GRE

PROJECT ID: 4840-00-71

WITH: 4840-00-71

COUNTY: FOND DU LAC

DECEMBER 2024

ORDER OF SHEETS

TOTAL SHEETS = 90

2025

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T EMPIRE, CTH T

TAYCHEEDAH CREEK BRIDGE

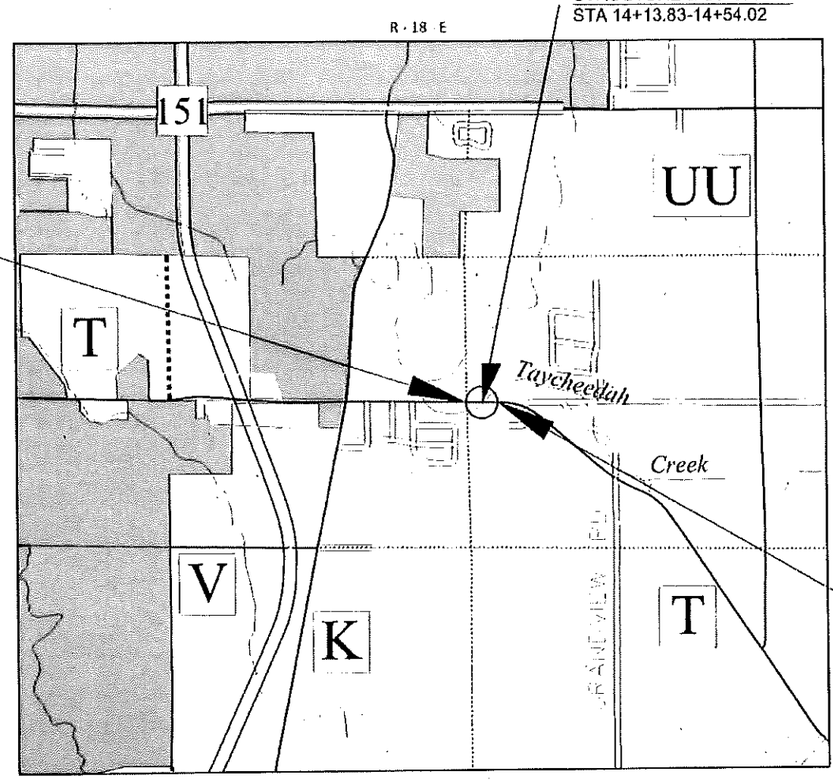
LOCAL STREET

FOND DU LAC COUNTY

STATE PROJECT NUMBER
4840-00-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4840-00-71	WISC 2025110	1

STRUCTURE B-20-254
STA 14+13.83-14+54.02



BEGIN PROJECT
STA 13+40
Y= 382,606.401
X= 833,361.083

END PROJECT
STA 15+15

DESIGN DESIGNATION

A A D.T.	(2025)	=	2157
A A D.T	(2045)	=	2793
D H V		=	350
D D		=	50/50
T		=	8.4 %
DESIGN SPEED		=	35 MPH
ESALS		=	300,000

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
- 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 (95.56)
- 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

LAYOUT

SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE = 0.033 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), FOND DU LAC 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 18

ACCEPTED FOR
FOND DU LAC COUNTY

DATE 5/22/24 (Signature and Title of Official)
Highway Commissioner

JT ENGINEERING

WISCONSIN
MURRAY R.
GLEN
36246-006
GREEN BAY, WI
PROFESSIONAL ENGINEER

DATE 5/22/24 (Professional Engineer's Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JT ENGINEERING, INC.
Designer	JT ENGINEERING, INC
Project Manager	KATIE SCHWARTZ
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	BRIAN EDWARDS

APPROVED FOR THE DEPARTMENT
DATE: 7-10-24 (Signature)

E

FILE NAME X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\010101_TI.DWG

PLOT DATE 6/24/2024 12:30 PM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME

GENERAL NOTES

IF THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS, THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGER'S HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

ANY UTILITY WHICH IS NOT A MEMBER OF DIGGER'S HOTLINE MUST BE CONTRACTED SEPARATELY.

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

SAW CUT LOCATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD,

ALL DISTURBED AREAS NOT OTHERWISE SURFACED ARE TO BE TOPSOILED, FERTILIZED, SEEDED AND COVERED WITH EROSION MAT.

THE LOCATIONS OF ALL EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DO NOT PLACE FERTILIZER 20 FEET OF A WETLAND OR WATER BODY.

WETLAND ARE PRESENT. DO NOT OPERATE MACHINERY OUTSIDE OF SLOPE INTERCEPTS

TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION OF 0.05 GAL/SY AND SHALL BE PLACED BETWEEN THE LAYERS OF ASPHALTIC PAVEMENT.

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

SEQUENCE OF SECTION 2

GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
DETOUR PLANS

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 STRIP-TURF	.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 SLOPE: TURF			.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 = 0.75 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.19 ACRES

UTILITY CONTACTS

ALLIANT ENERGY (GAS & ELECTRIC)
JOSH COLLIEN
883 W SCOTT ST
FOND DU LAC, WI 54937
OFFICE: 920-322-6646
CELL: 608-393-5695
EMAIL: JOSHUACOLLIEN@ALLIANTENERGY.COM

AT&T (COMMUNICATIONS)
CHARLES BARTELT
70 E DIVISION STREET
FOND DU LAC, WI 54935
OFFICE: 920-929-1013
CELL: 920-375-9172
EMAIL: CB1461@ATT.COM

CHARTER (COMMUNICATIONS)
ADAM OLSON
165 KNIGHTS WAY
FOND DU LAC, WI 54935
OFFICE: 920-349-5055
CELL: 920-263-0065
EMAIL: ADAM.OLSON@CHARTER.COM

TOWN OF EMPIRE SANITARY DISTRICT #3 (SANITARY)
NORBERT KOLELL
N6254 CREEK ROAD
FOND DU LAC, WI 54937
PHONE: 920-922-3584
EMAIL: NCKOLELL@ATT.NET

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

AGENCY/ PROJECTS CONTACTS

WISCONSIN DNR - NE REGION
MARTY DILLENBURG
625 E COUNTY ROAD Y STE 700
OSHKOSH, WI 54901
(920) 410-7428
MARTY.DILLENBURG@WISCONSIN.GOV

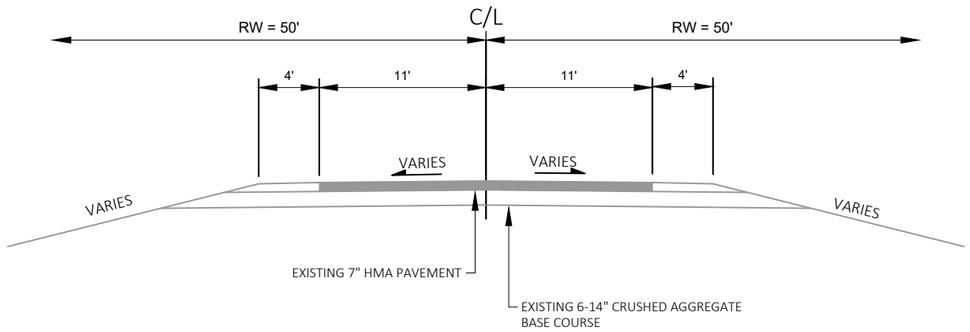
WISDOT - NE REGION
KATIE SCHWARTZ
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920) 492-5652
KATIEA.SCHWARTZ@DOT.WI.GOV

DESIGN CONTACT

JT ENGINEERING, INC.
RICH GLEN
1077 CENTENNIAL CENTRE BLVD
HOBART, WI 54155
PHONE: 920-468-4771
EMAIL: RICHG@JT-ENGINEERING.COM

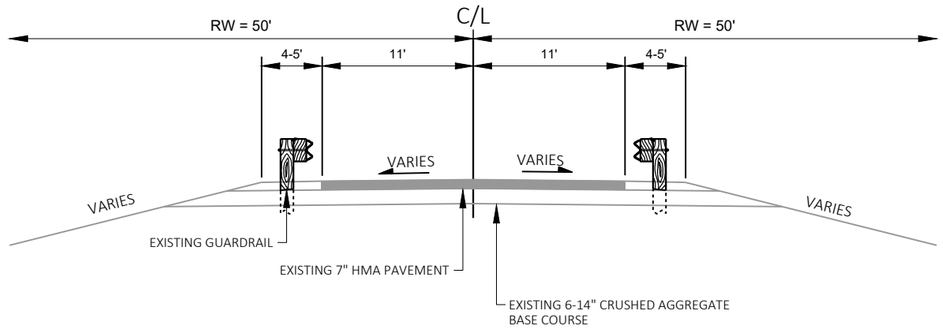
STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC
AC	ASPHALT CEMENT
AGG	AGGREGATE
ASPH	ASPHALT
BM	BENCHMARK
C/L	CENTERLINE
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CR	CREEK
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
ESALS	EQUIVALENT SINGLE AXIS LOADS
EXIST	EXISTING
FE	FIELD ENTRANCE
HYD	HYDRANT
IP	IRON PIPE
L	LENGTH OF CURVE
LC	LONG CHORD OF CURVE
LR	LENGTH OF RUN OFF
MH	MANHOLE
NC	NORMAL CROWN
PT	POINT OF TANGENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PE	PRIVATE ENTRANCE
R	RADIUS
REM	REMOVE
R/L OR RL	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
RCPSS	REINFORCED CONCRETE STORM SEWER
RO	RUNOUT
R/W	RIGHT OF WAY
STA	STATION
SE	SUPER ELEVATION
SS	STORM SEWER
T	TANGENT
TEL	TELEPHONE
TLE	TEMPORARY LIMITED EASEMENT
T	TRUCKS
VC	VERTICAL CURVE
W	WELL



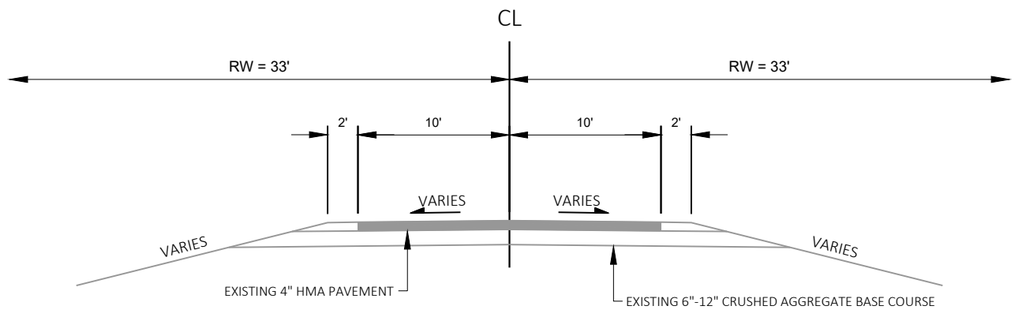
EXISTING TYPICAL SECTION

STA 12+57 - 13+69
STA 15+15 - 16+57



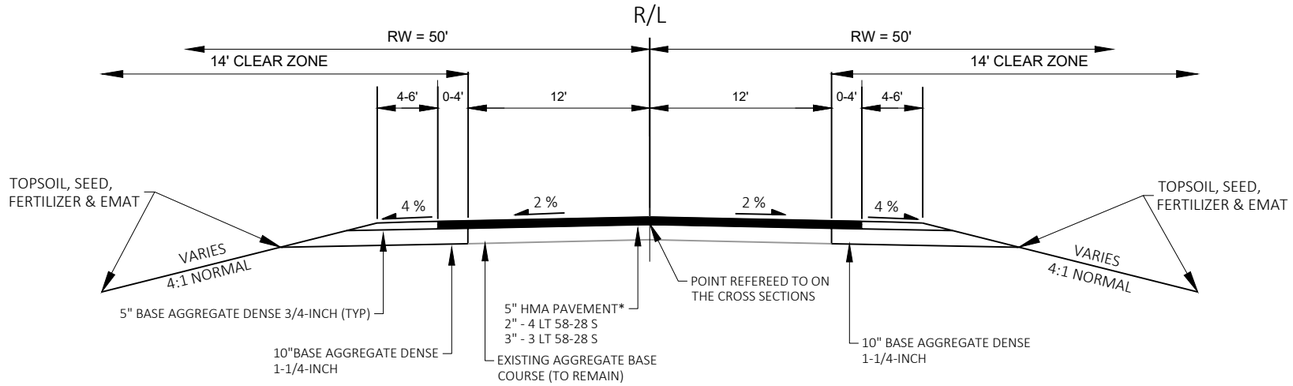
EXISTING TYPICAL SECTION

STA 13+69 - 14+21
STA 14+49 - 15+15



EXISTING TYPICAL SECTION

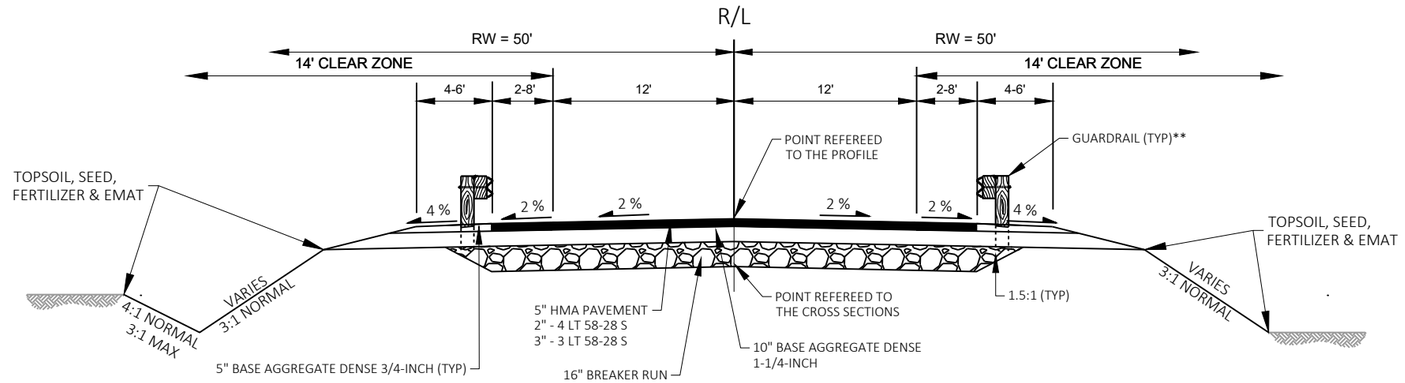
ELEANORE LANE



FINISHED TYPICAL SECTION

STA 12+57 - 13+40
STA 15+15 - 16+57

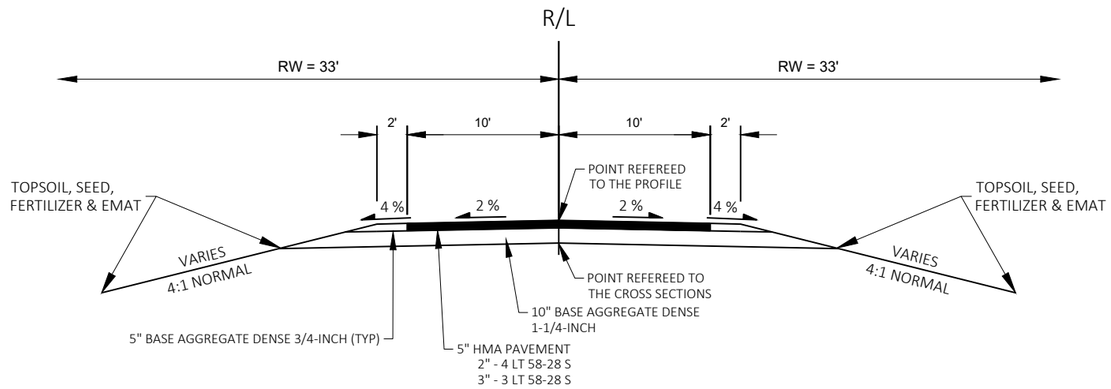
*-NOTE:
HMA PAVEMENT TO BE REMOVED/REPLACED AND ADDITIONAL BASE AGGREGATE DENSE 1/4-INCH FOR WIDENING AT THE FOLLOWING:
STA 12+57 - 13+40
STA 15+15 - 16+57



FINISHED TYPICAL SECTION

STA 13+40 - 14+17
STA 14+51 - 15+15

**-GUARDRAIL LOCATIONS
STA 13+14.27 - 14+06.23
STA 14+61.10 - 15+61.93



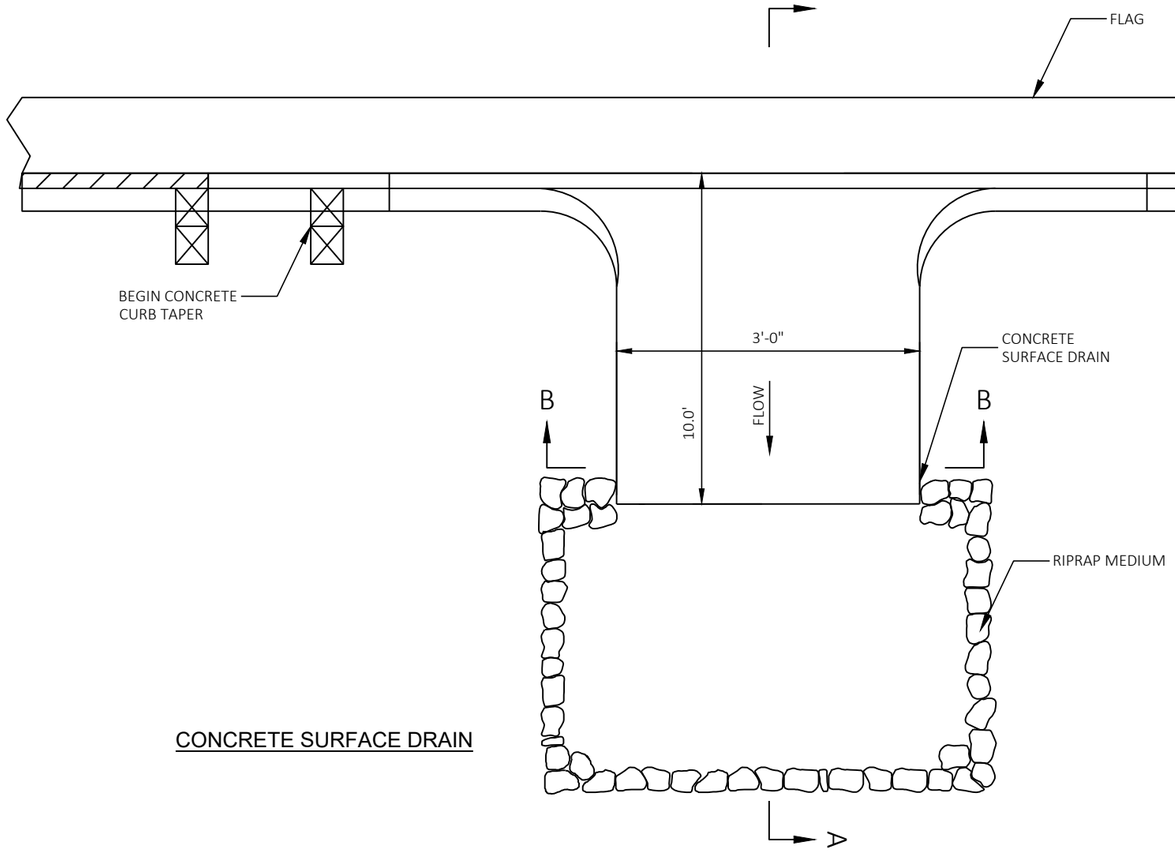
FINISHED TYPICAL SECTION

ELEANORE LANE

PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	TYPICAL SECTIONS	SHEET 4	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 02-10ft
PLOT DATE : 6/24/2024 12:54 PM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1 IN:10 FT

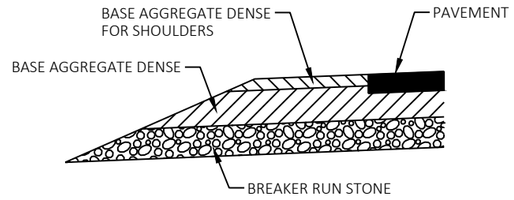
2



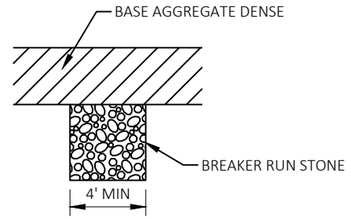
CONCRETE SURFACE DRAIN

GENERAL NOTES

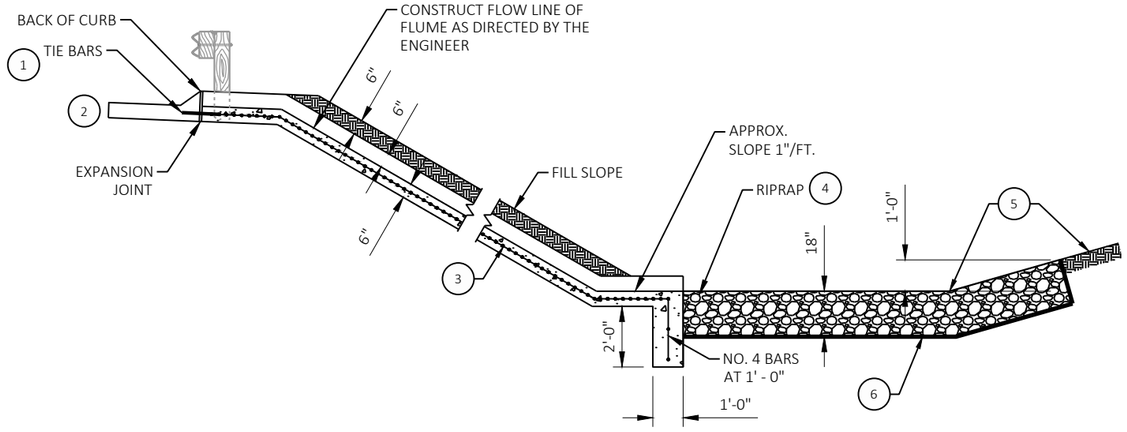
1. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
2. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
3. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
4. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
5. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
6. GEOTEXTILE TYPE HR.



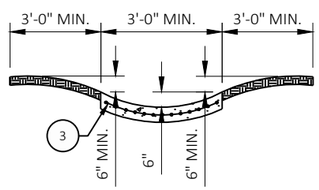
SECTION A-A



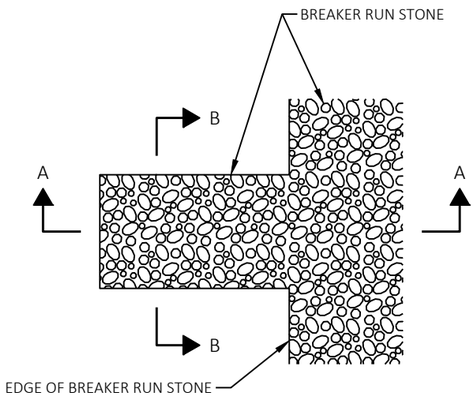
SECTION B-B



SECTION A - A



SECTION B - B

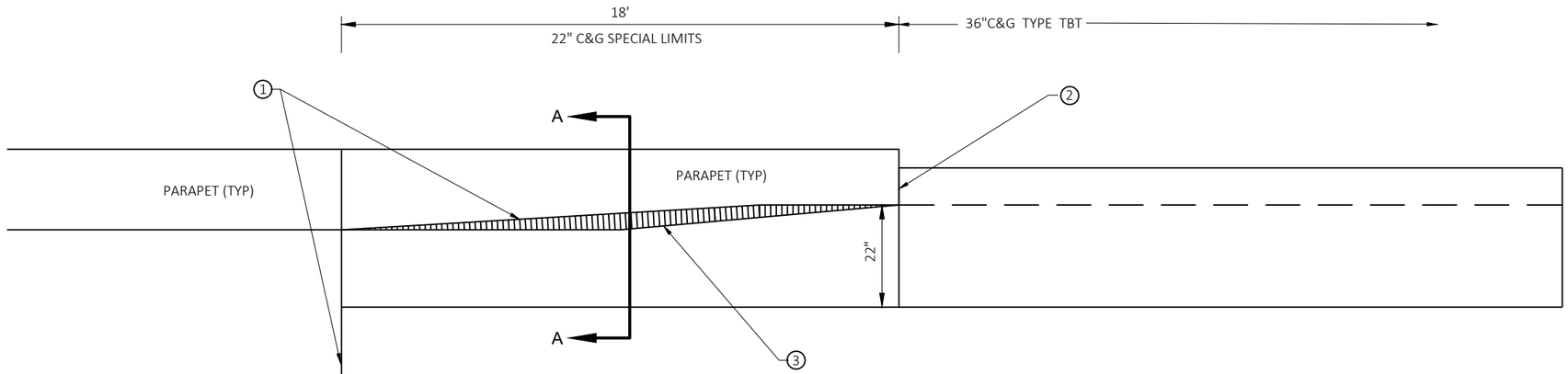


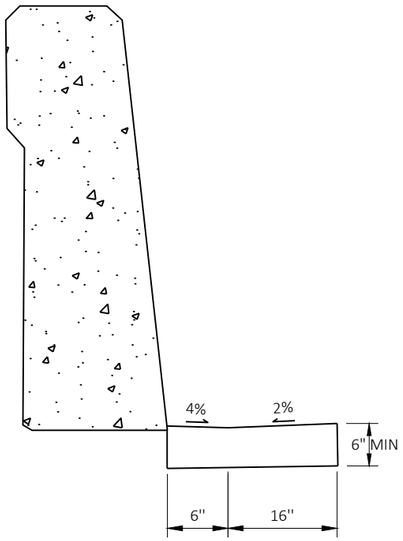
DETAIL FOR FRENCH DRAINS

STA 13+40 LT/RT
STA 14+65 RT
STA 14+75 LT

FINAL LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

EXCAVATION REQUIRED TO CONSTRUCT FRENCH DRAINS SHALL BE CONSIDERED INCIDENTAL TO THE ITEM BREAKER RUN STONE.





SECTION A-A

1. JOINT SEAL CONFORMING TO STANDARD SPECIFICATION 415.2.6 -INCIDENTAL TO 22" C&G SPECIAL
2. JOINT SEAL ACCORDING TO SDD-8D2
3. SEE STRUCTURE PLAN FOR TIE BAR CONNECTION INTO WING WALL

22-INCH CURB & GUTTER SPECIAL

2

LEGEND

EROSION MAT URBAN, CLASS I, TYPE B

SILT FENCE

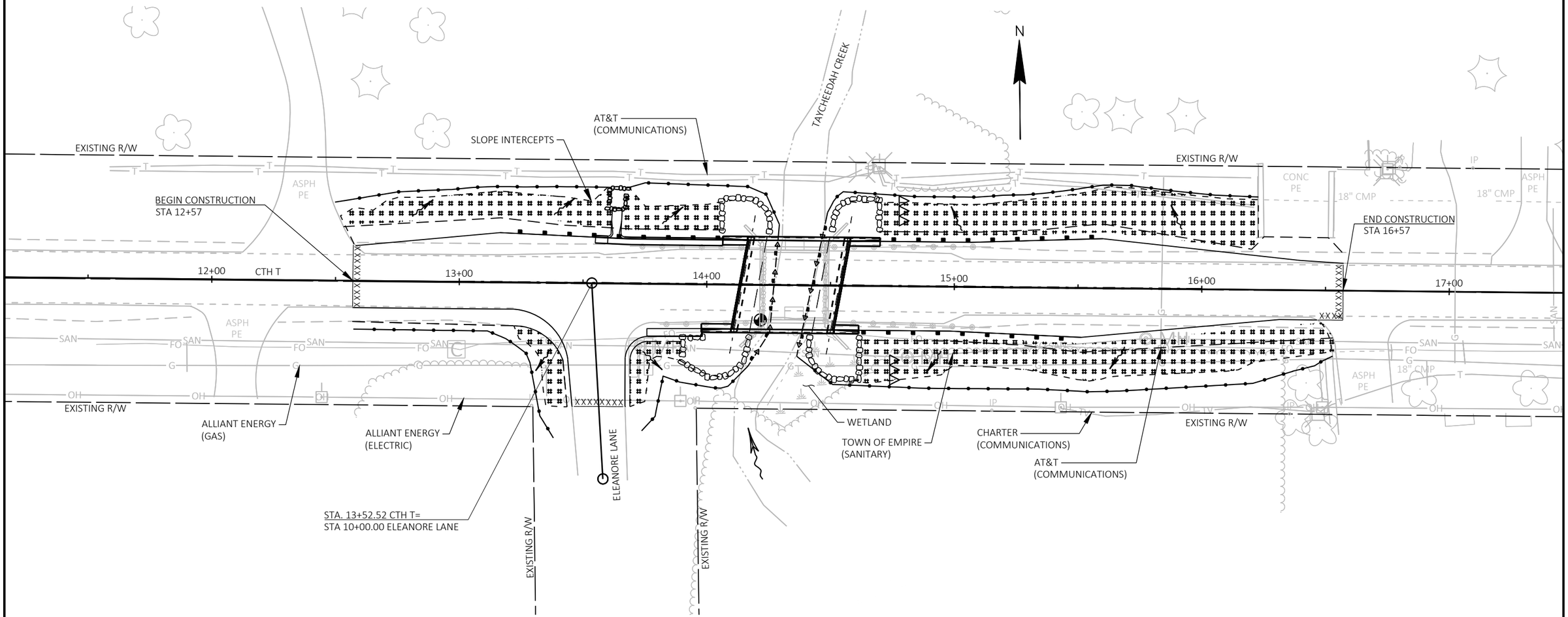
RIP RAP OR STONE DITCH CHECK

SLOPE INTERCEPT

TURBIDITY BARRIER

SURFACE FLOW

TEMPORARY DITCH CHECK

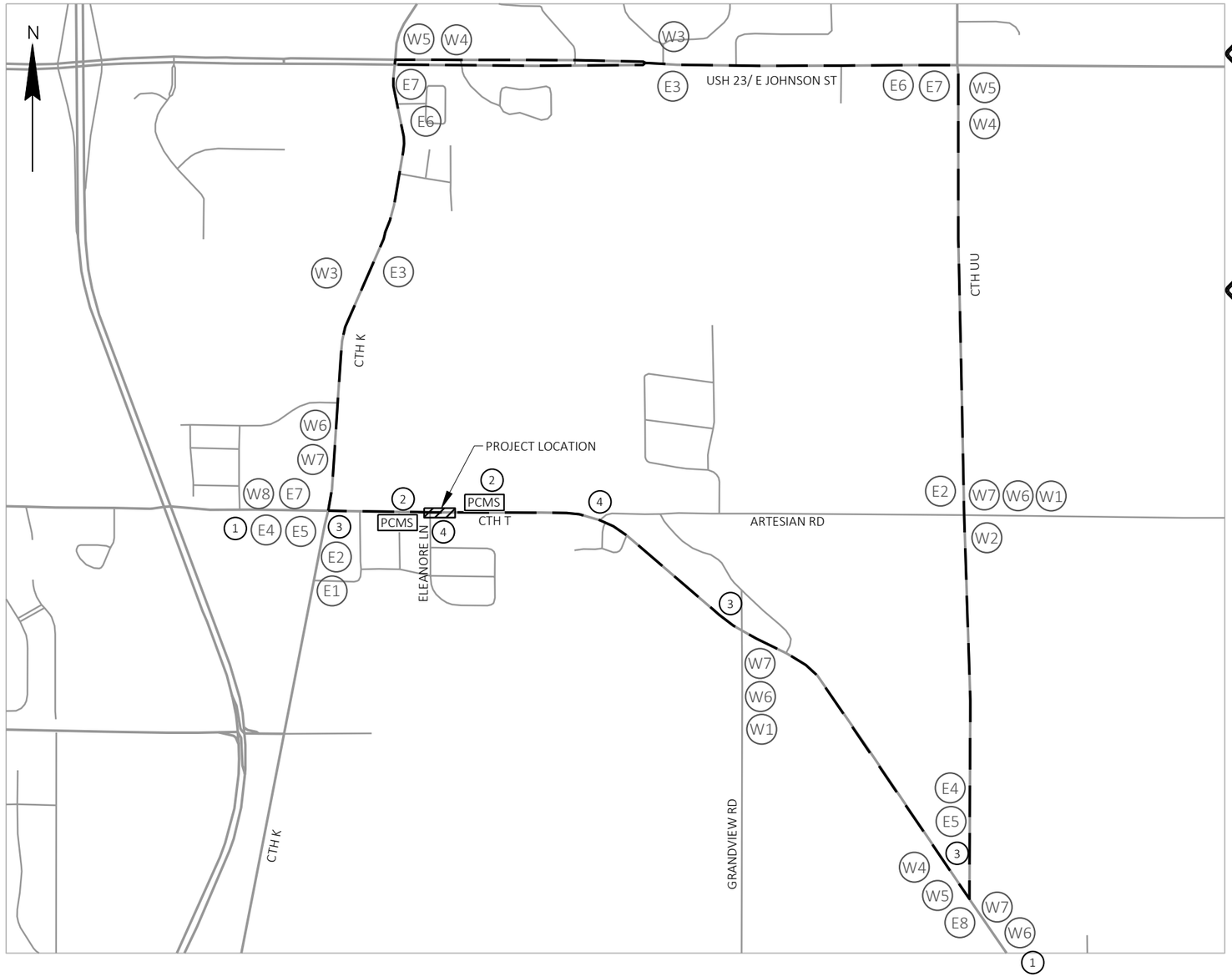


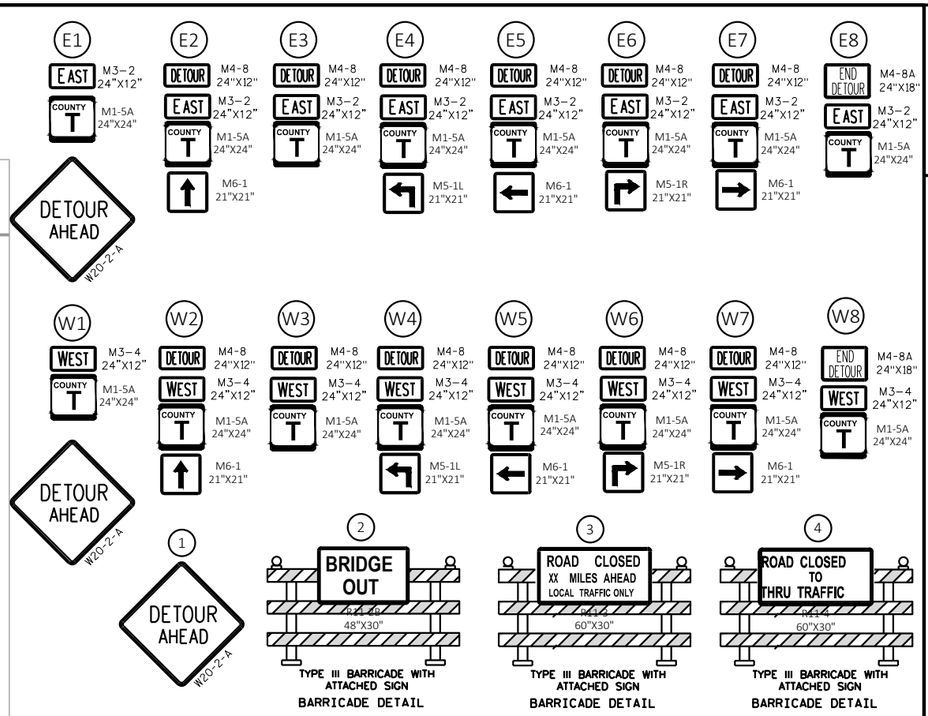
PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	EROSION CONTROL	SHEET 7	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - Erosion Control

PLOT DATE : 7/2/2024 10:16 AM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42





LEGEND:

- DETOUR ROUTE
- PROJECT AREA
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

DETOUR PLAN NOTES:

PORTABLE CHANGEABLE MESSAGE SIGNS MUST BE PLACED ALONG EASTBOUND/WESTBOUND CTH T APPROACHES TO PROJECT AREA 7 DAYS PRIOR TO DETOUR. LOCATIONS AS DIRECTED BY ENGINEER. USE THE FOLLOWING MESSAGE.

1ST FRAME	2ND FRAME
ROAD	BEGINNING
TO	<DATE>
CLOSE	

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATIONS OF THE DETOUR SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.

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

ALL EXISTING SIGN MESSAGES THAT CONFLICT WITH TRAFFIC CONTROL DETOUR SIGNS SHALL BE COVERED OR REMOVED.

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" & "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR SIGN SPACING AND LOCATIONS

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

ALL M3 SERIES SIGNS WHICH ARE PART OF THE DETOUR ROUTE MARKING SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND

ALL SIGNS TO BE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	DETOUR PLAN	SHEET 8	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - DT 1-1500FT
PLOT DATE : 7/2/2024 9:01 AM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1 IN: 1500 FT

4840-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	2.000	2.000
0010	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-20-019	EACH	1.000	1.000
0012	204.0165	Removing Guardrail	LF	220.000	220.000
0014	205.0100	Excavation Common	CY	565.000	565.000
0016	206.1001	Excavation for Structures Bridges (structure) 01. B-20-254	EACH	1.000	1.000
0020	208.0100	Borrow	CY	9.000	9.000
0022	210.1500	Backfill Structure Type A	TON	210.000	210.000
0024	213.0100	Finishing Roadway (project) 01. 4840-00-71	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	90.000	90.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	875.000	875.000
0032	311.0110	Breaker Run	TON	525.000	525.000
0038	450.4000	HMA Cold Weather Paving	TON	400.000	400.000
0040	455.0605	Tack Coat	GAL	100.000	100.000
0042	460.2000	Incentive Density HMA Pavement	DOL	256.000	256.000
0044	460.5223	HMA Pavement 3 LT 58-28 S	TON	240.000	240.000
0046	460.5224	HMA Pavement 4 LT 58-28 S	TON	160.000	160.000
0050	502.0100	Concrete Masonry Bridges	CY	201.000	201.000
0052	502.3200	Protective Surface Treatment	SY	161.000	161.000
0054	502.3210	Pigmented Surface Sealer	SY	63.000	63.000
0058	505.0400	Bar Steel Reinforcement HS Structures	LB	4,540.000	4,540.000
0060	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	29,250.000	29,250.000
0066	516.0500	Rubberized Membrane Waterproofing	SY	14.000	14.000
0072	550.0500	Pile Points	EACH	14.000	14.000
0074	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	280.000	280.000
0076	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	51.000	51.000
0078	602.3010	Concrete Surface Drains	CY	1.000	1.000
0080	606.0200	Riprap Medium	CY	3.000	3.000
0082	606.0300	Riprap Heavy	CY	150.000	150.000
0084	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	220.000	220.000
0086	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0088	614.0800	Crash Cushions Permanent	EACH	1.000	1.000
0090	614.2500	MGS Thrie Beam Transition	LF	118.200	118.200
0092	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0094	619.1000	Mobilization	EACH	0.400	0.400
0096	624.0100	Water	MGAL	20.000	20.000
0098	625.0100	Topsoil	SY	845.000	845.000
0100	628.1504	Silt Fence	LF	870.000	870.000
0102	628.1520	Silt Fence Maintenance	LF	870.000	870.000
0104	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0106	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0108	628.2008	Erosion Mat Urban Class I Type B	SY	845.000	845.000
0110	628.6005	Turbidity Barriers	SY	110.000	110.000
0112	628.7504	Temporary Ditch Checks	LF	20.000	20.000
0116	628.7570	Rock Bags	EACH	10.000	10.000
0118	629.0210	Fertilizer Type B	CWT	1.000	1.000
0120	630.0120	Seeding Mixture No. 20	LB	12.000	12.000
0122	630.0140	Seeding Mixture No. 40	LB	10.000	10.000
0124	630.0200	Seeding Temporary	LB	11.000	11.000
0126	630.0500	Seed Water	MGAL	19.000	19.000

4840-00-71

Line	Item	Item Description	Unit	Total	Qty
0128	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	5.000	5.000
0130	637.2210	Signs Type II Reflective H	SF	5.180	5.180
0132	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0134	638.2602	Removing Signs Type II	EACH	1.000	1.000
0136	638.3000	Removing Small Sign Supports	EACH	1.000	1.000
0138	642.5001	Field Office Type B	EACH	0.400	0.400
0140	643.0300	Traffic Control Drums	DAY	732.000	732.000
0142	643.0420	Traffic Control Barricades Type III	DAY	1,220.000	1,220.000
0144	643.0705	Traffic Control Warning Lights Type A	DAY	1,464.000	1,464.000
0146	643.0715	Traffic Control Warning Lights Type C	DAY	732.000	732.000
0148	643.0900	Traffic Control Signs	DAY	9,638.000	9,638.000
0150	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0152	643.5000	Traffic Control	EACH	0.400	0.400
0154	645.0111	Geotextile Type DF Schedule A	SY	110.000	110.000
0156	645.0120	Geotextile Type HR	SY	280.000	280.000
0158	645.0130	Geotextile Type R	SY	10.000	10.000
0160	646.2020	Marking Line Epoxy 6-Inch	LF	1,340.000	1,340.000
0162	650.4500	Construction Staking Subgrade	LF	390.000	390.000
0164	650.5000	Construction Staking Base	LF	390.000	390.000
0166	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	69.000	69.000
0168	650.6501	Construction Staking Structure Layout (structure) 01. B-20-254	EACH	1.000	1.000
0172	650.9911	Construction Staking Supplemental Control (project) 01. 4840-00-71	EACH	1.000	1.000
0176	650.9920	Construction Staking Slope Stakes	LF	390.000	390.000
0178	690.0150	Sawing Asphalt	LF	80.000	80.000
0180	715.0502	Incentive Strength Concrete Structures	DOL	1,224.000	1,224.000
0182	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0184	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 14+35	EACH	1.000	1.000
0188	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	600.000	600.000
0190	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0194	SPV.0090	Special 01. Concrete Curb and Gutter 22-Inch	LF	18.000	18.000

3

GRUBBING

STATION	TO	STATION	LOCATION	201.0205 GRUBBING STA
14+50	-	16+50	CTH T RT	2
			TOTAL 0010	2

REMOVING GUARDRAIL SUMMARY

CATEGORY	STATION		STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
0010	13+81	-	14+21	CTH T RT	40
0010	13+71	-	14+21	CTH T LT	50
0010	14+50	-	15+15	CTH T LT	65
0010	14+50	-	15+15	CTH T RT	65
				TOTAL 0010	220

3

EARTHWORK SUMMARY

Category	From/To Station	LOCATION	Common Excavation (item #205.0100) Cut (1)	Unusable Pavement Material (2)	Available Material (3)	Unexpanded Fill	Expanded Fill (4) Factor 1.25	Mass Ordinate +/- (5)	208.0100 BORROW	Comment:
0010	12+57 TO 14+13.83	CTH T	296	61	235	89	111	124	124	WEST APPROACH
0010	14+54.02 TO 16+57	CTH T	269	39	230	276	345	-115	-115	EAST APPROACH
Total 0010			565	100	465	365	456	9	9	

1) Unusable Pavement is included in Cut

2) Unusable Pavement Material = Existing Asphaltic Pavement

3) Available Material = Cut - Unusable Pavement Material

4) Expanded Fill Factor = 1.25 Expanded Fill = Unexpanded Fill * Fill Factor

5) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

BASE AGGREGATE SUMMARY

CATEGORY	STATION		STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0110 BREAKER RUN TON	624.0100 WATER MGAL	NOTES
0010	12+57	-	14+14	CTH T	25	325	275	7	WEST APPROACH
0010	14+53	-	16+57	CTH T	50	425	225	10	EAST APPROACH
0010	9+50	-	9+80	ELEANORE LANE	5	50	0	1	
0010	UNDISTRUBUTED				10	75	25	2	
				TOTAL 0010	90	875	525	20	

3

CONCRETE SURFACE DRAIN

CATEGORY	STATION	LOCATION	602.3010 CONCRETE SURFACE DRAIN CY
0010	13+63	CTH T LT	1.0
		TOTAL 0010	**1.0**

ASPHALT PAVEMENT SUMMARY

CATEGORY	STATION		STATION	LOCATION	AREA SY	IN	IN	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	416.1010 COLD WEATHER PAVING TON
0010	12+57	-	14+14	CTH T	670	3.00	2.00	47	113	75	188
0010	14+54	-	16+57	CTH T	760	3.00	2.00	53	128	85	213
				TOTAL 0010				**100**	**240**	**160**	**400**

3

CONCRETE CURB AND GUTTER

CATEGORY	STATION		STATION	LOCATION	601.0588 4-INCH SLOPED 36-INCH TYPE TBT LF	SPV 0090.01 CONCRETE CURB AND GUTTER 22-INCH LF
0010	13+54	-	14+06	CTH T LT	51	18
				TOTAL 0010	**51**	**18**

RIP-RAP AND GEOTEXTILE SUMMARY

CATEGORY	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0130 GEOTEXTILE TYPE R SY	REMARKS
0010		CTH T LT	3	10	APPROXIMATELY 6' X 8'
		TOTAL 0010	**3**	**10**	

EROSION CONTROL SUMMARY

CATEGORY	STATION		STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH	628.6005 TURBIDITY BARRIER CONTROL SY	628.7504 TEMPORARY DITCH CHECK LF	628.7570 ROCK BAGS EACH
0010	12+57	-	14+04	CTH T RT	170	170	5	3	50	---	---
0010	12+57	-	14+04	CTH T LT	190	190			---	---	---
0010	14+65	-	16+57	CTH T RT	230	230			47	10	5
0010	14+65	-	16+57	CTH T LT	180	180			---	10	5
UNDISTRIBUTED					100	100			13	---	---
				TOTAL 0010	**870**	**870**	**5**	**3**	**110**	**20**	**10**

GUARDRAIL SUMMARY

CATEGORY	STATION		STATION	LOCATION	614.0800 CRASH CUSHION PERMANENT EACH	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
0010	13+98	-	14+10	CTH T LT	1	--	--
0010	13+14	-	24+07	CTH T RT	--	39.4	1
0010	14+61	-	15+54	CTH T LT	--	39.4	1
0010	14+69	-	15+62	CTH T RT	--	39.4	1
				TOTAL 0010	**1**	**118.2**	**3**

TRAFFIC CONTROL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	APPROXIMATE SERVICE DAYS	643.5000 TRAFFIC CONTROL PROJECT EACH	643.0300 DRUMS NO. IN SERVICE	DAYS	643.0420 BARRICADES TYPE III NO. IN SERVICE	DAYS	643.0705 WARNING LIGHTS TYPE A NO. IN SERVICE	DAYS	643.0715 WARNING LIGHTS TYPE C NO. IN SERVICE	DAYS	643.1050 TRAFFIC CONTROL SIGNS PCMS NO. IN SERVICE	DAYS	643.0900 SIGNS NO. IN SERVICE	DAYS
0010	12+57	-	16+57	CTH T	61	0.4	12	732	14	854	12	732	12	732	2	14	14	854
0010	DETOUR			CTH T	61				6	366	12	732					144	8,784
					TOTAL 0010	**0.4**		**732**		**1,220**		**1,464**		**732**		**14**		**9,638**

LANDSCAPING SUMMARY

CATEGORY	STATION		STATION	LOCATION	625.0100 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I, TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
0010	12+57	-	14+14	CTH T RT	65	65	0.04	2	---	2	1
0010	12+57	-	14+14	CTH T LT	120	120	0.08	---	2	---	3
0010	14+54	-	16+57	CTH T RT	305	305	0.19	8	1	7	7
0010	14+54	-	16+57	CTH T LT	275	275	0.17	---	5	---	6
UNDISTRIBUTED					80	80	0.05	2	1	2	2
				TOTAL 0010	**845**	**845**	**1**	**12**	**10**	**11**	**19**

PERMANENT SIGNING, TYPE II

CATEGORY	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	634.0614 WOOD POSTS 4X6X14-FOOT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
0010	13+73	RT	R1-1	30X30	STOP SIGN	1	5.18	---	1	1
0010	13+94	RT	W5-52R	12X36	BRIDGE HAZARD MARKER	1	---	3	---	---
0010	14+04	LT	W5-52L	12X36	BRIDGE HAZARD MARKER	1	---	3	---	---
0010	14+72	LT	W5-52L	12X36	BRIDGE HAZARD MARKER	1	---	3	---	---
0010	154+63	RT	W5-52R	12X36	BRIDGE HAZARD MARKER	1	---	3	---	---
					TOTAL 0010	**5**	**5.18**	**12**	**1**	**1**

PAVEMENT MARKING

CATEGORY	STATION		STATION	LOCATION	646.2020 MARKING LINE EPOXY 6-INCH YELLOW	WHITE	NOTES
0010	12+57	-	13+77	CTH T RT	120	---	CENTERLINE SOLID
0010	13+77	-	16+57	CTH T RT	75	---	CENTERLINE SKIPS
0010	12+57	-	16+57	CTH T LT	400	---	CENTERLINE SOILD
0010	12+57	-	16+57	CTH T LT	---	400	WHITE EDGE LINE
0010	12+57	-	16+57	CTH T RT	---	345	WHITE EDGE LINE
				SUBTOTAL	**595**	**745**	
				TOTAL 0010	**1,340**		

SAWING SUMMARY

CATEGORY	STATION	LOCATION	690.0150 SAWING ASPHALT LF
0010	12+57	CTH T	25
0010	16+57	CTH T	34
0010	9+50	ELEANORE LANE	21
		TOTAL 0010	**80**

CONSTRUCTION STAKING SUMMARY

CATEGORY	STATION		STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB AND GUTTER LF	650.6501 CONSTRUCTION STAKING STRUCTURE LAYOUT EACH	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	12+57	-	14+14	CTH T	157	157	69	---	---	157
0010	14+54	-	16+57	CTH T	203	203	---	---	---	203
0010	9+50	-	9+80	ELEANORE LANE	30	30	---	---	---	30
	PROJECT				---	---	---	1	1	---
				TOTAL 0010	**390**	**390**	**69**	**1**	**1**	**390**

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM1	14+22, 14' RT	849.84	CHISELED "X" IN CURB
BM2	18+45, 46' RT	858.51	RR SPIKE IN POWER POLE
BM3	10+30, 47' RT	847.87	RR SPIKE IN POWER POLE

HOLY FAMILY CONGREGATION

CONCRETE SURFACE DRAIN
SEE CONSTRUCTION DETAIL

STA. 13+52.52 CTH T=
STA 10+00.00 ELEANORE LANE

SLOPE
INTERCEPTS

RIP RAP
MEDIUM

CONCRETE CURB & GUTTER
4-INCH SLOPED 36-INCH TBT (TYP)

CONCRETE CURB
SPECIAL 22-INCH

TAYCHEEDAH
CREEK

PAUL A AND ELIZABETH BIRSCHBACH

FRENCH DRAIN (TYP)
SEE CONSTRUCTION DETAILS

AT&T
(COMMUNICATIONS)

STA 15+15 - 16+57
REMOVE AND REPLACE
PAVEMENT

HOLY
FAMILY
CONGREGATION

N

EXISTING R/W

STA 12+57 - 13+40
REMOVE AND REPLACE
PAVEMENT

BEGIN CONSTRUCTION
STA 12+57
SAW CUT REQ'D

+16.35
-20.00' LT

+69.43
-18.00' LT

+59.85
-20.00' LT

18" CMP
(TO REMAIN)

END CONSTRUCTION
STA 16+57
SAW CUT REQ'D

+54.80
16.2'LT
848.59

+59.79
16.0'LT
848.66

+06.33
15.67'LT
849.31

+39.85
-12.00' LT

CTH T

12+00

13+00

14+00

15+00

16+00

17+00

S89°25'40"E

+98.42
18.00' RT

+51.50
20.00' RT

+31.50
12.00' RT

BM 1

N3°14'49"W

FRENCH DRAIN (TYP)
SEE CONSTRUCTION DETAILS

ALLIANT ENERGY
(ELECTRIC)

CRASH
CUSHION
REQ'D

WETLAND

MH CONFLICT
(BY OTHERS)

TOWN OF EMPIRE
(SANITARY)

MH CONFLICT
(BY OTHERS)

CHARTER
(COMMUNICATIONS)

AT&T
(COMMUNICATIONS)

EXISTING R/W

CHARTER
(COMMUNICATIONS)

CAUTION
ALLIANT ENERGY
(GAS)

BEGIN PROJECT
STA 13+40
MATCH EXISTING
Y = 382,606.401
X = 833,361.083

BP: 9+20.65

ELEANORE LANE

BEGIN CONSTRUCTION
STA 9+50
SAW CUT REQ'D

END PROJECT
STA 15+15
MATCH EXISTING

CTH T
ALIGNMENT STATIONING
PI: 10+00.00
Y=382,609.797
X=833,021.100

CTH T
ALIGNMENT STATIONING
PI: 18+55.79
Y=382,641.728
X=833,964.413

STEVEN D, PAULINE R,
GREGORY J DELFELD

JOHN H HALLE

P.L.

5

STA 13+40.00
EL 848.71

STA 14+09.00
EL 849.66

STA 14+58.00
EL 850.14

STA 15+15.00
EL 850.25

PROPOSED PROFILE

1.37%

0.97%

0.20%

EXISTING PROFILE

HIGH WATER$_{100}$
ELEV = 849.14

HIGH WATER$_{2}$
ELEV = 845.34

OBSERVED ICE
ELEV = 842.85
(1-20-2022)

STA 14+35.34
REMOVE STRUCTURE B-20-019
SINGLE SPAN STEEL GIRDER
26 FOOT OVERALL LENGTH

STA 14+33.92
STRUCTURE B-20-254
SINGLE SPAN CONCRETE FLAT SLAB
41.54 FEET LONG
36 FOOT CLEAR ROADWAY
10° SKEW LHF

EXISTING PROFILE ELEVATIONS
PROPOSED PROFILE ELEVATIONS

855
850
845
840

848.19 848.41 848.47 848.52 848.76 848.85 849.06 849.54 849.57 850.06 850.08 850.22 850.77 851.78 852.74 853.78 855.00

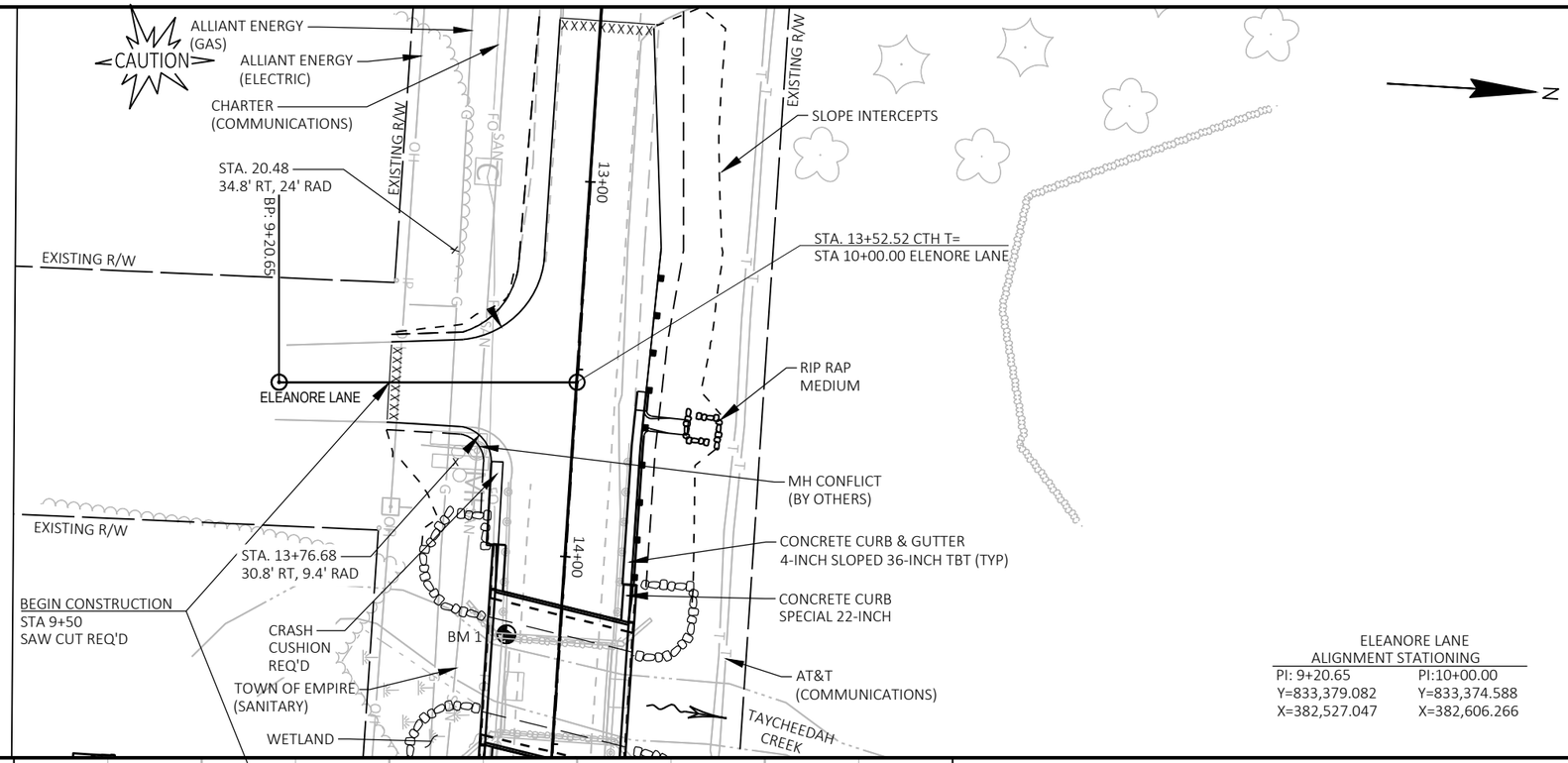
11+50 12+00 12+50 13+00 13+50 14+00 14+50 15+00 15+50 16+00 16+50 17+00 17+50

PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	PLAN AND PROFILE: CTH T	SHEET 15	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 05

PLOT DATE : 7/2/2024 10:20 AM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	PLAN AND PROFILE: ELEANORE LANE	SHEET 16 E

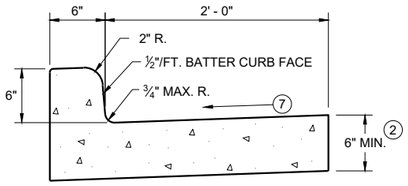
FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 07

PLOT DATE : 7/2/2024 10:20 AM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1 IN:40 FT

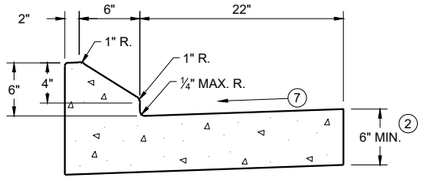
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

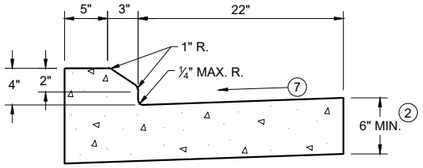
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E15-01	CULVERT PIPE CHECK
12A03-10	NAME PLATE (STRUCTURES)
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
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)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



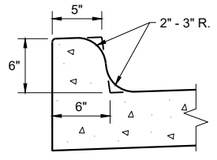
TYPES A (1) & D



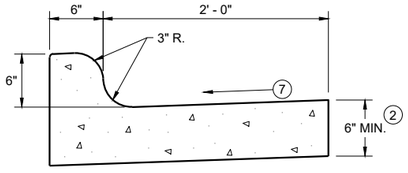
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

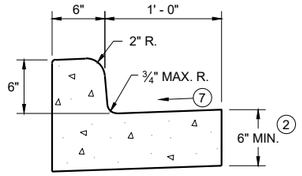


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



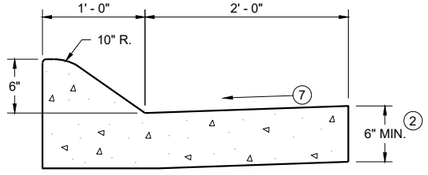
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

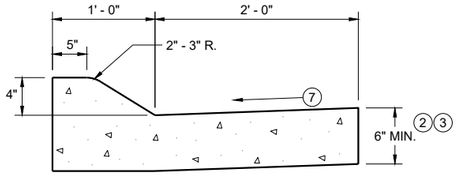


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

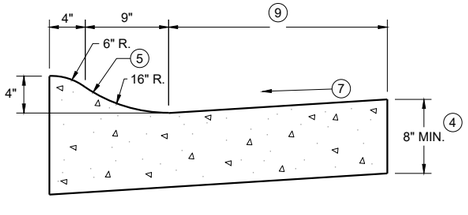


6" SLOPED CURB TYPES A (1) & D



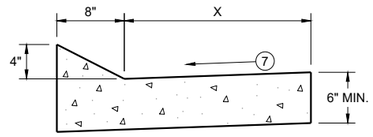
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

TBT & TBTT	X
30"	22"
36"	28"

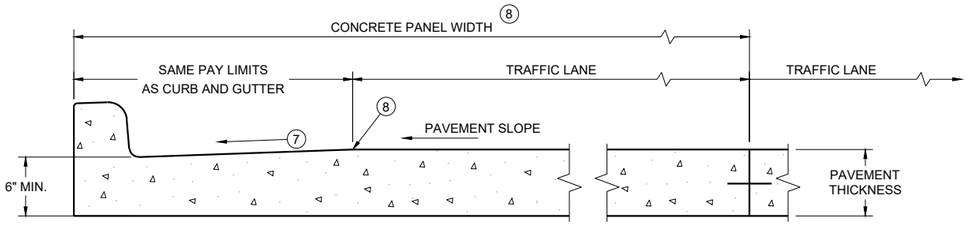


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

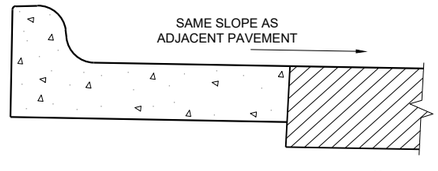
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

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

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

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

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

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

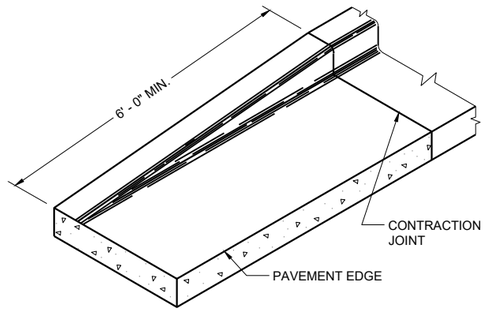
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

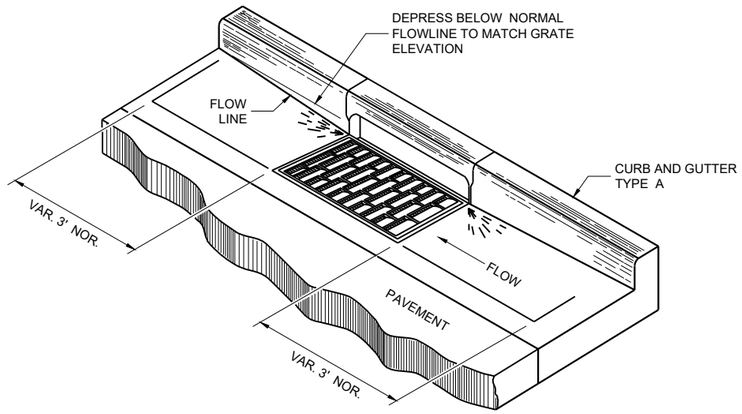
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D01-23a



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

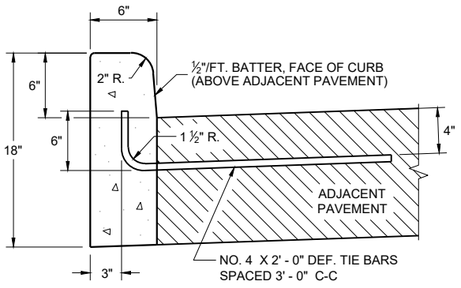
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

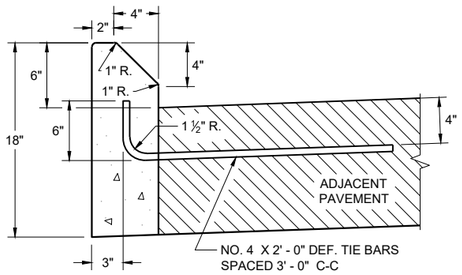
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

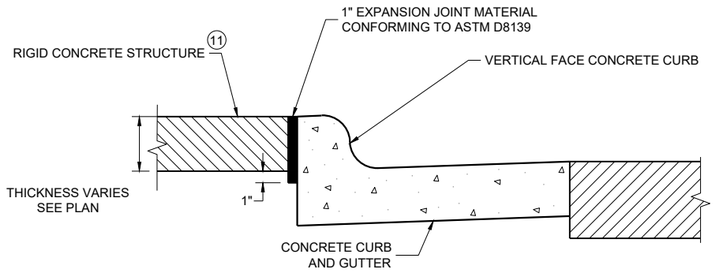


TYPES A (1) & D

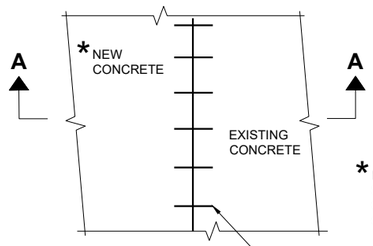


TYPES G (1) & J

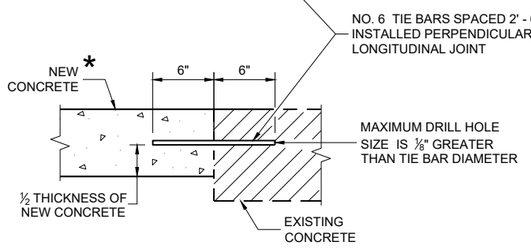
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)

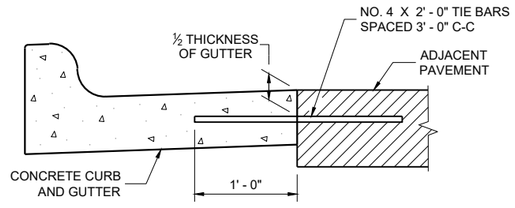


PLAN VIEW

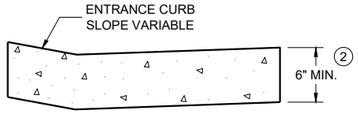


SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6
SDD 08D01-23b

GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

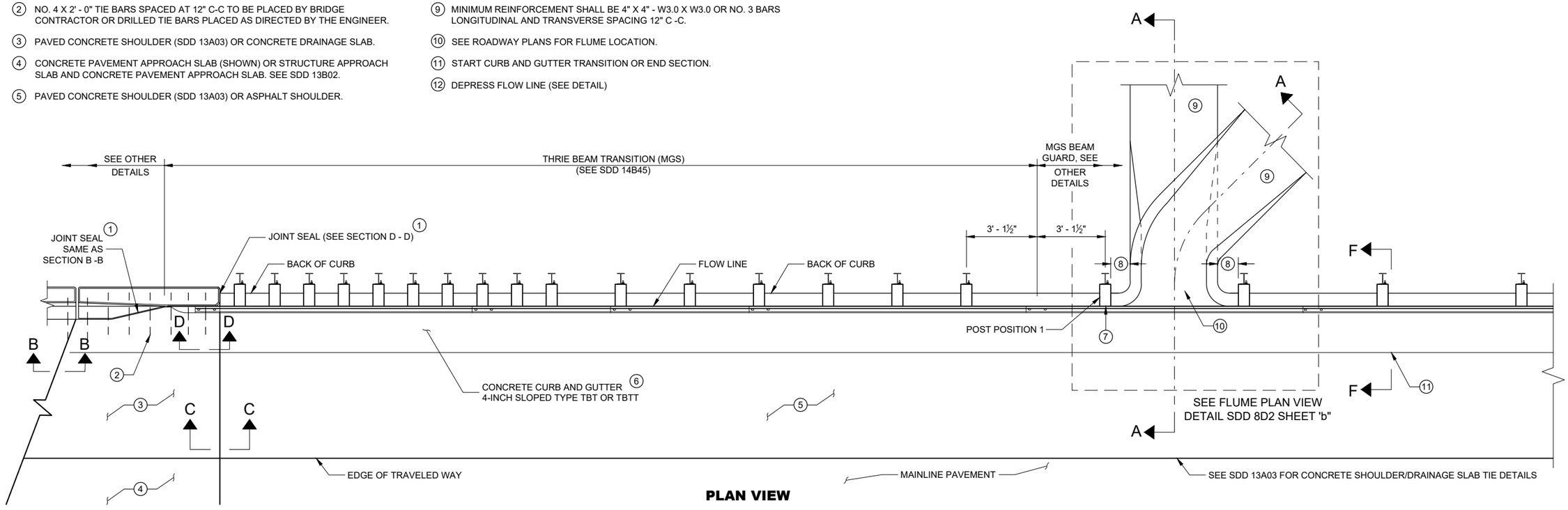
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

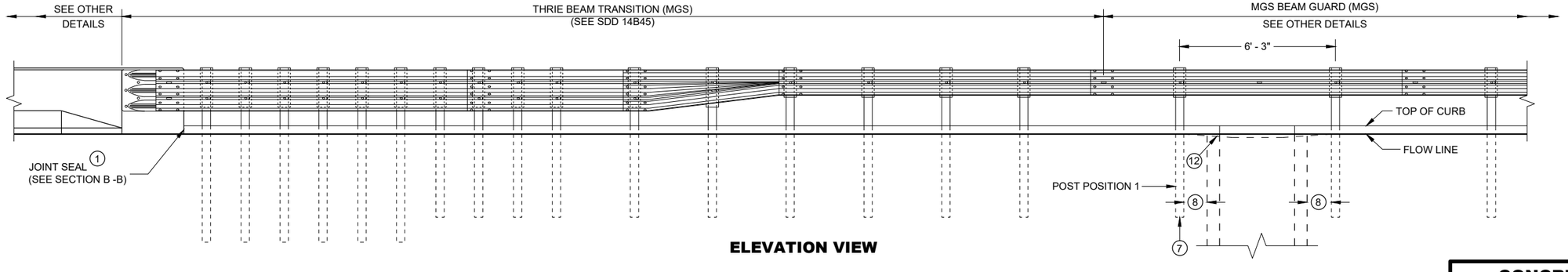
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



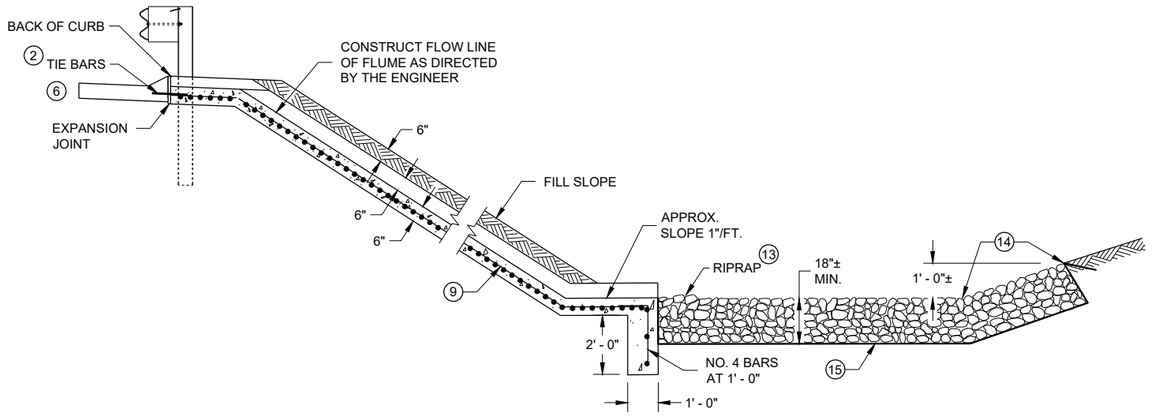
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

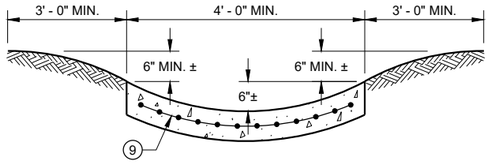
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D02 - 08a

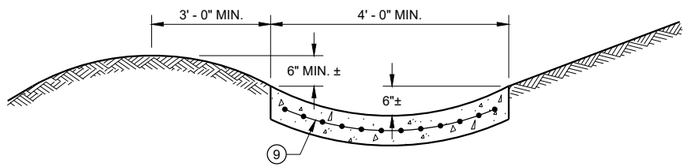
SDD 08D02 - 08a



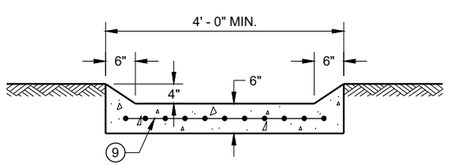
SECTION A - A



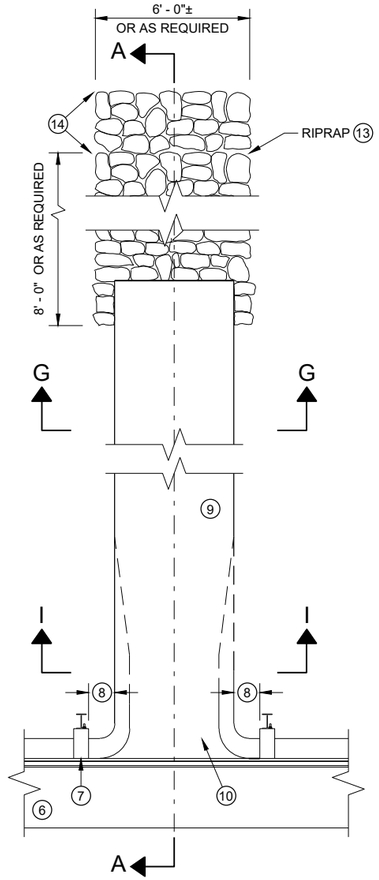
SECTION G - G



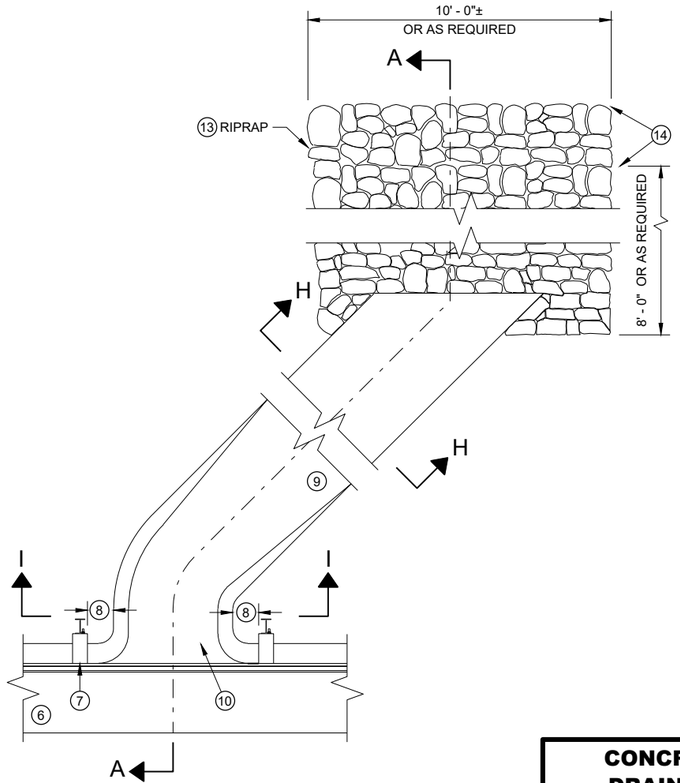
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

GENERAL NOTES

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

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

1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
9. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
10. SEE ROADWAY PLANS FOR FLUME LOCATION.
11. START CURB AND GUTTER TRANSITION OR END SECTION.
12. DEPRESS FLOW LINE (SEE DETAIL)
13. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
14. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
15. GEOTEXTILE TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

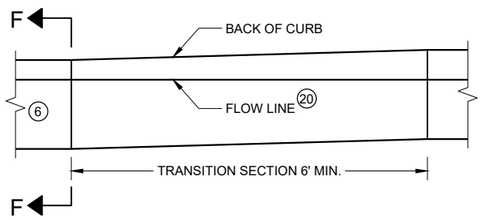
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

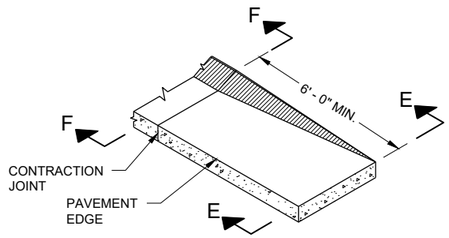
SDD 08D02 - 08b

6

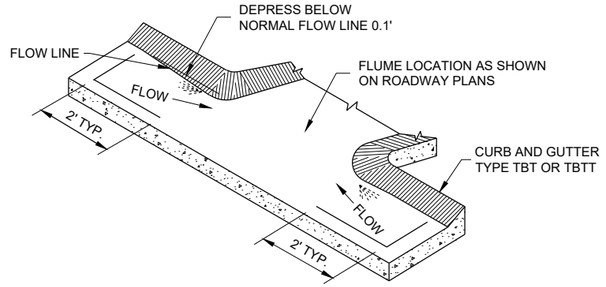
SDD 08D02 - 08b



CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT

GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(15) GEOTEXTILE TYPE HR.

(16) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

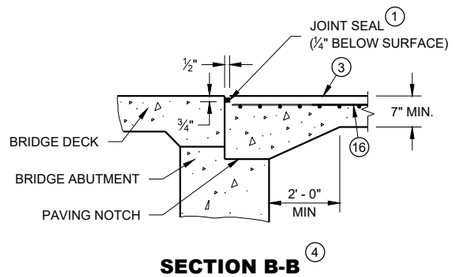
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(18) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

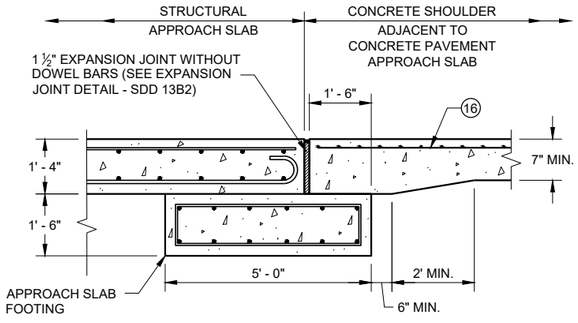
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

(20) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

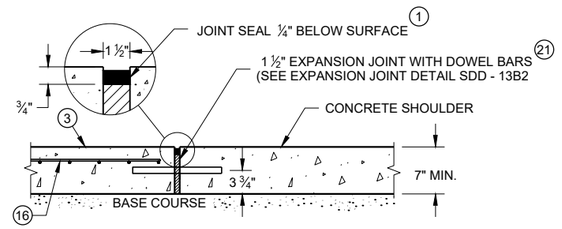
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



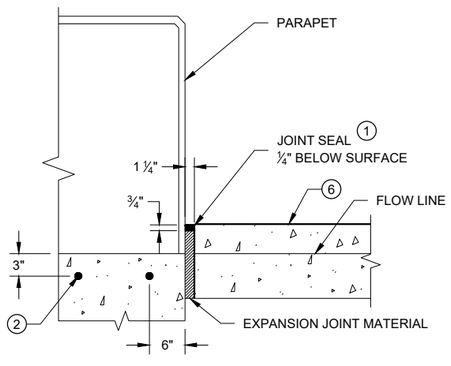
SECTION B-B



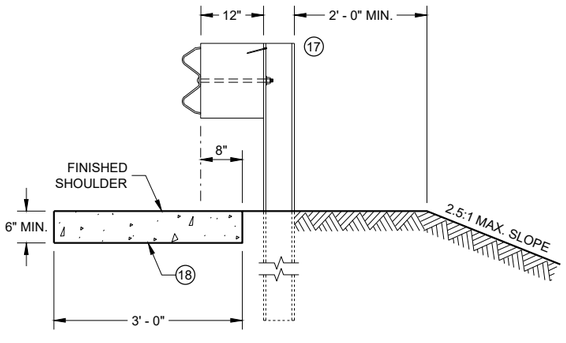
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



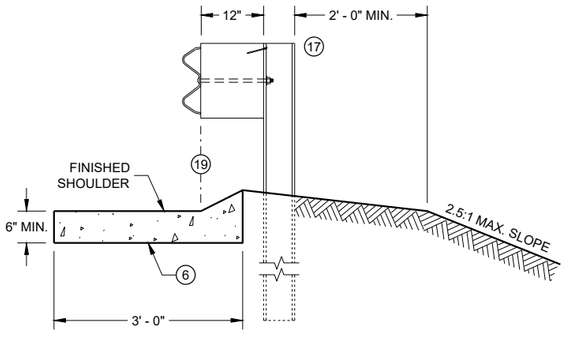
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

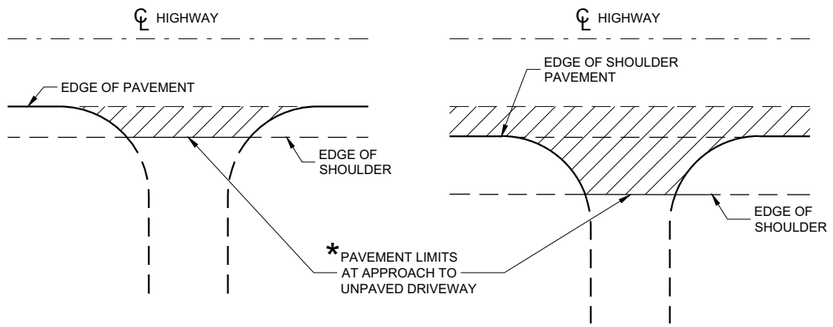
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

SDD 08D02 - 08c

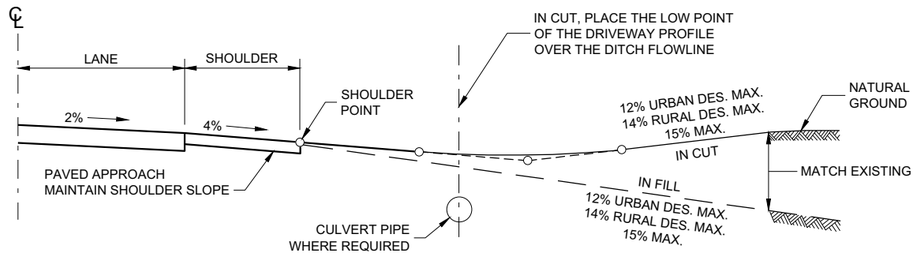
6



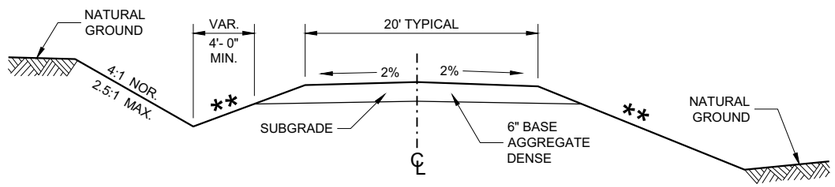
PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

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



TYPICAL DRIVEWAY PROFILES

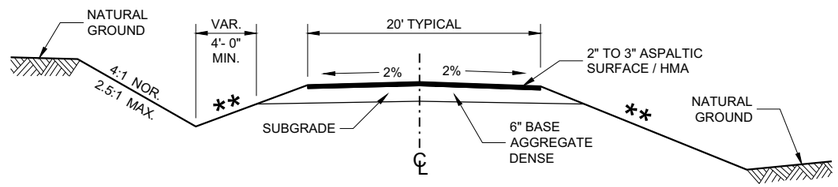


IN CUT IN FILL

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

6

6

SDD 08D21 - 01

SDD 08D21 - 01

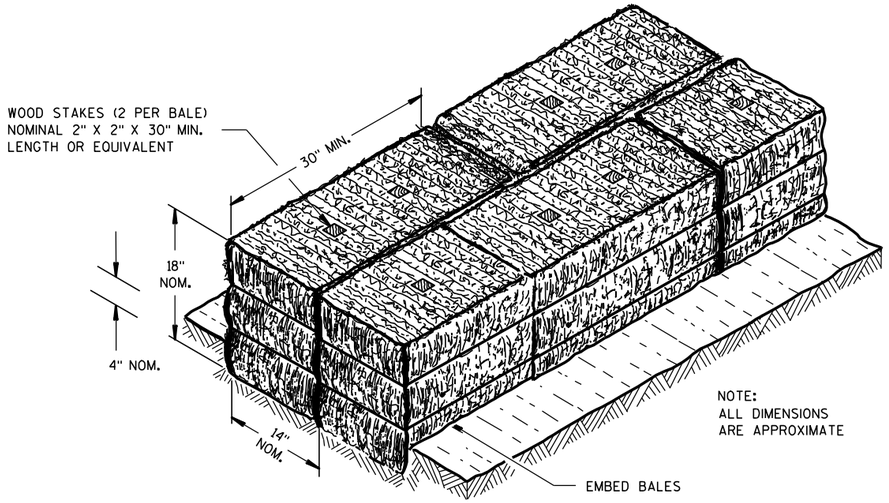
DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

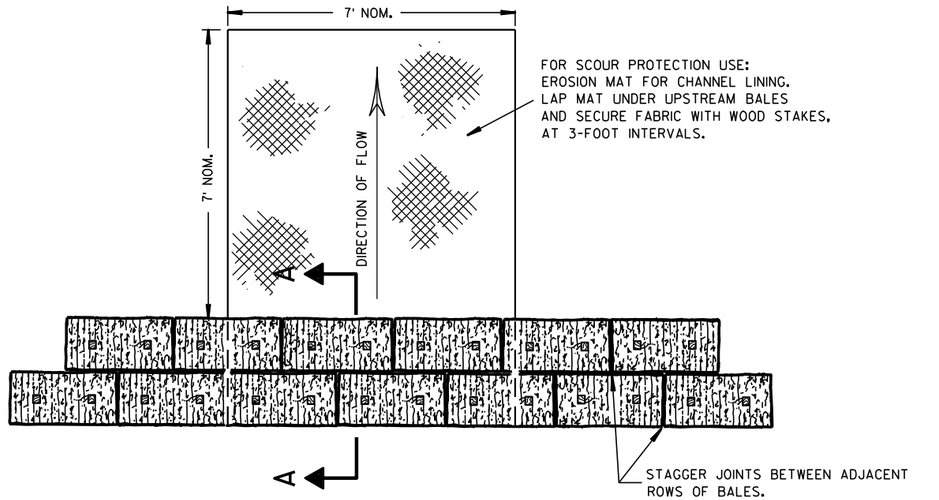
APPROVED
December 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

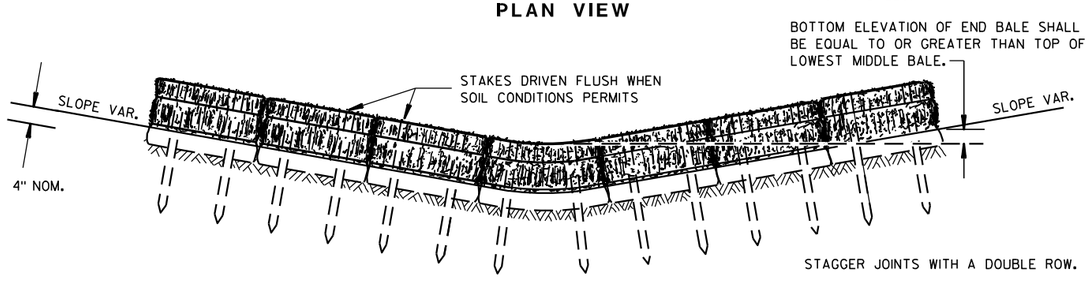
FHWA



SECTION A-A



PLAN VIEW



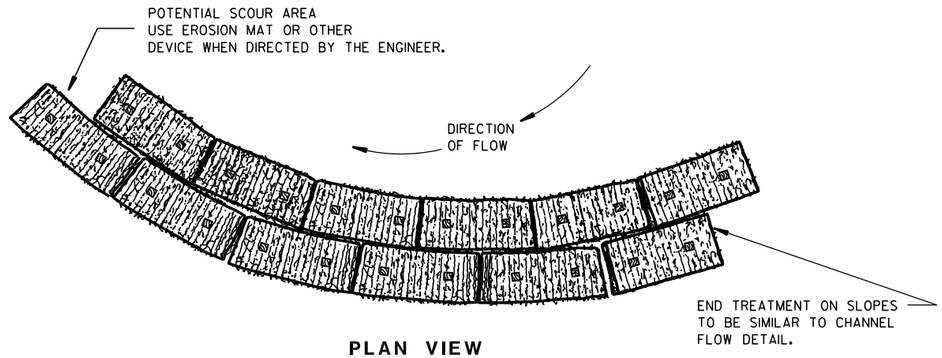
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

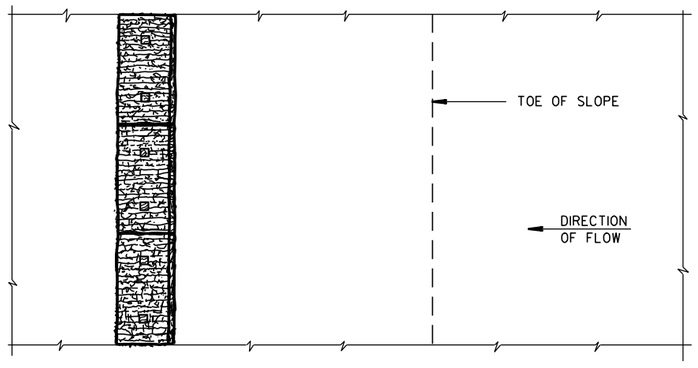
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

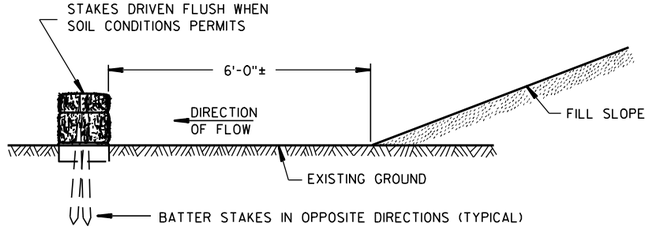


PLAN VIEW

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

6

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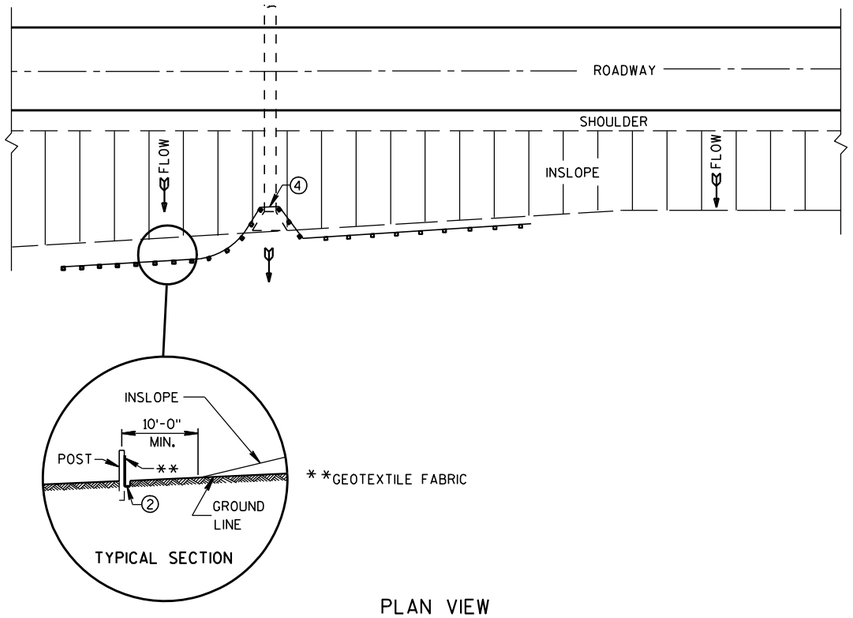
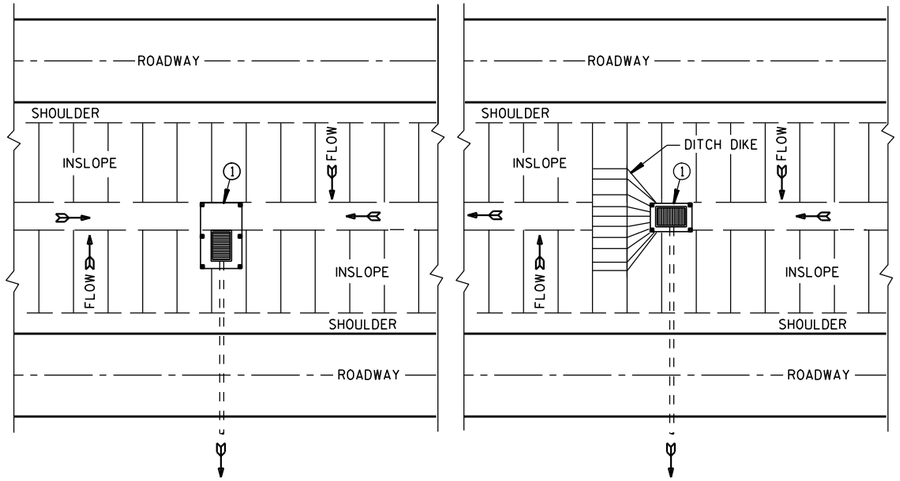
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



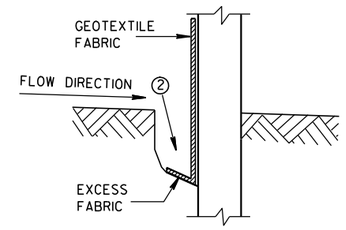
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

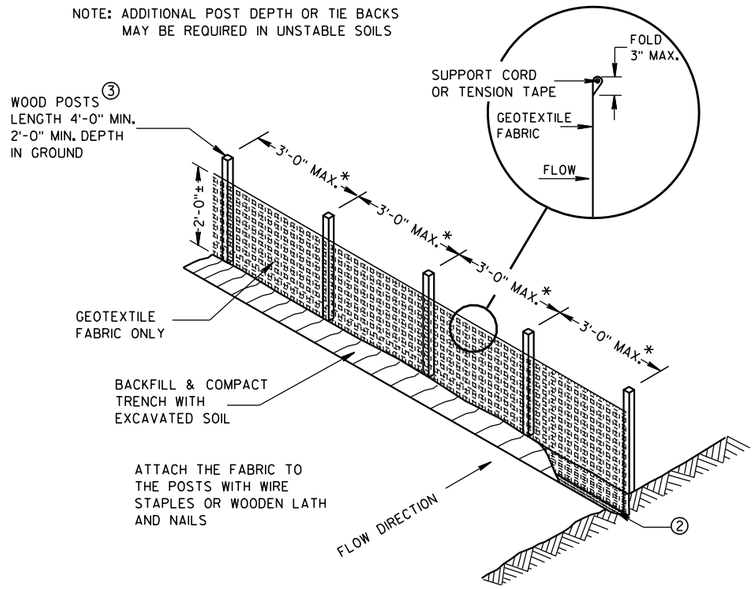
GENERAL NOTES

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

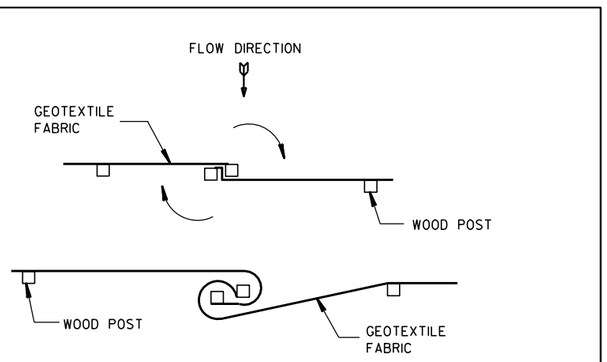
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



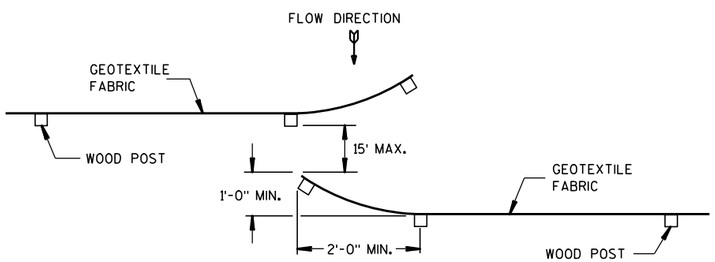
TRENCH DETAIL



SILT FENCE

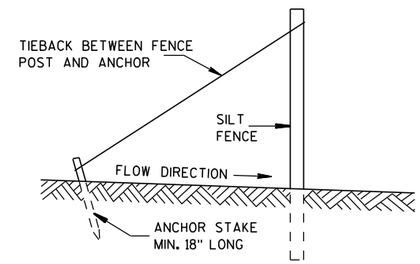


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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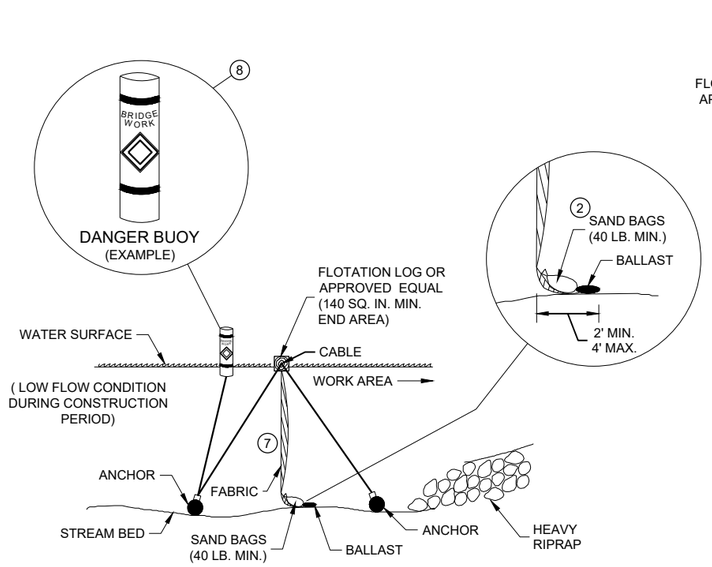
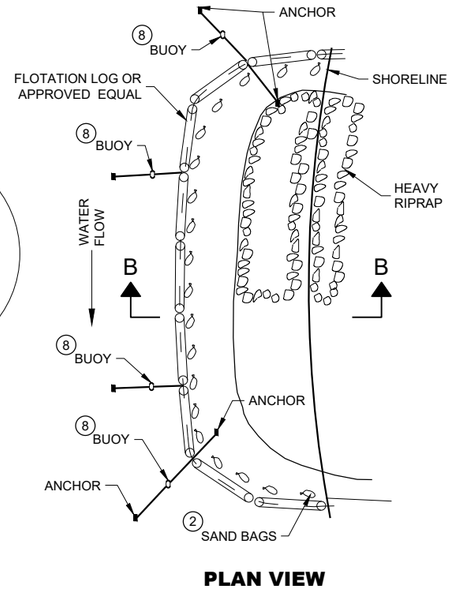
S.D.D. 8 E 9-6

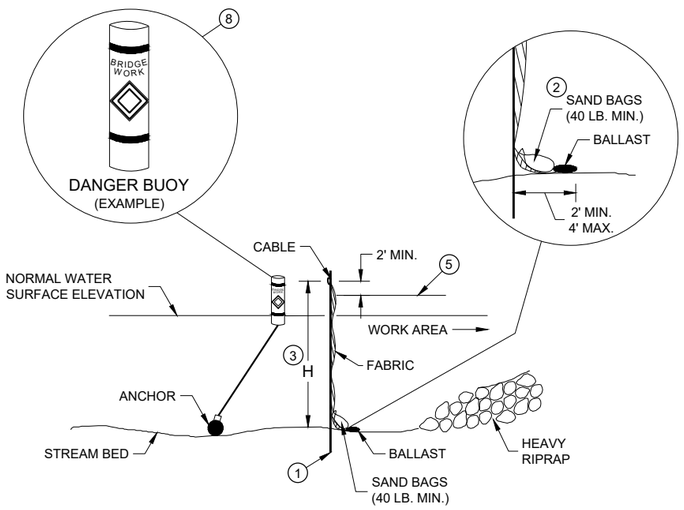


SECTION B - B

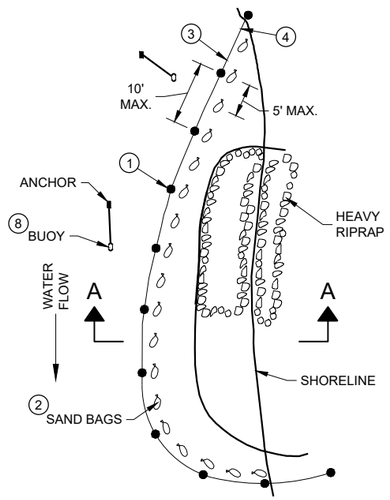


PLAN VIEW

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.

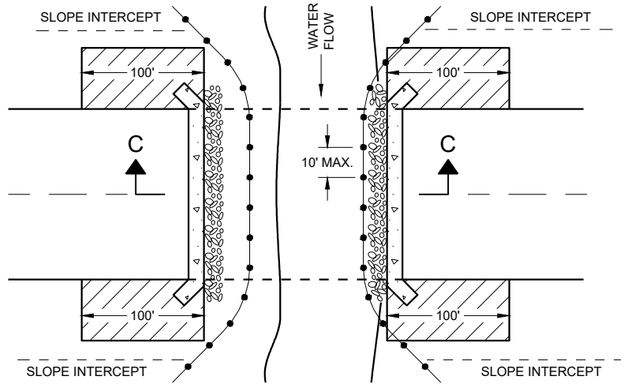
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(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.

