1" = 1'
WISDOT/CADDS SHEET 42

2



EXISTING TYPICAL SECTION

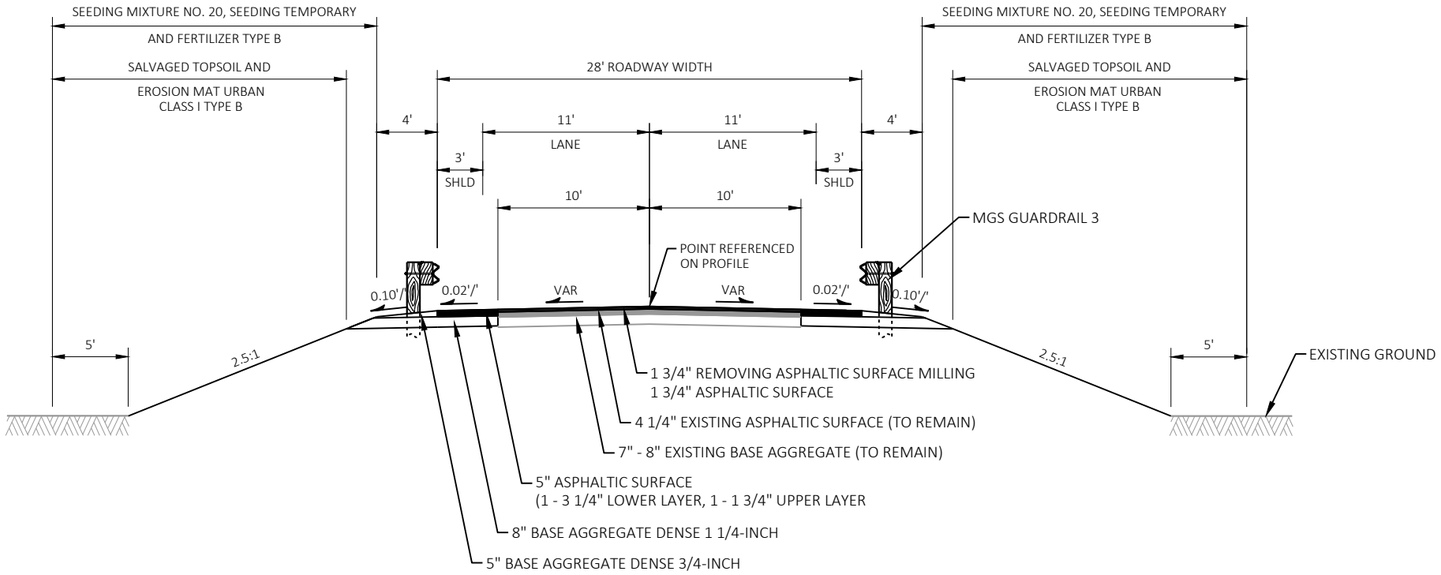
STA 7+79.3 TO STA 9+60.5
STA 10+39.3 TO STA 12+20.8



FINISHED TYPICAL SECTION

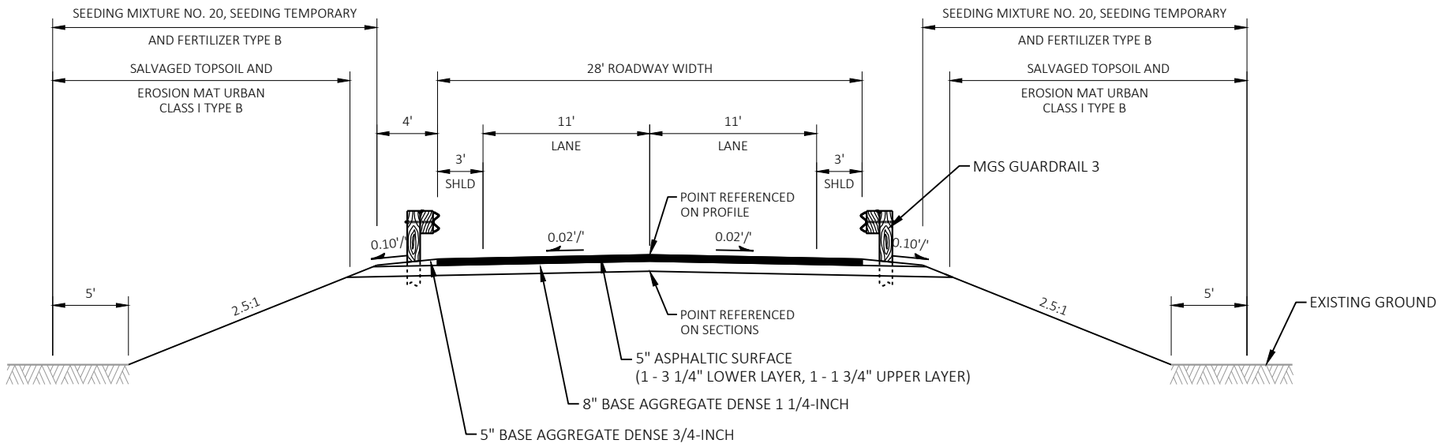
STA 8+04.3 TO STA 8+39.3
STA 11+60.8 TO STA 11+95.8

2



FINISHED TYPICAL SECTION

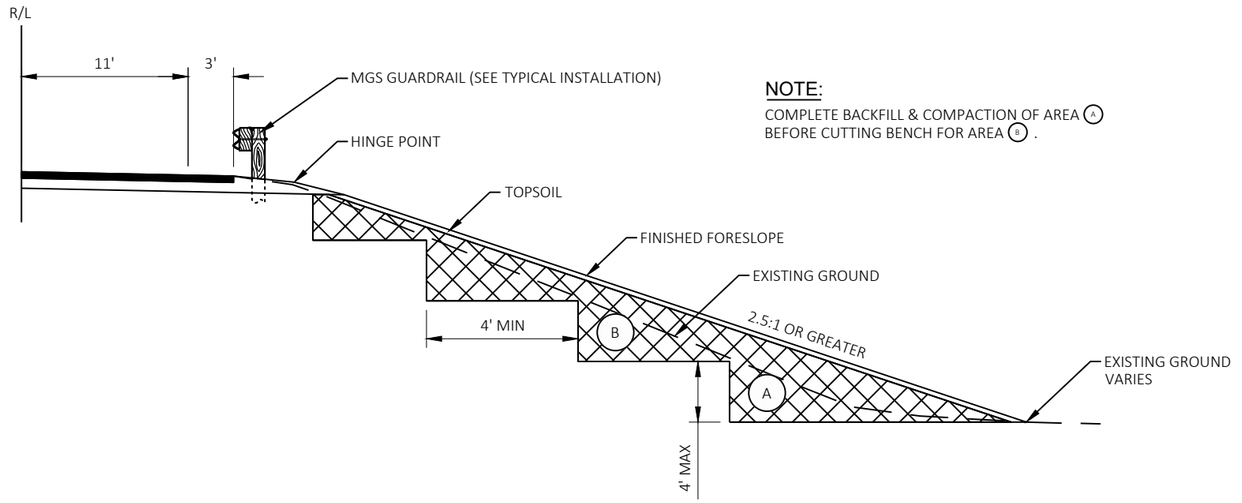
STA 8+39.2 TO STA 9+00.0
STA 11+00.0 TO STA 11+60.8



FINISHED TYPICAL SECTION

STA 9+00.0 TO STA 9+55.7
STA 10+44.3 TO STA 11+00.0

2

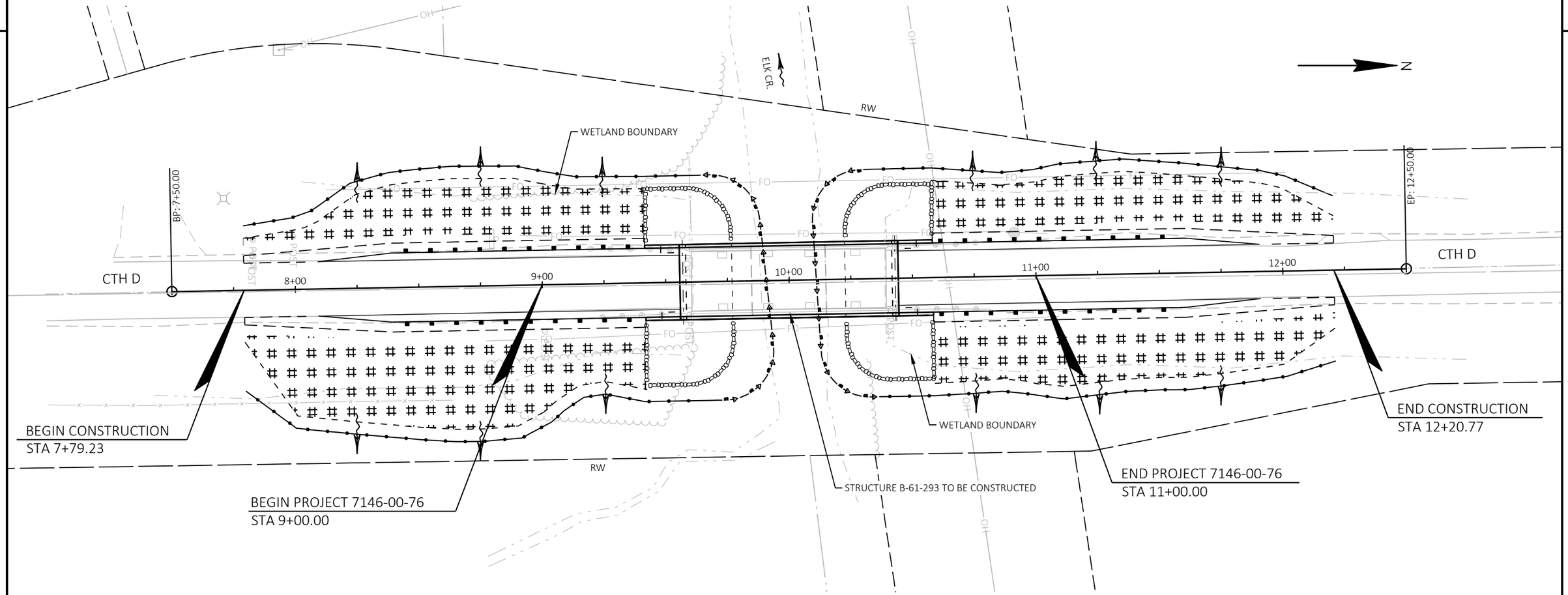


NOTE:
COMPLETE BACKFILL & COMPACTION OF AREA (A)
BEFORE CUTTING BENCH FOR AREA (B) .

DETAIL SHOWING METHOD FOR BENCHING
FILL INTO EXISTING EMBANKMENT

PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	CONSTRUCTION DETAILS	SHEET 6	E

2



LEGEND

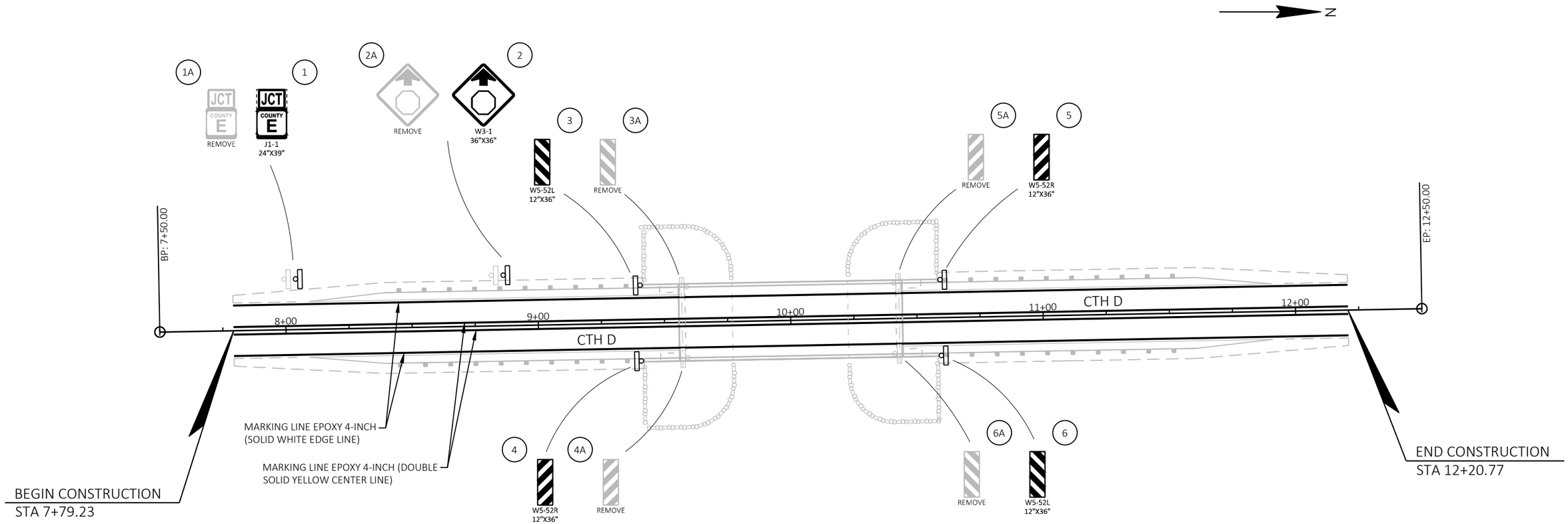
- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- RIP RAP HEAVY
- SLOPE INTERCEPT
- TURBIDITY BARRIER
- SURFACE WATER FLOW

NOTE

TREMPEALEAU COUNTY HAS CUT DOWN ALL THE TREES WITHIN PROJECT LIMITS. CONTRACTOR NEEDS TO CUT UP AND REMOVE THE TREES FROM PROJECT SITE.

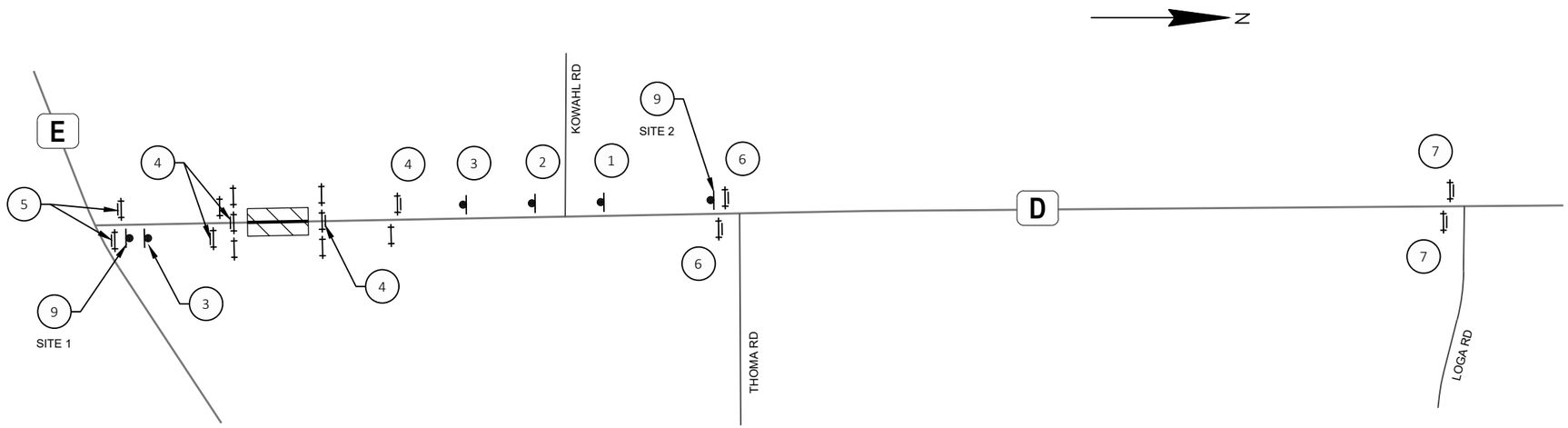
PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	EROSION CONTROL	SHEET 7	E

2



PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	PAVEMENT MARKING AND PERMANENT SIGNING	SHEET 8	E

2



LEGEND

- TYPE II / III BARRICADE WTH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- MB — PORTABLE CHANGEABLE MESSAGE BOARD
- WORK AREA

1
ROAD CLOSED AHEAD
W20-3A

2
ROAD CLOSED 1000 FT
W20-3C

3
ROAD CLOSED 500 FT
W20-3D

4
BRIDGE OUT
R11-2B
48"X30"

5
BRIDGE OUT
1/8 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3B
60"X30"

6
BRIDGE OUT
1/2 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3B
60"X30"

7
BRIDGE OUT
1 1/2 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3B
60"X30"

8
BRIDGE OUT
6 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3B
60"X30"

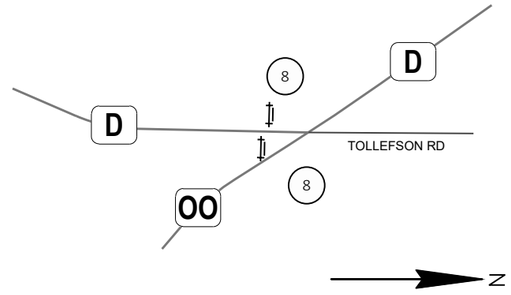
9
HWY D
ROAD CLOSED
BEGINS XXX-XX
G20-57C
96"X48"

NOTES:

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

ALL SIGNS ARE 48"X48" UNLESS NOTED.

SITE 1 AND SITE 2 SIGNS ARE TO BE IN PLACE FOR SEVEN DAYS PRIOR TO THE EXPECTED START OF WORK ON CTH D.



PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	TRAFFIC CONTROL	SHEET 9	E

Estimate Of Quantities

7146-00-76

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	4.000	4.000
0004	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-61-0038	EACH	1.000	1.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	24.000	24.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	470.000	470.000
0010	204.0165	Removing Guardrail	LF	164.000	164.000
0012	205.0100	Excavation Common	CY	211.000	211.000
0014	205.0506.S	Excavation, Hauling, and Disposal of Creosote Contaminated Soil	TON	118.000	118.000
0016	206.1001	Excavation for Structures Bridges (structure) 01. B-61-0293	EACH	1.000	1.000
0018	208.0100	Borrow	CY	823.000	823.000
0020	210.1500	Backfill Structure Type A	TON	346.000	346.000
0022	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 7146-00-76	EACH	1.000	1.000
0024	213.0100	Finishing Roadway (project) 01. 7146-00-76	EACH	1.000	1.000
0026	305.0110	Base Aggregate Dense 3/4-Inch	TON	120.000	120.000
0028	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	420.000	420.000
0030	455.0605	Tack Coat	GAL	64.000	64.000
0032	465.0105	Asphaltic Surface	TON	180.000	180.000
0034	502.0100	Concrete Masonry Bridges	CY	187.000	187.000
0036	502.3200	Protective Surface Treatment	SY	276.000	276.000
0038	502.3210	Pigmented Surface Sealer	SY	116.000	116.000
0040	503.0137	Prestressed Girder Type I 36W-Inch	LF	435.000	435.000
0042	505.0400	Bar Steel Reinforcement HS Structures	LB	3,600.000	3,600.000
0044	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	24,230.000	24,230.000
0046	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	10.000	10.000
0048	506.4000	Steel Diaphragms (structure) 01. B-61-0293	EACH	8.000	8.000
0050	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0052	550.2104	Piling CIP Concrete 10 3/4 X 0.25-Inch	LF	1,300.000	1,300.000
0054	606.0300	Riprap Heavy	CY	415.000	415.000
0056	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	142.000	142.000
0058	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0060	614.2300	MGS Guardrail 3	LF	50.000	50.000
0062	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0064	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0066	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7146-00-76	EACH	1.000	1.000
0068	619.1000	Mobilization	EACH	1.000	1.000
0070	624.0100	Water	MGAL	10.000	10.000
0072	625.0500	Salvaged Topsoil	SY	1,875.000	1,875.000
0074	627.0200	Mulching	SY	670.000	670.000
0076	628.1504	Silt Fence	LF	755.000	755.000
0078	628.1520	Silt Fence Maintenance	LF	755.000	755.000
0080	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0082	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0084	628.2008	Erosion Mat Urban Class I Type B	SY	1,920.000	1,920.000
0086	628.6005	Turbidity Barriers	SY	400.000	400.000
0088	629.0210	Fertilizer Type B	CWT	1.700	1.700
0090	630.0120	Seeding Mixture No. 20	LB	57.000	57.000
0092	630.0200	Seeding Temporary	LB	75.000	75.000
0094	630.0500	Seed Water	MGAL	63.000	63.000
0096	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0098	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	2.000	2.000

7146-00-76

Line	Item	Item Description	Unit	Total	Qty
0100	637.2210	Signs Type II Reflective H	SF	6.500	6.500
0102	637.2230	Signs Type II Reflective F	SF	21.000	21.000
0104	638.2602	Removing Signs Type II	EACH	6.000	6.000
0106	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0108	642.5001	Field Office Type B	EACH	1.000	1.000
0110	643.0420	Traffic Control Barricades Type III	DAY	1,350.000	1,350.000
0112	643.0705	Traffic Control Warning Lights Type A	DAY	2,700.000	2,700.000
0114	643.0900	Traffic Control Signs	DAY	1,214.000	1,214.000
0116	643.5000	Traffic Control	EACH	1.000	1.000
0118	645.0111	Geotextile Type DF Schedule A	SY	80.000	80.000
0120	645.0120	Geotextile Type HR	SY	710.000	710.000
0122	646.1020	Marking Line Epoxy 4-Inch	LF	1,768.000	1,768.000
0124	650.4500	Construction Staking Subgrade	LF	354.000	354.000
0126	650.5000	Construction Staking Base	LF	354.000	354.000
0128	650.6501	Construction Staking Structure Layout (structure) 01. B-61-0293	EACH	1.000	1.000
0130	650.9911	Construction Staking Supplemental Control (project) 01. 7146-00-76	EACH	1.000	1.000
0132	650.9920	Construction Staking Slope Stakes	LF	354.000	354.000
0134	690.0150	Sawing Asphalt	LF	284.000	284.000
0136	715.0502	Incentive Strength Concrete Structures	DOL	1,218.000	1,218.000
0138	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0140	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

EARTHWORK

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL (2)	EXPANDED FILL FACTOR 1.25	MASS ORDINATE +/- (3)	208.0100 BORROW
TREMPEALEAU CTH D	7+93.23 - 12+20.77	M/L	211	48	163	986	-823	823
		TOTAL COMMON EXC	211					

NOTES:
1 - CUT (SALVAGE/UNUSABLE PAVEMENT MATERIAL INCLUDED)
2 - AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 -THE MASS ORDINATE + OF - QUANTITIES CALCULATE FOR THE DIVISION. PLUS QUANTITIES INDICATES AN EXCESS OF MATERIAL. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

NO MARSH OR EBS IS ANTICIPATED.

CLEARING & GRUBBING

STATION	TO	STATION	LOCATION	201.0105 * CLEARING STA	201.0205 GRUBBING STA
8+50	-	11+75	M/L, LT & RT	4	4
			ITEM TOTALS	4	4

* TREMPEALEAU COUNTY HAS CUT DOWN ALL THE TREES WITHIN PROJECT LIMITS. CONTRACTOR NEEDS TO CUT UP AND REMOVE THE TREES FROM PROJECT SITE.

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
7+79.2	-	9+55.8	M/L	-	210	4
7+79.2	-	9+41.8	M/L, LT & RT	60	-	1
10+44.3	-	12+20.8	M/L	-	210	4
10+58.3	-	12+20.8	M/L, LT & RT	60	-	1
			ITEM TOTALS	120	420	10

ASPHALT ITEMS

STATION	TO	STATION	LOCATION	465.0105 ASPHALTIC SURFACE TON	455.0605 TACK COAT GAL	REMARKS
8+04.2	-	9+55.8	M/L	45	-	LOWER LAYER
8+04.2	-	9+55.8	M/L	45	32	UPPER LAYER
10+44.3	-	11+95.8	M/L	45	-	LOWER LAYER
10+44.3	-	11+95.8	M/L	45	32	UPPER LAYER
			ITEM TOTALS	180	64	

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

REMOVING ASPHALTIC SURFACE

STATION	TO	STATION	LOCATION	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY
7+79.2	-	8+09.2	M/L	12	-
8+04.2	-	9+00	M/L	-	235
11+90.8	-	11+95.8	M/L	12	-
11+00	-	11+95.8	M/L	-	235
			ITEM TOTALS	24	470

REMOVING GUARDRAIL

STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
9+17	-	9+58	M/L, LT	41
9+17	-	9+58	M/L, RT	41
10+41	-	10+82	M/L, LT	41
10+41	-	10+82	M/L, RT	41
			ITEM TOTALS	164

MGS GUARDRAIL

STATION	TO	STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
8+39.2	-	8+92.3	M/L, LT	-	-	1
8+39.2	-	8+92.3	M/L, RT	-	-	1
8+92.3	-	9+04.8	M/L, LT	12.5	-	-
8+92.3	-	9+04.8	M/L, RT	12.5	-	-
9+04.8	-	9+44.2	M/L, LT	-	39.4	-
9+04.8	-	9+44.2	M/L, RT	-	39.4	-
10+55.8	-	10+95.2	M/L, LT	-	39.4	-
10+55.8	-	10+95.2	M/L, RT	-	39.4	-
10+95.2	-	11+07.7	M/L, LT	12.5	-	-
10+95.2	-	11+07.7	M/L, RT	12.5	-	-
11+07.7	-	11+60.8	M/L, LT	-	-	1
11+07.7	-	11+60.8	M/L, RT	-	-	1
			ITEM TOTALS	50	157.6	4

3

SILT FENCE

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
7+75	-	9+60	M/L, LT	185	185
7+75	-	9+70	M/L, RT	195	195
10+30	-	12+20	M/L, LT	190	190
10+35	-	12+20	M/L, RT	185	185
ITEM TOTALS				755	755

EROSION CONTROL SUMMARY

STATION	TO	STATION	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
UNDISTRIBUTED			VARIOUS	5	2
ITEM TOTALS				5	2

TURBIDITY BARRIERS

STATION	TO	STATION	LOCATION	628.6005 TURBIDITY BARRIERS SY
9+91			M/L	200
10+11			M/L	200
ITEM TOTALS				400

LANDSCAPING ITEMS

STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
8+04.2	-	9+41.8	M/L, LT & RT	1025	-	0.7	1025	31	31	26
10+44.3	-	12+20.8	M/L, LT & RT	850	-	0.6	850	26	26	22
BORROW SITE			-	-	670	0.4	45	-	18	15
			ITEM TOTALS	1875	670	1.7	1920	57	75	63

SIGN ITEMS

NUMBER	STATION	LOCATION	SIGN CODE	SIGN MESSAGE	637.2210 SIGNS TYPE II RELECTIVE H SF	637.2230 SIGNS TYPE II RELECTIVE F SF	634.0612 POST WOOD 4x6-INCH x 12-FT EACH	634.0616 POST WOOD 4x6-INCH x 16-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
1	8+00	M/L, LT	J1-1	JCT E	6.5	-	-	1	-	-
1A	8+00	M/L, LT	-	JCT E	-	-	-	-	1	1
2	9+40	M/L, LT	W3-1	STOP AHEAD	-	9.0	-	1	-	-
2A	9+40	M/L, LT	-	STOP AHEAD	-	-	-	-	1	1
3	9+40	M/L, LT	W5-52L	TIGER STRIPES	-	3.0	1	-	-	-
3A	9+50	M/L, LT	-	TIGER STRIPES	-	-	-	-	1	1
4	9+40	M/L, RT	W5-52R	TIGER STRIPES	-	3.0	1	-	-	-
4A	9+50	M/L, RT	-	TIGER STRIPES	-	-	-	-	1	1
5	10+60	M/L, LT	W5-52R	TIGER STRIPES	-	3.0	1	-	-	-
5A	10+50	M/L, LT	-	TIGER STRIPES	-	-	-	-	1	1
6	10+60	M/L, RT	W5-52L	TIGER STRIPES	-	3.0	1	-	-	-
6A	10+50	M/L, RT	-	TIGER STRIPES	-	-	-	-	1	1
				ITEM TOTALS	6.5	21.0	4	2	6	6

TRAFFIC CONTROL SUMMARY

LOCATION	DURATION DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III QTY*	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A QTY*	643.0705 DAY	643.0900 TRAFFIC CONTROL SIGNS QTY*	643.0900 DAY	643.5000 TRAFFIC CONTROL EACH	REMARKS
CTH D/TREMPEALEAU	7	-	-	-	-	2	14	1	ADVANCED WARNING
CTH D TRAFFIC CONTROL	75	18	1,350	36	2,700	16	1,200	-	
	ITEM TOTALS		1,350		2,700		1,214	1	

* FOR INFORMATION ONLY

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

3

3

PAVEMENT MARKING ITEMS

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	REMARKS
7+79	-	12+21	M/L	-	884	DOUBLE SOLID YELLOW CENTER LINE
7+79	-	12+21	M/L, LT	442	-	SOLID WHITE EDGE LINE
7+79	-	12+21	M/L, RT	442	-	SOLID WHITE EDGE LINE
			SUBTOTALS	884	884	
			ITEM TOTALS	1,768		

STAKING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6501 CONSTRUCTION STAKING STRUCTURE LAYOUT B-61-293 EACH	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 7146-00-76 EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	PROJECT			-	-	-	1	-	
0010	7+79	-	9+56	M/L	177	177	-	-	177
0010	10+44	-	12+21	M/L	177	177	-	-	177
0020	10+00			M/L	-	-	1	-	-
				ITEM TOTALS	354	354	1	1	354

SAWING

STATION			LOCATION	690.0150 SAWING ASPHALT LF
8+39.2	-	9+00	M/L, LT & RT	122
9+00			M/L	20
11+00	-	11+95.8	M/L, LT & RT	122
11+00			M/L	20
			ITEM TOTALS	284

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
1	8+88.4 LT 33.4'	NAIL IN TREE	844.57

BEGIN CONSTRUCTION
STA 7+79.23
Y = 463,943.474
X = 844,387.840

END CONSTRUCTION
STA 12+20.77

BP: 7+50.00
Y = 463914.247
X = 844388.382

EP: 12+50.00
Y = 464414.161
X = 844379.112

RW

ELK CR.

WETLAND IMPACTS

WETLAND BOUNDARY

CP #100

MGS GUARDRAIL 3

TRI-COUNTY COMMUNICATIONS (ABANDONED)

TRI-COUNTY COMMUNICATIONS

SLOPE INTERCEPT

+89.23, -14.00' LT

+64.23, -14.00' LT

+39.23, -14.00' LT

+04.23

+09.23

MGS GUARDRAIL TERMINAL EAT

BM #1

+10.77, -14.00' LT

+35.77, -14.00' LT

MGS GUARDRAIL TERMINAL EAT

+60.77, -14.00' LT

+90.77

+95.77

CTH D

8+00

9+00

10+00

11+00

12+00

16TH LN

N01°03'45"W

CP #102

+39.23, 14.00' RT

MGS GUARDRAIL TERMINAL EAT

+64.23, 14.00' RT

+89.23, 14.00' RT

REMOVING ASPHALTIC SURFACE BUTT JOINTS REQUIRED

REMOVING ASPHALTIC SURFACE MILLING REQUIRED

REMOVE EXISTING FENCE (BY OTHERS)

MGS THRIE BEAM TRANSITION

ABANDONED COMMUNICATIONS LINE

SLOPE INTERCEPT

STRUCTURE B-61-293 TO BE CONSTRUCTED

STRUCTURE B-61-38 TO BE REMOVED

R/L CTH D

MGS THRIE BEAM TRANSITION

+60.77, 14.00' RT

MGS GUARDRAIL TERMINAL EAT

+35.77, 14.00' RT

CP #101

+10.77, 14.00' RT

REMOVING ASPHALTIC SURFACE BUTT JOINTS REQUIRED

REMOVING ASPHALTIC SURFACE MILLING REQUIRED

DAIRYLAND POWER

BEGIN PROJECT 7146-00-76
STA 9+00.00
BEGIN FULL DEPTH RECONSTRUCTION
MATCH EXISTING

END PROJECT 7146-00-76
STA 11+00.00
END FULL DEPTH RECONSTRUCTION
MATCH EXISTING

N

CONTROL POINTS				
NO.	Y	X	ELEV	DESCRIPTION
100	464038.53	844371.91	848.71	3/4" REBAR
101	464279.27	844394.92	849.30	3/4" REBAR
102	463902.68	844401.90	847.98	3/4" REBAR

STA 9+00.00
EL 849.33

VPC STA 9+25.00
VPC EL 849.44

VPI STA 10+00.00
VPI EL 849.78

HIGH WATER
Q100 EL 841.37

HIGH WATER
Q2 EL 835.44

VPT STA 10+75.00
VPT EL 849.39

STA 11+00.00
EL 849.26

EXISTING R/L PROFILE

0.45%

-0.52%

PROPOSED R/L PROFILE

HP STA 9+94.84
HP EL 849.60

STREAMBED
EL 827.94±

OBSERVED WATER
EL 829.67
(JANUARY 11 2024)

VCL = 150.00

K = 155.14

EXISTING R/L ELEVATION

PROPOSED R/L ELEVATION

7+00	7+50	8+00	8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00
848.58	848.59	848.68	848.78	848.95	849.13	849.33	849.33	849.43	849.44	849.40	849.53	835.91
849.58	828.09	849.60	835.86	849.57	849.41	849.50	849.33	849.39	849.26	849.26	849.20	849.04
848.84	848.72	848.67	848.67									

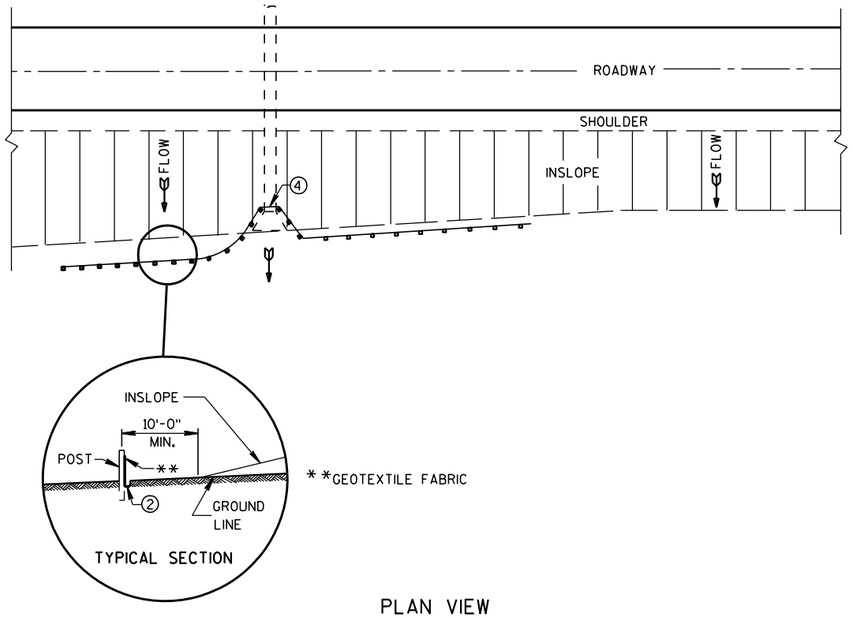
STA 10+00.00
REMOVE EXISTING STRUCTURE B-61-38
80.5' OVERALL LENGTH AND
24.0' CLEAR ROADWAY WIDTH
THREE SPAN HAUNCHED SLAB BRIDGE

STA 10+00.00
STRUCTURE B-61-293
88.5' OVERALL LENGTH AND
28.0' CLEAR ROADWAY WIDTH
SINGLE SPAN 36W PRESTRESSED CONCRETE GIRDER

PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	PLAN AND PROFILE: CTH D	SHEET 15	E

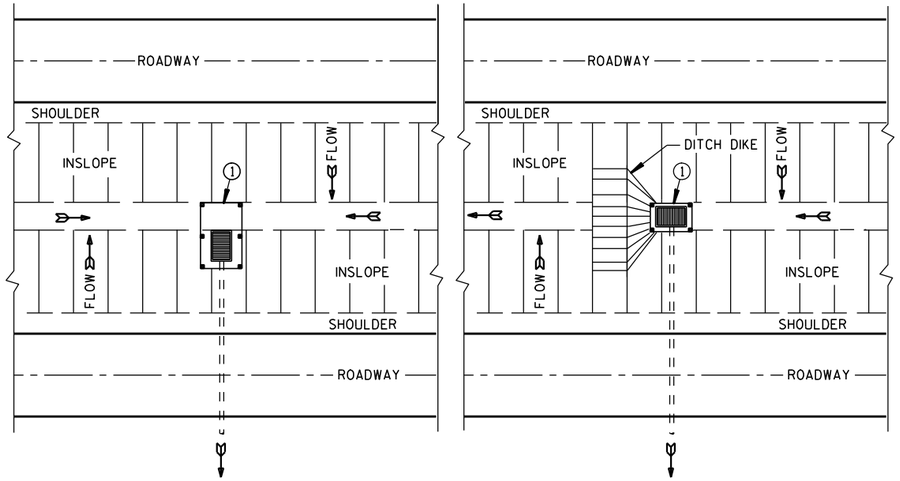
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



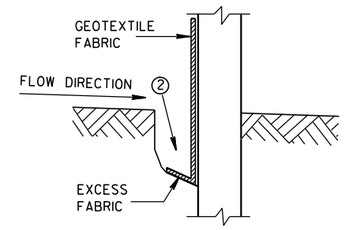
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

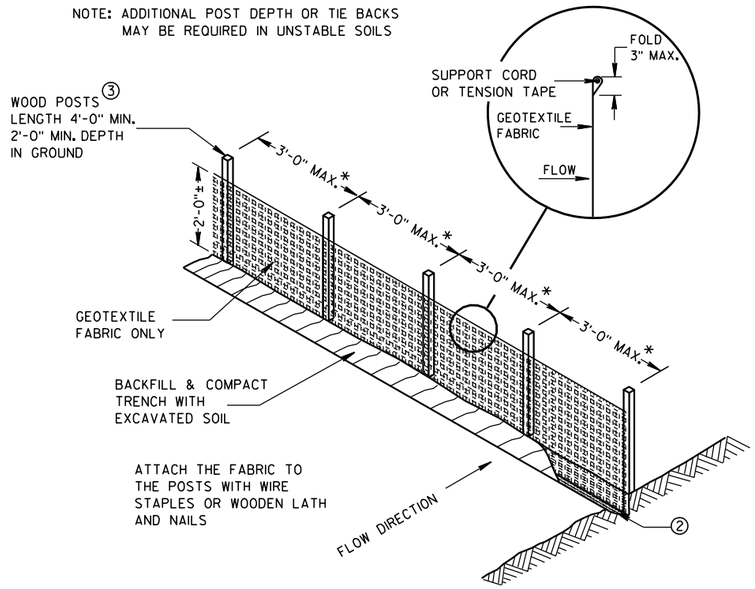
GENERAL NOTES

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

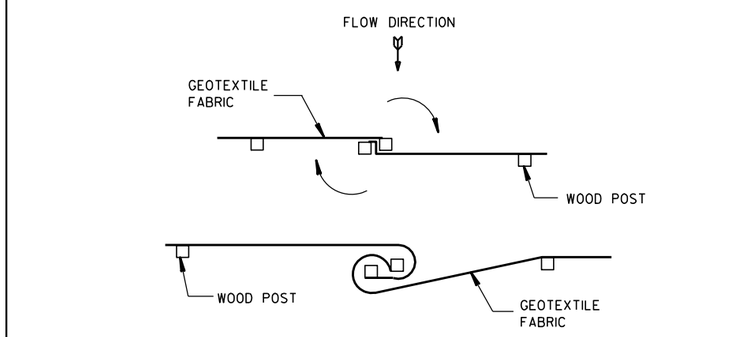
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



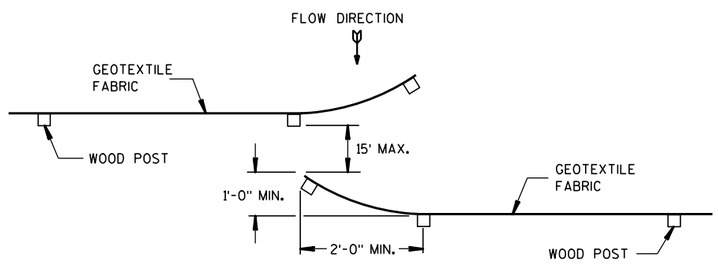
TRENCH DETAIL



SILT FENCE

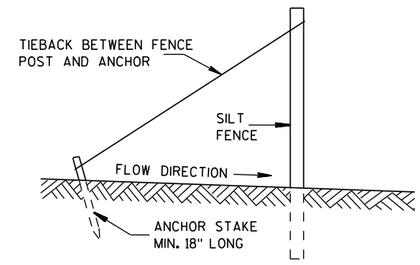


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

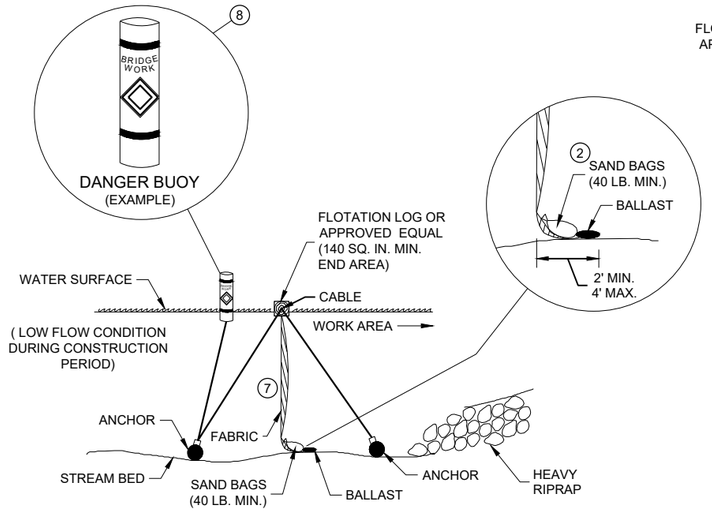
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

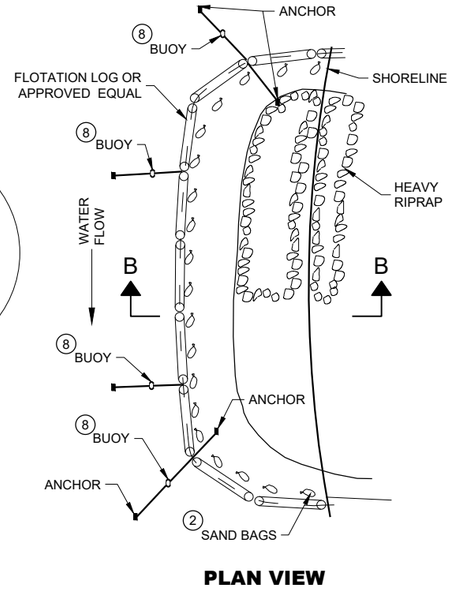
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

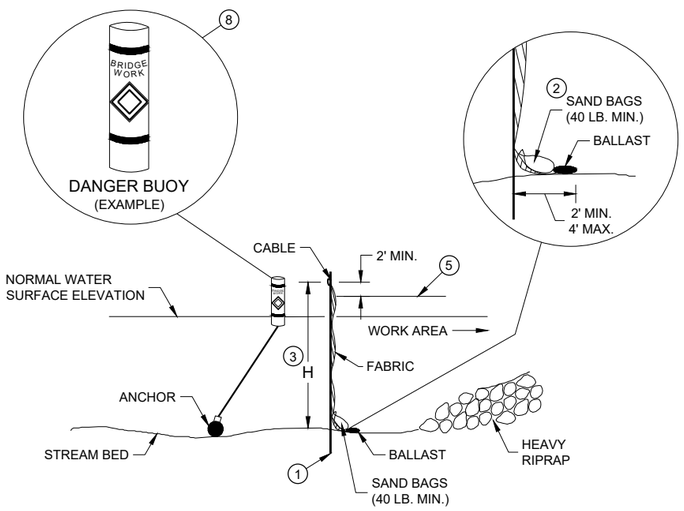


SECTION B - B

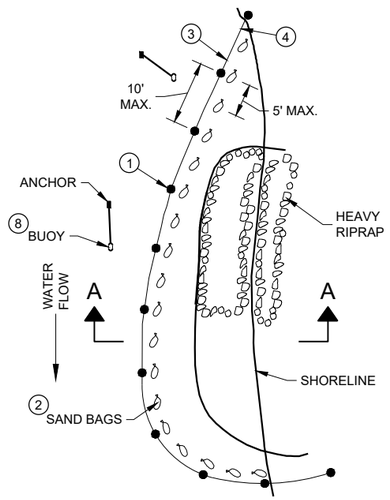


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

(1) DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

(2) SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

(3) WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.

