EAU

DECEMBER 2026

PROJECT ID: 7820-08-70

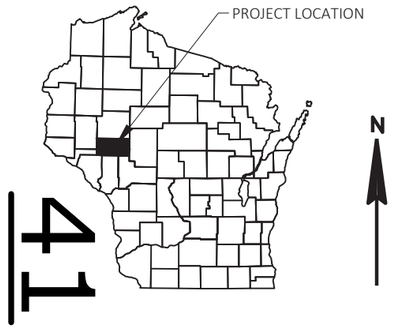
WITH: N/A

COUNTY: EAU CLAIRE

ORDER OF SHEETS

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

TOTAL SHEETS = 74



DESIGN DESIGNATION 7820-08-00

A.A.D.T.	2027	=	280
A.A.D.T.	2047	=	300
D.H.V.		=	28
D.D.		=	50/50
T.		=	10%
DESIGN SPEED		=	40 MPH
ESALS		=	95,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7820-08-70	—	—

WILSON - ECL

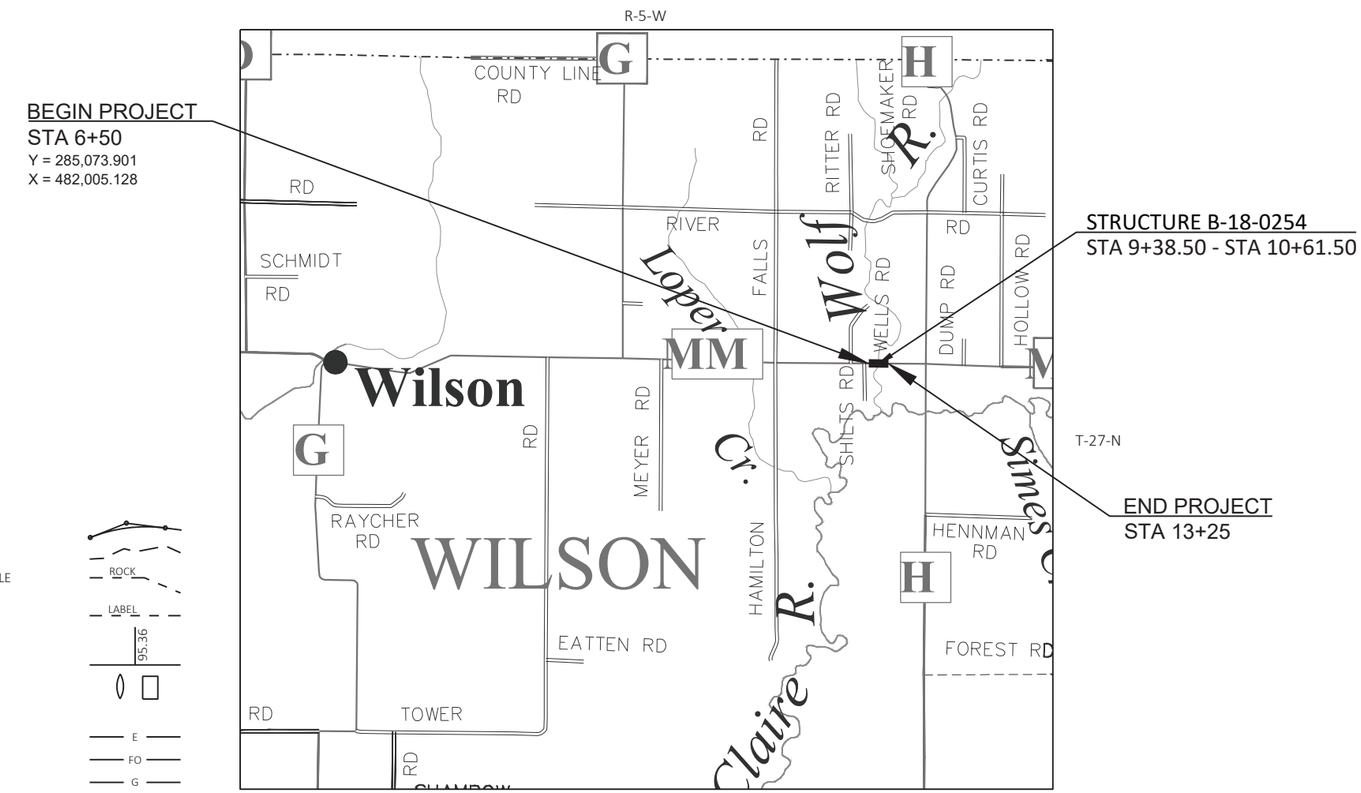
WOLF RIVER BRIDGE B-18-0254

CTH MM

EAU CLAIRE COUNTY

STATE PROJECT NUMBER

7820-08-70



LAYOUT

SCALE 0 — 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.128 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), EAU CLAIRE 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 ELEVATIONS ARE BASED ON GEOID 12A

ACCEPTED FOR

EAU CLAIRE COUNTY HIGHWAY DEPARTMENT

DATE: 7/9/2026 Travis Pickering (County Engineer Signature)

ORIGINAL PLANS PREPARED BY

SEH

WISCONSIN JUSTIN SHAVLIK 45324-6 CHIPPEWA FALLS WISCONSIN 07-08-2026 PROFESSIONAL ENGINEER

DATE: _____ (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SEH
Designer	SEH
Project Manager	TOU YANG
Regional Examiner	NW REGION
Regional Supervisor	TOU YANG

APPROVED FOR THE DEPARTMENT

DATE: _____ Digitally signed by Tou X. Yang Date: 2026.07.14 12:27:04-05'00' (Signature)

E

UTILITIES CONTACTS

BRIGHTSPEED
COMMUNICATION LINE
BEN BAKER
425 ELLINGSON AVE
HAWKINS, WI 54530
PHONE: 980-376-1560
EMAIL: BEN.BAKER@BRIGHTSPEED.COM

EAU CLAIRE ENERGY COOPERATIVE
COMMUNICATION LINE
NATHAN KARNES
8214 US HIGHWAY 12
FALL CREEK, WI 54742
PHONE: 715-836-6486
EMAIL: NKARNES@ECEC.COM

SPECTRUM
COMMUNICATION LINE
ROBERT STEPHENS
1201 MCCANN DR
ALTOONA, WI 54720
PHONE: 715-579-5594
EMAIL: ROBERT.STEPHENS@SPECTRUM.COM

WISDOT CONTACT

TOU YANG
WISDOT - NW REGION
718 W CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 715.833.5570
EMAIL: TOU.YANG@DOT.WI.GOV

DESIGN CONTACT

JUSTIN SHAVLIK
SEH
10 NORTH BRIDGE STREET
CHIPPEWA FALLS, WI 54729-2550
PHONE: 715.720.6279
EMAIL: JSHAVLIK@SEHINC.COM

COUNTY CONTACT

TRAVIS PICKERING
EAU CLAIRE COUNTY ENGINEER
5061 US HWY 53
EAU CLAIRE, WI 54701
PHONE: 715.975.0023
EMAIL: TRAVIS.PICKERING@EAUCLAIRECOUNTY.GOV

WISCONSIN DNR LIAISON

LEAH NICOL
WEST CENTRAL REGION
1300 W CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 715.934.9014
EMAIL: LEAH.NICOL@WISCONSIN.GOV

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

GENERAL NOTES

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

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

TACK COAT VOLUME CALCULATIONS ARE BASED ON 0.06 GAL/SY.

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, 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.

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.

WISDOT MONUMENTS WILL BE SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

RUNOFF COEFFICIENT TABLE

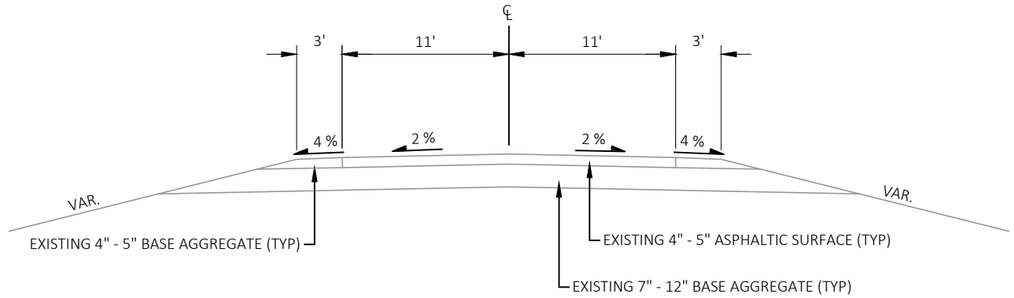
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .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 = 1.6 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.2 ACRES

BENCHMARK & CONTROL POINT TABLE

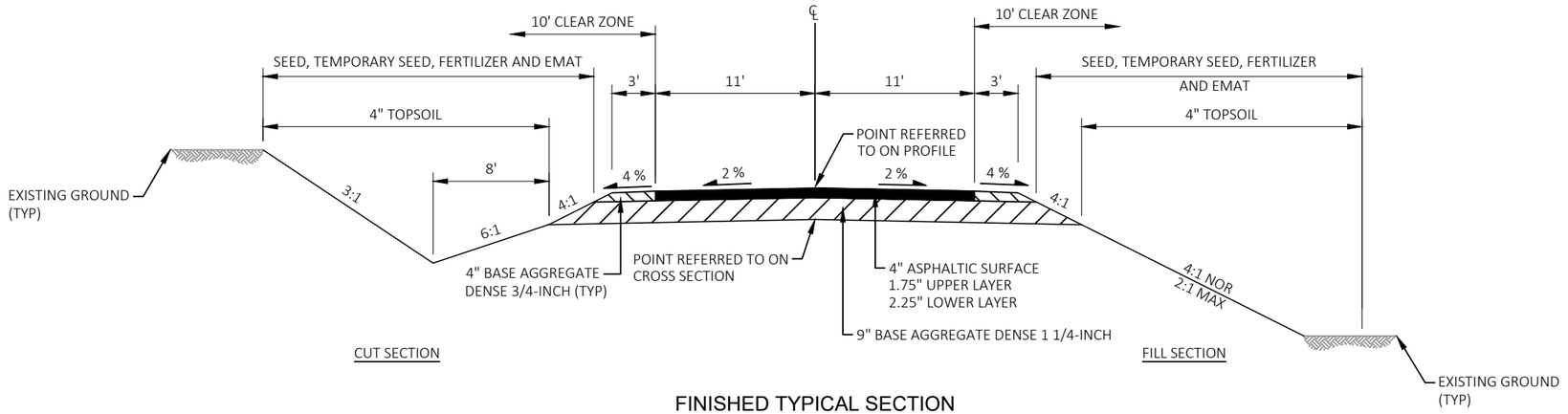
NO	STATION	Y COORDINATES	X COORDINATES	DESCRIPTION	ELEV
BM 1	STA 6+80.41, 25.7' LT	285,099.984	482,035.233	SPK IN POWER POLE	1005.854
CP 1	STA 7+31.39, 0.28' LT	285,075.139	482,086.507	PK NAIL	1007.377
CP 2	STA 9+35.99, 1.1' LT	285,078.364	482,291.083	PK NAIL	1004.284
CP 3	STA 10+63.68, 9.9' RT	285,068.836	482,418.893	PK NAIL	1004.862
CP 4	STA 10+58.12, 17.3' LT	285,096.018	482,413.017	SPK NAIL	1004.194
BM 2	STA 10+65.82, 24.9' LT	285,103.672	482,420.627	SPK IN POWER POLE	1003.221
BM 4	STA 11+21.97, 48.34' LT	285,127.8070	482,476.4970	SPK IN 18" PINE	997.133
BM 3	STA 12+32.41, 51.8' RT	285,028.987	482,588.105	SPK IN POWER POLE	1009.441
CP 5	STA 12+38.19, 1.2' LT	285,082.057	482,593.264	PK NAIL	1007.050

2



EXISTING TYPICAL SECTION

STA 6+50.00 - STA 9+47.26
STA 10+52.63 - STA 13+25.00

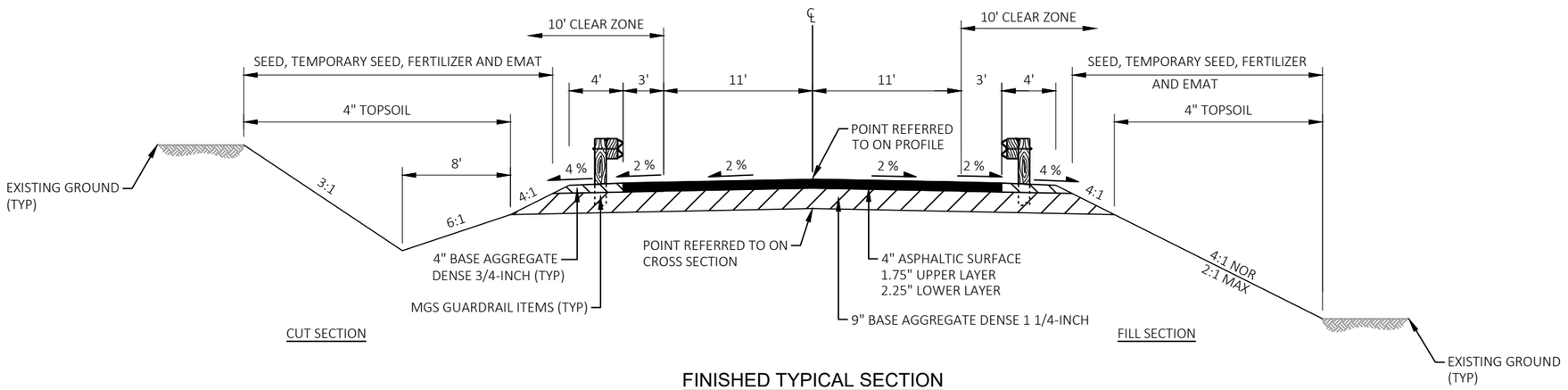


CUT SECTION

FILL SECTION

FINISHED TYPICAL SECTION

STA 6+50.00 - STA 8+35.55
STA 11+63.26 - STA 13+25.00



CUT SECTION

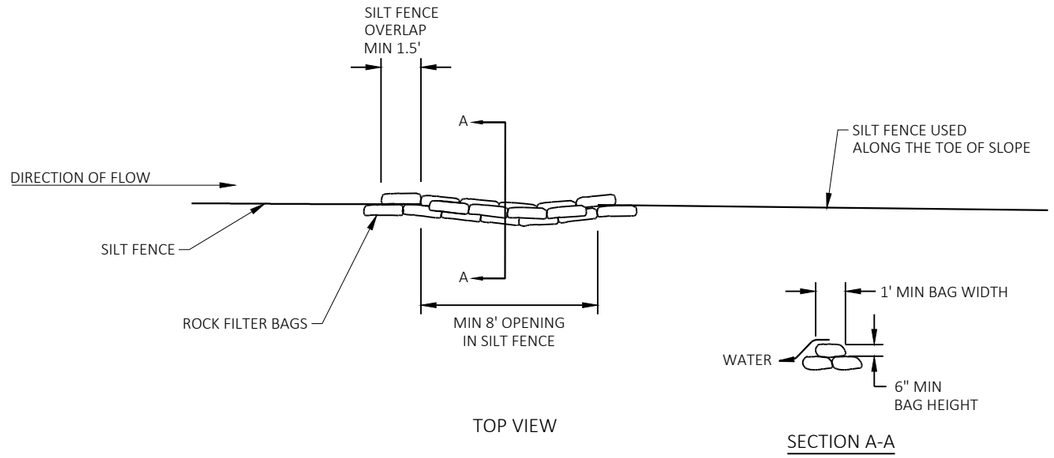
FILL SECTION

FINISHED TYPICAL SECTION

STA 8+35.55 - STA 9+38.50
STA 10+61.50 - STA 11+63.26

PROJECT NO: 7820-08-70	HWY: CTH MM	COUNTY: EAU CLAIRE	TYPICAL SECTIONS	SHEET 3	E

2



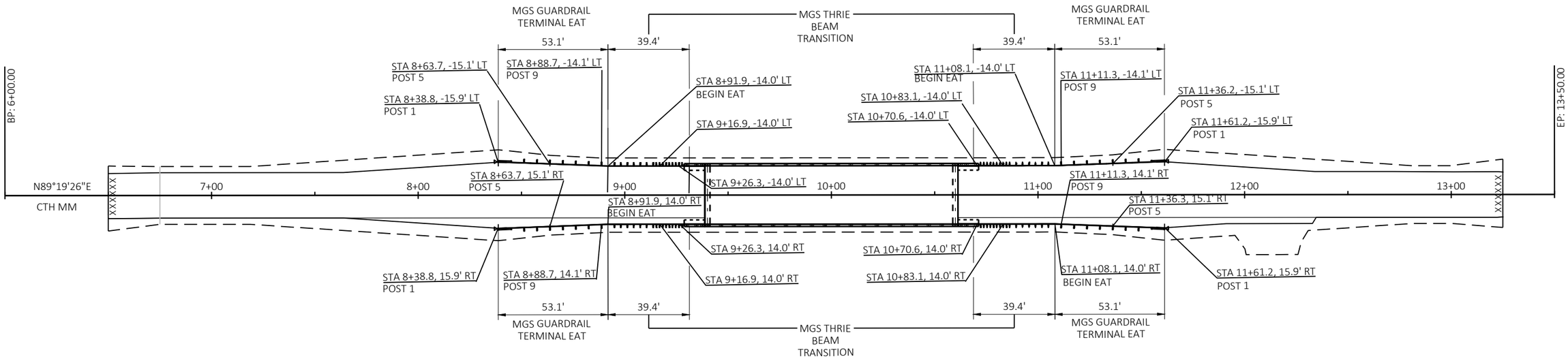
ROCK BAGS USED FOR SILT FENCE RELIEF

2

N

SCALE, FEET

0 25 50



PROJECT NO: 7820-08-70	HWY: CTH MM	COUNTY: EAU CLAIRE	CONSTRUCTION DETAIL - GUARDRAIL LAYOUT	SHEET 5	E

FILE NAME : \\SEHINC.COM\PANZURA\PZPROJECTS\AE\E\EAUCH\182323\5-FINAL-DSGN\C3D-CTH MM BRIDGE\SHEETS\NEW 021011 CD.DWG
LAYOUT NAME - 01
PLOT DATE : 7/16/2026 10:22 PM
PLOT BY : BEN PIERCE
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

Estimate Of Quantities

7820-08-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	6.000	6.000
0004	201.0205	Grubbing	STA	6.000	6.000
0006	203.0211.S	Abatement of Asbestos Containing Material (structure) 01. B-18-0004	EACH	1.000	1.000
0008	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. B-18-0004	EACH	1.000	1.000
0010	204.0165	Removing Guardrail	LF	447.000	447.000
0012	205.0100	Excavation Common	CY	255.000	255.000
0014	206.1001	Excavation for Structures Bridges (structure) 01. B-18-0254	EACH	1.000	1.000
0016	208.0100	Borrow	CY	3,336.000	3,336.000
0018	210.1500	Backfill Structure Type A	TON	501.000	501.000
0020	213.0100	Finishing Roadway (project) 01. 7820-08-70	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	155.000	155.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,259.000	1,259.000
0026	455.0605	Tack Coat	GAL	97.000	97.000
0028	465.0105	Asphaltic Surface	TON	361.000	361.000
0030	502.0100	Concrete Masonry Bridges	CY	220.000	220.000
0032	502.3200	Protective Surface Treatment	SY	494.000	494.000
0034	503.0155	Prestressed Girder Type I 54W-Inch	LF	484.000	484.000
0036	505.0400	Bar Steel Reinforcement HS Structures	LB	4,240.000	4,240.000
0038	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	31,280.000	31,280.000
0040	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0042	506.4000	Steel Diaphragms (structure) 01. B-18-0254	EACH	6.000	6.000
0044	513.4061	Railing Tubular Type M	LF	310.000	310.000
0046	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000
0048	550.0020	Pre-Boring Rock or Consolidated Materials	LF	288.000	288.000
0050	550.1120	Piling Steel HP 12-Inch x 53 Lb	LF	320.000	320.000
0052	606.0300	Riprap Heavy	CY	534.000	534.000
0054	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	164.000	164.000
0056	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0058	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0060	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7820-08-70	EACH	1.000	1.000
0062	619.1000	Mobilization	EACH	1.000	1.000
0064	624.0100	Water	MGAL	14.200	14.200
0066	625.0100	Topsoil	SY	1,940.000	1,940.000
0068	628.1504	Silt Fence	LF	1,350.000	1,350.000
0070	628.1520	Silt Fence Maintenance	LF	1,350.000	1,350.000
0072	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0076	628.2027	Erosion Mat Class II Type C	SY	2,060.000	2,060.000
0078	628.5505	Polyethylene Sheeting	SY	200.000	200.000
0080	628.6005	Turbidity Barriers	SY	140.000	140.000
0082	628.7504	Temporary Ditch Checks	LF	38.000	38.000
0084	628.7570	Rock Bags	EACH	40.000	40.000
0086	629.0210	Fertilizer Type B	CWT	1.400	1.400
0088	630.0120	Seeding Mixture No. 20	LB	89.000	89.000
0090	630.0200	Seeding Temporary	LB	53.000	53.000
0092	630.0500	Seed Water	MGAL	43.500	43.500
0094	634.0612	Posts Wood 4x6-Inch x 12-FT	EACH	4.000	4.000
0096	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0098	638.2602	Removing Signs Type II	EACH	4.000	4.000

7820-08-70

Line	Item	Item Description	Unit	Total	Qty
0100	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0102	642.5001	Field Office Type B	EACH	1.000	1.000
0104	643.0420	Traffic Control Barricades Type III	DAY	1,872.000	1,872.000
0106	643.0705	Traffic Control Warning Lights Type A	DAY	2,912.000	2,912.000
0108	643.0900	Traffic Control Signs	DAY	1,456.000	1,456.000
0110	643.5000	Traffic Control	EACH	1.000	1.000
0112	645.0111	Geotextile Type DF Schedule A	SY	46.000	46.000
0114	645.0120	Geotextile Type HR	SY	793.000	793.000
0116	646.1020	Marking Line Epoxy 4-Inch	LF	1,525.000	1,525.000
0118	650.4500	Construction Staking Subgrade	LF	553.000	553.000
0120	650.5000	Construction Staking Base	LF	553.000	553.000
0122	650.6501	Construction Staking Structure Layout (structure) 01. B-18-0254	EACH	1.000	1.000
0124	650.9911	Construction Staking Supplemental Control (project) 01. 7820-08-70	EACH	1.000	1.000
0126	650.9920	Construction Staking Slope Stakes	LF	553.000	553.000
0128	690.0150	Sawing Asphalt	LF	44.000	44.000
0130	715.0502	Incentive Strength Concrete Structures	DOL	1,320.000	1,320.000
0132	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. STA 10+00	EACH	1.000	1.000
0134	SPV.0195	Special 01. Infill Riprap B-18-0254	TON	26.000	26.000

3

CLEARING

STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
6+50 - 9+39	LT & RT	3	3
10+61 - 13+25	LT & RT	3	3
ITEM TOTALS		6	6

REMOVING GUARDRAIL

STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
7+71 - 9+47	RT	177
8+48 - 9+47	LT	102
10+53 - 11+21	RT	70
10+53 - 11+50	LT	98
ITEM TOTALS		447

FINISHING ROADWAY (PROJECT)

STATION	213.0100 01. 7820-08-70 EACH
6+50 - 13+25	1
ITEM TOTAL	1

EARTHWORK SUMMARY

STATION	LOCATION	205.0100 EXCAVATION COMMON CY	(1) SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	(2) AVAILABLE MATERIAL CY	(3) EXPANDED FILL CY	208.0100 BORROW CY	REMARKS
6+50 - 9+32	LT & RT	112	86	26	2260	2234	WEST OF STRUCTURE
10+68 - 13+25	LT & RT	143	79	64	1166	1102	EAST OF STRUCTURE
ITEM TOTALS		255	165	90	3426	3336	

NOTES:
1) UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN COMMON EXCAVATION.
2) AVAILABLE MATERIAL DOES NOT INCLUDE UNUSABLE PAVEMENT
3) EXPANSION FACTOR = 1.25

BASE AGGREGATE DENSE

STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
6+50 - 9+39	RT	37	328	3.7	
6+50 - 9+39	LT	37	329	3.7	
11+91 - 12+35	RT	12	-	-	DRIVEWAY
10+61 - 13+25	LT	35	305	3.4	
10+61 - 13+25	RT	34	297	3.4	
ITEM TOTALS		155	1259	14.2	

ASPHALTIC PAVEMENT ITEMS

STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	REMARKS
6+50 - 9+39	LT & RT	42	159	THRU LANES
7+64 - 9+39	LT	4	14	SW SHOULDER
7+64 - 9+39	RT	4	14	NW SHOULDER
10+18 - 10+70	LT & RT	39	145	THRU LANES
10+61 - 12+35	LT	4	14	NE SHOULDER
10+61 - 12+35	RT	4	15	SE SHOULDER
ITEM TOTALS		97	361	

BEAM GUARD

STATION	LOCATION	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
8+39 - 9+27	RT	39.4	1
8+39 - 9+27	LT	39.4	1
10+70 - 11+61	RT	39.4	1
10+70 - 11+61	LT	39.4	1
ITEM TOTALS		157.6	4

FINISHING ITEMS

STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
6+50 - 9+39	RT	630	0.4	29	17	14.1
6+50 - 9+39	LT	550	0.4	25	15	12.3
10+61 - 13+25	LT	520	0.4	24	14	11.7
10+61 - 13+25	RT	240	0.2	11	7	5.4
ITEM TOTALS		1940	1.4	89	53	43.5

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

3

3

EROSION CONTROL ITEMS

STATION	LOCATION	606.0300** RIPRAP HEAVY CY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2027 EROSION MAT CLASS II TYPE C SY	628.5505 POLYETHYLENE SHEETING SY	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7570 ROCK BAGS EACH	645.0120** GEOTEXTILE TYPE HR SY
6+50 - 9+39	LT & RT	130	710	710	1240	-	70	-	20	162
10+61 - 13+25	LT & RT	113	640	640	820	-	70	30	-	141
UNDISTRIBUTED	-	-	-	-	-	200	-	8	20	-
ITEM TOTALS		243	1350	1350	2060	200	140	38	40	303

**ITEM LOCATED ELSEWHERE IN PLANS

MOBILIZATIONS EROSION CONTROL

STATION	628.1905 EROSION CONTROL EACH	628.1910 EMERGENCY EROSION CONTROL EACH
6+50 - 13+25	3	3
ITEM TOTALS	3	3

PERMANENT SIGNING

SIGN GROUP CODE	SIGN CODE	SIGN MESSAGE	TYPE II SIZE	634.0612 POSTS WOOD 4X6-INCH 12-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
1-1	W5-52R	CLEARANCE STRIPER	12" X 36"	1	3	1	1	REPLACE
1-2	W5-52L	CLEARANCE STRIPER	12" X 36"	1	3	1	1	REPLACE
1-3	W5-52L	CLEARANCE STRIPER	12" X 36"	1	3	1	1	REPLACE
1-4	W5-52R	CLEARANCE STRIPER	12" X 36"	1	3	1	1	REPLACE
ITEM TOTALS				4	12	4	4	

TRAFFIC CONTROL

STATION	643.0420 BARRICADES TYPE III EACH	643.0420 BARRICADES TYPE III DAY	643.0705 WARNING LIGHTS TYPE A EACH	643.0705 WARNING LIGHTS TYPE A DAY	643.0900 SIGNS EACH	643.0900 SIGNS DAY	CALENDAR DAYS
6+50 - 13+25	18	1872	28	2912	14	1456	104
ITEM TOTALS		1872		2912		1456	

MARKING LINE

STATION	LOCATION	646.1020 EPOXY 4-INCH LF	REMARKS
6+50 - 13+25	CL	175	YELLOW SKIP CENTERLINE
6+50 - 13+25	LT & RT	1350	WHITE EDGELINE
ITEM TOTAL		1525	

CONSTRUCTION STAKING

STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	*650.6501 STRUCTURE LAYOUT (B-18-0254) EACH	650.9911 SUPPLEMENTAL CONTROL (7820-08-70) EACH	650.9920 SLOPE STAKES LF
6+50 - 9+39	LT & RT	289	289	-	-	289
10+61 - 13+25	LT & RT	264	264	-	-	264
PROJECT	LT & RT	-	-	1	1	-
ITEM TOTALS		553	553	1	1	553

*CATEGORY 0020

SAWING ASPHALT

STATION	LOCATION	690.0150 LF	REMARKS
6+50	LT & RT	22	MAINLINE
13+25	LT & RT	22	MAINLINE
ITEM TOTAL		44	

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED



EAU CLAIRE COUNTY

EAU CLAIRE COUNTY HIGHWAY DEPARTMENT

TRANSPORTATION PROJECT PLAT TITLE SHEET

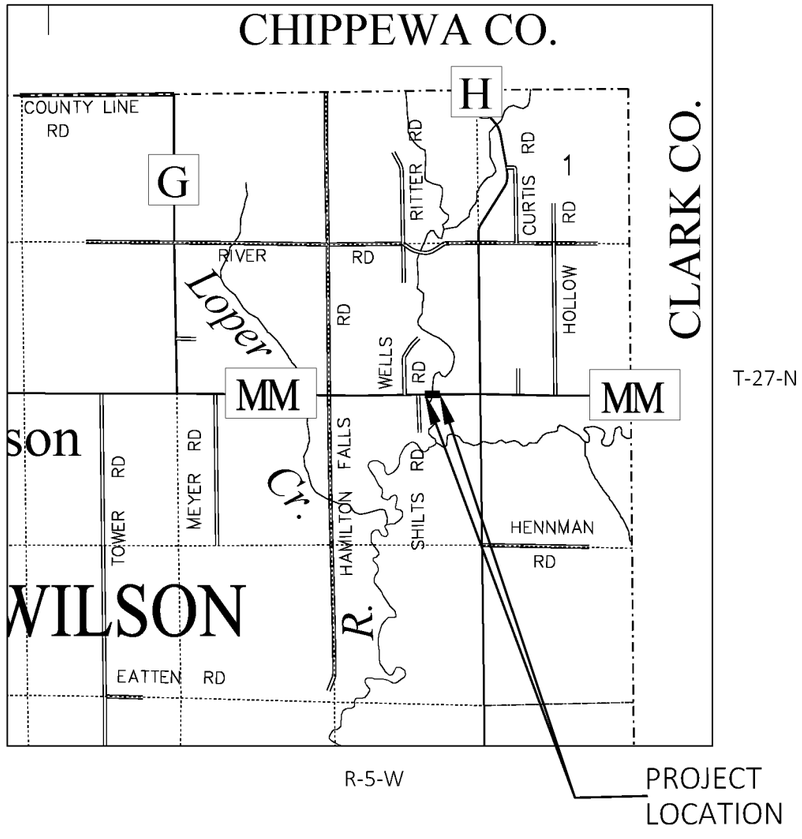
7820-08-00

WILSON - ECL

WOLF RIVER BRIDGE B-18-0254

CTH MM

EAU CLAIRE COUNTY



LAYOUT
SCALE 0 0.5 MI.

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER MINOR LINES
EXISTING CENTERLINE
CORPORATE LIMITS
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
BUILDING
TO BE REMOVED
BRIDGE
CULVERT

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
NON-PERMITTED SIGN
PERMITTED SIGN
ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER
PARALLEL OFFSETS

R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND SURVEY MONUMENT (SEE FOUND MONUMENT TABLE)

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	PROPERTY LINE	PL
ACRES	AC	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BLOCK	BLK	REMAINING	REM
CENTERLINE	C/L	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
CERTIFIED SURVEY MAP	CSM	RIGHT	RT
CONCRETE	CONC	RIGHT OF WAY	R/W
COUNTY TRUNK HIGHWAY	CTH	SECTION	SEC
CORNER	COR	SEPTIC VENT	SEPV
DOCUMENT NUMBER	DOC	SQUARE FEET	SF
EASEMENT	EASE	STATE TRUNK HIGHWAY	STH
EXISTING	EX	STATION	STA
GAS VALVE	GV	TELEPHONE PEDESTAL	TP
GRID NORTH	GN	TRANSPORTATION PROJECT PLAT	TPP
IDENTIFICATION	ID	UNITED STATES HIGHWAY	USH
INTERSTATE HIGHWAY	IH	VOLUME	V
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		
POINT OF COMPOUND CURVE	PCC		
POINT OF INTERSECTION	PI		

CURVE DATA ABBREVIATIONS

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
DELTA ANGLE	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

CONVENTIONAL UTILITY SYMBOLS

UTILITY NUMBER

		COMPENSABLE	NON-COMPENSABLE
WATER	W		
GAS	G		
TELEPHONE	T		
OVERHEAD TRANSMISSION LINES	OH		
ELECTRIC	E		
CABLE TELEVISION	TV		
FIBER OPTIC	FO		
SANITARY SEWER	SAN		
STORM SEWER	SS		
COMBINED SEWER	SSS		
ELECTRIC TOWER			
TRANSMISSION STRUCTURES			
ELECTRIC POLE			
TELEPHONE POLE			
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)			

THE NOTES, CONVENTIONAL SIGNS, AND ABBREVIATIONS ARE ASSOCIATED WITH EACH TRANSPORTATION PROJECT PLAT FOR PROJECT 7820-08-00.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), EAU CLAIRE COUNTY, NAD83(2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY AND PERMANENT EASEMENT MONUMENTS WILL BE TYPE 2 (TYPICALLY REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

ALL RIGHT-OF-WAY LINES DEPICTED IN THE NON-ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER RECORDED DOCUMENTS, CENTERLINE OF EXISTING PAVEMENTS AND/OR EXISTING OCCUPATIONAL LINES.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINE HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

PROPERTY LINES SHOWN ON THIS PLAT FOR PROPERTIES BEING IMPACTED ARE DRAWN FROM DATA DERIVED FROM FILED/RECORDED MAPS AND DOCUMENTS OF PUBLIC RECORD. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE EAU CLAIRE COUNTY HIGHWAY DEPARTMENT.

INFORMATION FOR THE BASIS OF EXISTING HIGHWAY RIGHT-OF-WAY POINTS OF REFERENCE AND ACCESS CONTROL ARE LISTED ON THE TPP DETAIL PAGES.

PROJECT NUMBER 7820-08-00- 4.01
SHEET 2 OF 2

FILE NAME : X:\AE\E\EAUCH\182323\5-FINAL-DSGN\C3D-CTH MM BRIDGE\RW\DWG\040101_RP.DWG
LAYOUT NAME: Title
PLOT DATE : 4/23/2026 PLOT BY : SEH PLOT NAME : _____

7820-08-00 4.01

Eau Claire County Register of Deeds Doc#1278936 Page 2 of 2

TRANSPORTATION PROJECT PLAT NO: 7820-08-00-4.01 AMENDMENT NO: 1 AMENDS UTILITY NO: 50 ON TRANSPORTATION PROJECT PLAT 7820-08-00-4.01 RECORDED AS DOCUMENT NO. 1278936.

THAT PART OF OUTLOT 1 OF CSM NO. 3707, V. 21, P. 151, DOC NO. 1220725, LOCATED IN AND INCLUDING SOUTHWEST OF THE SOUTHEAST, AND THAT PART OF OUTLOT 1 AND LOT 2 OF CSM NO. 3707, V. 21, P. 151, DOC. NO. 1220725, LOCATED IN AND INCLUDING THE SOUTHEAST 1/4 OF THE SOUTHEAST 1/4, SECTION 11 AND THAT PART OF THE NORTHWEST 1/4 OF THE NORTHEAST 1/4 SECTION 14, ALL IN TOWNSHIP 27 NORTH, RANGE 5 WEST, TOWN OF WILSON, EAU CLAIRE COUNTY, WISCONSIN.

RELOCATION ORDER CTH MM, WILSON - ECL, WOLF RIVER BRIDGE B-02-0254 EAU CLAIRE COUNTY.

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, EAU CLAIRE COUNTY DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE NAMED PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 83.07 AND 83.08, WISCONSIN STATUTES, EAU CLAIRE COUNTY, HEREBY ORDERS THAT:

1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE COUNTY FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE COUNTY OF EAU CLAIRE, PURSUANT TO THE PROVISIONS OF SECTION 83.07 AND 83.08, WISCONSIN STATUTES.

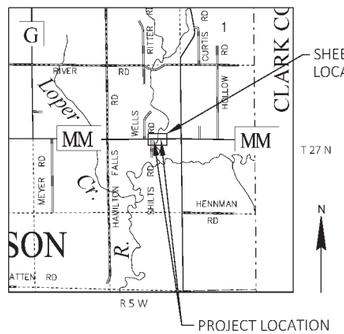
FOR ADDITIONAL INFORMATION REFER TO THE TITLE SHEET, RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS IN EAU CLAIRE COUNTY AS SHEET 2 OF 2, DOCUMENT 1278936.

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), EAU CLAIRE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY AND PERMANENT EASEMENT MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" IRON REBARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE EAU CLAIRE COUNTY HIGHWAY DEPARTMENT.

LOCATION SKETCH
NOT TO SCALE



OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE COUNTY.

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER(S)	INTERESTS REQUIRED	FEE R/W SQUARE FEET REQUIRED			PLE SQUARE FEET	TLE SQUARE FEET
			NEW	EXISTING	TOTAL		
1	MARK A. & SARA B. GINT	PLE/TLE	-	-	-	989	4484
2	JESSE J. & LYNN M. FREY	PLE/TLE	-	-	-	1147	4517
3	ADAM WALTERS	TLE	-	-	-		918

UTILITY INTERESTS REQUIRED

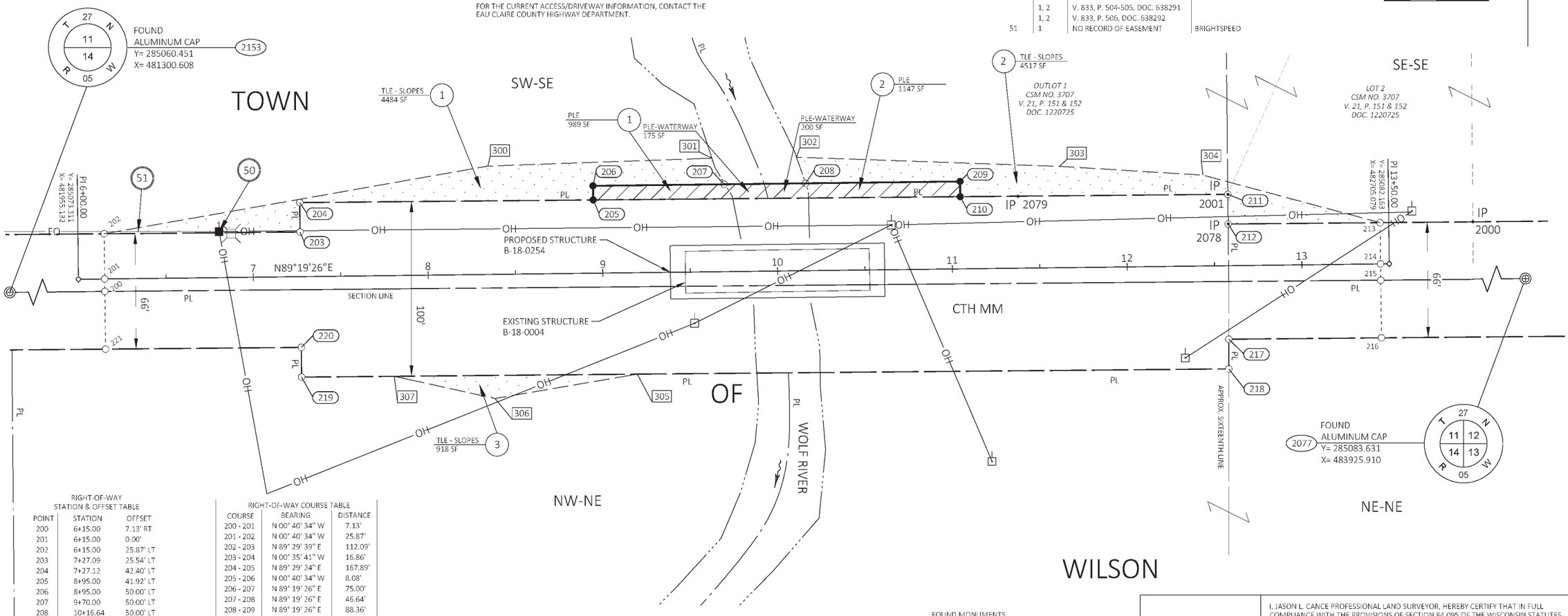
UTILITY NUMBER	OWNER (S)	INTEREST REQUIRED
50	EAU CLAIRE ENERGY COOPERATIVE	RELEASE OF RIGHTS
51	BRIGHTSPEED	RELEASE OF RIGHTS

UTILITY EASEMENT TABLE

UTILITY NUMBER	PARCEL	RECORDING INFORMATION	NAME
50	1, 2	DOC. 1150020	EAU CLAIRE ENERGY COOPERATIVE
	2	DOC. 1203486	
	1, 2	V. 833, P. 504-505, DOC. 638291	
	1, 2	V. 833, P. 506, DOC. 638292	
51	1	NO RECORD OF EASEMENT	BRIGHTSPEED

1279096
TINA K POMMIER
EAU CLAIRE COUNTY WI
REGISTER OF DEEDS
RECORDED ON
04/30/2026 12:28 PM
REC FEE: 30.00
PAGES: 1
This document was electronically recorded and returned to submitter

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER: 7820-08-00-4.01
AMENDMENT NO: 1



RIGHT-OF-WAY STATION & OFFSET TABLE

POINT	STATION	OFFSET
200	6+15.00	7.13' RT
201	6+15.00	0.00'
202	6+15.00	25.87' LT
203	7+27.09	25.54' LT
204	7+27.12	42.40' LT
205	8+95.00	41.92' LT
206	8+95.00	50.00' LT
207	9+70.00	50.00' LT
208	10+16.64	50.00' LT
209	11+05.00	50.00' LT
210	11+05.00	41.31' LT
211	12+58.11	40.86' LT
212	12+58.09	23.86' LT
213	13+45.00	23.61' LT
214	13+45.00	0.00'
215	13+45.00	9.30' RT
216	13+45.00	42.30' RT
217	12+57.68	42.04' RT
218	12+57.48	59.04' RT
219	7+26.97	57.46' RT
220	7+27.00	40.46' RT
221	6+15.00	40.13' RT

RIGHT-OF-WAY COURSE TABLE

COURSE	BEARING	DISTANCE
200 - 201	N 00° 40' 34" W	7.13'
201 - 202	N 00° 40' 34" W	25.87'
202 - 203	N 89° 29' 39" E	112.09'
203 - 204	N 00° 35' 41" W	16.86'
204 - 205	N 89° 29' 24" E	167.89'
205 - 206	N 00° 40' 34" W	8.08'
206 - 207	N 89° 19' 26" E	75.00'
207 - 208	N 89° 19' 26" E	46.64'
208 - 209	N 89° 19' 26" E	88.36'
209 - 210	S 00° 40' 34" E	8.69'
210 - 211	N 89° 29' 24" E	153.11'
211 - 212	S 00° 35' 41" E	17.00'
212 - 213	N 89° 29' 24" E	86.91'
213 - 214	S 00° 40' 34" E	23.61'
214 - 215	S 00° 40' 34" E	9.30'
215 - 216	S 00° 40' 34" E	33.00'
216 - 217	S 89° 29' 39" W	87.32'
217 - 218	S 00° 00' 00" E	17.00'
218 - 219	S 89° 29' 39" W	530.51'
219 - 220	N 00° 35' 41" W	17.00'
220 - 221	S 89° 29' 39" W	112.00'
221 - 200	N 00° 40' 34" W	33.00'

TLE STATION & OFFSET TABLE

POINT	STATION	OFFSET
300	8+35.00	62.00' LT
301	9+63.21	65.00' LT
302	10+11.57	65.00' LT
303	11+62.00	58.00' LT
304	12+44.00	52.00' LT
305	9+19.00	58.03' RT
306	8+37.50	71.00' RT
307	7+80.00	57.62' RT

SECTION LINE - COURSE TABLE

COURSE	BEARING	DISTANCE
2153 -200	N 89° 29' 39" E	669.63'
200 - 215	N 89° 29' 39" E	750.00'
215 - 2077	N 89° 29' 39" E	1205.77'
2077 -2153	S 89° 29' 39" W	2625.40'

FOUND MONUMENTS

POINT	Y	X	DESCRIPTION
2000	285106.217	482752.904	3/4" REBAR
2001	285121.940	482612.768	3/4" REBAR
2078	285105.026	482612.956	5/8" REBAR
2079	285120.778	482492.736	5/8" REBAR

ROAD NAME	BASIS OF EXISTING R/W	YEAR
CTH MM	CSM 3707, V. 21, P. 151-152, DOC. 1220725	2021

SEH
10 N BRIDGE ST
CHIPPEWA FALLS WI 54729

I, JASON L. CANCE PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF EAU CLAIRE COUNTY, I HAVE SURVEYED AND MAPPED THIS TRANSPORTATION PROJECT PLAT AND SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN JASON L. CANCE S-2688 CHIPPEWA FALLS WI LAND SURVEYOR

SIGNATURE: _____ DATE: 4-30-26
PRINT NAME: JASON L. CANCE
REGISTRATION NUMBER: S-2688

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR EAU CLAIRE COUNTY

SIGNATURE: _____ DATE: 4/30/2026
PRINT NAME: BRIAN SPILDE

FILE NAME : X:\AE\E\EAUCH\182323\5-FINAL-DSGN\C3D-CTH MM BRIDGE\RW\DWG\040101_RP.DWG
APPRAISAL PLAT DATE : 4-30-26
PLOT DATE : 4/23/2026
PLOT BY : SEH
PLOT NAME :
PLOT SCALE :
7820-08-00-4.01A1

UTILITY LOCATIONS ARE APPROXIMATE.
ACTUAL LOCATIONS MUST BE FIELD VERIFIED.