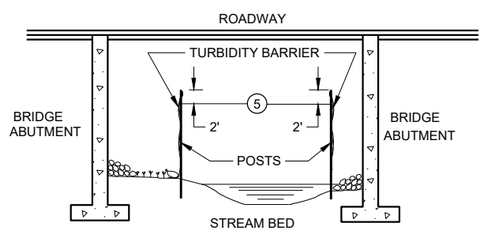
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(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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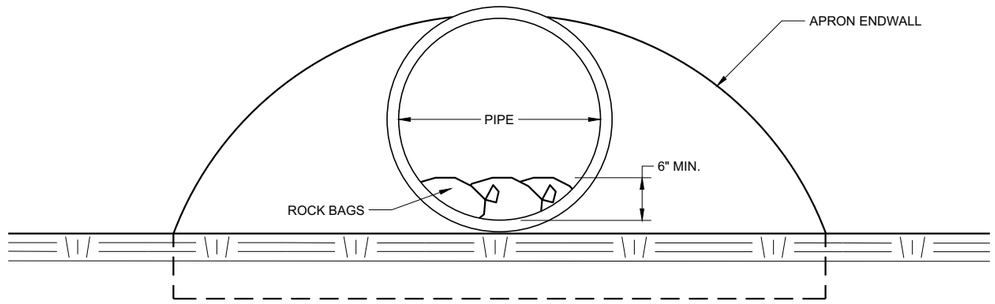
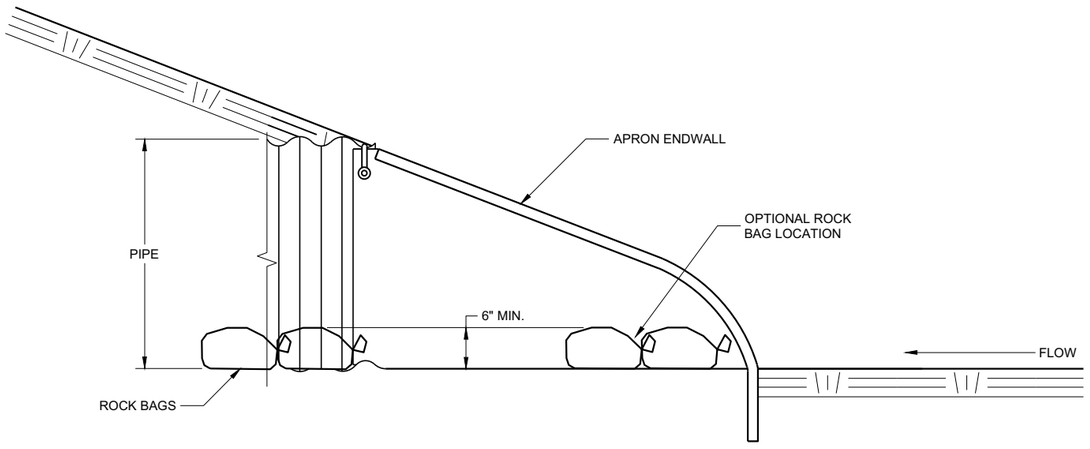
SDD 08E11 - 02



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

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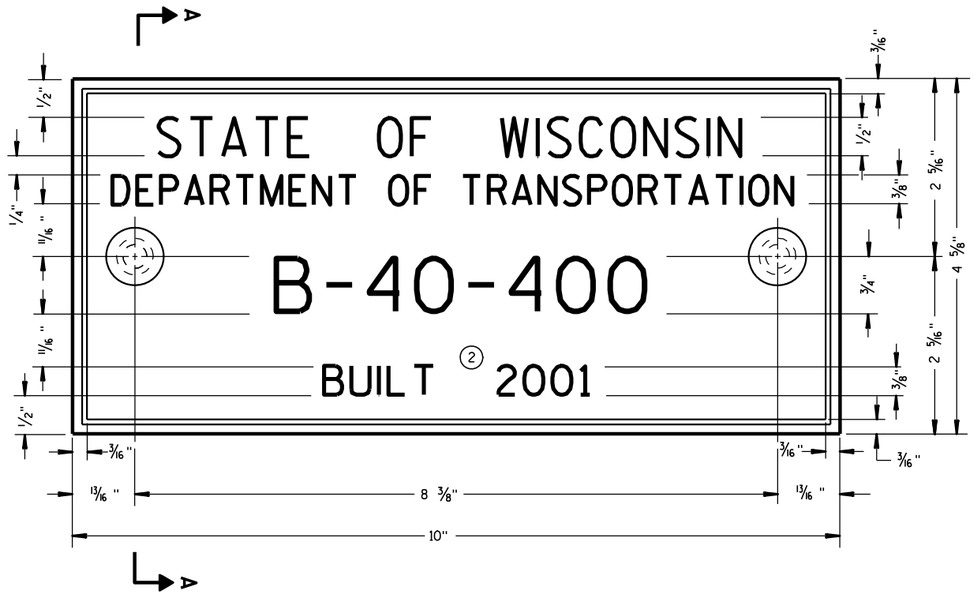
SDD 08E15 - 01



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

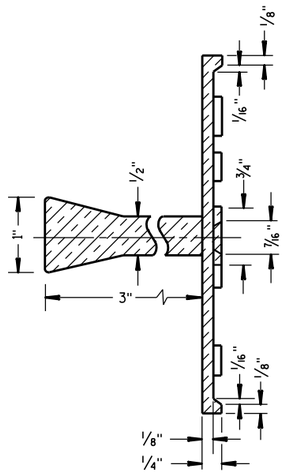
GENERAL NOTES

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

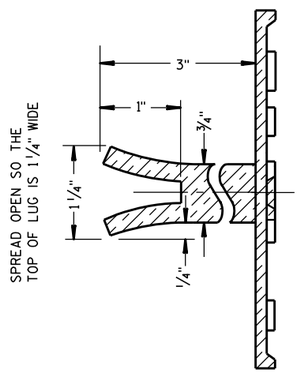
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

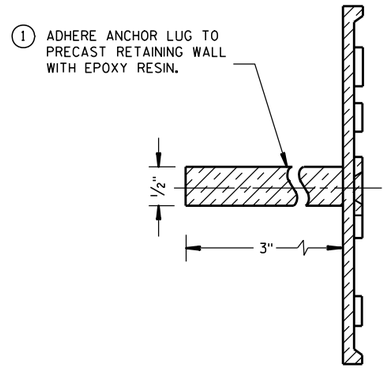
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

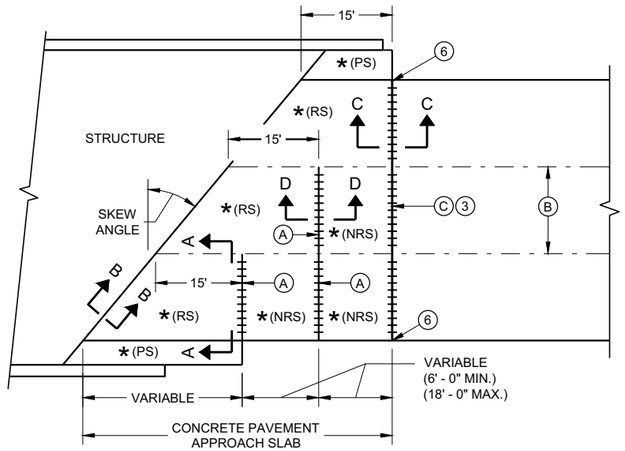
3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

6

S.D.D. 12 A 3-10



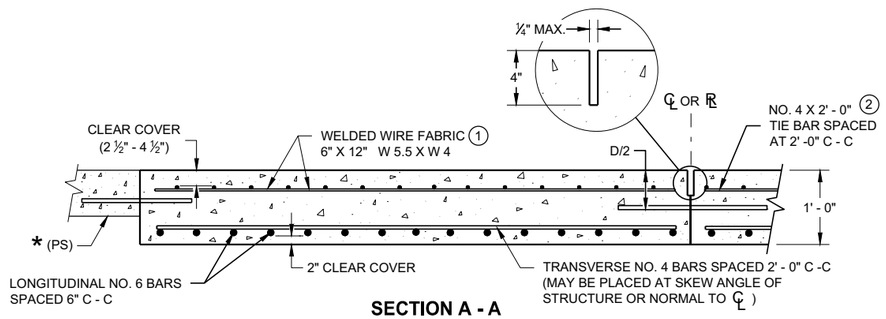
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

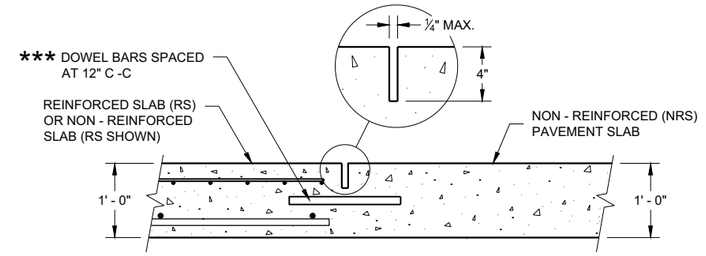
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

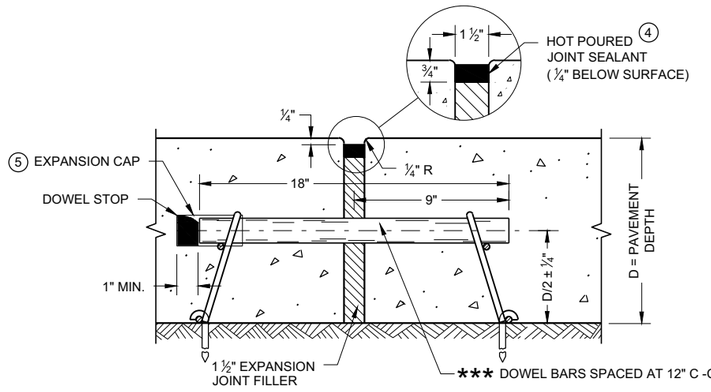
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

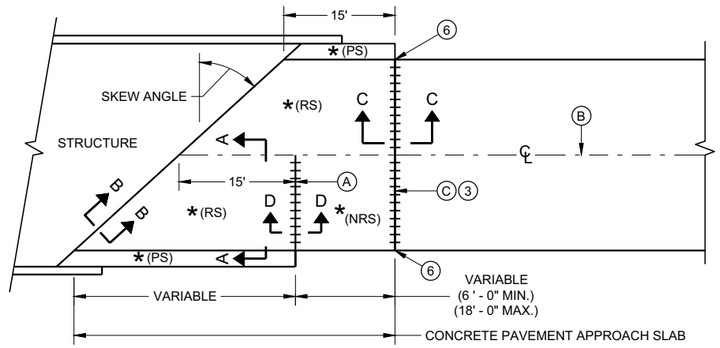
(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



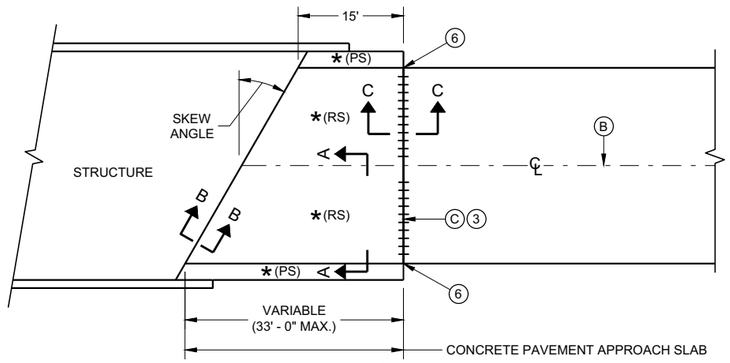
SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

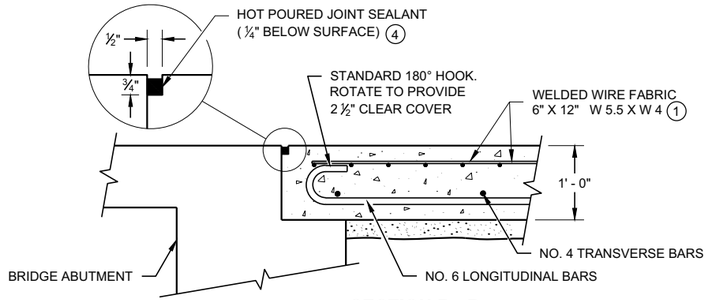


SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

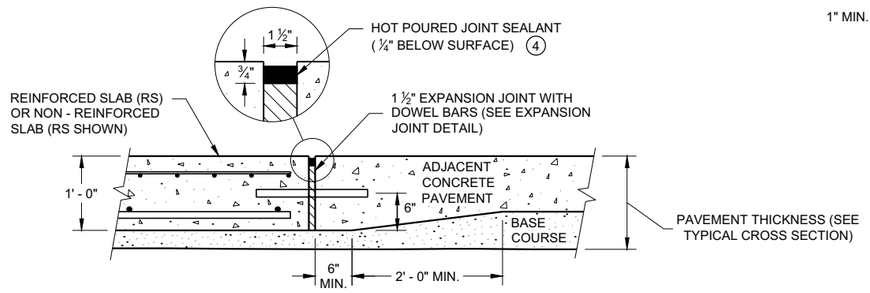


SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVISO

FHWA

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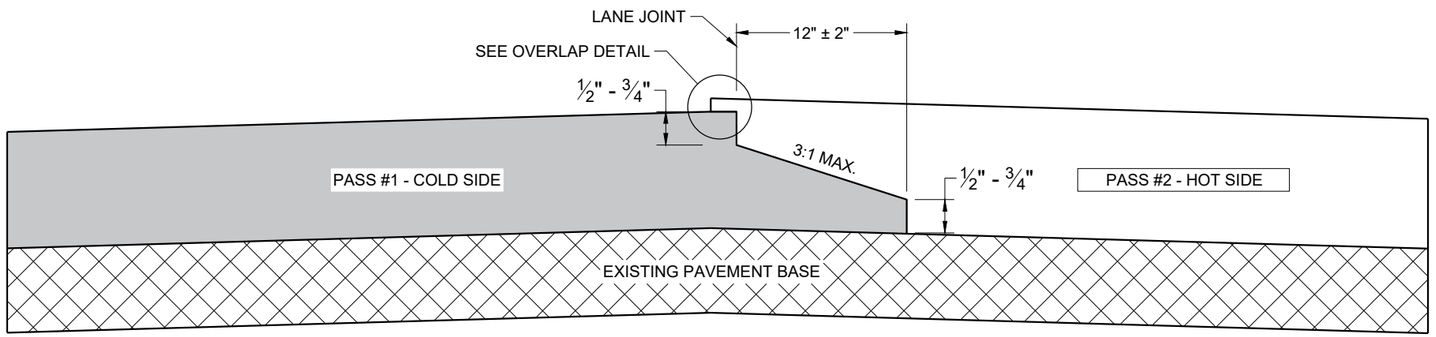
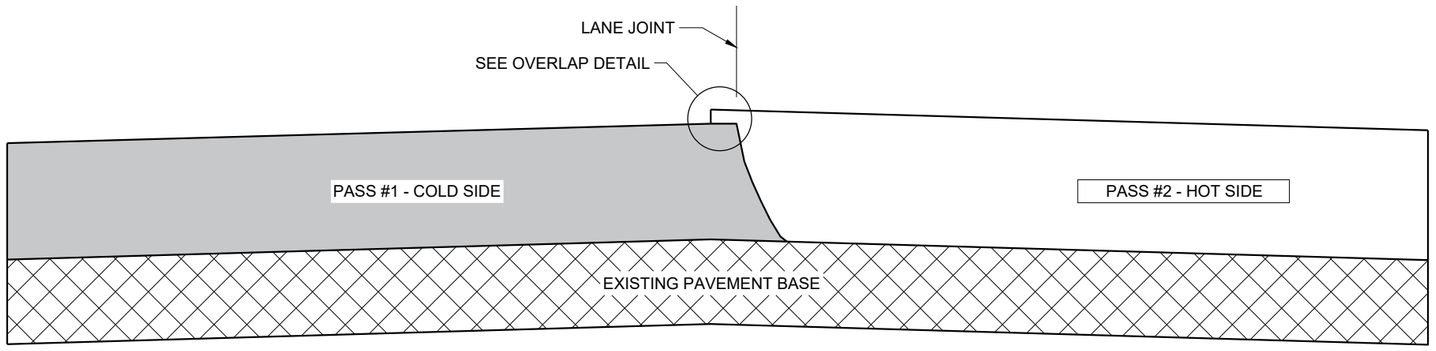
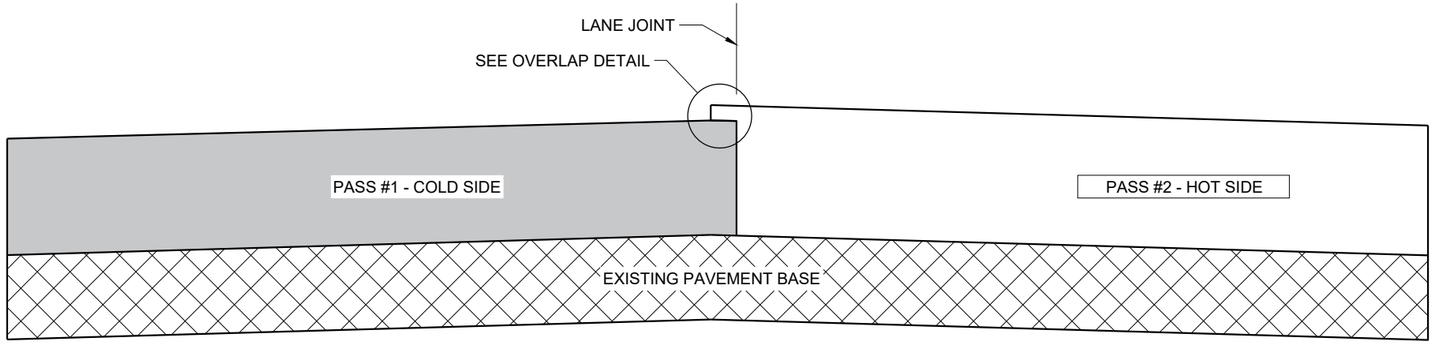
SDD 13B02 - 09a



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

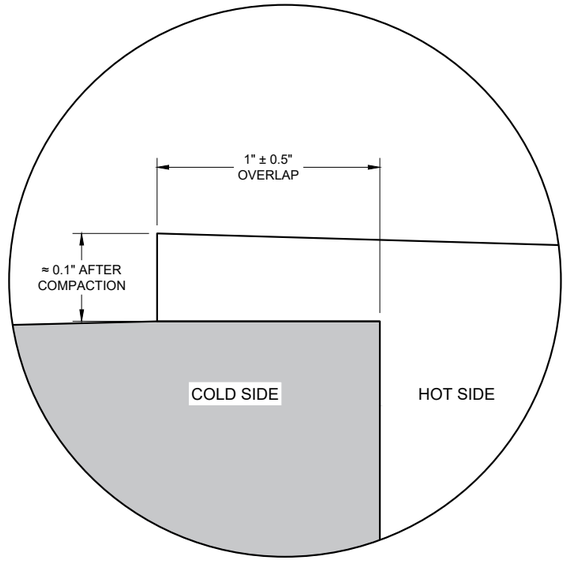
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

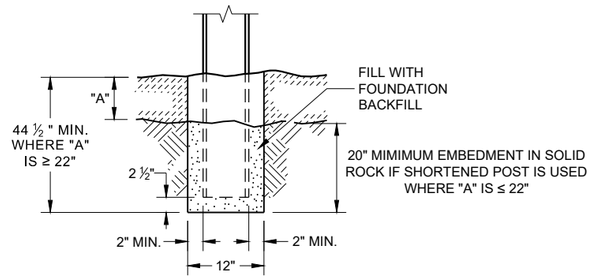
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

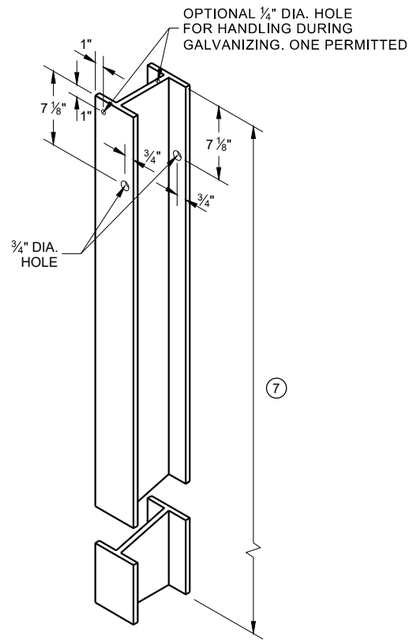
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

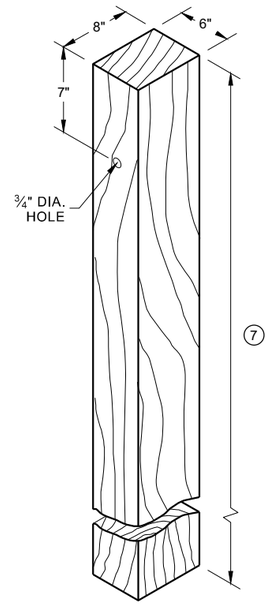
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



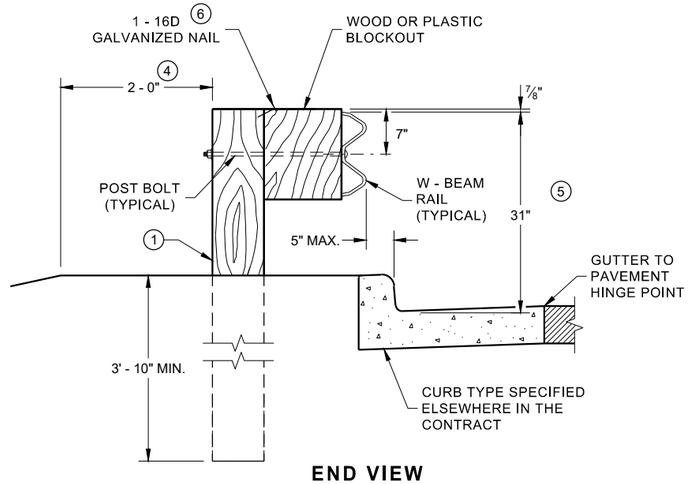
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



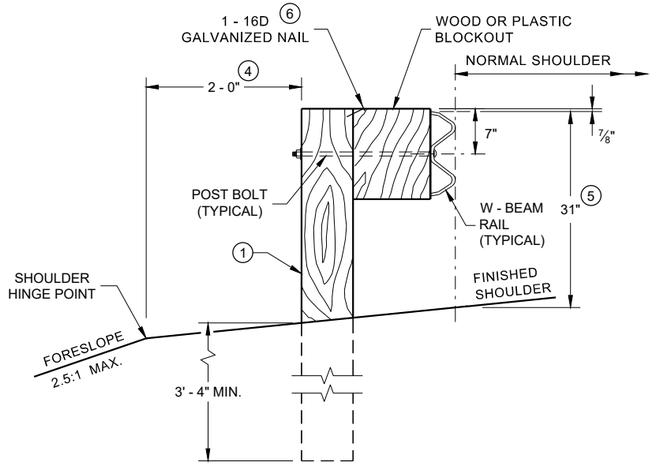
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



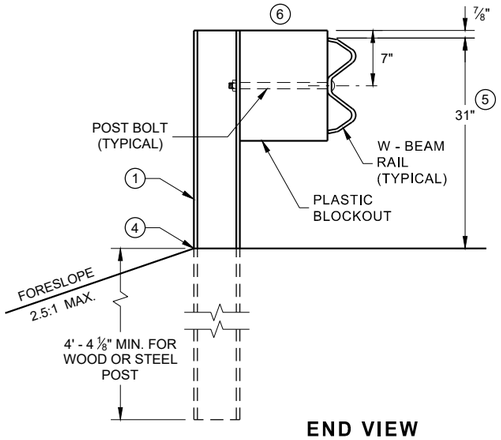
WOOD POST (6" X 8") NOMINAL (1)



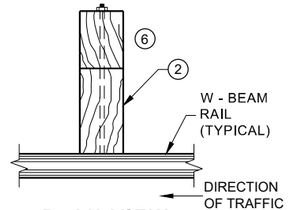
END VIEW
LOCATED ALONG A CURBED ROADWAY



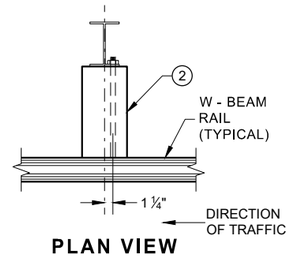
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



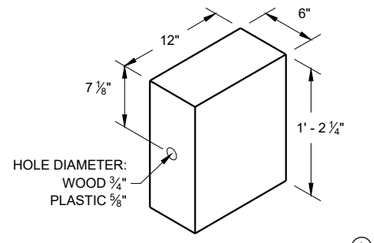
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM

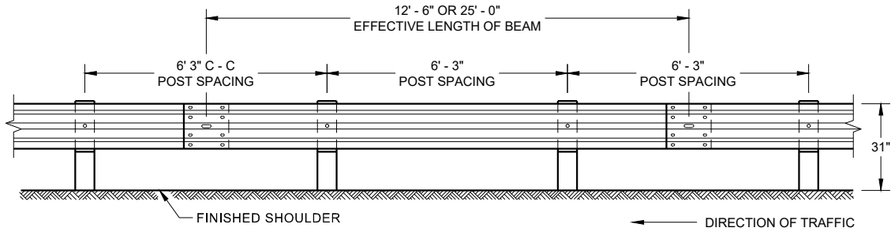


WOOD OR PLASTIC BLOCKOUT (2)

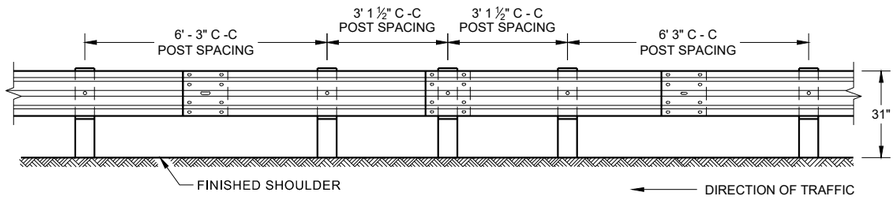
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

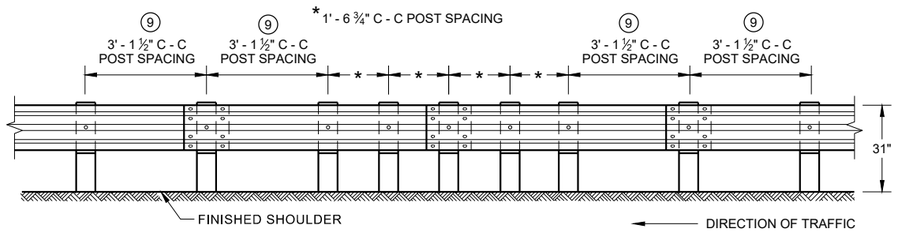
6
SDD 14B42 - 07a



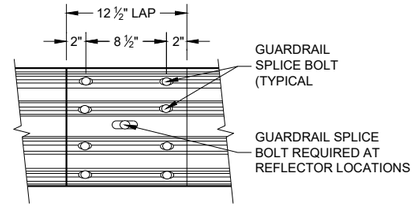
FRONT VIEW
POST SPACING STANDARD INSTALLATION



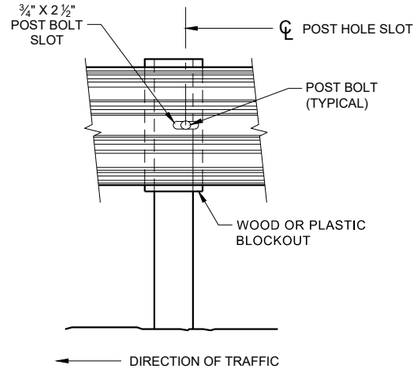
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



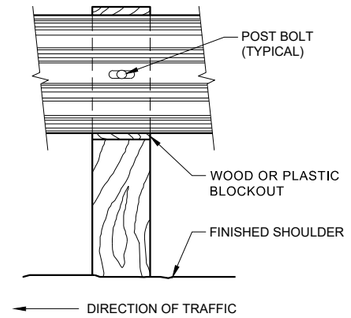
FRONT VIEW
QUARTER POST SPACING (QS)



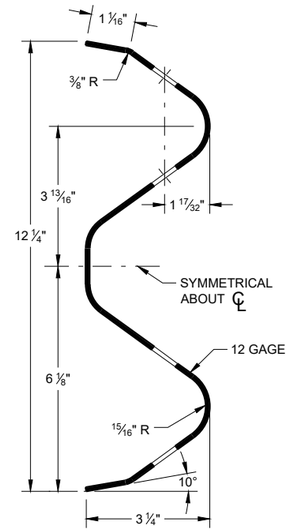
FRONT VIEW
MID-SPAN BEAM SPLICE



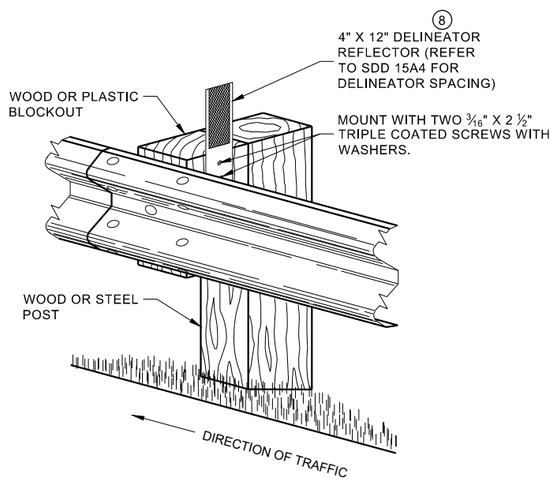
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

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

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

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

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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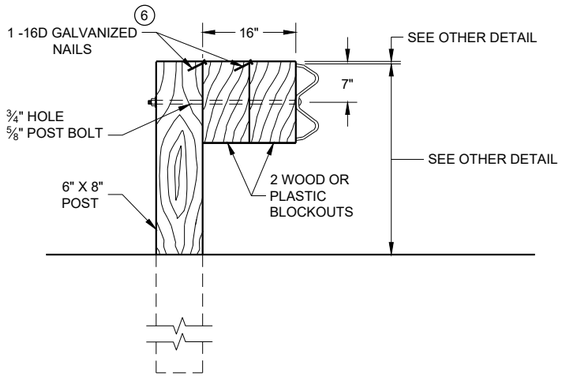
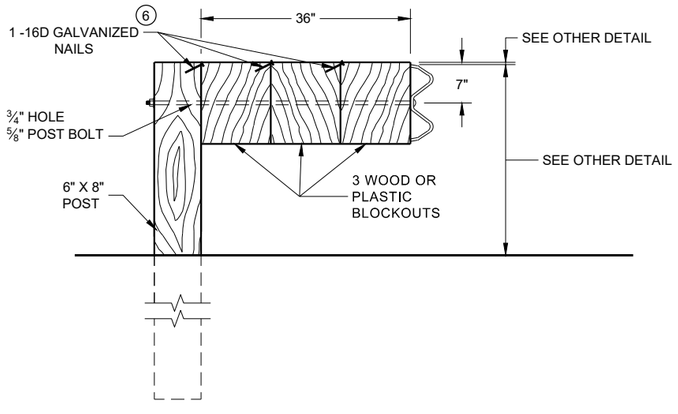
SDD 14B42 - 07b
SDD 14B42 - 07b



DETAIL FOR 16" BLOCKOUT DEPTH

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



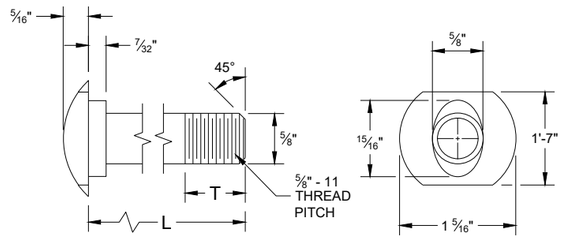
DETAIL FOR 36" BLOCKOUT DEPTH

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

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

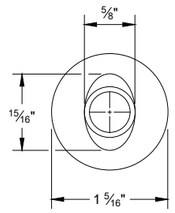
NOTE:

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

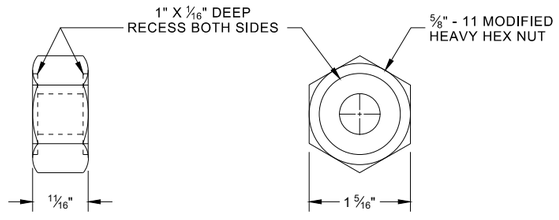


POST BOLT TABLE

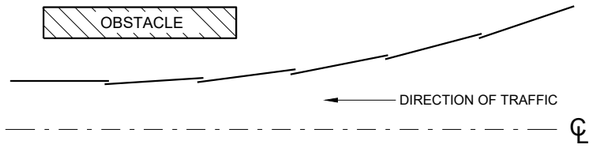
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



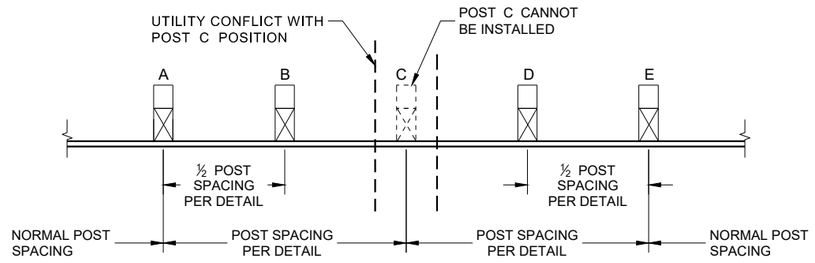
ALTERNATE BOLT HEAD



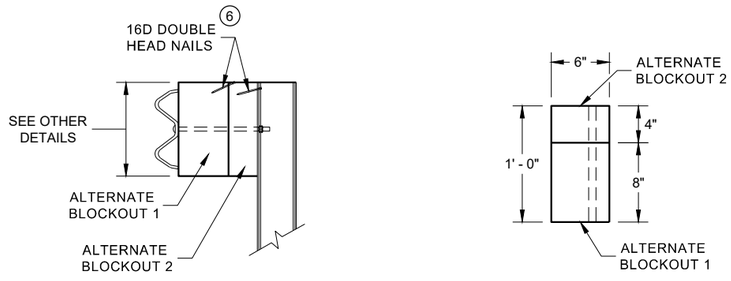
POST BOLT, SPLICE BOLT AND RECESS NUT



PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



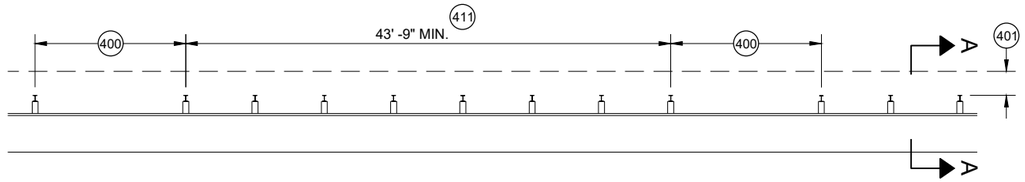
SIDE VIEW

PLAN VIEW

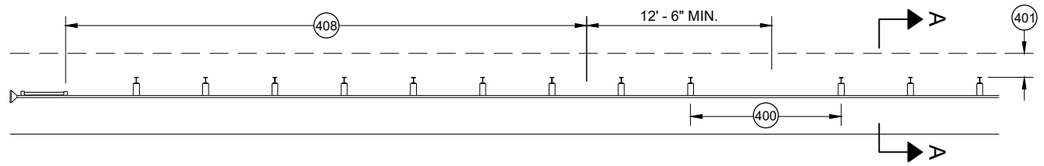
ALTERNATE WOOD BLOCKOUT DETAIL

(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.

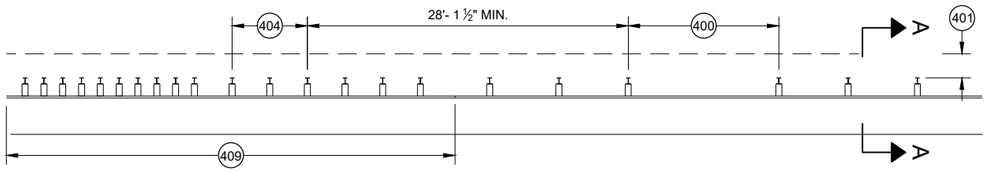
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



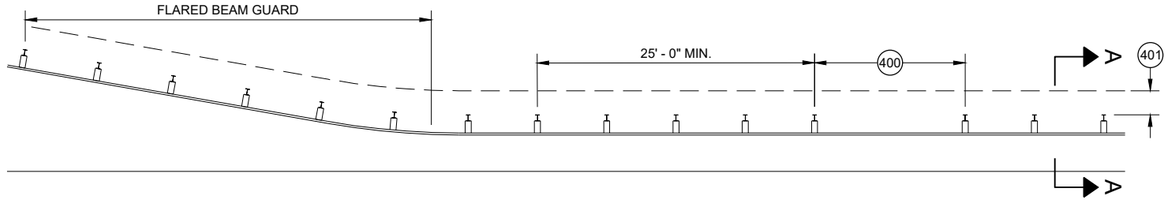
MISSING POST IN MGS GUARDRAIL



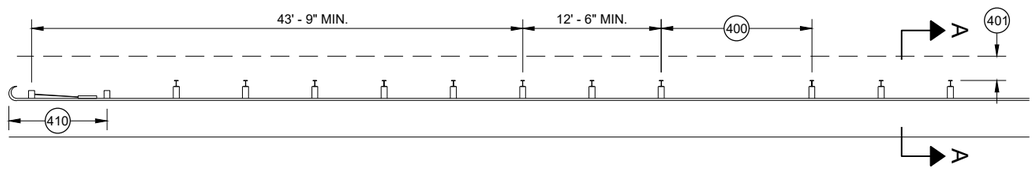
MISSING POST IN MGS GUARDRAIL NEAR EAT



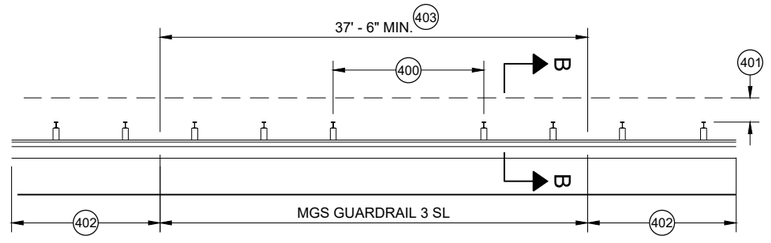
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

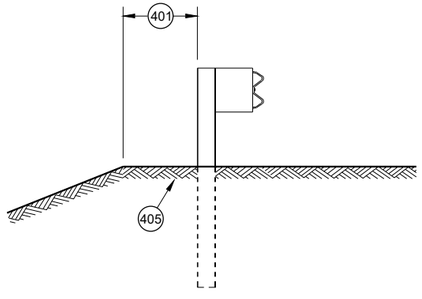


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

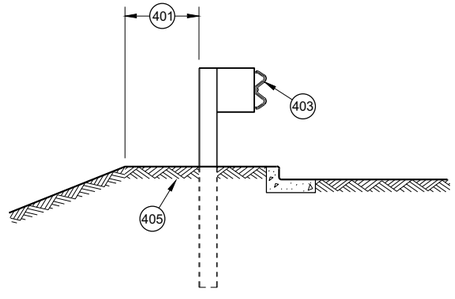


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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.

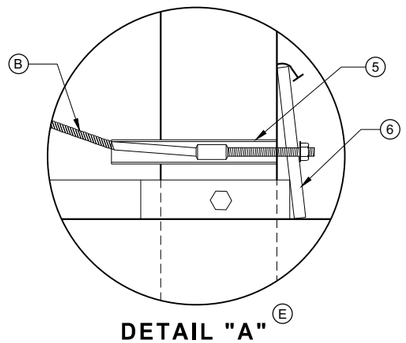
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

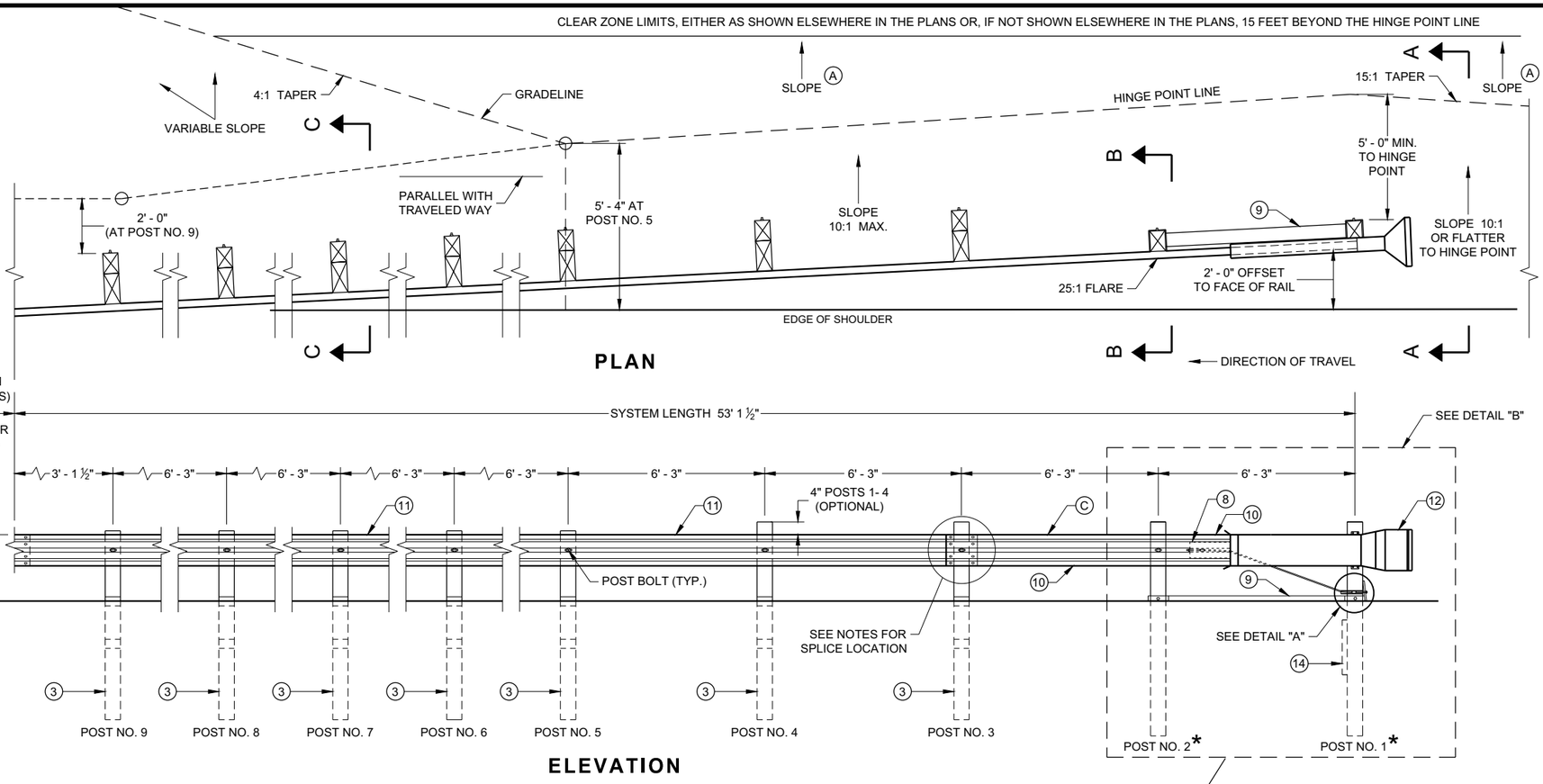
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

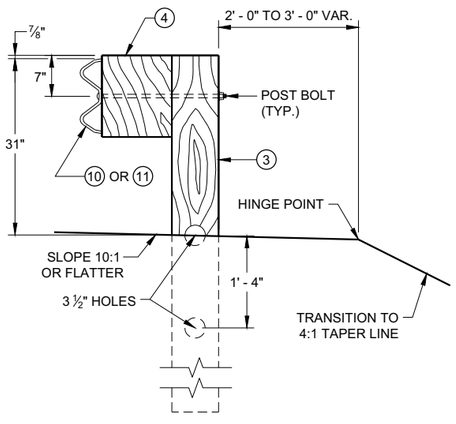
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

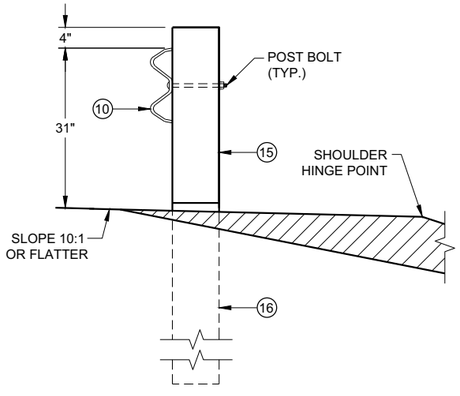


DETAIL "A" (E)

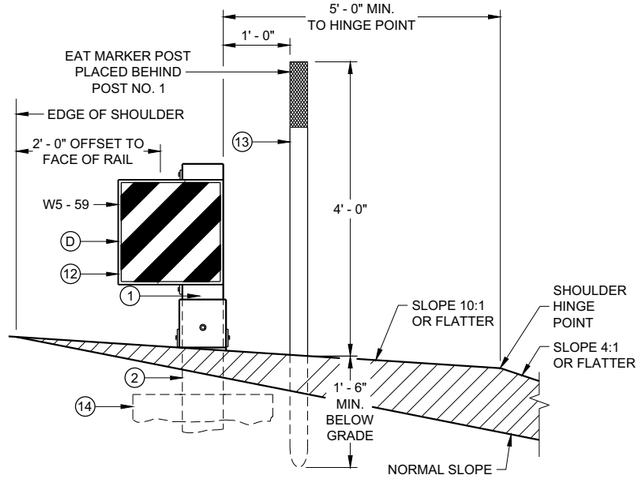




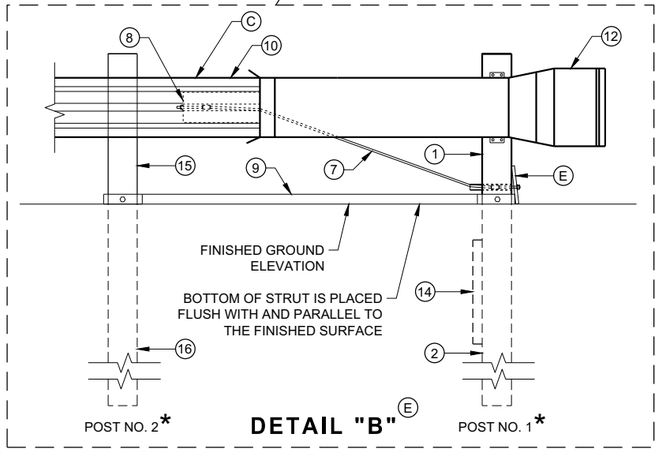
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

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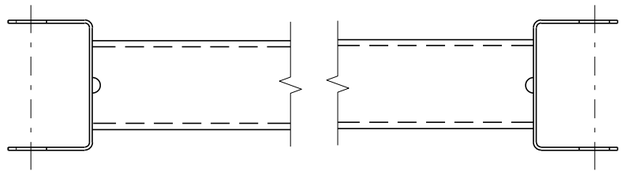
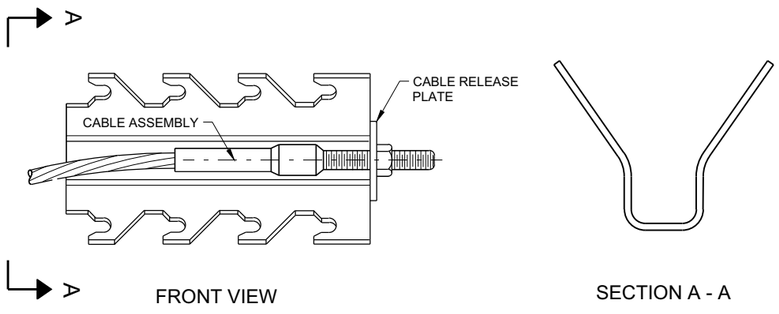


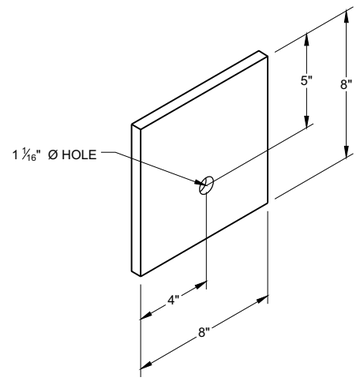
GENERIC GROUND STRUT ⑨ Ⓔ

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 ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

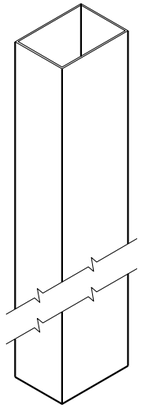
6

SDD 14B44 - 04b

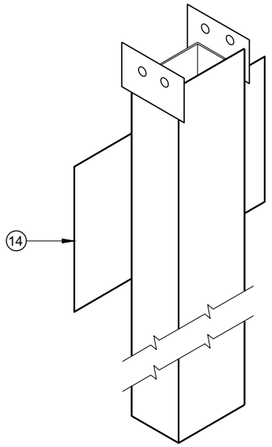
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

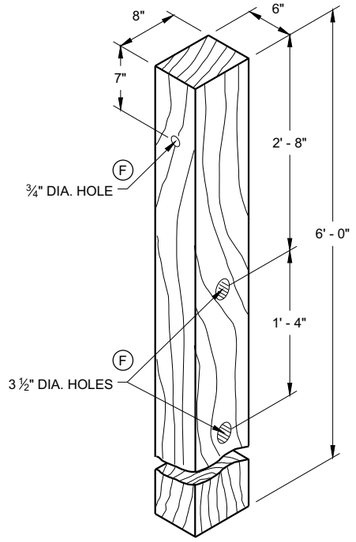
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



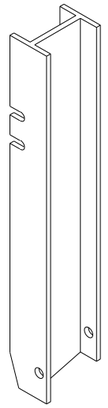
UPPER POST NO. 1 (1) (E)



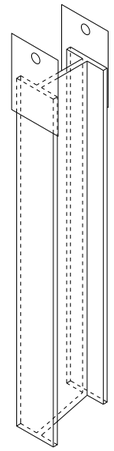
LOWER POST NO. 1 (2) (E)



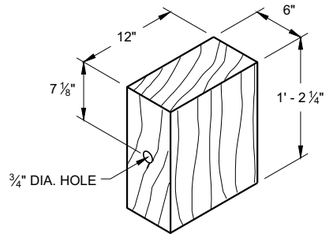
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



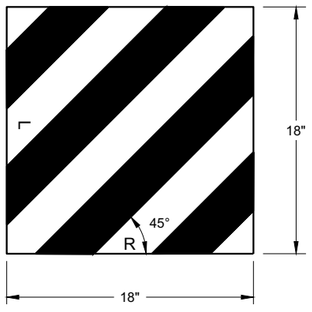
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

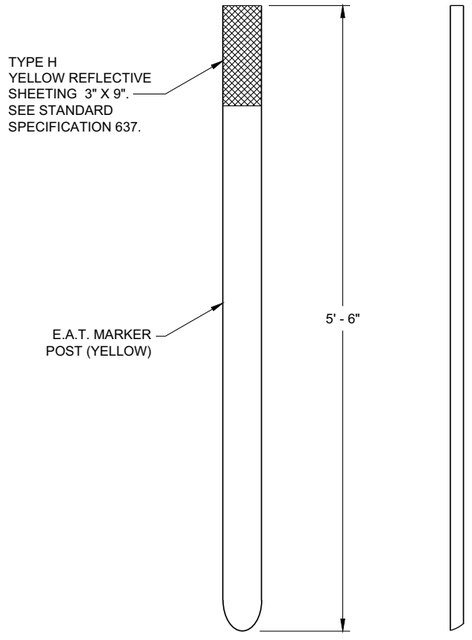


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



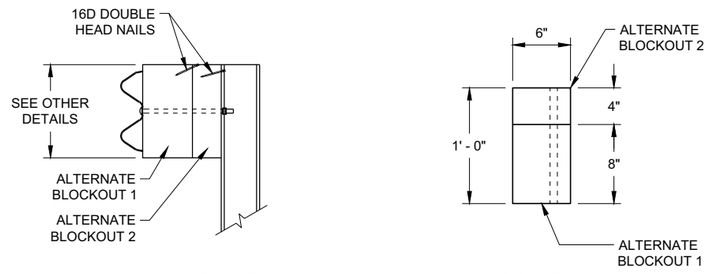
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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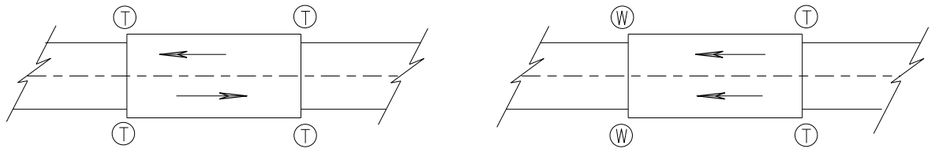
SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

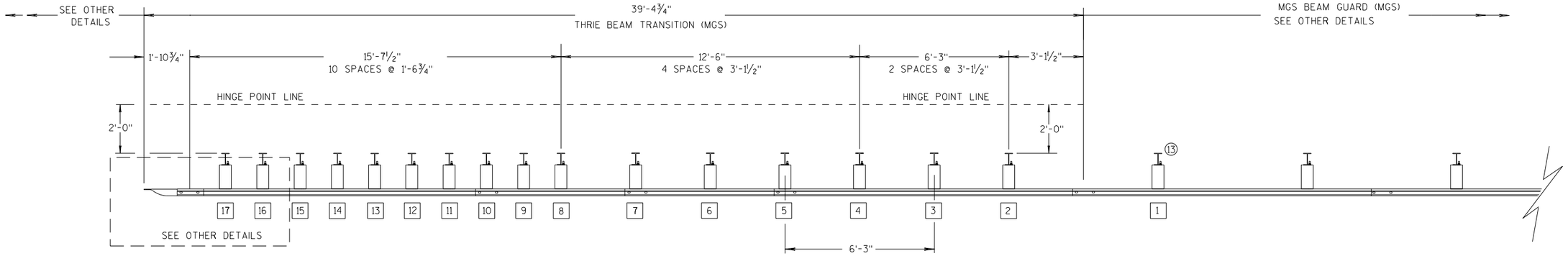
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

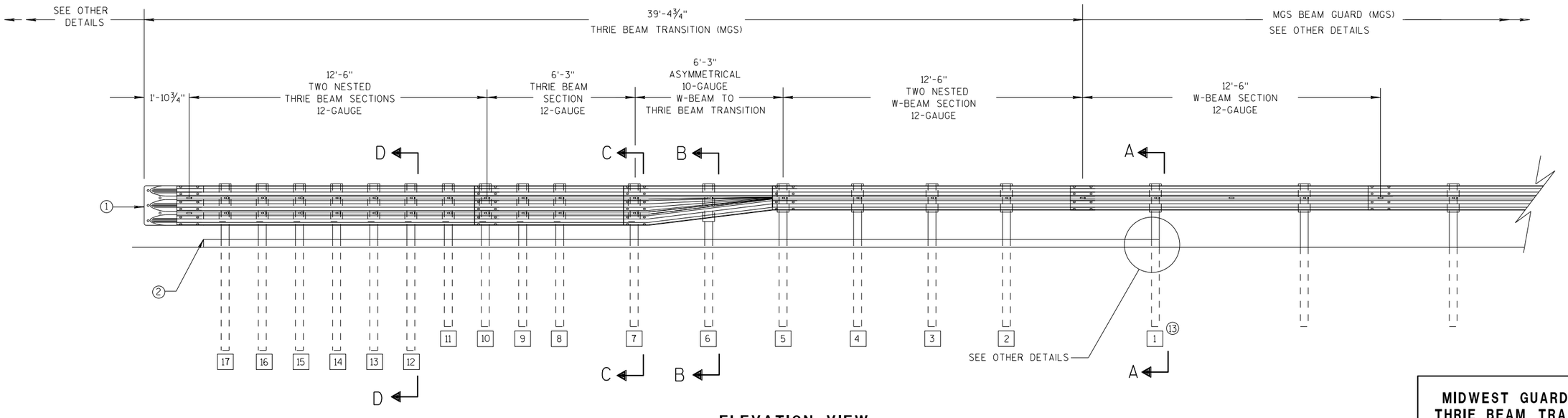
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

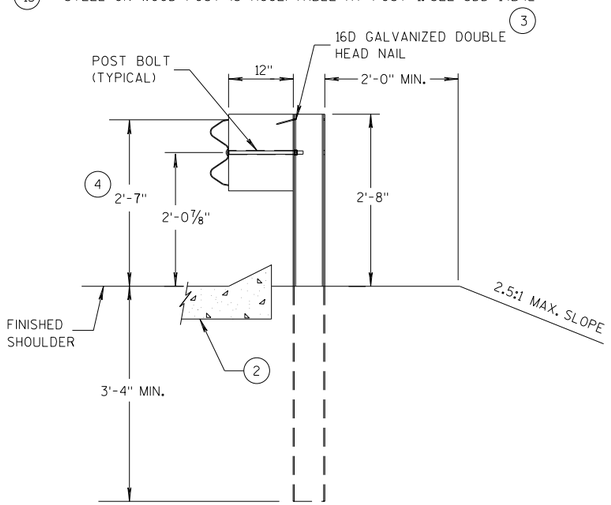
GENERAL NOTES

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

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

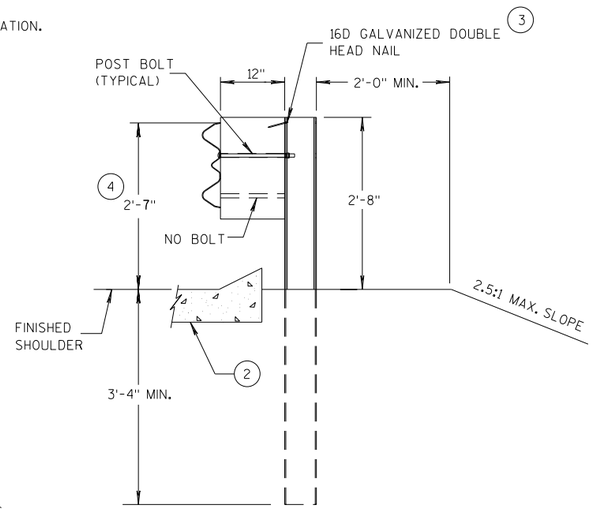
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



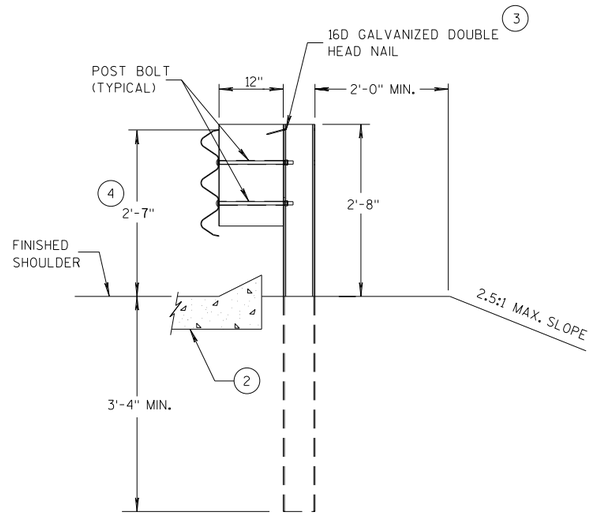
SECTION A-A (13)

POSTS 1-5



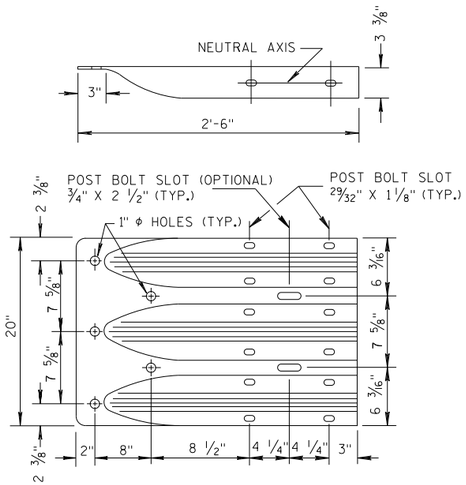
SECTION B-B

POST 6

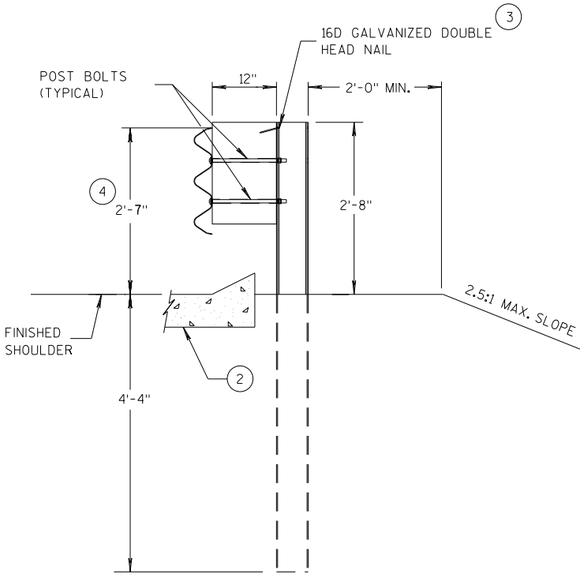


SECTION C-C

POSTS 7-11

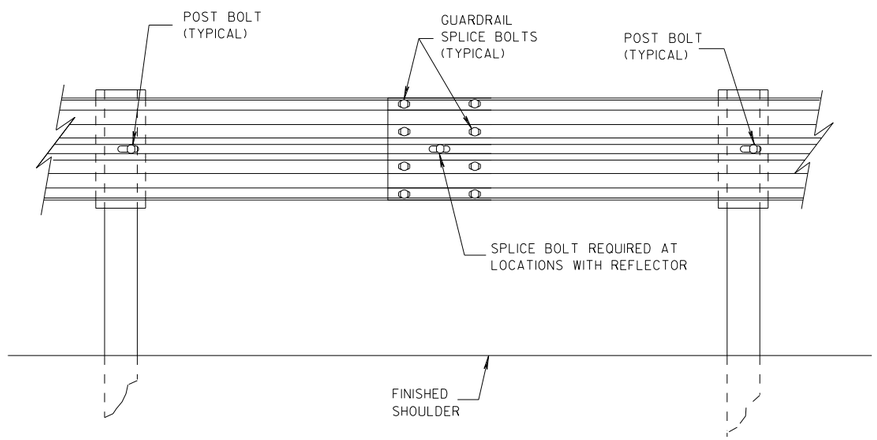


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

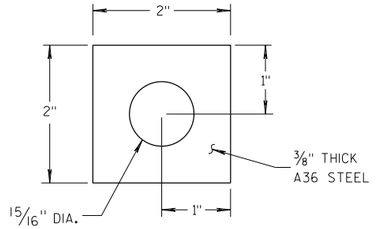
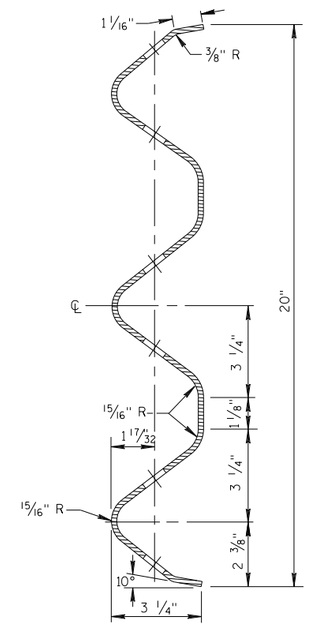


PLATE WASHER DETAIL



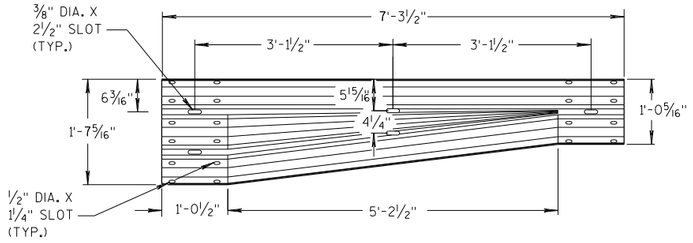
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

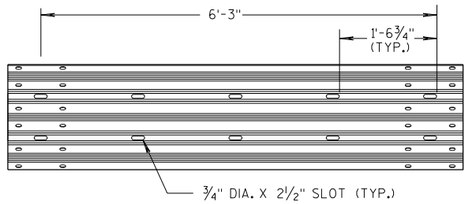
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

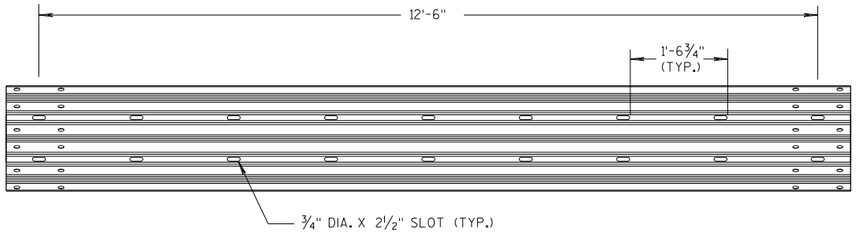
S.D.D. 14 B 45-5b



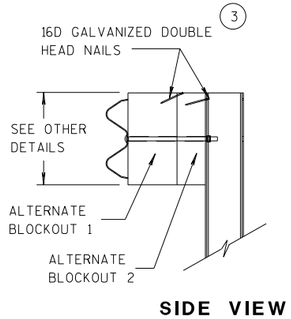
W-BEAM TO THRIE BEAM TRANSITION SECTION



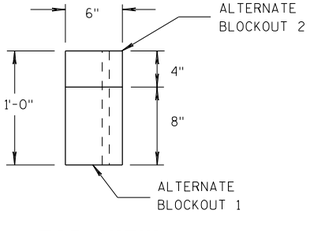
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

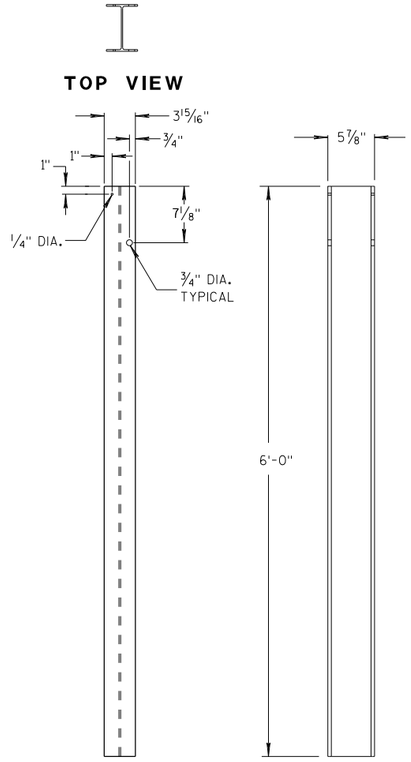


SIDE VIEW



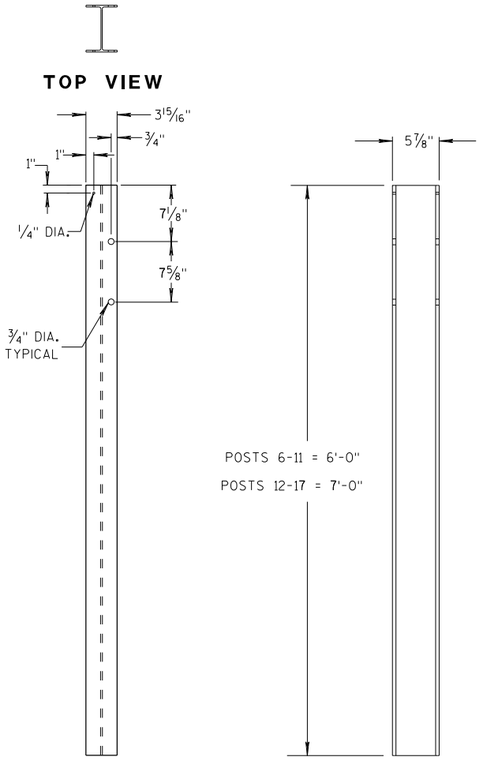
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



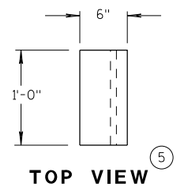
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

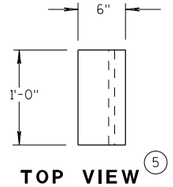


FRONT VIEW SIDE VIEW

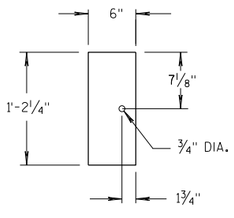
STEEL POSTS 6-17



TOP VIEW (5)

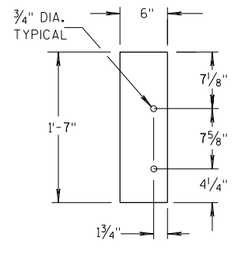


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

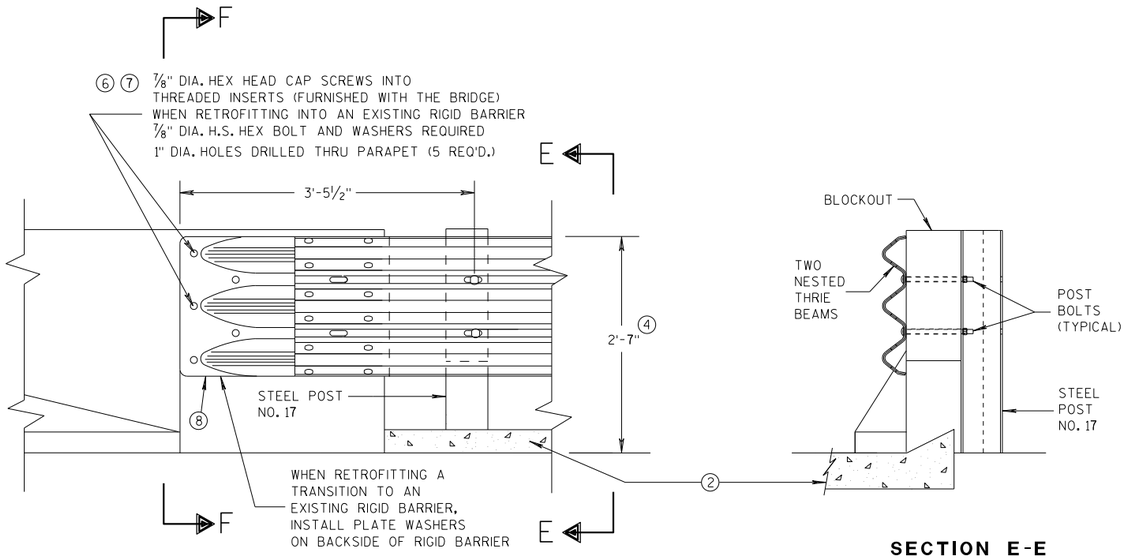
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

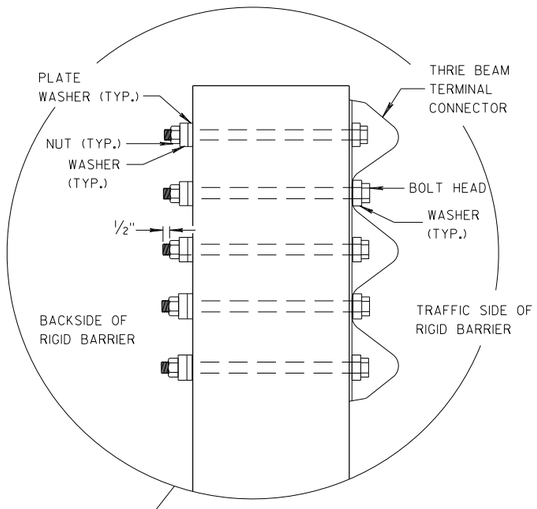
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

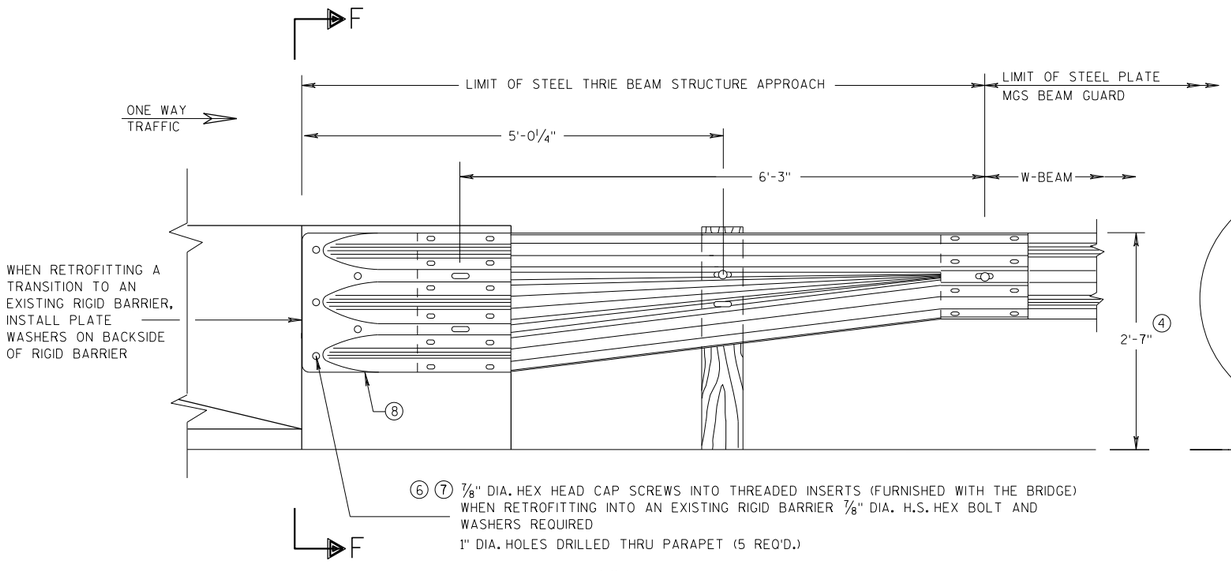
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

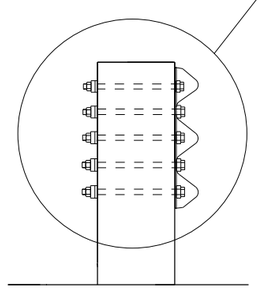
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

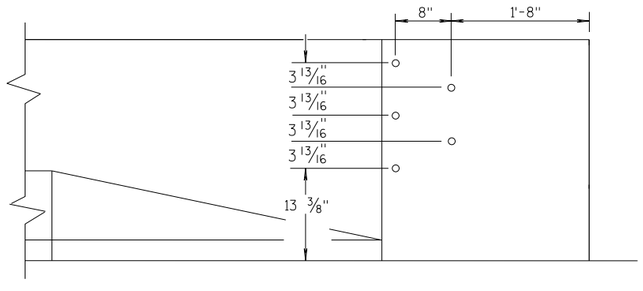




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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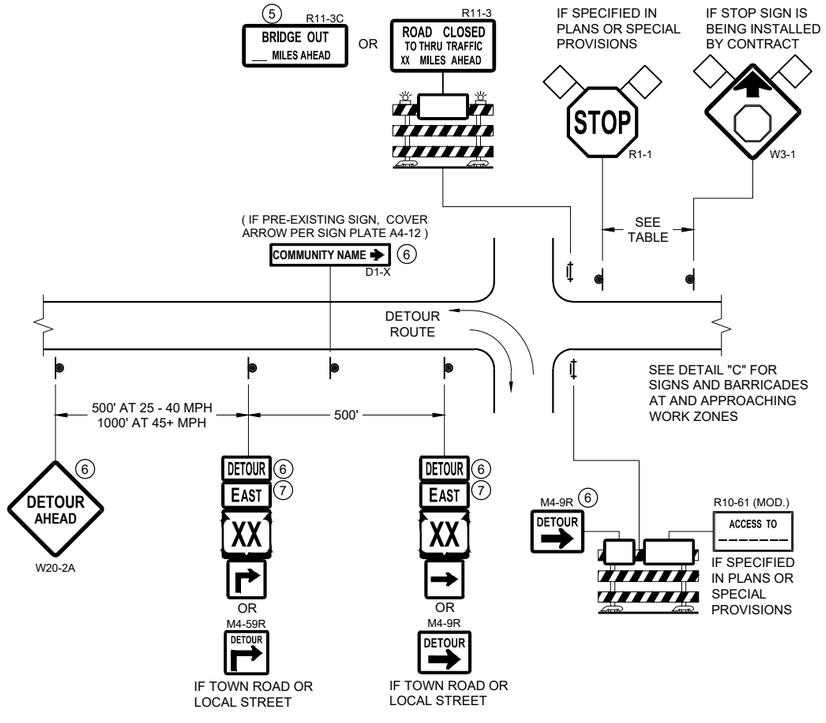
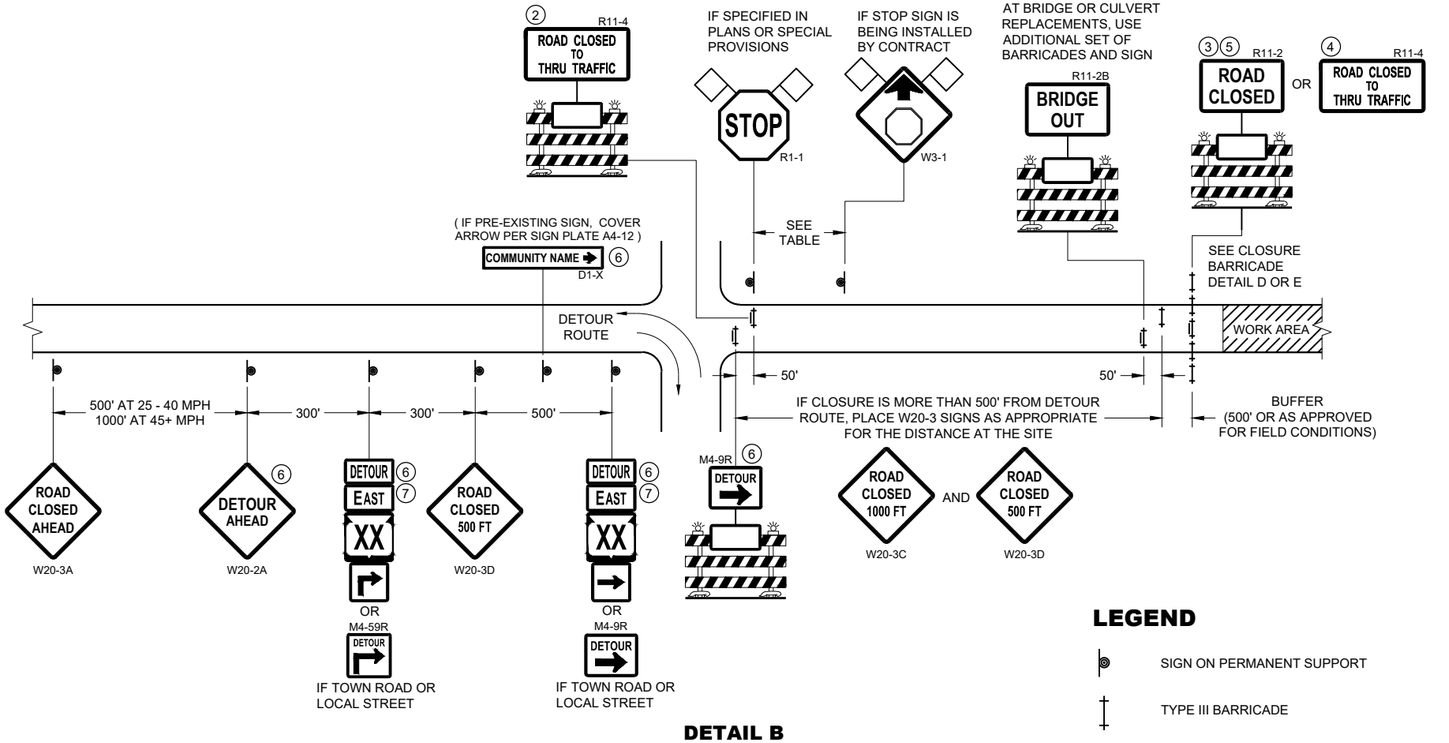
S.D.D. 14 B 45-5d



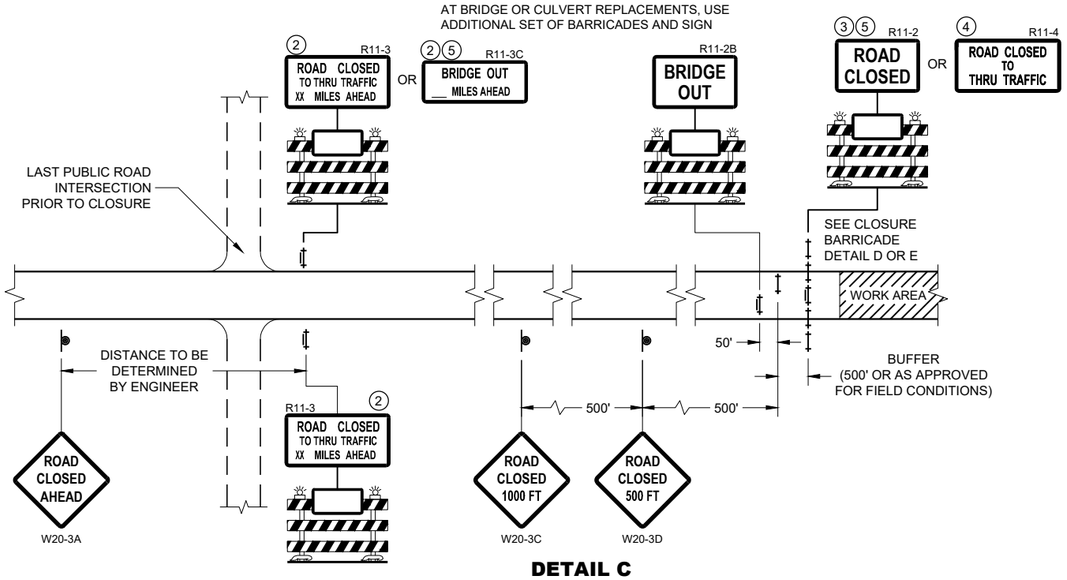
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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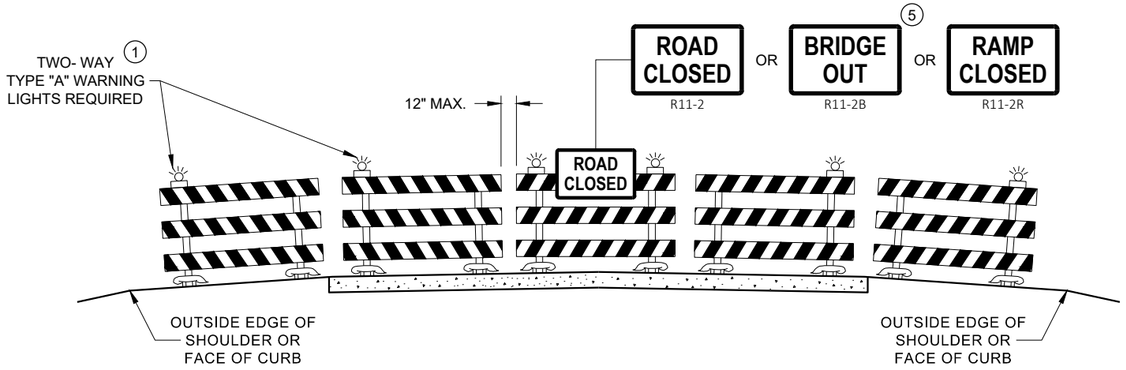
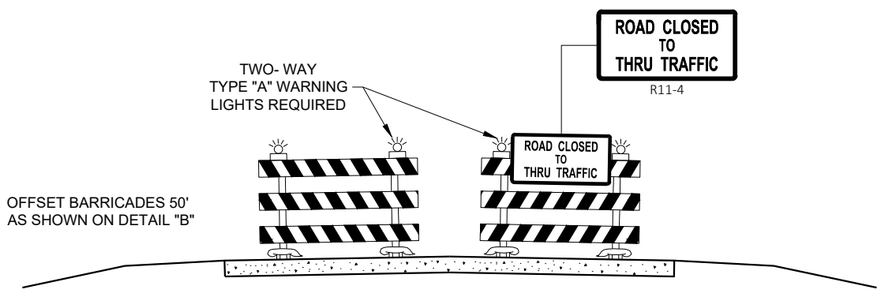
SDD 15C02 - 09a

6

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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SDD 15C02 - 09b

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SDD 15C02 - 09b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR / EAST — M4 - 8, M3 - X
- XX — M1 - 4
- OR XX — M1 - 6
- OR COUNTY X — M1 - 5A
- M05 - 1
- OR M06 - 1
- OR M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

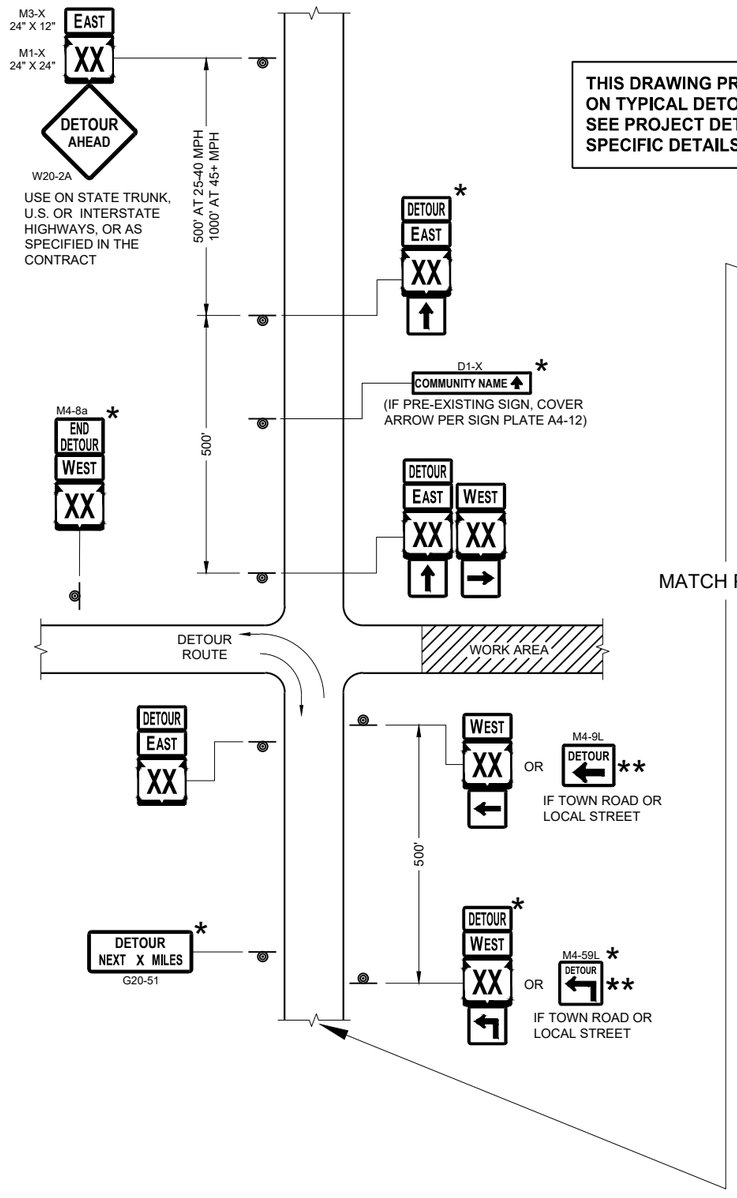
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

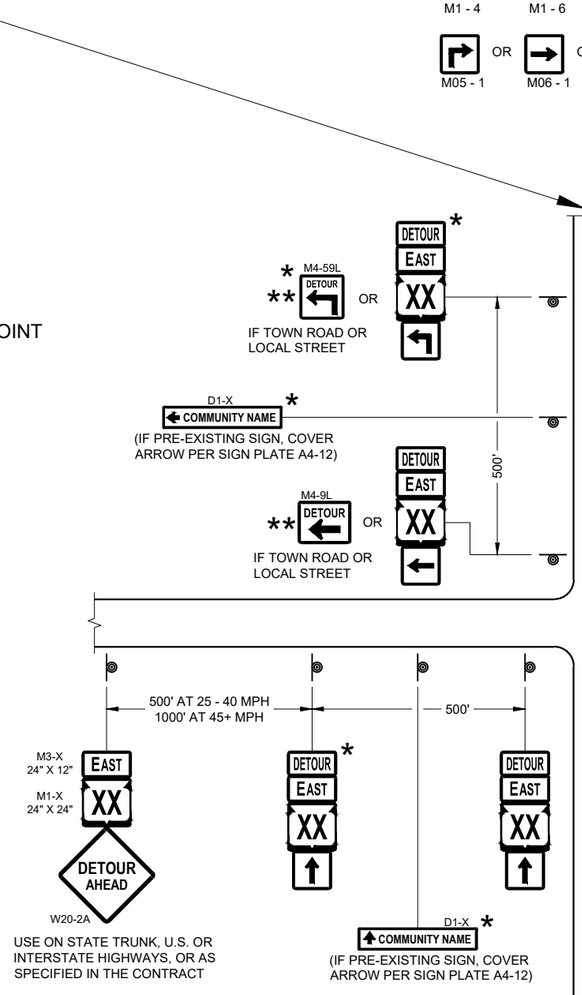
M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
M4-9 AND M4-59 SHALL BE 30" X 24"
M4-8a SHALL BE 24" X 18"
G20-51 SHALL BE 60" X 24"
W20-2A SHALL BE 48" X 48"
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

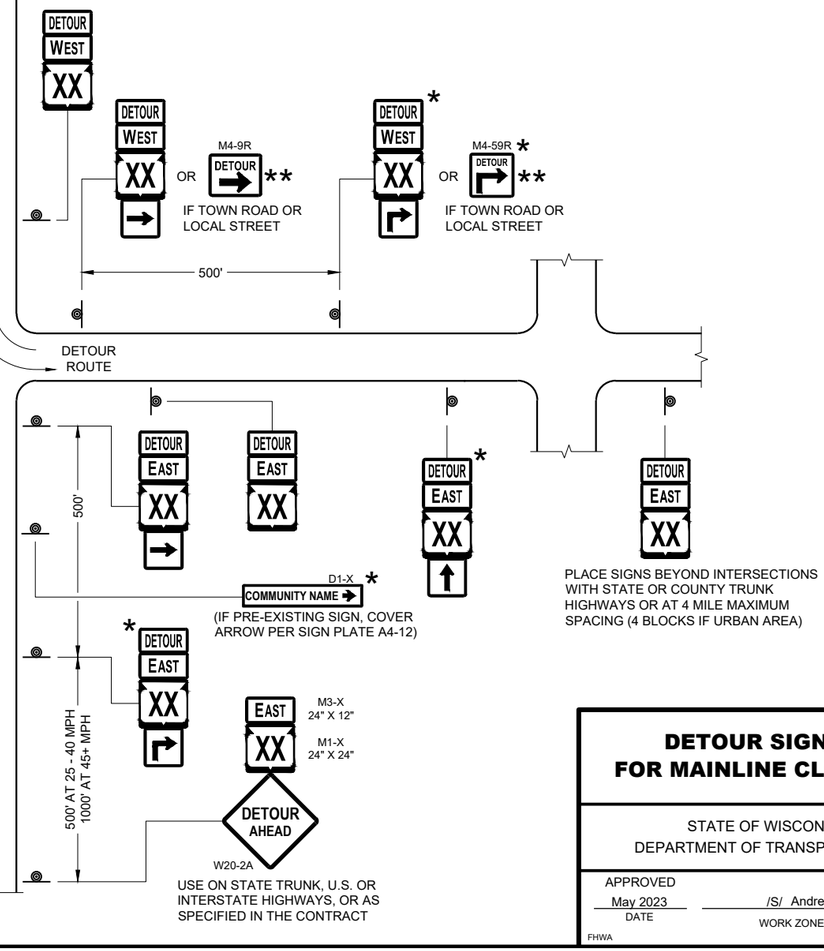
* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



MATCH POINT





SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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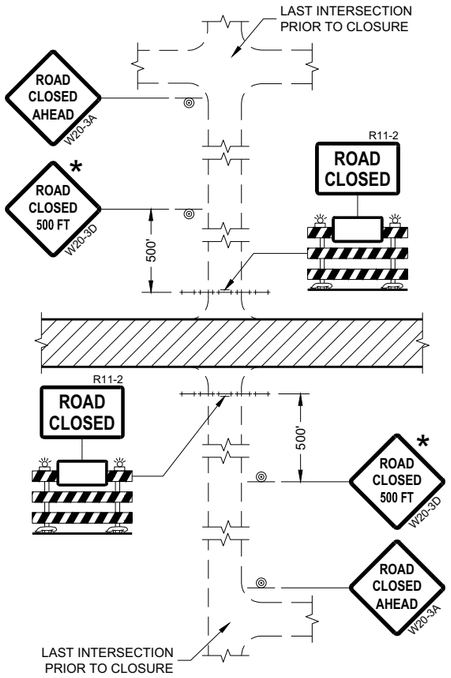
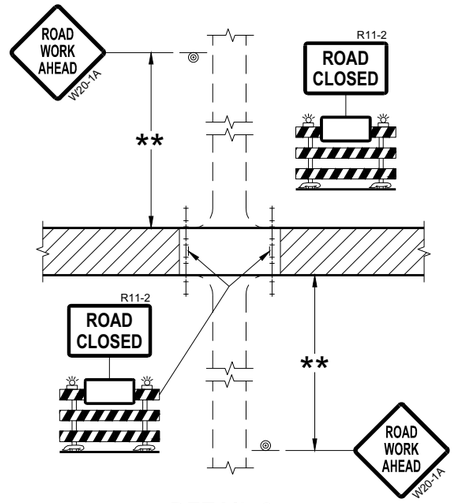
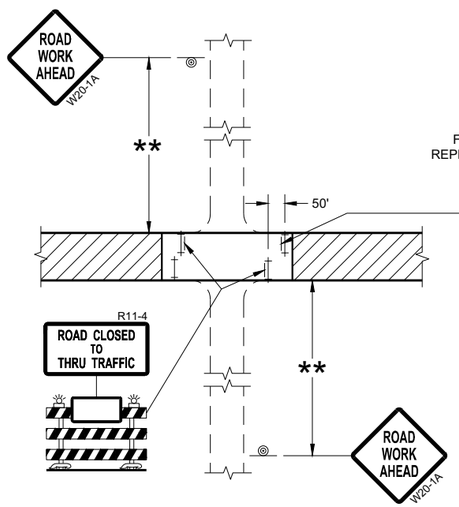
SDD 15C02 - 09c



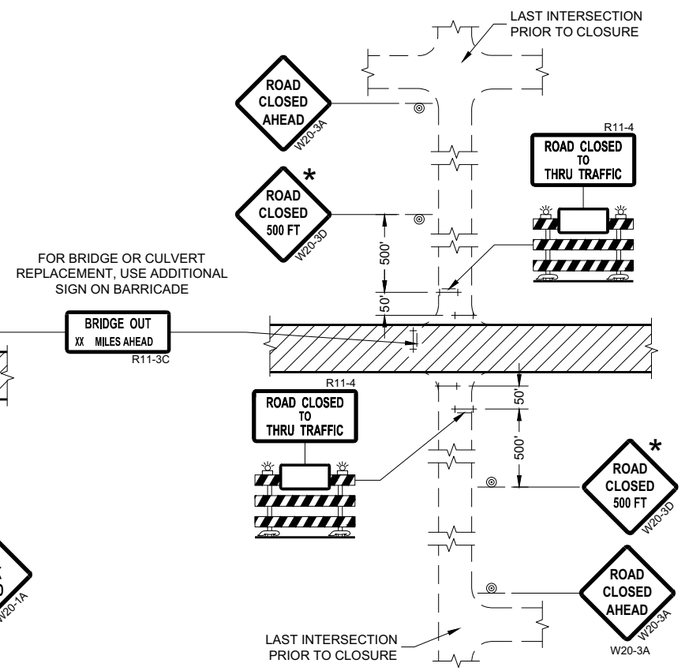
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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SDD 15C03 - 05

6

SDD 15C03 - 05

GENERAL NOTES

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

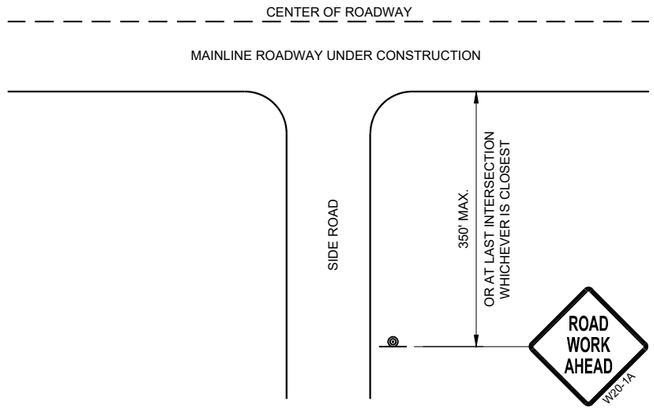
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

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

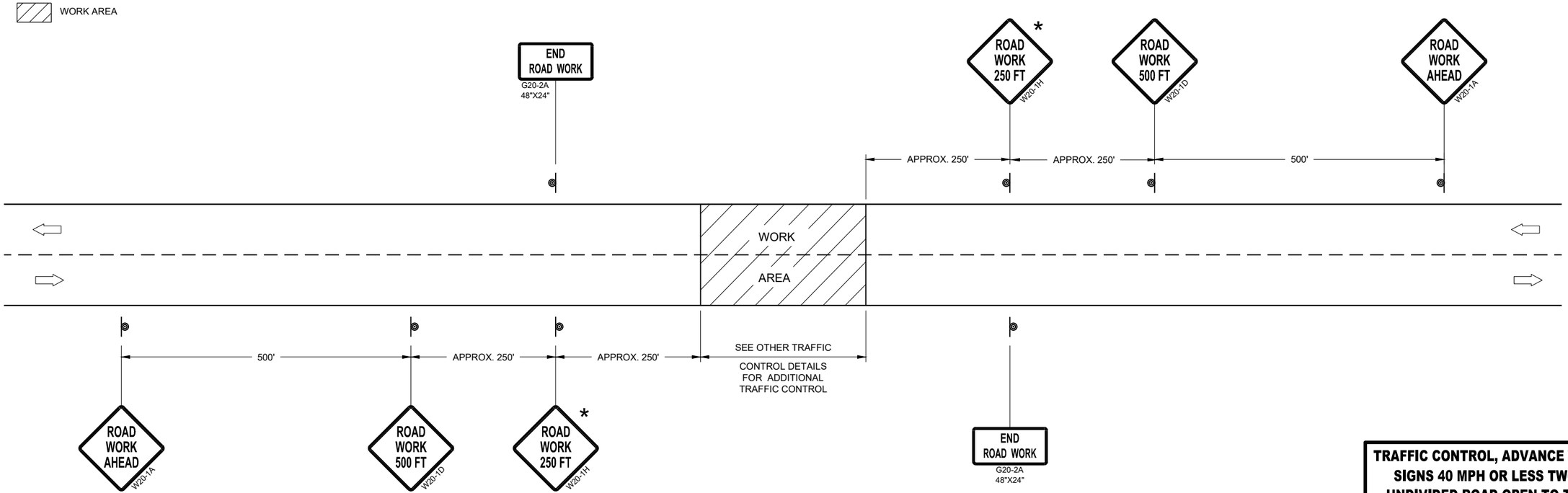
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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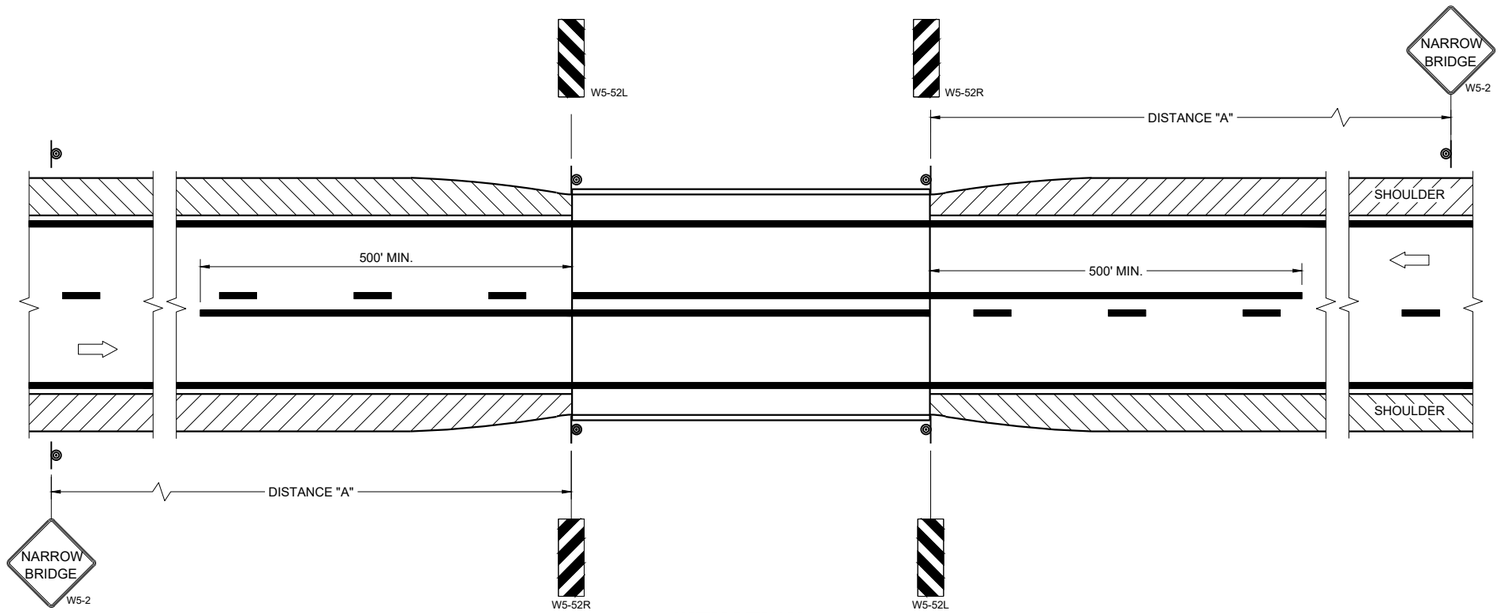
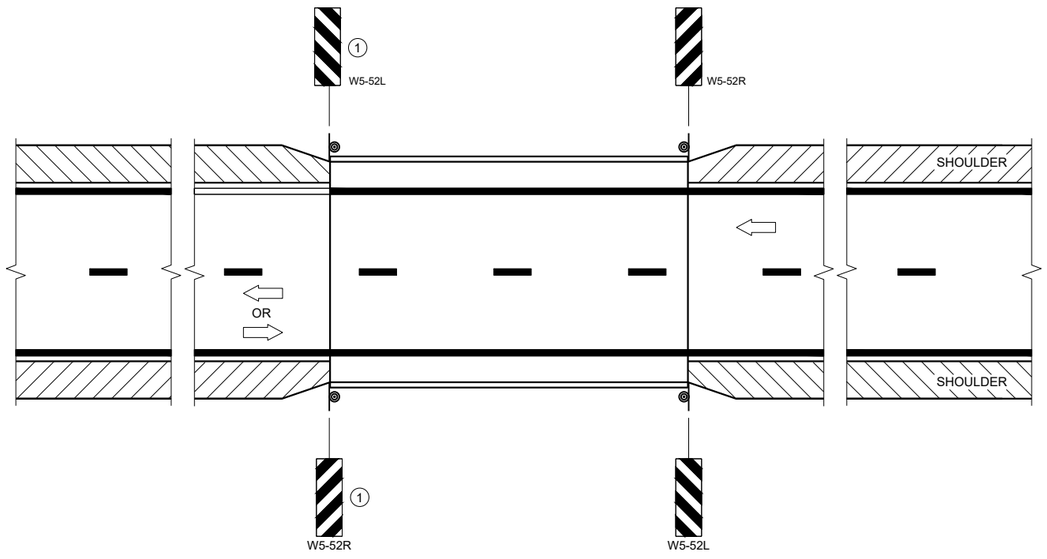
SDD 15C05 - 05



SITUATION 1

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



SITUATION 2

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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

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

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15C06-12

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.

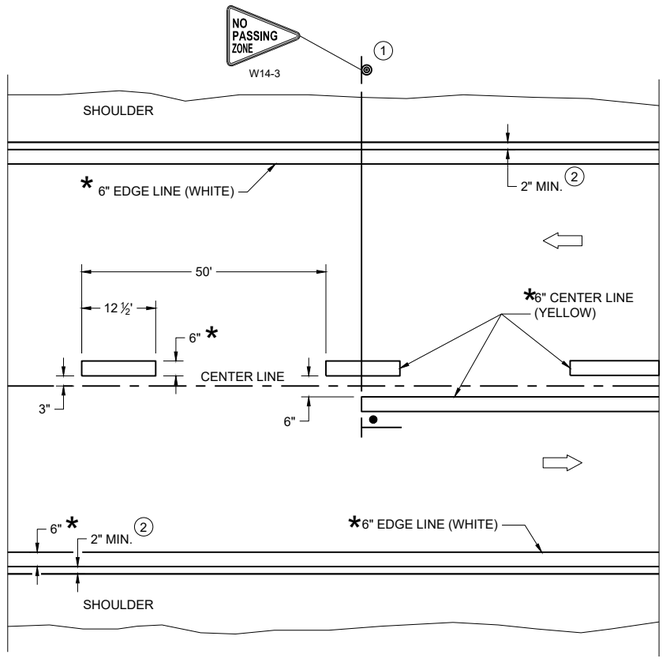
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

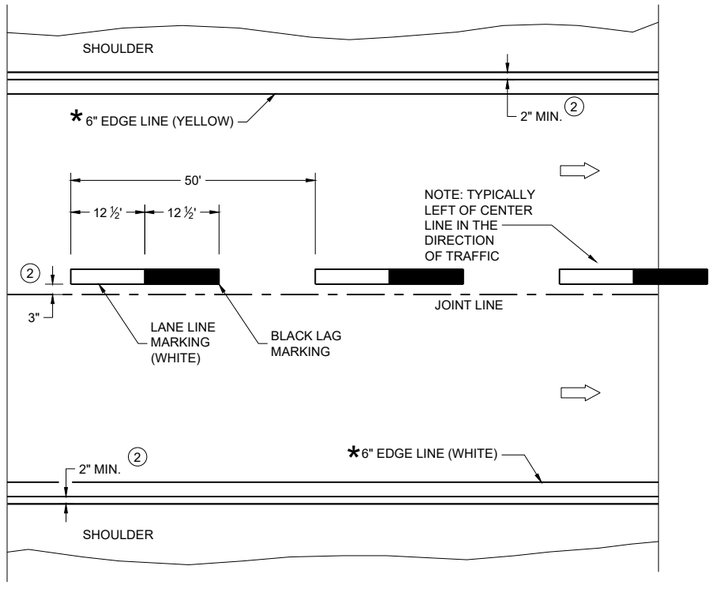
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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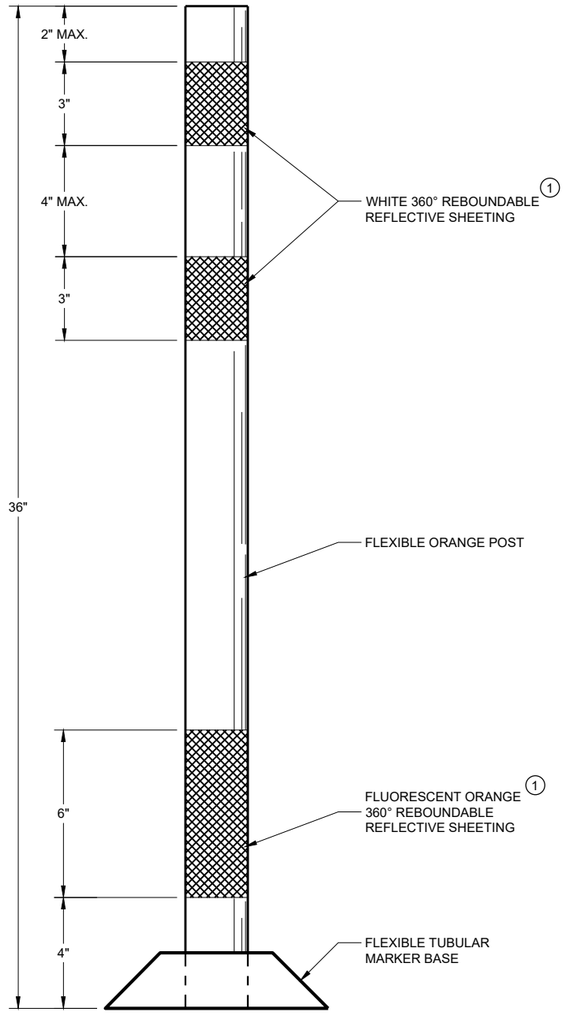
SDD 15C08-23a



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

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

6

SDD 15C11 - 10a

CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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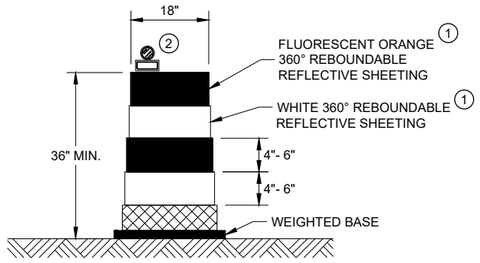
SDD 15C11 - 10a

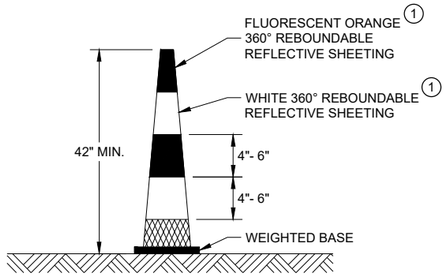
GENERAL NOTES

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



DRUM

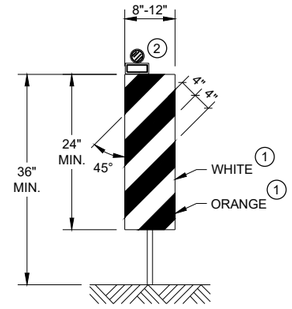
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

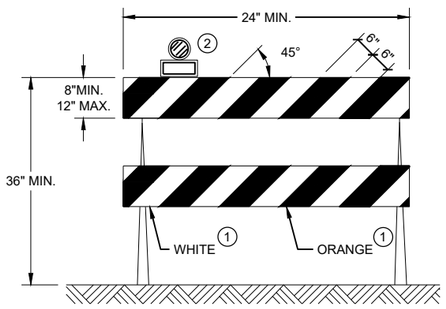
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



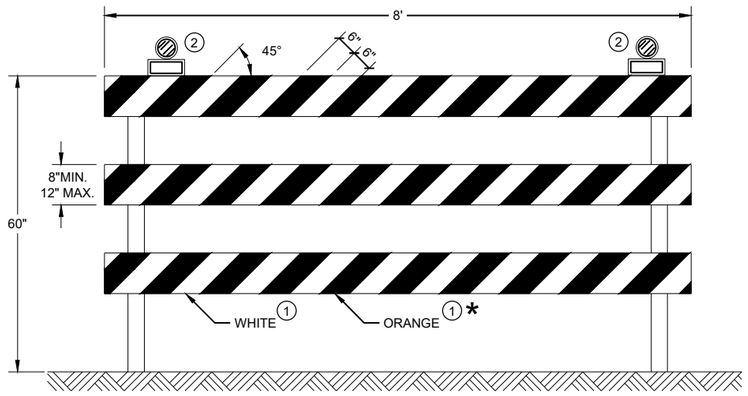
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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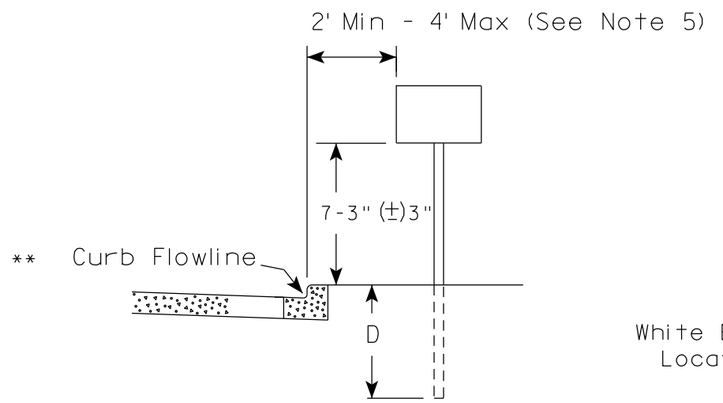
SDD 15C11 - 10b

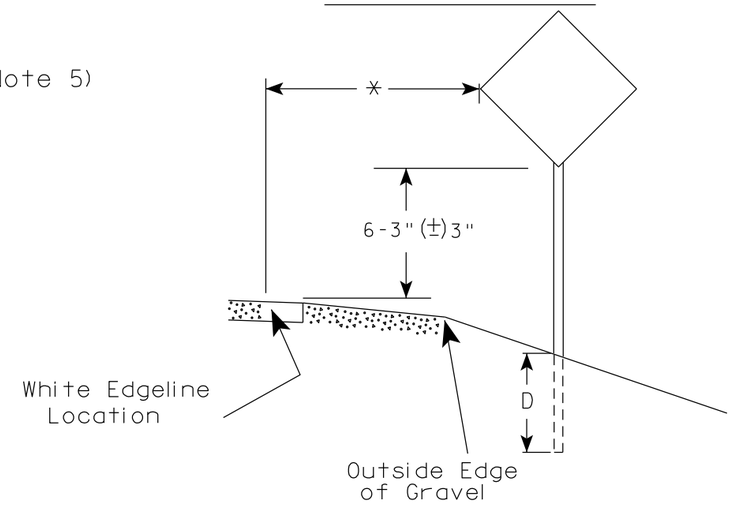
6

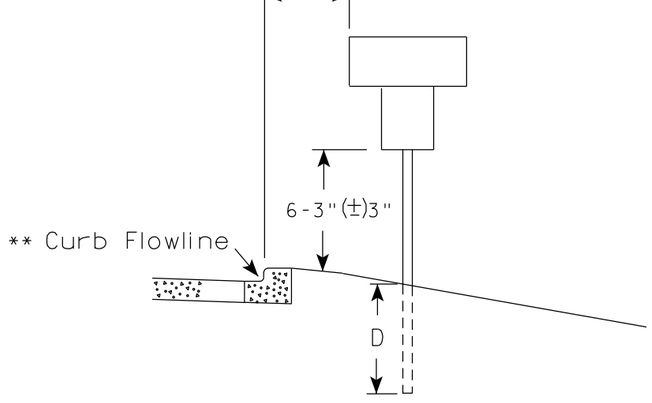
SDD 15C11 - 10b

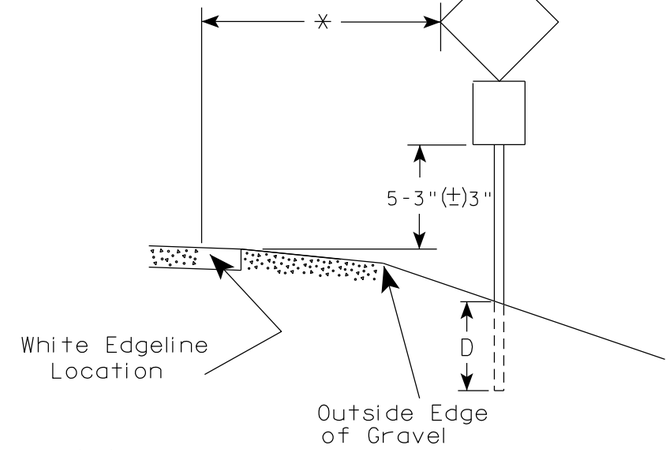
URBAN AREA



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.