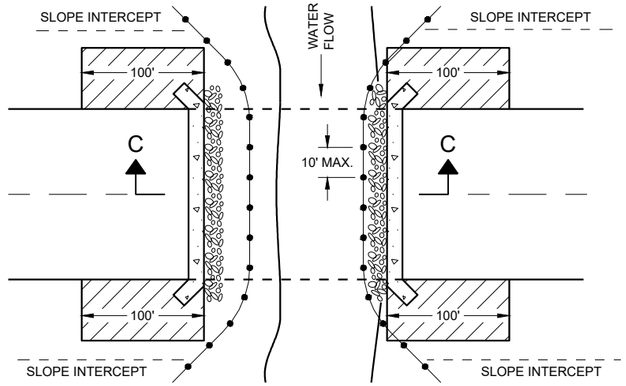
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

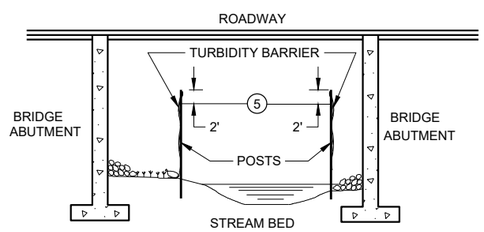
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(7) ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

(8) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

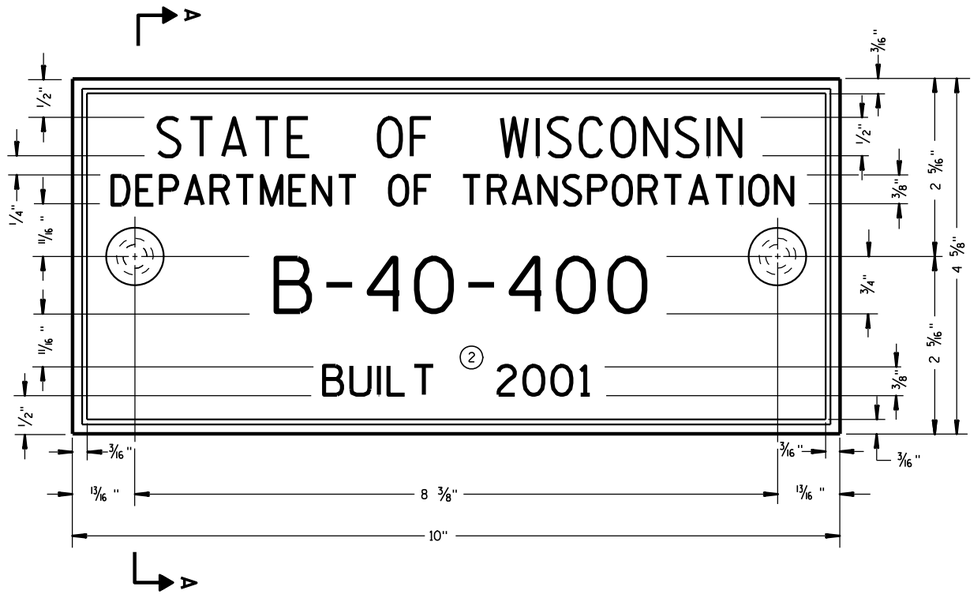
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
SDD 08E11 - 02



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

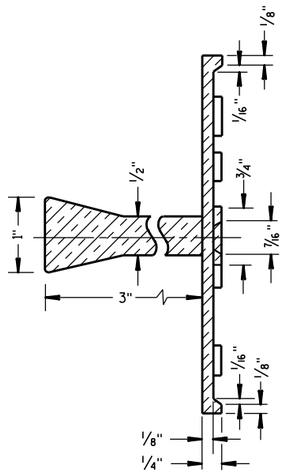
GENERAL NOTES

NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

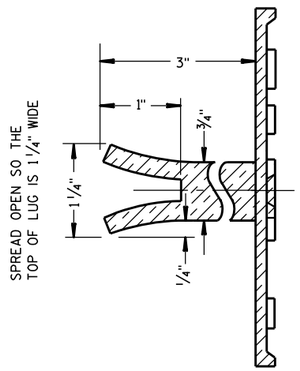
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

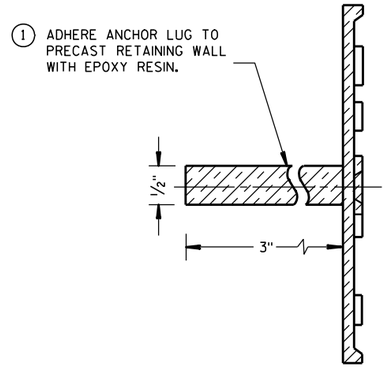
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 12 A 3-10

(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.

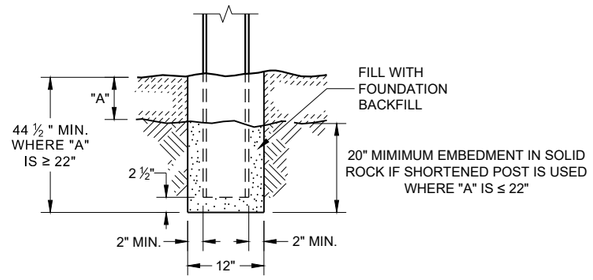
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

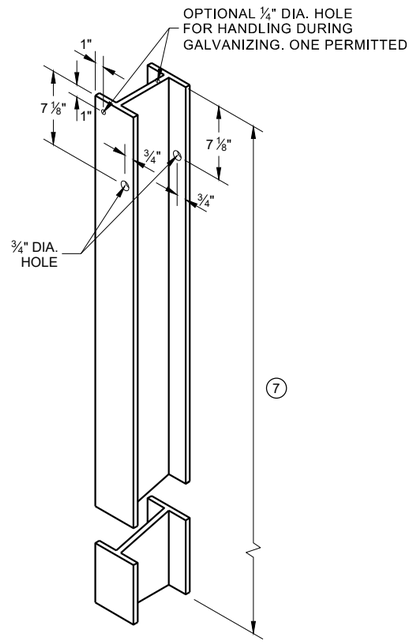
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(6) WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

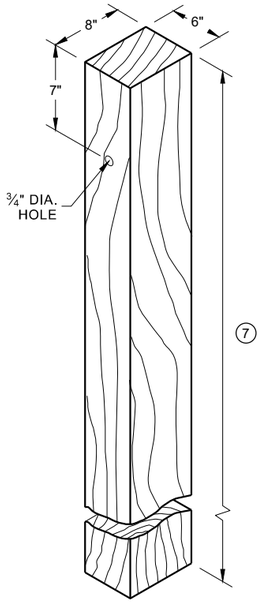
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



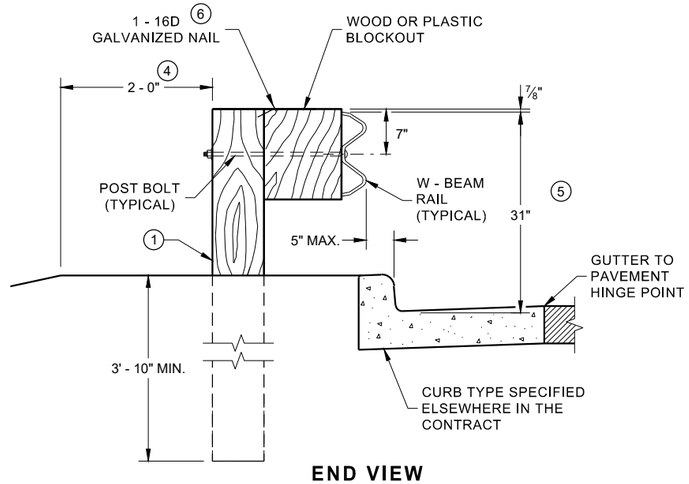
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



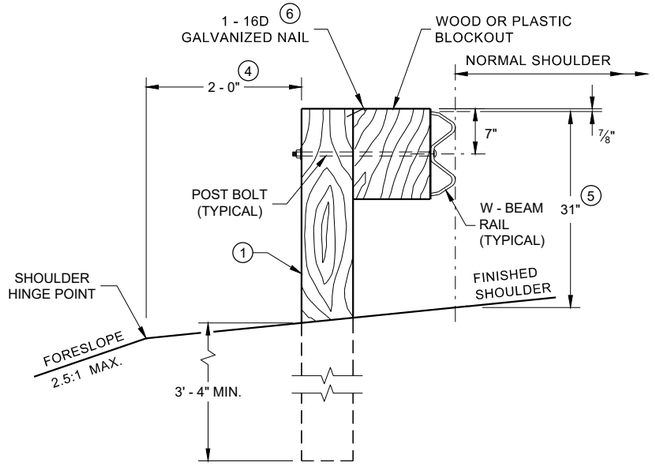
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



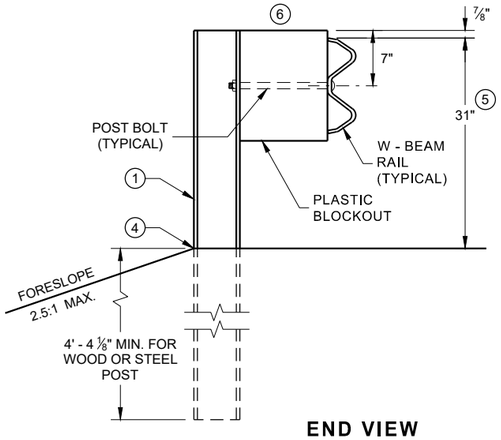
WOOD POST (6" X 8") NOMINAL (1)



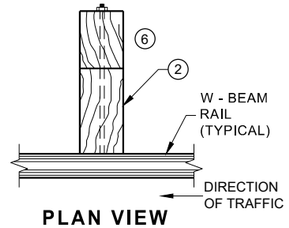
END VIEW
LOCATED ALONG A CURBED ROADWAY



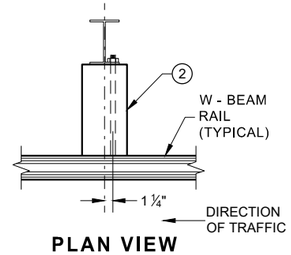
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



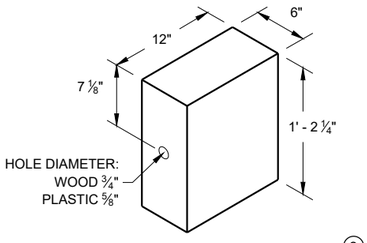
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM

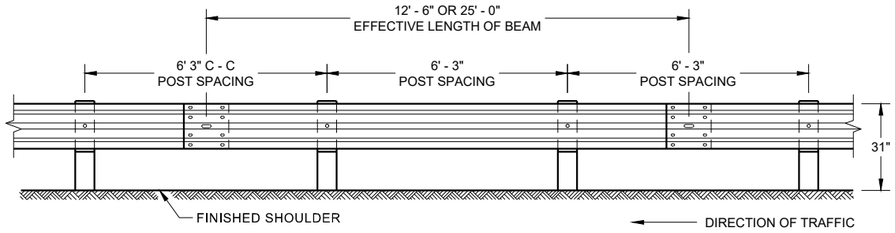


WOOD OR PLASTIC BLOCKOUT (2)

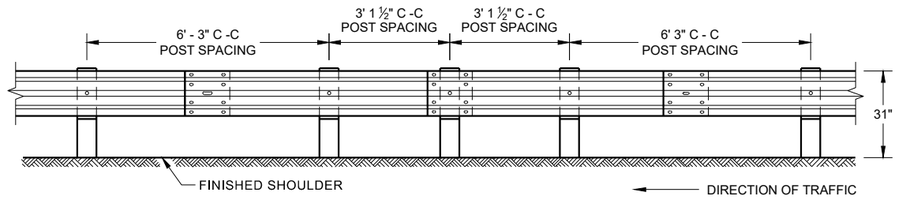
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

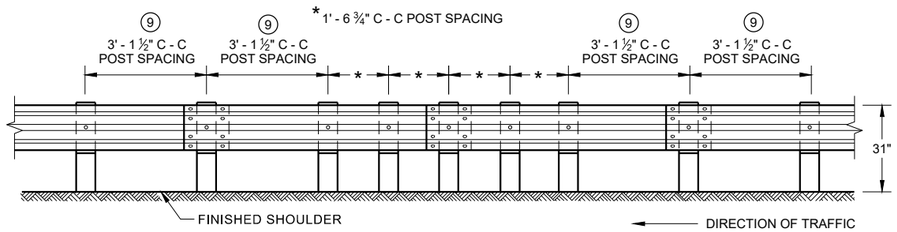
6
SDD 14B42 - 07a



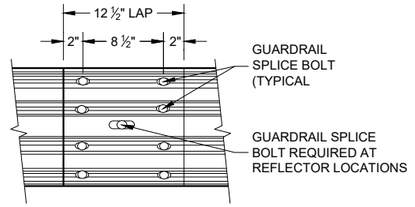
FRONT VIEW
POST SPACING STANDARD INSTALLATION



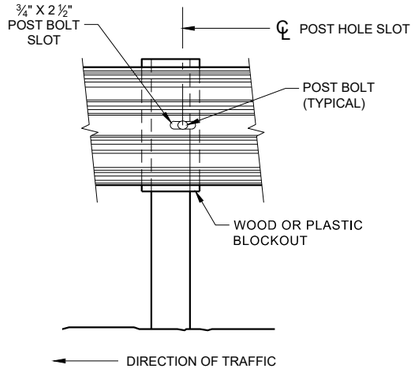
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



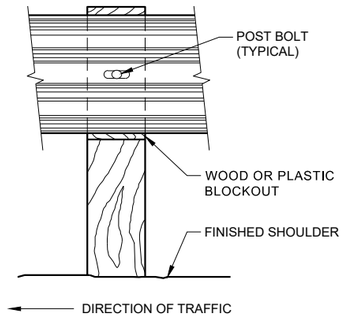
FRONT VIEW
QUARTER POST SPACING (QS)



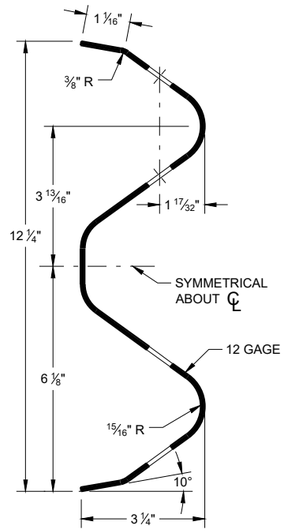
FRONT VIEW
MID-SPAN BEAM SPLICE



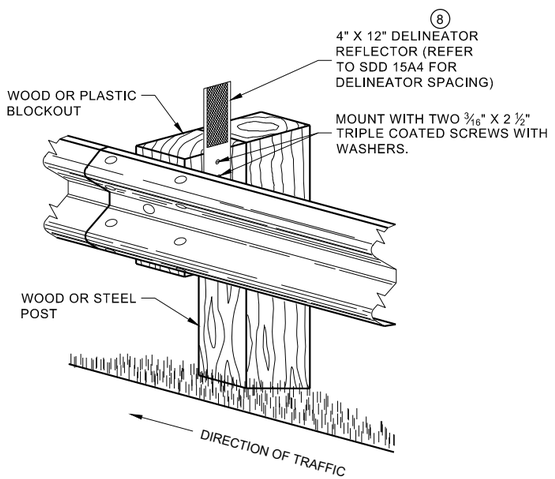
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

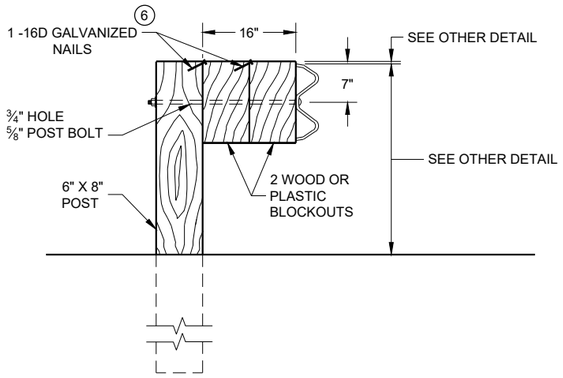
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

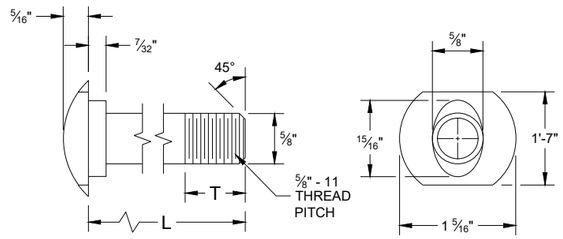


DETAIL FOR 16" BLOCKOUT DEPTH

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.

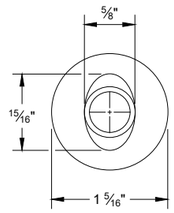
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3⁄16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

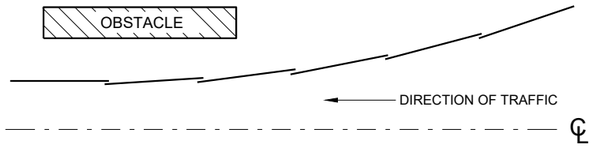


POST BOLT TABLE

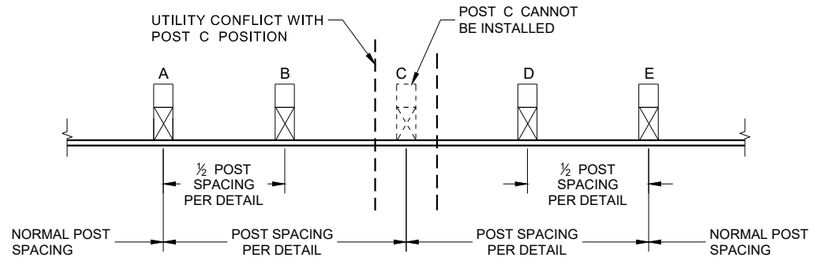
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



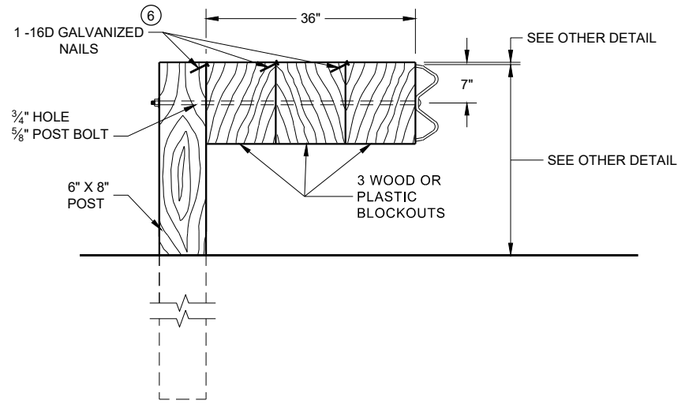
ALTERNATE BOLT HEAD



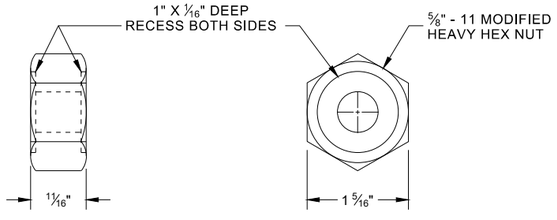
PLAN VIEW
BEAM LAPPING DETAIL



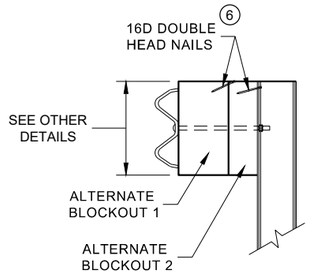
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



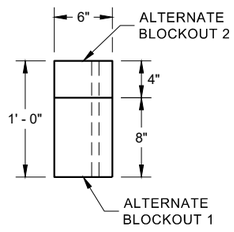
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

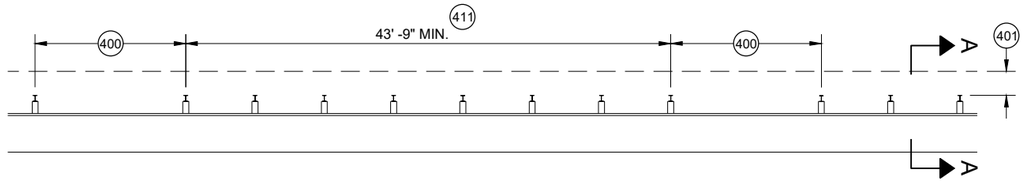
ALTERNATE WOOD BLOCKOUT DETAIL

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.

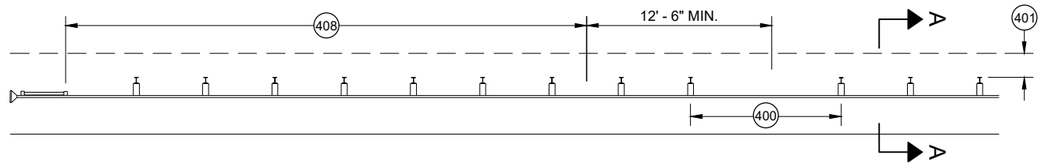
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(6) WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

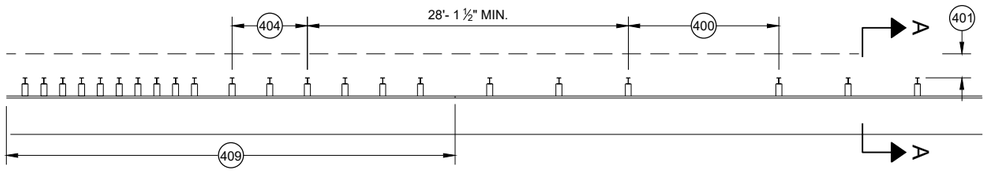
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



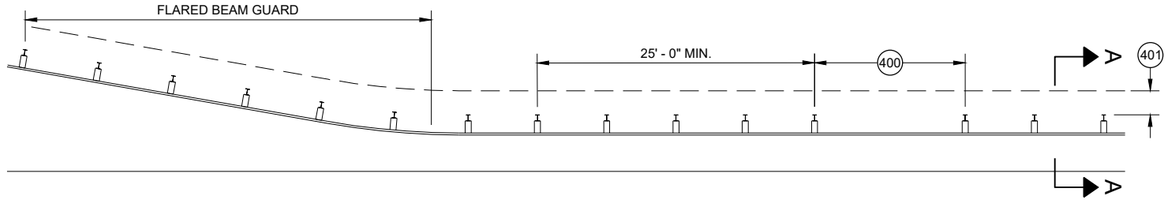
MISSING POST IN MGS GUARDRAIL



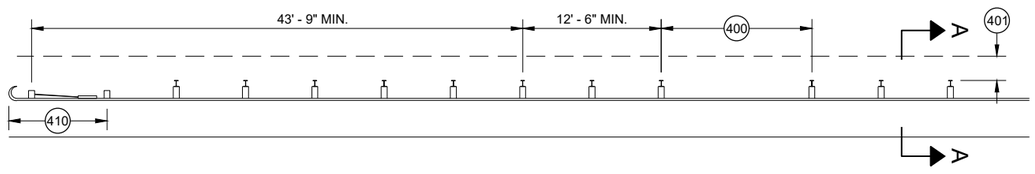
MISSING POST IN MGS GUARDRAIL NEAR EAT



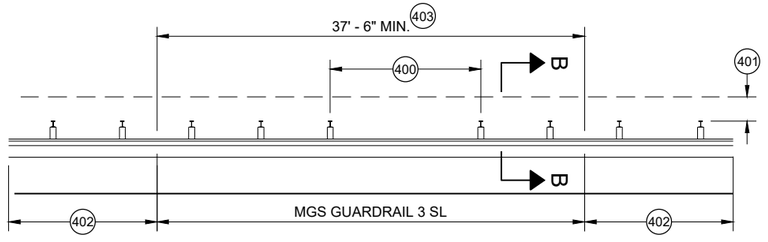
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

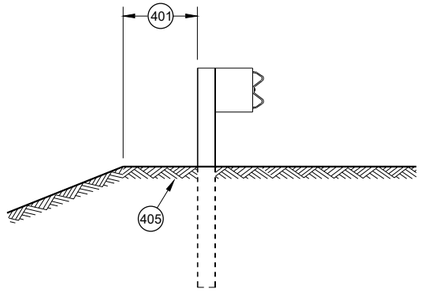


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

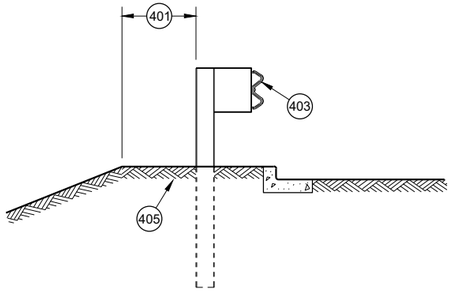


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR
FHWA

6

SDD 14B42 - 07d

SDD 14B42 - 07d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, 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 MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

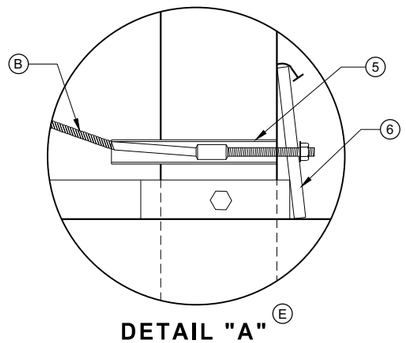
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

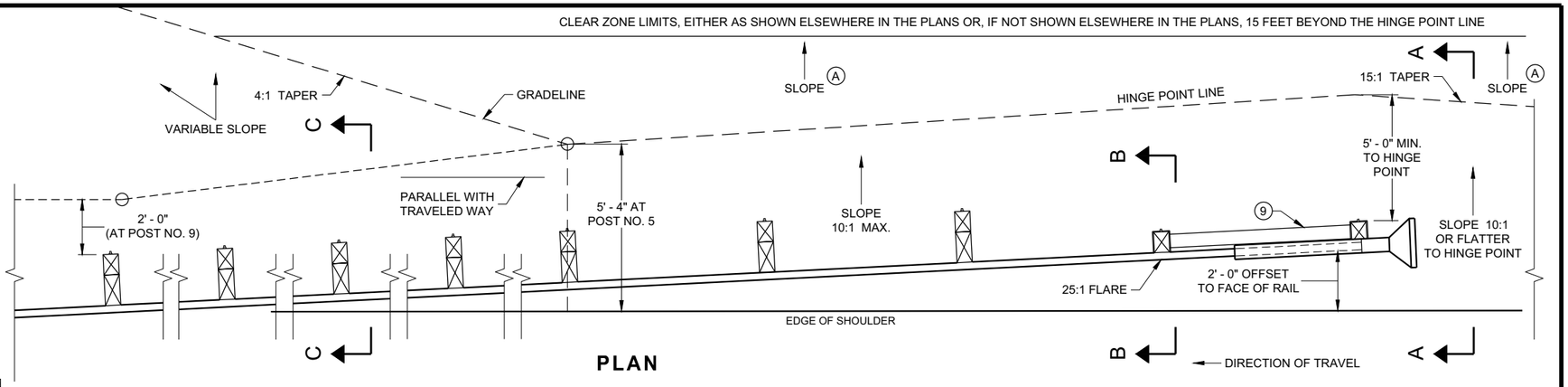
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

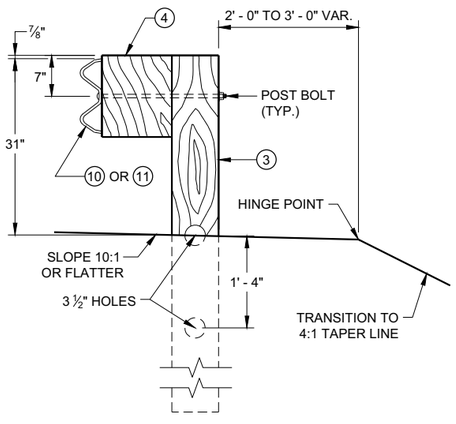
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

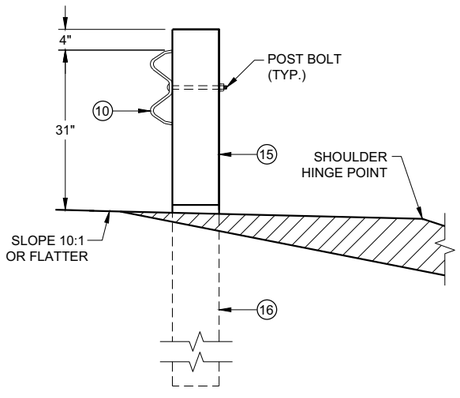


DETAIL "A" (E)

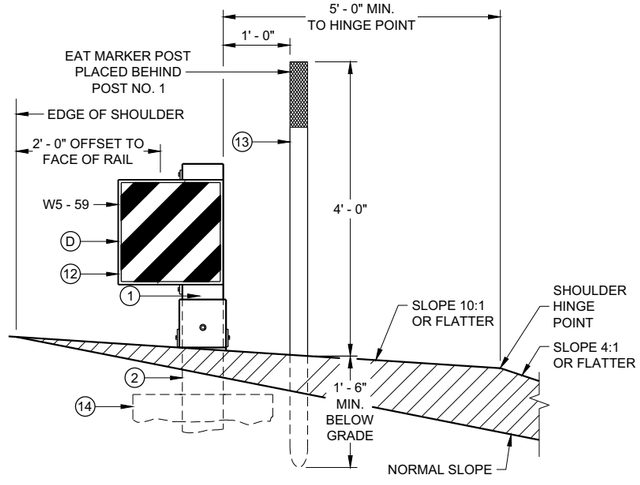




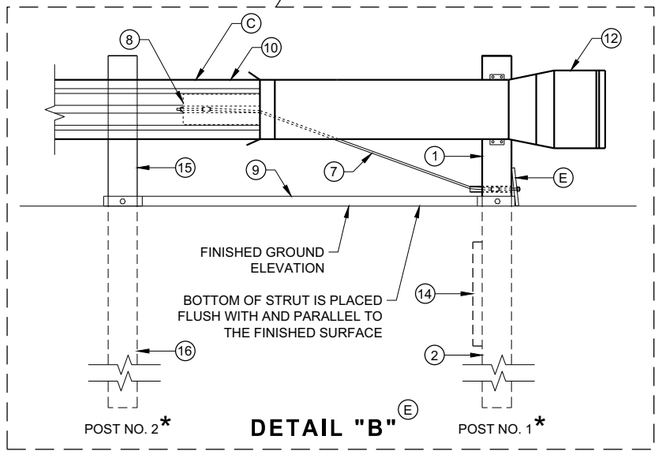
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



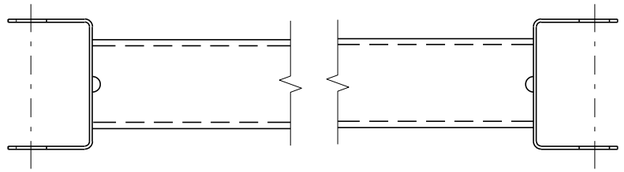
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

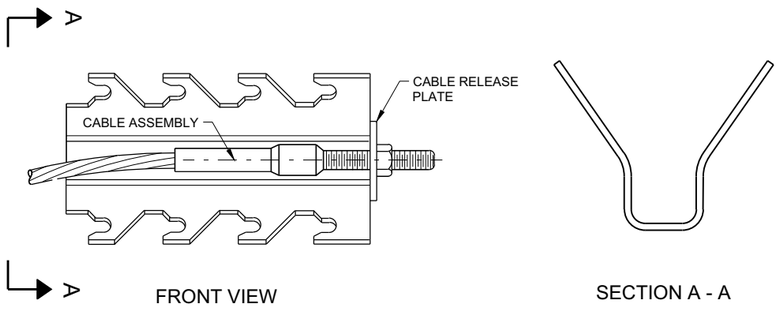
SDD 14B44 - 04a



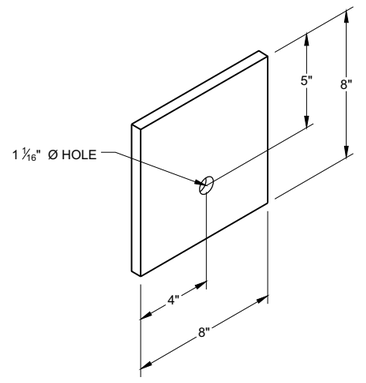
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
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	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

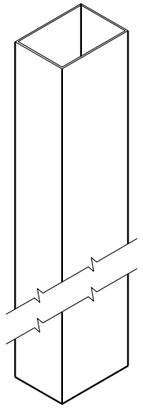
6

SDD 14B44 - 04b

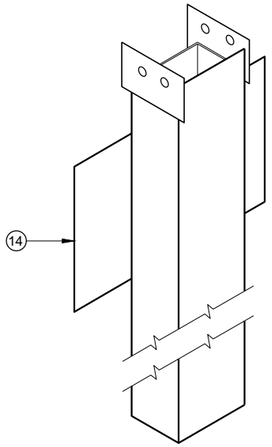
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

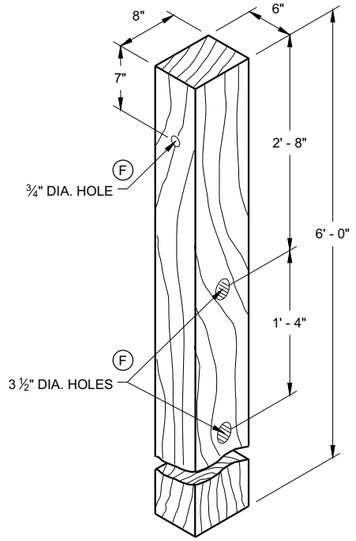
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



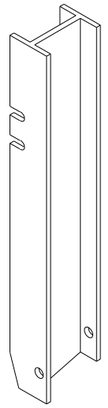
UPPER POST NO. 1 (1) (E)



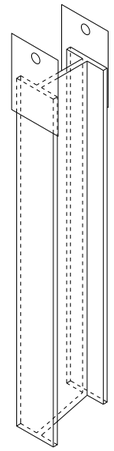
LOWER POST NO. 1 (2) (E)



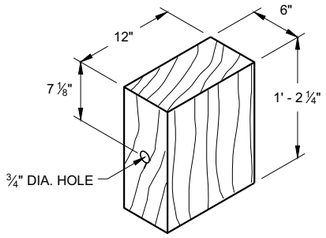
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



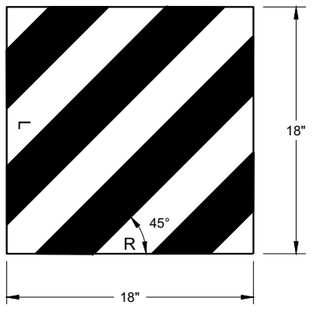
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

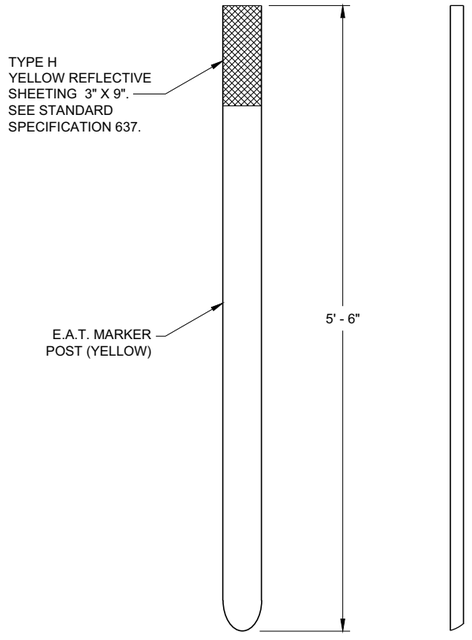


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



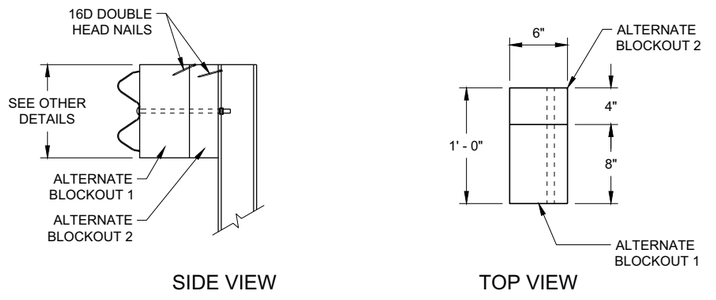
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

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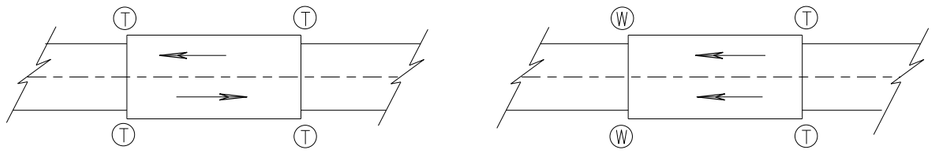
SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

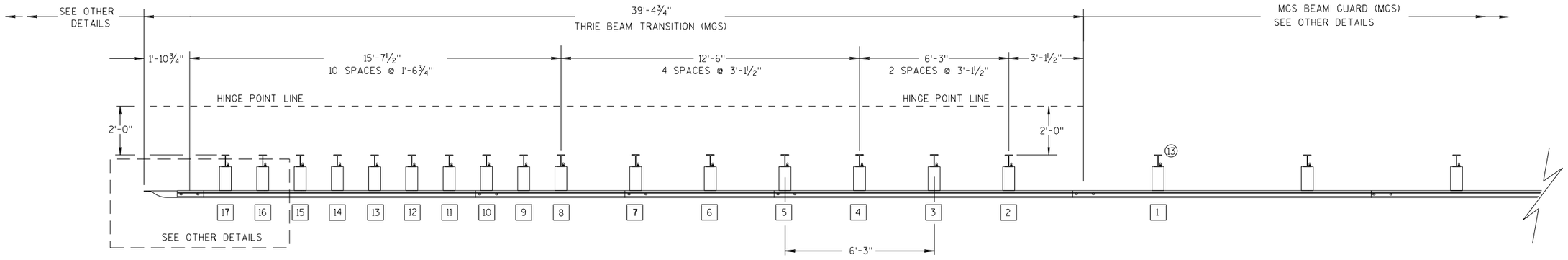
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

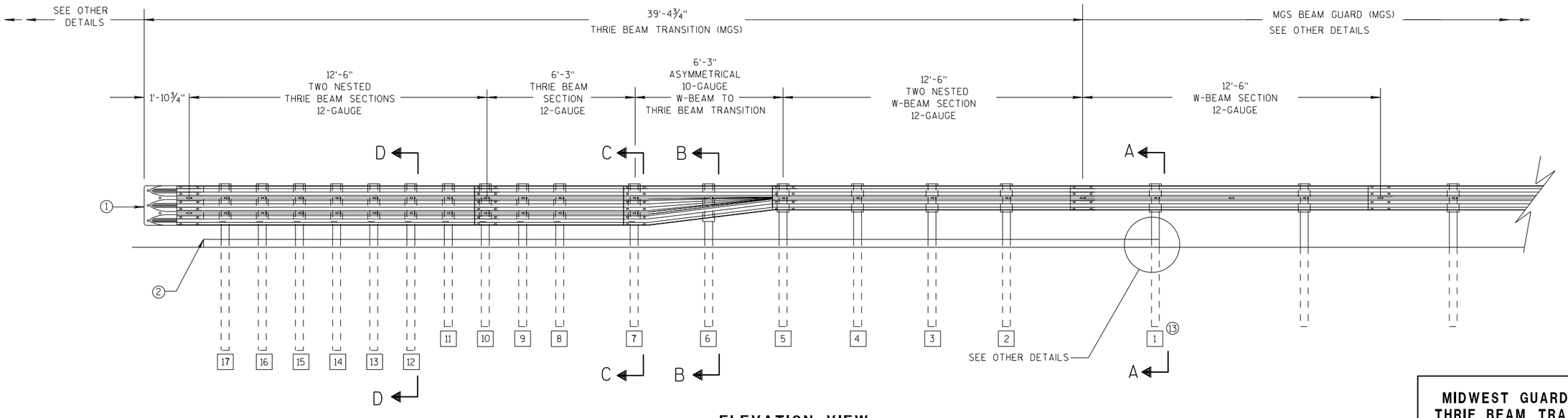
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 45-5a

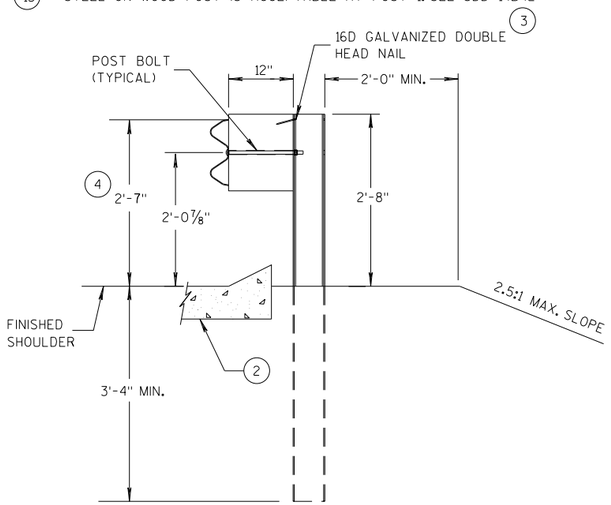
GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

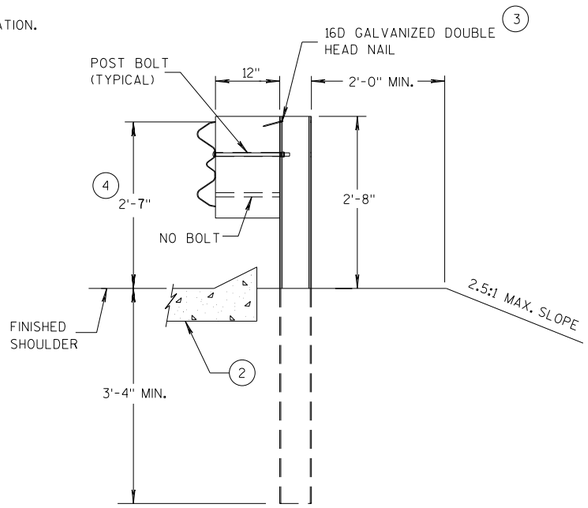
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



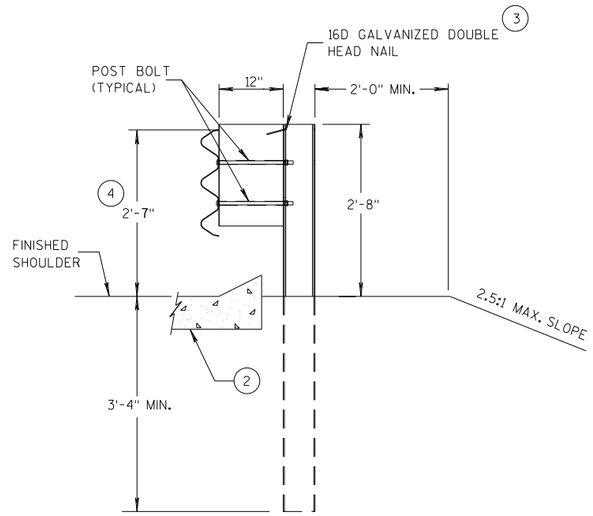
SECTION A-A (13)

POSTS 1-5



SECTION B-B

POST 6

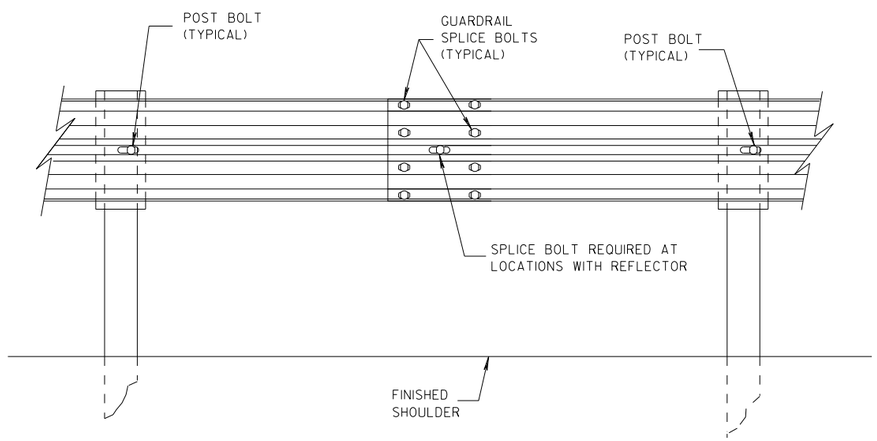


SECTION C-C

POSTS 7-11

SECTION D-D

POSTS 12-17



SPLICE DETAIL

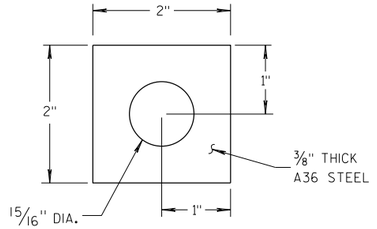
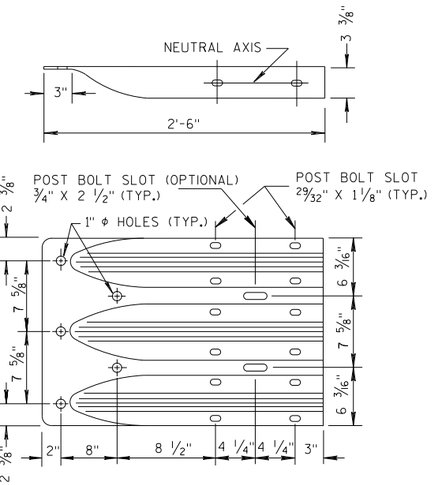
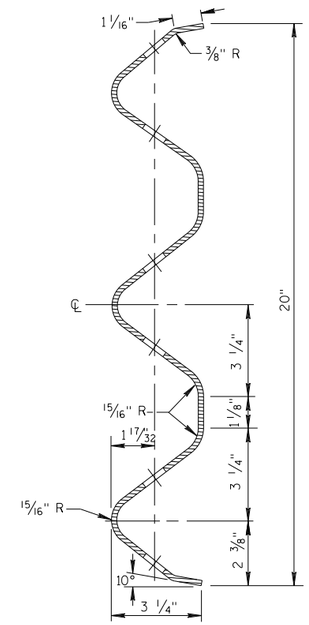