SEE GENERAL NOTES SHEET FOR BENCHMARK AND CONTROL POINT INFORMATION.

0.08 ACRES TYPE FF WETLAND LOSS
0.10 ACRES TEMPORARY TYPE FF WETLAND IMPACT

SCALE, FEET 0 25 50

N

TOP OF STREAMBANK (TYP)
EDGE OF WATER (TYP)
REMOVE EXISTING STRUCTURE B-18-0004
REPLACE 1-2 W5-52L 12"X36"
REPLACE 1-4 W5-52R 12"X36"
PLE
EXIST R/W SIXTEENTH LINE
EXIST PROPERTY LINE
DELINEATED WETLAND BOUNDARY
TLE (TYP)
EAU CLAIRE ENERGY COOPERATIVE & SPECTRUM BRIGHTSPEED
BRIGHTSPEED
BP: 6+00.00 Y = 285073.311 X = 481955.132
EP: 13+50.00 Y = 285082.163 X = 482705.079
BM 1
BM 2
BM 3
BM 4
CP 1
CP 2
CP 3
CP 4
CP 5
N89°19'26"E
7+00
8+00
9+00
10+00
11+00
12+00
13+00
CTH MM
SAWCUT (TYP)
SLOPE INTERCEPT (TYP)
INSTALL SILT FENCE RELIEF (SEE CONSTRUCTION DETAIL) (TYP)
BEGIN PROJECT STA 6+50 MATCH EXISTING SAWCUT REQ'D Y = 285,073.901 X = 482,005.128
REPLACE 1-1 W5-52R 12"X36"
TLE (TYP)
EAU CLAIRE ENERGY COOPERATIVE
DELINEATED WETLAND BOUNDARY
WILDLIFE PASSAGE (SEE STRUCTURE PLAN)
WOLF RIVER
REPLACE 1-3 W5-52L 12"X36"
B-18-0254 PROPOSED STRUCTURE (SEE STRUCTURE PLAN)
DELINEATED WETLAND BOUNDARY
EAU CLAIRE ENERGY COOPERATIVE
STA 12+13 CONSTRUCT GRAVEL PE
EXIST R/W (TYP)
END PROJECT STA 13+25 MATCH EXISTING SAWCUT REQ'D Y = 285,081.677 X = 482,680.083

EROSION CONTROL LEGEND
- SILT FENCE
- TURBIDITY BARRIERS
- RIPRAP HEAVY
- TEMPORARY DITCH CHECKS
- EROSION MAT CLASS II TYPE C
- SILT FENCE RELIEF

VCL = 160.00
K = 64.99
VCL = 120.00
K = 63.64
VCL = 120.00
K = 79.18

STA 6+50.00 EL 1009.50
VPC STA 6+55.00 VPC EL 1009.39
-2.16%
LP STA 7+95.50 LP EL 1007.87
VPI STA 7+35.00 VPI EL 1007.66
VPT STA 8+15.00 VPT EL 1007.90
PROPOSED ℄ PROFILE
EXISTING ℄ PROFILE
0.30%
VPC STA 10+65.00 VPC EL 1008.65
HP STA 10+88.75 HP EL 1008.69
VPI STA 11+25.00 VPI EL 1008.83
VPT STA 11+85.00 VPT EL 1008.10
-1.22%
VPC STA 11+90.00 VPC EL 1008.04
LP STA 12+67.36 LP EL 1007.57
VPI STA 12+50.00 VPI EL 1007.31
VPT STA 13+10.00 VPT EL 1007.71
STA 13+25.00 EL 1007.81
0.67%
HIGH WATER 100 YR EL. 1001.71'
HIGH WATER 2 YR EL. 991.21'
OBSERVED WATER EL. 985.34' (11/12/2024)
EXISTING ℄ ELEVATION
PROPOSED ℄ ELEVATION

1020 1015 1010 1005 1000 995 990 985 983

1010.54 1009.49 1009.50 1008.22 1008.57 1006.98 1008.03 1006.03 1007.87 1005.29 1008.00 1004.72 1008.15 1001.64 1008.30 984.24 1008.45 1003.12 1008.60 1005.55 1008.68 1006.18 1008.45 1006.65 1007.93 1007.12 1007.59 1007.58 1007.65 1008.03

EARTHWORK SUMMARY
STA 6+50 TO STA 9+32

CUT	112 CY
FILL	1,808 CY
FILL AR 1.25 EXP	2,260 CY
BORROW	2,234 CY

STA 10+00
REMOVE STRUCTURE B-18-0004 REQ'D
3-SPAN CONCRETE SLAB BRIDGE
105.4' OVERALL LENGTH

EARTHWORK SUMMARY
STA 10+68 TO STA 13+25

CUT	143 CY
FILL	933 CY
FILL AR 1.25 EXP	1,166 CY
BORROW	1,102 CY

STA 10+00
STRUCTURE B-18-0254 REQ'D
PROPOSED SINGLE-SPAN
54W" CONCRETE GIRDER BRIDGE
123.0' OVERALL LENGTH
28' CLEAR ROADWAY WIDTH

PROJECT NO: 7820-08-70	HWY: CTH MM	COUNTY: EAU CLAIRE	PLAN AND PROFILE: CTH MM	SHEET 12	E

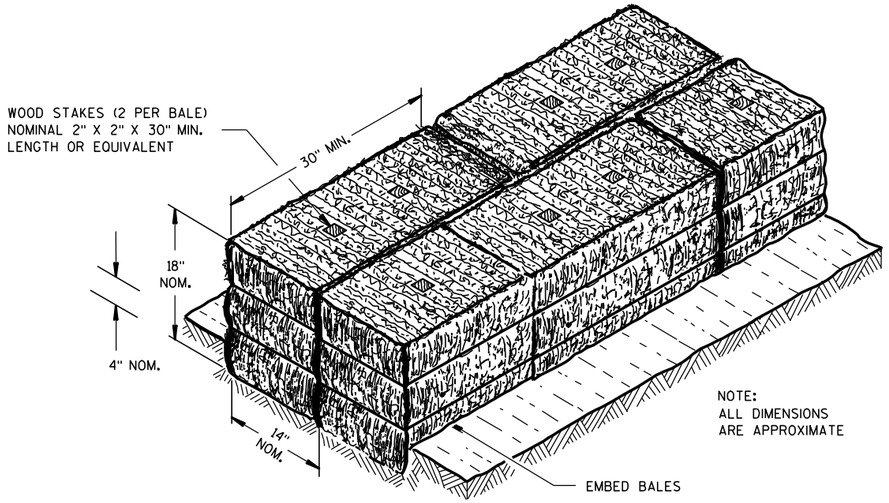
FILE NAME : \\SEHINC.COM\PANZURA\PZPROJECTS\AE\E\EAUCH\182323\5-FINAL-DSGN\C3D-CTH MM BRIDGE\SHEETS\NEW 050101 PP.DWG
LAYOUT NAME - 01
PLOT DATE : 7/21/2026 10:51 PM PLOT BY : BEN PIERCE PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 44

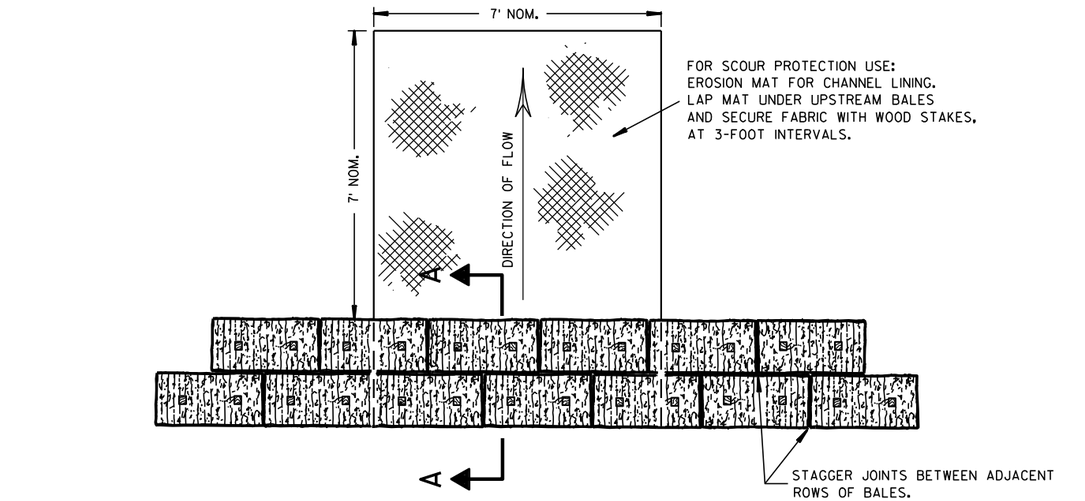
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
09A14-01	DRIVEWAYS WITHOUT CURB AND GUTTER
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
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)
15C02-10A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-10B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING AND MARKING FOR TWO LANE BRIDGES
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-11B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

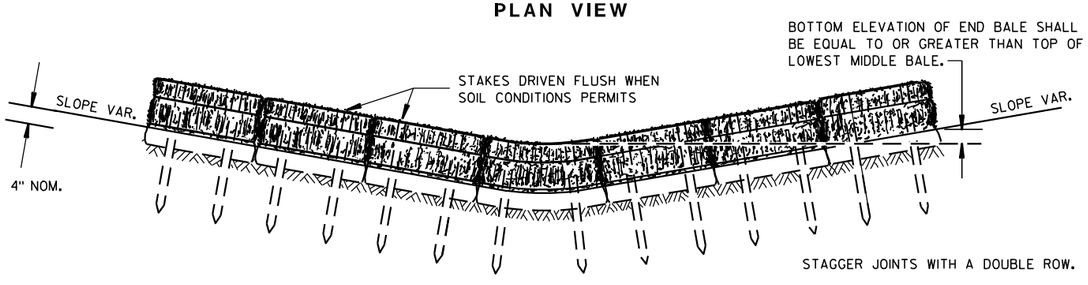
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SECTION A-A



PLAN VIEW



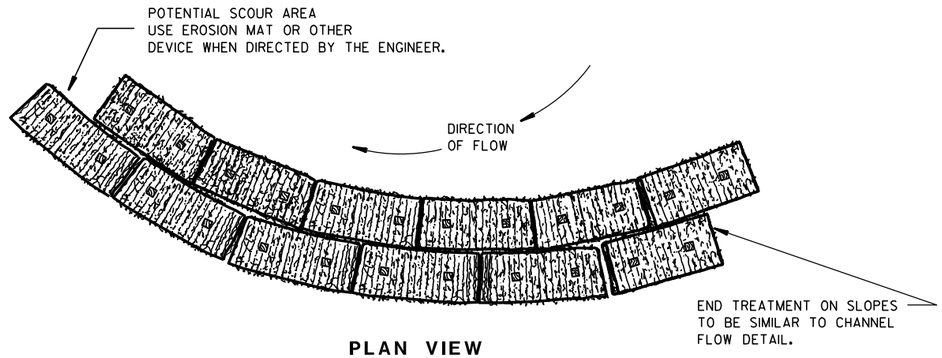
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

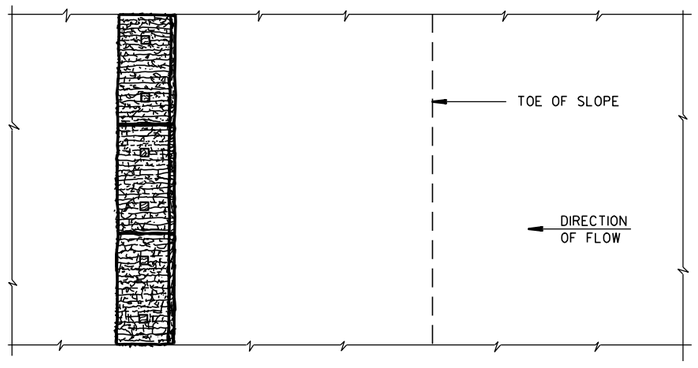
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

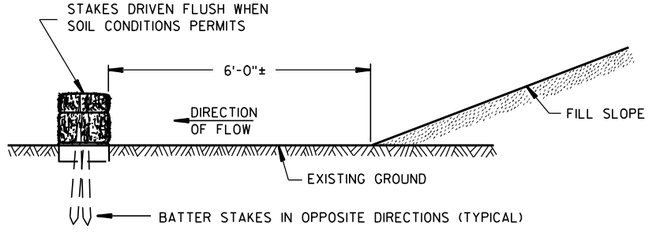


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

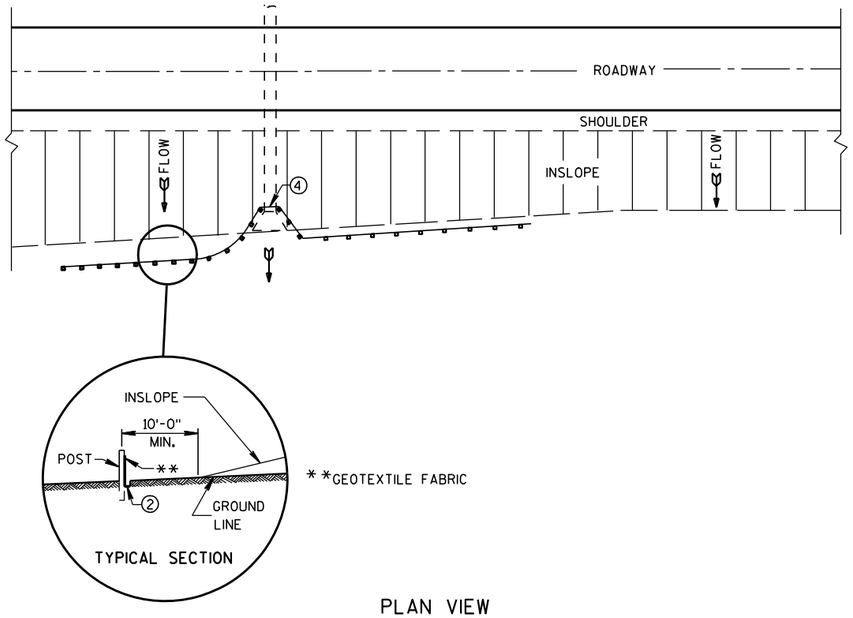
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

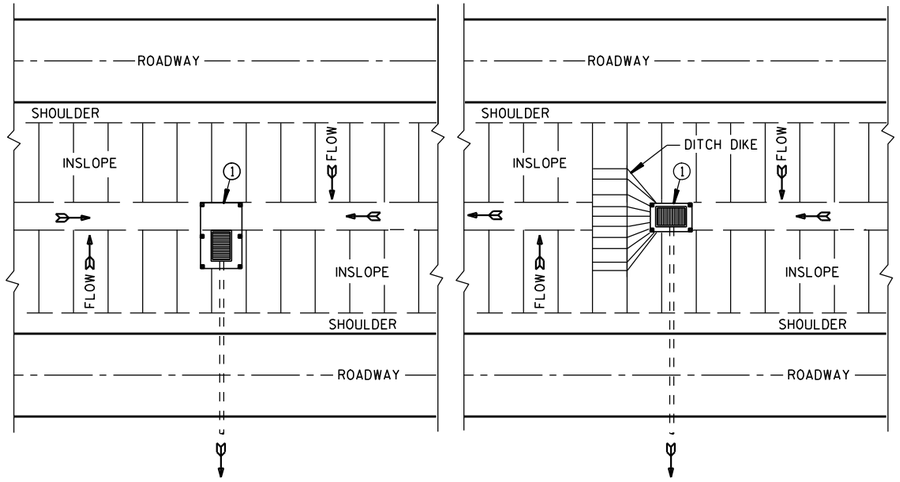
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S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



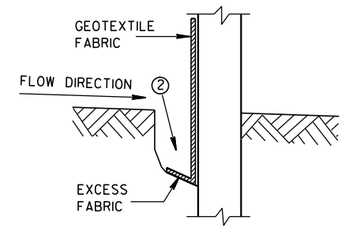
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

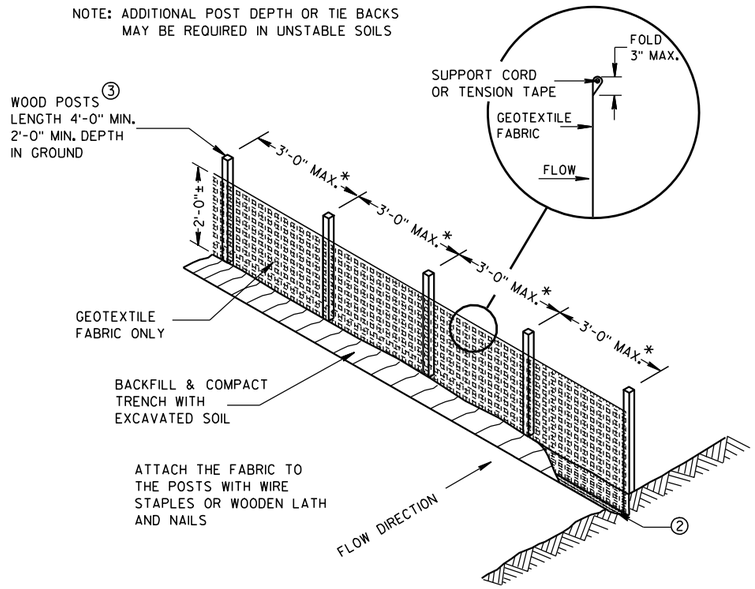
GENERAL NOTES

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

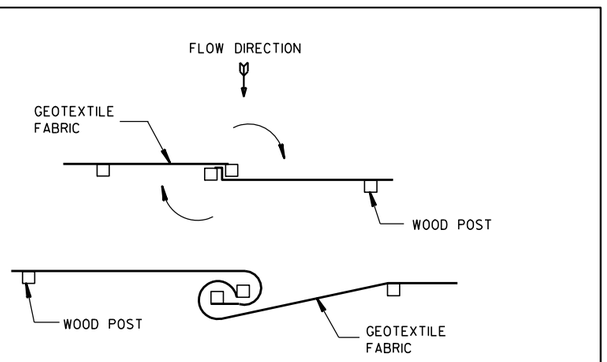
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



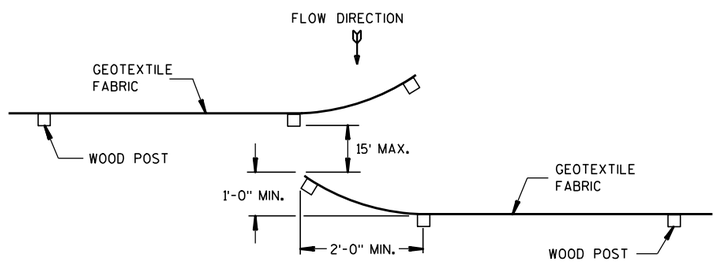
TRENCH DETAIL



SILT FENCE

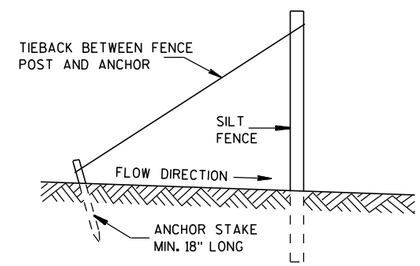


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

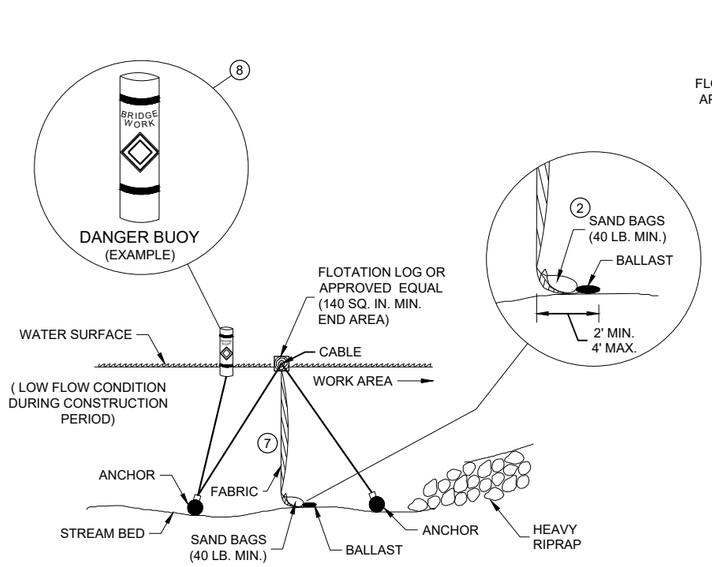
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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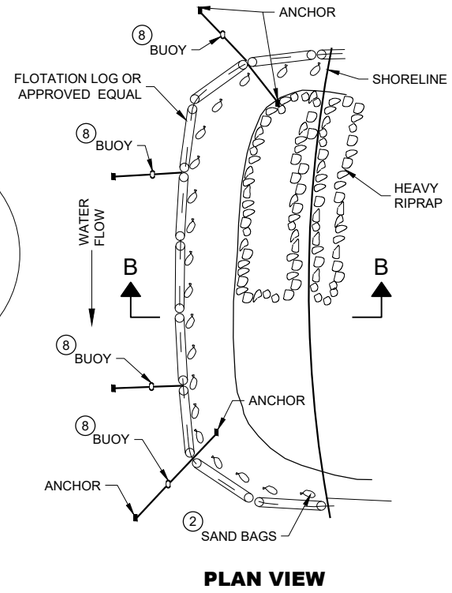
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

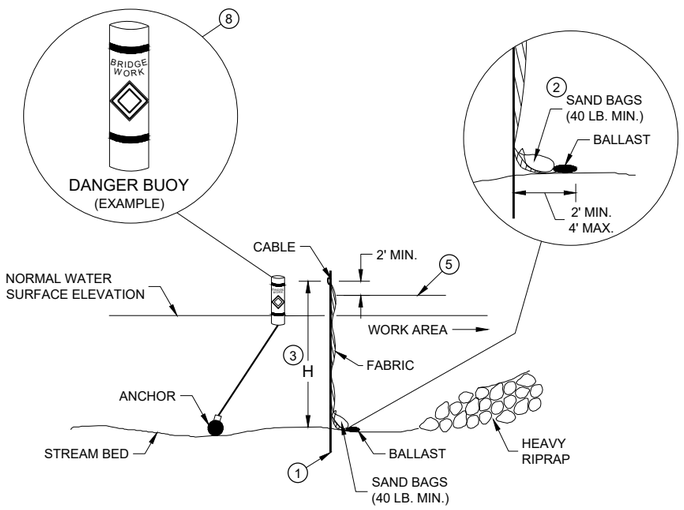


SECTION B - B

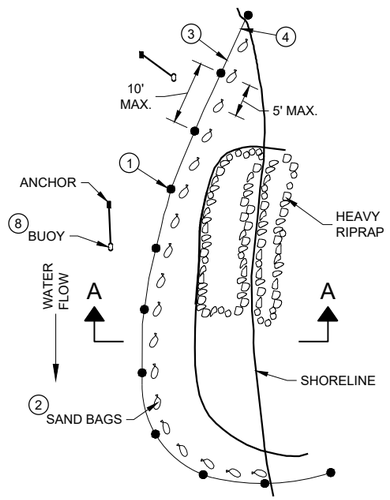


PLAN VIEW

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.

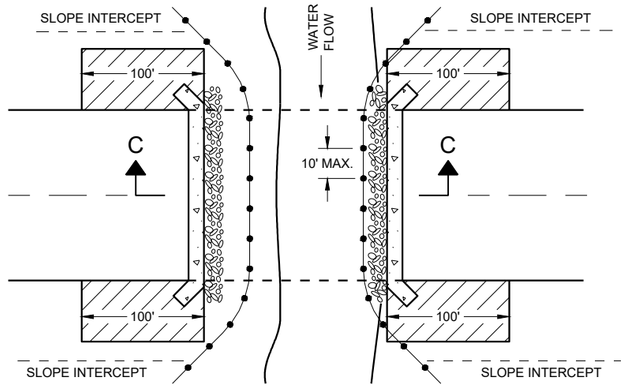
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(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.

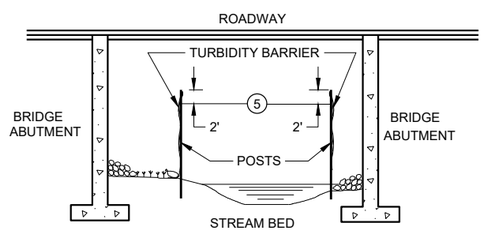
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(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

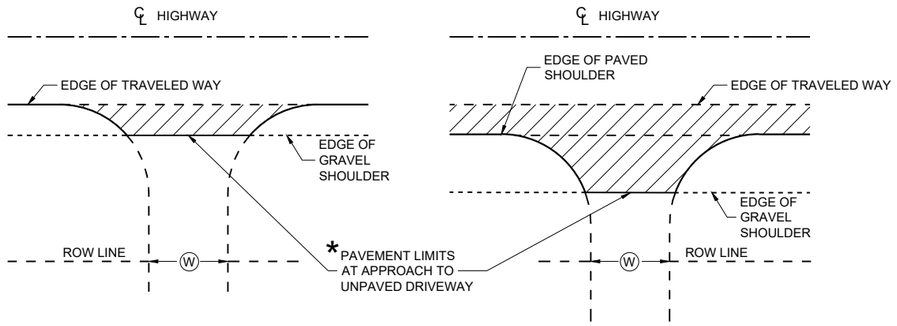
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 08E11 - 02

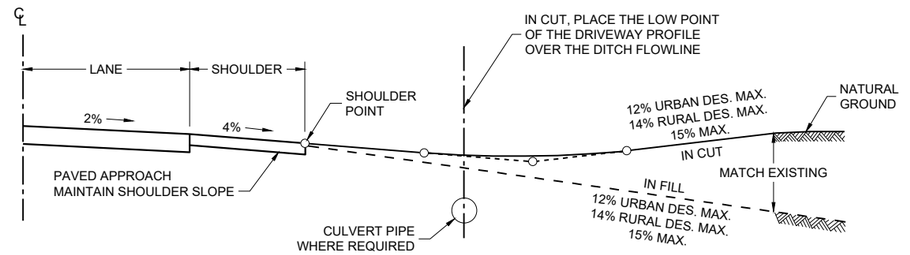


* WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

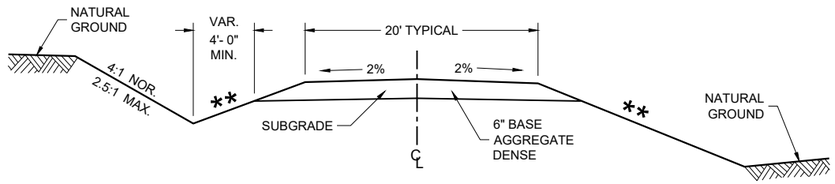
PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL (NO CURB AND GUTTER OR SIDEWALK)



TYPICAL DRIVEWAY PROFILES

Ⓦ : DRIVEWAY WIDTHS (MEASURED AT ROW LINE)
~ COMMERCIAL & INDUSTRIAL 16' MIN. - 35' MAX.
~ RESIDENTIAL & AGRICULTURAL (NONCOMMERCIAL) 16' MIN. - 24' MAX.

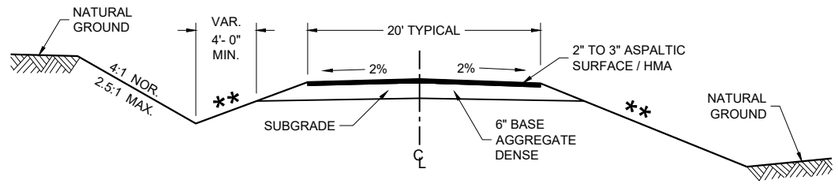


IN CUT IN FILL

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



IN CUT IN FILL

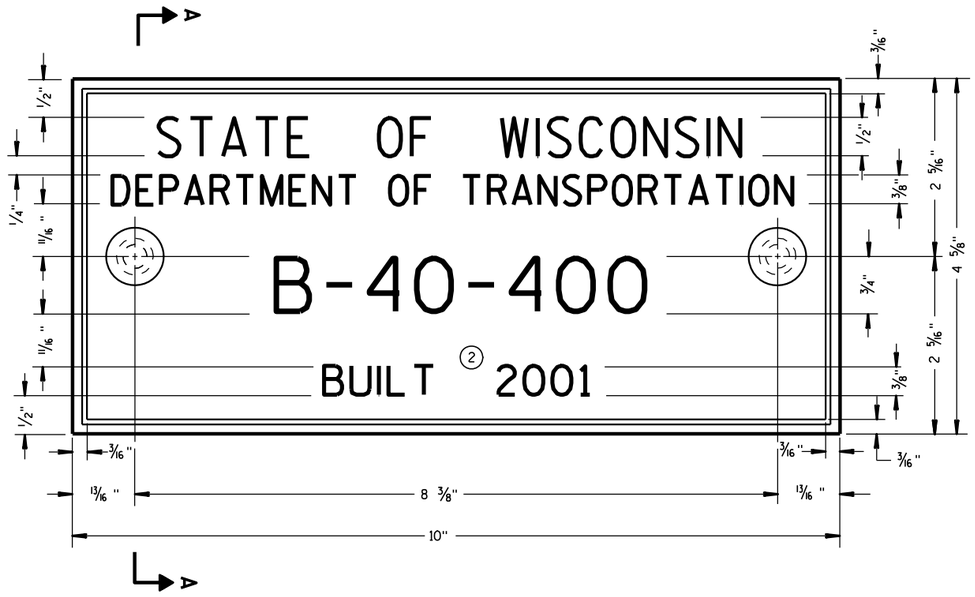
TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

DRIVEWAYS WITHOUT CURB AND GUTTER

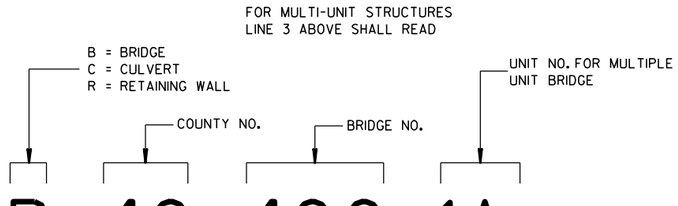
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

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SDD 09A14-01



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

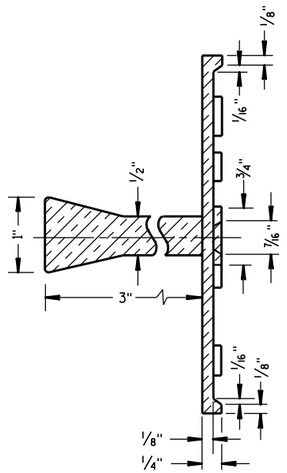
GENERAL NOTES

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

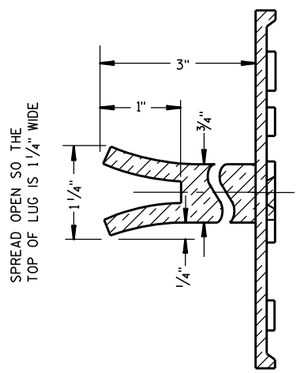
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

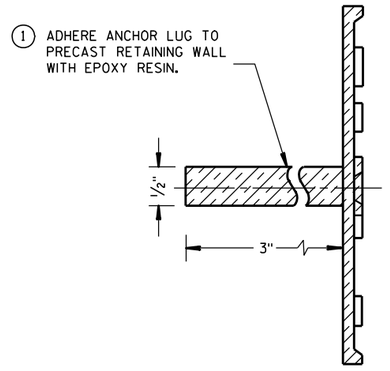
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

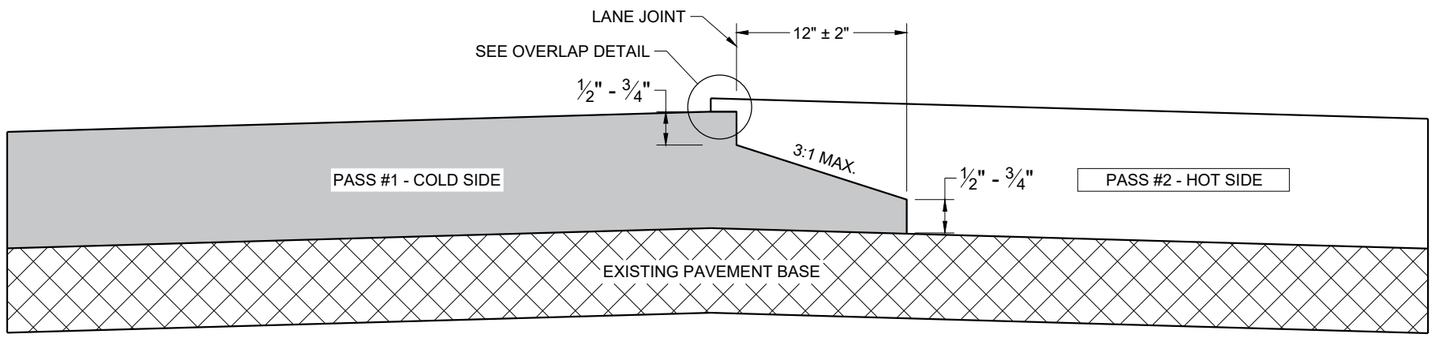
APPROVED

3/26/10 DATE — /S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

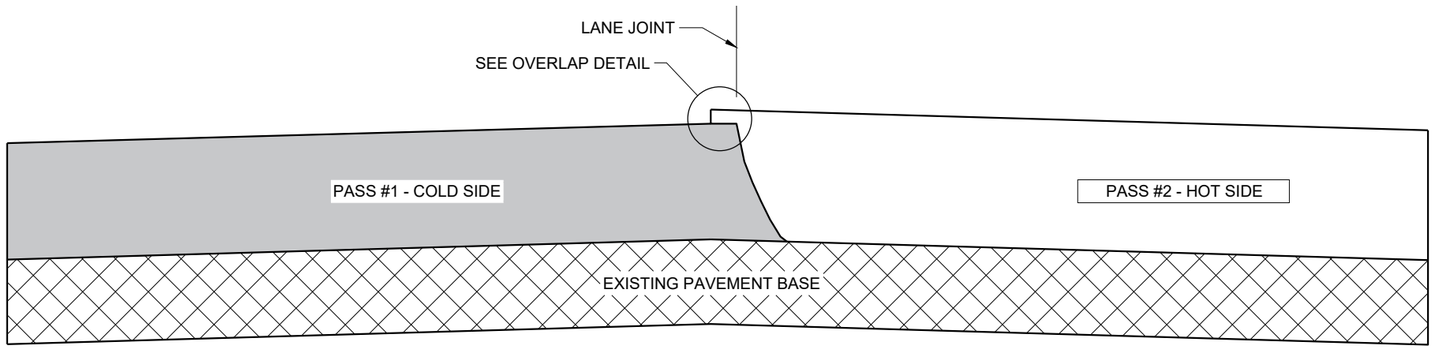
FHWA

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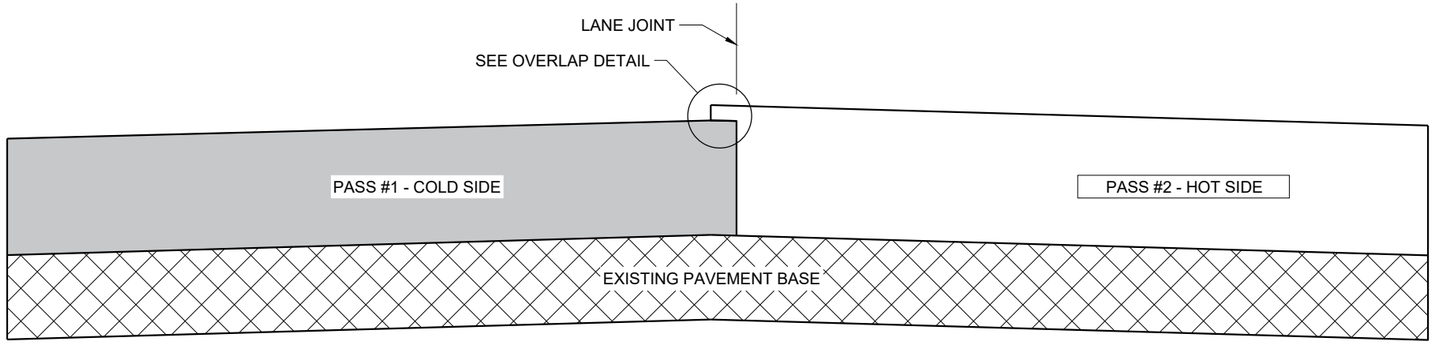
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

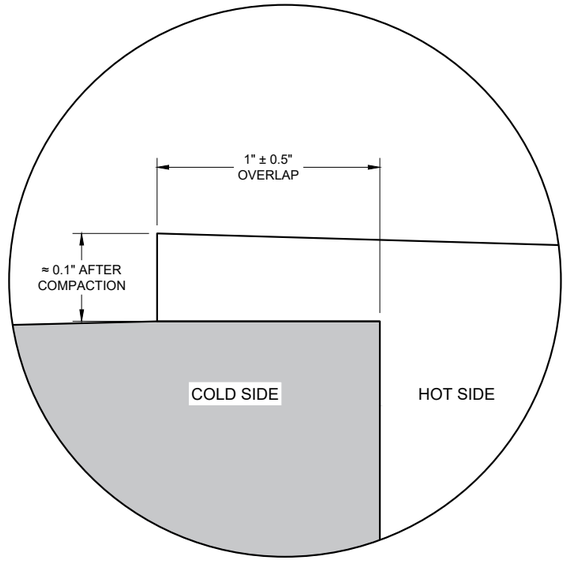
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY 1" ± 0.5" AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

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SDD 13C19 - 03

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SDD 13C19 - 03

(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.