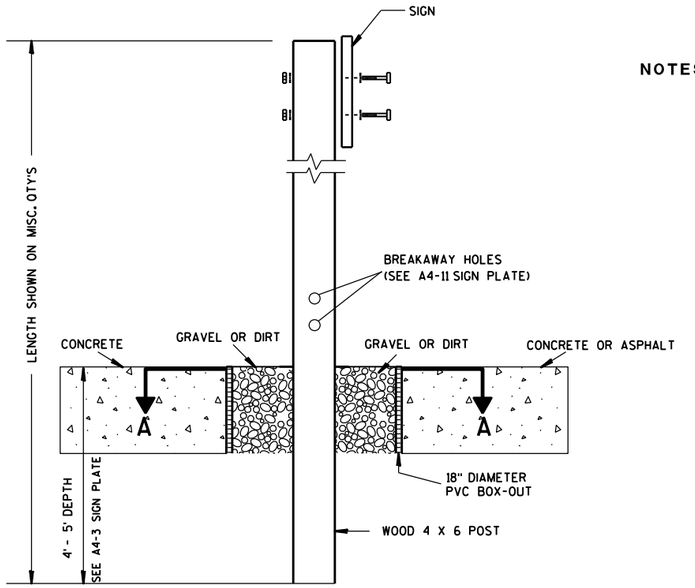
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

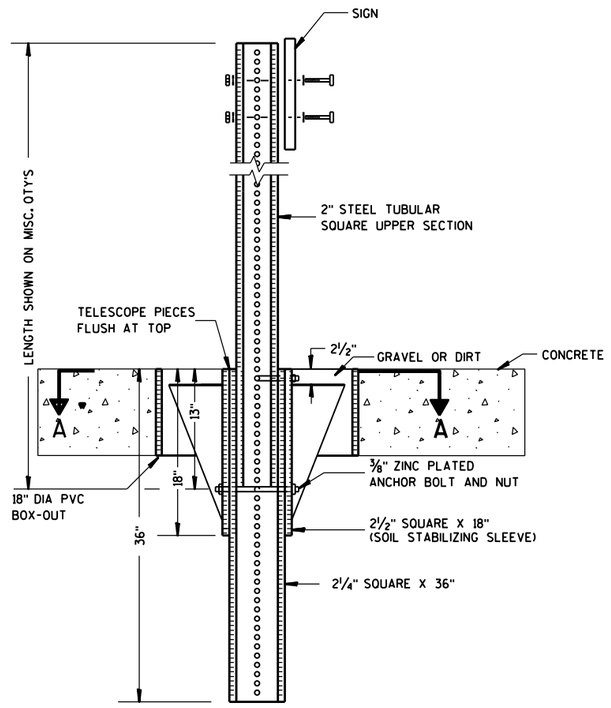
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 51	E



ELEVATION VIEW

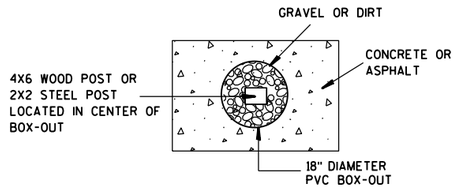
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

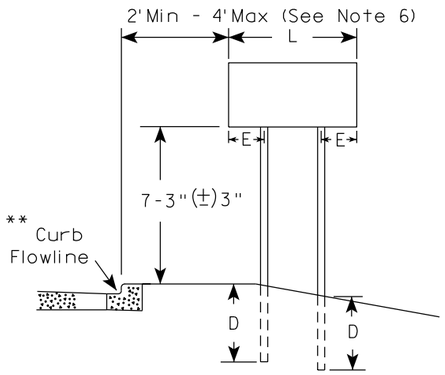
APPROVED Matthew R Rauch
for State Traffic Engineer

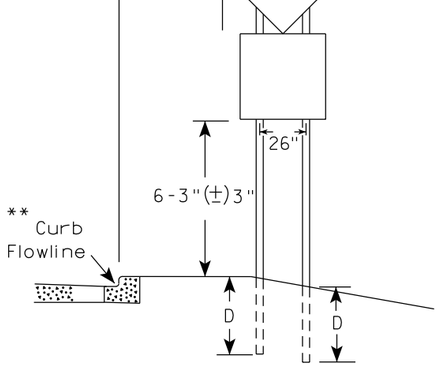
DATE 1/27/14 PLATE NO. A4-3B.1

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

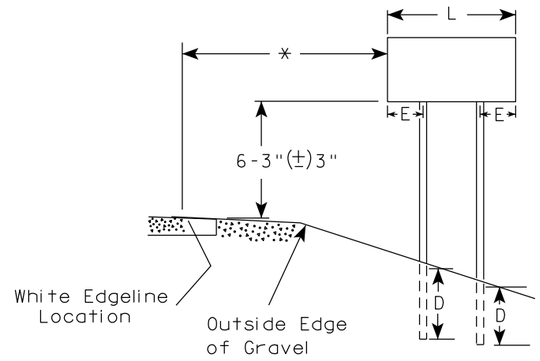
URBAN AREA

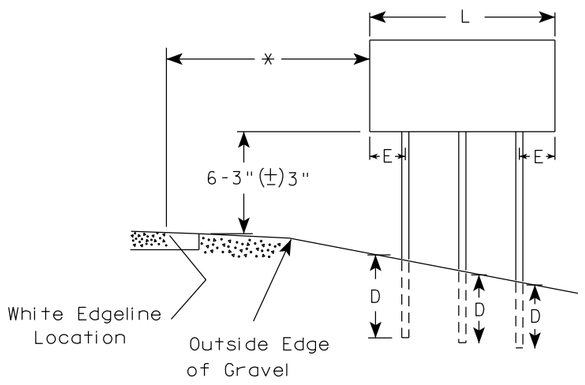


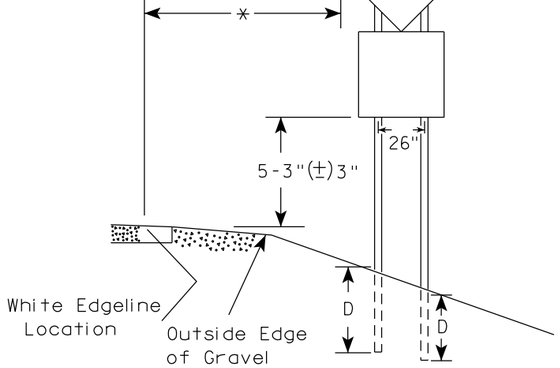


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

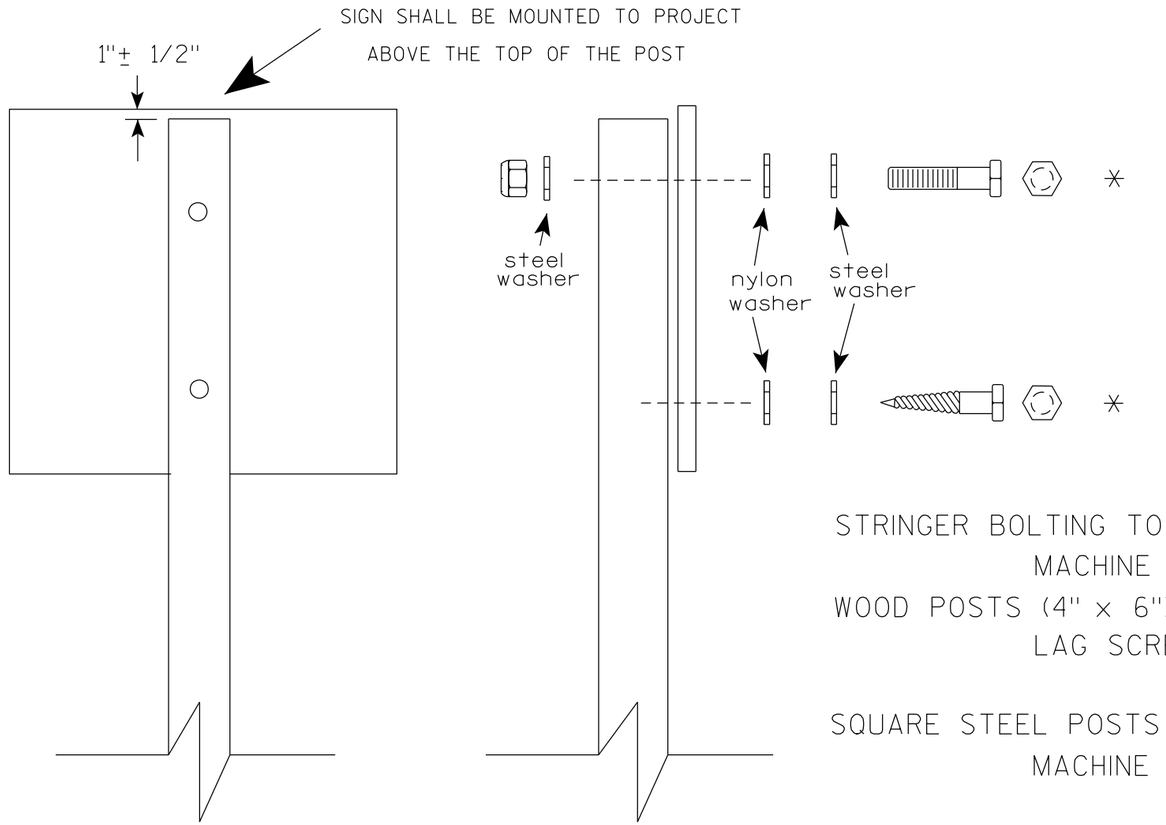
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 53	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

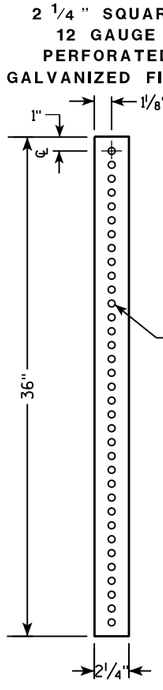
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

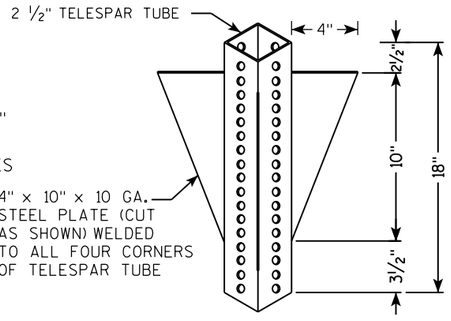
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

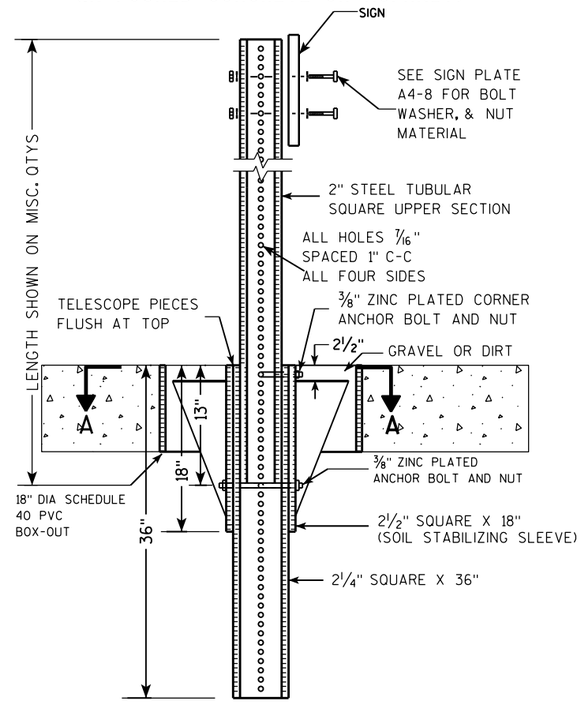
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



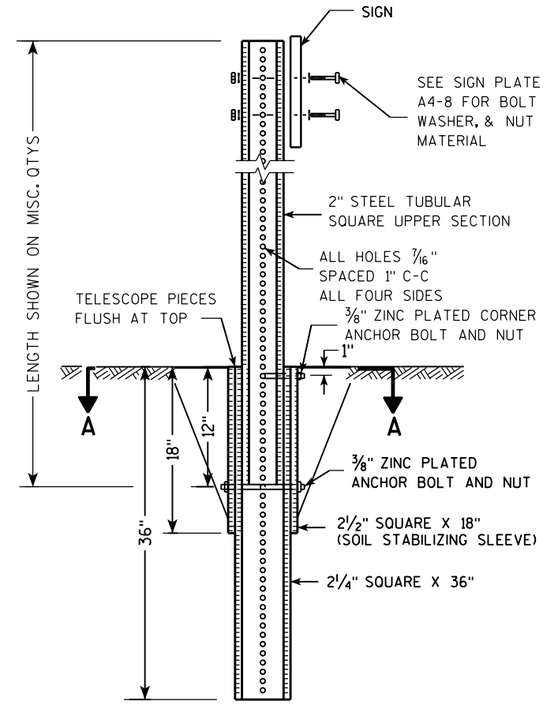
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

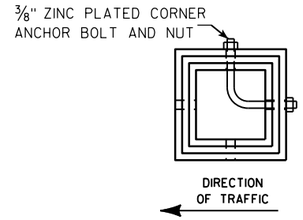


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

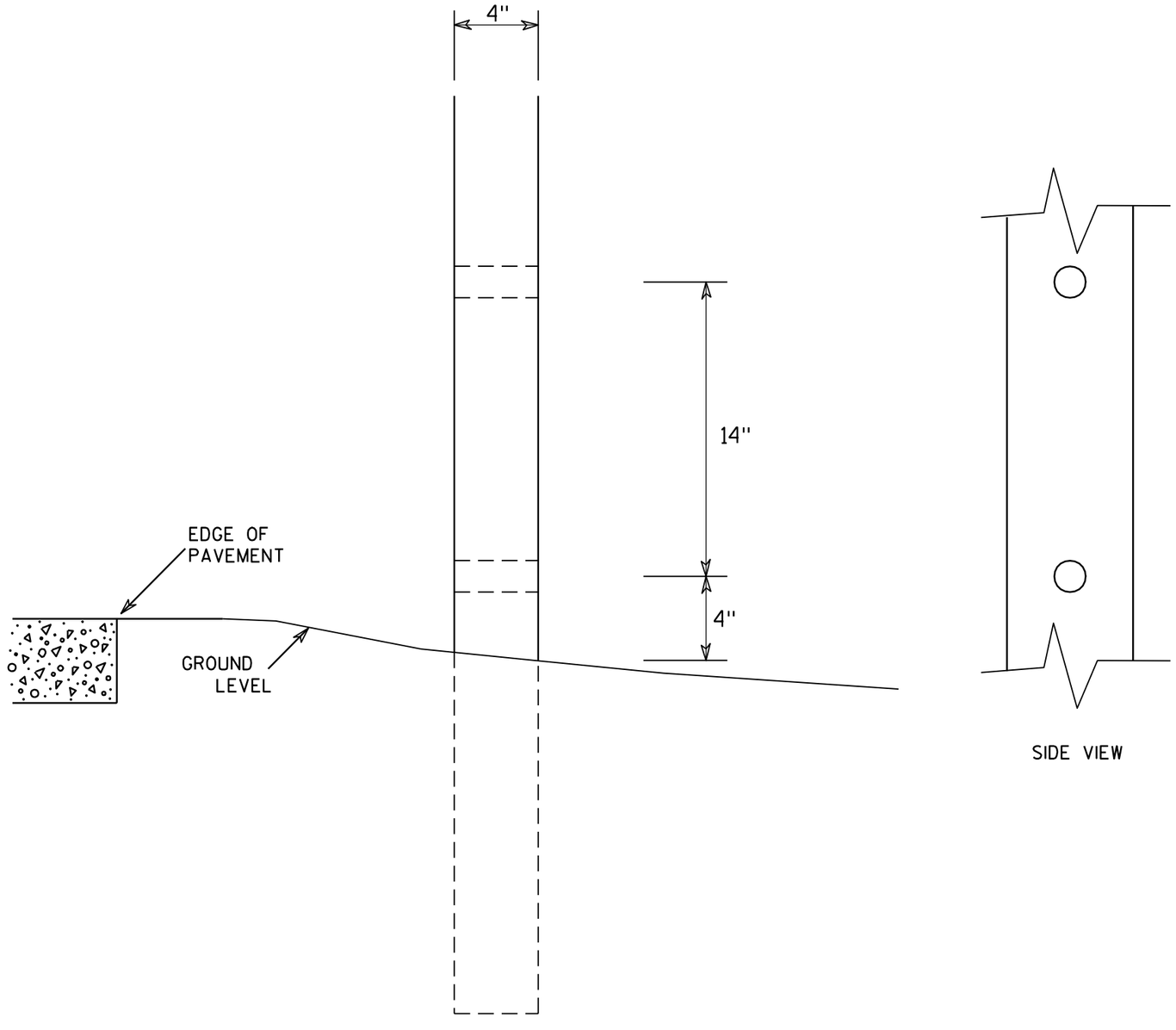
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 55 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

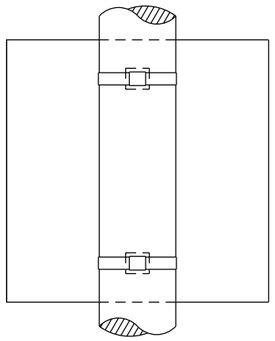
APPROVED Chester J Spang for State Traffic Engineer

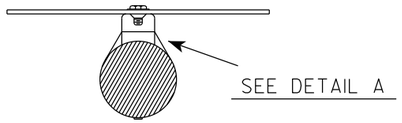
DATE 3/27/97 PLATE NO. A4-11.2

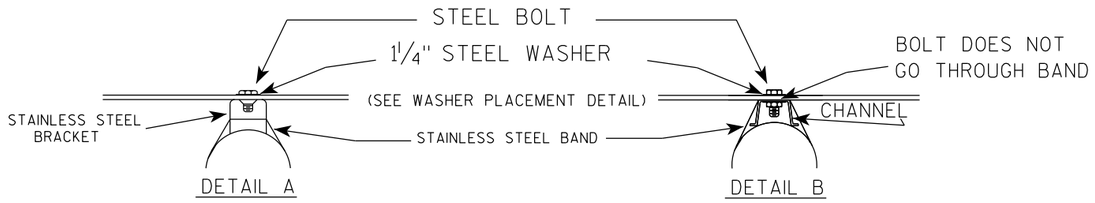
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 56	E

BANDING

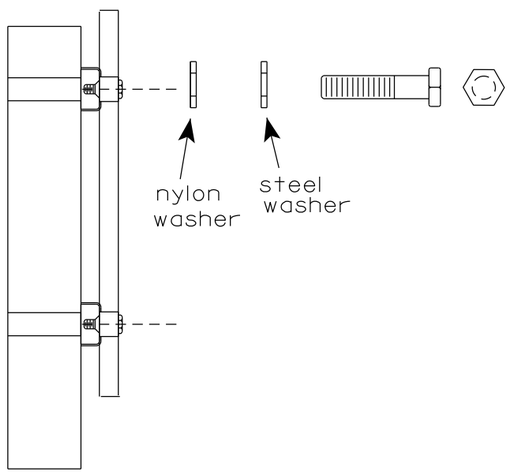
SINGLE SIGN







WASHER PLACEMENT

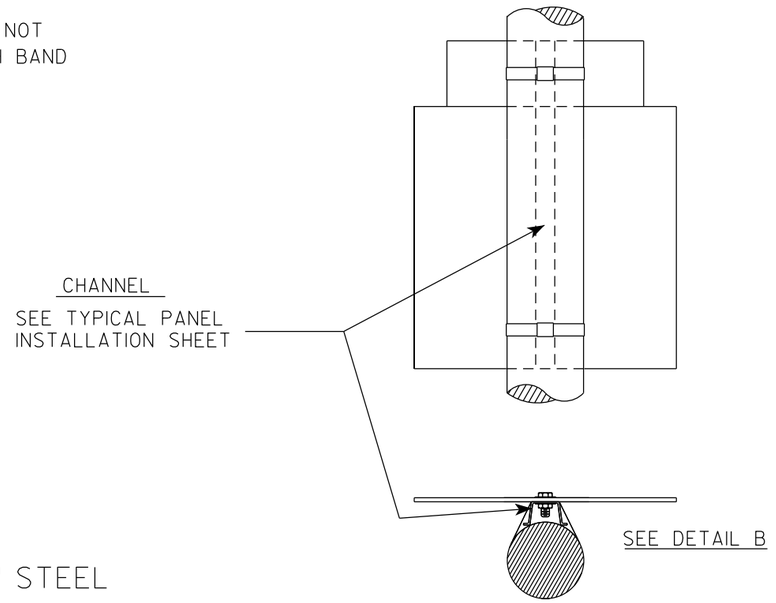


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

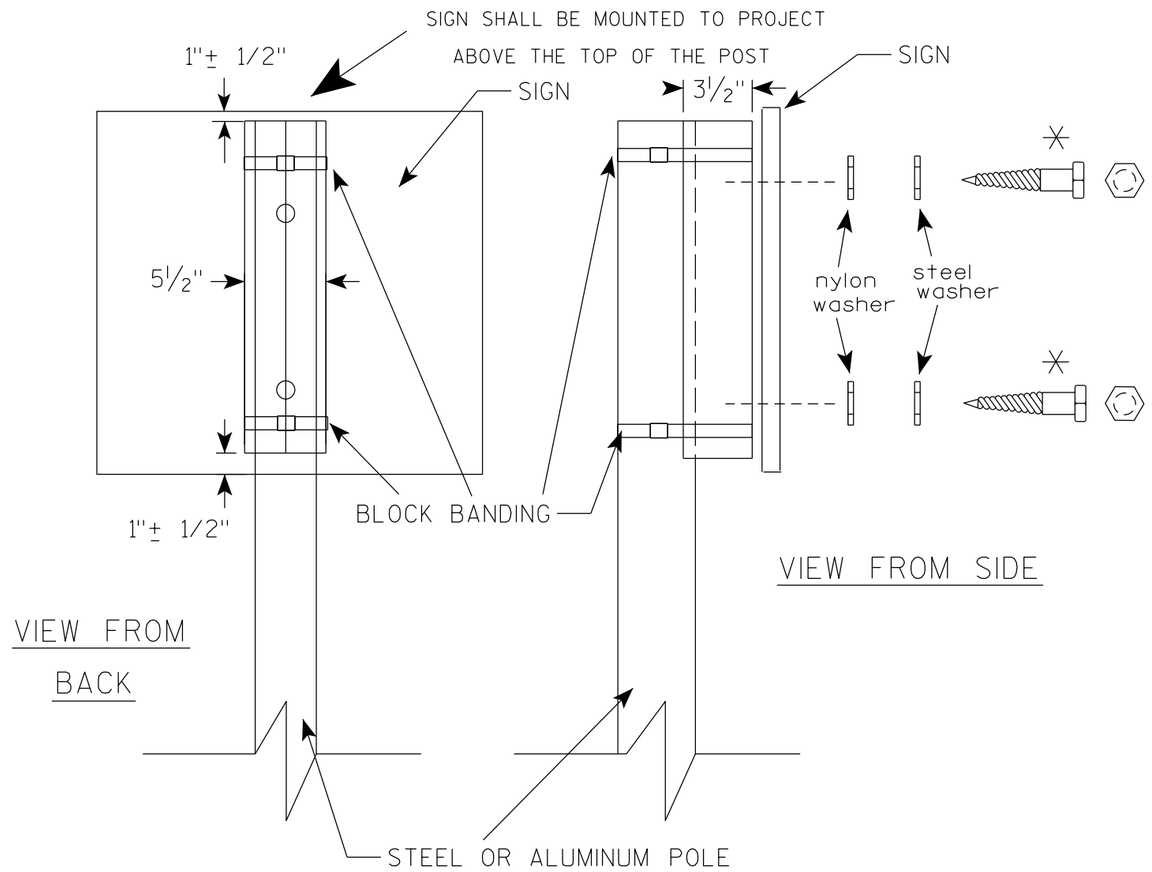
DATE 6/10/19 PLATE NO. A5-9.4

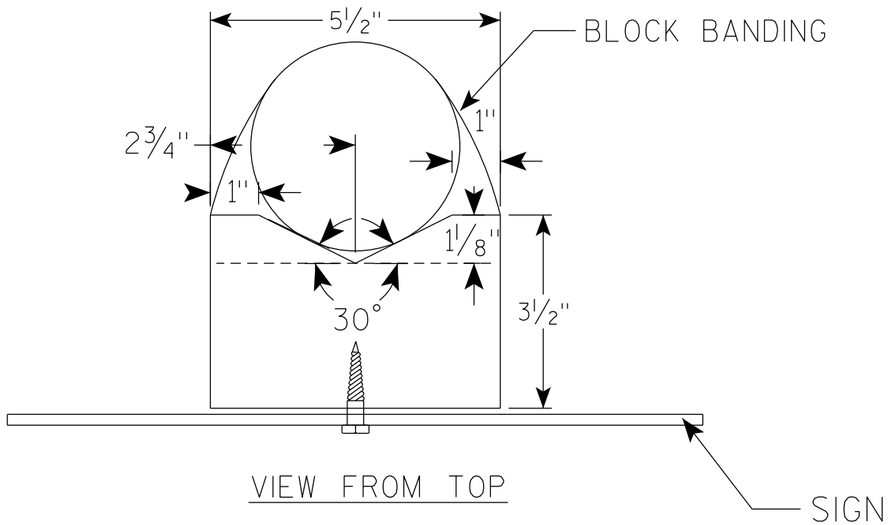
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 57	E

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)

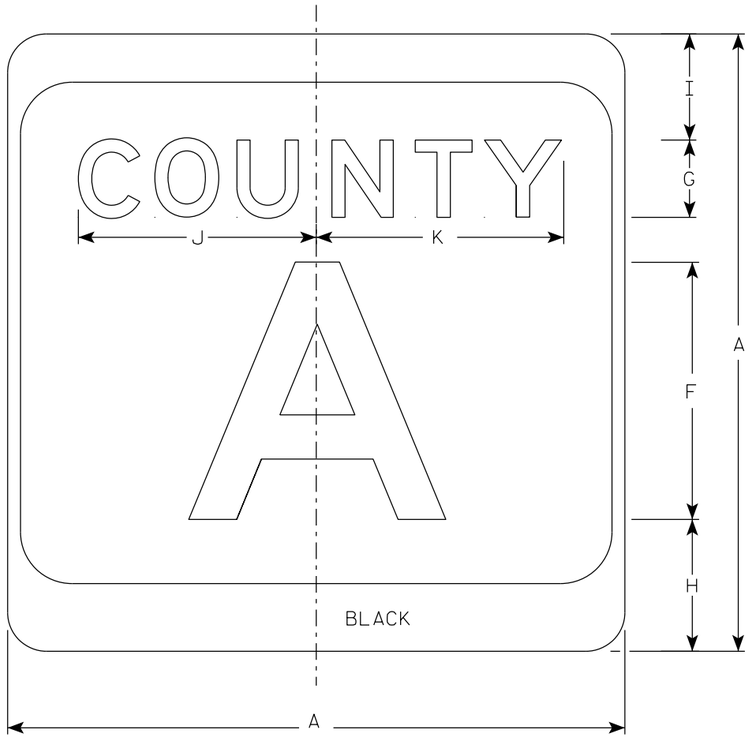
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

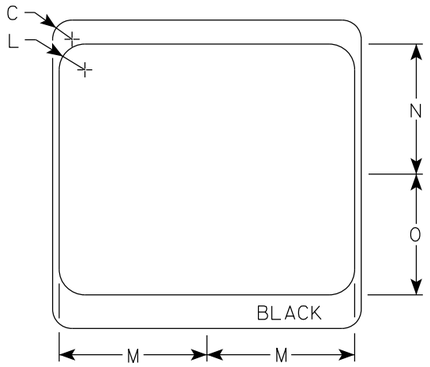
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 58 E

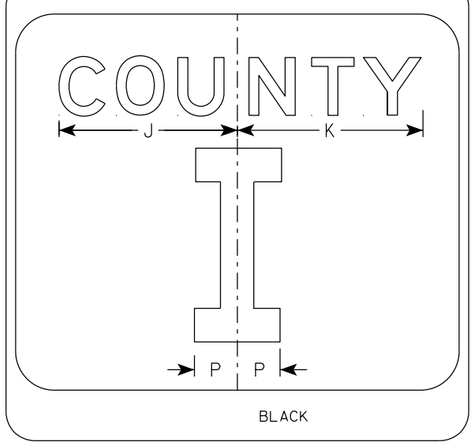


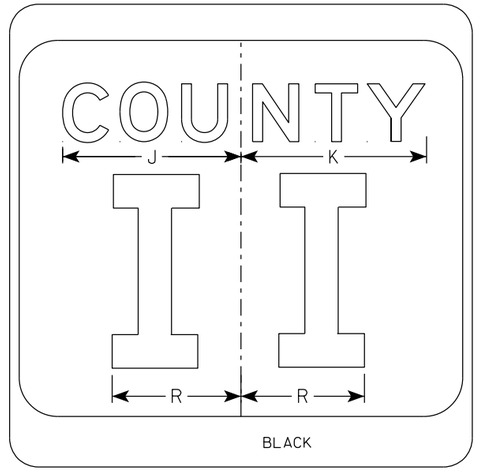
M1-5A



NOTES

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





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

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

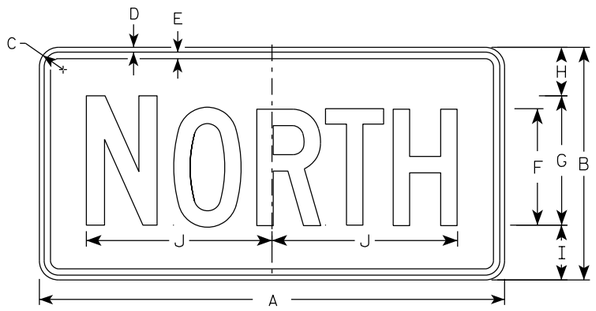
APPROVED Matthew R Rauch
for State Traffic Engineer

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

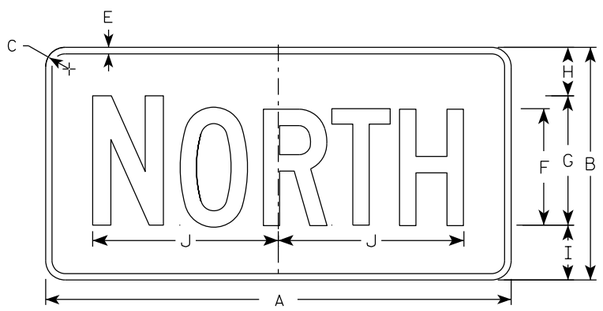
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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

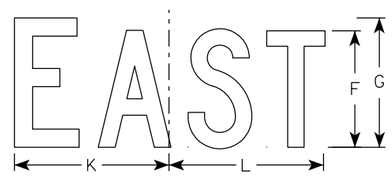
7



M3-1
MM3-1
MP3-1

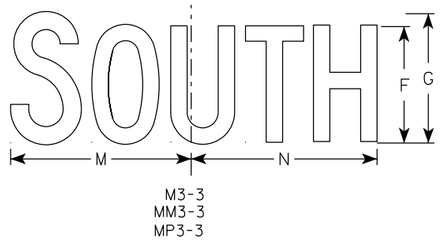


MB3-1
MK3-1
MN3-1

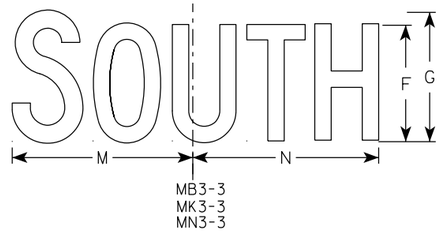


M3-2
MM3-2
MP3-2

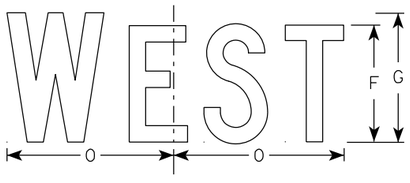
MB3-2
MK3-2
MN3-2



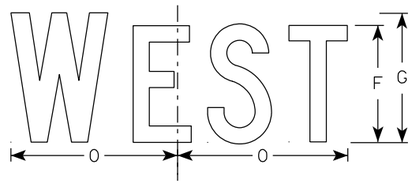
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
2M	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
3	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
4	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
5	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5

STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

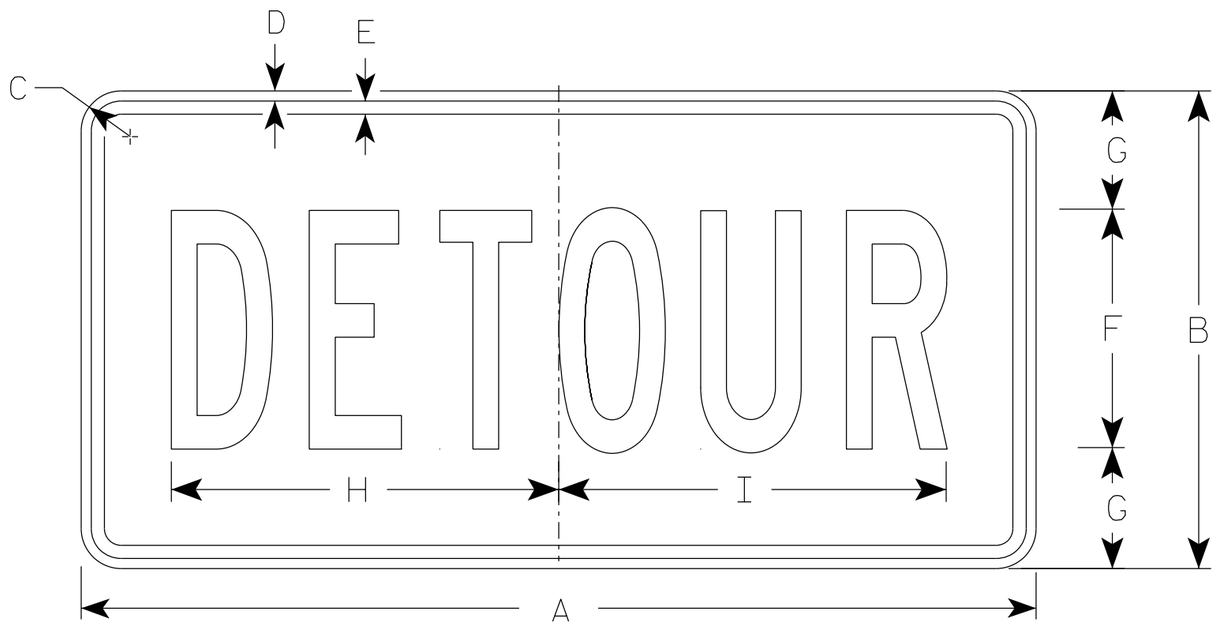
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

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

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



M4-8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
2M	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5

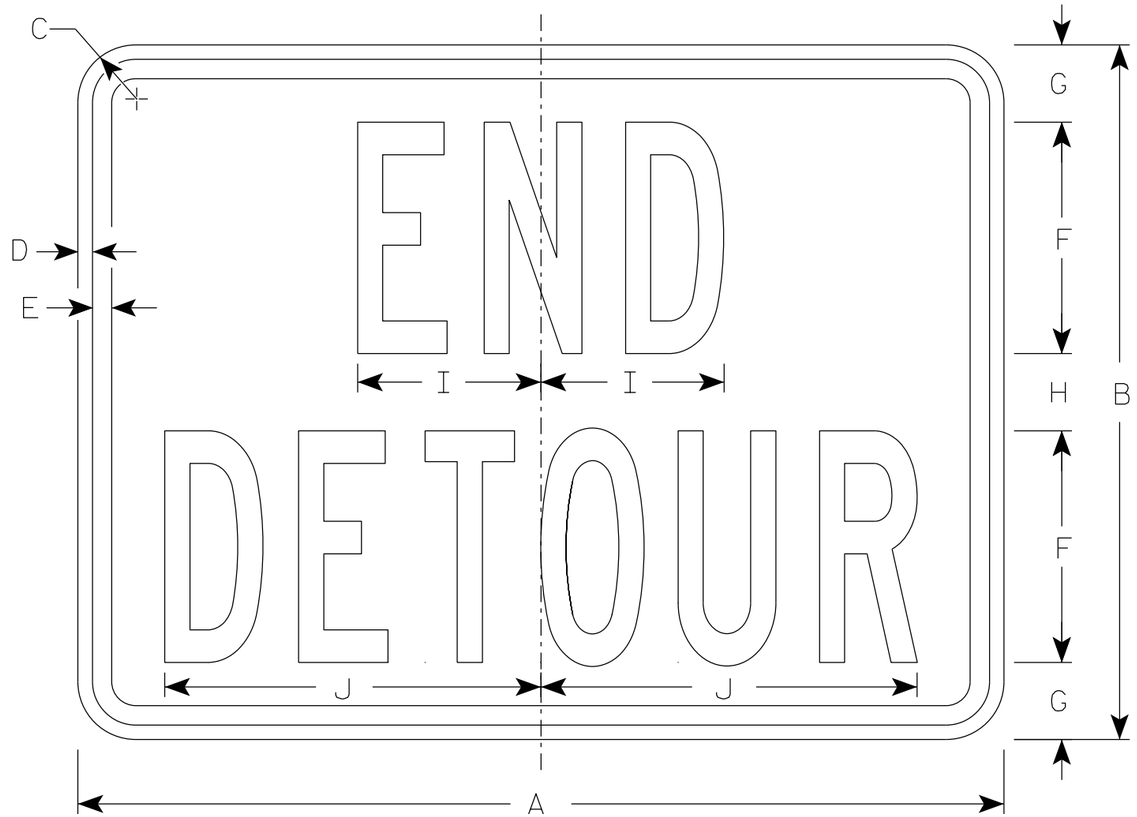
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 61	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
2M	24	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
3	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
4	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
5	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0

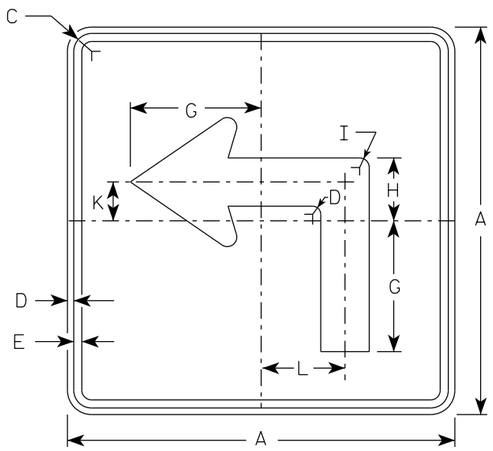
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

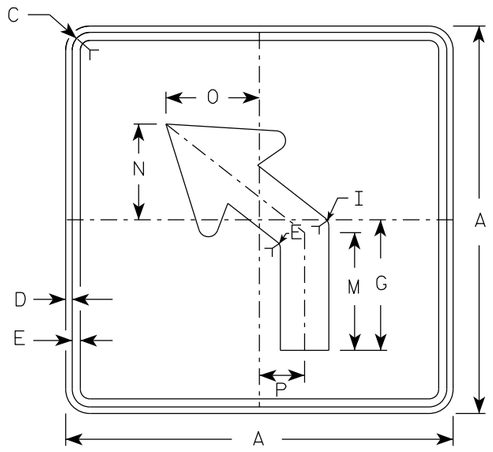
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8A.4

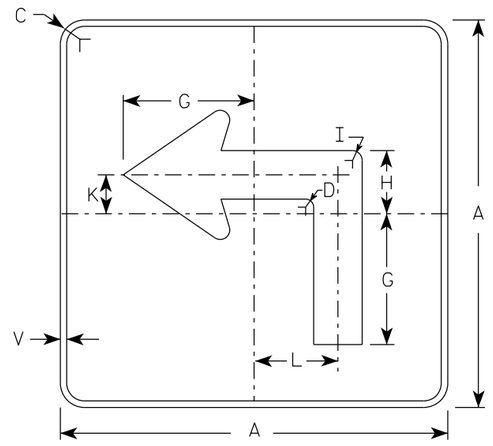
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 62 | E



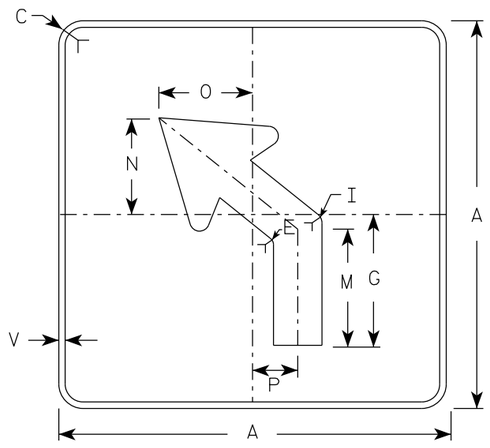
M5-1L
MM5-1L
MO5-1L
MP5-1L



M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L

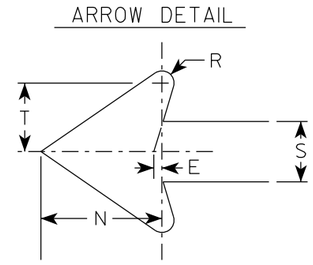


MB5-2L
MK5-2L
MN5-2L
MR5-2L

NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
4	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
5	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25

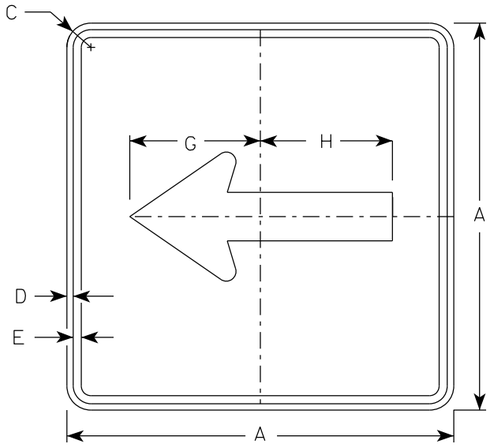
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

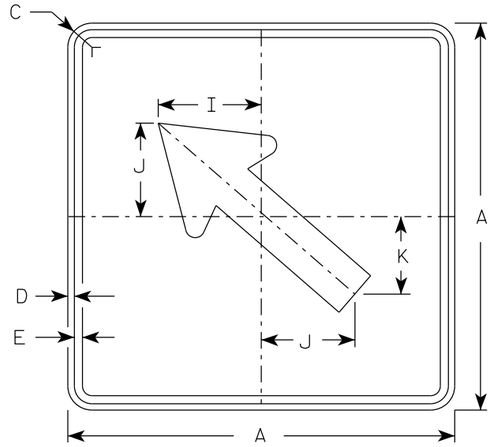
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-1.15

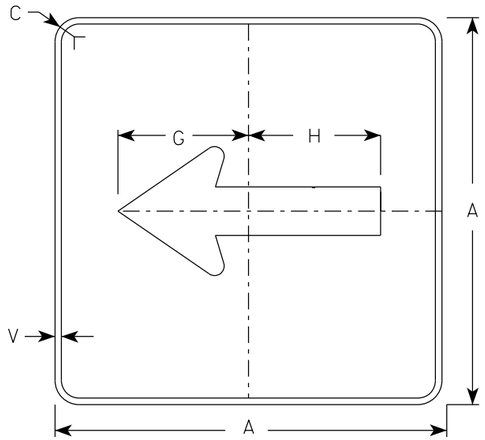
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 63 | E



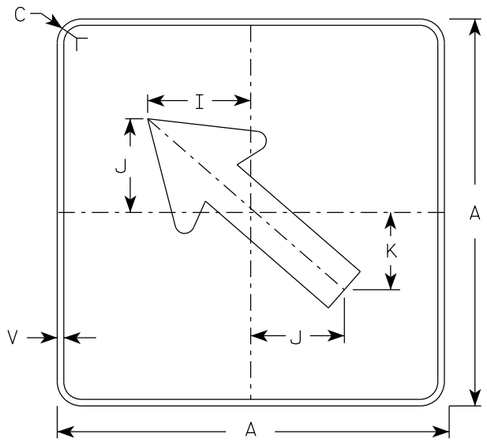
M6-1
MM6-1
MO6-1
MP6-1



M6-2
MM6-2
MO6-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1

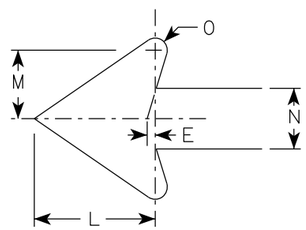


MB6-2
MK6-2
MN6-2
MR6-2

NOTES

1. Signs are Type II - Type H Reflective except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
4	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
5	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25

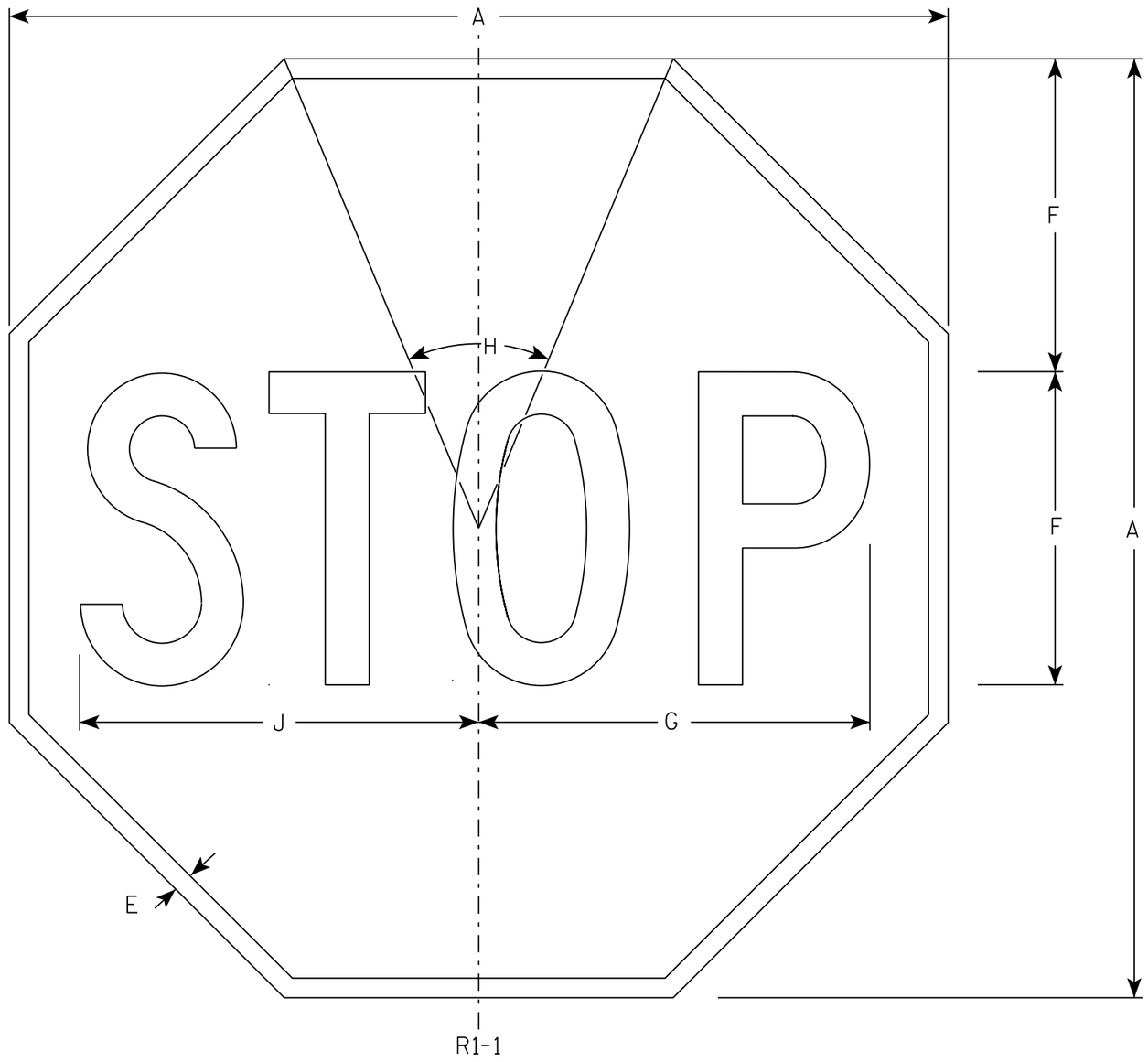
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 64 | E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN

R1-1

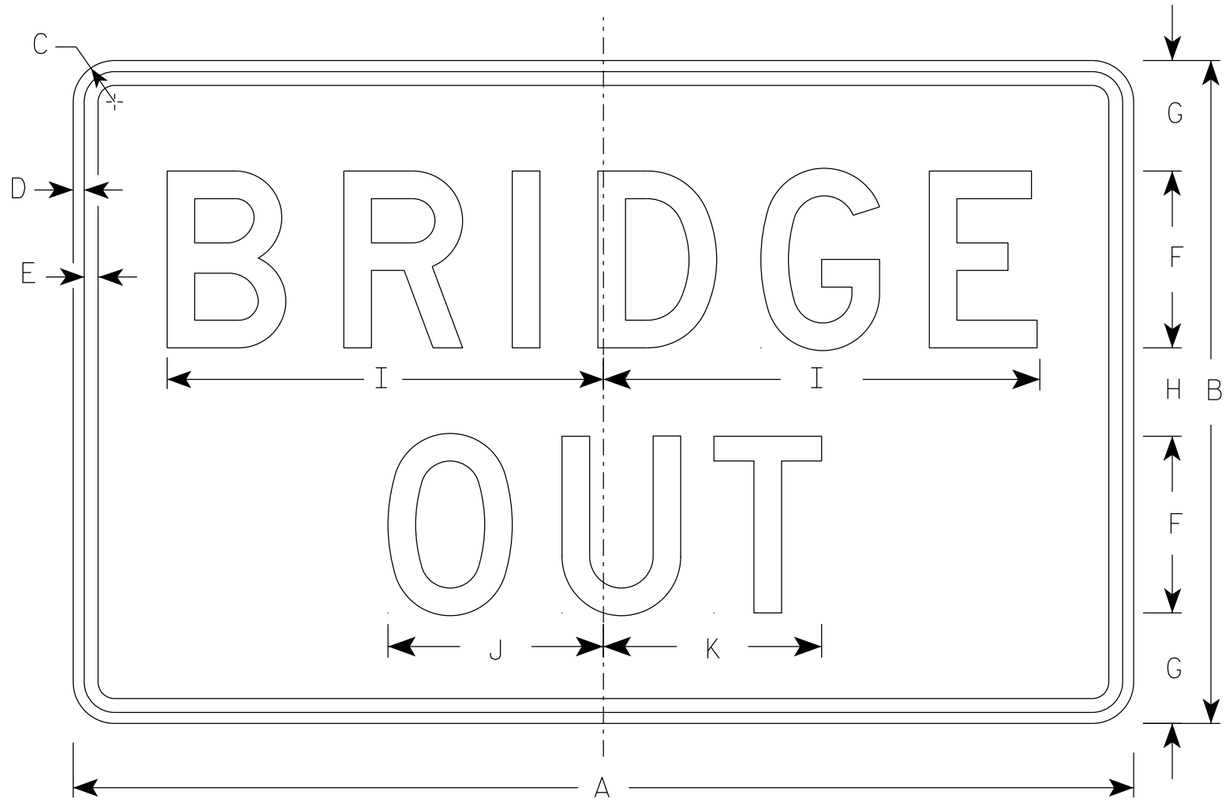
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 65	E



R11-2B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

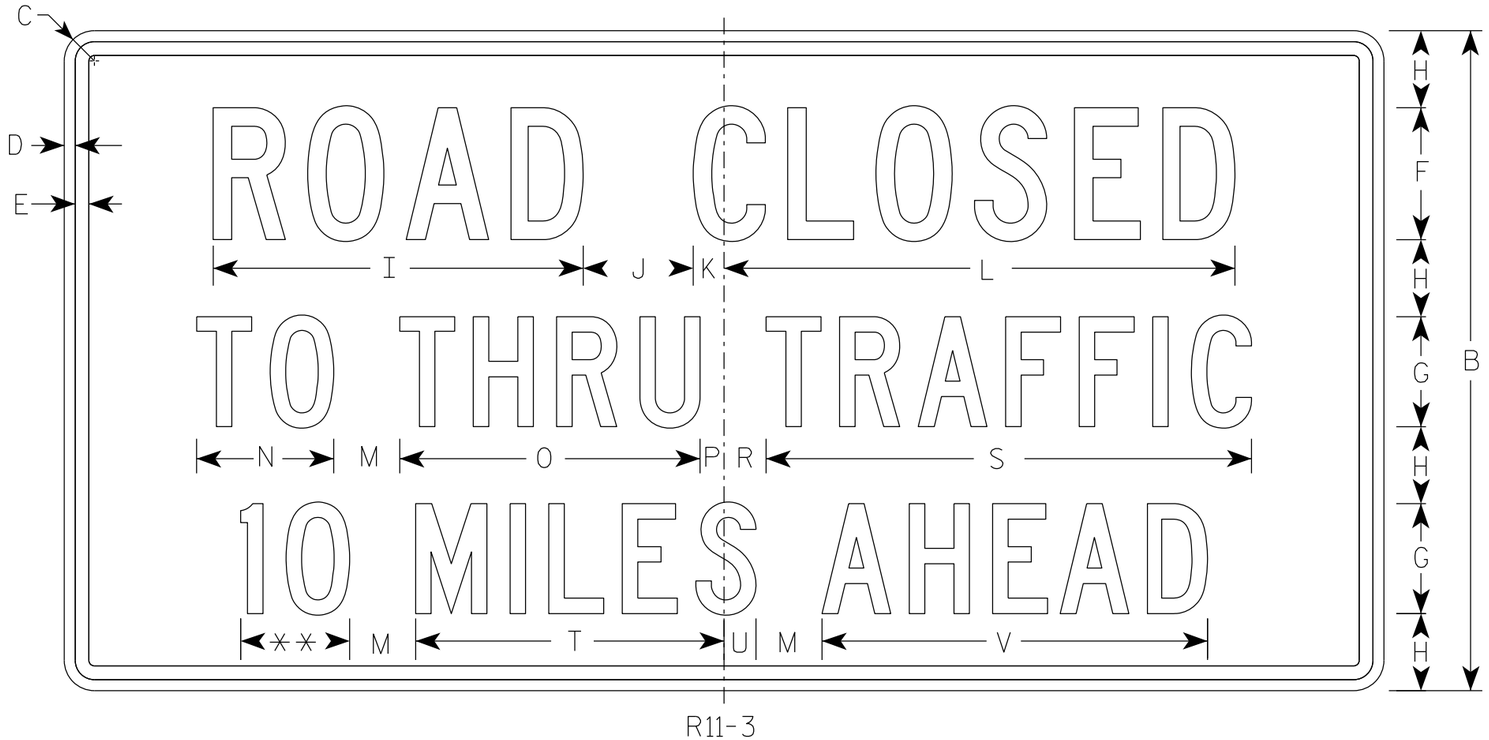
DATE 2/5/24 PLATE NO. R11-2B.3

PROJECT NO:

SHEET NO: 66 E

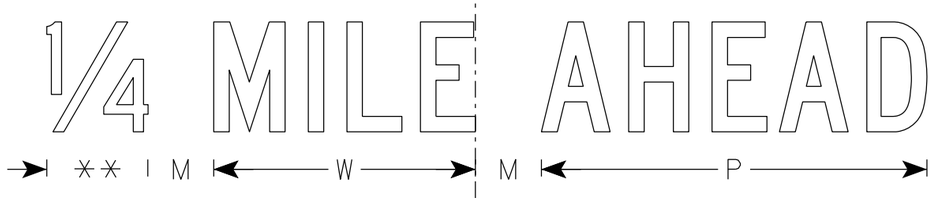
NOTES

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



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

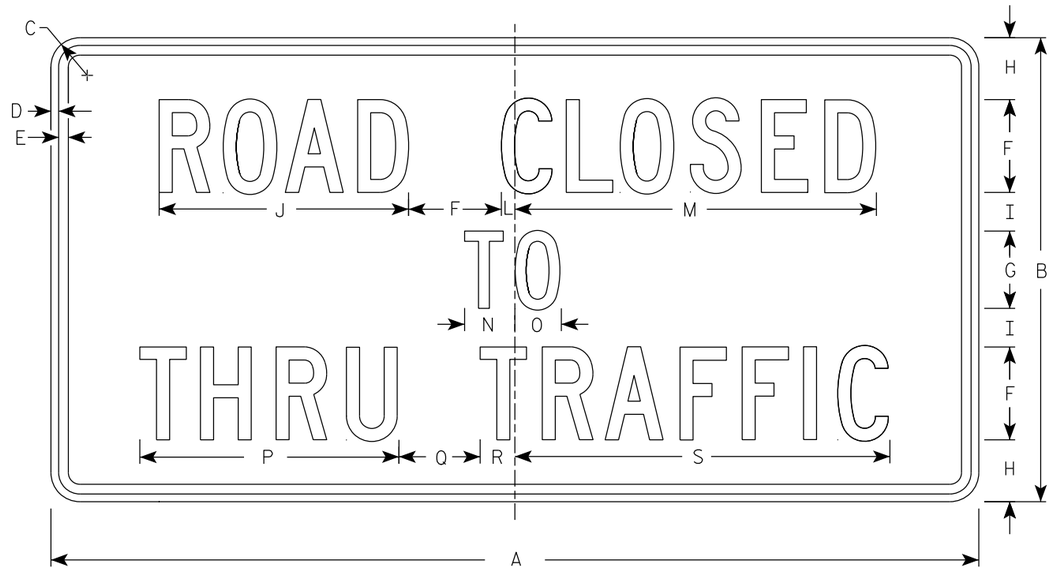
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 67	E



R11-4

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

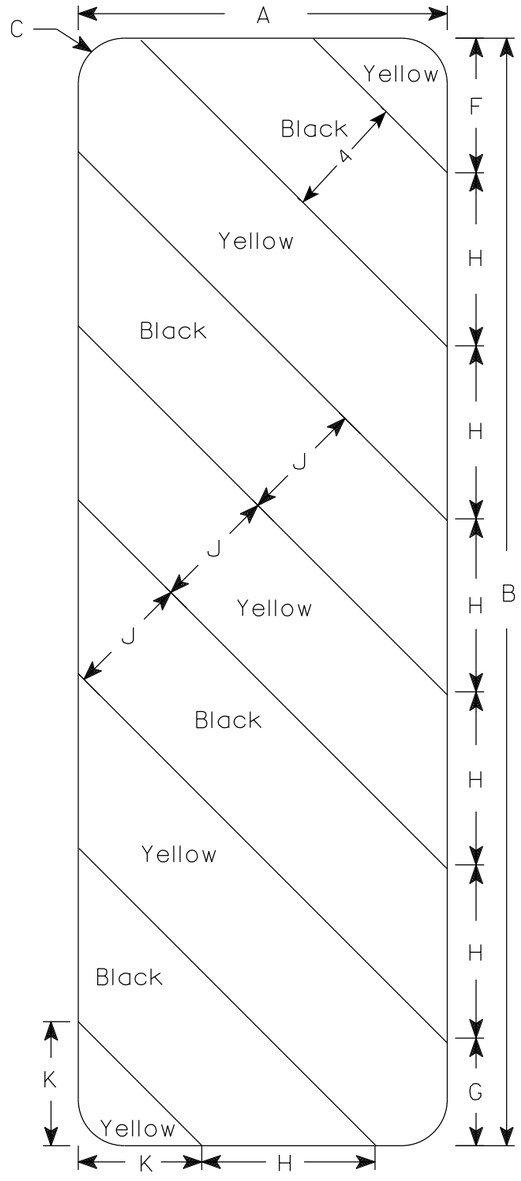
STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

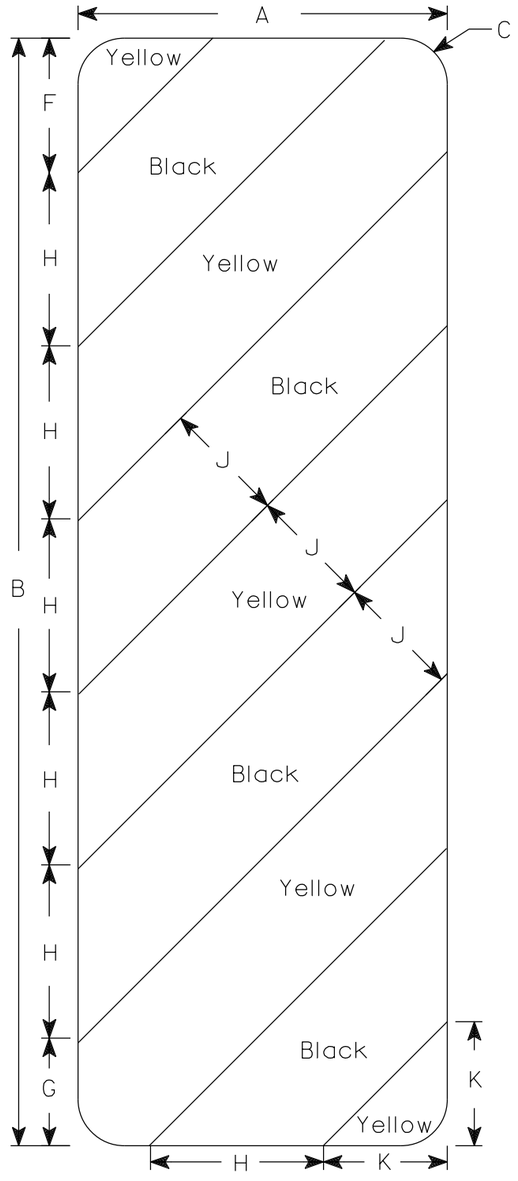
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-4.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 68 | 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

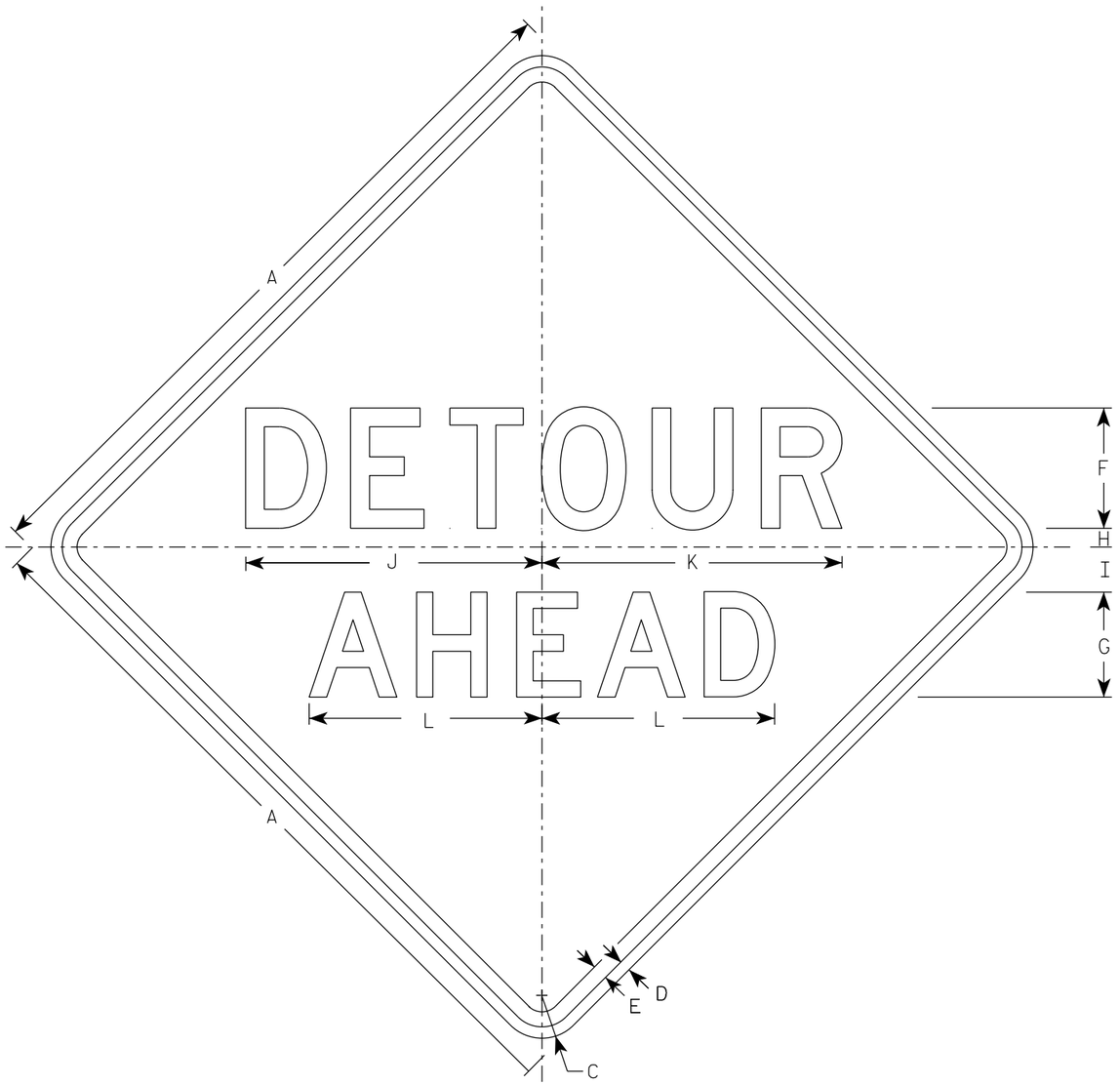
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

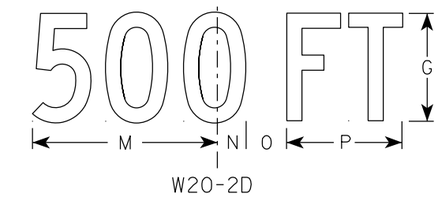
APPROVED Matthew R Rauch
for State Traffic Engineer

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

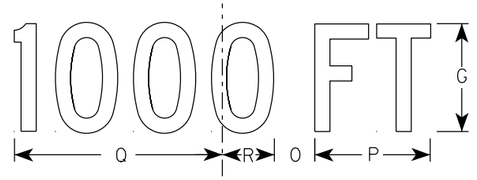
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 69 E



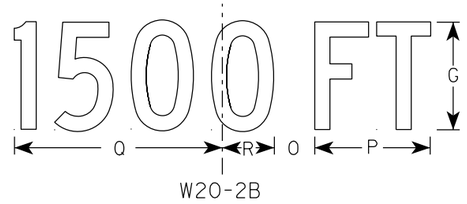
W20-2A



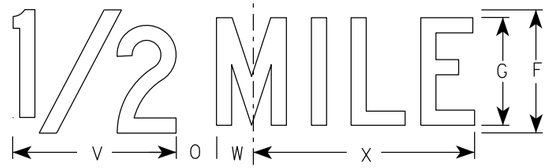
W20-2D



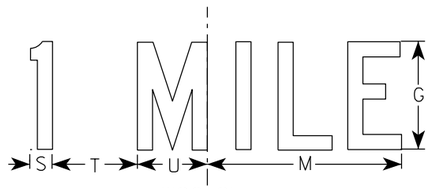
W20-2C



W20-2B



W20-2G



W20-2F

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W202.DGN PLOT DATE : 10-JAN 2024 11:36 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

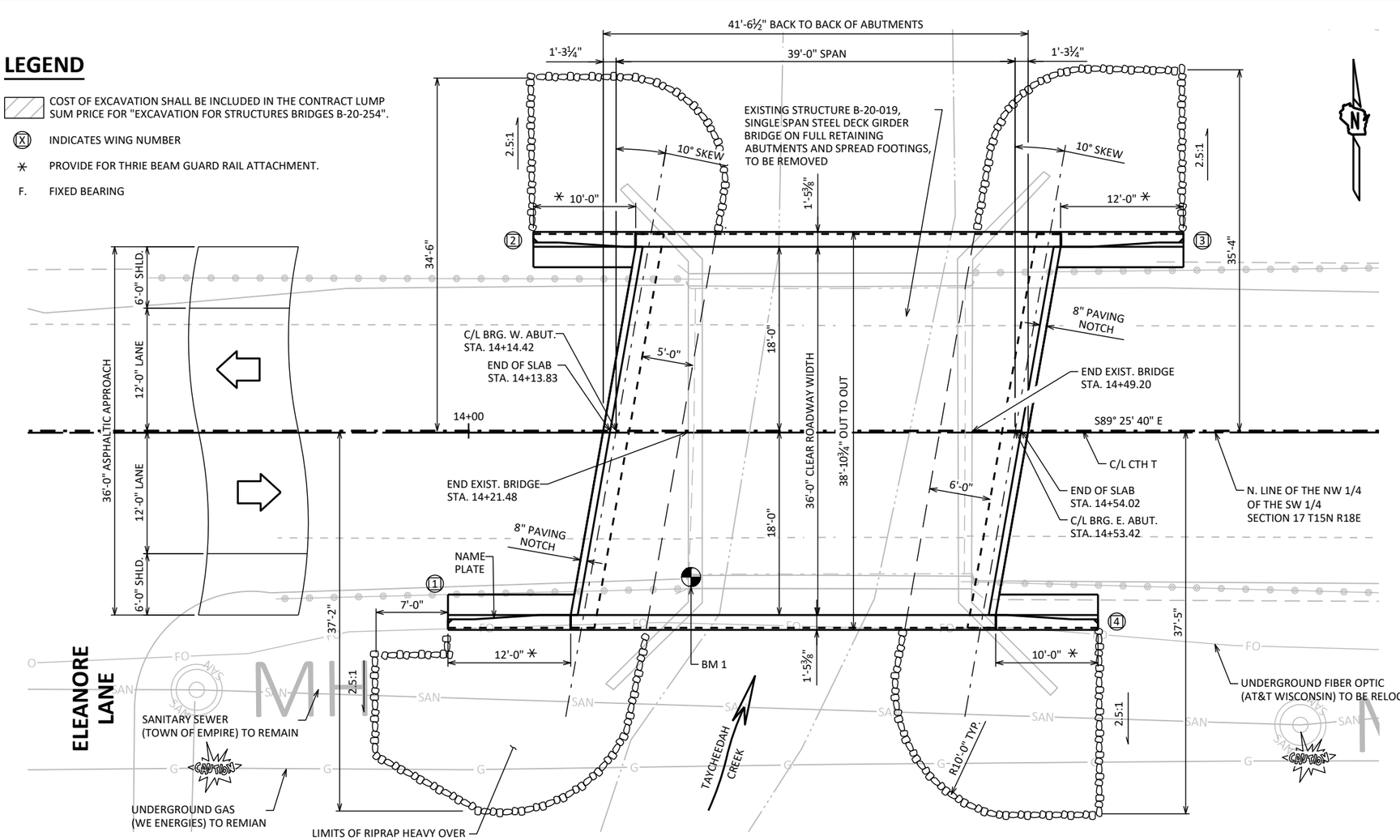
LEGEND

COST OF EXCAVATION SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-20-254".

(X) INDICATES WING NUMBER

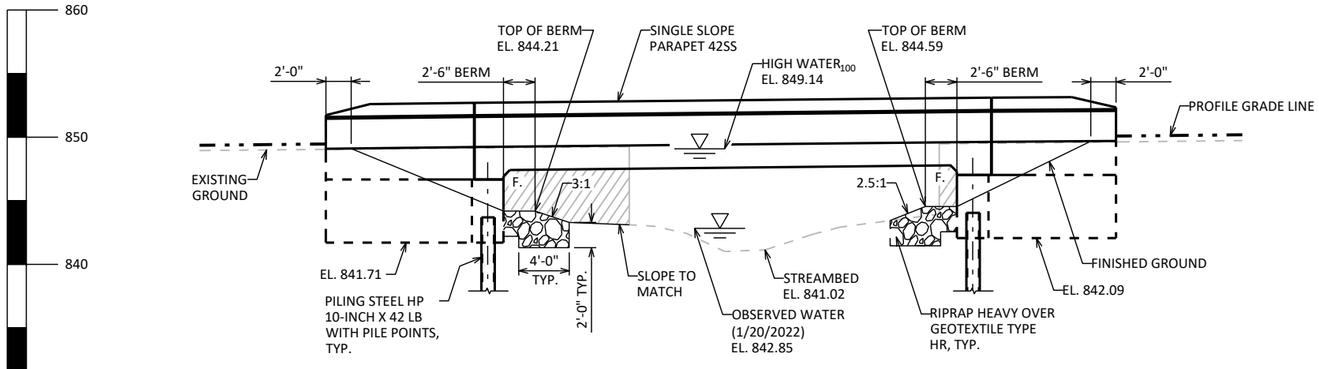
⚹ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT.

F. FIXED BEARING



PLAN

SINGLE SPAN CONCRETE FLAT SLAB BRIDGE



ELEVATION

LOOKING NORTH
(NORMAL TO TAYCHEEDAH CREEK)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.27
OPERATING RATING: RF = 1.65
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

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

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

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10-INCH X 42 LB PILING WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED 20'-0" LONG AT WEST ABUTMENT.
ESTIMATED 20'-0" LONG AT EAST ABUTMENT.

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

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 1,275 C.F.S.
Q_{BRIDGE}= 1,105 C.F.S.
Q_{ROAD}= 170 C.F.S.
V_{100}= 6.55 F.P.S.
HW_{100}= EL. 849.14
WATERWAY AREA = 169 SQ. FT.
DRAINAGE AREA = 8.4 SQ. MI.
SCOUR CRITICAL CODE = 5

ROADWAY OVERTOPPING FREQUENCY:

FREQUENCY= 20 YEARS
Q_{20}= 850 C.F.S
HW_{20}= EL. 848.36

2-YEAR FREQUENCY:

Q_2= 320 C.F.S.
V_2= 3.55 F.P.S.
HW_2= EL. 845.34

TRAFFIC DATA

FEATURE ON: CTH T

ADT = 2,160 (2025)
ADT = 2,800 (2045)
R.D.S. = 35 MPH

LIST OF DRAWINGS:

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
BM 1	14+21.74, 14.29' RT.	CHISELED 'X' IN BRIDGE CURB	849.84
BM 2	18+44.84, 45.88' RT.	RR SPIKE IN POWER POLE	858.51
BM 3	10+29.52, 46.49' RT.	RR SPIKE IN POWER POLE	847.87

WISCONSIN
VINCENT J. DIFRANCES
E-45790
MILWAUKEE
WI
PROFESSIONAL ENGINEER
5/31/2024

STRUCTURE DESIGN CONTACTS:

AARON BONK, P.E. 608-261-0261
VINCENT DIFRANCES, P.E. 262-573-3864

NO.	DATE	REVISION	BY

jt ENGINEERING
REAL. TRUSTED. PROVEN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED SDR 08/19/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STATE PROJECT NUMBER
4840-00-71

STRUCTURE B-20-254

CTH T OVER TAYCHEEDAH CREEK

COUNTY: FOND DU LAC
TOWN: EMPIRE

DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
VJD	CJM	CJM	VJD

GENERAL PLAN & ELEVATION

SHEET 1 OF 11
71

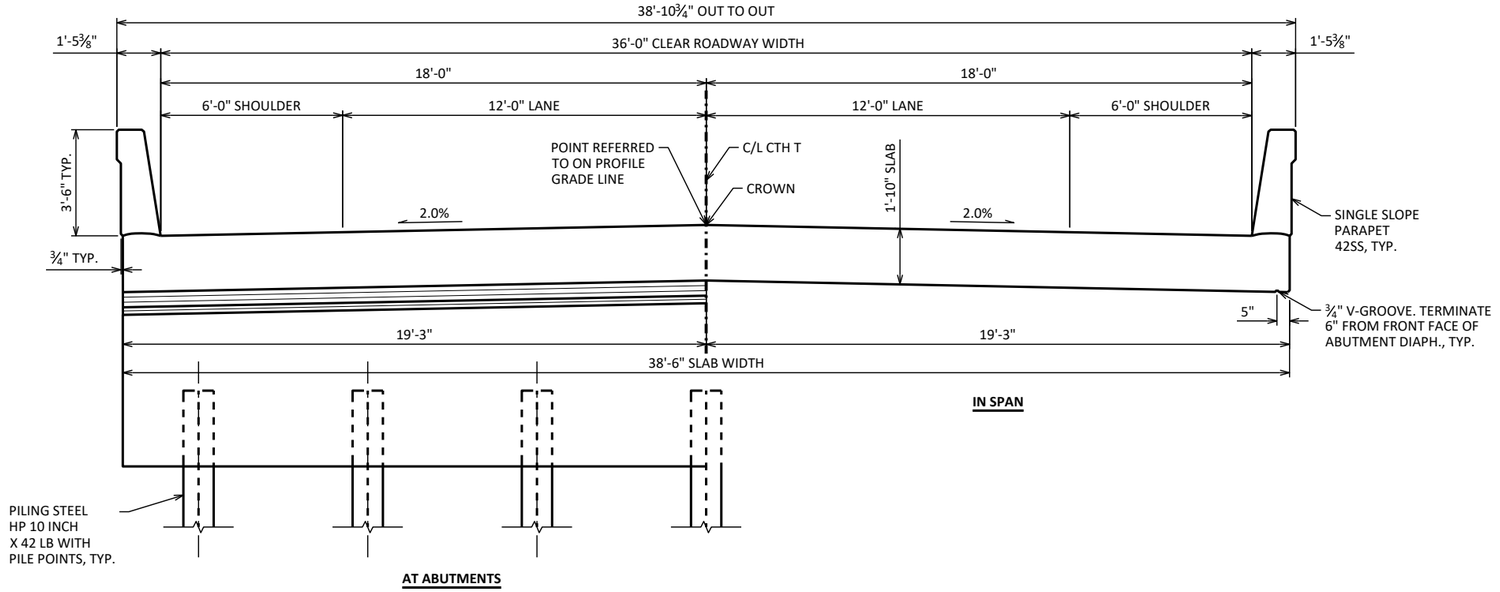
SCALE = N.T.S.

I.D. 4840-00-00

DATE: 05/31/2024

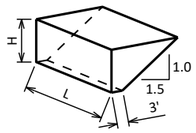
8

8



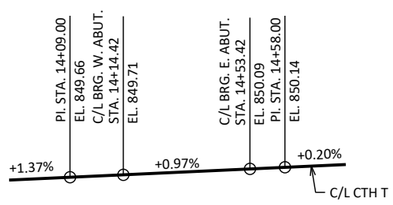
TYPICAL CROSS SECTION THRU BRIDGE

LOOKING EAST
DIMENSIONS SHOWN ARE NORMAL TO REF. LINE



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)

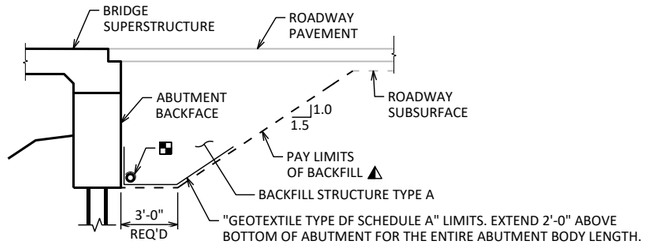


PROFILE GRADE LINE

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-20-019	EACH	-	-	-	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-20-254	EACH	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	105	105	210
502.0100	CONCRETE MASONRY BRIDGES	CY	125	38	38	201
502.3200	PROTECTIVE SURFACE TREATMENT	SY	161	-	-	161
502.3210	PIGMENTED SURFACE SEALER	SY	41	11	11	63
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-	2,270	2,270	4,540
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	24,810	2,220	2,220	29,250
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	7	7	14
550.0500	PILE POINTS	EACH	-	7	7	14
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	-	140	140	280
606.0300	RIPRAP HEAVY	CY	-	75	75	150
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	110	110	220
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	-	2	2	4
645.0111	GEOTEXTILE DF SCHEDULE A	SY	-	55	55	110
645.0120	GEOTEXTILE TYPE HR	SY	-	140	140	280
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				½" & ¾"
	NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER	SIZE				1"
	NAME PLATE	EACH				1

ALL B-20-254 BID ITEMS ARE CATEGORY 0020



TYPICAL SECTION THRU ABUTMENT

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

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

STATE PROJECT NUMBER
4840-00-71

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-20-254" SHALL BE THE EXISTING GROUNDLINE.

THE EXISTING STRUCTURE, B-20-019, WAS ORIGINALLY CONSTRUCTED IN 1955 AND IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE SUPPORTED ON FULL RETAINING ABUTMENTS AND SPREAD FOOTINGS. THE STRUCTURE HAS AN OVERALL WIDTH OF 30'-10" AND AN OVERALL LENGTH OF 27'-9". THE EXISTING STRUCTURE B-20-019 IS TO BE REMOVED.

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

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

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENTS.

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

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

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

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.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-254

DRAWN BY VJD/CJM | PLANS CK'D VJD

CROSS SECTION & QUANTITIES

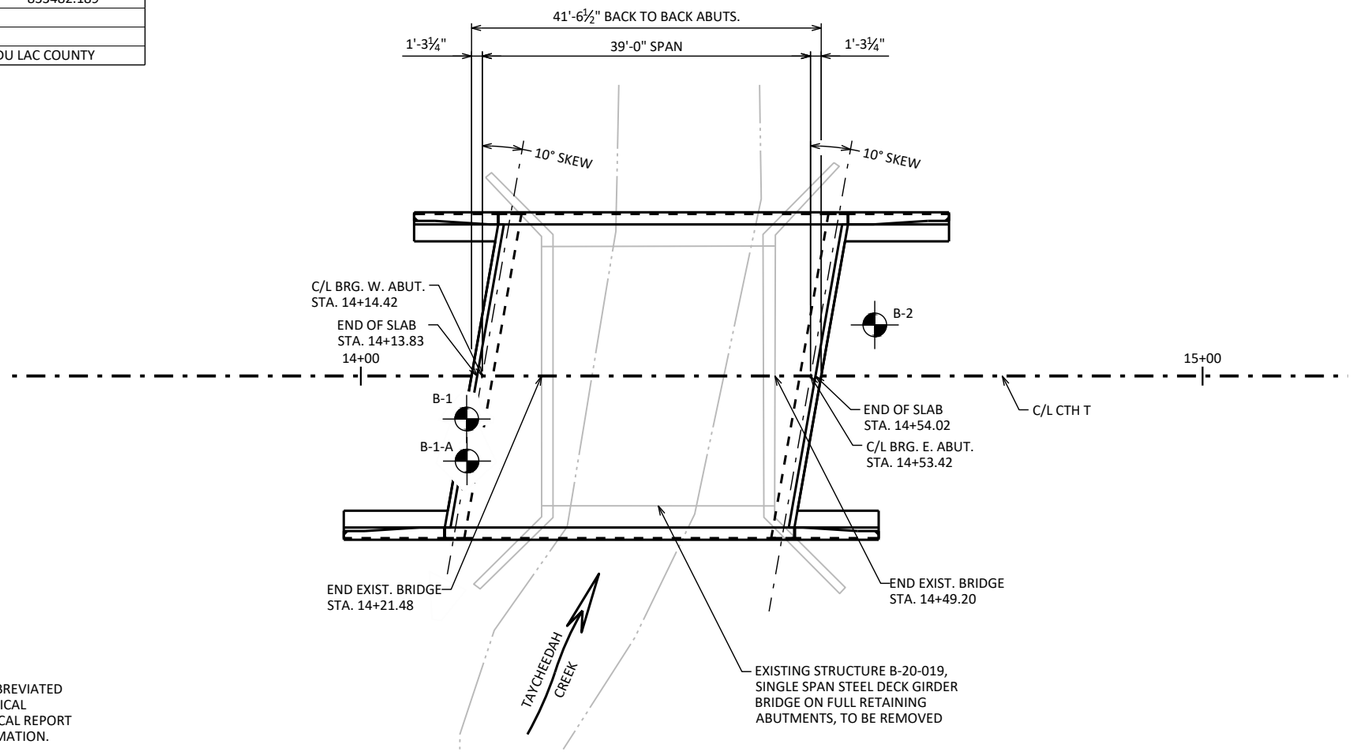
SHEET 2 OF 11
72

SCALE = N.T.S.

8

8

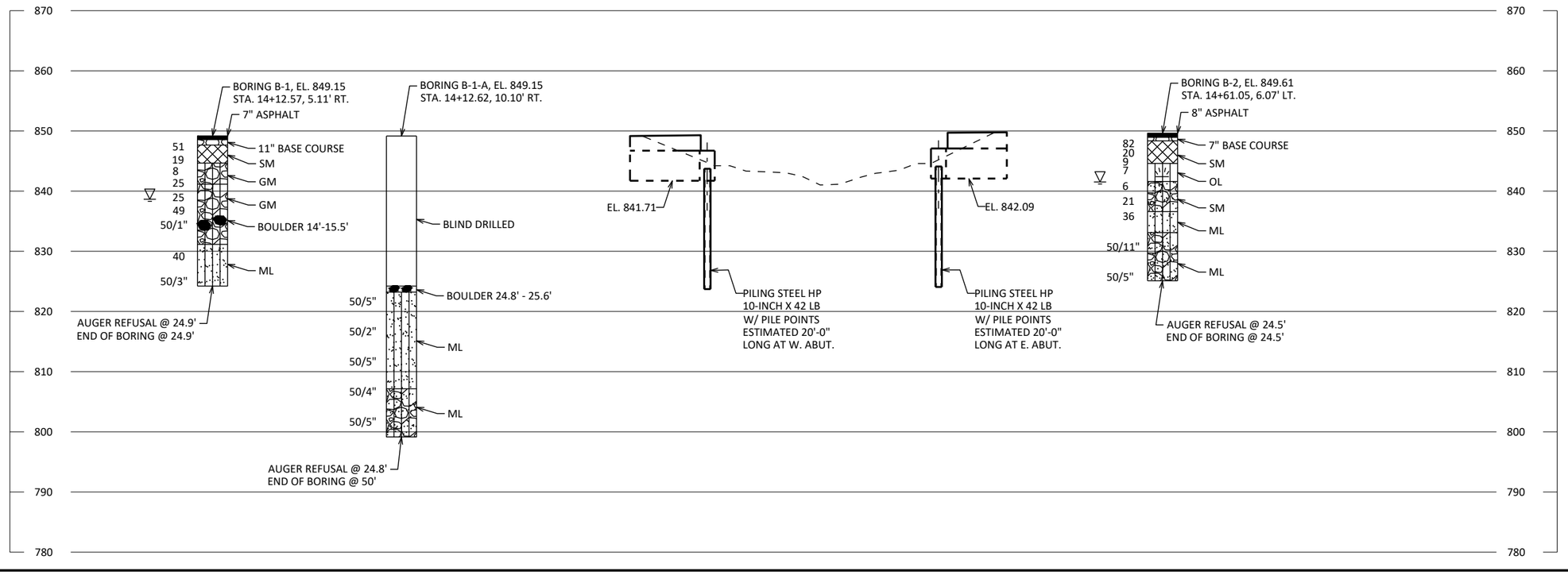
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	JANUARY 24, 2022	382600.572	833433.594
1-A	JANUARY 31, 2022	382595.572	833433.594
2	JANUARY 24, 2022	382611.261	833482.189
BORINGS COMPLETED BY: ECS MIDWEST, LLC			
REPORT COMPLETED BY: ECS MIDWEST, LLC			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) FOND DU LAC COUNTY			



NOTES:

BORING STATIONS AND OFFSETS ARE BASED ON C/L CTH T.

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.



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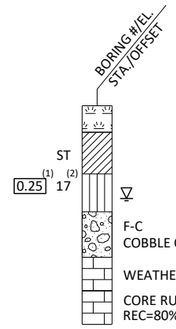
STATE PROJECT NUMBER

4840-00-71

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-20-254

DRAWN BY VJD/CJM | PLANS CK'D VJD

SUBSURFACE EXPLORATION

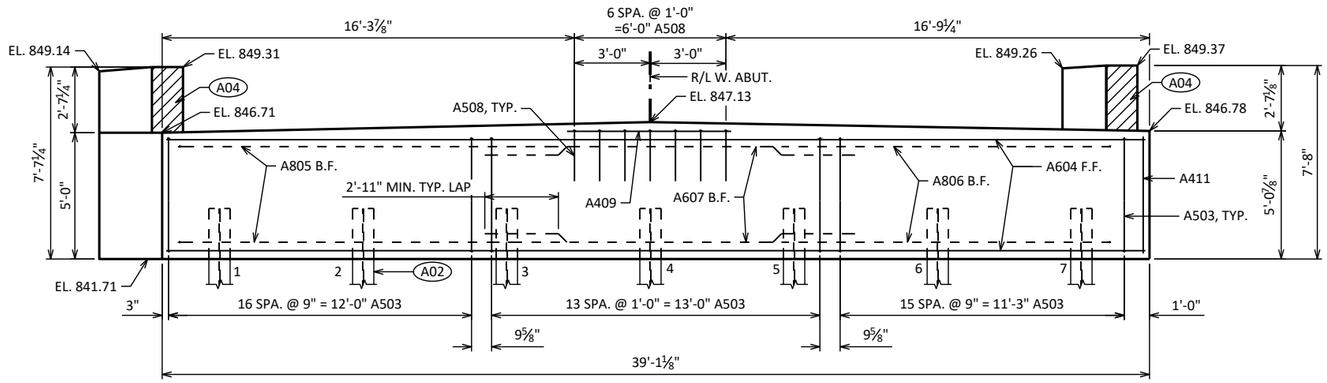
SHEET 3 OF 11

73

SCALE = N.T.S.

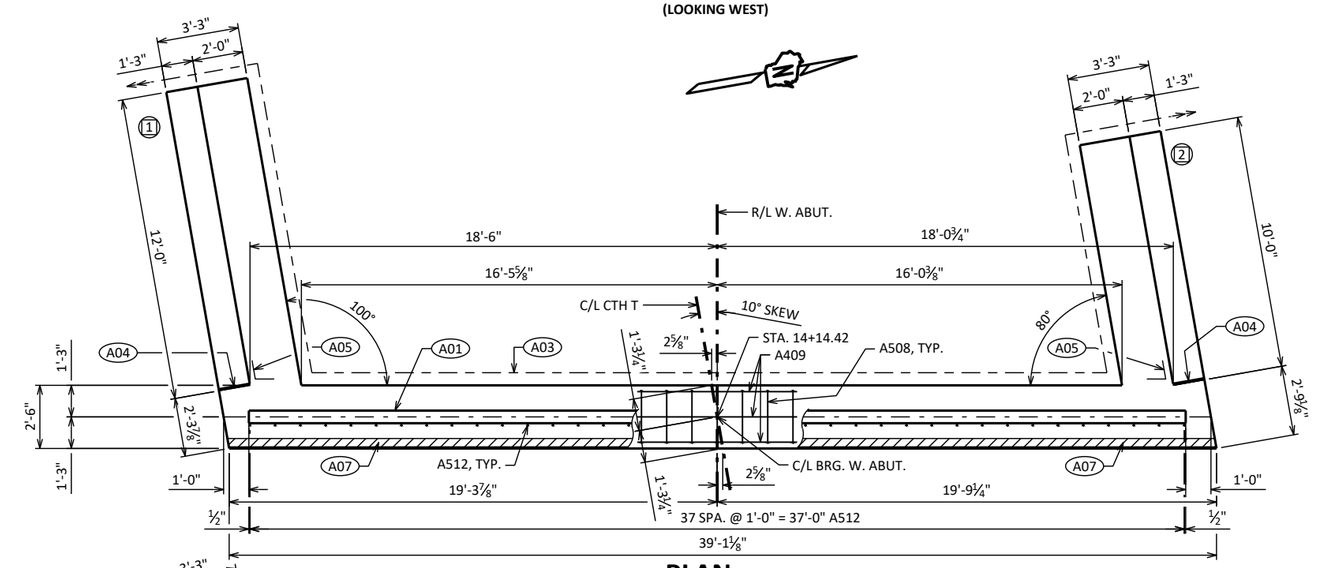
STATE PROJECT NUMBER

4840-00-71

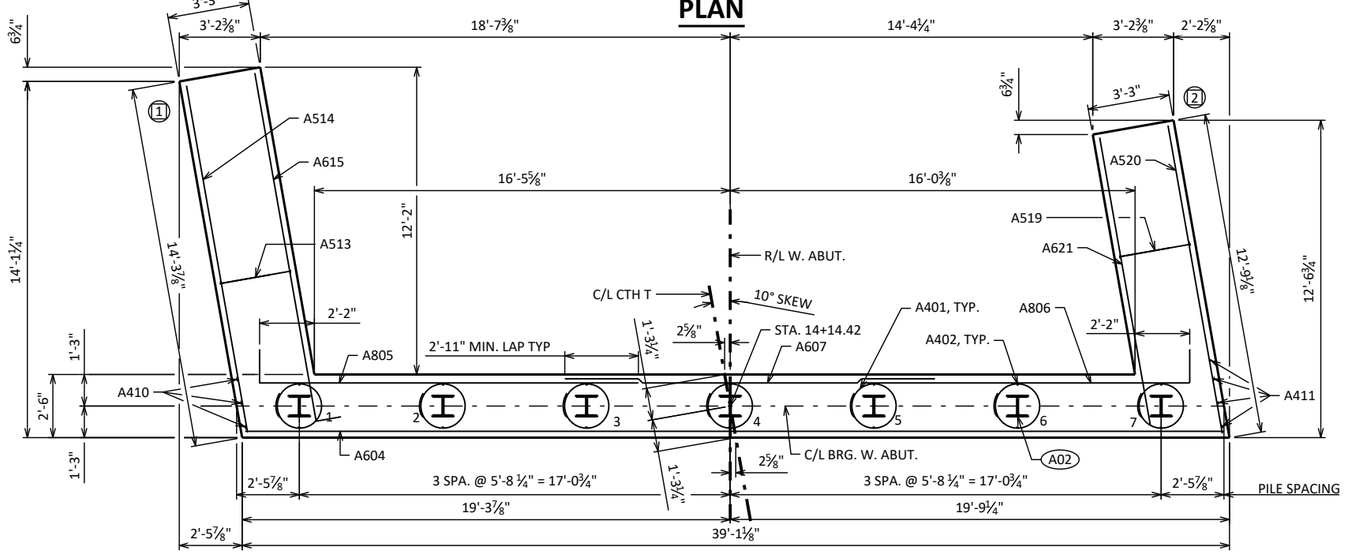


ELEVATION

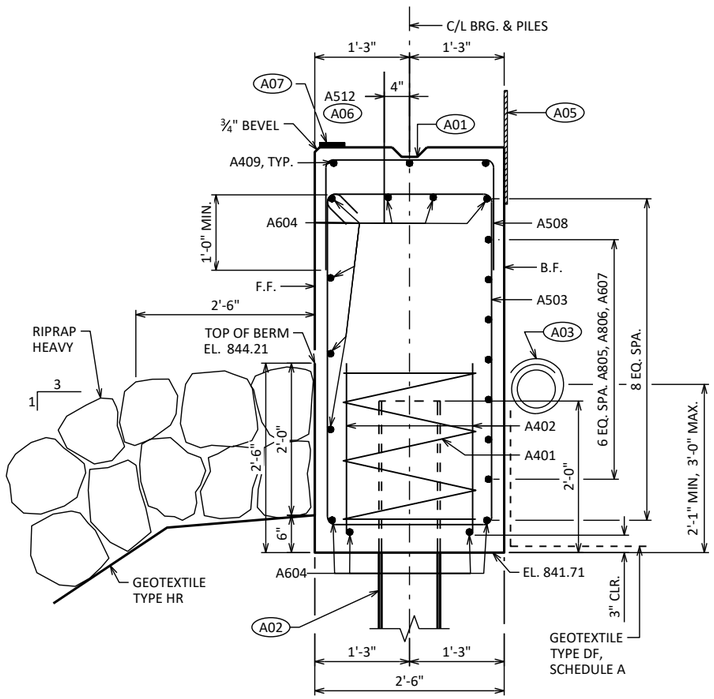
(LOOKING WEST)



PLAN



PILE LAYOUT



SECTION THRU BODY

LEGEND

- (A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.
- (A02) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING WITH PILE POINTS. ESTIMATED 20'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE DETAILS ON SHEET 8. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
- (A04) 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 ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A05) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A06) BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (A07) ¾" X 4" PREFORMED FILLER, OUT TO OUT OF ABUTMENT.
- (X) INDICATES WINGWALL NUMBER.

F.F. = FRONT FACE B.F. = BACK FACE

NOTES

SEE SHEET 8 FOR WEST ABUTMENT BILL OF BARS.

SPACE A503 TO MISS PILE LOCATIONS.

CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-254

DRAWN BY CJM | PLANS CK'D VJD

WEST ABUTMENT

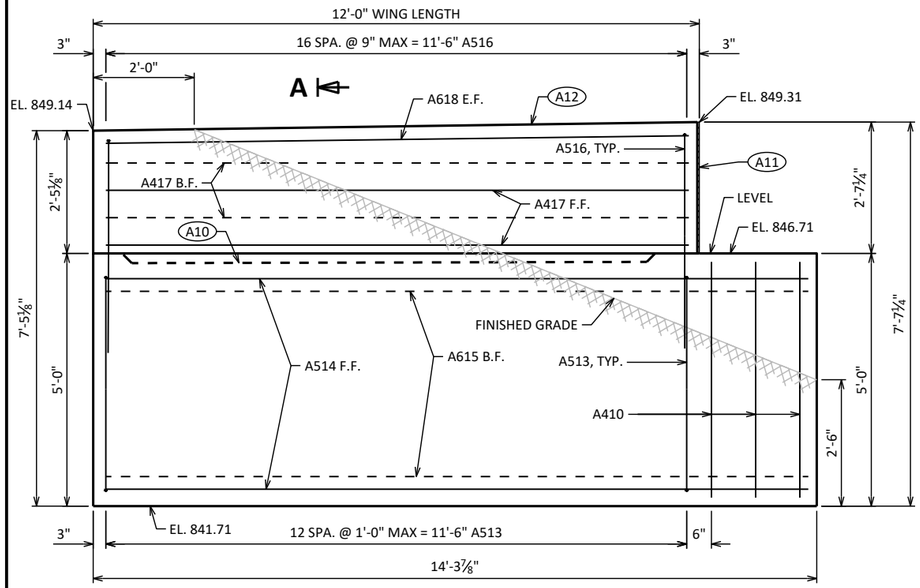
SHEET 4 OF 11

74

SCALE = N.T.S.

8

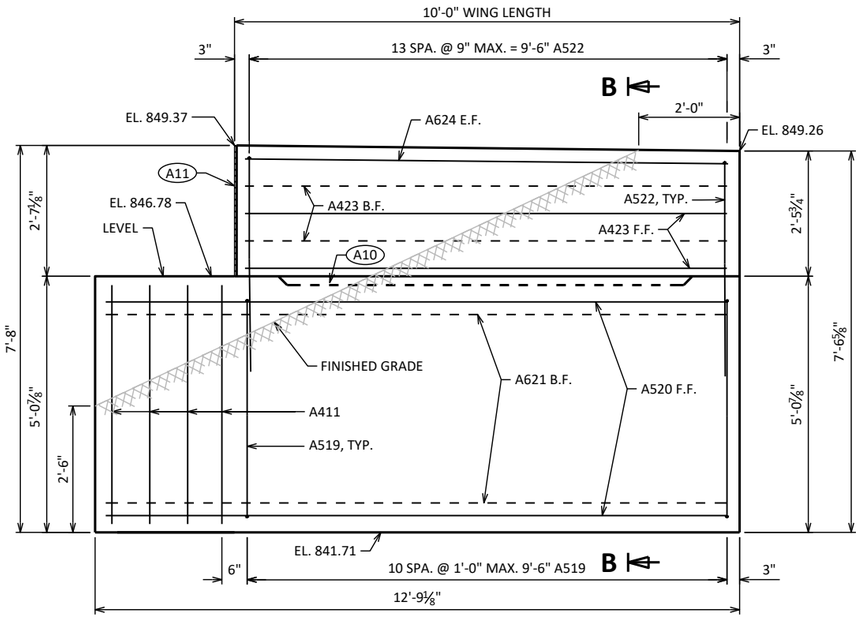
8



A

WING 1 ELEVATION

(LOOKING AT FRONT FACE)
PARAPET REINFORCEMENT EMBEDDED INTO WING
NOT SHOWN FOR CLARITY



WING 2 ELEVATION

(LOOKING AT FRONT FACE)
PARAPET REINFORCEMENT EMBEDDED INTO WING
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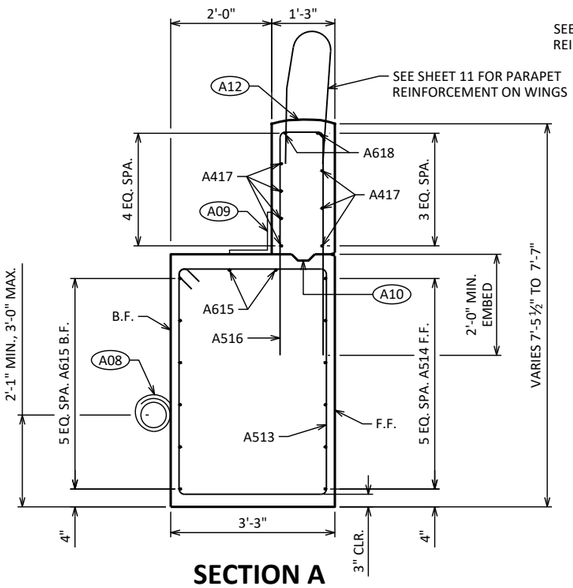
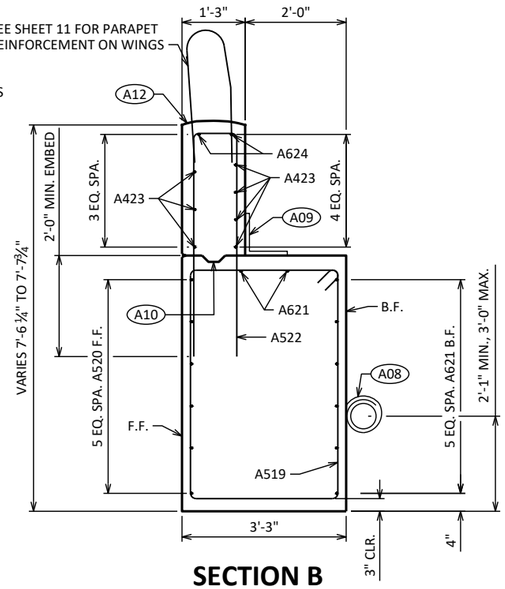


SECTION A



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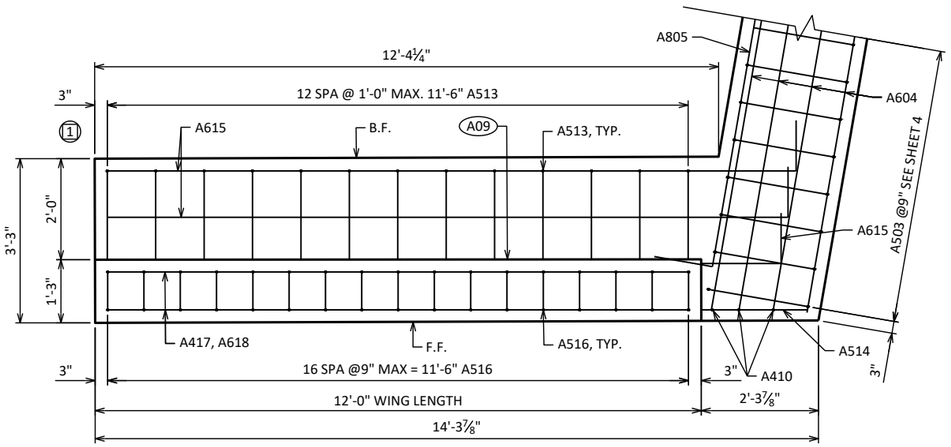
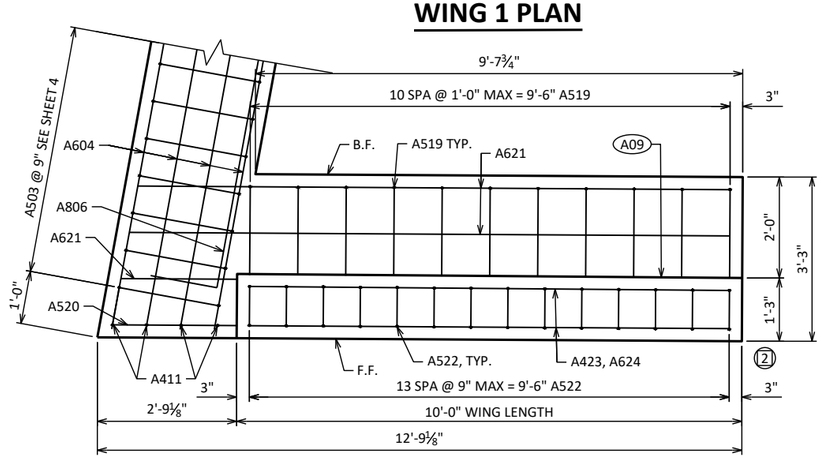


WING 1 PLAN



WING 2 PLAN

NOTES

SEE SHEET 8 FOR W. ABUT. BILL OF BARS.

SEE SHEET 8 FOR TYPICAL FILL SECTIONS AT WING TIPS.

SEE SHEET 11 FOR SECTIONS THRU PARAPET AND TRANSITION, AND FOR PARAPET REINFORCEMENT IN WING WALLS.

CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

DASHED BAR STEEL LINES SHOWN ON THIS SHEET INDICATE BACK FACE BARS.

ABUTMENT BODY STEEL NOT SHOWN FOR CLARITY.

PARAPET DETAILS AND REINFORCEMENT EMBEDDED INTO WINGS NOT SHOWN FOR CLARITY.

LEGEND

(A08) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON SHEET 8.

(A09) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A10) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A11) 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 ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A12) STRIKE OFF AND LEAVE ROUGH. FINISH HORIZONTAL SURFACES NOT COVERED BY PARAPET.

(X) INDICATES WING WALL NUMBER

F.F. = FRONT FACE B.F. = BACK FACE

E.F. = EACH FACE

STATE PROJECT NUMBER

4840-00-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-254

DRAWN BY CJM | PLANS CK'D VJD

WEST ABUTMENT DETAILS

SHEET 5 OF 11
75

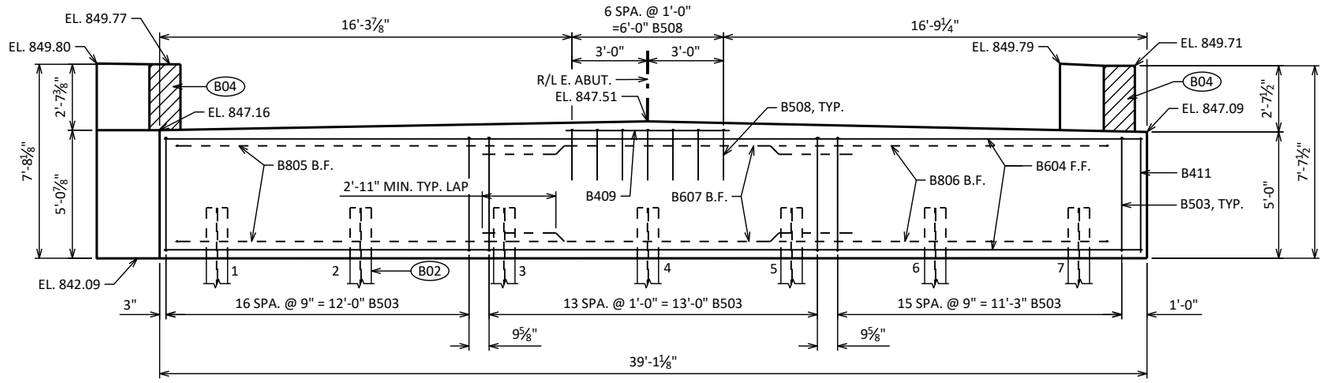
SCALE = N.T.S.

8

8

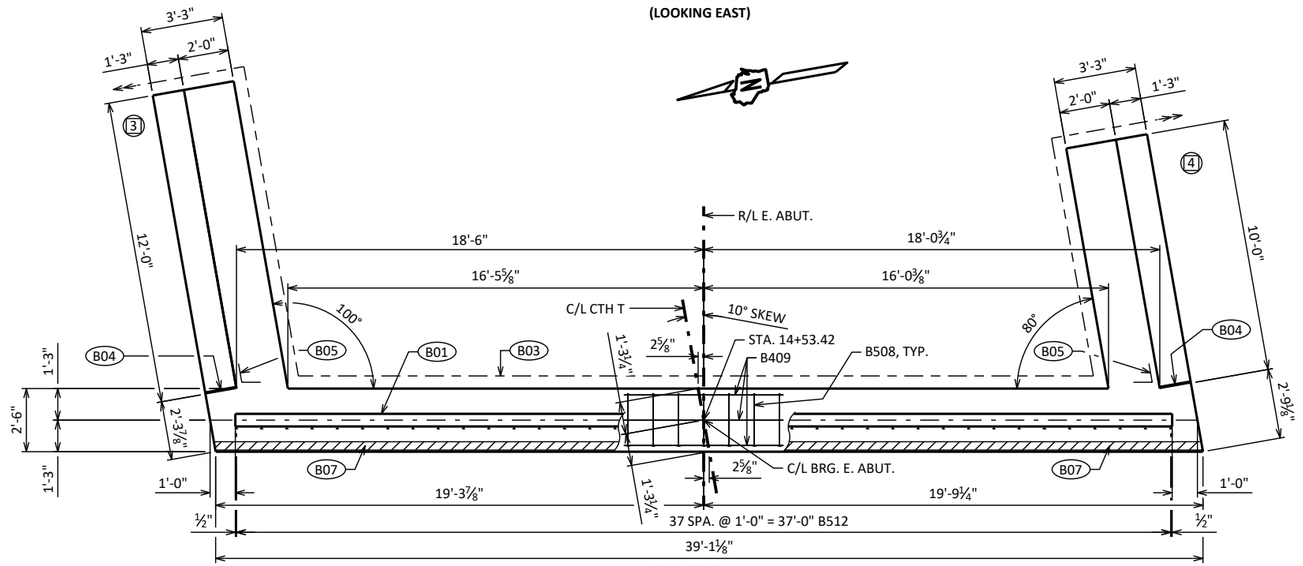
STATE PROJECT NUMBER

4840-00-71

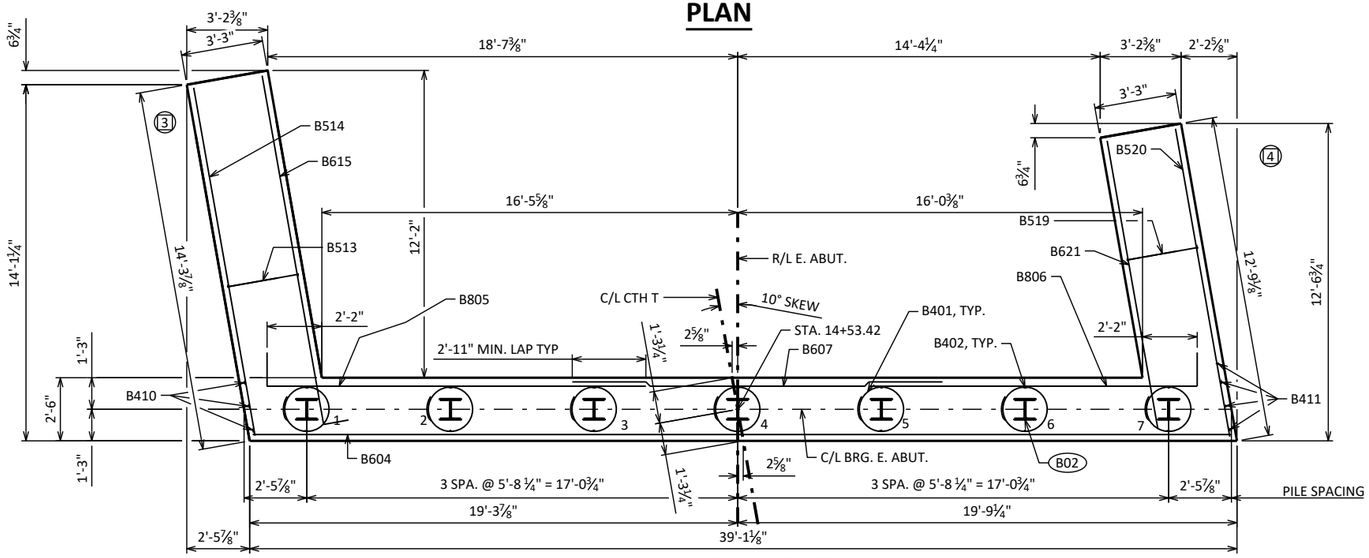


ELEVATION

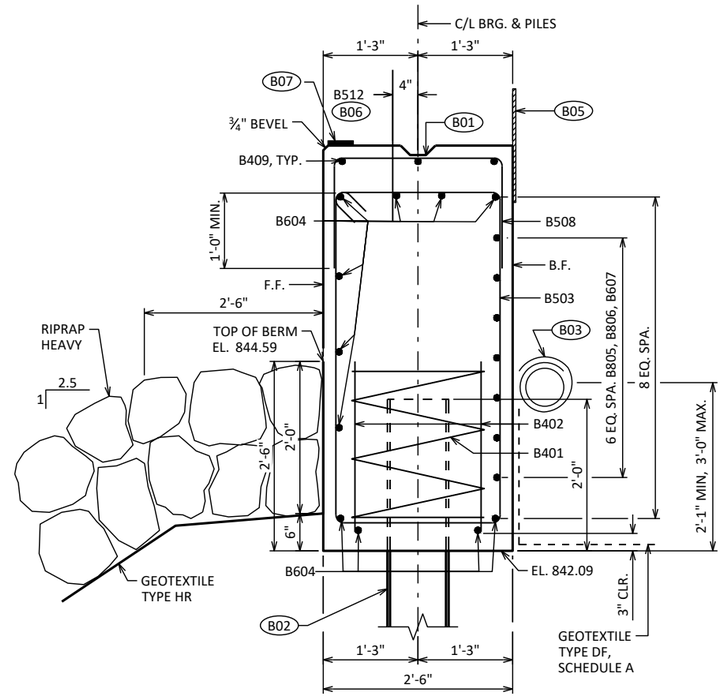
(LOOKING EAST)



PLAN



PILE LAYOUT



SECTION THRU BODY

LEGEND

- (B01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.
- (B02) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING WITH PILE POINTS. ESTIMATED 20'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (B03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE DETAILS ON SHEET 8. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
- (B04) 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 ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (B05) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (B06) BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (B07) ¾" X 4" PREFORMED FILLER, OUT TO OUT OF ABUTMENT.
- (X) INDICATES WINGWALL NUMBER.

F.F. = FRONT FACE B.F. = BACK FACE

NOTES

SEE SHEET 8 FOR EAST ABUTMENT BILL OF BARS.

SPACE B503 TO MISS PILE LOCATIONS.

CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-254

DRAWN BY CJM | PLANS CK'D VJD

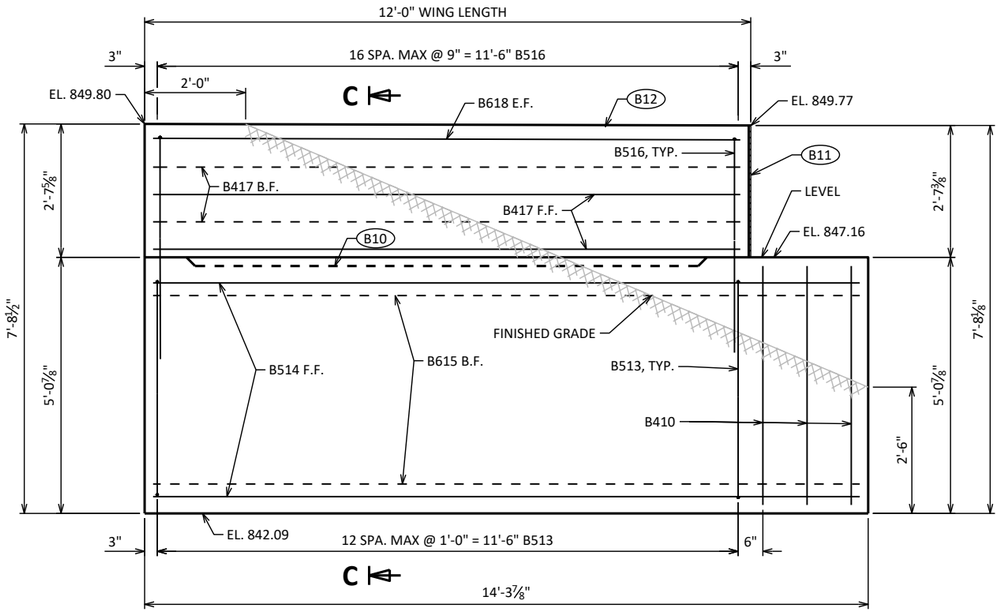
EAST ABUTMENT

SHEET 6 OF 11
76

SCALE = N.T.S.

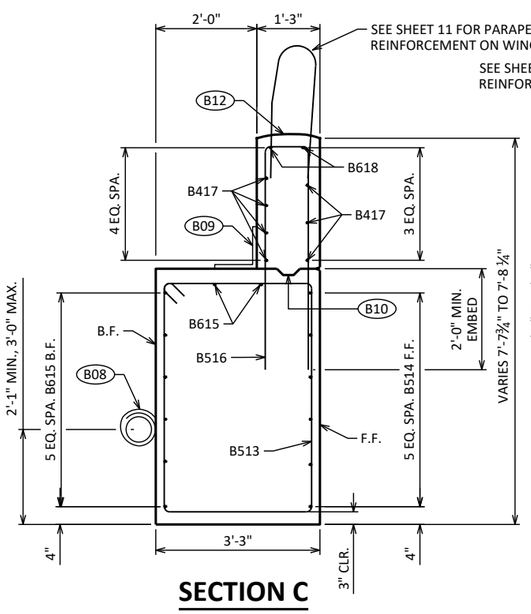
8

8



WING 3 ELEVATION

(LOOKING AT FRONT FACE)
PARAPET REINFORCEMENT EMBEDDED INTO WING
NOT SHOWN FOR CLARITY



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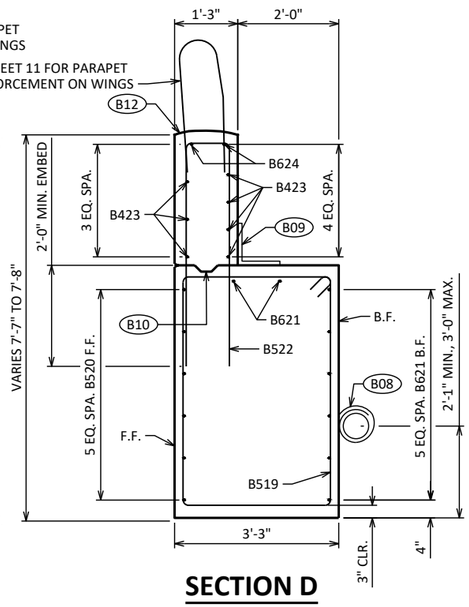
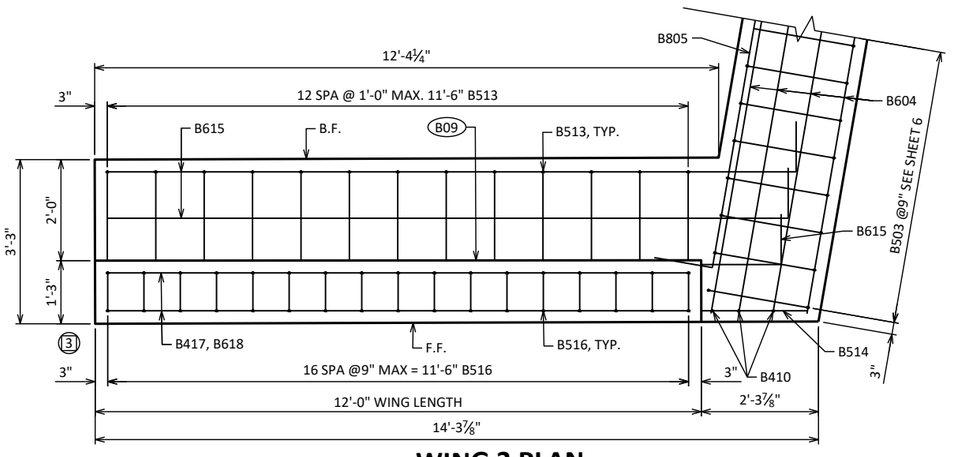
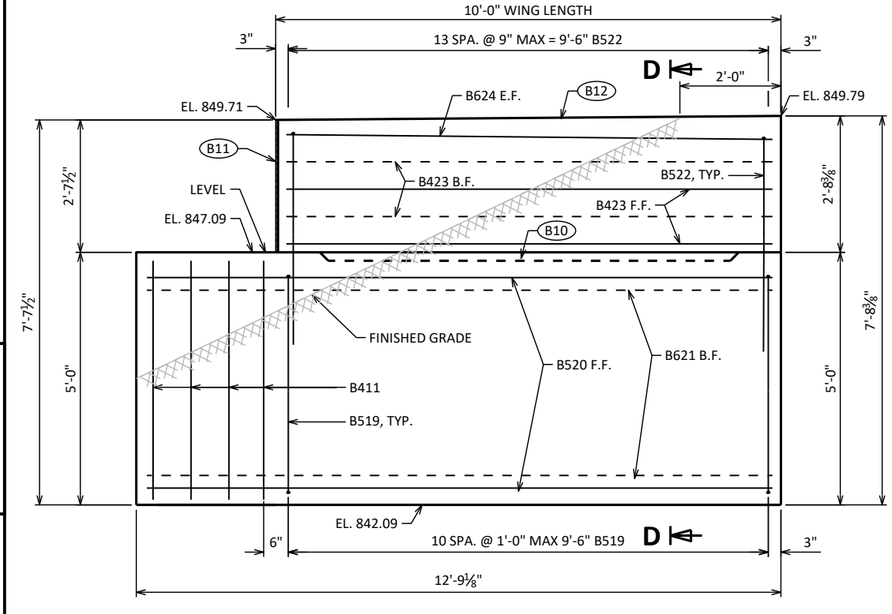


SECTION D

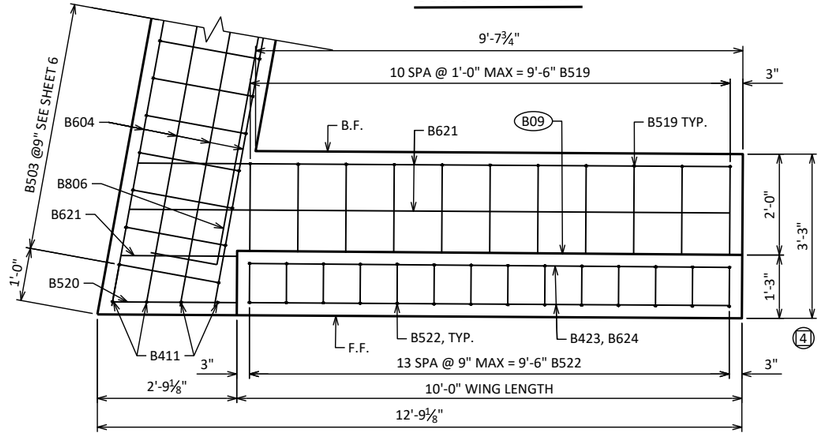


WING 3 PLAN



WING 4 ELEVATION

(LOOKING AT FRONT FACE)
PARAPET REINFORCEMENT EMBEDDED INTO WING
NOT SHOWN FOR CLARITY



WING 4 PLAN

NOTES

SEE SHEET 8 FOR E. ABUT. BILL OF BARS.

SEE SHEET 8 FOR TYPICAL FILL SECTIONS AT WING TIPS.