PLATE WASHER DETAIL



THRIE BEAM TERMINAL CONNECTOR



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

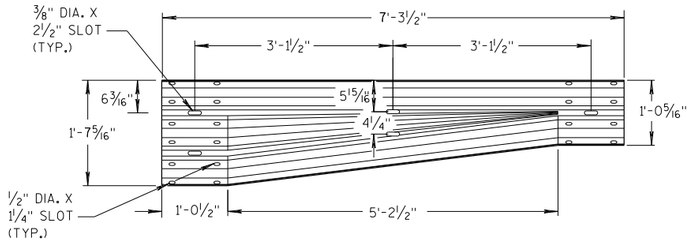
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 28

6

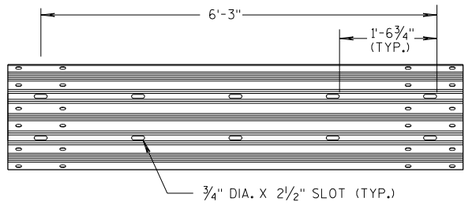
S.D.D. 14 B 45-5b

6

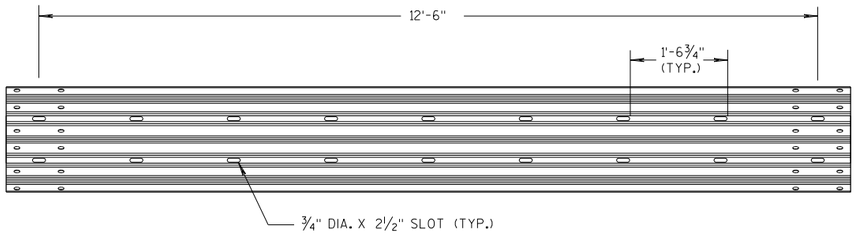
S.D.D. 14 B 45-5b



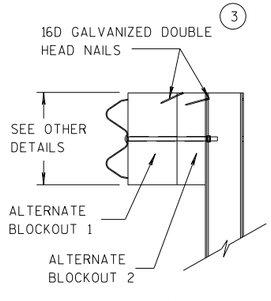
W-BEAM TO THRIE BEAM TRANSITION SECTION



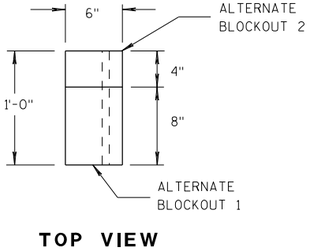
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

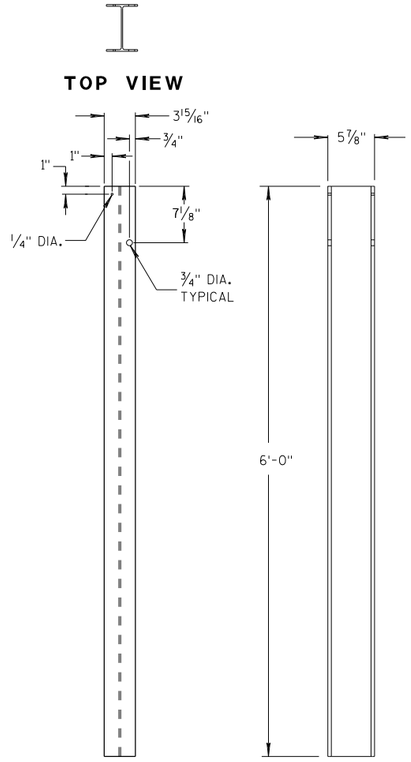


SIDE VIEW



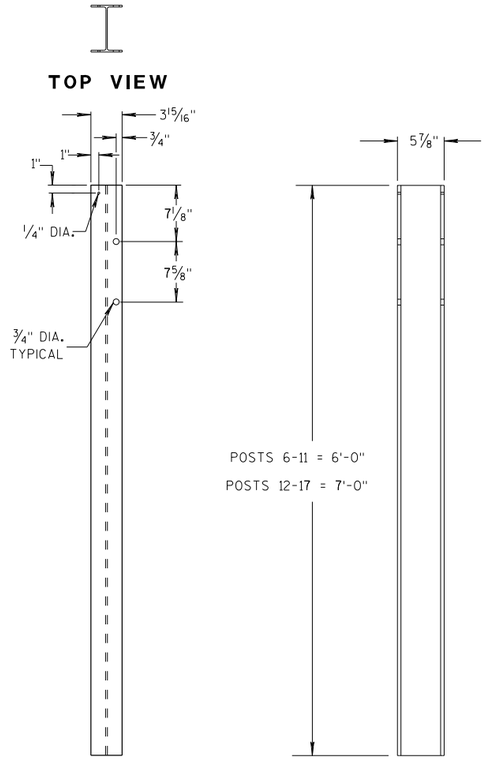
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



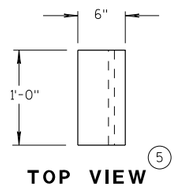
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

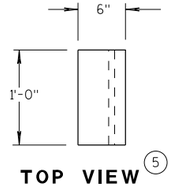


FRONT VIEW SIDE VIEW

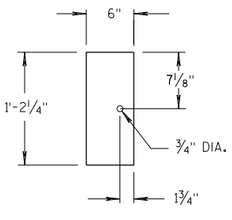
STEEL POSTS 6-17



TOP VIEW (5)

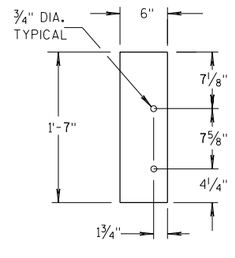


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

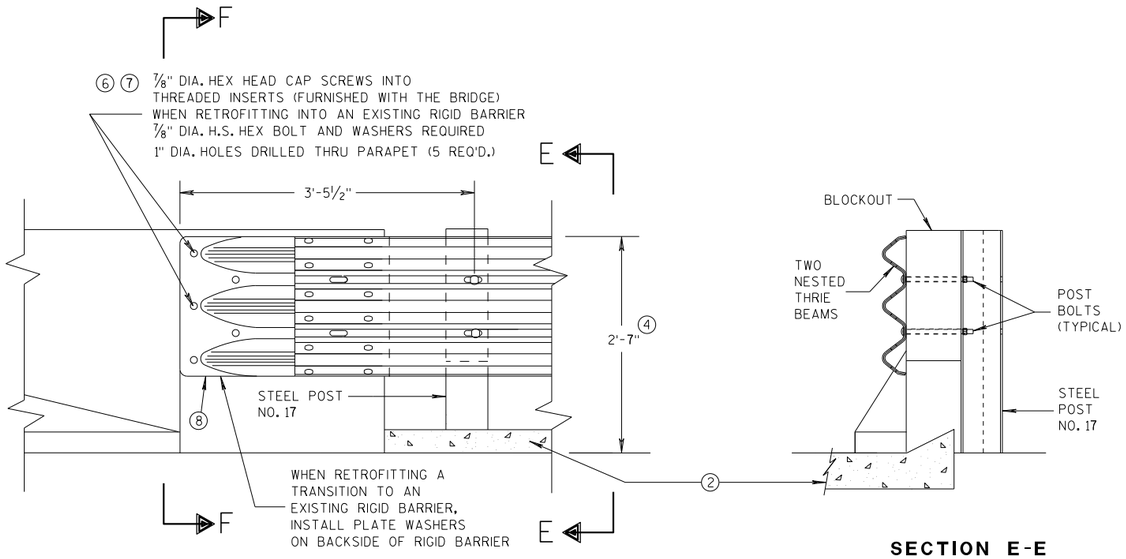
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 45-5c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

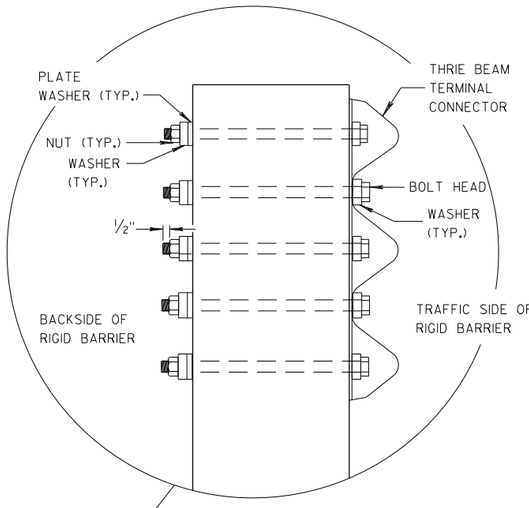
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

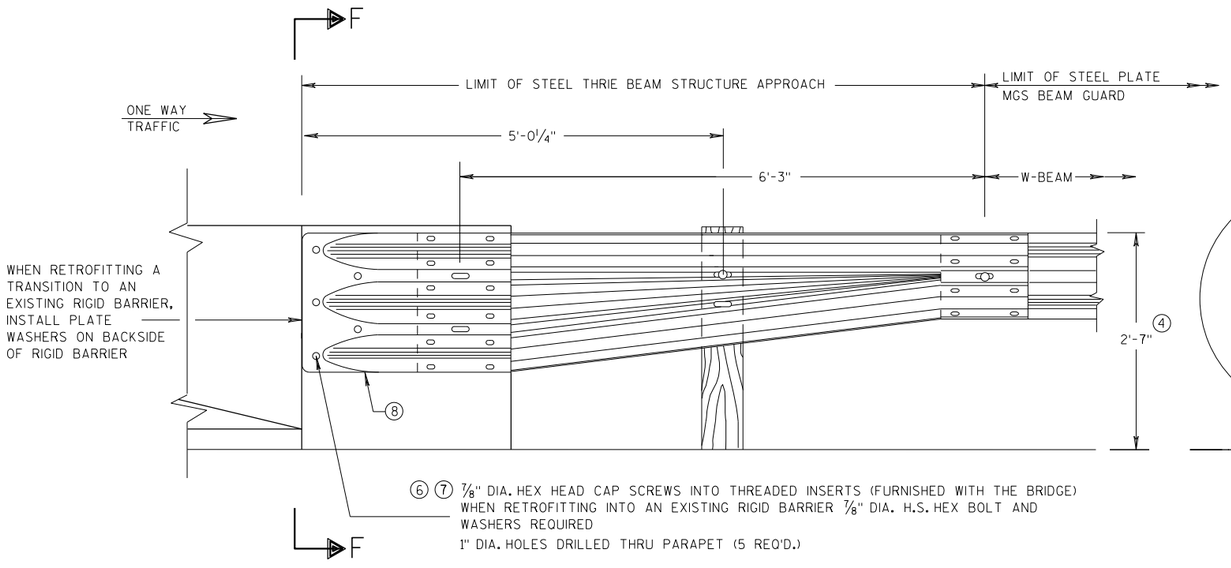
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

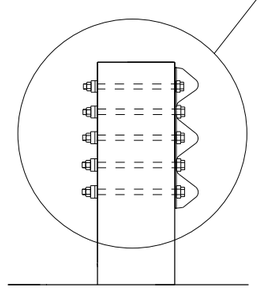
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ 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".

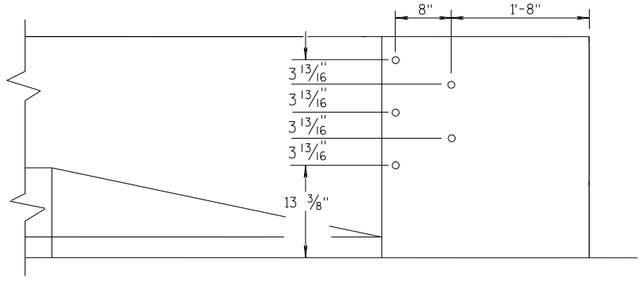




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVI
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FHWA

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GENERAL NOTES

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

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

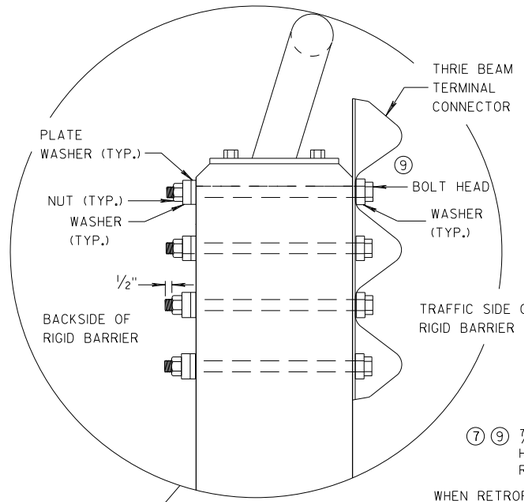
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

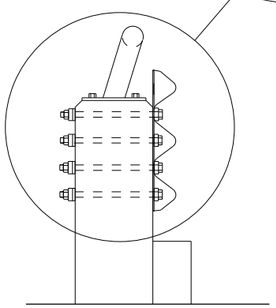
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) 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 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

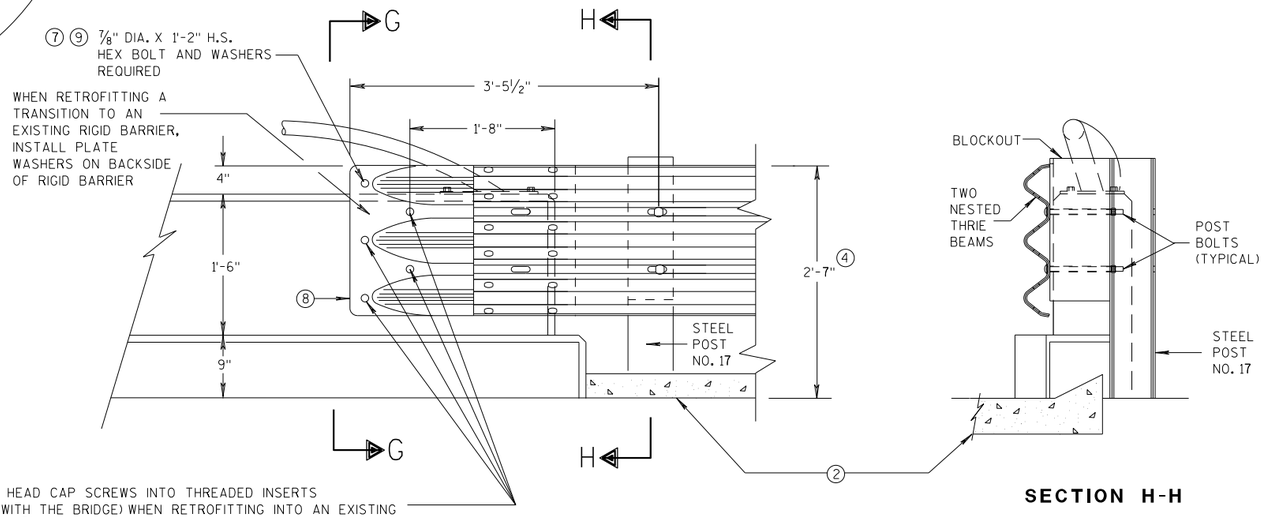
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(9) 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.





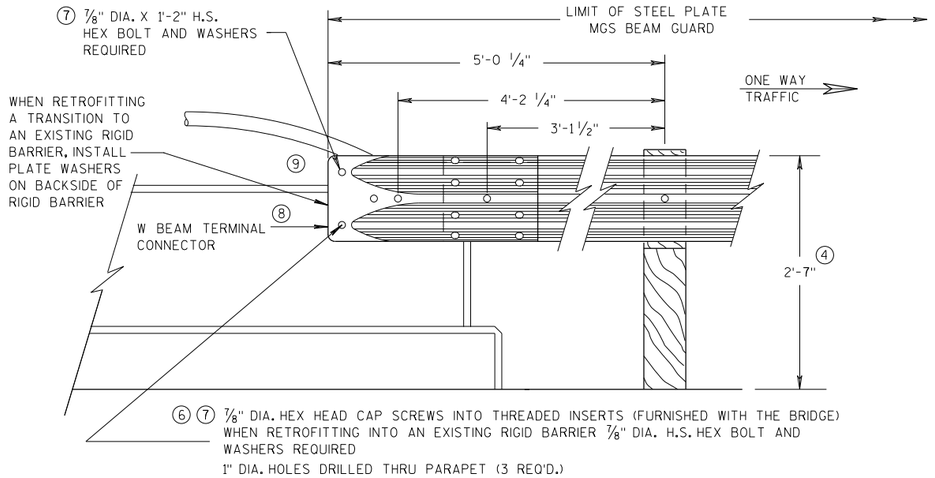
SECTION G-G



FRONT VIEW

SECTION H-H

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)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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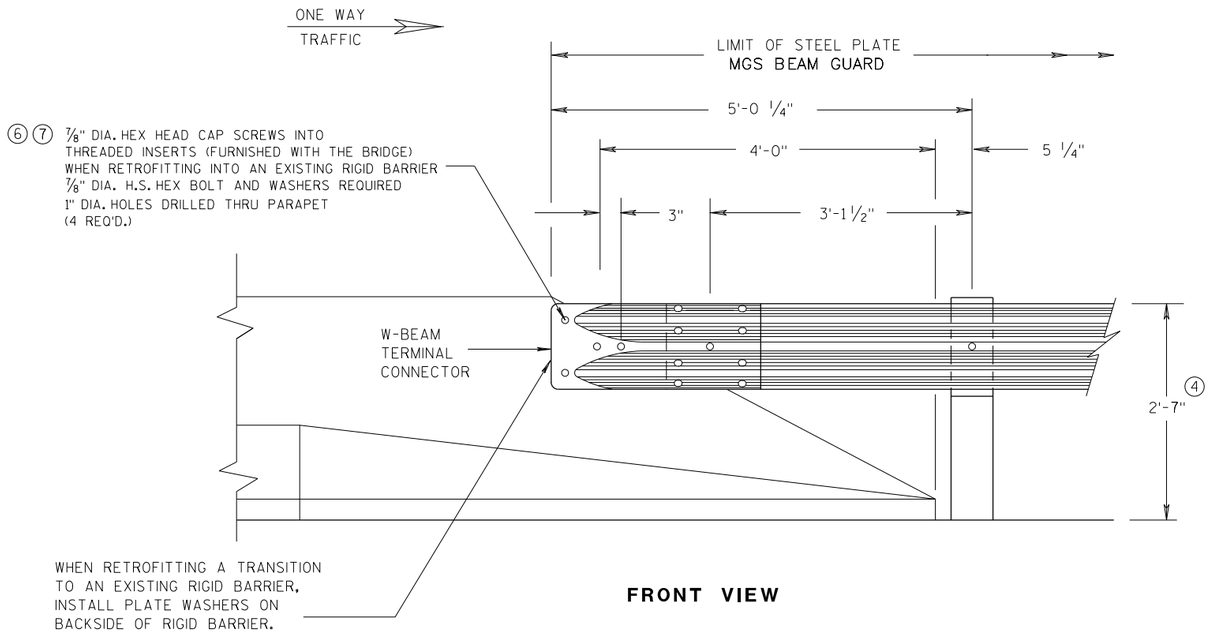


FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

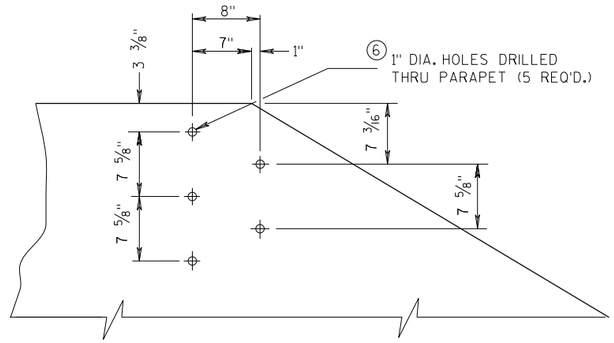
GENERAL NOTES

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

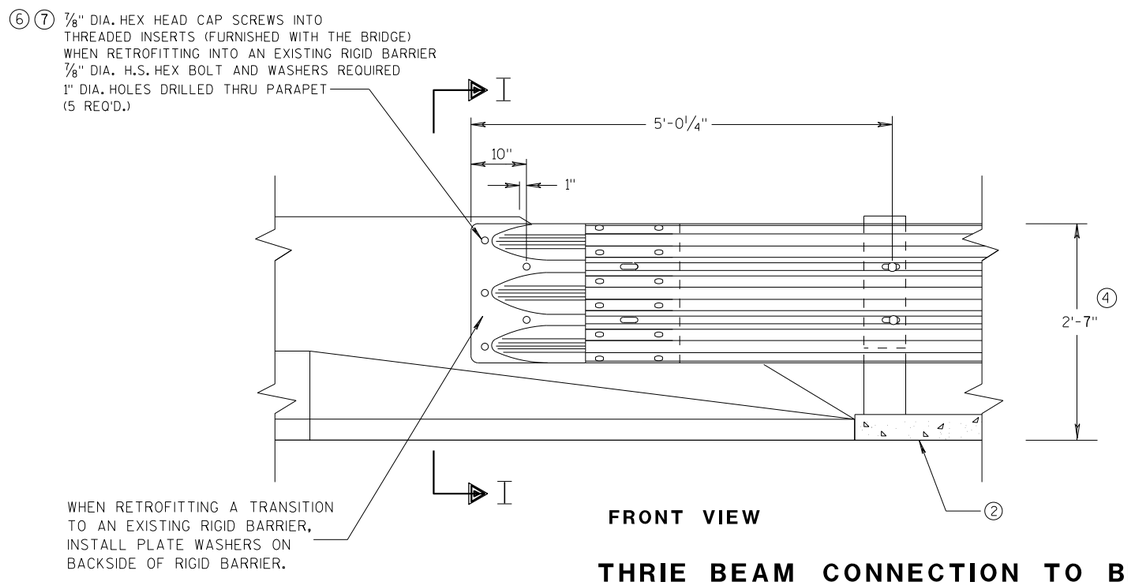
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

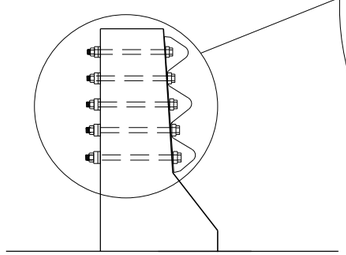
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



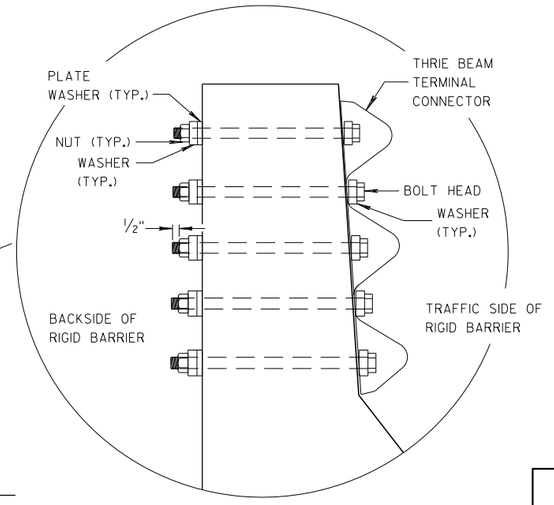
DRILL HOLE LOCATION AND PATTERN FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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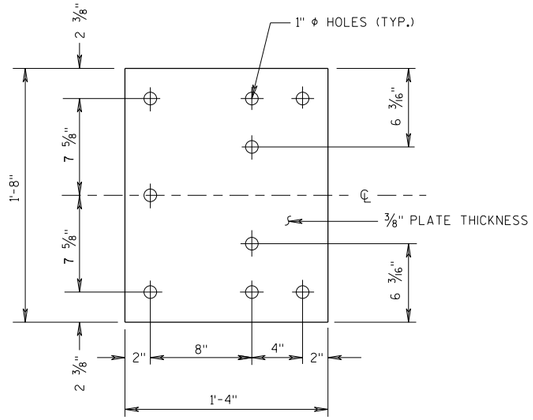
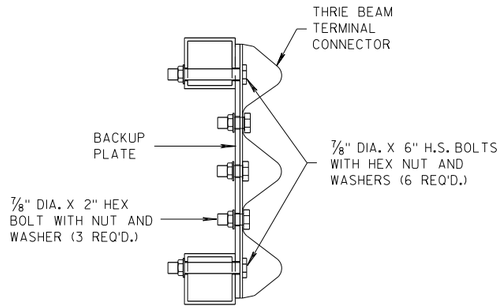
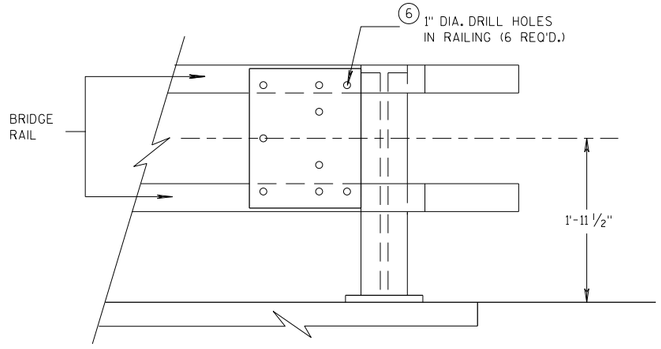


BACK-UP PLATE DETAIL



SECTION J-J

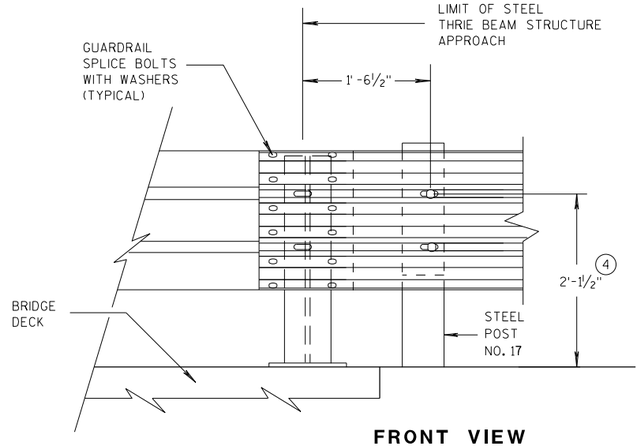


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

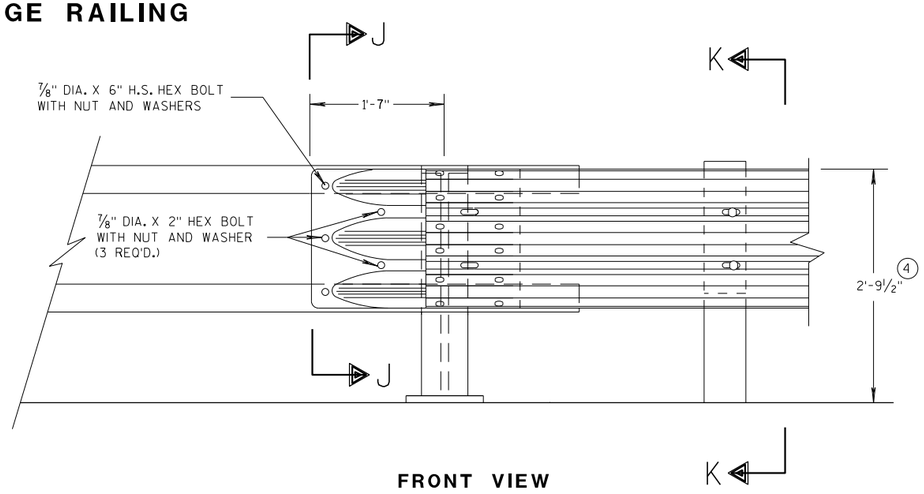
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING HOLES THROUGH THE PAPRPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

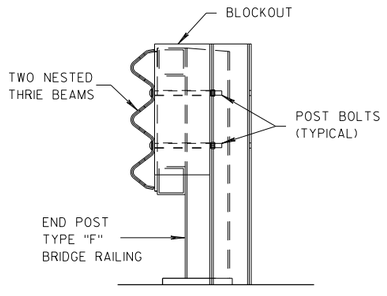


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED 07/2018 — DATE — FHWA

/S/ Rodney Taylor 33 — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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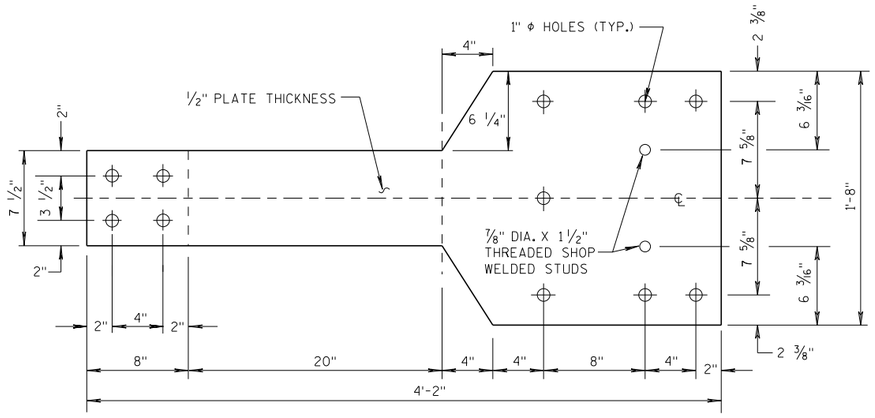
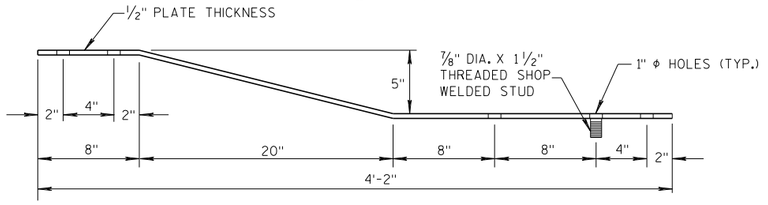
GENERAL NOTES

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

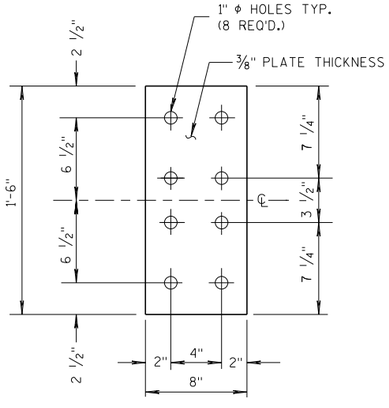


FRONT VIEW



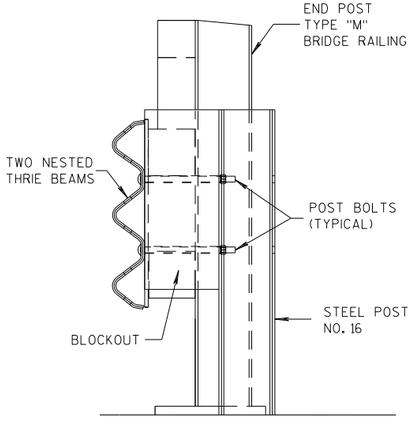
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

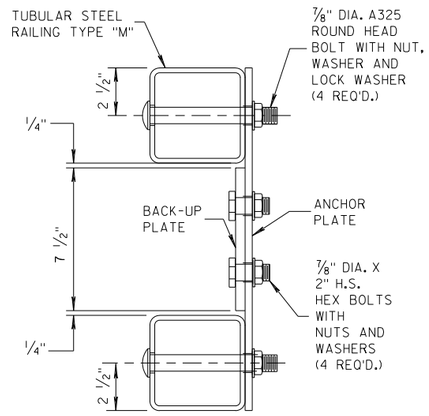


FRONT VIEW

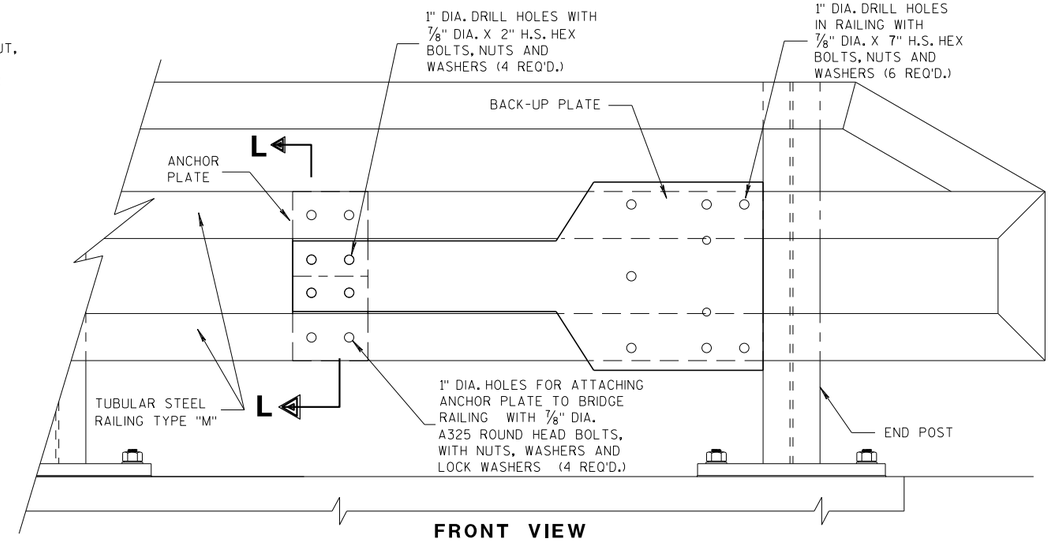
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

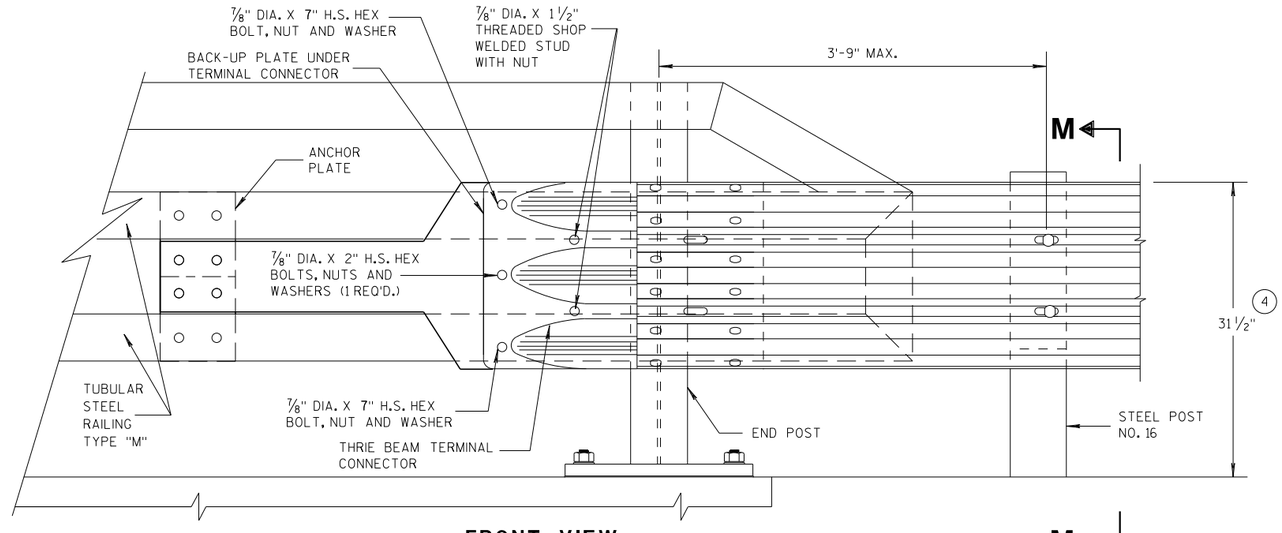


SECTION L-L

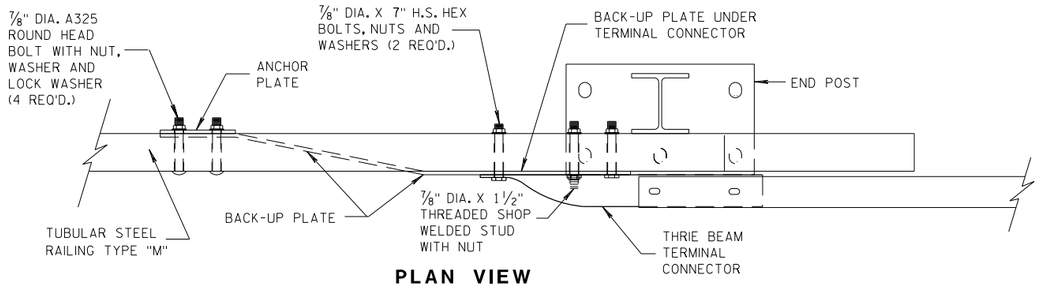


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
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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.

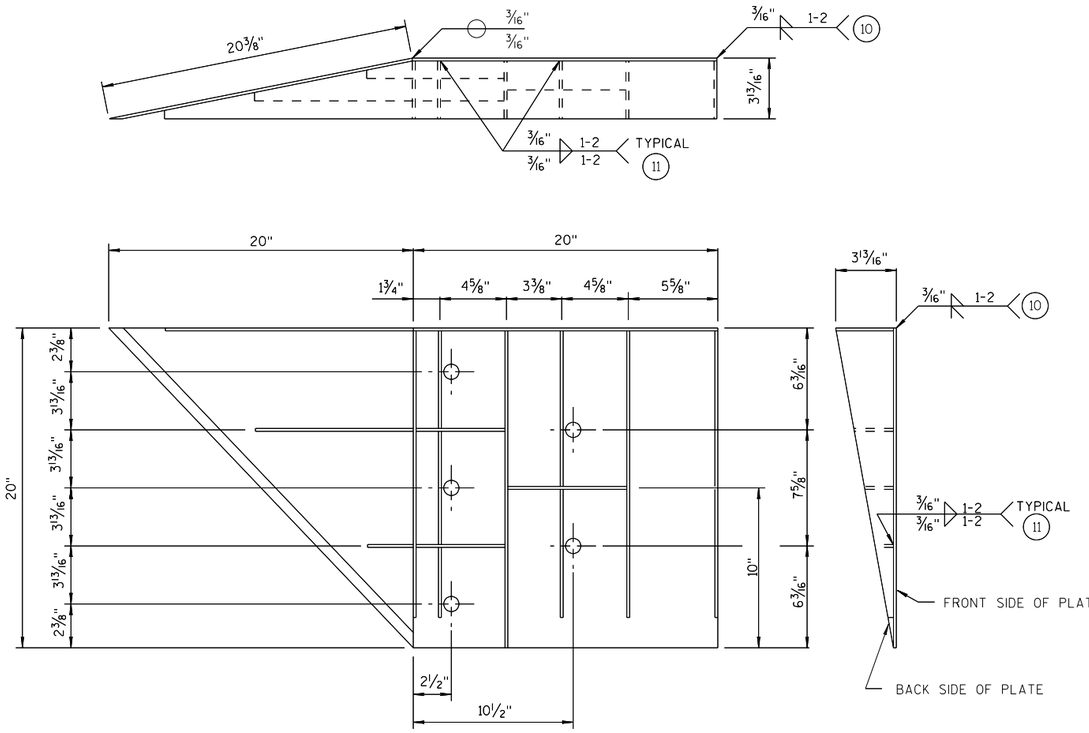
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) 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.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

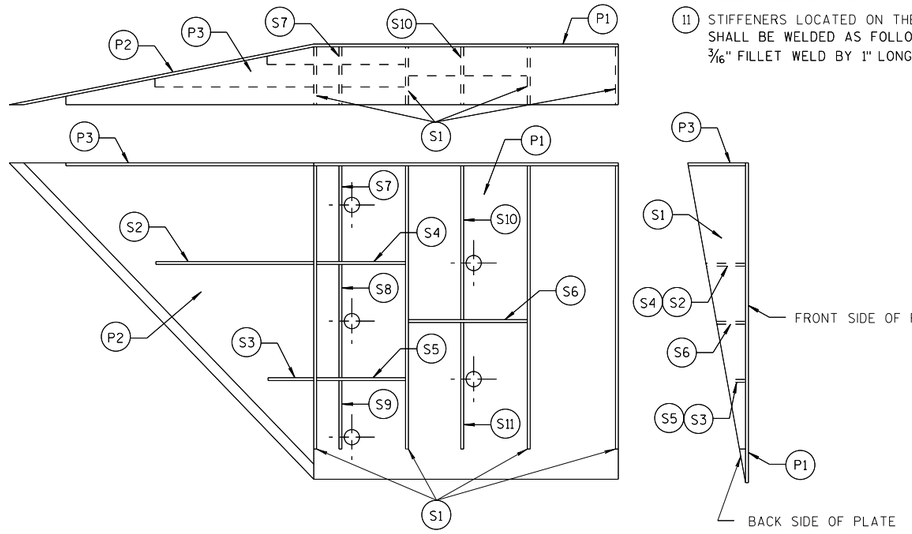


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

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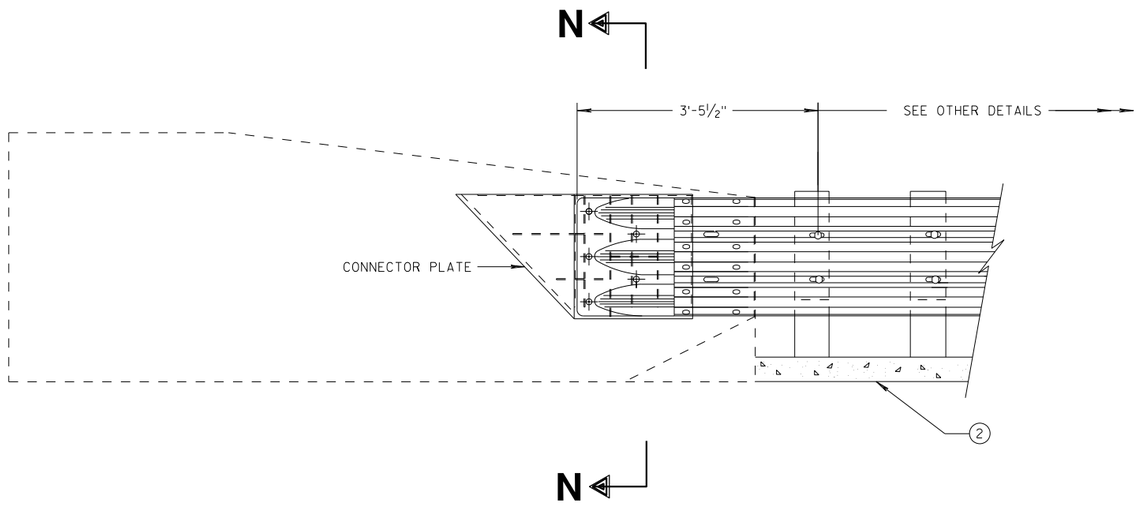
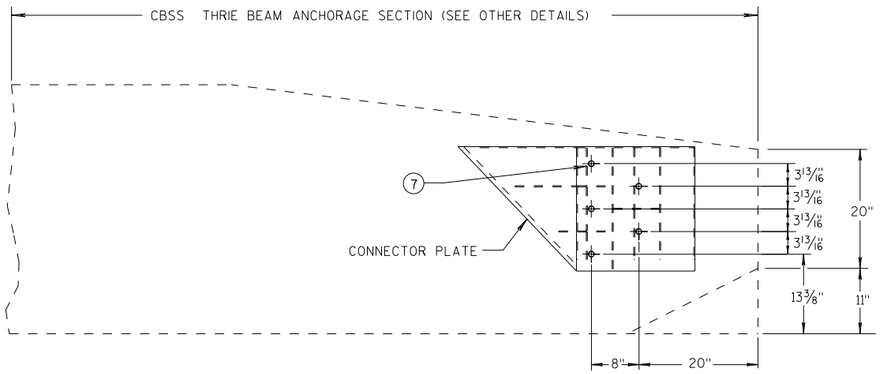


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



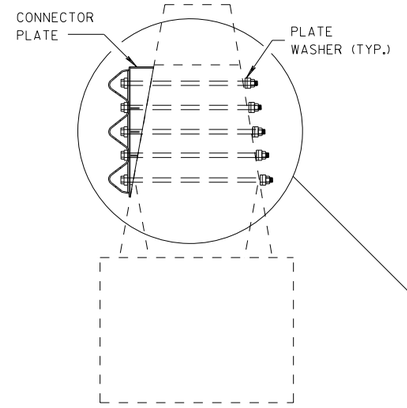
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