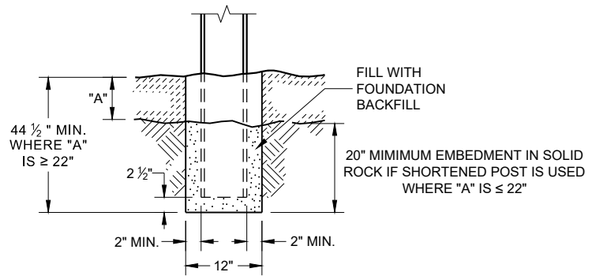
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

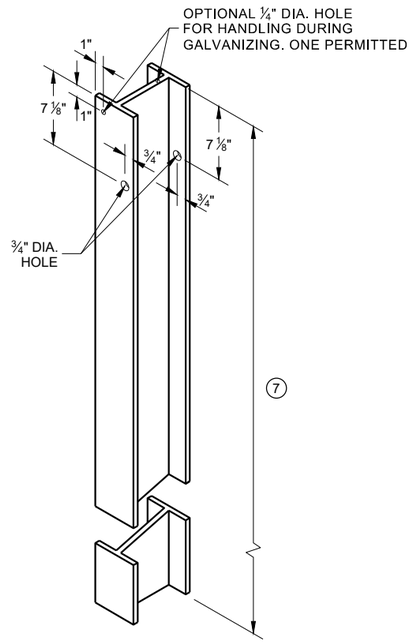
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

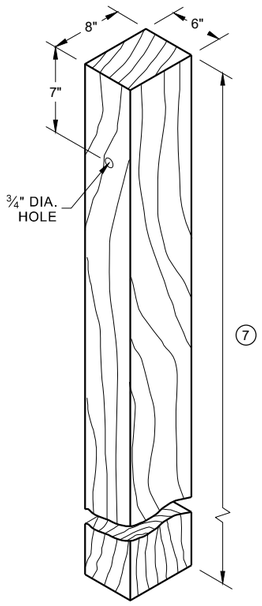
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



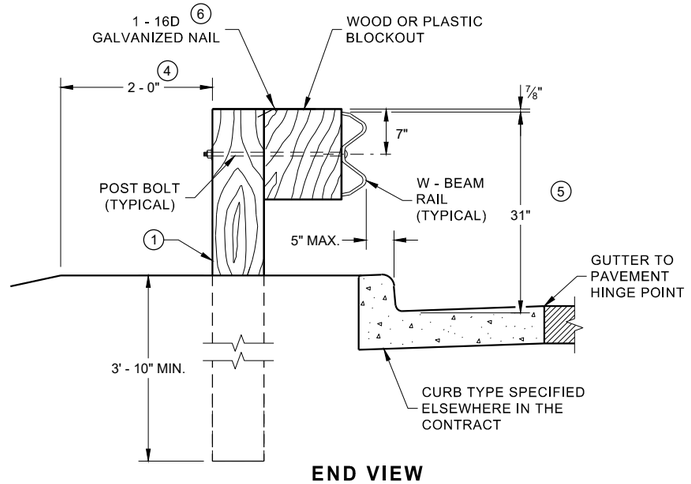
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



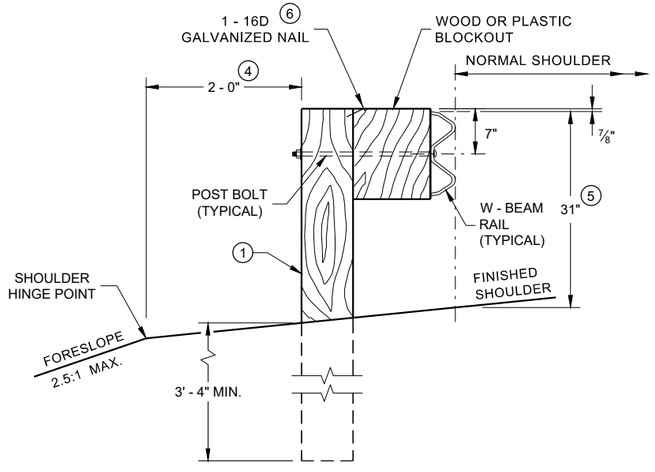
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



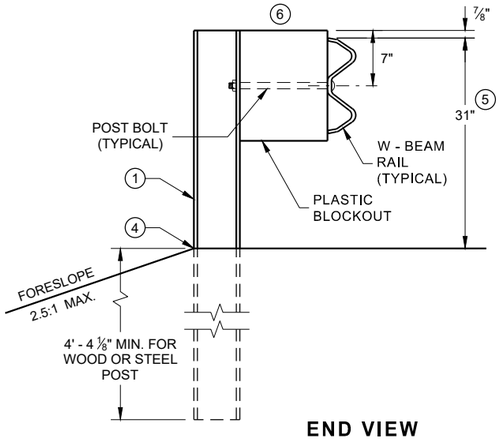
WOOD POST (6" X 8") NOMINAL (1)



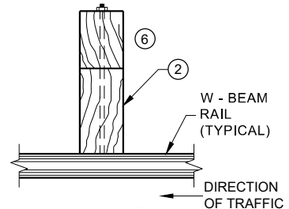
END VIEW
LOCATED ALONG A CURBED ROADWAY



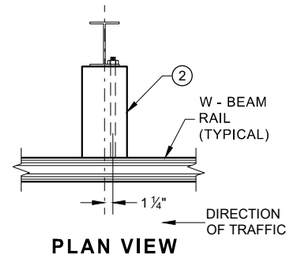
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



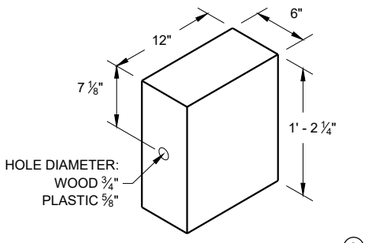
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM

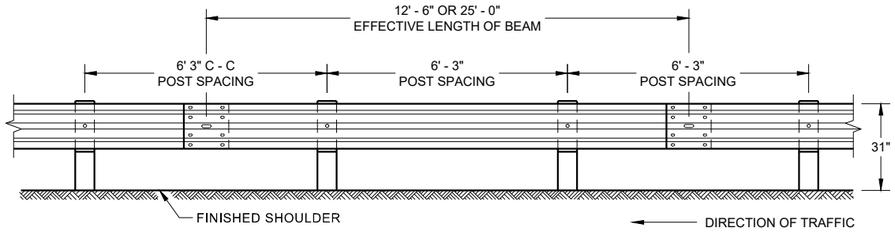


WOOD OR PLASTIC BLOCKOUT (2)

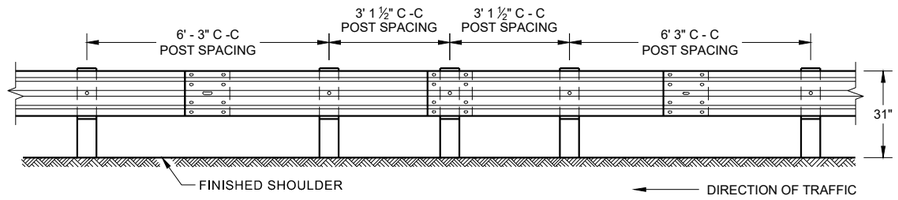
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

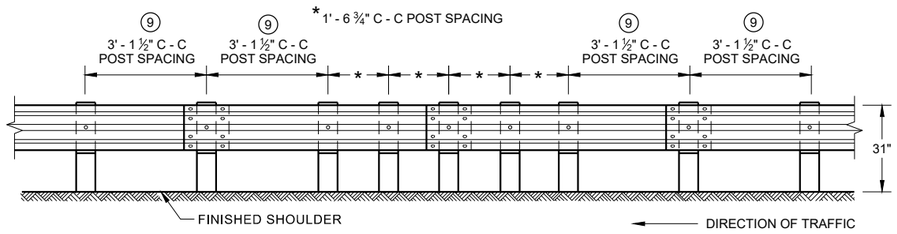
6
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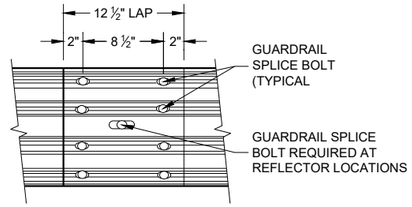
FRONT VIEW
POST SPACING STANDARD INSTALLATION



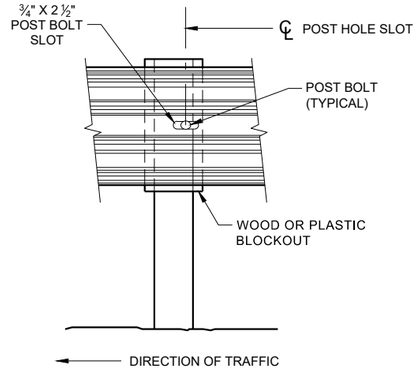
FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)



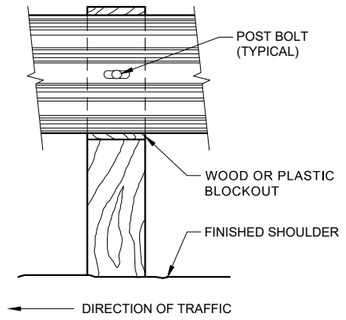
FRONT VIEW
QUARTER POST SPACING (QS)



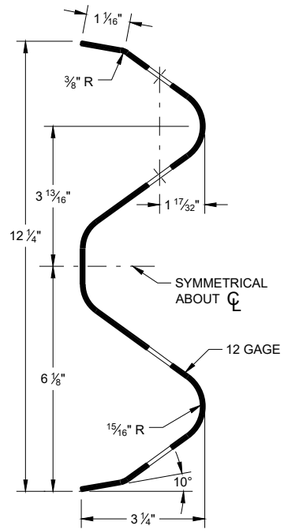
FRONT VIEW
MID-SPAN BEAM SPLICE



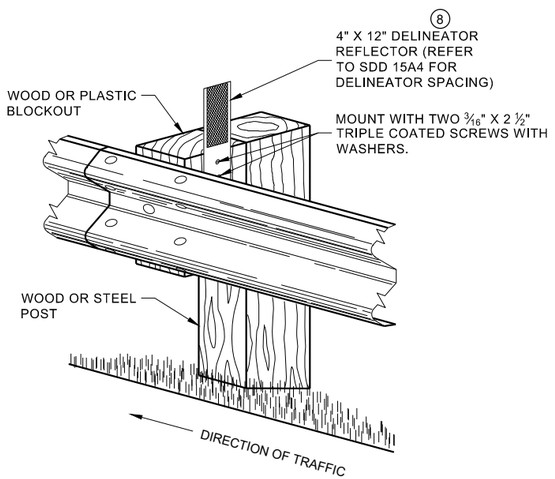
FRONT VIEW AT STEEL POST



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.

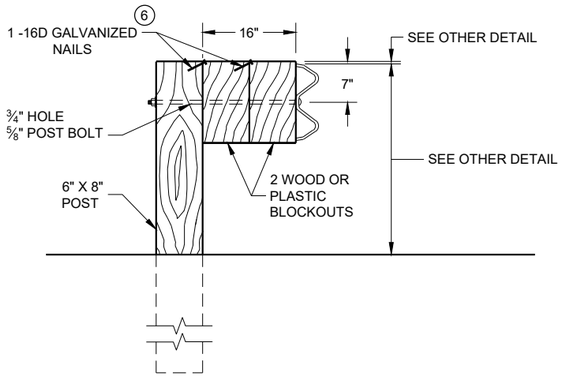
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
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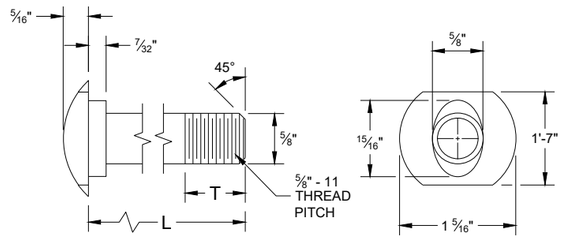


DETAIL FOR 16" BLOCKOUT DEPTH

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.

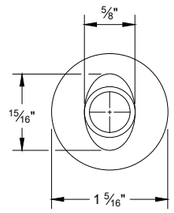
NOTE:

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.

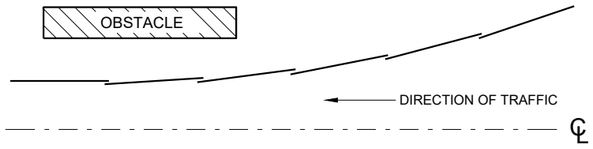


POST BOLT TABLE

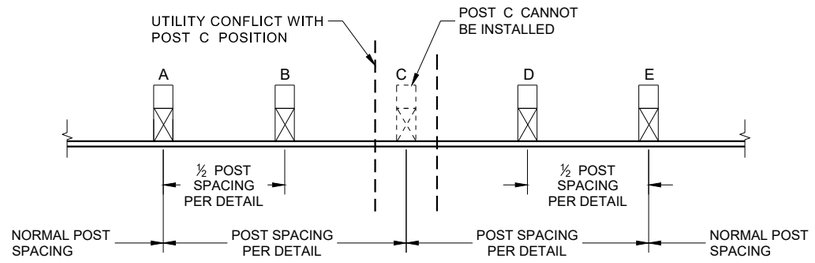
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



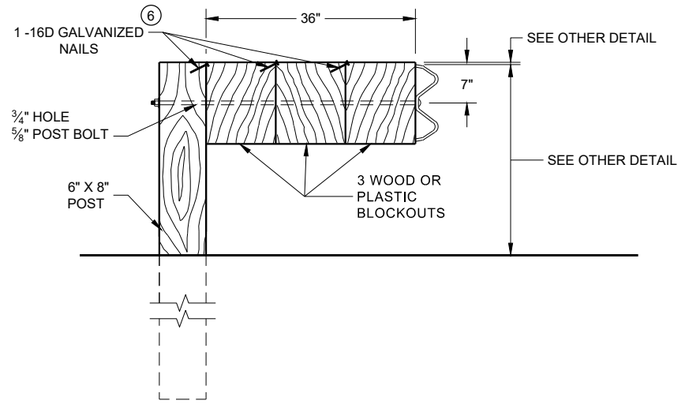
ALTERNATE BOLT HEAD



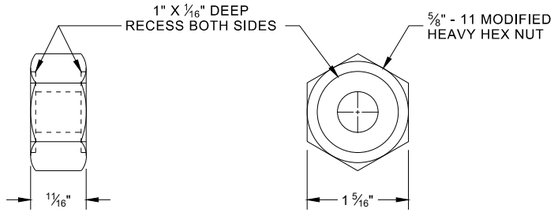
PLAN VIEW
BEAM LAPPING DETAIL



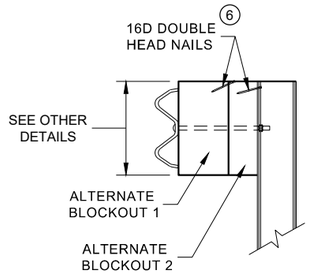
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



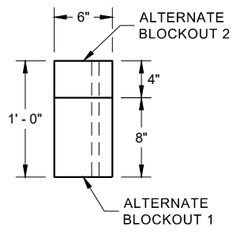
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

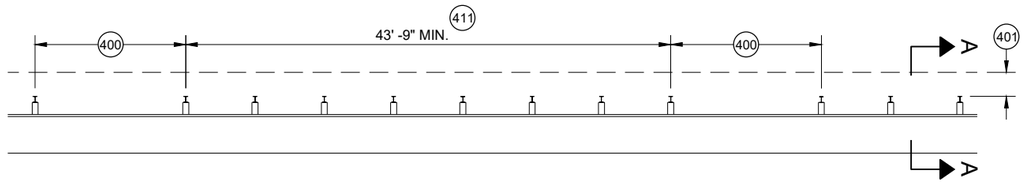
ALTERNATE WOOD BLOCKOUT DETAIL

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.

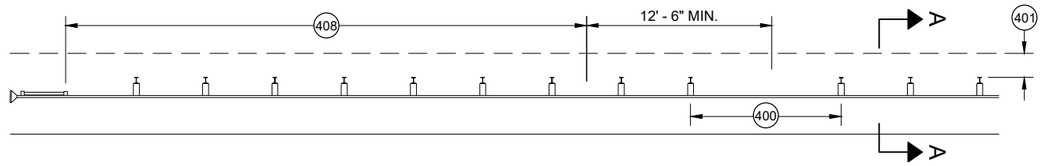
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

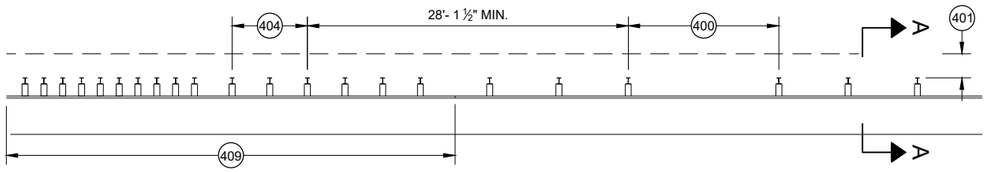
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



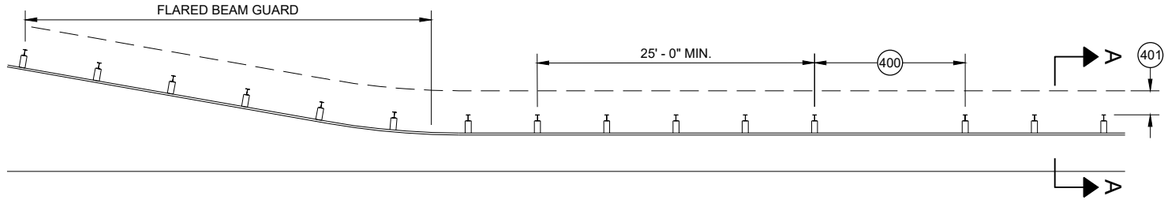
MISSING POST IN MGS GUARDRAIL



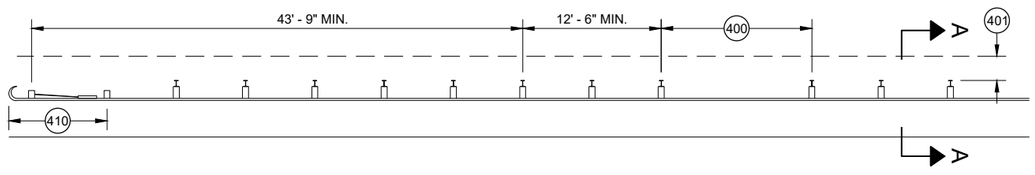
MISSING POST IN MGS GUARDRAIL NEAR EAT



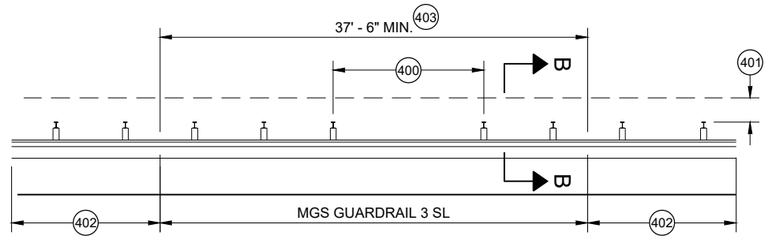
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

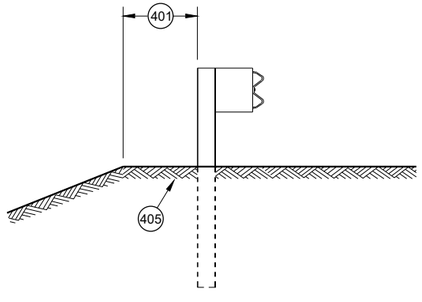


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

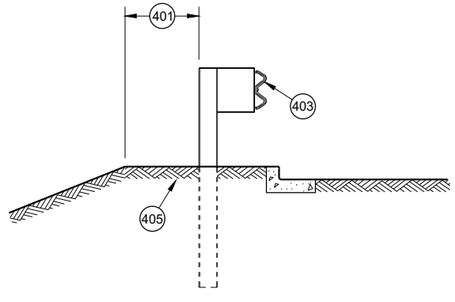


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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

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.

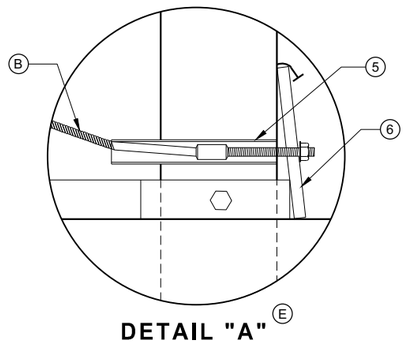
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

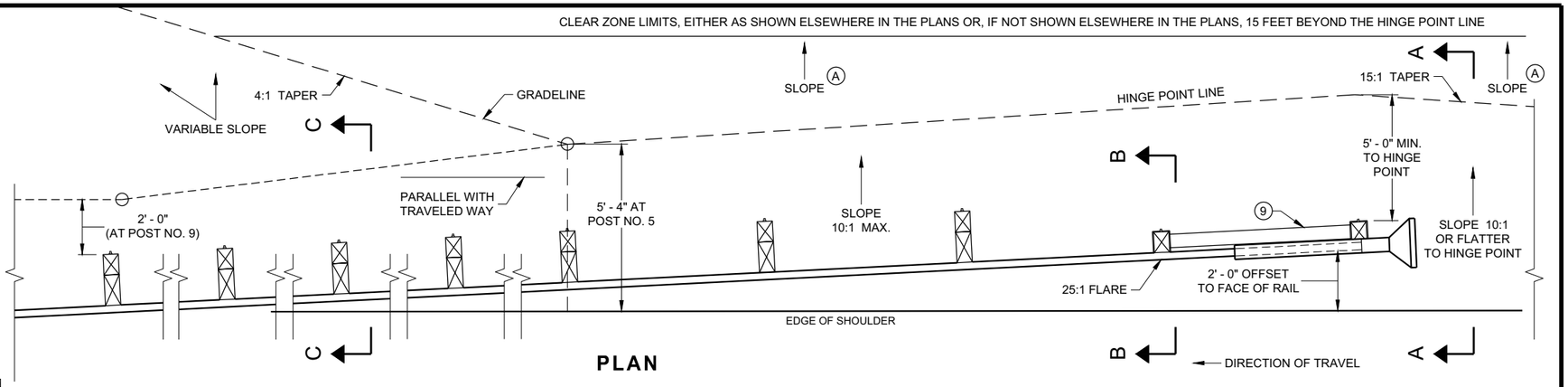
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

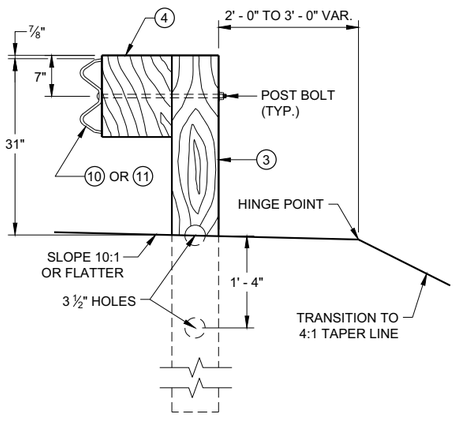
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

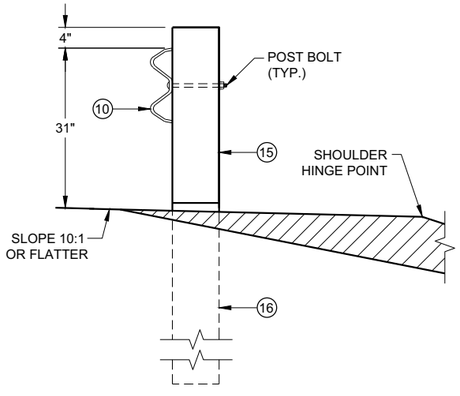


DETAIL "A" (E)

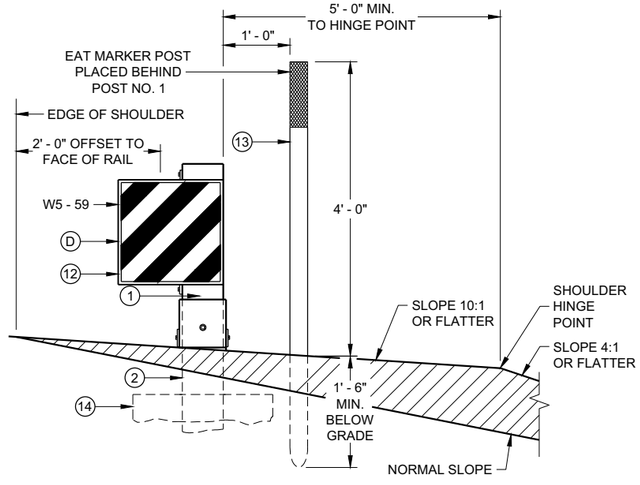




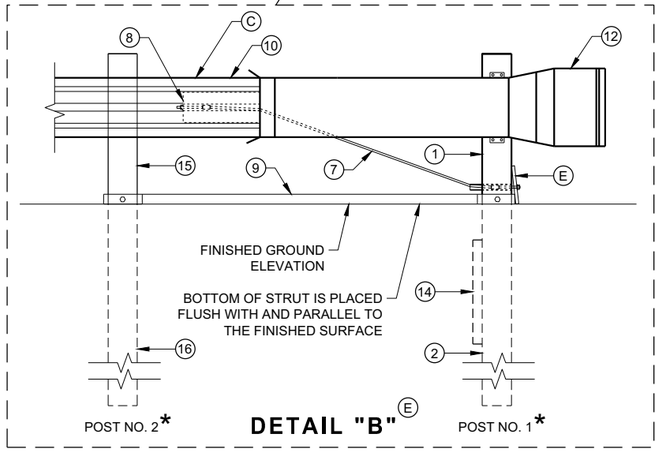
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



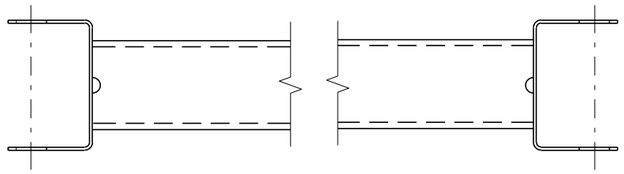
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

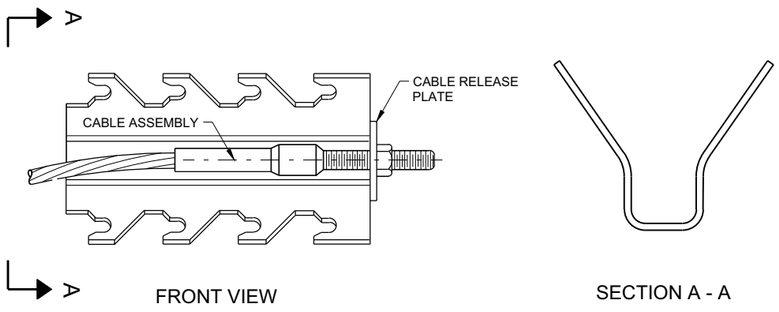
SDD 14B44 - 04a



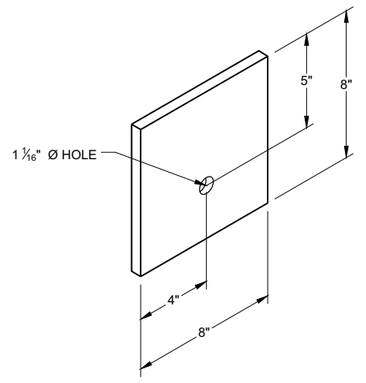
GENERIC GROUND STRUT ⑨ Ⓔ

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

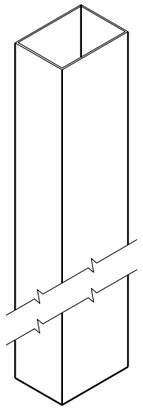
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SDD 14B44 - 04b

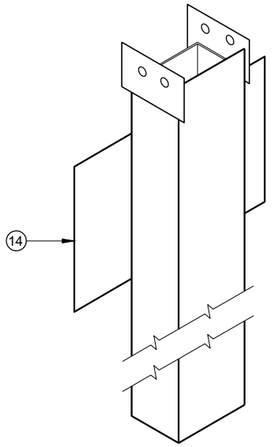
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

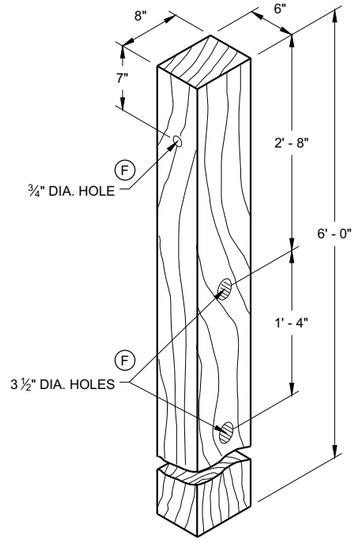
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



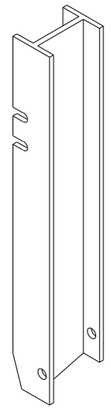
UPPER POST NO. 1 (1) (E)



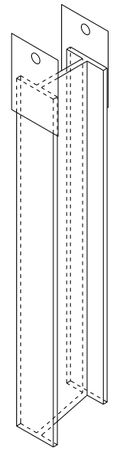
LOWER POST NO. 1 (2) (E)



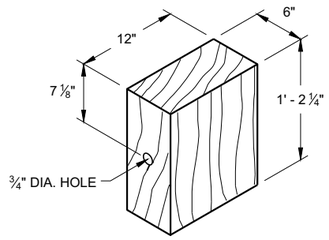
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



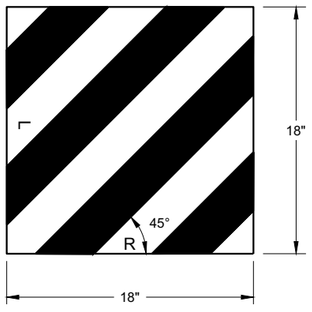
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

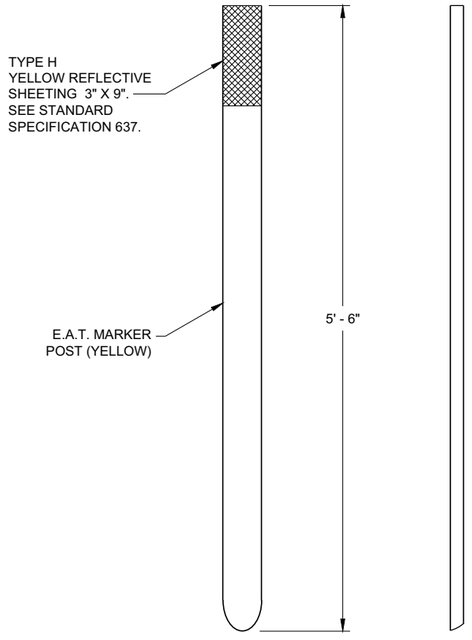


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



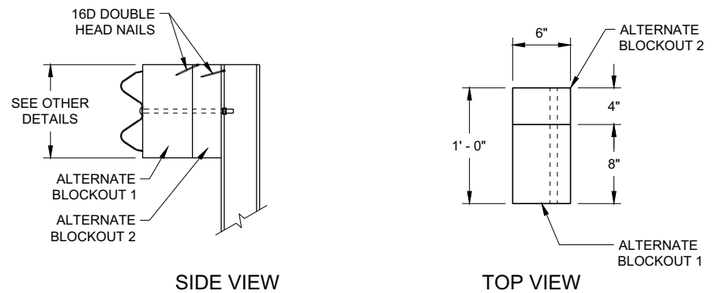
W5 - 59

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)

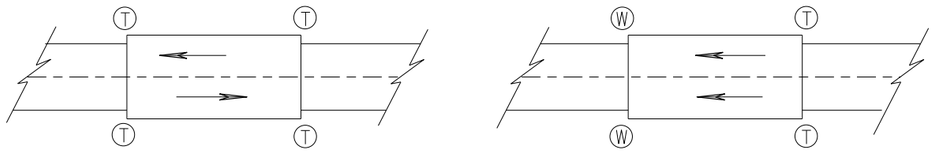
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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SDD 14B44 - 04c
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.

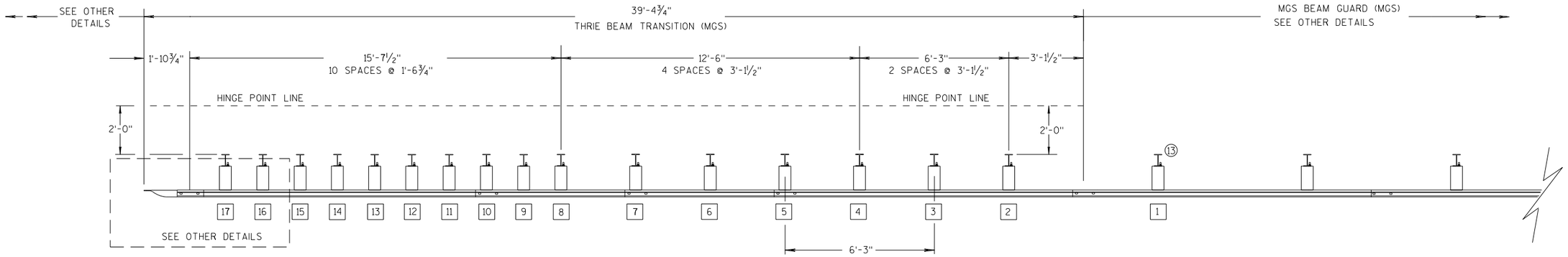
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

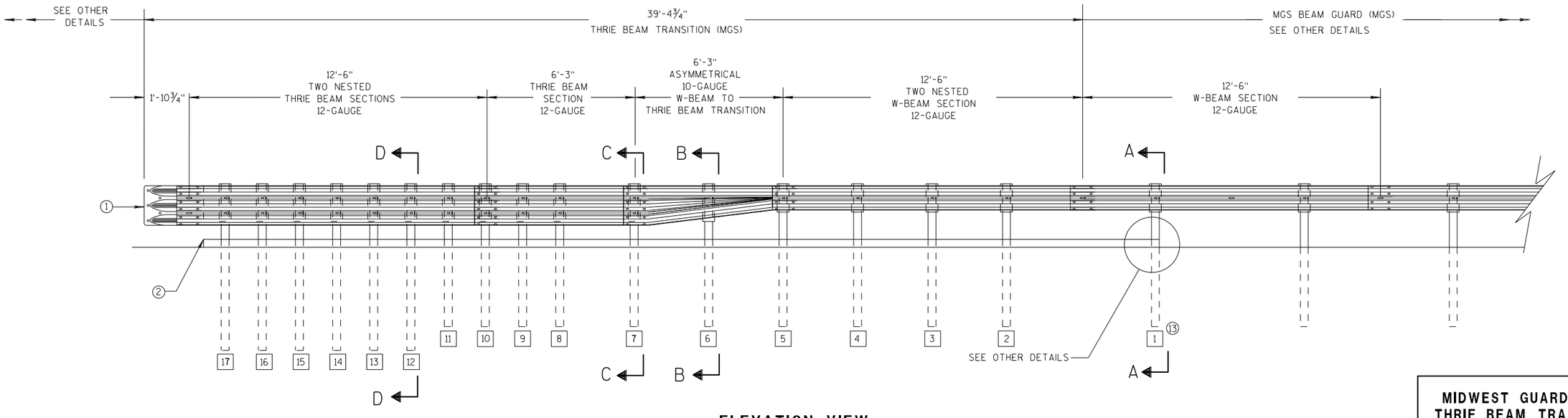
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

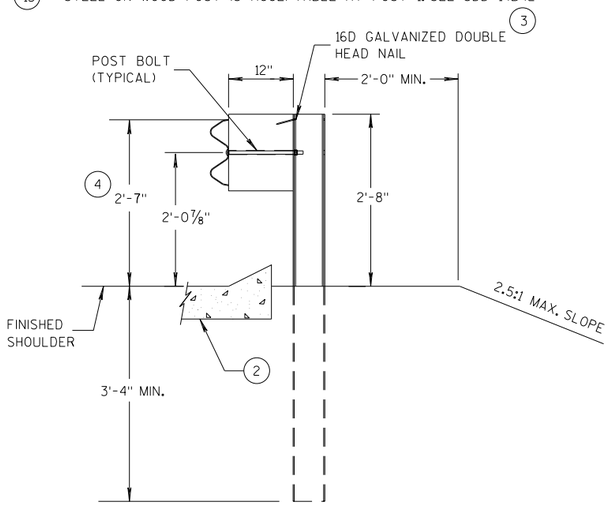
GENERAL NOTES

(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.

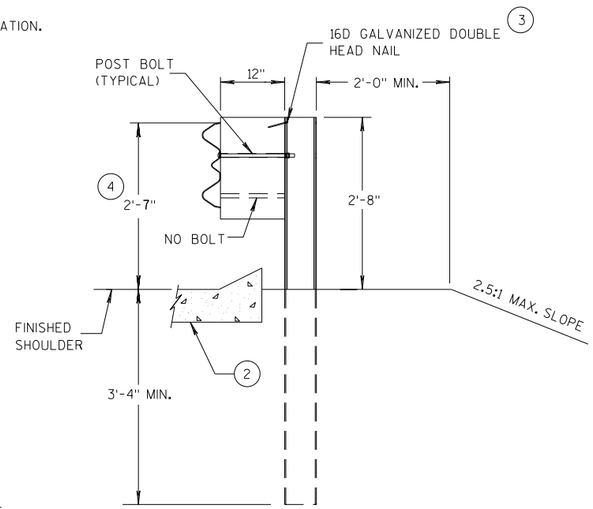
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



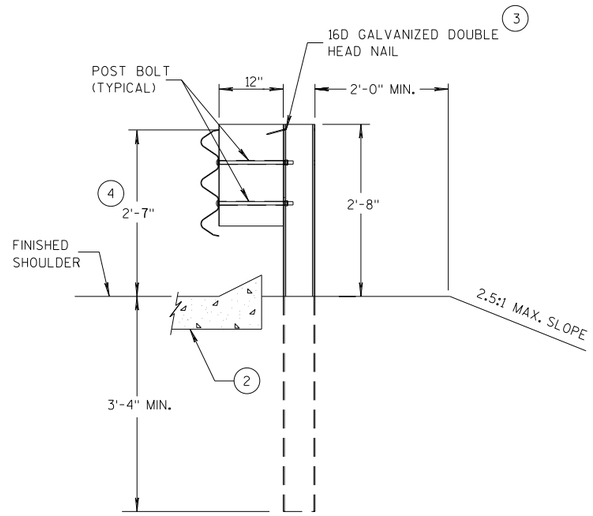
SECTION A-A (13)

POSTS 1-5



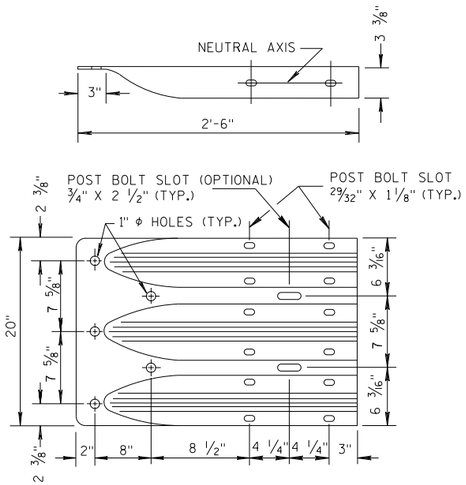
SECTION B-B

POST 6

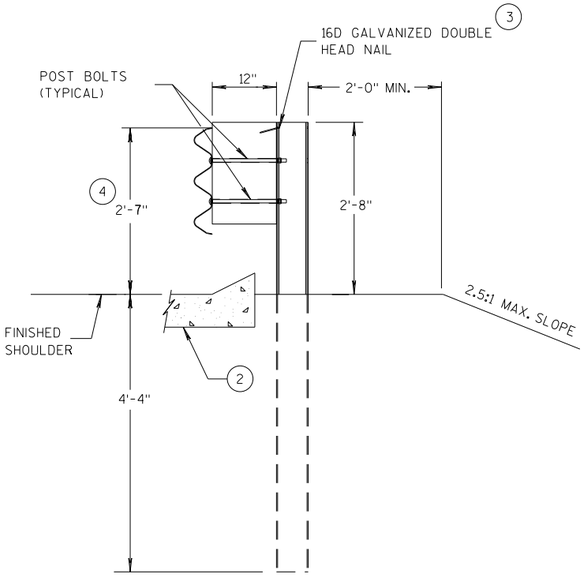


SECTION C-C

POSTS 7-11

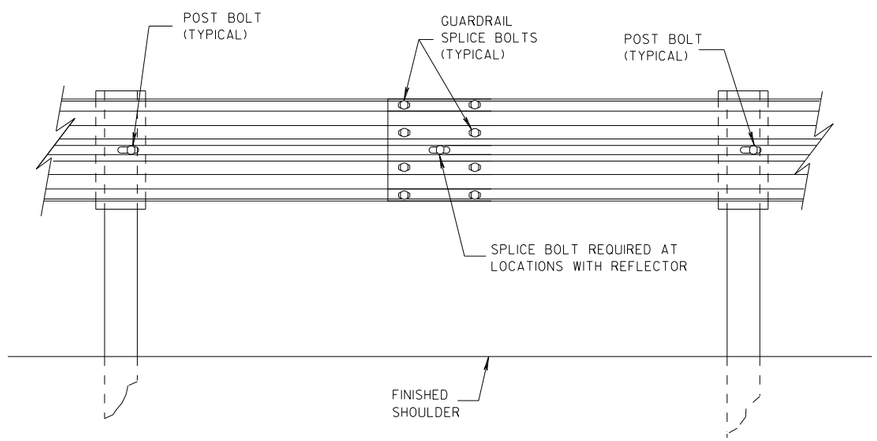


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

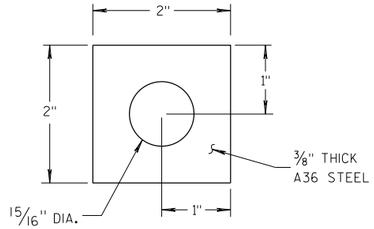
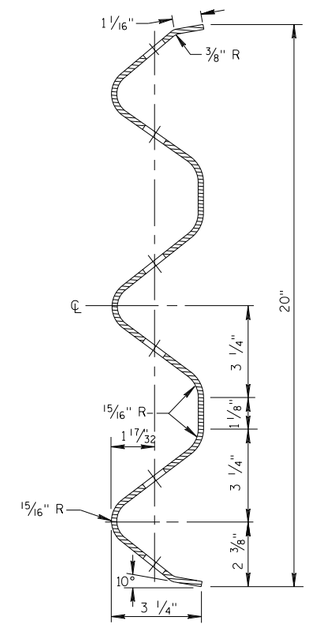


PLATE WASHER DETAIL



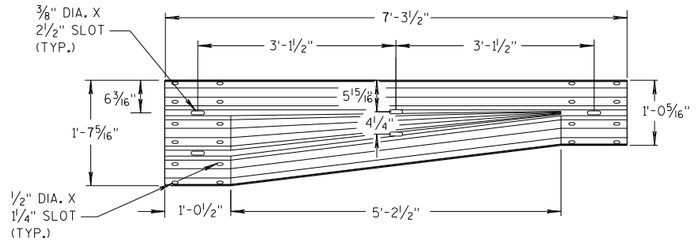
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

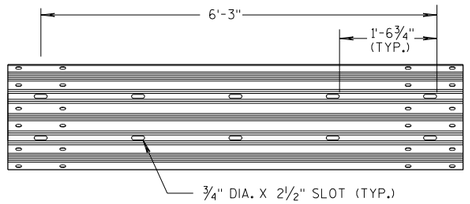
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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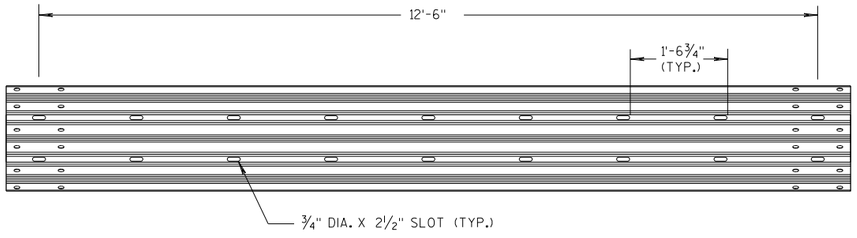
S.D.D. 14 B 45-5b



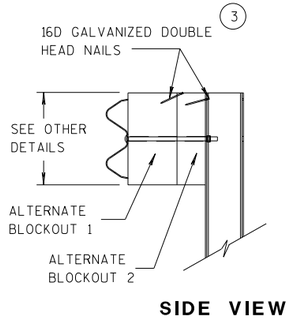
W-BEAM TO THRIE BEAM TRANSITION SECTION



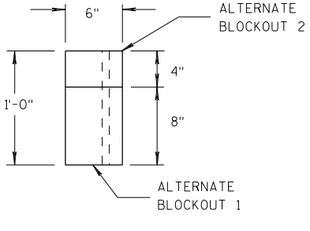
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

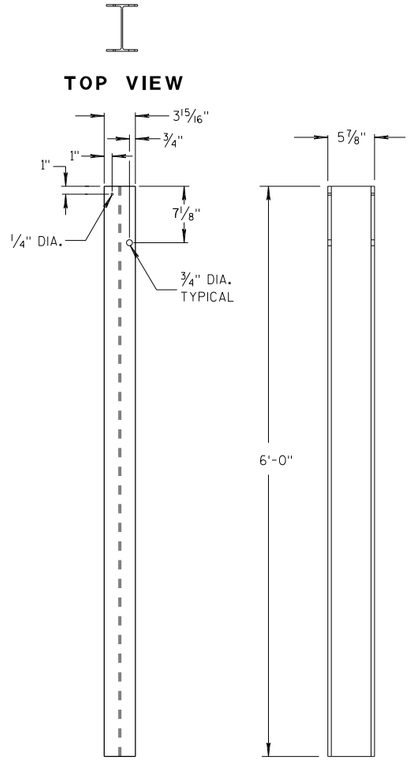


SIDE VIEW



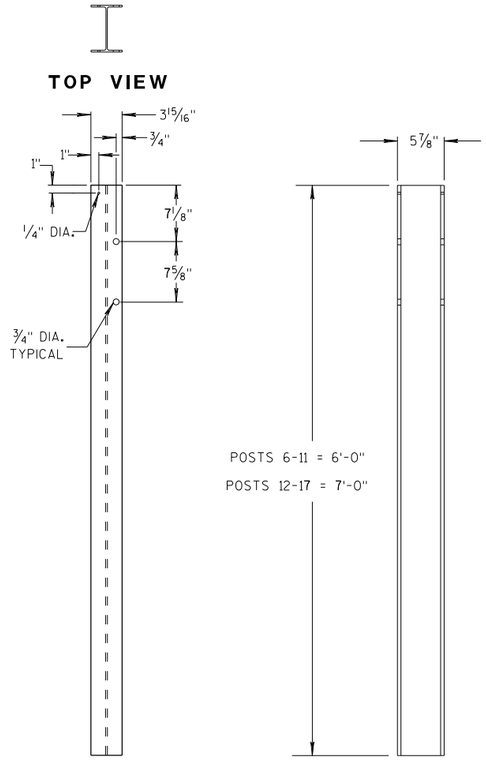
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



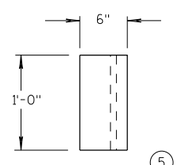
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

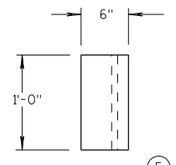


FRONT VIEW SIDE VIEW

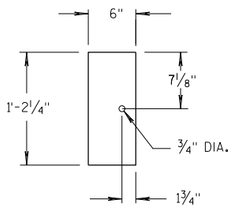
STEEL POSTS 6-17



TOP VIEW (5)

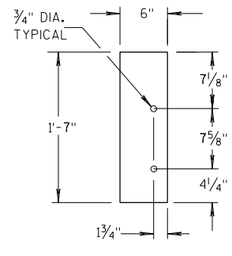


TOP VIEW (5)



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.