SEE SHEET 11 FOR SECTIONS THRU PARAPET AND TRANSITION, AND FOR PARAPET REINFORCEMENT IN WING WALLS.

CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

DASHED BAR STEEL LINES SHOWN ON THIS SHEET INDICATE BACK FACE BARS.

ABUTMENT BODY STEEL NOT SHOWN FOR CLARITY.

PARAPET DETAILS AND REINFORCEMENT EMBEDDED INTO WINGS NOT SHOWN FOR CLARITY.

LEGEND

- (B08) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE DETAILS ON SHEET 8.
- (B09) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE. NOT REQUIRED IF CONSTRUCTION JOINT IS NOT USED.
- (B10) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).
- (B11) 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 ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (B12) STRIKE OFF AND LEAVE ROUGH. FINISH HORIZONTAL SURFACES NOT COVERED BY PARAPET.
- (X) INDICATES WING WALL NUMBER

F.F. = FRONT FACE B.F. = BACK FACE

E.F. = EACH FACE

STATE PROJECT NUMBER

4840-00-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-254

DRAWN BY CJM | PLANS CK'D VJD

EAST ABUTMENT DETAILS

SHEET 7 OF 11
77

SCALE = N.T.S.

8

8

STATE PROJECT NUMBER

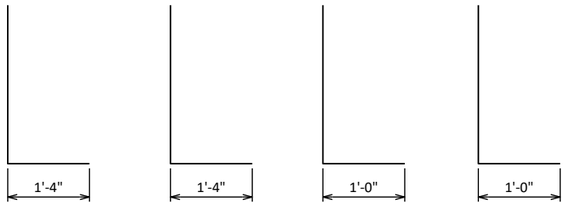
4840-00-71

BILL OF BARS - W. ABUT.

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	1,430# COATED 2,270# UNCOATED
A401		7	28'-0"	X		BODY AT PILES	
A402		14	2'-3"			BODY AT PILES VERT.	
A503		47	13'-10"	X		BODY VERT.	
A604		11	38'-8"			BODY HORIZ. F.F. & B.F.	
A805		7	16'-2"	X		BODY HORIZ. B.F. @ WING 1	
A806		7	14'-2"	X		BODY HORIZ. B.F. @ WING 2	
A607		7	14'-9"			BODY HORIZ. B.F. BTWN. WINGS	
A508		7	4'-11"	X		BODY VERT. TOP	
A409		3	6'-4"			BODY HORIZ. TOP	
A410		3	4'-5"			BODY VERT. @ WING 1	
A411		4	4'-5"			BODY VERT. @ WING 2	
A512	X	38	2'-0"			BODY VERT. - DOWELS	
A513	X	13	15'-4"	X		WING 1 VERT.	
A514	X	6	13'-11"			WING 1 HORIZ. F.F.	
A615	X	8	14'-9"	X		WING 1 HORIZ.	
A516	X	17	9'-6"	X		WING 1 VERT. TOP.	
A417	X	7	11'-8"			WING 1 HORIZ.	
A618	X	2	11'-8"			WING 1 HORIZ. TOP	
A519	X	11	15'-4"	X		WING 2 VERT.	
A520	X	6	12'-4"			WING 2 HORIZ. F.F.	
A621	X	8	11'-6"			WING 2 HORIZ.	
A522	X	14	9'-6"	X		WING 2 VERT. TOP.	
A423	X	7	9'-8"			WING 2 HORIZ.	
A624	X	2	9'-8"			WING 2 HORIZ. TOP	

BENDING DIMENSIONS ARE OUT-TO-OUT OF BARS.



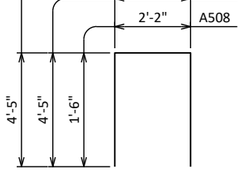
A805, B805 **A806, B806** **A615** **B615**

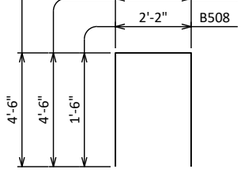
BILL OF BARS - E. ABUT.

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

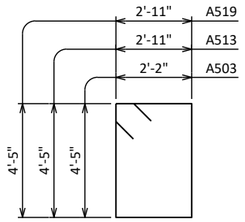
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION	1,430# COATED 2,270# UNCOATED
B401		7	28'-0"	X		BODY AT PILES	
B402		14	2'-3"			BODY AT PILES VERT.	
B503		47	13'-10"	X		BODY VERT.	
B604		11	38'-8"			BODY HORIZ. F.F. & B.F.	
B805		7	16'-2"	X		BODY HORIZ. B.F. @ WING 3	
B806		7	14'-2"	X		BODY HORIZ. B.F. @ WING 4	
B607		7	14'-9"			BODY HORIZ. B.F. BTWN. WINGS	
B508		7	4'-11"	X		BODY VERT. TOP	
B409		3	6'-4"			BODY HORIZ. TOP	
B410		3	4'-5"			BODY VERT. @ WING 3	
B411		4	4'-5"			BODY VERT. @ WING 4	
B512	X	38	2'-0"			BODY VERT. - DOWELS	
B513	X	13	15'-4"	X		WING 3 VERT.	
B514	X	6	13'-11"			WING 3 HORIZ. F.F.	
B615	X	8	14'-9"	X		WING 3 HORIZ.	
B516	X	17	9'-8"	X		WING 3 VERT. TOP.	
B417	X	7	11'-8"			WING 3 HORIZ.	
B618	X	2	11'-8"			WING 3 HORIZ. TOP	
B519	X	11	15'-4"	X		WING 4 VERT.	
B520	X	6	12'-4"			WING 4 HORIZ. F.F.	
B621	X	8	11'-6"			WING 4 HORIZ.	
B522	X	14	9'-8"	X		WING 4 VERT. TOP.	
B423	X	7	9'-8"			WING 4 HORIZ.	
B624	X	2	9'-8"			WING 4 HORIZ. TOP	

BENDING DIMENSIONS ARE OUT-TO-OUT OF BARS.

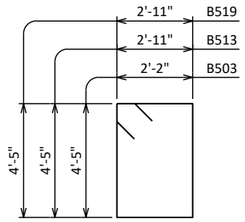




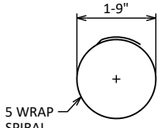
A508, A516, A522 **B508, B516, B522**



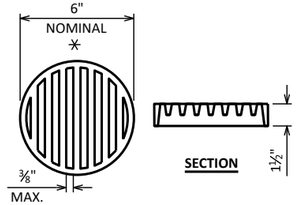
A503, A513, A519



B503, B513, B519



A401, B401



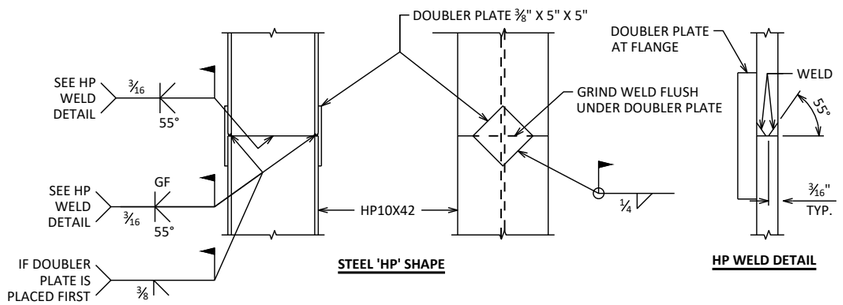
PLAN

RODENT SHIELD DETAIL

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

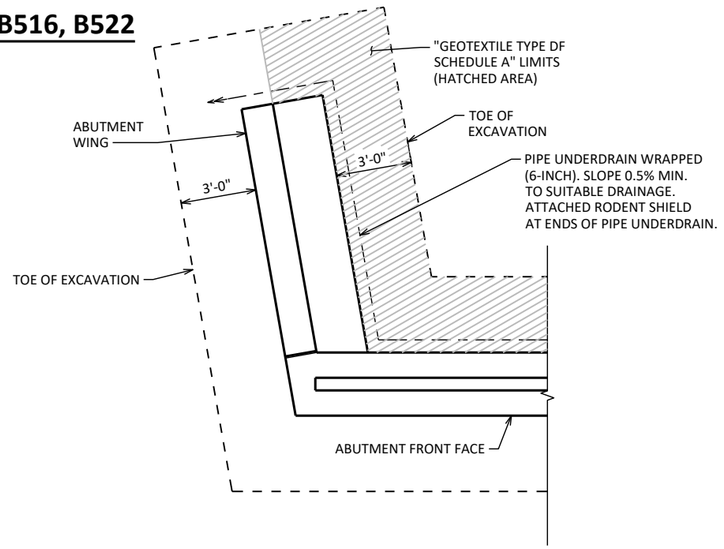
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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.



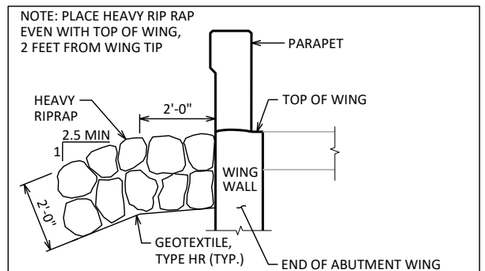
STEEL 'HP' SHAPE HP WELD DETAIL

'HP' PILE DETAILS



ABUTMENT PLAN WITH WING

WING 1 SHOWN, OTHER WINGS SIMILAR



TYPICAL FILL SECTION AT WING TIPS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-254

DRAWN BY CJM | PLANS CK'D VJD

ABUTMENT BILL OF BARS

SHEET 8 OF 11

78

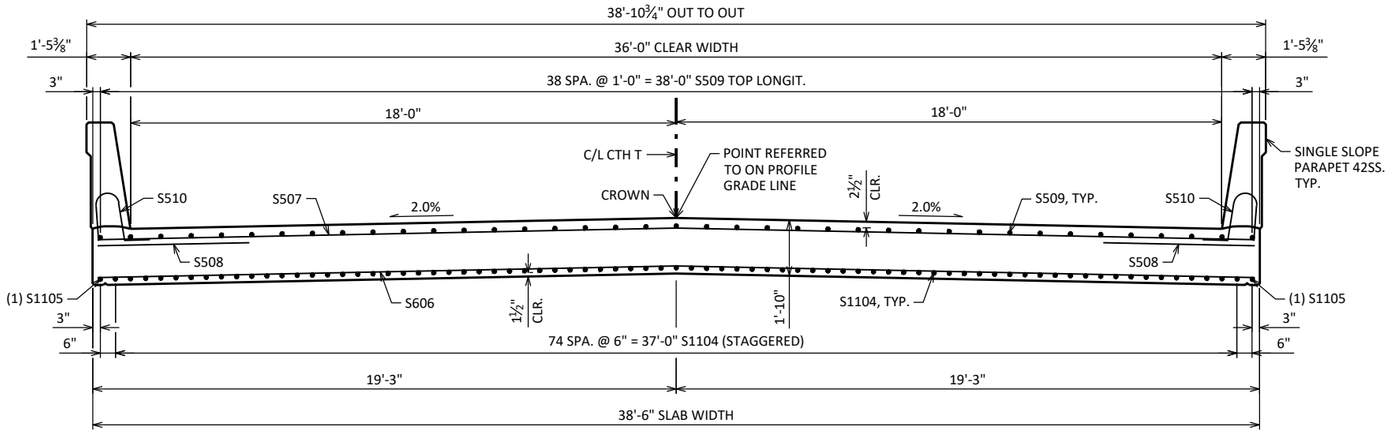
SCALE = N.T.S.

8

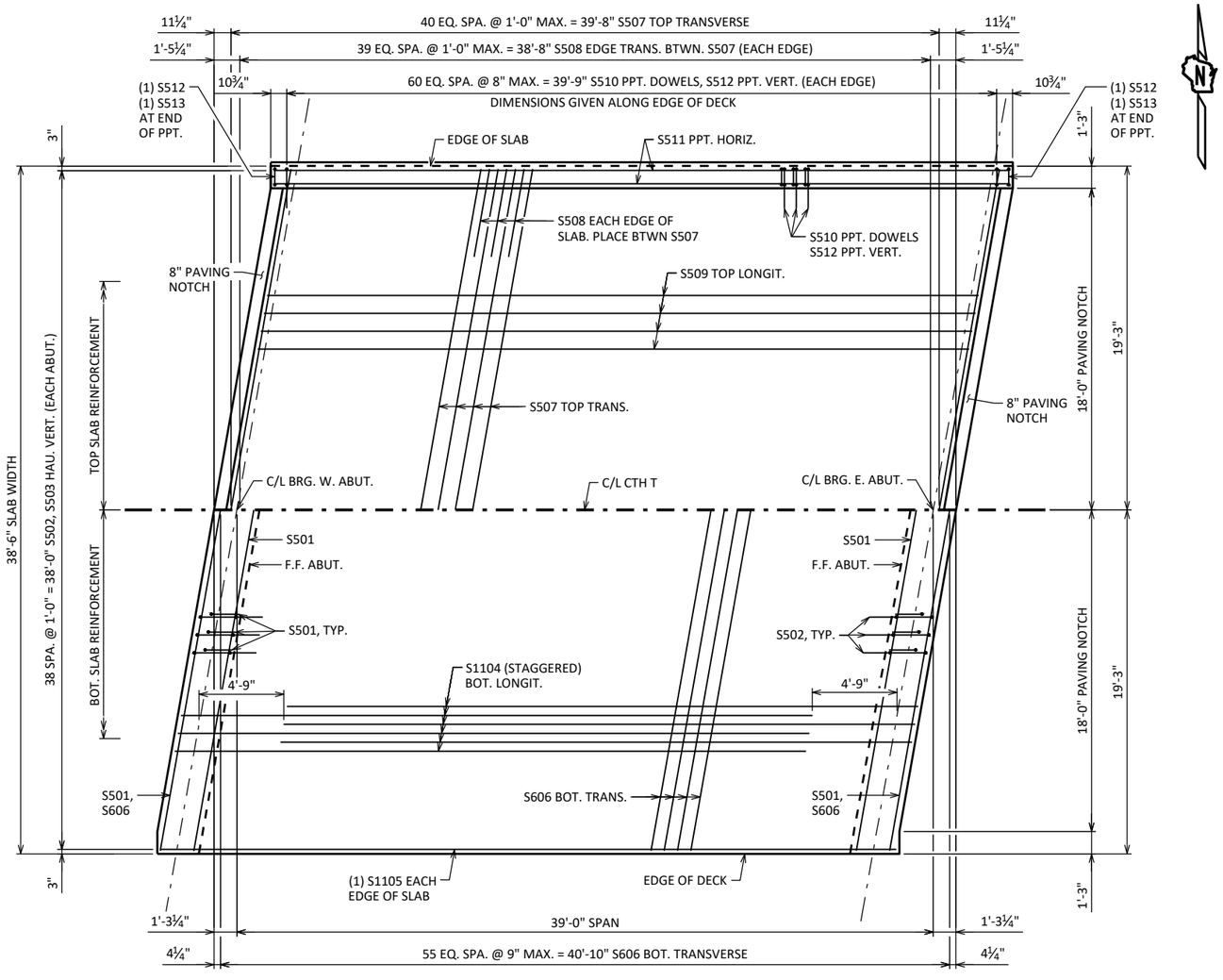
8

STATE PROJECT NUMBER

4840-00-71

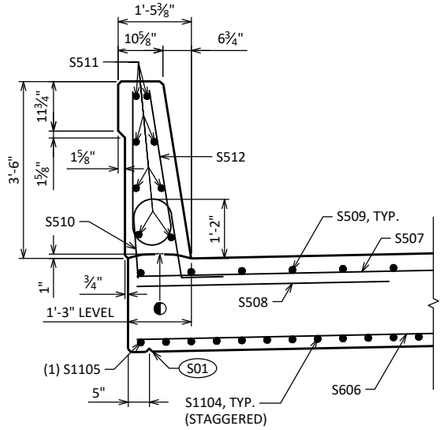


SLAB REINFORCEMENT CROSS SECTION



SLAB REINFORCEMENT PLAN

DIMENSIONS ARE GIVEN ALONG C/L CTH T UNLESS NOTED OTHERWISE



SECTION THRU EDGE OF DECK

SHOWING PARAPET REINFORCEMENT

LEGEND

S01 — ¾" "V"GROOVE REQUIRED. EXTEND TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM.

CONSTRUCTION JOINT - STRIKE OFF AS SHOWN.

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

SEE SHEET 10 FOR LONGITUDINAL SECTION THRU SLAB AND ADDITIONAL SLAB REINFORCEMENT DETAILS.

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SUPERSTRUCTURE BILL OF BARS ON SHEET 10.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-254

DRAWN BY CJM | PLANS CK'D VJD

SUPERSTRUCTURE

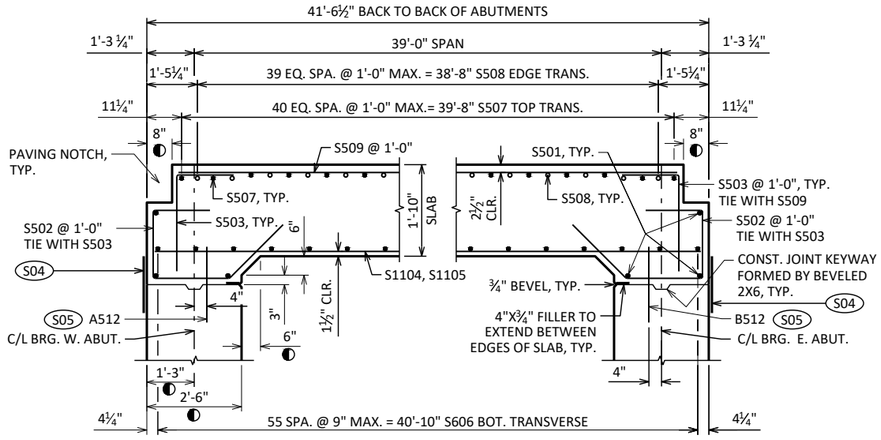
SHEET 9 OF 11

79

SCALE = N.T.S.

8

8



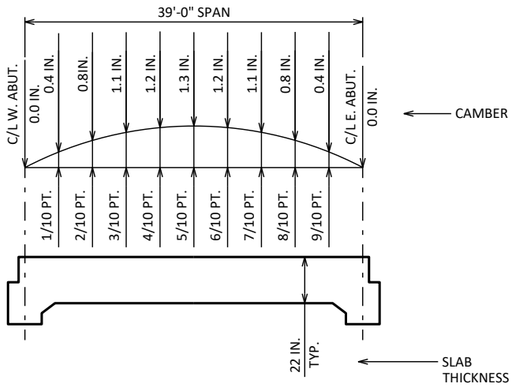
LONGITUDINAL SECTION

DIMENSIONS ARE GIVEN PARALLEL TO C/L ROADWAY UNLESS OTHERWISE NOTED.

◐ MEASURED NORMAL TO THE C/L OF BEARING. DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS.

TOP OF SLAB ELEVATIONS

LOCATION	C/L BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. E. ABUT.
N. GUTTER	849.38	849.42	849.46	849.50	849.54	849.58	849.61	849.65	849.69	849.73	849.77
C/L CTH T	849.71	849.75	849.79	849.83	849.87	849.90	849.94	849.98	850.02	850.06	850.10
S. GUTTER	849.32	849.36	849.40	849.44	849.47	849.51	849.55	849.59	849.63	849.67	849.70



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT GUTTER, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	W. ABUTMENT	5/10 PT.	E. ABUTMENT
N. GUTTER			
C/L CTH T			
S. GUTTER			

NOTES

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

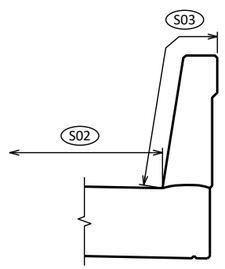
LEGEND

(S02) COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE ENTIRE DECK SURFACE AND TO VERT. AND HORIZ. SURFACES OF THE PAVING NOTCHES.

(S03) COAT WITH "PIGMENTED SURFACE SEALER AS PER THE STANDARD SPECIFICATIONS. PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE AND TOP FACES OF PARAPET, INCLUDING PARAPETS ON WINGS.

(S04) 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW). SEAL ALL HORIZONTAL AND VERTICAL JOINTS AT BACK FACE.

(S05) A512, B512 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)



SECTION THRU PARAPET

SHOWING LIMITS OF PIGMENTED SURFACE SEALER AND PROTECTIVE SURFACE TREATMENT

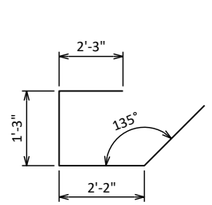
STATE PROJECT NUMBER

4840-00-71

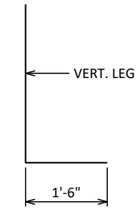
BILL OF BARS

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

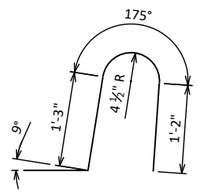
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION 24,810# COATED
S501	X	6	38'-9"			ABUT. DIAPH. - HORIZ.
S502	X	78	7'-8"	X		ABUT. DIAPH. - VERT
S503	X	78	3'-6"	X		ABUT. DIAPH. - VERT. NOTCH
S1104	X	75	35'-5"			SLAB - BOT. LONG.
S1105	X	2	41'-2"			SLAB - BOT. LONG. EDGE
S606	X	56	38'-9"			SLAB - BOT. TRANS.
S507	X	41	38'-9"			SLAB - TOP TRANS.
S508	X	80	5'-0"			SLAB - TOP TRANS. EDGE
S509	X	39	39'-9"			SLAB - TOP LONG.
S510	X	122	4'-5"	X		SLAB - PARAPET DOWELS
S511	X	16	41'-2"			PARAPET - HORIZ.
S512	X	126	6'-8"	X		PARAPET - VERT.
S513	X	4	5'-10"	X		SLAB - PARAPET DOWELS - ENDS



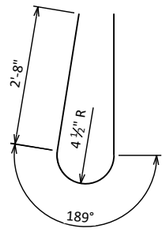
S502



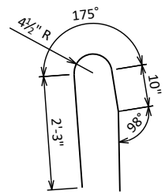
S503



S510



S512



S513

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-254

DRAWN BY CJM | PLANS CK'D VJD

SUPERSTRUCTURE DETAILS

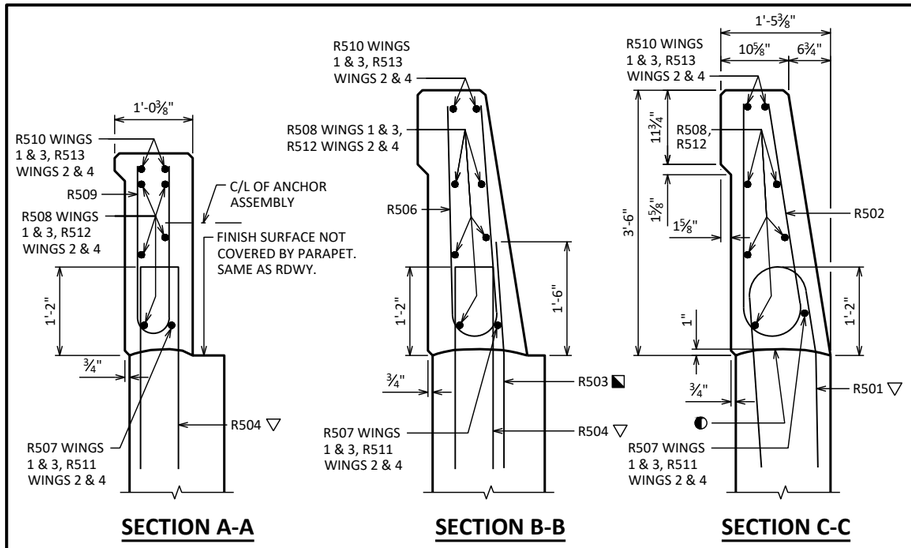
SHEET 10 OF 11

80

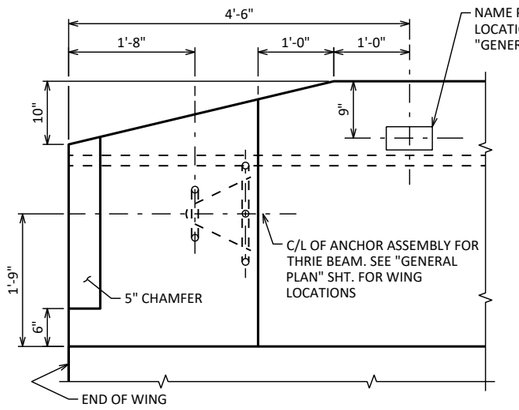
SCALE = N.T.S.

8

8



SECTION A-A **SECTION B-B** **SECTION C-C**



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

STATE PROJECT NUMBER

4840-00-71

BILL OF BARS

FOR WING PARAPETS

790# COATED W. ABUT.
790# COATED E. ABUT.

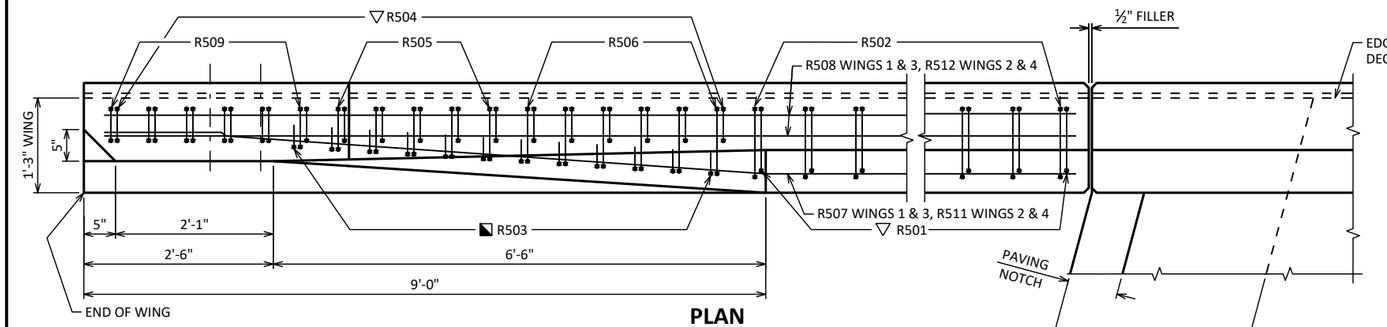
BAR MARK	COAT	W. ABUT.	E. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	9	9	5'-10"	X		PARAPET VERT.
R502	X	9	9	6'-8"	X		PARAPET VERT.
R503	X	24	24	3'-0"	X		PARAPET VERT.
R504	X	34	34	5'-7"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	1	1	11'-7"	X		PARAPET HORIZ. W 1 & 3
R508	X	5	5	11'-8"			PARAPET HORIZ. W 1 & 3
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	2	2	11'-7"	X		PARAPET HORIZ. W 1 & 3
R511	X	1	1	9'-7"	X		PARAPET HORIZ. W 2 & 4
R512	X	5	5	9'-8"			PARAPET HORIZ. W 2 & 4
R513	X	2	2	9'-7"	X		PARAPET HORIZ. W 2 & 4

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

BAR SERIES TABLE

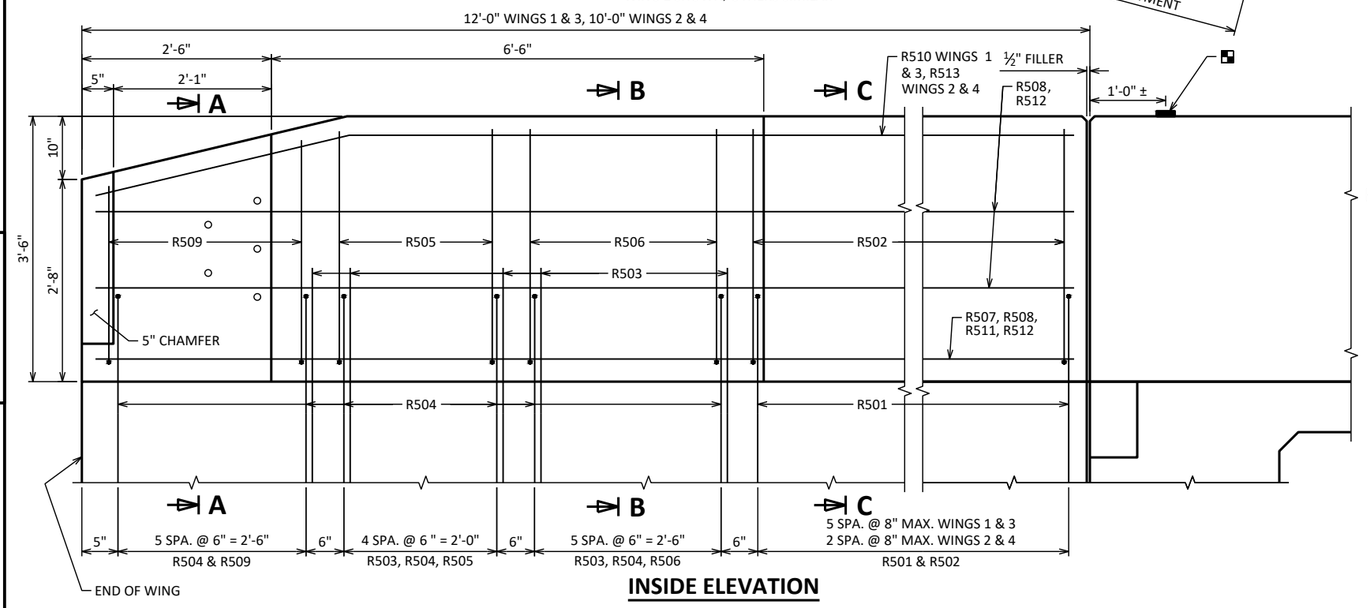
BUNDLE AND TAG EACH SERIES SEPARATELY.

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



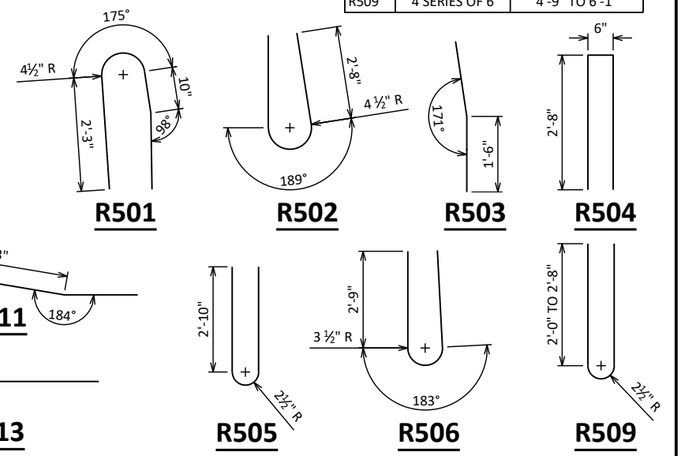
PLAN

WING 2 SHOWN, OTHERS SIMILAR

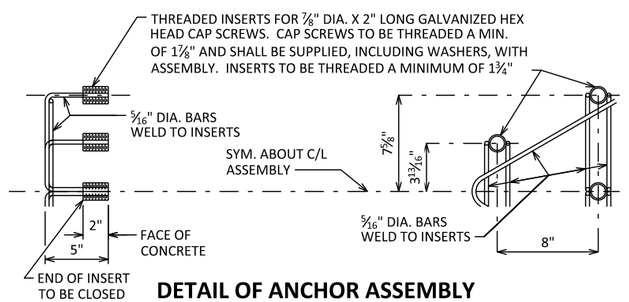


INSIDE ELEVATION

WING 2 SHOWN, OTHERS SIMILAR



BENCH MARK CAP (WHEN SUPPLIED)



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

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

CONST. JOINT - STRIKE OFF AS SHOWN

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-254

DRAWN BY CJM | PLANS CK'D VJD

SINGLE SLOPE PARAPET 42SS

SHEET 11 OF 11
81

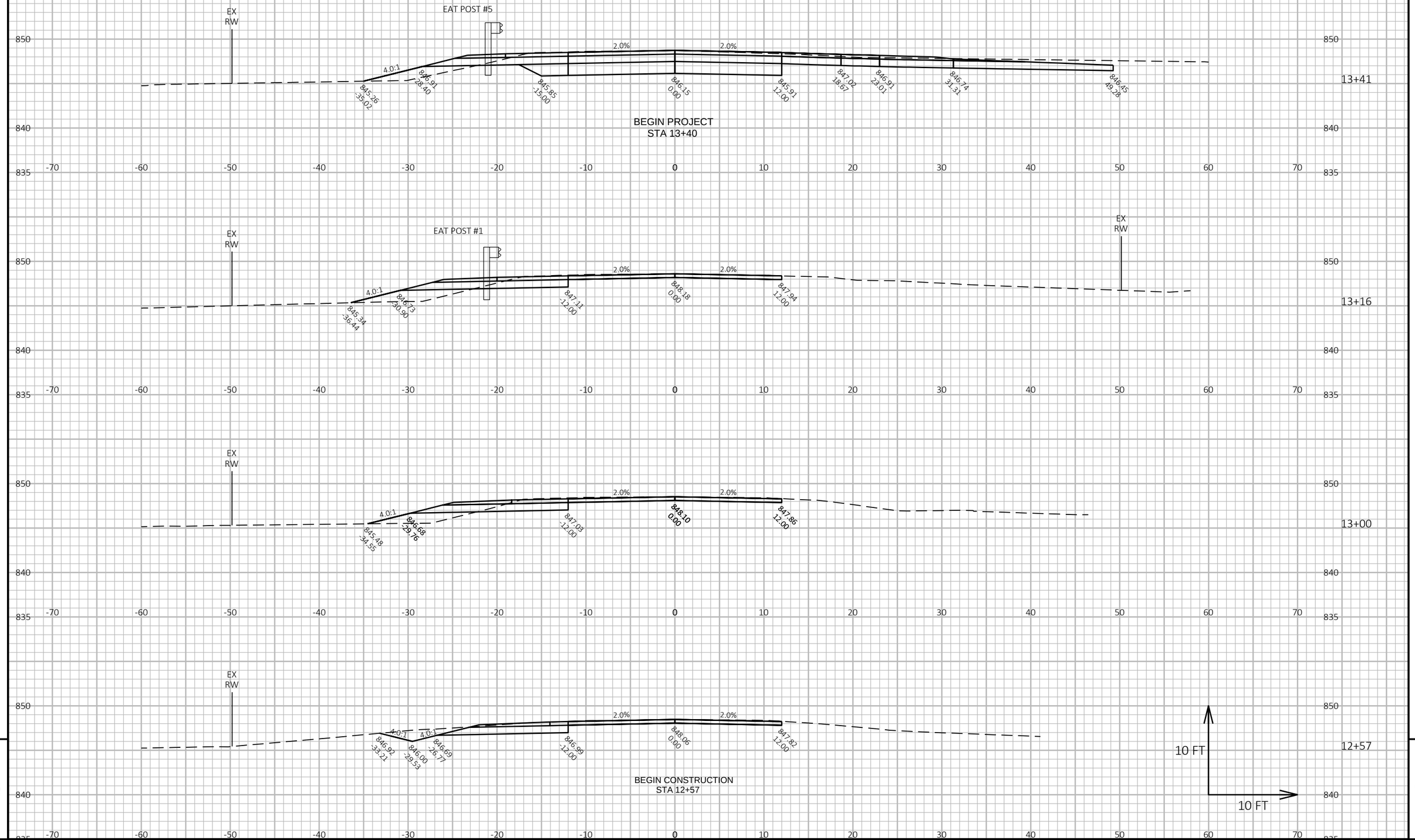
SCALE = N.T.S.

8

8

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)	
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL
							1.00	1.25
					NOTE 1	NOTE 3	NOTE 1	
12+57	1257.00	0.00	16.98	0.02	0	0	0	0
12+60	1260.00	3.00	15.73	0.03	2	0	2	0
12+70	1270.00	10.00	12.99	1.74	5	0	7	0
12+80	1280.00	10.00	10.45	7.38	4	2	11	3
12+90	1290.00	10.00	10.94	7.91	4	3	15	6
13+00	1300.00	10.00	11.40	8.50	4	3	19	10
13+10	1310.00	10.00	11.17	9.51	4	3	23	14
13+20	1320.00	10.00	10.98	10.31	4	4	27	19
13+30	1330.00	10.00	31.11	9.65	8	4	35	24
13+40	1340.00	10.00	50.63	16.11	15	5	50	30
13+50	1350.00	10.00	111.22	7.57	30	4	80	35
13+60	1360.00	10.00	113.92	12.00	42	4	122	40
13+70	1370.00	10.00	107.83	13.45	41	5	163	46
13+80	1380.00	10.00	87.95	15.84	36	5	199	53
13+90	1390.00	10.00	78.20	24.89	31	8	230	63
14+00	1400.00	10.00	75.40	39.19	28	12	258	78
14+13.83	1413.83	13.83	71.49	64.85	38	27	296	111

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)	
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL
							1.00	1.25
					NOTE 1	NOTE 3	NOTE 1	
14+54.02	1454.02	0.00	71.61	67.18	0	0	0	0
14+60	1460.00	5.98	71.47	69.02	16	15	16	19
14+70	1470.00	10.00	71.98	56.20	27	23	43	48
14+80	1480.00	10.00	75.16	50.55	27	20	70	73
14+90	1490.00	10.00	78.62	43.51	28	17	98	94
15+00	1500.00	10.00	82.21	38.32	30	15	128	113
15+10	1510.00	10.00	85.43	35.48	31	14	159	130
15+20	1520.00	10.00	15.98	34.55	19	13	178	146
15+30	1530.00	10.00	16.84	36.65	6	13	184	163
15+40	1540.00	10.00	17.30	45.63	6	15	190	181
15+50	1550.00	10.00	16.63	53.77	6	18	196	204
15+60	1560.00	10.00	16.82	56.92	6	20	202	229
15+70	1570.00	10.00	16.97	51.90	6	20	208	254
15+80	1580.00	10.00	16.99	46.19	6	18	214	276
15+90	1590.00	10.00	16.64	40.06	6	16	220	296
16+00	1600.00	10.00	16.28	33.89	6	14	226	314
16+10	1610.00	10.00	15.97	26.85	6	11	232	328
16+20	1620.00	10.00	17.50	13.58	6	7	238	336
16+30	1630.00	10.00	23.67	8.18	8	4	246	341
16+40	1640.00	10.00	24.91	3.41	9	2	255	344
16+50	1650.00	10.00	27.17	0.07	10	1	265	345
16+57	1657.00	7.00	2.31	0.00	4	0	269	345



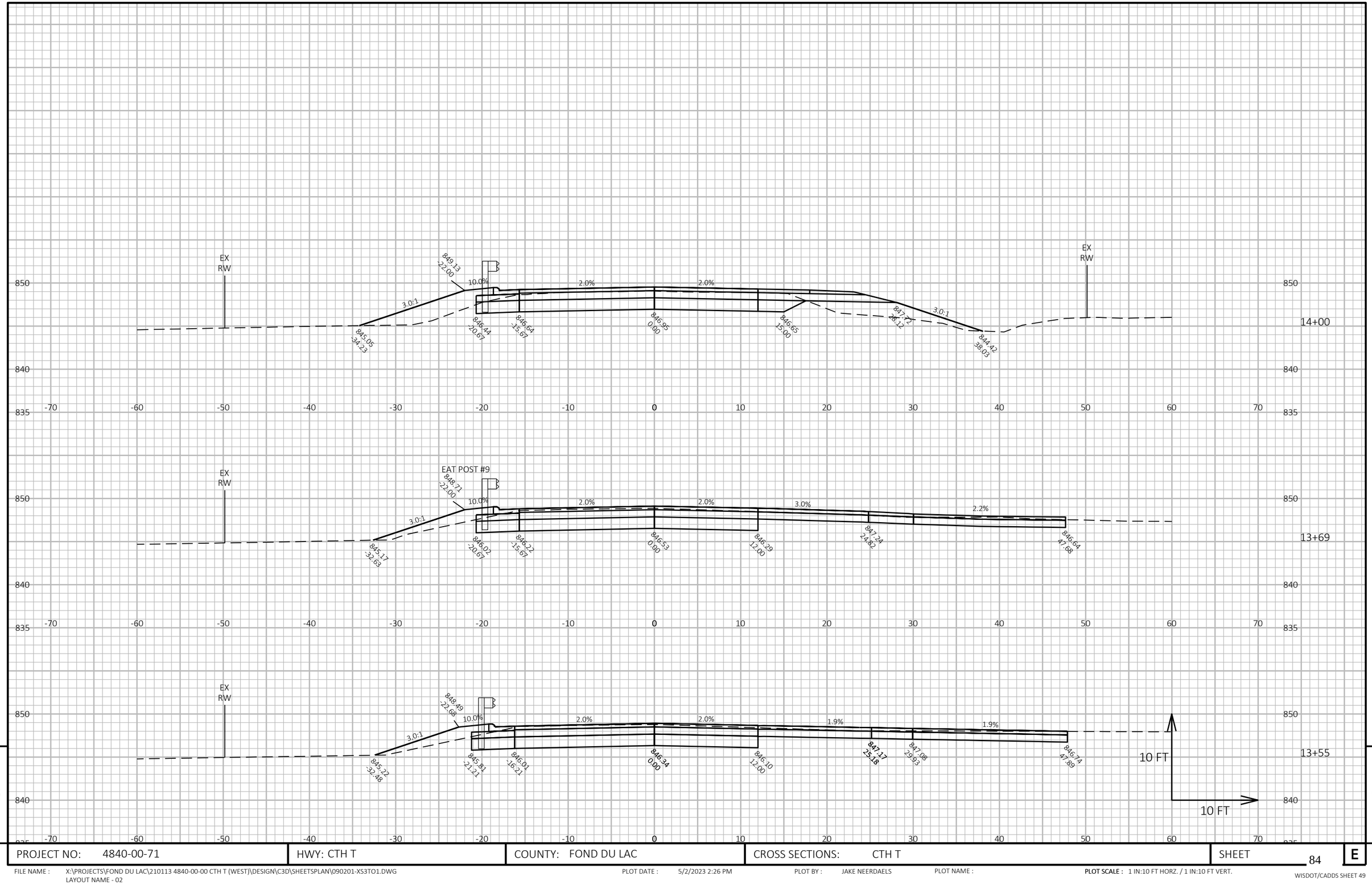
9

9

PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 83	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\090201-XS3TO1.DWG
LAYOUT NAME - 01

PLOT DATE : 3/25/2024 2:51 PM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



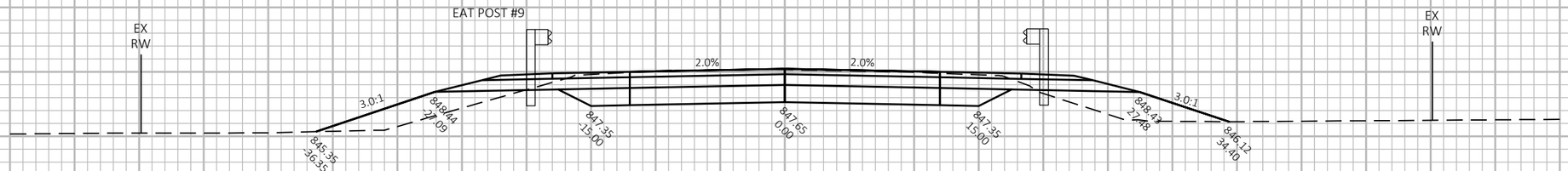
PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 84	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\090201-XS3TO1.DWG
LAYOUT NAME - 02

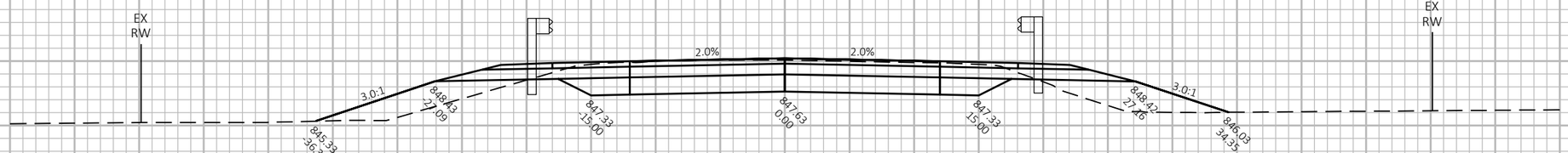
PLOT DATE : 5/2/2023 2:26 PM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END PROJECT
STA 15+15



15+07



15+00

14+98

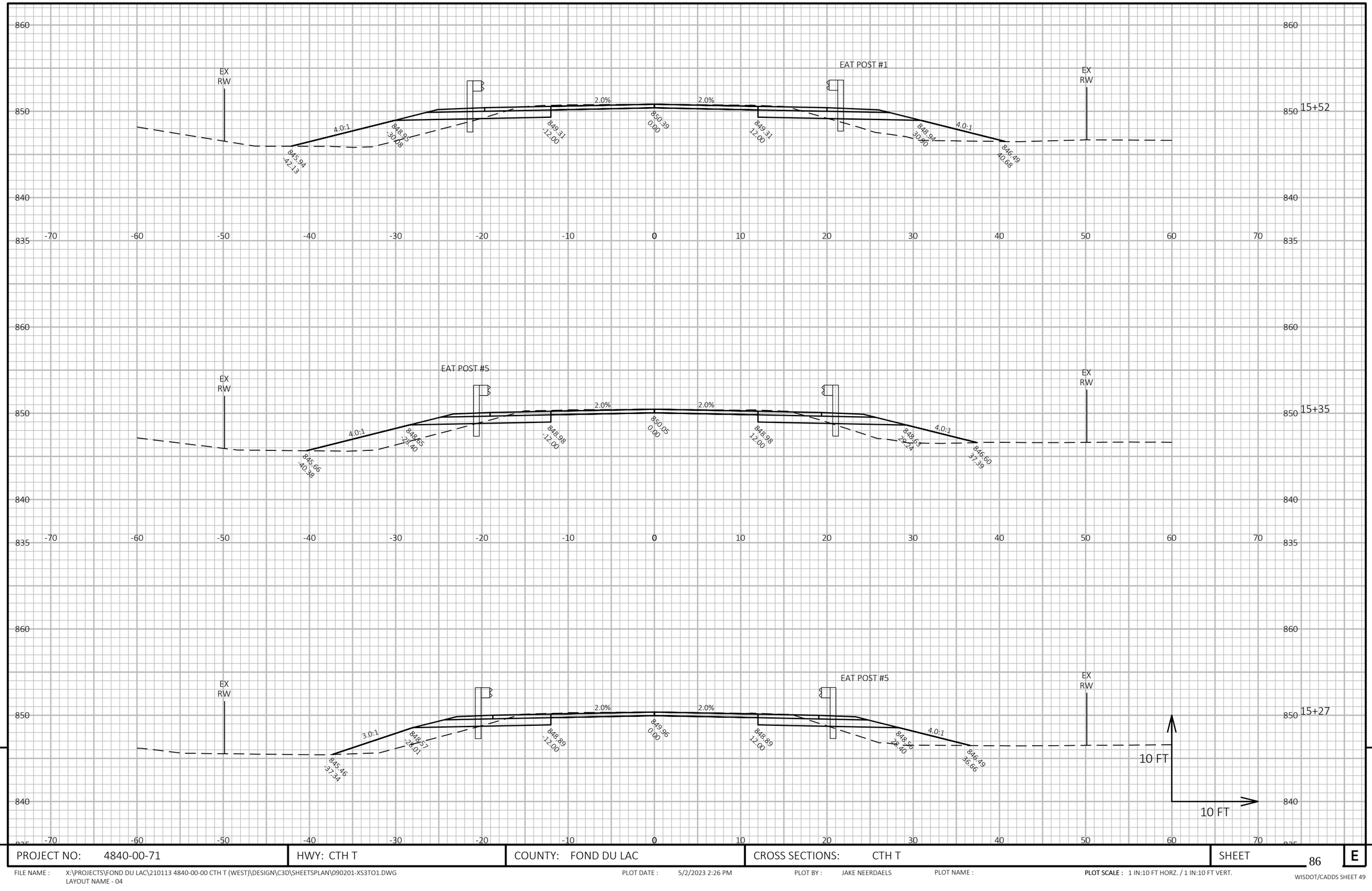
9

9

PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 85	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\090201-XS3TO1.DWG
LAYOUT NAME - 03

PLOT DATE : 5/2/2023 2:26 PM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 86 E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\090201-XS3TO1.DWG
LAYOUT NAME - 04

PLOT DATE : 5/2/2023 2:26 PM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

DRIVEWAY LT

EX RW

3.5%

10.0%

2.0%

2.0%

4.0:1

850.69
-26.02

850.97
-12.00

852.04
0.00

850.97
12.00

850.71
25.12

849.12
31.46

16+35

EX RW

4.0:1

846.71
-37.98

846.04
-24.65

2.0%

2.0%

850.29
-12.00

851.36
0.00

850.29
12.00

849.98
27.52

4.0:1

847.26
38.42

16+00

EX RW

EAT POST #1

4.0:1

846.05
-43.09

849.17
-30.86

2.0%

2.0%

849.48
-12.00

850.56
0.00

849.48
12.00

849.12
30.51

4.0:1

846.65
40.17

15+60

10 FT

10 FT

9

9

PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 87	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\090201-XS3TO1.DWG
LAYOUT NAME - 05

PLOT DATE : 3/26/2024 9:57 AM

PLOT BY : JAKE NEERDAELS

PLOT NAME :

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

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA 16+57

EX RW

EX RW

2.0%

2.0%

852.08
-15.49

852.21
-12.00

852.45
0.00

852.21
12.00

16+57

10 FT

10 FT

860
850
840

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

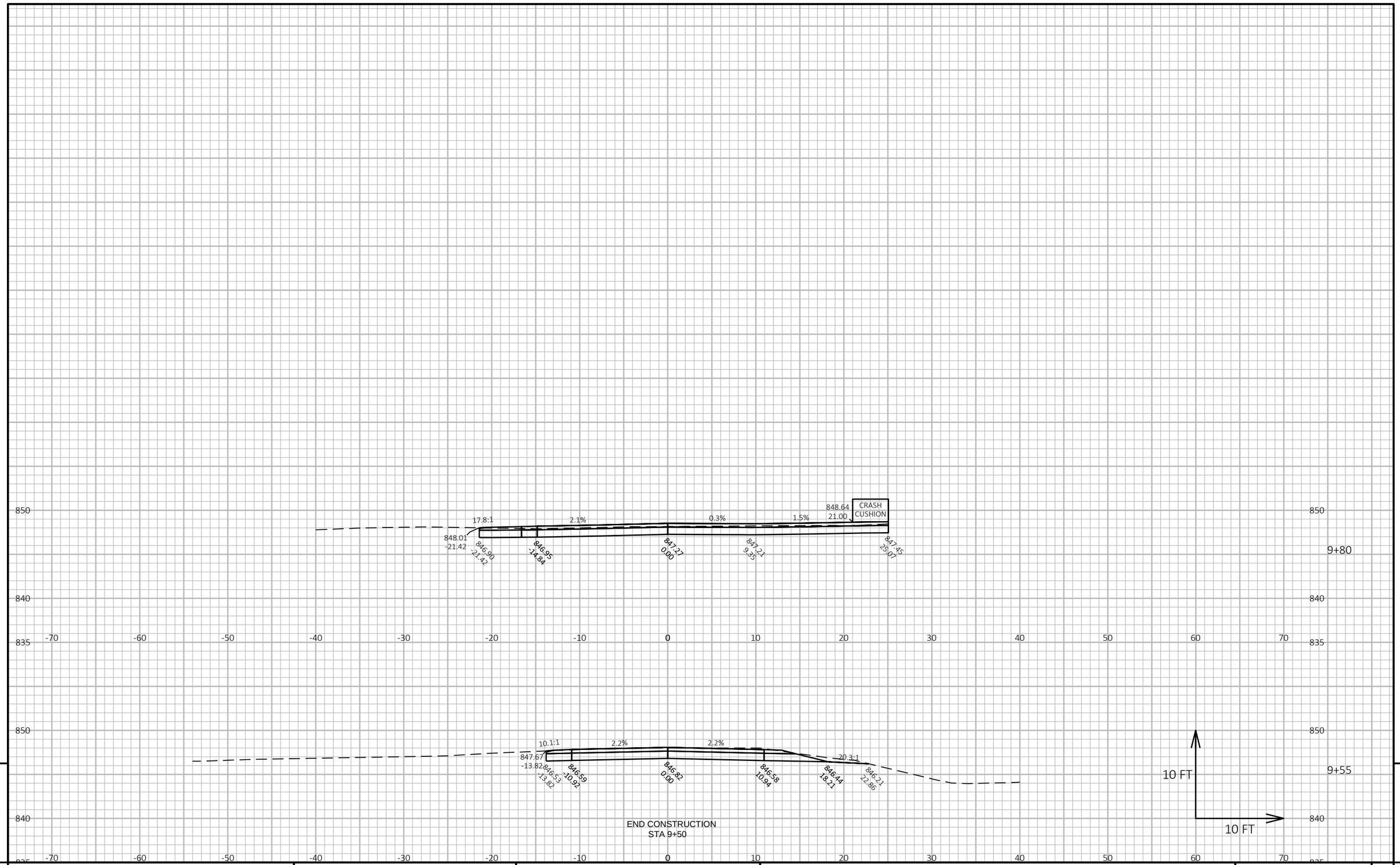
9

9

PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 88	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\090201-XS3TO1.DWG
LAYOUT NAME - 06

PLOT DATE : 5/2/2023 2:26 PM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

9

PROJECT NO: 4840-00-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: ELEANORE LANE	SHEET 89	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210113 4840-00-00 CTH T (WEST)\DESIGN\C3D\SHEETSPLAN\090201-XS3TO1.DWG
LAYOUT NAME - 07

PLOT DATE : 6/19/2024 10:17 AM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov

GRE

PROJECT ID: 4840-01-71

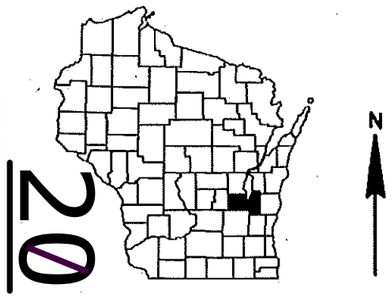
WITH: 4840-01-71

COUNTY: FOND DU LAC

DECEMBER 2024

ORDER OF SHEETS

TOTAL SHEETS = 108



N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T EMPIRE, CTH T

TAYCHEEDAH CREEK BRIDGE

LOCAL STREET

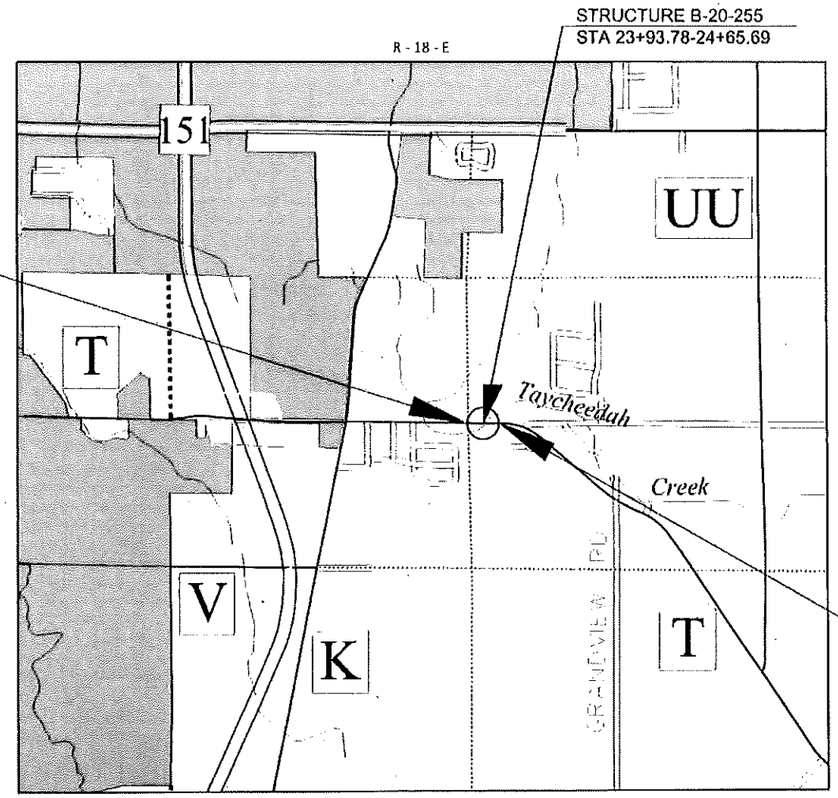
FOND DU LAC COUNTY

STATE PROJECT NUMBER
4840-01-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4840-01-71	WISC 2025111	1

ACCEPTED FOR
FOND DU LAC COUNTY

DATE: 6/10/24 [Signature and Title of Official] HIGHWAY COMMISSIONER



DESIGN DESIGNATION

A A D.T	(2025)	=	2157
A A D T	(2045)	=	2793
D H V.		=	350
D D.		=	50/50
T		=	8.4 %
DESIGN SPEED		=	35 MPH
ESALS		=	300,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	995.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		WATER	W
		UTILITY PEDESTAL	
WOODED OR SHRUB AREA		POWER POLE	
		TELEPHONE POLE	

LAYOUT

SCALE 0 0.5 MI

TOTAL NET LENGTH OF CENTERLINE = 0.095 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), FOND DU LAC 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 18

jt ENGINEERING

WISCONSIN
MURRAY R. GLEN
36246-006
GREEN BAY, WI
PROFESSIONAL ENGINEER

DATE 5/20/24 [Professional Engineer's signature]

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JT ENGINEERING, INC.
Designer	JT ENGINEERING, INC
Project Manager	KATIE SCHWARTZ
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	BRIAN EDWARDS

APPROVED FOR THE DEPARTMENT

DATE 7-10-24 [Signature]

E

FILE NAME X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\010101_TI DWG

PLOT DATE 6/24/2024 6:39 AM

PLOT BY JEFF ZLATOHLAVEK

PLOT NAME

GENERAL NOTES

IF THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS, THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGER'S HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

ANY UTILITY WHICH IS NOT A MEMBER OF DIGGER'S HOTLINE MUST BE CONTRACTED SEPARATELY.

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

SAW CUT LOCATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD,

ALL DISTURBED AREAS NOT OTHERWISE SURFACED ARE TO BE TOPSOILED, FERTILIZED, SEEDED AND COVERED WITH EROSION MAT.

THE LOCATIONS OF ALL EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

DO NOT PLACE FERTILIZER 20 FEET OF A WETLAND OR WATER BODY.

WETLAND ARE PRESENT. DO NOT OPERATE MACHINERY OUTSIDE OF SLOPE INTERCEPTS

TACK COAT HAS BEEN ESTIMATED AT AN APPLICATION OF 0.05 GAL/SY AND SHALL BE PLACED BETWEEN THE LAYERS OF ASPHALTIC PAVEMENT.

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

SEQUENCE OF SECTION 2

GENERAL NOTES
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
DETOUR PLANS

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 STRIP- TURF	.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 SLOPE: TURF			.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 = 1.48 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.35 ACRES

UTILITY CONTACTS

ALLIANT ENERGY (GAS & ELECTRIC)
JOSH COLLIEN
883 W SCOTT ST
FOND DU LAC, WI 54937
OFFICE: 920-322-6646
CELL: 608-393-5695
EMAIL: JOSHUACOLLIEN@ALLIANTENERGY.COM

AT&T (COMMUNICATIONS)
CHARLES BARTELT
70 E DIVISION STREET
FOND DU LAC, WI 54935
OFFICE: 920-929-1013
CELL: 920-375-9172
EMAIL: CB1461@ATT.COM

CHARTER (COMMUNICATIONS)
ADAM OLSON
165 KNIGHTS WAY
FOND DU LAC, WI 54935
OFFICE: 920-349-5055
CELL: 920-263-0065
EMAIL: ADAM.OLSON@CHARTER.COM

TOWN OF EMPIRE SANITARY DISTRICT #3 (SANITARY)
NORBERT KOLELL
N6254 CREEK ROAD
FOND DU LAC, WI 54937
PHONE: 920-922-3584
EMAIL: NCKOLELL@ATT.NET

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

AGENCY/ PROJECTS CONTACTS

WISCONSIN DNR - NE REGION
MARTY DILLENBURG
625 E COUNTY ROAD Y STE 700
OSHKOSH, WI 54901
(920) 410-7428
MARTY.DILLENBURG@WISCONSIN.GOV

WISDOT - NE REGION
KATIE SCHWARTZ
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920) 492-5652
KATIEA.SCHWARTZ@DOT.WI.GOV

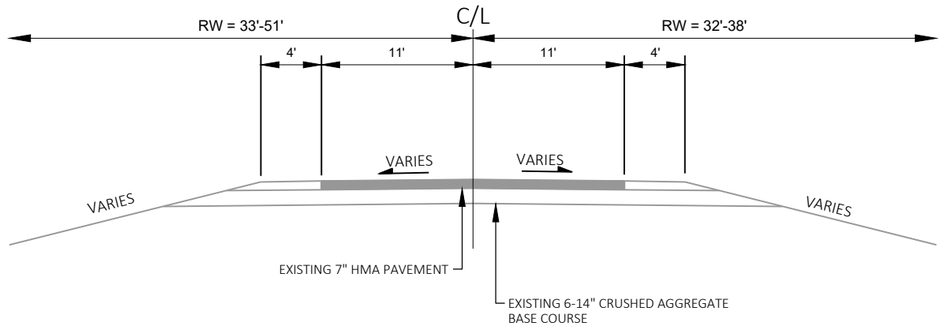
DESIGN CONTACT

JT ENGINEERING, INC.
RICH GLEN
1077 CENTENNIAL CENTRE BLVD
HOBART, WI 54155
PHONE: 920-468-4771
EMAIL: RICHG@JT-ENGINEERING.COM

STANDARD ABBREVIATIONS

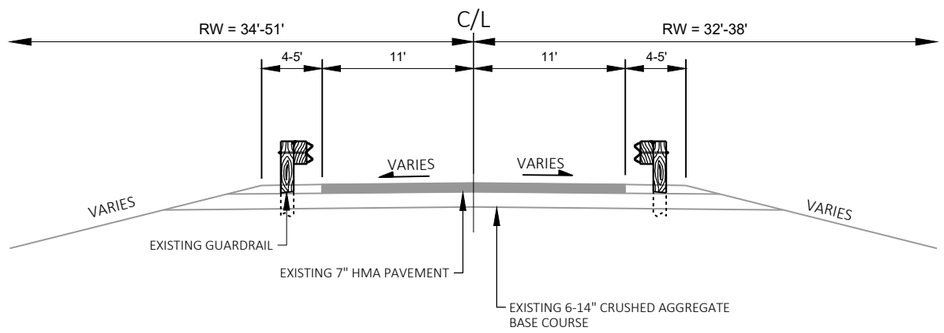
ADT	AVERAGE DAILY TRAFFIC
AC	ASPHALT CEMENT
AGG	AGGREGATE
ASPH	ASPHALT
BM	BENCHMARK
C/L	CENTERLINE
CONC	CONCRETE
CMP	CORRUGATED METAL PIPE
CR	CREEK
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
ESALS	EQUIVALENT SINGLE AXIS LOADS
EXIST	EXISTING
FE	FIELD ENTRANCE
HYD	HYDRANT
IP	IRON PIPE
L	LENGTH OF CURVE
LC	LONG CHORD OF CURVE
LR	LENGTH OF RUN OFF
MH	MANHOLE
NC	NORMAL CROWN
PT	POINT OF TANGENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PE	PRIVATE ENTRANCE
R	RADIUS
REM	REMOVE
R/L OR RL	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
RCPSS	REINFORCED CONCRETE STORM SEWER
RO	RUNOUT
R/W	RIGHT OF WAY
STA	STATION
SE	SUPER ELEVATION
SS	STORM SEWER
T	TANGENT
TEL	TELEPHONE
TLE	TEMPORARY LIMITED EASEMENT
T	TRUCKS
VC	VERTICAL CURVE
W	WELL

2



EXISTING TYPICAL SECTION

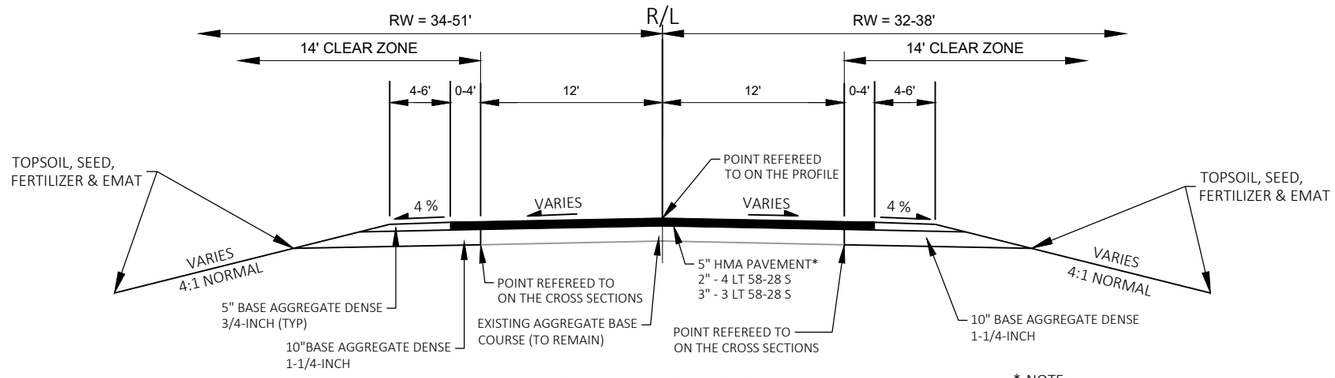
STA 21+10 - 23+34
STA 25+26 - 27+69



EXISTING TYPICAL SECTION

STA 23+34 - 24+12
STA 24+46 - 25+26

2

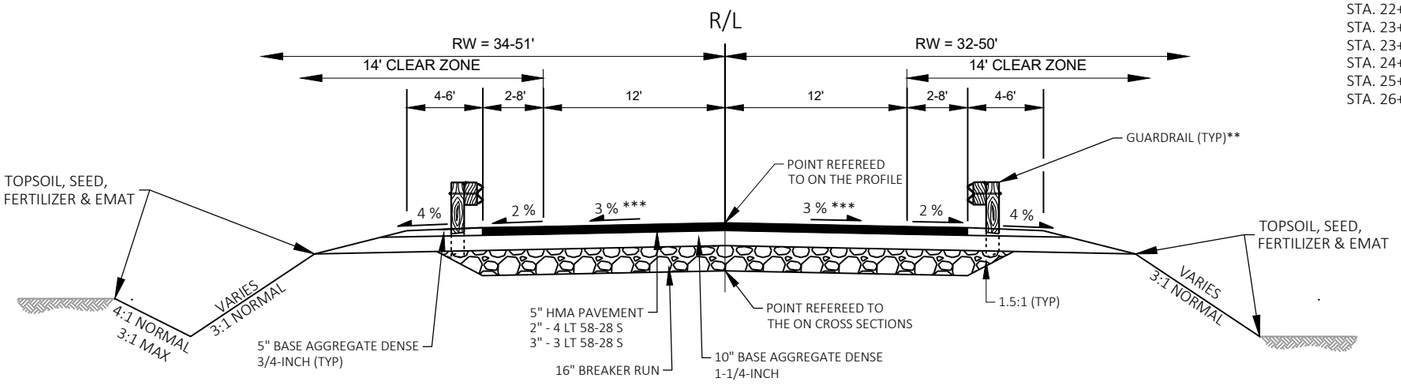


FINISHED TYPICAL SECTION

STA 21+75 - 22+00
STA 26+85 - 27+00

*-NOTE:
HMA PAVEMENT TO BE REMOVED/REPLACED AND ADDITIONAL BASE AGGREGATE DENSE 1/4-INCH FOR WIDENING AT THE FOLLOWING:
STA 21+75 - STA 22+00

*** TRANSITION CROSS SLOPES AS FOLLOWS:
STA. 21+75 - 22+10 TRANSITION FROM EXISTING TO 3%
STA. 22+10 - 23+25 3%
STA. 23+25 - 23+63 TRANSITION FROM 3% TO 2%
STA. 23+63 - 24+97 2%
STA. 24+97 - 25+35 TRANSITION FROM 2% TO 3%
STA. 25+35 - 26+65 3%
STA. 26+65 - 27+00 TRANSITION FROM 3% TO EXISTING



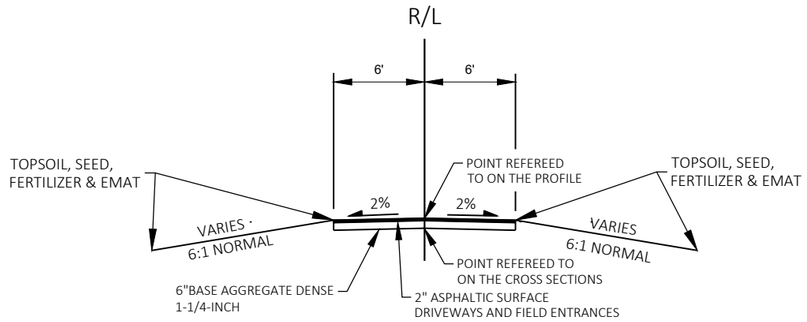
FINISHED TYPICAL SECTION

STA 22+00 -23+93.78
STA 24+65.69 - 26+85

**- GUARDRAIL LOCATIONS
STA 22+69.84 - 23+63.90 LT
STA 24+50.41 - 25+41.44 RT
STA 24+99.67 - 25+89.65 LT

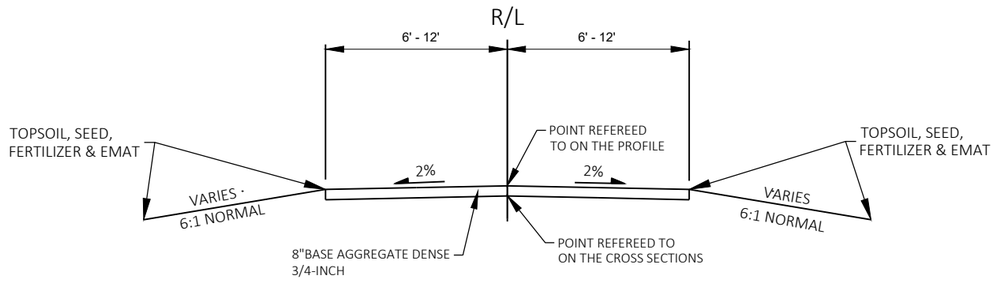
PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	TYPICAL SECTIONS	SHEET 4	E

2



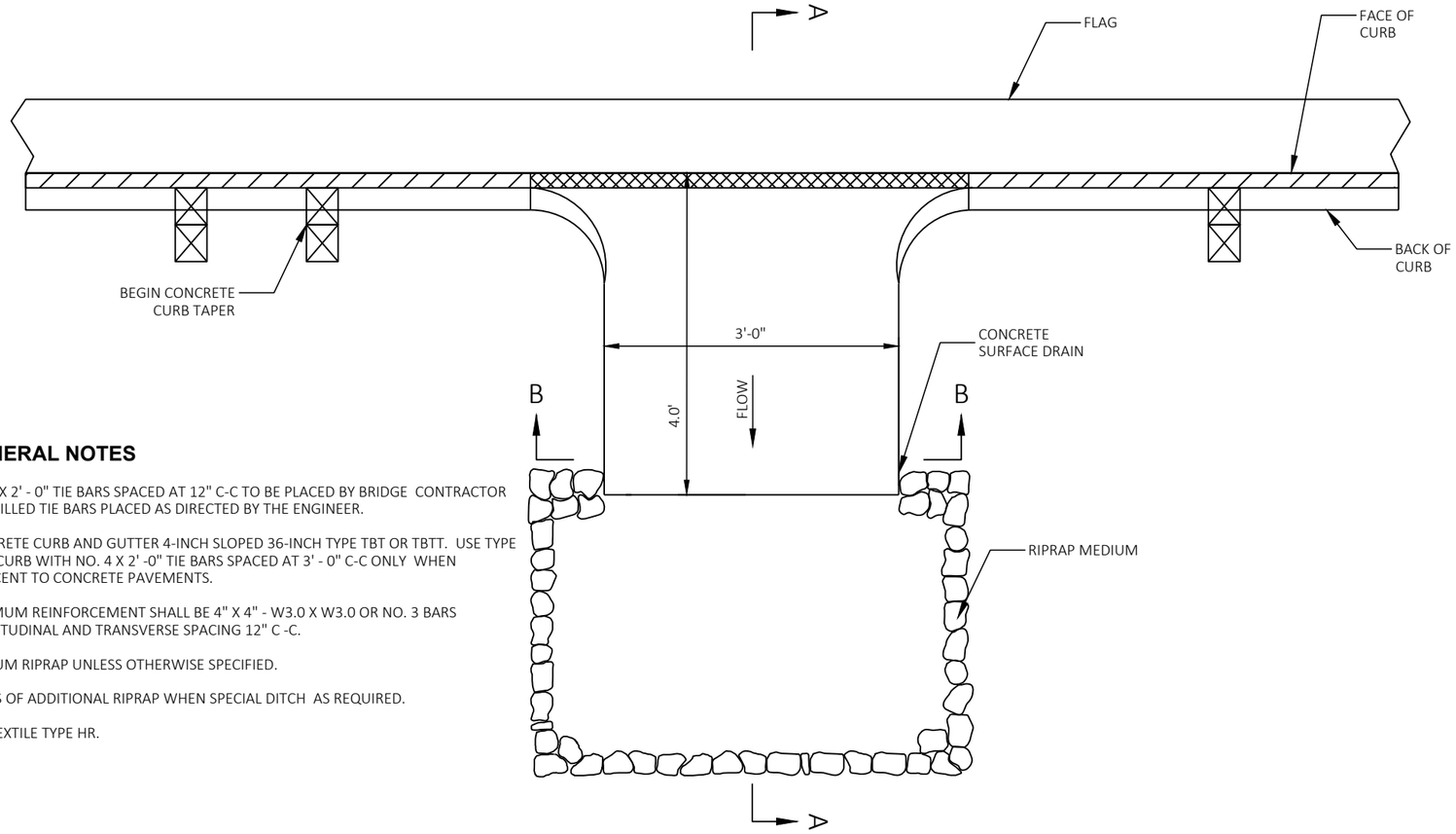
NW DRIVEWAY FINISHED TYPICAL SECTION

STA 10+18 - 10+91.58



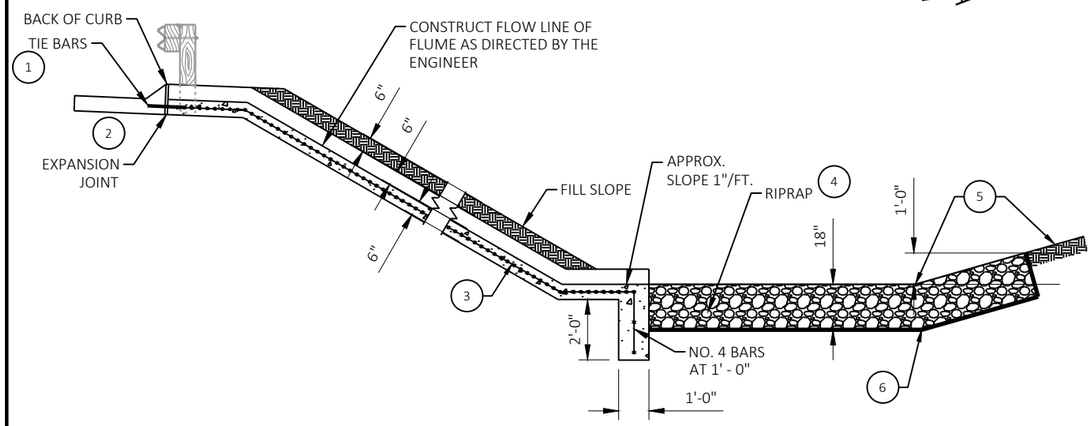
SE DRIVEWAY FINISHED TYPICAL SECTION

STA 8+86.54 - 9+83

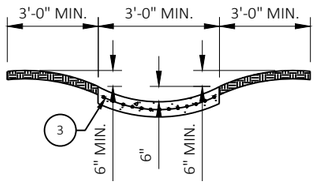


GENERAL NOTES

1. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
2. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
3. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
4. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
5. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
6. GEOTEXTILE TYPE HR.

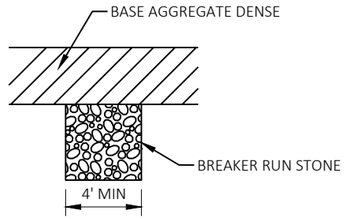


SECTION A - A

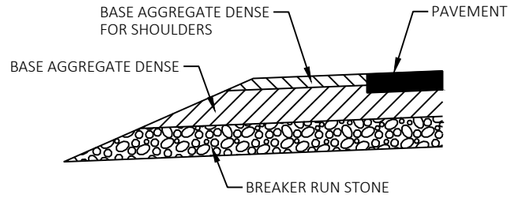


SECTION B - B

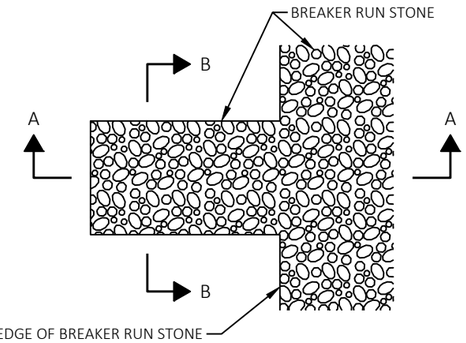
CONCRETE SURFACE DRAIN



SECTION B-B



SECTION A-A



DETAIL FOR FRENCH DRAINS

STA 22+00 LT
STA 22+00 RT
STA 24+75 RT
STA 25+05 LT

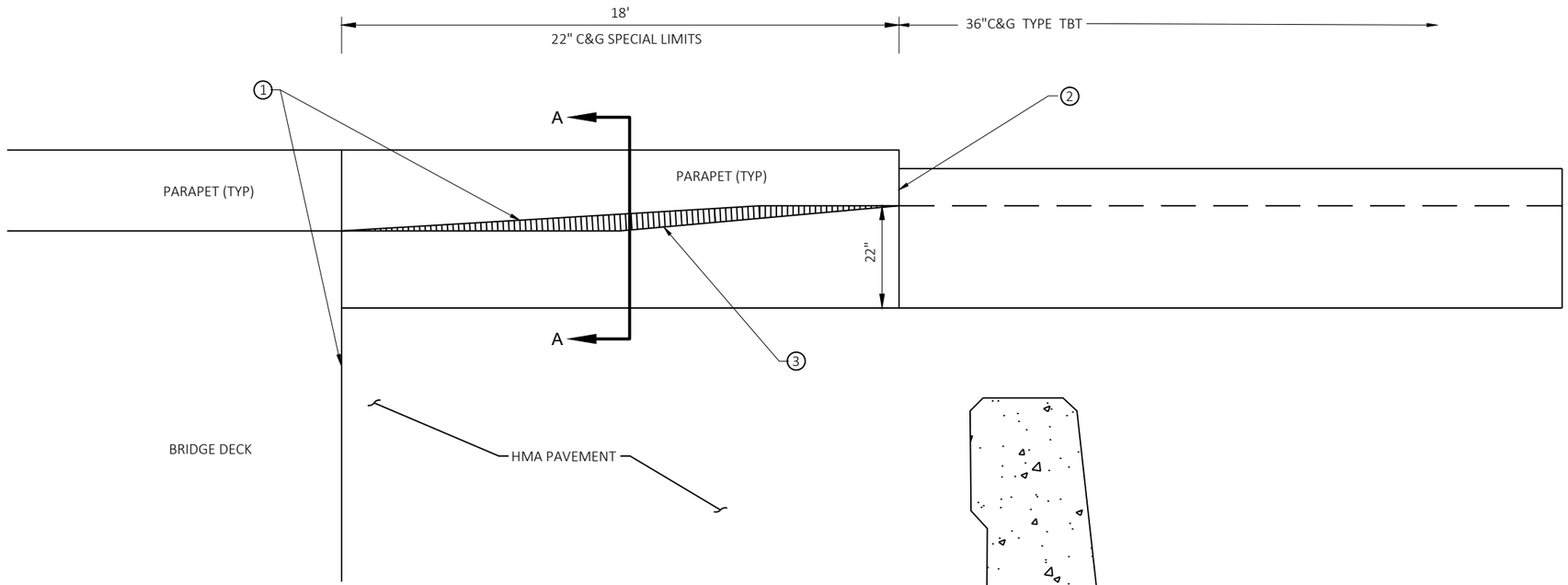
FINAL LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ENGINEER.

EXCAVATION REQUIRED TO CONSTRUCT FRENCH DRAINS SHALL BE CONSIDERED INCIDENTAL TO THE ITEM BREAKER RUN STONE.

PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	CONSTRUCTION DETAILS	SHEET 6	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\021001_CD.DWG
LAYOUT NAME - CD_01

PLOT DATE : 6/24/2024 11:50 AM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1 IN:40 FT



1. JOINT SEAL CONFORMING TO STANDARD SPECIFICATION 415.2.6 -INCIDENTAL TO 22" C&G SPECIAL
2. JOINT SEAL ACCORDING TO SDD-8D2
3. SEE STRUCTURE PLAN FOR TIE BAR CONNECTION INTO WING WALL

22-INCH CURB & GUTTER SPECIAL

SECTION A-A

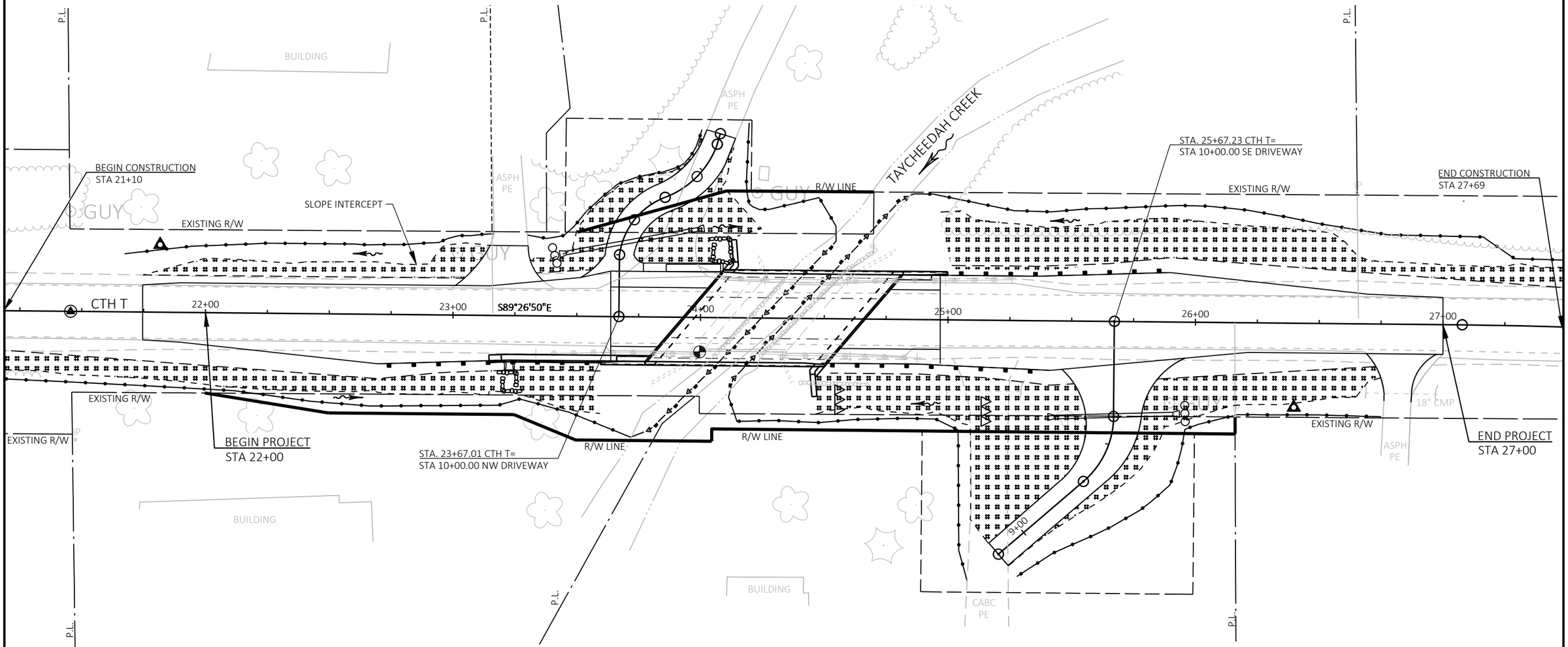
2

LEGEND

- EROSION MAT URBAN, CLASS I, TYPE B
- SILT FENCE
- RIP RAP OR STONE DITCH CHECK
- SLOPE INTERCEPT
- TURBIDITY BARRIER
- SURFACE WATER FLOW
- TEMPORARY DITCH CHECK
- CULVERT PIPE DITCH CHECKS

N

2

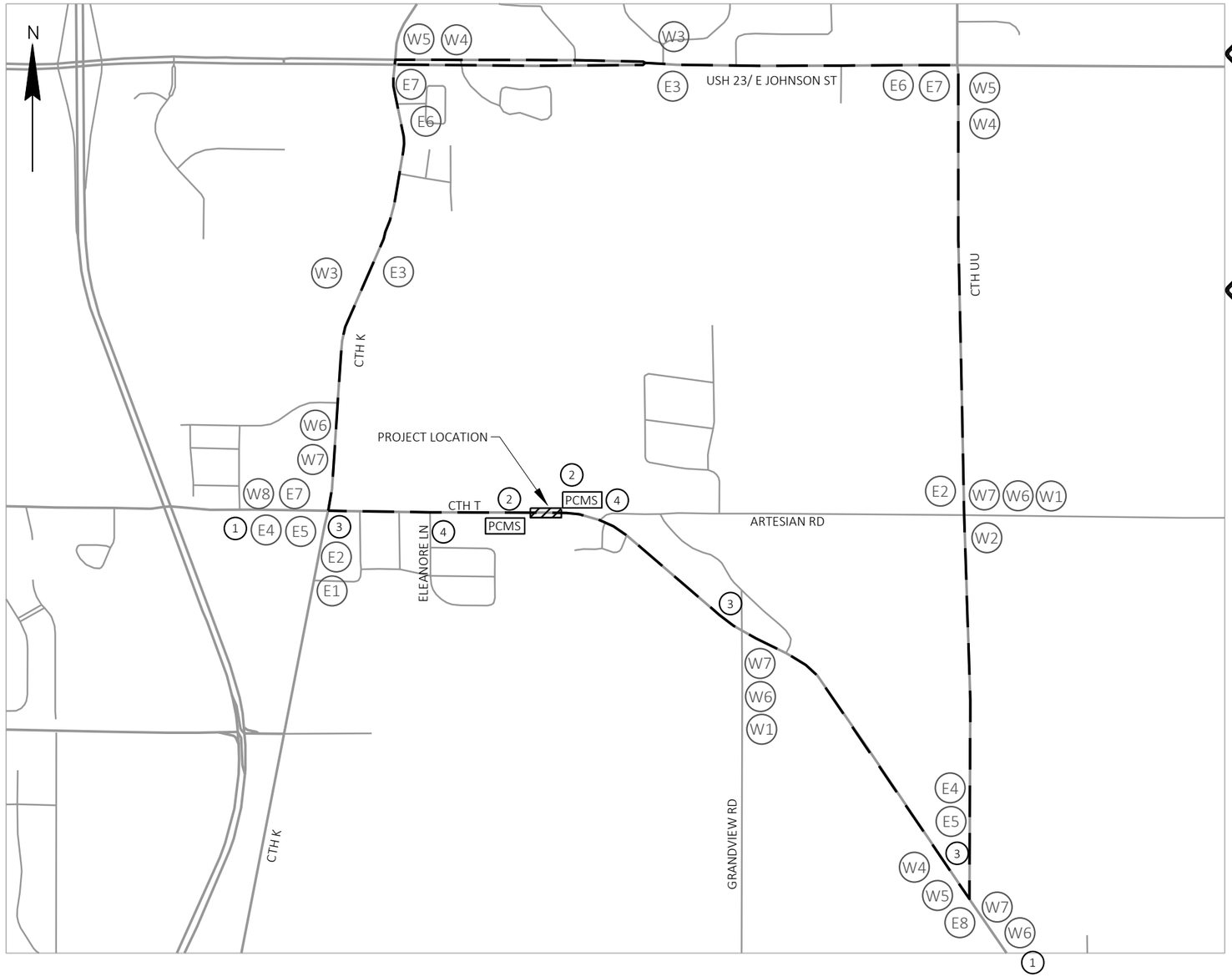


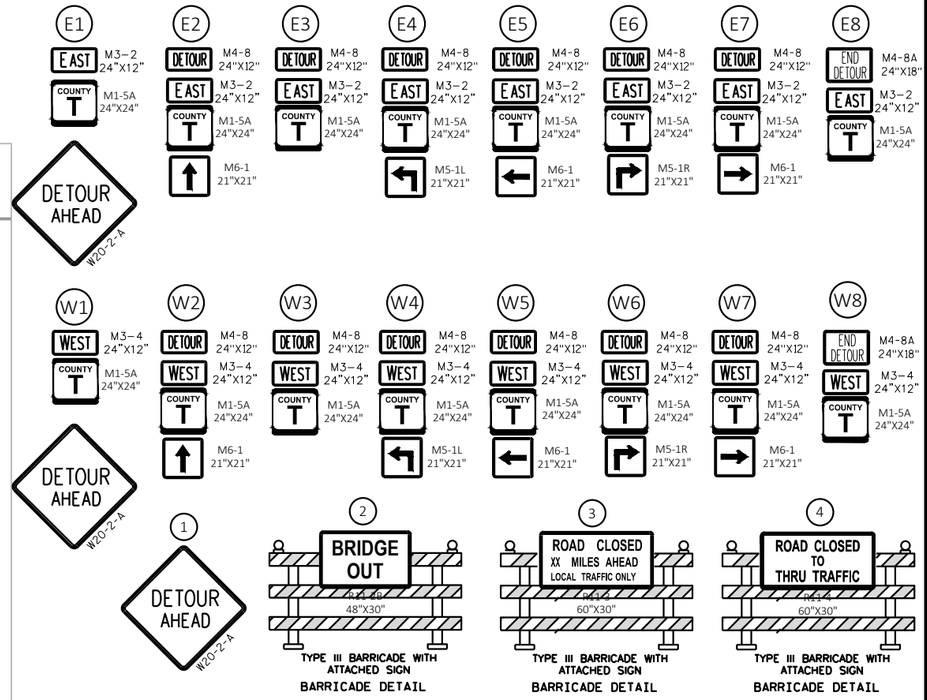
PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	EROSION CONTROL	SHEET 8	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\022001_EC.DWG
LAYOUT NAME - Erosion Control

PLOT DATE : 10/14/2024 6:30 AM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42





LEGEND:

- DETOUR ROUTE
- PROJECT AREA
- PCMS — PORTABLE CHANGEABLE MESSAGE SIGN

DETOUR PLAN NOTES:

PORTABLE CHANGEABLE MESSAGE SIGNS MUST BE PLACED ALONG EASTBOUND/WESTBOUND CTH T APPROACHES TO PROJECT AREA 7 DAYS PRIOR TO DETOUR. LOCATIONS AS DIRECTED BY ENGINEER. USE THE FOLLOWING MESSAGE.

1ST FRAME	2ND FRAME
ROAD	BEGINNING
TO	<DATE>
CLOSE	

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATIONS OF THE DETOUR SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES.

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

ALL EXISTING SIGN MESSAGES THAT CONFLICT WITH TRAFFIC CONTROL DETOUR SIGNS SHALL BE COVERED OR REMOVED.

SEE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" & "DETOUR SIGNING FOR MAINLINE CLOSURES" FOR SIGN SPACING AND LOCATIONS

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

ALL M3 SERIES SIGNS WHICH ARE PART OF THE DETOUR ROUTE MARKING SIGNING ASSEMBLY OR ATTACHED TO ANY WARNING SIGN SHALL BE BLACK LETTERING ON A WHITE BACKGROUND

ALL SIGNS TO BE 48" X 48" UNLESS OTHERWISE NOTED

PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	DETOUR PLAN	SHEET 9	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\027001_DT.DWG
LAYOUT NAME - DT 1-1500FT
PLOT DATE : 7/2/2024 12:07 PM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1 IN: 1500 FT

4840-01-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	1.000	1.000
0004	201.0220	Grubbing	ID	18.000	18.000
0006	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0008	203.0250	Removing Structure Over Waterway Remove Debris (structure) 02. B-20-020	EACH	1.000	1.000
0012	204.0165	Removing Guardrail	LF	205.000	205.000
0014	205.0100	Excavation Common	CY	858.000	858.000
0018	206.1001	Excavation for Structures Bridges (structure) 02. B-20-255	EACH	1.000	1.000
0020	208.0100	Borrow	CY	237.000	237.000
0022	210.1500	Backfill Structure Type A	TON	662.000	662.000
0026	213.0100	Finishing Roadway (project) 02. 4840-01-71	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	235.000	235.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	916.000	916.000
0032	311.0110	Breaker Run	TON	1,700.000	1,700.000
0034	415.0060	Concrete Pavement 6-Inch	SY	85.000	85.000
0036	415.0410	Concrete Pavement Approach Slab	SY	165.000	165.000
0038	450.4000	HMA Cold Weather Paving	TON	438.000	438.000
0040	455.0605	Tack Coat	GAL	103.000	103.000
0042	460.2000	Incentive Density HMA Pavement	DOL	264.000	264.000
0044	460.5223	HMA Pavement 3 LT 58-28 S	TON	248.000	248.000
0046	460.5224	HMA Pavement 4 LT 58-28 S	TON	165.000	165.000
0048	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	25.000	25.000
0050	502.0100	Concrete Masonry Bridges	CY	262.000	262.000
0052	502.3200	Protective Surface Treatment	SY	306.000	306.000
0054	502.3210	Pigmented Surface Sealer	SY	95.000	95.000
0056	503.0137	Prestressed Girder Type I 36W-Inch	LF	345.000	345.000
0058	505.0400	Bar Steel Reinforcement HS Structures	LB	8,300.000	8,300.000
0060	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	26,070.000	26,070.000
0062	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	10.000	10.000
0064	506.4000	Steel Diaphragms (structure) B-20-255	EACH	4.000	4.000
0066	516.0500	Rubberized Membrane Waterproofing	SY	28.000	28.000
0068	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	4.000	4.000
0070	520.3318	Culvert Pipe Class III-A 18-Inch	LF	96.000	96.000
0072	550.0500	Pile Points	EACH	24.000	24.000
0074	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	540.000	540.000
0076	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	49.000	49.000
0078	602.3010	Concrete Surface Drains	CY	0.500	0.500
0080	606.0200	Riprap Medium	CY	7.000	7.000
0082	606.0300	Riprap Heavy	CY	346.000	346.000
0084	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	186.000	186.000
0086	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0088	614.0800	Crash Cushions Permanent	EACH	1.000	1.000
0090	614.2500	MGS Thrie Beam Transition	LF	118.200	118.200
0092	614.2610	MGS Guardrail Terminal EAT	EACH	3.000	3.000
0094	619.1000	Mobilization	EACH	0.600	0.600
0096	624.0100	Water	MGAL	23.000	23.000
0098	625.0100	Topsoil	SY	1,710.000	1,710.000
0100	628.1504	Silt Fence	LF	1,500.000	1,500.000
0102	628.1520	Silt Fence Maintenance	LF	1,500.000	1,500.000
0104	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000

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Line	Item	Item Description	Unit	Total	Qty
0106	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0108	628.2008	Erosion Mat Urban Class I Type B	SY	1,710.000	1,710.000
0110	628.6005	Turbidity Barriers	SY	170.000	170.000
0112	628.7504	Temporary Ditch Checks	LF	20.000	20.000
0114	628.7555	Culvert Pipe Checks	EACH	4.000	4.000
0116	628.7570	Rock Bags	EACH	10.000	10.000
0118	629.0210	Fertilizer Type B	CWT	1.100	1.100
0120	630.0120	Seeding Mixture No. 20	LB	18.000	18.000
0122	630.0140	Seeding Mixture No. 40	LB	31.000	31.000
0124	630.0200	Seeding Temporary	LB	18.000	18.000
0126	630.0500	Seed Water	MGAL	29.000	29.000
0128	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0132	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0138	642.5001	Field Office Type B	EACH	0.600	0.600
0142	643.0420	Traffic Control Barricades Type III	DAY	1,300.000	1,300.000
0144	643.0705	Traffic Control Warning Lights Type A	DAY	1,560.000	1,560.000
0148	643.0900	Traffic Control Signs	DAY	10,270.000	10,270.000
0150	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0152	643.5000	Traffic Control	EACH	0.600	0.600
0154	645.0111	Geotextile Type DF Schedule A	SY	104.000	104.000
0156	645.0120	Geotextile Type HR	SY	547.000	547.000
0158	645.0130	Geotextile Type R	SY	17.000	17.000
0160	646.2020	Marking Line Epoxy 6-Inch	LF	1,510.000	1,510.000
0162	650.4500	Construction Staking Subgrade	LF	735.000	735.000
0164	650.5000	Construction Staking Base	LF	735.000	735.000
0166	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	67.000	67.000
0170	650.6501	Construction Staking Structure Layout (structure) 02. B-20-255	EACH	1.000	1.000
0174	650.9911	Construction Staking Supplemental Control (project) 02. 4840-01-71	EACH	1.000	1.000
0176	650.9920	Construction Staking Slope Stakes	LF	735.000	735.000
0178	690.0150	Sawing Asphalt	LF	70.000	70.000
0180	715.0502	Incentive Strength Concrete Structures	DOL	1,548.000	1,548.000
0182	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0186	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 02. 24+30	EACH	1.000	1.000
0188	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	600.000	600.000
0190	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0192	SPV.0060	Special 01. RECONSTRUCT EXISTING SANITARY MANHOLE	EACH	1.000	1.000
0194	SPV.0090	Special 01. Concrete Curb and Gutter 22-Inch	LF	18.000	18.000

GRUBBING

STATION	TO	STATION	LOCATION	201.0205 GRUBBING STA	201.0220 GRUBBING ID
23+00	-	24+00	CTH T LT	-	18
25+50	-	26+50	CTH T LT	1	-
			TOTAL 0010	**1**	**18**

REMOVING SMALL CULVERTS

CATEGORY	STATION	LOCATION	203.0100 REMOVING SMALL CULVERTS EACH
0010	23+90	CTH T LT	1
0010	25+15	CTH T RT	1
		TOTAL 0010	**2**

REMOVING GUARDRAIL SUMMARY

CATEGORY	STATION		STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
0010	23+33	-	24+00	CTH K RT	67
0010	24+10	-	24+26	CTH K LT	16
0010	24+33	-	24+88	CTH K RT	55
0010	24+59	-	25+26	CTH K LT	67
			TOTAL 0010		**205**

EARTHWORK SUMMARY

CATEGORY	From/To Station	LOCATION	205.0100 Common Excavation Cut (1)	Unusable Pavement Material (2)	Available Material (3)	Unexpanded Fill	Expanded Fill (4) Factor 1.25	Mass Ordinate +/- (5)	208.0100 Borrow	Comment:
0010	21+10 TO 24+25	CTH T	466	139	327	128	160	167	-167	WEST APPROACH
0010	24+51 TO 27+69	CTH T	392	136	256	528	660	-404	404	EAST APPROACH
		Total 0010	858	275	583	656	820	-237	237	

1) Unusable Pavement is included in Cut

2) Unusable Pavement Material = Existing Asphaltic Pavement

3) Available Material = Cut - Unusable Pavement Material

4) Expanded Fill Factor = 1.25 Expanded Fill = Unexpanded Fill * Fill Factor

5) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

BASE AGGREGATE SUMMARY

CATEGORY	STATION		STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	305.0110 BREAKER RUN TON	624.0100 WATER MGAL
0010	21+10	-	24+13	CTH T	78	350	700	9
0010	24+92	-	27+69	CTH T	87	366	850	9
0010	10+00	-	10+92	NW DRIVEWAY	--	50	--	1
0010	8+78	-	10+00	SE DRIVEWAY	60	--	--	1
0010	UNDISTRUBUTED				10	150	150	3
TOTAL 0010					**235**	**916**	**1,700**	**23**

CONCRETE SUMMARY

CATEGORY	STATION		STATION	LOCATION	415.0410 CONCRETE PAVEMENT APPROACH SLAB SY	415.0060 6-INCH CONCRETE PAVEMENT SY	602.3010 CONCRETE SURFACE DRAIN CY	601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TBT LF	SPV.0090.01 CONCRETE CURB & GUTTER 22-INCH LF
0010	23+64	-	23+94	STR B-20-20, W. APPROACH SLAB	80	43	0.5	-	-
0010	24+65	-	24+97	STR B-20-20, E. APPROACH SLAB	85	42	-	-	-
0010	23+15	-	23+64	CTH T RT	-	-	-	49	18
TOTAL 0010					**165**	**85**	**0.5**	**49**	**18**

RIP-RAP AND GEOTEXTILES SUMMARY

CATEGORY	STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0130 GEOTEXTILE TYPE R SY	REMARKS
0010	23+23	CTH T RT	3	7	APPROXIMATELY 6'X8'
0010	24+06	CTH T LT	4	10	APPROXIMATELY 7'X10'
TOTAL 0010			**7**	**17**	

ASPHALT PAVEMENT SUMMARY

CATEGORY	STATION		STATION	LOCATION	AREA SY	LOWER LAYER DEPTH IN	UPPER LAYER DEPTH IN	455.0605 TACK COAT GAL	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0120 ASPHALTIC SURFACE DRIVEWAY TON	450.4000 HMA COLD WEATHER PAVING TON
0010	21+75	-	23+64	CTH T	725	3.00	2.00	51	122	81	--	203
0010	24+97	-	27+00	CTH T	750	3.00	2.00	53	126	84	--	210
0010	21+75		27+00	DRIVEWAYS	150	--	3.00	--	--	--	25	25
TOTAL 0010								**103**	**248**	**165**	**25**	**438**

EROSION CONTROL SUMMARY

CATEGORY	STATION		STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATION EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EACH	628.6005 TURBIDITY BARRIER EROSION CONTROL SY	628.7555 CULVERT PIPE CHECKS EACH	628.7504 TEMPORARY DITCH CHECK LF	628.7570 ROCK BAGS EACH
0010	21+10	-	24+13	CTH T RT	285	285	5	3	85	---	---	5
0010	21+74	-	24+13	CTH T LT	310	310				2	---	---
0010	24+46	-	27+00	CTH T RT	350	350			75	2	---	5
0010	24+46	-	27+69	CTH T LT	305	305				---	20	---
UNDISTRIBUTED					250	250	---	---	10			
TOTAL 0010					**1,500**	**1,500**	**5**	**3**	**170**	**4**	**20**	**10**

GUARDRAIL SUMMARY

CATEGORY	STATION		STATION	LOCATION	614.0800 CRASH CUSHION PERMANENT EACH	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EA
0010	22+68	-	24+00	CTH T RT	-	39.4	1
0010	23+97	-		CTH T LT	1	-	-
0010	25+01	-	25+94	CTH T LT	-	39.4	1
0010	24+53	-	25+48	CTH T RT	-	39.4	1
TOTAL 0010					**1**	**118.2**	**3**

CULVERT PIPES SUMMARY

CATEGORY	STATION	LOCATION	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	520.3318 CULVERT PIPE CLASS III-A 18-INCH LF
0010	23+67	CTH T LT	2	48
0010	25+67	CTH T RT	2	48
TOTAL 0010			**4**	**96**

TRAFFIC CONTROL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	APPROXIMATE SERVICE DAYS	643.5000 TRAFFIC CONTROL PROJECT EA	643.0420 BARRICADES TYPE III NO. IN SERVICE	643.0420 DAYS	643.0705 WARNING LIGHTS TYPE A NO. IN SERVICE	643.0705 DAYS	643.1050 TRAFFIC CONTROL SIGNS PCMS NO. IN SERVICE	643.1050 DAYS	643.0900 SIGNS NO. IN SERVICE	643.0900 DAYS	643.1050 TRAFFIC CONTROL PCMS NO. IN SERVICE	643.1050 DAYS
0010	21+10	-	27+69	CTH T	65	0.6	14	910	12	780	2	14	14	910	2	14
	DETOUR			CTH T	65		6	390	12	780	---	---	144	9,360	---	---
TOTAL 0010						**0.6**		**1,300**		**1,560**		**14**		**10,270**		**14**

PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	MISCELLANEOUS QUANTITIES	SHEET 14	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\030201-MQ.DWG
LAYOUT NAME - 03
PLOT DATE : 10/14/2024 6:38 AM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1" = 1'

LANDSCAPING SUMMARY

CATEGORY	STATION		STATION	LOCATION	625.0100 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I, TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0140 SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
0010	21+10	-	24+13	CTH T RT	230	230	0.14	---	4	---	4
0010	21+74	-	24+13	CTH T LT	250	250	0.16	---	5	---	4
0010	24+46	-	27+69	CTH T RT	550	550	0.35	---	10	---	8
0010	24+46	-	27+00	CTH T LT	400	400	0.25	11	7	11	7
UNDISTRIBUTED					280	280	0.18	8	5	8	6
				TOTAL 0010	**1,710**	**1,710**	**1.1**	**18**	**31**	**18**	**29**

RECONSTRUCT EXISTING SANITARY MANHOLE

CATEGORY	STATION	LOCATION	SPV.0060.01 RECONSTRUCT EXISTING SANITARY MANHOLE EACH
0030	25+00	CTH T RT	1
		TOTAL 0030	**1**

PERMANENT SIGNING, TYPE II SUMMARY

CATEGORY	STATION	LOCATION	SIGN CODE	SIZE	DESCRIPTION	634.0614 WOOD POSTS 4X6X14-FOOT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF
0010	23+78	CTH T LT	W5-52L	12X36	BRIDGE HAZARD MARKER	1	3
0010	24+08	CTH T RT	W5-52R	12X36	BRIDGE HAZARD MARKER	1	3
0010	24+51	CTH T LT	W5-52L	12x36	BRIDGE HAZARD MARKER	1	3
0010	24+81	CTH T RT	W5-52R	12X36	BRIDGE HAZARD MARKER	1	3
					TOTAL 0010	**4**	**12**

MARKING SUMMARY

CATEGORY	STATION		STATION	LOCATION	646.2020 MARKING 6-INCH EPOXY YELLOW	WHITE	NOTES
0010	21+75	-	27+00	CTH T RT	525	---	WHITE EDGELINE
0010	21+75	-	27+00	CTH T LT	525	---	WHITE EDGELINE
0010	23+80		27+00	CTH T	---	320	CENTER LINE SOLID
0010	21+75		27+00	CTH T	---	140	CENTER LINE SKIPS
				SUBTOTAL	1,050	460	
				TOTAL 0010	**1,510**		

CONSTRUCTION STAKING SUMMARY

CATEGORY	STATION		STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB AND GUTTER LF	650.5501 CONSTRUCTION STAKING STRUCTURE LAYOUT EACH	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	21+10	-	23+64	CTH T	254	254	67	---	---	254
0010	24+65	-	27+69	CTH T	304	304	---	---	---	304
0010	10+18	-	10+91	NW DRIVEWAY	73	73	---	---	---	73
0010	8+78	-	9+83	SW DRIVEWAY	104	104	---	---	---	104
	PROJECT				---	---	---	1	1	---
				TOTAL 0010	**735**	**735**	**67**	**1**	**1**	**735**

SAWING SUMMARY

CATEGORY	STATION	LOCATION	690.0150 SAWING ASPHALT LF
0010	21+75	CTH T	22
0010	27+00	CTH T	22
		DRIVEWAYS	26
		TOTAL 0010	**70**

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
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)
TEMPORARY LIMITED EASEMENT AREA
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING TO BE REMOVED
BRIDGE CULVERT

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER 25
UTILITY NUMBER 40
PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	POINT OF COMPOUND CURVE	PCC
ACRES	AC	POINT OF INTERSECTION	PI
AHEAD	AH	PROPERTY LINE	PL
ALUMINUM	ALUM	RECORDED AS	(100')
AND OTHERS	ET AL	REEL / IMAGE	R/I
BACK	BK	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	CO	SECTION	SEC
COUNTY TRUNK HIGHWAY	CTH	SEPTIC VENT	SEPV
DISTANCE	DIST	SQUARE FEET	SF
CORNER	COR	STATE TRUNK HIGHWAY	STH
DOCUMENT NUMBER	DOC	STATION	STA
EASEMENT	EASE	TELEPHONE PEDESTAL	TP
EXISTING	EX	TEMPORARY LIMITED EASEMENT	TLE
GAS VALVE	GV	TRANSPORTATION PROJECT PLAT	TPP
GRID NORTH	GN	UNITED STATES HIGHWAY	USH
HIGHWAY EASEMENT	HE	VOLUME	V
IDENTIFICATION	ID		
LAND CONTRACT	LC		
LEFT	LT		
MONUMENT	MON		
NATIONAL GEODETIC SURVEY	NGS		
NUMBER	NO		
OUTLOT	OL		
PAGE	P		
POINT OF TANGENCY	PT		
PERMANENT LIMITED EASEMENT	PLE		
POINT OF BEGINNING	POB		
POINT OF CURVATURE	PC		

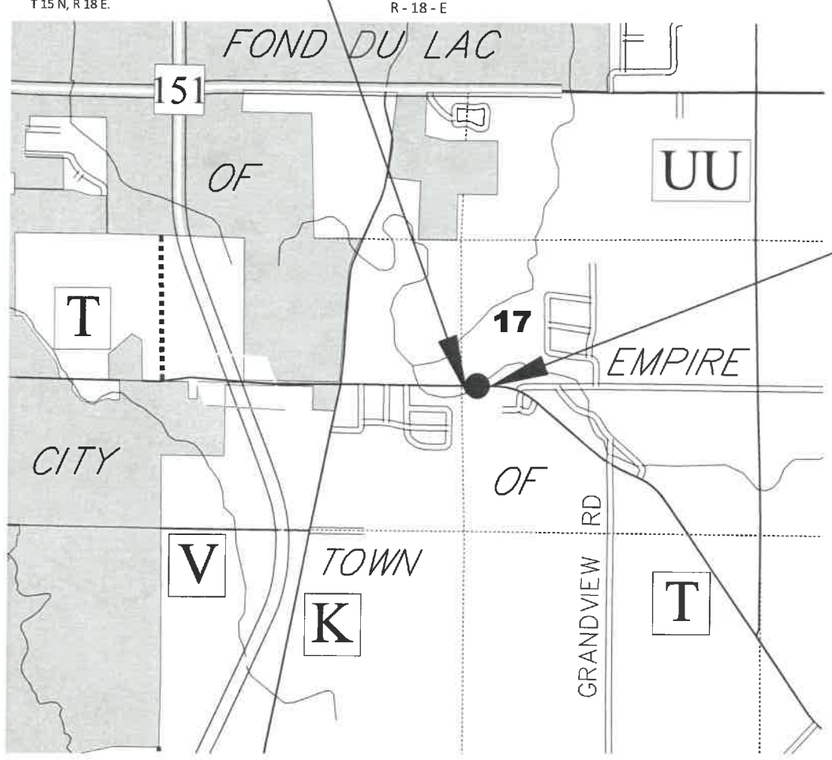
CURVE DATA ABBREVIATIONS

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

CONVENTIONAL UTILITY SYMBOLS

	NON COMPENSABLE	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—	
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		

BEGIN RELOCATION ORDER
PROJECT 4840-01-00
STA 21+45.53
Y = 382596.014
X = 834371.133
LOCATED 0.34' SOUTH AND 0.01' EAST OF THE WEST WEST CORNER OF SECTION 17, T 15 N, R 18 E.



END RELOCATION ORDER
PROJECT 4840-01-00
STA 26+75.00
Y = 382590.907
X = 834900.578
LOCATED 5.45' SOUTH AND 529.45' EAST OF THE WEST WEST CORNER OF SECTION 17, T 15 N, R 18 E.