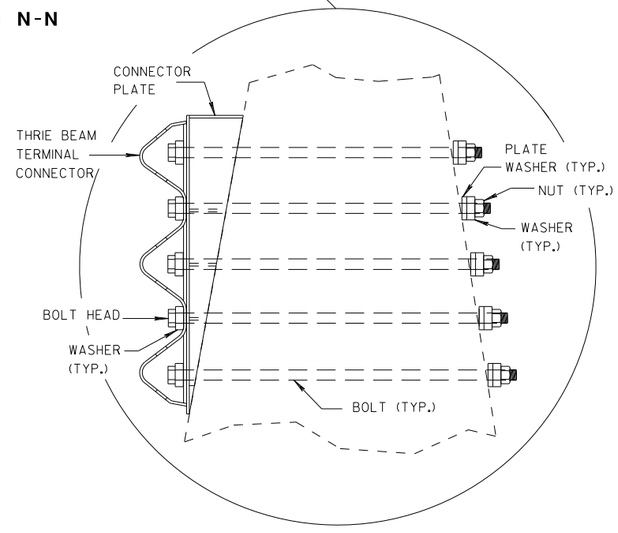
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

(7) 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 5/32" 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
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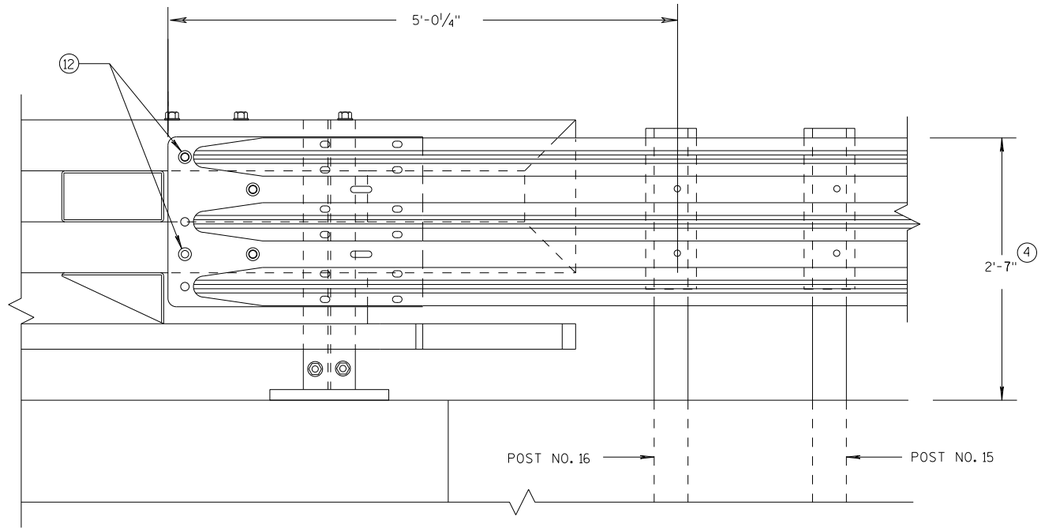
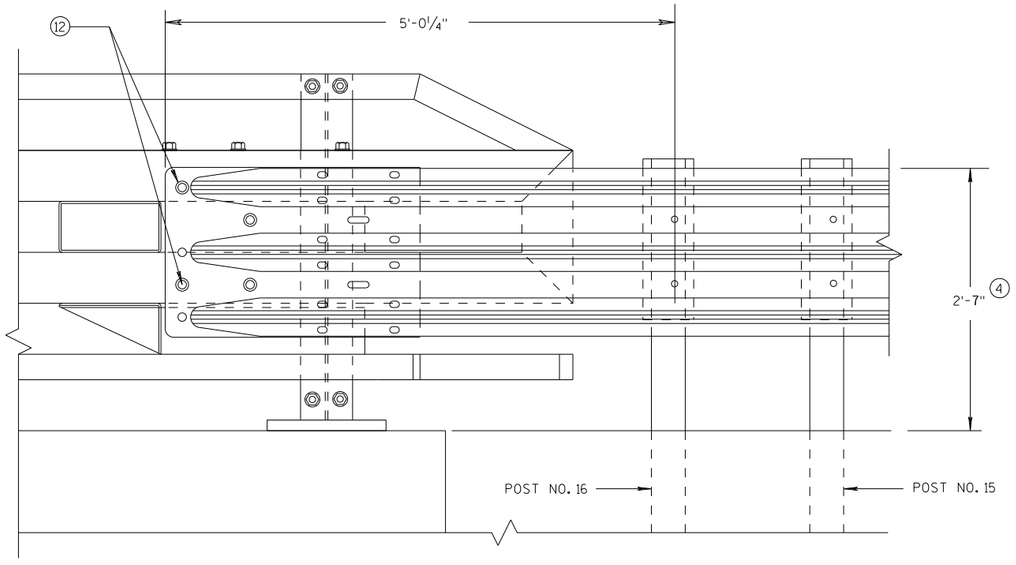


ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS

NT

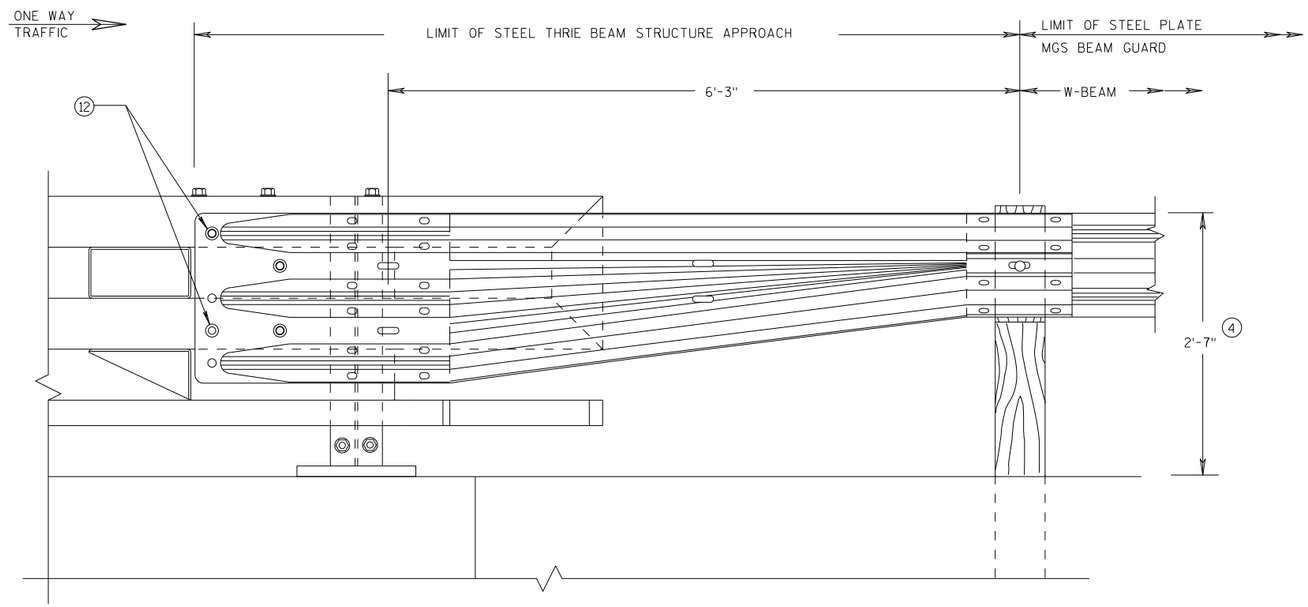
FHWA

6

S.D.D. 14 B 45-5k

6

S.D.D. 14 B 45-5k



FRONT VIEW

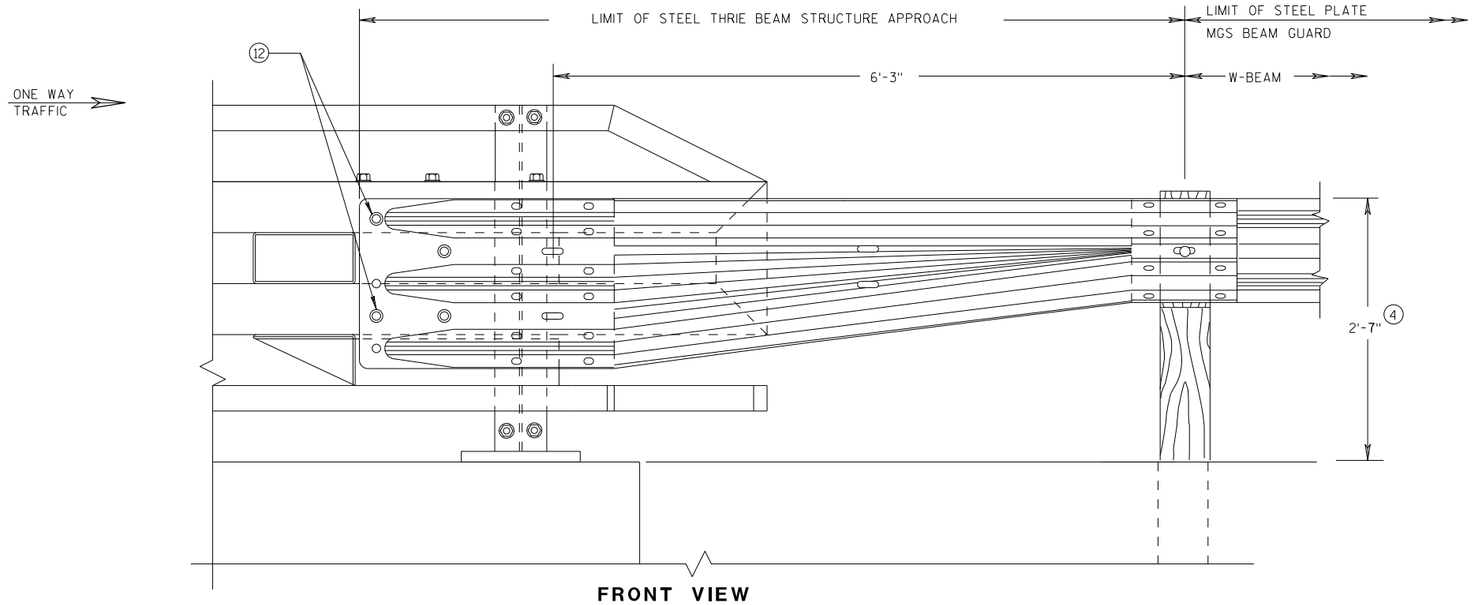
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

(12) 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D
UNIT SUPERVIS
NT
FHWA

6

S.D.D. 14 B 45-5L

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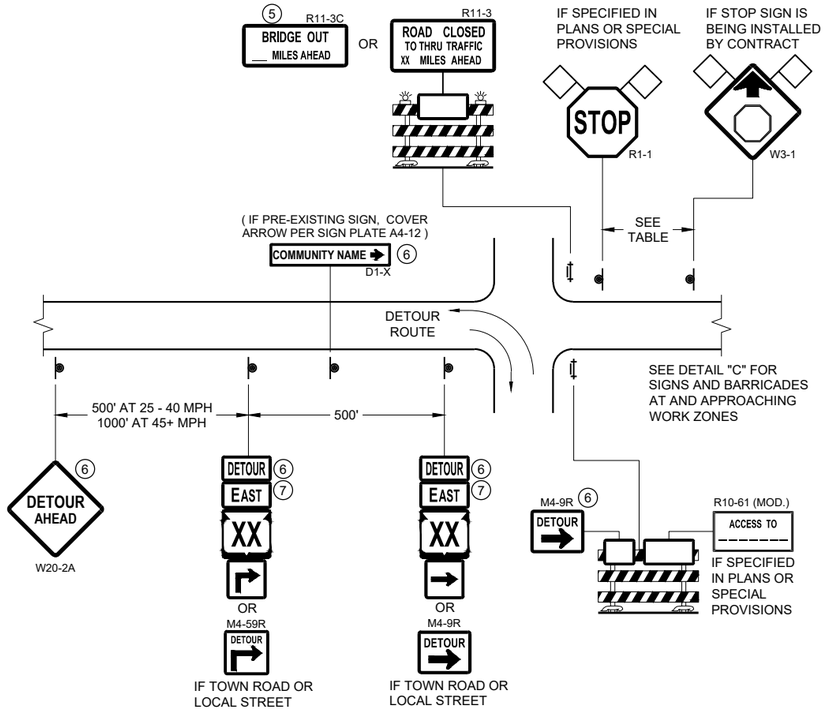
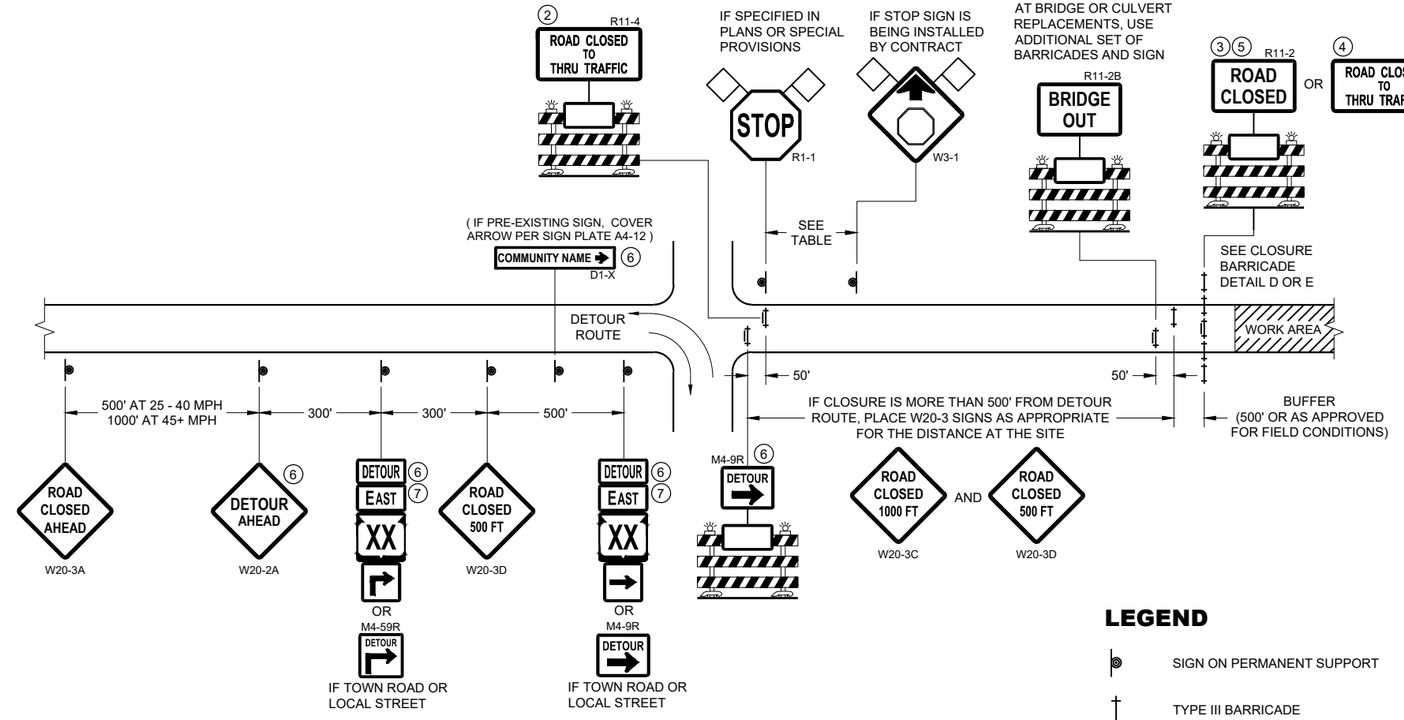
S.D.D. 14 B 45-5L



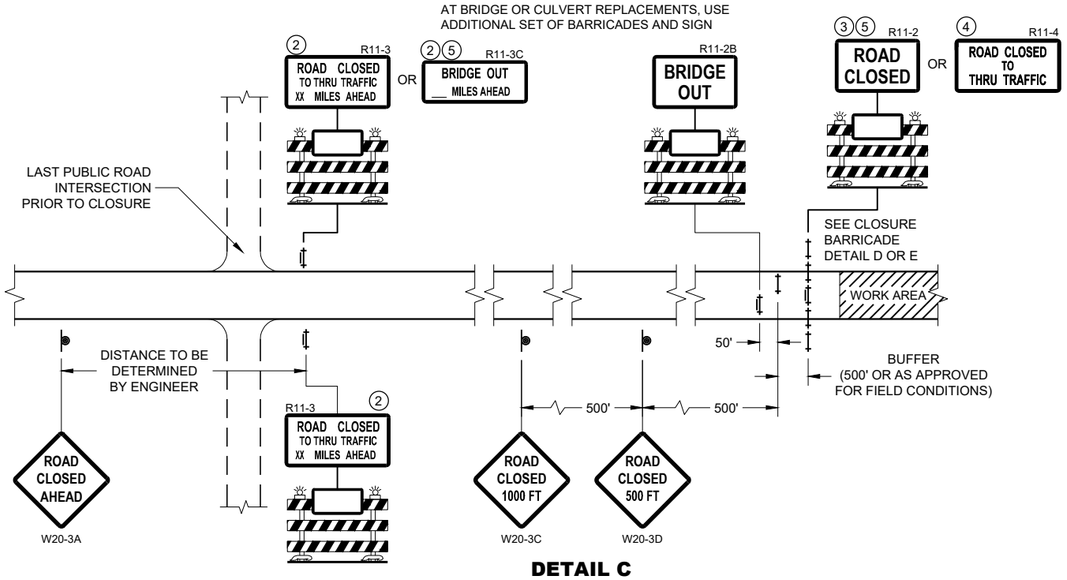
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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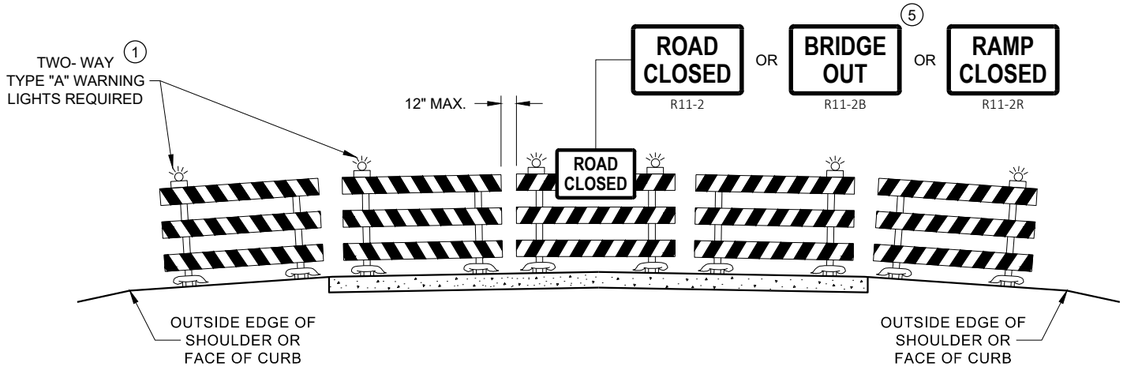
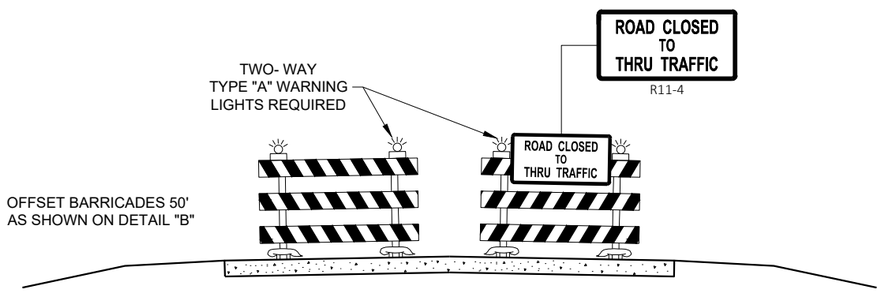
SDD 15C02 - 09a

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING.

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6

SDD 15C02 - 09b

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SDD 15C02 - 09b

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

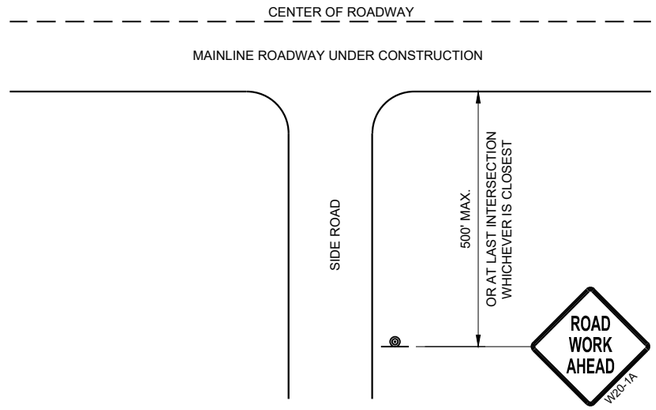
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS

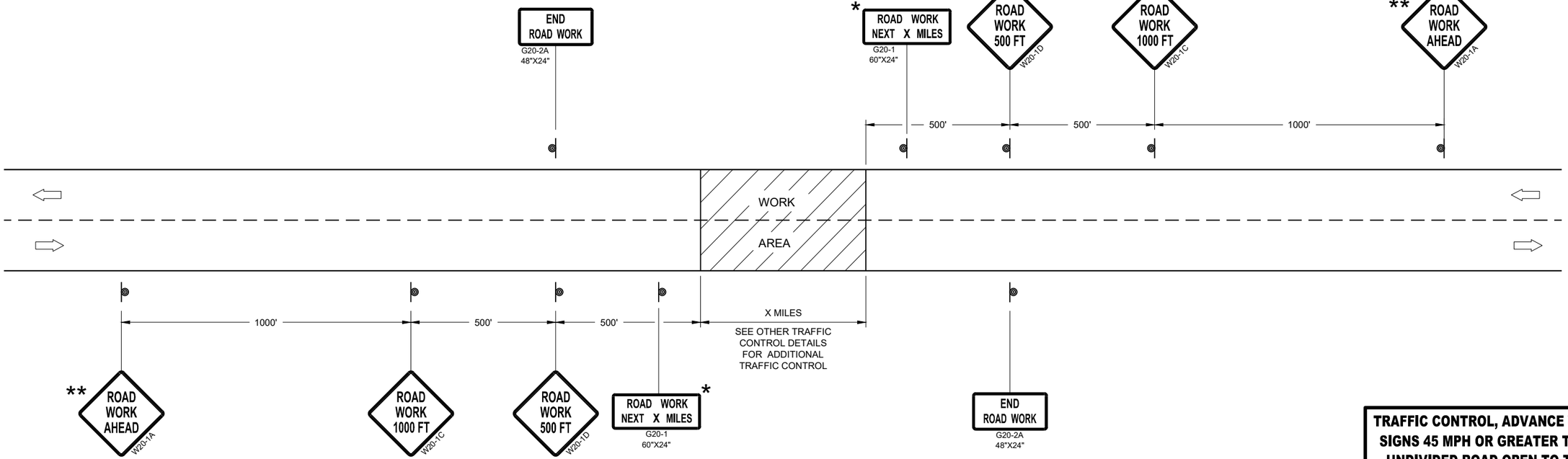
** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

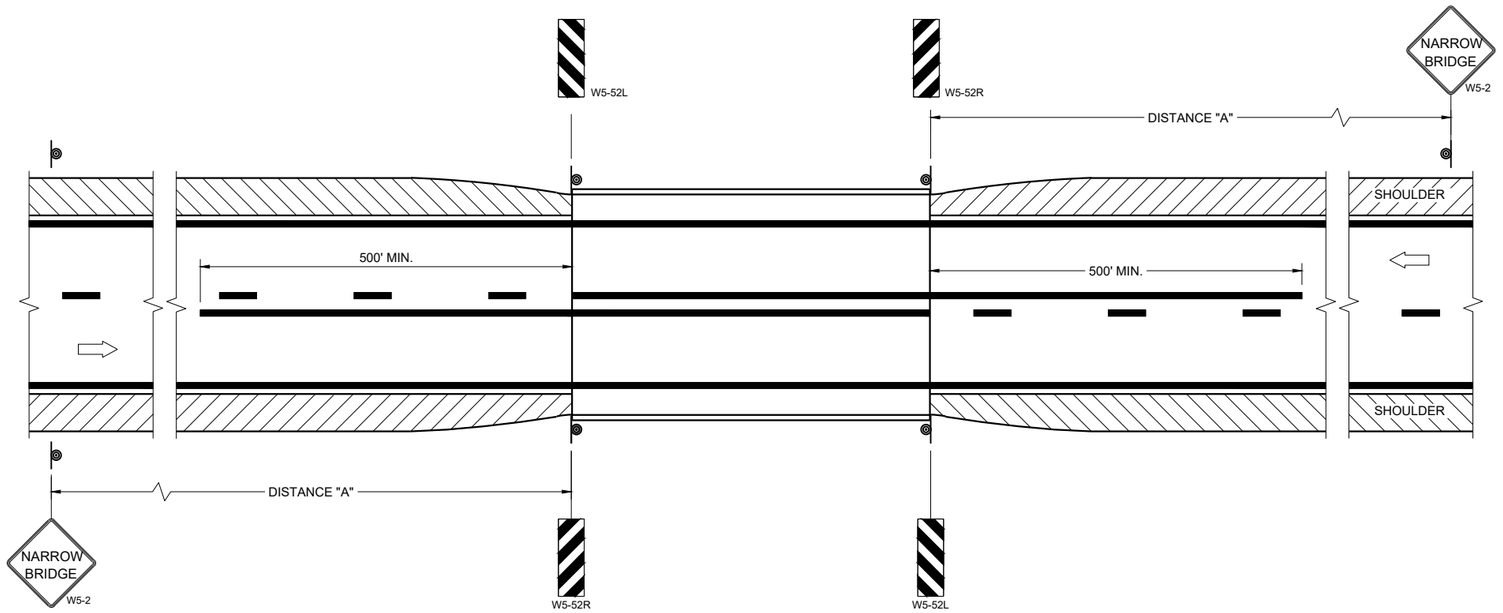
APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

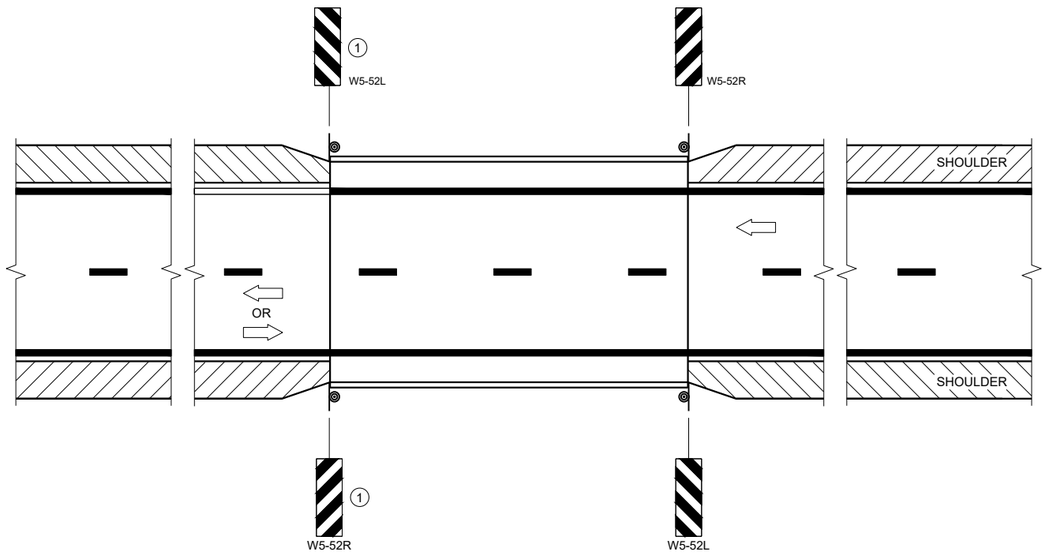
6

SDD 15C04 - 05



SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



SITUATION 2

WARRANTING CRITERIA:
1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET

GENERAL NOTES

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

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA

6
SDD 15C06-12

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING

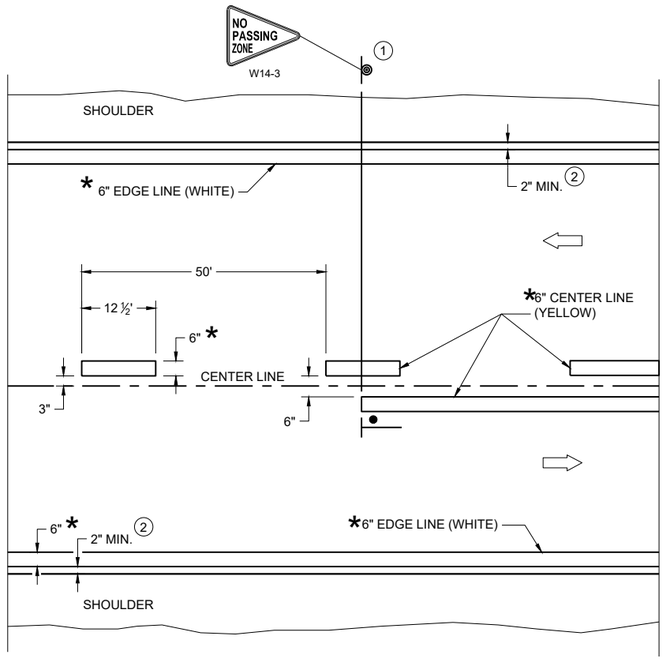
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

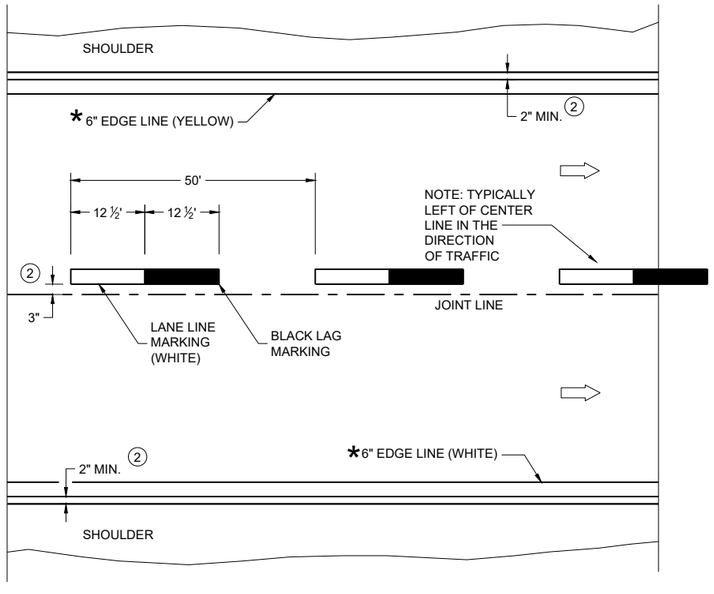
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer
FHWA

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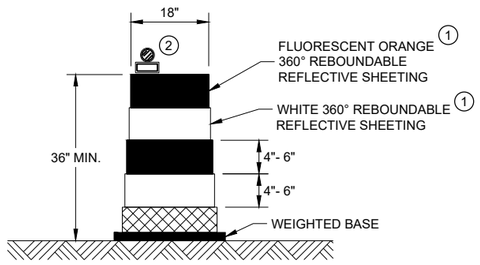
SDD 15C08-23a

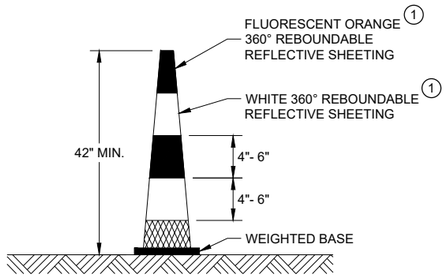
GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

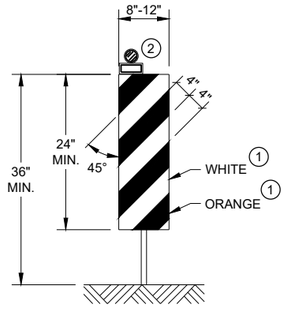
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

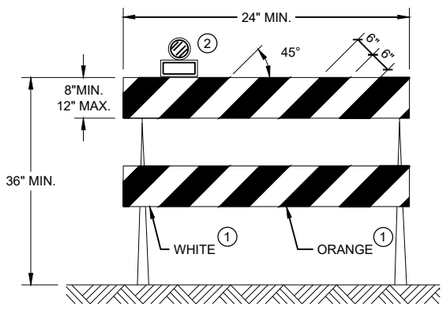
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



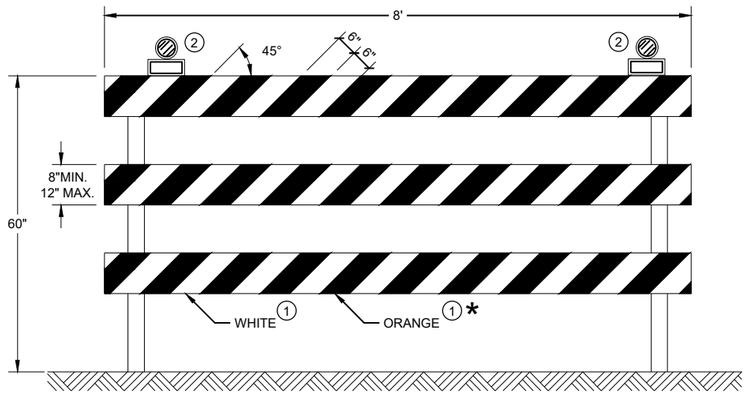
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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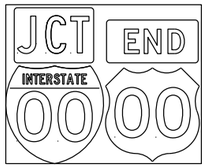
SDD 15C11 - 10b

6

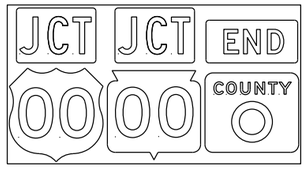
SDD 15C11 - 10b

TYPICAL ASSEMBLIES

J1-1



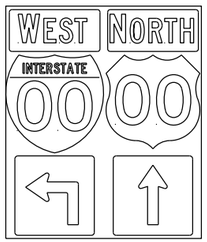
J1-2



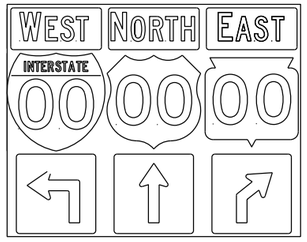
J1-3

JR1-1

J2-1

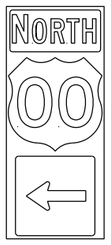


J2-2

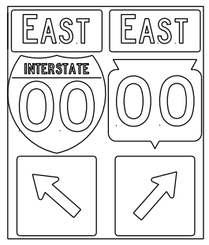


J2-3

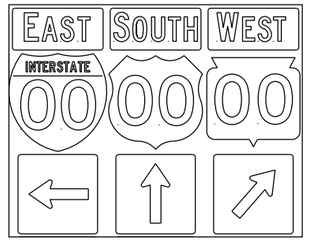
JV
(Typical Vertical J-Assembly
See Note 10 and 11)



J3-1

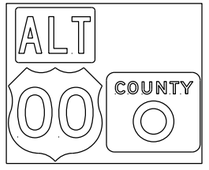


J3-2

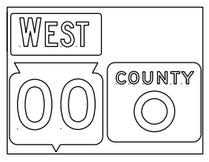


J3-3

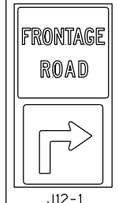
J4-1



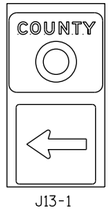
J4-2



J4-2



J12-1

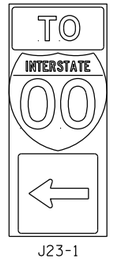


J13-1

J32-1

J33-1

J22-1

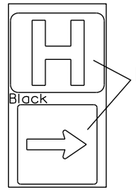


J23-1

JR13-1

JR23-1

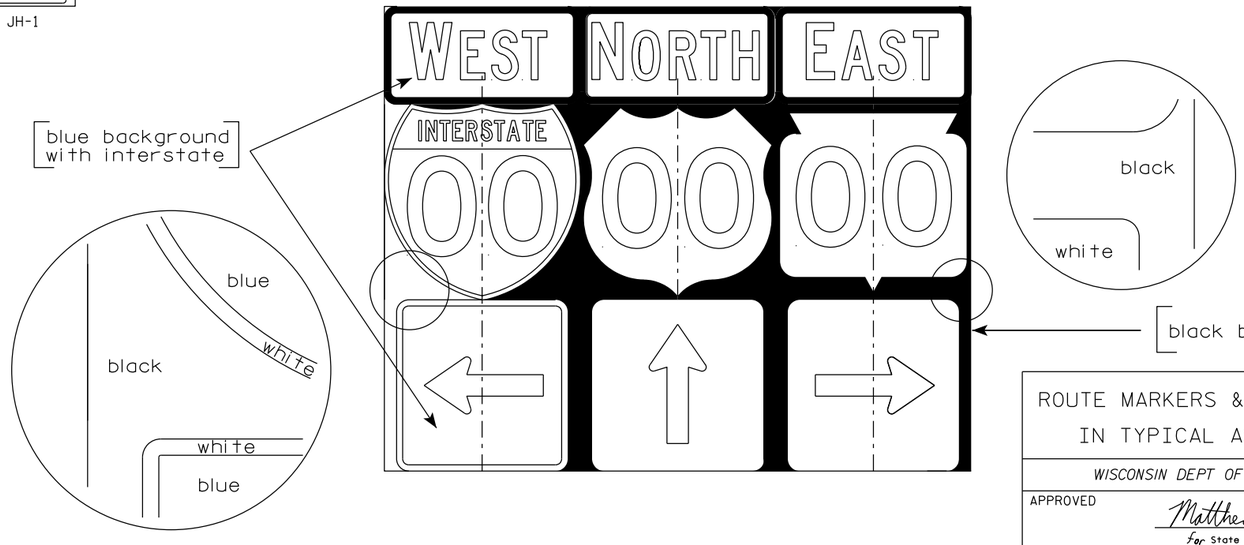
JR99-1



Blue Background
JH-1

NOTES

1. Signs are Type II - Type H Reflective
2. Color:
   Background - Black Non-reflective
   Message - see Note 4
3. Message Series - See Note 4
4. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
5. 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.
6. 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.
7. 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.
8. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. All Vertical J Assemblies are given a Sign Code of JV
10. For JV Assemblies that have a mixture of Interstate and Non-Interstate shields, arrows and cardinals shall be white on blue.
11. For JV Assemblies that have a mixture of Non-Interstate and Auto-Tour shields, arrows and cardinals shall be black on white.



ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

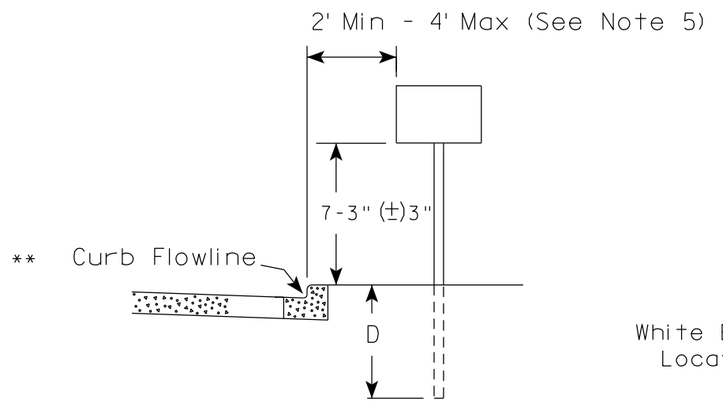
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/23 PLATE NO. A2-1S.10

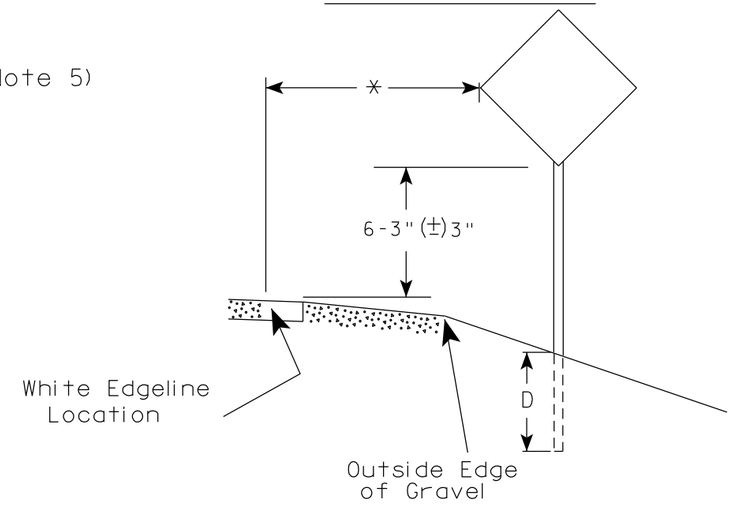
PROJECT NO:

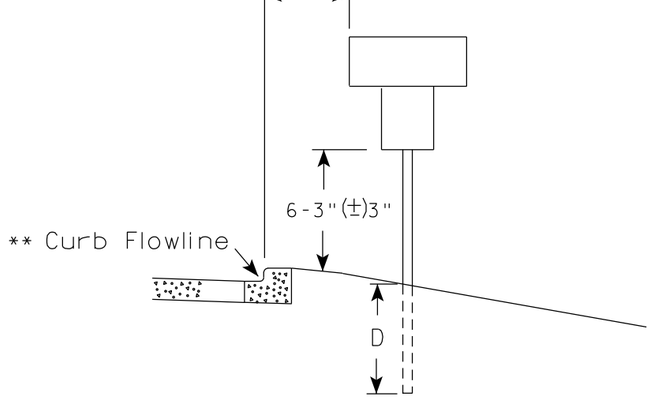
SHEET NO: 45 E

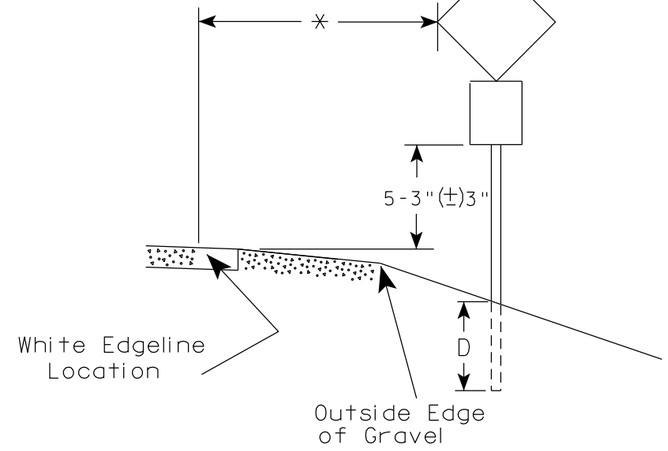
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

POST EMBEDMENT DEPTH

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

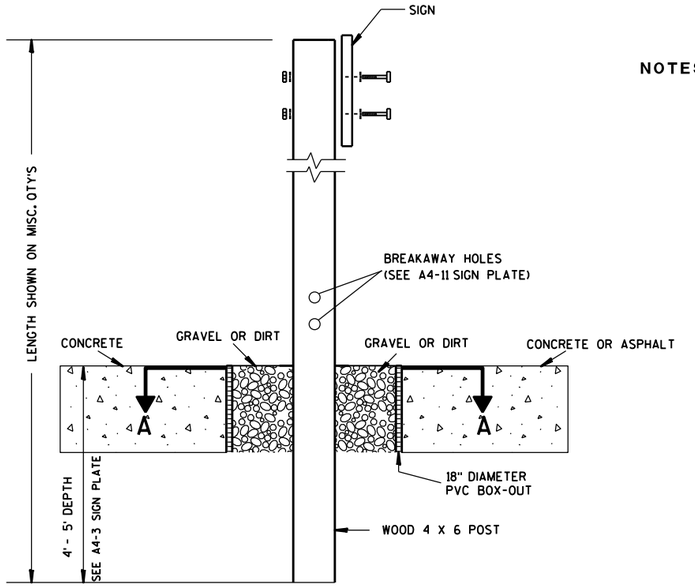
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

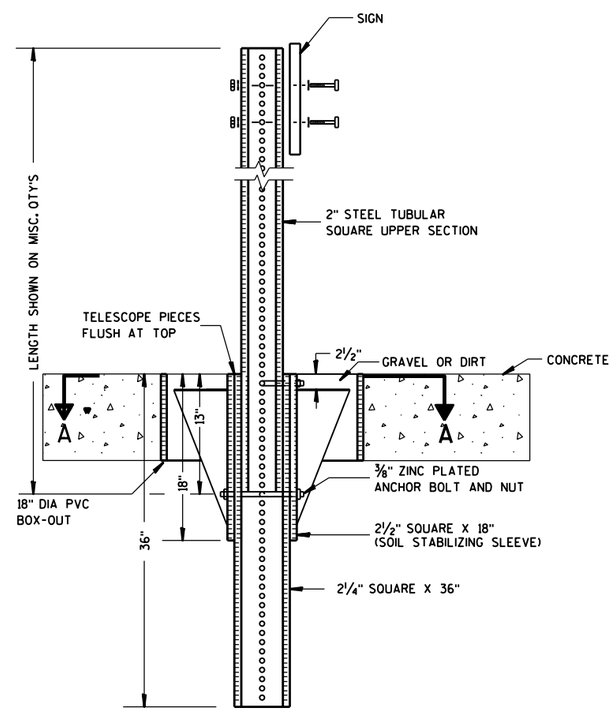
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 46	E



ELEVATION VIEW

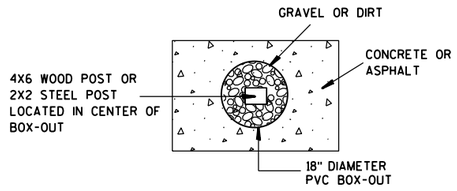
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

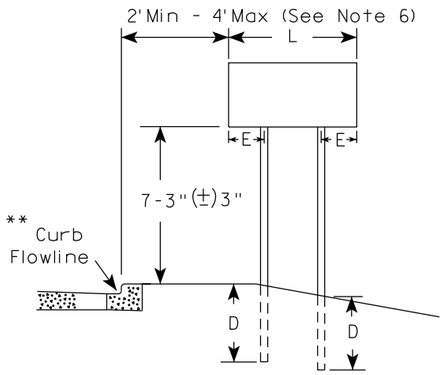
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

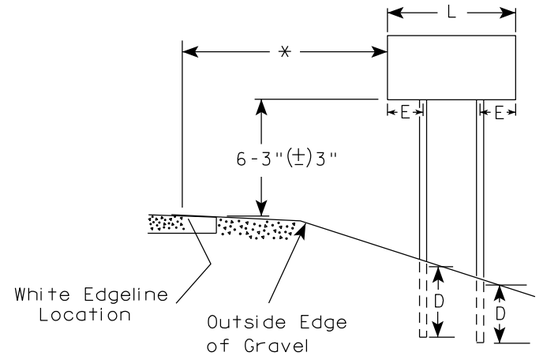
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

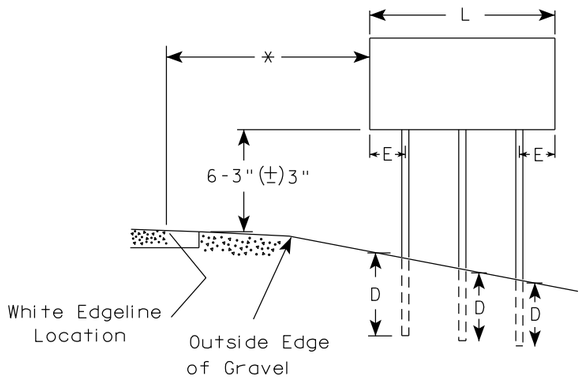
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

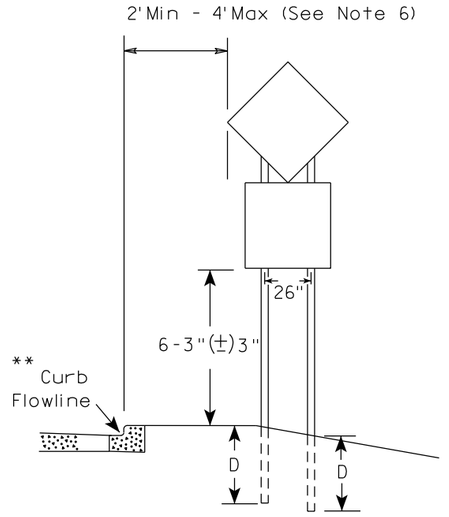
URBAN AREA



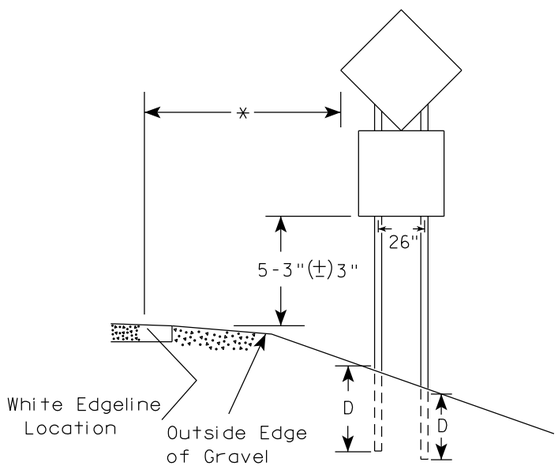
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

***	SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
	L	E
	Greater than 48" Less than 60"	12"
	60" to 108"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±) 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 and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

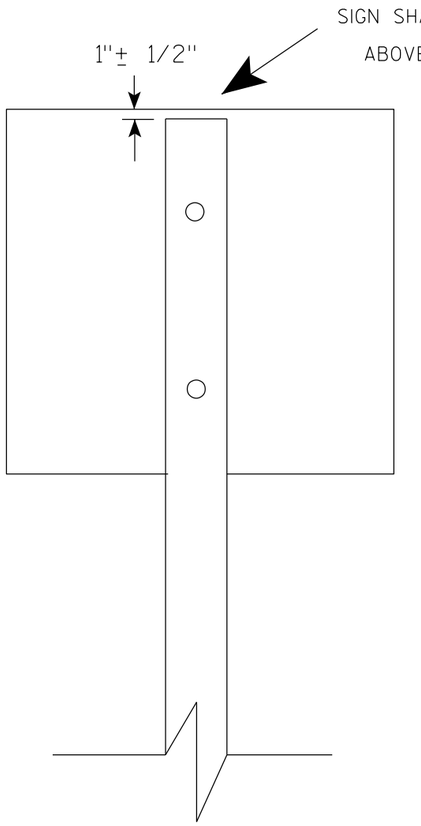
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

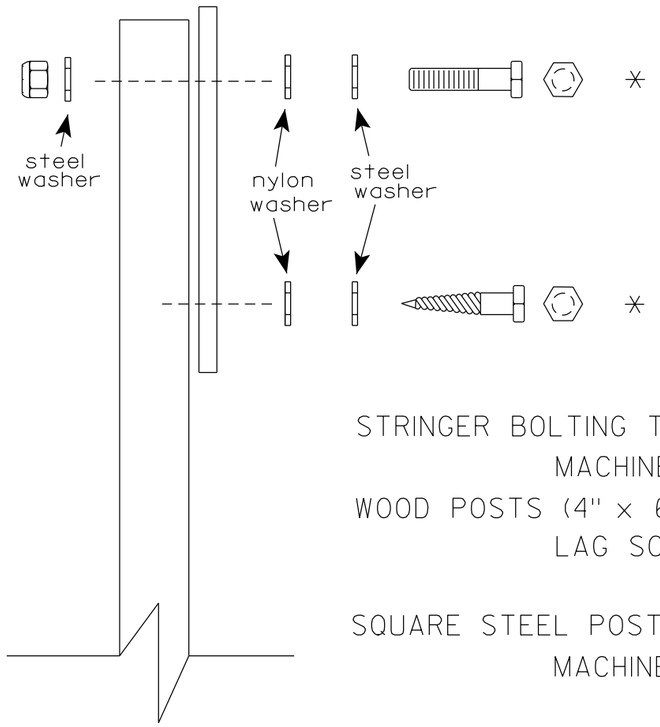
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 48	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.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

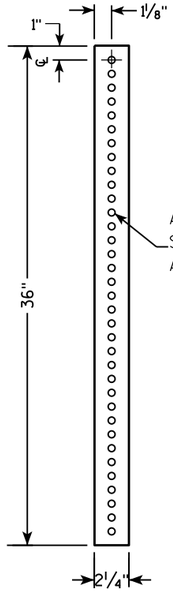
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

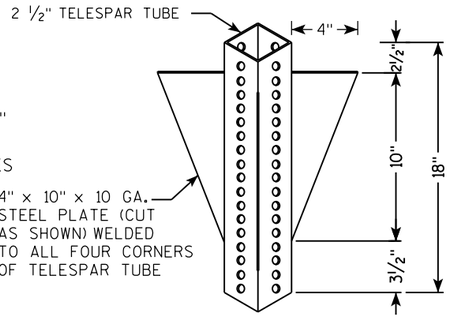
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

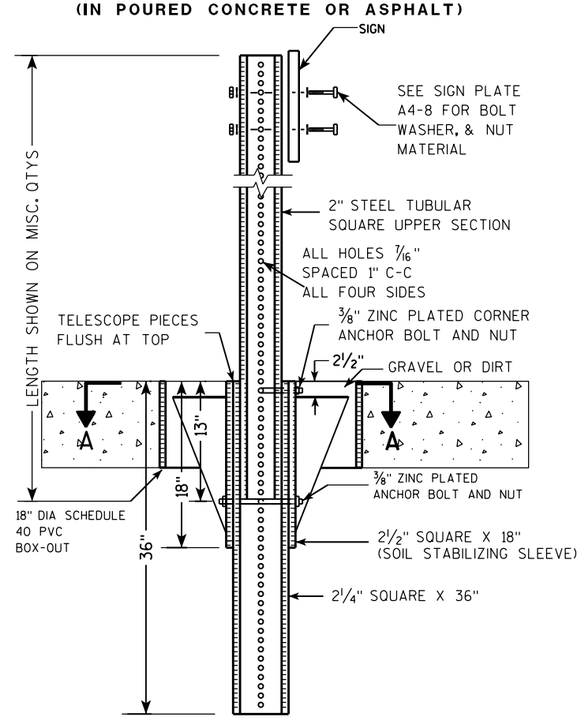
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



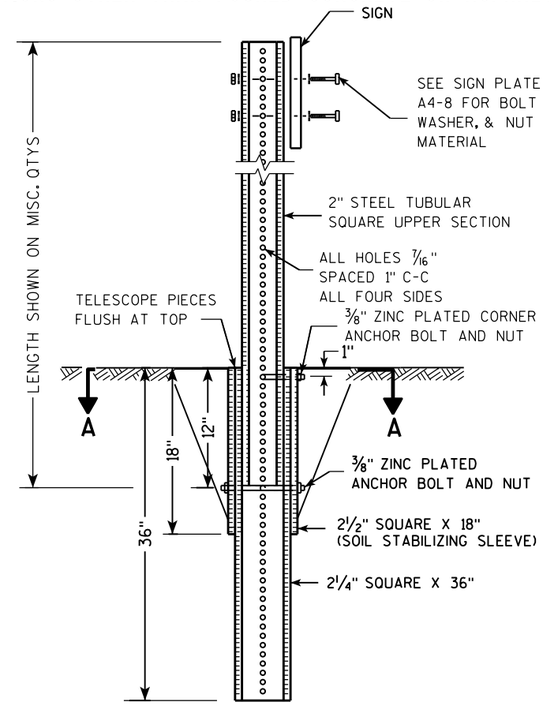
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

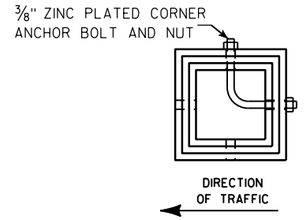


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

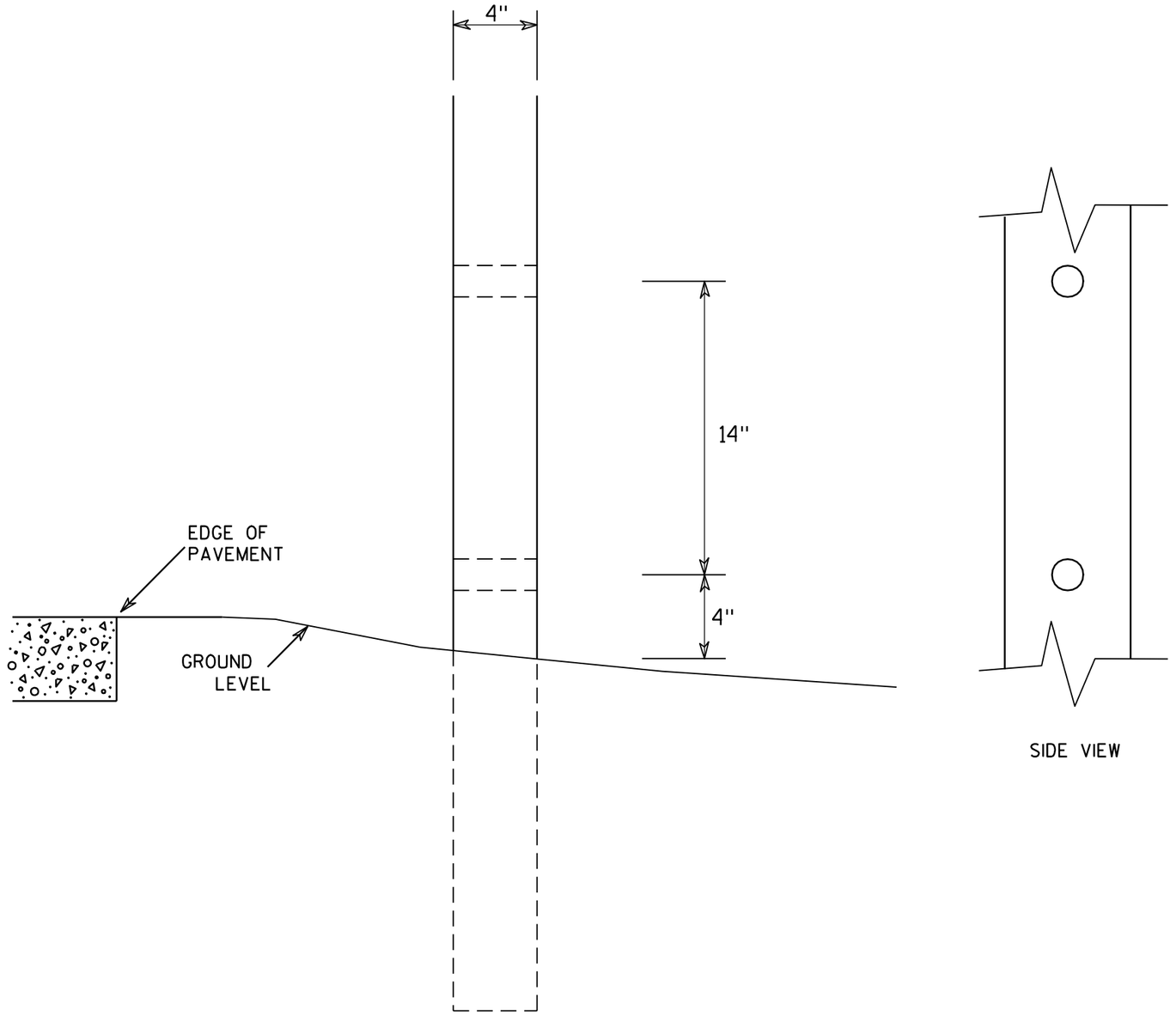
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 50 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	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

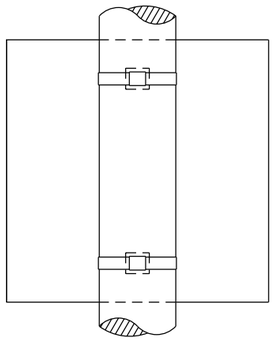
APPROVED Chester J Spang for State Traffic Engineer

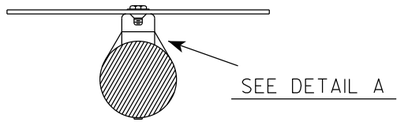
DATE 3/27/97 PLATE NO. A4-11.2

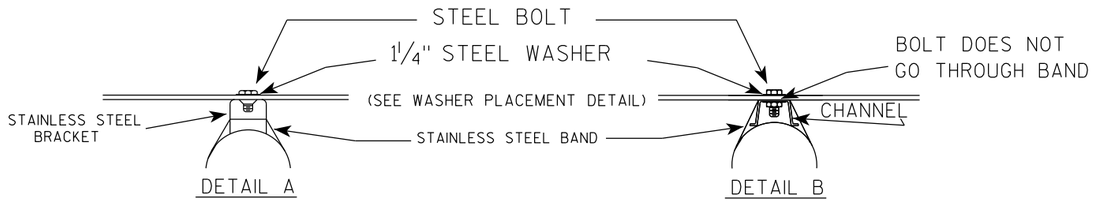
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 51	E

BANDING

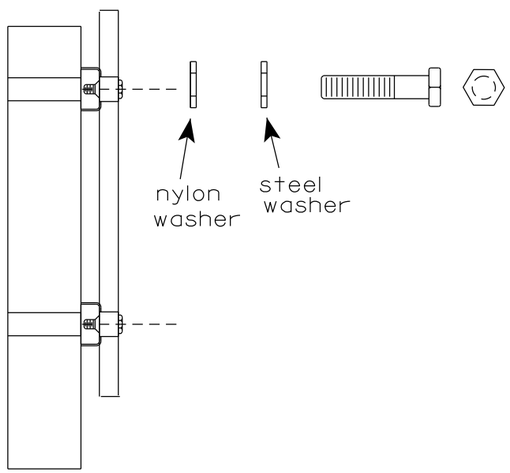
SINGLE SIGN







WASHER PLACEMENT

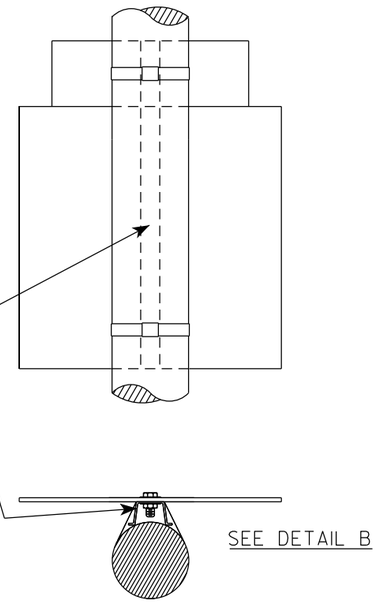


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

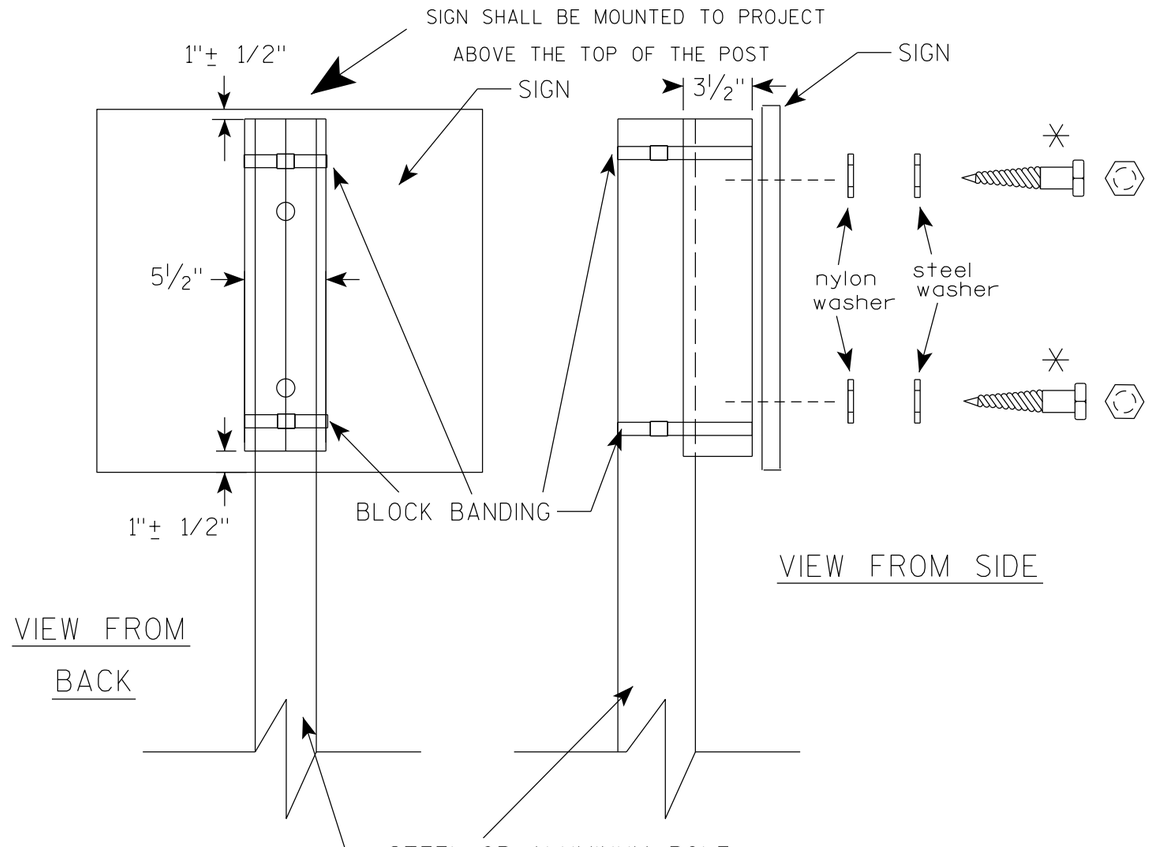
WISCONSIN DEPT OF TRANSPORTATION

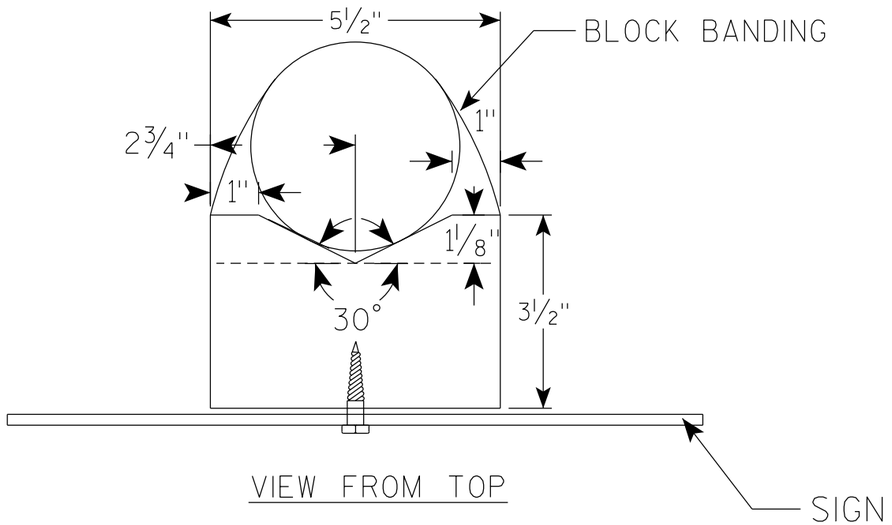
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 52	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

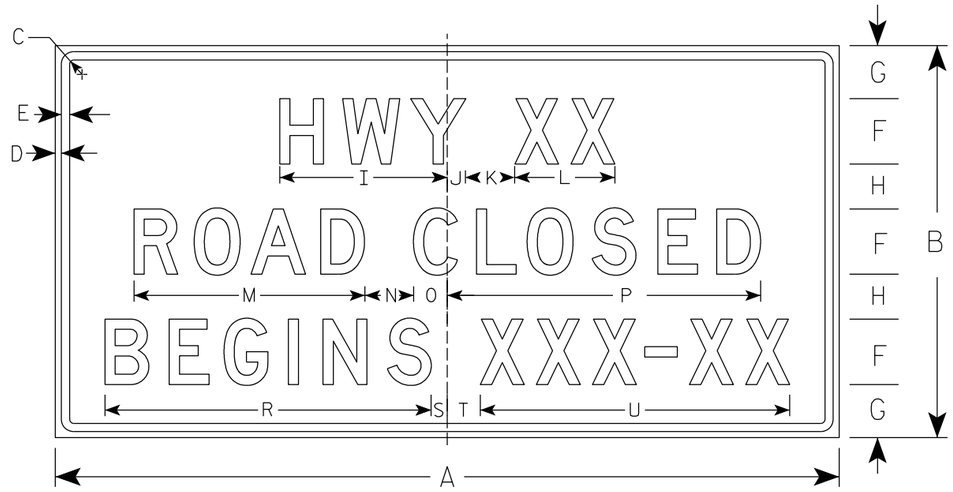
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

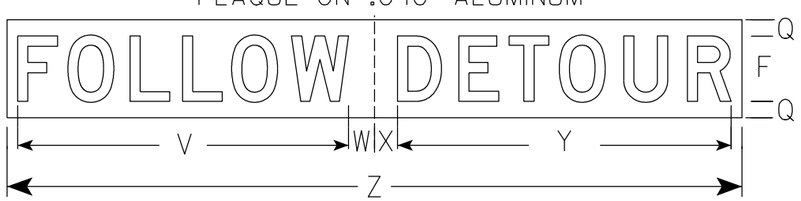
PROJECT NO:

SHEET NO: 53 E



G20-57C

PLAQUE ON .040" ALUMINUM



USE ONLY ONCE WHEN ROAD IS CLOSED

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/8	5	2 7/8	29	2	30	1 3/4	3 1/4	28 3/8	40 1/2	2	2	29 3/4	66	18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	6	4 1/8	38 3/8	2	39 7/8	2	4	37 7/8	29 3/4	3 1/8	2 7/8	40 7/8	90	32.0
5																											

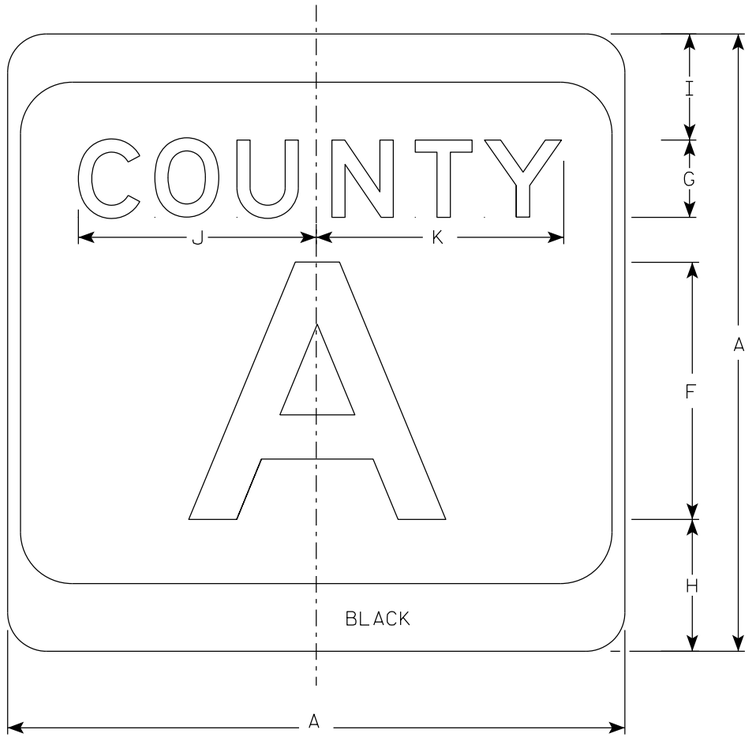
STANDARD SIGN
G20-57C

WISCONSIN DEPT OF TRANSPORTATION

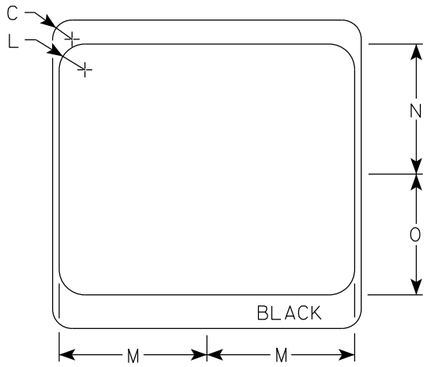
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/25/19 PLATE NO. G20-57C.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 54 | E

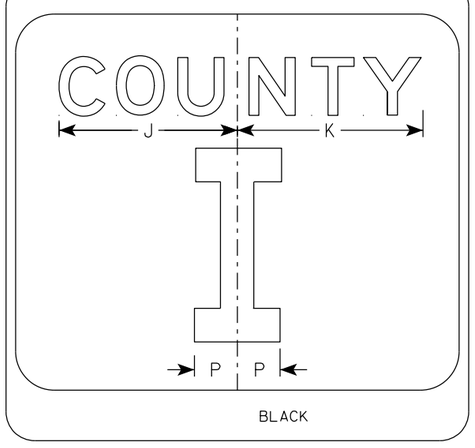


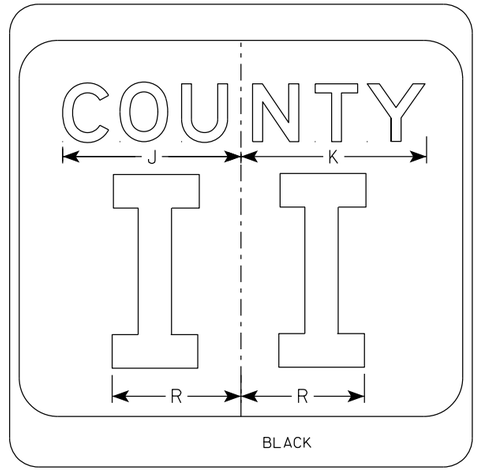
M1-5A



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White & Black
   Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
5. Substitute appropriate letters & optically center to achieve proper balance.





SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
2M	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

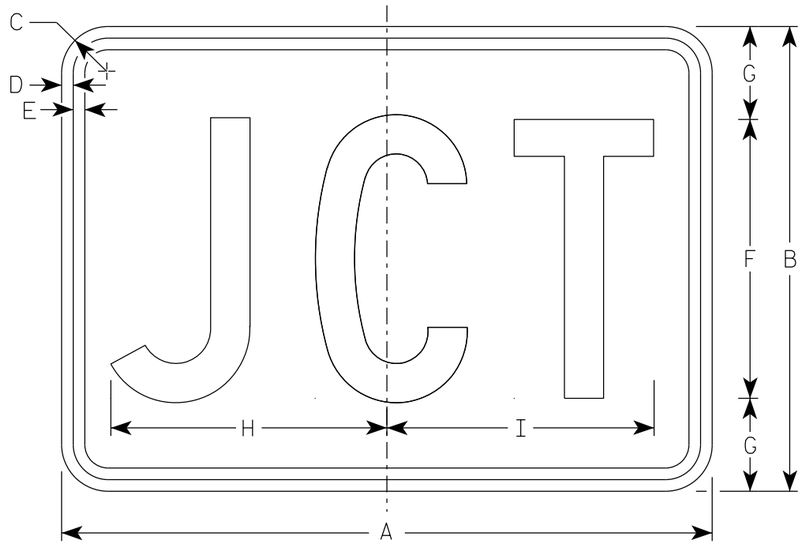
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-5A.9

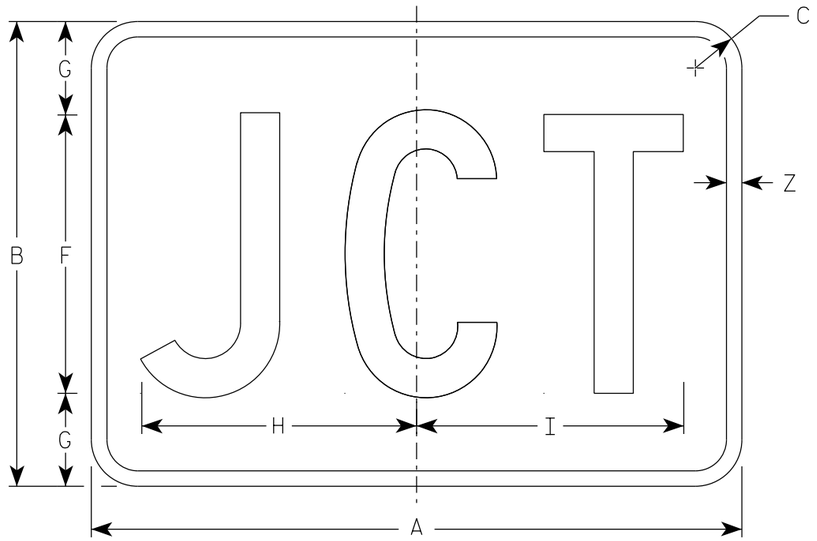
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M15A.dgn PLOT DATE : 8-NOV 2022 8:26 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

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	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
2M	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
3	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
4	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
5	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40

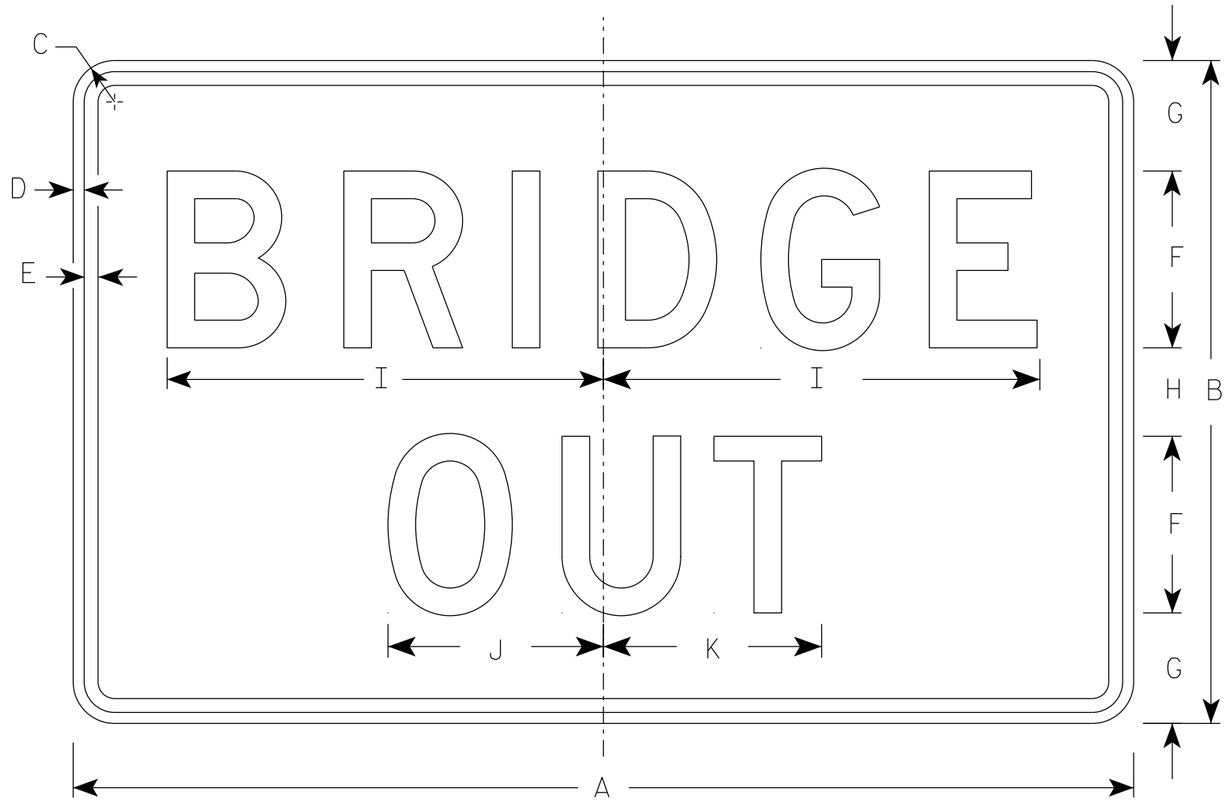
STANDARD SIGN
M2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/8/2023 PLATE NO. M2-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 56 | E



R11-2B

NOTES

1. Sign is Type II - Type H Reflective
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	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

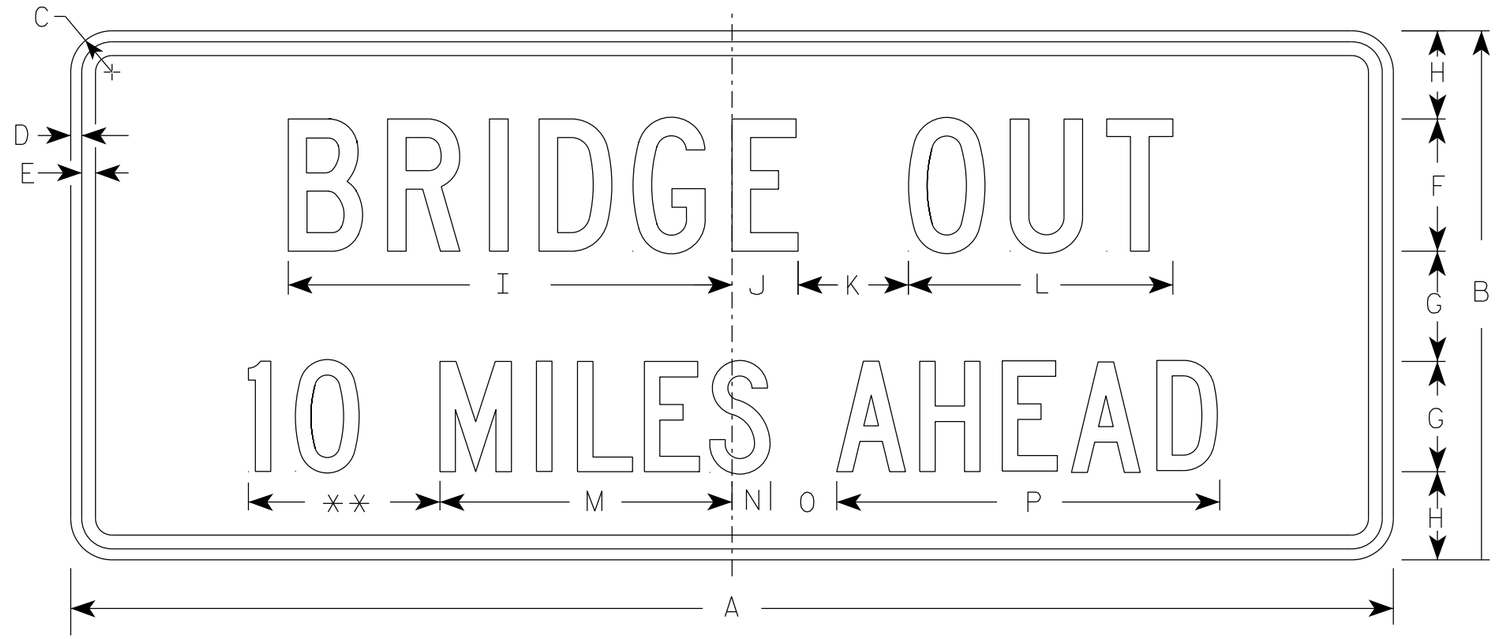
DATE 2/5/24 PLATE NO. R11-2B.3

PROJECT NO:

SHEET NO: 57 E

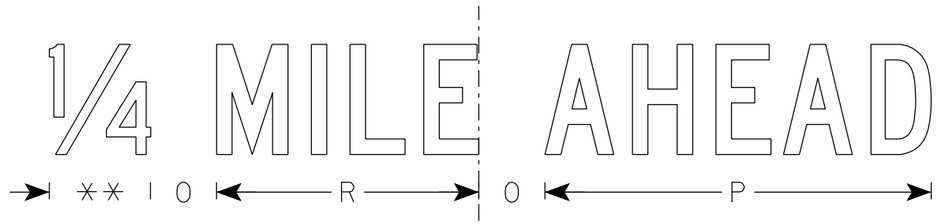
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3C

** 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	36	15	1 1/2	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8									3.75
2S	60	24	1 7/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
2M	60	24	1 7/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

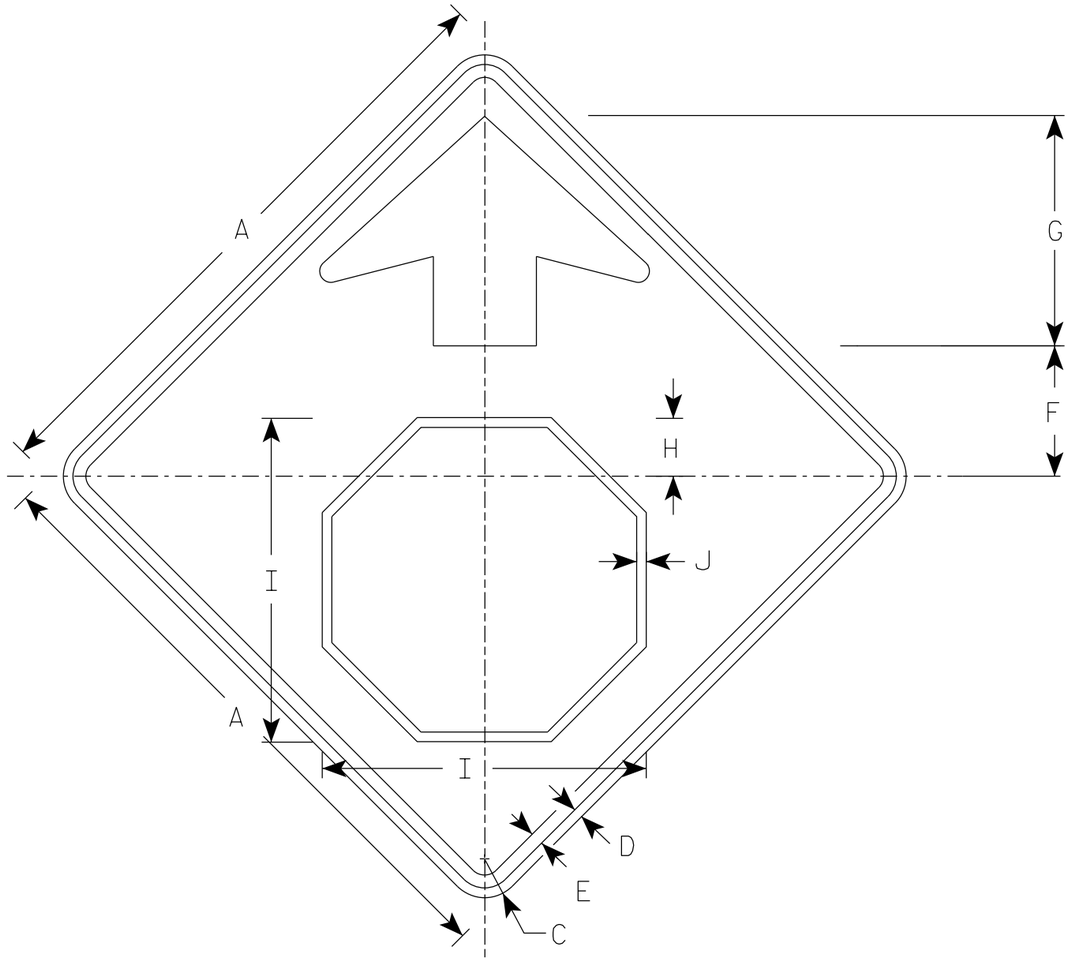
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3C.4

PROJECT NO:

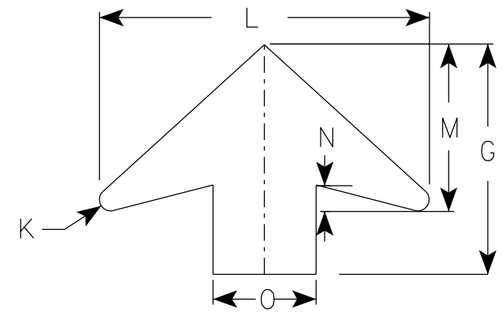
SHEET NO: 58 E



W3-1

NOTES

1. Sign is Type II - Type F Reflective
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 7/8	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		2 1/4	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		2 1/4	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		2 1/4	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		3	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		3	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

STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/17/2023 PLATE NO. W3-1.13

PROJECT NO:

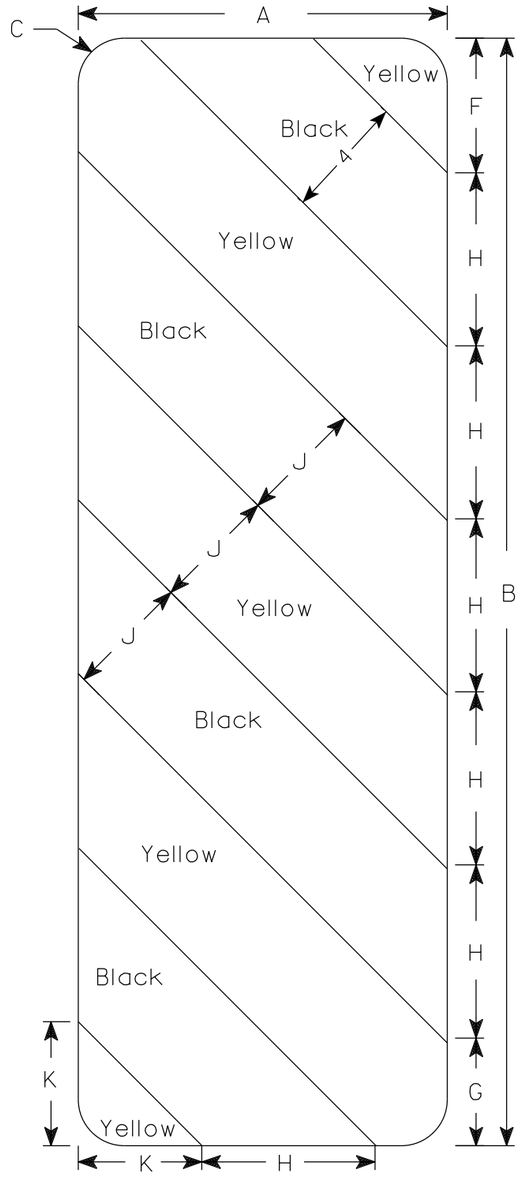
SHEET NO: 59 E

FILE NAME : C:\CAEfiles\Project\tr_stdplate\W31.dgn PLOT DATE : 17-AUG 2023 2:30 PLOT BY : dotc4c