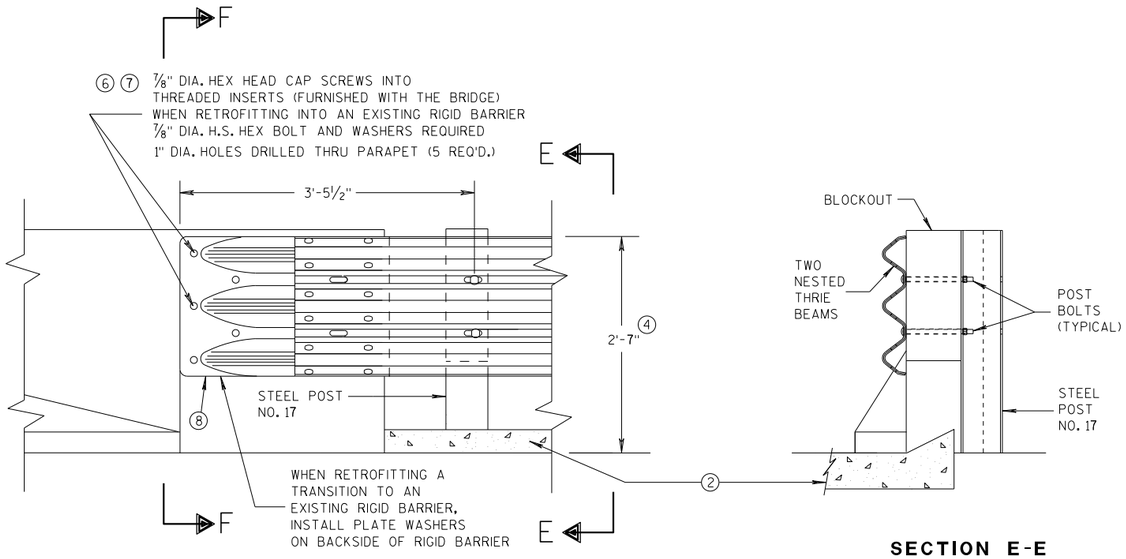
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

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.

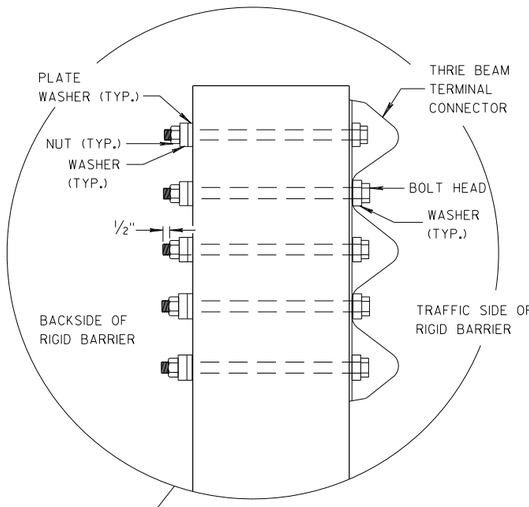
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

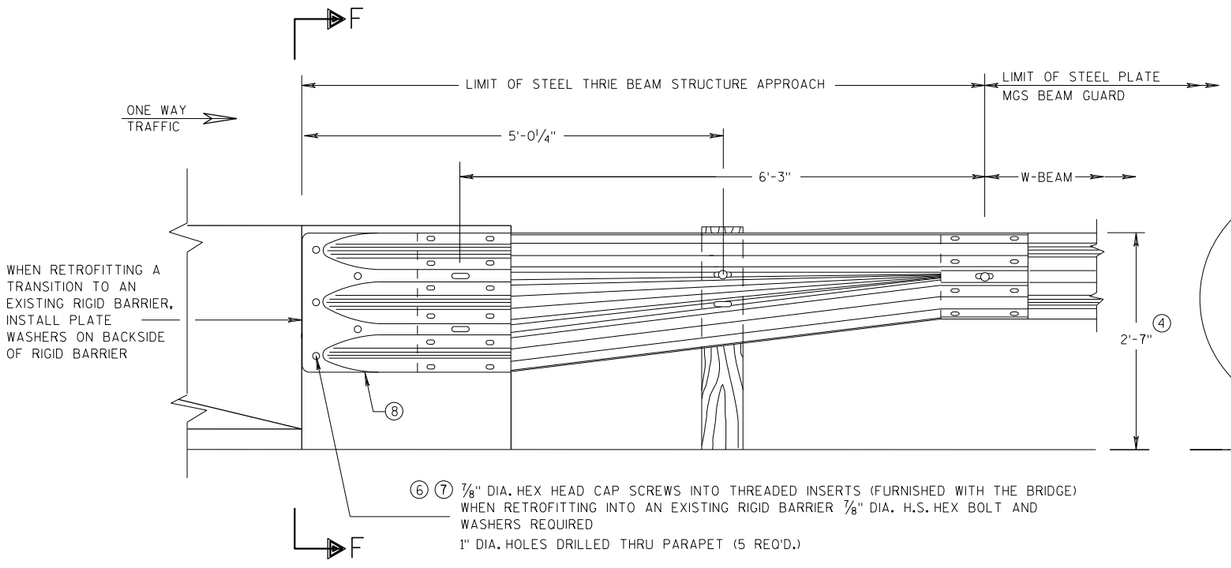
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

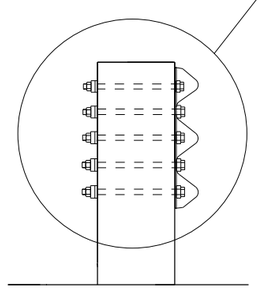
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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".

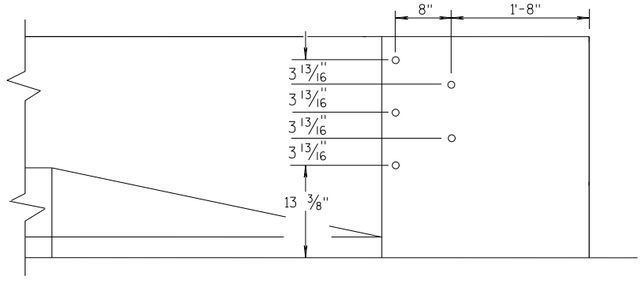




FRONT VIEW



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
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FHWA

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

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

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.

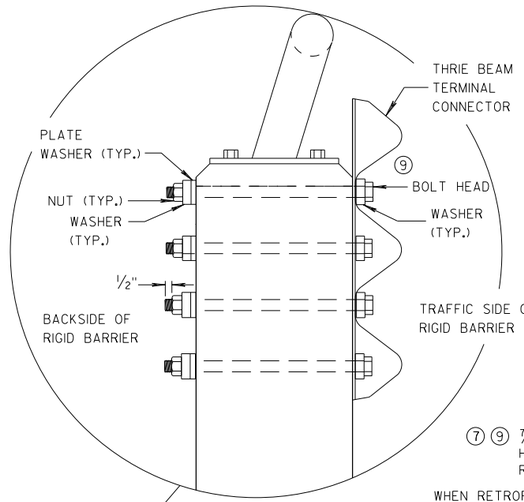
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

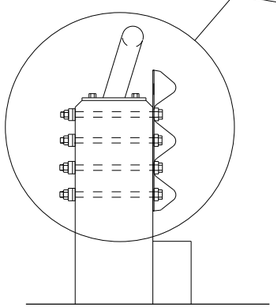
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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.

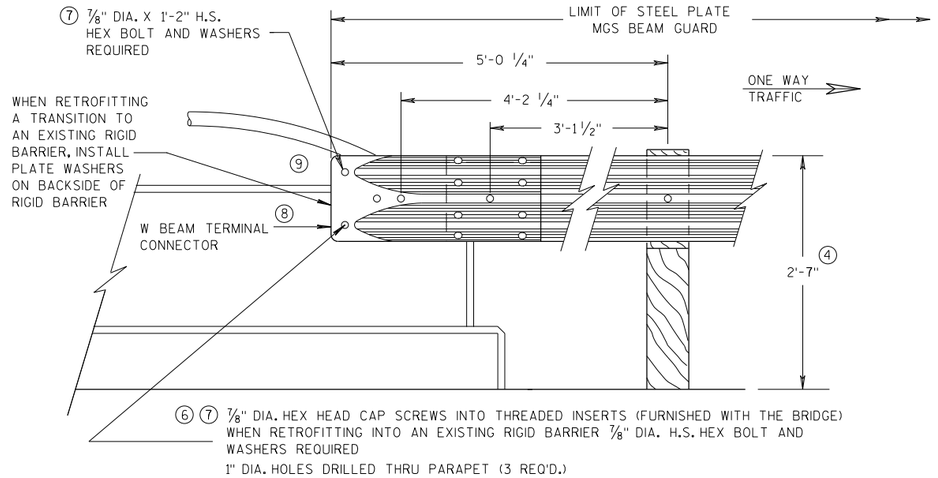
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 ½".

(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.





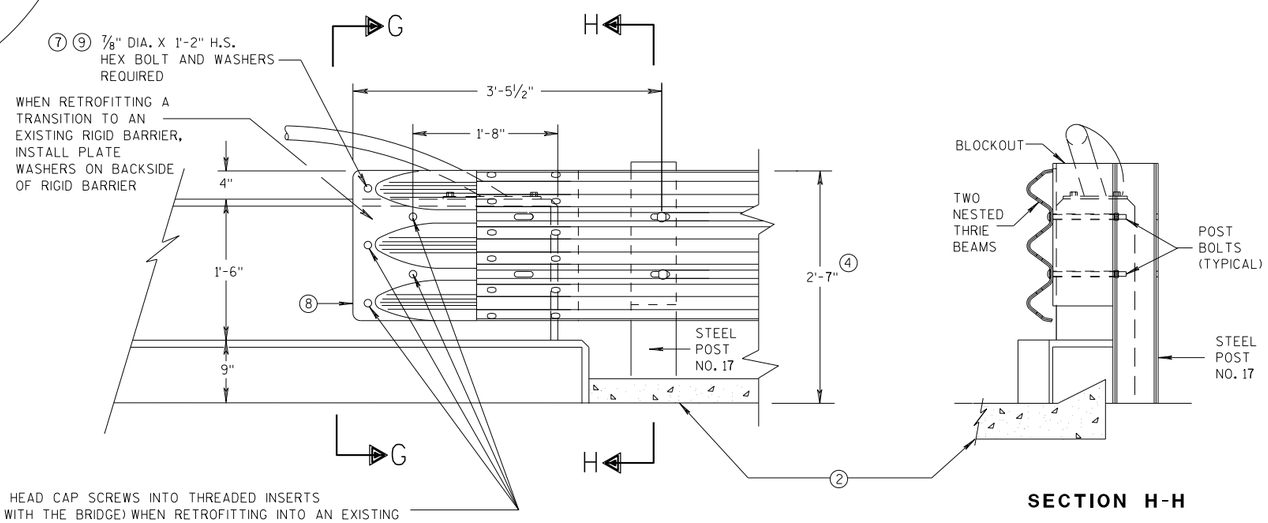
SECTION G-G



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

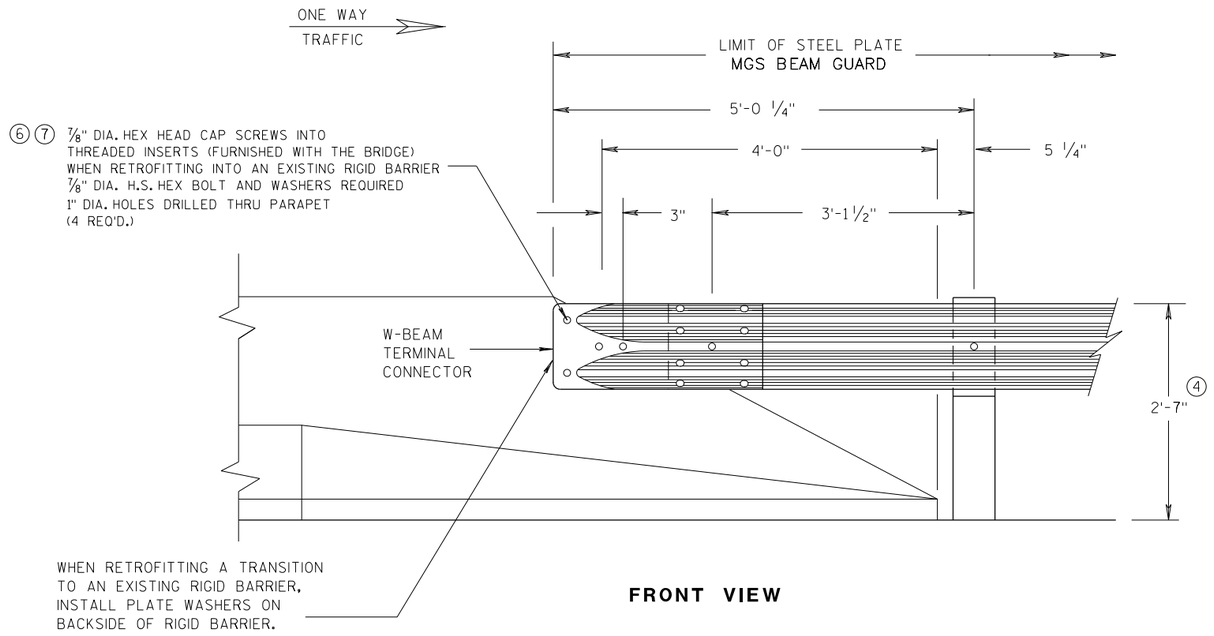
APPROVED
07/2018 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D UNIT SUPERVIS — NT
FHWA

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

6

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



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

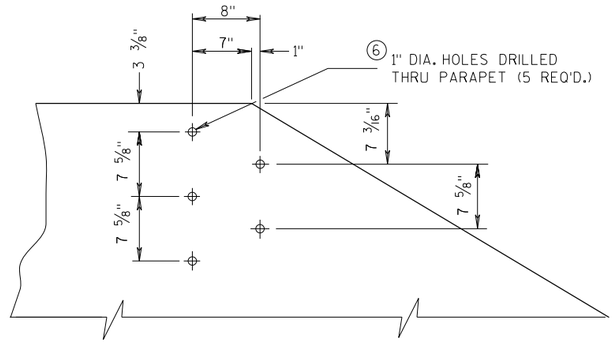
GENERAL NOTES

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

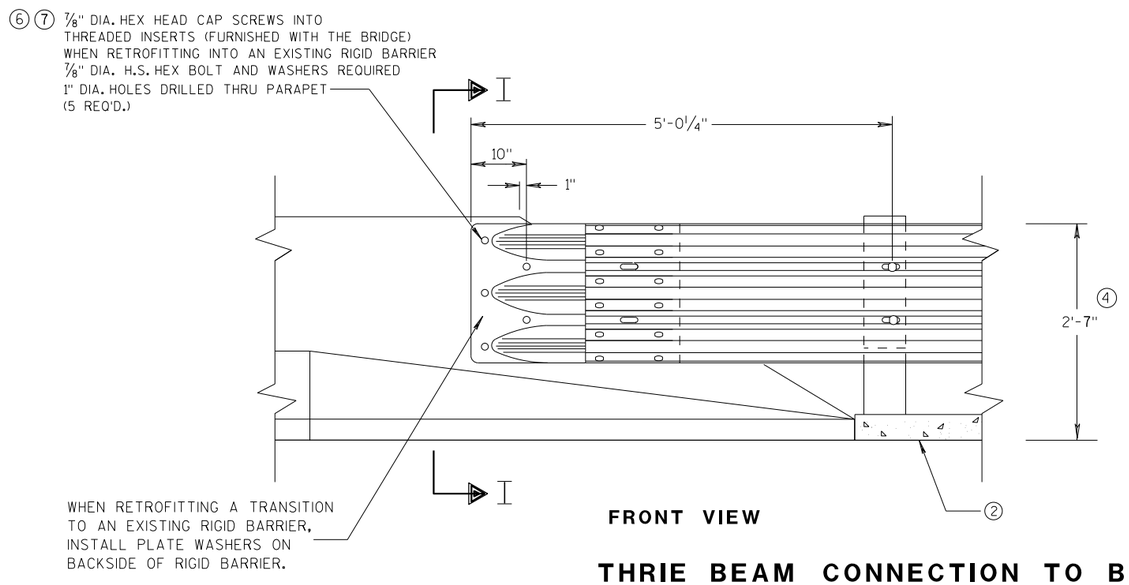
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

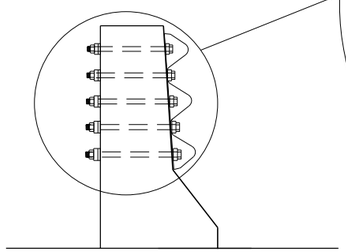
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. 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.



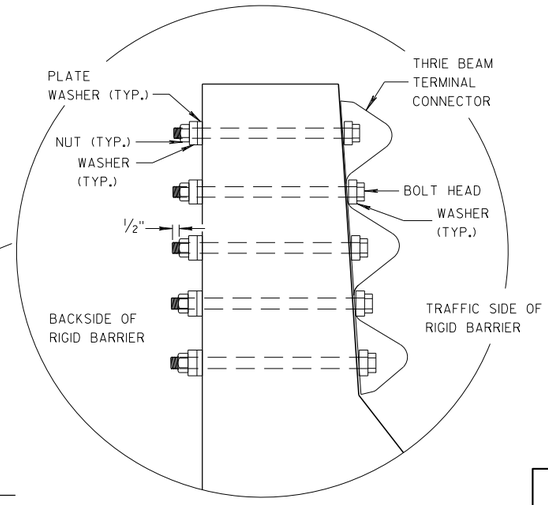
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



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

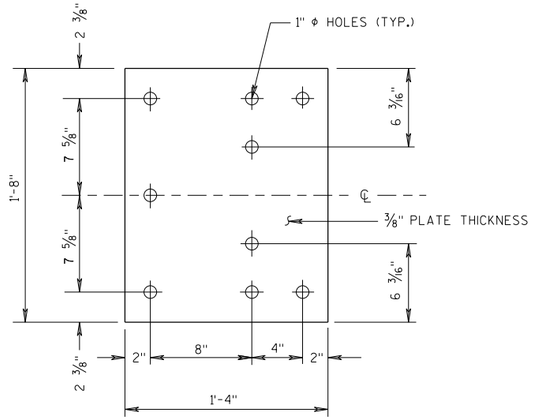
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07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS [illegible] UNIT SUPERVI[illegible]ENT
FHWA

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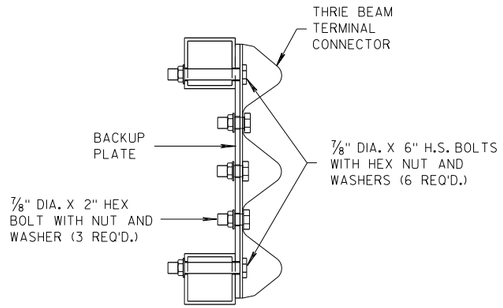
S.D.D. 14 B 45-5f

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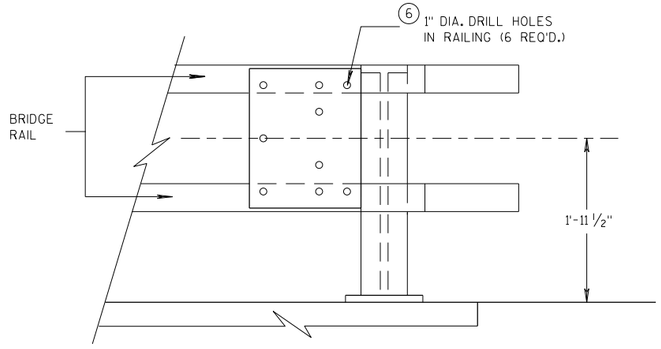
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BACK-UP PLATE DETAIL



SECTION J-J

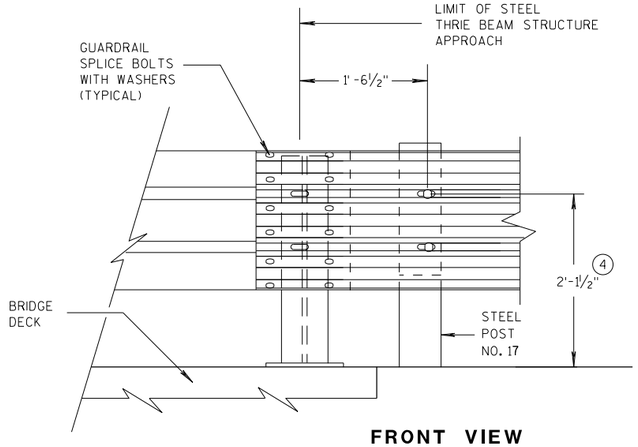


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

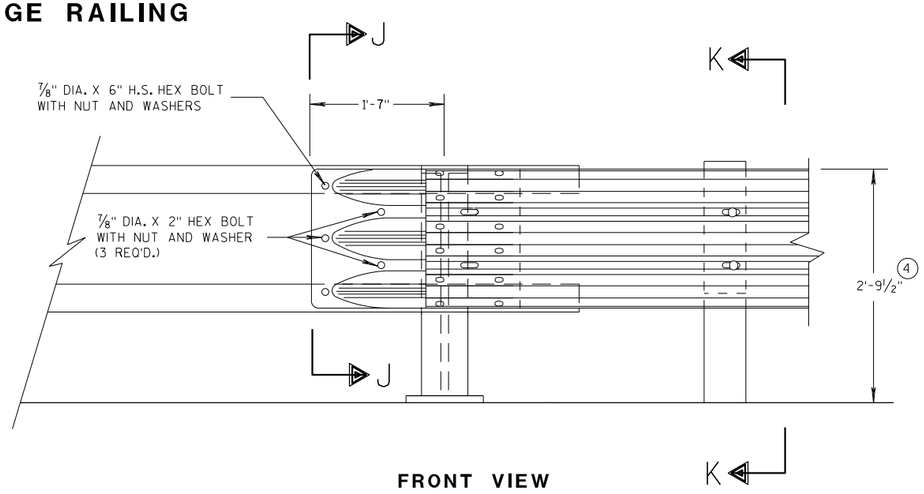
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

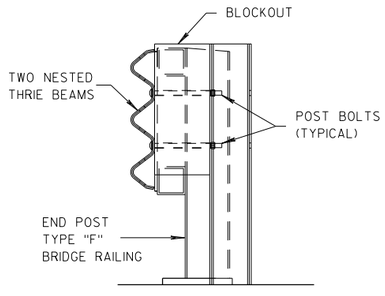


FRONT VIEW

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

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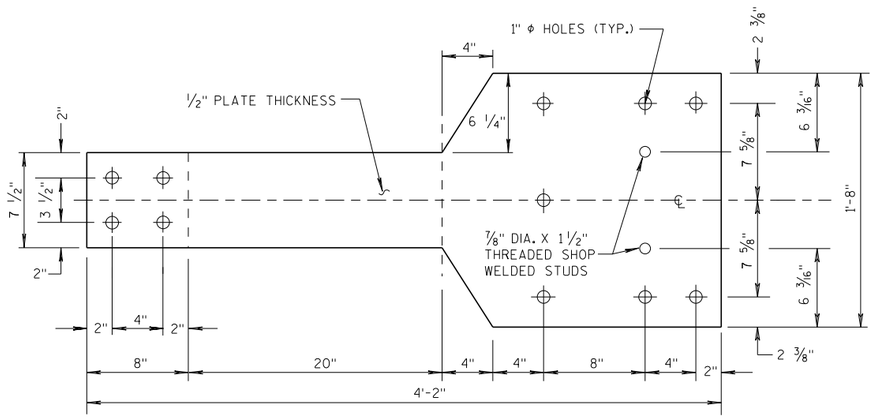
S.D.D. 14 B 45-5g

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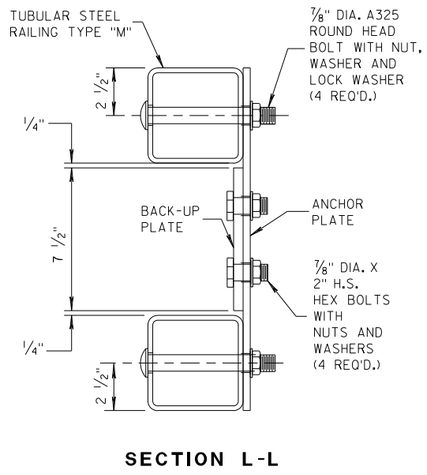
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GENERAL NOTES

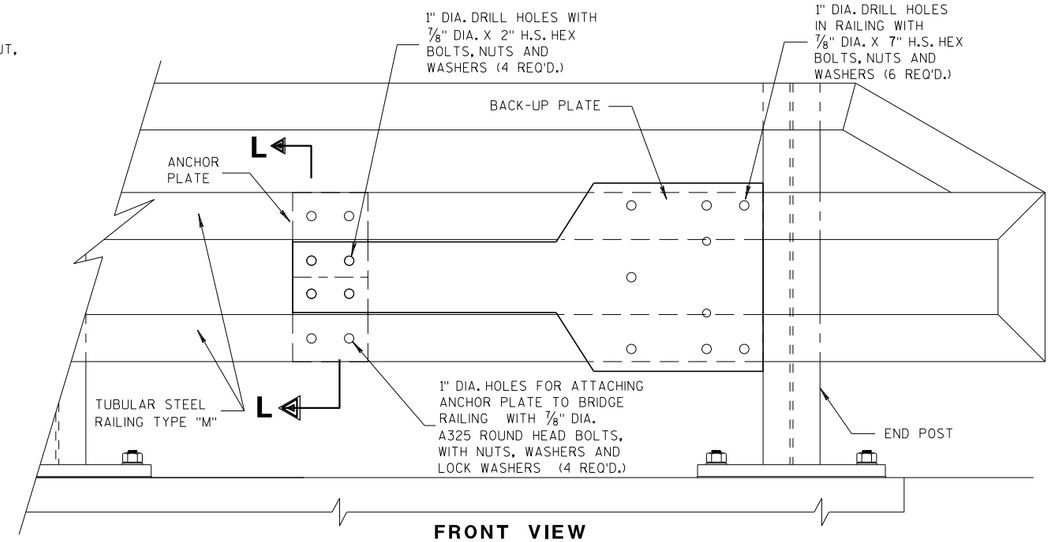
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

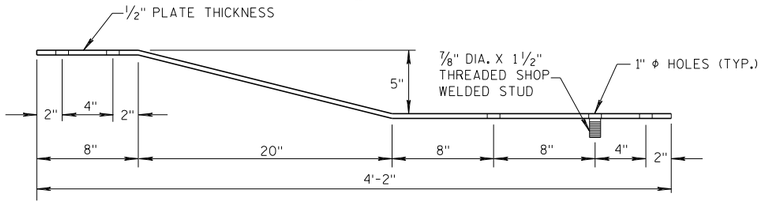


SECTION L-L



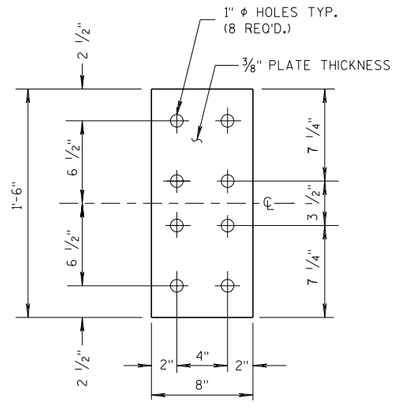
FRONT VIEW

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



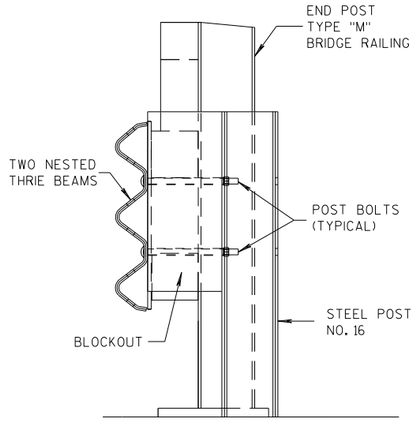
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

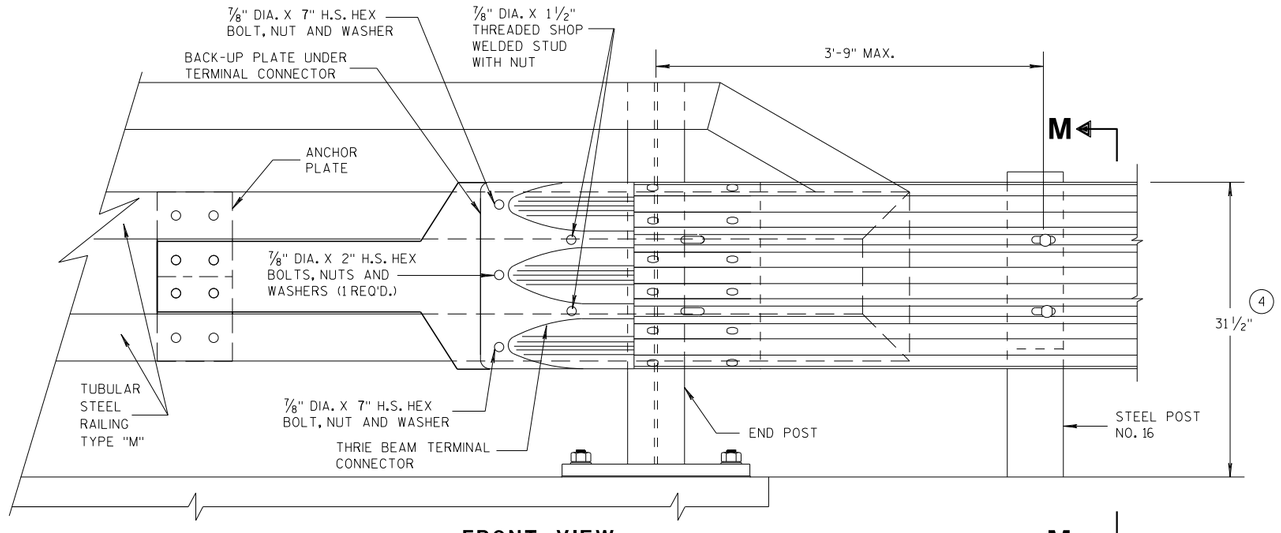


FRONT VIEW

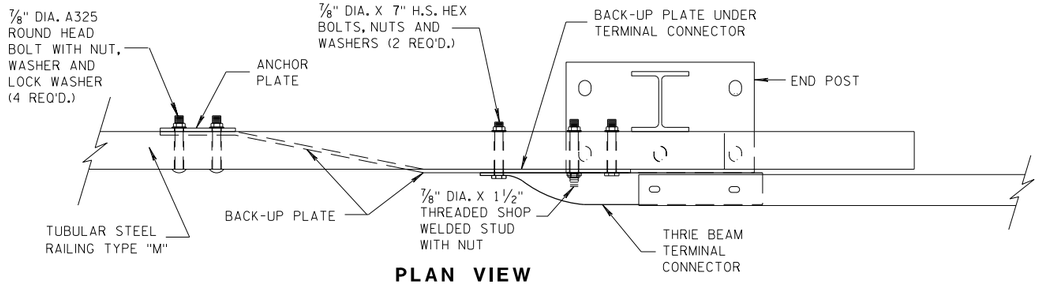
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-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

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07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
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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.

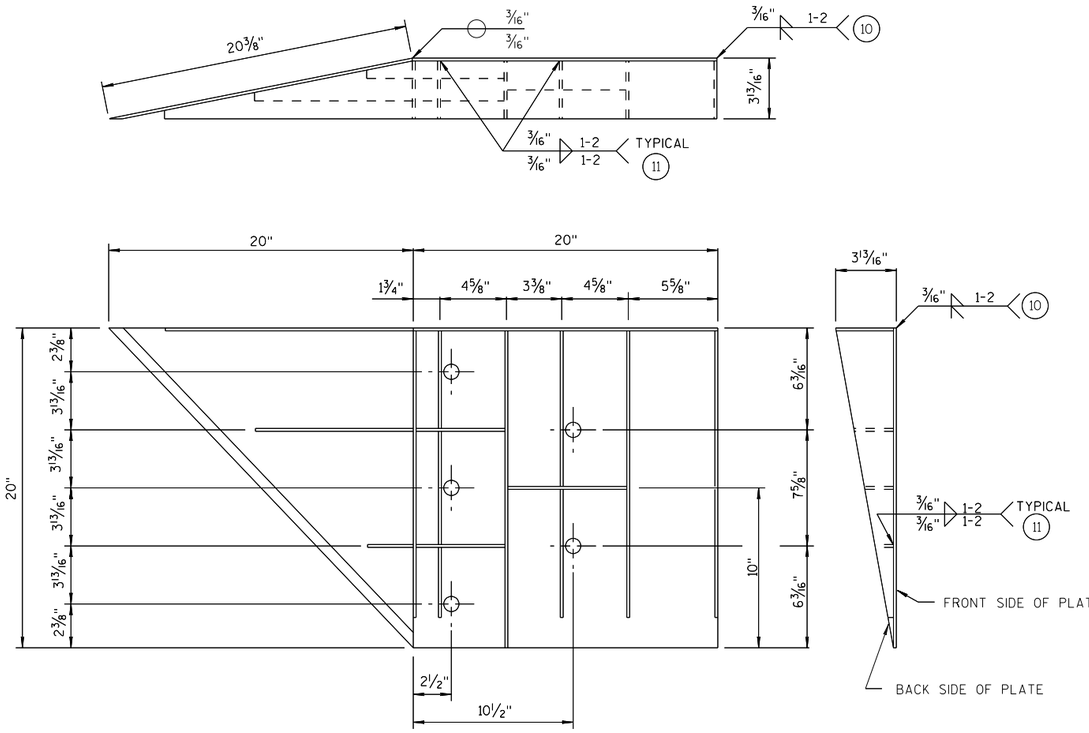
FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

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)

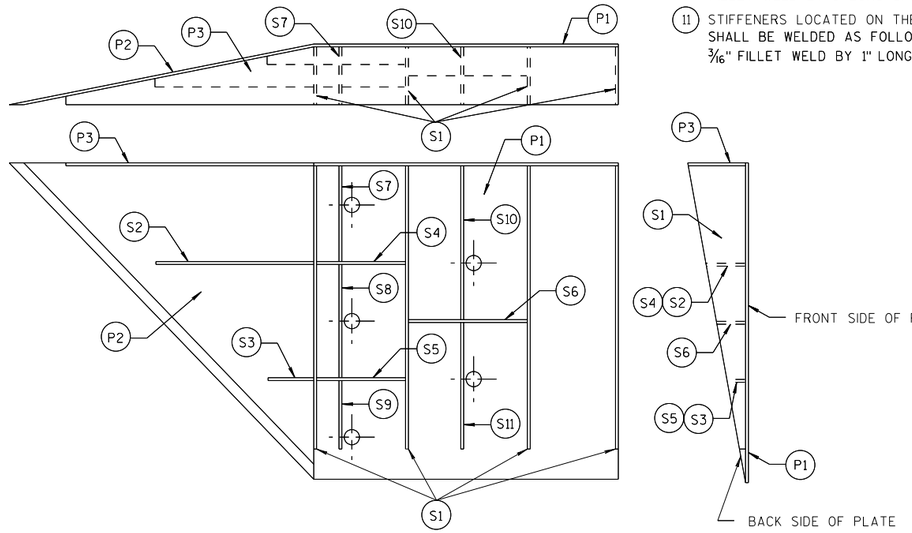


PLATE AND STIFFENER IDENTIFICATION

(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

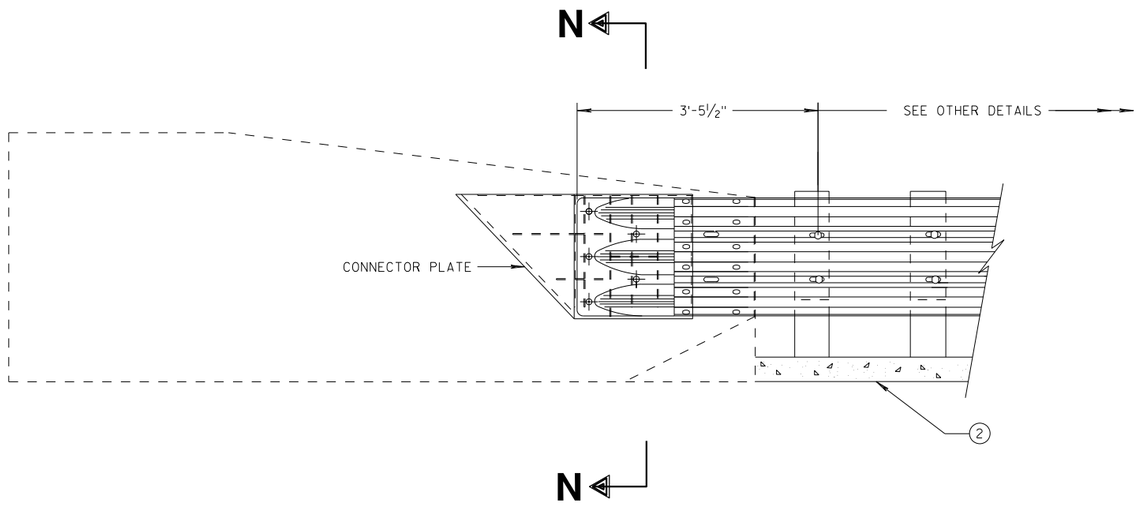
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

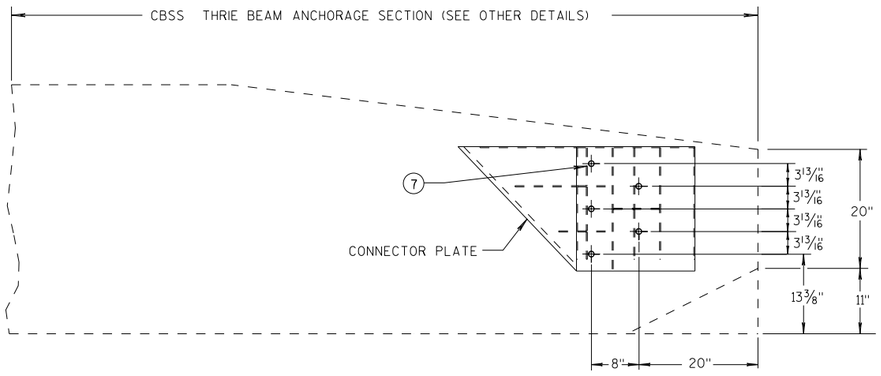
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THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



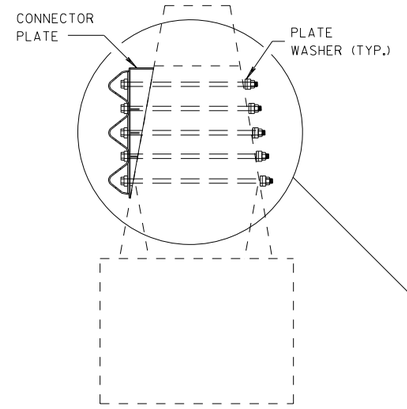
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

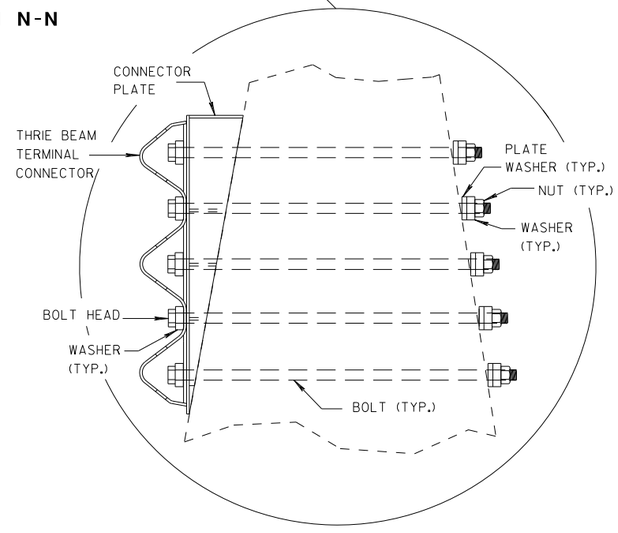
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(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