LAYOUT
SCALE 0 SCALE

TOTAL NET LENGTH OF REFERENCE = 0.100 MILES

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
4840-01-00	4.00	2
FEDERAL PROJECT NUMBER ----------		

PLAT OF RIGHT-OF-WAY REQUIRED FOR

T EMPIRE, CTH T
TAYCHEEDAH CREEK BRIDGE

CTH T — FOND DU LAC COUNTY

CONSTRUCTION PROJECT NUMBER
4840-01-71

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), FOND DU LAC NAD 83 (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 MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4" X 24" CAPPED IRON BARS), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINT OF REFERENCE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH T SHOWN HEREIN IS BASED ON A PREVIOUS ROADWAY CSM 5112 AND CSM 1875.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES. AS DEFINED 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 NECESSARY OR DESIRABLE. ALL TLES EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

APPROVED
FOR
FOND DU LAC COUNTY

4-26-2023
DATE

(SIGNATURE)

JT ENGINEERING, INC
Consultant Services

THE SURVEY IS PREPARED AT THE REQUEST OF FOND DU LAC COUNTY. THE TOPOGRAPHY AND UTILITY SURVEY WAS PERFORMED IN JANUARY 2022. THIS THIS SURVEY IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
James R. Cappeart
S-3044
Green Bay
Wis.
LAND SURVEYOR

JAMES CAPPEART
REGISTRATION NUMBER S-3044

04/24/2023
DATE

REVISION DATE

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\RW\040000.DWG
PLOT DATE : 4/24/2023 2:54 PM
PLOT BY : JAMES CAPPEART
PLOT NAME :

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	OWNER (S)	INTEREST REQUIRED
200	ALLIANT ENERGY - ELECTRIC	RELEASE OF RIGHTS
201	AT&T	RELEASE OF RIGHTS
202	TOWN OF EMPIRE SANITARY DISTRICT NO. 3	RELEASE OF RIGHTS

(200) ALLIANT ENERGY (WISCONSIN POWER AND LIGHT COMPANY)
V.1051 PAGE 742-744 DOC. 496947- PARCEL 1

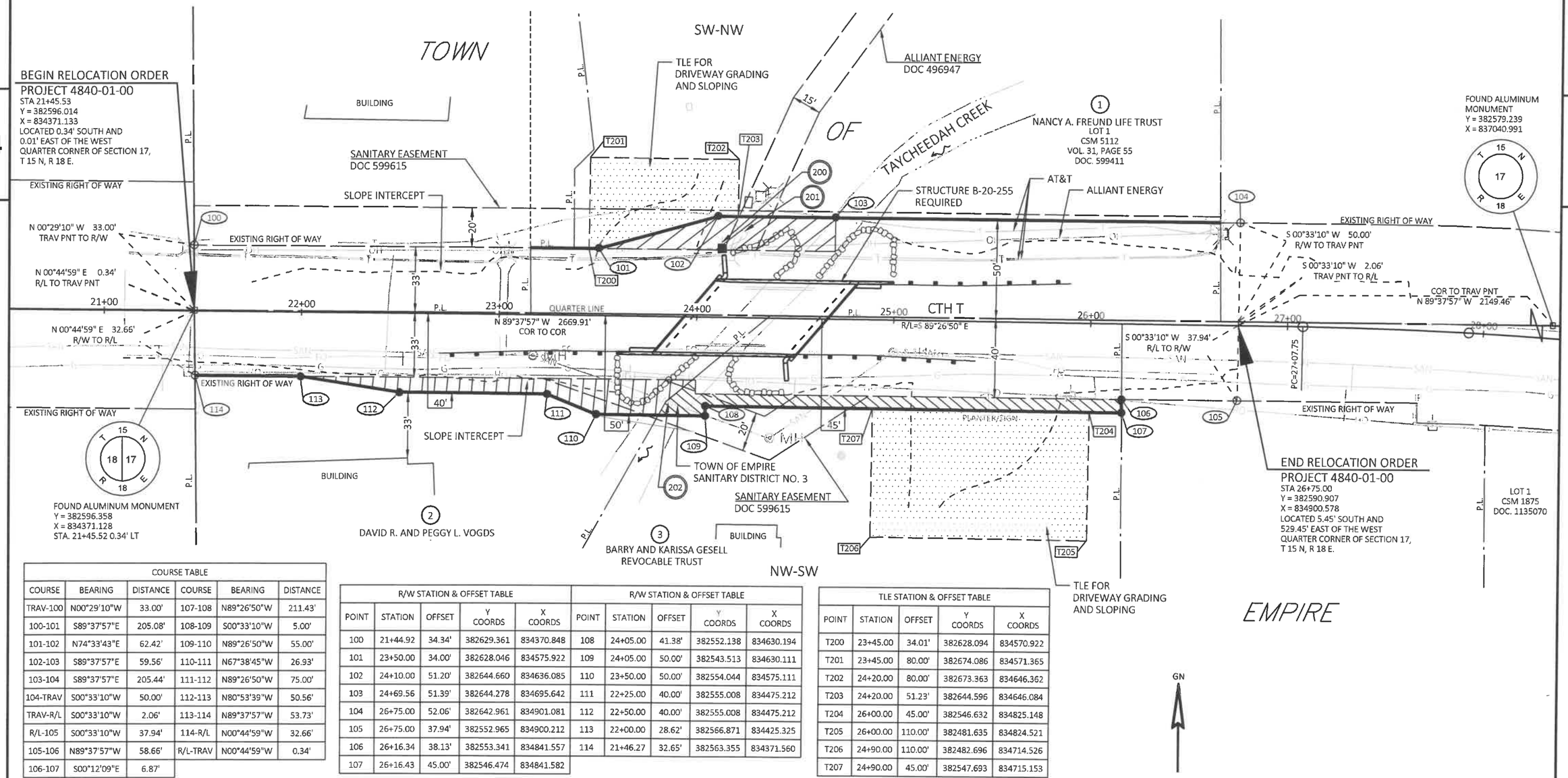
(201) AT&T (WISCONSIN TELEPHONE COMPANY)
V.726 PAGE 149-150 DOC. 301209- PARCEL 1

(202) TOWN OF EMPIRE SANITARY DISTRICT NO. 3
V.1278 PAGE 78-82 DOC. 599615- PARCELS 2 AND 3

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	FEE R/W ACRES, REQUIRED			TLE ACRES
			NEW	EXISTING	TOTAL	
1	NANCY A. FREUND LIFE TRUST	FEE AND TLE	0.035	0.341	0.376	0.063
2	DAVID R AND PEGGY L VODS	FEE	0.041	0.206	0.247	---
3	BARRY AND KARISSA GESELL REVOCABLE TRUST	FEE AND TLE	0.038	0.185	0.223	0.164

NOTE: OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO FOND DU LAC COUNTY



COURSE TABLE

COURSE	BEARING	DISTANCE	COURSE	BEARING	DISTANCE
TRAV-100	N00°29'10"W	33.00'	107-108	N89°26'50"W	211.43'
100-101	S89°37'57"E	205.08'	108-109	S00°33'10"W	5.00'
101-102	N74°33'43"E	62.42'	109-110	N89°26'50"W	55.00'
102-103	S89°37'57"E	59.56'	110-111	N67°38'45"W	26.93'
103-104	S89°37'57"E	205.44'	111-112	N89°26'50"W	75.00'
104-TRAV	S00°33'10"W	50.00'	112-113	N80°53'39"W	50.56'
TRAV-R/L	S00°33'10"W	2.06'	113-114	N89°37'57"W	53.73'
R/L-105	S00°33'10"W	37.94'	114-R/L	N00°44'59"W	32.66'
105-106	N89°37'57"W	58.66'	R/L-TRAV	N00°44'59"W	0.34'
106-107	S00°12'09"E	6.87'			

R/W STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS
100	21+44.92	34.34'	382629.361	834370.848
101	23+50.00	34.00'	382628.046	834575.922
102	24+10.00	51.20'	382644.660	834636.085
103	24+69.56	51.39'	382644.278	834695.642
104	26+75.00	52.06'	382642.961	834901.081
105	26+75.00	37.94'	382552.965	834900.212
106	26+16.34	38.13'	382553.341	834841.557
107	26+16.43	45.00'	382546.474	834841.582

R/W STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS
108	24+05.00	41.38'	382552.138	834630.194
109	24+05.00	50.00'	382543.513	834630.111
110	23+50.00	50.00'	382554.044	834575.111
111	22+25.00	40.00'	382555.008	834475.212
112	22+50.00	40.00'	382555.008	834475.212
113	22+00.00	28.62'	382566.871	834425.325
114	21+46.27	32.65'	382563.355	834371.560

TLE STATION & OFFSET TABLE

POINT	STATION	OFFSET	Y COORDS	X COORDS
T200	23+45.00	34.01'	382628.094	834570.922
T201	23+45.00	80.00'	382674.086	834571.365
T202	24+20.00	80.00'	382673.363	834646.362
T203	24+20.00	51.23'	382644.596	834646.084
T204	26+00.00	45.00'	382546.632	834825.148
T205	26+00.00	110.00'	382481.635	834824.521
T206	24+90.00	110.00'	382482.696	834714.526
T207	24+90.00	45.00'	382547.693	834715.153

REVISION DATE	DATE 4/24/2023	SCALE, FEET 0' 25' 50'	HWY: CTH T	STATE R/W PROJECT NUMBER 4840-01-00	PLAT SHEET 4.01
	GRID FACTOR		COUNTY: FOND DU LAC	CONSTRUCTION PROJECT NUMBER 4840-01-71	PS&E SHEET E

FILE NAME : 040001.DWG PLOT DATE : 4/24/2023 2:55 PM PLOT BY : JAMES CAPPEART PLOT NAME :

WISDOT/CADD:

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM1	23+99.74, 13.97' RT	870.93	CHISELED "X" ON SW WINGWALL
BM2	19+98.26, -62.60 LT	864.50	RR SPIKE IN POWER POLE
BM3	27+74.56, 47.46' RT	878.62	RR SPIKE IN POWER POLE

ALIGNMENT STATIONING
PI: 19+50.00
Y=382,597.900
X=834,175.612

ALIGNMENT STATIONING
PC: 27+07.75
Y=382,590.591
X=834,933.330

N

BEGIN CONSTRUCTION
STA 21+10

END CONSTRUCTION
STA 27+69

STA 21+75 - STA 22+00
REMOVE AND REPLACE
PAVEMENT

SLOPE INTERCEPT
(TYP)

SAW CUT
REQ'D

TLE REQUIRED FOR
DRIVEWAY CONSTRUCTION
AND SLOPING

STA. 10+91.58
MATCH EXISTING
SAW CUT REQ'D

CRASH CUSHION
REQ'D

TAYCHEEDAH CREEK

AT&T
(COMMUNICATIONS)

FRENCH DRAIN
(TYP)

STA. 25+67.23 CTH T=
STA 10+00.00 SE DRIVEWAY

EXISTING R/W

R/W LINE

(REMOVE)
18" CMP
CC

CTH T

S89°26'50"E

22+00 23+00 24+00 25+00 26+00 27+00

+14.93 12.00' LT
+36.56 18.00'LT
+89.65 20.00' LT
+69.65 12.00' LT
+69.84 20.00' RT
+89.82 12.00' RT
+14.74 15.98' RT 870.63
+19.64 15.67' RT 870.84
+22.91 18.00' RT
+63.90 15.67' RT 871.82
+88.36 18.00' RT
+41.44 20.00' LT
+21.44 12.00' RT

BM#1

FRENCH DRAIN
SEE CONSTRUCTION
DETAIL (TYP)

MH
CONFLICTS
(BY OTHERS)

RIP RAP
MEDIUM

CONCRETE SURFACE DRAIN
SEE CONSTRUCTION DETAIL

CONCRETE CURB AND GUTTER
4-INCH SLOPED, 36-INCH TBT

CURB AND GUTTER
22-INCH

TOWN OF EMPIRE
(SANITARY)

STA. 23+67.01 CTH T=
STA 10+00.00 NW DRIVEWAY

MH CONFLICTS
P RIM 873.53
E RIM 870.85
REMOVE AND REPLACE
CONE SECTION

TLE REQUIRED FOR
DRIVEWAY CONSTRUCTION
AND SLOPING

PLANTER
(REMOVE)

CHARTER
COMMUNICATIONS

ALLIANT ENERGY
(ELECTRIC)

SAW CUT
REQ'D

ALLIANT ENERGY
(GAS)

CAUTION

BUILDING

BEGIN PROJECT
STA 22+00
MATCH EXISTING
Y=382,595.489
X=834,425.601

STA. 8+86.54
MATCH EXISTING

END PROJECT
STA 27+00
MATCH EXISTING
SAW CUT REQ'D

5

5

VCL = 120.00
K = 49.24

STA 22+00.00
EL 868.37

VPC STA 23+34.00
VPC EL 871.57

VPI STA 23+50.00
VPI EL 871.96

VPT STA 23+66.00
VPT EL 872.16

STA 24+95.80
EL 873.85

VPC STA 25+80.00
VPC EL 874.48

VPI STA 26+40.00
VPI EL 874.93

STA 27+00.00
EL 876.84

VPT STA 27+00.00
VPT EL 876.84

PROPOSED PROFILE

2.39%
1.30%
0.75%
3.18%

EXISTING PROFILE

HIGH WATER $_{100}$
ELEV = 866.39

HIGH WATER $_{2}$
ELEV = 864.21

OBSERVED ICE
ELEV = 861.69
(1-25-2022)

VCL = 32.00
K = 29.14

STA 24+29.71
REMOVE STRUCTURE B-20-020
SINGLE SPAN STEEL GIRDER
34 FOOT OVERALL LENGTH

STA 24+29.71
STRUCTURE B-20-255
SINGLE SPAN 36 W" PRESTRESSED GIRDER BRIDGE
73.67 FEET LONG
36' CLEAR ROADWAY
40° SKEW LHF

EXISTING PROFILE ELEVATIONS
PROPOSED PROFILE ELEVATIONS

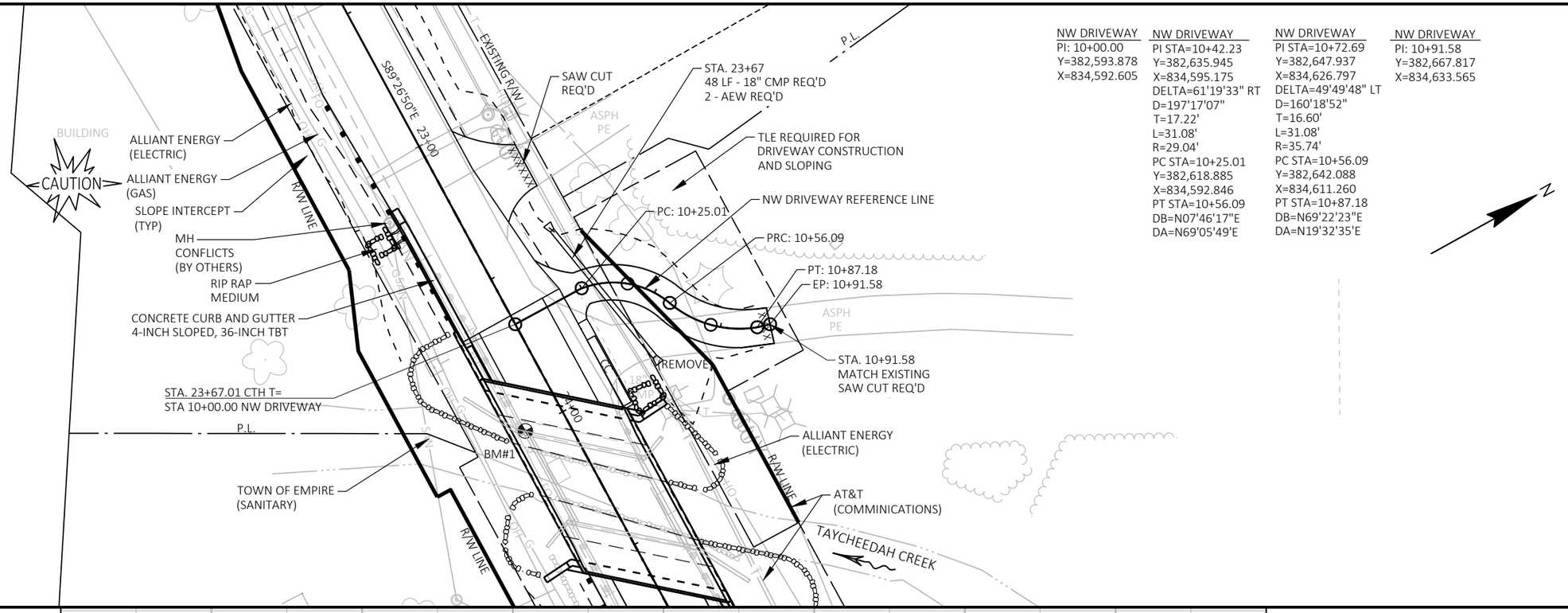
867.45	867.74	868.37	868.37	869.05	869.56	869.52	870.76	869.87	871.91	870.21	872.60	870.86	873.25	871.21	873.88	872.13	874.25	873.48	874.67	875.05	875.50	876.84	876.84	877.86
21+25	21+50	22+00	22+50	23+00	23+50	24+00	24+50	25+00	25+50	26+00	26+50	27+00	27+25											

PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	PLAN AND PROFILE: CTH T	SHEET 18	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 03

PLOT DATE : 7/2/2024 10:28 AM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



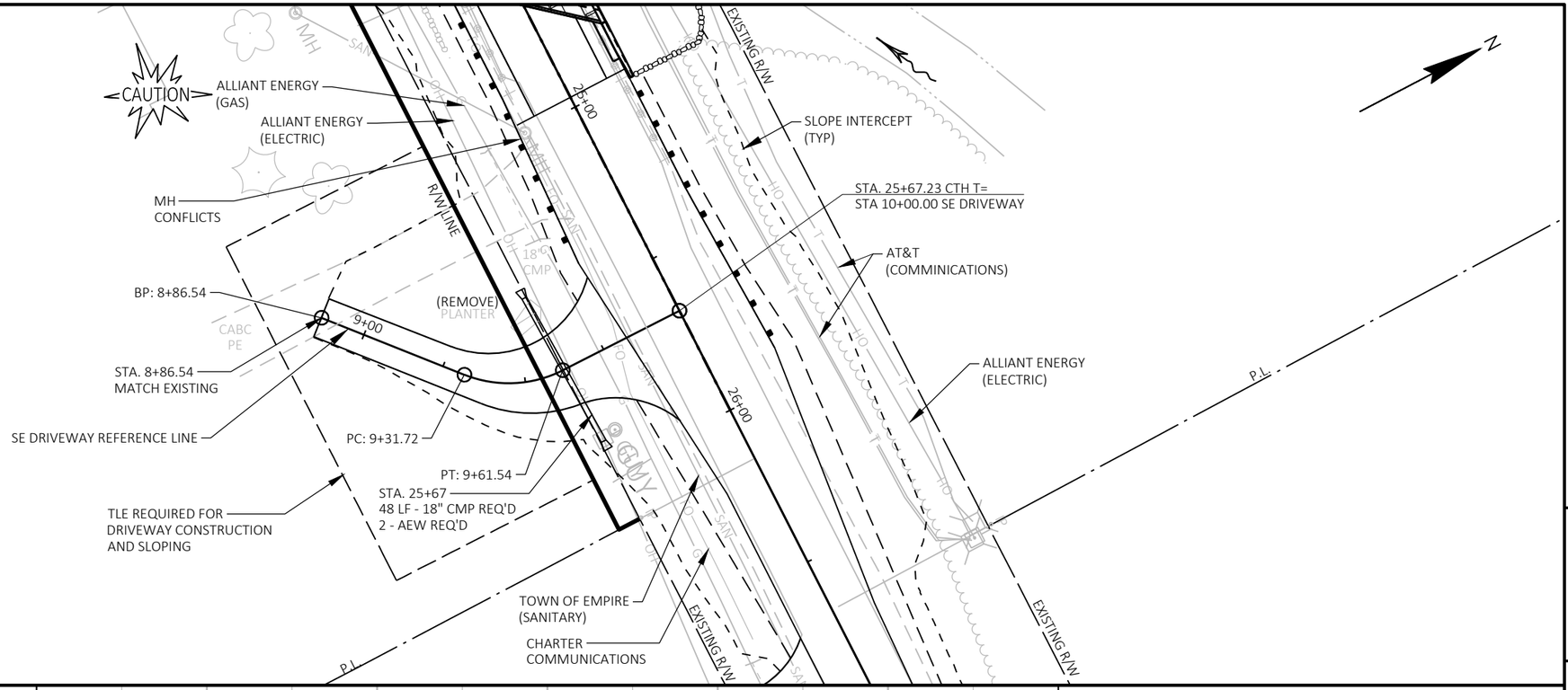
PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	PLAN AND PROFILE: NW DRIVEWAY	SHEET 19	E

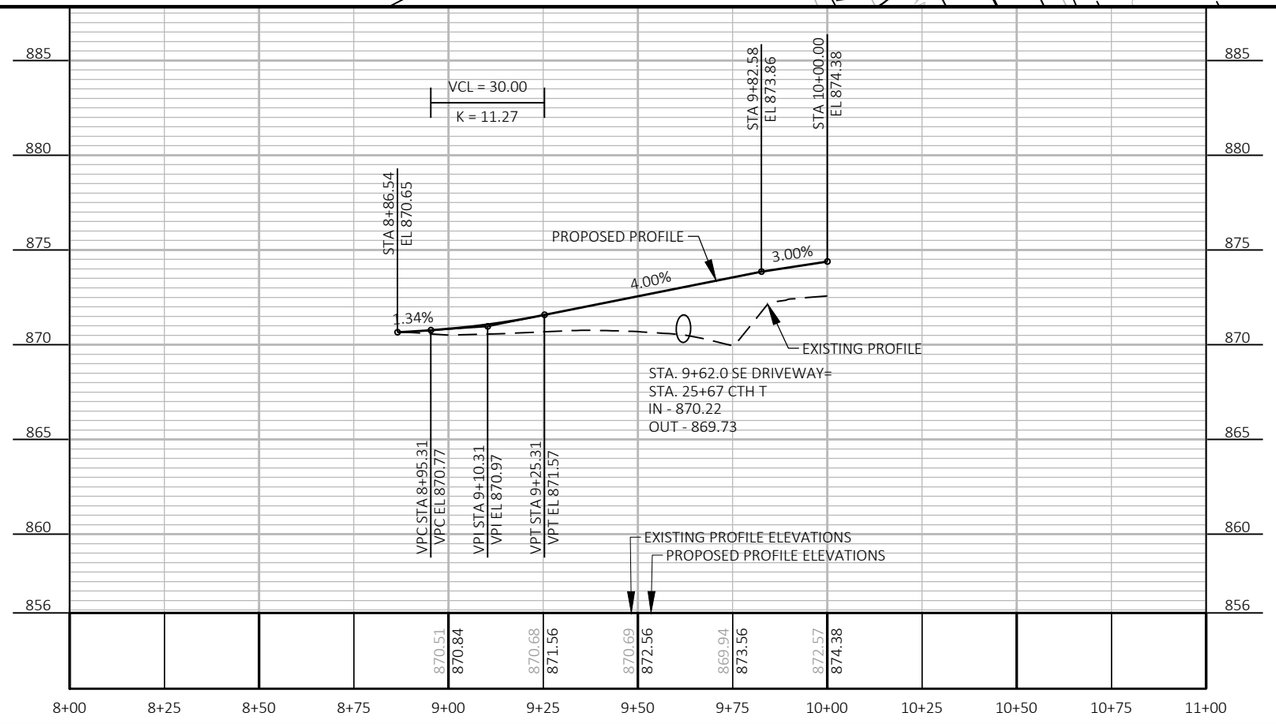
FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 05
PLOT DATE : 7/2/2024 10:28 AM PLOT BY : JEFF ZLATOHLAVEK PLOT NAME : PLOT SCALE : 1 IN:40 FT

SE DRIVEWAY
PI: 10+00.00
Y=382,591.946
X=834,792.811

SE DRIVEWAY
PI STA=9+47.61
Y=382,537.608
X=834,792.287
DELTA=48'49'15" LT
D=163'42'08"
T=15.88'
L=29.82'
R=35.00'
PC STA=9+31.72
Y=382,527.266
X=834,780.231
PT STA=9+61.54
Y=382,553.492
X=834,792.440
DB=N49'22'24"E
DA=N00'33'10"E

SE DRIVEWAY
PI: 8+86.54
Y=382,497.848
X=834,745.941

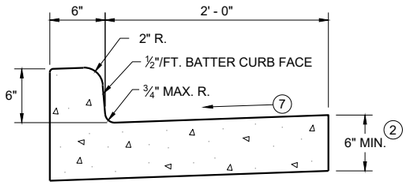




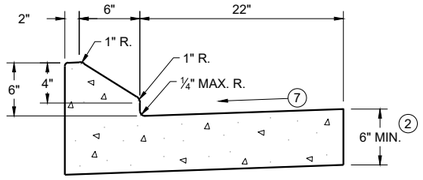
PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	PLAN AND PROFILE: SE DRIVEWAY	SHEET 20	E

Standard Detail Drawing List

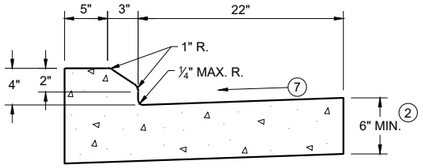
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E15-01	CULVERT PIPE CHECK
12A03-10	NAME PLATE (STRUCTURES)
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
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)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-09C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



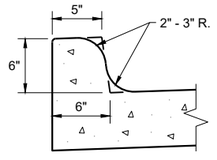
TYPES A (1) & D



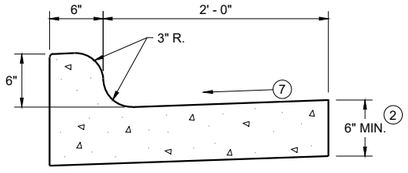
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

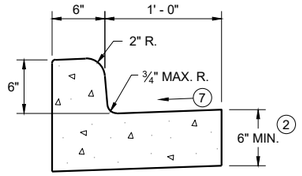


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



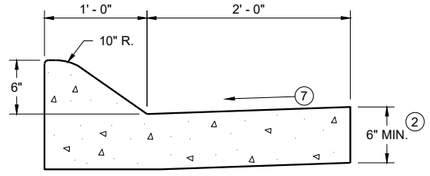
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

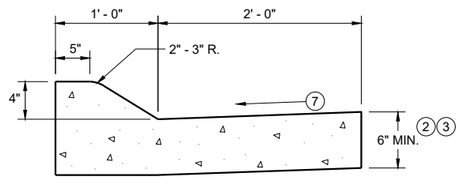


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

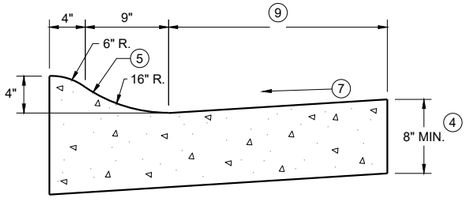


6" SLOPED CURB TYPES A (1) & D



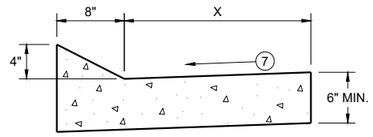
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

TBT & TBTT	X
30"	22"
36"	28"

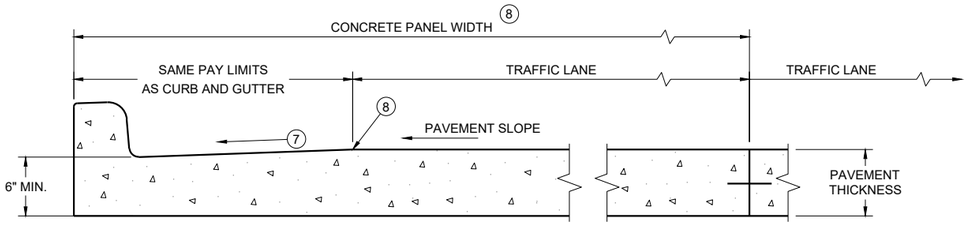


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

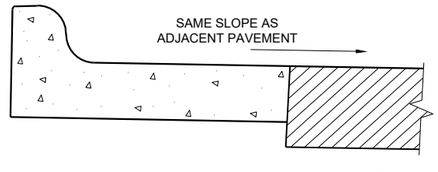
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

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

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

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

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

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

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

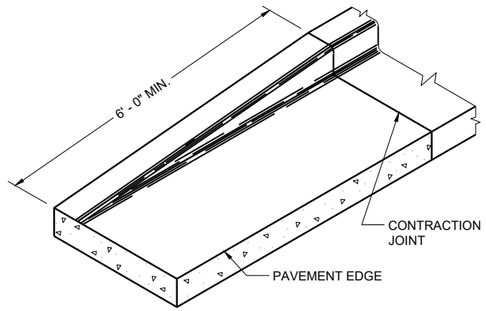
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

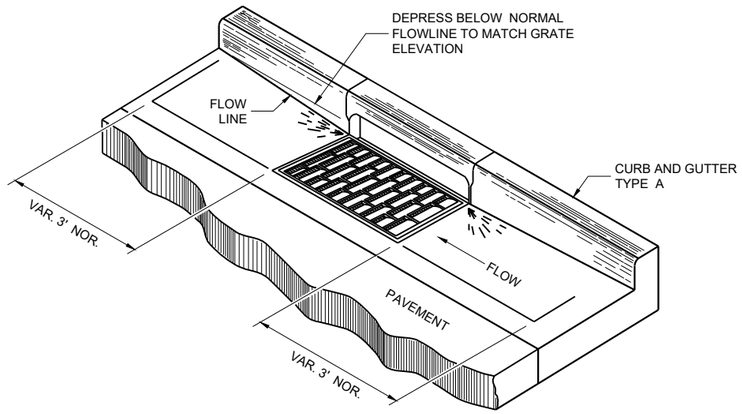
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D01-23a



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

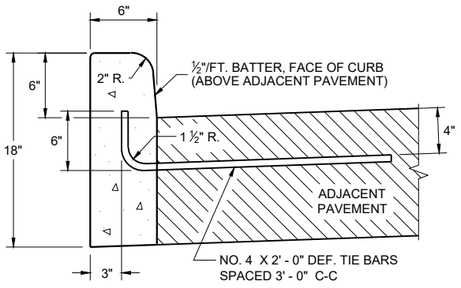
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

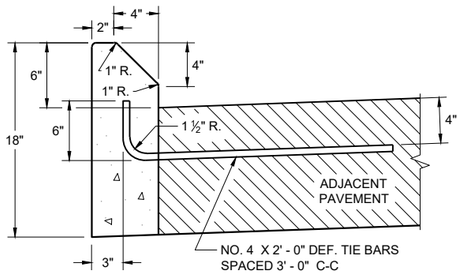
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

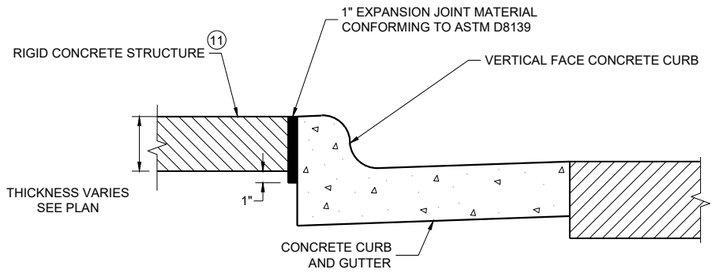


TYPES A (1) & D

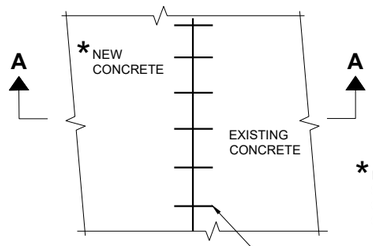


TYPES G (1) & J

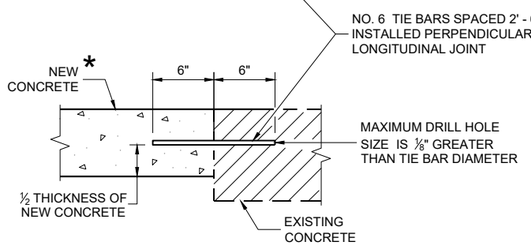
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)

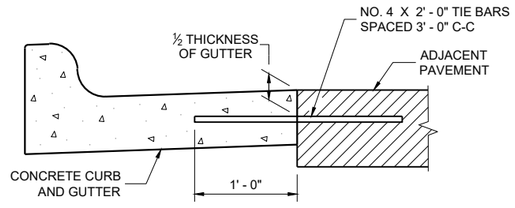


PLAN VIEW

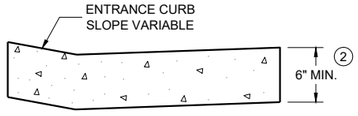


SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

6
SDD 08D01-23b

GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

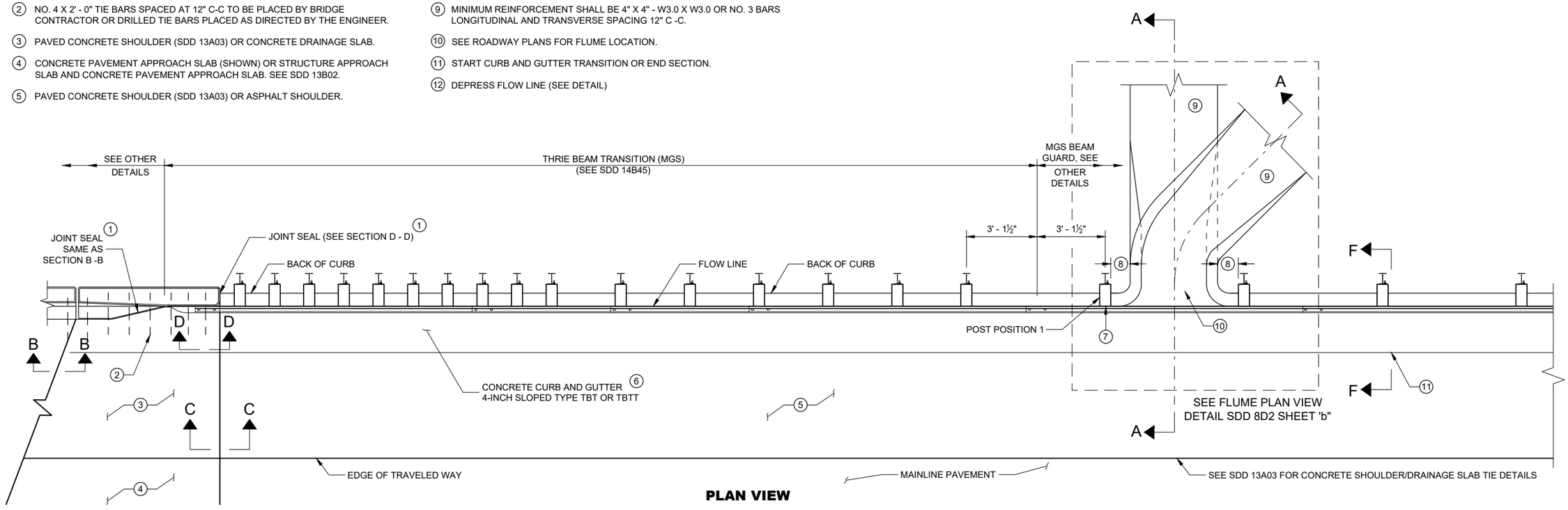
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

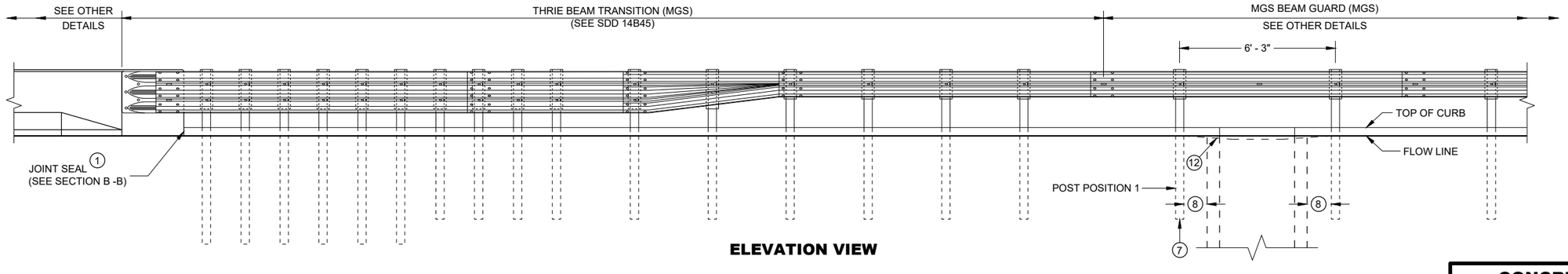
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

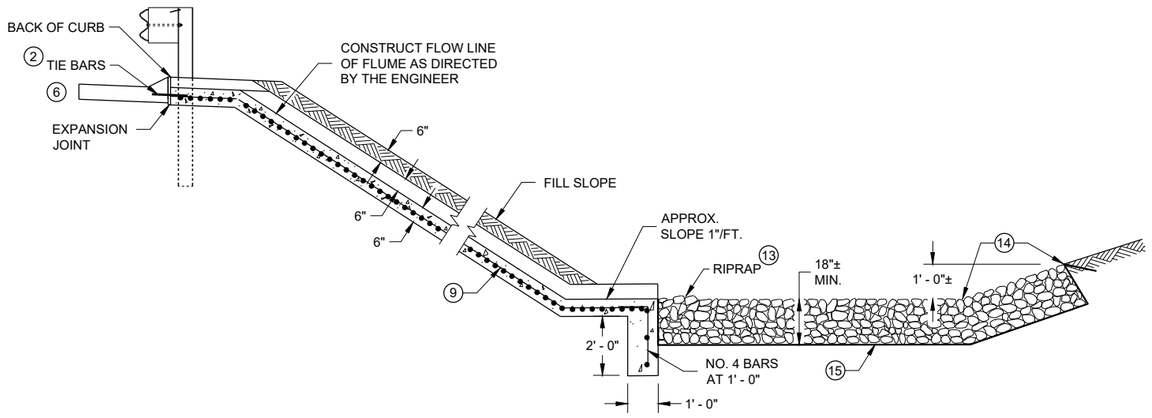
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

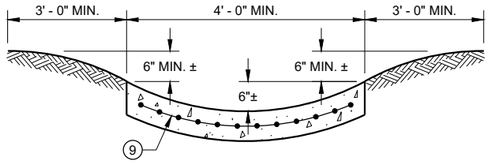
SDD 08D02 - 08a

6

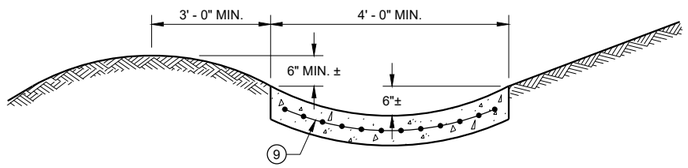
SDD 08D02 - 08a



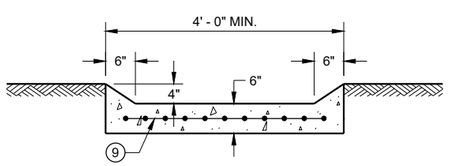
SECTION A - A



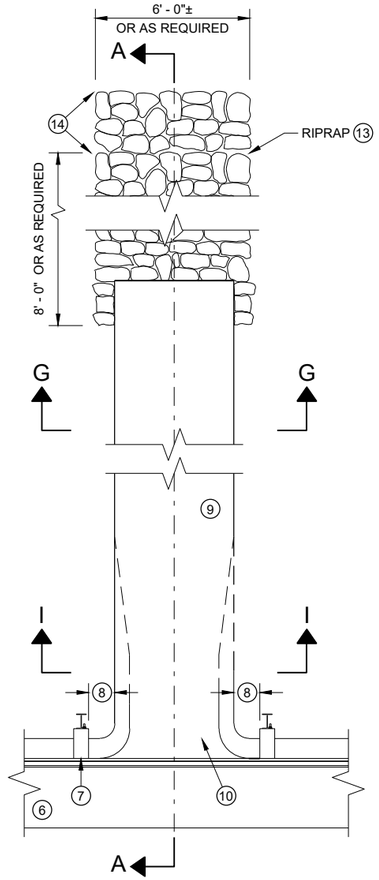
SECTION G - G



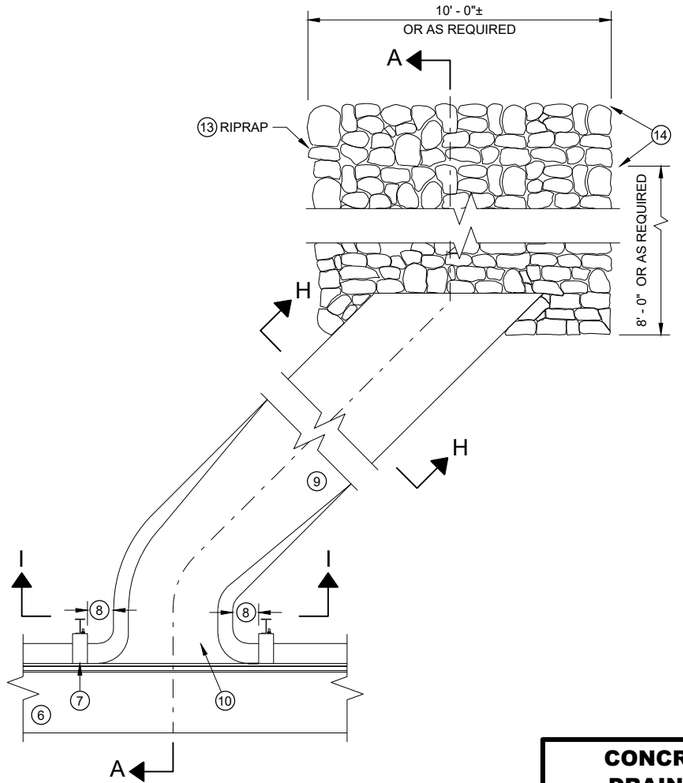
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

GENERAL NOTES

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

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

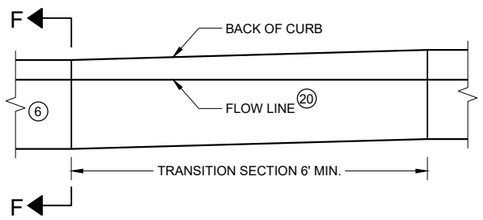
1. USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
2. NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
3. PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
4. CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
5. PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
6. CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
7. PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
8. CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
9. MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
10. SEE ROADWAY PLANS FOR FLUME LOCATION.
11. START CURB AND GUTTER TRANSITION OR END SECTION.
12. DEPRESS FLOW LINE (SEE DETAIL)
13. MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
14. LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
15. GEOTEXTILE TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

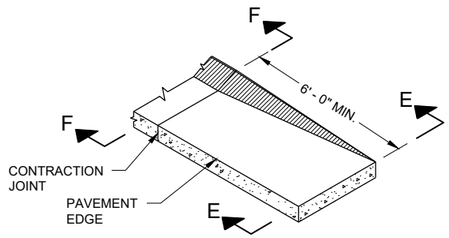
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

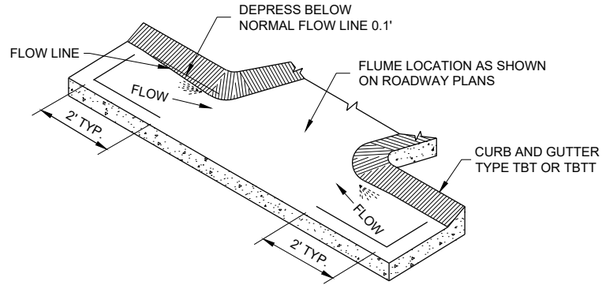
SDD 08D02 - 08b



CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT



CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT

GENERAL NOTES

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

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

(1) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

(2) NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.

(4) CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.

(5) PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

(6) CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' -0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

(7) PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)

(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

(9) MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

(11) START CURB AND GUTTER TRANSITION OR END SECTION.

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

(14) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

(15) GEOTEXTILE TYPE HR.

(16) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C - C.

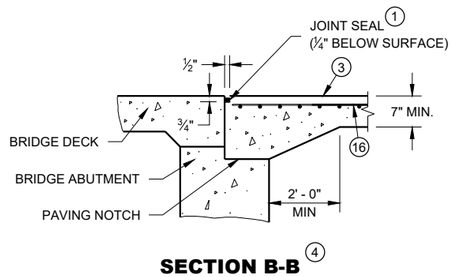
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

(18) MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.

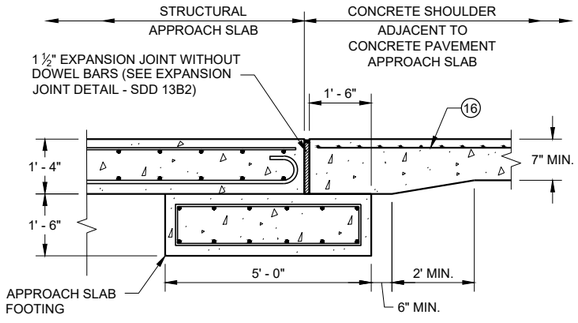
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

(20) MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.

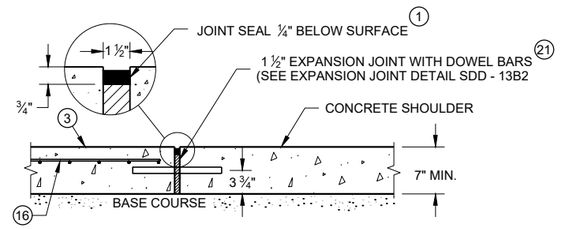
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



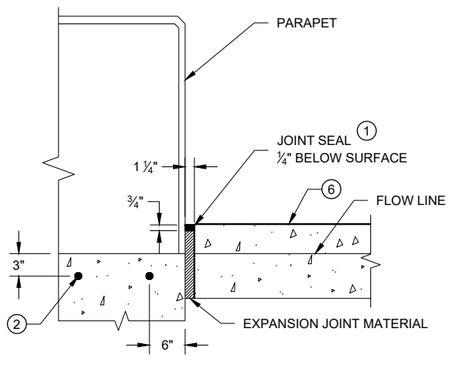
SECTION B-B (4)



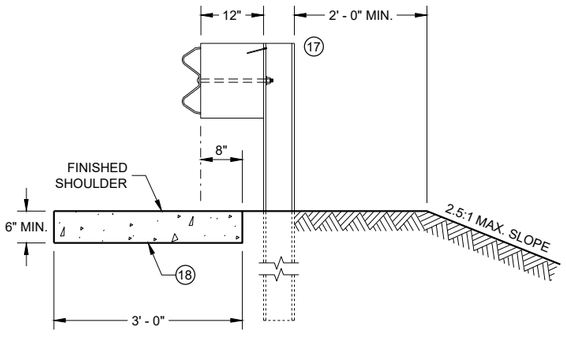
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



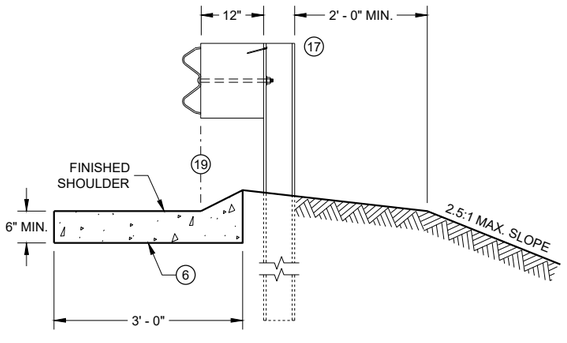
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

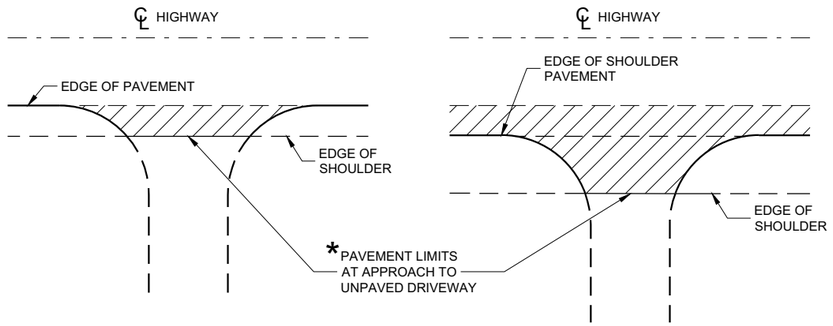
CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

FHWA

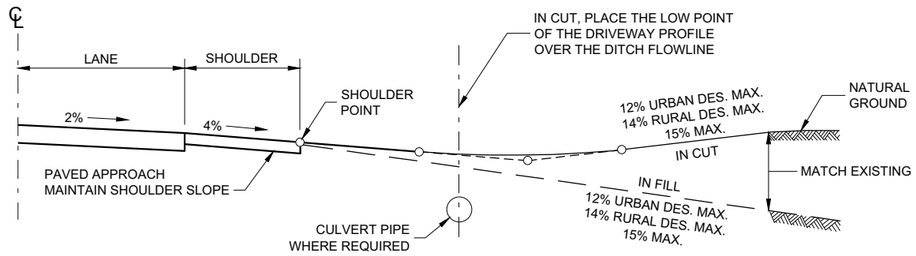
6
SDD 08D02 - 08c



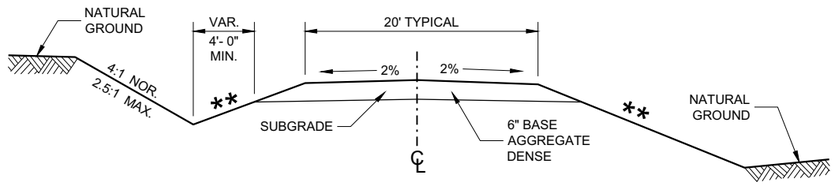
PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

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



TYPICAL DRIVEWAY PROFILES

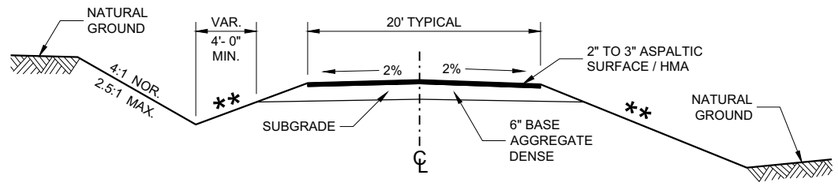


IN CUT **IN FILL**

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

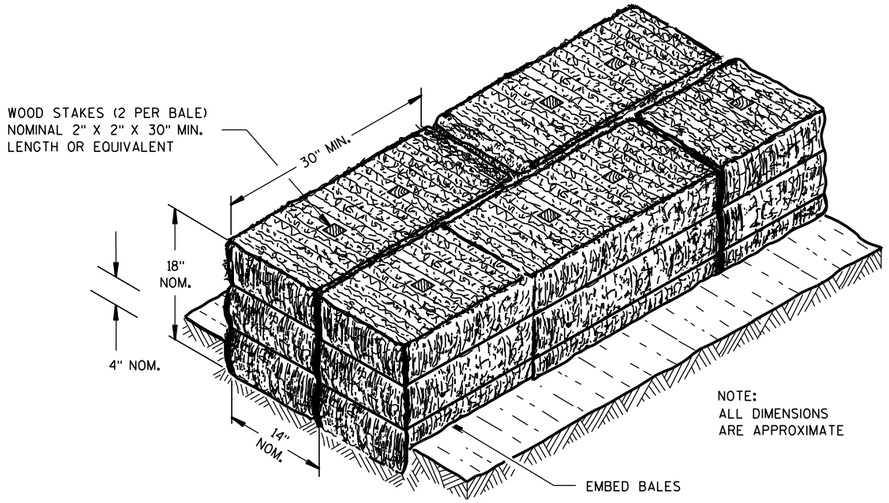
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

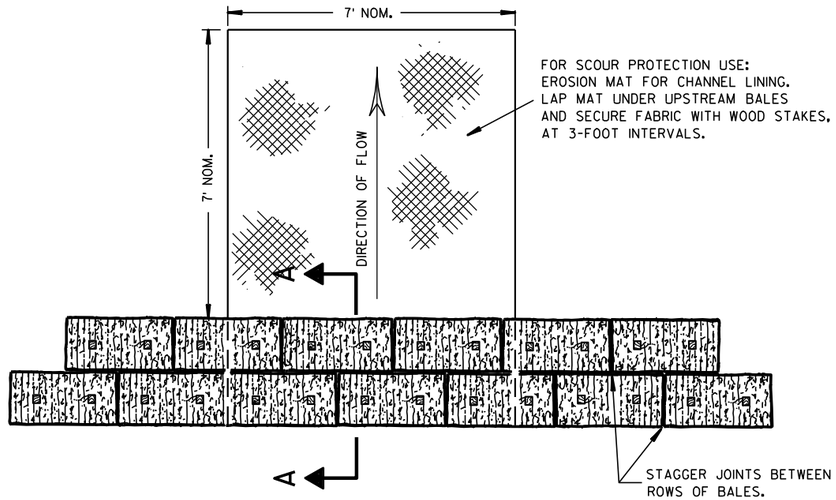
FHWA

6

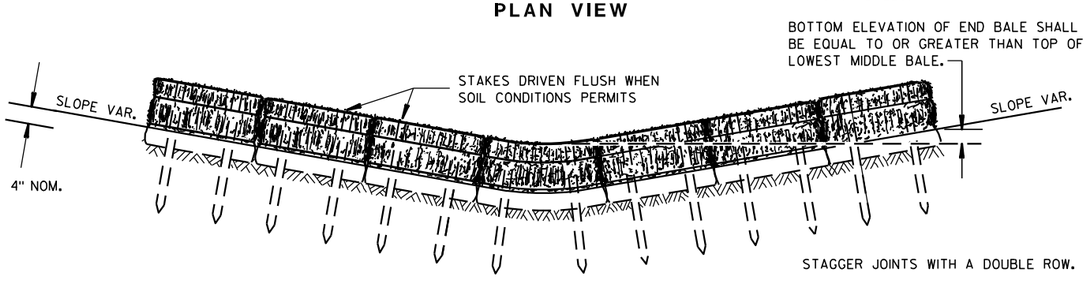
SDD 08D21 - 01



SECTION A-A



PLAN VIEW



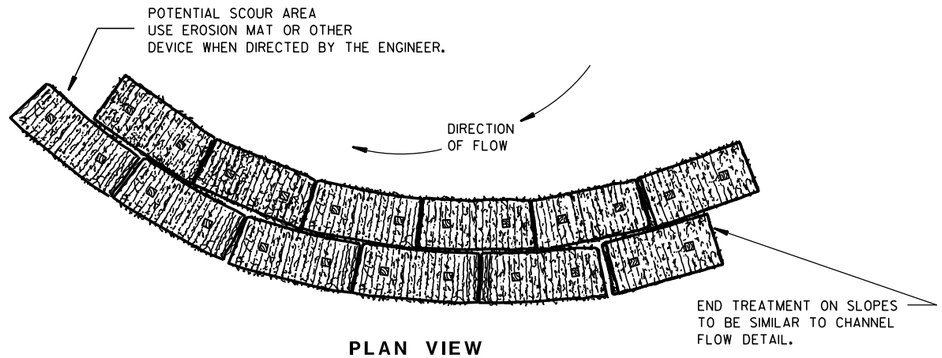
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

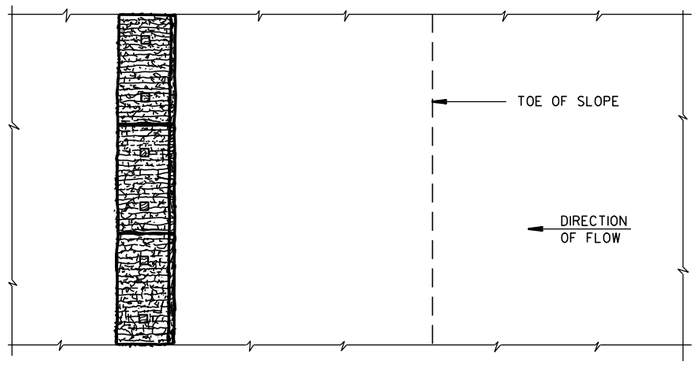
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(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.

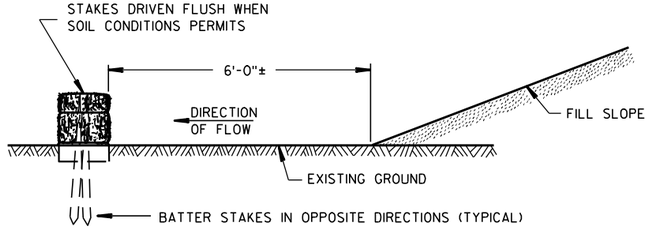


PLAN VIEW

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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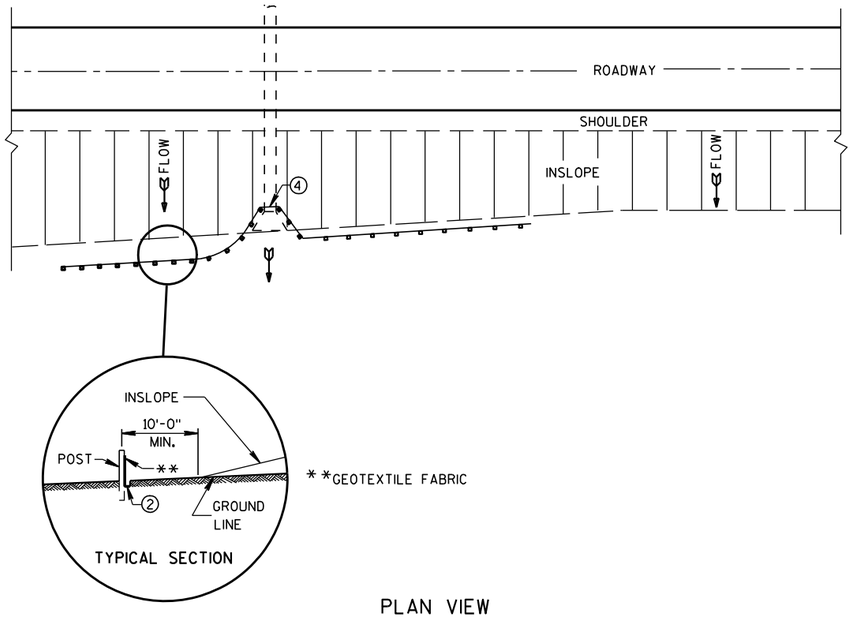
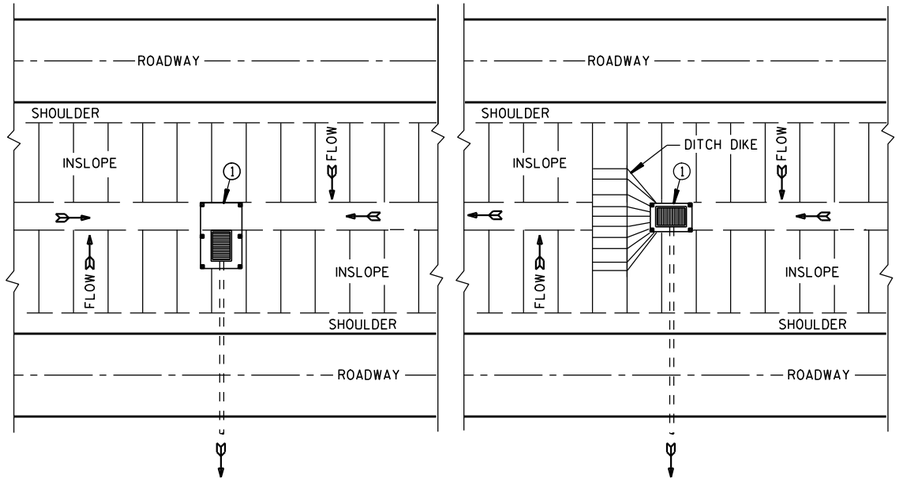
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



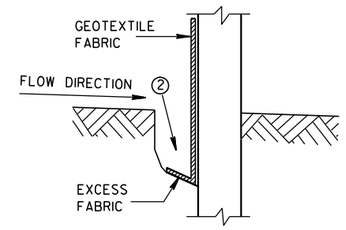
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

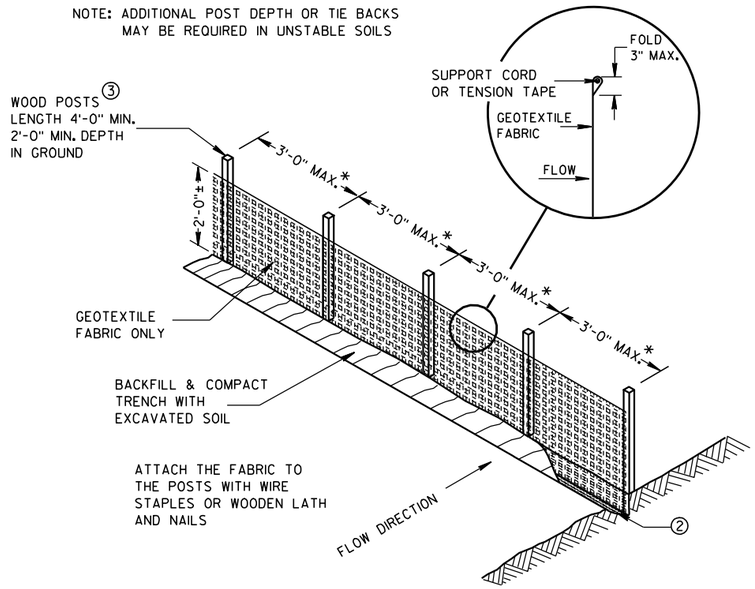
GENERAL NOTES

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

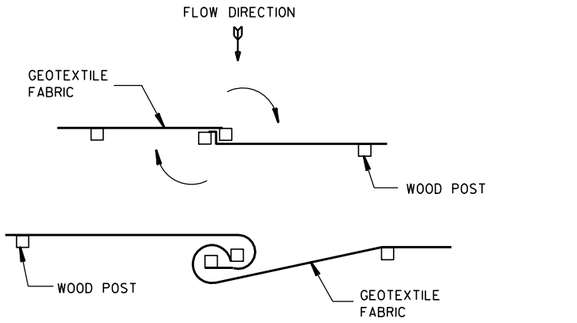
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL 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.



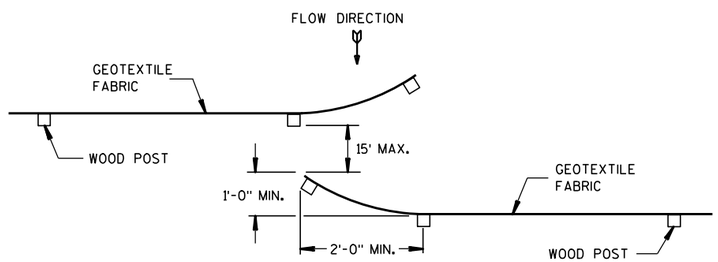
TRENCH DETAIL



SILT FENCE

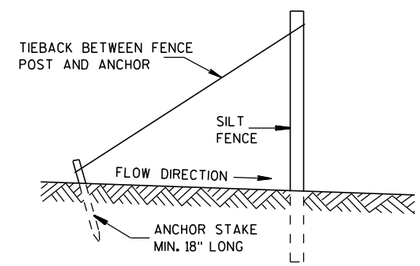


TWIST METHOD



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

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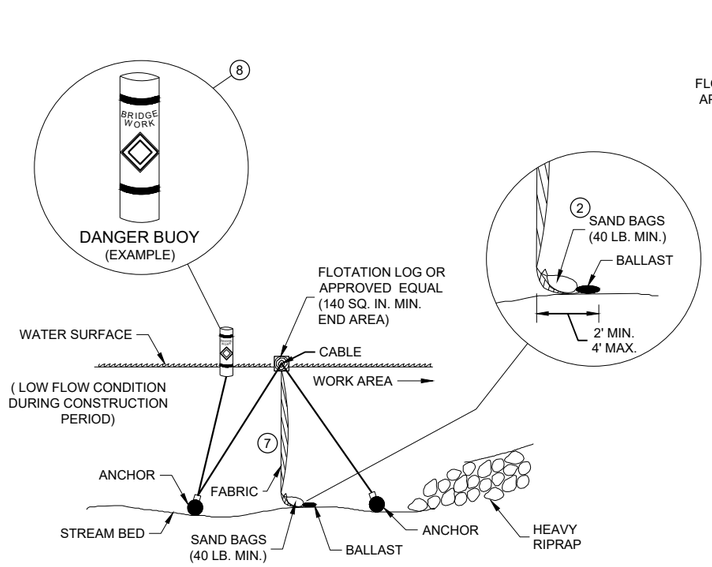
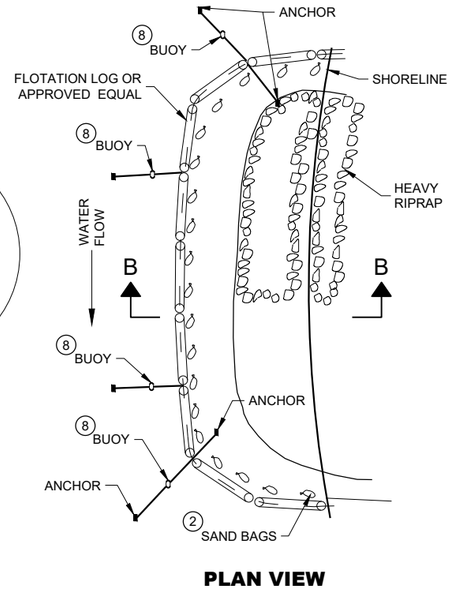
S.D.D. 8 E 9-6

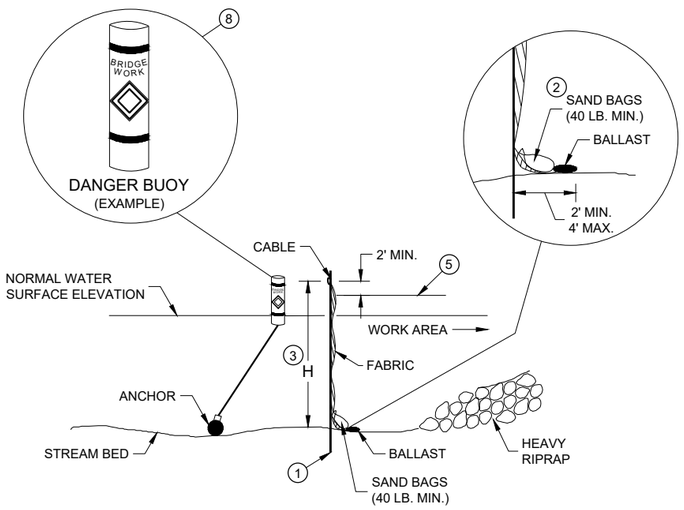


SECTION B - B

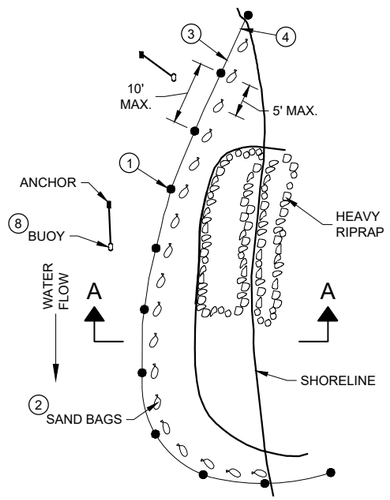


PLAN VIEW

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.

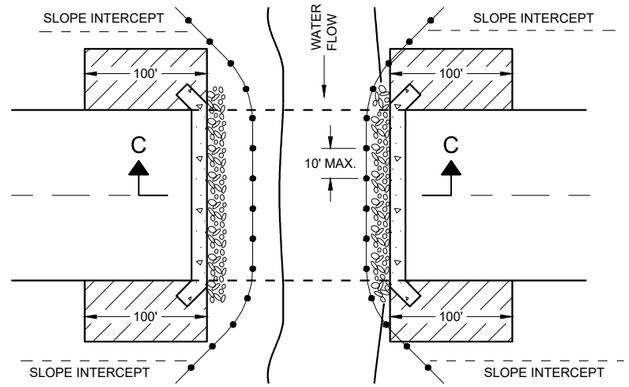
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(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.

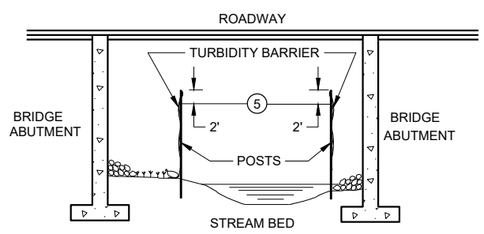
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(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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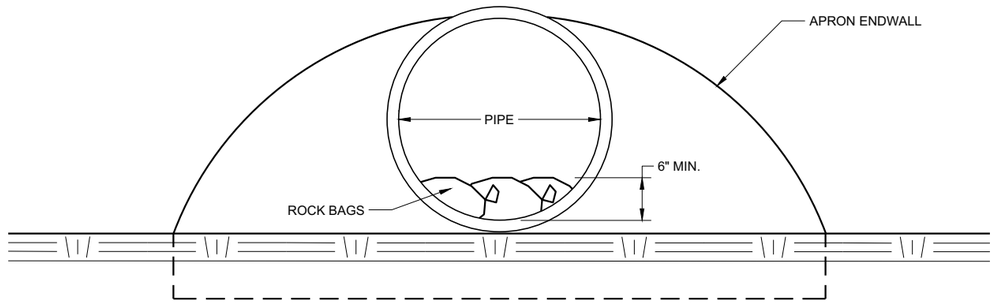
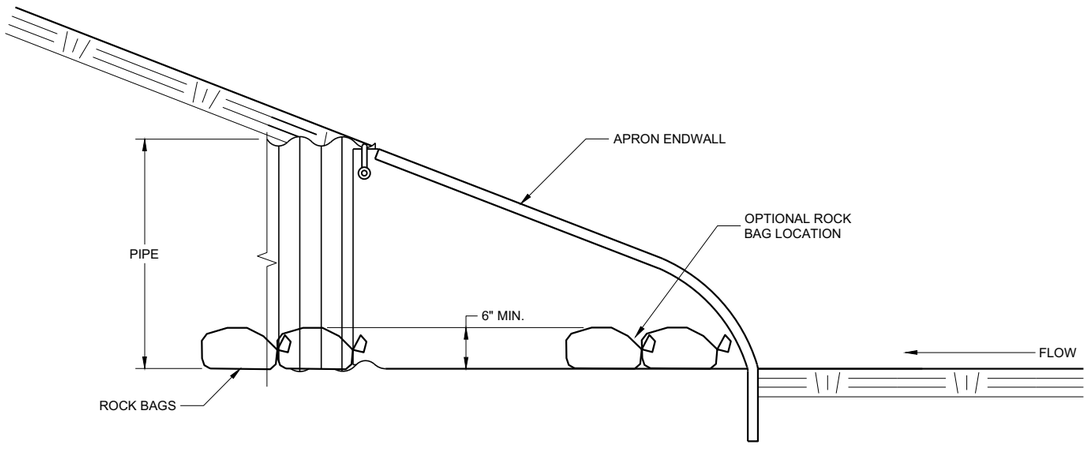
SDD 08E11 - 02



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

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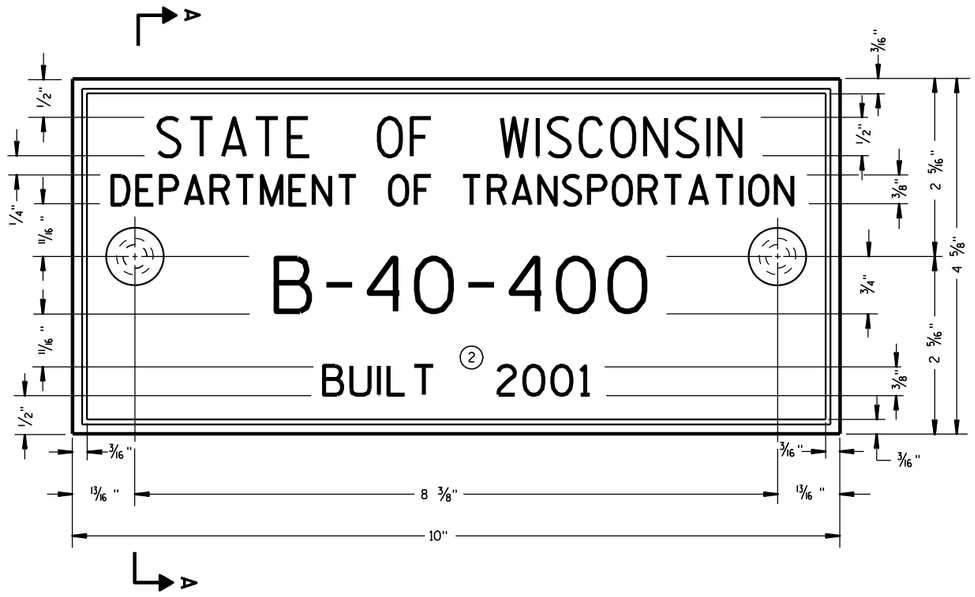
SDD 08E15 - 01



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

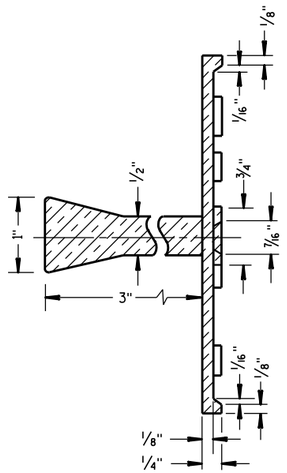
GENERAL NOTES

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

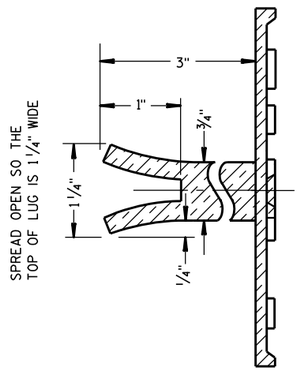
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

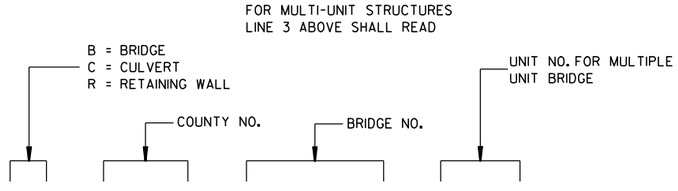
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



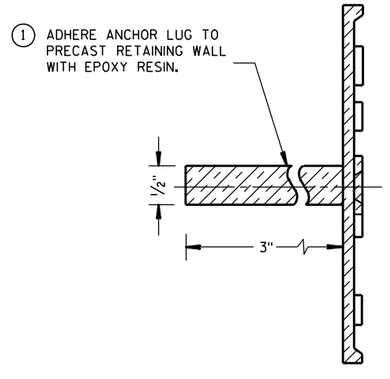
SECTION A-A



ALTERNATE LUG



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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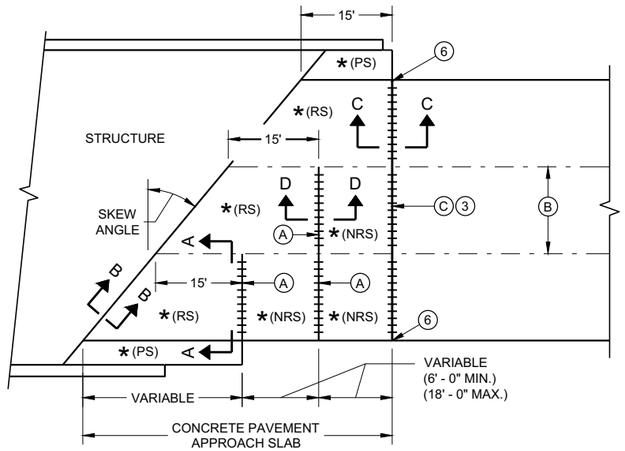
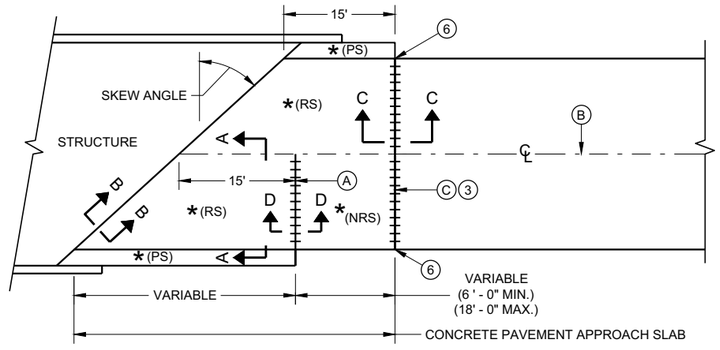
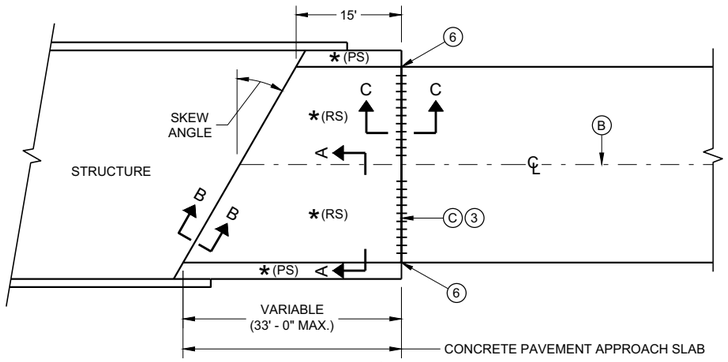
S.D.D. 12 A 3-10



SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')



SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

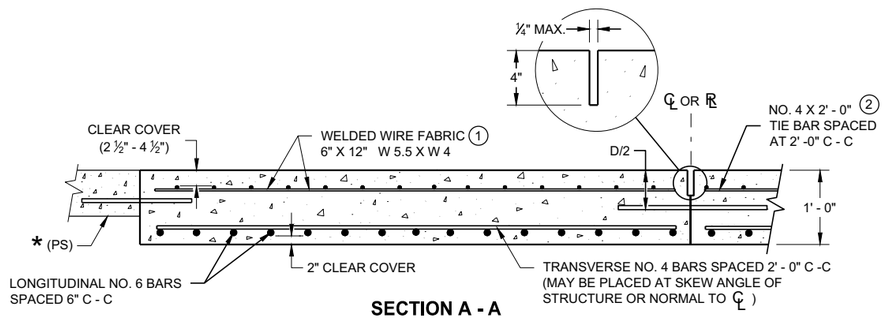
APPROACH SLAB AND ADJACENT PAVEMENT

* (RS) = REINFORCED CONCRETE SLAB

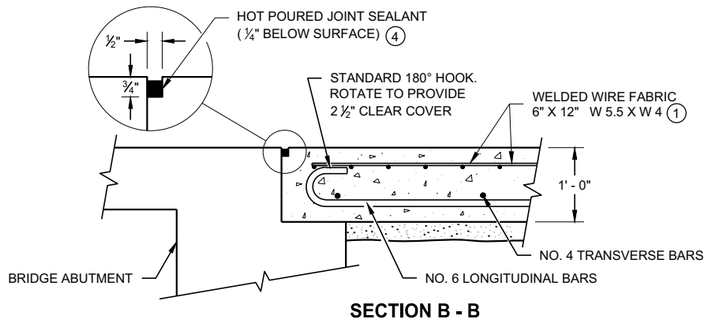
* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

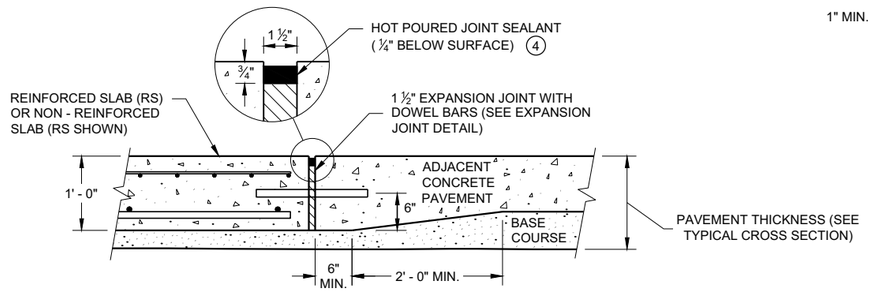
*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL



SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.

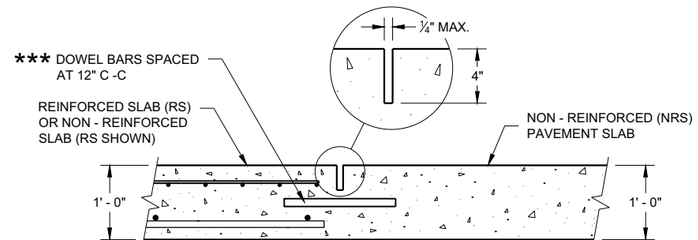
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

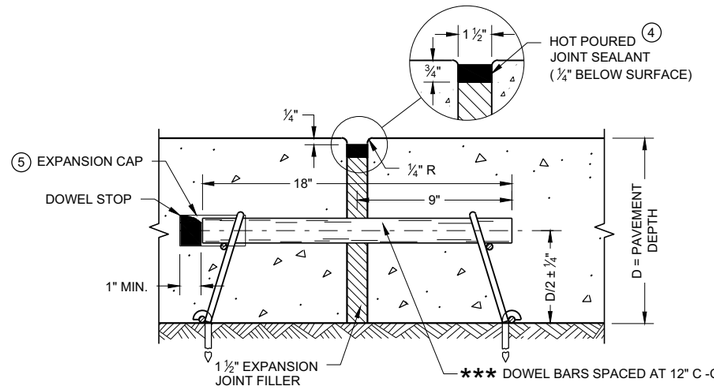
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞ .



SECTION D - D
CONTRACTION JOINT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERVIS

FHWA

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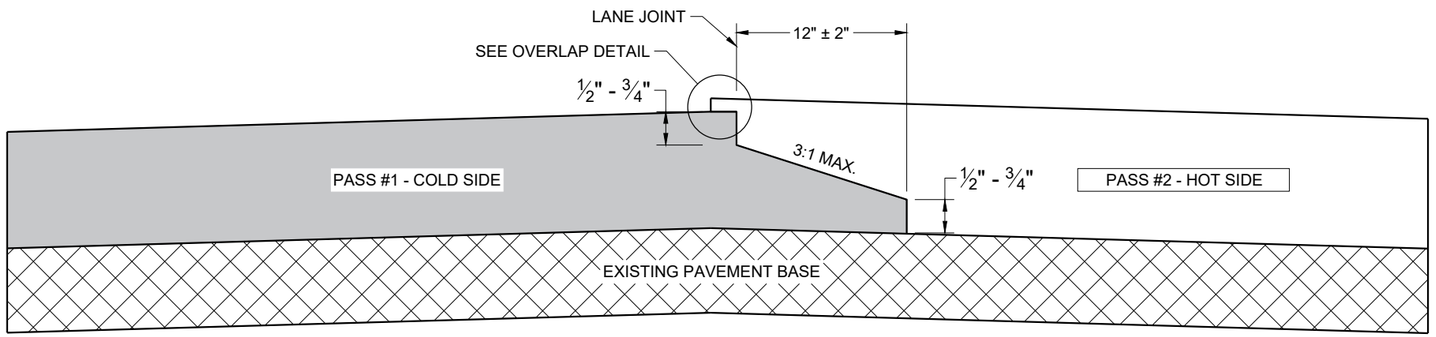
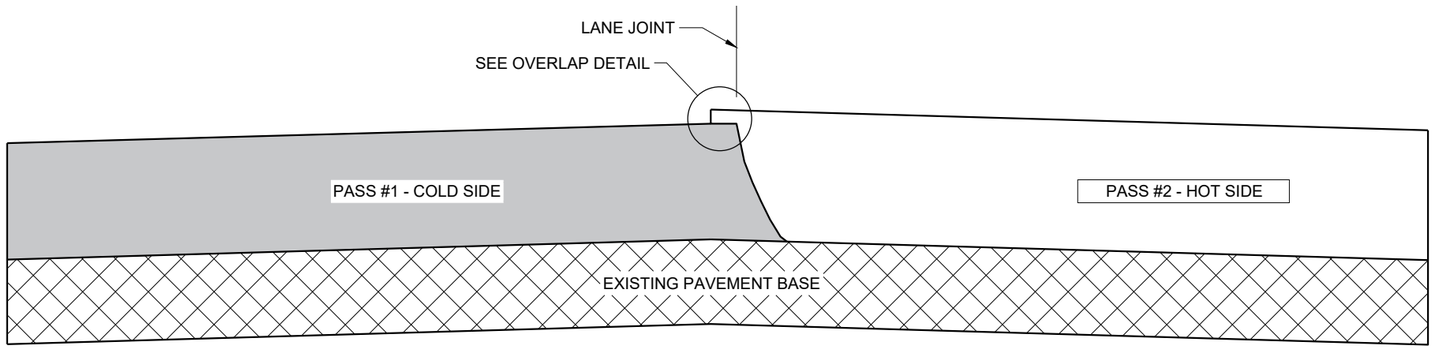
SDD 13B02 - 09a

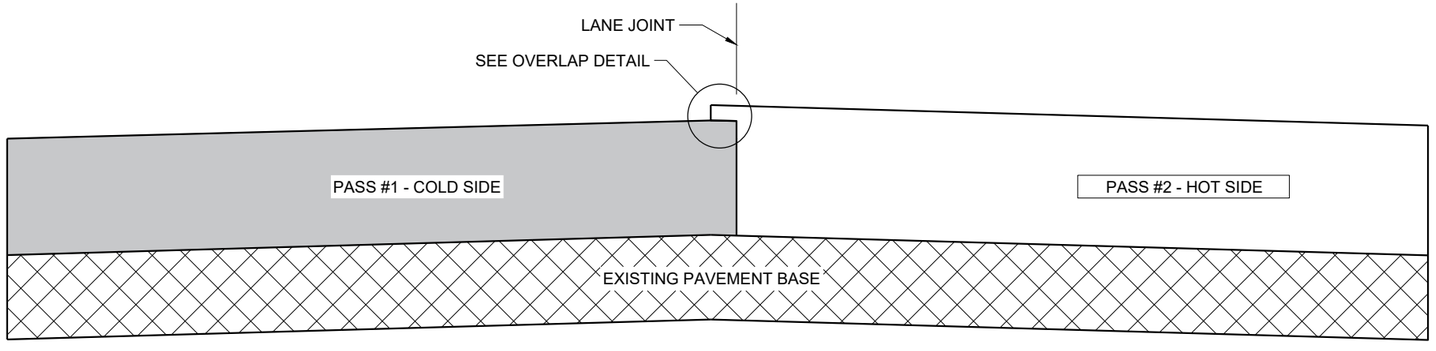
SDD 13B02 - 09a



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

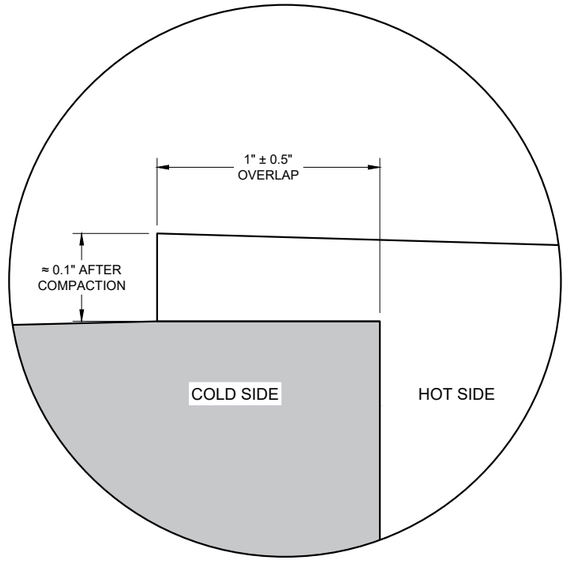
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)

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SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

(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.

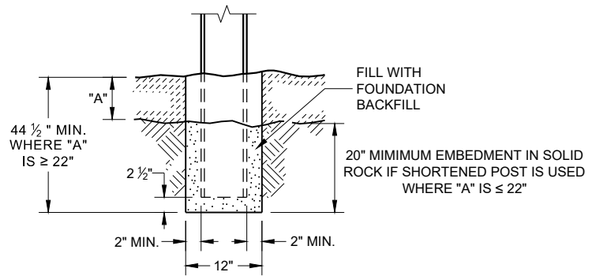
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

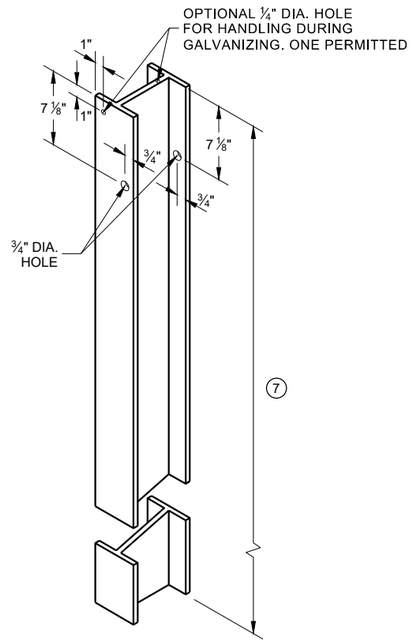
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

(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.

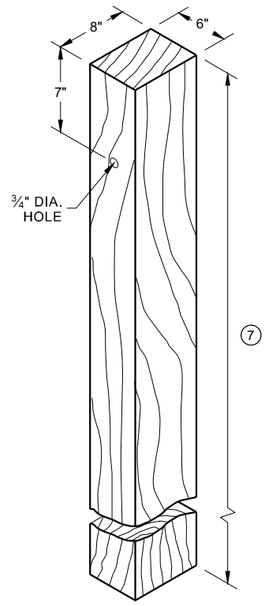
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



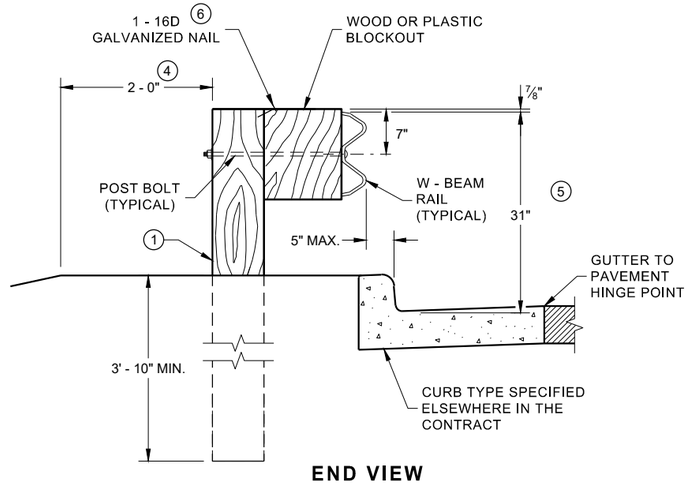
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



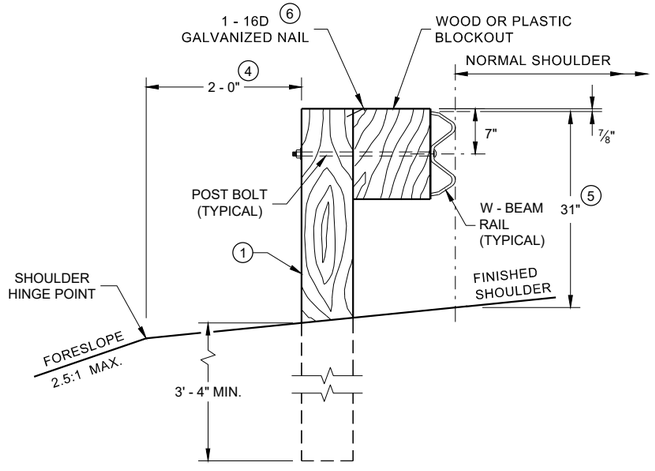
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



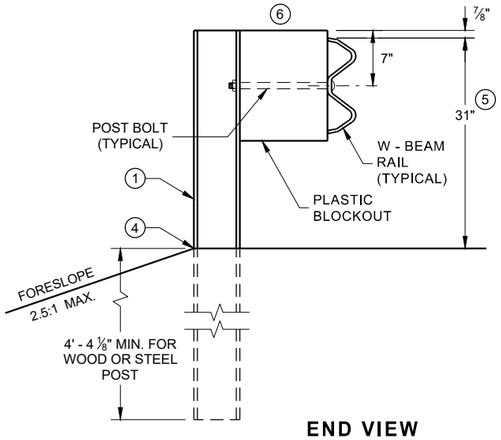
WOOD POST (6" X 8") NOMINAL (1)



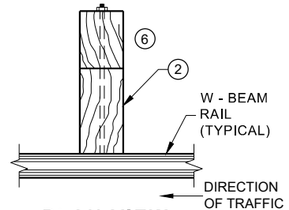
END VIEW
LOCATED ALONG A CURBED ROADWAY



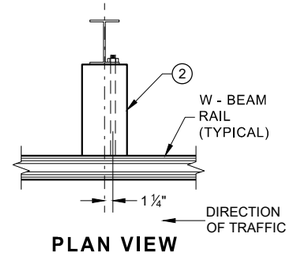
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



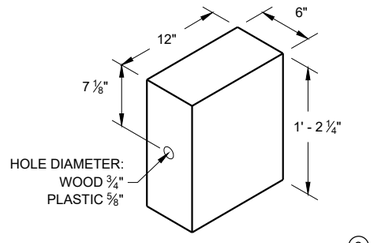
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



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

SDD 14B42 - 07a

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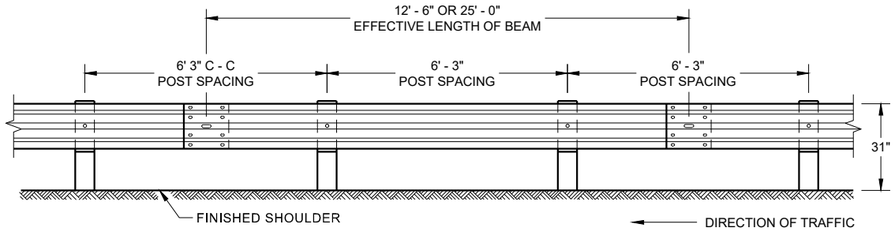
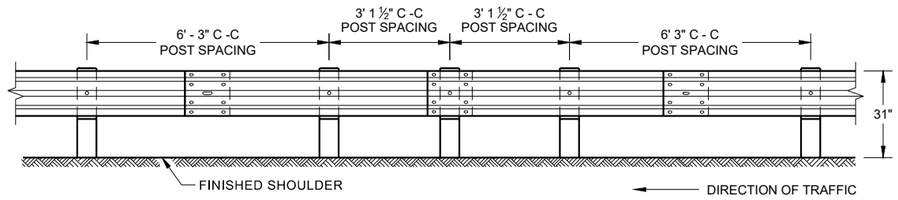
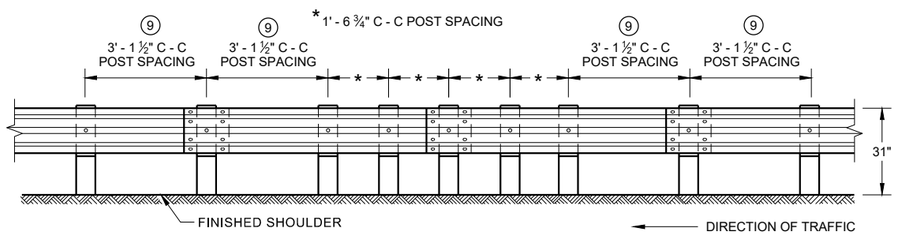


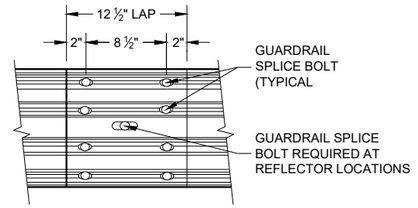
FRONT VIEW
POST SPACING STANDARD INSTALLATION



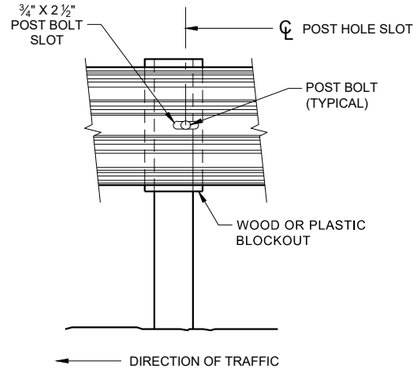
FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



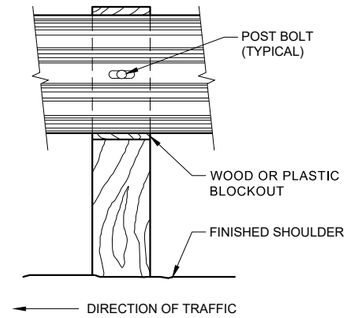
FRONT VIEW
QUARTER POST SPACING (QS)



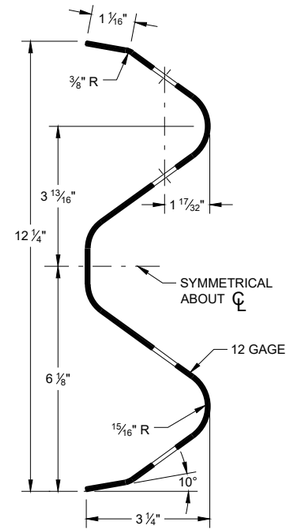
FRONT VIEW
MID-SPAN BEAM SPLICE



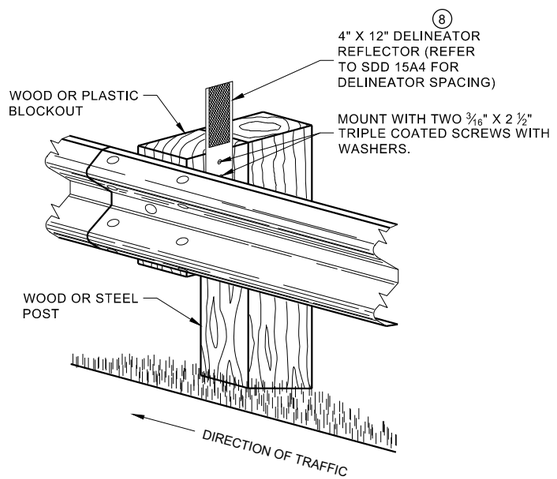
FRONT VIEW AT STEEL POST



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.

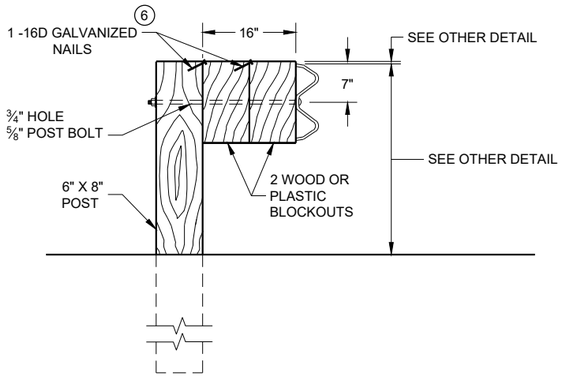
POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

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
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 07b

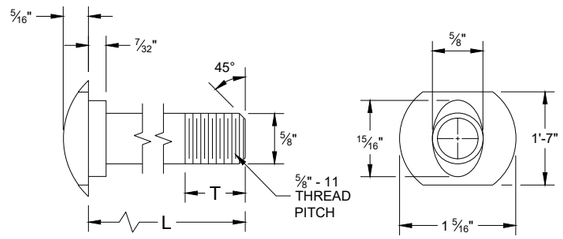


DETAIL FOR 16" BLOCKOUT DEPTH

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.

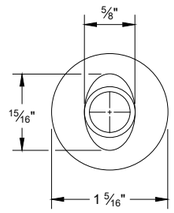
NOTE:

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.

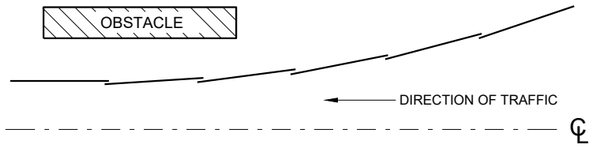


POST BOLT TABLE

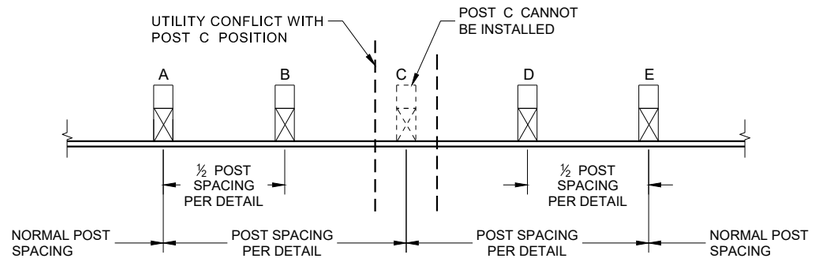
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



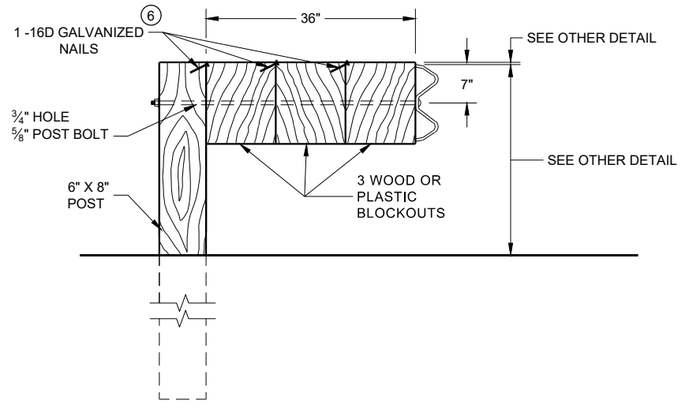
ALTERNATE BOLT HEAD



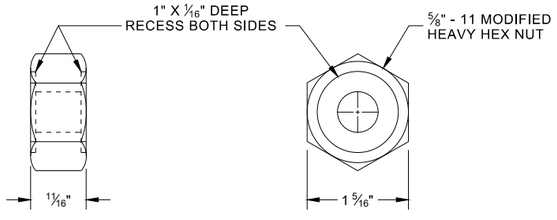
PLAN VIEW
BEAM LAPPING DETAIL



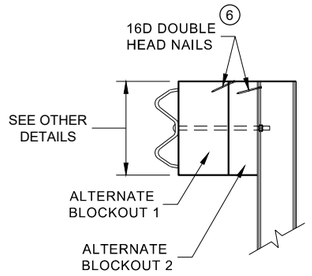
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



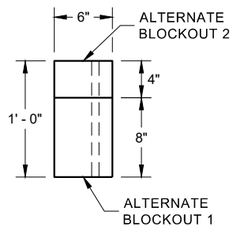
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

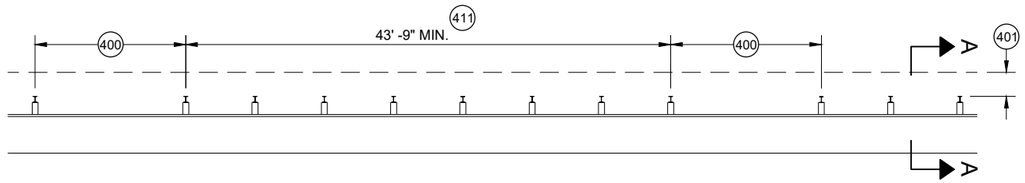
ALTERNATE WOOD BLOCKOUT DETAIL

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.

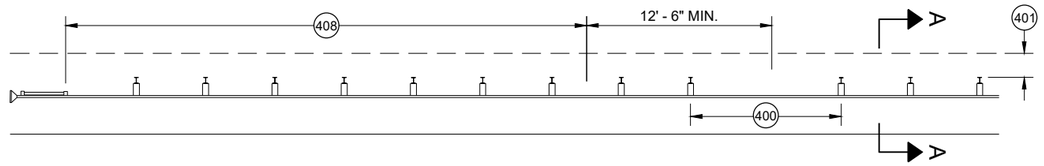
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

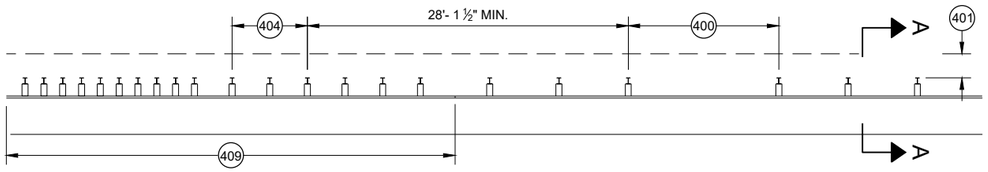
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



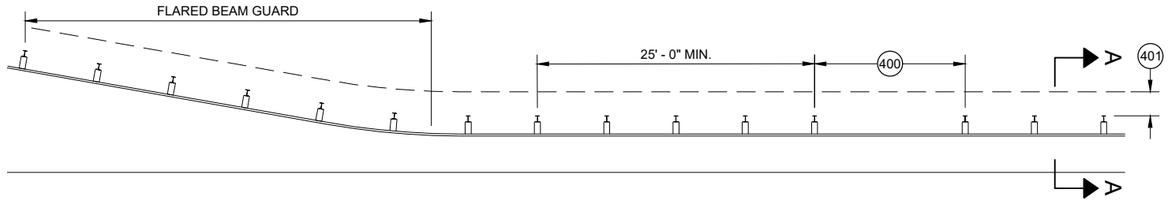
MISSING POST IN MGS GUARDRAIL



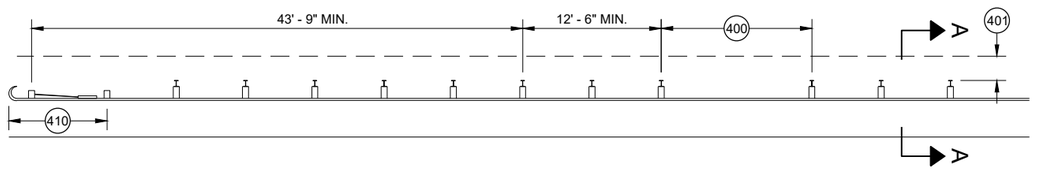
MISSING POST IN MGS GUARDRAIL NEAR EAT



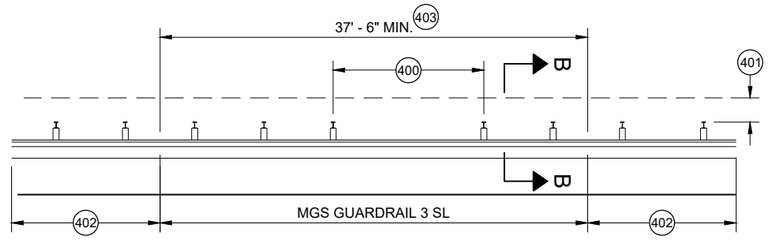
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

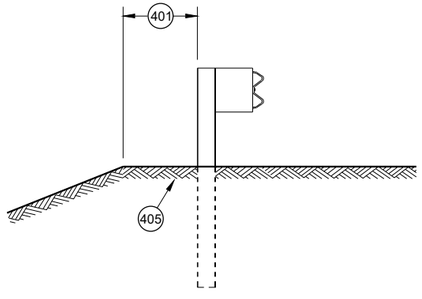


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

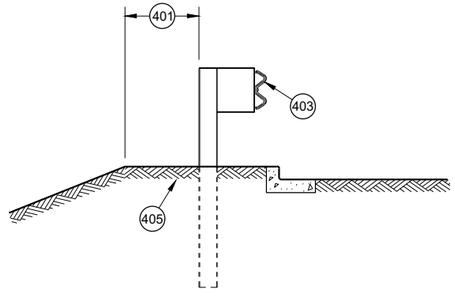


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(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.