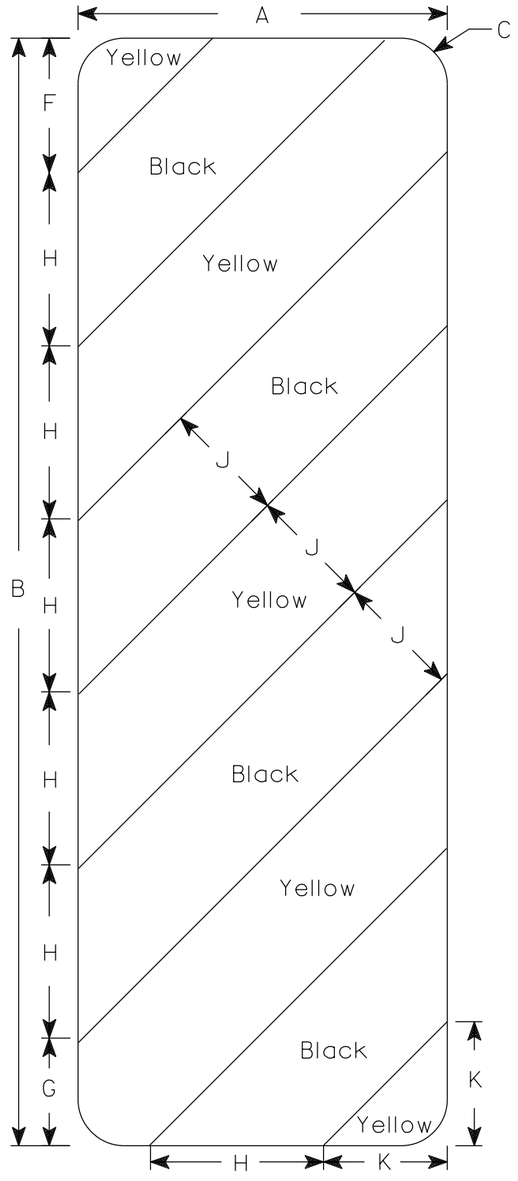
WISDOT/CADDS SHEET 42

7

7



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. 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	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

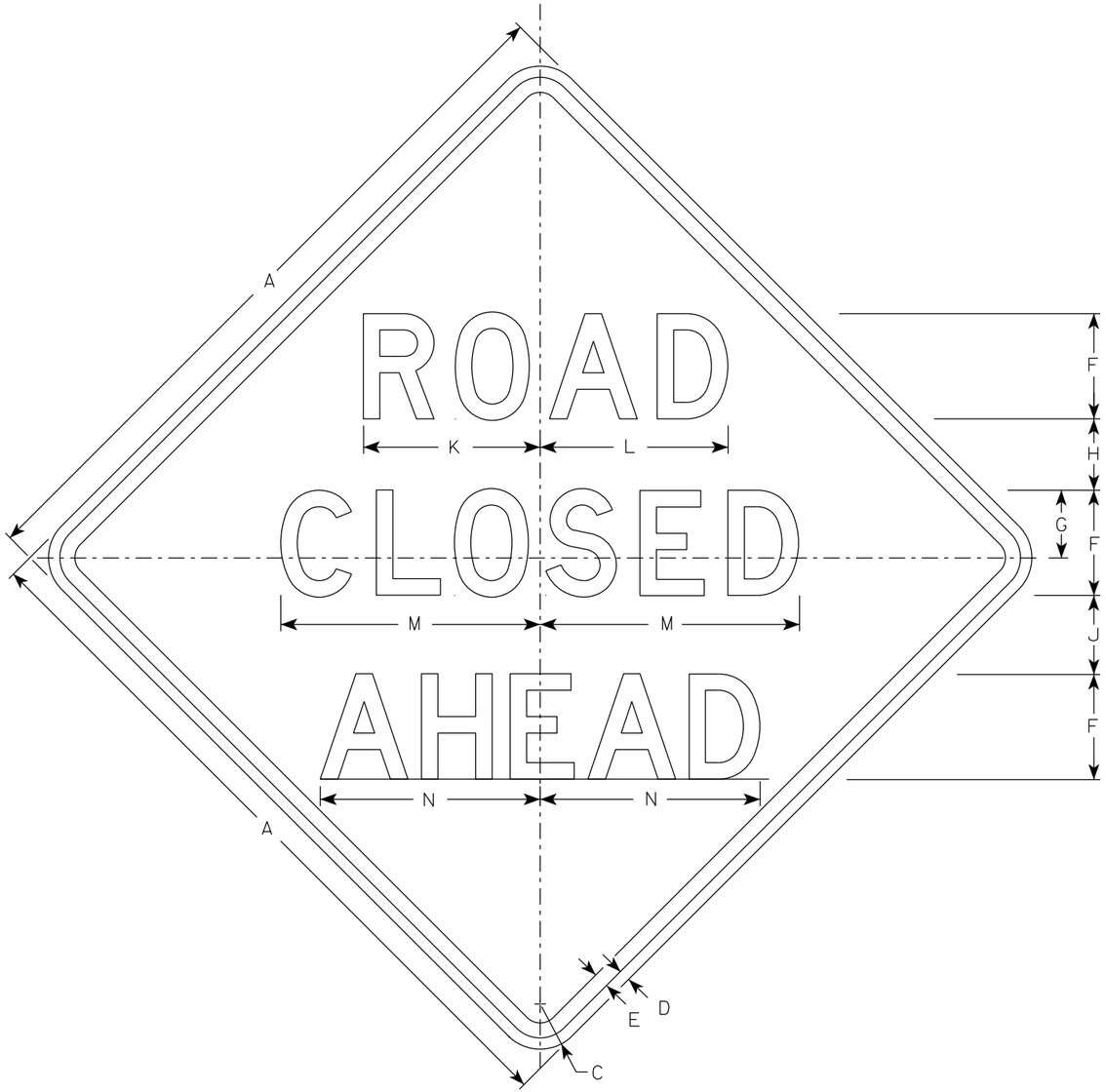
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/4/2024 PLATE NO. W5-52.10

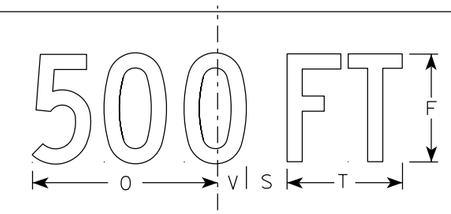
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 60 E

7

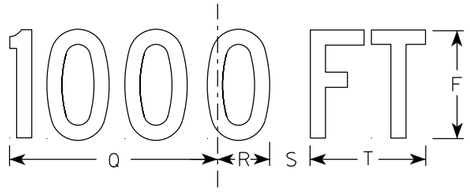
7



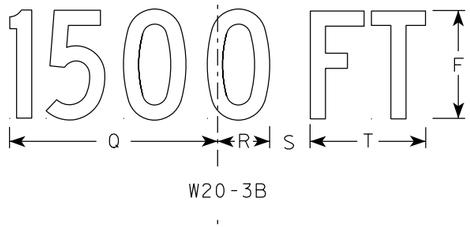
W20-3A



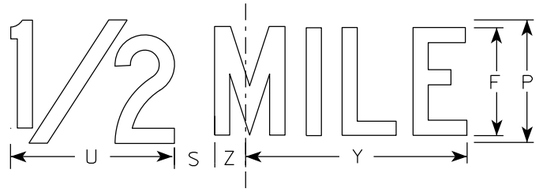
W20-3D



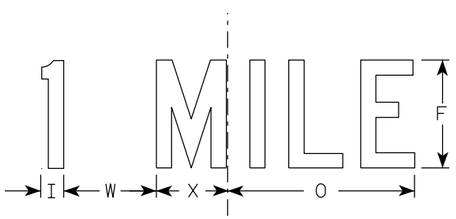
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		3	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-3.8

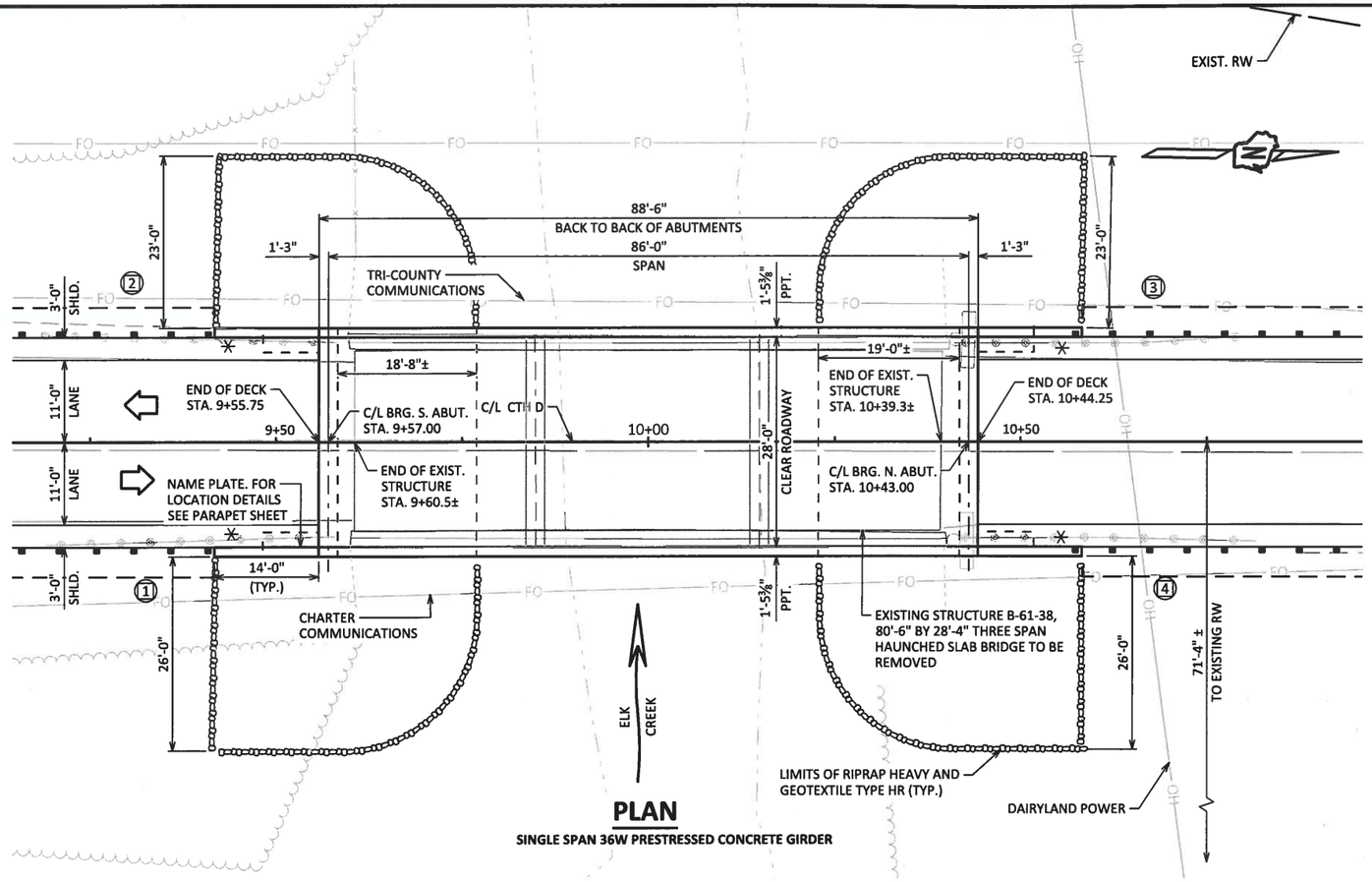
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W203.DGN PLOT DATE : 10-JAN 2024 12:02 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER
7146-00-76

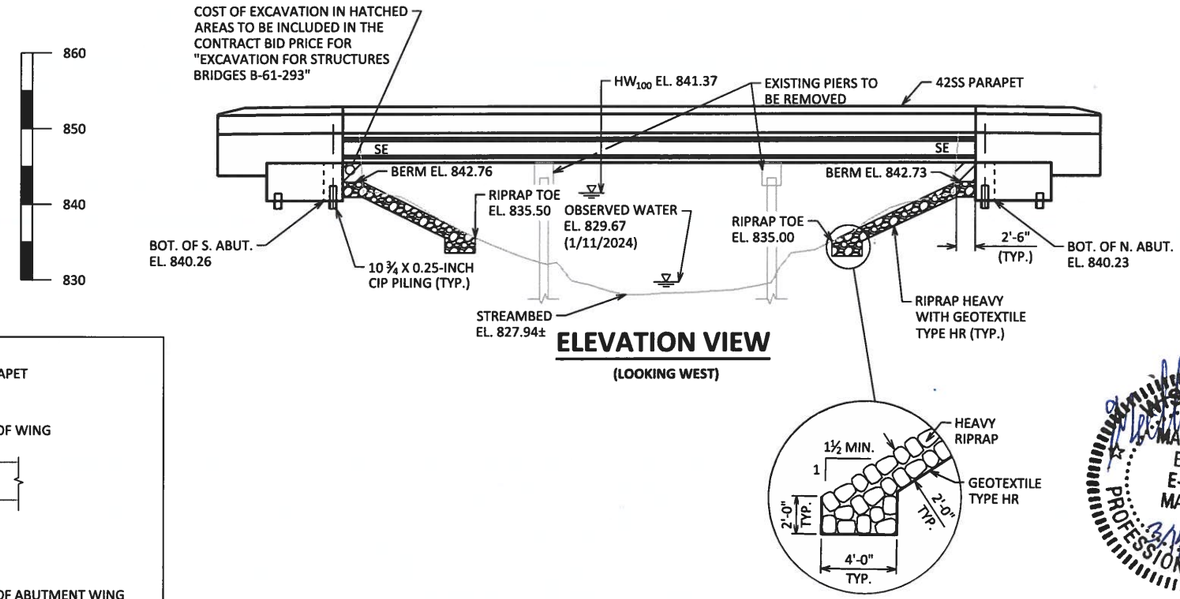
Ⓗ INDICATES WING NUMBER

✳ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT.



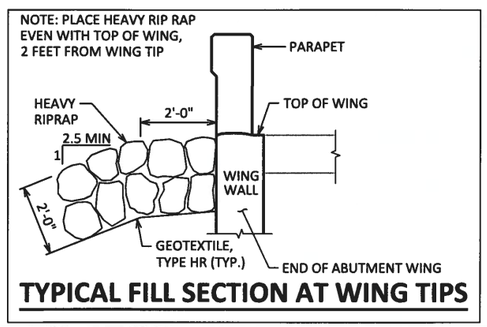
PLAN

SINGLE SPAN 36W PRESTRESSED CONCRETE GIRDER



ELEVATION VIEW

(LOOKING WEST)



TYPICAL FILL SECTION AT WING TIPS

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.26
OPERATING RATING: RF = 1.64
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE — f'_c = 4,000 PSI
ALL OTHER — f'_c = 3,500 PSI

BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

36W PRESTRESSED GIRDERS:
CONCRETE MASONRY — f'_c = 8,000 PSI
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON 10 ¾ X 0.25-INCH CIP PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 65'-0" LONG.

**THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE PILE CAPACITY.

HYDRAULIC DATA

100-YEAR FREQUENCY:
Q_{100}= 4270 C.F.S.
V_{100}= 8.2 F.P.S.
HW_{100}= EL. 841.37
WATERWAY AREA = 518 SQ. FT.
DRAINAGE AREA = 41.2 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:
Q_2= 702 C.F.S.
V_2= 3.0 F.P.S.
HW_2= EL. 835.44

TRAFFIC DATA

CTH D:
ADT = 310 (2044)
R.D.S. = 40 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT WING DETAILS
6. SOUTH ABUTMENT DETAILS
7. NORTH ABUTMENT
8. NORTH ABUTMENT WING DETAILS
9. NORTH ABUTMENT DETAILS
10. 36W" PRESTRESSED GIRDER DETAILS 1
11. 36W" PRESTRESSED GIRDER DETAILS 2
12. STEEL DIAPHRAGM
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE DETAILS
15. SUPERSTRUCTURE DETAILS 2
16. SINGLE SLOPE PARAPET 42SS

STRUCTURE DESIGN CONTACTS:
CONSULTANT: MATT BUCKLI 608-443-0441
BUREAU OF STRUCTURES: AARON BONK 608-261-0261

NO.	DATE	REVISION	BY

Mead & Hunt, Inc.
2440 Deming Way
Middleton, WI 53562
608.273.6380
www.meadhunt.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED EMK 3/17/25
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-61-293

CTH D OVER ELK CREEK

COUNTY	TOWN
TREMPEALEAU	HALE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
JLA	RCP	JLA	RCP

GENERAL PLAN

SHEET 1 OF 16
62

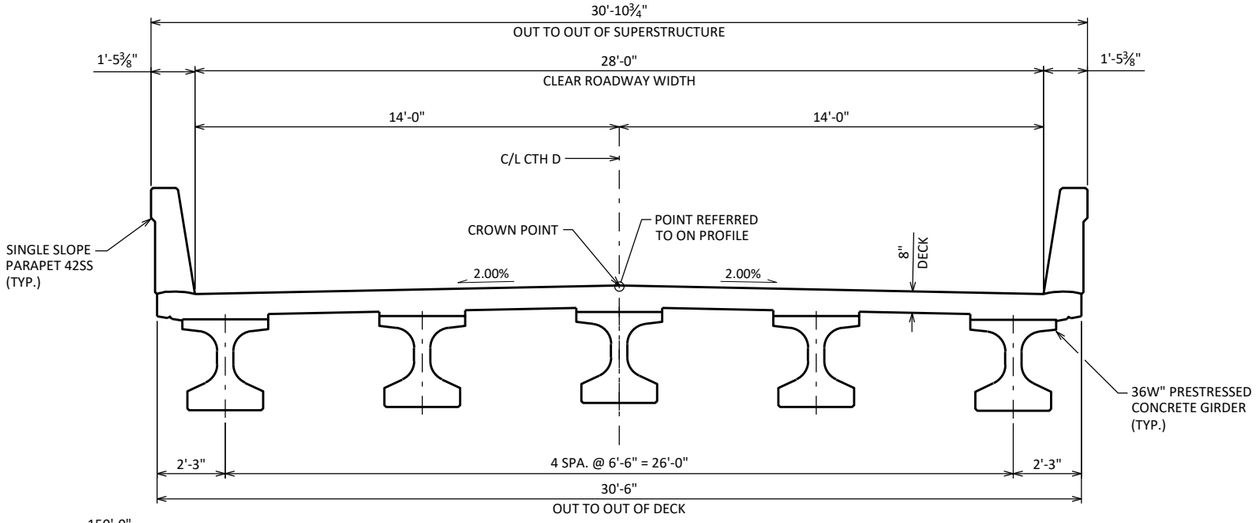
LD DATE:

WISCONSIN MATTHEW J. BUCKLI E-39849 MADISON WI 3/17/25 PROFESSIONAL ENGINEER

8

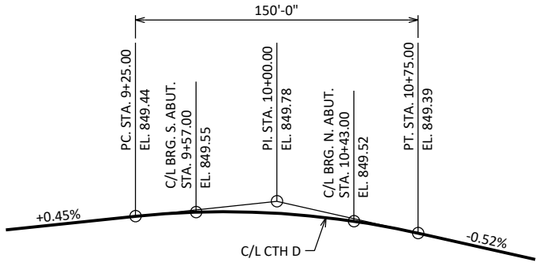
8

STATE PROJECT NUMBER
7146-00-76



CROSS SECTION THRU ROADWAY

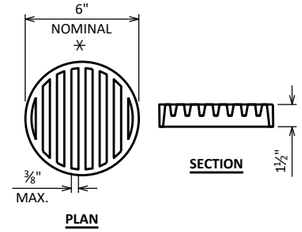
LOOKING UPSTATION



PROFILE GRADE LINE

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
1	8+87.79	NAIL IN CEDAR TREE WAIST HIGH SE FACE	844.569



PLAN

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-61-293" SHALL BE THE EXISTING GROUNDLINE.

AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.

EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON WING WALLS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "36W PRESTRESSED GIRDER DETAILS 2" SHEET.

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

TOTAL ESTIMATED QUANTITIES

(A01) THE AREA OF CREOSOTE COATED TIMBER IN CONTACT WITH SOIL FOR A DEPTH OF 3 FEET WAS USED TO CALCULATE THE ESTIMATED QUANTITY.

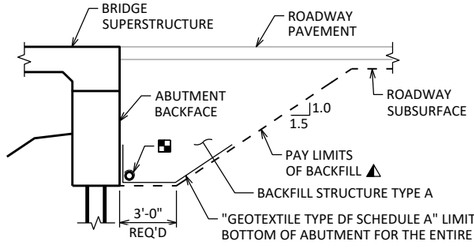
BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	SOUTH ABUT.	NORTH ABUT.	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS B-61-38	EACH	--	--	--	1
205.0506.S	EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOILS	TON	---	59	59	118 (A01)
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-61-293	EACH	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	--	173	173	346
502.0100	CONCRETE MASONRY BRIDGES	CY	120.9	33.0	33.0	187
502.3200	PROTECTIVE SURFACE TREATMENT	SY	276	--	--	276
502.3210	PIGMENTED SURFACE SEALER	SY	88	14	14	116
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	435	--	--	435
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	--	1800	1800	3600
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	19530	2350	2350	24230
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EA	10	--	--	10
506.4000	STEEL DIAPHRAGMS B-61-293	EA	8	--	--	8
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	--	9	9	18
550.2104	PILING CIP CONCRETE 10 3/4 X 0.25-INCH	LF	--	650	650	1300
606.0300	RIPRAP HEAVY	CY	--	205	210	415
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	--	71	71	142
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EA	--	2	2	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	--	40	40	80
645.0120	GEOTEXTILE TYPE HR	SY	--	350	360	710
	NON-BID ITEMS					
	FILLER	SIZE	---	---	---	½", ¾"

RODENT SHIELD DETAIL

✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

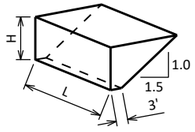
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X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



TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

CROSS SECTION & QUANTITIES

SHEET 2
63

8

8

STATE PROJECT NUMBER

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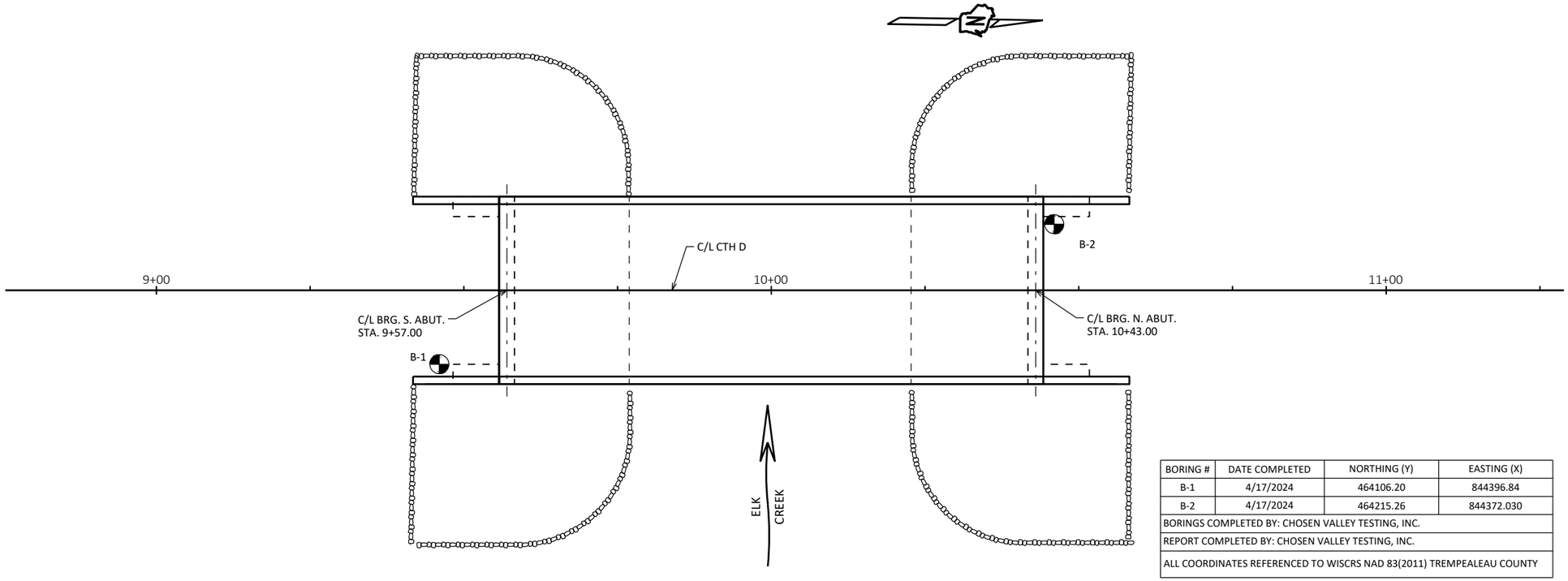
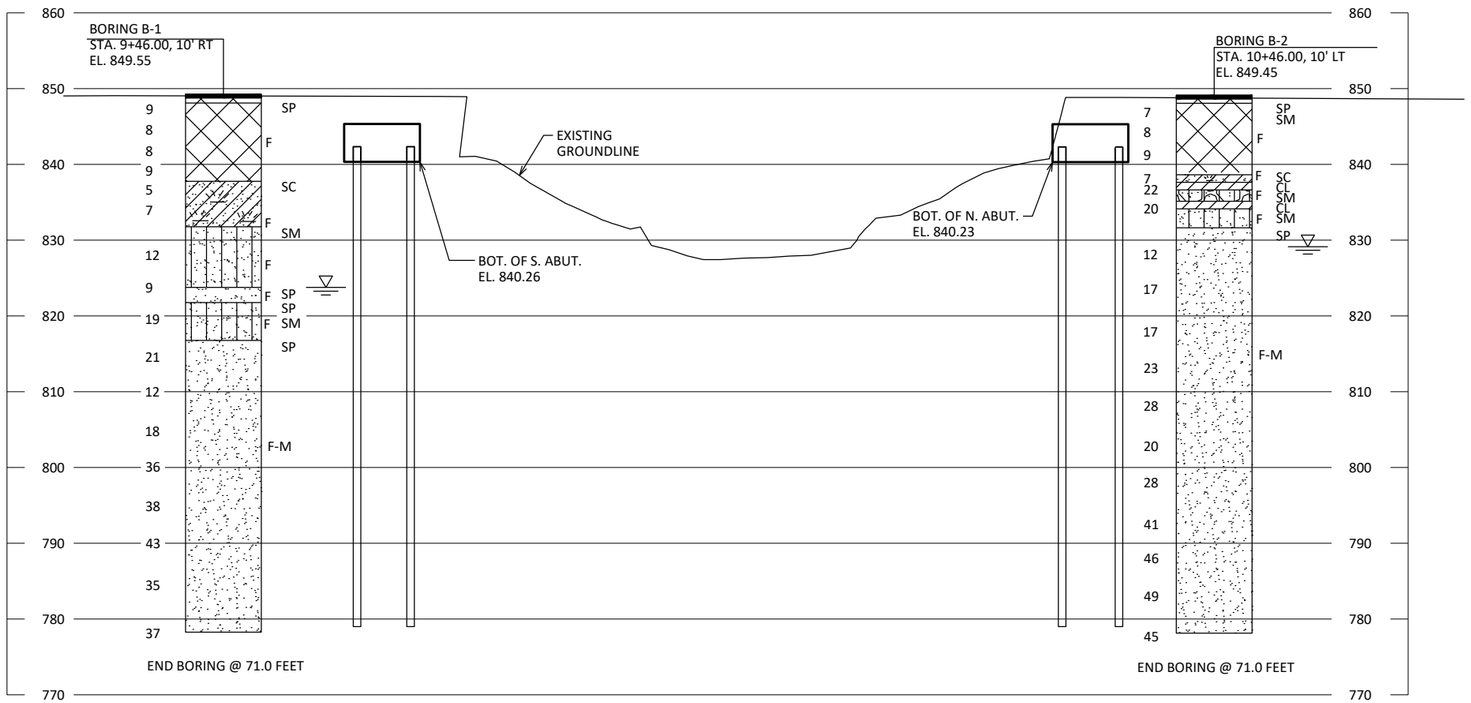


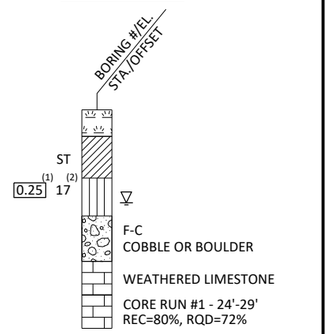
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	4/17/2024	464106.20	844396.84
B-2	4/17/2024	464215.26	844372.030
BORINGS COMPLETED BY: CHOSEN VALLEY TESTING, INC.			
REPORT COMPLETED BY: CHOSEN VALLEY TESTING, INC.			
ALL COORDINATES REFERENCED TO WISCRS NAD 83(2011) TREMPEALEAU COUNTY			



MATERIAL SYMBOLS

ASPHALT · TOPSOIL · PEAT
CONCRETE · FILL · GRAVEL
SAND · CLAY · SILT
BOULDERS OR COBBLES · LIMESTONE · BEDROCK (UNKNOWN)
SHALE · SANDSTONE · IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE · M-MEDIUM · C-COARSE · ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA · PLANS CK'D MJB

SUBSURFACE EXPLORATION

SHEET 3
64

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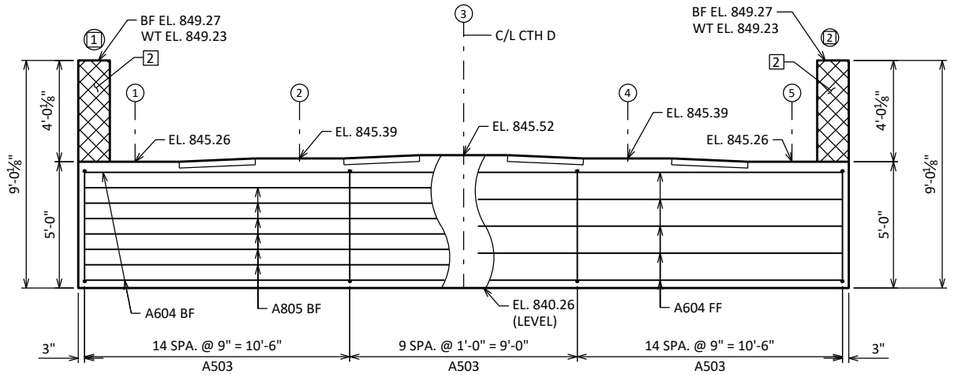
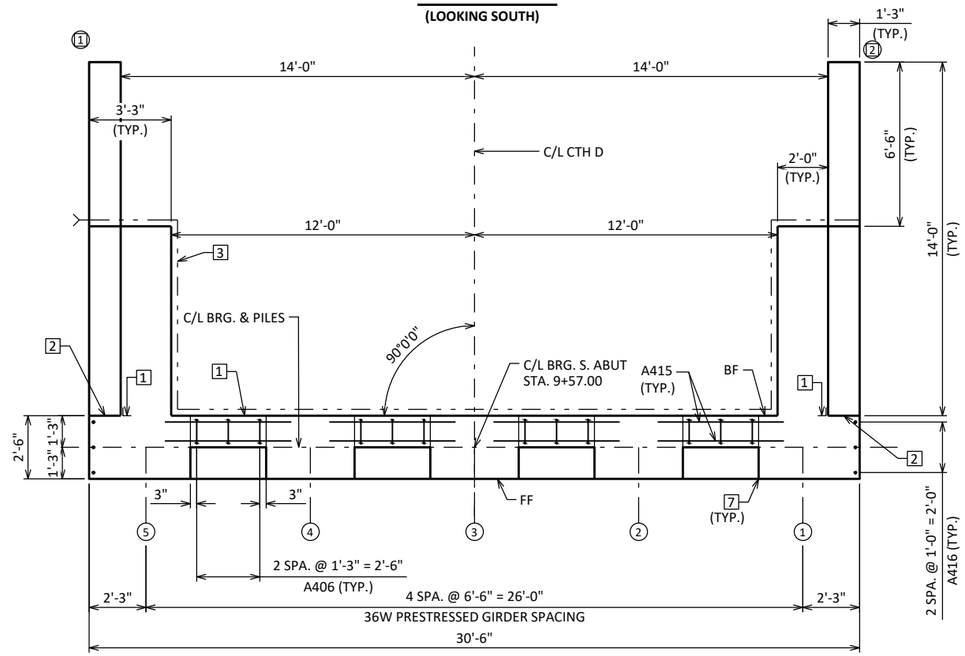
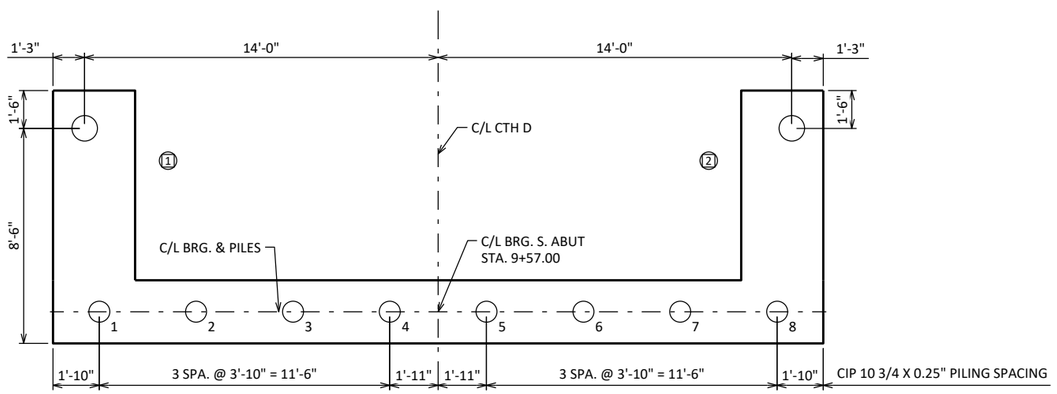


ELEVATION
(LOOKING SOUTH)



PLAN



PILE PLAN

STATE PROJECT NUMBER

7146-00-76

NOTES:

FOR PILE SPLICE DETAILS SEE SHEET 6

SEE SHEET 6 FOR SECTION THRU ABUTMENT

SOUTH ABUTMENT TO BE SUPPORTED ON CIP 10¾" X 0.25-INCH PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 65' LONG.

[1] 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

[2] ½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET. INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

[3] PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 2 FOR RODENT SHIELD DETAILS.

[4] 4" x ½" FILLER LENGTH OF ABUTMENT.

[5] ½" PERFORMED FILLER UNDER GIRDERS.

[6] NON-LAMINATED ELASTOMERIC BEARING PAD ½" X 8" X 2'-10".

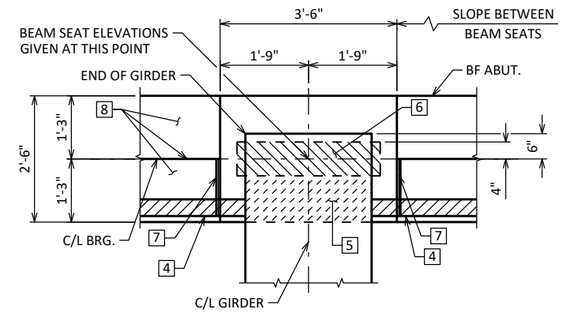
[7] ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.

[8] STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND SUPERSTRUCTURE. TOTAL THICKNESS OF ALL SHEETS TO BE AT LEAST 0.03".

(#) INDICATES WING NUMBER

(#) INDICATES GIRDER NUMBER

FF = FRONT FACE
BF = BACK FACE
WT = WINGTIP



BEARING PAD DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

SOUTH ABUTMENT

SHEET 4
65

8

8

STATE PROJECT NUMBER

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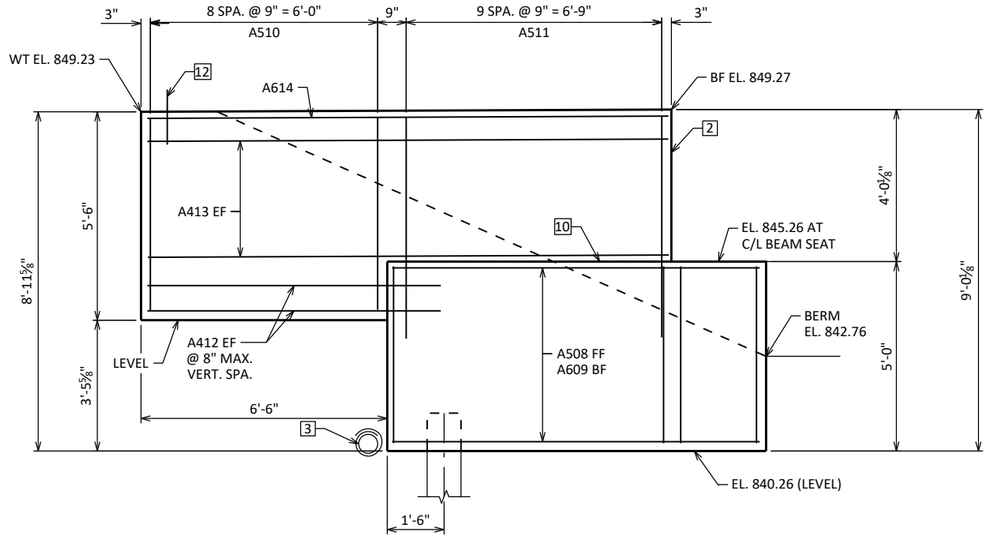
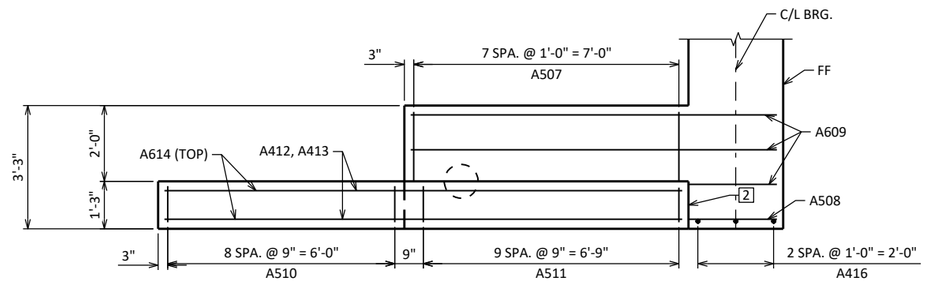
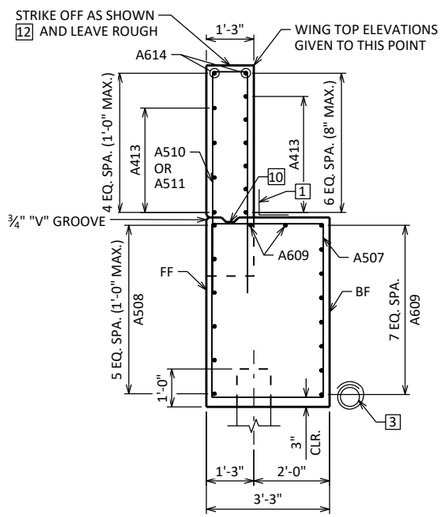


WING 1 & 2 ELEVATION

(FRONT FACE)
WING 1 SHOWN WING 2 SIMILAR



WING 1 & 2 PLAN



WING SECTION

NOTES:

1 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

2 ½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET, INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅜" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

3 PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 2 FOR RODENT SHIELD DETAILS.

10 OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.

12 PARAPET REINFORCEMENT. SEE SHEET 16 FOR DETAILS.

FF = FRONT FACE
BF = BACK FACE
WT = WING TIP

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

SOUTH ABUTMENT WING DETAILS

SHEET 5
66

8

8

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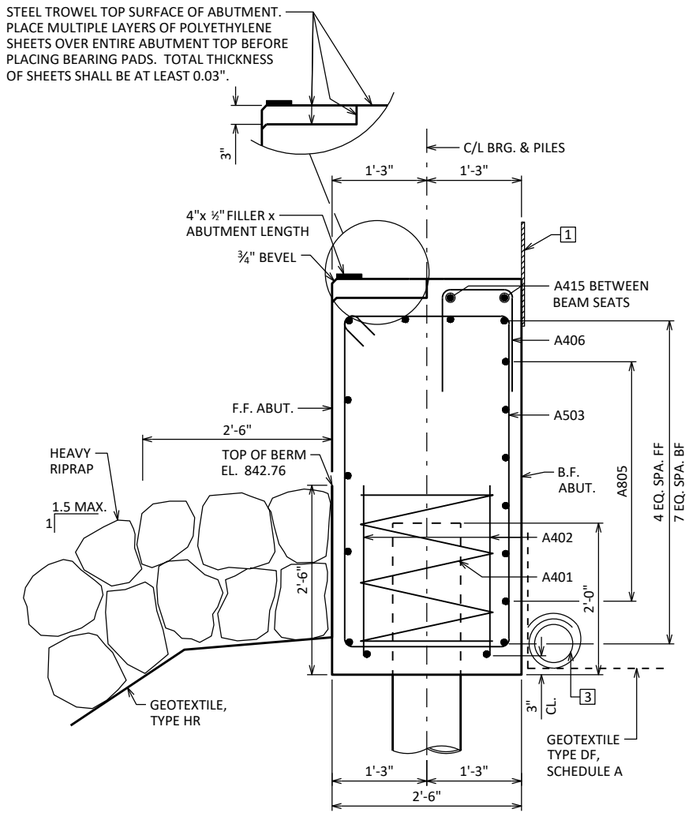
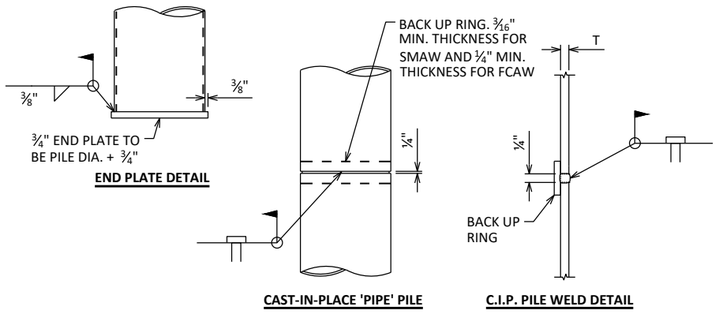


SECTION THRU BODY

ALL HORIZONTAL BARS NOT LABELED ARE A604 BARS



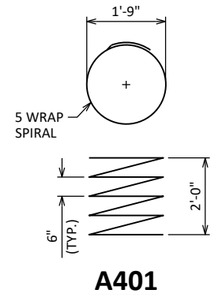
CIP PILE DETAILS

NOTES:

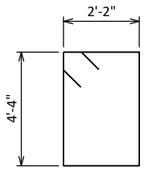
1. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

3. PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 2 FOR RODENT SHIELD DETAILS.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE
WT = WING TIP



A401



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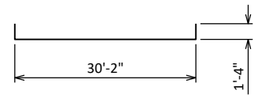
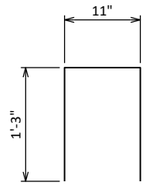


A805



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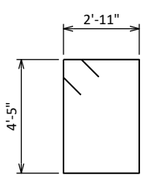

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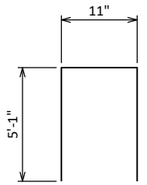

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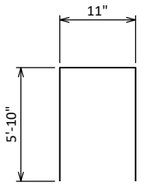


A511

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
A401		8	28'-0"	X		ABUTMENT BODY - 1 PER PILE	SPIRAL
A402		16	2'-3"			ABUTMENT BODY - 2 PER PILE	VERT
A503		38	13'-6"	X		ABUTMENT BODY - STIRRUPS	VERT
A604		11	30'-2"			ABUTMENT BODY - FF, TOP, BTM	HORIZ
A805		6	32'-5"	X		ABUTMENT BODY - BF	HORIZ
A406		12	3'-3"	X		ABUTMENT BODY - SEAT STEP	VERT
A507	X	16	15'-2"	X		WINGWALL BODY - STIRRUPS	VERT
A508	X	12	9'-8"			WINGWALL BODY - FF	HORIZ
A609	X	20	9'-8"			WINGWALL BODY - BF	HORIZ
A510	X	18	10'-10"	X		WINGWALL TOP - TIES INTO BODY	VERT
A511	X	20	12'-4"	X		WINGWALL TOP - TIES AT WT	VERT
A412	X	8	7'-9"			WINGWALL TOP	HORIZ
A413	X	20	13'-7"			WINGWALL TOP	HORIZ
A614	X	4	13'-7"			WINGWALL TOP	HORIZ
A415		8	5'-0"			ABUTMENT BODY - SEAT STEP	HORIZ
A416		6	4'-7"			ABUTMENT BODY - ENDS	VERT

BAR DIMENSIONS IN BENDING DETAIL ARE OUT TO OUT OF BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

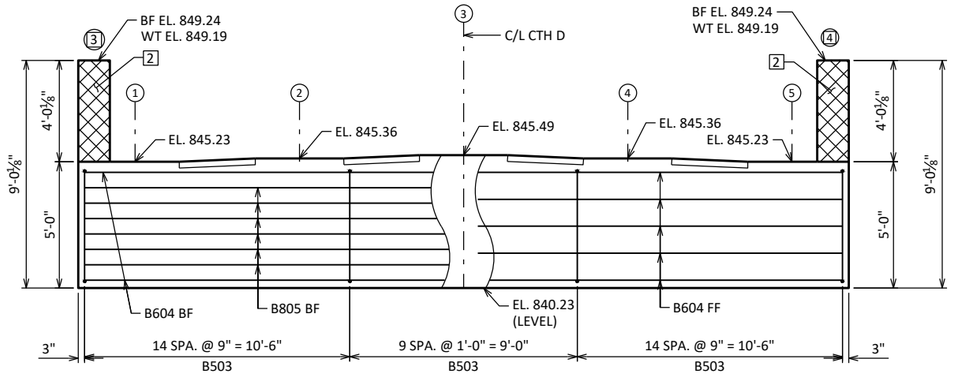
DRAWN BY JLA | PLANS CK'D RCP

SOUTH ABUTMENT DETAILS 2

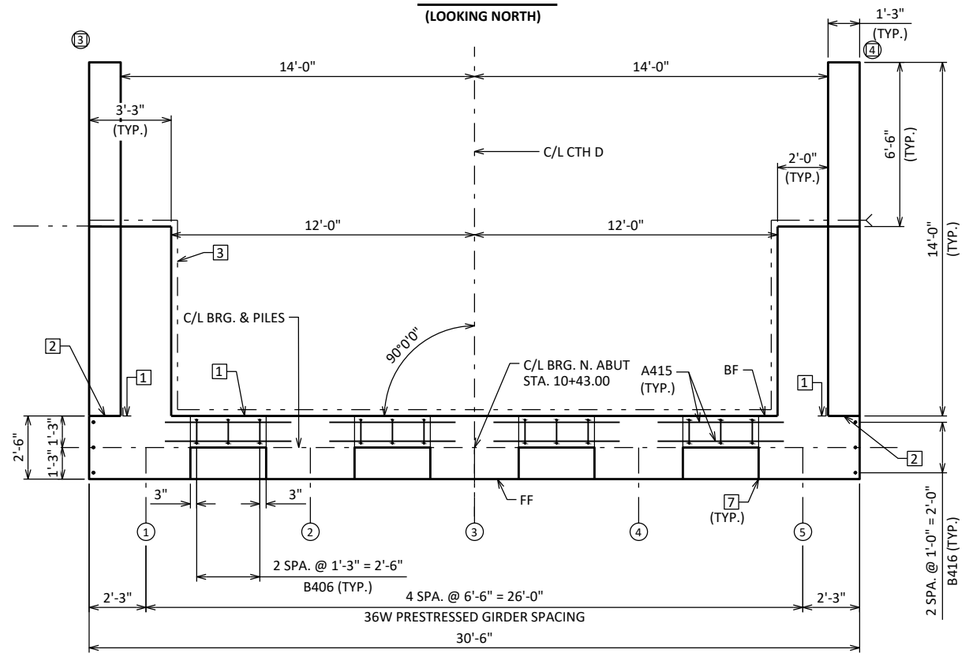
SHEET 6
67

8

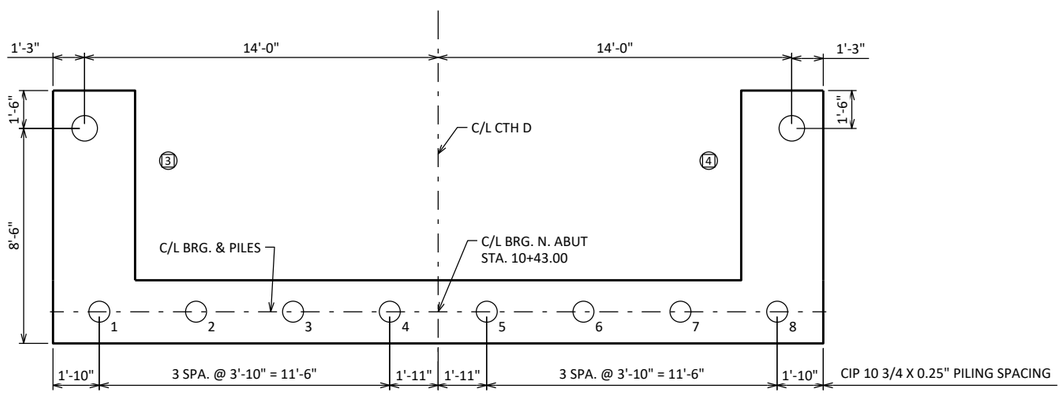
8



ELEVATION
(LOOKING NORTH)



PLAN



PILE PLAN

STATE PROJECT NUMBER

7146-00-76

NOTES:

FOR PILE SPLICE DETAILS SEE SHEET 9

SEE SHEET 9 FOR SECTION THRU ABUTMENT

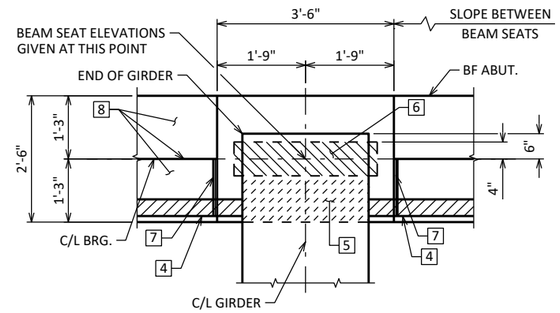
NORTH ABUTMENT TO BE SUPPORTED ON CIP 10¾" X 0.25-INCH PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 65' LONG.

1. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
2. ½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET. INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
3. PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 2 FOR RODENT SHIELD DETAILS.
4. 4" x ½" FILLER LENGTH OF ABUTMENT.
5. ½" PERFORMED FILLER UNDER GIRDERS.
6. NON-LAMINATED ELASTOMERIC BEARING PAD ½" X 8" X 2'-10".
7. ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
8. STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS AND SUPERSTRUCTURE. TOTAL THICKNESS OF ALL SHEETS TO BE AT LEAST 0.03".

(#) INDICATES WING NUMBER

(#) INDICATES GIRDER NUMBER

FF = FRONT FACE
BF = BACK FACE
WT = WINGTIP



BEARING PAD DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

NORTH ABUTMENT

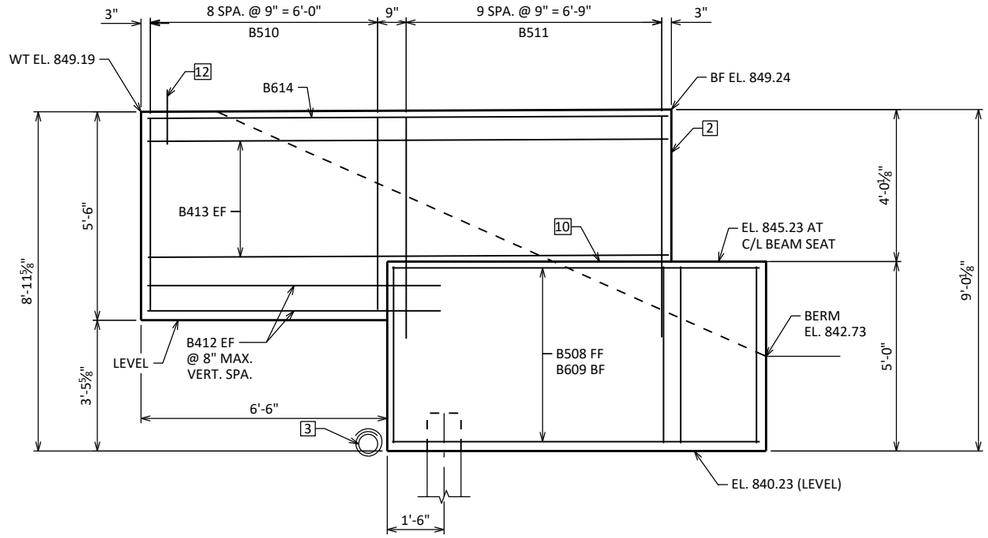
SHEET 7
68

8

8

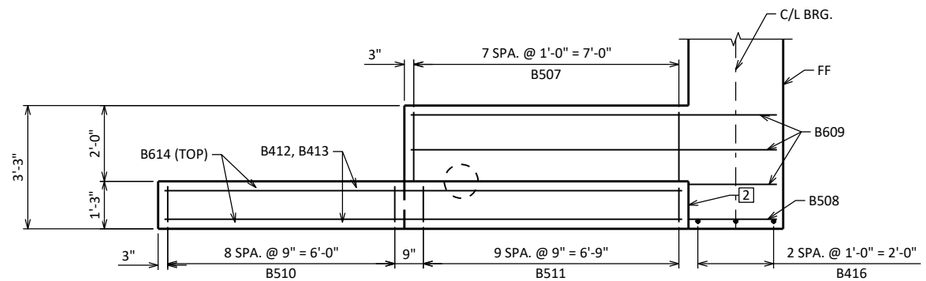
STATE PROJECT NUMBER

7146-00-76

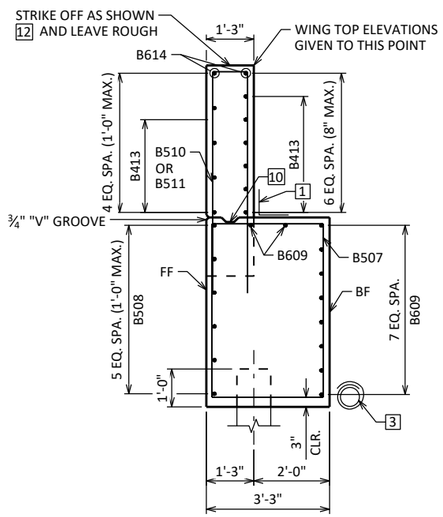


WING 3 & 4 ELEVATION

(FRONT FACE)
WING 3 SHOWN WING 4 SIMILAR



WING 3 & 4 PLAN



WING SECTION

NOTES:

1. 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
2. ½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET, INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅜" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
3. PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 2 FOR RODENT SHIELD DETAILS.
10. OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
12. PARAPET RENFORCEMENT. SEE SHEET 16 FOR DETAILS.

FF = FRONT FACE
BF = BACK FACE
WT = WING TIP

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

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NORTH ABUTMENT WING DETAILS

SHEET 8
69

STATE PROJECT NUMBER

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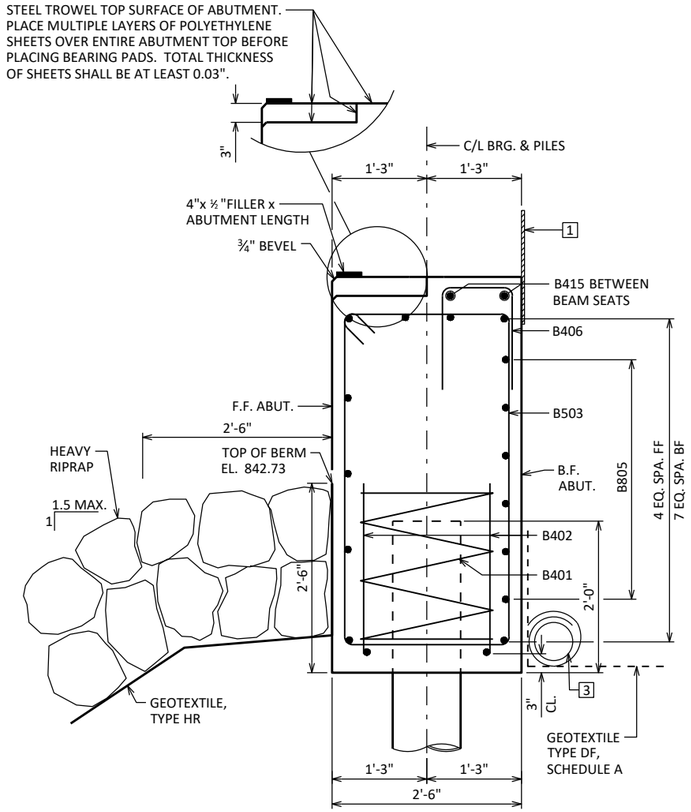
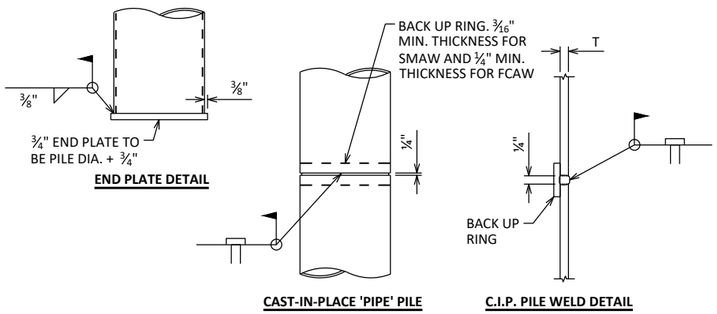


SECTION THRU BODY

ALL HORIZONTAL BARS NOT LABELED ARE B604 BARS



END PLATE DETAIL

CAST-IN-PLACE 'PIPE' PILE

C.I.P. PILE WELD DETAIL

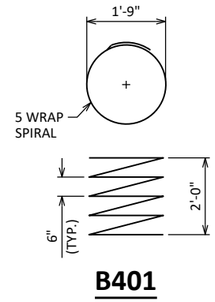
CIP PILE DETAILS

NOTES:

1 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

3 PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 2 FOR RODENT DETAILS.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE
WT = WING TIP



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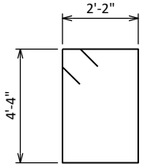
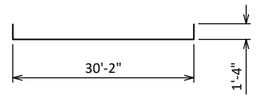


B503



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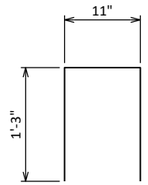
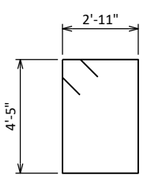


B406



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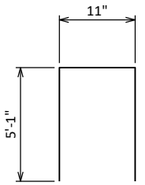
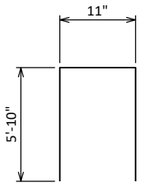


B510



B511

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
B401		8	28'-0"	X		ABUTMENT BODY - 1 PER PILE	SPIRAL
B402		16	2'-3"			ABUTMENT BODY - 2 PER PILE	VERT
B503		38	13'-6"	X		ABUTMENT BODY - STIRRUPS	VERT
B604		11	30'-2"			ABUTMENT BODY - FF, TOP, BTM	HORIZ
B805		6	32'-5"	X		ABUTMENT BODY - BF	HORIZ
B406		12	3'-3"	X		ABUTMENT BODY - SEAT STEP	VERT
B507	X	16	15'-2"	X		WINGWALL BODY - STIRRUPS	VERT
B508	X	12	9'-8"			WINGWALL BODY - FF	HORIZ
B609	X	20	9'-8"			WINGWALL BODY - BF	HORIZ
B510	X	18	10'-10"	X		WINGWALL TOP - TIES INTO BODY	VERT
B511	X	20	12'-4"	X		WINGWALL TOP - TIES AT WT	VERT
B412	X	8	7'-9"			WINGWALL TOP	HORIZ
B413	X	20	13'-7"			WINGWALL TOP	HORIZ
B614	X	4	13'-7"			WINGWALL TOP	HORIZ
B415		8	5'-0"			ABUTMENT BODY - SEAT STEP	HORIZ
B416		6	4'-7"			ABUTMENT BODY - ENDS	VERT

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

NORTH ABUTMENT DETAILS

SHEET 9
70

8

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STATE PROJECT NUMBER

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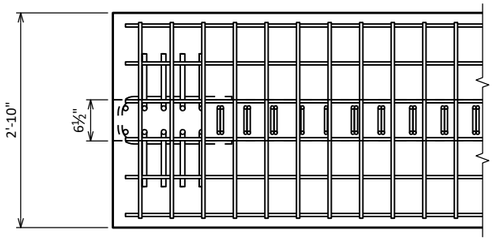
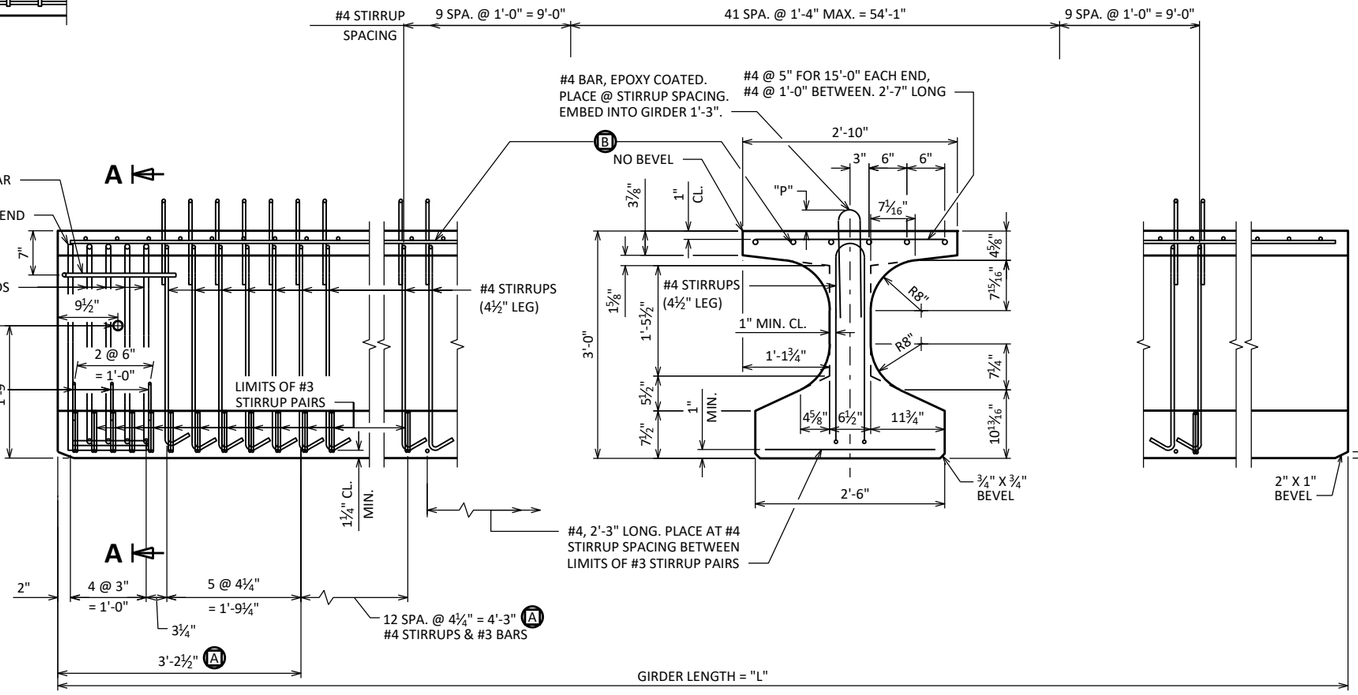
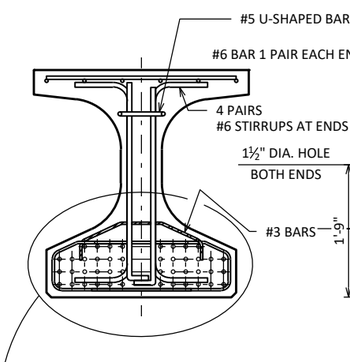
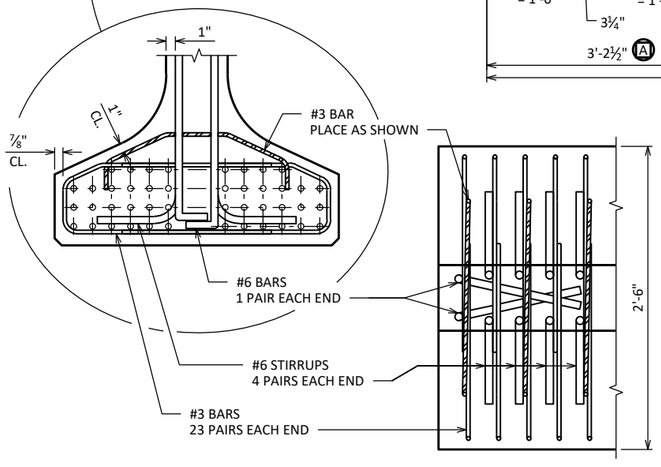


TOP FLANGE





SECTION A-A



BOTTOM FLANGE

SIDE VIEW & TYPICAL SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 2'-4"

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.4 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

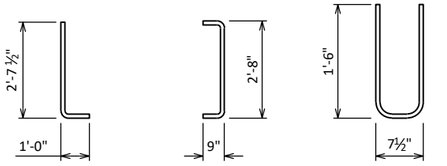
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

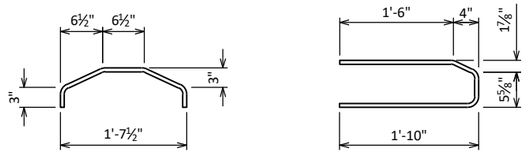
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DESIGN SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

PRESTRESSING STRANDS SHALL BE 0.6" DIA.-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.





✳ MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'_c (P.S.I.)	"P" (IN.)			DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10		1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	END 1/3 OF GIRDER		TOTAL NO. OF STRANDS	f'_{ci} (P.S.I.) ✳	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'_{ci} (P.S.I.) ✳
1	1, 5	87'-0"	0.5	0.9	1.2	1.5	1.5	1.5	1.2	0.9	0.5	8000	7.5	7	7.5	0.6	30	6800	30.0	10.5	13.5	4.0	--	--
1	2 - 4	87'-0"	0.5	1.0	1.4	1.6	1.7	1.6	1.4	1.0	0.5	8000	7.5	7	7.5	0.6	30	6800	30.0	10.5	13.5	4.0	--	--

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

36W" PRESTRESSED GIRDER DETAILS 1

SHEET 10
71

8

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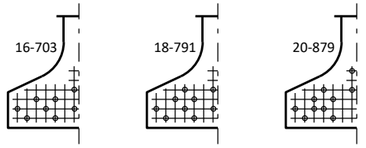
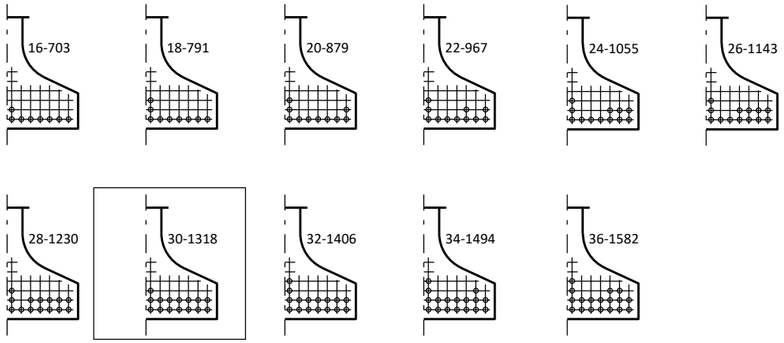


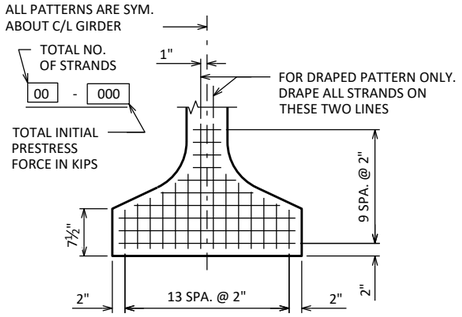
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

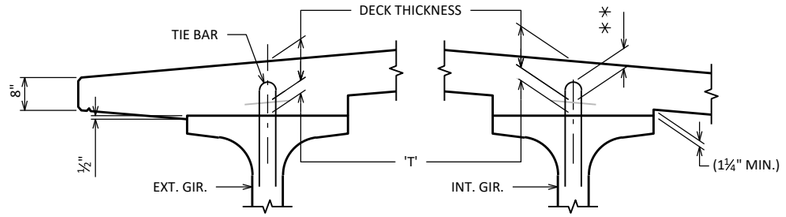


ARRANGEMENT AT C/L SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE

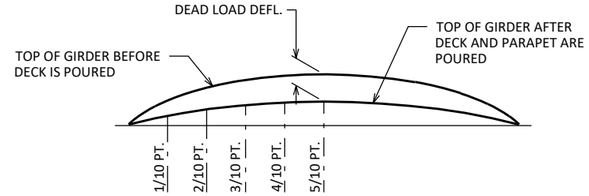
⁎ GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

⁎⁎ IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

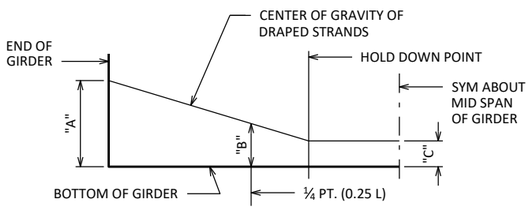
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

	TOP OF DECK ELEV. AT FINAL GRADE
-	TOP OF GIRDER ELEVATION
+	DEAD LOAD DEFLECTION
-	DECK THICKNESS
=	HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 3.4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

⁎ THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) ⁎
1	3.27

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

36W" PRESTRESSED GIRDER DETAILS 2

SHEET 11
72

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STATE PROJECT NUMBER

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NOTES

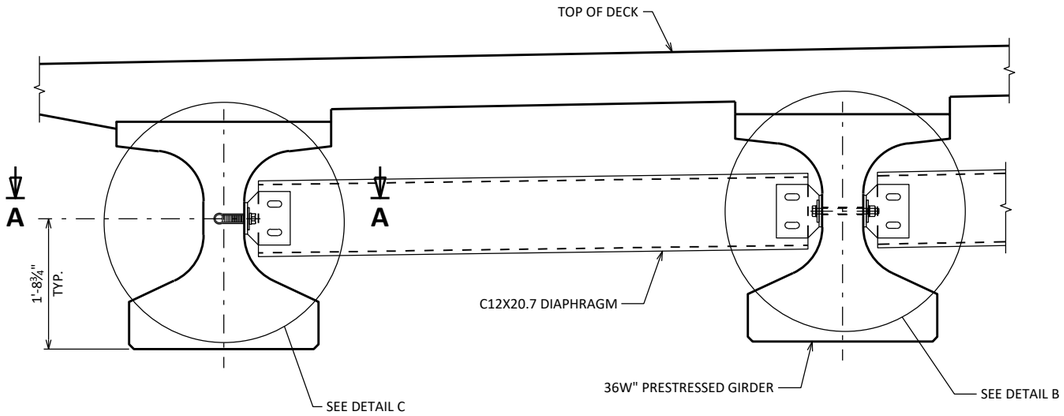
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-61-293", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

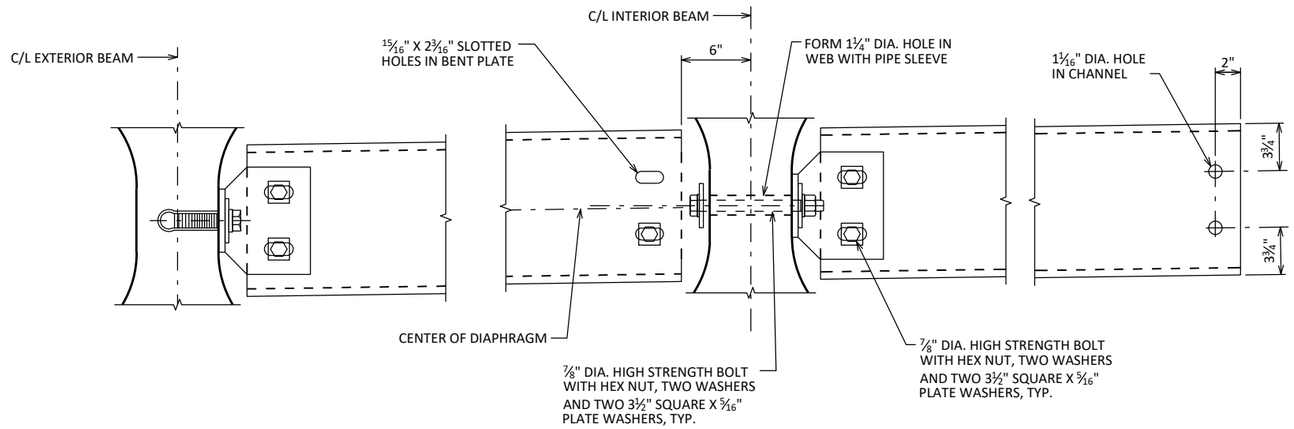
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

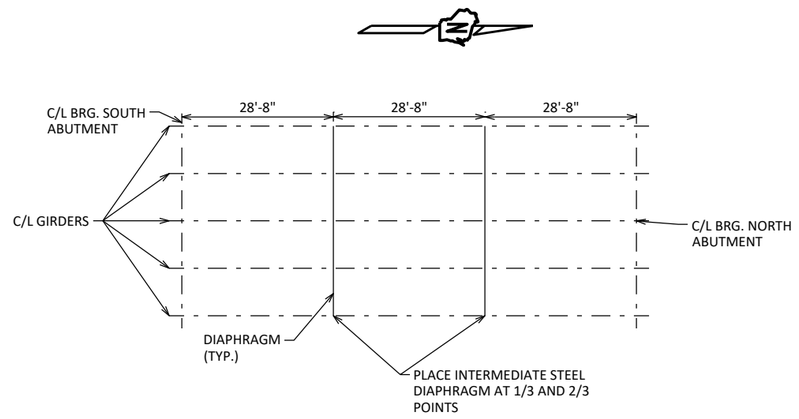


EXTERIOR GIRDER **INTERIOR GIRDER**

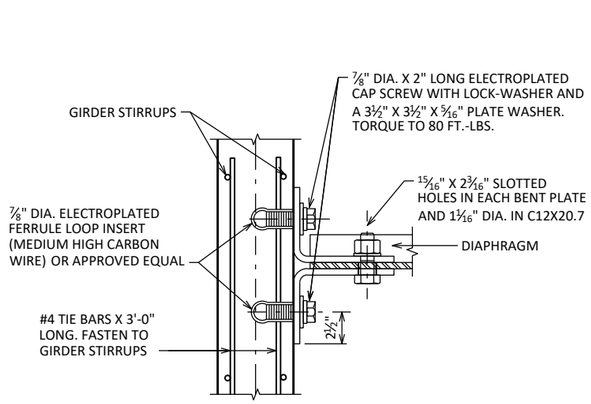
PART TRANSVERSE SECTION AT DIAPHRAGM



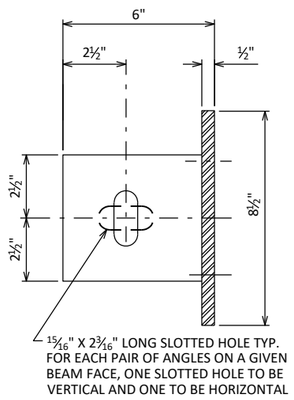
DETAIL C **DETAIL B**



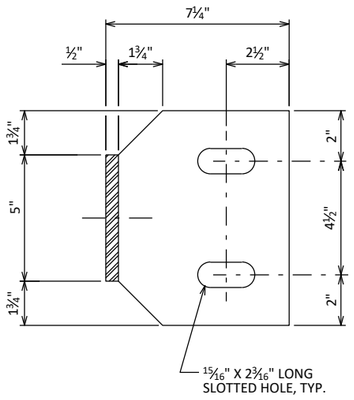
PLAN VIEW OF DIAPHRAGM



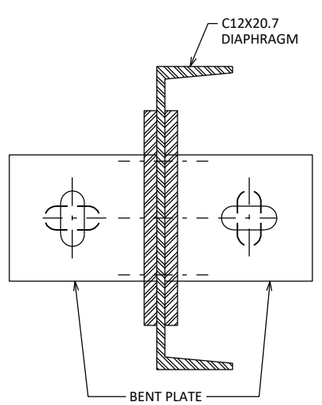
SECTION A-A
(FOR EXTERIOR ATTACHMENT)



BEAM FACE



DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

STEEL DIAPHRAGM

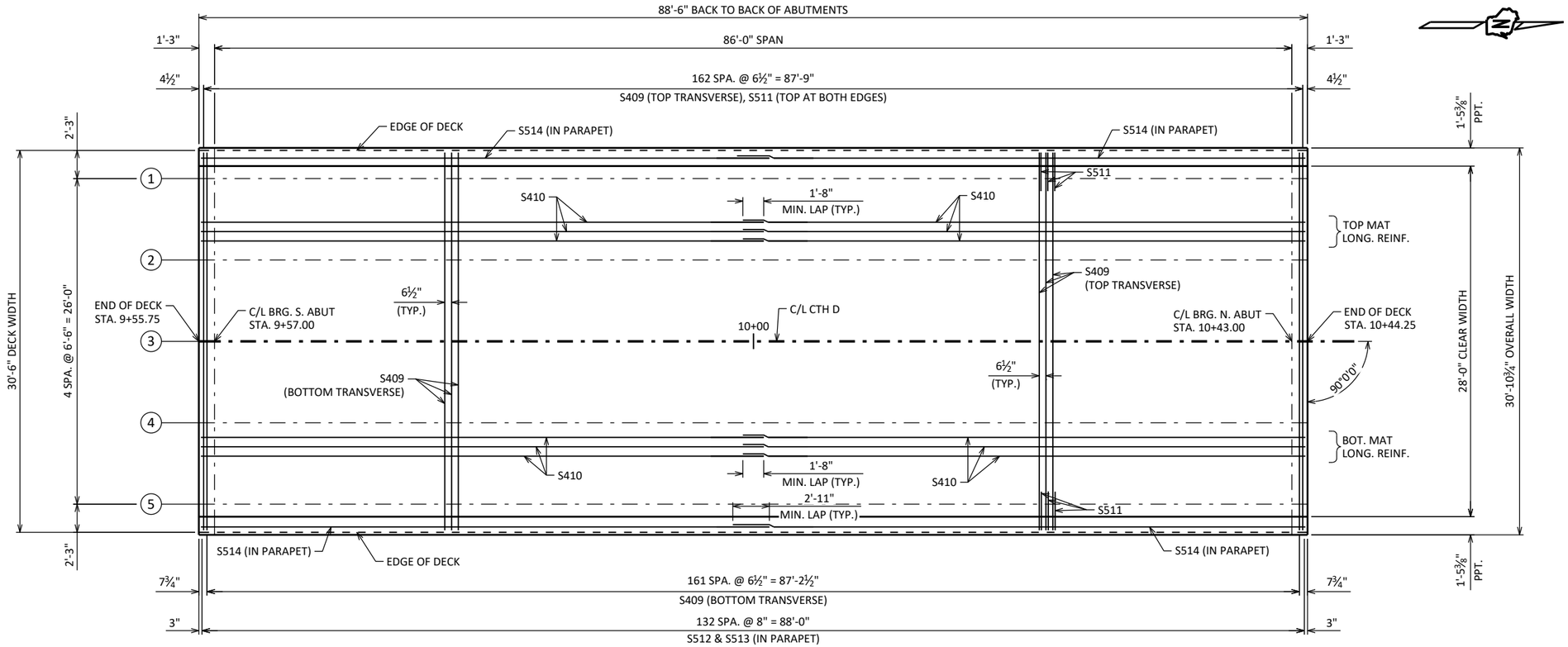
SHEET 12
73

8

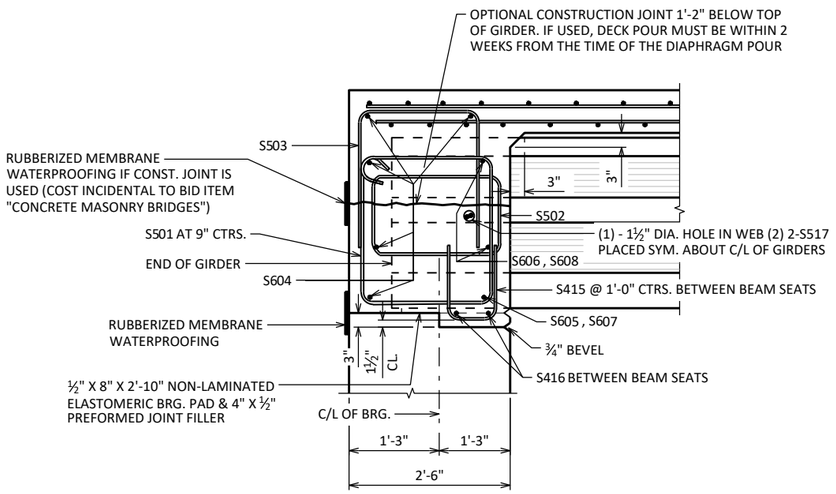
8

STATE PROJECT NUMBER

7146-00-76



REINFORCEMENT PLAN



SECTION AT ABUTMENT DIAPHRAGM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

SUPERSTRUCTURE

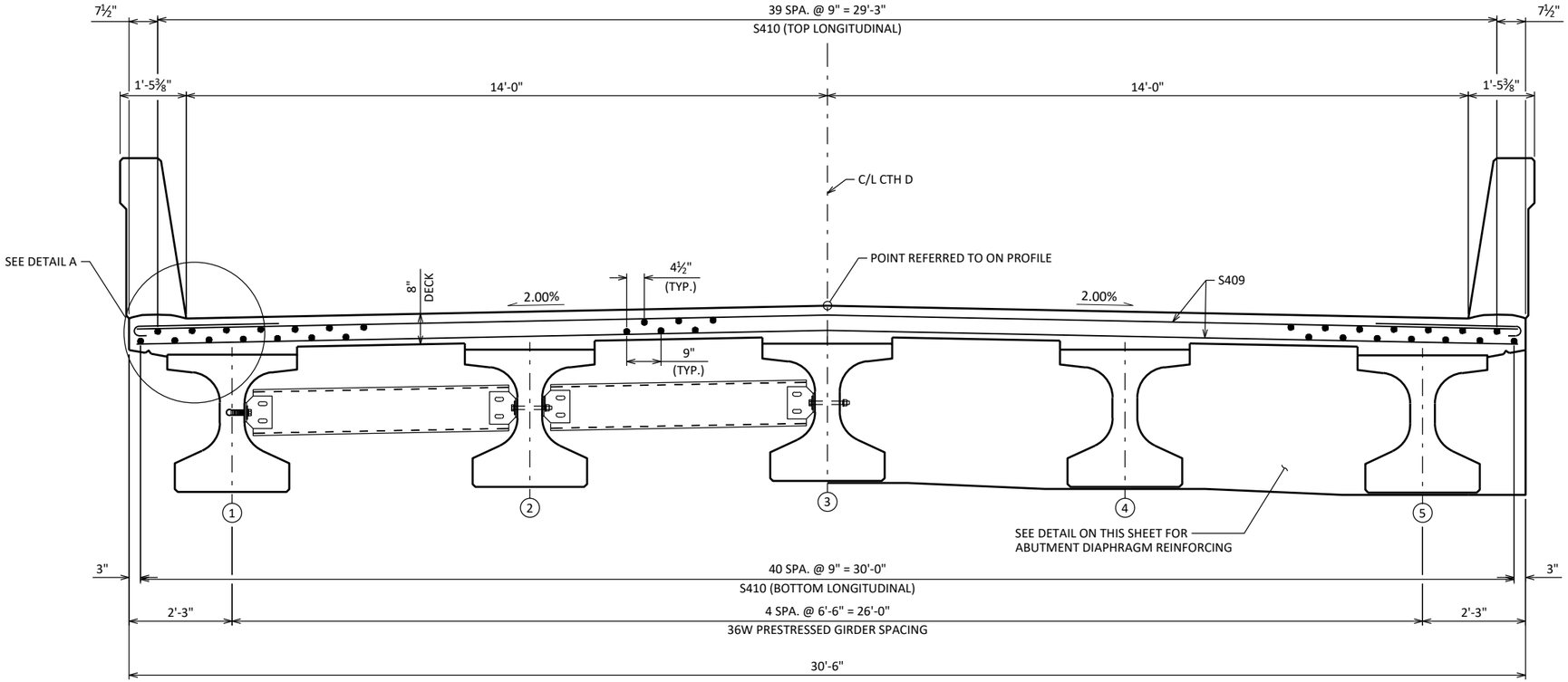
SHEET 13
74

8

8

STATE PROJECT NUMBER

7146-00-76



CROSS SECTION THRU ROADWAY

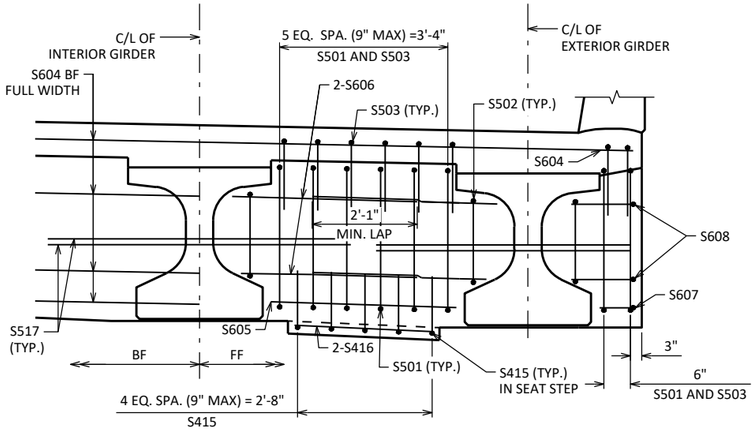
(LOOKING NORTH)

NOTES:

1. ¾" V-GROOVE REQ'D. EXTEND TO 6" FROM FF OF ABUTMENT DIAPHRAGM.
2. HORIZONTAL CONSTRUCTION JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.

FF - FRONT FACE
BF - BACK FACE

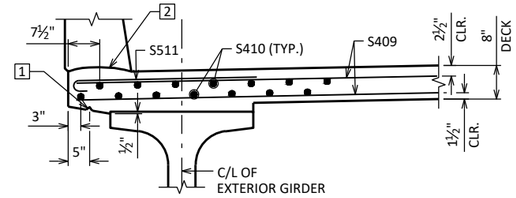
IN SPAN



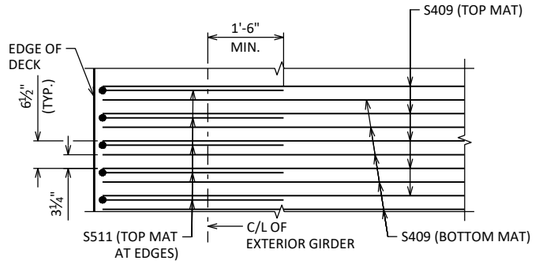
ABUTMENT DIAPHRAGMS

DECK STEEL NOT SHOWN FOR CLARITY

AT ABUTMENTS

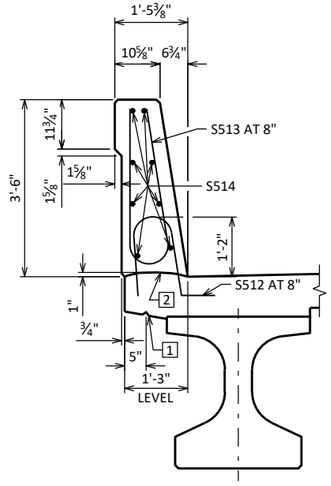


SECTION



PLAN VIEW

DETAIL A



SECTION THRU PARAPET ON BRIDGE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

SUPERSTRUCTURE DETAILS

SHEET 14
75

8

8

STATE PROJECT NUMBER

7146-00-76

TOP OF DECK ELEVATIONS

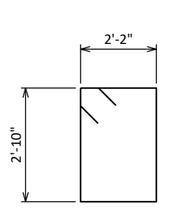
LOCATION	C/L S. ABUT	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L N. ABUT
W. EOD	849.27	849.29	849.30	849.31	849.32	849.32	849.31	849.30	849.29	849.27	849.24
GIRDER 1	849.29	849.31	849.32	849.33	849.34	849.34	849.33	849.32	849.31	849.29	849.26
GIRDER 2	849.42	849.44	849.45	849.46	849.47	849.47	849.46	849.45	849.44	849.42	849.39
R/L CTH D / GIRDER 3	849.55	849.57	849.58	849.59	849.60	849.60	849.59	849.58	849.57	849.55	849.52
GIRDER 4	849.42	849.44	849.45	849.46	849.47	849.47	849.46	849.45	849.44	849.42	849.39
GIRDER 5	849.29	849.31	849.32	849.33	849.34	849.34	849.33	849.32	849.31	849.29	849.26
E. EOD	849.27	849.29	849.30	849.31	849.32	849.32	849.31	849.30	849.29	849.27	849.24

BILL OF BARS

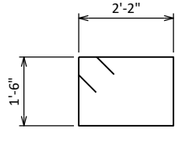
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	
S501	X	56	10'-8"	X		DIAPHRAGM - STIRRUPS	VERT
S502	X	20	8'-0"	X		DIAPHRAGM - STIRRUPS	VERT
S503	X	56	5'-3"	X		DIAPHRAGM - TIES	VERT
S604	X	10	30'-2"			DIAPHRAGM - BF	TRANS
S605	X	8	3'-8"			DIAPHRAGM - FF BETWEEN GIRDERS	TRANS
S606	X	32	3'-10"			DIAPHRAGM - FF BETWEEN GIRDERS	TRANS
S607	X	4	4'-5"	X		DIAPHRAGM - AT ENDS	HORIZ
S608	X	8	5'-2"	X		DIAPHRAGM - AT ENDS	HORIZ
S409	X	325	30'-2"			SLAB - TOP & BOTTOM	TRANS
S410	X	162	44'-11"			SLAB - TOP & BOTTOM	LONGIT
S511	X	326	4'-2"	X		SLAB - TOP AT EDGES	TRANS
S512	X	266	4'-5"	X		PARAPET - TIES	VERT
S513	X	266	6'-8"	X		PARAPET - STIRRUPS	VERT
S514	X	32	45'-7"			PARAPET	LONGIT
S415	X	40	3'-5"	X		DIAPHRAGM - SEAT STEP	VERT
S416	X	16	2'-8"			DIAPHRAGM - BETWEEN SEATS	HORIZ
S517	X	20	6'-0"			DIAPHRAGM - THRU GIRDERS	HORIZ

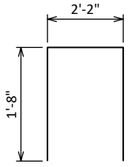
BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.



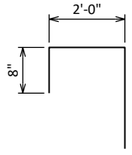
S501



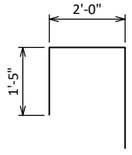
S502



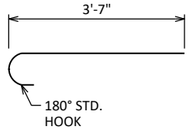
S503



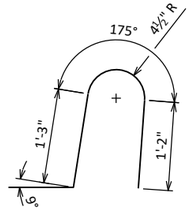
S607



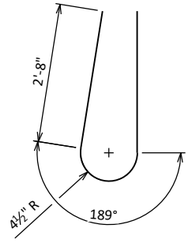
S608



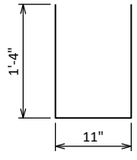
S511



S512



S513



S415

8

8

NO.	DATE	REVISION	BY

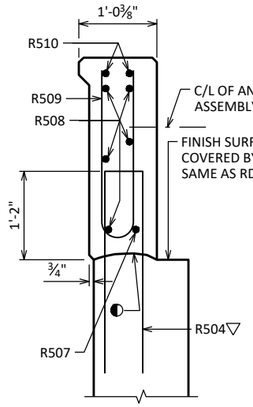
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

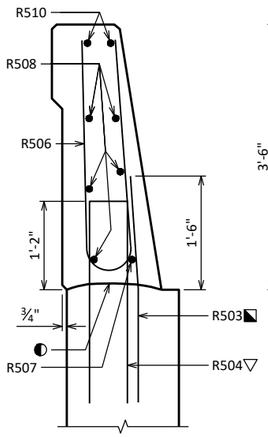
DRAWN BY JLA | PLANS CK'D RCP

SUPERSTRUCTURE DETAILS 2

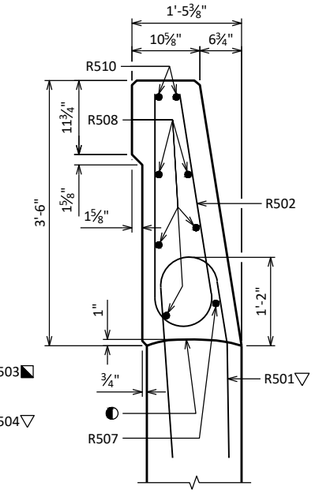
SHEET 15
76



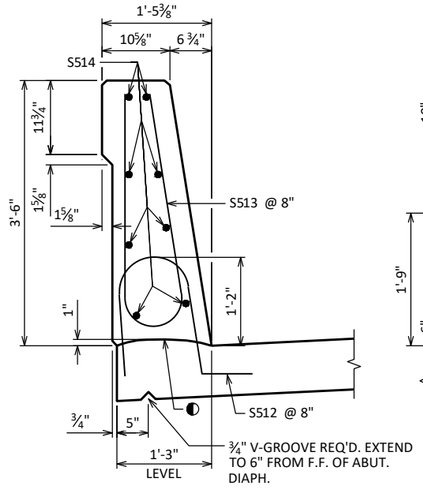
SECTION A-A



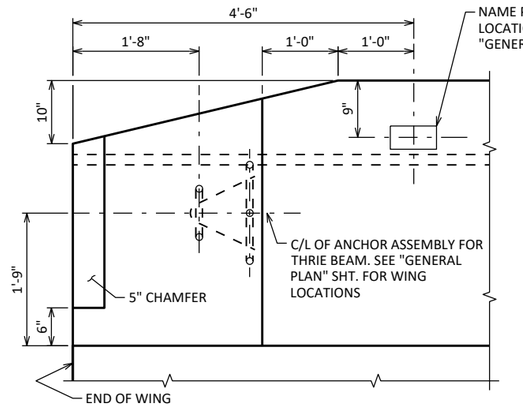
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON DECK



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

STATE PROJECT NUMBER

7146-00-76

BILL OF BARS

FOR WING PARAPETS

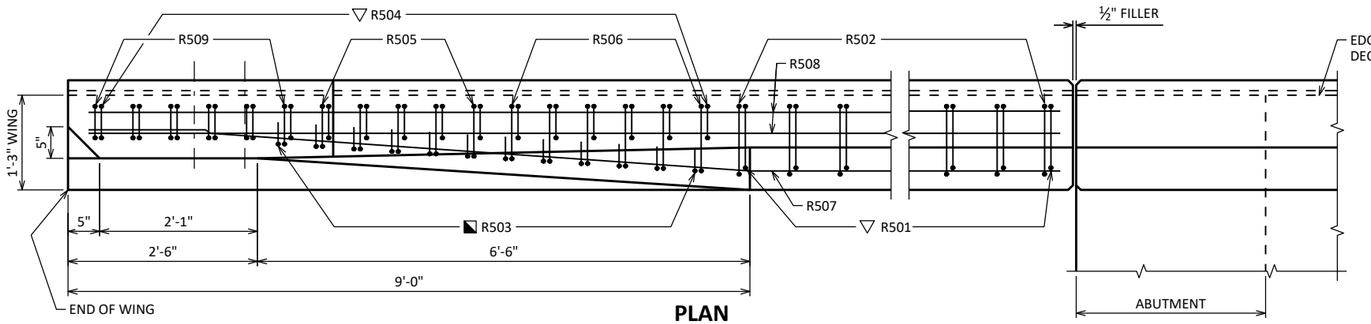
BAR MARK	COAT	S. ABUT.	N. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	16	16	5'-10"	X		PARAPET VERT.
R502	X	16	16	6'-8"	X		PARAPET VERT.
R503	X	24	24	3'-0"	X		PARAPET VERT.
R504	X	34	34	5'-7"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	13'-6"	X		PARAPET HORIZ.
R508	X	10	10	13'-6"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	13'-6"	X		PARAPET HORIZ.

⚠ LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

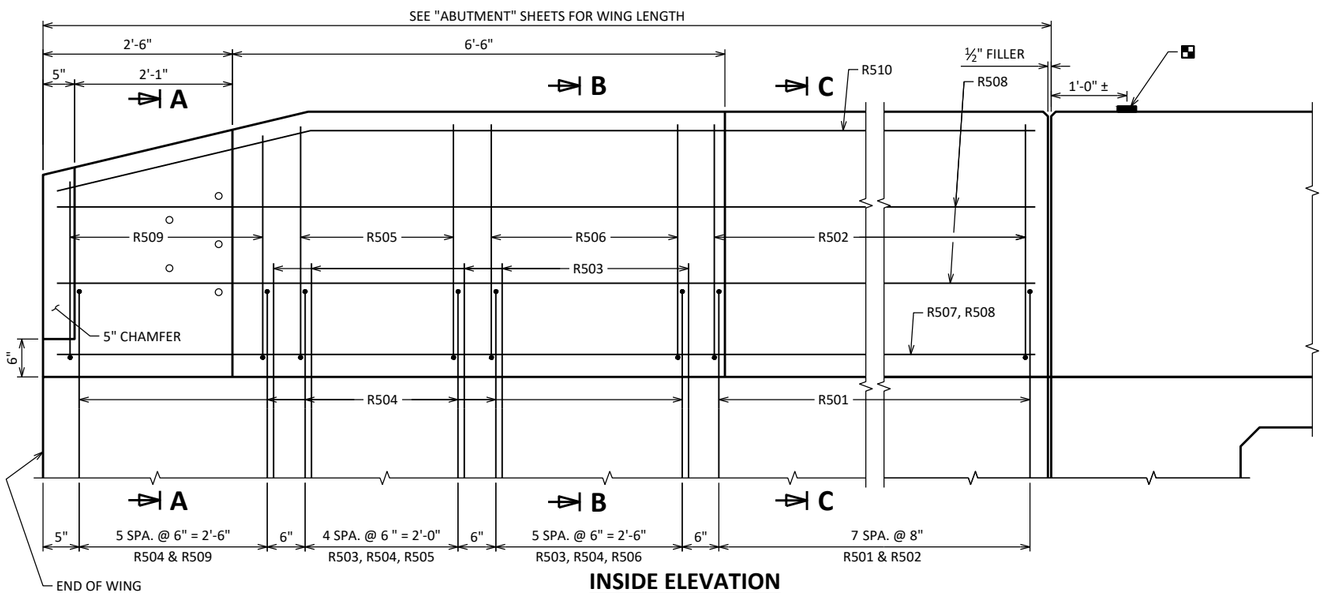
BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"



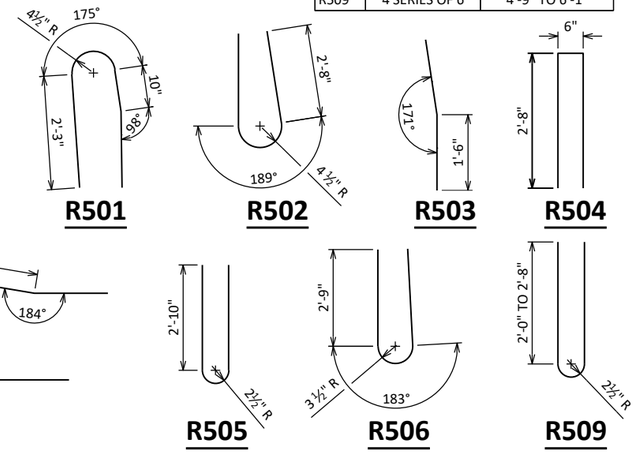
PLAN

SW CORNER SHOWN, OTHERS SIMILAR



INSIDE ELEVATION

SW CORNER SHOWN, OTHERS SIMILAR

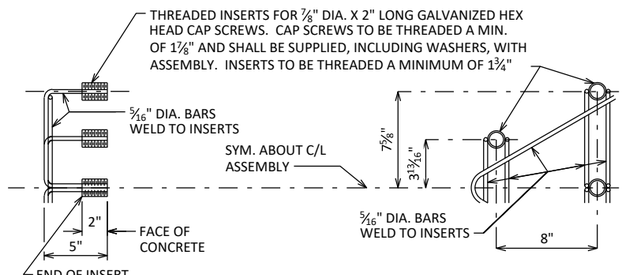


■ BENCH MARK CAP (WHEN SUPPLIED).

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASTM F2329.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-61-293

DRAWN BY JLA | PLANS CK'D RCP

SINGLE SLOPE PARAPET 42SS

SHEET 16
77

8

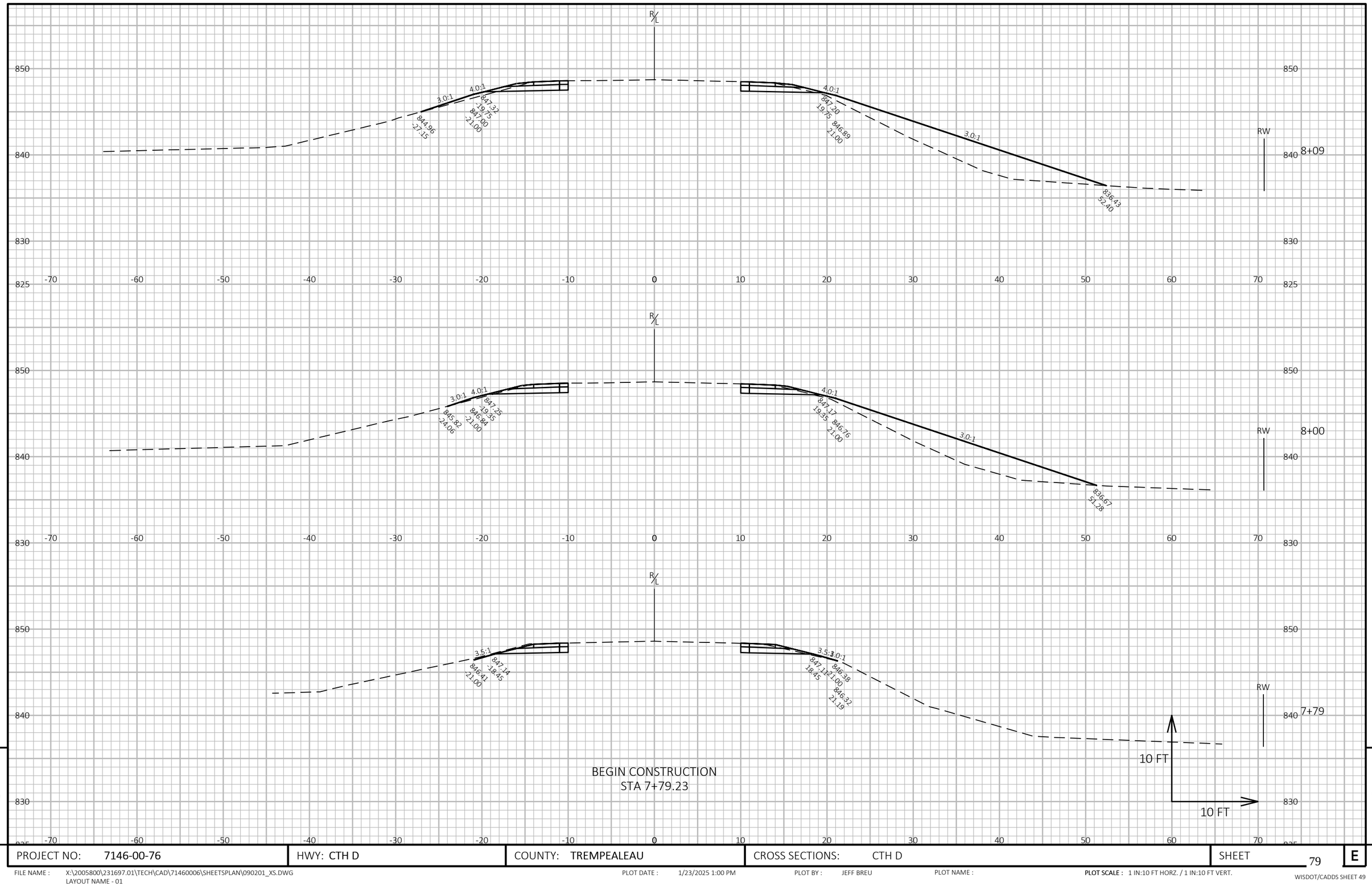
8

DIVISION - TREMPEALEAU CTH D

STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
							1.00	1.25	
				NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4
7+79.23	12.34	1.00	0.30	0	0	0	0	0	0
8+00.00	12.84	1.00	51.73	10	1	20	10	25	-16
8+09.23	12.71	1.00	61.29	4	0	19	14	49	-36
8+25.00	12.26	1.00	81.96	7	1	42	21	101	-82
8+39.23	12.05	1.00	104.90	6	1	49	27	163	-139
8+50.00	11.98	1.00	119.14	5	0	45	32	219	-190
8+64.23	11.56	1.00	132.20	6	1	66	38	301	-267
8+75.00	11.46	1.00	130.25	5	0	52	43	366	-327
8+89.23	11.44	1.00	119.64	6	1	66	49	449	-405
9+00.00	33.56	11.00	81.02	9	2	40	58	499	-448
9+25.00	34.10	11.00	54.43	31	10	63	89	578	-506
9+41.75	30.35	11.00	69.41	20	7	38	109	625	-540
10+58.25	30.47	11.00	63.43				109	625	-540
10+75.00	32.48	11.00	45.08	20	7	34	129	668	-570
11+00.00	34.71	11.00	51.82	31	10	45	160	724	-605
11+10.77	10.11	1.00	71.41	9	2	25	169	755	-629
11+25.00	10.06	1.00	70.50	5	1	37	174	801	-671
11+35.77	10.15	1.00	69.14	4	0	28	178	836	-702
11+50.00	9.92	1.00	63.01	5	1	35	183	880	-742
11+60.77	10.00	1.00	58.73	4	0	24	187	910	-768
11+75.00	10.23	1.00	41.71	5	1	26	192	943	-797
11+90.77	10.81	1.00	26.49	6	1	20	198	968	-817
12+00.00	11.26	1.00	18.31	4	0	8	202	978	-823
12+20.77	12.40	1.00	0.46	9	1	7	211	986	-823
				211	48	789			

NOTES:
1 - CUT (SALVAGE/UNUSABLE PAVEMENT MATERIAL INCLUDED)
2 - SALVAGE/UNUSABLE PAVEMENT MATERIAL. (THIS DOES NOT SHOW UP IN THE CROSSE SECTIONS)
3 - FILL (DOES NOT INCLUDE UNUSABLE PAVEMENT VOLUME)
4 - THE MASS ORDINATE + OR - QUANTITIES CALCULATED. PLUS QUANTITIES AS EXCESS MATERIAL. MINUS A SHORTAGE OF MATERIAL

NO MARSH OR EBS IS ANTICIPATED.

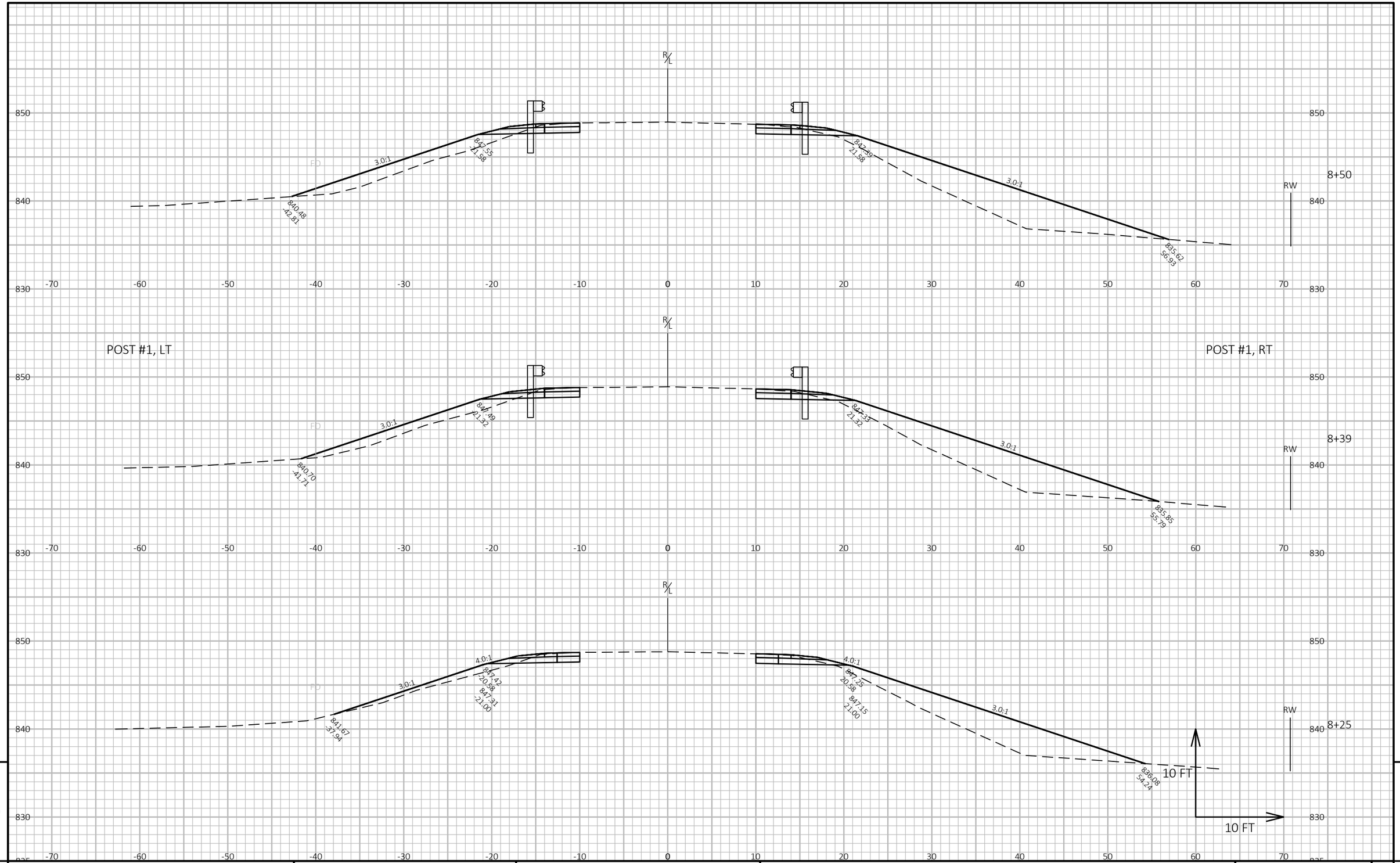


PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	CROSS SECTIONS: CTH D	SHEET 79	E

FILE NAME : X:\2005800\231697.01\TECH\CAD\71460006\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 01

PLOT DATE : 1/23/2025 1:00 PM PLOT BY : JEFF BREU PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	CROSS SECTIONS: CTH D	SHEET 80	E

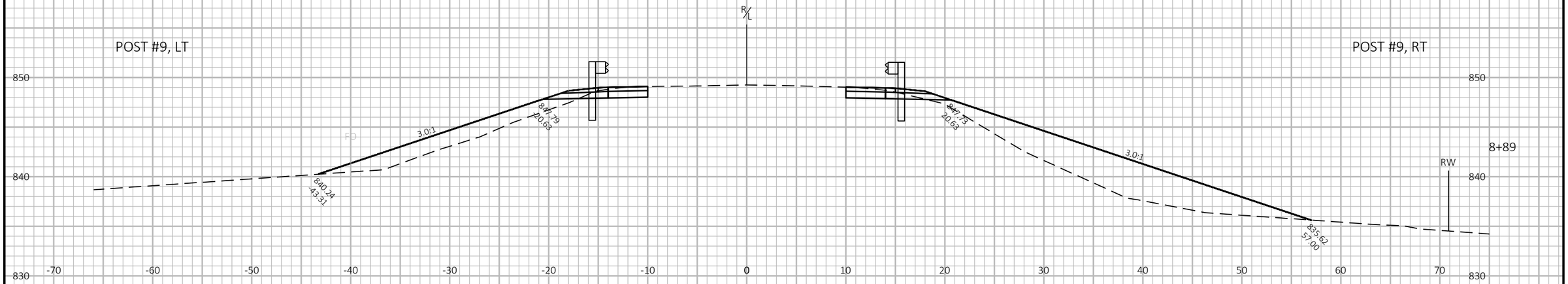
FILE NAME : X:\2005800\231697.01\TECH\CAD\71460006\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 02

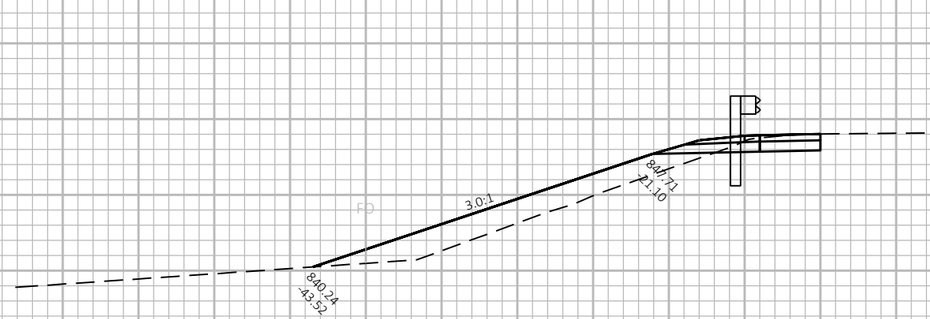
PLOT DATE : 3/12/2025 8:36 AM PLOT BY : JEFF BREU PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

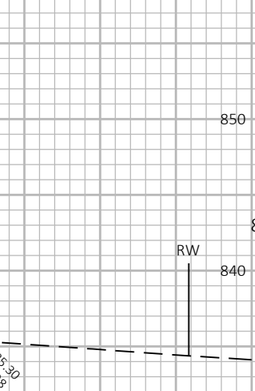
POST #9, LT

POST #9, RT

8+89







8+75

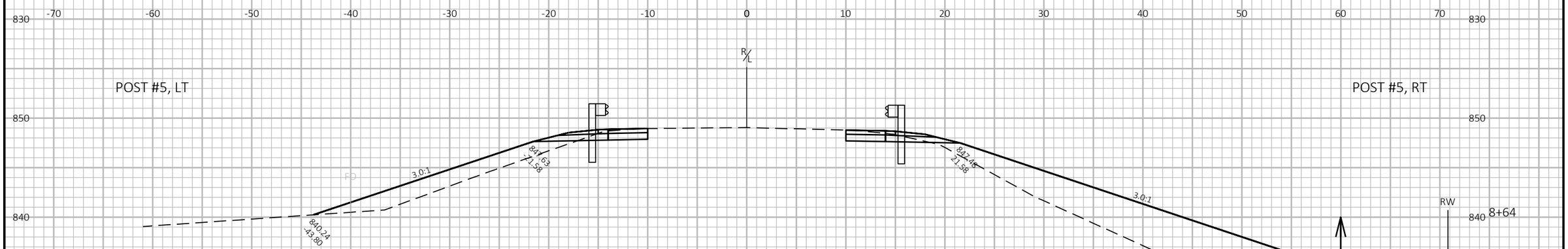
POST #5, LT

POST #5, RT

8+64

10 FT

10 FT



9

9

PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	CROSS SECTIONS: CTH D	SHEET 81	E

FILE NAME : X:\2005800\231697.01\TECH\CAD\71460006\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 03

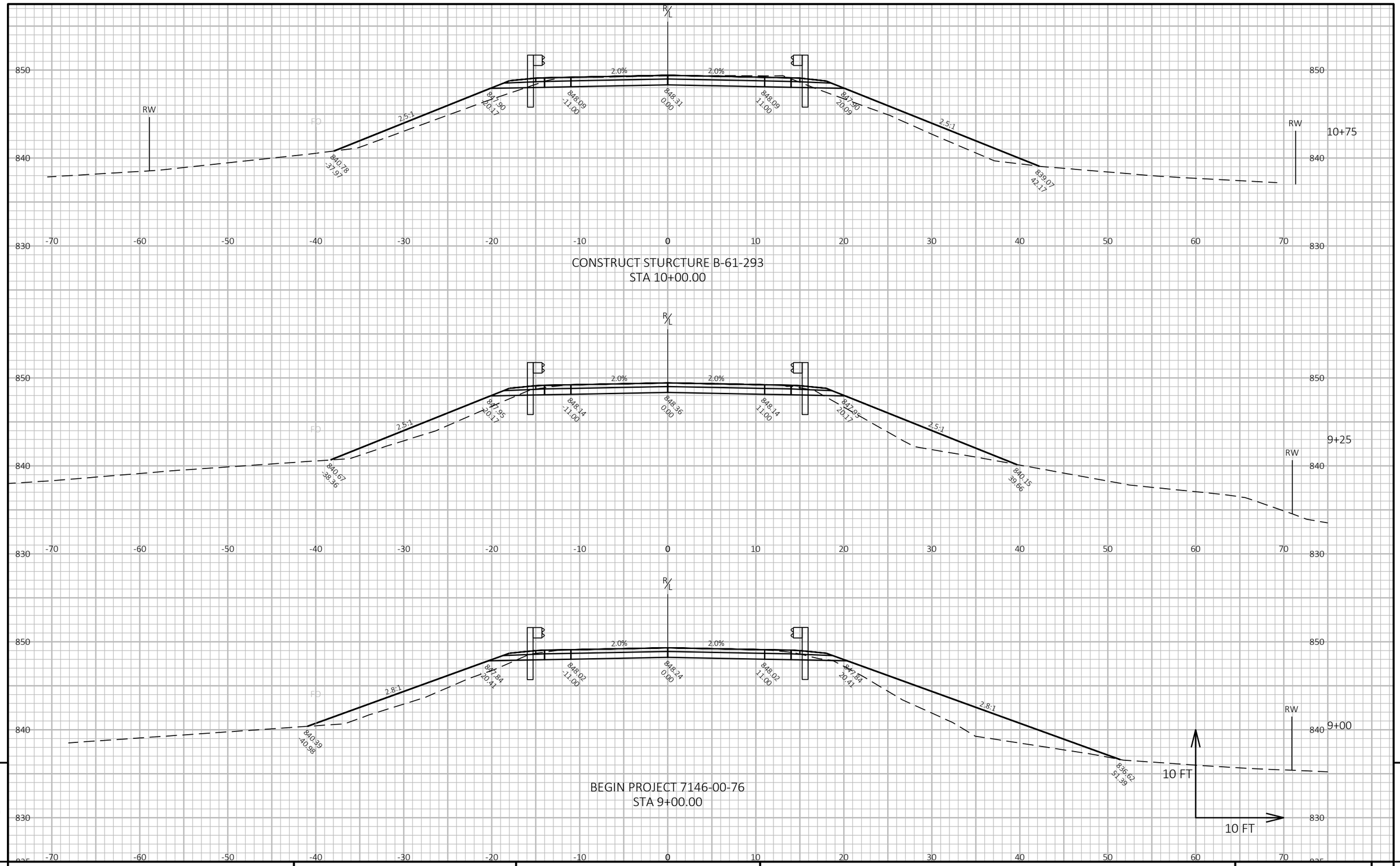
PLOT DATE : 3/12/2025 8:36 AM

PLOT BY : JEFF BREU

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



BEGIN PROJECT 7146-00-76
STA 9+00.00

9

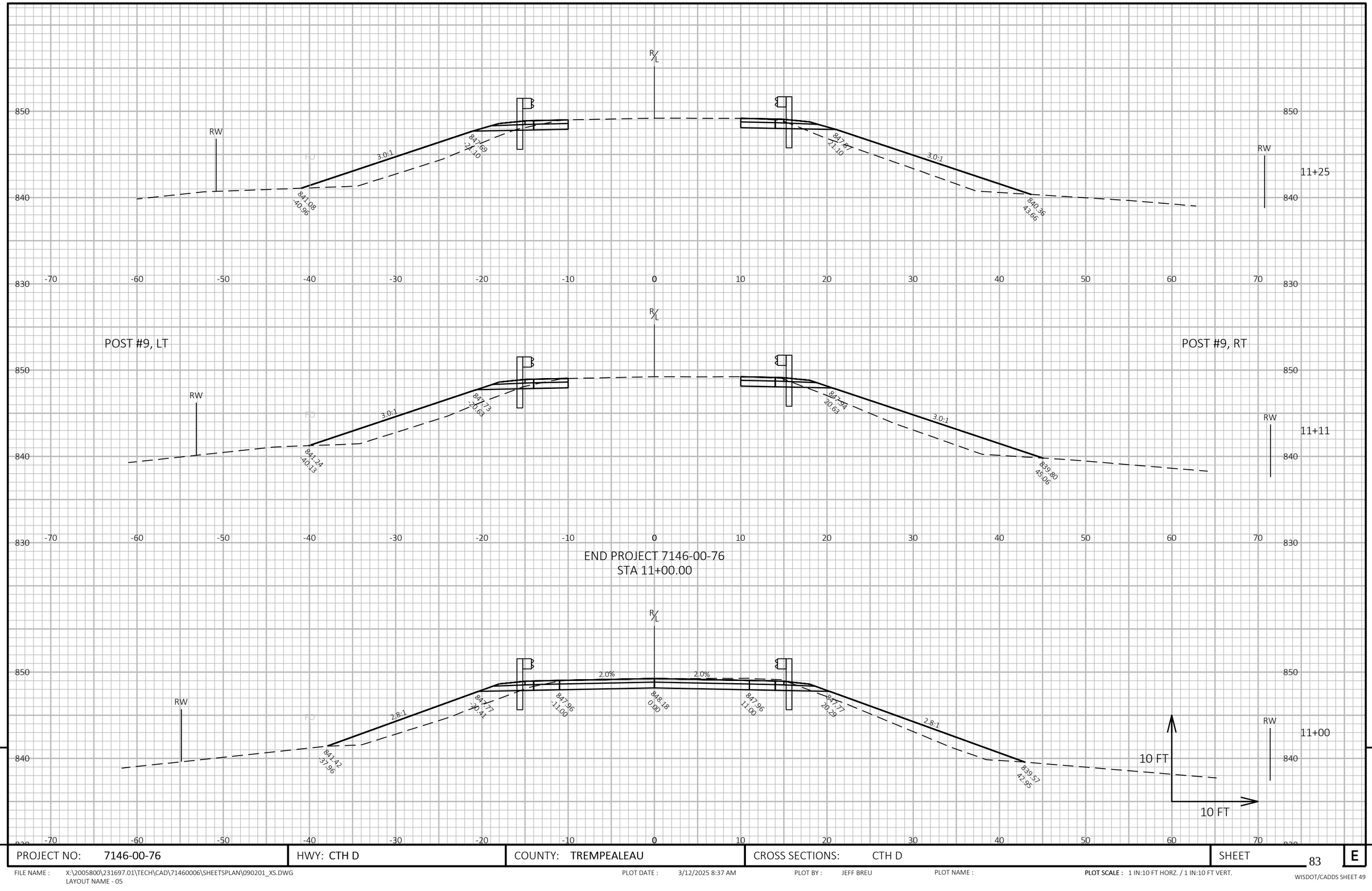
9

PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	CROSS SECTIONS: CTH D	SHEET 82	E

FILE NAME : X:\2005800\231697.01\TECH\CAD\71460006\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 04

PLOT DATE : 1/23/2025 1:01 PM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

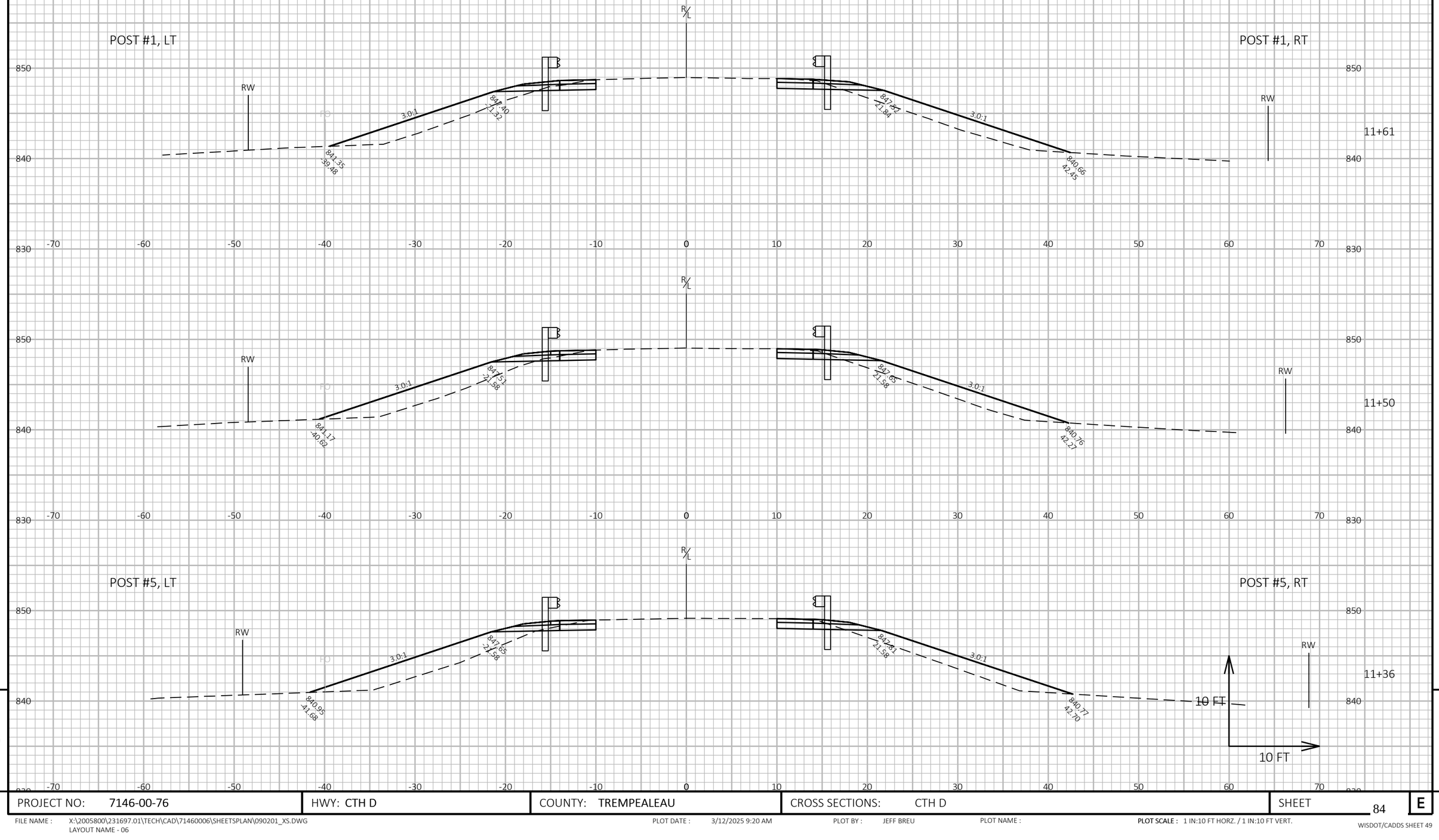


PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	CROSS SECTIONS: CTH D	SHEET 83	E

FILE NAME : X:\2005800\231697.01\TECH\CAD\71460006\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 05

PLOT DATE : 3/12/2025 8:37 AM PLOT BY : JEFF BREU PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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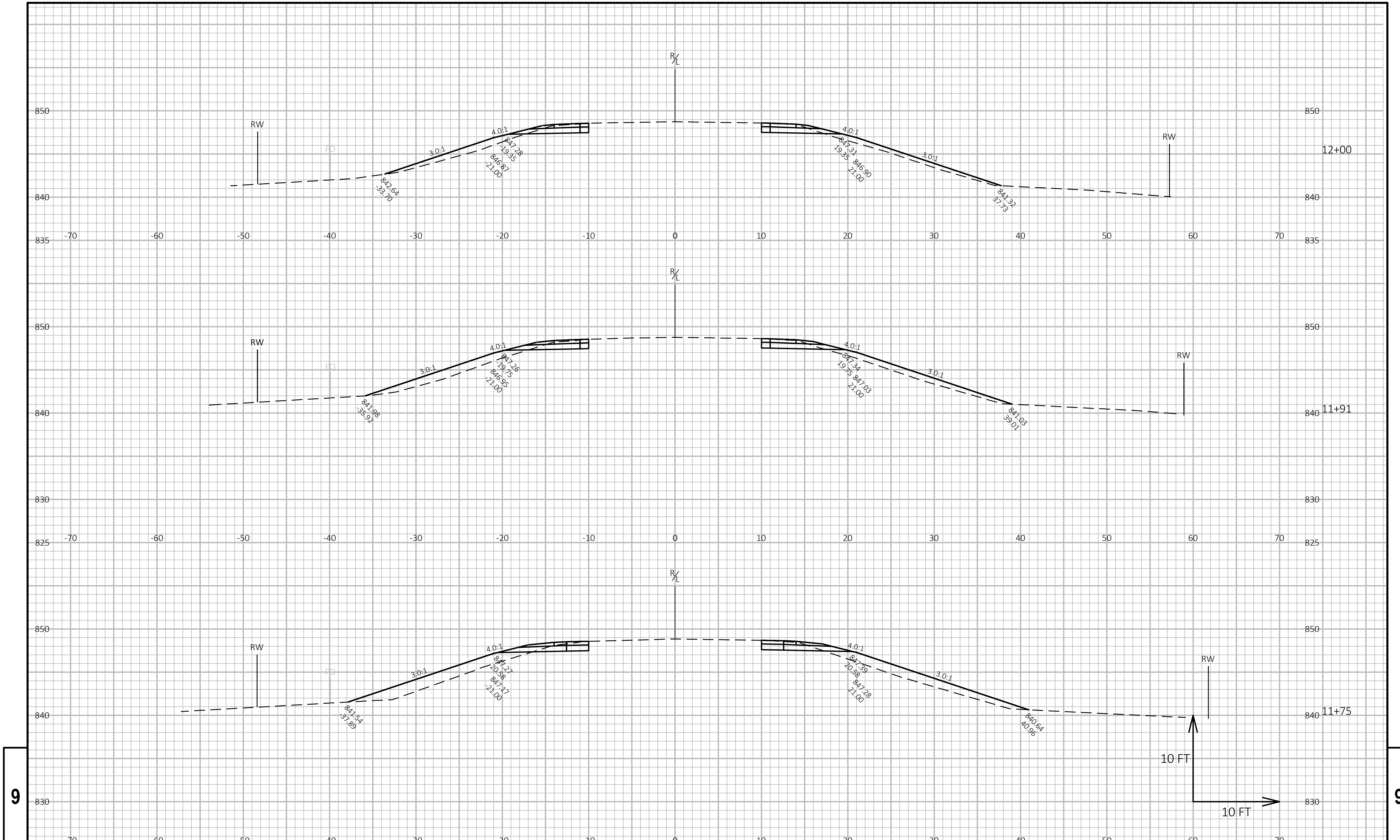
PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	CROSS SECTIONS: CTH D	SHEET 84	E

FILE NAME : X:\2005800\231697.01\TECH\CAD\71460006\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 06

PLOT DATE : 3/12/2025 9:20 AM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



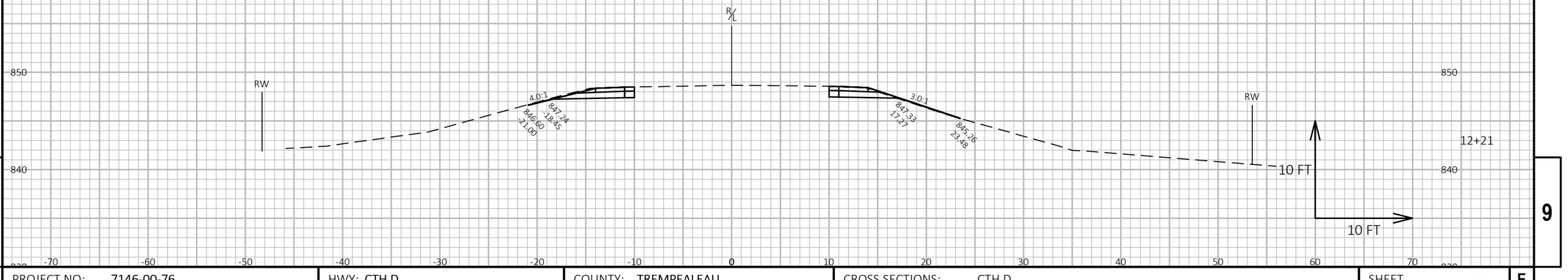
PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	CROSS SECTIONS: CTH D	SHEET 85	E

FILE NAME : X:\2005800\231697.01\TECH\CAD\71460006\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 07

PLOT DATE : 1/23/2025 1:02 PM PLOT BY : JEFF BREU PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA 12+20.77



9

9

PROJECT NO: 7146-00-76	HWY: CTH D	COUNTY: TREMPEALEAU	CROSS SECTIONS: CTH D	SHEET 86	E

FILE NAME : X:\2005800\231697.01\TECH\CAD\71460006\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 08

PLOT DATE : 1/23/2025 1:02 PM PLOT BY : JEFF BREU PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Notes

Wisconsin Department of Transportation

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