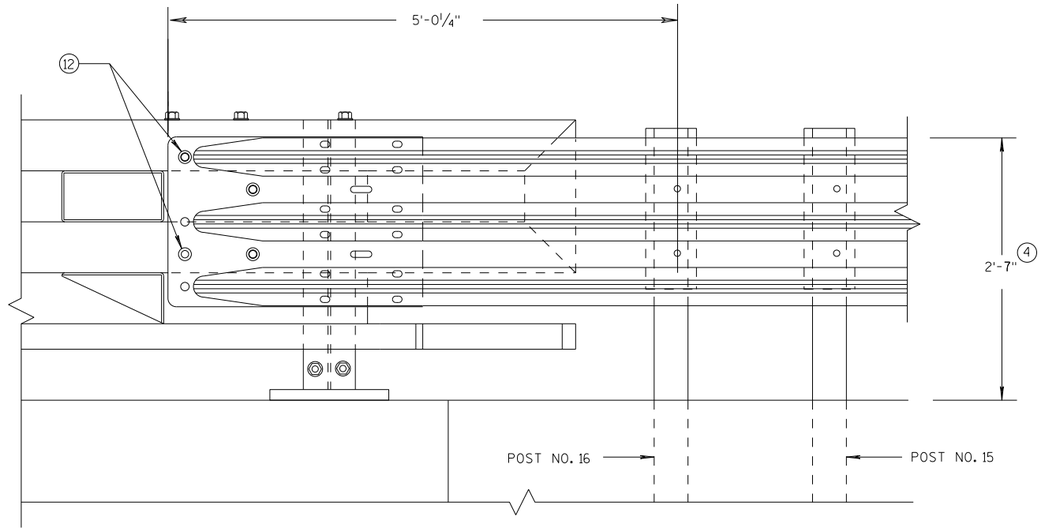
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
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/S/ Rodney Taylor
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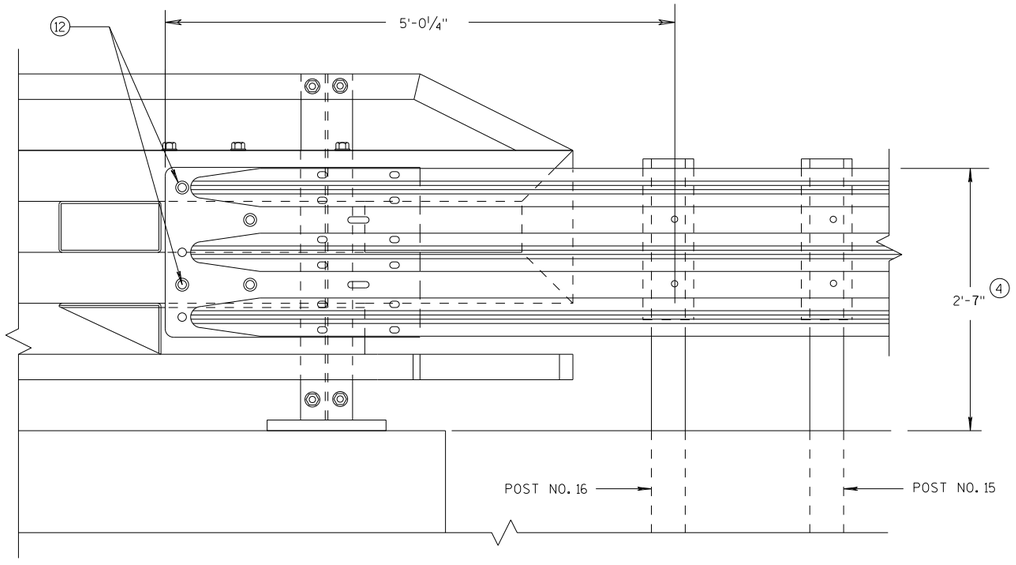
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S.D.D. 14 B 45-5j



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
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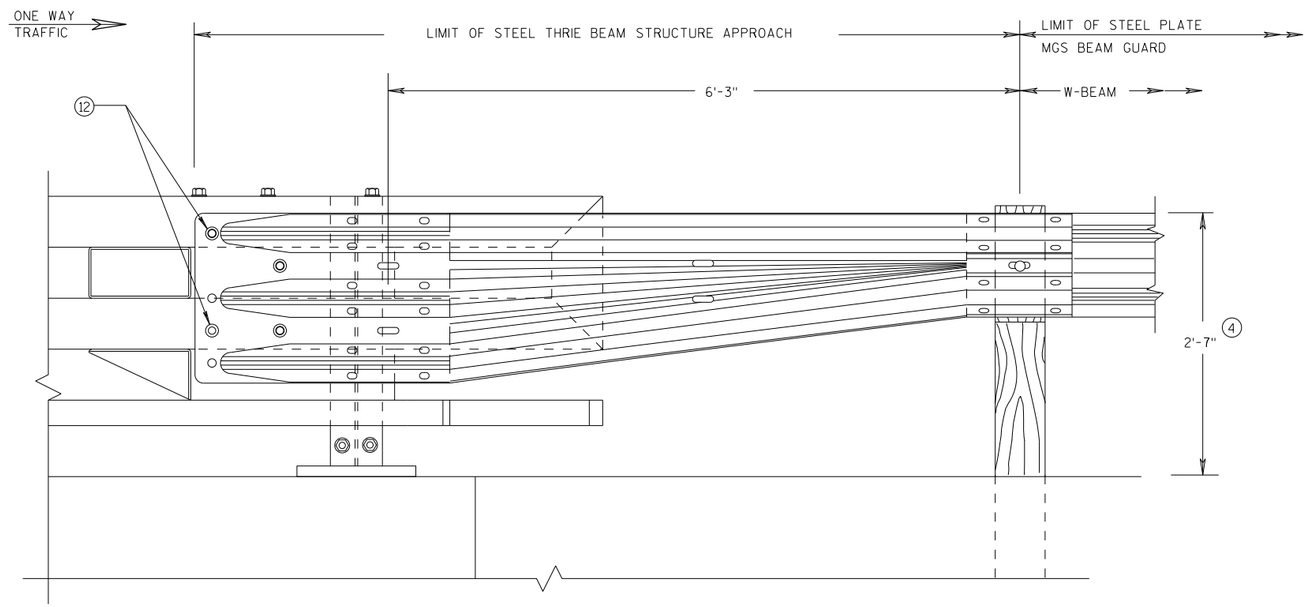
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FRONT VIEW

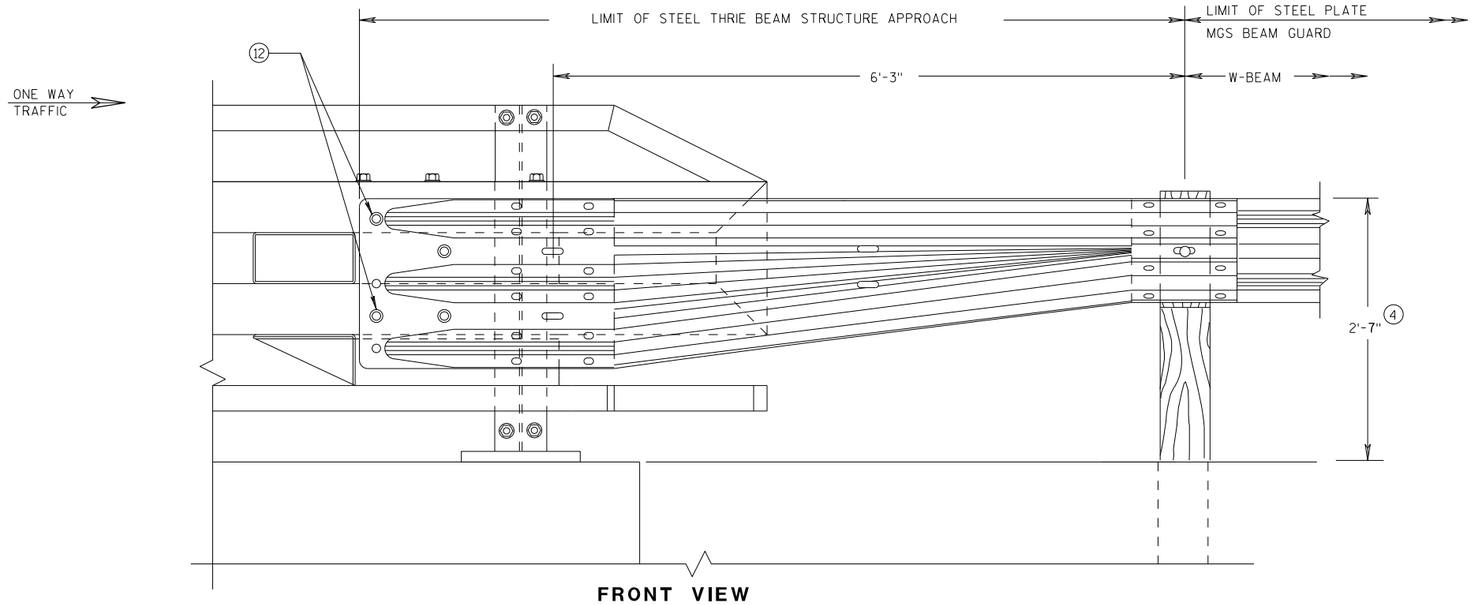
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

(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 $\frac{1}{2}$-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
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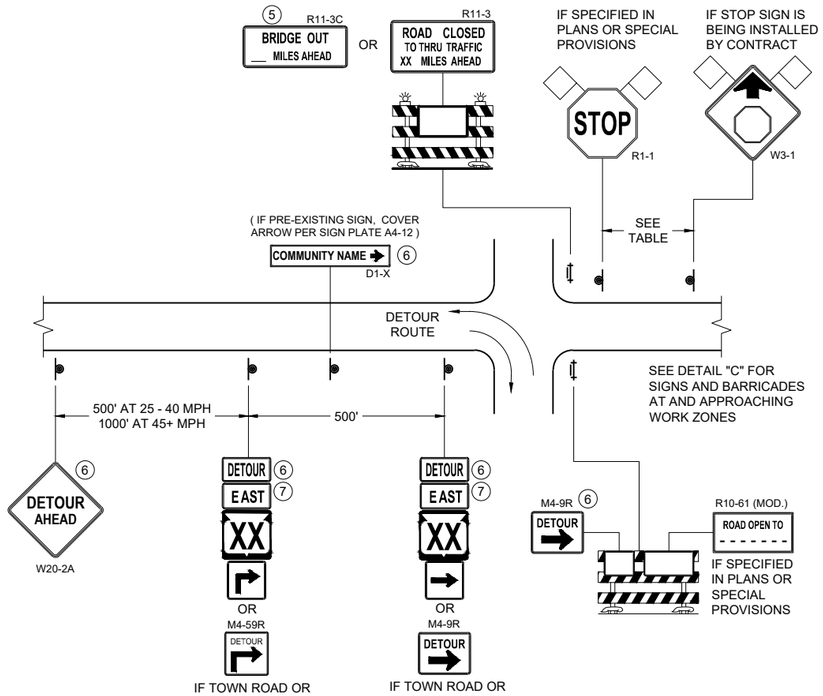
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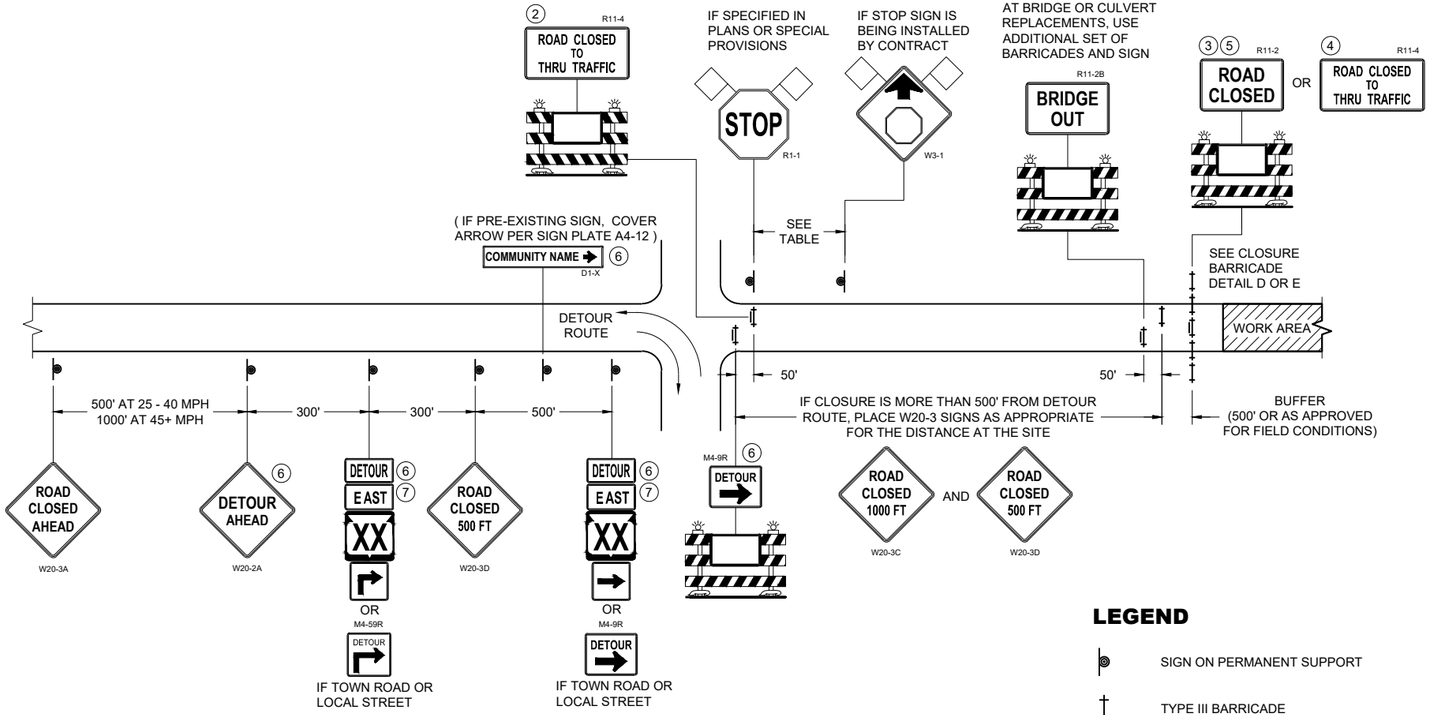
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S.D.D. 14 B 45-5L



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)

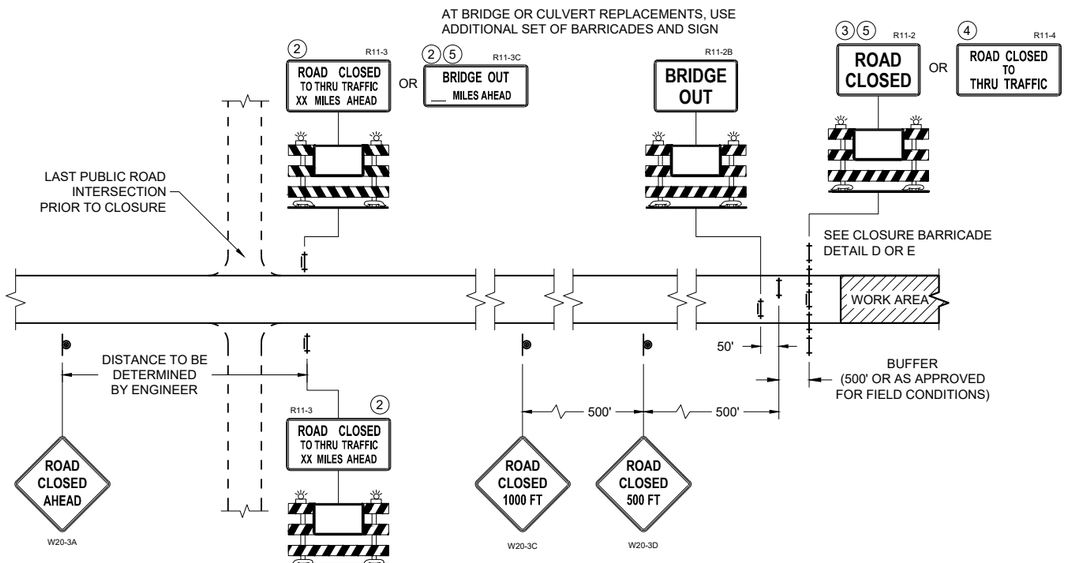
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

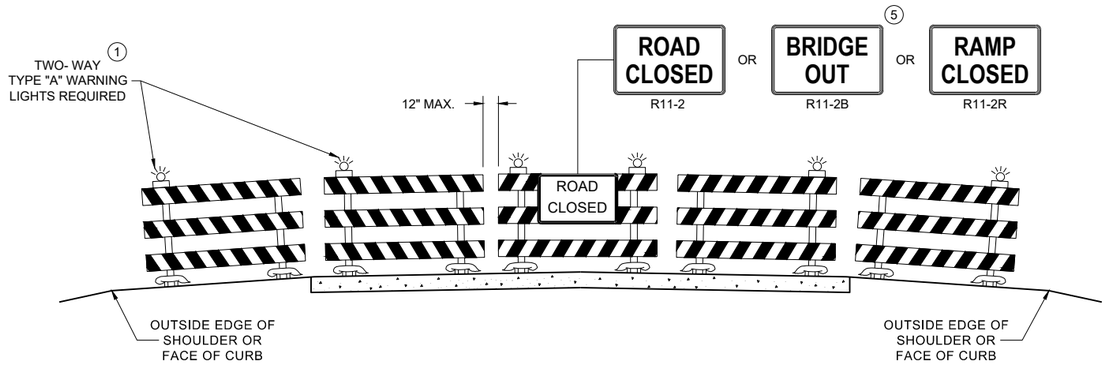
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

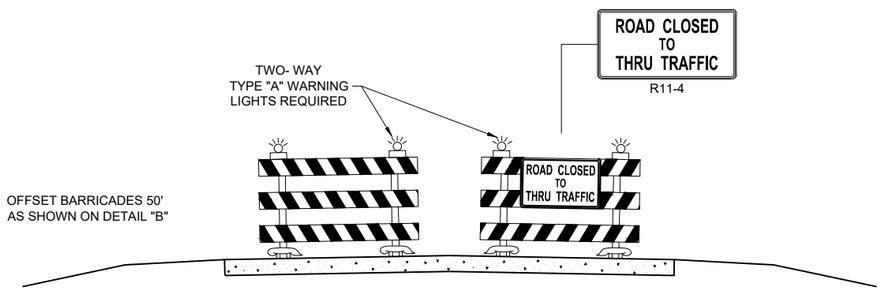
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SDD 15C02-10a



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.

PARTIAL NUMBERS ON SIGNS SHALL BE DISPLAYED AS A WHOLE NUMBER(AS NEEDED) FOLLOWED BY A FRACTION. SIGNS SHALL NOT DISPLAY NUMBERS IN DECIMAL FORM.

"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"

SIGNS PLACED ON TYPE III BARRICADES THAT ARE SIZES OTHER THAN 48"X30" SHALL HAVE A CORRUGATED POLYPROPYLENE OR POLYETHYLENE PLASTIC SIGN BASE.

(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

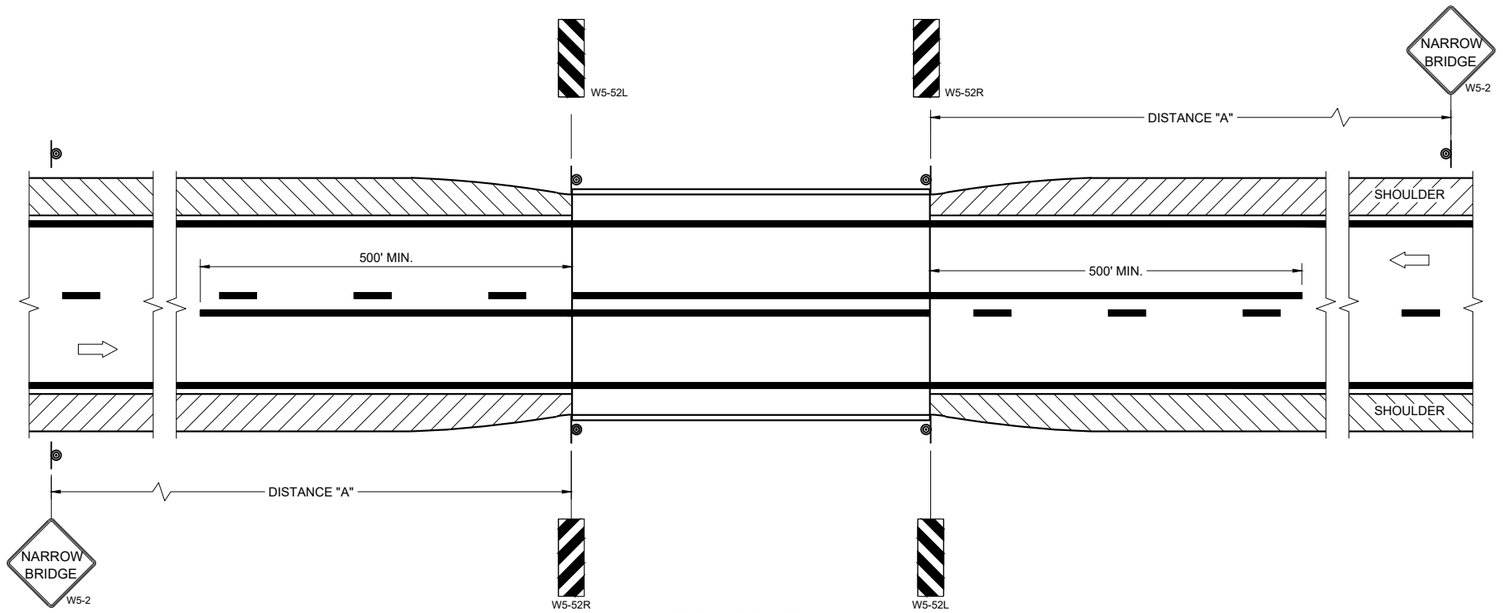
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

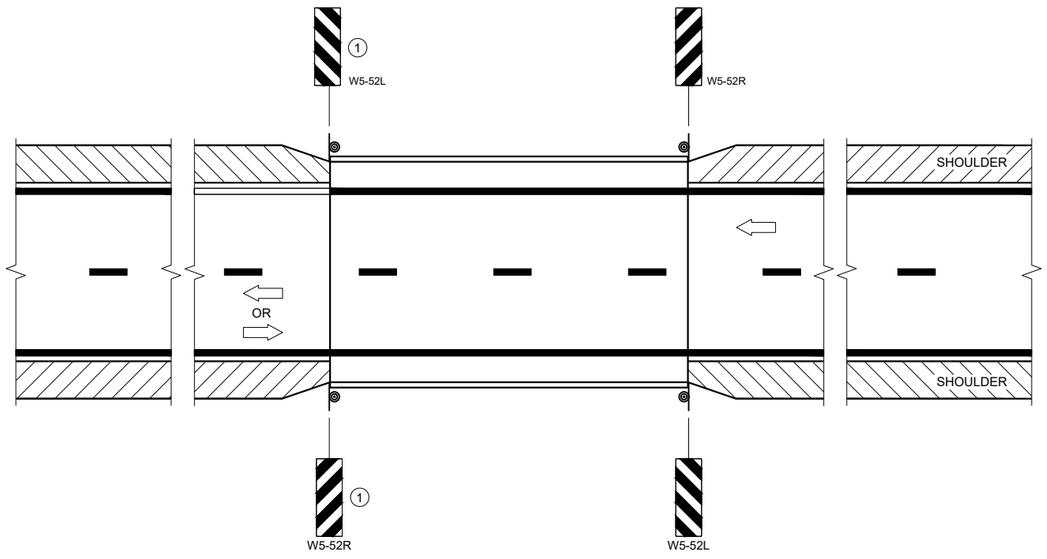
6

SDD 15C02-10b



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

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.

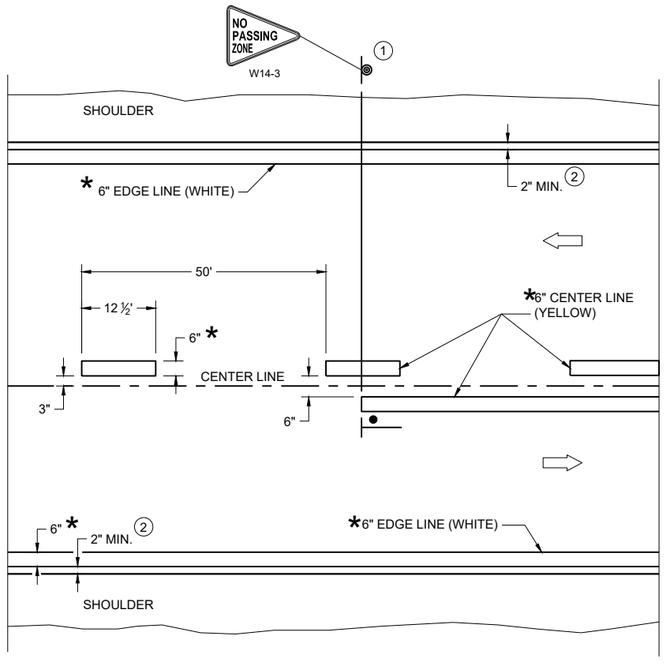
LEGEND

"T" MARKING

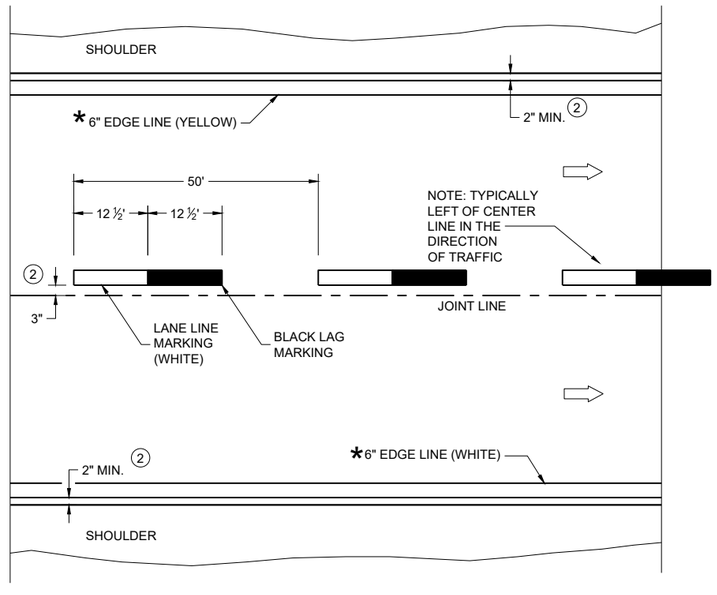
SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

6

SDD 15C08-24a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

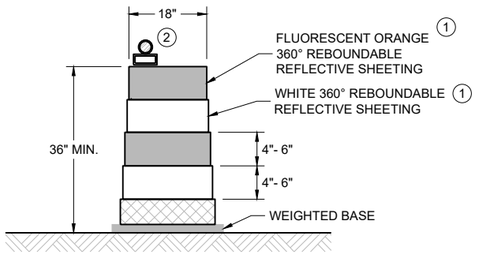
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SDD 15C08-24a

GENERAL NOTES

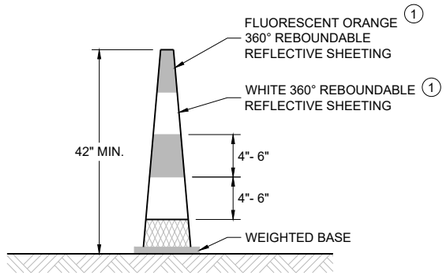
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

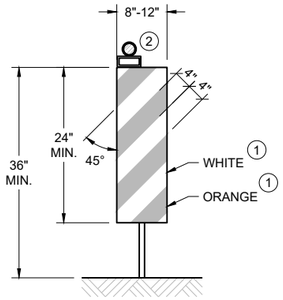
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

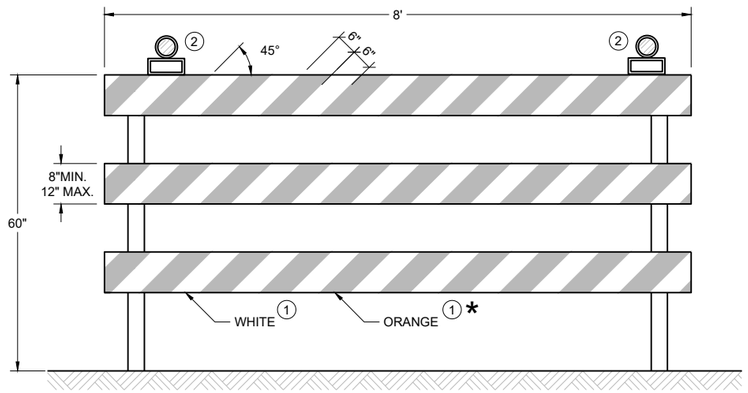
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



VERTICAL PANEL

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



TYPE 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

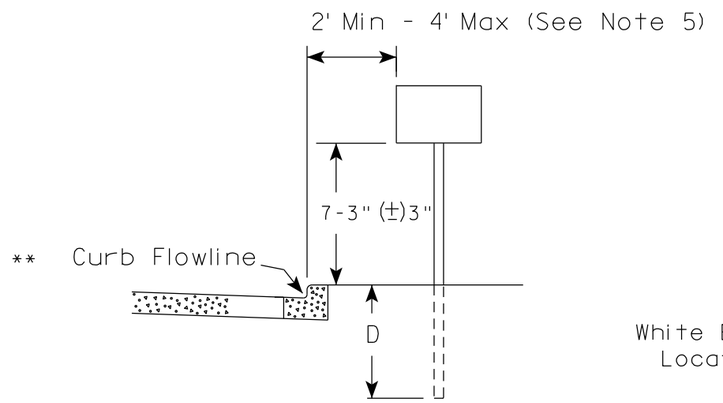
February 2026
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

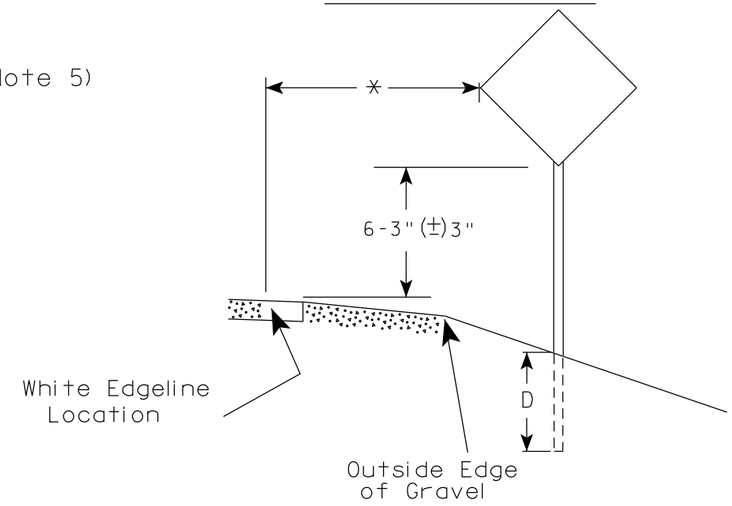
FHWA

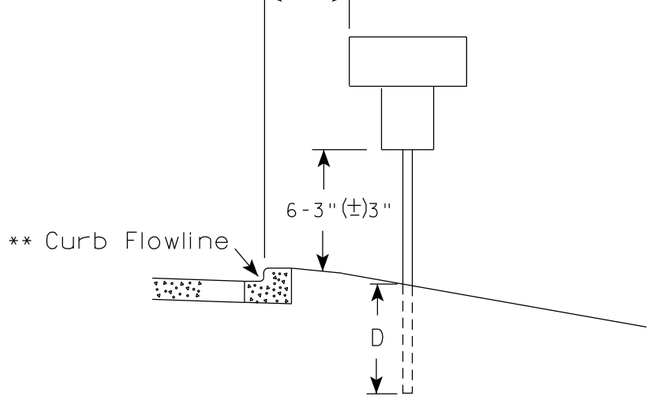
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SDD 15C11-11b

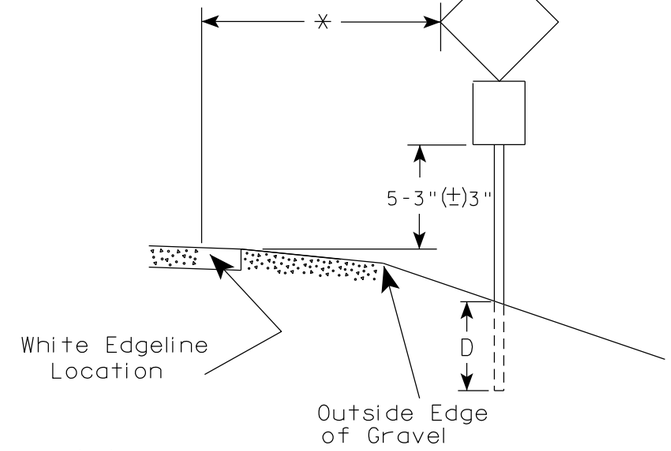
URBAN AREA



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.

POST EMBEDMENT DEPTH

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

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.

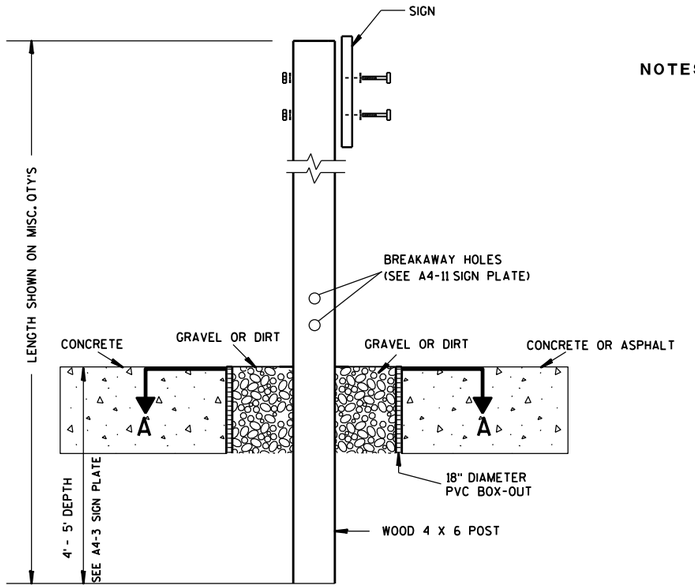
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

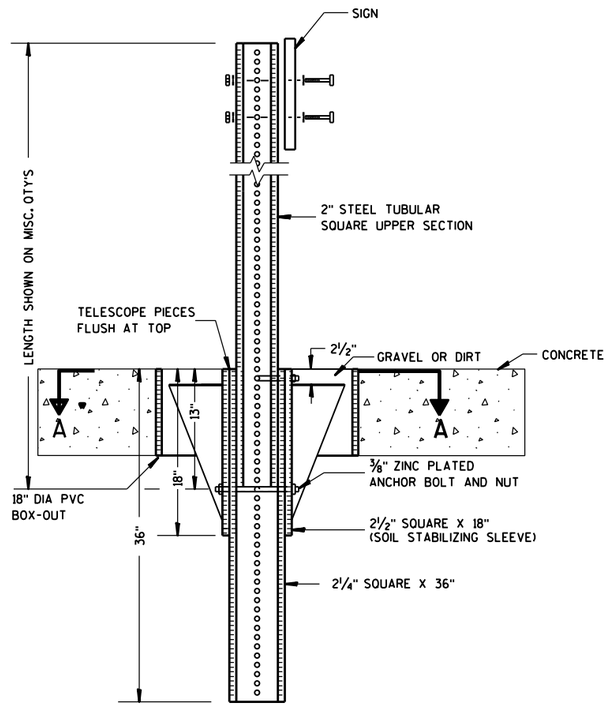
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 44	E



ELEVATION VIEW

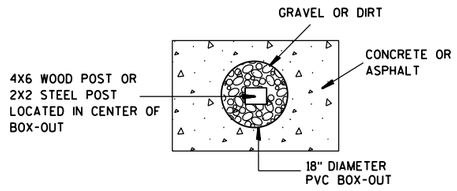
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

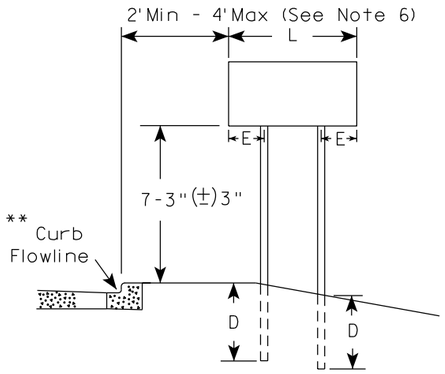
APPROVED Matthew R Rauch
for State Traffic Engineer

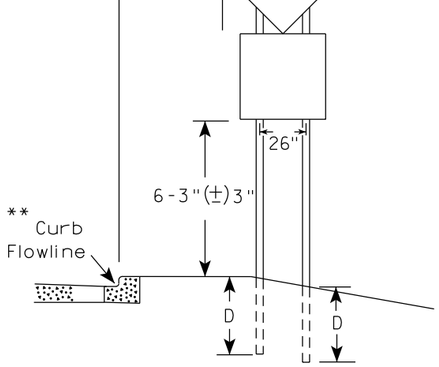
DATE 1/27/14 PLATE NO. A4-3B.1

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

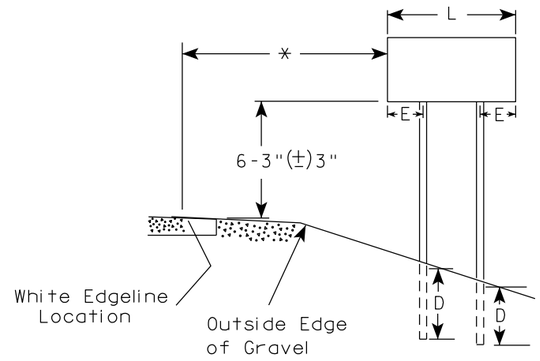
URBAN AREA

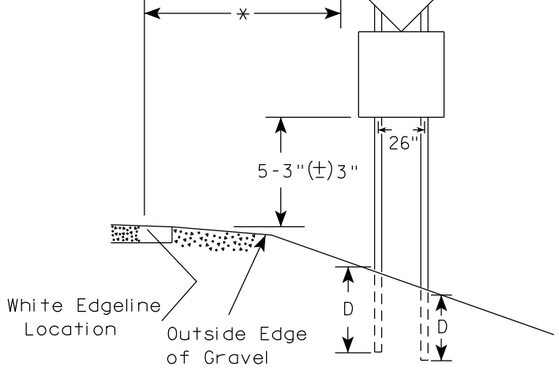




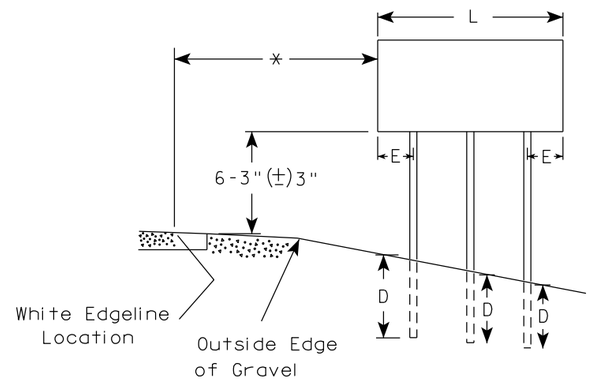
48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)





48" DIAMOND WARNING SIGN



GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 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.

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"

POST EMBEDMENT DEPTH

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

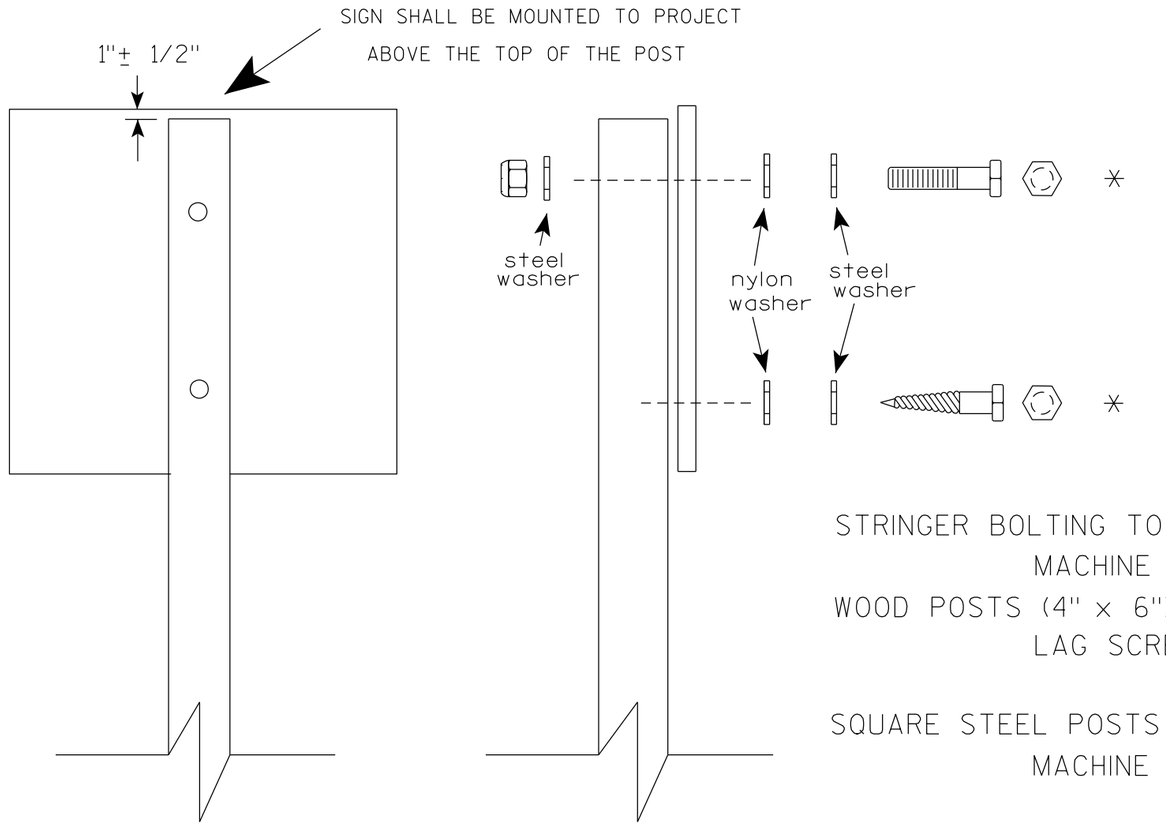
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 46	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

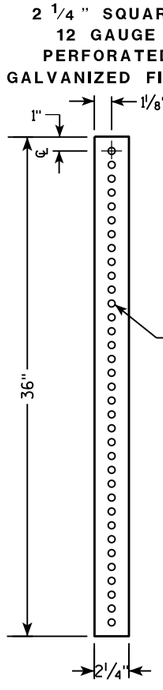
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

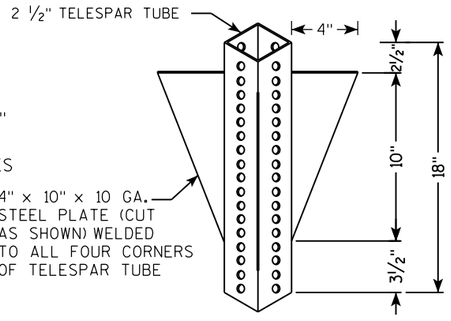
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

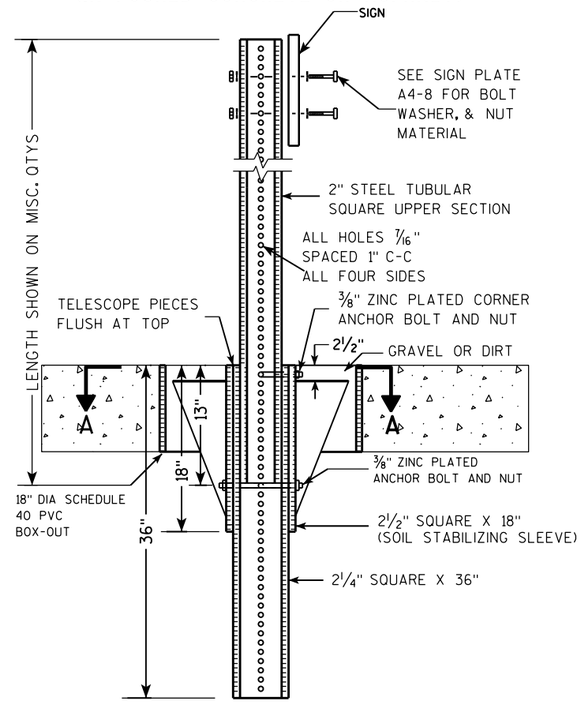
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



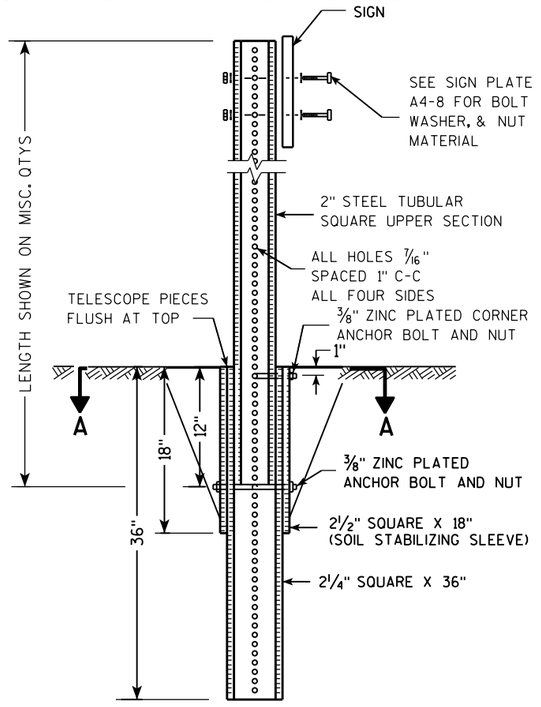
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

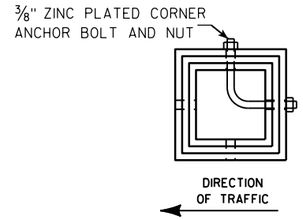


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

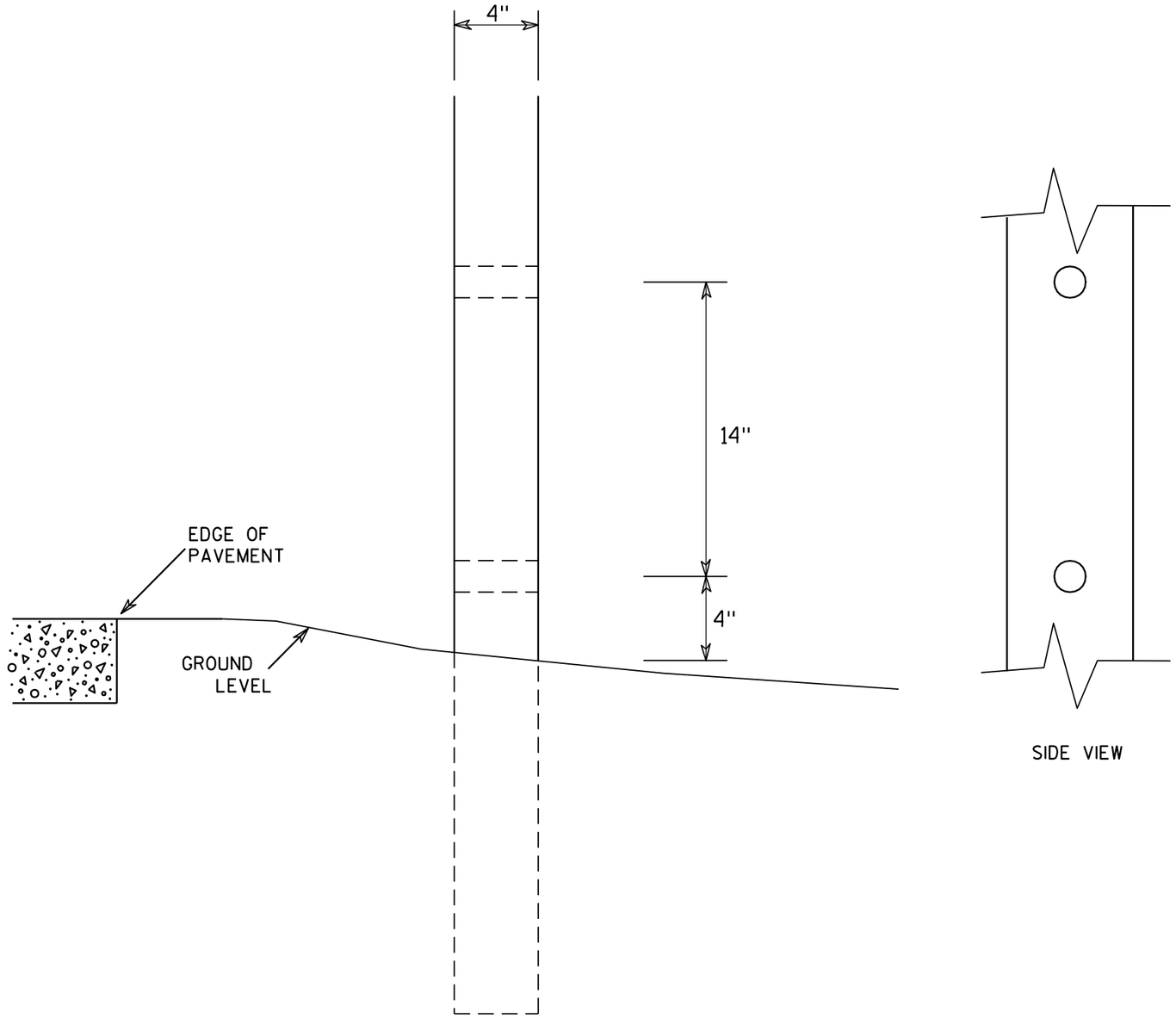
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 48 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.