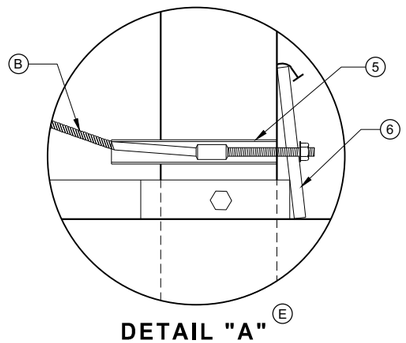
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

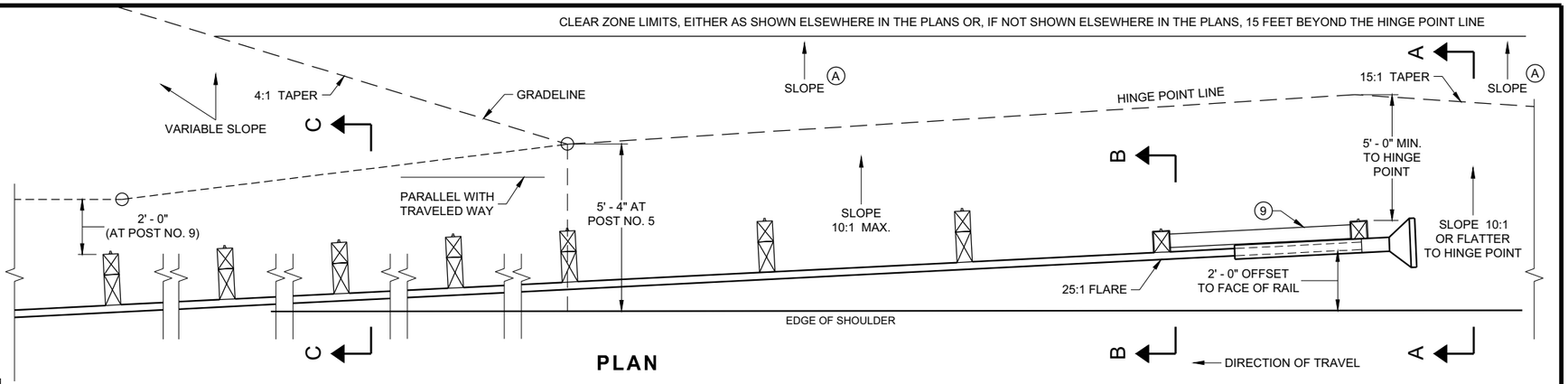
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

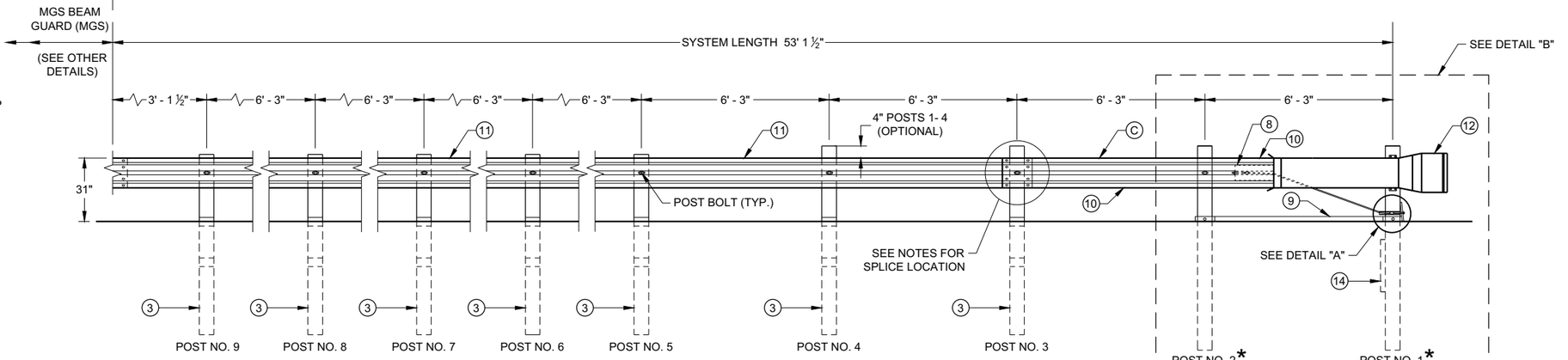
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

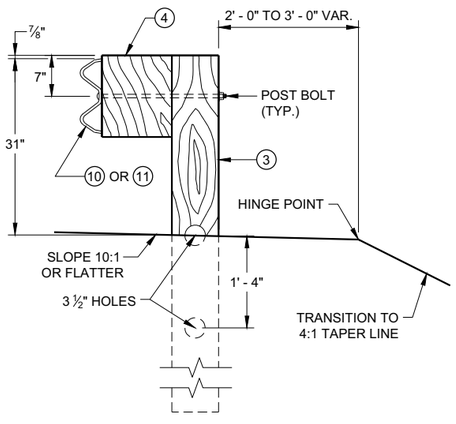
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



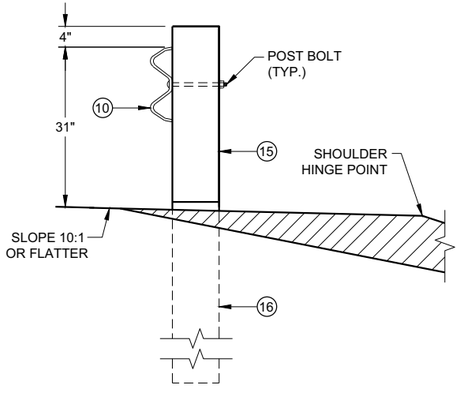
DETAIL "A" (E)



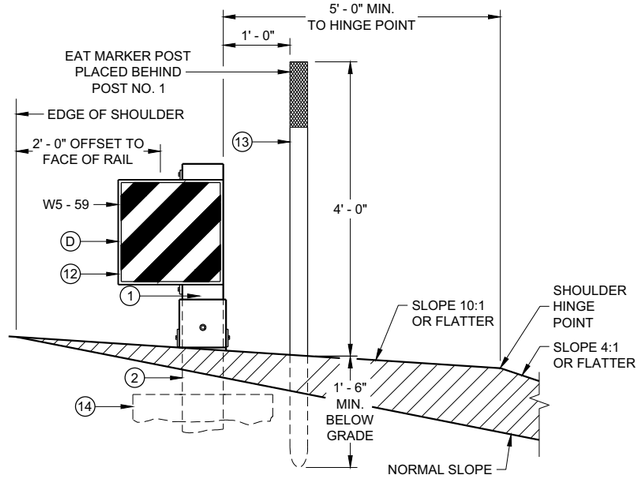




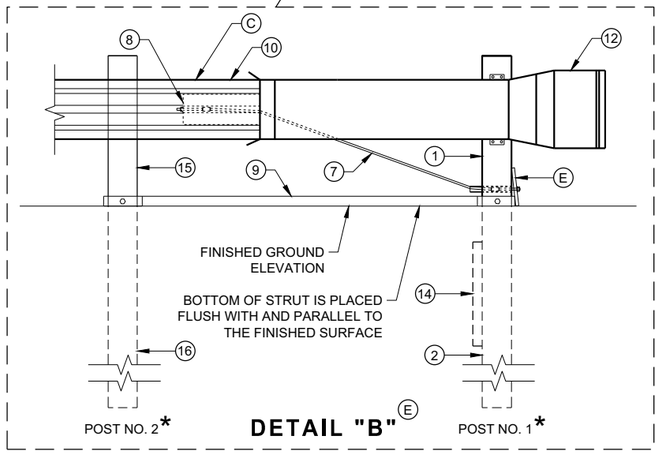
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



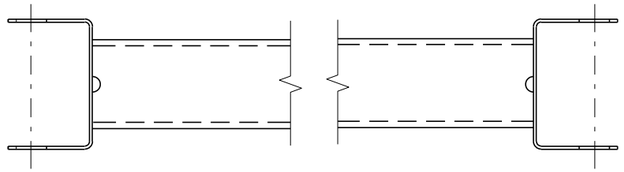
SECTION A - A
TYPICAL AT POST NO. 1*



MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

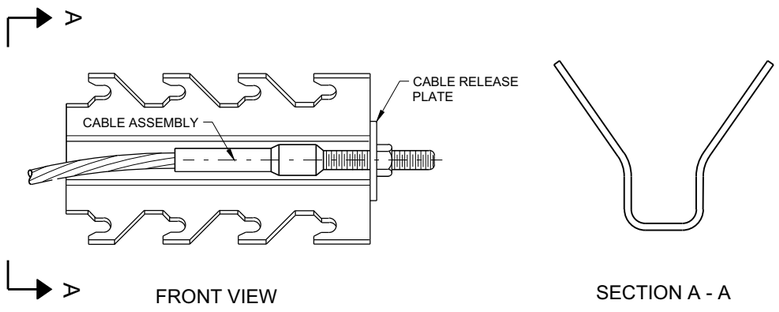
SDD 14B44 - 04a



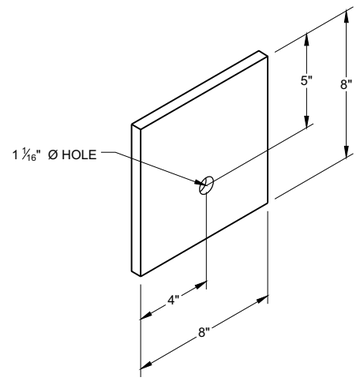
GENERIC GROUND STRUT (9) (E)

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) (E)



BEARING PLATE (6) (E)

6

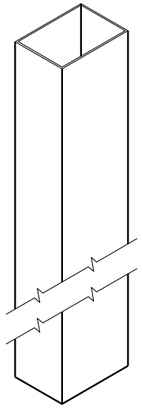
6

SDD 14B44 - 04b

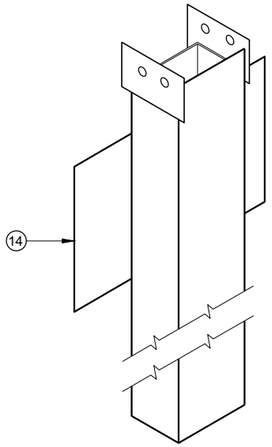
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



UPPER POST NO. 1 (1) (E)



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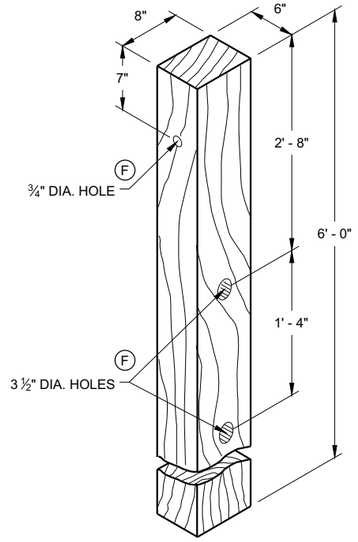
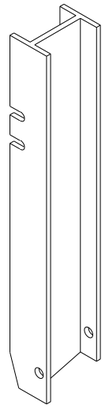
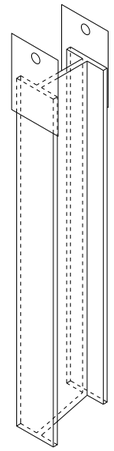


WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 (15) (E)



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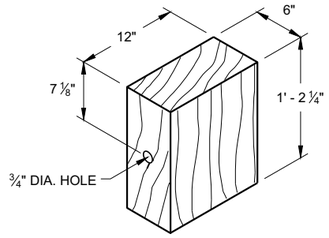
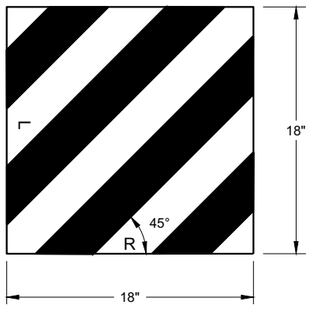
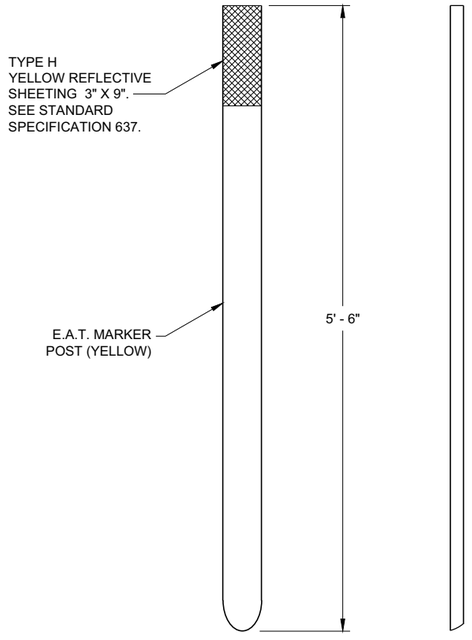


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



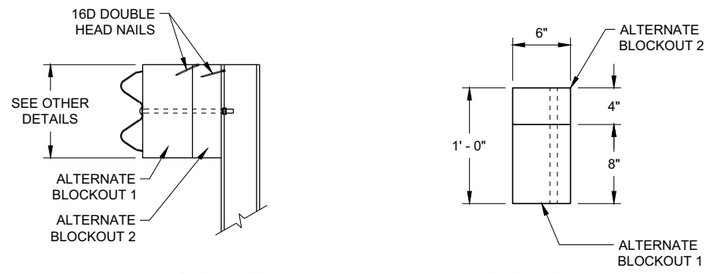
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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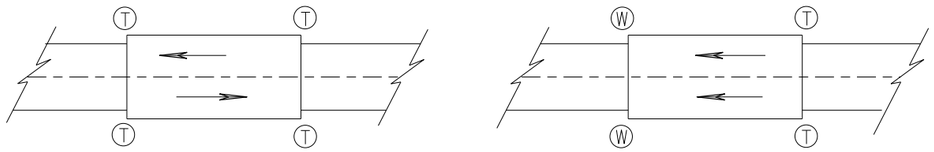
SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

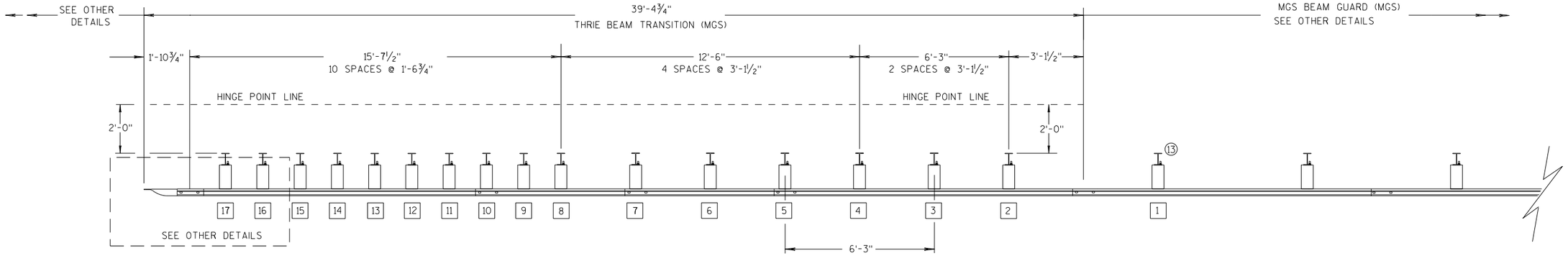
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

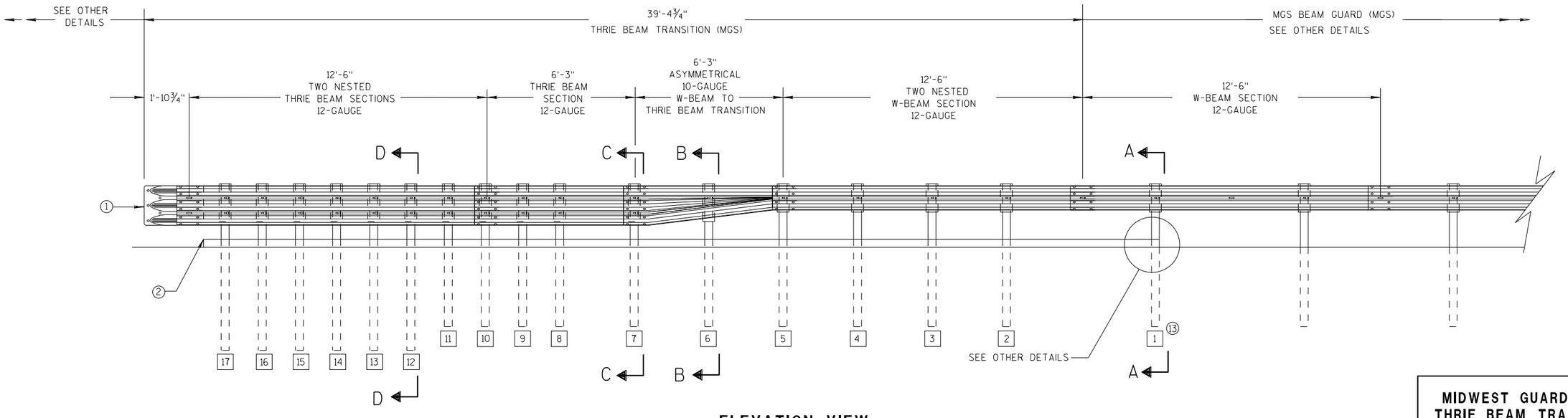
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

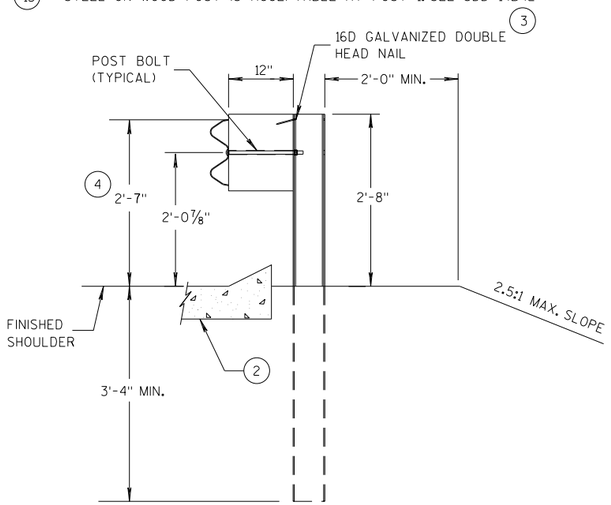
GENERAL NOTES

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

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

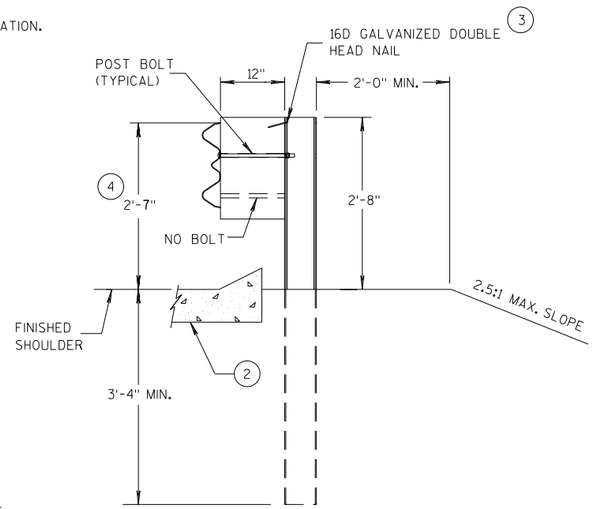
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



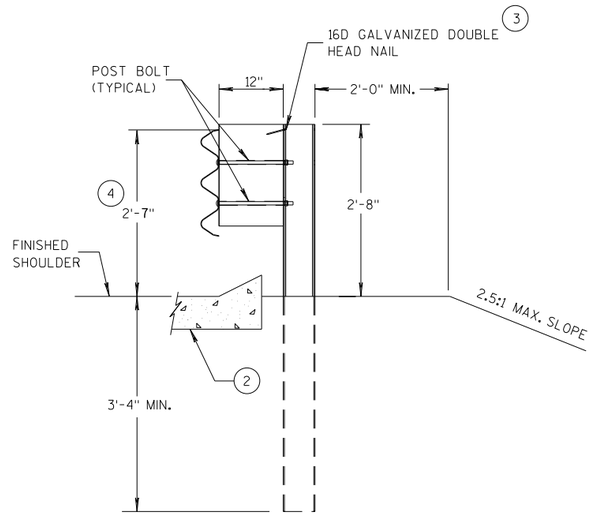
SECTION A-A (13)

POSTS 1-5



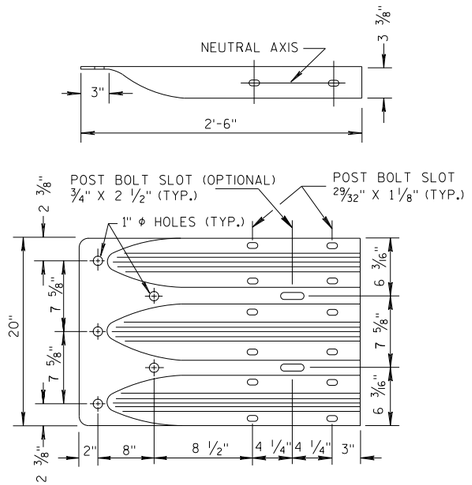
SECTION B-B

POST 6

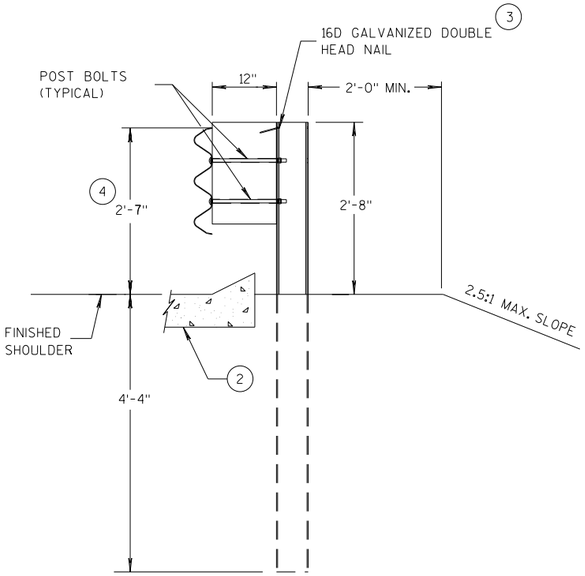


SECTION C-C

POSTS 7-11

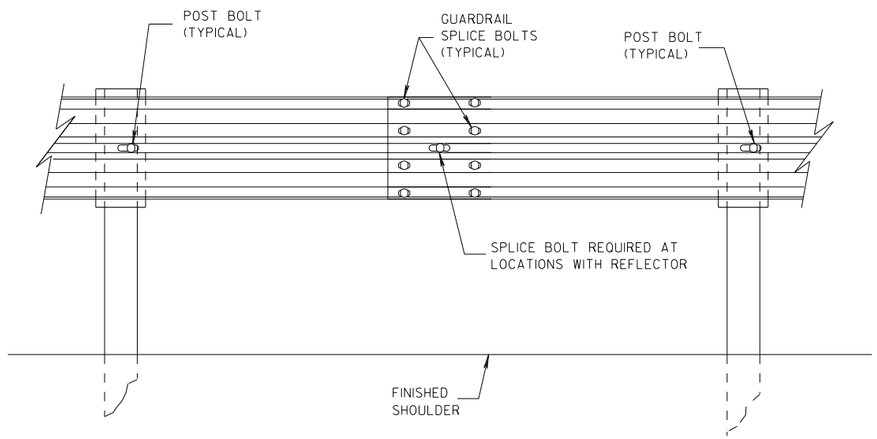


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

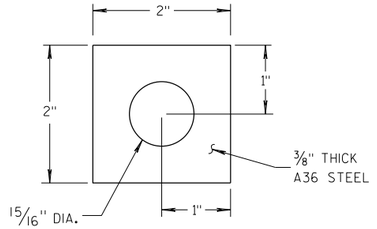
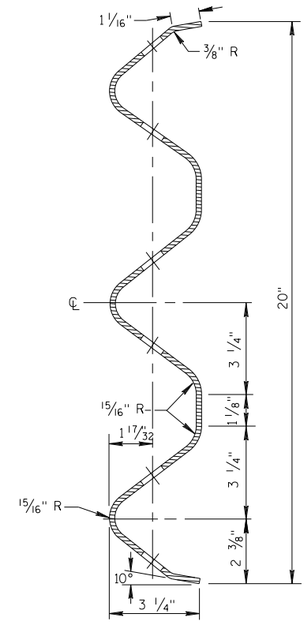


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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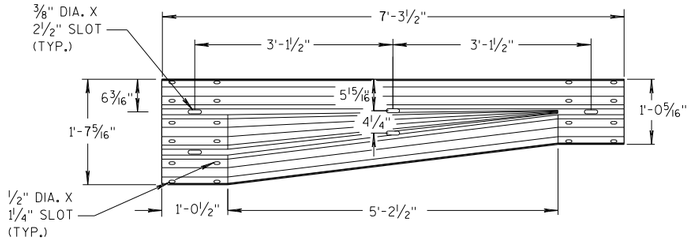
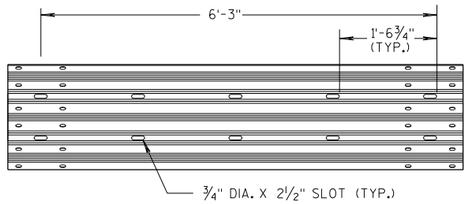
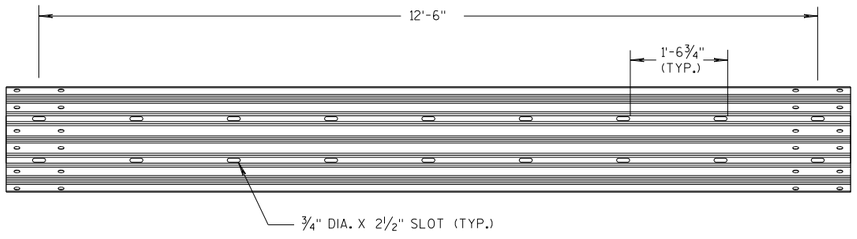
S.D.D. 14 B 45-5b



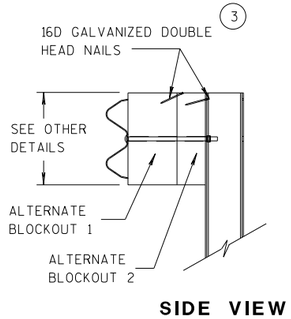
W-BEAM TO THRIE BEAM TRANSITION SECTION



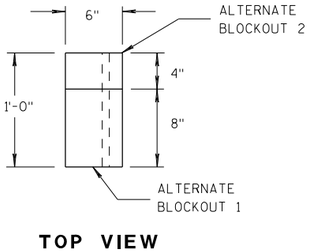
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

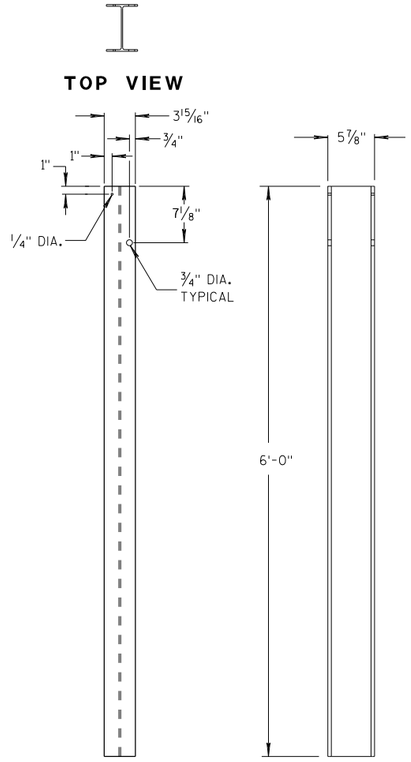


SIDE VIEW



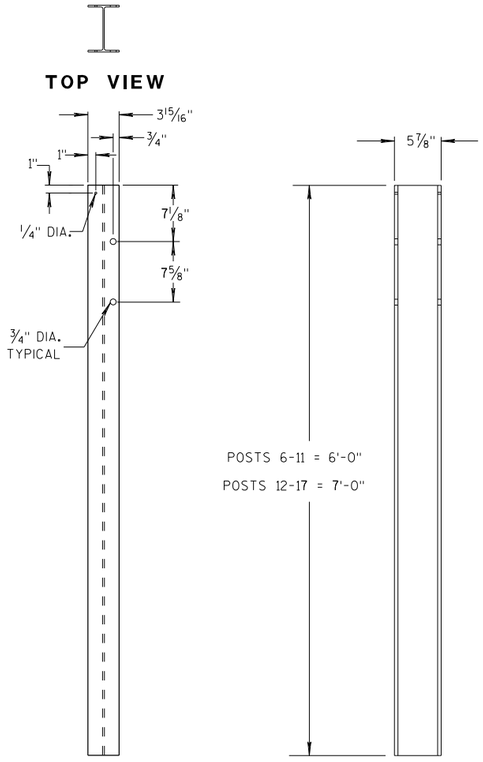
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



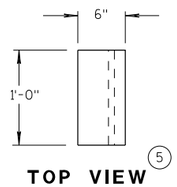
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

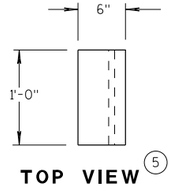


FRONT VIEW SIDE VIEW

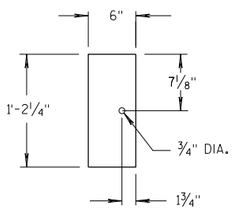
STEEL POSTS 6-17



TOP VIEW (5)

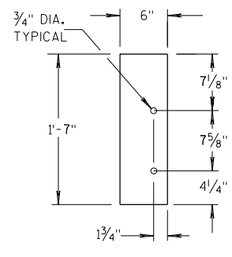


TOP VIEW (5)



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.

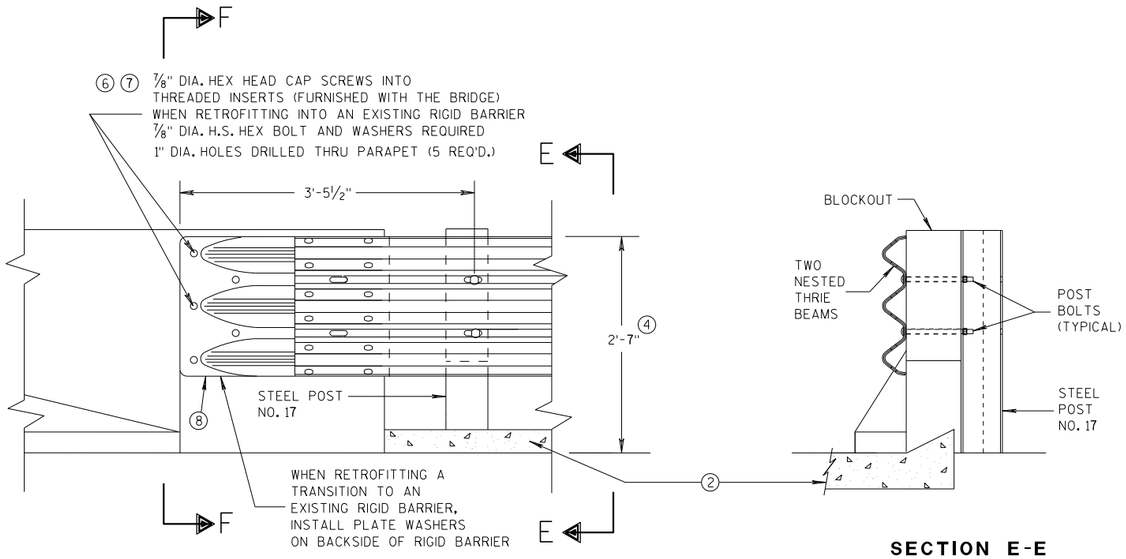
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

(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 TRANSPOF

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

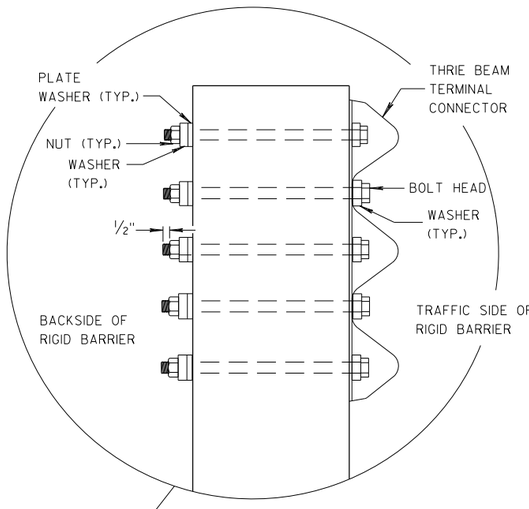
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

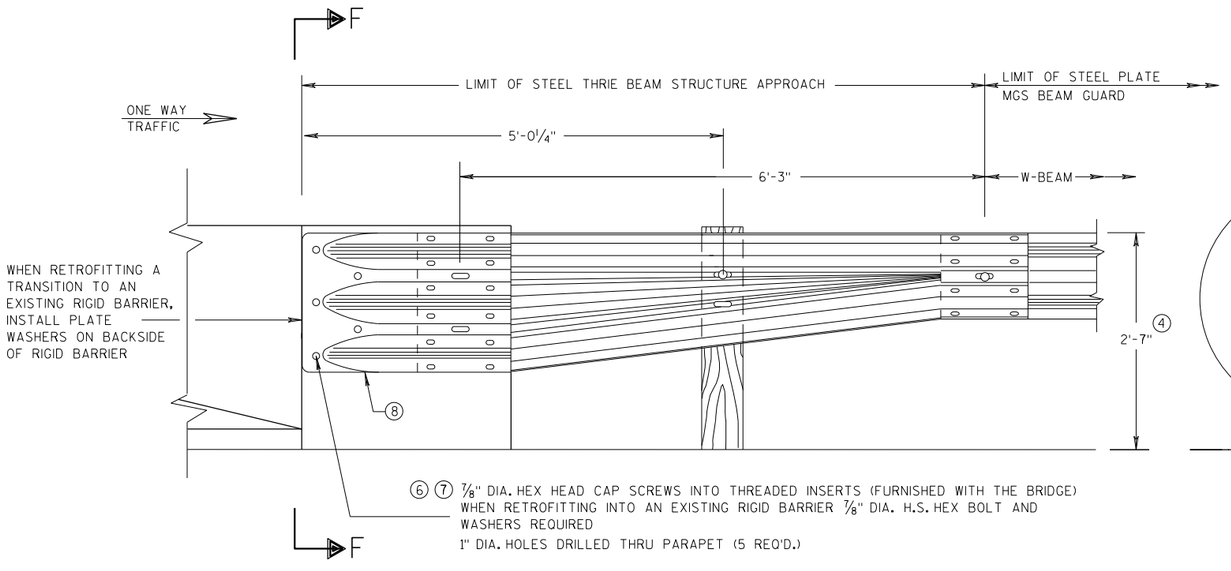
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

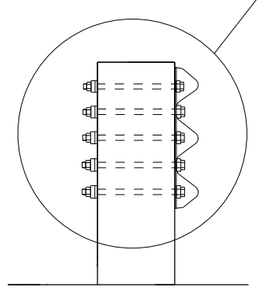
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

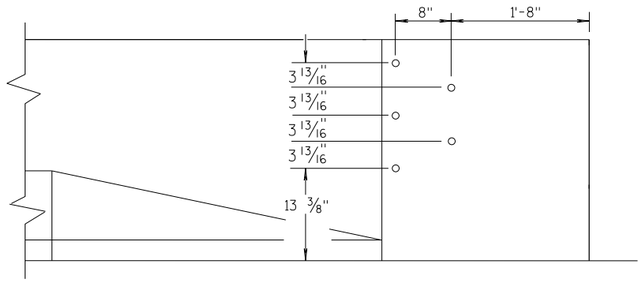




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVIS
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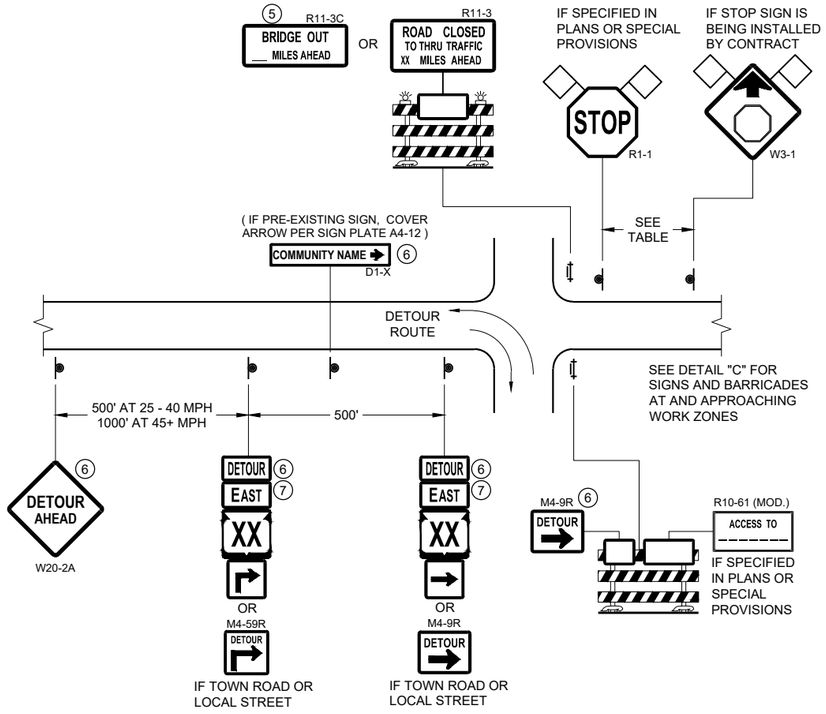
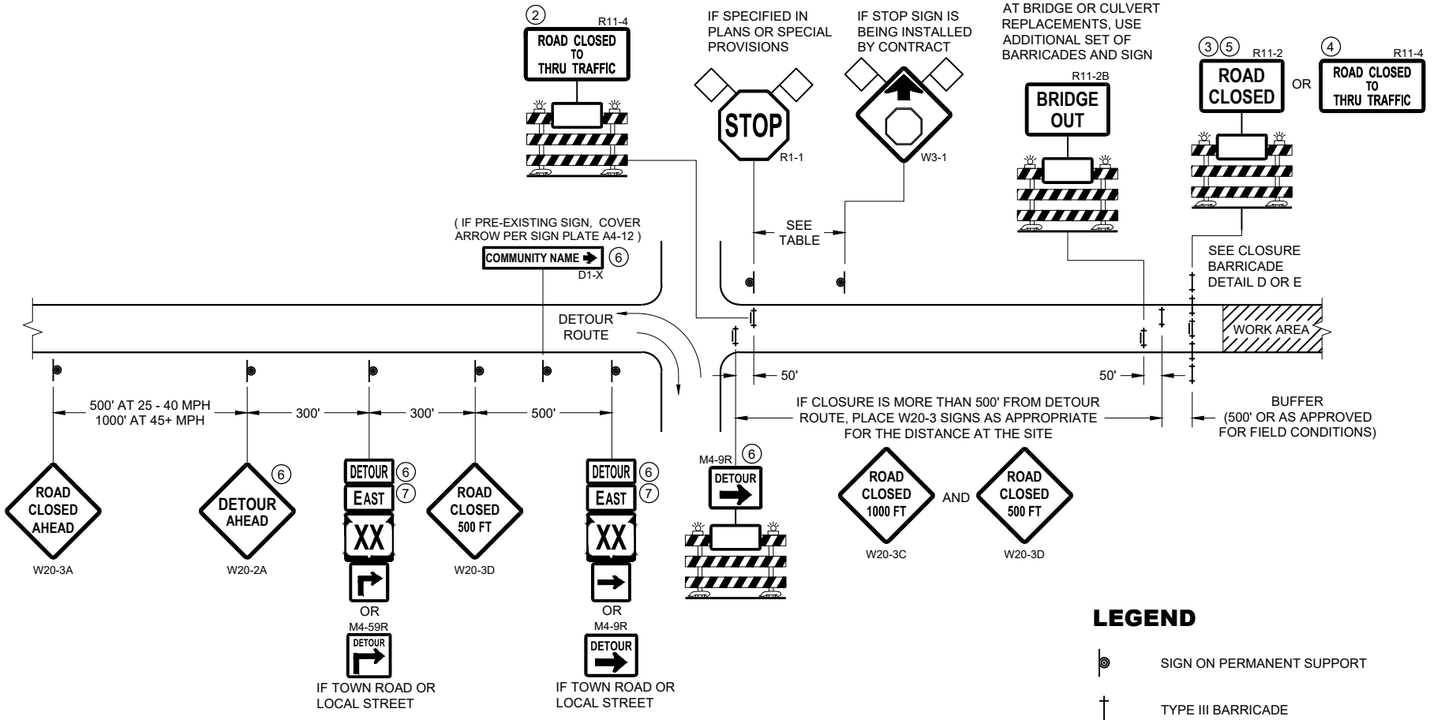
S.D.D. 14 B 45-5d



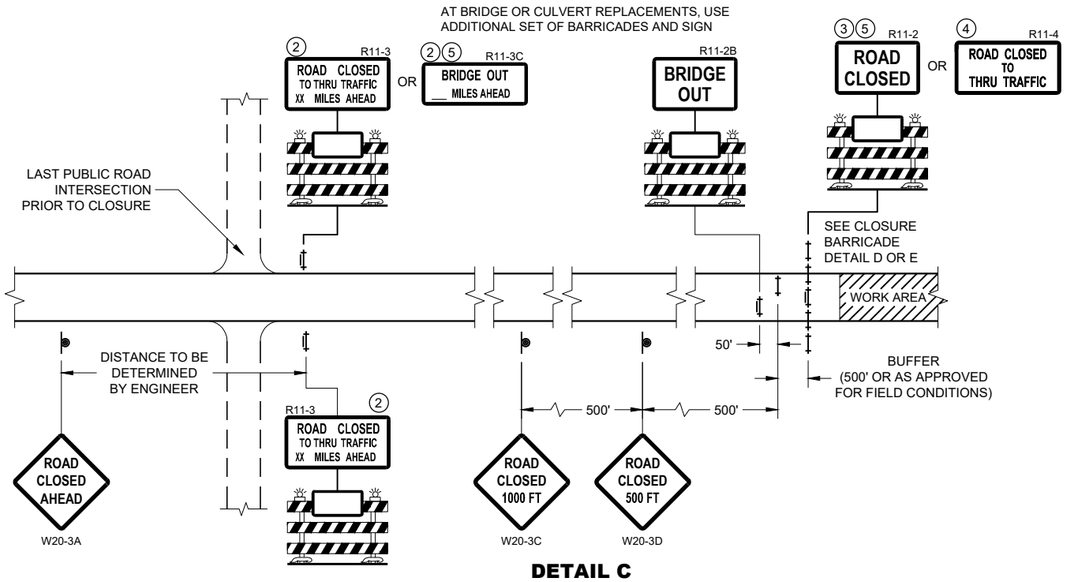
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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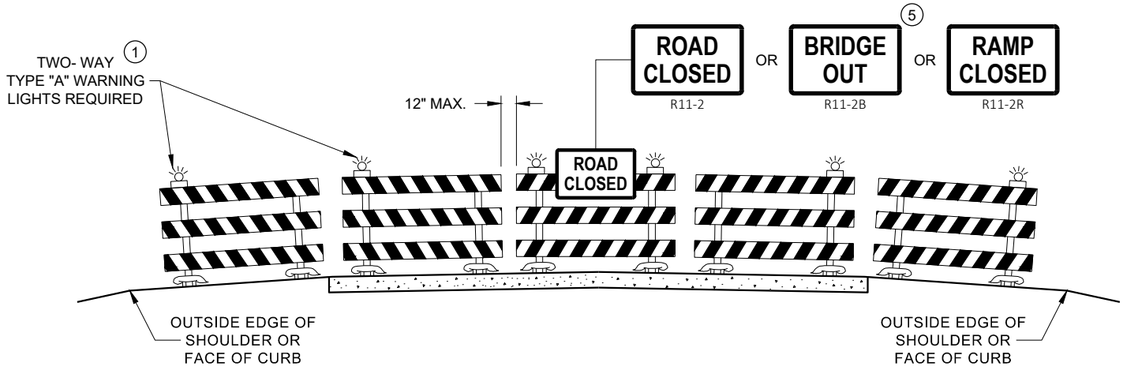
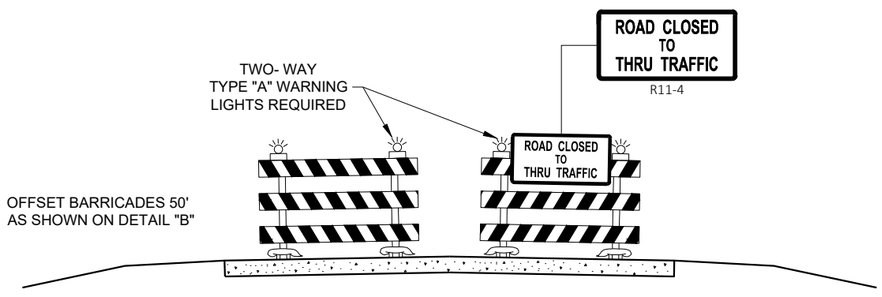
SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 15C02 - 09b

6

SDD 15C02 - 09b

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- DETOUR / EAST — M4 - 8, M3 - X
- XX — M1 - 4
- XX — M1 - 6
- COUNTY / X — M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

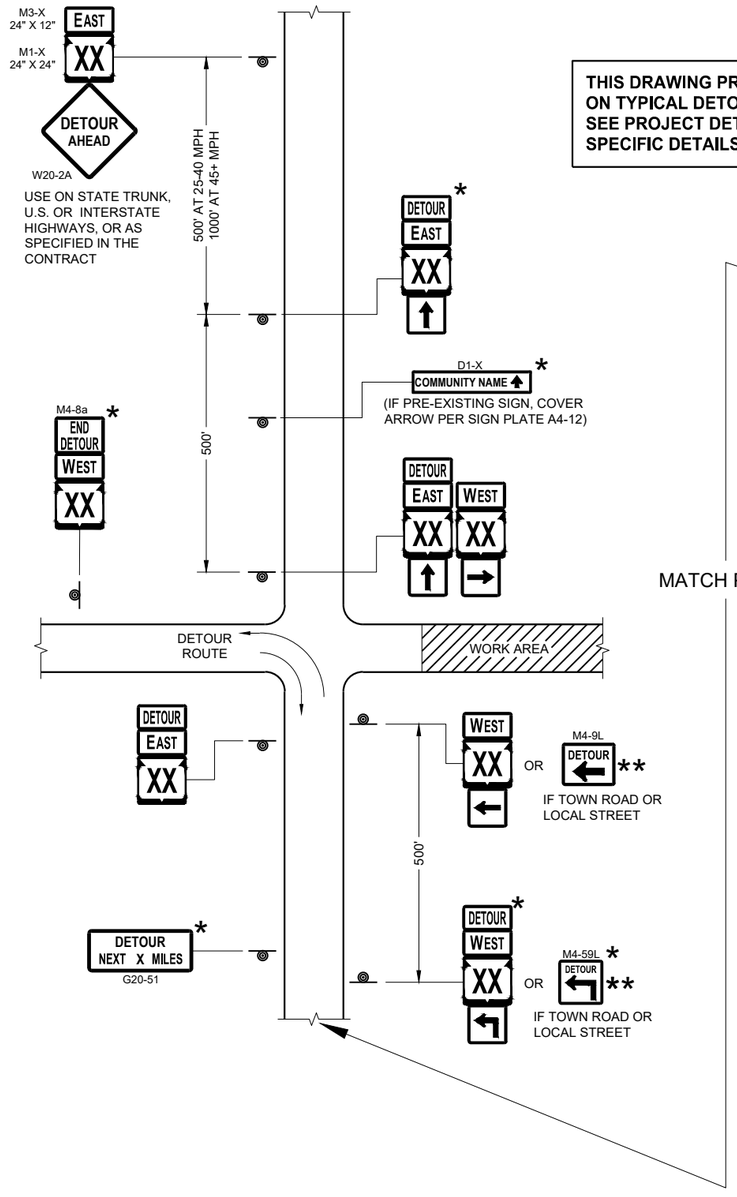
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

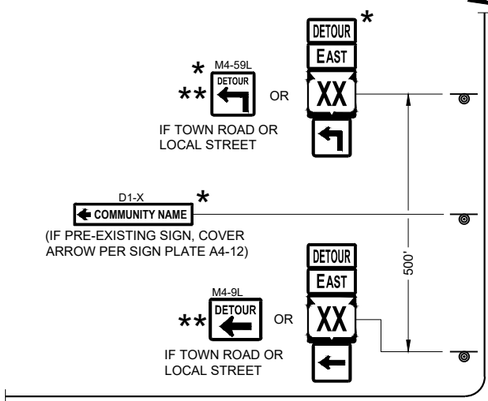
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

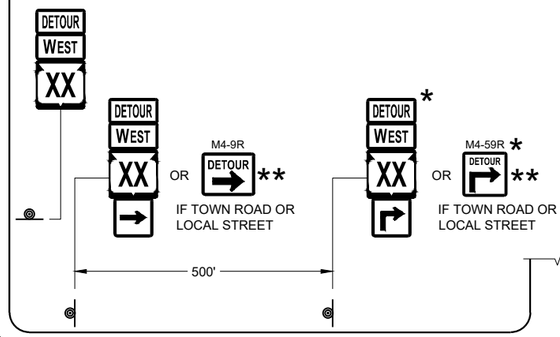
* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

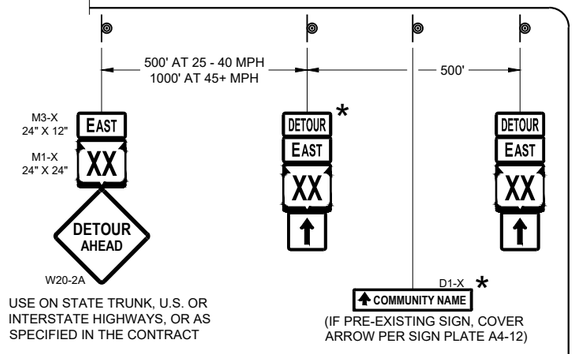
** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT

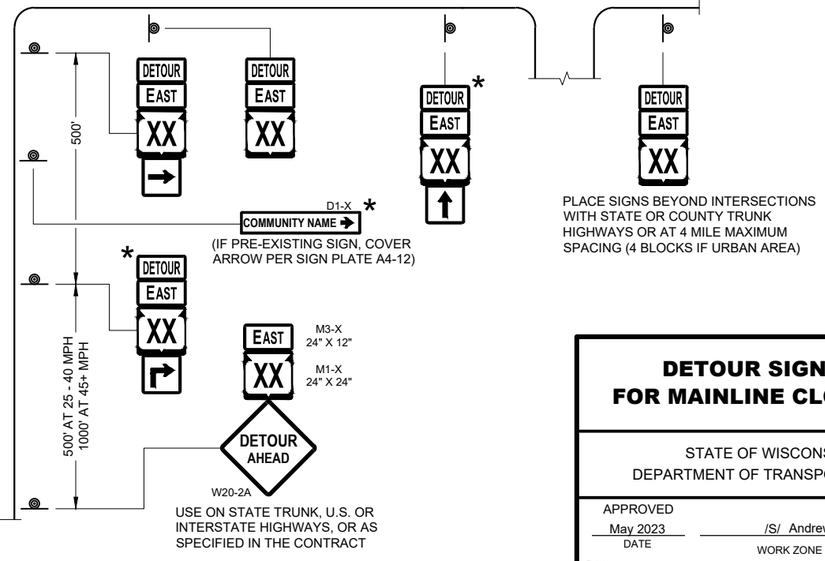


MATCH POINT









SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

DETAIL F
DETOUR SIGNING

DETOUR SIGNING FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

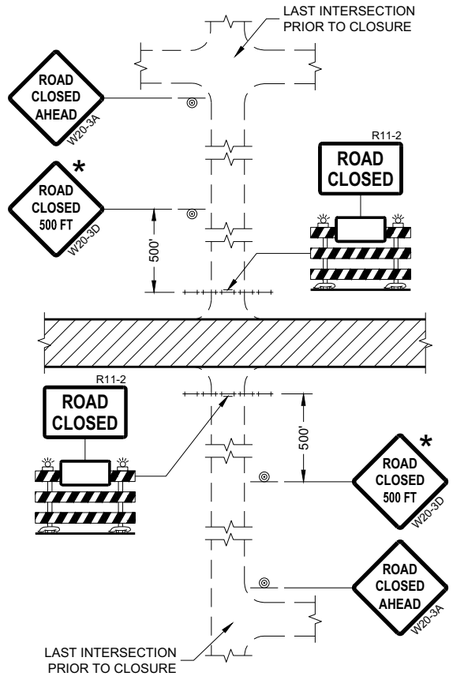
APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

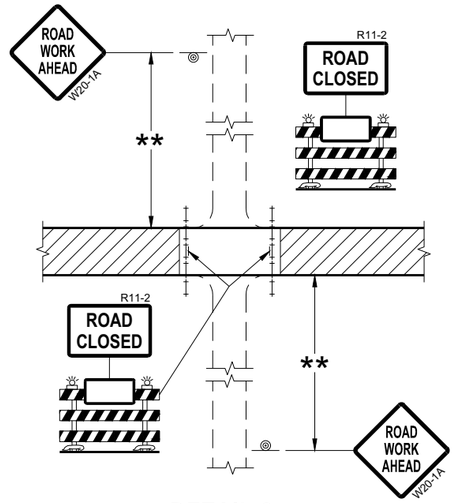
FHWA

6

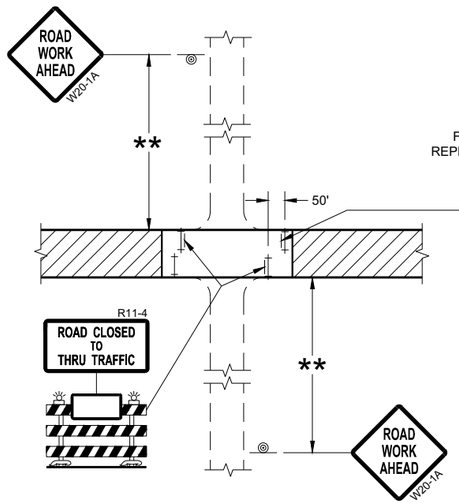
SDD 15C02 - 09c



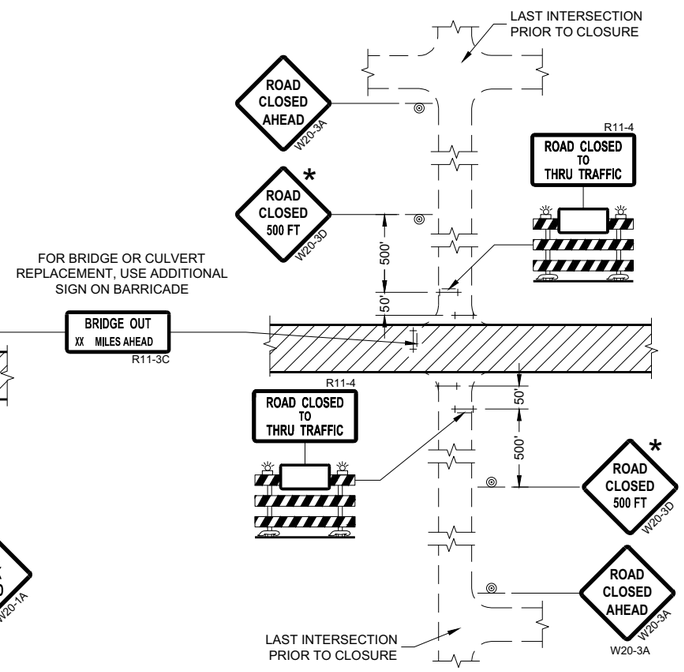
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6
SDD 15C03 - 05

GENERAL NOTES

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

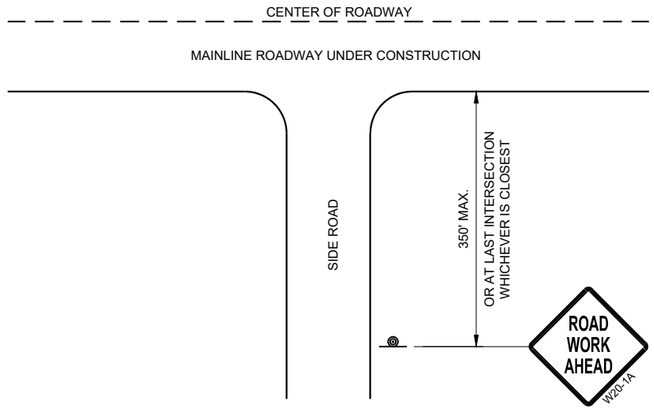
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

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

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

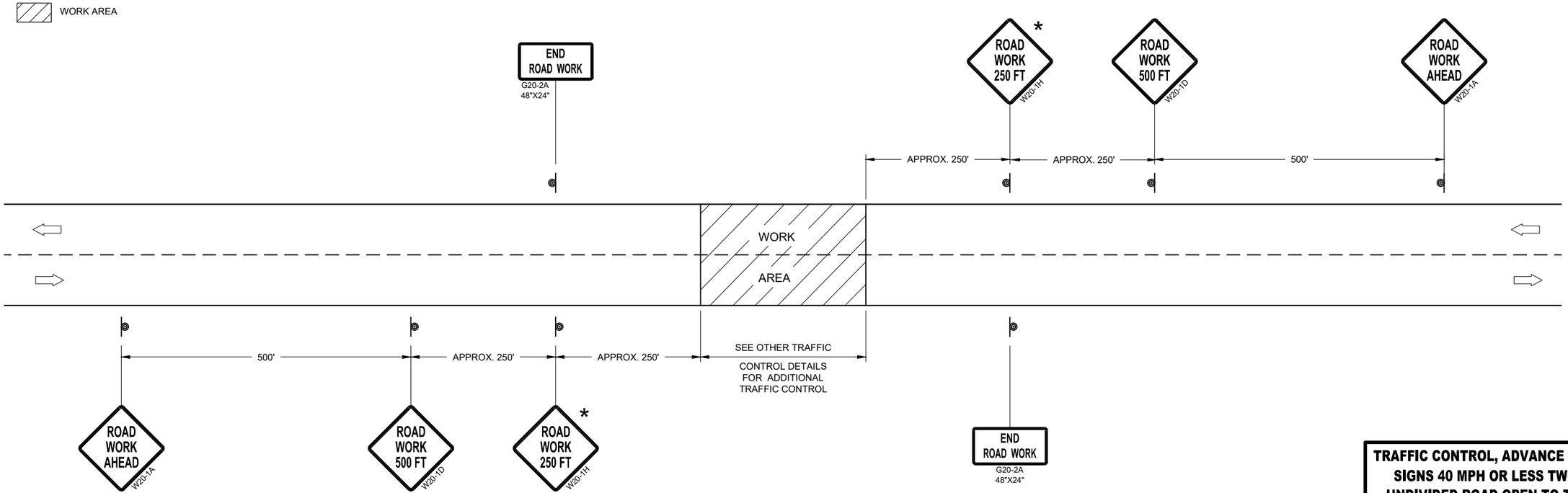
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 MPH OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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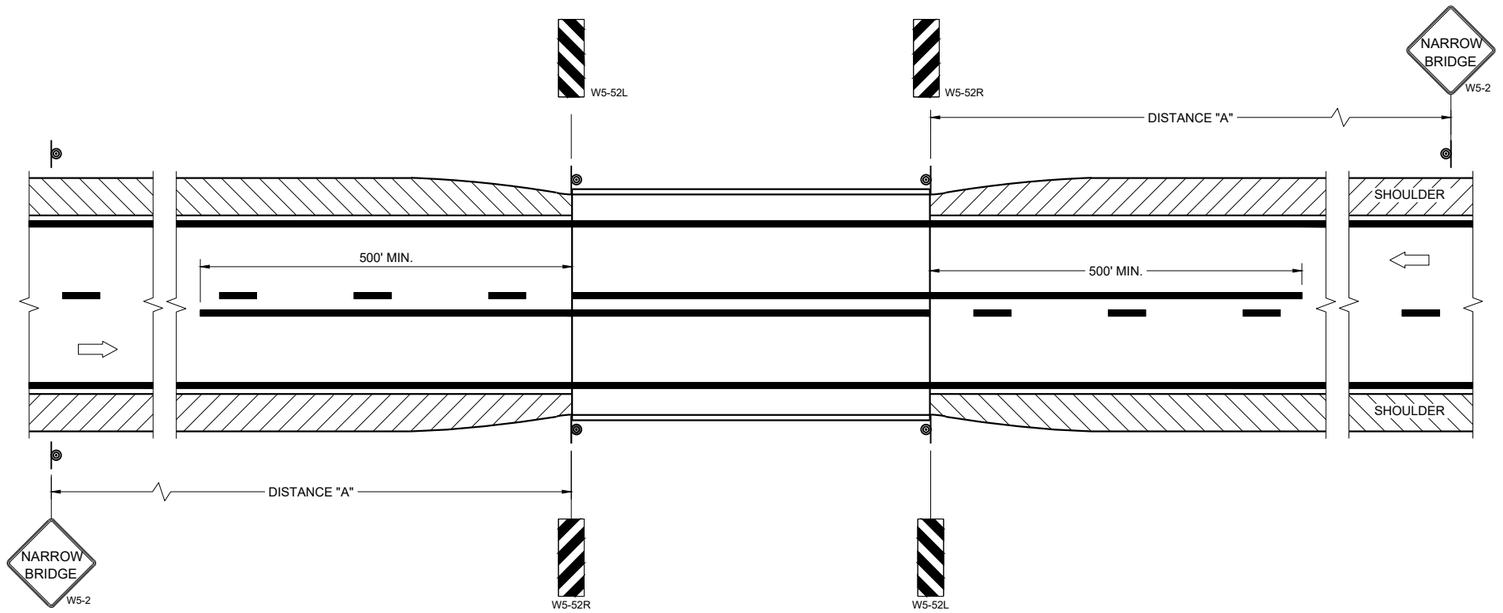
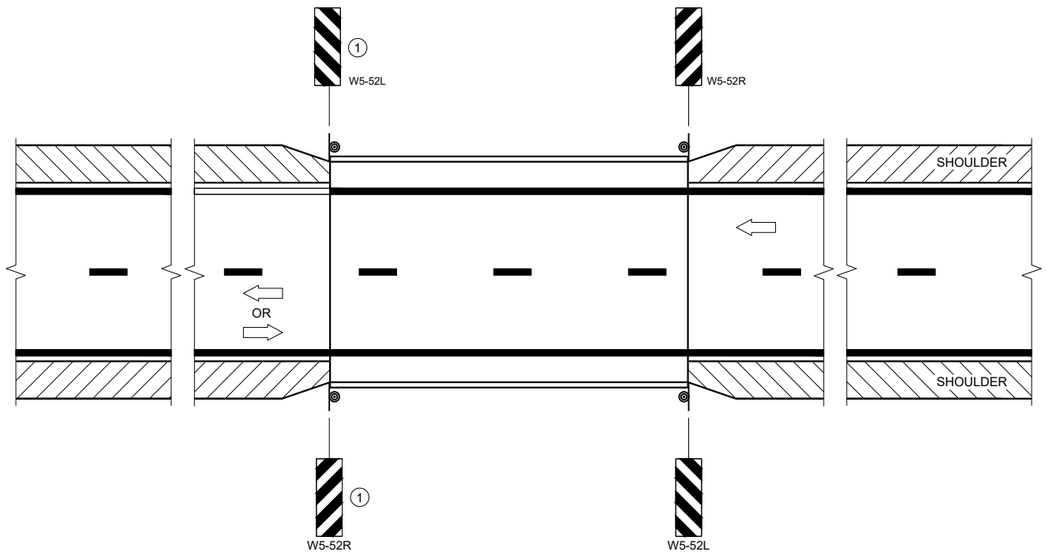
SDD 15C05 - 05



SITUATION 1

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



SITUATION 2

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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

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

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15C06-12

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.

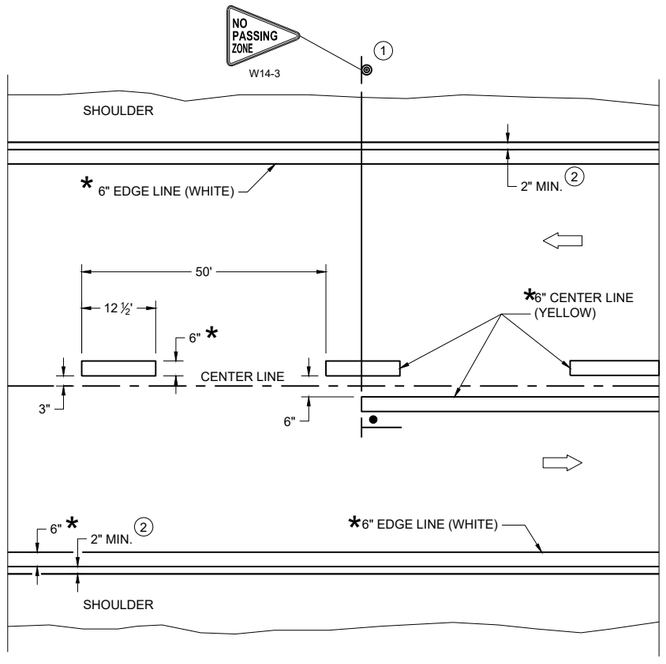
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

LEGEND

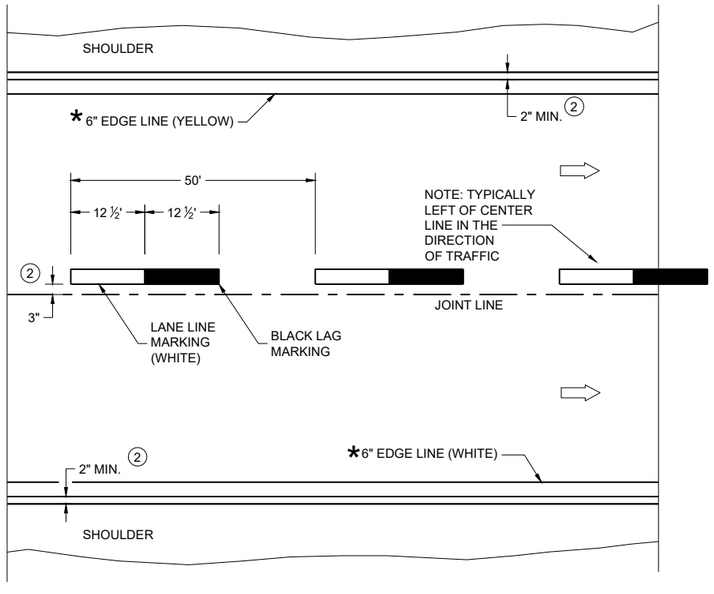
"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

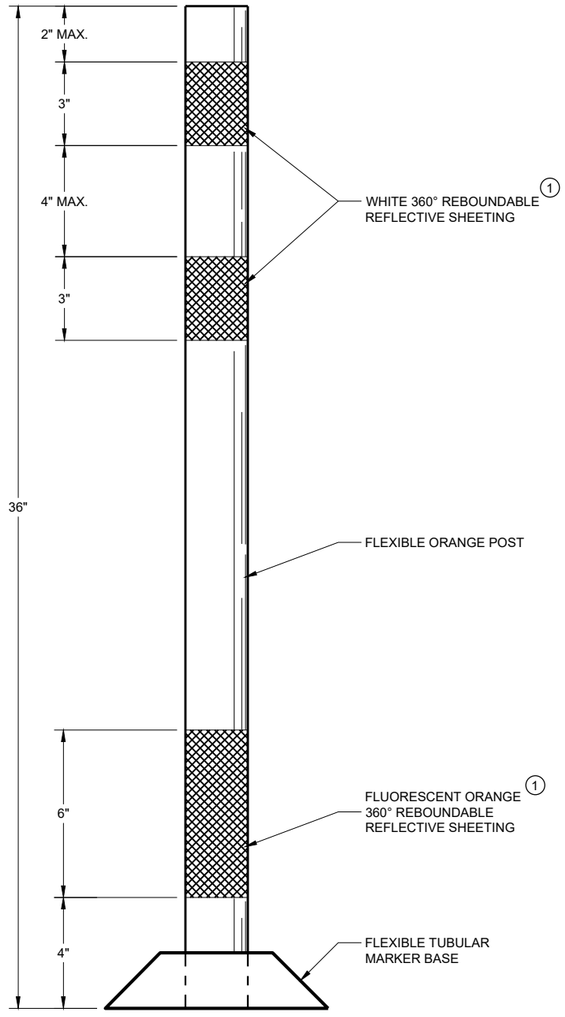
APPROVED
May 2023 — DATE
/S/ Jeannie Silver — Statewide Pavement Marking Engineer
FHWA

6

SDD 15C08-23a

6

SDD 15C08-23a



FLEXIBLE TUBULAR MARKER POST WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

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

6

SDD 15C11 - 10a

CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

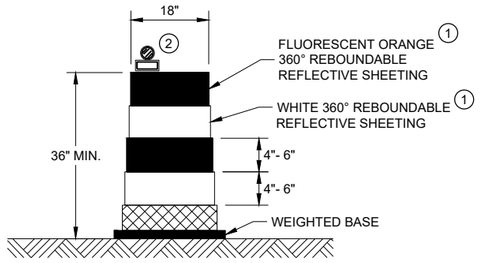
APPROVED
November 2022 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

6

SDD 15C11 - 10a

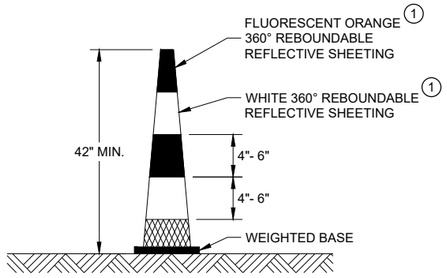
GENERAL NOTES

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



DRUM

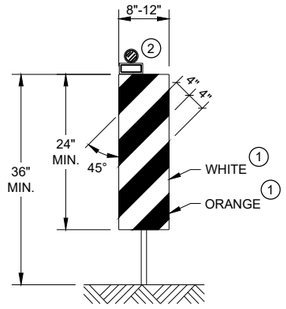
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

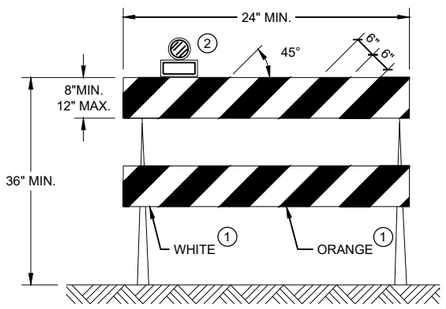
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



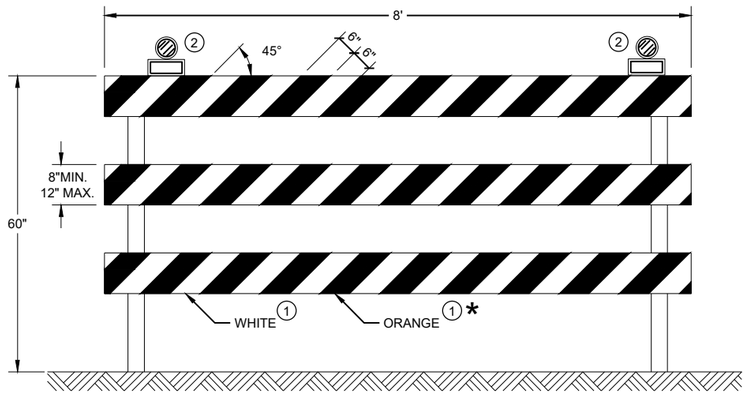
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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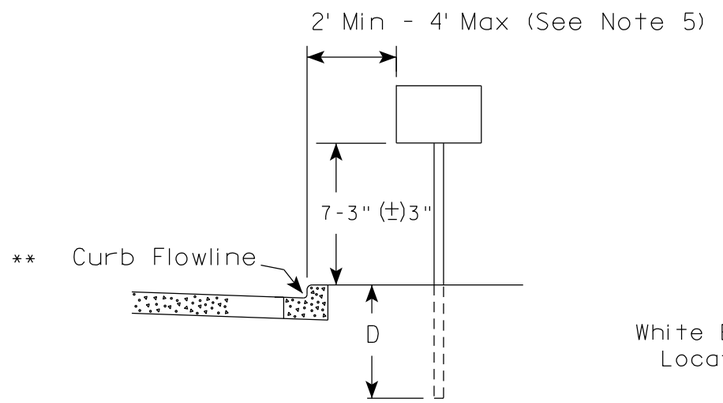
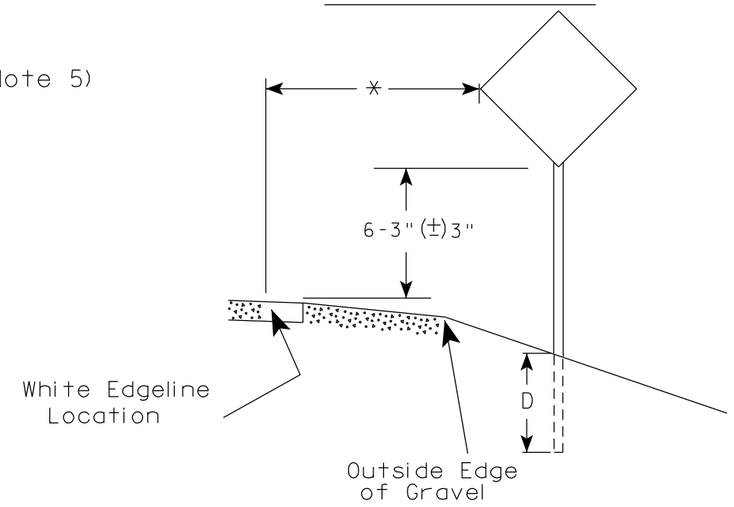
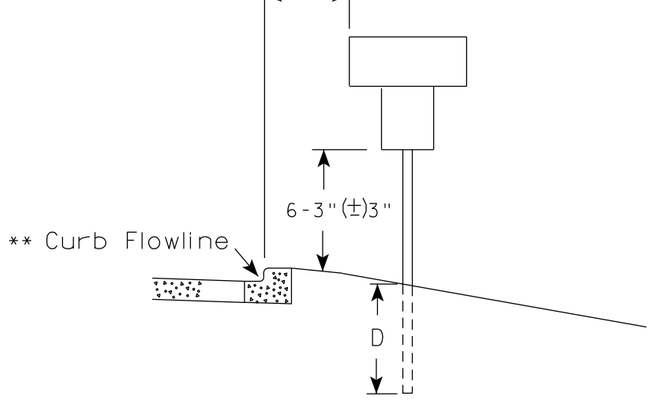
SDD 15C11 - 10b

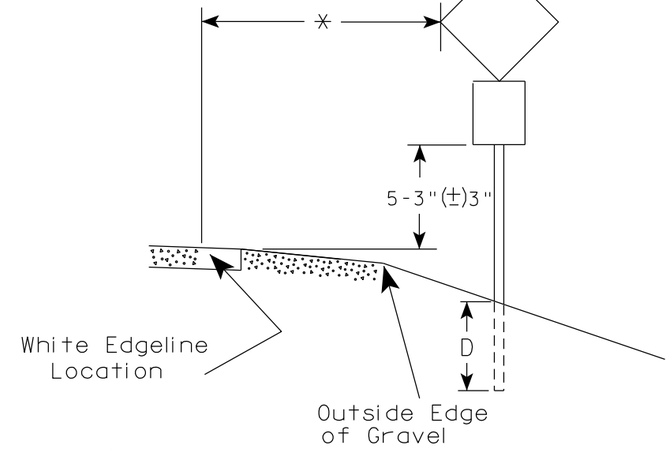
URBAN AREA



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.

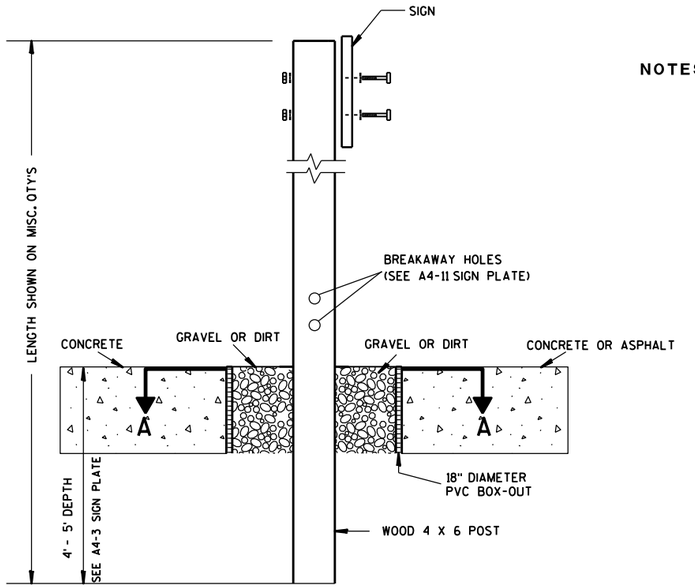
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

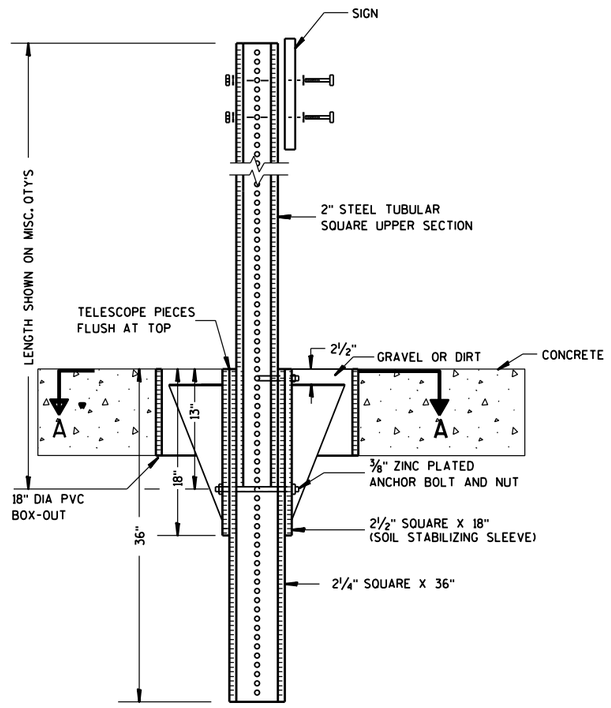
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 55	E



ELEVATION VIEW

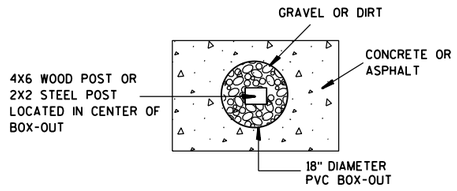
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

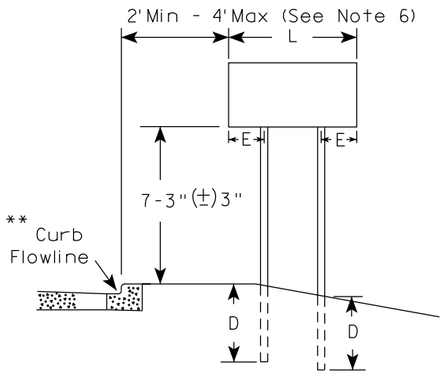
APPROVED Matthew R Rauch
for State Traffic Engineer

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

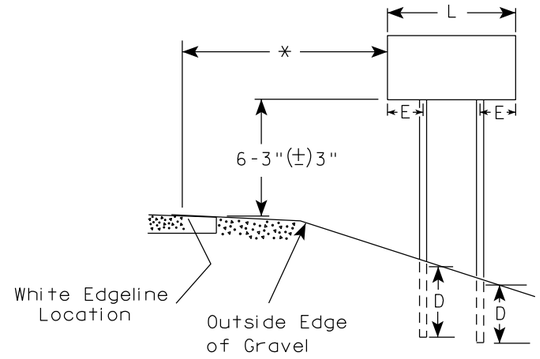
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

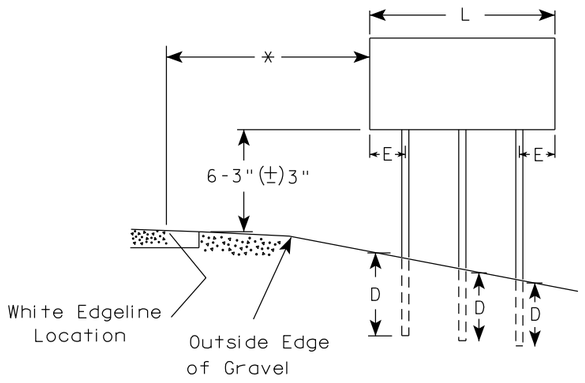
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

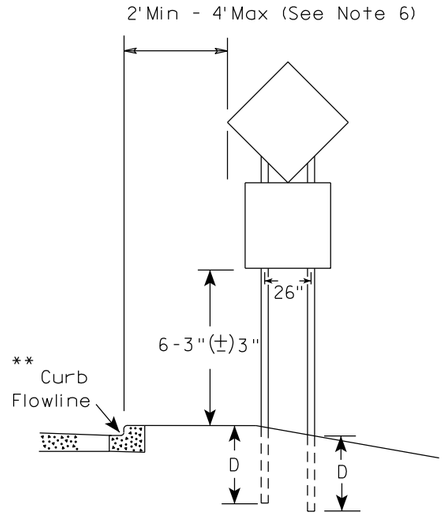
URBAN AREA



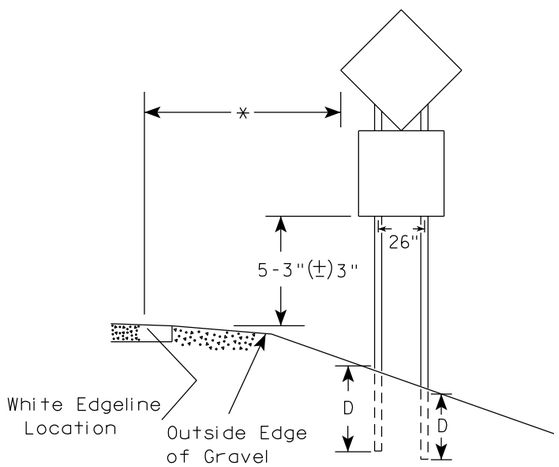
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

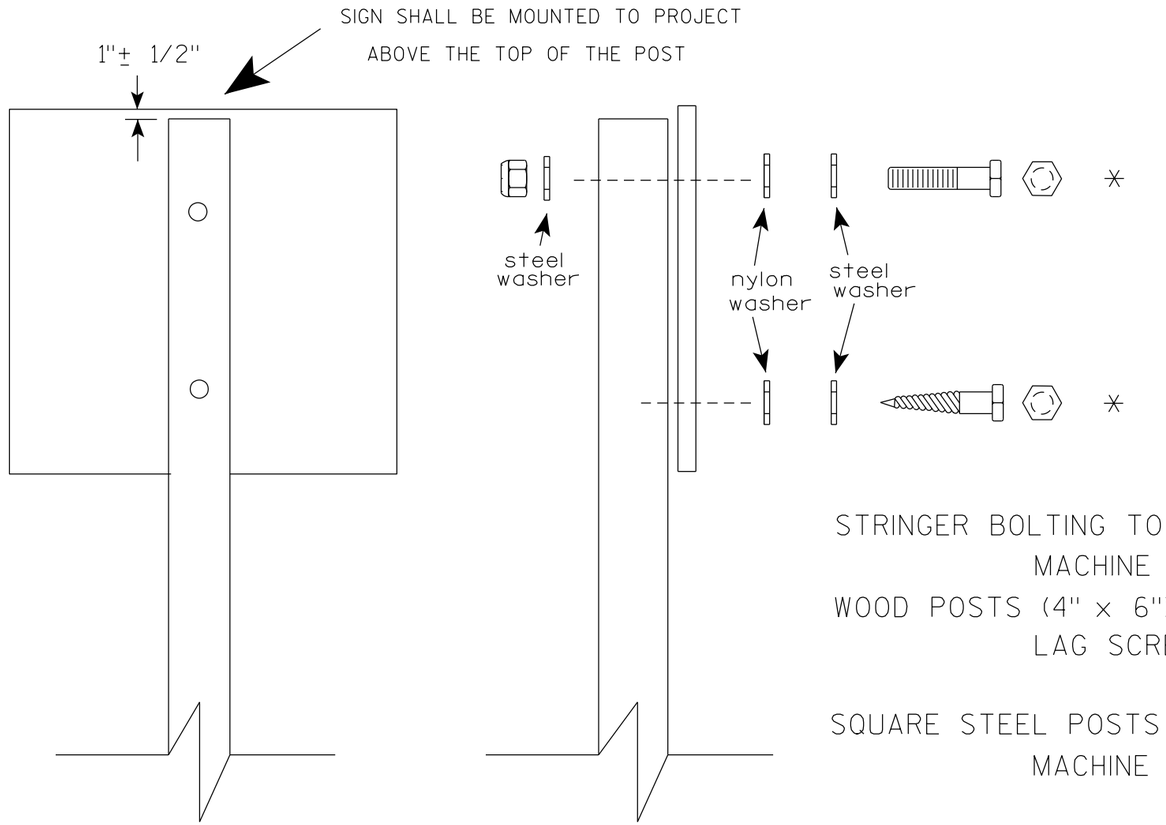
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 57	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

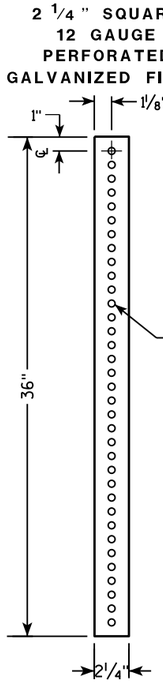
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

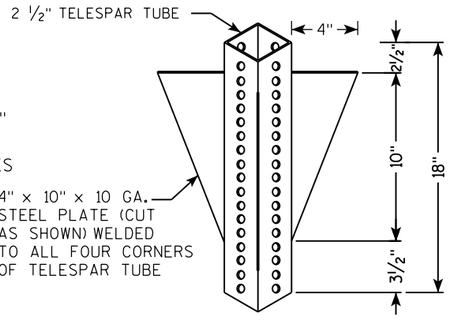
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

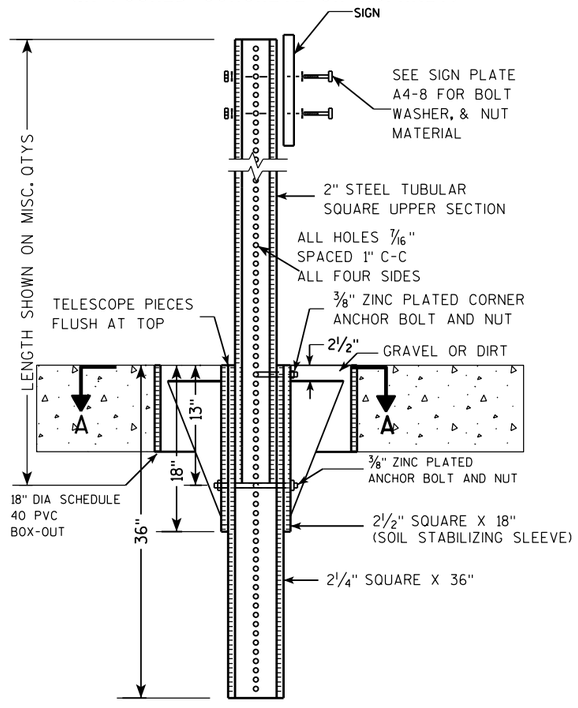
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



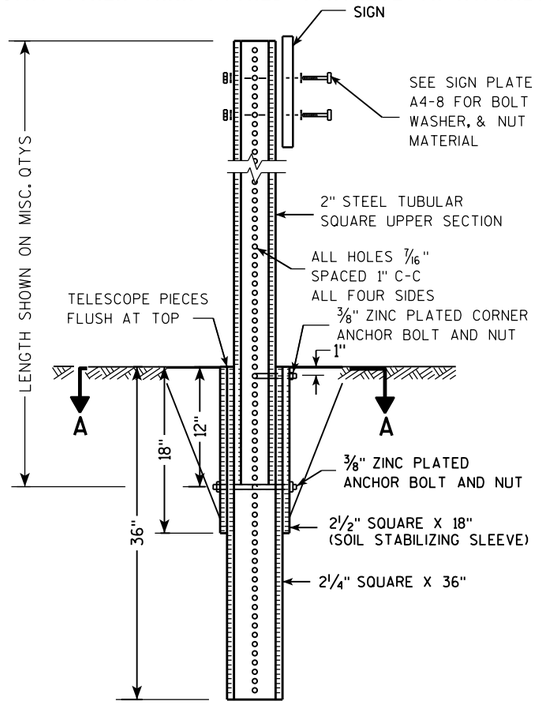
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

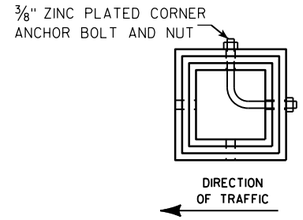


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

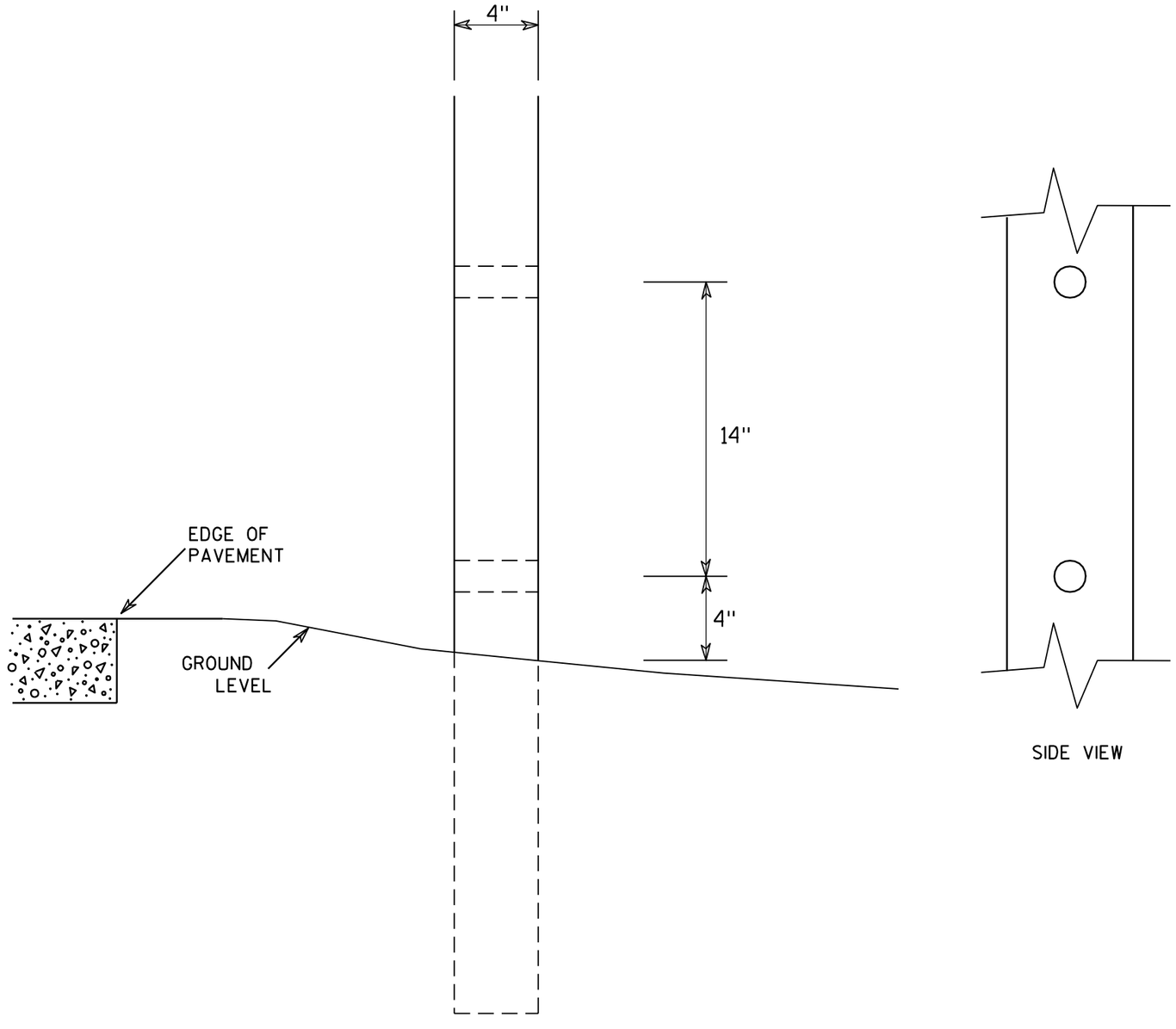
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 59 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

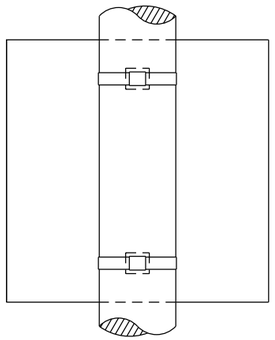
APPROVED Chester J Spang for State Traffic Engineer

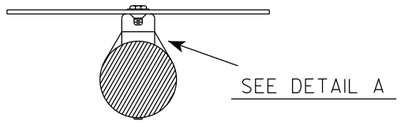
DATE 3/27/97 PLATE NO. A4-11.2

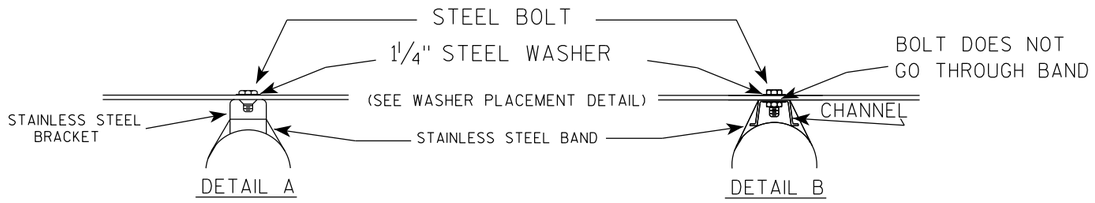
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 60	E

BANDING

SINGLE SIGN



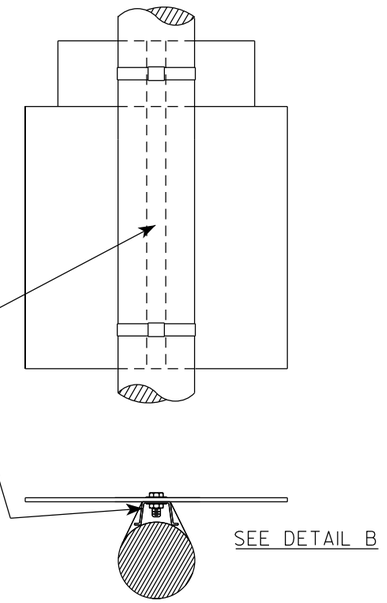




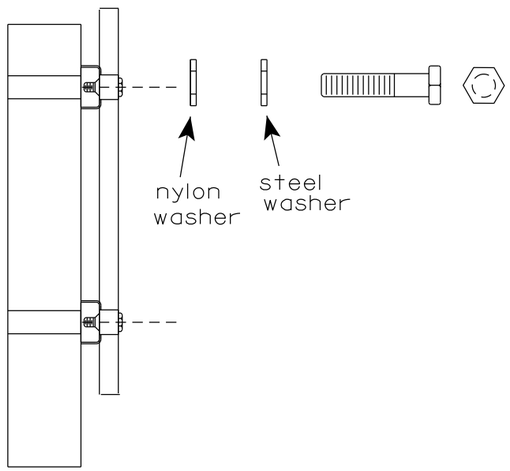
GENERAL NOTES

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

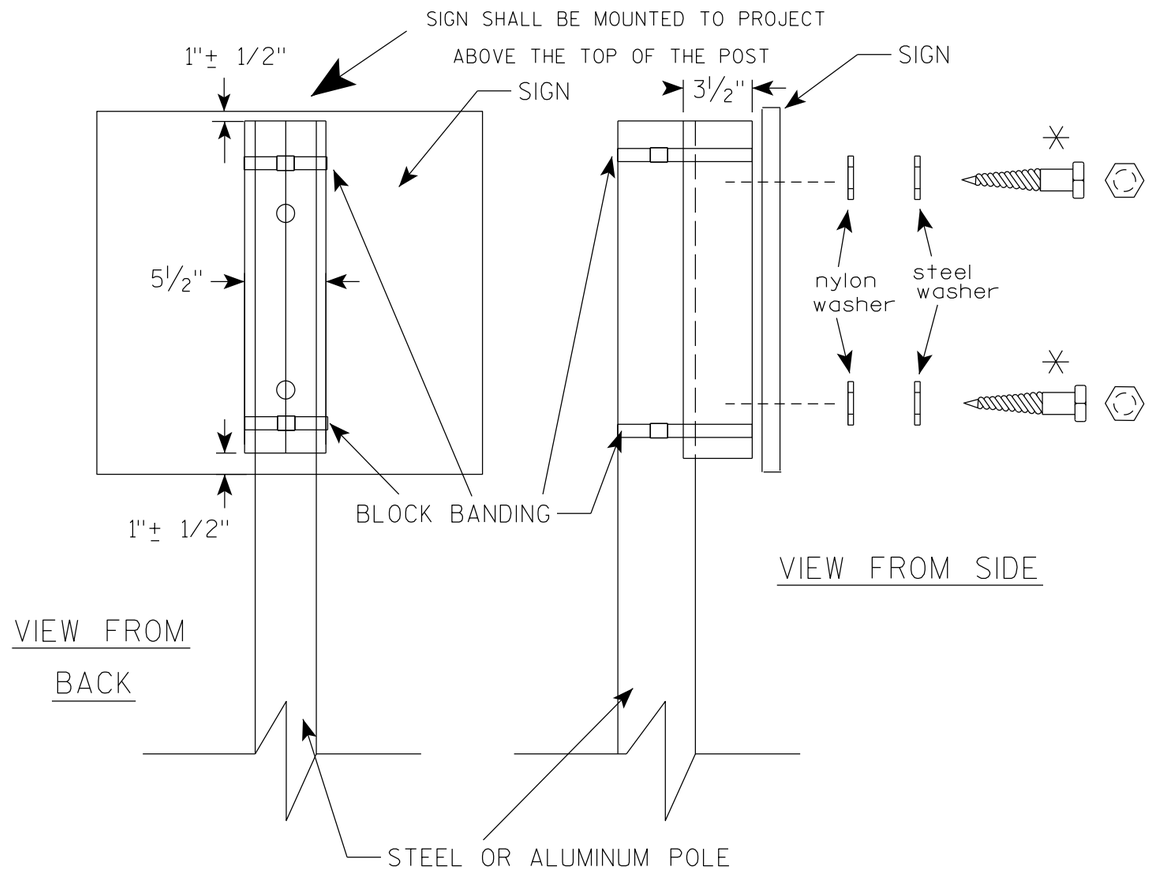
DATE 6/10/19 PLATE NO. A5-9.4

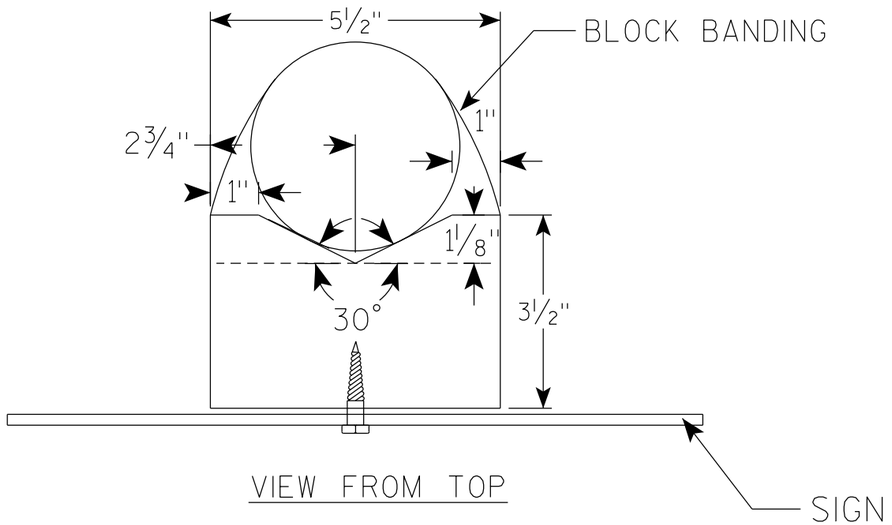
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 61	E

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)

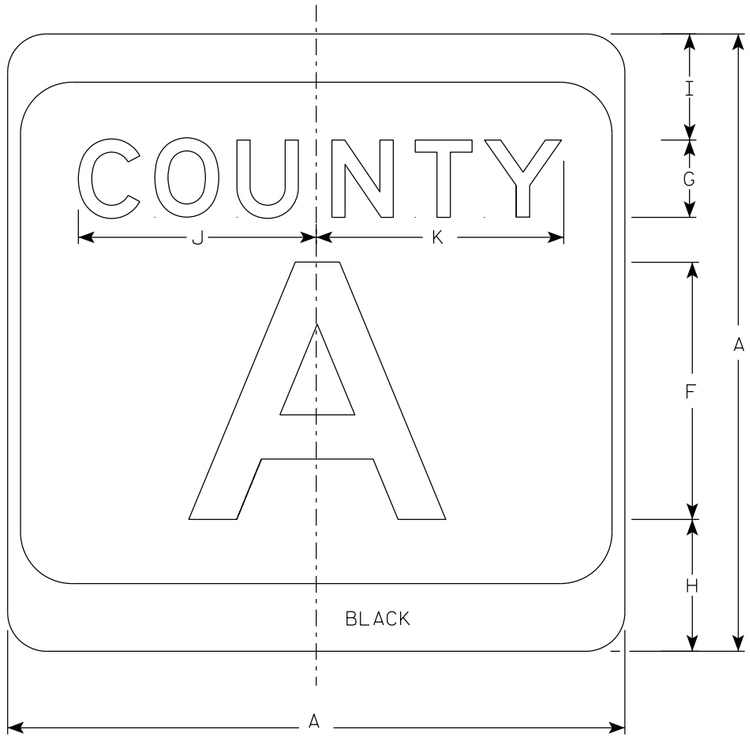
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

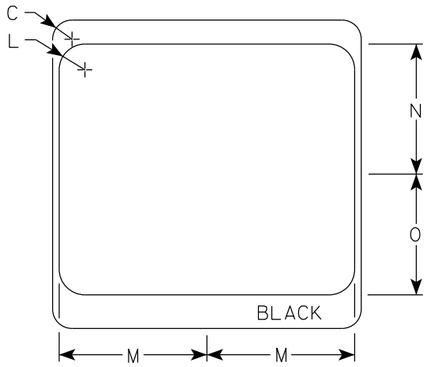
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 62 E

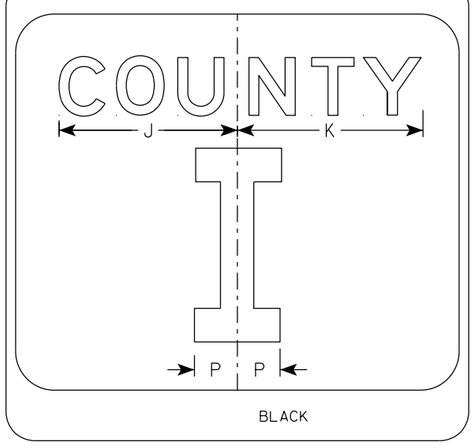


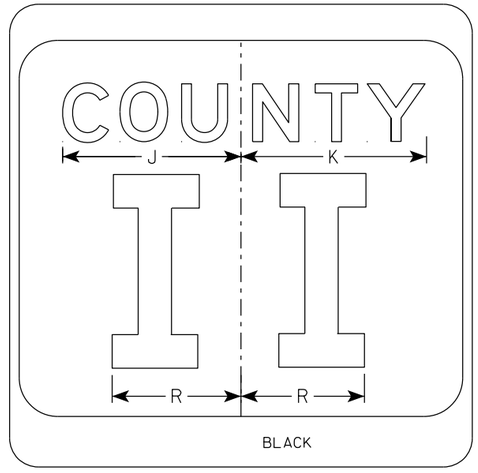
M1-5A



NOTES

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





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

CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

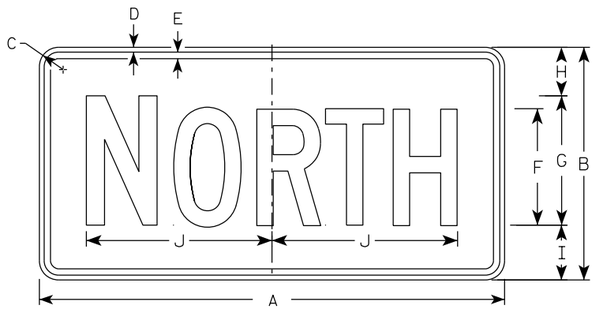
APPROVED Matthew R Rauch
for State Traffic Engineer

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

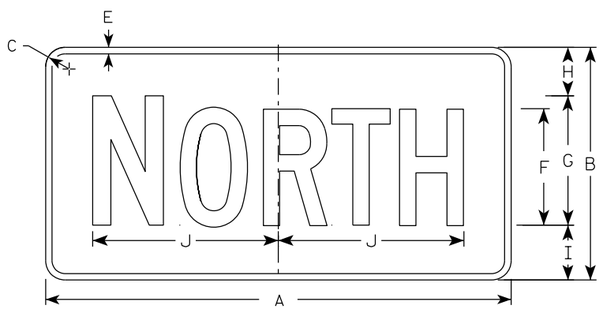
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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

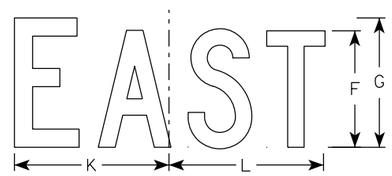
7



M3-1
MM3-1
MP3-1

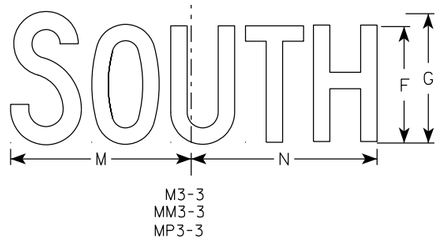


MB3-1
MK3-1
MN3-1

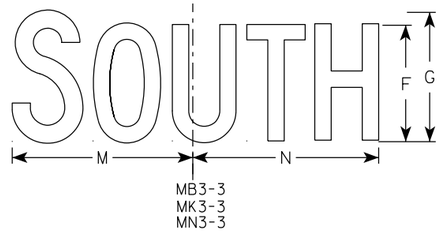


M3-2
MM3-2
MP3-2

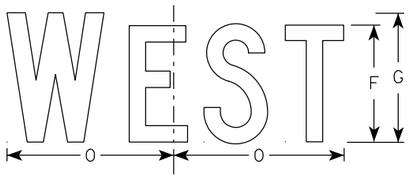
MB3-2
MK3-2
MN3-2



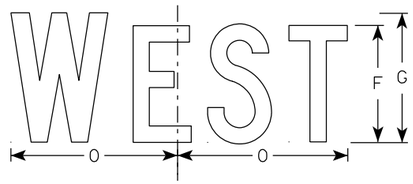
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
   Message - Black
   MB3-1 thru MB3-4 Background - Blue
   Message - White
   MK3-1 thru MK3-4 Background - Green
   Message - White
   MM3-1 thru MM3-4 Background - White
   Message - Green
   MN3-1 thru MN3-4 Background - Brown
   Message - White
   MP3-1 thru MP3-4 Background - White
   Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
2M	24	12	1 1/2	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4												2.00
3	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
4	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5
5	36	18	1 1/2	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13												4.5

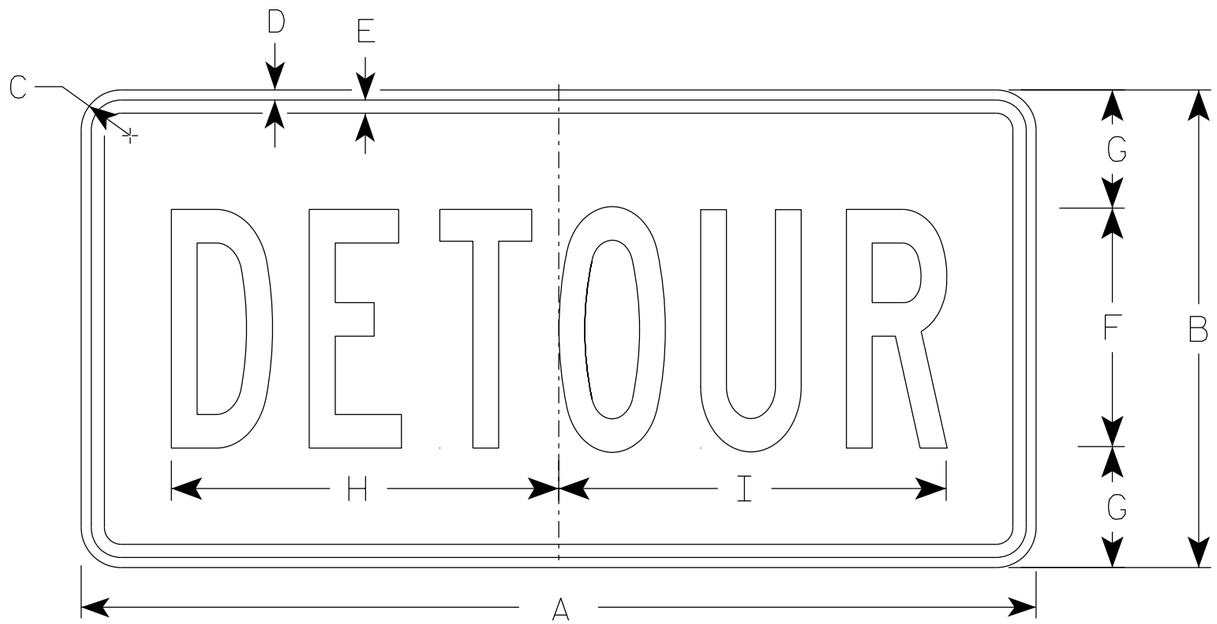
STANDARD SIGNS
M3-1 THRU M3-4
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/8/2023 PLATE NO. M3-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 64 | E



M4-8

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
2M	24	12	1 1/2	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
5	36	18	1 1/2	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5

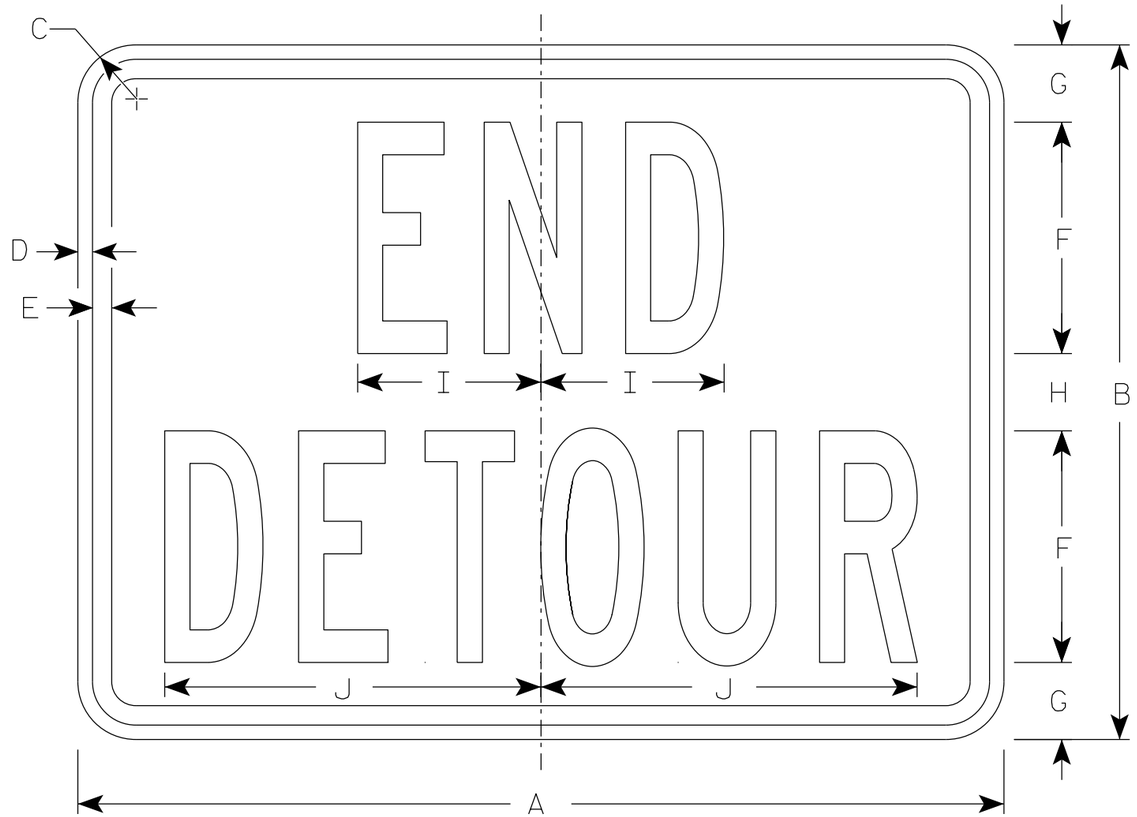
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 65	E



M4-8A

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
2M	24	18	1 ½	⅜	½	6	2	2	4 ¾	9 ¾																	3.0
3	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
4	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0
5	30	24	1 ½	⅜	½	8	2 ½	3	6 ¾	13																	5.0

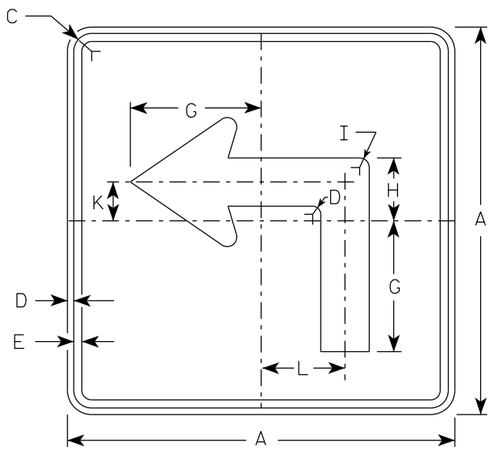
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

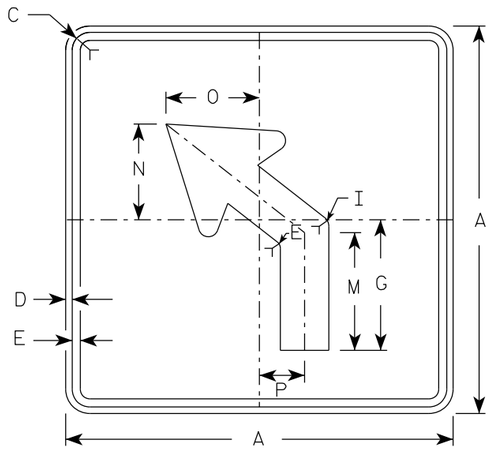
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8A.4

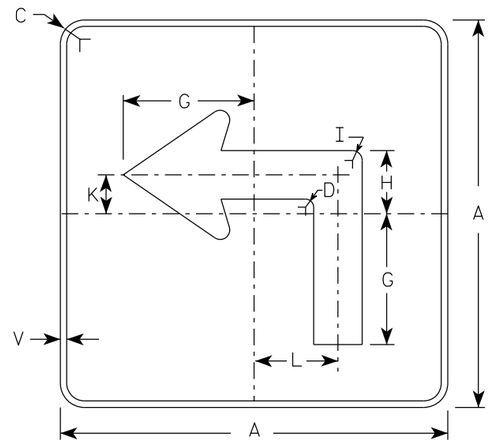
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 66 | E



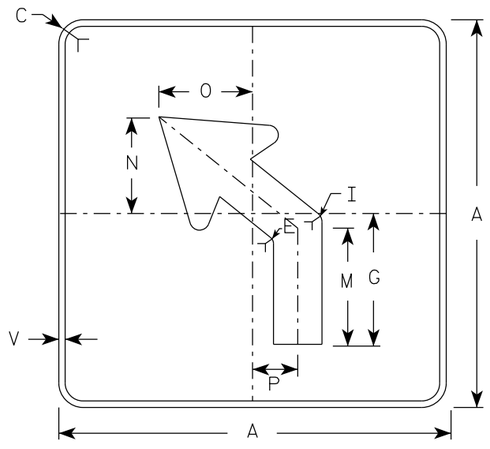
M5-1L
MM5-1L
MO5-1L
MP5-1L



M5-2L
MM5-2L
MO5-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L

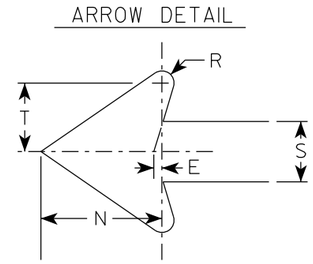


MB5-2L
MK5-2L
MN5-2L
MR5-2L

NOTES

1. Signs are Type II - Type H reflective except as shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M5-1 and M5-2 Background - White
   Message - Black
   MB5-1 and MB5-2 Background - Blue
   Message - White
   MK5-1 and MK5-2 Background - Green
   Message - White
   MM5-1 and MM5-2 Background - White
   Message - Green
   MN5-1 and MN5-2 Background - Brown
   Message - White
   MO5-1 and MO5-2 Background - Orange - Type F Reflective
   Message - Black
   MP5-1 and MP5-2 Background - White
   Message - Blue
   MR5-1 and MR5-2 Background - Brown
   Message - Yellow
5. M5-1R same as M5-1L except arrow points right.
6. M5-2R same as M5-2L except arrow tilts right.

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
4	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25
5	30		1 7/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4		1/2					6.25

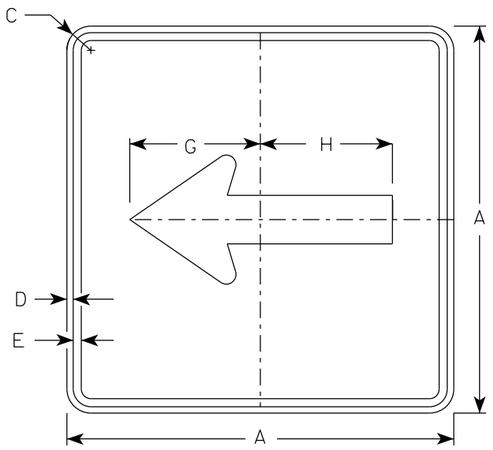
STANDARD SIGN
M5-1 & M5-2

WISCONSIN DEPT OF TRANSPORTATION

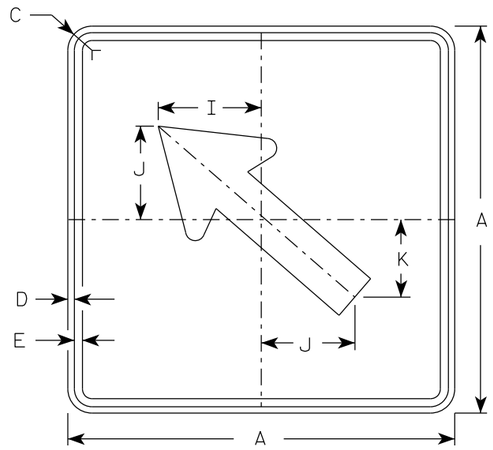
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/13/2023 PLATE NO. M5-1.15

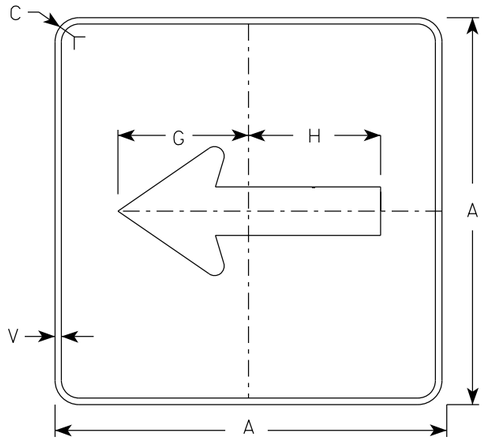
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 67 | E



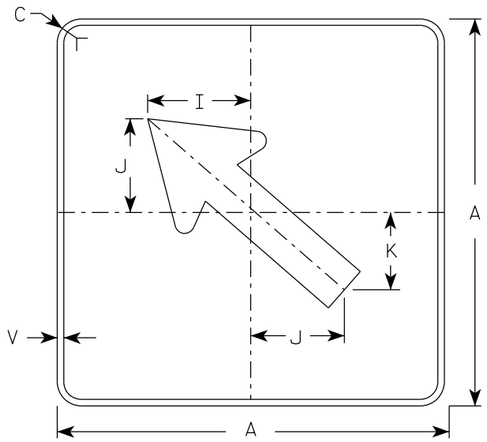
M6-1
MM6-1
MO6-1
MP6-1



M6-2
MM6-2
MO6-2
MP6-2



MB6-1
MK6-1
MN6-1
MR6-1

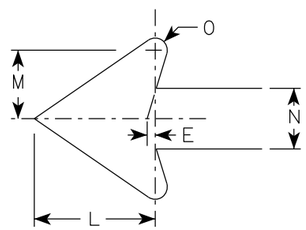


MB6-2
MK6-2
MN6-2
MR6-2

NOTES

1. Signs are Type II - Type H Reflective except as Shown
2. Color:
   Background - See note 4
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-1 and M6-2 Background - White
   Message - Black
   MB6-1 and MB6-2 Background - Blue
   Message - White
   MK6-1 and MK6-2 Background - Green
   Message - White
   MM6-1 and MM6-2 Background - White
   Message - Green
   MN6-1 and MN6-2 Background - Brown
   Message - White
   MO6-1 and MO6-2 Background - Orange - Type F Reflective
   Message - Black
   MP6-1 and MP6-2 Background - White
   Message - Blue
   MR6-1 and MR6-2 Background - Brown
   Message - Yellow

ARROW DETAIL



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
4	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
5	30		1 7/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4							1/2					6.25

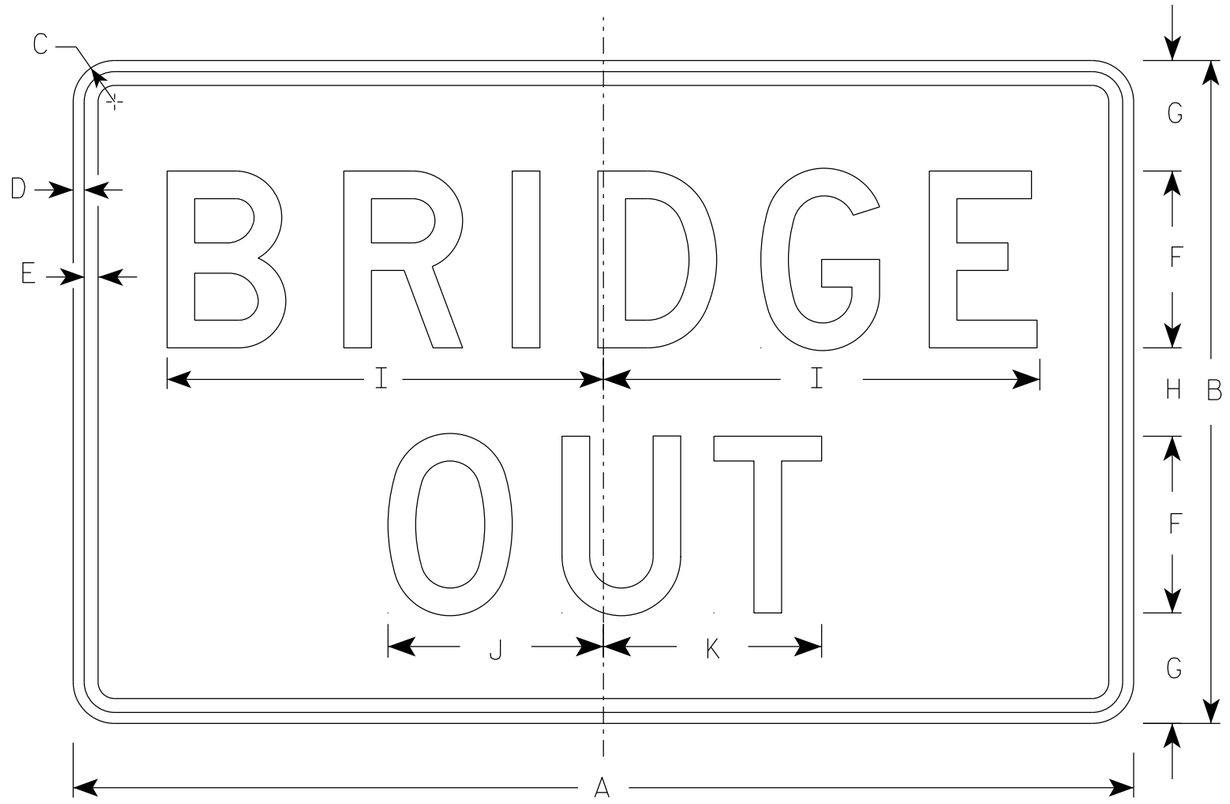
STANDARD SIGN
M6-1 & M6-2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 68 | E



R11-2B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

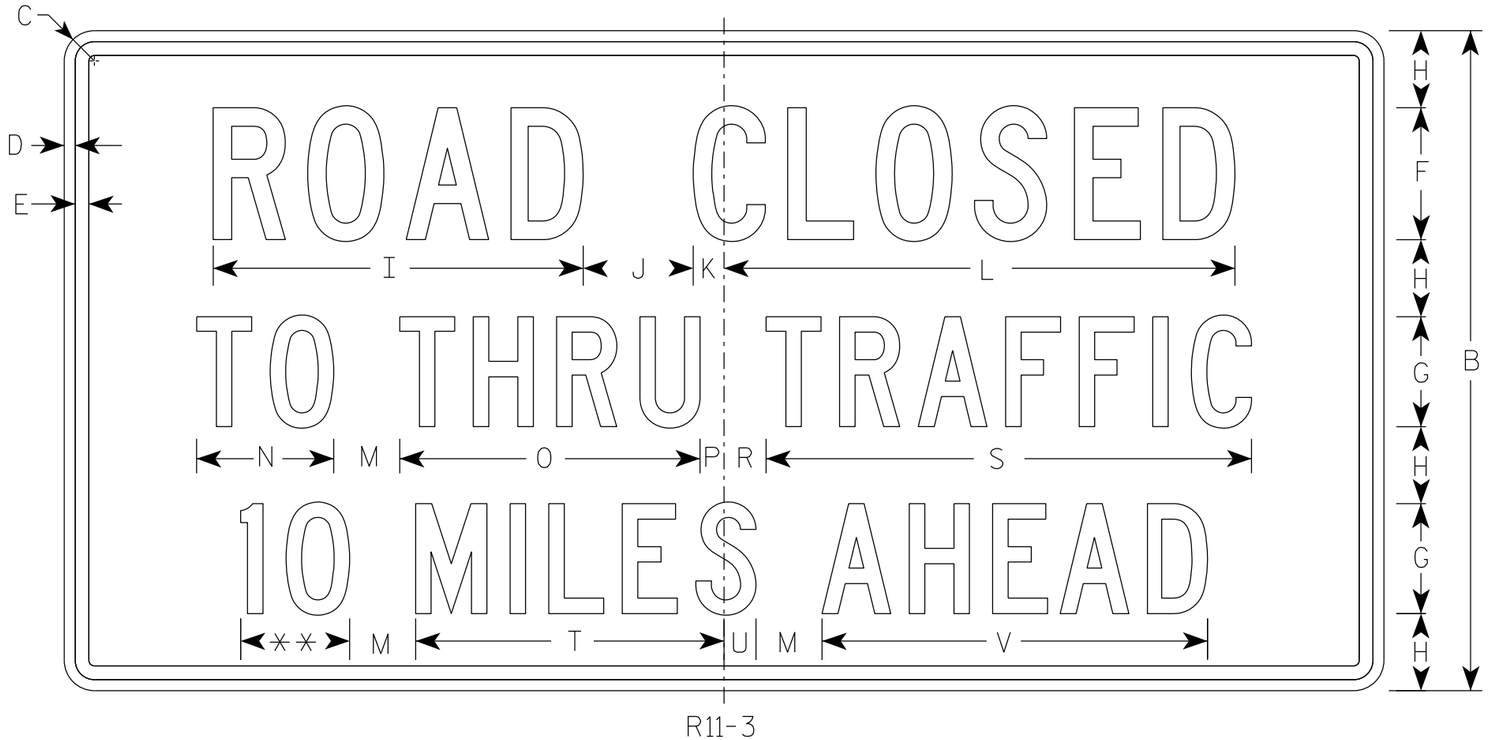
DATE 2/5/24 PLATE NO. R11-2B.3

PROJECT NO:

SHEET NO: 69 E

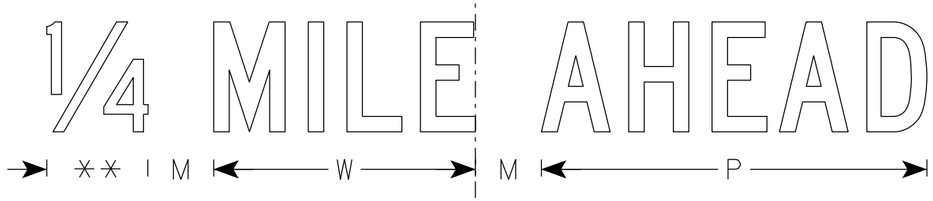
NOTES

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



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	3/8	4	3	2	11 1/4	3	1 1/8	15 3/8	2	3 3/4	8 1/4	5/8		1 3/8	13 1/4	8 3/8	7/8	10 1/2	7 1/8				4.5
2S	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
2M	60	30	1 7/8	1/2	5/8	6	5	3 1/2	16 7/8	5	1 3/8	23 1/4	3	6 1/4	13 5/8	1 1/8		1 7/8	22 1/8	14	1 1/2	17 1/2	11 7/8				12.5
3																											
4																											
5																											

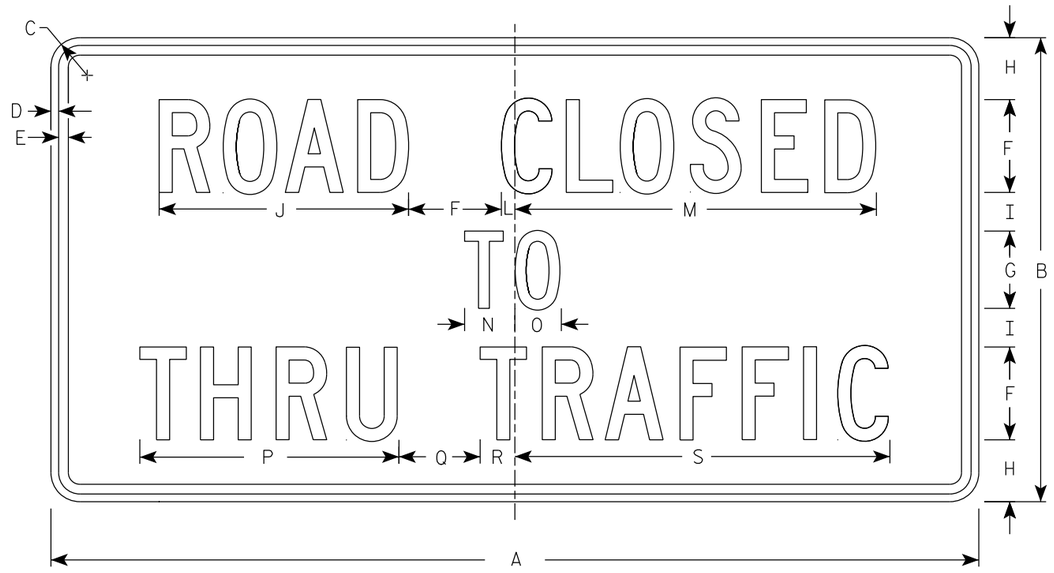
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/5/24 PLATE NO. R11-3.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 70 | E



R11-4

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
2M	60	30	1 7/8	1/2	5/8	6	5	4	2 1/2	16 1/8		7/8	23 3/8	3 1/4	3	16 3/4	5 1/4	2 1/4	24 1/4								12.5
3																											
4																											
5																											

STANDARD SIGN
R11 - 4

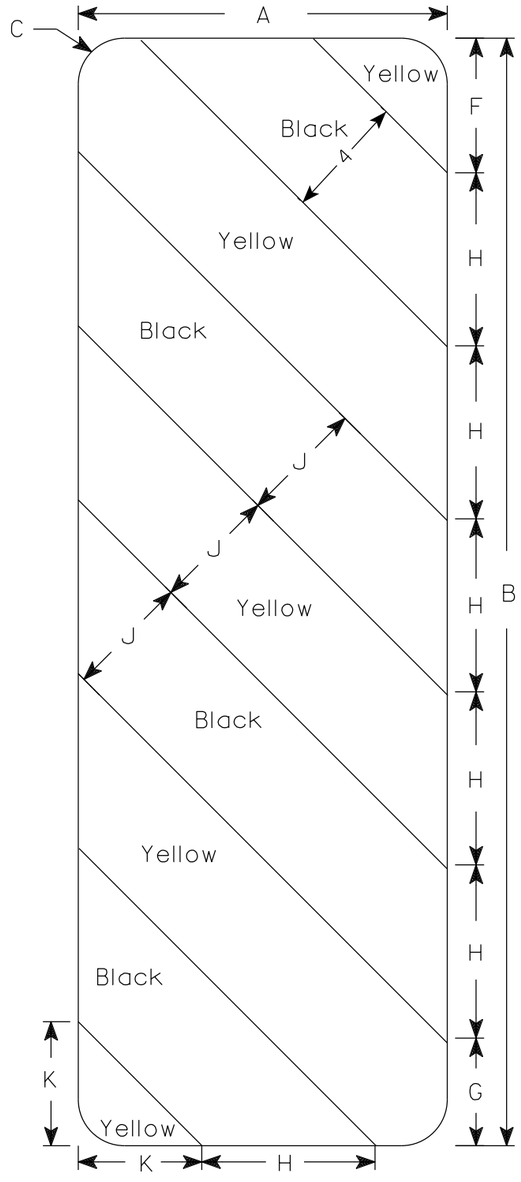
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

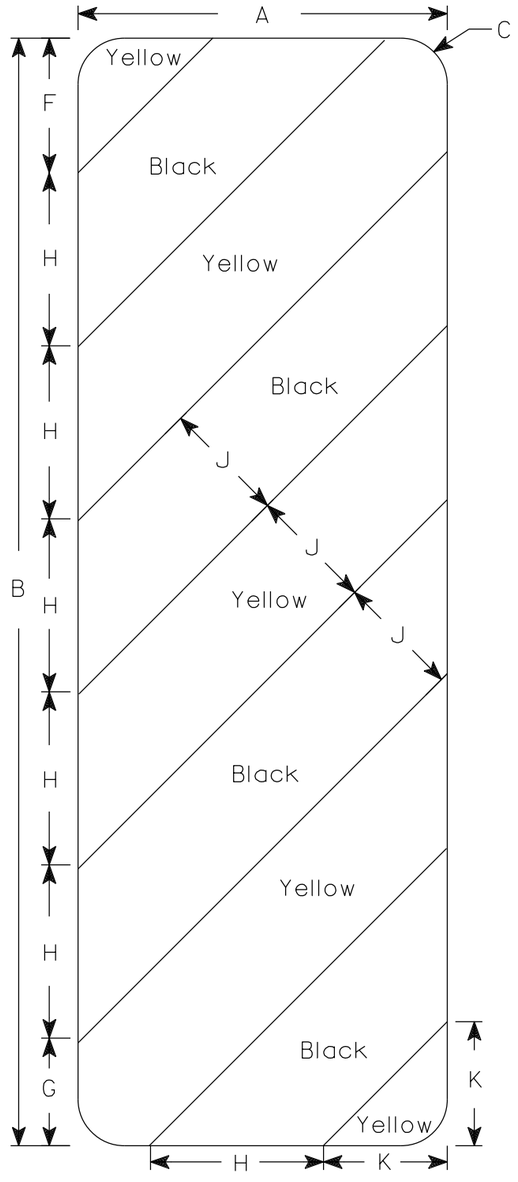
DATE 2/5/24 PLATE NO. R11-4.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 71 | E

7



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

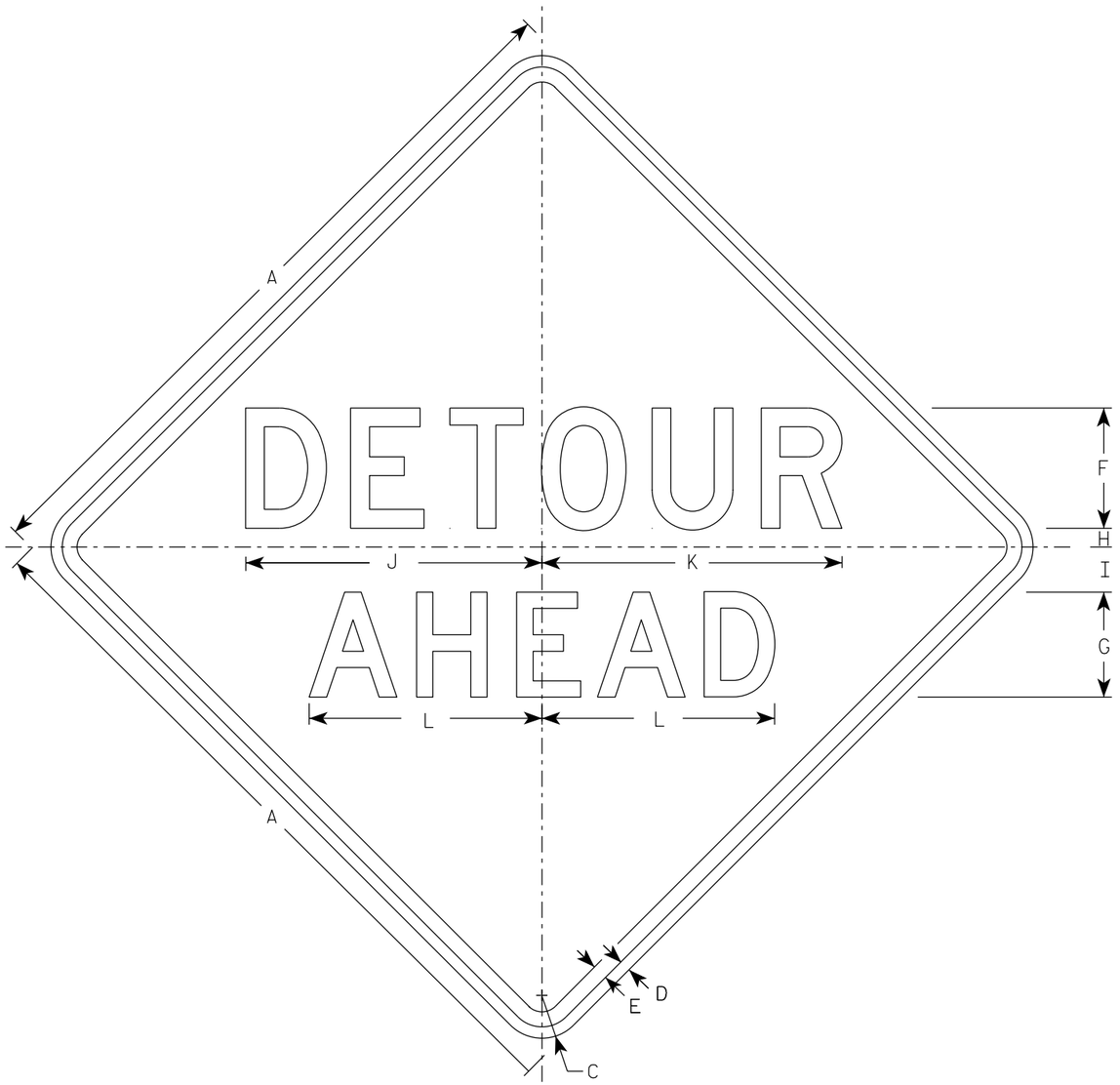
APPROVED Matthew R Rauch
for State Traffic Engineer

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

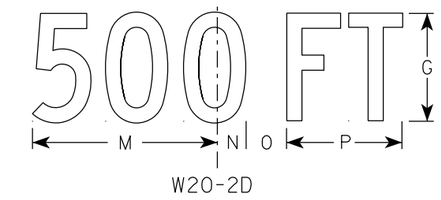
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 72 E

7

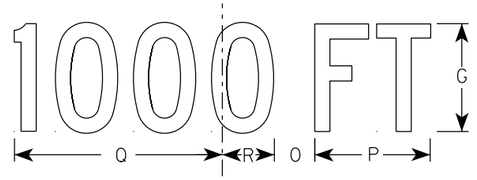
7



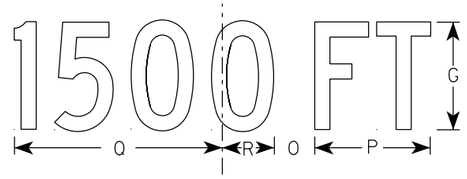
W20-2A



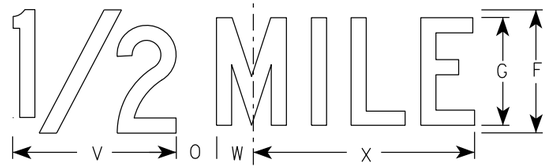
W20-2D



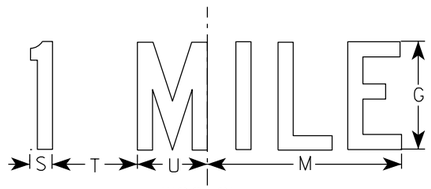
W20-2C



W20-2B



W20-2G



W20-2F

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		3	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

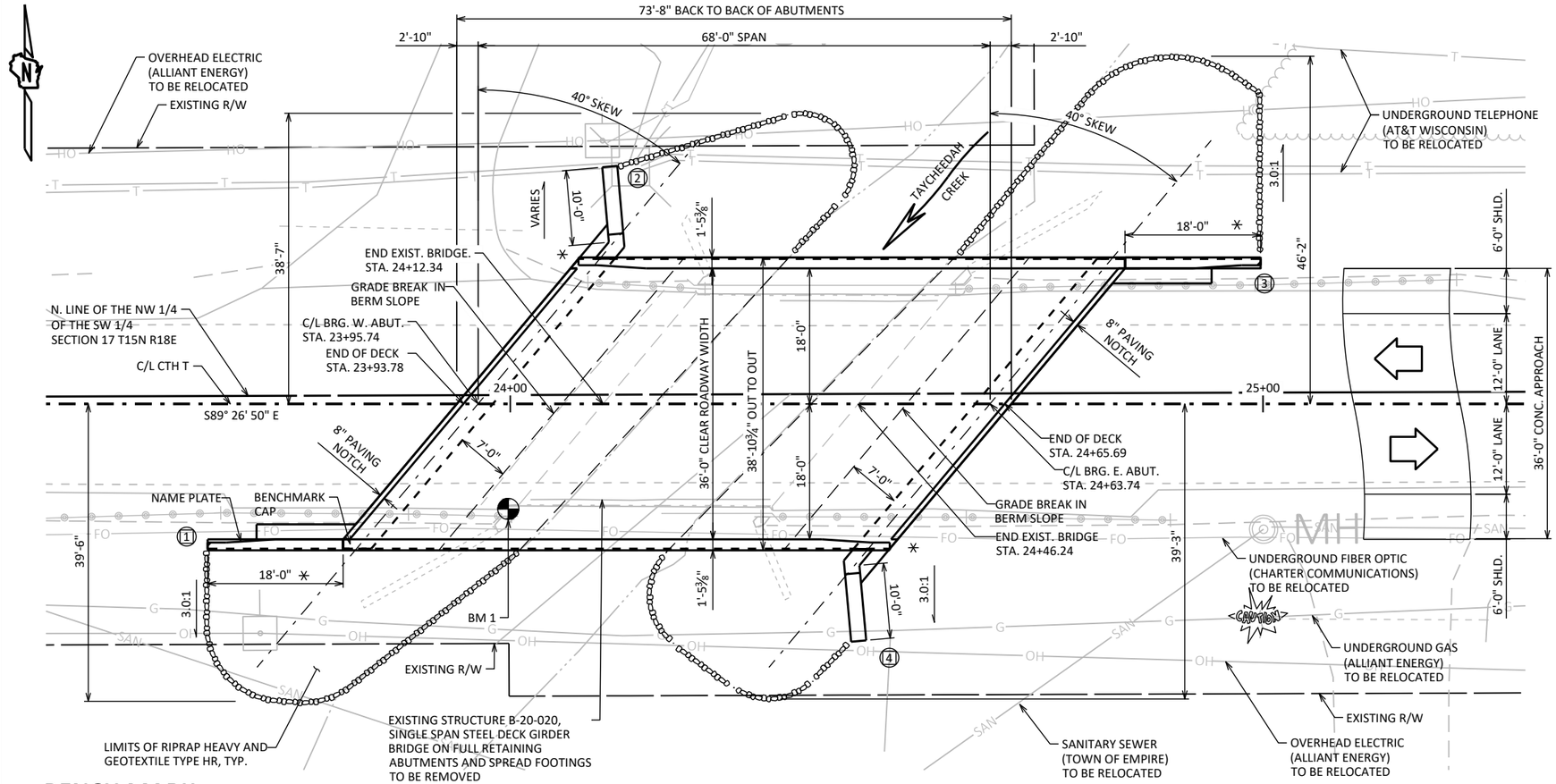
DATE 1/10/2024 PLATE NO. W20-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W202.DGN PLOT DATE : 10-JAN 2024 11:36 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER

4840-01-71



BENCH MARK

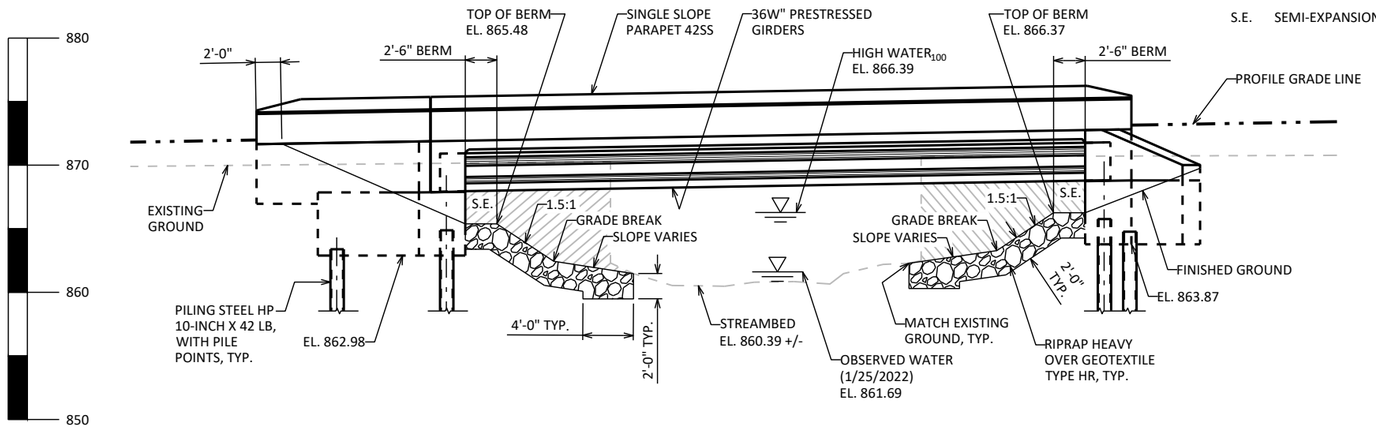
NO.	STATION	DESCRIPTION	ELEV.
BM 1	23+99.74. 13.97' RT.	CHISELED 'X' ON SW WINGWALL	870.93
BM 2	19+98.26. 62.60' LT.	R.R. SPIKE IN POWER POLE	864.50
BM 3	27+74.56. 47.46' RT.	R.R. SPIKE IN POWER POLE	878.62

PLAN

SINGLE SPAN 36W" PRESTRESSED GIRDER BRIDGE

LEGEND

- COST OF EXCAVATION SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-20-255".
- (X) INDICATES WING NUMBER
- ✳ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT.
- S.E. SEMI-EXPANSION BEARING



ELEVATION

LOOKING NORTH
(NORMAL TO TAYCHEEDAH CREEK)

DESIGN DATA

LIVE LOAD:

DESIGN LOADING:
INVENTORY RATING: RF = 1.04
OPERATING RATING: RF = 1.48
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

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

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

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

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10-INCH X 42 LB PILING WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED 25-0" LONG AT WEST ABUTMENT.
ESTIMATED 20'-0" LONG AT EAST ABUTMENT.

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

HYDRAULIC DATA

100-YEAR FREQUENCY:
Q_{100}= 1,275 C.F.S.
V_{100} = 8.23 F.P.S.
HW_{100} = EL. 866.39
WATERWAY AREA = 155 SQ. FT.
DRAINAGE AREA = 8.3 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:
Q_2 = 320 C.F.S.
V_2 = 6.47 F.P.S.
HW_2 = EL. 864.21

TRAFFIC DATA

FEATURE ON: CTH T
ADT = 2,160 (2025)
ADT = 2,800 (2045)
R.D.S. = 35 MPH

WISCONSIN
VINCENT J. DIFRANCES
E-45790
MILWAUKEE
WI
PROFESSIONAL ENGINEER
8/2/2024

LIST OF DRAWINGS:

1. GENERAL PLAN & ELEVATION
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. WING 1 DETAILS
7. WING 2 DETAILS
8. WEST ABUTMENT BILL OF BARS
9. EAST ABUTMENT
10. EAST ABUTMENT DETAILS
11. WING 3 DETAILS
12. WING 4 DETAILS
13. EAST ABUTMENT BILL OF BARS
14. ALTERNATE CONSTRUCTION JOINT
15. 36W" PRESTRESSED GIRDER DETAILS 1
16. 36W" PRESTRESSED GIRDER DETAILS 2
17. STEEL DIAPHRAGM
18. SUPERSTRUCTURE CROSS SECTION
19. SUPERSTRUCTURE DETAILS
20. SUPERSTRUCTURE PLAN
21. SINGLE SLOPE PARAPET 42SS IN SPAN
22. SUPERSTRUCTURE BILL OF BARS
23. SINGLE SLOPE PARAPET 42SS ON WINGS

STRUCTURE DESIGN CONTACTS:
AARON BONK, P.E. 608-261-0261
VINCENT DIFRANCES, P.E. 262-573-3864

NO.	DATE	REVISION	BY

jt ENGINEERING
REAL. TRUSTED. PROVEN

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED — SDR — 08/19/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-20-255

CTH T OVER TAYCHEEDAH CREEK

COUNTY	TOWN
FOND DU LAC	EMPIRE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
VJD	CJM	VJD	CJM

GENERAL PLAN & ELEVATION

SHEET 1 OF 23
74

SCALE = N.T.S.

I.D. 4840-01-00

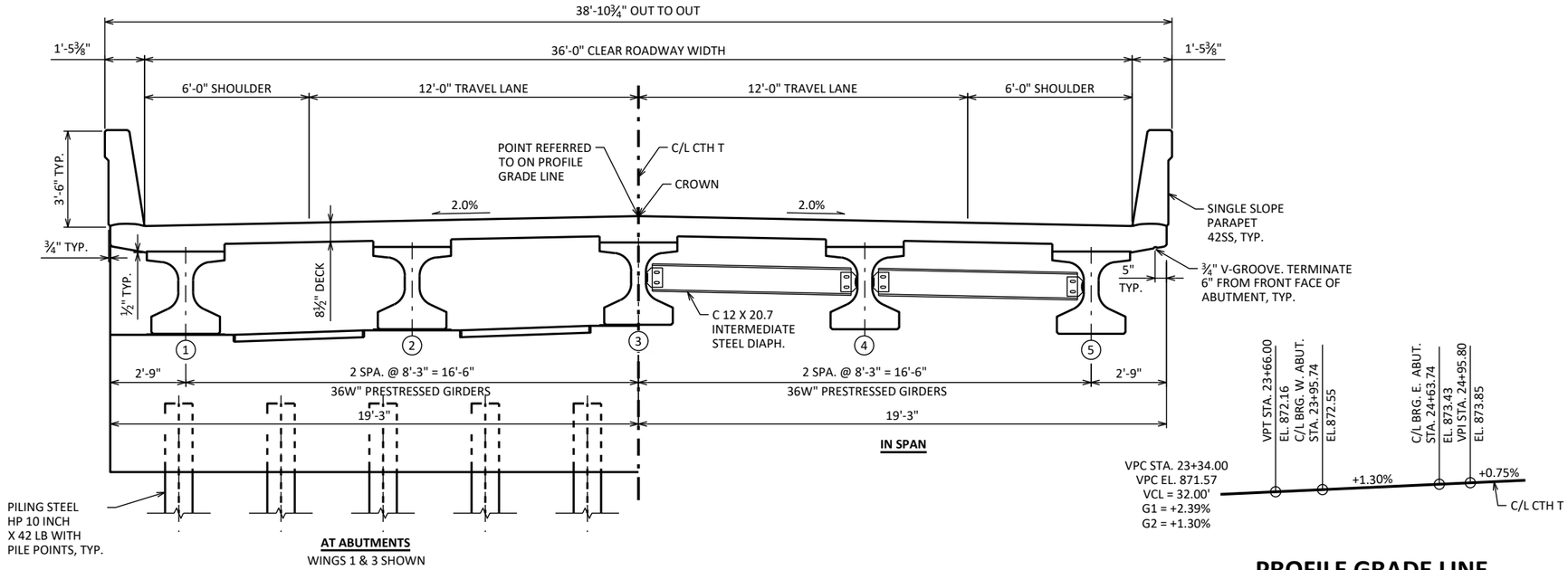
DATE: 08/02/2024

8

8

STATE PROJECT NUMBER

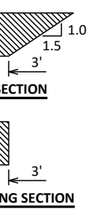
4840-01-71

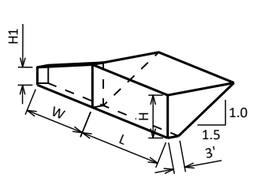


TYPICAL CROSS SECTION THRU BRIDGE

LOOKING EAST
DIMENSIONS SHOWN ARE NORMAL TO C/L CTH T

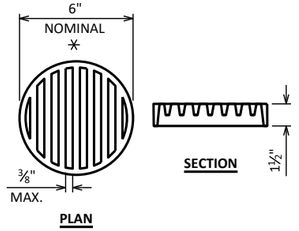
PROFILE GRADE LINE





ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING PERPENDICULAR WING (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING HEIGHT AT TIP (FT)
W = WING LENGTH (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) + (3')(0.5)(H1+H)(W)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

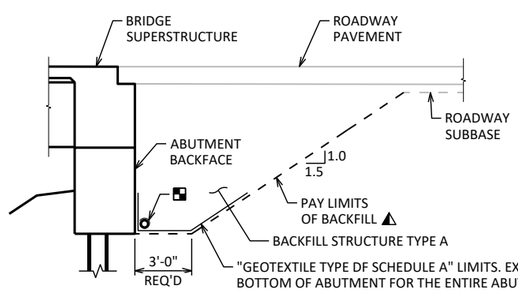


RODENT SHIELD DETAIL

✳ 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 UNDERDRAING WRAPPED 6-INCH".

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



TYPICAL SECTION THRU ABUTMENT

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

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

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-20-020	EACH	-	-	-	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-20-255	EACH	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	331	331	662
502.0100	CONCRETE MASONRY BRIDGES	CY	142	60	60	262
502.3200	PROTECTIVE SURFACE TREATMENT	SY	306	-	-	306
502.3210	PIGMENTED SURFACE SEALER	SY	77	9	9	95
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	345	-	-	345
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-	4,160	4,140	8,300
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	21,400	2,350	2,320	26,070
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-	5	5	10
506.4000	STEEL DIAPHRAGMS B-20-255	EACH	4	-	-	4
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	14	14	28
550.0500	PILE POINTS	EACH	-	12	12	24
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	-	300	240	540
606.0300	RIPRAP HEAVY	CY	-	165	181	346
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	93	93	186
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	1	1	4
645.0111	GEOTEXTILE DF SCHEDULE A	SY	-	52	52	104
645.0120	GEOTEXTILE TYPE HR	SY	-	263	284	547
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				½" & ¾"
	NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER	SIZE				1"
	NAME PLATE	EACH				1

ALL B-20-255 BID ITEMS ARE CATEGORY 0020

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-20-255" SHALL BE THE EXISTING GROUNDLINE.

THE EXISTING STRUCTURE, B-20-020, WAS ORIGINALLY CONSTRUCTED IN 1955 AND IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE SUPPORTED ON FULL RETAINING ABUTMENTS AND SPREAD FOOTINGS. THE STRUCTURE HAS AN OVERALL WIDTH OF 30'-3" AND AN OVERALL LENGTH OF 35'-2". THE EXISTING STRUCTURE B-20-020 IS TO BE REMOVED.

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

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

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

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.

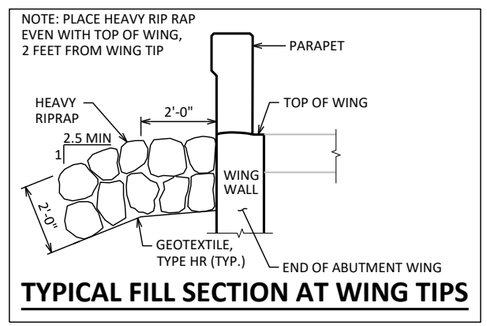
PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON WING WALLS.

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

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "36W PRESTRESSED GIRDER DETAILS 2" SHEET ON SHEET 16.

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.

THE UTILITY INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING THEIR OWN DETERMINATIONS AS TO THE TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.



TYPICAL FILL SECTION AT WING TIPS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

CROSS SECTION & QUANTITIES

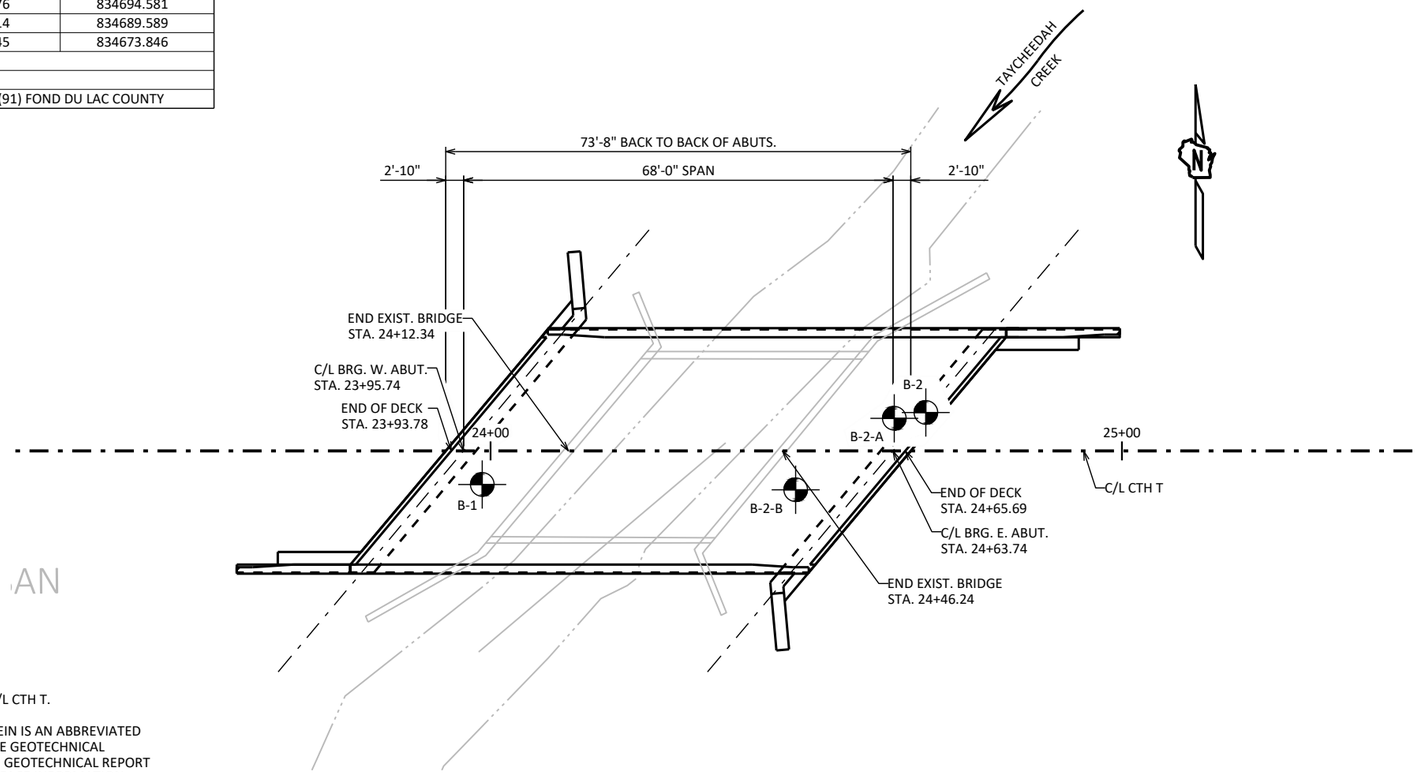
SHEET 2 OF 23
75

SCALE = N.T.S.

8

8

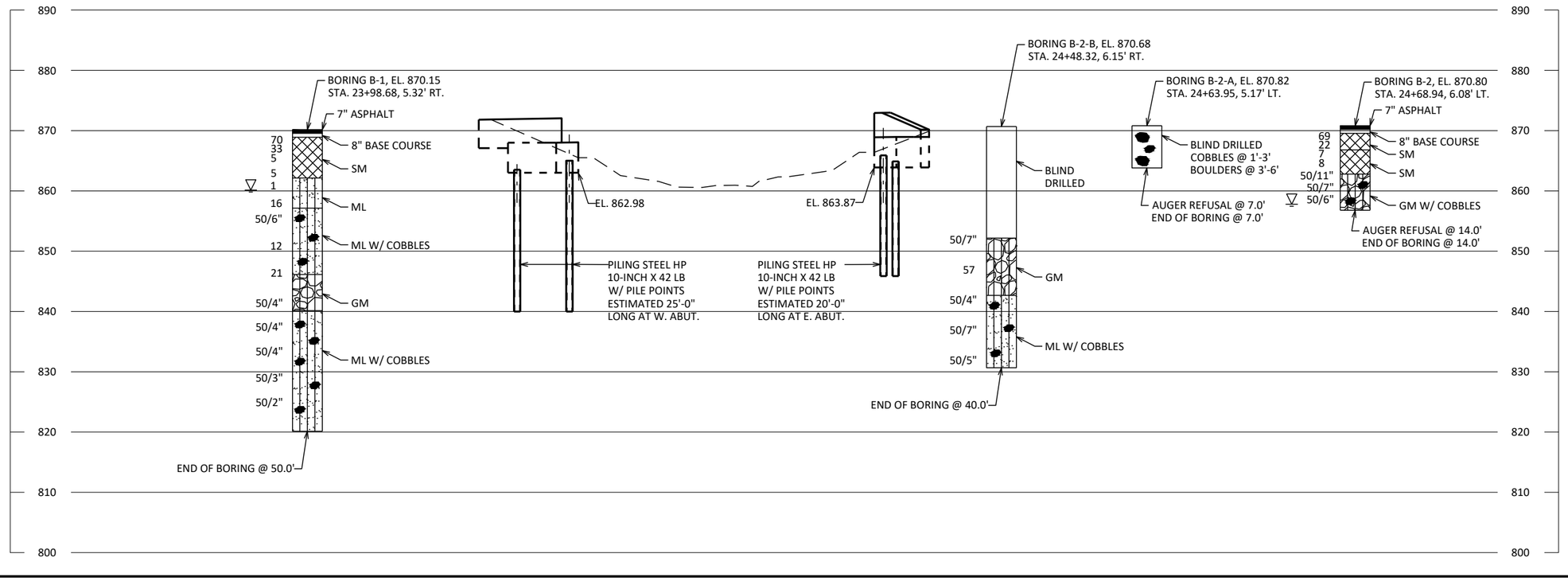
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	JANUARY 27, 2022	382588.257	834624.218
2	JANUARY 27, 2022	382598.976	834694.581
2-A	FEBRUARY 1, 2022	382598.114	834689.589
2-B	FEBRUARY 1, 2022	382586.945	834673.846
BORINGS COMPLETED BY: ECS MIDWEST, LLC			
REPORT COMPLETED BY: ECS MIDWEST, LLC			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) FOND DU LAC COUNTY			



NOTES:

BORING STATIONS AND OFFSETS ARE BASED ON C/L CTH T.

THE SUBSURFACE INFORMATION PRESENTED HEREIN IS AN ABBREVIATED VERSION OF THE INFORMATION PRESENTED IN THE GEOTECHNICAL ENGINEERING REPORT. REVIEW THE APPROPRIATE GEOTECHNICAL REPORT AND SOIL BORING LOGS FOR ADDITIONAL SUBSURFACE INFORMATION.



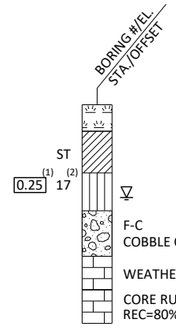
STATE PROJECT NUMBER

4840-01-71

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-20-255

DRAWN BY VJD | PLANS CK'D CJM

SUBSURFACE EXPLORATION

SHEET 3 OF 23
76

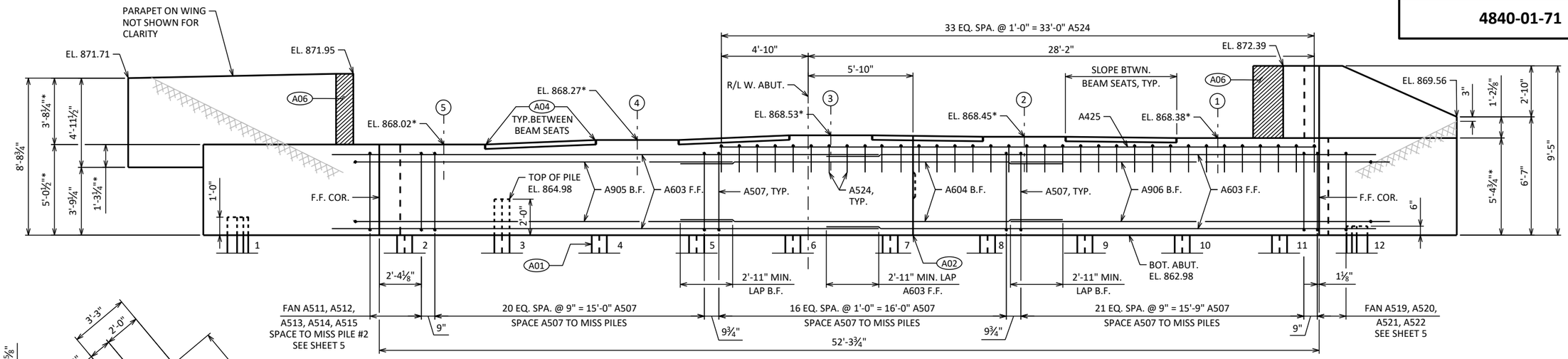
SCALE = N.T.S.

8

8

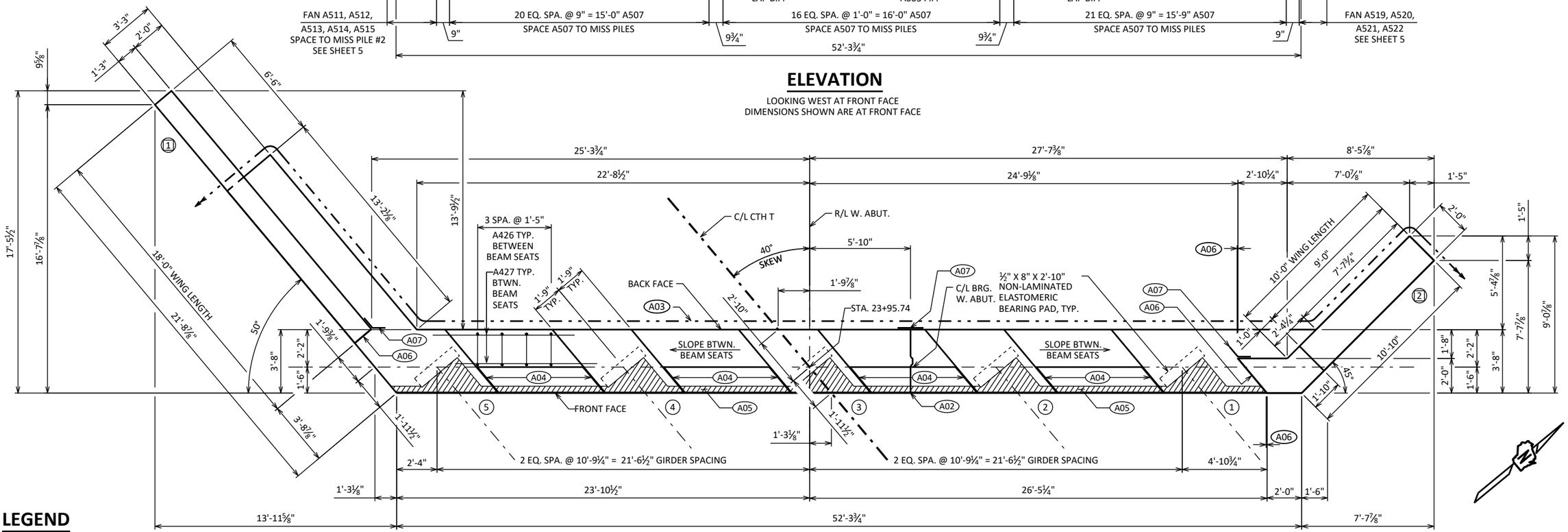
STATE PROJECT NUMBER

4840-01-71



ELEVATION

LOOKING WEST AT FRONT FACE
DIMENSIONS SHOWN ARE AT FRONT FACE



LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING WITH PILE POINTS, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A02) VERTICAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 8". RUN BAR STEEL THRU JOINT AND SEAL WITH 18" RUBBERIZED MEMBRANE WATERPROOFING. SEE SHEET 14 FOR ALTERNATE CONSTRUCTION JOINT.
- (A03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHEET 2 FOR RODENT SHIELD DETAIL.
- (A04) ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A05) ½" PREFORMED JOINT FILLER FULL LENGTH OF ABUTMENT (4" WIDE) AND UNDER GIRDER FLANGE IN FRONT OF BEARING PAD.
- (A06) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET OR TOP OF WING. FILLER INCLUDED IN WING LENGTH AT WING 1.
- (A07) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- ⚹ DIMENSION AND ELEVATION AT CENTERLINE OF BEARING AND CENTERLINE OF GIRDER. SEE SLOPED BEAM SEAT DETAIL THIS SHEET.

NOTES

SOME BARS ARE OMITTED FOR CLARITY. SEE WEST ABUTMENT BILL OF BARS ON SHEET 8.

FOR PILE SPLICE DETAIL, IF NEEDED, SEE SHEET 8.

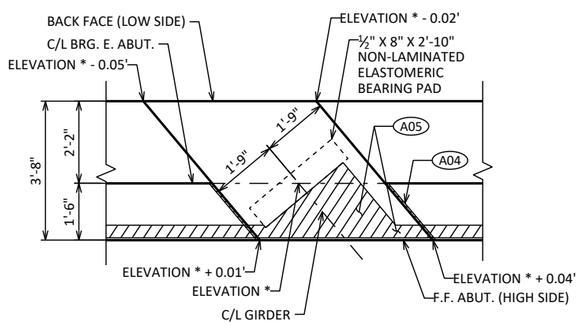
FOR RODENT SHIELD DETAIL ATTACHED TO PIPE UNDERDRAIN WRAPPED 6-INCH, SEE SHEET 2.

FOR FILL DETAILS AT WING TIPS, SEE SHEET 2.

LEGEND (CONT'D)

- (X) INDICATES GIRDER NUMBER
- (X) INDICATES WING WALL NUMBER

PLAN



SLOPED BEAM SEAT DETAIL*

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

WEST ABUTMENT

SHEET 4 OF 23
77

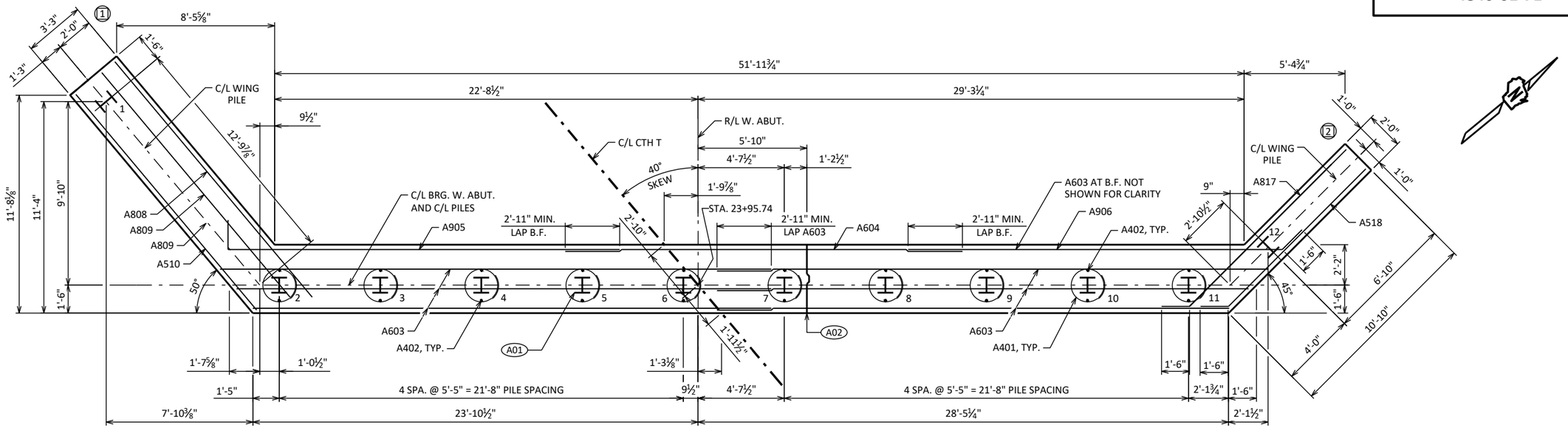
SCALE = N.T.S.

8

8

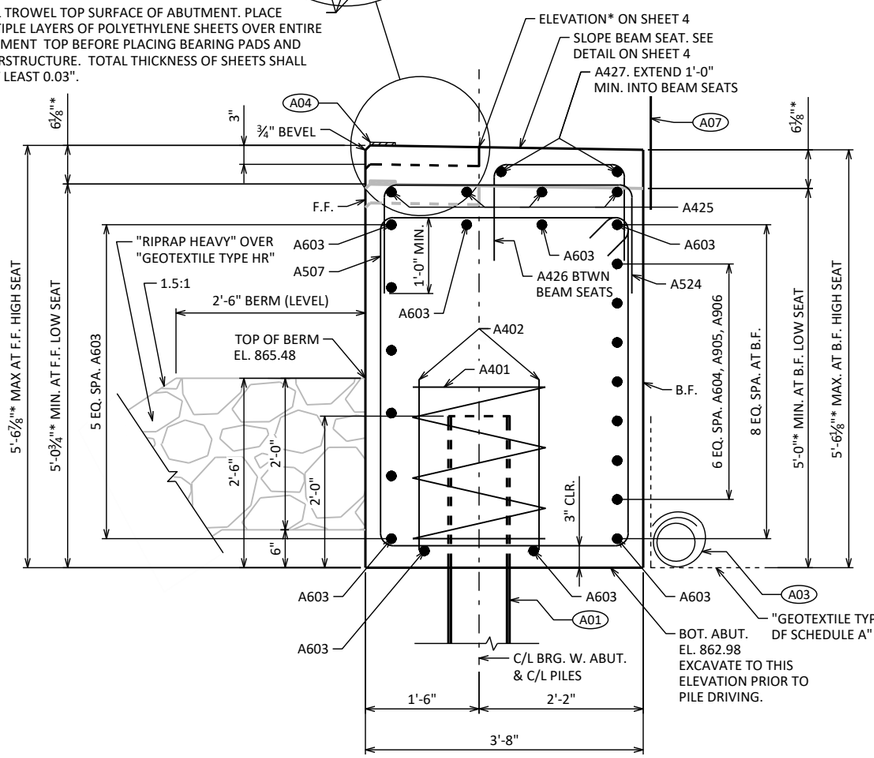
STATE PROJECT NUMBER

4840-01-71



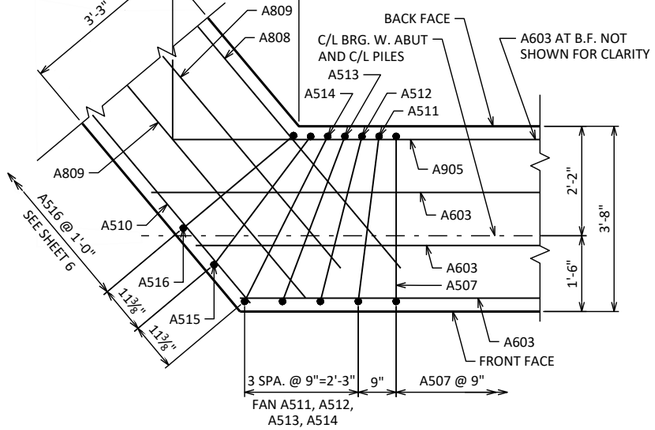
PILE PLAN

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



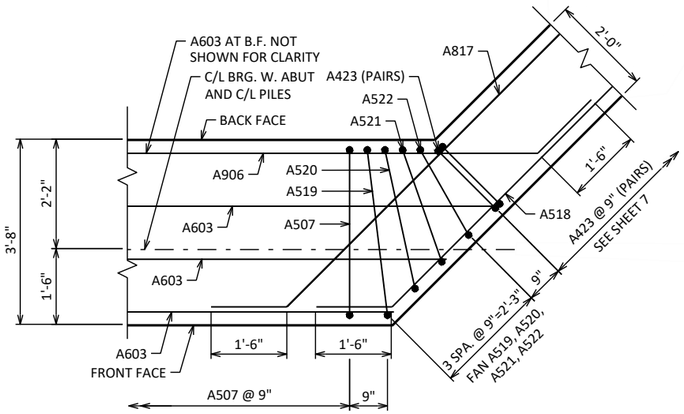
SECTION THRU ABUTMENT

LOOKING SOUTHWEST
DIMENSIONS ARE NORMAL TO C/L BRG.



CORNER REINFORCEMENT DETAIL

AT WING 1
BAR SPACING IS DIMENSIONED ALONG FRONT FACE



CORNER REINFORCEMENT DETAIL

AT WING 2
BAR SPACING IS DIMENSIONED ALONG FRONT FACE

LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING WITH PILE POINTS, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A02) VERTICAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 8". RUN BAR STEEL THRU JOINT AND SEAL WITH 18" RUBBERIZED MEMBRANE WATERPROOFING. SEE SHEET 14 FOR ALTERNATE CONSTRUCTION JOINT.
- (A03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHEET 2 FOR RODENT SHIELD DETAIL.
- (A04) ½" PREFORMED JOINT FILLER FULL LENGTH OF ABUTMENT (4" WIDE) AND UNDER GIRDER FLANGE IN FRONT OF BEARING PAD.
- (A07) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- F.F. = FRONT FACE B.F. = BACK FACE
- (X) INDICATES WING WALL NUMBER
- ✳ DIMENSION AND ELEVATION AT CENTERLINE OF BEARING AND CENTERLINE OF GIRDER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD PLANS CK'D CJM

WEST ABUTMENT DETAILS

SHEET 5 OF 23
78

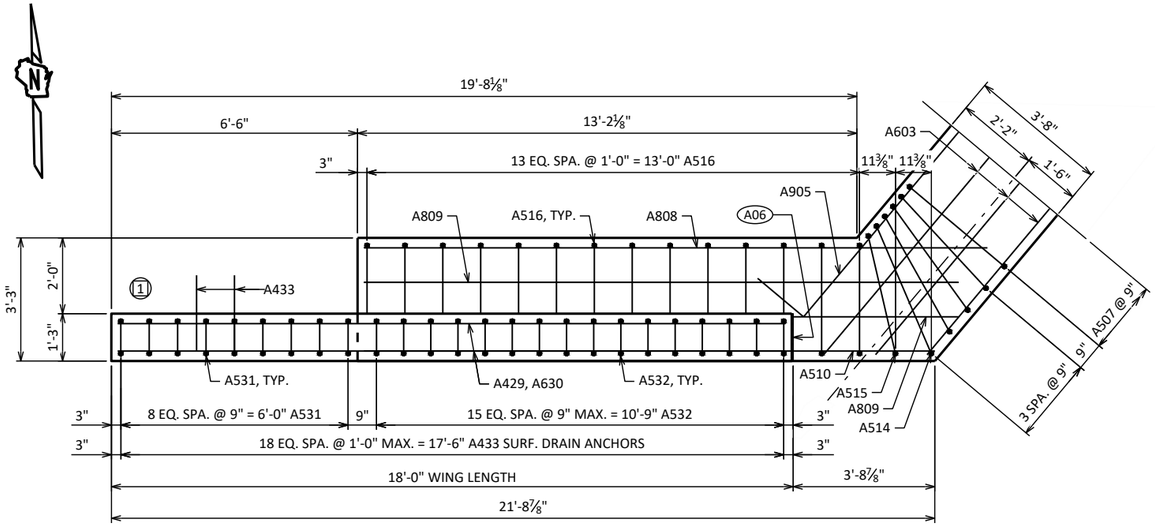
SCALE = N.T.S.

8

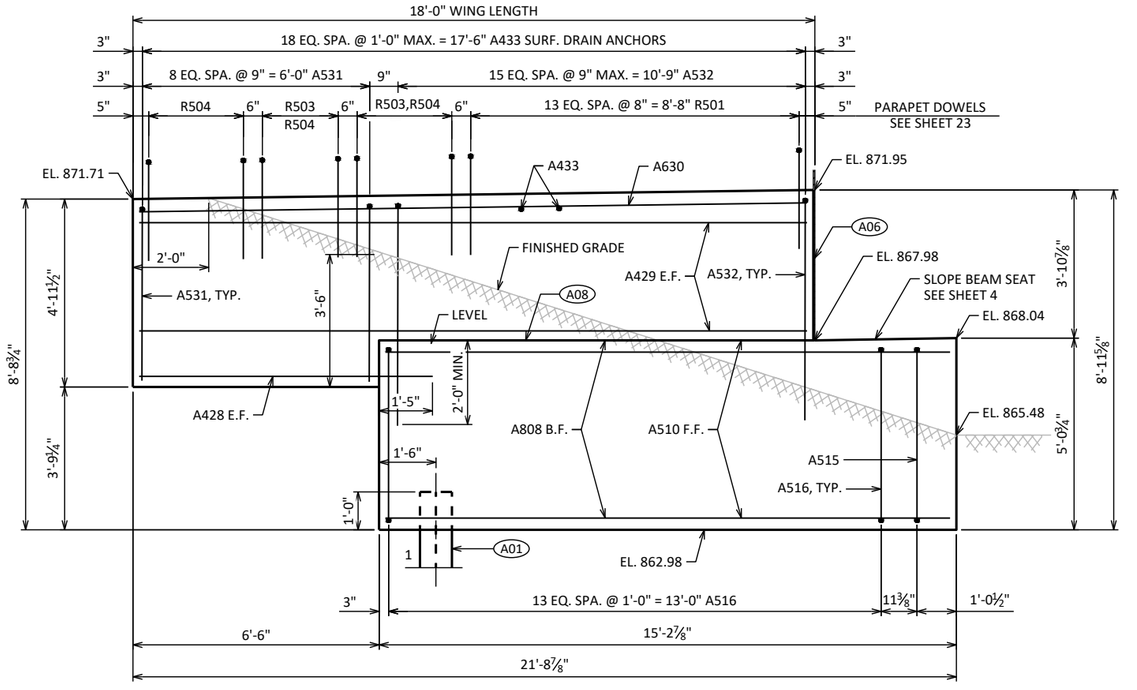
8

STATE PROJECT NUMBER

4840-01-71

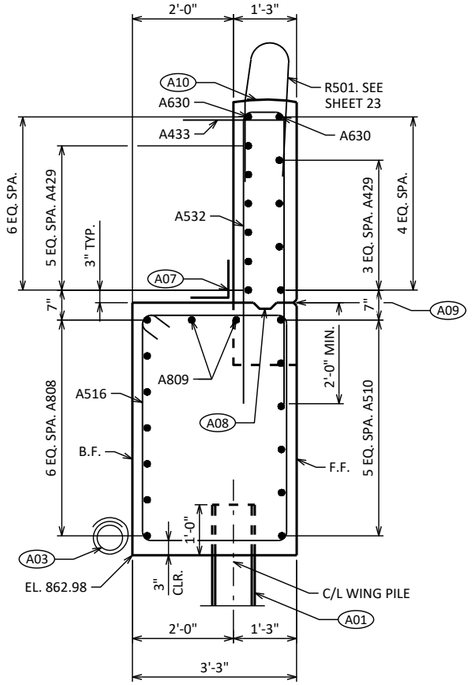


WING 1 PLAN



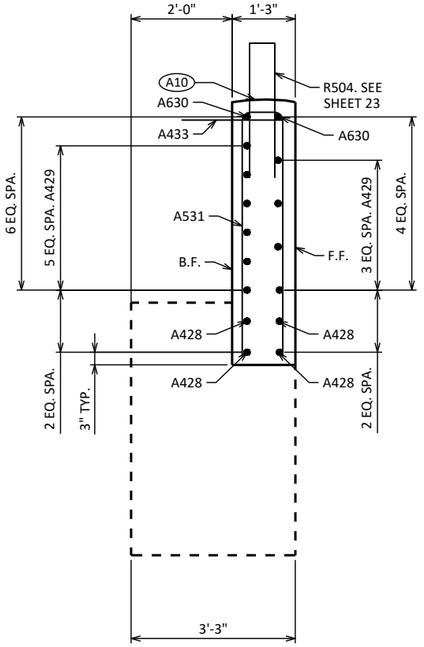
WING 1 ELEVATION

LOOKING AT FRONT FACE



SECTION THRU WING BODY

SHOWING PARAPET REINFORCEMENT
PARAPET NOT SHOWN FOR CLARITY



SECTION THRU WING STEM

SHOWING PARAPET REINFORCEMENT
PARAPET NOT SHOWN FOR CLARITY

LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING WITH PILE POINTS, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHEET 2 FOR RODENT SHIELD DETAIL.
- (A06) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH.
- (A07) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- (A08) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY.
- (A09) ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- (A10) CONSTRUCTION JOINT, LEAVE ROUGH.

F.F. = FRONT FACE B.F. = BACK FACE E.F. = EACH FACE

(X) INDICATES WING WALL NUMBER

NOTES

FOR WEST ABUTMENT BILL OF BARS, SEE SHEET 8.

FOR PARAPET REINFORCEMENT AND PARAPET ON WING BILL OF BARS, SEE SHEET 23.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD PLANS CK'D CJM

WING 1 DETAILS

SHEET 6 OF 23

79

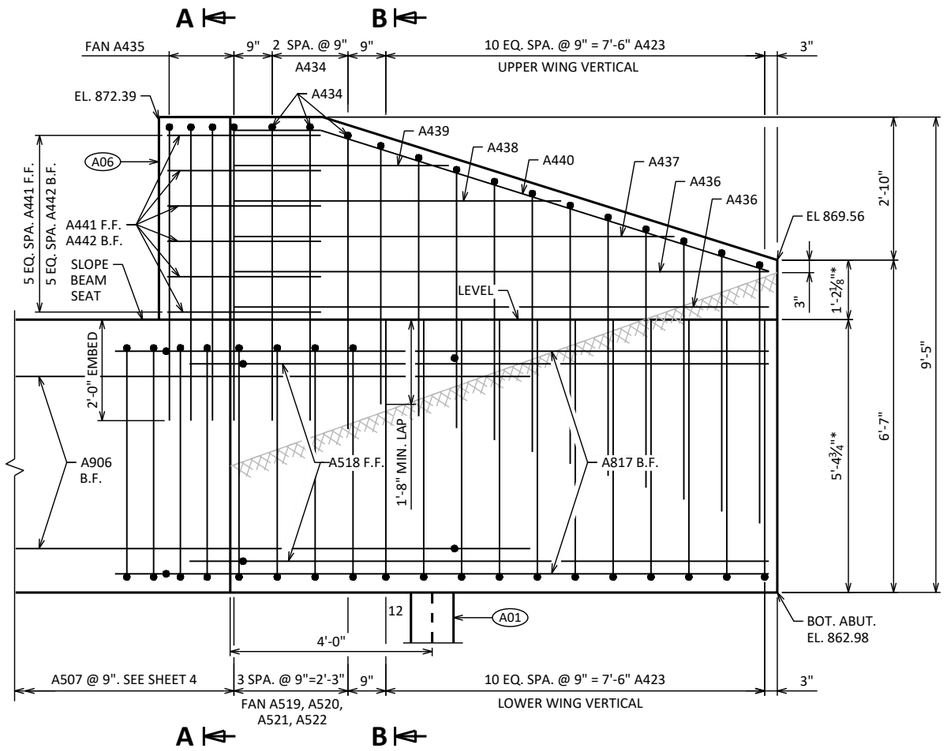
SCALE = N.T.S.

8

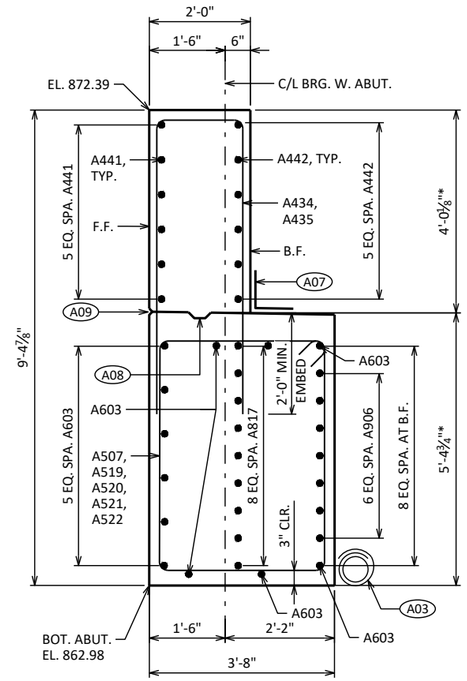
8

STATE PROJECT NUMBER

4840-01-71

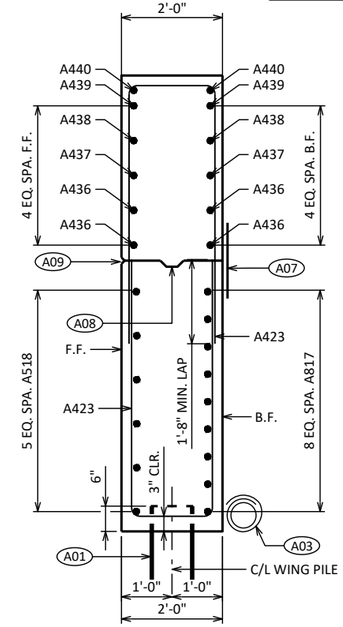


WING 2 ELEVATION



SECTION A-A

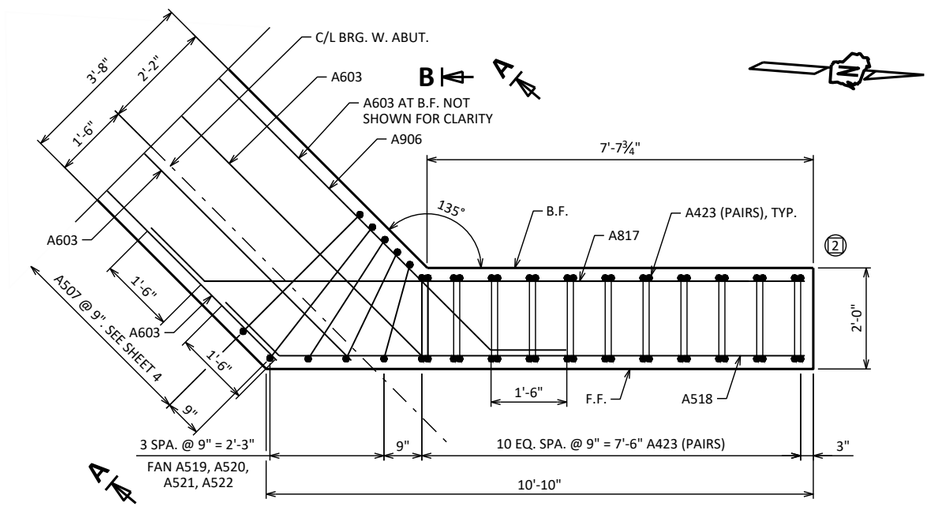
DIMENSIONS ARE NORMAL TO C/L BRG



SECTION B-B

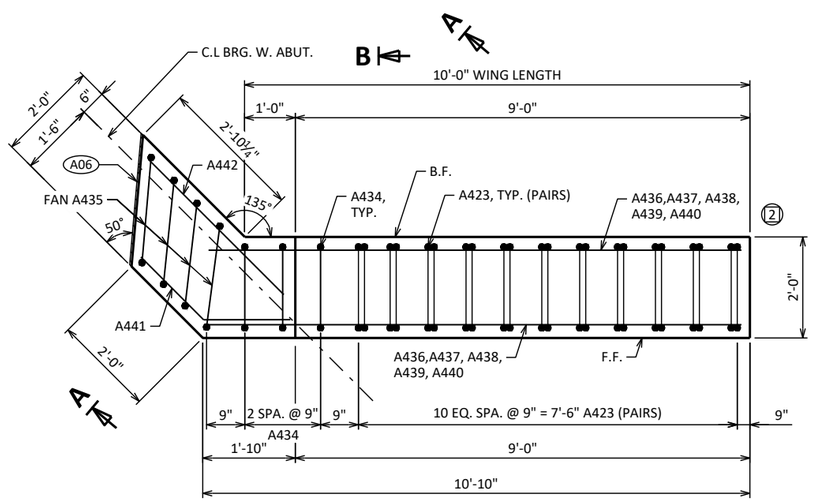
LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING WITH PILE POINTS, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHEET 2 FOR RODENT SHIELD DETAIL.
- (A06) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.
- (A07) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- (A08) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY.
- (A09) ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- F.F. = FRONT FACE B.F. = BACK FACE
- (X) INDICATES WING WALL NUMBER
- ✳ DIMENSION AND ELEVATION AT CENTERLINE OF BEARING AND CENTERLINE OF GIRDER. SEE SHEET 4 FOR SLOPED BEAM SEAT DETAIL.



WING 2 PLAN

SHOWING LOWER WING REINFORCEMENT



WING 2 PLAN

SHOWING UPPER WING REINFORCEMENT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

WING 2 DETAILS

SHEET 7 OF 23

80

SCALE = N.T.S.

8

8

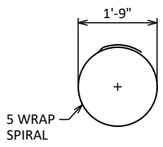
STATE PROJECT NUMBER

4840-01-71

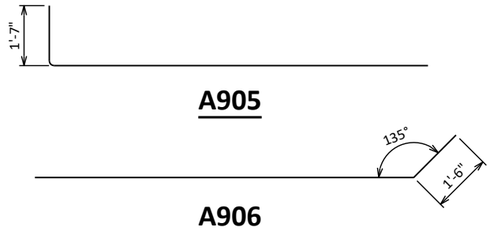
BILL OF BARS - WEST ABUTMENT

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		10	28'-0"	X		ABUT. BODY - VERT. - 1 PER PILE
A402		20	2'-3"			ABUT. BODY - VERT. - 2 PER PILE
A603		24	30'-6"			ABUT. BODY - HORIZ.
A604		7	21'-4"			ABUT. BODY - HORIZ. - BACK FACE
A905		7	22'-4"	X		ABUT. BODY - HORIZ. - BACK FACE
A906		7	21'-9"	X		ABUT. BODY - HORIZ. - BACK FACE
A507		60	16'-0"	X		ABUT. BODY - VERT. - STIRRUPS
A808	X	7	16'-6"			WING 1 BODY - HORIZ. - BACK FACE
A809	X	2	15'-9"			WING 1 BODY - HORIZ. - TOP
A510	X	6	15'-1"			WING 1 BODY - HORIZ. - FRONT FACE
A511		1	16'-0"	X		ABUT. BODY - VERT. - WING 1 CORNER
A512		1	16'-2"	X		ABUT. BODY - VERT. - WING 1 CORNER
A513		1	16'-4"	X		ABUT. BODY - VERT. - WING 1 CORNER
A514		1	16'-8"	X		ABUT. BODY - VERT. - WING 1 CORNER
A515		1	15'-8"	X		ABUT. BODY - VERT. - WING 1 CORNER
A516	X	14	15'-6"	X		WING 1 BODY - VERT. - STIRRUPS
A817	X	9	13'-5"	X		WING 2 BODY - HORIZ. - BACK FACE
A518	X	6	12'-0"	X		WING 2 BODY - HORIZ. - FRONT FACE
A519		1	16'-0"	X		ABUT. BODY - VERT. - WING 2 CORNER
A520		1	15'-0"	X		ABUT. BODY - VERT. - WING 2 CORNER
A521		1	14'-0"	X		ABUT. BODY - VERT. - WING 2 CORNER
A522		1	13'-2"	X		ABUT. BODY - VERT. - WING 2 CORNER
A423	X	22	11'-9"	X		WING 2 BODY - VERT. - PAIRS
A524		34	6'-6"	X		ABUT. BODY - VERT. - HIGH SEATS
A425		4	33'-4"			ABUT. BODY - HORIZ. - HIGH SEATS
A426		16	4'-6"	X		ABUT. BODY - VERT. - BTWN BEAM SEATS
A427		8	8'-4"			ABUT. BODY - HORIZ. - BTWN BEAM SEATS
A428	X	4	7'-10"			WING 1 STEM - HORIZ. - EACH FACE
A429	X	10	17'-7"			WING 1 STEM - HORIZ. - EACH FACE
A630	X	2	17'-7"			WING 1 STEM - HORIZ. - EACH FACE - TOP
A531	X	9	9'-8"	X		WING 1 STEM - VERT.
A532	X	16	12'-4"	X		WING 1 STEM - VERT.
A433	X	19	2'-0"			WING 1 STEM - HORIZ. - SURF. DRAIN DOWELS
A434	X	3	13'-2"	X		WING 2 - VERT.
A435	X	4	13'-7"	X		WING 2 - VERT.
A436	X	4	10'-7"			WING 2 UPPER - HORIZ. - EACH FACE
A437	X	2	8'-8"			WING 2 UPPER - HORIZ. - EACH FACE
A438	X	2	6'-6"			WING 2 UPPER - HORIZ. - EACH FACE
A439	X	2	4'-3"			WING 2 UPPER - HORIZ. - EACH FACE
A440	X	2	11'-1"	X		WING 2 UPPER - HORIZ. - EACH FACE
A441	X	6	3'-6"	X		WING 2 UPPER - HORIZ.
A442	X	6	3'-9"			WING 2 UPPER - HORIZ.

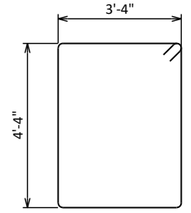


A401



A905

A906



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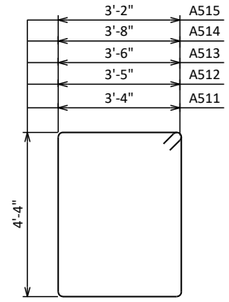
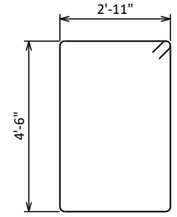


A511, A512, A513
A514, A515



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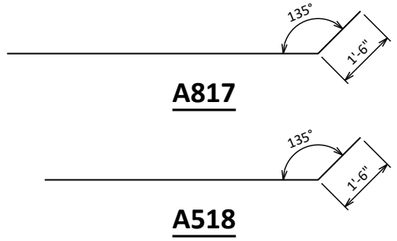

A817

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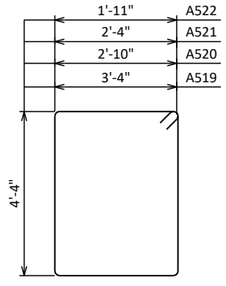

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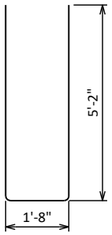
A521, A522



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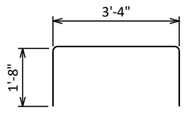

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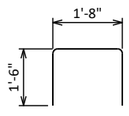

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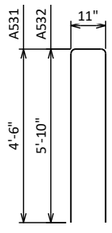

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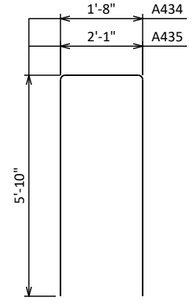
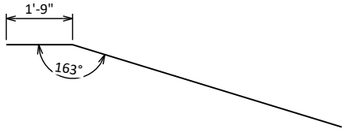


A434, A435



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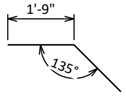

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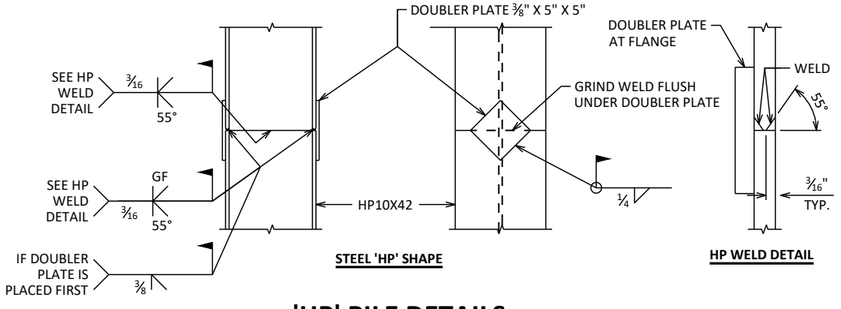


'HP' PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

WEST ABUTMENT BILL OF BARS

SHEET 8 OF 23

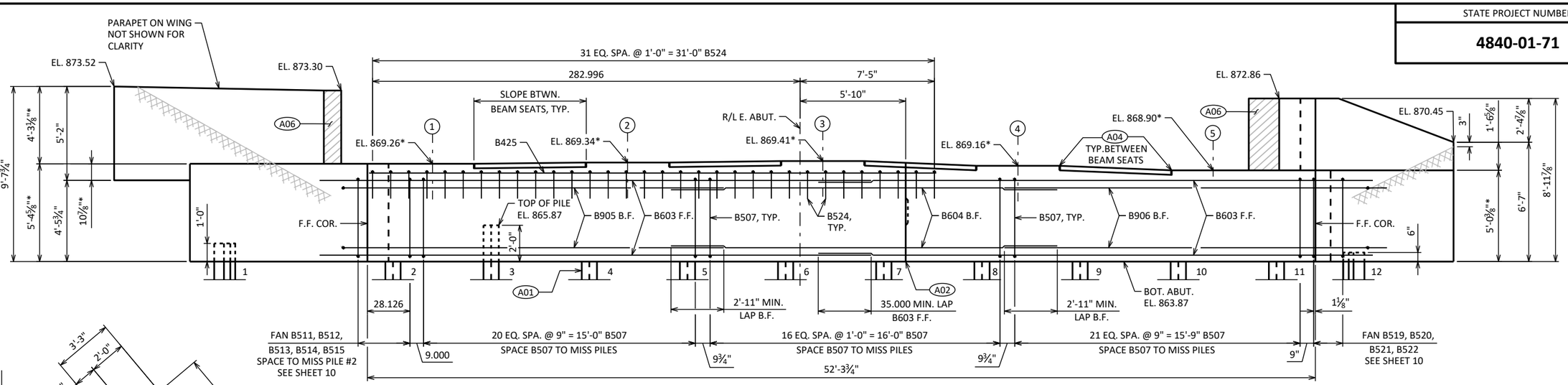
81

SCALE = N.T.S.

8

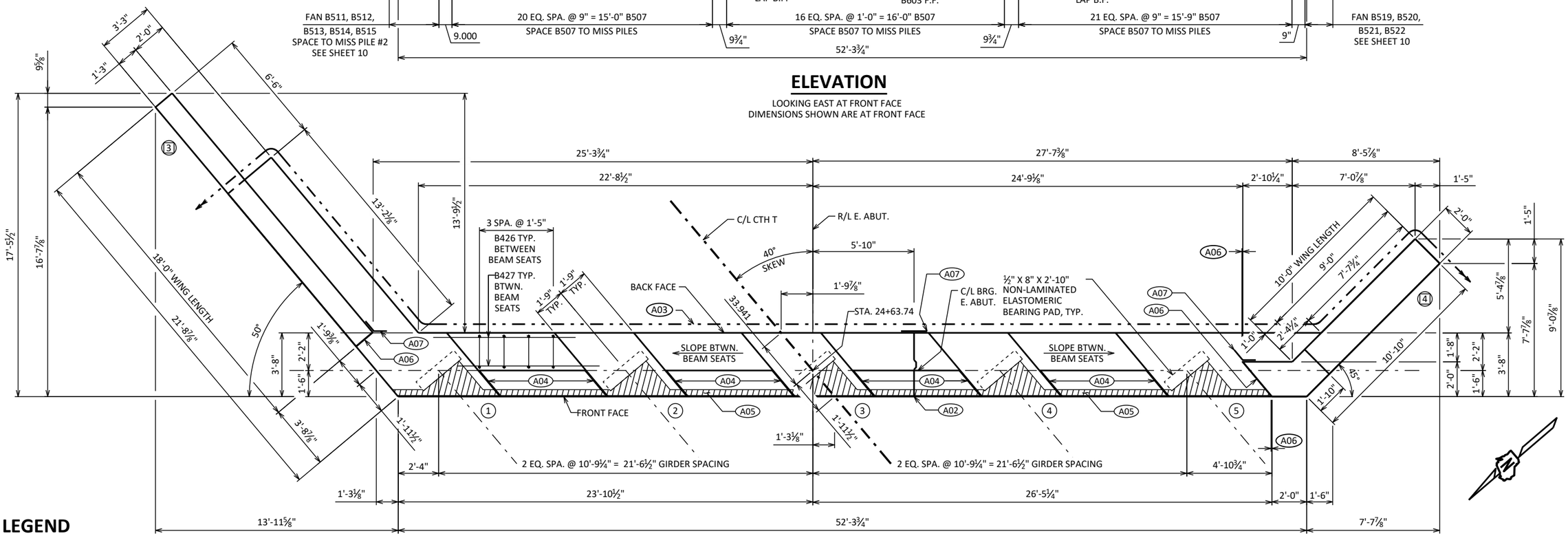
8

STATE PROJECT NUMBER
4840-01-71

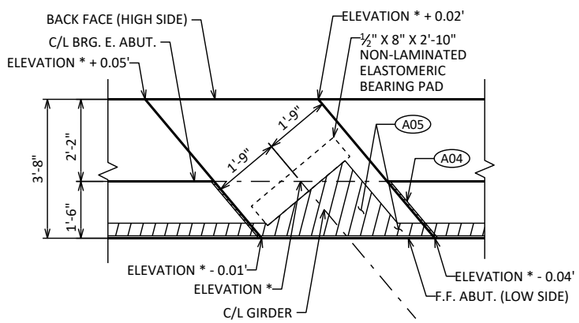


ELEVATION

LOOKING EAST AT FRONT FACE
DIMENSIONS SHOWN ARE AT FRONT FACE



PLAN



SLOPED BEAM SEAT DETAIL*

LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING WITH PILE POINTS, ESTIMATED 20'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A02) VERTICAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 8". RUN BAR STEEL THRU JOINT AND SEAL WITH 18" RUBBERIZED MEMBRANE WATERPROOFING. SEE SHEET 14 FOR ALTERNATE CONSTRUCTION JOINT.
- (A03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHEET 2 FOR RODENT SHIELD DETAIL.
- (A04) ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- (A05) ½" PREFORMED JOINT FILLER FULL LENGTH OF ABUTMENT (4" WIDE) AND UNDER GIRDER FLANGE IN FRONT OF BEARING PAD.
- (A06) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET OR TOP OF WING. FILLER INCLUDED IN WING LENGTH AT WING 3.
- (A07) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- ✳ DIMENSION AND ELEVATION AT CENTERLINE OF BEARING AND CENTERLINE OF GIRDER. SEE SLOPED BEAM SEAT DETAIL THIS SHEET.

NOTES

SOME BARS ARE OMITTED FOR CLARITY. SEE EAST ABUTMENT BILL OF BARS ON SHEET 13.

FOR PILE SPLICE DETAIL, IF NEEDED, SEE SHEET 13.

FOR RODENT SHIELD DETAIL ATTACHED TO PIPE UNDERDRAIN WRAPPED 6-INCH, SEE SHEET 2.

FOR FILL DETAILS AT WING TIPS, SEE SHEET 2.

LEGEND (CONT'D)

- (X) INDICATES GIRDER NUMBER
- (X) INDICATES WING WALL NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

EAST ABUTMENT

SHEET 9 OF 23
82

SCALE = N.T.S.

8

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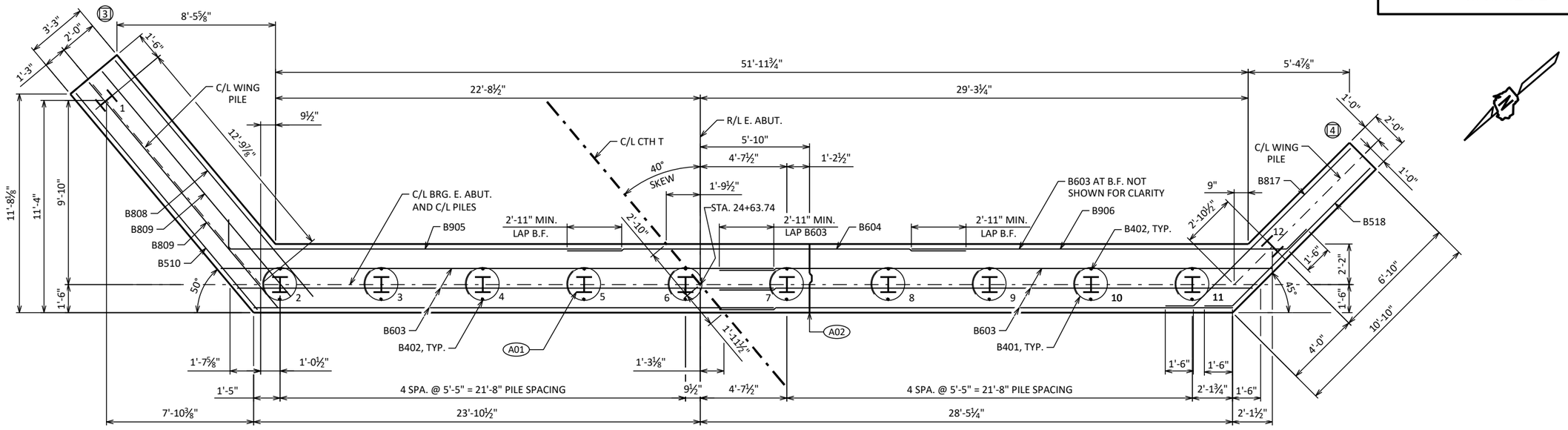
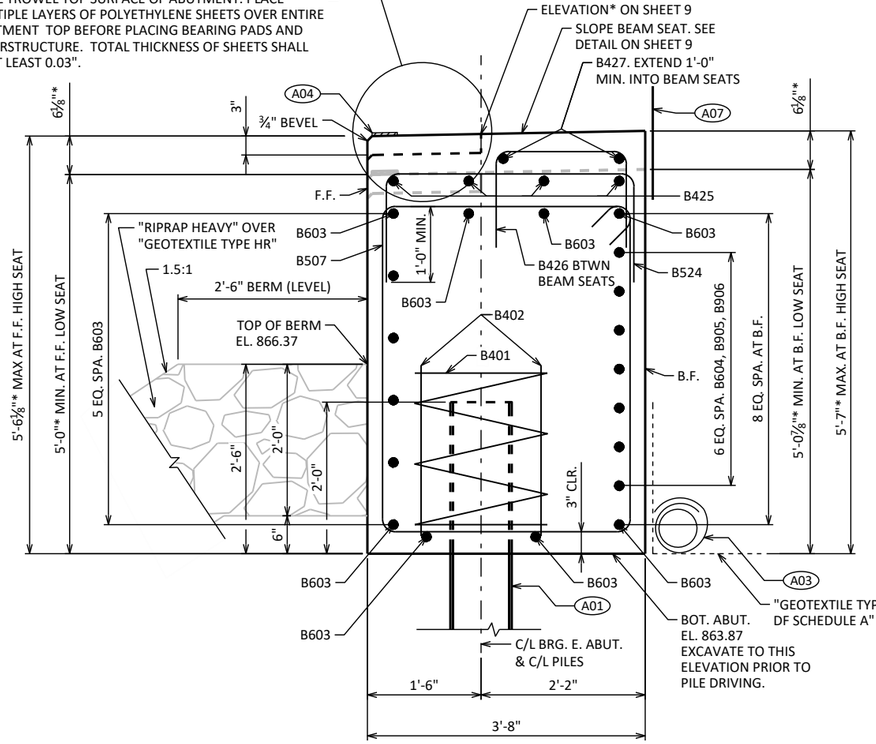
STATE PROJECT NUMBER

4840-01-71



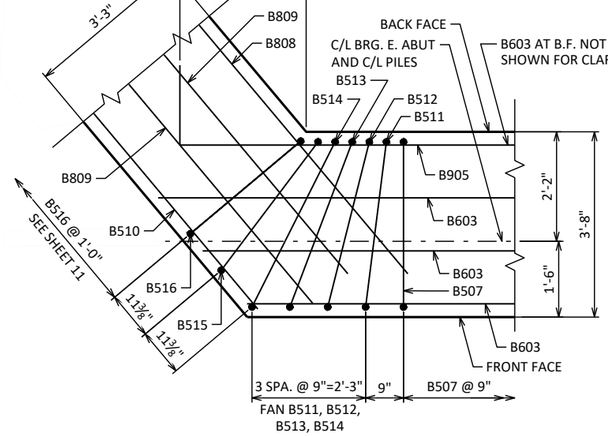
PILE PLAN

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



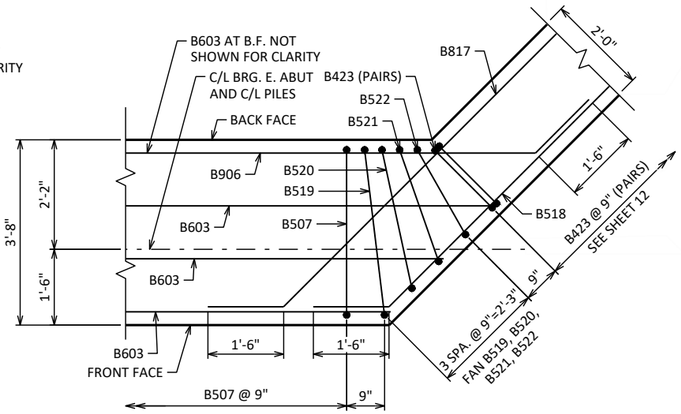
SECTION THRU ABUTMENT

LOOKING NORTHEAST
DIMENSIONS ARE NORMAL TO C/L BRG.



CORNER REINFORCEMENT DETAIL

AT WING 3
BAR SPACING IS DIMENSIONED ALONG FRONT FACE



CORNER REINFORCEMENT DETAIL

AT WING 4
BAR SPACING IS DIMENSIONED ALONG FRONT FACE

LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING WITH PILE POINTS, ESTIMATED 20'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A02) VERTICAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 8". RUN BAR STEEL THRU JOINT AND SEAL WITH 18" RUBBERIZED MEMBRANE WATERPROOFING. SEE SHEET 14 FOR ALTERNATE CONSTRUCTION JOINT.
- (A03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHEET 2 FOR RODENT SHIELD DETAIL.
- (A04) ½" PREFORMED JOINT FILLER FULL LENGTH OF ABUTMENT (4" WIDE) AND UNDER GIRDER FLANGE IN FRONT OF BEARING PAD.
- (A07) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- F.F. = FRONT FACE B.F. = BACK FACE
- (X) INDICATES WING WALL NUMBER
- ⁎ DIMENSION AND ELEVATION AT CENTERLINE OF BEARING AND CENTERLINE OF GIRDER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD PLANS CK'D CJM

EAST ABUTMENT DETAILS

SHEET 10 OF 23
83

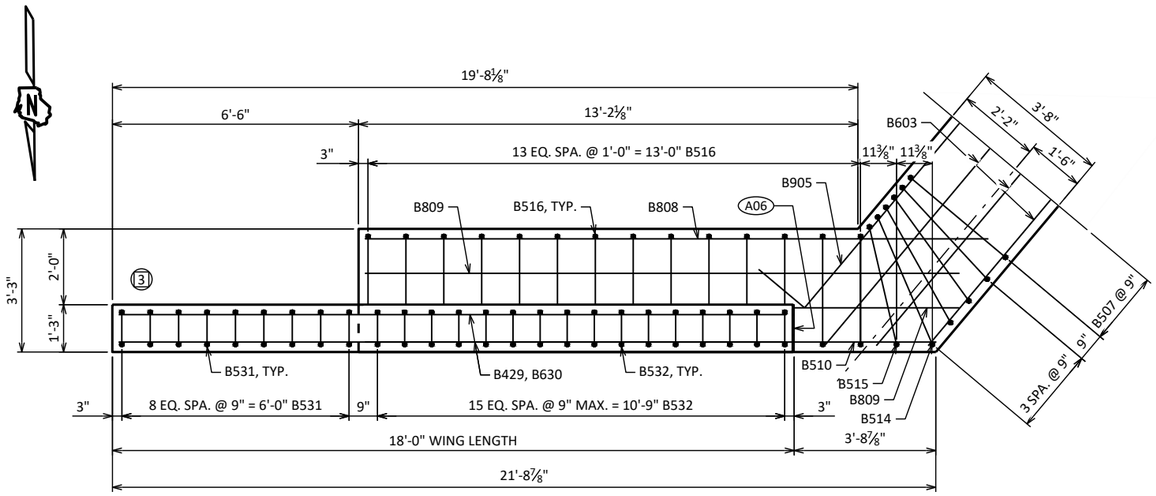
SCALE = N.T.S.

8

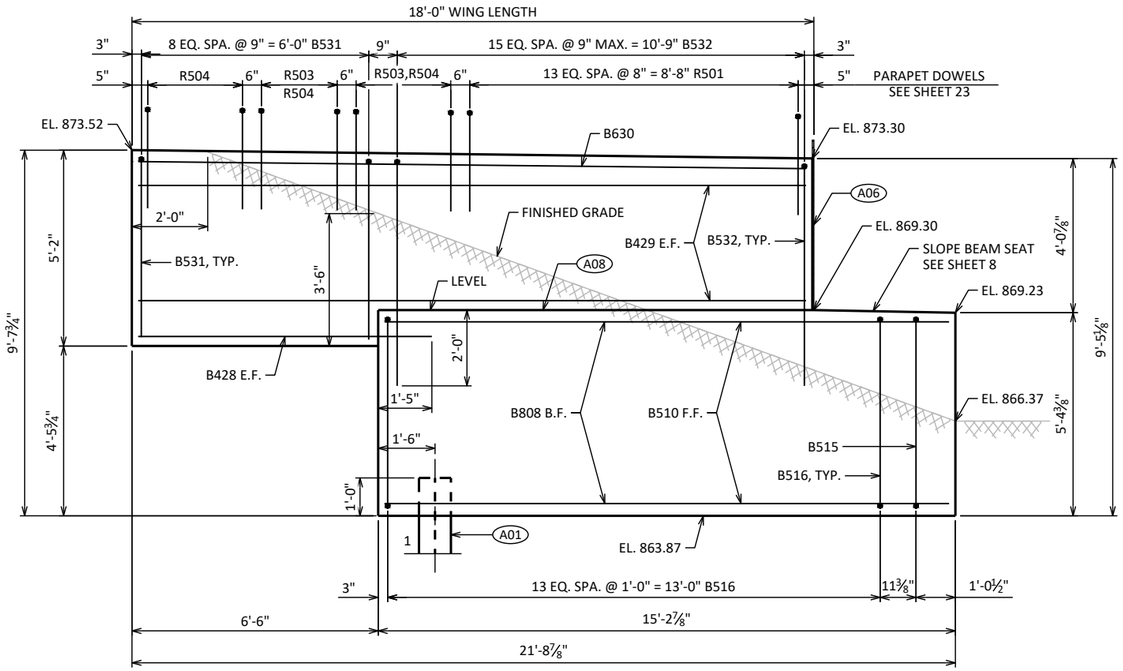
8

STATE PROJECT NUMBER

4840-01-71

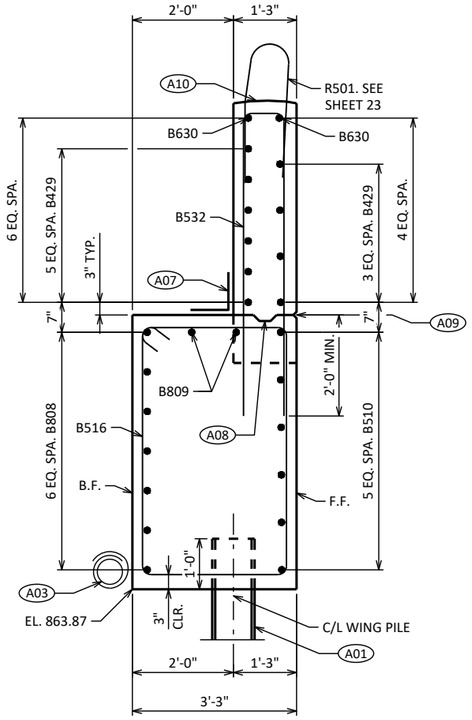


WING 3 PLAN



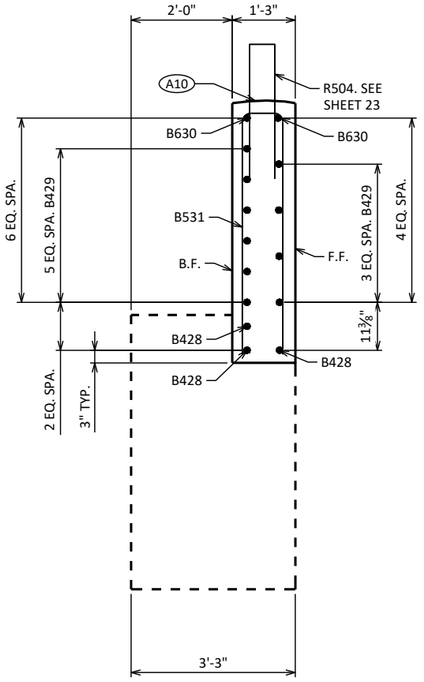
WING 3 ELEVATION

LOOKING AT FRONT FACE



SECTION THRU WING BODY

SHOWING PARAPET REINFORCEMENT
PARAPET NOT SHOWN FOR CLARITY



SECTION THRU WING STEM

SHOWING PARAPET REINFORCEMENT
PARAPET NOT SHOWN FOR CLARITY

LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING WITH PILE POINTS, ESTIMATED 20'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHEET 2 FOR RODENT SHIELD DETAIL.
- (A06) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH.
- (A07) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- (A08) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY.
- (A09) ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- (A10) CONSTRUCTION JOINT, LEAVE ROUGH.

F.F. = FRONT FACE B.F. = BACK FACE E.F. = EACH FACE

(X) INDICATES WING WALL NUMBER

NOTES

FOR EAST ABUTMENT BILL OF BARS, SEE SHEET 13.

FOR PARAPET REINFORCEMENT AND PARAPET ON WING BILL OF BARS, SEE SHEET 23.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD PLANS CK'D CJM

WING 3 DETAILS

SHEET 11 OF 23

84

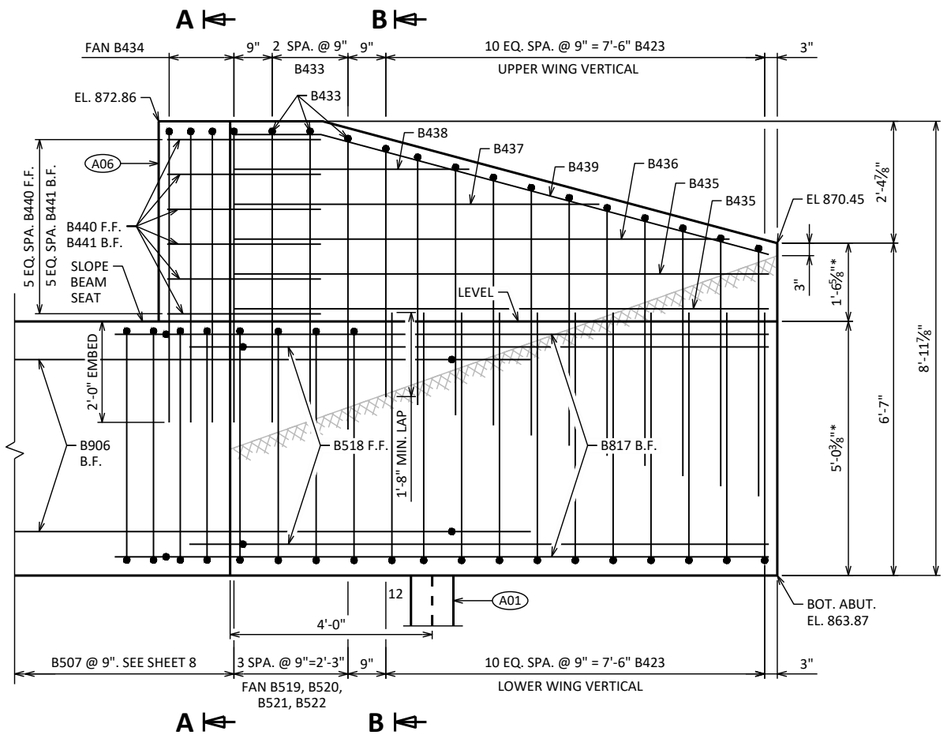
SCALE = N.T.S.

8

8

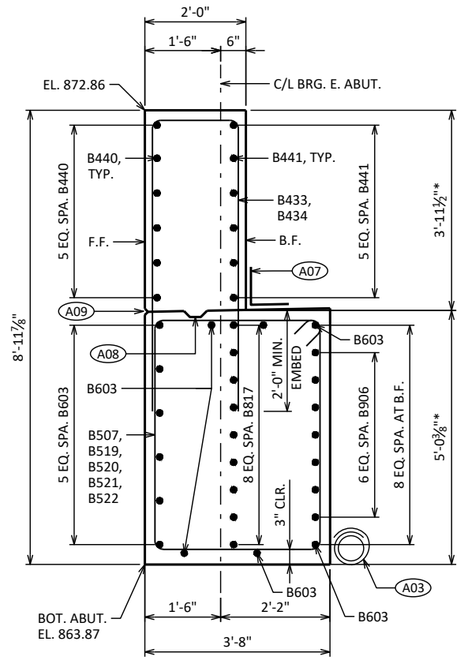
STATE PROJECT NUMBER

4840-01-71



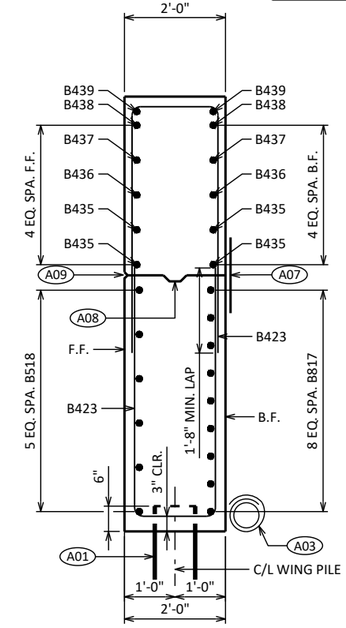
WING 4 ELEVATION

LOOKING AT FRONT FACE OF WING

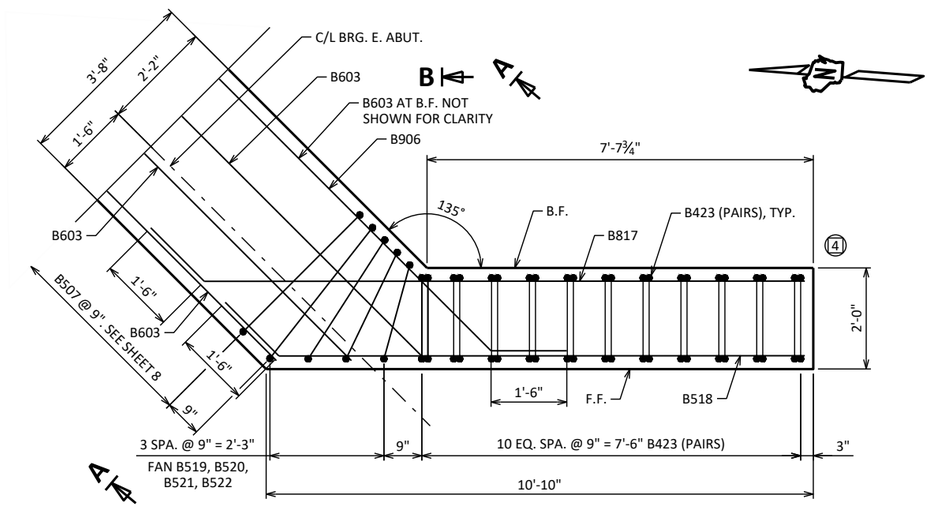


SECTION A-A

DIMENSIONS ARE NORMAL TO C/L BRG

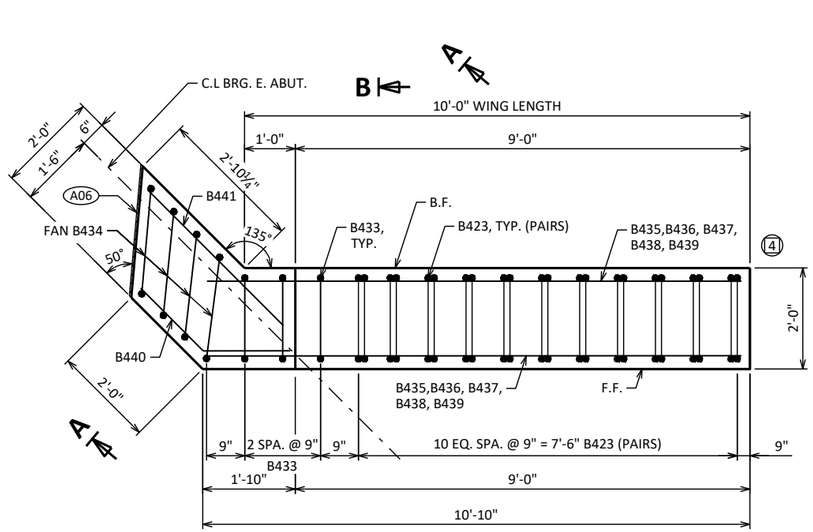


SECTION B-B



WING 4 PLAN

SHOWING LOWER WING REINFORCEMENT



WING 4 PLAN

SHOWING UPPER WING REINFORCEMENT

LEGEND

- (A01) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING WITH PILE POINTS, ESTIMATED 20'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A03) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHEET 2 FOR RODENT SHIELD DETAIL.
- (A06) ½" FILLER TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.
- (A07) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- (A08) OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY.
- (A09) ¾" "V" GROOVE ON FRONT FACE OF WINGWALL.
- F.F. = FRONT FACE B.F. = BACK FACE
- (X) INDICATES WING WALL NUMBER
- ✳ DIMENSION AND ELEVATION AT CENTERLINE OF BEARING AND CENTERLINE OF GIRDER. SEE SHEET 8 FOR SLOPED BEAM SEAT DETAIL.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD PLANS CK'D CJM

WING 4 DETAILS

SHEET 12 OF 23

85

SCALE = N.T.S.

8

8

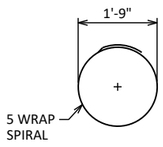
STATE PROJECT NUMBER

4840-01-71

BILL OF BARS - EAST ABUTMENT

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		10	28'-0"	X		ABUT. BODY - VERT. - 1 PER PILE
B402		20	2'-3"			ABUT. BODY - VERT. - 2 PER PILE
B603		24	30'-6"			ABUT. BODY - HORIZ.
B604		7	21'-4"			ABUT. BODY - HORIZ. - BACK FACE
B905		7	22'-4"	X		ABUT. BODY - HORIZ. - BACK FACE
B906		7	21'-9"	X		ABUT. BODY - HORIZ. - BACK FACE
B507		60	16'-0"	X		ABUT. BODY - VERT. - STIRRUPS
B808	X	7	16'-6"			WING 3 BODY - HORIZ. - BACK FACE
B809	X	2	15'-9"			WING 3 BODY - HORIZ. - TOP
B510	X	6	15'-1"			WING 3 BODY - HORIZ. - FRONT FACE
B511		1	16'-0"	X		ABUT. BODY - VERT. - WING 3 CORNER
B512		1	16'-2"	X		ABUT. BODY - VERT. - WING 3 CORNER
B513		1	16'-4"	X		ABUT. BODY - VERT. - WING 3 CORNER
B514		1	16'-8"	X		ABUT. BODY - VERT. - WING 3 CORNER
B515		1	15'-8"	X		ABUT. BODY - VERT. - WING 3 CORNER
B516	X	14	15'-6"	X		WING 3 BODY - VERT. - STIRRUPS
B817	X	9	13'-5"	X		WING 4 BODY - HORIZ. - BACK FACE
B518	X	6	12'-0"	X		WING 4 BODY - HORIZ. - FRONT FACE
B519		1	16'-0"	X		ABUT. BODY - VERT. - WING 4 CORNER
B520		1	15'-0"	X		ABUT. BODY - VERT. - WING 4 CORNER
B521		1	14'-0"	X		ABUT. BODY - VERT. - WING 4 CORNER
B522		1	13'-2"	X		ABUT. BODY - VERT. - WING 4 CORNER
B423	X	22	11'-5"	X		WING 4 BODY - VERT. - PAIRS
B524		32	6'-6"	X		ABUT. BODY - VERT. - HIGH SEATS
B425		4	31'-4"			ABUT. BODY - HORIZ. - HIGH SEATS
B426		16	4'-6"	X		ABUT. BODY - VERT. - BTWN BEAM SEATS
B427		8	8'-4"			ABUT. BODY - HORIZ. - BTWN BEAM SEATS
B428	X	4	7'-10"			WING 3 STEM - HORIZ. - EACH FACE
B429	X	10	17'-7"			WING 3 STEM - HORIZ. - EACH FACE
B630	X	2	17'-7"			WING 3 STEM - HORIZ. - EACH FACE - TOP
B531	X	9	9'-8"	X		WING 3 STEM - VERT.
B532	X	16	12'-4"	X		WING 3 STEM - VERT.
B433	X	3	13'-2"	X		WING 4 - VERT.
B434	X	4	13'-7"	X		WING 4 - VERT.
B435	X	4	10'-7"			WING 4 UPPER - HORIZ. - EACH FACE
B436	X	2	8'-8"			WING 4 UPPER - HORIZ. - EACH FACE
B437	X	2	6'-6"			WING 4 UPPER - HORIZ. - EACH FACE
B438	X	2	4'-3"			WING 4 UPPER - HORIZ. - EACH FACE
B439	X	2	11'-1"	X		WING 4 UPPER - HORIZ. - EACH FACE
B440	X	6	3'-6"	X		WING 4 UPPER - HORIZ.
B441	X	6	3'-9"			WING 4 UPPER - HORIZ.



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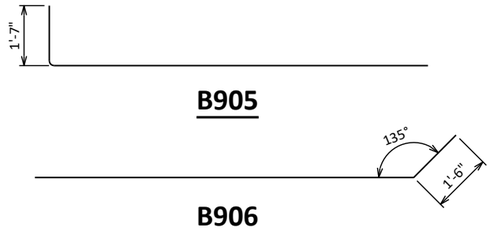
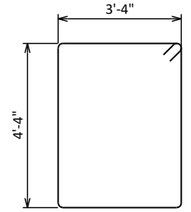


B905

B906



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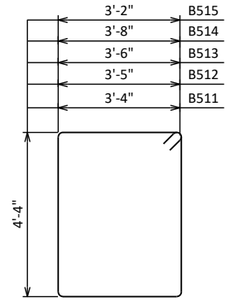

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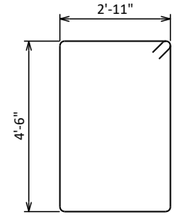
B514, B515



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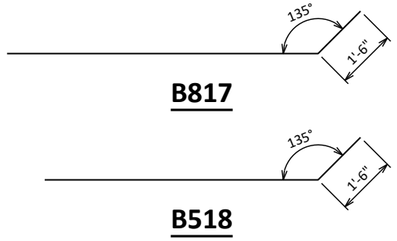

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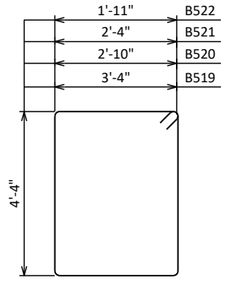

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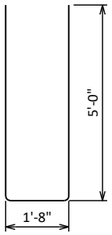

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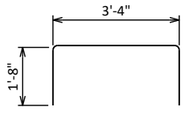

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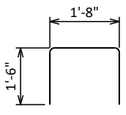

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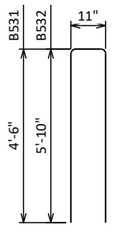

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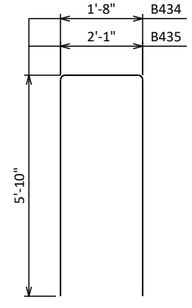

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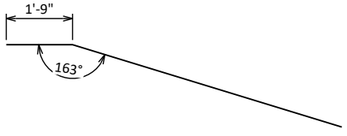

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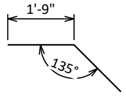

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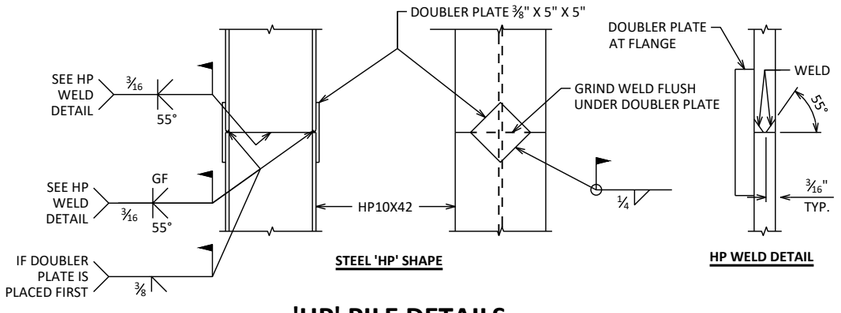


'HP' PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

EAST ABUTMENT BILL OF BARS

SHEET 13 OF 23

86

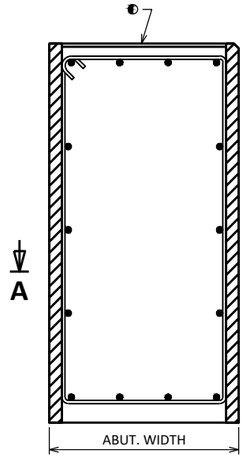
SCALE = N.T.S.

8

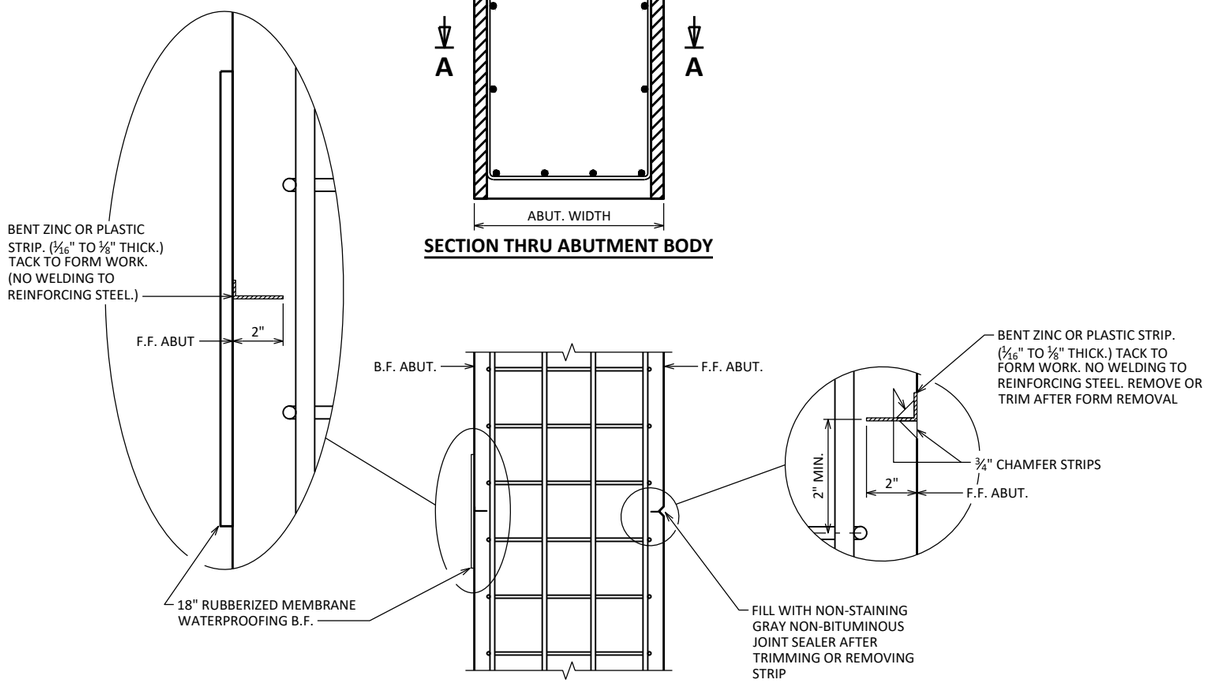
8

STATE PROJECT NUMBER

4840-01-71



SECTION THRU ABUTMENT BODY



SECTION A-A

ALTERNATE CONSTRUCTION JOINT AT ABUTMENT

NOTES

PARTIAL ZINC OR PLASTIC BULKHEAD MAY BE USED AS ALTERNATIVE CONSTRUCTION JOINT, WITH THE PERMISSION OF THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

VERTICAL CONSTRUCTION JOINT KEYWAY IS NOT REQUIRED WHEN USING ALTERNATE CONSTRUCTION JOINT.

CARE IS TO BE USED IN CASTING CONCRETE AROUND BULKHEAD TO PREVENT DISLOCATION OR MISALIGNMENT OF THE BULKHEAD.

SAW CUTTING JOINT IS NOT ALLOWED.

◐ USE A JOINT TOOL TO CONSTRUCT A CONTRACTION JOINT APPROXIMATELY 1/2" DEEP.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

ALTERNATE CONSTRUCTION JOINT

SHEET 14 OF 23

87

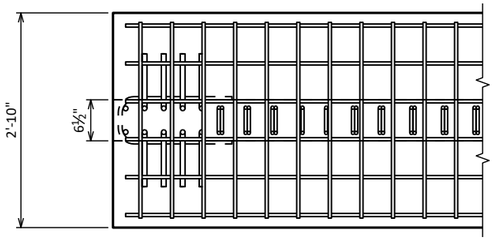
SCALE = 2.00

8

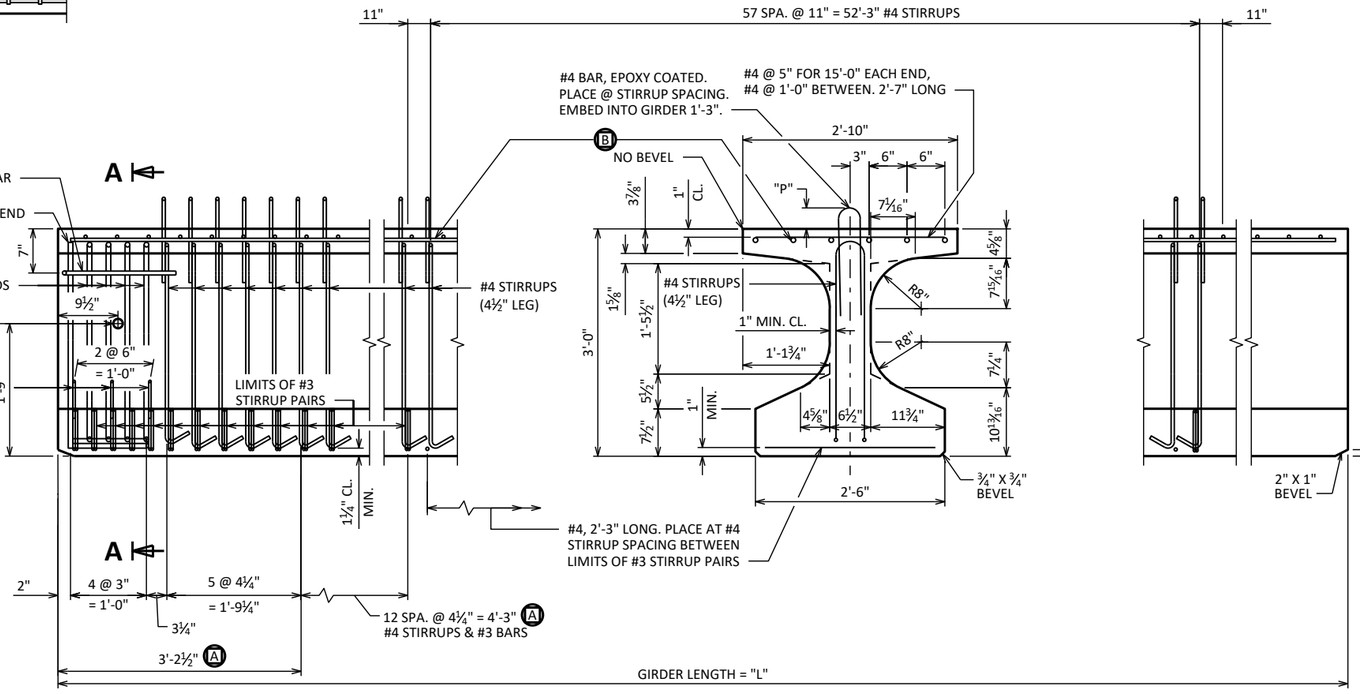
8

STATE PROJECT NUMBER

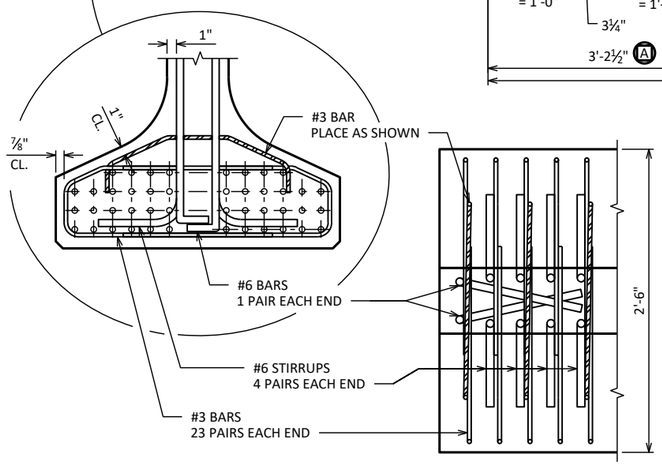
4840-01-71



TOP FLANGE



SECTION A-A



BOTTOM FLANGE

SIDE VIEW & TYPICAL SECTION IN SPAN

- (A) DETAIL TYP. AT EACH END
- (B) 6 - #4 BARS, FULL LENGTH, MIN. LAP = 4'-2"

NOTES

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

DO NOT APPLY CONCRETE SEALER 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.

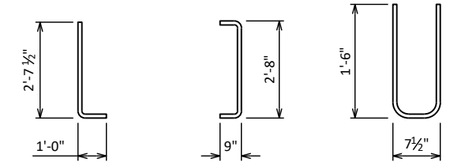
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

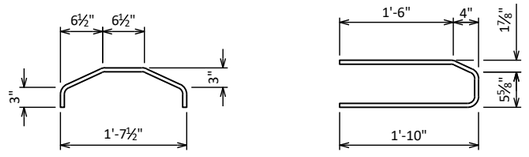
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

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.) ⚹
1	1,5	69'-0"	0.2	0.4	0.6	0.7	0.7	0.7	0.6	0.4	0.2	8,000	8	7	8	0.6	20	6,800	28	10	13	4		
1	2,3,4	69'-0"	0.3	0.5	0.7	0.8	0.8	0.8	0.7	0.5	0.3	8,000	8	7	8	0.6	20	6,800	28	10	13	4		

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

36W" PRESTRESSED GIRDER DETAILS 1

SHEET 15 OF 23
88

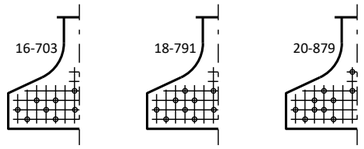
SCALE = 2.00

8

8

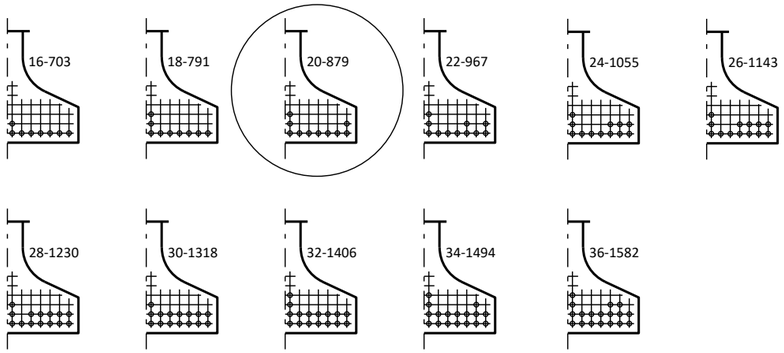
STATE PROJECT NUMBER

4840-01-71



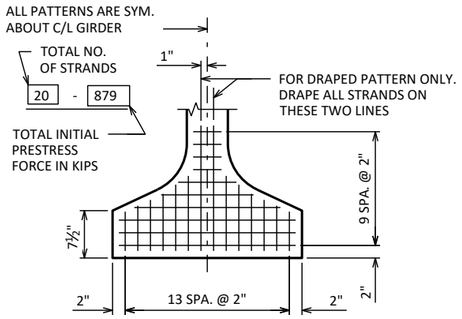
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

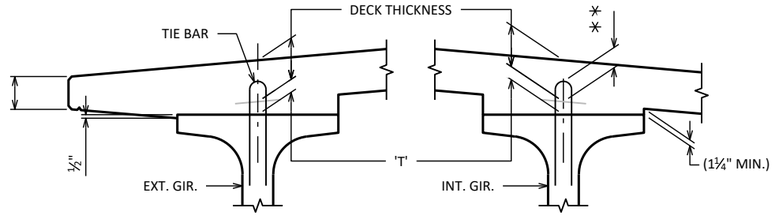


ARRANGEMENT AT C/L SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

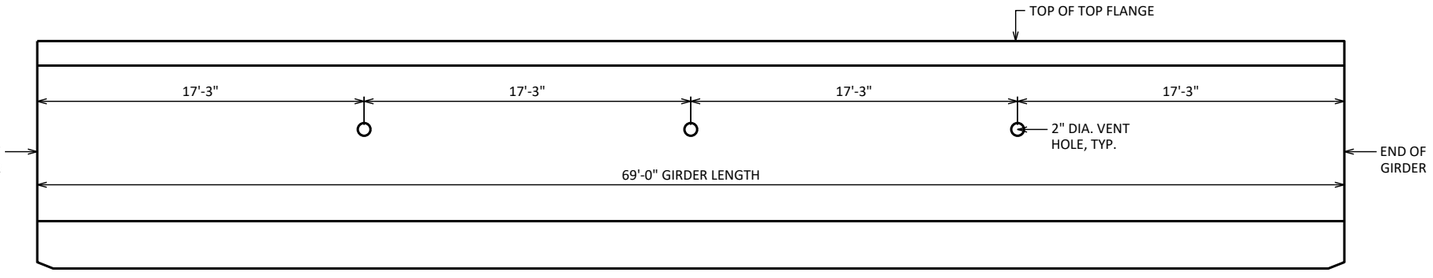
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

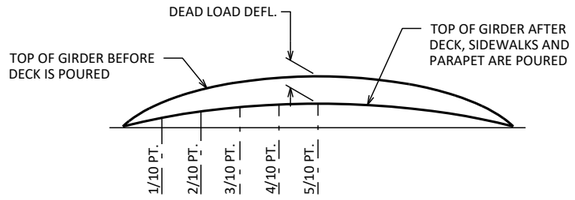
⁎⁎ IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

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 2.8" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".





DEAD LOAD DEFLECTION DIAGRAM

GIRDER VENT LOCATIONS

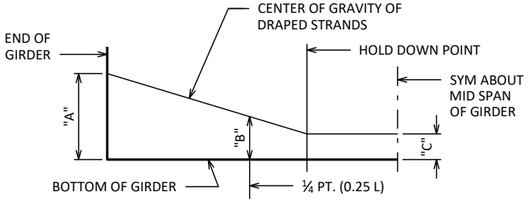
(TYP. ALL GIRDERS)
VENT HOLES ARE CONSIDERED INCIDENTAL TO BID ITEM "PRESTRESSED GIRDER TYPE I 36W-INCH"

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

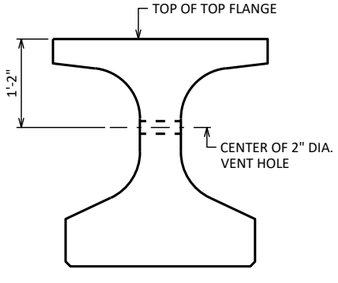
SPAN	CAMBER (IN.) ⁎
1	1.6

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

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DRAPED STRAND PROFILE



GIRDER VENT HOLE DETAIL

2" DIA. VENT HOLE MAY BE PRODUCED WITH A REMOVABLE OR NON-REMOVABLE FORM. THEY MAY BE SHIFTED SLIGHTLY TO AVOID CONFLICTS WITH GIRDER REINFORCEMENT.

8

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

36W" PRESTRESSED GIRDER DETAILS 2

SHEET 16 OF 23
89

SCALE = 2.00

STATE PROJECT NUMBER

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NOTES

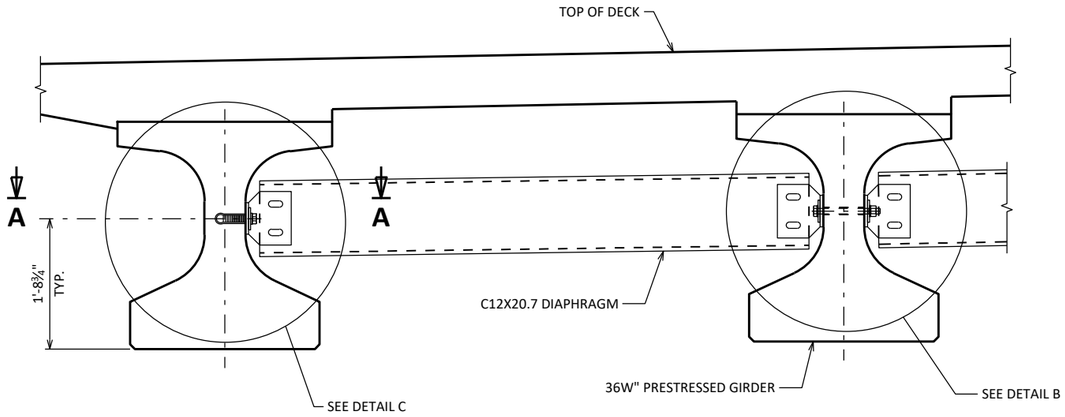
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-20-255", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

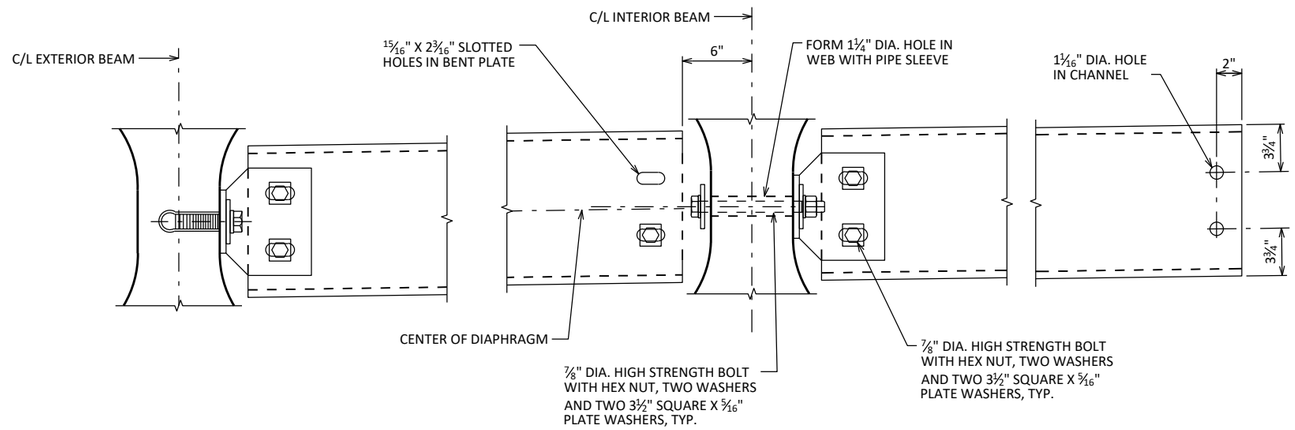
ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

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

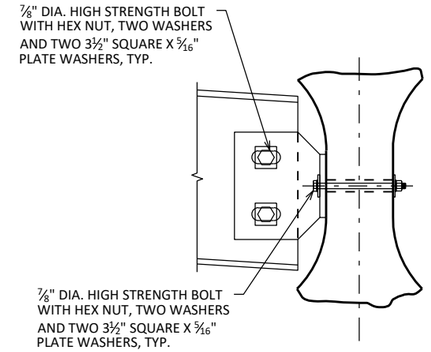


EXTERIOR GIRDER **INTERIOR GIRDER**

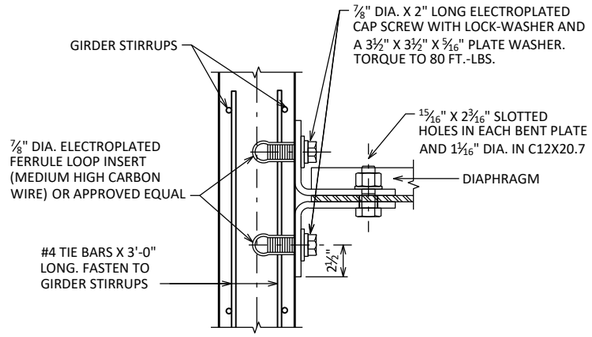
PART TRANSVERSE SECTION AT DIAPHRAGM



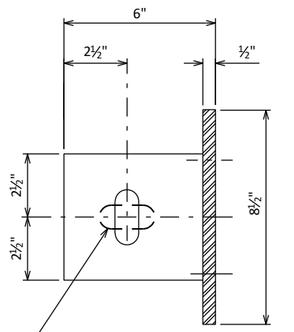
DETAIL C **DETAIL B**



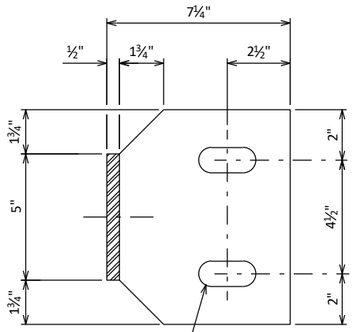
SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°



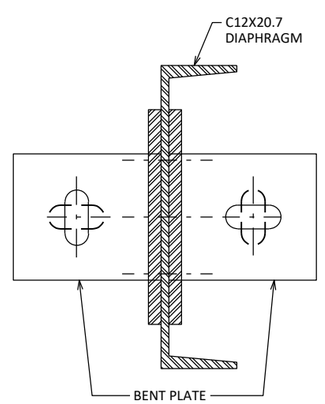
SECTION A-A
(FOR EXTERIOR ATTACHMENT)



BEAM FACE



DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

STEEL DIAPHRAGM

SHEET 17 OF 23
90

SCALE = 2.00

8

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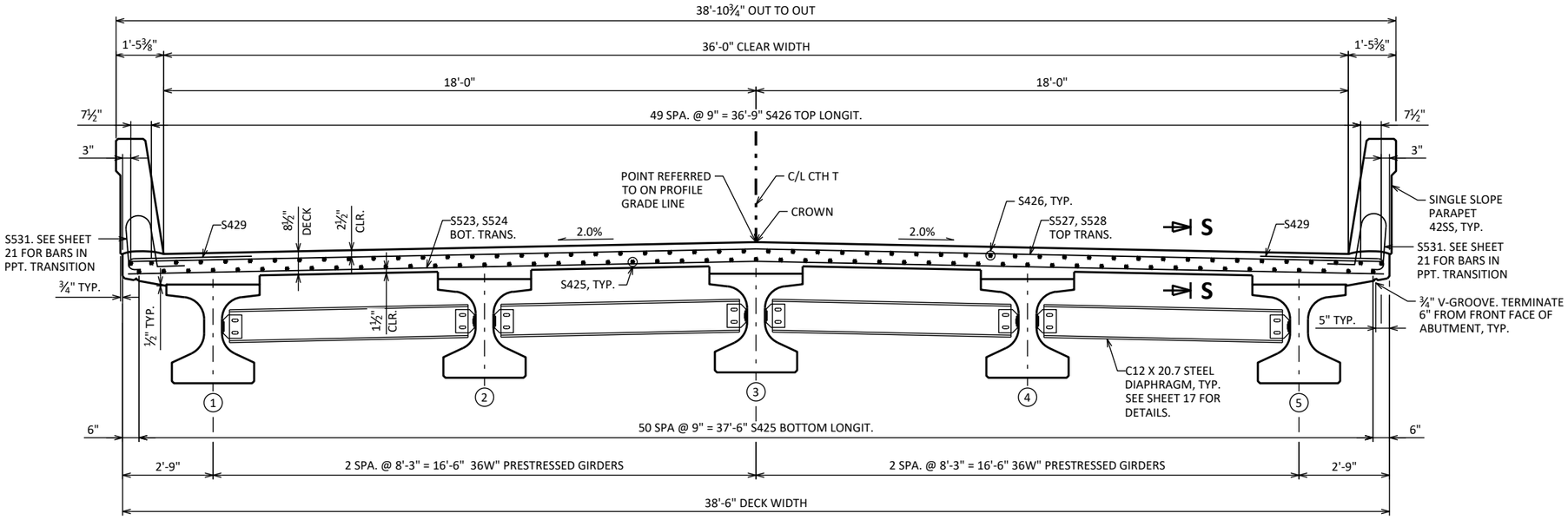
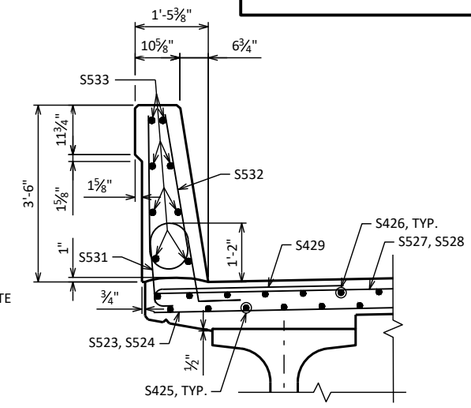
STATE PROJECT NUMBER

4840-01-71



REINFORCEMENT CROSS SECTION

LOOKING EAST
DIMENSIONS SHOWN ARE NORMAL TO C/L CTH T



SECTION THRU PARAPET

IN SPAN
SEE SHEET 21 FOR PPT. REINF. IN TRANSITION

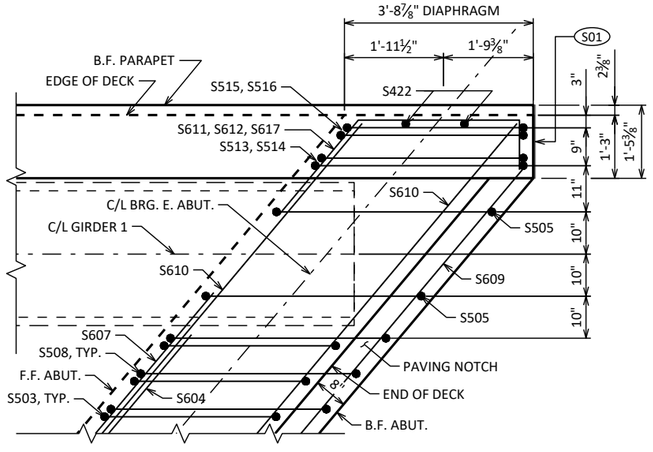
TOP OF DECK ELEVATIONS

LOCATION	C/L BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	C/L BRG. E. ABUT.
N. FLOW LINE	872.38	872.47	872.56	872.65	872.74	872.82	872.91	873.00	873.09	873.18	873.27
GIRDER 1	872.40	872.49	872.57	872.66	872.75	872.84	872.93	873.02	873.10	873.19	873.28
GIRDER 2	872.47	872.56	872.65	872.74	872.83	872.91	873.00	873.09	873.18	873.27	873.36
GIRDER 3/ CROWN	872.55	872.64	872.72	872.81	872.90	872.99	873.08	873.17	873.25	873.34	873.43
GIRDER 4	872.29	872.38	872.47	872.56	872.65	872.73	872.82	872.91	873.00	873.09	873.18
GIRDER 5	872.04	872.13	872.21	872.30	872.39	872.48	872.57	872.66	872.74	872.83	872.92
S. FLOW LINE	871.99	872.08	872.17	872.26	872.34	872.43	872.52	872.61	872.70	872.79	872.87

SECTION S-S

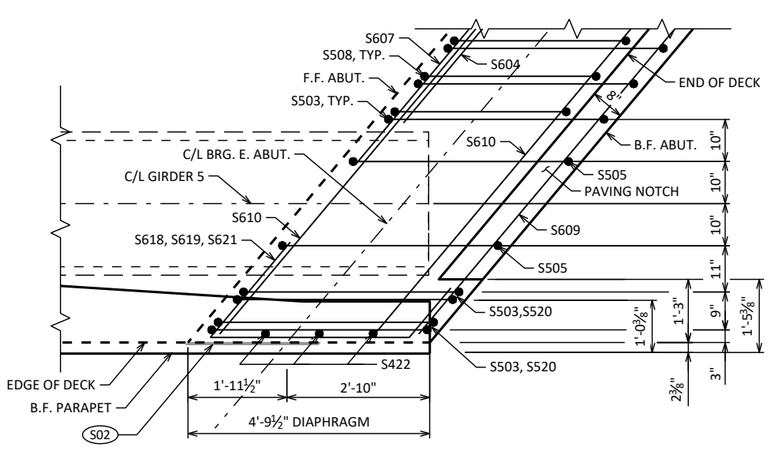
SECTION THRU PARAPET

AT PAVING NOTCH
WING 2 AND WING 4 CORNERS SIMILAR



DIAPHRAGM PLAN AT CORNERS

WING 3 SHOWN, WING 1 SIMILAR
PARAPET REINFORCEMENT NOT SHOWN FOR CLARITY
DIMENSIONS ARE NORMAL TO CENTERLINE CTH T



DIAPHRAGM PLAN AT CORNERS

WING 4 SHOWN, WING 2 SIMILAR
PARAPET REINFORCEMENT NOT SHOWN FOR CLARITY
DIMENSIONS ARE NORMAL TO CENTERLINE CTH T

LEGEND

(S01) ½" FILLER - TO EXTEND FROM BEAM SEAT TO TOP OF CONCRETE PARAPET. FILLER INCLUDED IN WING LENGTH. SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE) AT FRONT FACE. SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF FILLER WITH 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE.

(S02) ½" FILLER - TO EXTEND FROM BEAM SEAT TO TOP WING. SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE) AT FRONT FACE. SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF FILLER WITH 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

SUPERSTRUCTURE CROSS SECTION

SHEET 18 OF 23
91

SCALE = N.T.S.

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STATE PROJECT NUMBER

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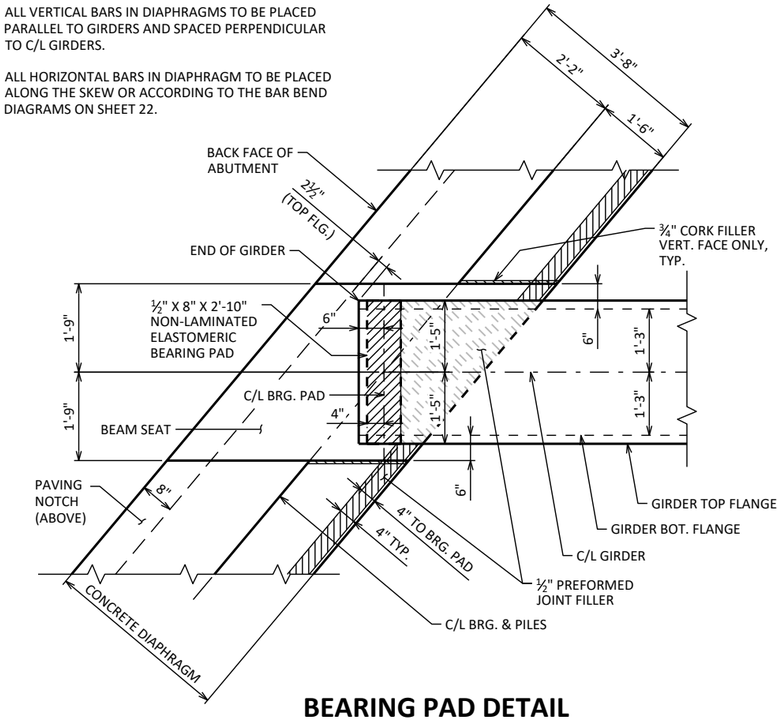
NOTES

SEE SHEET 22 FOR SUPERSTRUCTURE BILL OF BARS.

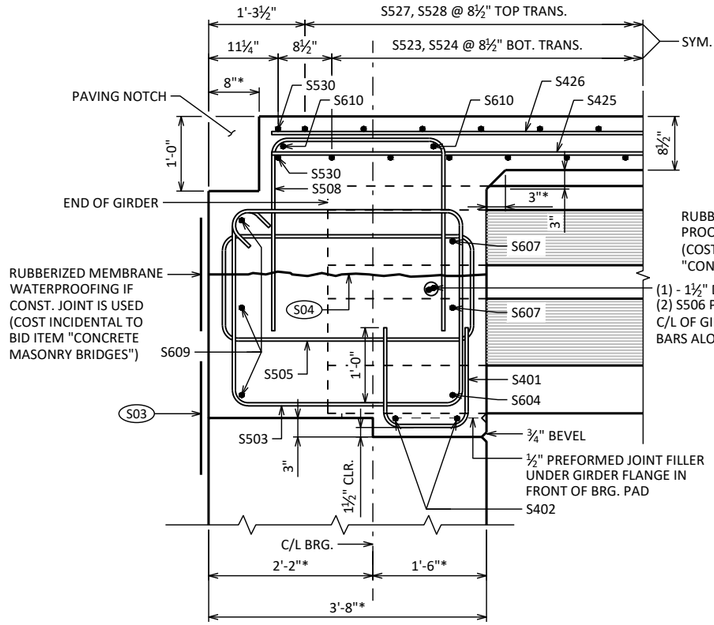
ALL VERTICAL BARS IN DIAPHRAGMS TO BE PLACED PARALLEL TO GIRDERS AND SPACED PERPENDICULAR TO C/L GIRDERS.

ALL HORIZONTAL BARS IN DIAPHRAGM TO BE PLACED ALONG THE SKEW OR ACCORDING TO THE BAR BEND DIAGRAMS ON SHEET 22.



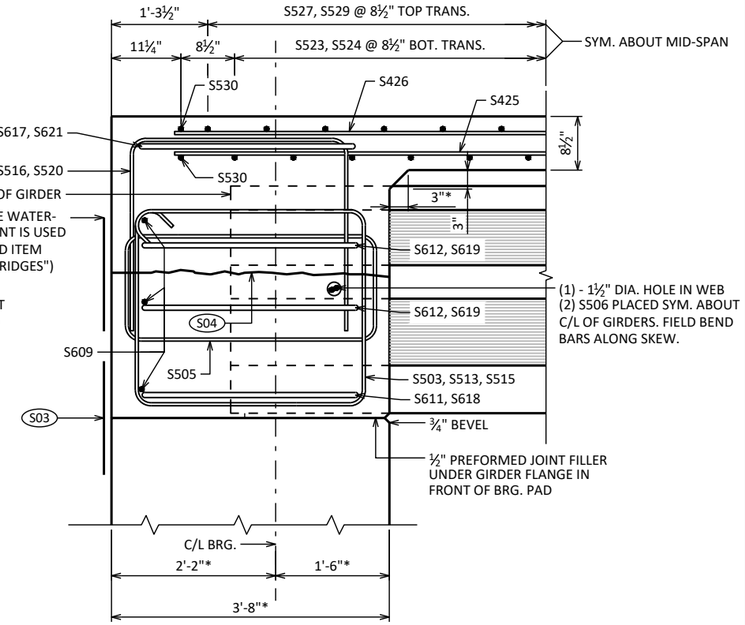
BEARING PAD DETAIL

INTERIOR GIRDER SHOWN, ALL BEARING LOCATIONS SIMILAR
FOR SLOPED BEAM SEAT DETAILS, SEE SHEETS 4 AND 9



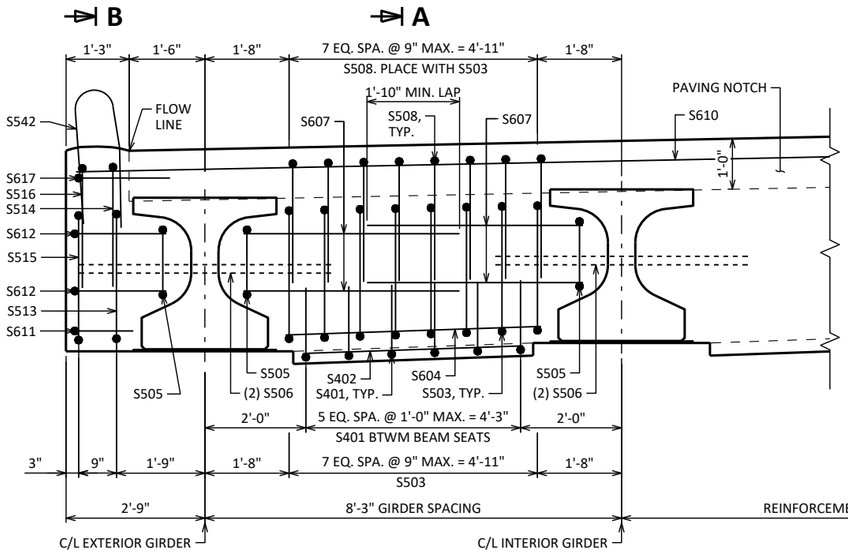
SECTION A-A

SHOWING DIAPHRAGM REINFORCEMENT BETWEEN GIRDERS



SECTION B-B

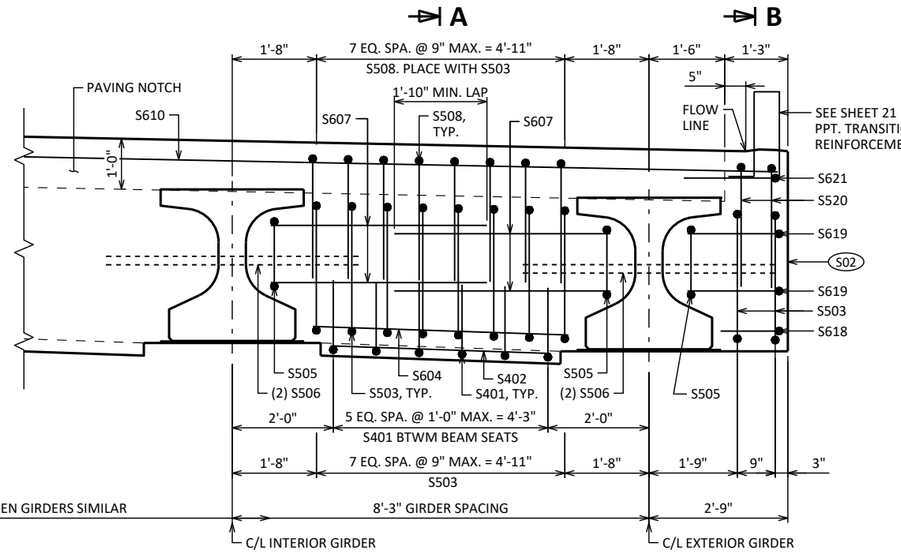
SHOWING DIAPHRAGM REINFORCEMENT AT CORNERS



PART TRANSVERSE SECTION AT DIAPHRAGM

WING 1 AND 3 CORNERS SIMILAR
PARAPET NOT SHOWN FOR CLARITY
DIMENSIONS ARE NORMAL TO CENTERLINE CTH T

REINFORCEMENT BETWEEN GIRDERS SIMILAR



PART TRANSVERSE SECTION AT DIAPHRAGM

WING 2 AND 4 CORNERS SIMILAR
PARAPET NOT SHOWN FOR CLARITY
DIMENSIONS ARE NORMAL TO CENTERLINE CTH T

LEGEND

- ✳ DIMENSION IS TAKEN NORMAL TO THE C/L OF BEARING
- F.F. = FRONT FACE B.F. = BACK FACE
- (S02) ½" FILLER - TO EXTEND FROM BEAM SEAT TO TOP WING. SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE) AT FRONT FACE. SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF FILLER WITH 18" RUBBERIZED MEMBRANE WATERPROOFING AT BACK FACE.
- (S03) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- (S04) OPTIONAL CONSTRUCTION JOINT 1'-2" BELOW TOP OF GIRDER. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

SUPERSTRUCTURE DETAILS

SHEET 19 OF 23
92

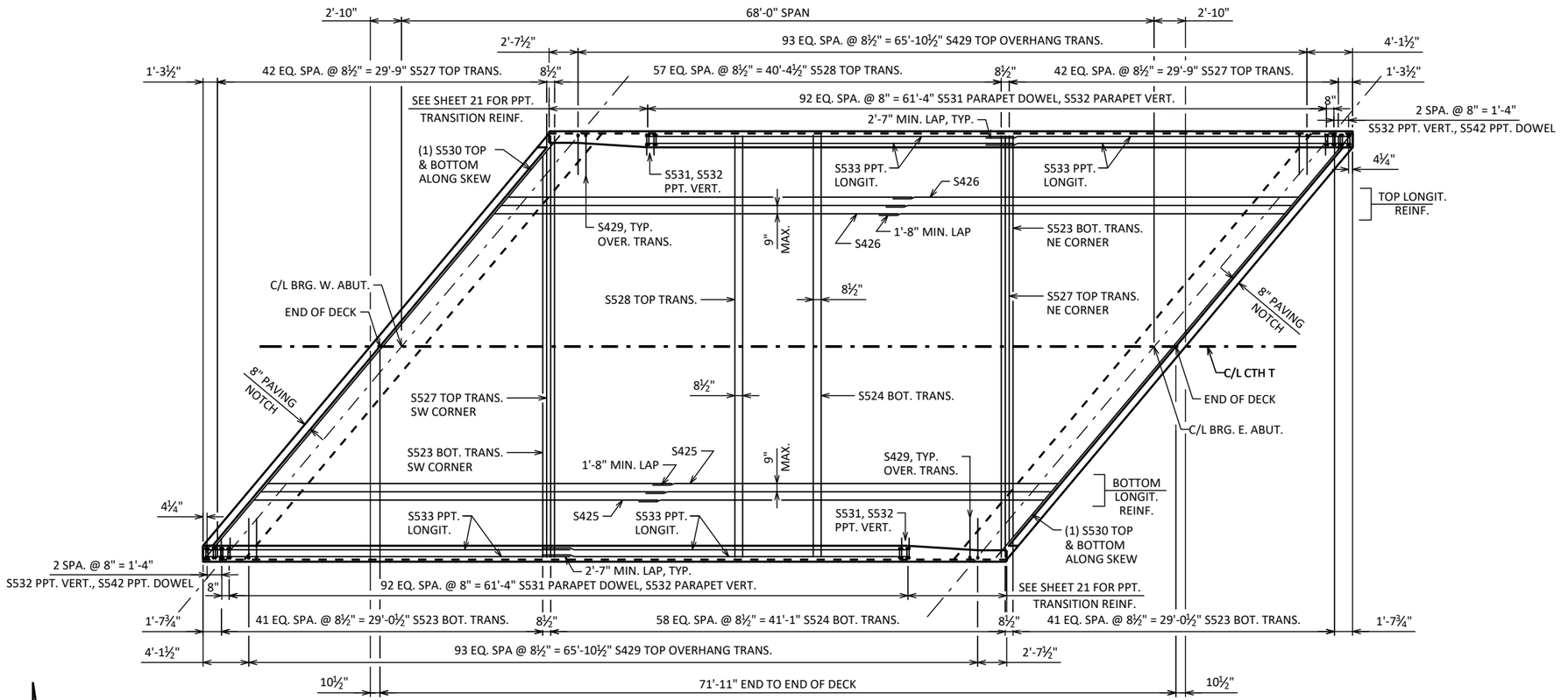
SCALE = N.T.S.

8

8

STATE PROJECT NUMBER

4840-01-71



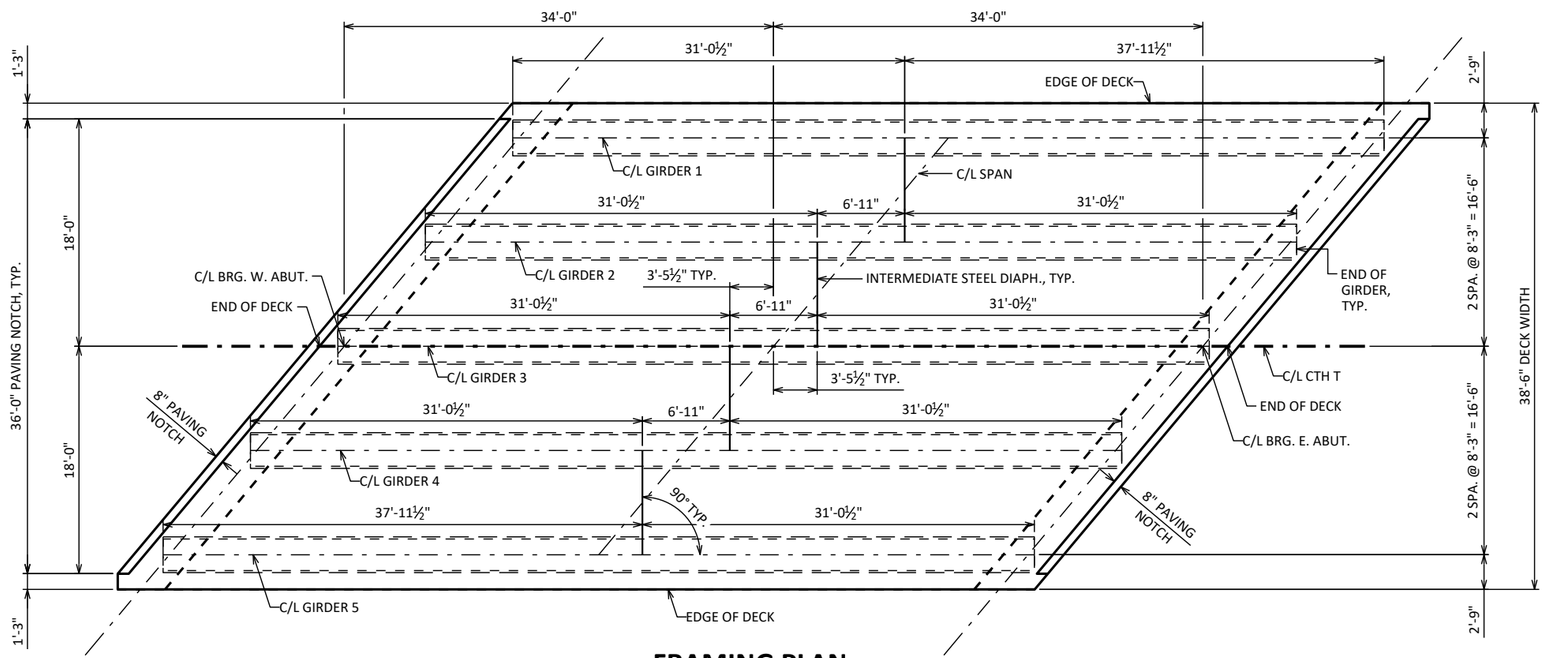
REINFORCEMENT PLAN

NOTES

PLACE ALL TRANSVERSE STEEL PERPENDICULAR TO THE REFERENCE LINE UNLESS SHOWN OR NOTED OTHERWISE.

SEE REINFORCEMENT CROSS SECTION THRU BRIDGE ON SHEET 18 FOR TYPICAL LONGITUDINAL BAR SPACING.

SEE PART LONGITUDINAL SECTIONS ON SHEET 19 FOR SUPERSTRUCTURE REINFORCEMENT AT ABUTMENT DIAPHRAGMS.



FRAMING PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

SUPERSTRUCTRE PLAN

SHEET 20 OF 23

93

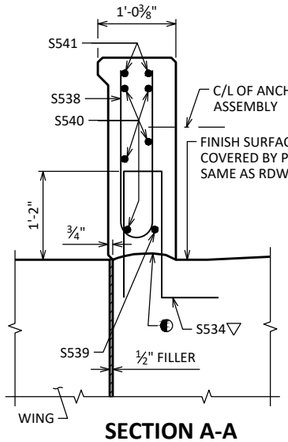
SCALE = N.T.S.

8

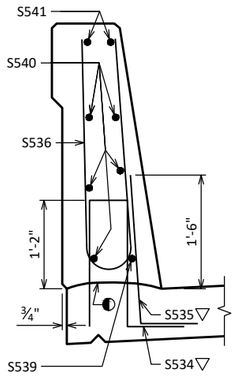
8

STATE PROJECT NUMBER

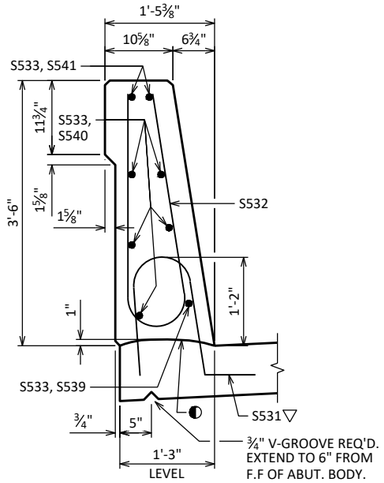
4840-01-71



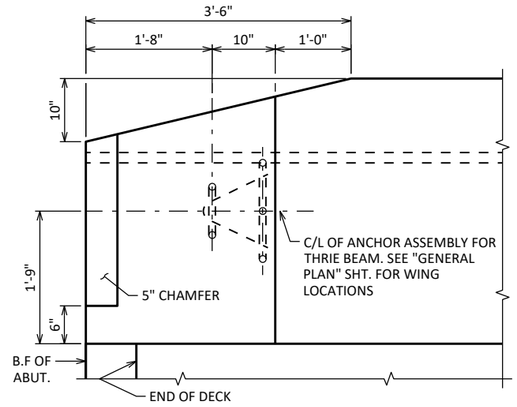
SECTION A-A



SECTION B-B

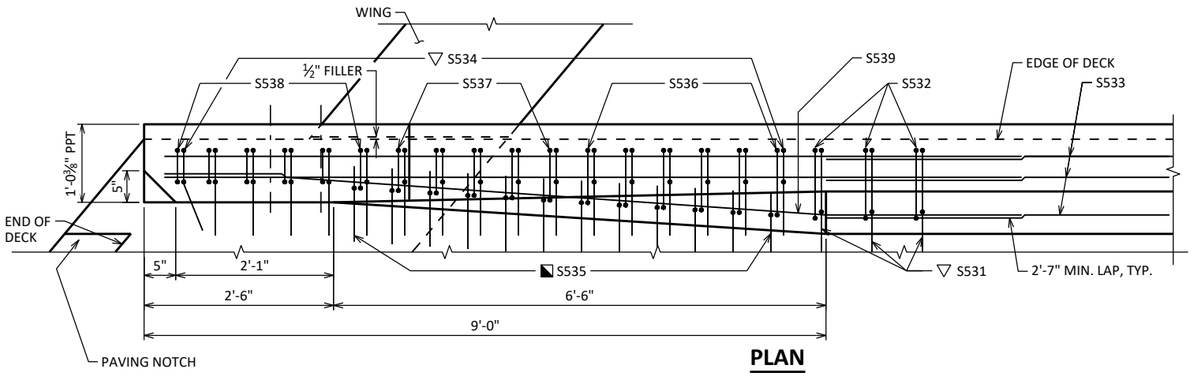


SECTION C-C



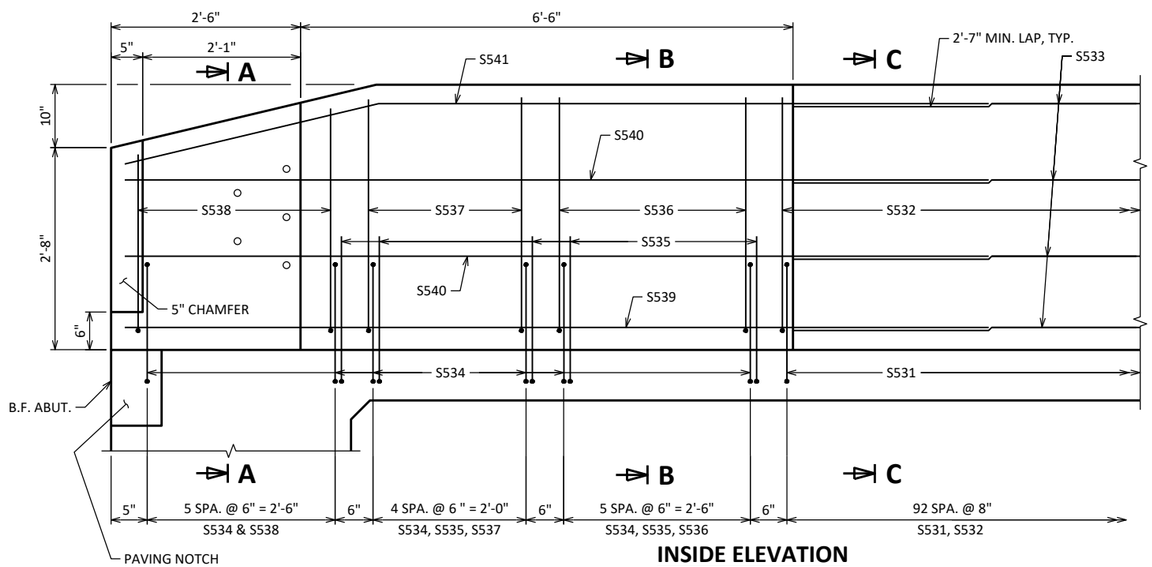
PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET



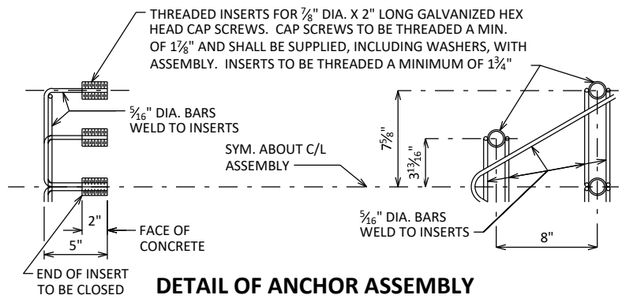
PLAN

WING 2 CORNER SHOWN, WING 4 CORNER SIMILAR



INSIDE ELEVATION

WING 2 CORNER SHOWN, WING 4 CORNER SIMILAR



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN

◪ USE CARE TO PLACE S535 BARS CORRECTLY ALONG TRANSITION OF PARAPET.

▽ S531, S534, AND S535 BARS TO BE TIED TO SUPERSTRUCTURE STEEL BEFORE SUPERSTRUCTURE IS POURED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

SINGLE SLOPE PARAPET 42SS IN SPAN

SHEET 21 OF 23

94

SCALE = 2.00

8

8

STATE PROJECT NUMBER

4840-01-71

BILL OF BARS - SUPERSTRUCTURE

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

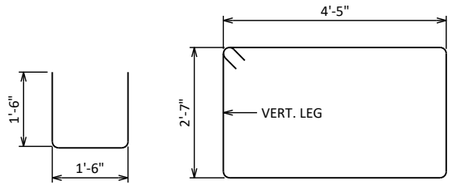
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	48	4'-4"	X		ABUT. DIAPH. - VERT. - BTWN GIRDERS
S402	X	16	5'-8"			ABUT. DIAPH. - HORIZ. - BTWN GIRDERS
S503	X	68	14'-8"	X		ABUT. DIAPH. - VERT. - BTWN GIRDERS
S604	X	8	7'-0"			ABUT. DIAPH. - HORIZ. - BTWN GIRDERS
S505	X	20	12'-2"	X		ABUT. DIAPH. - VERT. - UNDER FLANGES
S506	X	20	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIRDER WEB
S607	X	32	6'-0"			ABUT. DIAPH. - HORIZ. - BTWN GIRDERS
S508	X	64	7'-7"	X		ABUT. DIAPH. - VERT. - BTWN GIRDERS
S609	X	6	48'-8"			ABUT. DIAPH. - HORIZ.
S610	X	4	49'-9"			ABUT. DIAPH. - HORIZ.
S611	X	2	6'-9"	X		ABUT. DIAPH. - HORIZ. - EDGE - COR. 1 & 3
S612	X	4	7'-9"	X		ABUT. DIAPH. - HORIZ. - EDGE - COR. 1 & 3
S513	X	2	13'-10"	X		ABUT. DIAPH. - VERT. - EDGE - COR. 1 & 3
S514	X	2	8'-1"	X		ABUT. DIAPH. - VERT. - EDGE - COR. 1 & 3
S515	X	2	12'-10"	X		ABUT. DIAPH. - VERT. - EDGE - COR. 1 & 3
S516	X	2	7'-7"	X		ABUT. DIAPH. - VERT. - EDGE - COR. 1 & 3
S617	X	2	6'-4"	X		ABUT. DIAPH. - HORIZ. - EDGE - COR. 1 & 3
S618	X	2	8'-0"	X		ABUT. DIAPH. - HORIZ. - EDGE - COR. 2 & 4
S619	X	4	9'-2"	X		ABUT. DIAPH. - HORIZ. - EDGE - COR. 2 & 4
S520	X	4	8'-6"	X		ABUT. DIAPH. - VERT. - EDGE - COR. 2 & 4
S621	X	2	8'-0"	X		ABUT. DIAPH. - HORIZ. - EDGE - COR. 2 & 4
S422	X	10	3'-7"			ABUT. DIAPH. - VERT. - EDGE - ALL COR.
⚠ S523	X	84	19'-1"		X	DECK - BOT. TRANS.
S524	X	59	38'-1"			DECK - BOT. TRANS.
S425	X	102	37'-0"			DECK - BOT. LONGIT.
S426	X	104	37'-0"			DECK - TOP LONGIT.
⚠ S527	X	86	19'-1"		X	DECK - TOP TRANS.
S528	X	58	38'-1"			DECK - TOP TRANS.
S429	X	188	4'-1"	X		DECK - TOP TRANS. - OVERHANG - EACH EDGE
S530	X	4	49'-8"			DECK - TOP & BOT. TRANS. - END OF DECK - ALONG SKEW
S531	X	186	4'-5"	X		PARAPET - VERT. - DOWELS
S532	X	192	6'-8"	X		PARAPET - VERT.
S533	X	32	33'-1"			PARAPET - HORIZ.
S534	X	34	4'-4"	X		PARAPET - VERT. - DOWELS - TRANSITION - COR. 2 & 4
S535	X	24	2'-9"	X		PARAPET - VERT. - DOWELS - TRANSITION - COR. 2 & 4
S536	X	12	6'-6"	X		PARAPET - VERT. - TRANSITION - COR. 2 & 4
S537	X	10	6'-5"	X		PARAPET - VERT. - TRANSITION - COR. 2 & 4
⚠ S538	X	12	5'-5"	X	X	PARAPET - VERT. - TRANSITION - COR. 2 & 4
S539	X	2	11'-6"	X		PARAPET - HORIZ. - TRANSITION - COR. 2 & 4
S540	X	10	11'-7"			PARAPET - HORIZ. - TRANSITION - COR. 2 & 4
S541	X	4	11'-6"	X		PARAPET - HORIZ. - TRANSITION - COR. 2 & 4
S542	X	6	5'-10"	X		PARAPET - VERT. - COR. 1 &3 - AT PAVING NOTCH

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

BAR SERIES TABLE

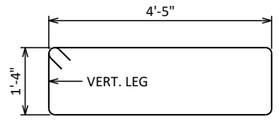
BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
S523	2 SERIES OF 42	1'-10" TO 36'-4"
S527	2 SERIES OF 43	1'-5" TO 36'-9"
S538	2 SERIES OF 6	4'-9" TO 6'-1"

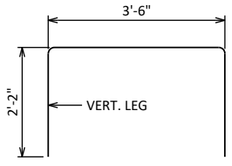


S401

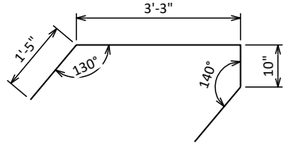
S503



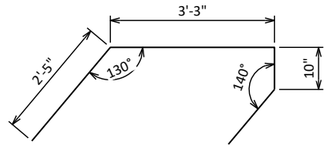
S505



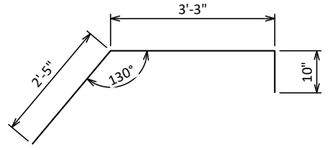
S508



S611



S612



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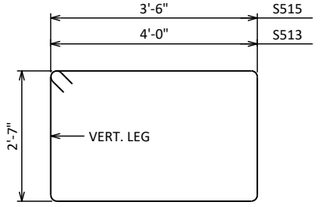
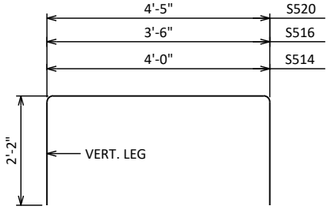
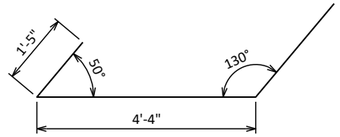


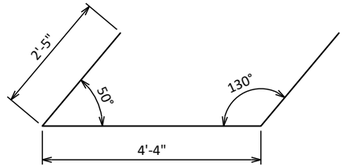
S513, S515



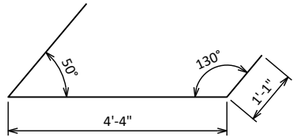
S514, S516, S520



S618



S619



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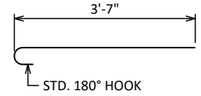

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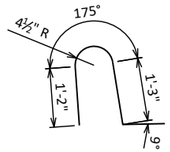
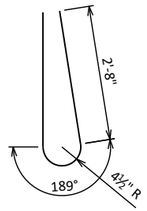
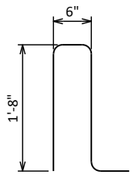


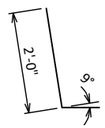
S531



S532



S534



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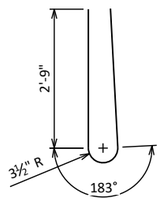
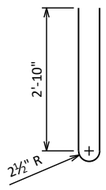
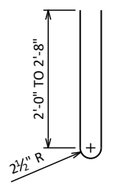


S536



S537



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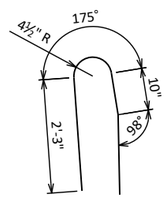

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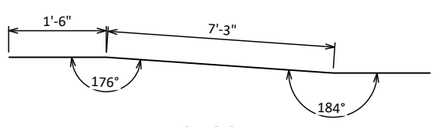
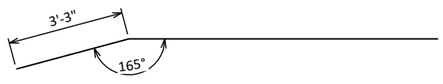


S539



S541

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

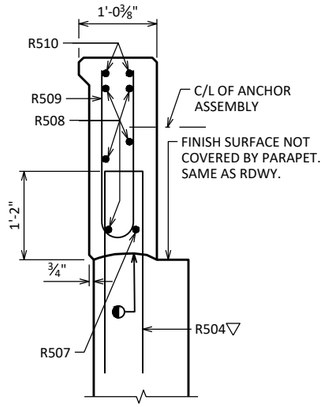
DRAWN BY VJD | PLANS CK'D CJM

SUPERSTRUCTURE BILL OF BARS

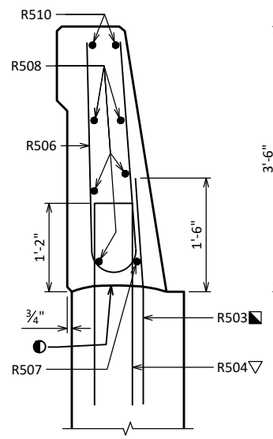
SHEET 22 OF 23

95

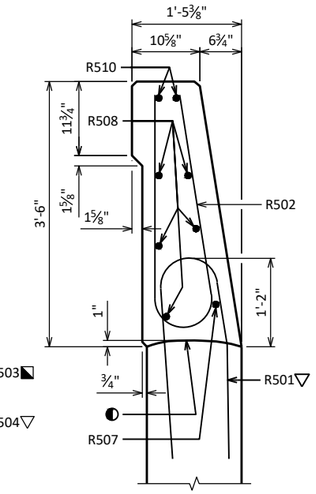
SCALE =



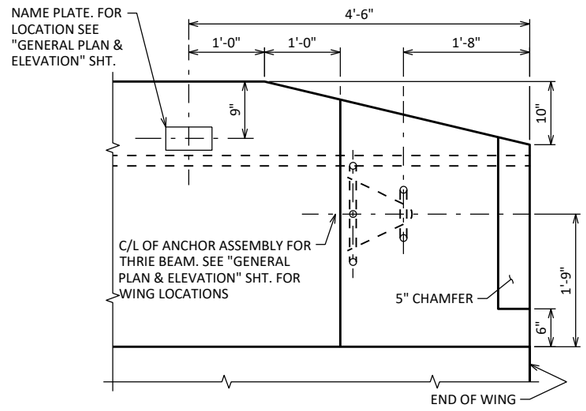
SECTION A-A



SECTION B-B



SECTION C-C



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

STATE PROJECT NUMBER

4840-01-71

BILL OF BARS

FOR WING 1 & 3 PARAPETS

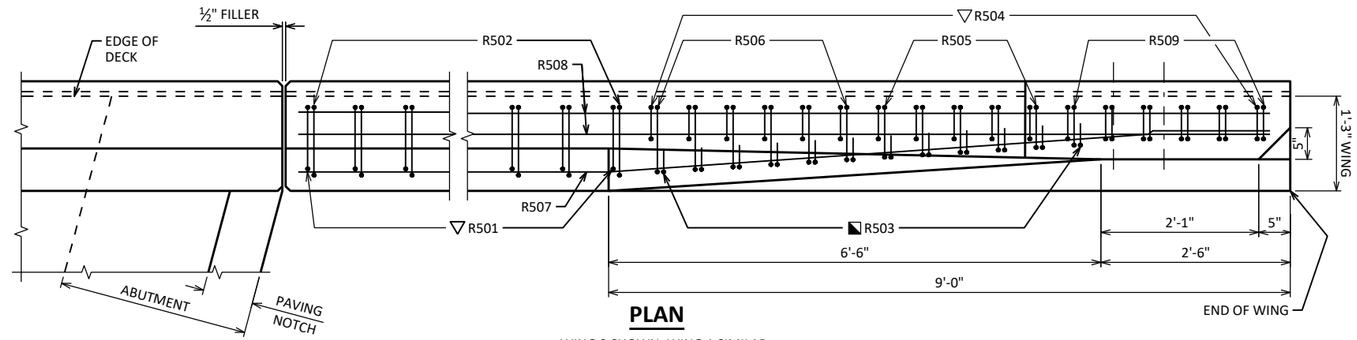
BAR MARK	COAT	W. ABUT.	E. ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	15	15	5'-10"	X		PARAPET VERT.
R502	X	15	15	6'-8"	X		PARAPET VERT.
R503	X	12	12	3'-0"	X		PARAPET VERT.
R504	X	17	17	5'-7"	X		PARAPET VERT.
R505	X	5	5	6'-5"	X		PARAPET VERT.
R506	X	6	6	6'-6"	X		PARAPET VERT.
R507	X	1	1	17'-6"	X		PARAPET HORIZ.
R508	X	5	5	17'-6"			PARAPET HORIZ.
R509	X	6	6	5'-5"	X	⚠	PARAPET VERT.
R510	X	2	2	17'-6"	X		PARAPET HORIZ.

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

BAR SERIES TABLE

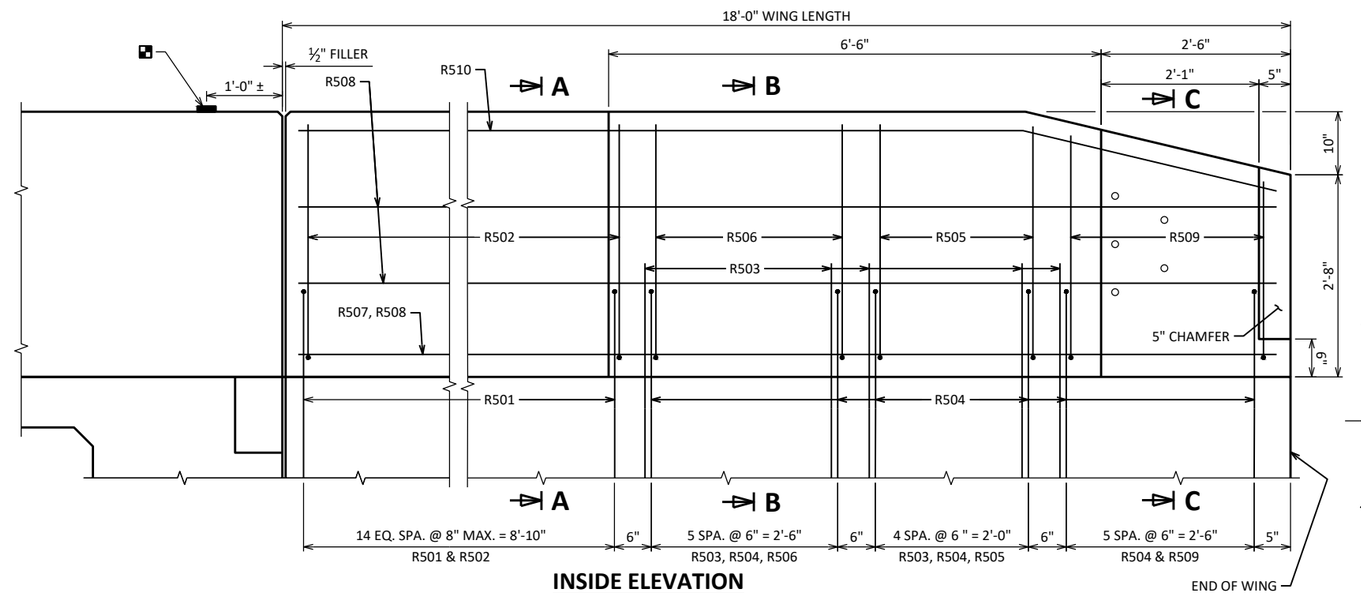
BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
R509	2 SERIES OF 6	4'-9" TO 6'-1"



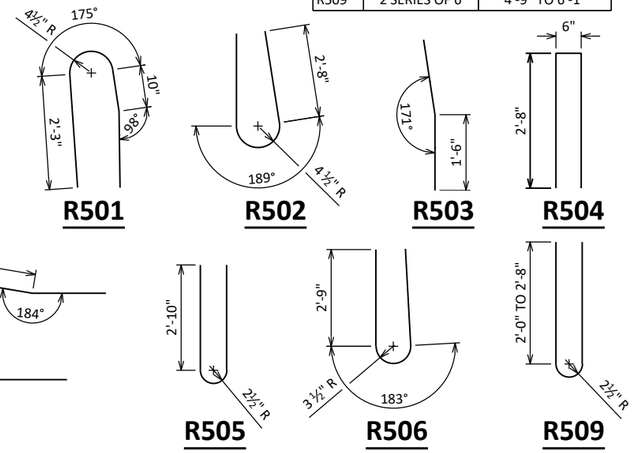
PLAN

WING 3 SHOWN, WING 1 SIMILAR



INSIDE ELEVATION

WING 3 SHOWN, WING 1 SIMILAR

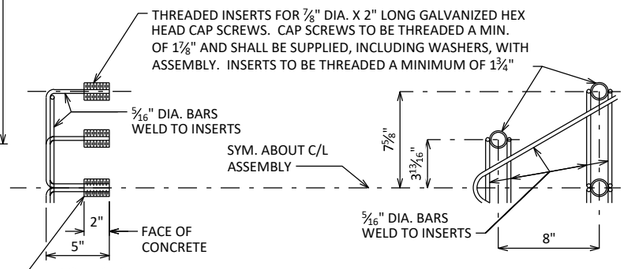


BENCH MARK CAP (WHEN SUPPLIED). PLACE CAP AT WING 1 ONLY.

CONST. JOINT - STRIKE OFF AS SHOWN

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

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



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-255

DRAWN BY VJD | PLANS CK'D CJM

SINGLE SLOPE PARAPET 42SS ON WINGS

SHEET 23 OF 23

96

SCALE = 2.00

8

8

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)	
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL
							1.00	1.25
					NOTE 1	NOTE 3	NOTE 1	
21+10	2110.00	0.00	12.08	0.00	0	0	0	0
21+20	2120.00	10.00	11.90	0.00	4	0	4	0
21+30	2130.00	10.00	11.92	0.00	4	0	8	0
21+40	2140.00	10.00	12.83	0.00	5	0	13	0
21+50	2150.00	10.00	13.49	0.00	5	0	18	0
21+60	2160.00	10.00	14.06	0.00	5	0	23	0
21+70	2170.00	10.00	14.80	0.00	5	0	28	0
21+80	2180.00	10.00	30.88	0.00	8	0	36	0
21+90	2190.00	10.00	31.79	0.00	12	0	48	0
22+00	2200.00	10.00	96.12	0.00	24	0	72	0
22+10	2210.00	10.00	93.84	0.00	35	0	107	0
22+20	2220.00	10.00	91.19	0.00	34	0	141	0
22+30	2230.00	10.00	87.78	0.00	33	0	174	0
22+40	2240.00	10.00	83.54	0.07	32	0	206	0
22+50	2250.00	10.00	80.05	0.13	30	0	236	0
22+60	2260.00	10.00	75.50	0.16	29	0	265	0
22+70	2270.00	10.00	69.30	0.25	27	0	292	0
22+80	2280.00	10.00	61.22	0.55	24	0	316	0
22+90	2290.00	10.00	54.89	1.91	22	0	338	0
23+00	2300.00	10.00	51.92	3.16	20	1	358	1
23+10	2310.00	10.00	40.64	15.30	17	3	375	5
23+20	2320.00	10.00	46.29	11.11	16	5	391	11
23+30	2330.00	10.00	35.27	18.11	15	5	406	18
23+40	2340.00	10.00	28.48	20.17	12	7	418	26
23+50	2350.00	10.00	21.92	35.94	9	10	427	39
23+60	2360.00	10.00	16.83	84.82	7	22	434	66
23+70	2370.00	10.00	11.83	124.89	5	39	439	115
23+80	2380.00	10.00	10.92	22.29	4	27	443	149
23+90	2390.00	10.00	8.86	4.50	4	5	447	155
24+00	2400.00	10.00	26.69	8.62	7	2	454	158
24+10	2410.00	10.00	16.32	0.46	8	2	462	160
24+20	2420.00	10.00	2.85	0.01	4	0	466	160
24+25	2425.00	5.00	0.00	0.00	0	0	466	160

9

9

PROJECT NO: 4840-01-71 | HWY: CTH T | COUNTY: FOND DU LAC | EARTHWORK DATA | SHEET 97 | E

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)	
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL
							1.00	1.25
					NOTE 1	NOTE 3	NOTE 1	
24+51	2451.00	0.00	0.00	56.10	0	0	0	0
24+60	2460.00	9.00	0.84	52.60	0	18	0	23
24+70	2470.00	10.00	0.40	46.00	0	18	0	45
24+80	2480.00	10.00	0.43	46.52	0	17	0	66
24+90	2490.00	10.00	0.78	159.33	0	38	0	114
25+00	2500.00	10.00	2.17	109.39	1	50	1	176
25+10	2510.00	10.00	14.01	69.81	3	33	4	218
25+20	2520.00	10.00	27.32	65.16	8	25	12	249
25+30	2530.00	10.00	14.49	76.46	8	26	20	281
25+40	2540.00	10.00	16.54	96.13	6	32	26	321
25+50	2550.00	10.00	22.20	119.14	7	40	33	371
25+60	2560.00	10.00	29.40	122.24	10	45	43	428
25+70	2570.00	10.00	36.47	111.75	12	43	55	481
25+80	2580.00	10.00	43.53	95.49	15	38	70	529
25+90	2590.00	10.00	50.27	55.21	17	28	87	564
26+00	2600.00	10.00	55.97	45.07	20	19	107	588
26+10	2610.00	10.00	59.06	36.98	21	15	128	606
26+20	2620.00	10.00	62.13	30.60	22	13	150	623
26+30	2630.00	10.00	66.60	25.13	24	10	174	635
26+40	2640.00	10.00	71.37	19.96	26	8	200	645
26+50	2650.00	10.00	75.81	13.63	27	6	227	653
26+60	2660.00	10.00	79.42	8.14	29	4	256	658
26+70	2670.00	10.00	83.76	0.28	30	2	286	660
26+80	2680.00	10.00	80.90	0.71	30	0	316	660
26+90	2690.00	10.00	83.34	0.43	30	0	346	660
27+00	2700.00	10.00	13.00	0.00	18	0	364	660
27+07	2707.00	7.00	10.48	0.03	3	0	367	660
27+10	2710.00	3.00	10.48	0.02	1	0	368	660
27+20	2720.00	10.00	10.54	0.00	4	0	372	660
27+30	2730.00	10.00	11.08	0.00	4	0	376	660
27+40	2740.00	10.00	10.72	0.00	4	0	380	660
27+50	2750.00	10.00	11.26	0.00	4	0	384	660
27+60	2760.00	10.00	11.88	0.00	4	0	388	660
27+69	2769.00	9.00	11.94	0.00	4	0	392	660

9

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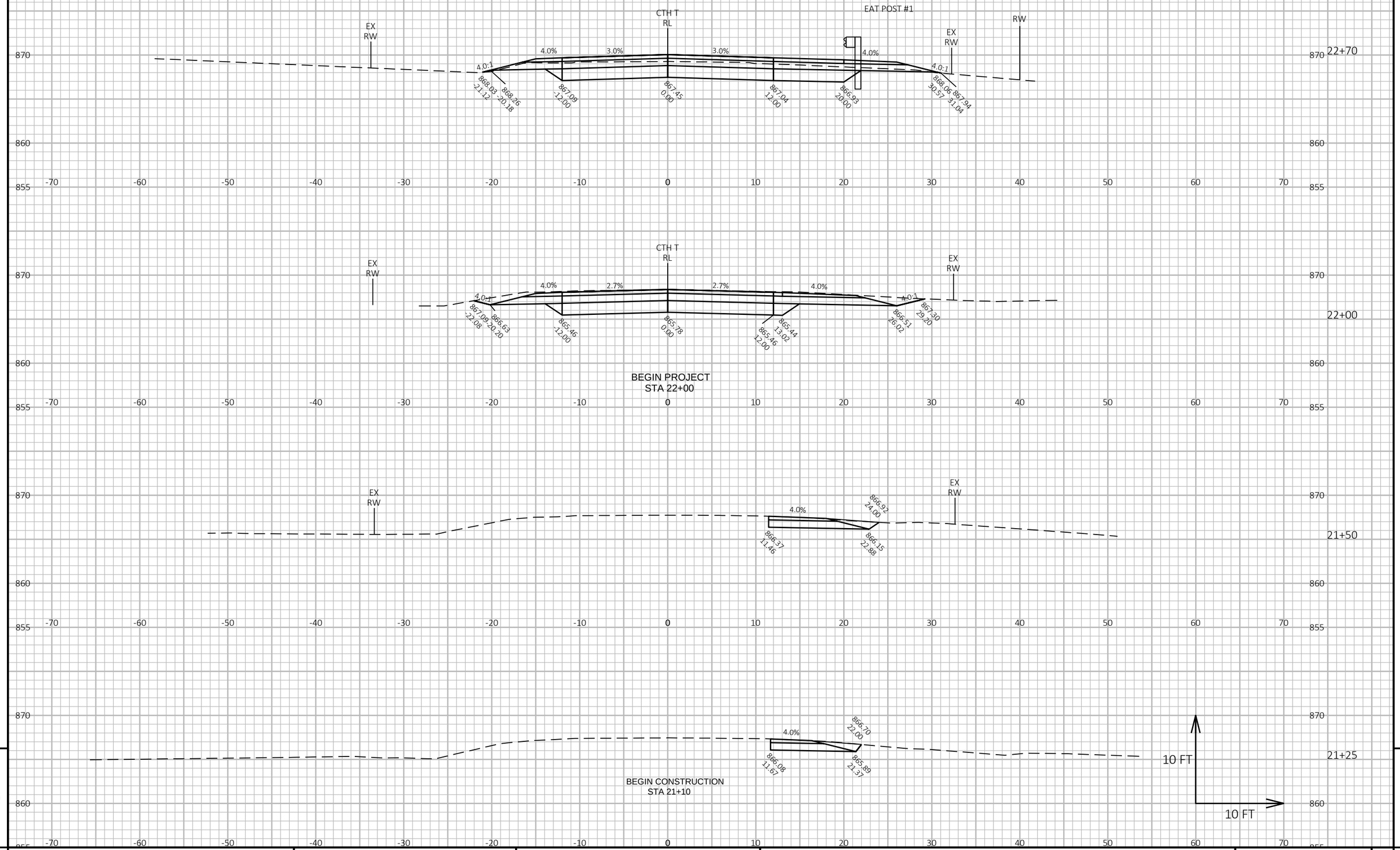
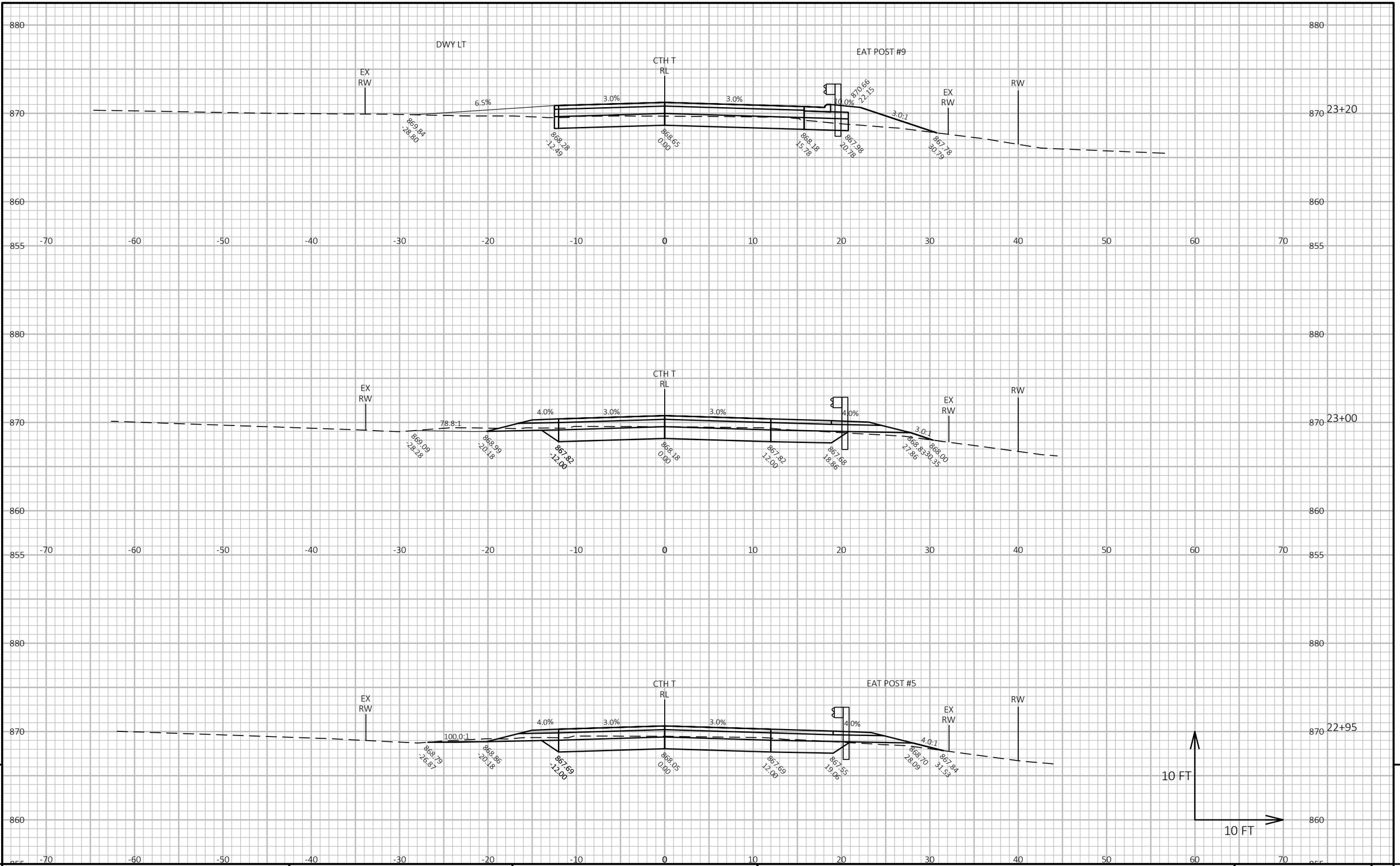
PROJECT NO: 4840-01-71 | HWY: CTH T | COUNTY: FOND DU LAC | EARTHWORK DATA | SHEET 98 | E



PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 99	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\090201-XS-3TO1.DWG
LAYOUT NAME - 01

PLOT DATE : 5/21/2024 8:56 AM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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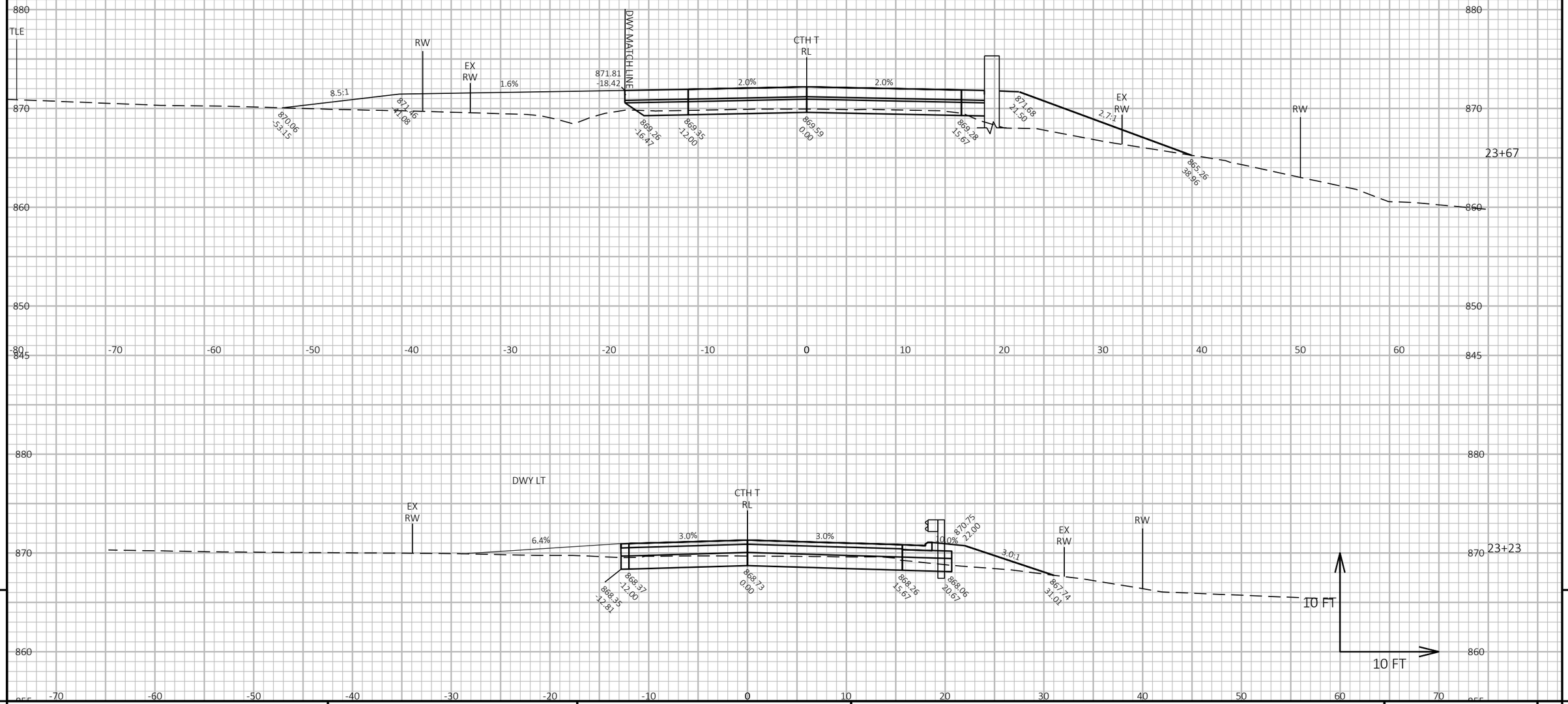
PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 100	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\090201-XS-3TO1.DWG
LAYOUT NAME - 02

PLOT DATE : 5/21/2024 8:56 AM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

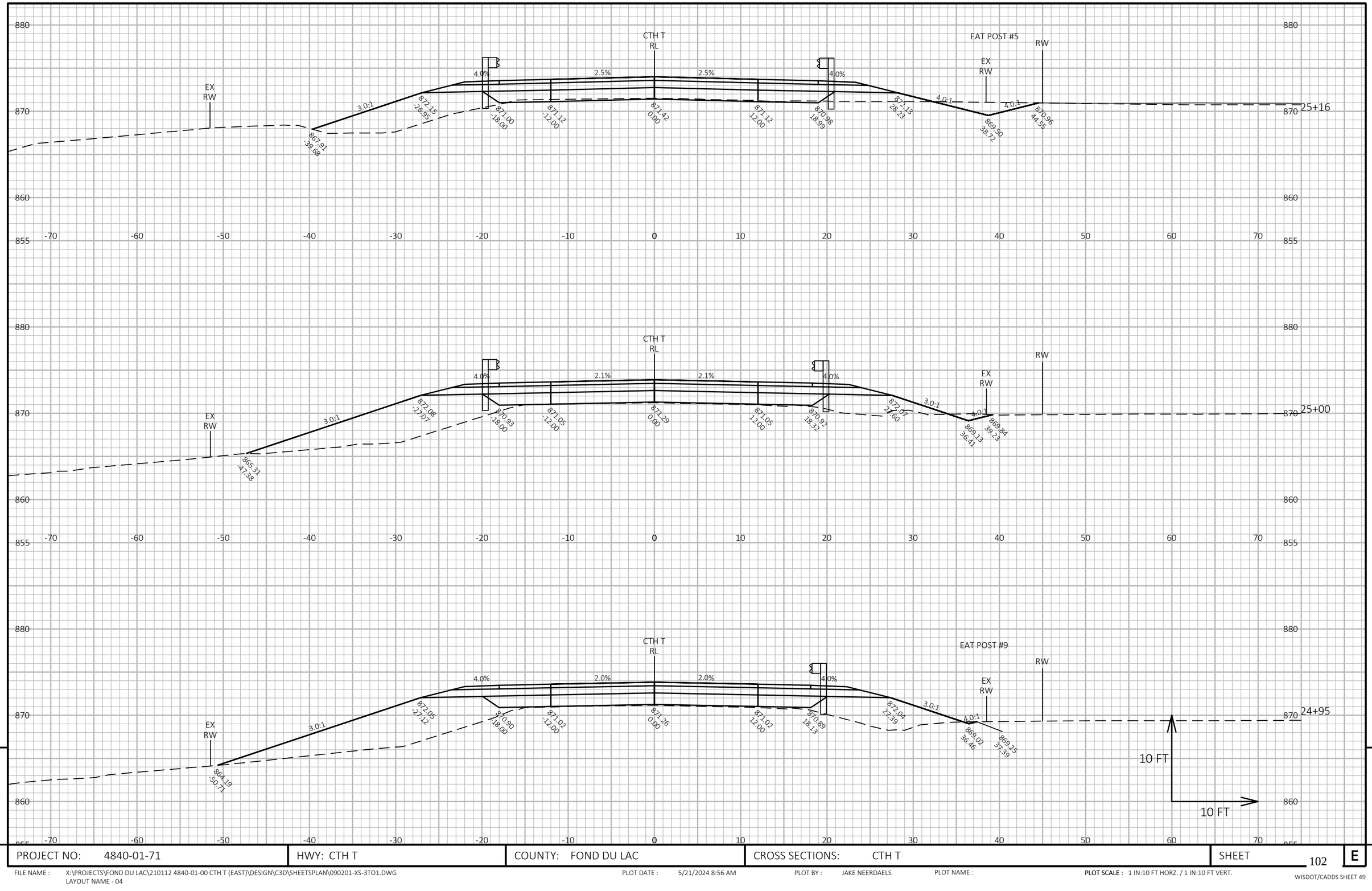


PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 101 E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\090201-XS-3TO1.DWG
LAYOUT NAME - 03

PLOT DATE : 6/19/2024 2:27 PM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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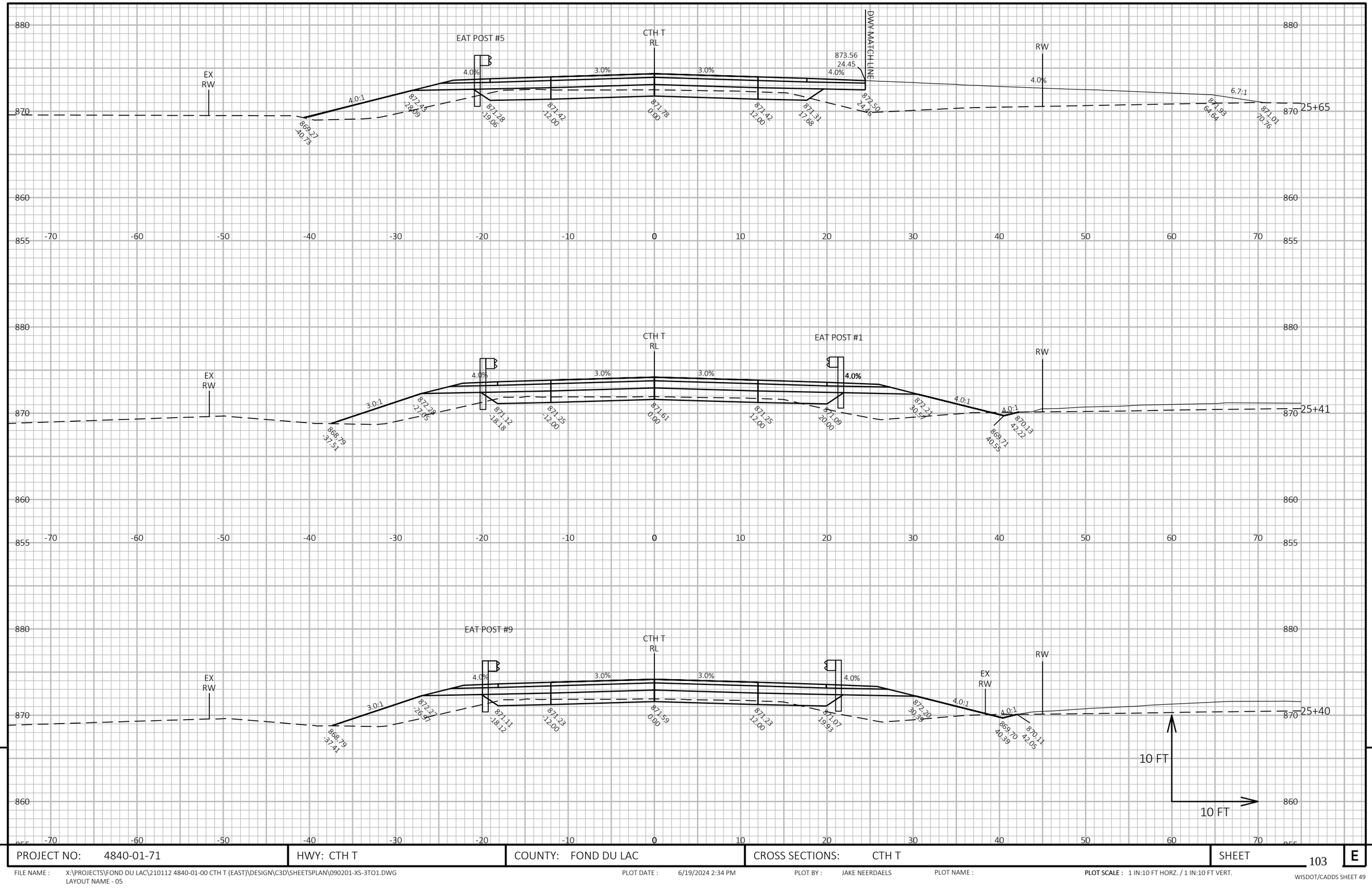
PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 102	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\090201-XS-3TO1.DWG
LAYOUT NAME - 04

PLOT DATE : 5/21/2024 8:56 AM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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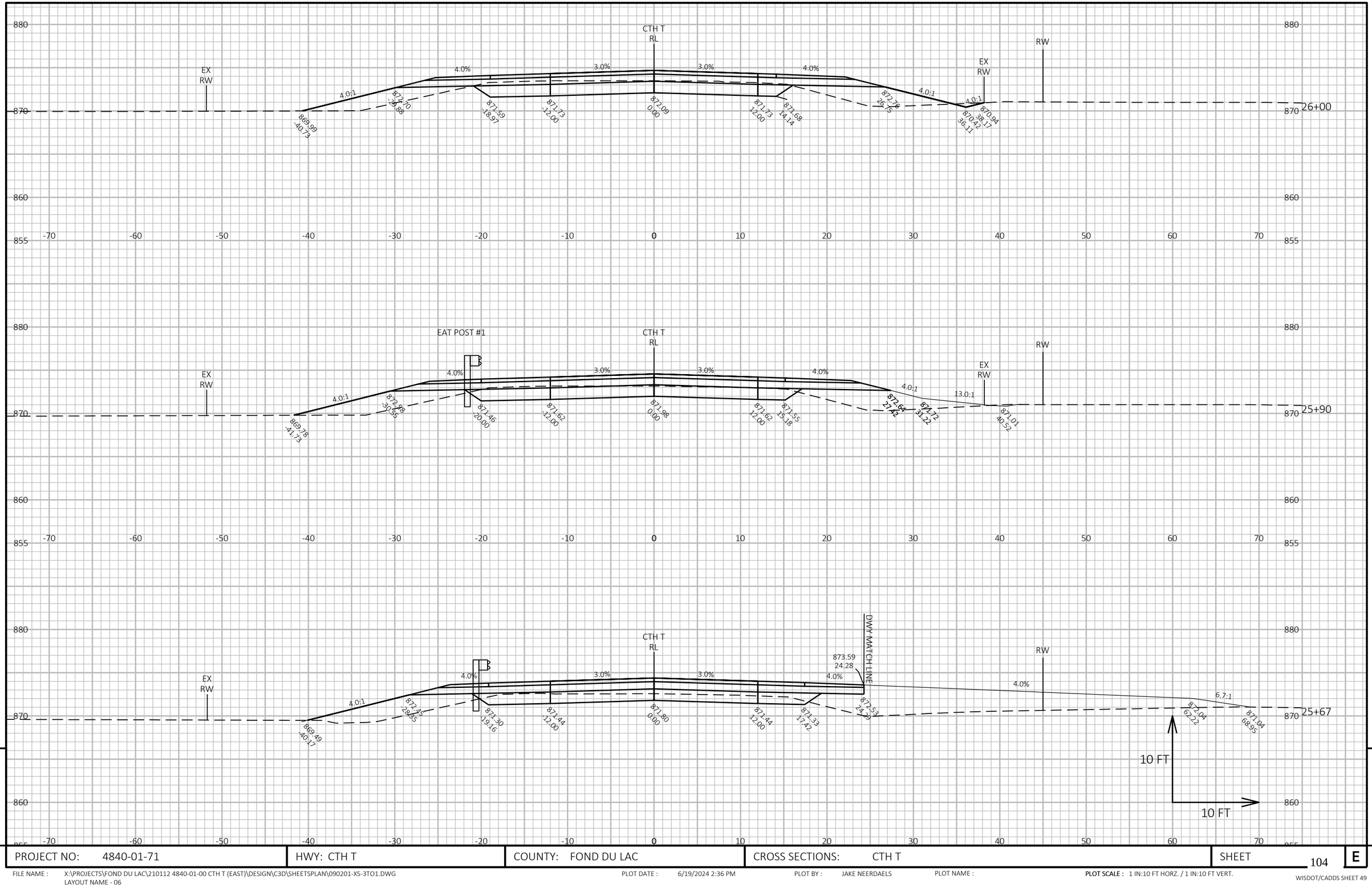
PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 103	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\090201-XS-3TO1.DWG
LAYOUT NAME - 05

PLOT DATE : 6/19/2024 2:34 PM PLOT BY : JAKE NEERDAELS PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



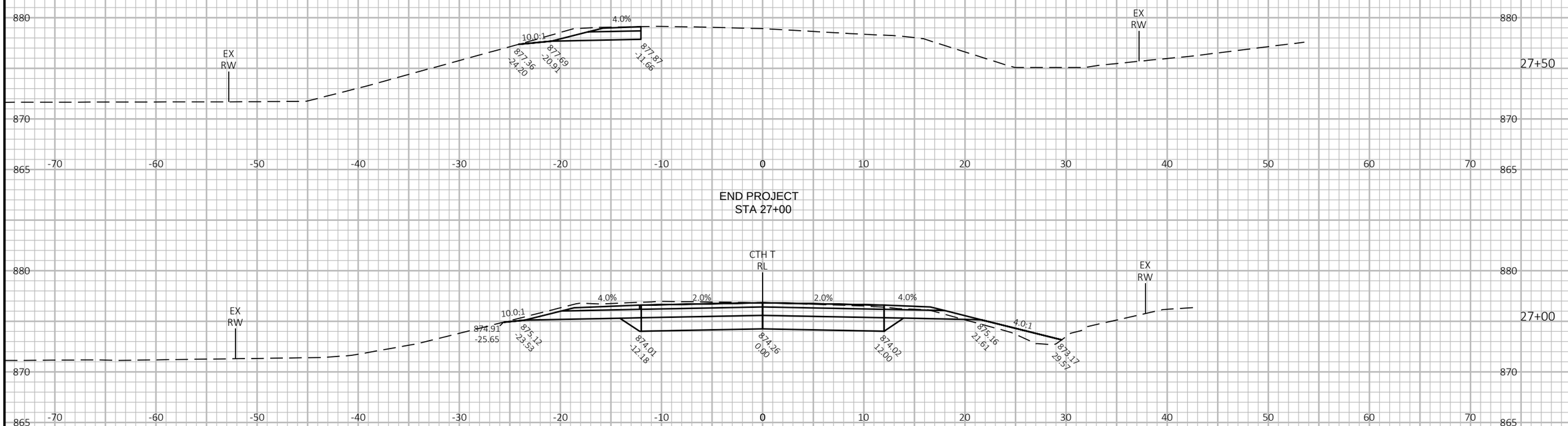
PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 104	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\090201-XS-3TO1.DWG
LAYOUT NAME - 06

PLOT DATE : 6/19/2024 2:36 PM PLOT BY : JAKE NEERDAELS PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END CONSTRUCTION
STA 27+69



END PROJECT
STA 27+00

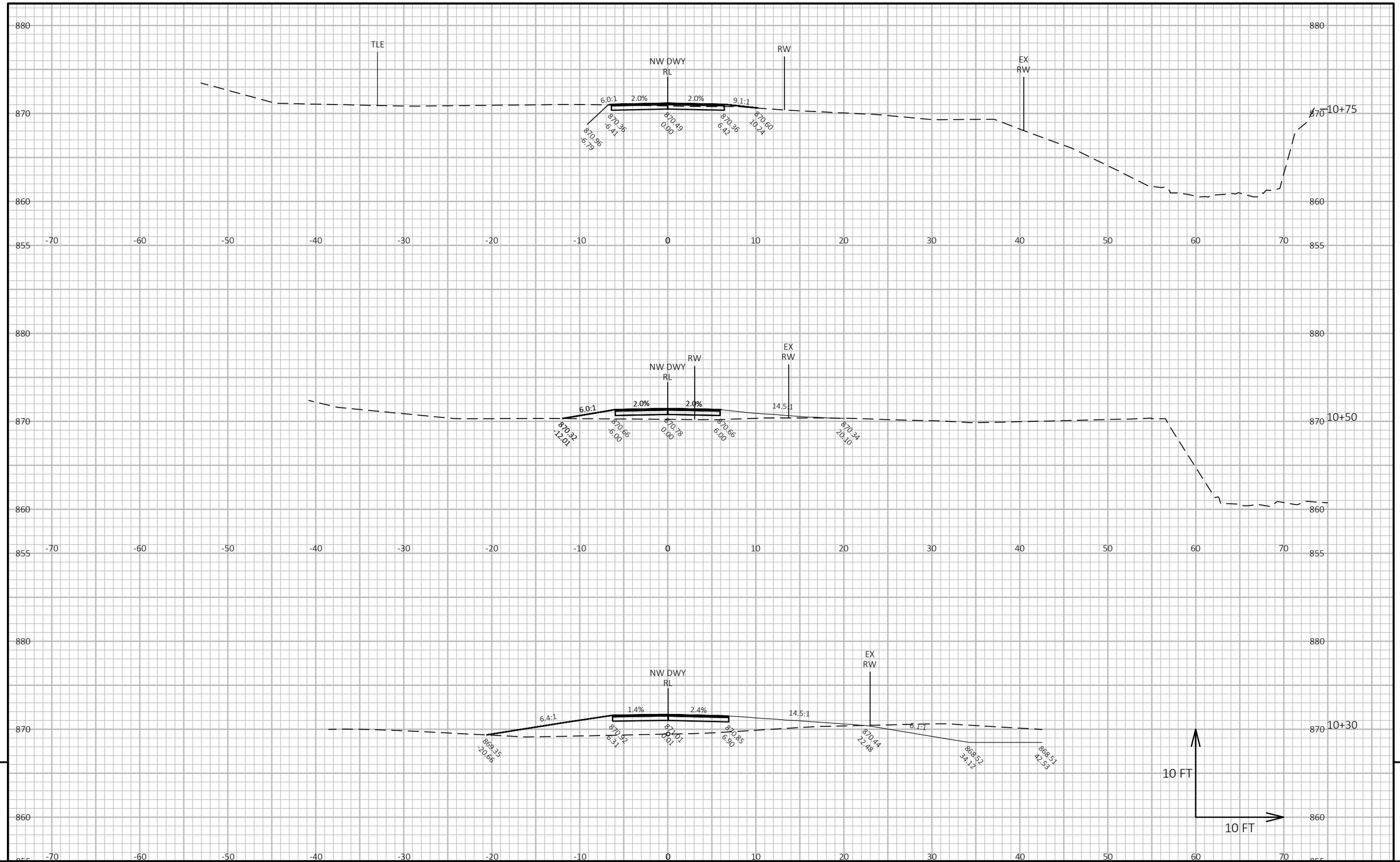
9 9

PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: CTH T	SHEET 105	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\090201-XS-3TO1.DWG
LAYOUT NAME - 07

PLOT DATE : 6/24/2024 10:32 AM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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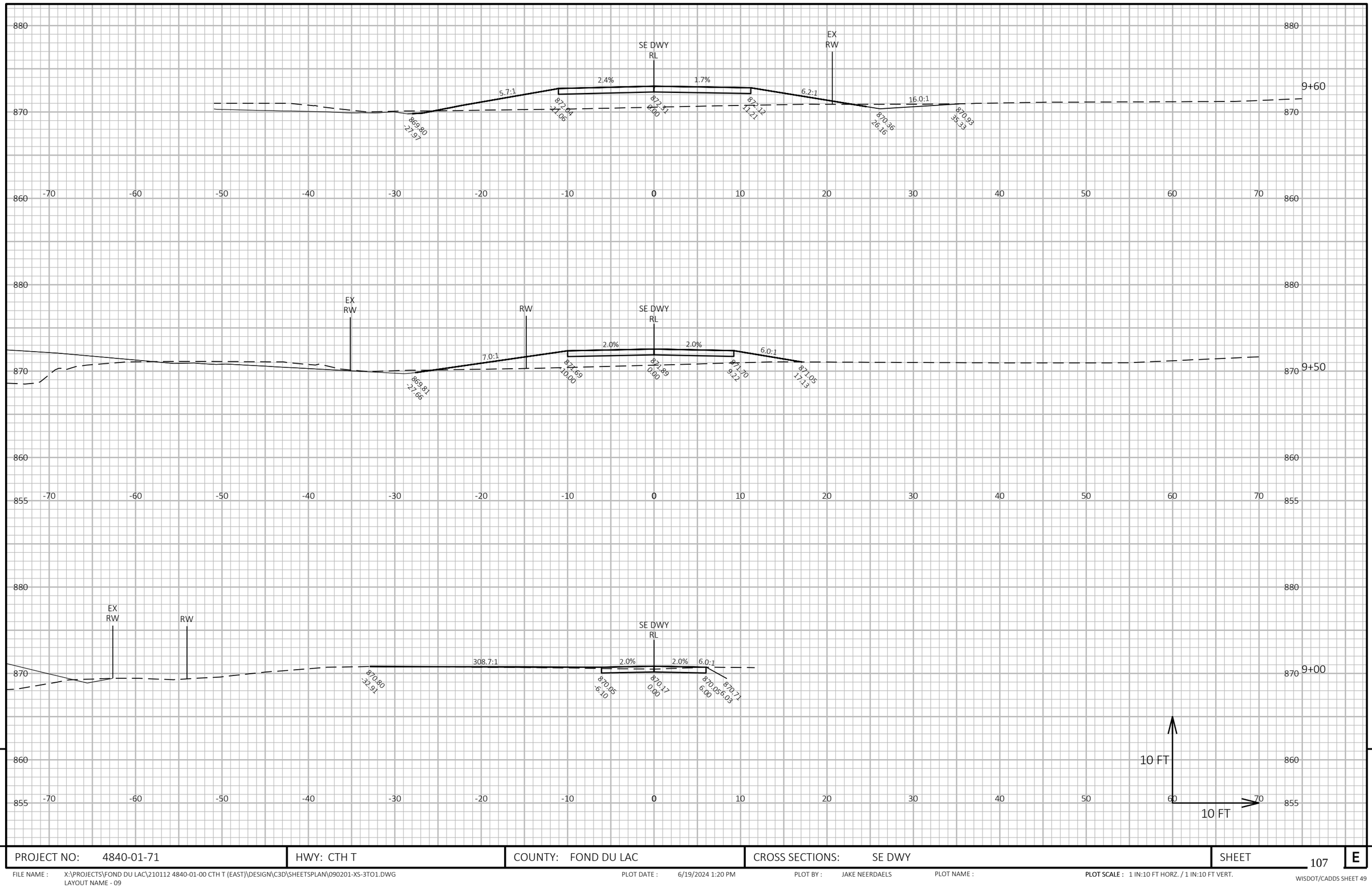
PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: NE DWY	SHEET 106	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\090201-XS-3TO1.DWG
LAYOUT NAME - 08

PLOT DATE : 6/19/2024 12:57 PM PLOT BY : JAKE NEERDAELS PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 4840-01-71	HWY: CTH T	COUNTY: FOND DU LAC	CROSS SECTIONS: SE DWY	SHEET 107	E

FILE NAME : X:\PROJECTS\FOND DU LAC\210112 4840-01-00 CTH T (EAST)\DESIGN\C3D\SHEETSPLAN\090201-XS-3TO1.DWG
LAYOUT NAME - 09

PLOT DATE : 6/19/2024 1:20 PM

PLOT BY : JAKE NEERDAELS

PLOT NAME :

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

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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