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

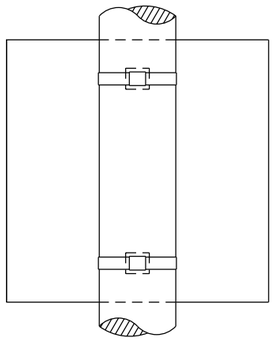
APPROVED Chester J Spang for State Traffic Engineer

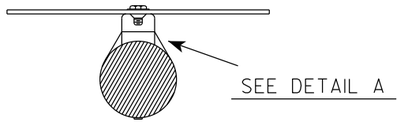
DATE 3/27/97 PLATE NO. A4-11.2

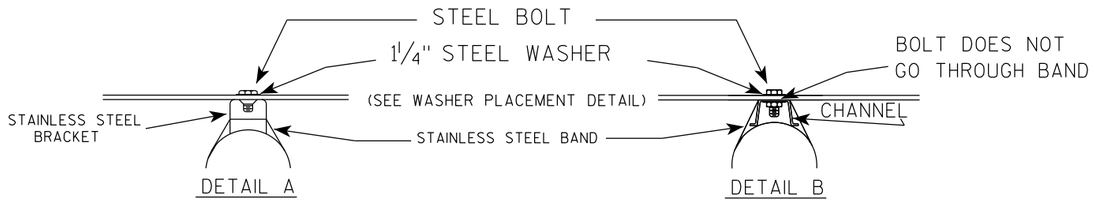
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 49	E

BANDING

SINGLE SIGN



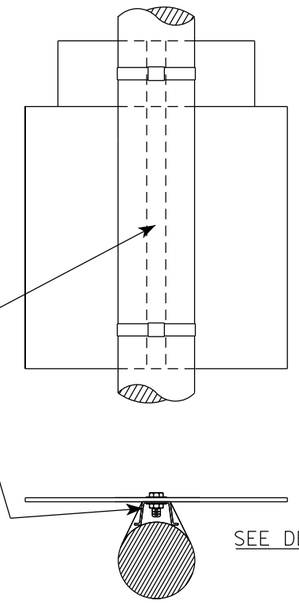




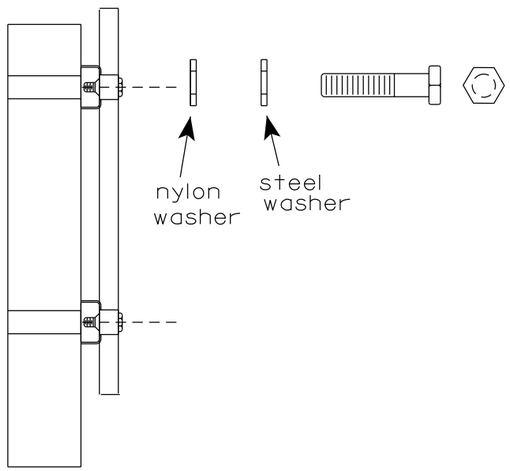
GENERAL NOTES

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



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

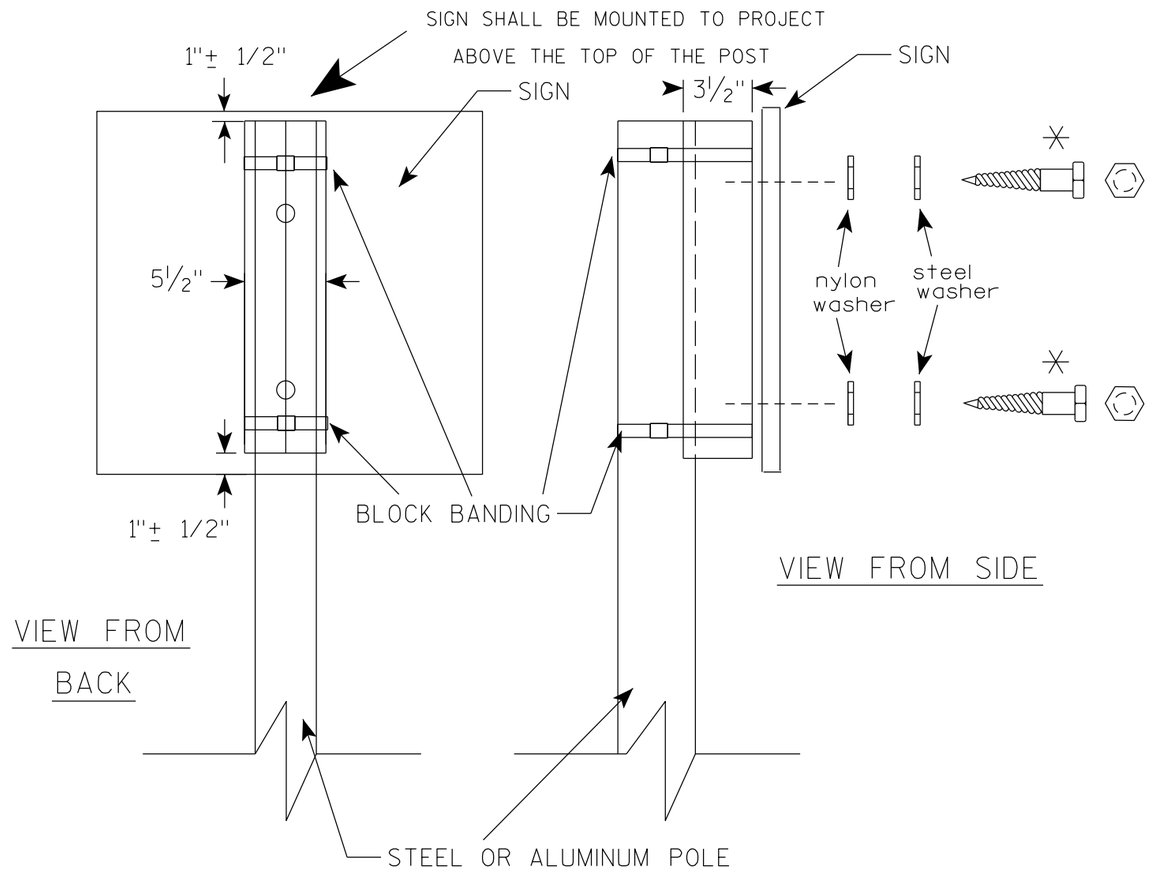
DATE 6/10/19 PLATE NO. A5-9.4

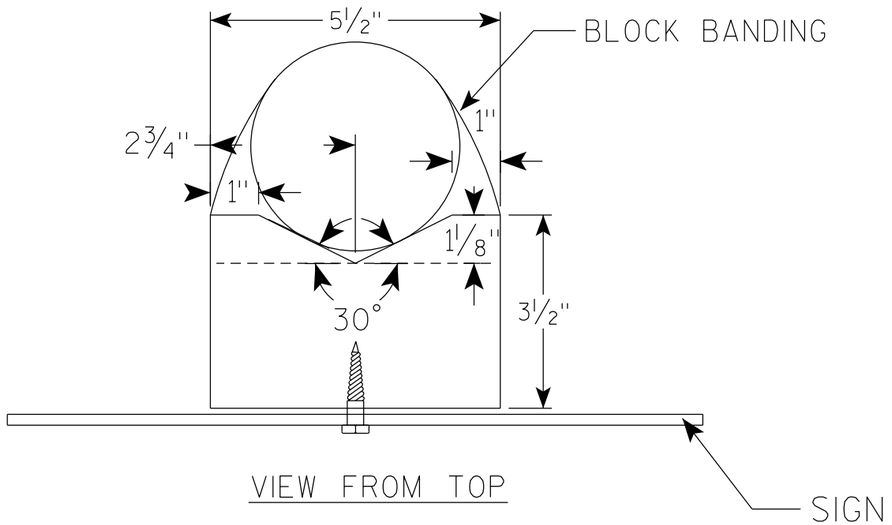
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 50	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





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)

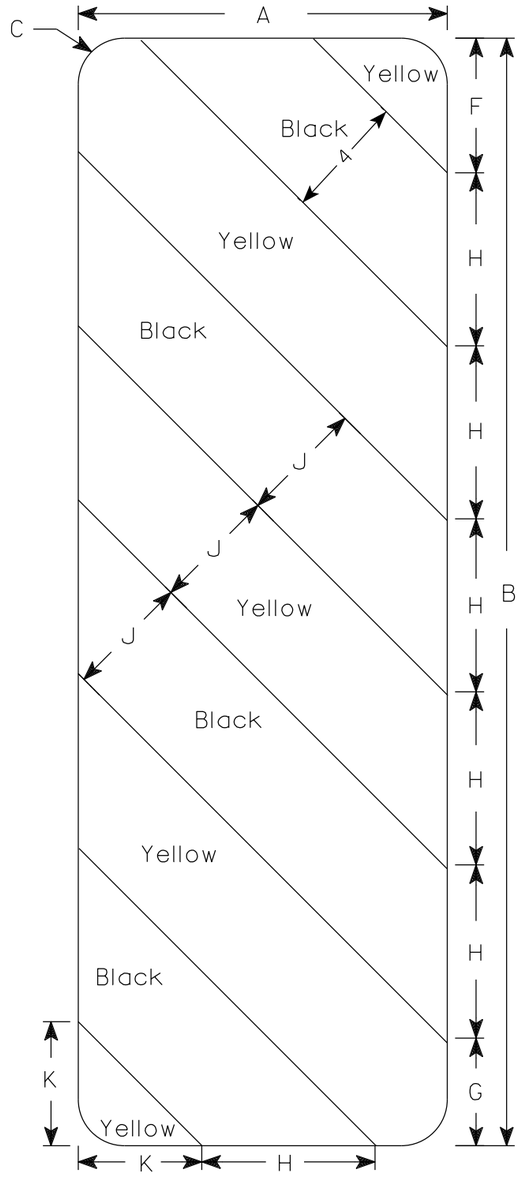
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

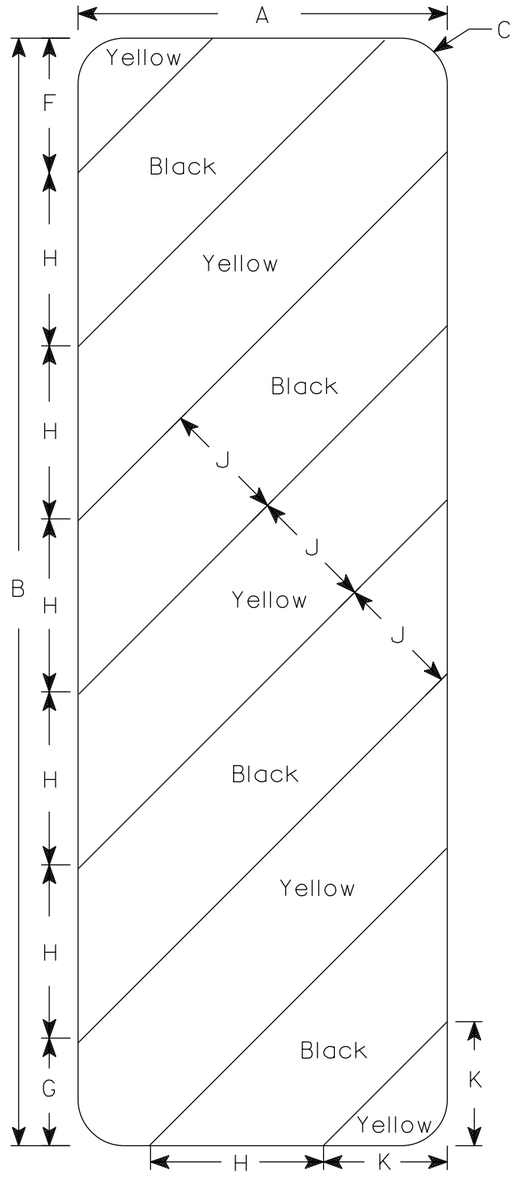
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 51 E



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

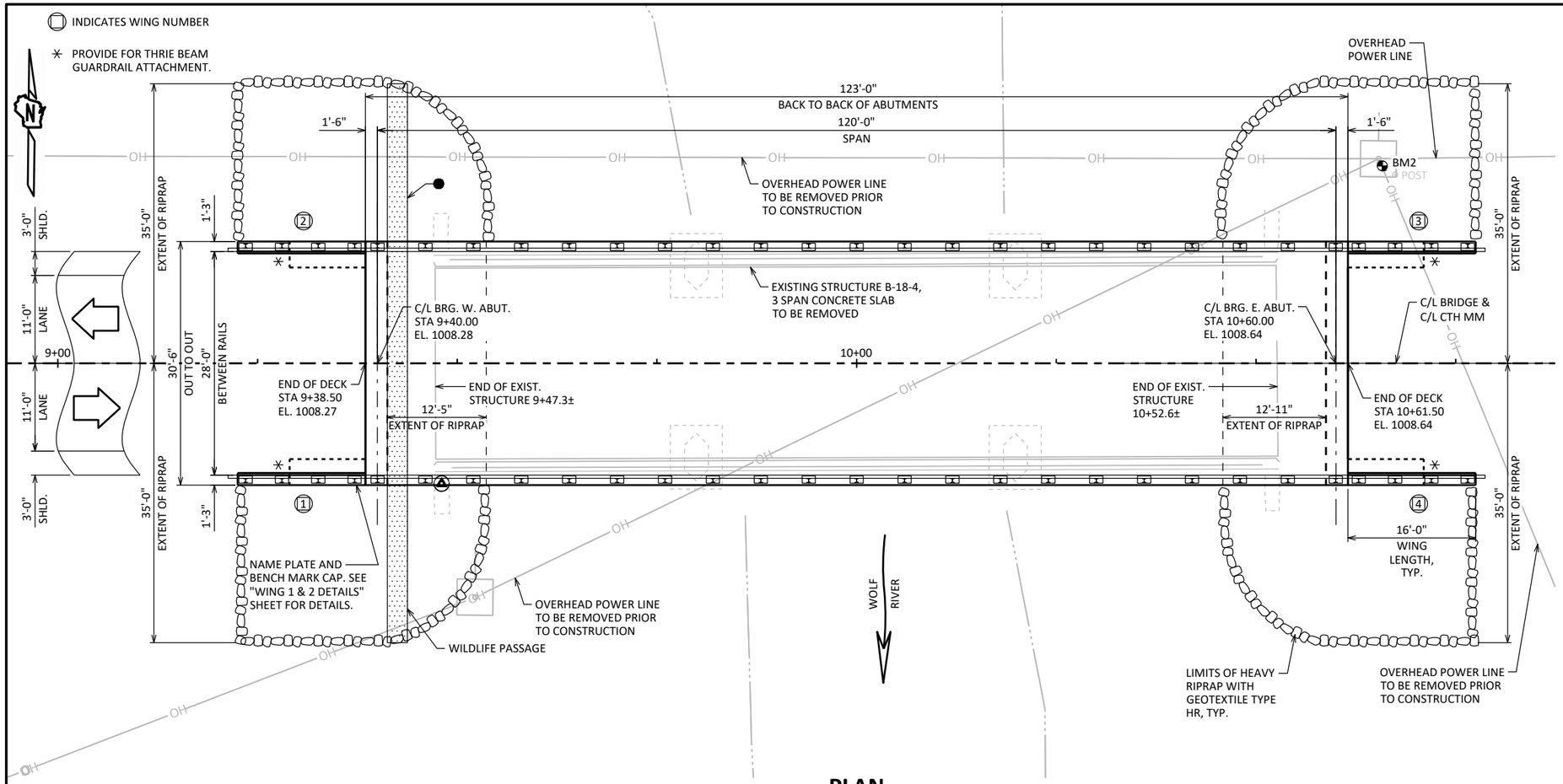
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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

INDICATES WING NUMBER

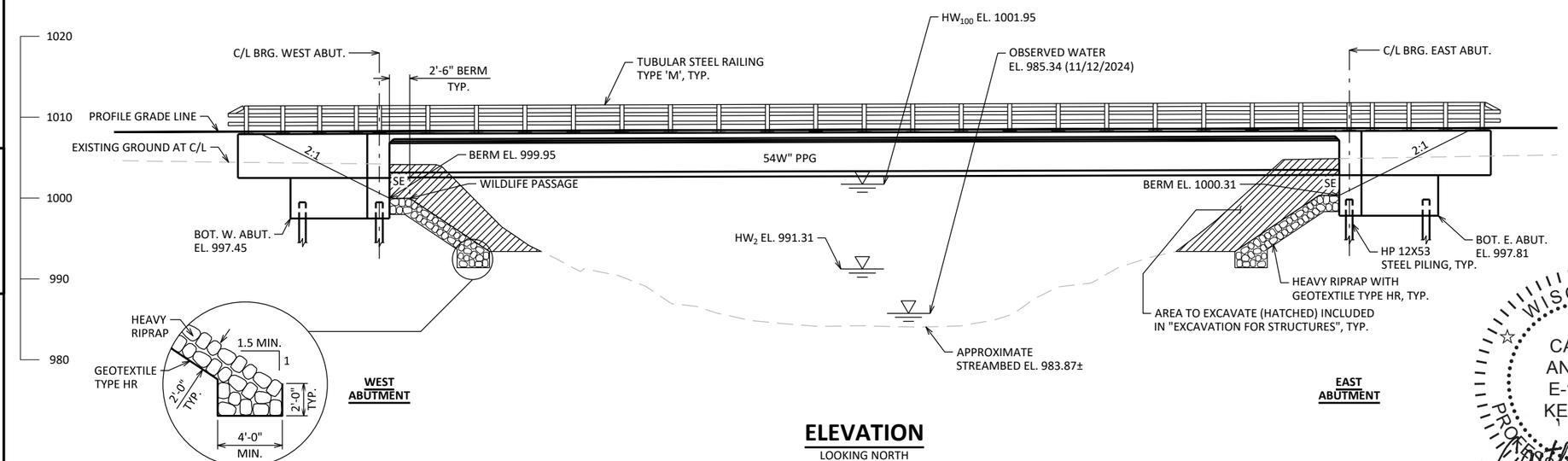
PROVIDE FOR THRIE BEAM GUARDRAIL ATTACHMENT.



PLAN

SINGLE SPAN 54W" PRESTRESSED CONCRETE GIRDER BRIDGE

WILDLIFE PASSAGE. SEE TYPICAL SECTION ON SHEET 2.



ELEVATION

LOOKING NORTH

STATE PROJECT NUMBER

7820-08-70

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.10
OPERATING RATING: RF = 1.46
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 248 (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

HIGH STRENGTH BAR STEEL REINFORCEMENT
- GRADE 60 — f_y = 60,000 PSI

54W" PRESTRESSED GIRDERS:
- CONCRETE MASONRY — f'_c = 8,000 PSI
- STRANDS: 0.6" DIA. LOW RELAXATION WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

STEEL DIAPHRAGMS — f_y = 36,000 PSI

FOUNDATION DATA

BOTH ABUTMENTS TO BE SUPPORTED ON HP12x53 PILES SEATED IN PRE-BORED HOLES TERMINATED AT EL. 980.61. PILES MUST BE FIRMLY SEATED WITH FIRM CONTACT BETWEEN PILE AND ROCK / SOIL. PILE DRIVING IS NOT REQUIRED.
ESTIMATED 20' LONG FOR THE WEST ABUTMENT
ESTIMATED 20' LONG FOR THE EAST ABUTMENT

THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 220 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

WEST ABUTMENT TO BE CORED 3 FEET MINIMUM INTO ROCK.

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 9,430 C.F.S.
V_{100}= 7.5 F.P.S.
HW_{100}= EL. 1001.95
WATERWAY AREA = 1,261 SQ. FT.
DRAINAGE AREA = 80.9 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

Q_2= 2,150 C.F.S.
V_2= 7.5 F.P.S.
HW_2= EL. 991.31

TRAFFIC DATA

CTH MM:

ADT = 280 (2027)
ADT = 300 (2047)
R.D.S. = 40 MPH

LIST OF DRAWINGS

1. GENERAL PLANS
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. ABUTMENT DETAILS
5. ABUTMENT DETAILS
6. WING 1 & 2 DETAILS
7. WING 3 & 4 DETAILS
8. SUPERSTRUCTURE DETAILS
9. SUPERSTRUCTURE DETAILS
10. 54W" PRESTRESSED GIRDER DETAILS
11. 54W" PRESTRESSED GIRDER DETAILS
12. STEEL DIAPHRAGMS
13. TUBULAR STEEL RAILING TYPE M

STRUCTURE DESIGN CONTACTS:

CAITLYN KOR 612-404-2703
AARON BONK 608-261-0261

NO.	DATE	REVISION	BY

SEH
SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 10/28/26
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-18-254

CTH MM OVER WOLF RIVER

COUNTY	TOWN
EAU CLAIRE	WILSON

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
HWC	CAK	LMT	CAK

WISCONSIN
CAITLYN ANN KOR
E-100023
KENNETH
MN
PROFESSIONAL ENGINEER
10/27/2026

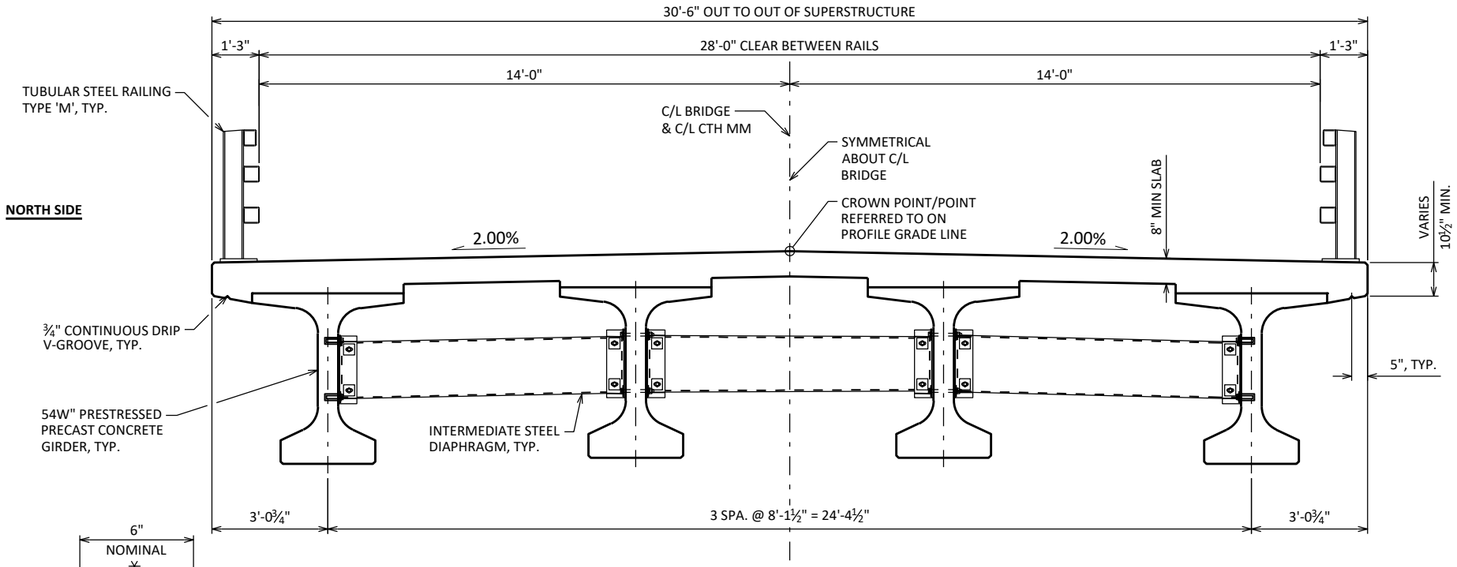
GENERAL PLAN

SHEET 1 OF 13
53

I.D. DATE:

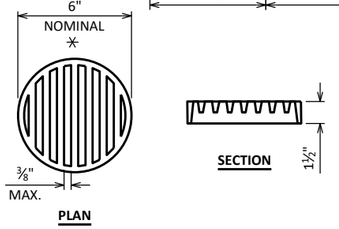
8

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CROSS SECTION THRU BRIDGE SHOWN IN SPAN

(LOOKING EAST)

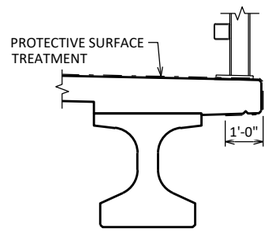


RODENT SHIELD DETAIL

✳ 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.



PROTECTIVE SURFACE TREATMENT DETAIL

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 B-18-254" SHALL BE THE EXISTING GROUNDLINE.

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.

ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

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 "54W" PRESTRESSED GIRDER DETAILS" 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.

SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING NON-ASPHALTIC JOINT SEALER (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).

SEE ROADWAY PLANS FOR EXISTING UTILITY LOCATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING EXISTING UTILITIES. COORDINATE WITH UTILITY COMPANIES.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED AREA ON SIDE AND TOP OF WINGWALLS, TOP OF DECK, AND EDGE OF DECK PLUS 1'-0" UNDER EDGES OF DECK AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENT.

THE QUANTITY FOR BACKFILL STRUCTURE TYPE A, BID ITEM 210.1500 IS CALCULATED BASED ON THE BACKFILL STRUCTURE LIMITS DETAILS SHOWN ON THIS SHEET.

AT ABUTMENTS, ALL SPACE EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A UNLESS OTHERWISE NOTED.

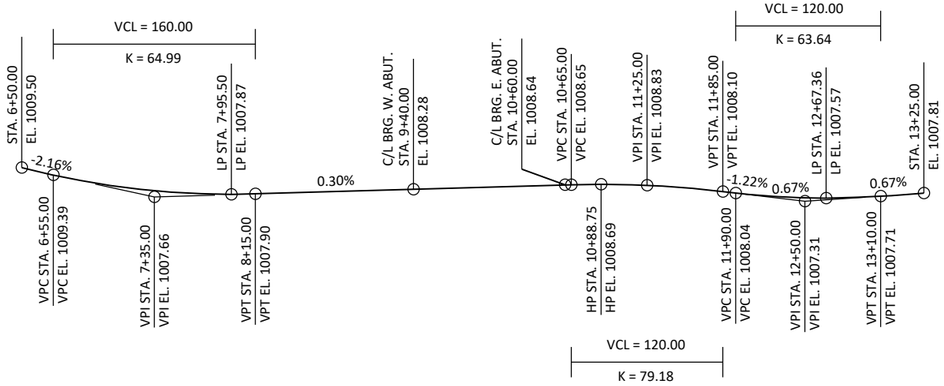
FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION :M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION :M213.

REMOVE EXISTING STRUCTURE STA. 9+47.3 TO STA. 10+52.6 B-18-4, 3 SPAN CONCRETE SLAB, 104' LONG 27' WIDE.

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NAVD 88 (2007) DATUM.

ALL DIMENSIONS ARE IN FEET AND INCHES UNLESS OTHERWISE NOTED.

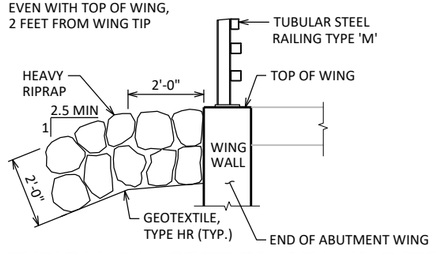
PROFILE GRADE LINE



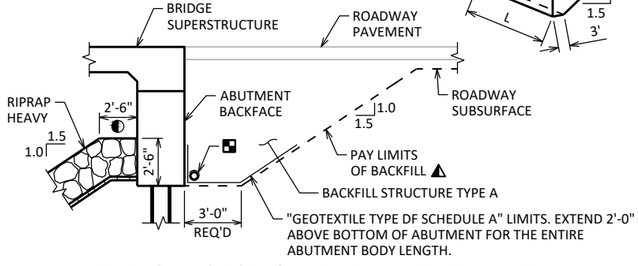
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	WEST ABUT	EAST ABUT	TOTALS
203.0211.S	ABATEMENT OF ASBESTOS CONTAINING MATERIAL B-18-4	EACH	-	-	-	1
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS B-18-4	EACH	-	-	-	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-18-254	EACH	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	250	251	501
502.0100	CONCRETE MASONRY BRIDGES	CY	145	37	38	220
502.3200	PROTECTIVE SURFACE TREATMENT	SY	469	12	13	494
503.0155	PRESTRESSED GIRDER TYPE I 54W-INCH	LF	484	-	-	484
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-	2120	2120	4240
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	26770	2255	2255	31280
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	8	-	-	8
506.4000	STEEL DIAPHRAGMS B-18-254	EACH	6	-	-	6
513.4061	RAILING TUBULAR TYPE M	LF	310	-	-	310
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	10	10	20
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	-	144	144	288
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	-	160	160	320
606.0300	RIPRAP HEAVY	CY	-	145	146	291
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	82	82	164
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	-	23	23	46
645.0120	GEOTEXTILE TYPE HR	SY	-	244	246	490
SPV.0195	INFILL RIPRAP B-18-254	TON	-	26	-	26
	NON-BID ITEMS					
	FILLER	SIZE	-	-	-	1/2", 3/4"
	NAMEPLATE	EACH	-	-	-	1
	BENCHMARK	EACH	-	-	-	1

NOTE: PLACE HEAVY RIPRAP EVEN WITH TOP OF WING, 2 FEET FROM WING TIP



TYPICAL FILL SECTION AT WING TIPS



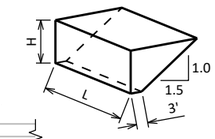
TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL 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.

◐ WILDLIFE PASSAGE AT WEST ABUTMENT ONLY UTILIZING BIT ITEM "INFILL RIPRAP B-18-254". SEE PLAN VIEW ON SHEET 1 FOR LAYOUT OF WILDLIFE PASSAGE.

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)

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
BM1	STA. 6+80.39, 25.3' LT	SPK IN PP	1005.85
BM2	STA. 10+65.80, 24.7' LT	SPK IN PP	1003.22
BM3	STA. 12+32.44, 51.8' RT	SPK IN PP	1007.05

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER
7820-08-70

STRUCTURE B-18-254

DRAWN BY LMT | PLANS CK'D CAK

CROSS SECTION & QUANTITIES

SHEET 2 OF 13
54

8

8

BORING #	DATE COMPLETED
B-1	12/10/2024
B-2	12/9/2024
BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC.	
12839 30TH AVENUE, CHIPPEWA FALLS, WI 54729	
PHONE: (715) 738-2770	
REPORT COMPLETED BY: JEFFREY A. MANNINEN, BRANCH MANAGER	

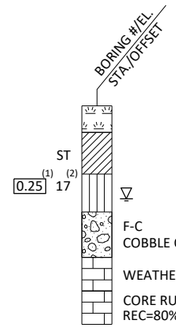
STATE PROJECT NUMBER

7820-08-70

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

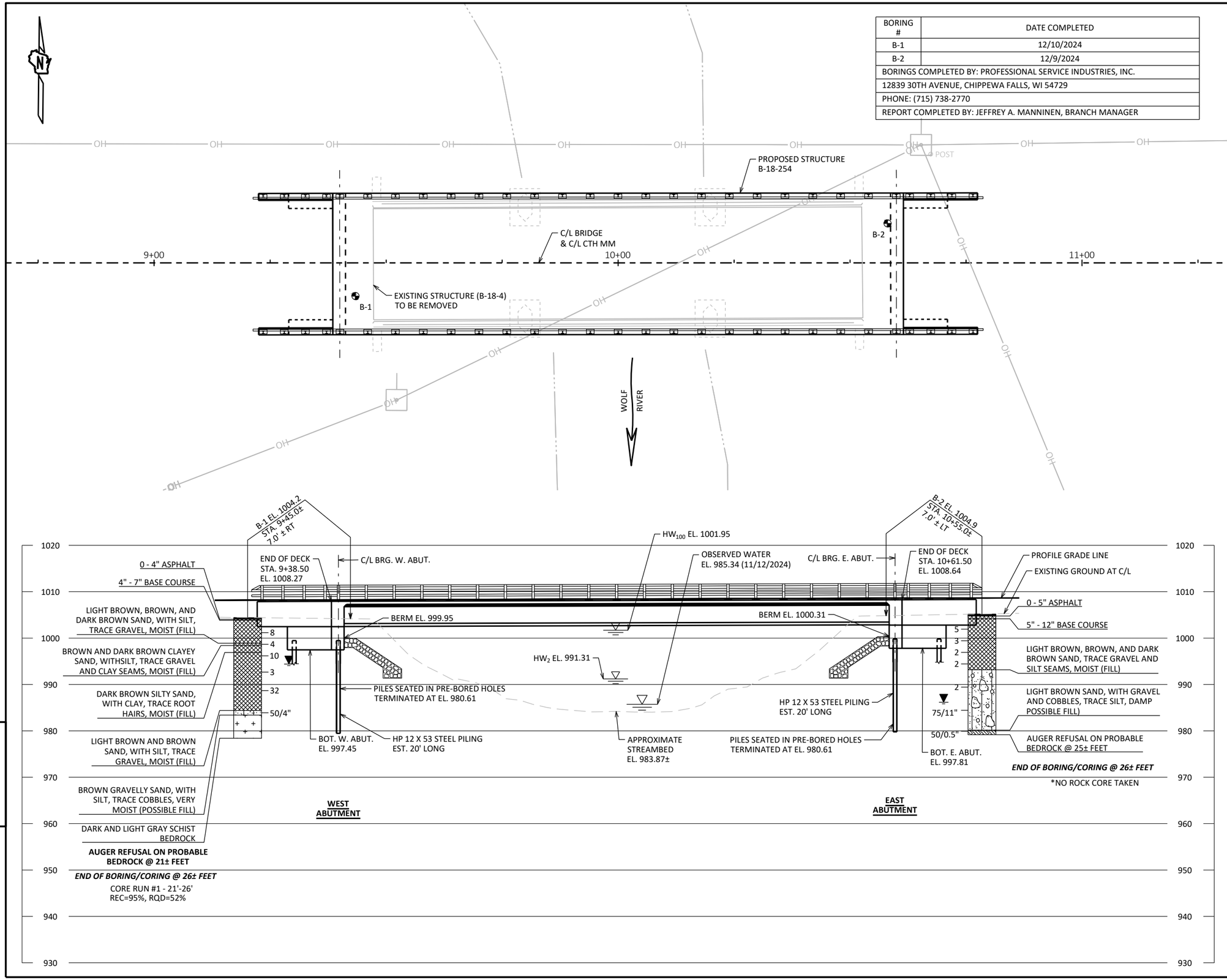
AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

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-18-254

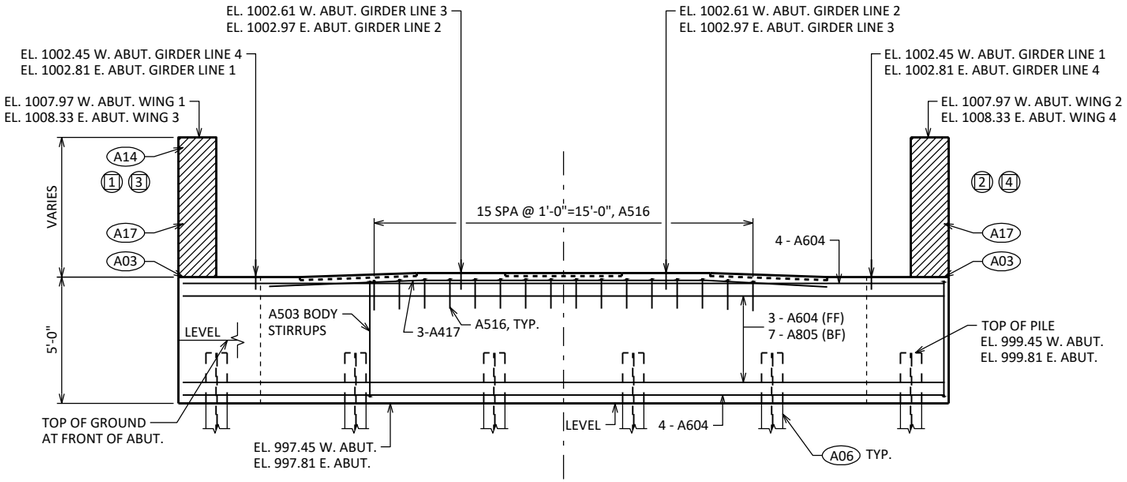
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SUBSURFACE EXPLORATION

SHEET 3 OF 13
55

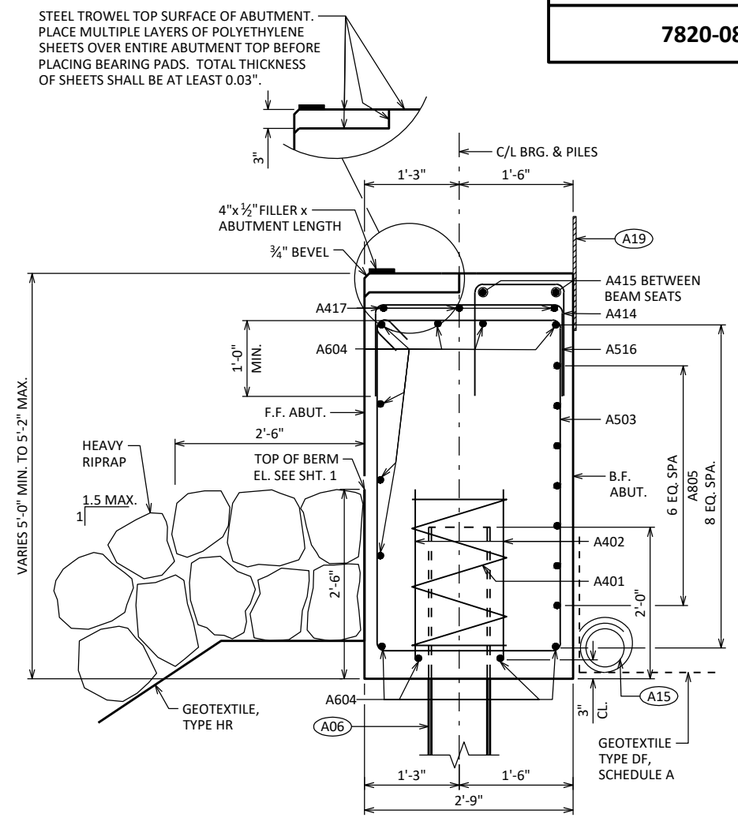
STATE PROJECT NUMBER

7820-08-70

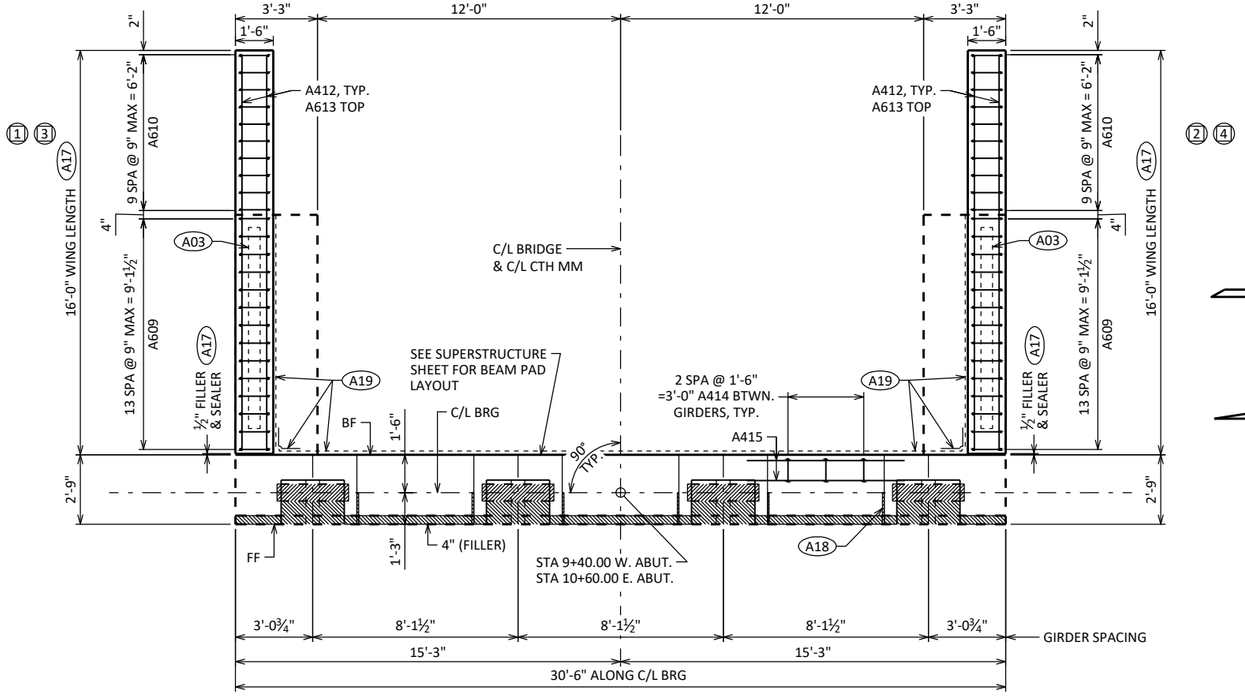


ELEVATION

(LOOKING AT FRONT FACE)



SECTION THRU BODY



PLAN

WEST ABUT.

EAST ABUT.

- A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).
- A06 SUPPORT ABUTMENT ON HP 12 x 53 STEEL PILING SEATED IN PRE-BORED HOLES, ESTIMATED 20'-0" LONG AT WEST ABUTMENT & 20'-0" LONG AT EAST ABUTMENT.
- A14 CONTRACTOR SHALL SUPPLY A NEW NAME PLATE ON WING 1 PER 502.3.11 OF STD. SPEC.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- A17 ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ½" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- A18 ¾" CORK FILLER UP VERT. BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

ABUTMENT NOTES

DIMENSIONS ARE MEASURED ALONG C/L ABUT BRG UNLESS NOTED OTHERWISE.

SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER. (1" DEEP AND HOLD 1/2" BELOW SURFACE). FILLER INCLUDED IN WING LENGTH.

FOR PILE SPLICE DETAIL SEE SHEET 5.

FOR BEARING PAD DETAIL SEE SHEET 8.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-254

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ABUTMENT DETAILS

SHEET 4 OF 13

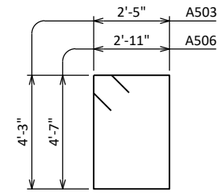
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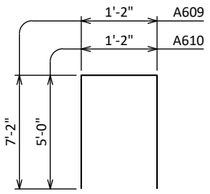
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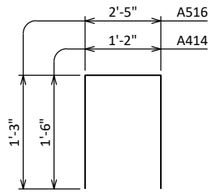
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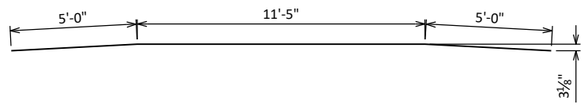
A503, A506



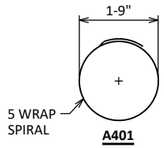
A609, A610



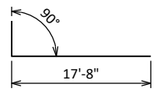
A414, A516



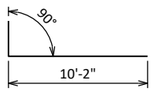
A417



A401



A805



A707

BILL OF BARS — BOTH ABUTMENTS

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

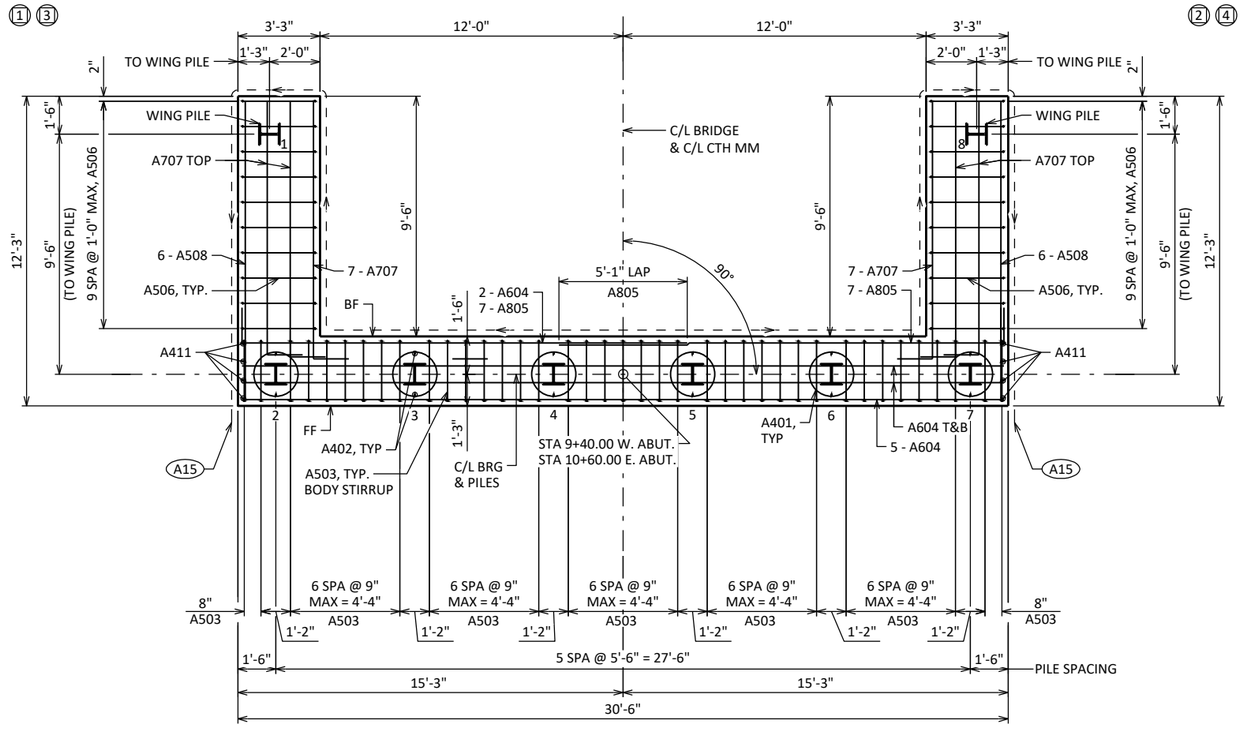
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		12	28'-0"	X		BODY AT PILES
A402		24	2'-3"			BODY AT PILES
A503		78	14'-4"	X		BODY STIRRUPS
A604		22	30'-0"			BODY HORIZ
A805		28	19'-0"	X		BODY HORIZ
A506	X	40	16'-0"	X		WING STIRRUP
A707	X	36	11'-4"	X		WING 1 THRU 4 BF & TOP
A508	X	24	11'-11"			WING 1 THRU 4 FF
A609	X	56	15'-6"	X		WING 1 THRU 4 VERT
A610	X	40	11'-2"	X		WING 1 THRU 4 VERT
A411		16	4'-7"			BODY VERT ENDS
A412	X	52	15'-8"			WING HORIZ
A613	X	8	15'-8"			WING HORIZ TOP
A414		18	4'-2"	X		BODY VERT BETWEEN BEAM SEATS
A415		12	6'-3"			BODY HORIZ BETWEEN BEAM SEATS
A516		32	4'-11"	X		BODY VERT AT TOP
A417		6	21'-5"	X		BODY HORIZ AT TOP

NOTE: TABLE INCLUDES TOTAL BARS FOR ALL ABUTMENTS
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

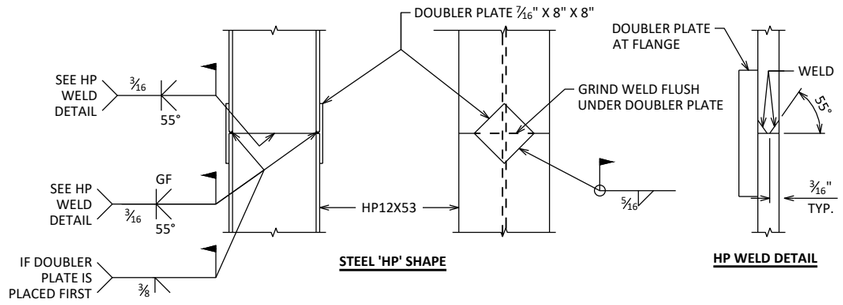
NOTES

SEE SHEET 4 FOR ABUTMENT NOTES.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

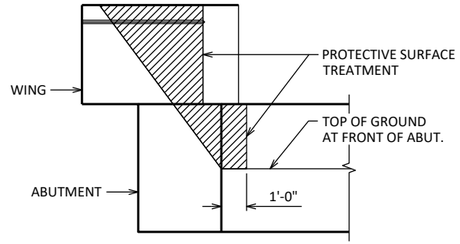


FOOTING & PILE LAYOUT



STEEL 'HP' SHAPE — **HP WELD DETAIL**

'HP' PILE DETAILS



PROTECTIVE SURFACE TREATMENT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-254

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ABUTMENT DETAILS

SHEET 5 OF 13

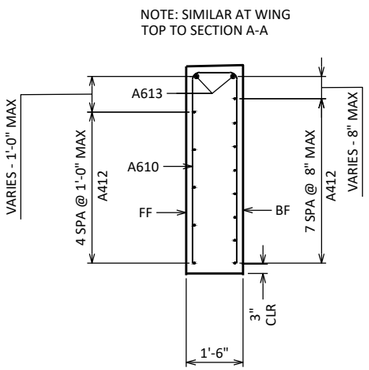
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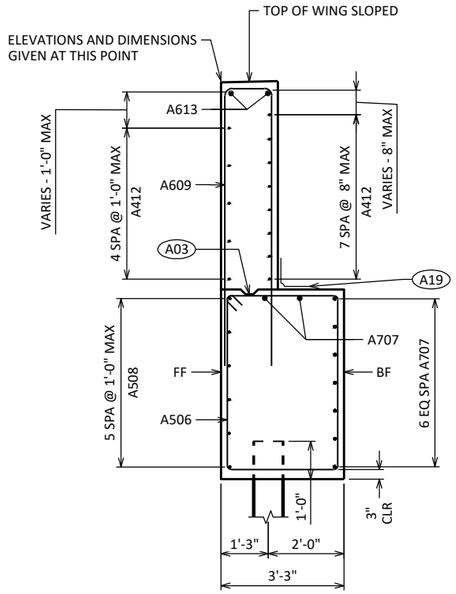
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STATE PROJECT NUMBER

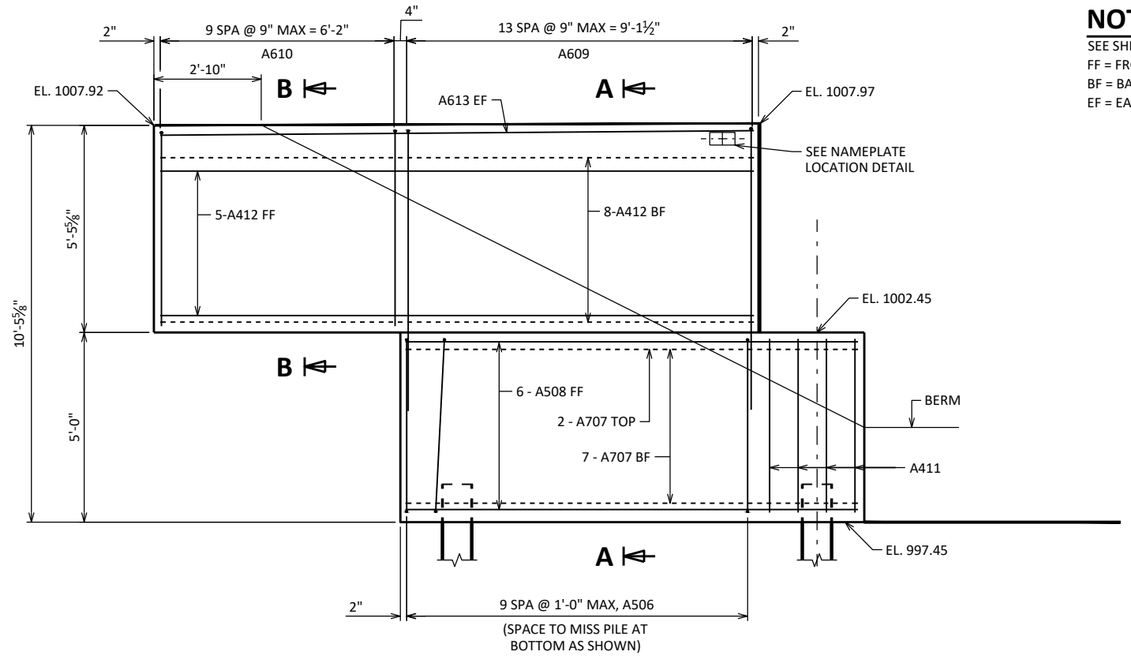
7820-08-70



SECTION B-B



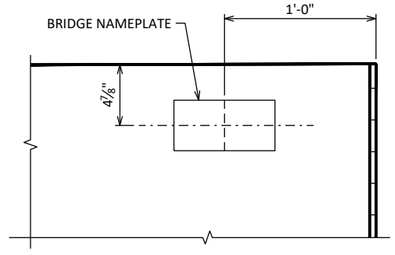
SECTION A-A



ELEVATION - WINGS 1 & 2

NOTES

SEE SHEET 4 FOR ABUTMENT NOTES
FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE



NAMEPLATE LOCATION DETAIL

(AT WING 1 WEST ABUTMENT ONLY)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-254

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WING 1 & 2 DETAILS

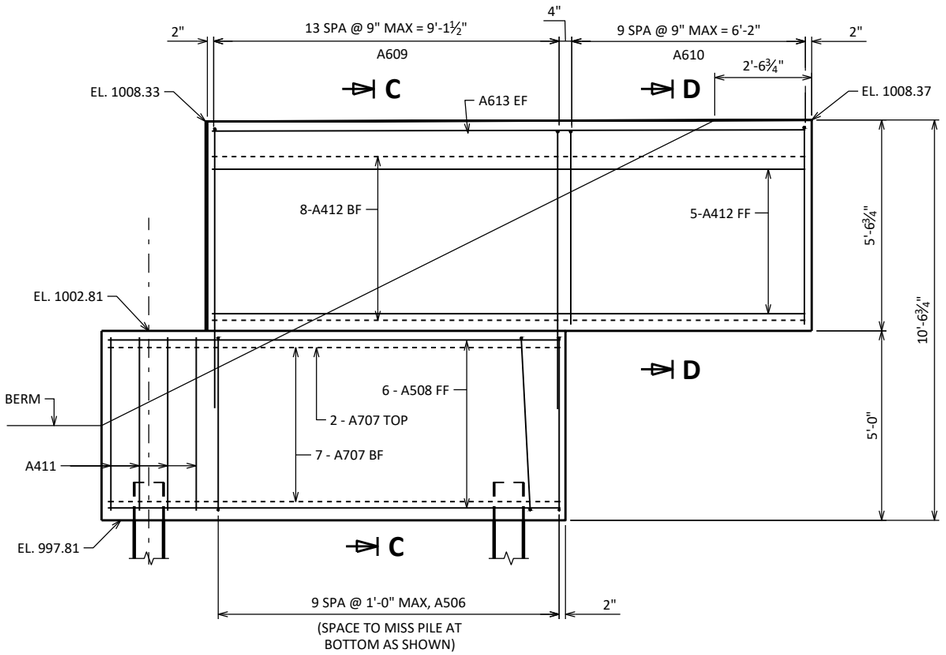
SHEET 6 OF 13

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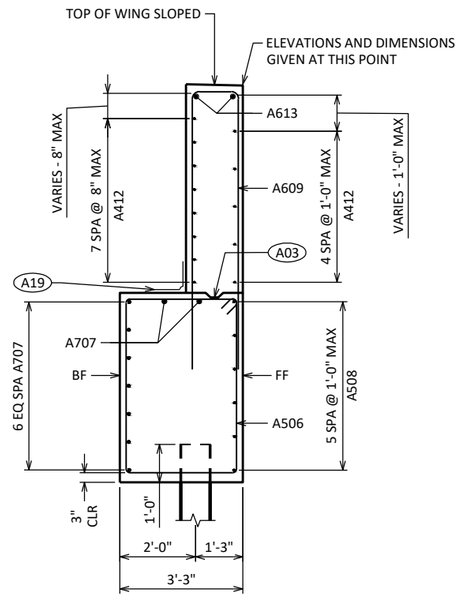
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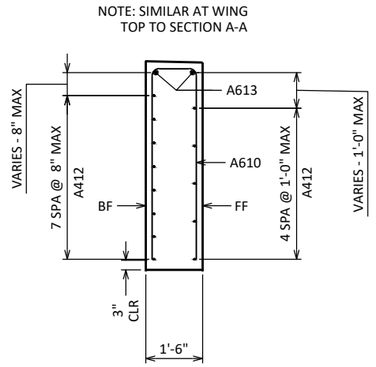
SEE SHEET 4 FOR ABUTMENT NOTES
FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE



ELEVATION - WINGS 3 & 4



SECTION C-C



SECTION D-D

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-254

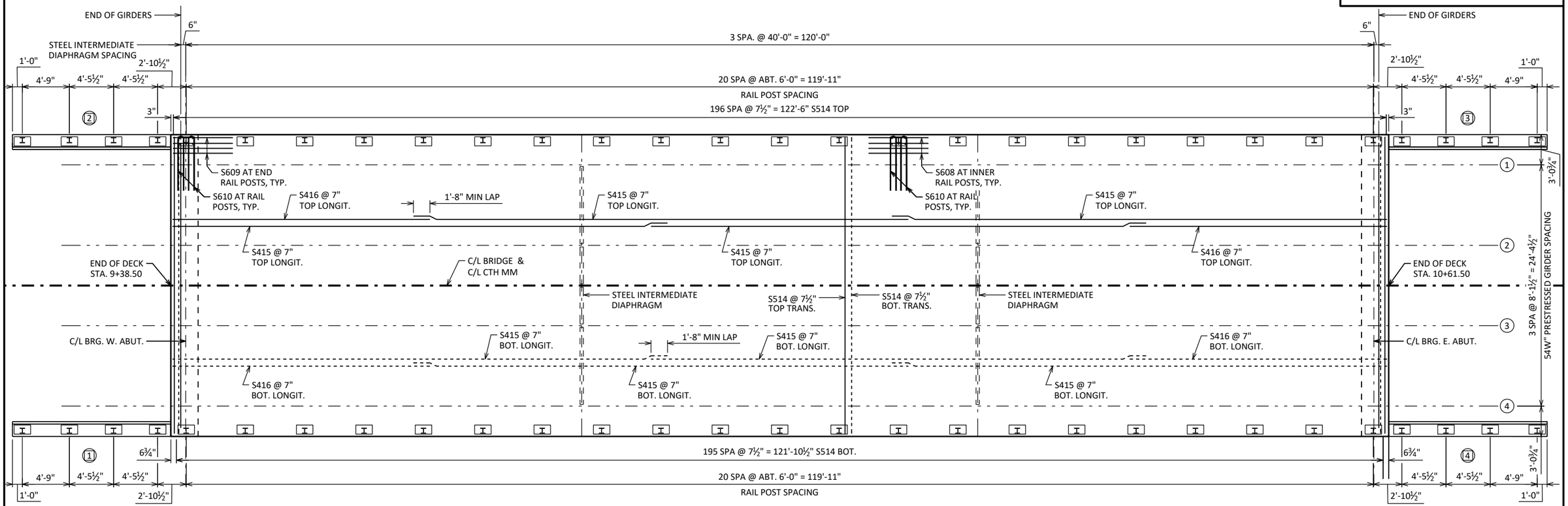
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WING 3 & 4 DETAILS

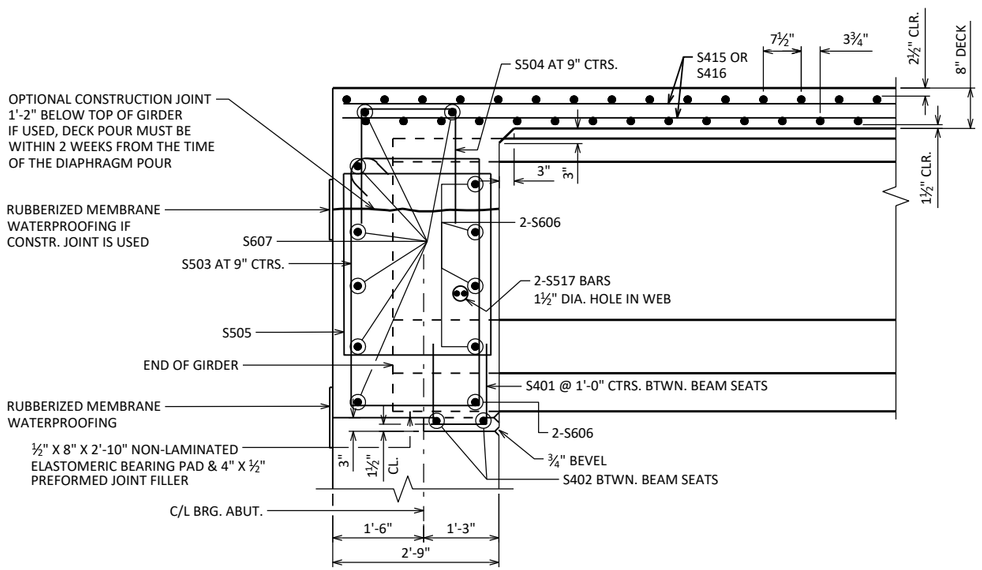
SHEET 7 OF 13

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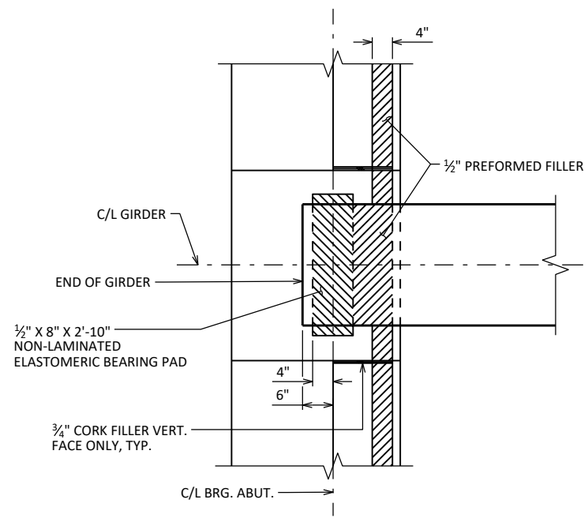
STATE PROJECT NUMBER
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REINFORCEMENT PLAN



PARTIAL LONGITUDINAL SECTION



BEARING PAD DETAIL

AT ABUTMENTS

SUPERSTRUCTURE NOTES & SYMBOLS:

BOTTOM TRANSVERSE BAR STEEL SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS WITH A CENTER TO CENTER SPACING NOT TO EXCEED 4'-0". ONE LINE OF CONTINUOUS BAR CHAIRS SHALL BE PLACED NEAR EACH EDGE OF SLAB TO SUPPORT THE END OF THE BOTTOM TRANSVERSE BAR STEEL.

TOP LONGITUDINAL BAR STEEL SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

FOR PRESTRESSED GIRDER DETAILS SEE SHEETS 10 & 11.

FOR STEEL INTERMEDIATE DIAPHRAGM DETAILS SEE SHEET 12.

(X) INDICATES GIRDER NUMBER

——— INDICATES TOP BAR STEEL REINFORCEMENT

- - - - - - INDICATES BOTTOM BAR STEEL REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-18-254

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SUPERSTRUCTURE DETAILS

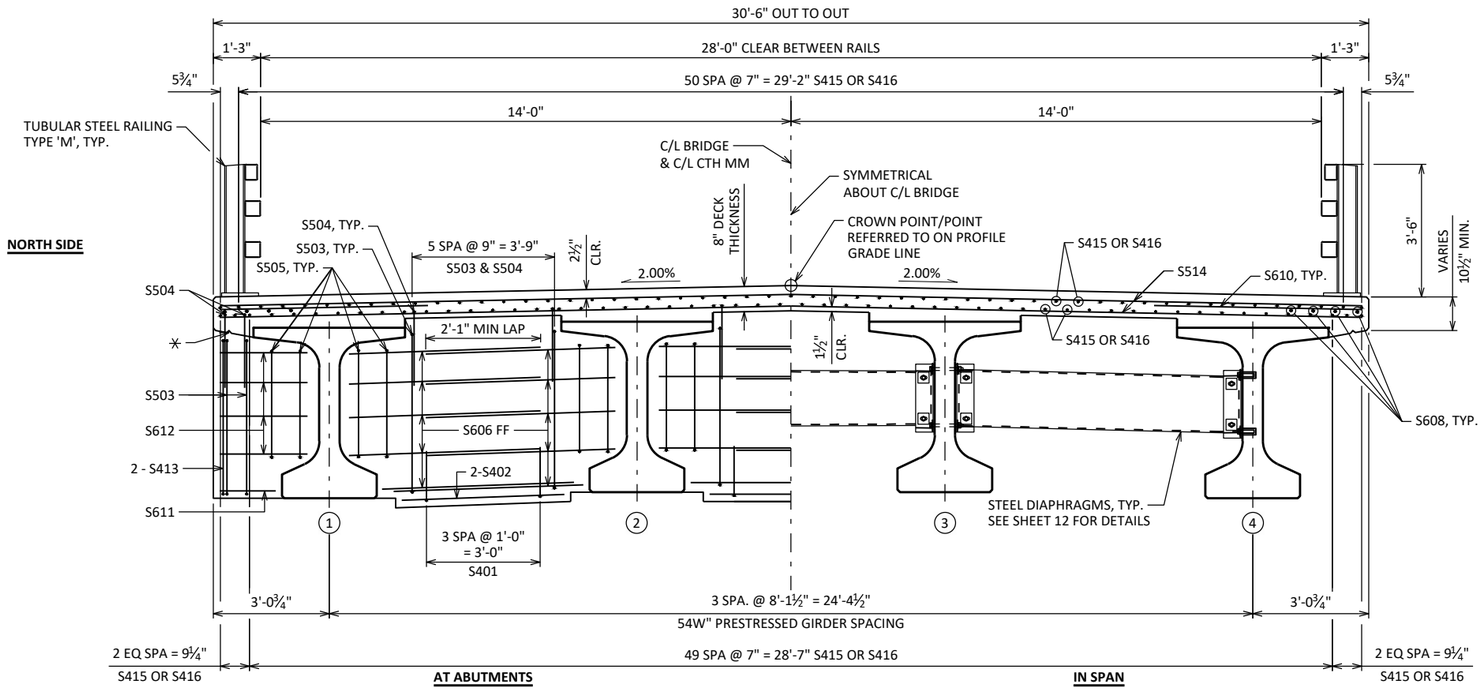
SHEET 8 OF 13
60

8

8

STATE PROJECT NUMBER

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CROSS SECTION THRU DECK

BILL OF BARS — SUPERSTRUCTURE

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	24	3' - 7"	X		ABUTMENT DIAPHRAGM BETWEEN SEATS VERT
S402	X	12	4' - 0"			ABUTMENT DIAPHRAGM BETWEEN SEATS HORIZ
S503	X	44	14' - 2"	X		ABUTMENT DIAPHRAGM STIRRUP VERT
S504	X	44	5' - 11"	X		ABUTMENT DIAPHRAGM TO SLAB TIES
S505	X	32	11' - 0"	X		ABUTMENT DIAPHRAGM STIRRUPS
S606	X	60	4' - 9"			ABUTMENT DIAPHRAGM FF
S607	X	14	30' - 0"			ABUTMENT DIAPHRAGM BF
S608	X	152	6' - 0"			RAIL POST, INT
S609	X	16	4' - 8"	X		RAIL POST, END
S610	X	84	11' - 8"	X		RAIL POST
S611	X	4	5' - 1"	X		ABUTMENT DIAPHRAGM ENDS HORIZ
S612	X	16	6' - 9"	X		ABUTMENT DIAPHRAGM ENDS HORIZ
S413	X	8	4' - 4"			ABUTMENT DIAPHRAGM SIDES VERT
S514	X	393	30' - 2"			DECK TOP AND BOTTOM TRANS
S415	X	214	50' - 0"			DECK TOP AND BOTTOM LONGIT
S416	X	107	21' - 8"			DECK TOP AND BOTTOM LONGIT
S517	X	16	6' - 0"			ABUTMENT DIAPHRAGM THRU BEAM

TOP OF DECK ELEVATIONS

FINAL TOP OF DECK ELEVATIONS											
	WEST ABUT	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	EAST ABUT
NORTH EDGE OF DECK	1007.97	1008.01	1008.04	1008.08	1008.11	1008.15	1008.19	1008.22	1008.26	1008.29	1008.33
GIRDER LINE 1	1008.03	1008.07	1008.10	1008.14	1008.18	1008.21	1008.25	1008.28	1008.32	1008.36	1008.39
GIRDER LINE 2	1008.19	1008.23	1008.27	1008.30	1008.34	1008.37	1008.41	1008.45	1008.48	1008.52	1008.55
C/L	1008.28	1008.31	1008.35	1008.38	1008.42	1008.46	1008.49	1008.53	1008.56	1008.60	1008.64
GIRDER LINE 3	1008.19	1008.23	1008.27	1008.30	1008.34	1008.37	1008.41	1008.45	1008.48	1008.52	1008.55
GIRDER LINE 4	1008.03	1008.07	1008.10	1008.14	1008.18	1008.21	1008.25	1008.28	1008.32	1008.36	1008.39
SOUTH EDGE OF DECK	1007.97	1008.01	1008.04	1008.08	1008.11	1008.15	1008.19	1008.22	1008.26	1008.29	1008.33

NOTES

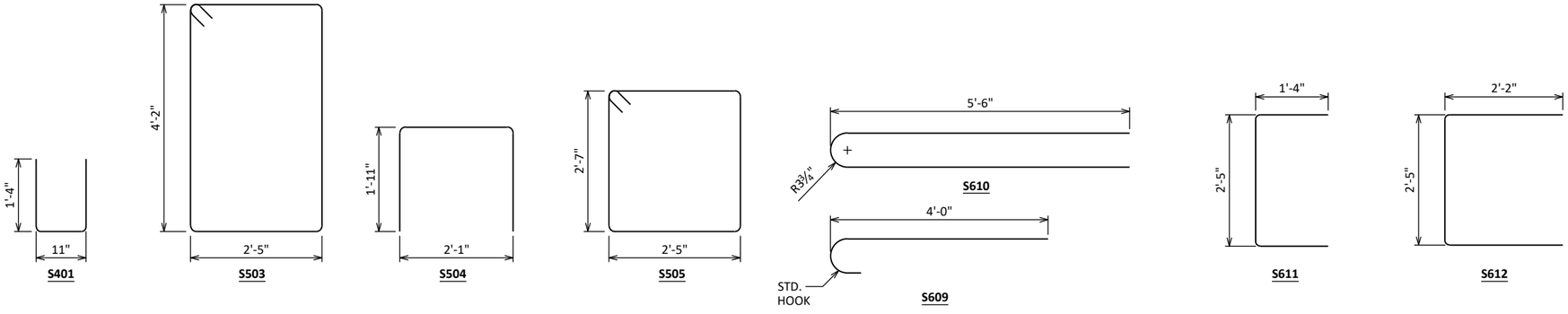
SEE SUPERSTRUCTURE NOTES & SYMBOLS ON SHEET 8.

⚹ ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT. DIAPHRAGM, TYP.

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

ALL REINFORCING BARS ARE ENGLISH.

FF = FRONT FACE
BF = BACK FACE



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STRUCTURE B-18-254

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SUPERSTRUCTURE DETAILS

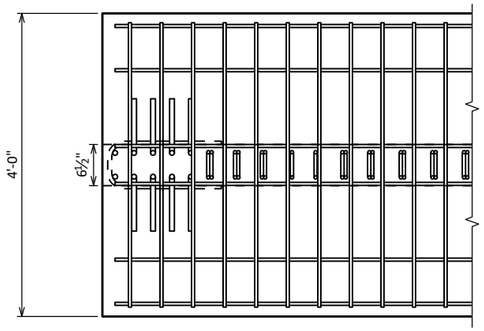
SHEET 9 OF 13

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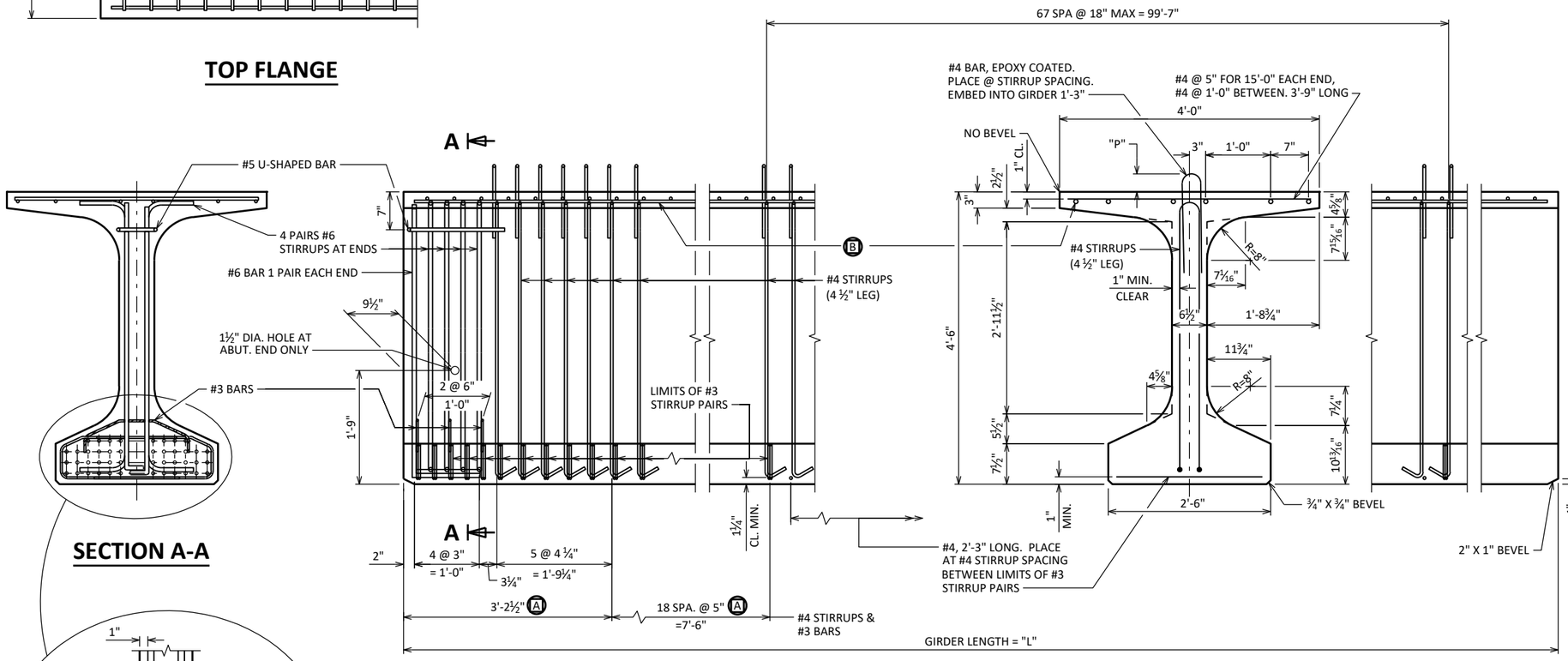
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STATE PROJECT NUMBER

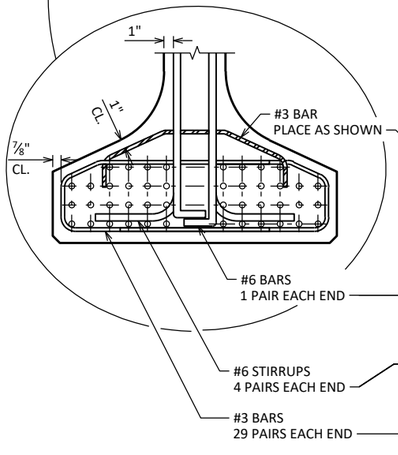
7820-08-70



TOP FLANGE



SECTION A-A

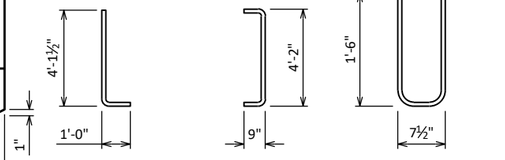


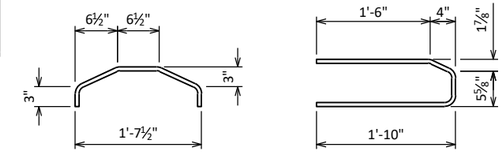
BOTTOM FLANGE

SIDE VIEW & TYP. SECTION IN SPAN

A DETAIL TYP. AT EACH END

B 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-9"





NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

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.) ⚹
ALL	ALL	121	0.7"	1.3"	1.8"	2.1"	2.2"	2.1"	1.8"	1.3"	0.7"	8,000	7 1/8	6 3/8	7 1/8	0.600	42	6,800	47	15 1/2	18 1/2	5	-	-

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-254

DRAWN BY LMT | PLANS CK'D CAK

54W" PRESTRESSED GIRDER DETAILS

SHEET 10 OF 13

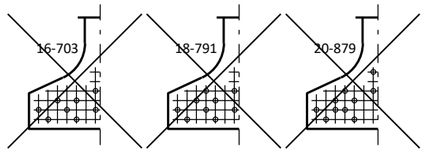
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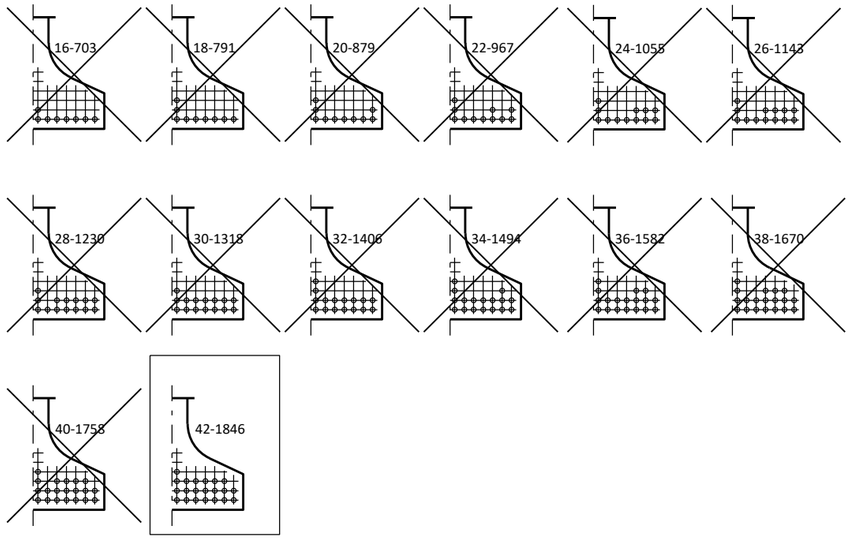
STATE PROJECT NUMBER

7820-08-70



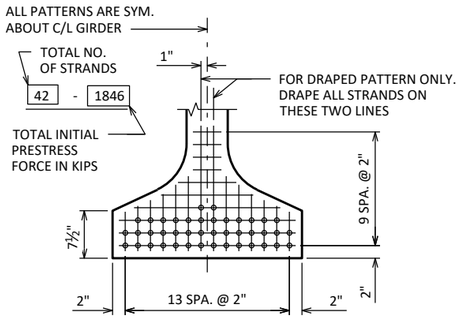
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

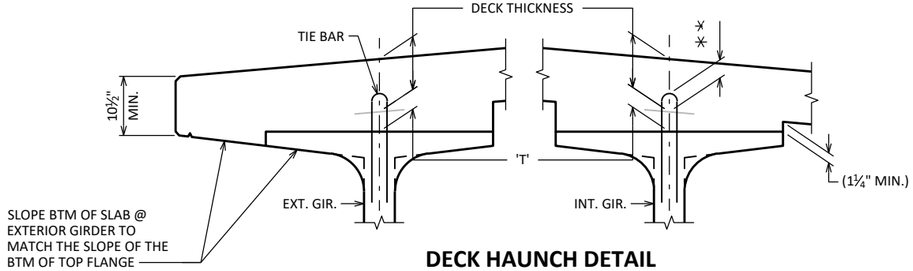


ARRANGEMENT AT C/L SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

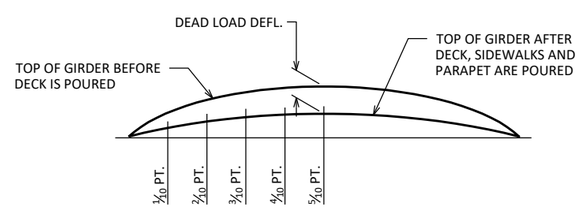
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

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

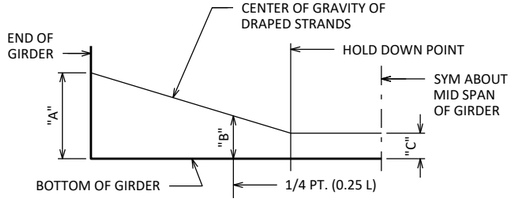
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

	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" 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.) ⁑
ALL	4 1/2"

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

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-254

DRAWN BY LMT | PLANS CK'D CAK

54W" PRESTRESSED GIRDER DETAILS

SHEET 11 OF 13

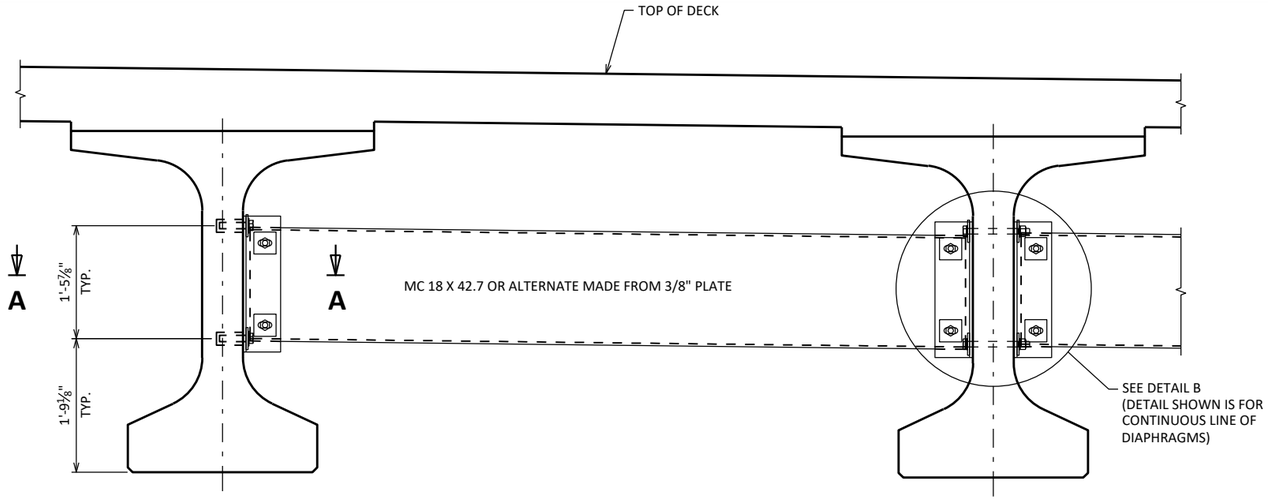
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STATE PROJECT NUMBER

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EXTERIOR GIRDER **INTERIOR GIRDER**

PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

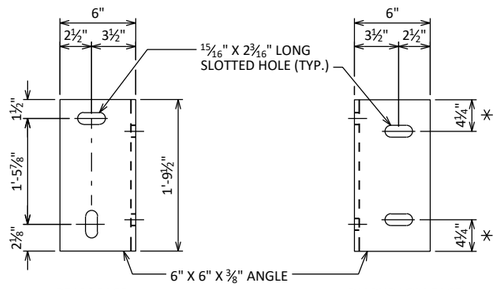
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-18-254", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

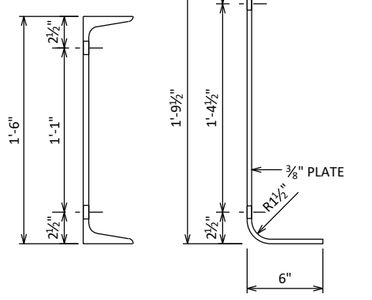
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

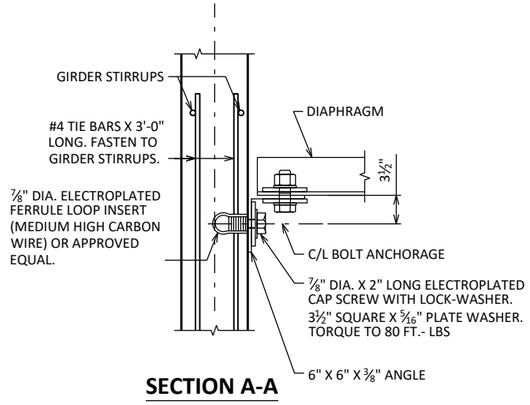


DIAPHRAGM SUPPORT

✳ 2½" FOR ALTERNATE PLATE DIAPHRAGM

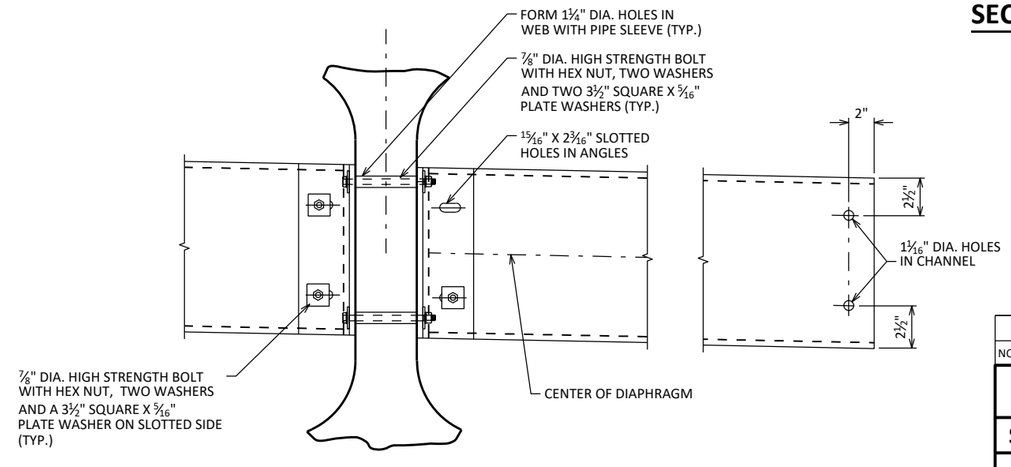


SECTION THRU DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DETAIL B

(FOR CONTINUOUS LINE OF DIAPHRAGMS)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-254

DRAWN BY LMT | PLANS CK'D CAK

STEEL DIAPHRAGMS

SHEET 12 OF 13

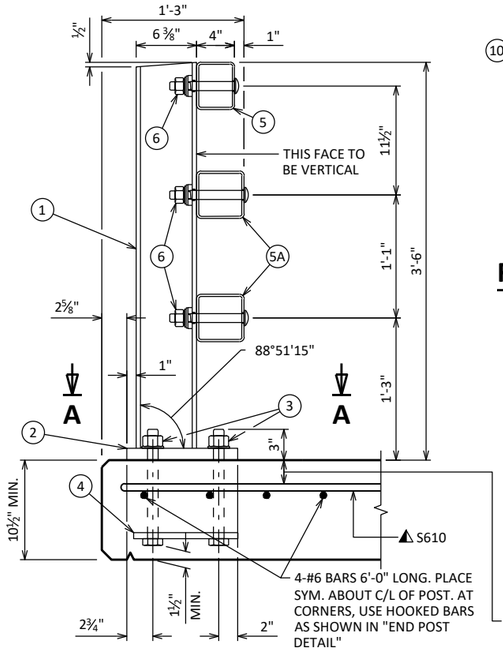
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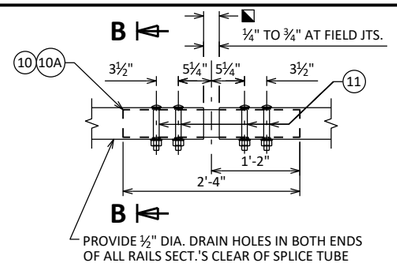
STATE PROJECT NUMBER

7820-08-70

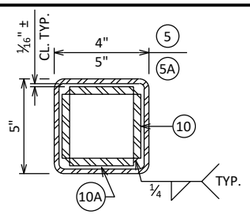


SECTION THRU RAILING ON DECK

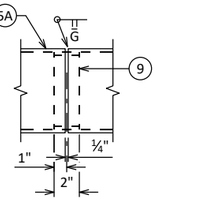
2½" FOR SLABS ON GIRDERS; FOR OTHER STRUCTURES, PLACE BELOW TOP MAT SLAB REINFORCEMENT



FIELD ERECTION JOINT DETAIL

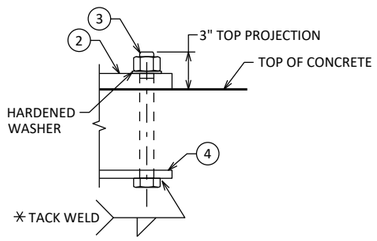


SECTION B-B

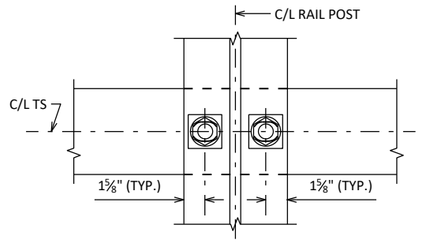


SHOP RAIL SPLICE DETAIL

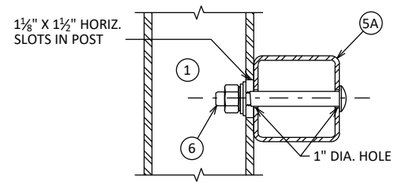
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



ANCHOR BOLTS



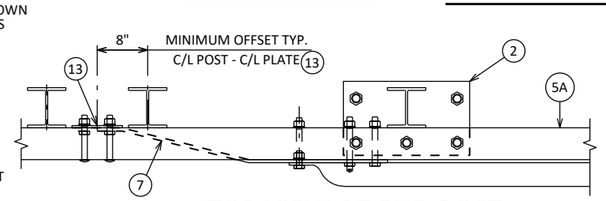
SECTION THRU POST WEB



SECTION THRU RAIL

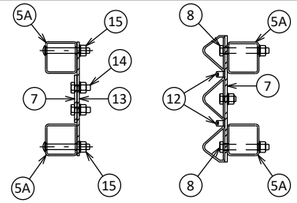
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT



SECTION C-C

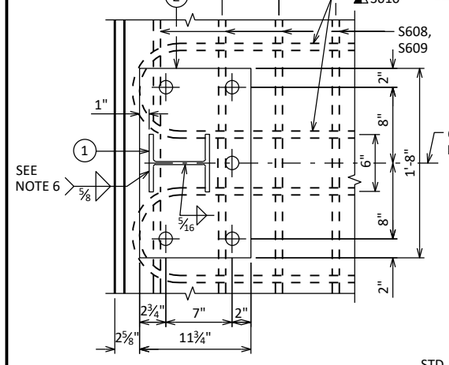
SECTION D-D

LEGEND

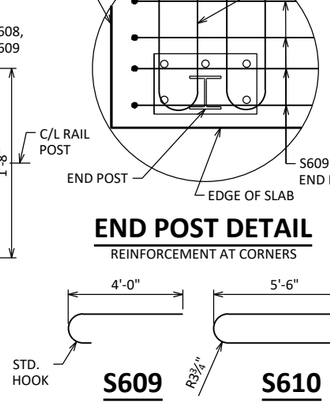
1. W6 X 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" X 11¾" X 1'-8" WITH 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
4. ⅝" X 11" X 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 X 4 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 X 5 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1⅝" X 1⅝" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1¼" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND 15/16" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 15/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
14. ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1" DIA. HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.



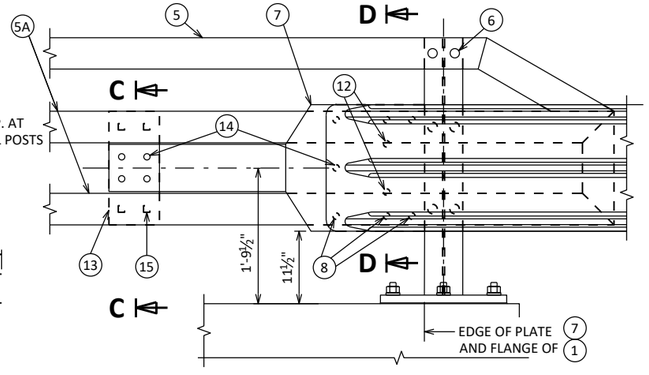
SECTION A-A

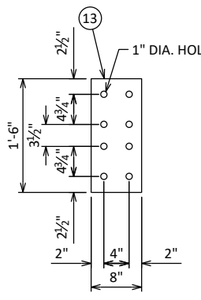


END POST DETAIL

REINFORCEMENT AT CORNERS

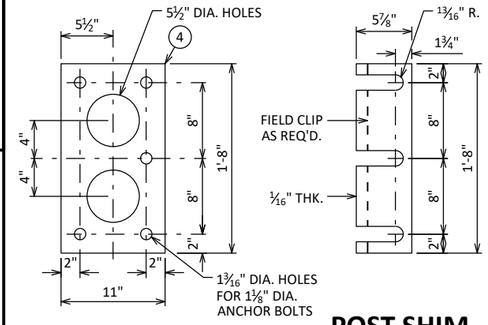
S609 S610





ANCHOR PLATE

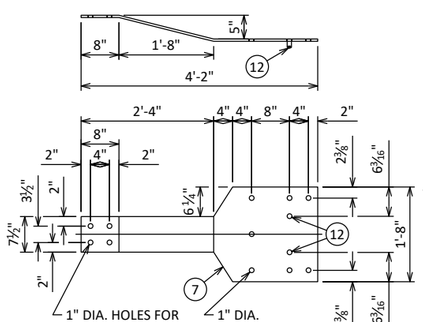
AT BEAM GUARD ATTACHMENT



ANCHOR PLATE

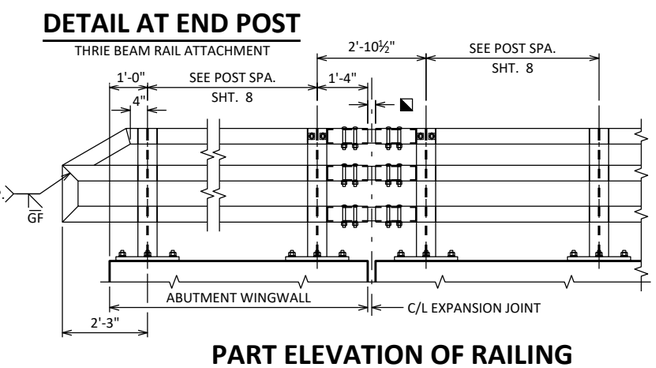
AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

▲ TIE TO TOP MAT OF STEEL.

✳ ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.

◥ RDWY. OPENING OR 2½" MIN. FOR STRIP SEAL EXP. JOINT & (¼" TO ¾") OPENING FOR A1 ABUTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-18-254

DRAWN BY LMT | PLANS CK'D CAK

TUBULAR STEEL RAILING TYPE "M"

SHEET 13 OF 13

65

8

8

CTH MM WEST OF STRUCUTRE

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 4
6+50.00	650.00	0.00	48.25	8.25	0.00	0	0	0	0	0	0
7+00.00	700.00	50.00	29.96	8.25	4.99	72	15	5	72	6	51
7+50.00	750.00	50.00	6.73	8.25	48.13	34	15	49	106	68	9
8+00.00	800.00	50.00	0.00	8.25	208.66	6	15	238	112	365	-298
8+38.77	838.77	38.77	0.00	8.25	375.18	0	12	419	112	889	-834
8+63.75	863.75	24.98	0.00	8.25	364.13	0	8	342	112	1316	-1269
8+88.73	888.73	24.98	0.00	8.25	318.91	0	8	316	112	1711	-1672
9+32.37	932.37	43.64	0.00	8.25	224.54	0	13	439	112	2260	-2234
				COLUMN TOTALS		112	86	1,808			

CTH MM EAST OF STRUCTURE

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 4
10+67.63	1067.63	0.00	0.00	8.25	186.44	0	0	0	0	0	0
11+11.27	1111.27	43.64	0.00	8.25	185.67	0	13	301	0	376	-389
11+36.25	1136.25	24.98	0.00	8.25	202.85	0	8	180	0	601	-622
11+61.23	1161.23	24.98	0.00	8.25	159.71	0	8	168	0	811	-840
12+12.88	1212.88	51.65	15.21	8.25	57.86	15	16	208	15	1071	-1101
12+50.00	1250.00	37.12	26.00	8.25	22.84	28	11	55	43	1140	-1153
13+00.00	1300.00	50.00	39.66	8.25	0.36	61	15	21	104	1166	-1133
13+25.00	1325.00	25.00	45.52	8.25	0.13	39	8	0	143	1166	-1102
				COLUMN TOTALS		143	79	933			

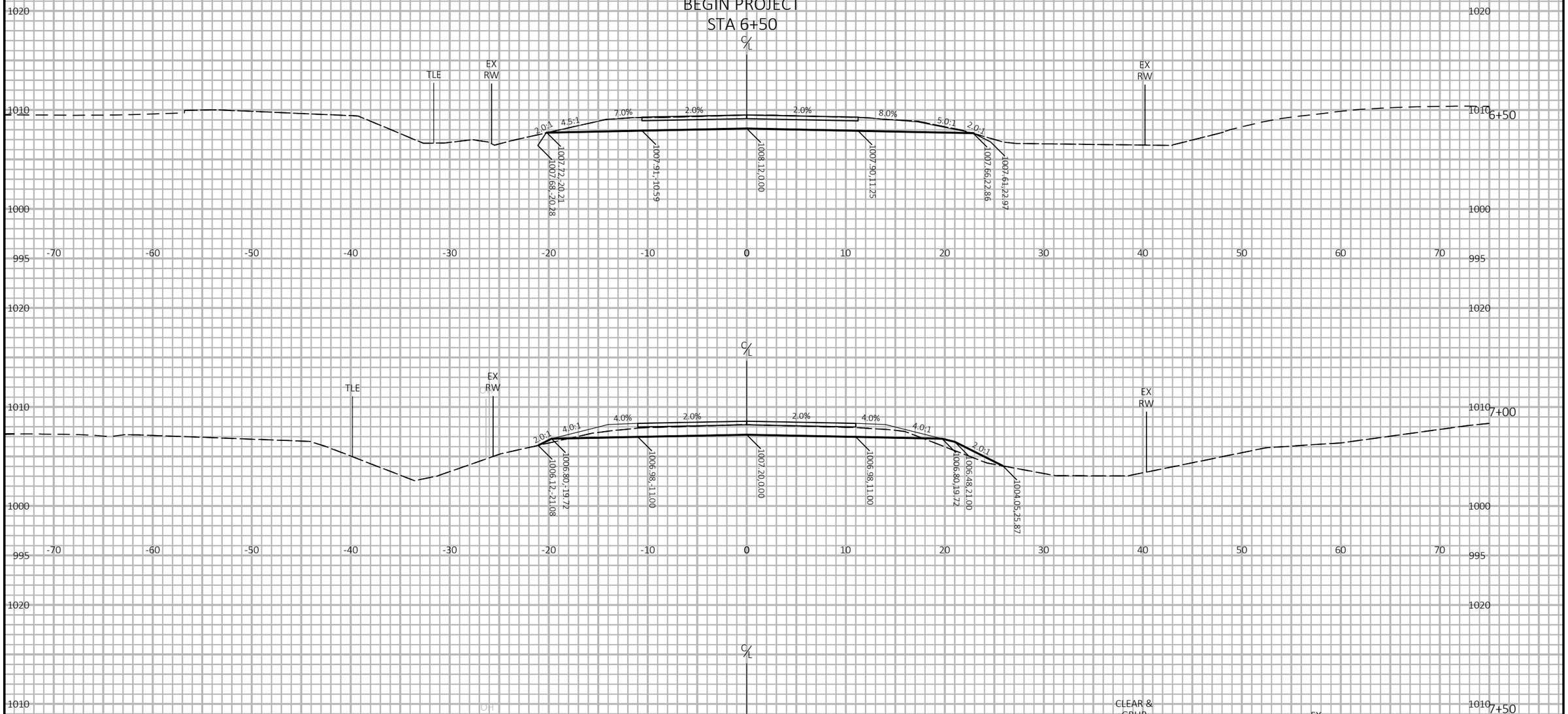
NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. BORROW ITEM NUMBER 208.0100

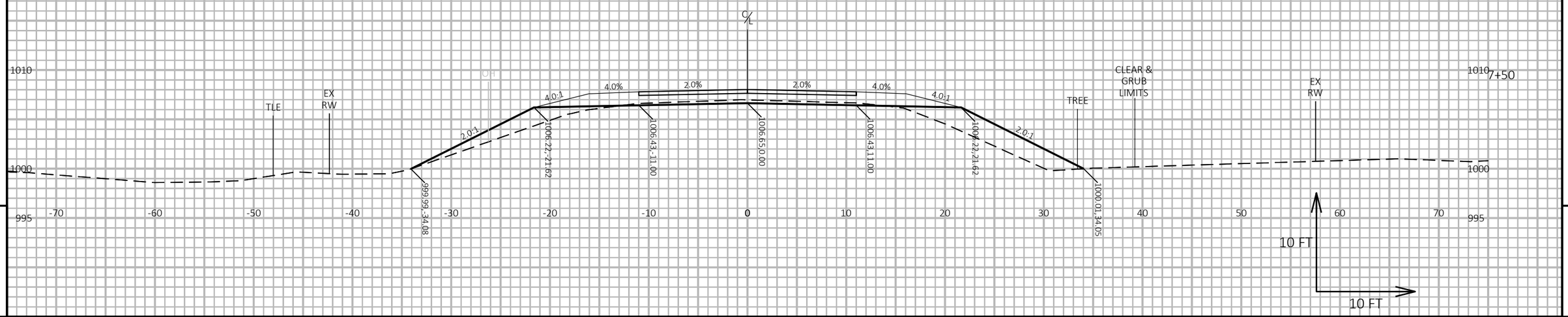
9

9

PROJECT NO: 7820-08-70 | HWY: CTH MM | COUNTY: EAU CLAIRE | EARTHWORK DATA | SHEET 66 | E

BEGIN PROJECT
STA 6+50





9

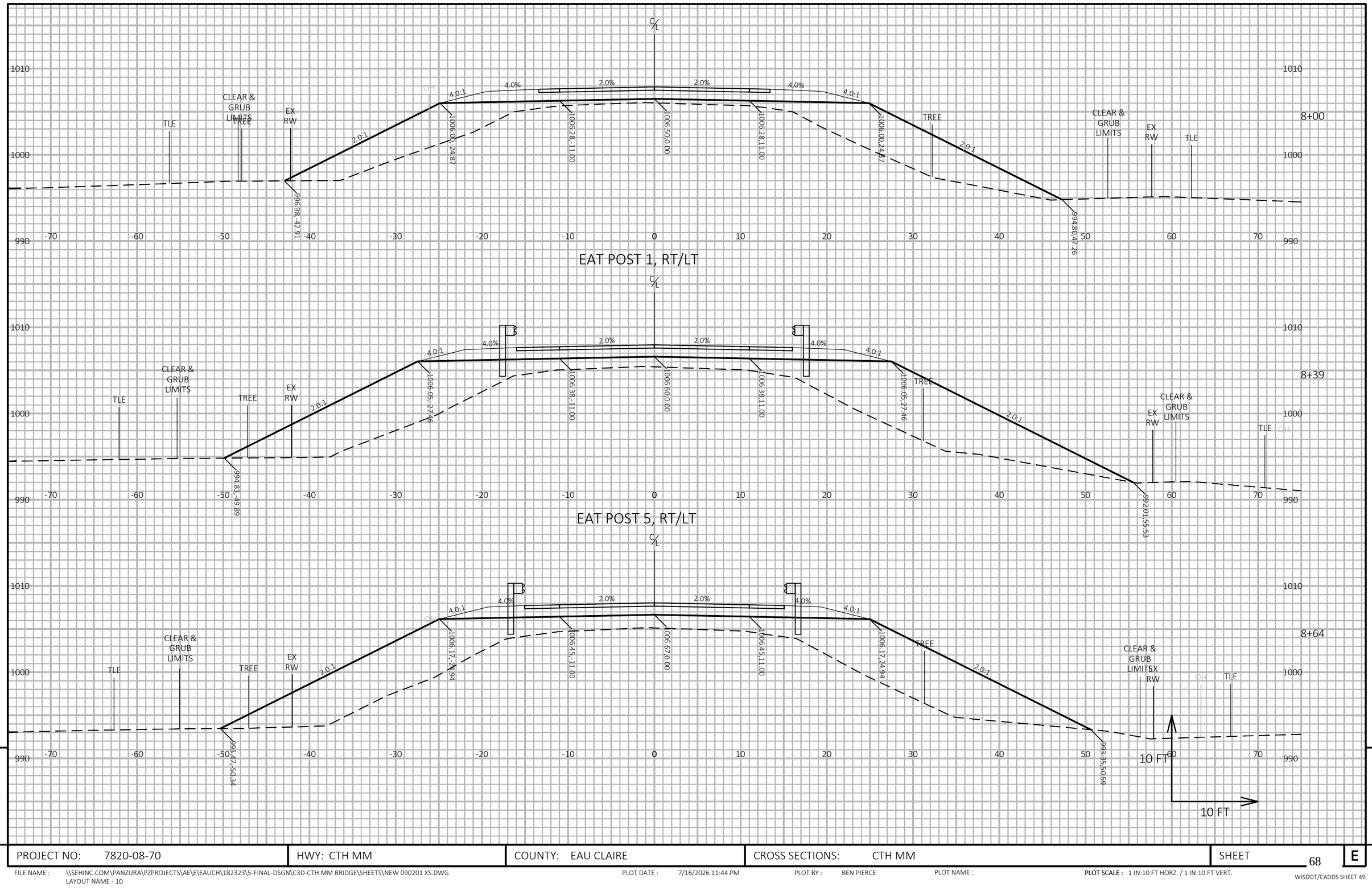
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PROJECT NO: 7820-08-70	HWY: CTH MM	COUNTY: EAU CLAIRE	CROSS SECTIONS: CTH MM	SHEET 67	E

FILE NAME : \\SEHINC.COM\PANZURA\PZPROJECTS\AE\E\EAUCH\182323\5-FINAL-DSGN\C3D-CTH MM BRIDGE\SHEETS\NEW 090201 XS.DWG
LAYOUT NAME - 09

PLOT DATE : 7/16/2026 11:44 PM PLOT BY : BEN PIERCE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



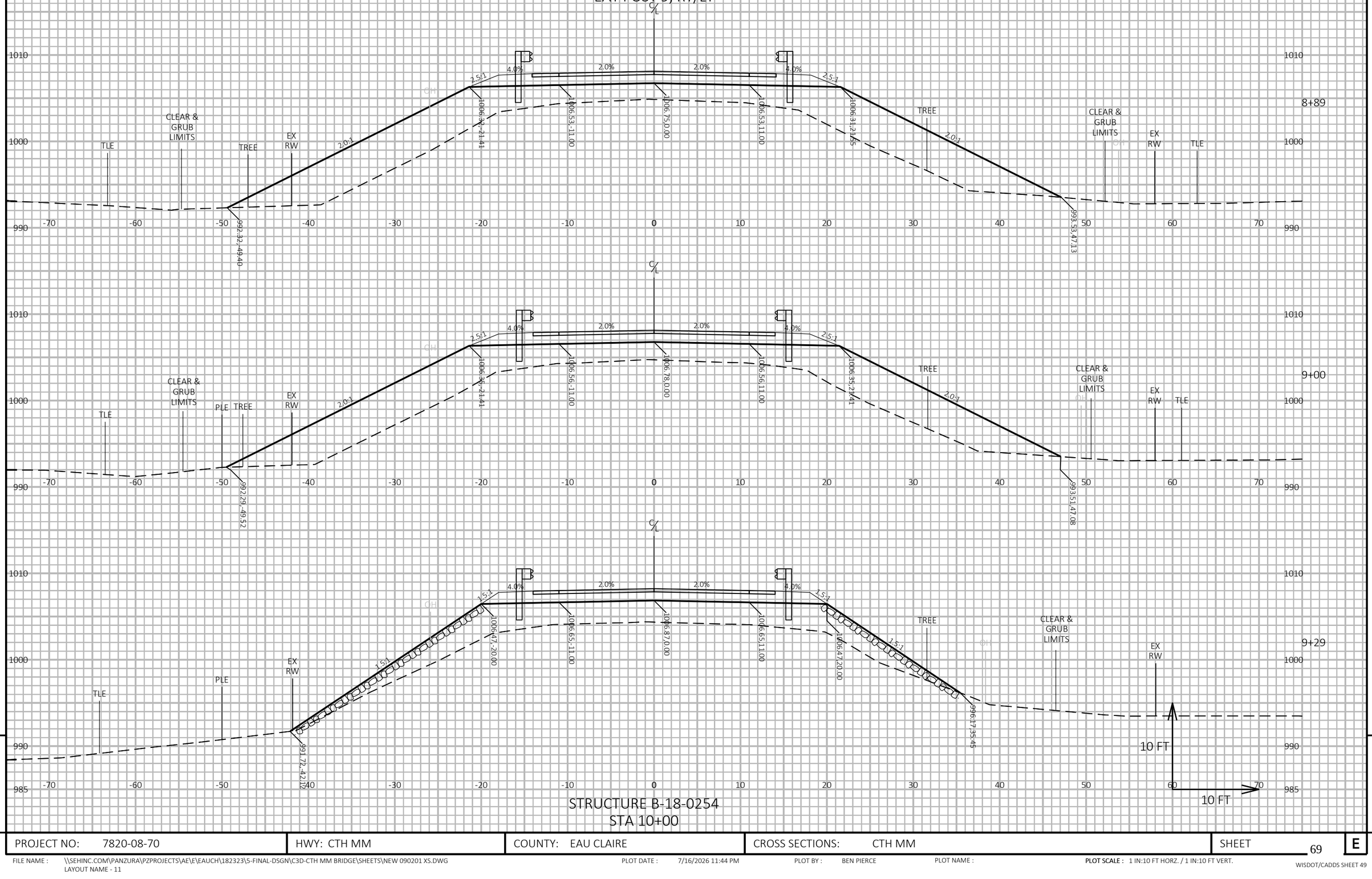
PROJECT NO: 7820-08-70	HWY: CTH MM	COUNTY: EAU CLAIRE	CROSS SECTIONS: CTH MM	SHEET 68	E

FILE NAME : \\SEHINC.COM\PANZURA\PZPROJECTS\AE\E\EAUCH\182323\5-FINAL-DSGN\C3D-CTH MM BRIDGE\SHEETS\NEW 090201 XS.DWG
LAYOUT NAME - 10

PLOT DATE : 7/16/2026 11:44 PM PLOT BY : BEN PIERCE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

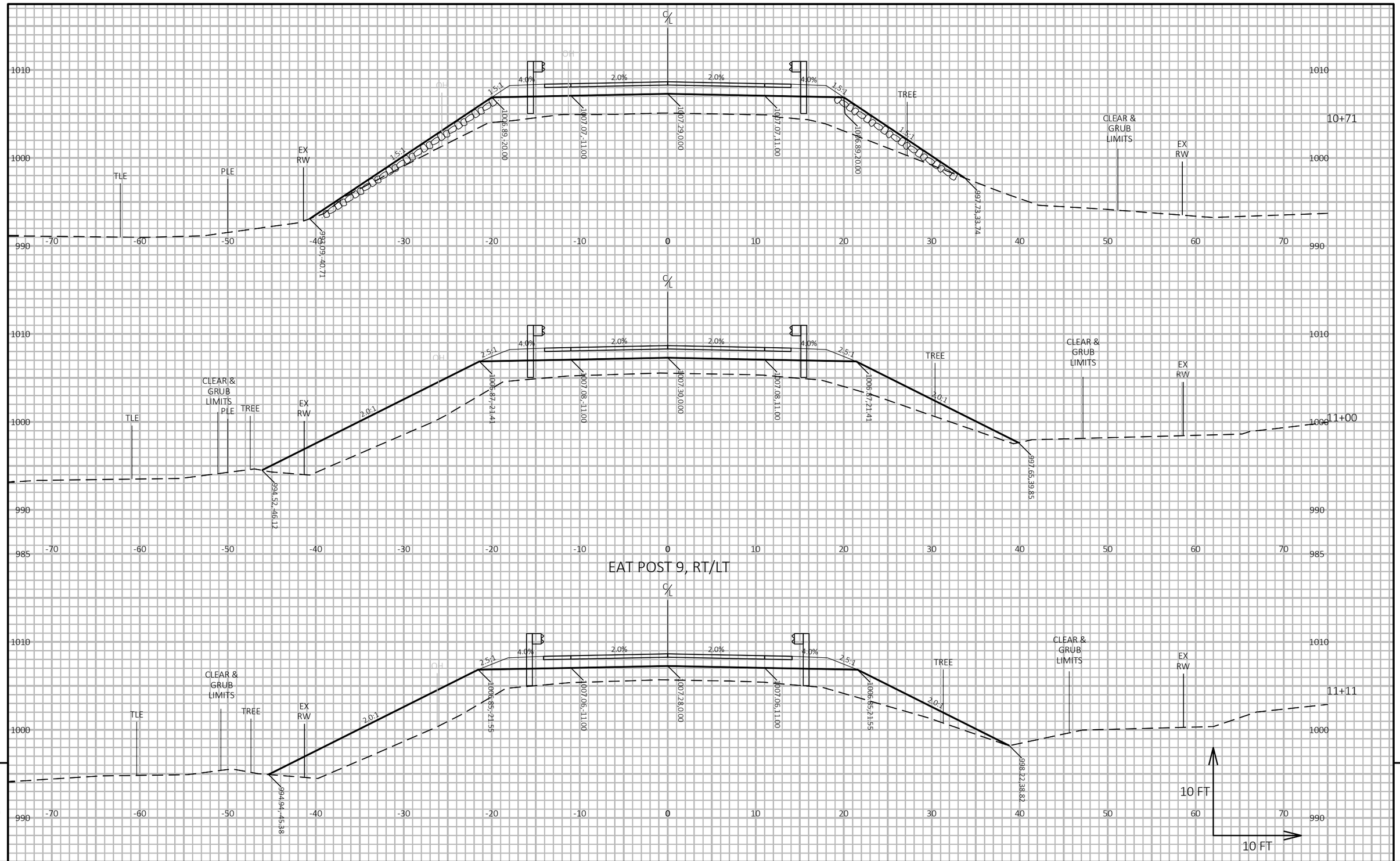
WISDOT/CADDS SHEET 49

EAT POST 9, RT/LT



STRUCTURE B-18-0254
STA 10+00

PROJECT NO: 7820-08-70	HWY: CTH MM	COUNTY: EAU CLAIRE	CROSS SECTIONS: CTH MM	SHEET 69	E



9

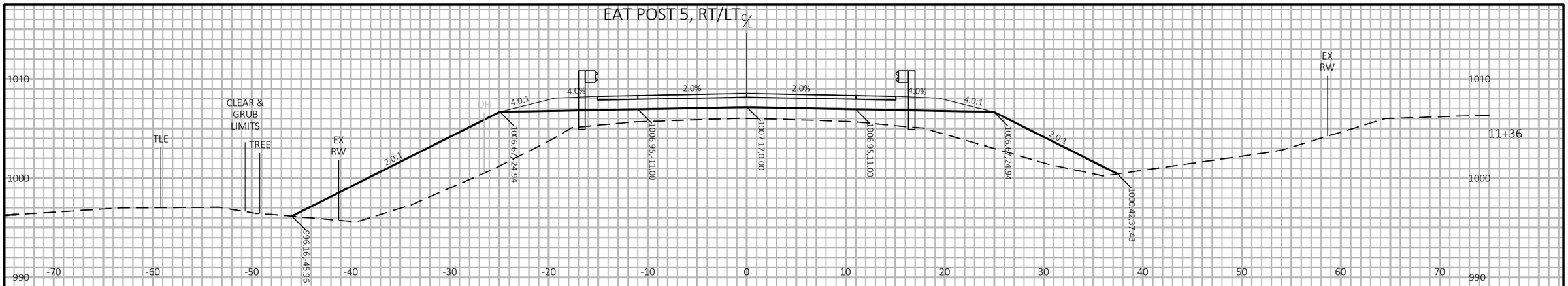
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PROJECT NO: 7820-08-70	HWY: CTH MM	COUNTY: EAU CLAIRE	CROSS SECTIONS: CTH MM	SHEET 70	E

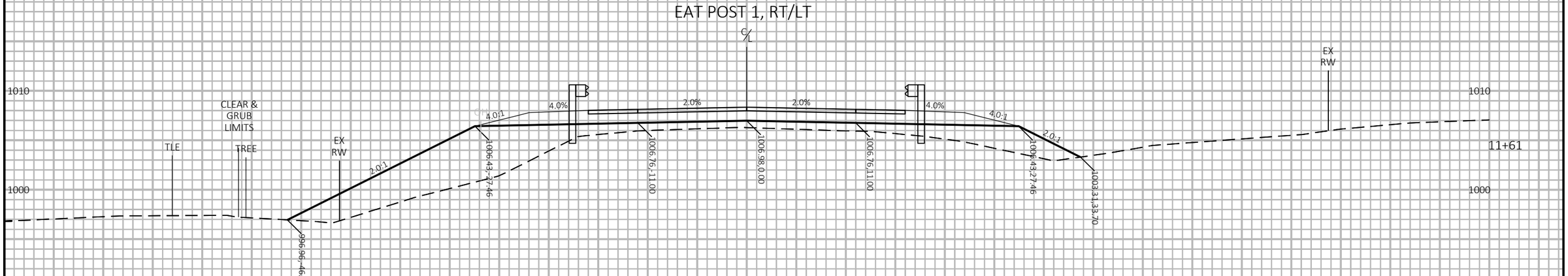
FILE NAME : \\SEHINC.COM\PANZURA\PZPROJECTS\AE\E\EAUCH\182323\5-FINAL-DSGN\C3D-CTH MM BRIDGE\SHEETS\NEW 090201 XS.DWG
LAYOUT NAME - 12

PLOT DATE : 7/16/2026 11:45 PM PLOT BY : BEN PIERCE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

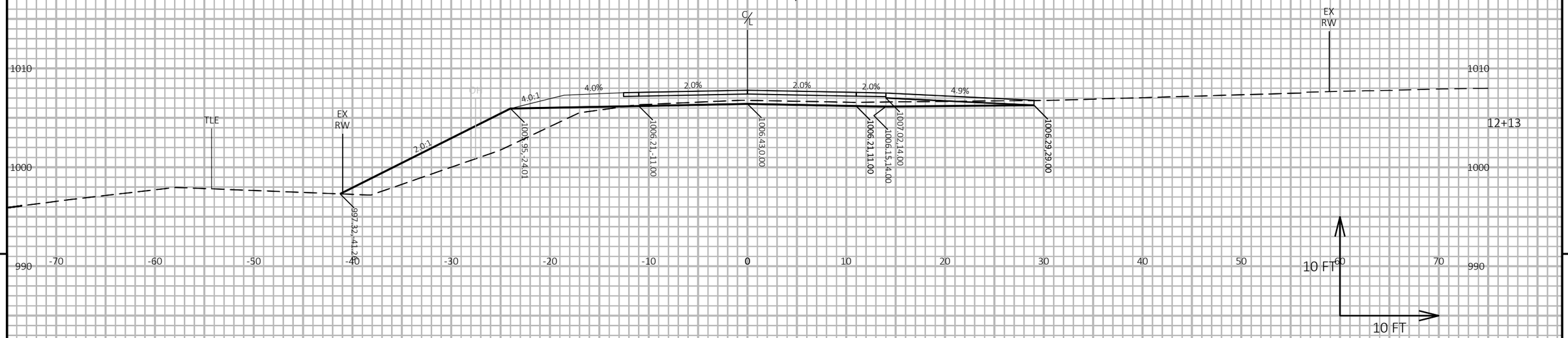
EAT POST 5, RT/LT



EAT POST 1, RT/LT



AGG DRIVEWAY, RT



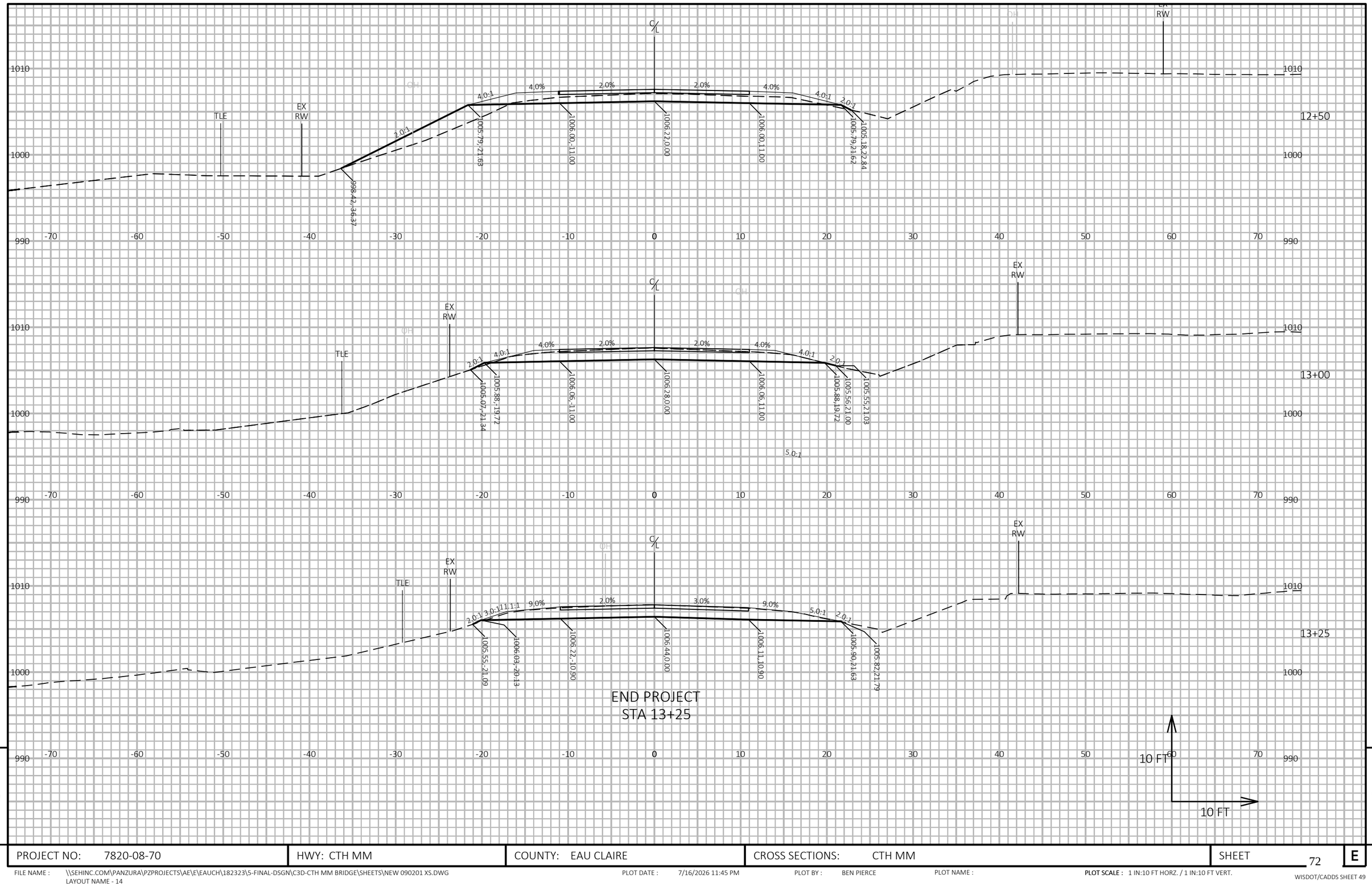
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9

PROJECT NO: 7820-08-70	HWY: CTH MM	COUNTY: EAU CLAIRE	CROSS SECTIONS: CTH MM	SHEET 71	E

FILE NAME : \\SEHINC.COM\PANZURA\PZPROJECTS\AE\E\EAUCH\182323\5-FINAL-DSGN\C3D-CTH MM BRIDGE\SHEETS\NEW 090201 XS.DWG
LAYOUT NAME - 13

PLOT DATE : 7/16/2026 11:45 PM PLOT BY : BEN PIERCE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 7820-08-70	HWY: CTH MM	COUNTY: EAU CLAIRE	CROSS SECTIONS: CTH MM	SHEET 72	E

FILE NAME : \\SEHINC.COM\PANZURA\PZPROJECTS\AE\E\EAUCH\182323\5-FINAL-DSGN\C3D-CTH MM BRIDGE\SHEETS\NEW 090201 XS.DWG
LAYOUT NAME - 14
PLOT DATE : 7/16/2026 11:45 PM
PLOT BY : BEN PIERCE
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov