

RHI

PROJECT ID:
WITH: N/A

6678-02-70

COUNTY:

MARATHON

JANUARY 2026

ORDER OF SHEETS

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

TOTAL SHEETS = 50



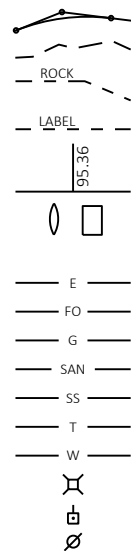
DESIGN DESIGNATION

A.A.D.T.	2026	=	90
A.A.D.T.	2046	=	100
D.H.V.		=	N/A
D.D.		=	50/50
T.		=	10.9%
DESIGN SPEED		=	55 MPH
ESALS		=	15,000

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	
MARSH AREA	
WOODED OR SHRUB AREA	

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



STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

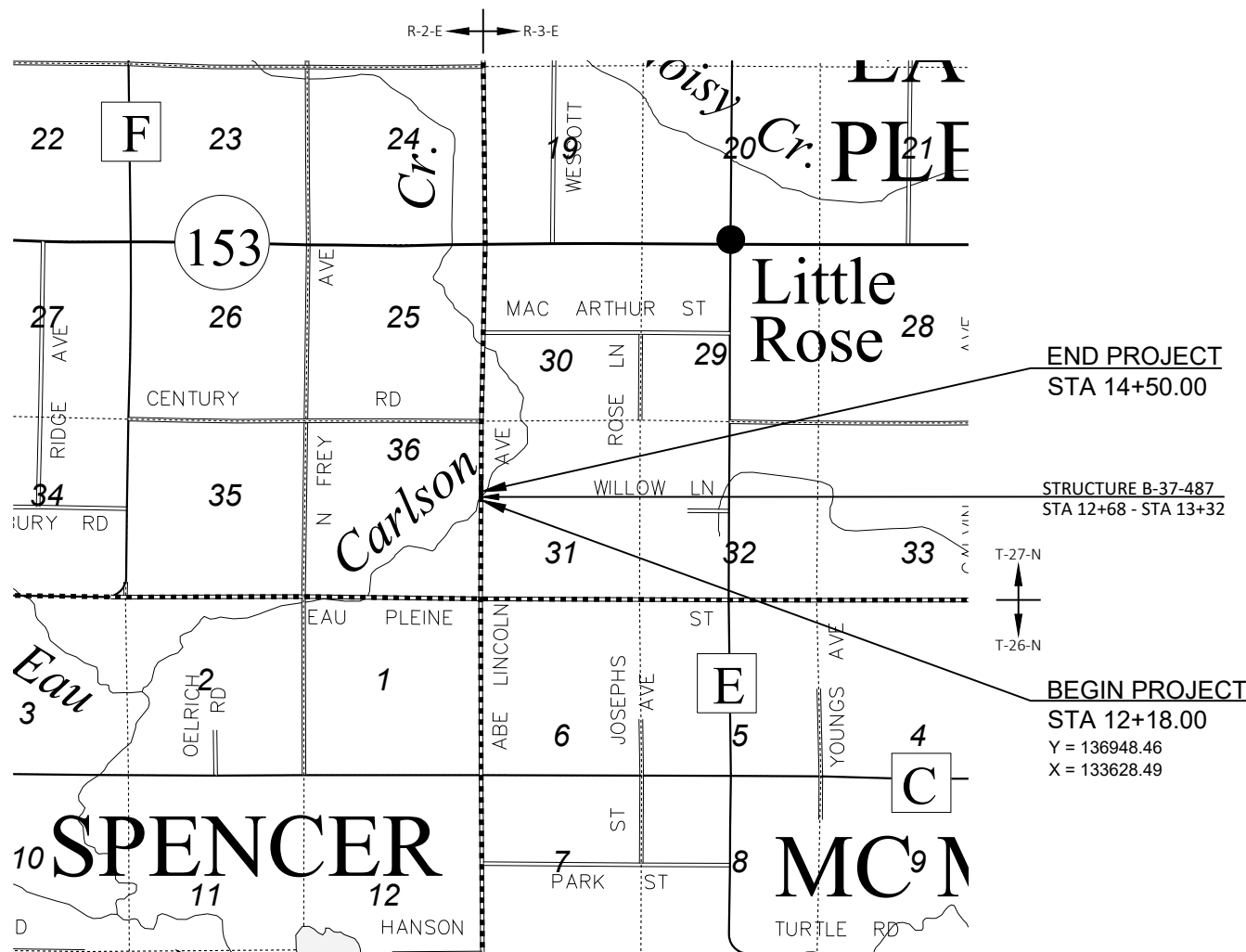
T EAU PLEINE, ABE LINCOLN ROAD

CARLSON CREEK BRIDGE, B-37-0487

LOC STR

MARATHON COUNTY

STATE PROJECT NUMBER
6678-02-70



LAYOUT
SCALE 0 1 MI
TOTAL NET LENGTH OF CENTERLINE = 0.044 MILES

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

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18-WI.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6678-02-70	WISC 2026151	1

ACCEPTED FOR

MARATHON COUNTY

Date 07/28/25 *James Griesbach*
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY

CORRE
ENGINEERING

MADISON | EAU CLAIRE | WAUKESHA | APPLETON | TOMAH | WAUSAU



July 28, 2025

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	CORRE, INC.
Designer	CORRE, INC.
Project Manager	MICHAEL GRAGE, P.E.
Regional Examiner	NC REGION
Regional Supervisor	DAN ERVA, P.E.

APPROVED FOR THE DEPARTMENT
DATE: 7/29/2025 *[Signature]*
(Signature)

E

UTILITIES CONTACTS

CLARK ELECTRIC COOPERATIVE
COMMUNICATIONS
KENT WEIGEL
1209 W DAL-BERG STREET
GREENWOOD, WI 54437
PHONE: (715) 267-7955
EMAIL: KWEIGEL@CECOOP.COM

ORDER OF SECTION 2 DETAIL SHEETS

GENERAL NOTES
TYPICAL SECTIONS
EROSION CONTROL

WISDOT PROJECT MANAGER

MIKE GRAGE, P.E.
NORTH CENTRAL REGION
510 HANSON LAKE ROAD
RHINELANDER, WI 54501
PHONE: (715) 365-5705
EMAIL: MICHAEL.GRAGE@DOT.WI.GOV

DESIGN CONSULTANT

CORRE INC.
ERIC PRICE, P.E.
6510 GRAND TETON PLAZA, SUITE 314
MADISON, WI 53719
PHONE: (608) 826-6146
EMAIL: EPRICE@CORREINC.COM

COUNTY HIGHWAY COMMISSIONER

JIM GRIESBACH
MARATHON COUNTY
1430 WEST STREET
WAUSAU, WI 54401
PHONE: (715) 261-1801
EMAIL: JAMES.GRIESBACH@CO.MARATHON.WI.US

WISCONSIN DNR LIAISON

JAY SCHIEFELBEIN
NORTH CENTRAL REGION
2984 SHAWANO AVE.
GREEN BAY, WI 54313
PHONE: (920) 360-3784
EMAIL: JEREMIAH.SCHIEFELBEIN@WISCONSIN.GOV

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES BY CALLING DIGGERS HOTLINE AND CONTACTING UTILITIES DIRECTLY AS NEEDED.

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

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

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

TACK COAT CALCULATIONS ARE BASED ON AN APPLICATION OF 0.07 GAL/SY.

RUNOFF COEFFICIENT TABLE

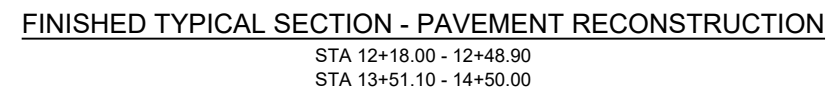
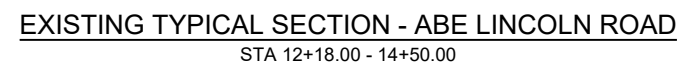
LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIPTURF:	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPETURF:			.25			.27			.28			.30
			.32			.34			.36			.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 = 0.30 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.02 ACRES

DIGGERSHOTLINE

Dial 811 or (800)242-8511

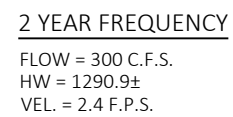
www.DiggersHotline.com



LEGEND

(A) FERTILIZER TYPE A, SEEDING MIXTURE NO. 20
& SEEDING TEMPORARY

(B) SALVAGED TOPSOIL & EROSION MAT URBAN
CLASS I TYPE B



Estimate Of Quantities

6678-02-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. P-37-302	EACH	1.000	1.000
0004	205.0100	Excavation Common	CY	127.000	127.000
0006	206.1001	Excavation for Structures Bridges (structure) 01. B-37-487	EACH	1.000	1.000
0008	208.0100	Borrow	CY	134.000	134.000
0010	210.1500	Backfill Structure Type A	TON	290.000	290.000
0012	213.0100	Finishing Roadway (project) 01. 6678-02-70	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	30.000	30.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	210.000	210.000
0018	415.0060	Concrete Pavement 6-Inch	SY	18.000	18.000
0020	415.0410	Concrete Pavement Approach Slab	SY	100.000	100.000
0022	416.0610	Drilled Tie Bars	EACH	20.000	20.000
0024	455.0605	Tack Coat	GAL	23.000	23.000
0026	465.0105	Asphaltic Surface	TON	65.000	65.000
0028	502.0100	Concrete Masonry Bridges	CY	138.000	138.000
0030	502.3200	Protective Surface Treatment	SY	180.000	180.000
0032	502.3210	Pigmented Surface Sealer	SY	82.000	82.000
0034	505.0400	Bar Steel Reinforcement HS Structures	LB	4,140.000	4,140.000
0036	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	11,710.000	11,710.000
0038	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	14.000	14.000
0040	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000
0042	550.0010	Pre-Boring Unconsolidated Materials	LF	138.000	138.000
0044	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	162.000	162.000
0046	602.3010	Concrete Surface Drains	CY	5.000	5.000
0048	606.0300	Riprap Heavy	CY	185.000	185.000
0050	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	190.000	190.000
0052	618.0100	Maintenance and Repair of Haul Roads (project) 01. 6678-02-70	EACH	1.000	1.000
0054	619.1000	Mobilization	EACH	1.000	1.000
0056	624.0100	Water	MGAL	6.000	6.000
0058	625.0500	Salvaged Topsoil	SY	449.000	449.000
0060	628.1504	Silt Fence	LF	488.000	488.000
0062	628.1520	Silt Fence Maintenance	LF	488.000	488.000
0064	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0068	628.2008	Erosion Mat Urban Class I Type B	SY	562.000	562.000
0070	628.6005	Turbidity Barriers	SY	270.000	270.000
0072	629.0205	Fertilizer Type A	CWT	0.500	0.500
0074	630.0120	Seeding Mixture No. 20	LB	40.000	40.000
0076	630.0200	Seeding Temporary	LB	25.000	25.000
0078	630.0500	Seed Water	MGAL	18.000	18.000
0080	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0082	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0084	638.2602	Removing Signs Type II	EACH	6.000	6.000
0086	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0088	642.5001	Field Office Type B	EACH	1.000	1.000
0090	643.0420	Traffic Control Barricades Type III	DAY	1,188.000	1,188.000
0092	643.0705	Traffic Control Warning Lights Type A	DAY	1,848.000	1,848.000
0094	643.0900	Traffic Control Signs	DAY	924.000	924.000
0096	643.5000	Traffic Control	EACH	1.000	1.000
0098	645.0111	Geotextile Type DF Schedule A	SY	62.000	62.000

Estimate Of Quantities

6678-02-70

Line	Item	Item Description	Unit	Total	Qty
0100	645.0120	Geotextile Type HR	SY	310.000	310.000
0102	650.4500	Construction Staking Subgrade	LF	169.000	169.000
0104	650.5000	Construction Staking Base	LF	169.000	169.000
0106	650.6501	Construction Staking Structure Layout (structure) 01. B-37-487	EACH	1.000	1.000
0108	650.9911	Construction Staking Supplemental Control (project) 01. 6678-02-70	EACH	1.000	1.000
0110	650.9920	Construction Staking Slope Stakes	LF	169.000	169.000
0112	715.0502	Incentive Strength Concrete Structures	DOL	828.000	828.000
0114	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0116	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0118	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0120	SPV.0090	Special 01. Prestressed Girder Box Type 27-Inch	LF	418.000	418.000
0122	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	20.000	20.000

BASE AGGREGATE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	624.0100
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	WATER MGAL
0010	12+18	-	12+68	SOUTH APPROACH	10	55	2
0010	13+32	-	14+50	NORTH APPROACH	20	155	4
TOTAL 0010					30	210	6

CONCRETE

CATEGORY	STATION	TO	STATION	LOCATION	415.0060	415.0410	416.0610	602.3010
					CONCRETE PAVEMENT 6-INCH SY	CONCRETE PAVEMENT APPROACH SLAB SY	DRILLED TIE BARS EACH	CONCRETE SURFACE DRAINS CY
0010	12+49	-	12+69	SOUTH APPROACH	9	50	20	5
0010	13+31	-	13+51	NORTH APPROACH	9	50	-	-
TOTAL 0010					18	100	20	5

EARTHWORK

DIVISION	FROM/TO STATION	LOCATION	205.0100	SALVAGED/UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL	UNEXPANDED FILL	EXPANDED FILL	MASS ORDINATE +/-	WASTE	208.0100 BORROW (CY)	COMMENT
			COMMON EXCAVATION (CY) CUT				FACTOR 1.25				
SOUTH APPROACH	12+18/12+64	MAINLINE	41	0	41	71	89	-48	0	48	
NORTH APPROACH	13+36/14+50	MAINLINE	86	0	86	138	172	-86	0	86	
TOTAL			127	0	127	209	261	-134	0	134	

ASPHALT ITEMS

CATEGORY	LOCATION	455.0605	465.0105
		TACK COAT GAL	ASPHALTIC SURFACE TON
0010	SOUTH APPROACH	6	17
0010	NORTH APPROACH	17	48
TOTAL 0010		23	65

SIGNING

CATEGORY	LOCATION	634.0614	637.2230	638.2602	638.3000	REMARKS
		POSTS WOOD 4X6-INCH X 14-FT EACH	SIGNS TYPE II REFLECTIVE F SF	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	
0010	SW QUADRANT	1	3.0	1	1	PROPOSED BRIDGE MARKER SIGNS, W5-52L & W5-52R. INSTALL ACCORDING TO S.D.D. "SIGNING AND MARKING FOR TWO LANE BRIDGES".
0010	SE QUADRANT	1	3.0	2	1	
0010	NW QUADRANT	1	3.0	2	1	
0010	NE QUADRANT	1	3.0	1	1	
TOTAL 0010		4	12	6	4	

LANDSCAPING & EROSION CONTROL

		625.0500	628.1504	628.1520	628.1905	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	628.2008	628.6005	629.0205	630.0120	630.0200	630.0500
		SALVAGED TOPSOIL	SILT FENCE	SILT FENCE	MOBILIZATIONS		EROSION MAT URBAN	TURBIDITY	FERTILIZER	SEEDING MIXTURE	SEEDING	SEED WATER
CATEGORY	LOCATION	SY	LF	LF	EROSION CONTROL	EACH	CLASS I TYPE B	SY	TYPE A CWT	NO. 20 LB	TEMPORARY LB	MGAL
0010	ENTIRE PROJECT	449	390	390	5	3	449	216	0.4	30	20	14
0010	UNDISTRIBUTED	-	98	98	-	-	113	54	0.1	10	5	4
	TOTAL 0010	449	488	488	5	3	562	270	0.5	40	25	18

TRAFFIC CONTROL

		643.0420	643.0705	643.0900	643.5000
		TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL
CATEGORY	LOCATION	DAY	DAY	DAY	EACH
0010	ENTIRE PROJECT	1,188	1,848	924	1
	TOTAL 0010	1,188	1,848	924	1

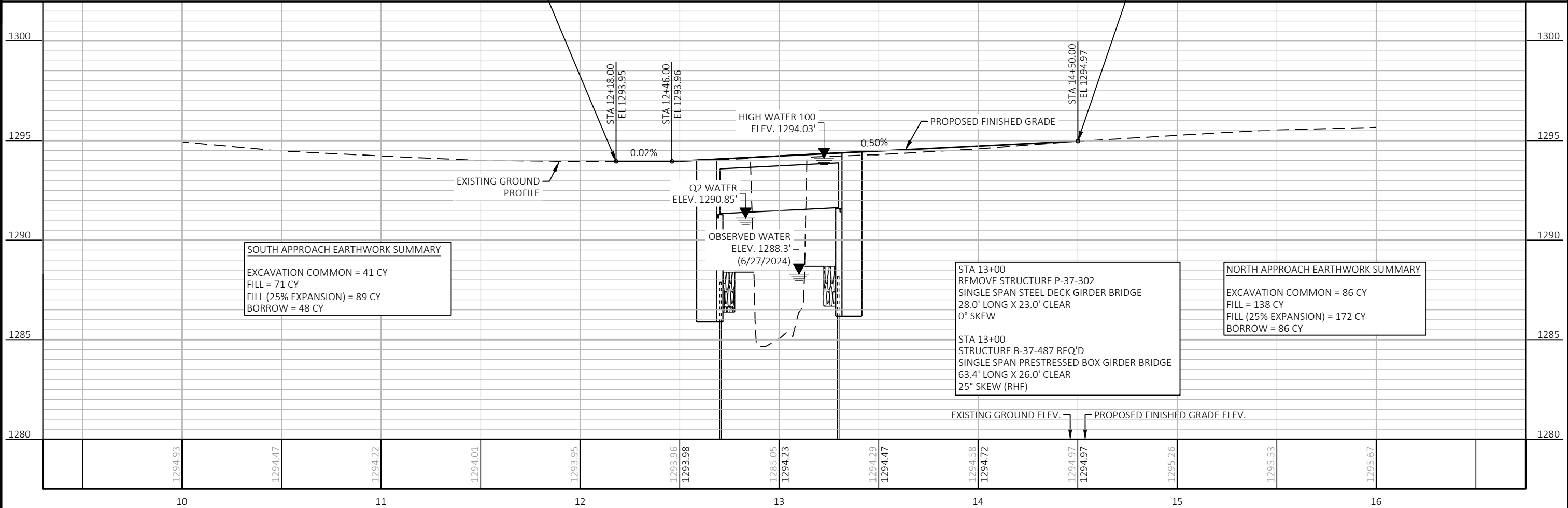
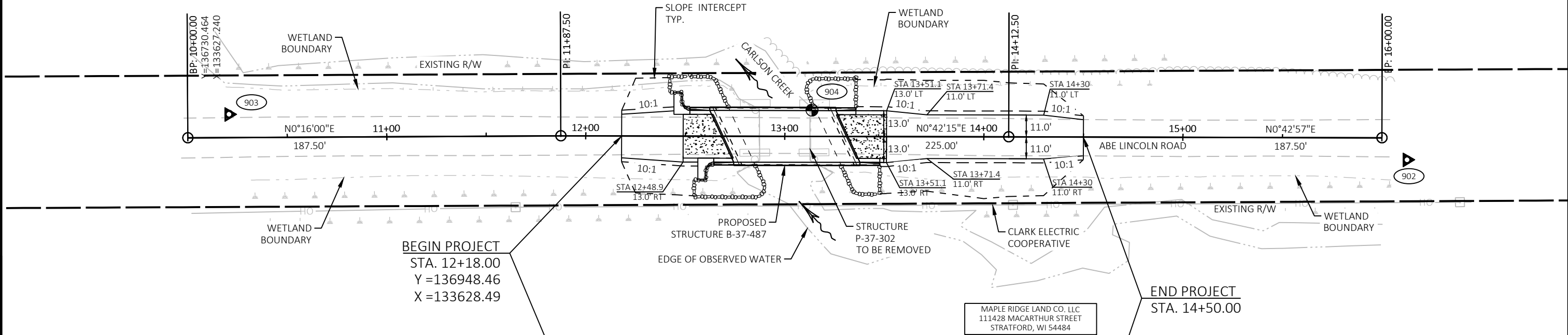
CONSTRUCTION STAKING

					650.4500	650.5000	650.6501.01	650.9911.01	650.9920
					CONSTRUCTION STAKING SUBGRADE	CONSTRUCTION STAKING BASE	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-37-0487)	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 6678-02-70)	CONSTRUCTION STAKING SLOPE STAKES
CATEGORY	STATION	TO	STATION	LOCATION	LF	LF	EACH	EACH	LF
0010	12+18	-	14+50	ABE LINCOLN ROAD	169	169	-	1	169
0020	12+69		13+31	ABE LINCOLN ROAD	-	-	1	-	-
	TOTAL				169	169	1	1	169

CONTROL POINTS & BENCH MARKS						
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
902	N/A	N/A	137342.89	133644.39	1295.16	CAPPED REBAR
903	10+20.74	11.68' LT	136751.26	133615.66	1294.00	CAPPED REBAR
904	13+13.57	13.25' LT	137044.19	133616.41	1293.56	BM / NAME PLATE E BOLT

CONCRETE PAVEMENT APPROACH SLAB
& CONCRETE PAVEMENT SHOULDERS
SEE S.D.D. 13A3 AND 13B2
STA. 12+49 TO 12+69
STA. 13+32 TO 13+51

PETER & KAROLYN FRANCKOWIAK
112186 DRAGONFLY ROAD
MARSHFIELD, WI 54449



SOUTH APPROACH EARTHWORK SUMMARY
EXCAVATION COMMON = 41 CY
FILL = 71 CY
FILL (25% EXPANSION) = 89 CY
BORROW = 48 CY

STA 13+00
REMOVE STRUCTURE P-37-302
SINGLE SPAN STEEL DECK GIRDER BRIDGE
28.0' LONG X 23.0' CLEAR
0° SKEW

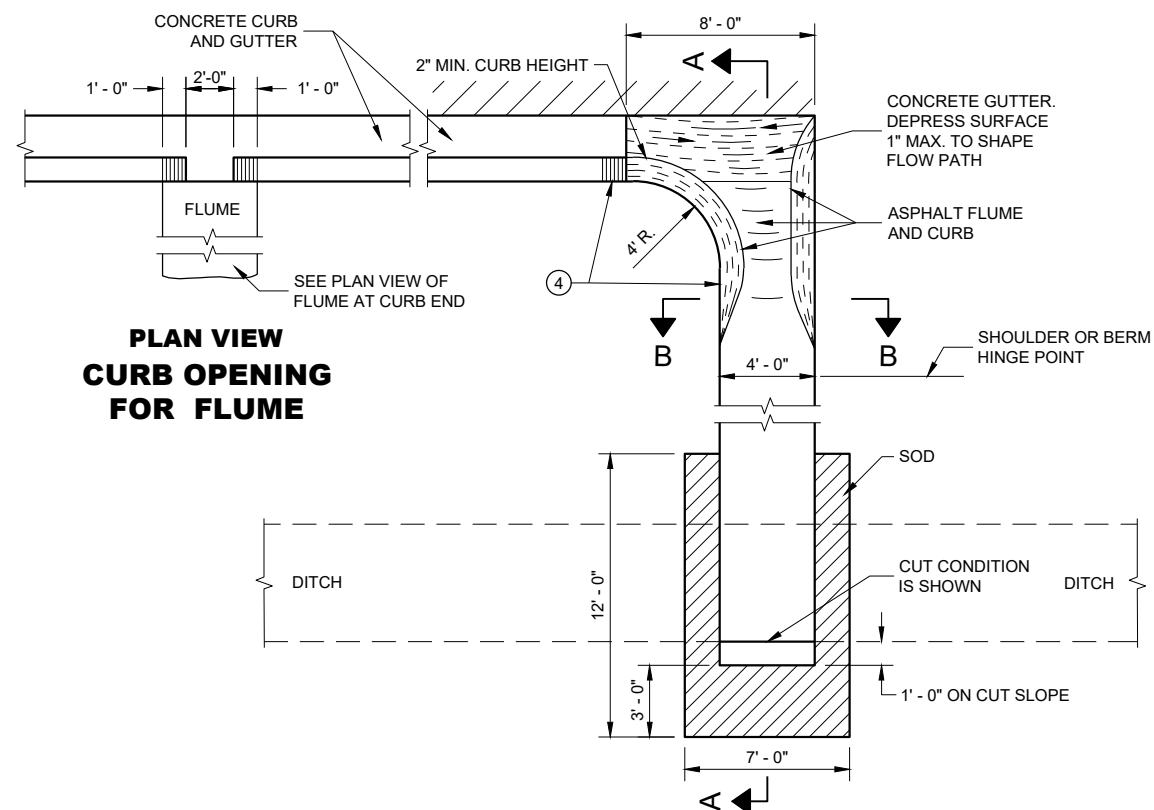
STA 13+00
STRUCTURE B-37-487 REQ'D
SINGLE SPAN PRESTRESSED BOX GIRDER BRIDGE
63.4' LONG X 26.0' CLEAR
25° SKEW (RHF)

NORTH APPROACH EARTHWORK SUMMARY
EXCAVATION COMMON = 86 CY
FILL = 138 CY
FILL (25% EXPANSION) = 172 CY
BORROW = 86 CY

Standard Detail Drawing List

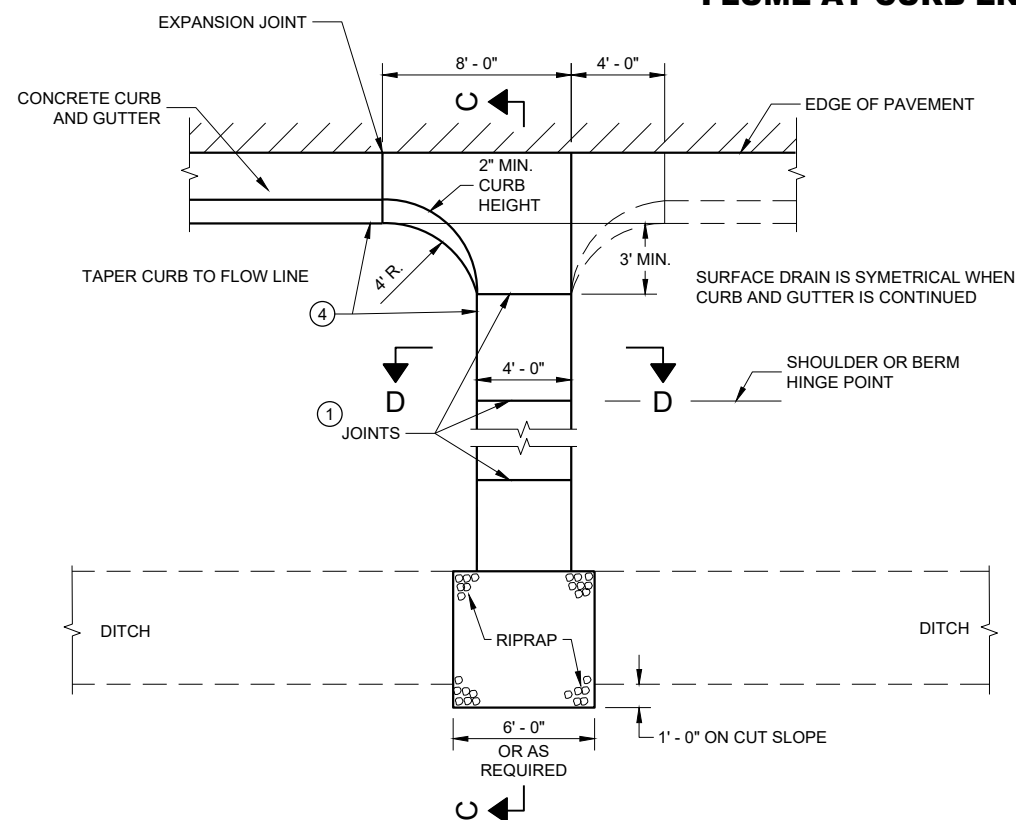
08D04-07	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C19-03	HMA LONGITUDINAL JOINTS
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

PLAN VIEW
FLUME AT CURB END



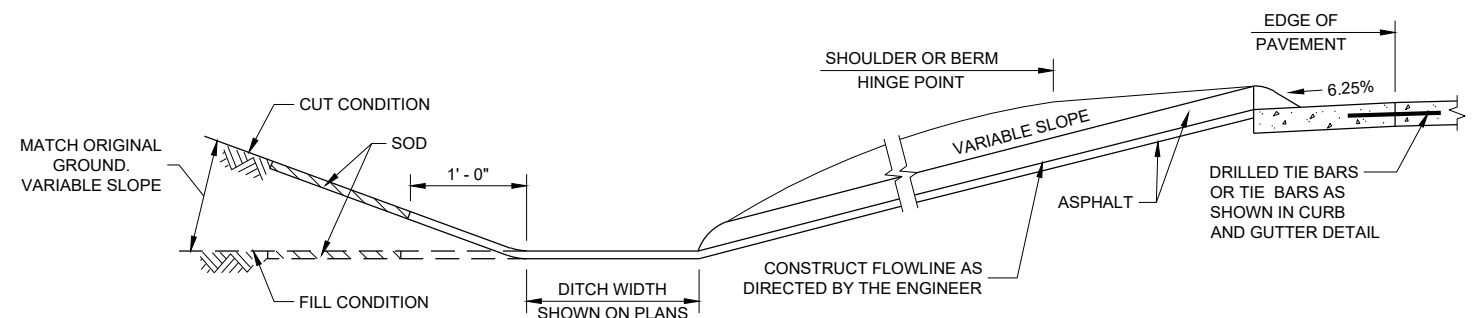
PLAN VIEW
CONCRETE SURFACE DRAIN

GENERAL NOTES

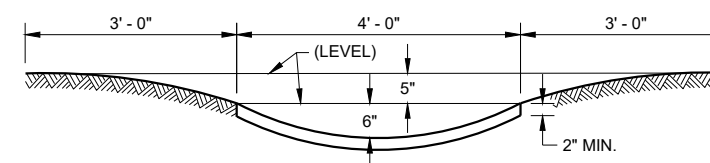
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

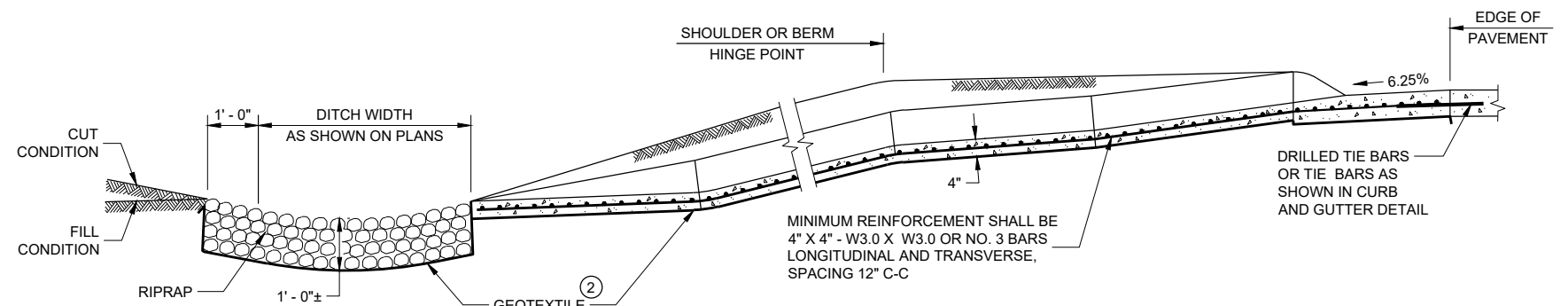
- ① JOINTS SHALL BE $\frac{1}{8}$ " TO $\frac{1}{4}$ " WIDE BY $\frac{1}{2}$ " DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



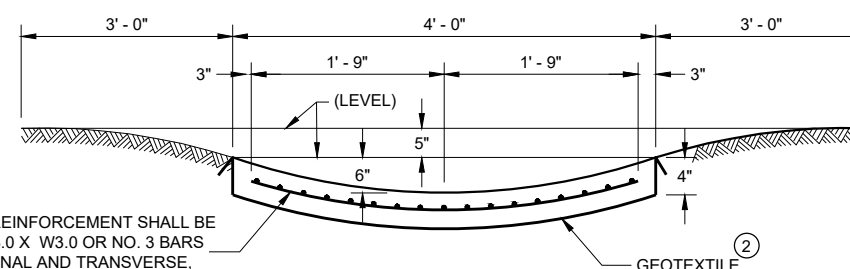
SECTION A - A



SECTION B - B



SECTION C - C



SECTION D - D

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

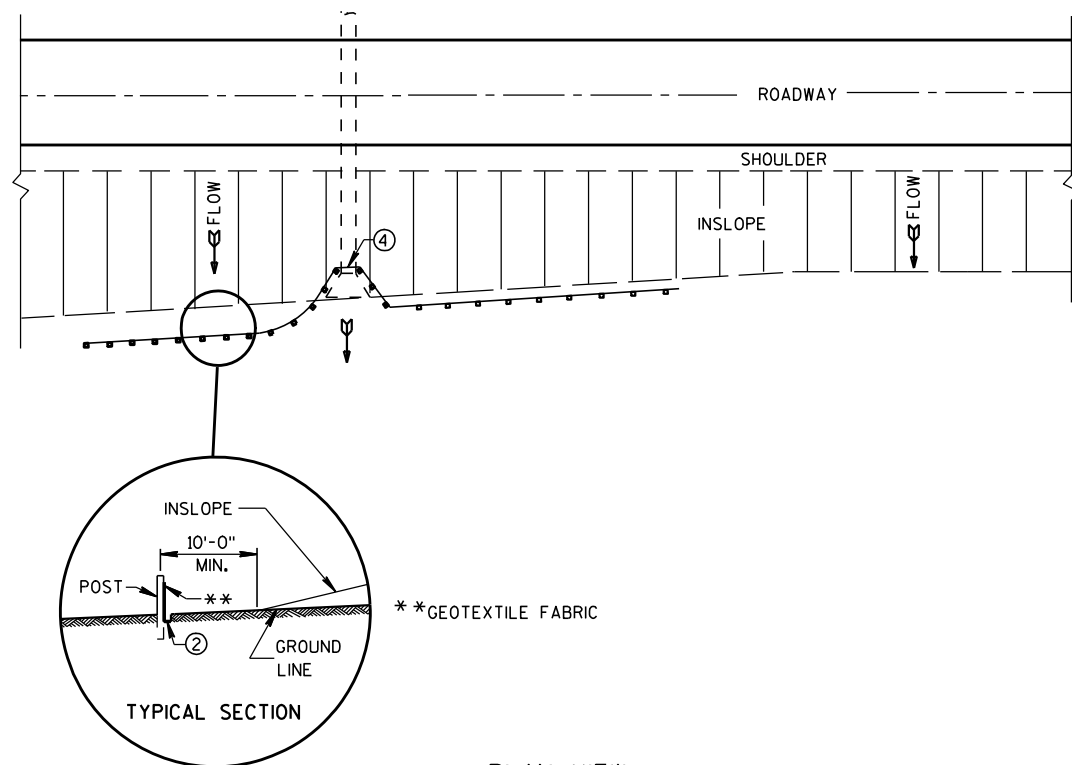
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

6

SDD 08D04 - 07

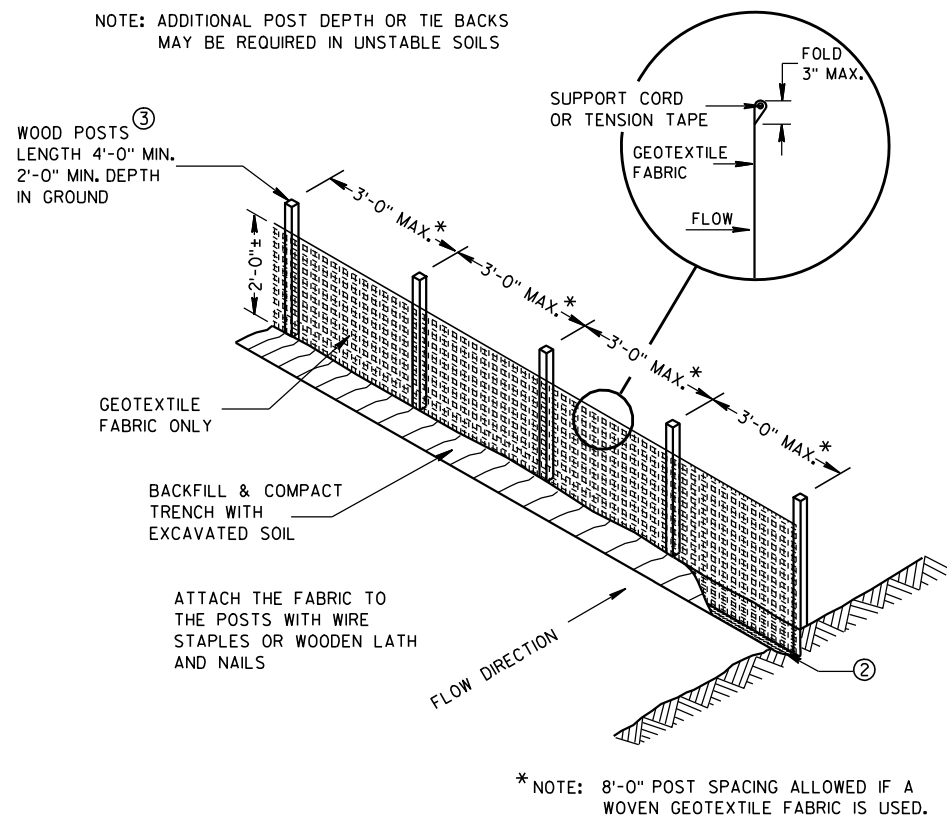
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SDD 08D04 - 07

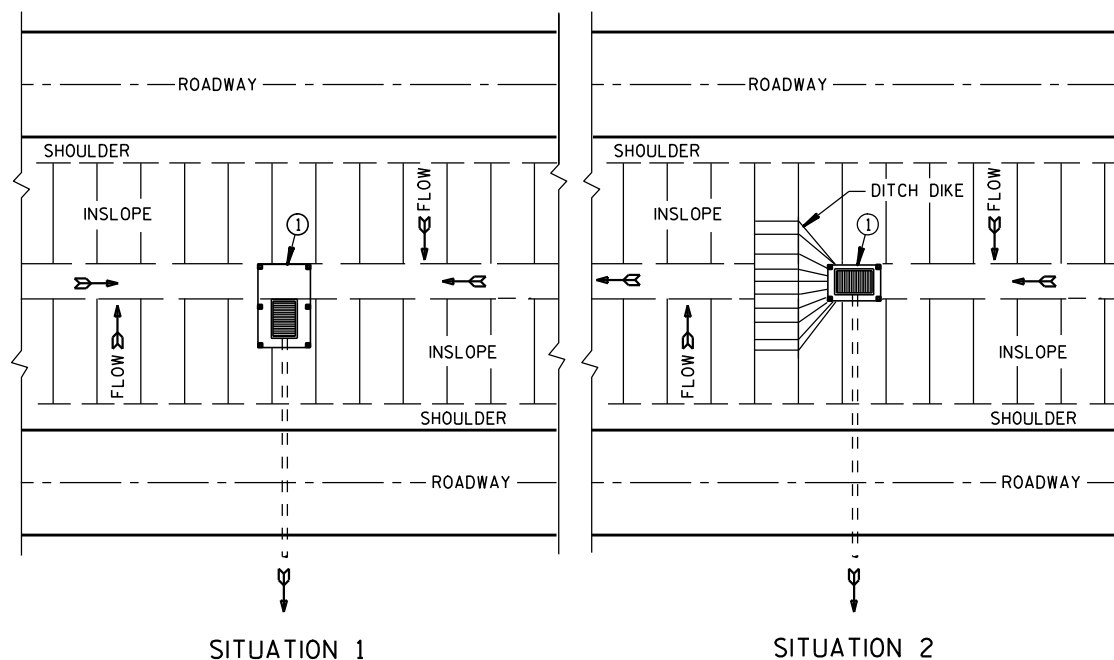


PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

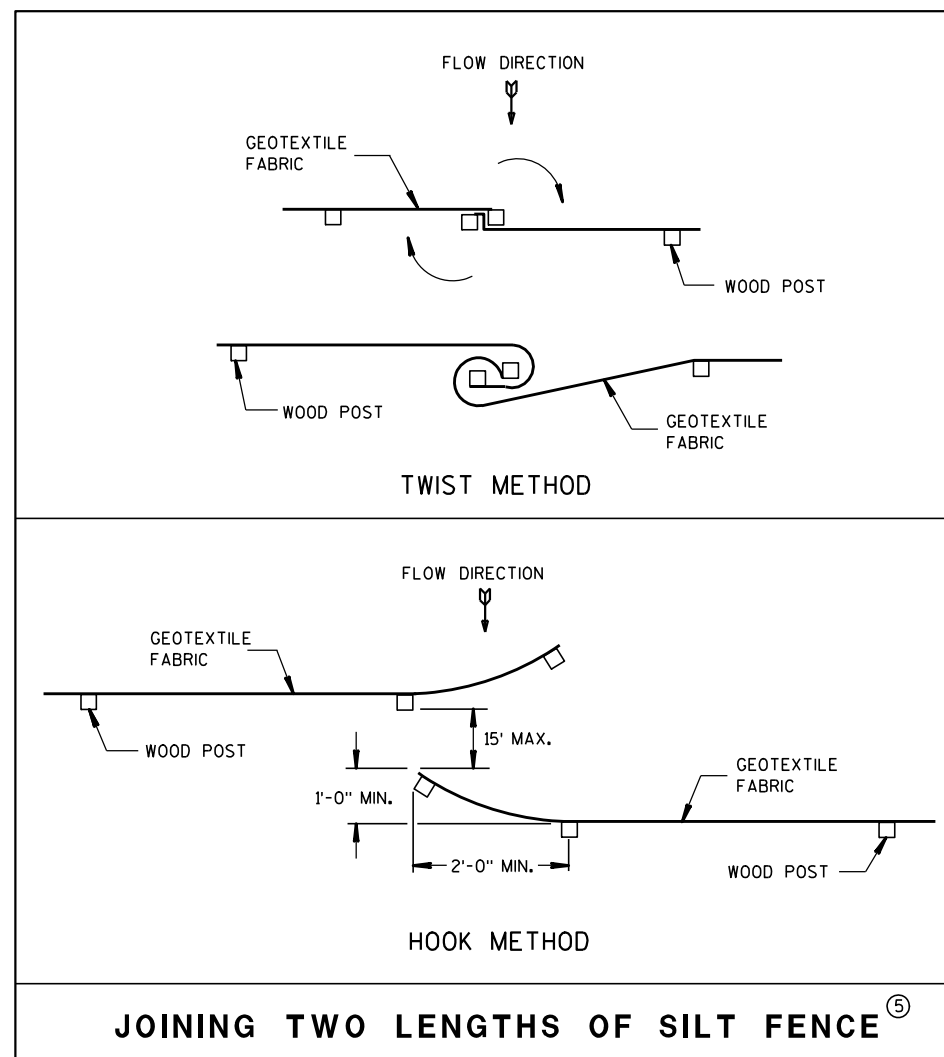
NOTE: ADDITIONAL POST DEPTH OR TIE BACKS
MAY BE REQUIRED IN UNSTABLE SOILS



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

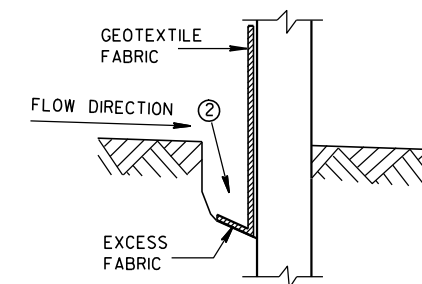


JOINING TWO LENGTHS OF SILT FENCE^⑤

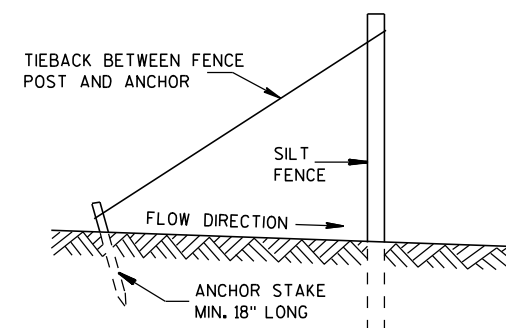
GENERAL NOTES

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

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

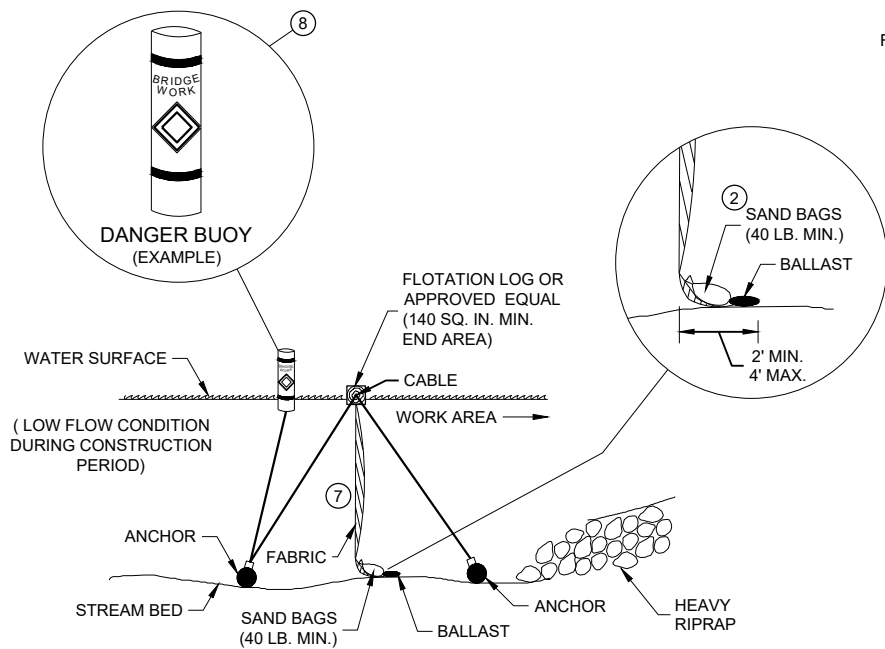
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05
DATE

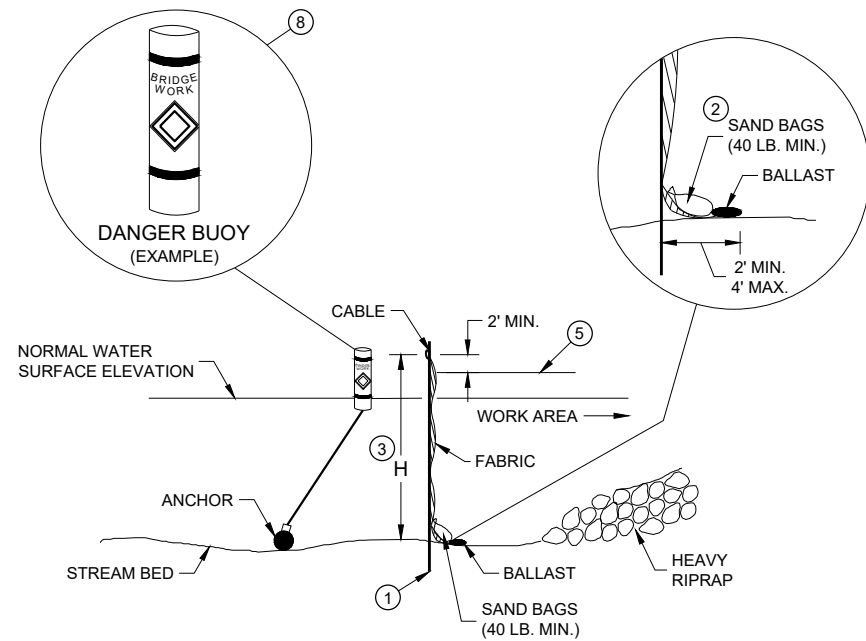
FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



SECTION B - B

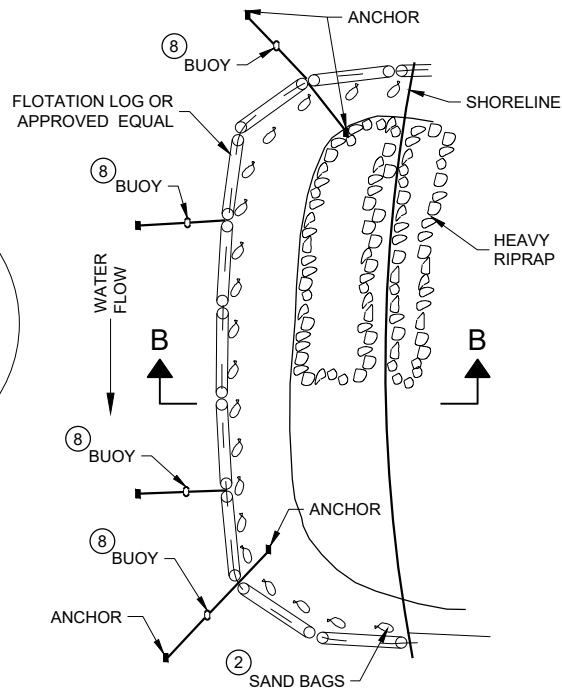
TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



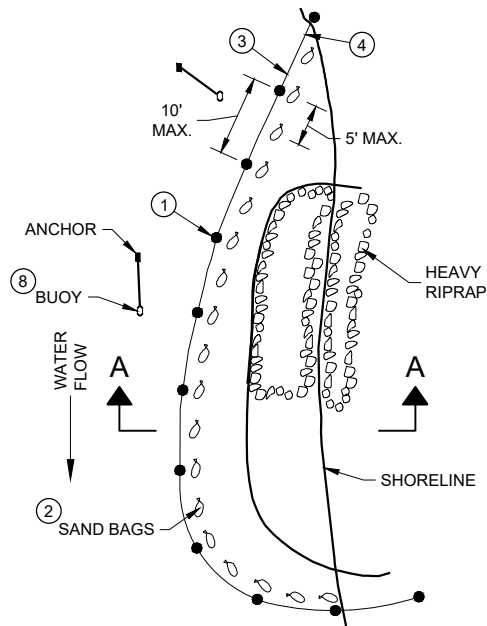
SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS



PLAN VIEW



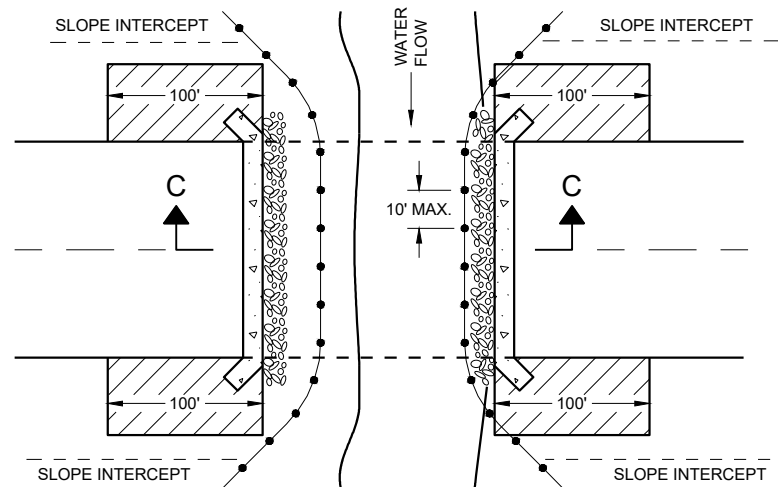
PLAN VIEW

GENERAL NOTES

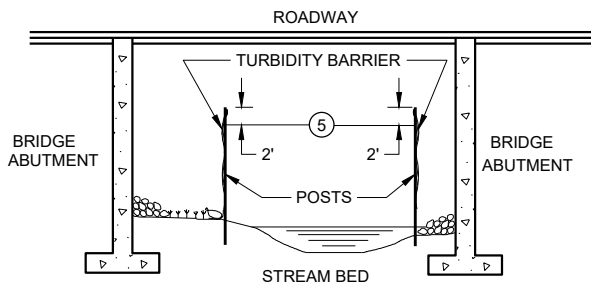
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

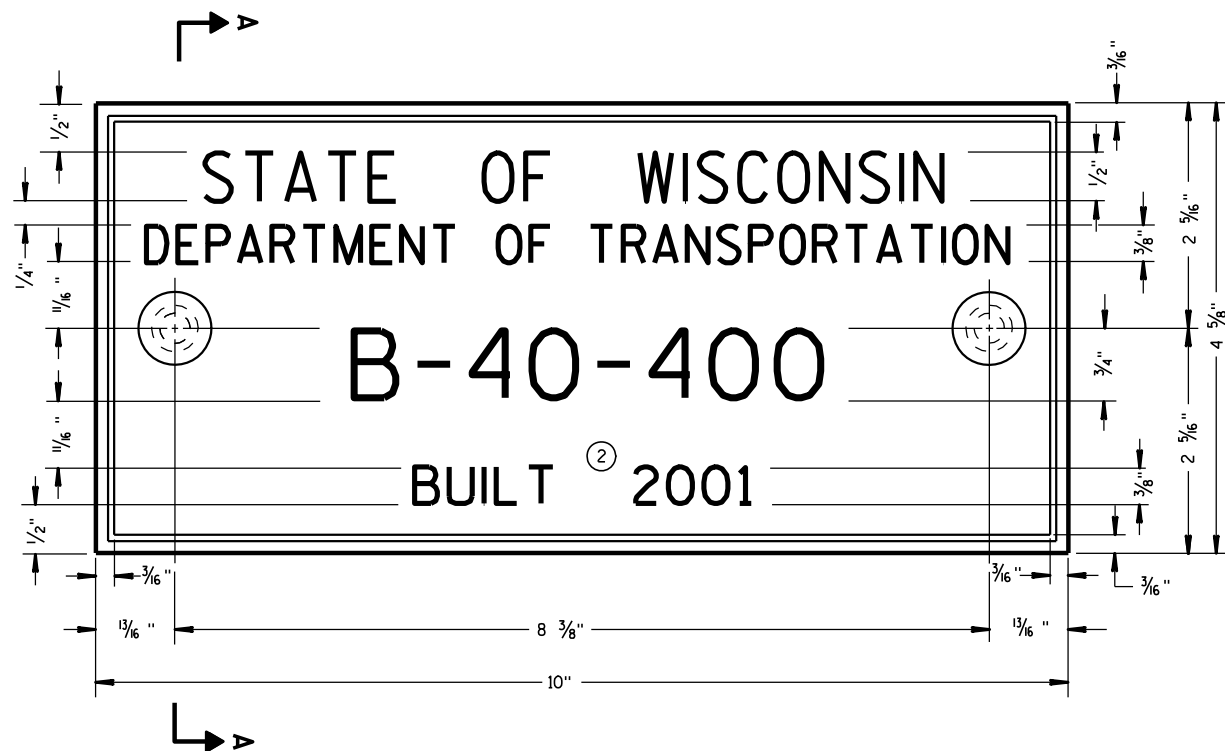
TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

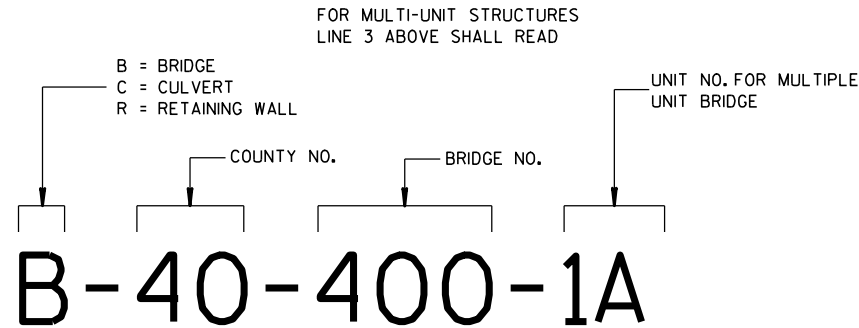
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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



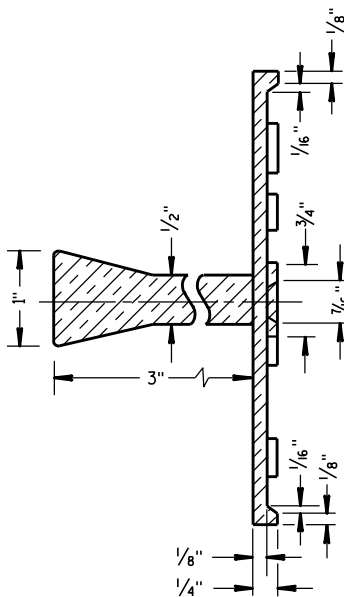
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

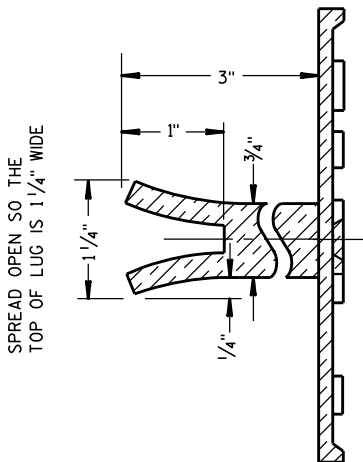
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

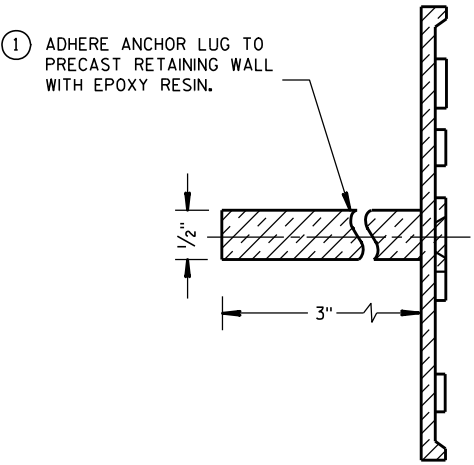
- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A

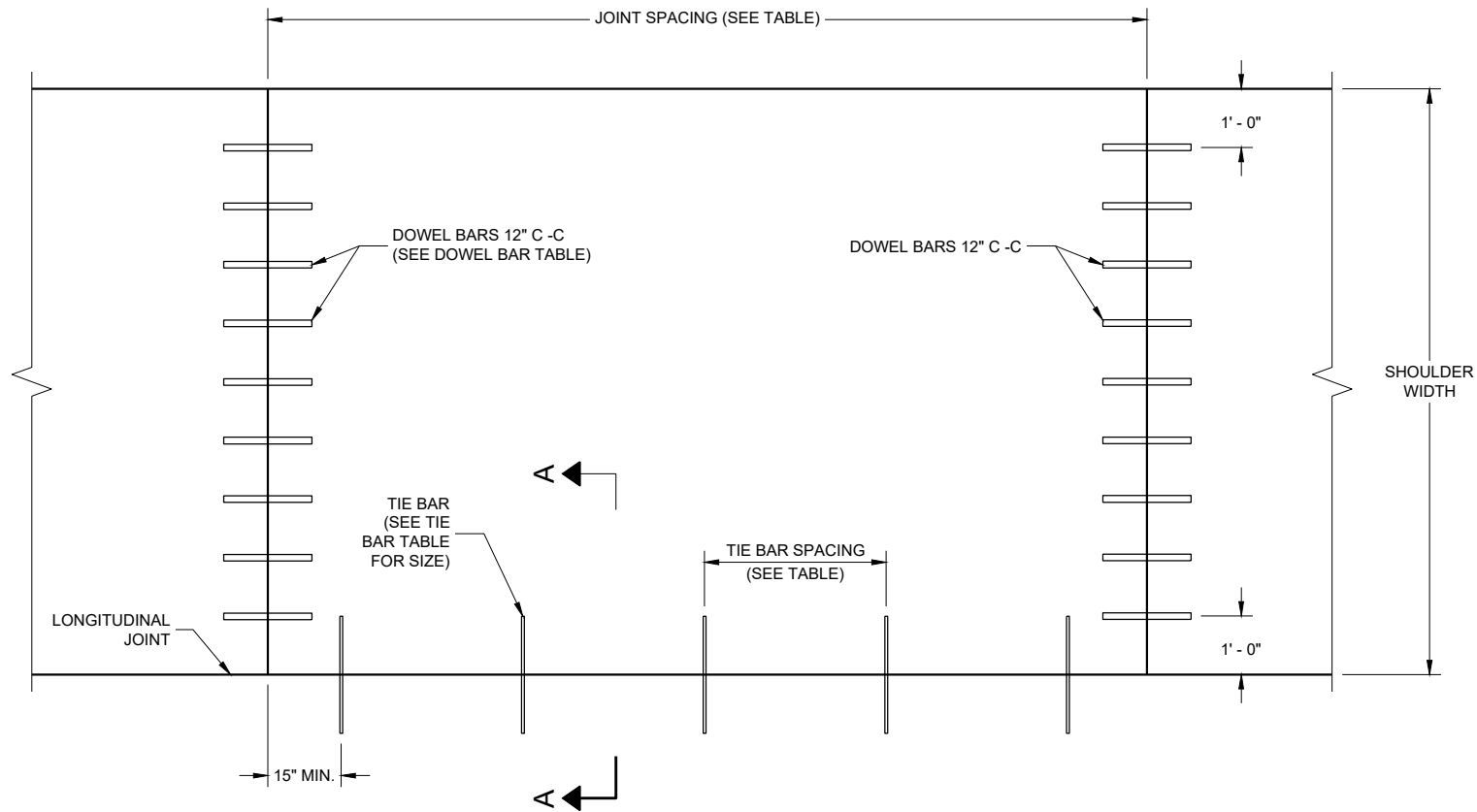


ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/26/10 DATE	/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	



PLAN VIEW
CONCRETE PAVEMENT SHOULDER

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
<10 1/2"	NO. 4	30"	36"
>10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BATS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES).

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER ***	CONTRACTION JOINT SPACING
6", 6 1/2"	NONE	12"
7", 7 1/2"	1"	14"
8" & ABOVE	1 1/4"	15"

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FRO THE AVERAGE THICKNESS OF THE CROSS SECTION.

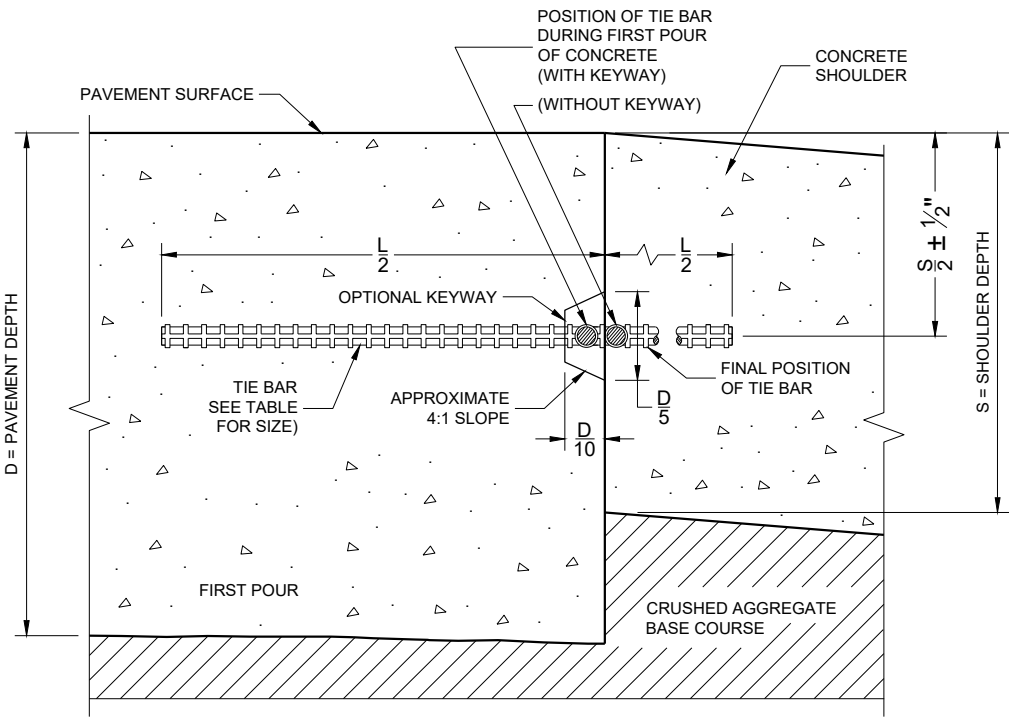
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

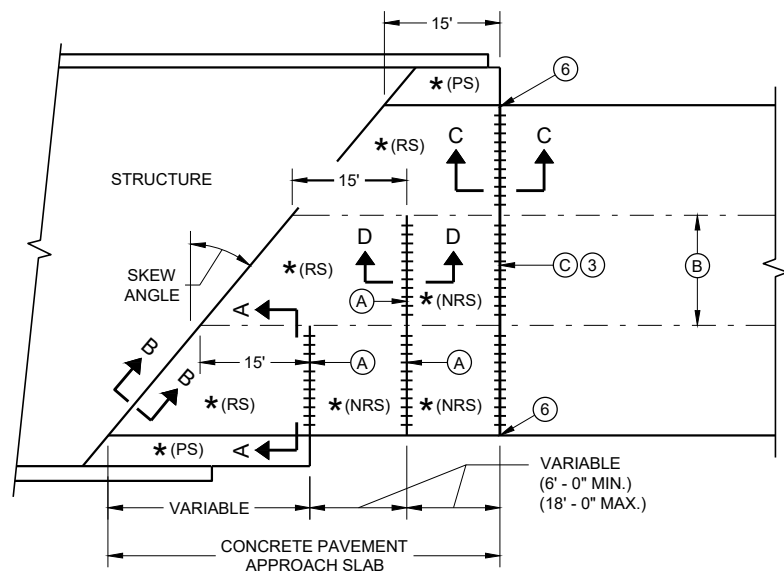


SECTION A - A
LONGITUDINAL CONSTRUCTION JOINT

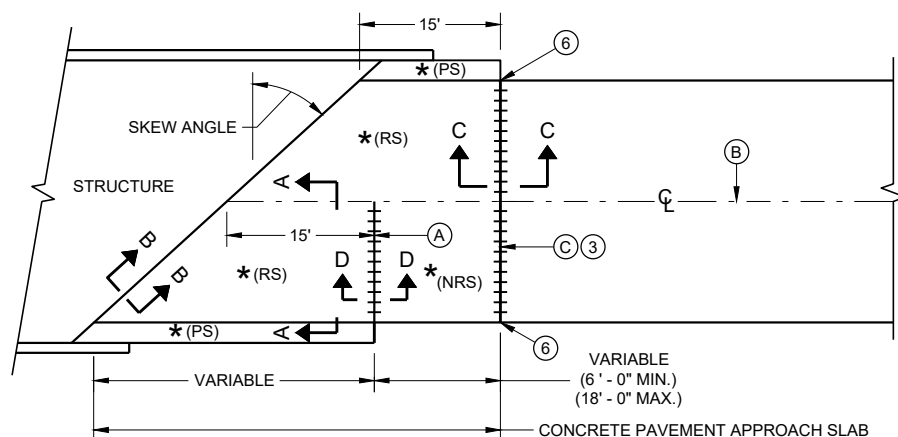
CONCRETE PAVEMENT
SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

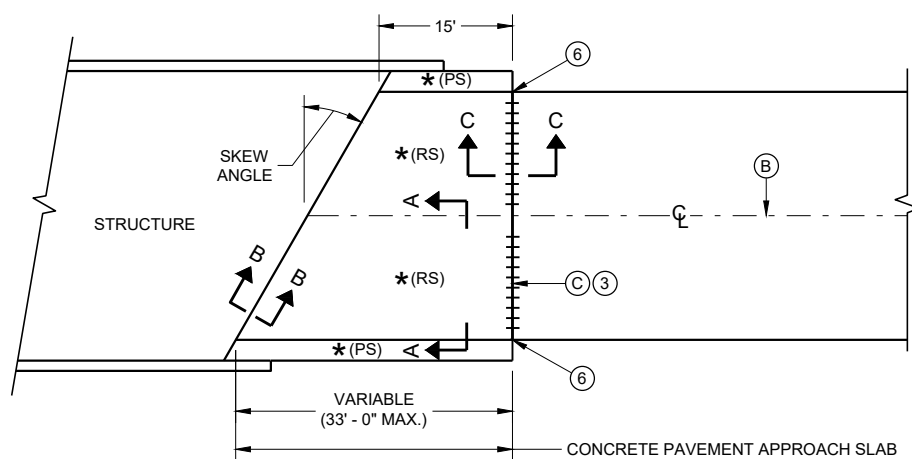
APPROVED
November 2022 /S/ Peter Kemp
DATE PAVEMENT SUPERVISOR
FHWA



**SKewed APPROACH
(PAVEMENT MORE THAN TWO LANES)**



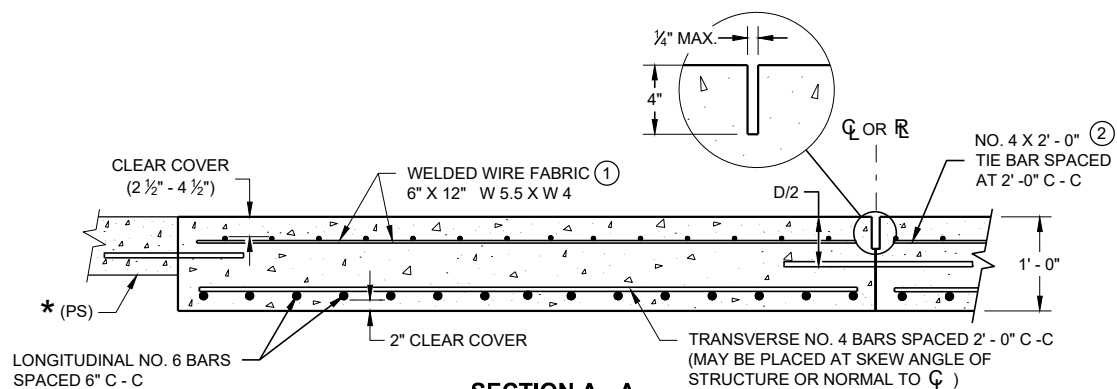
**SKews > 20°
(PAVEMENT WIDTH ≤ 30')**



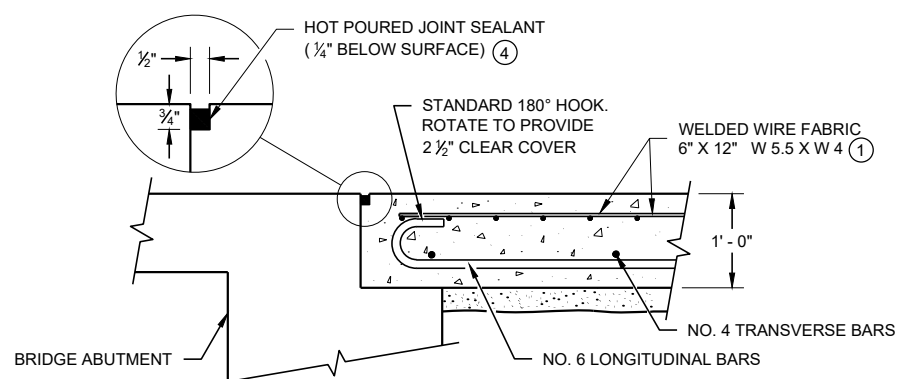
**SKews ≤ 20°
(PAVEMENT WIDTH ≤ 30')**

APPROACH SLAB AND ADJACENT PAVEMENT

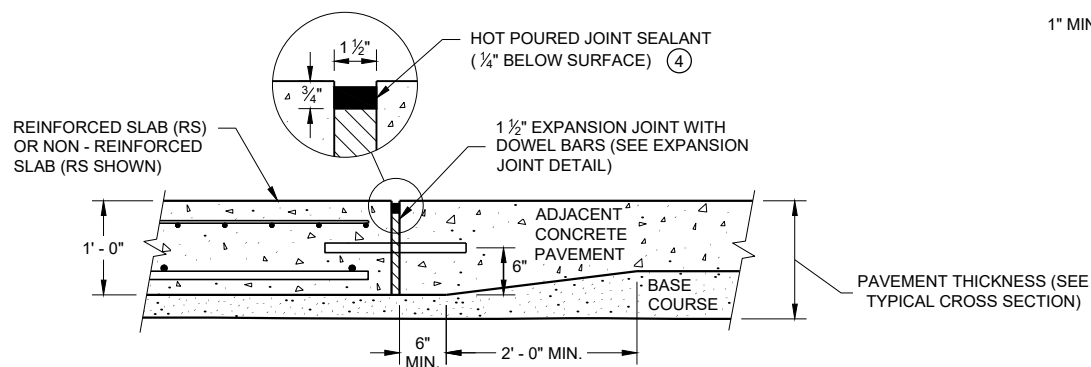
- * (RS) = REINFORCED CONCRETE SLAB
- * (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- * (NRS) = NON - REINFORCED CONCRETE SLAB
- *** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A
REINFORCEMENT POSITIONING DETAIL**



**SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT**



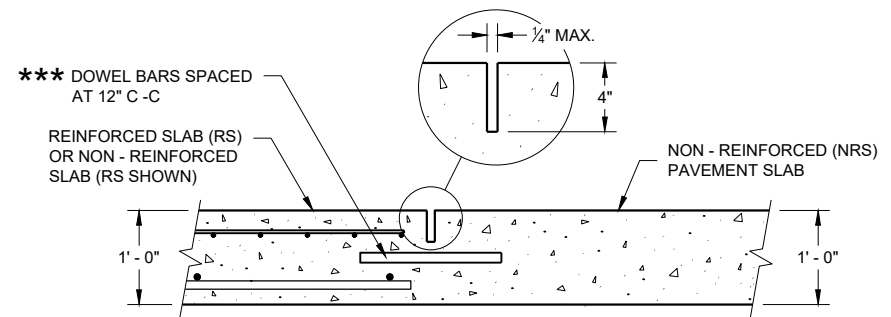
**SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT**

GENERAL NOTES

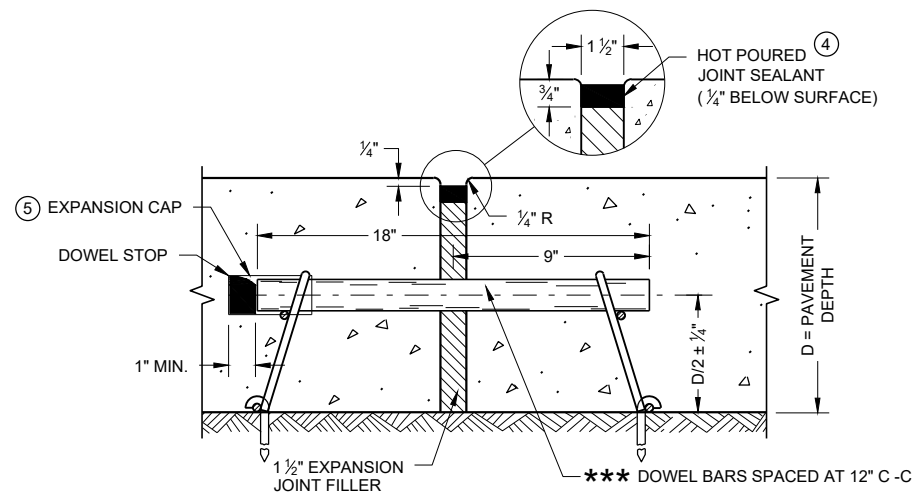
THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

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 \mathcal{C} OR \mathcal{R} .
- (B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
- (C) 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO \mathcal{C} OR \mathcal{R} .



**SECTION D - D
CONTRACTION JOINT**



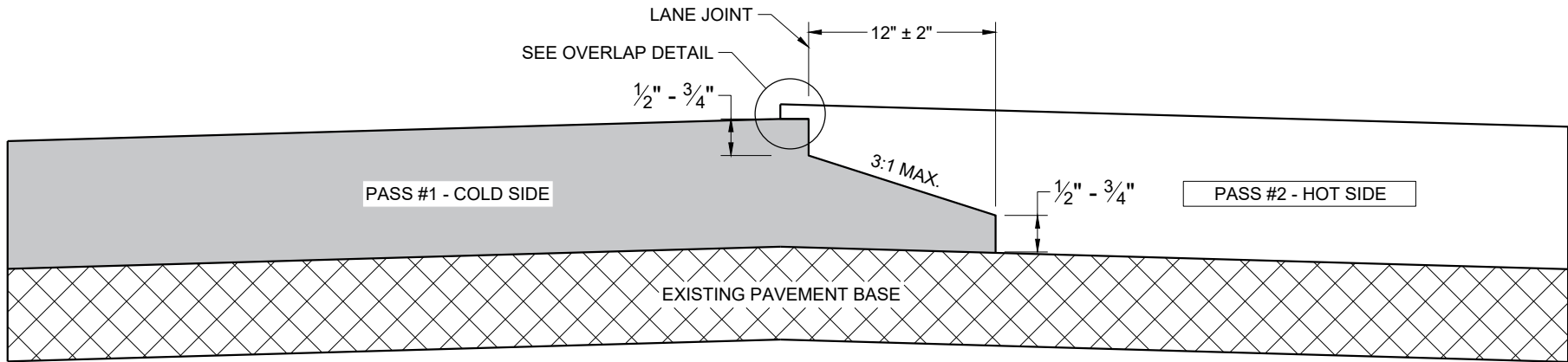
EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

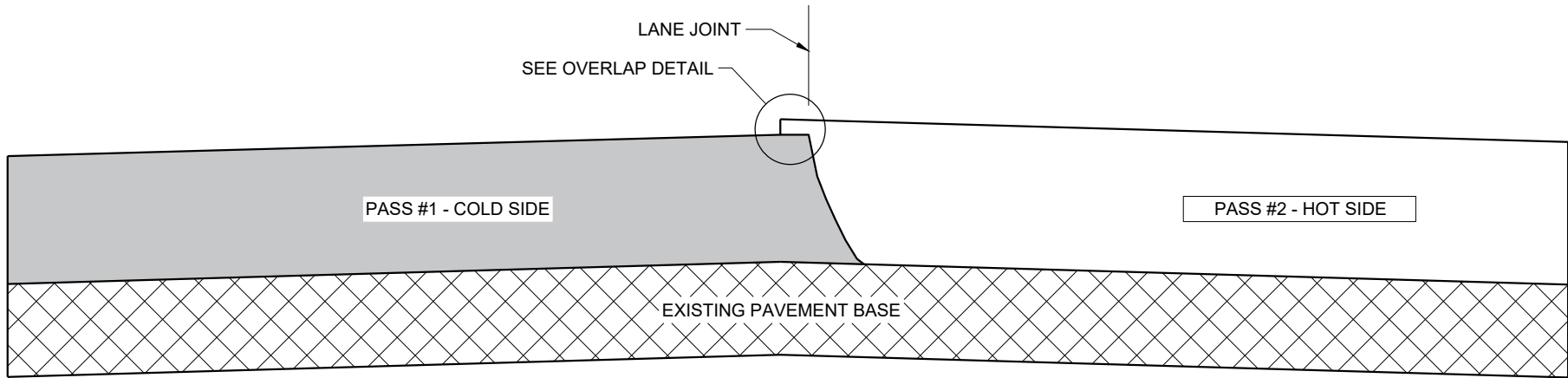
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR

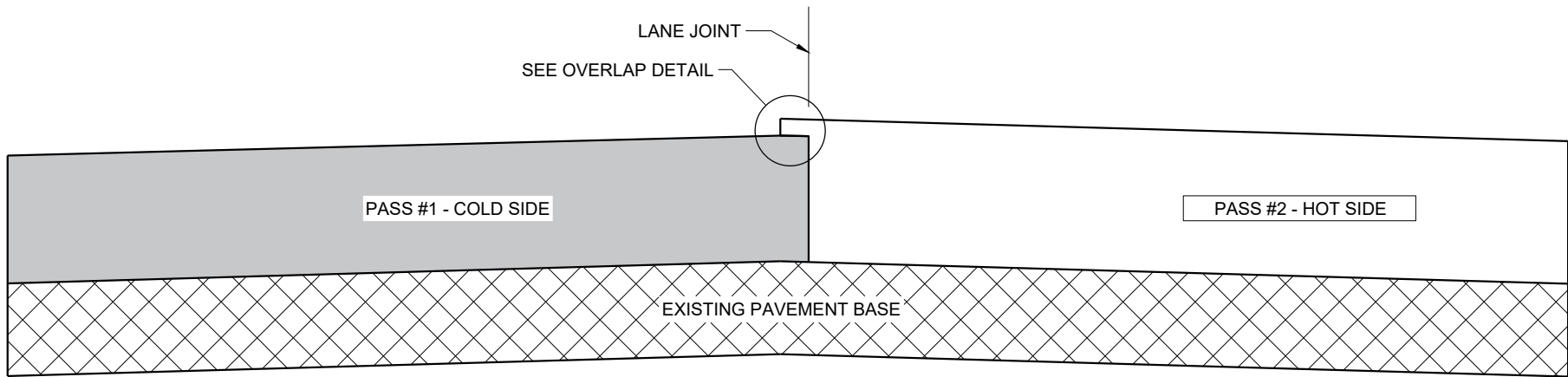
FHWA



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

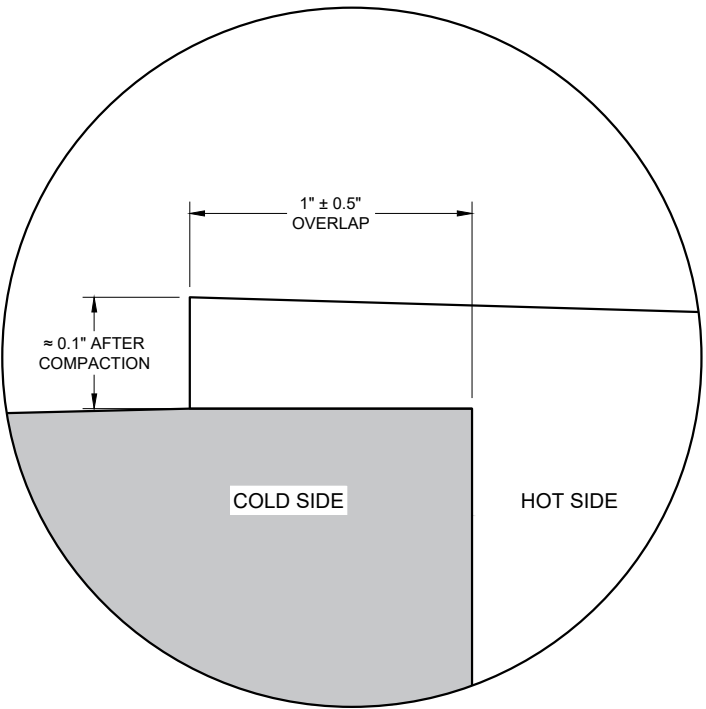
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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

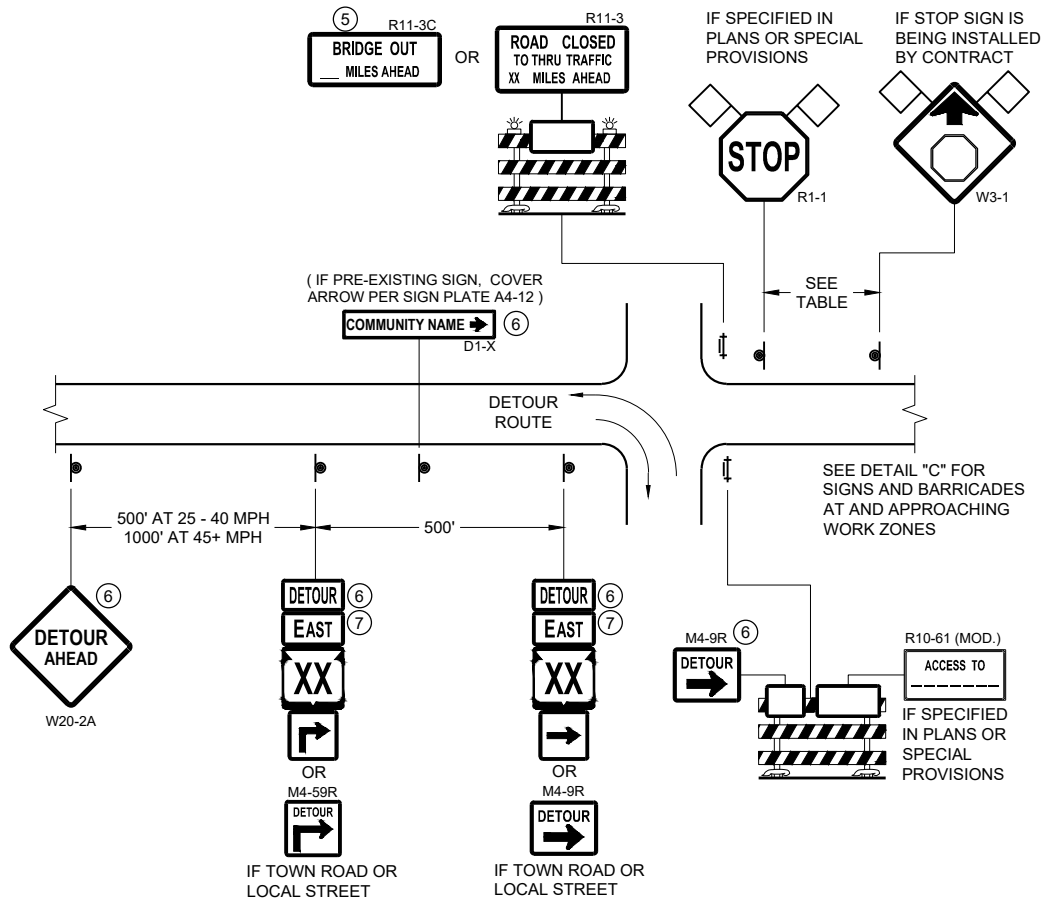


OVERLAP DETAIL (TYPICAL)

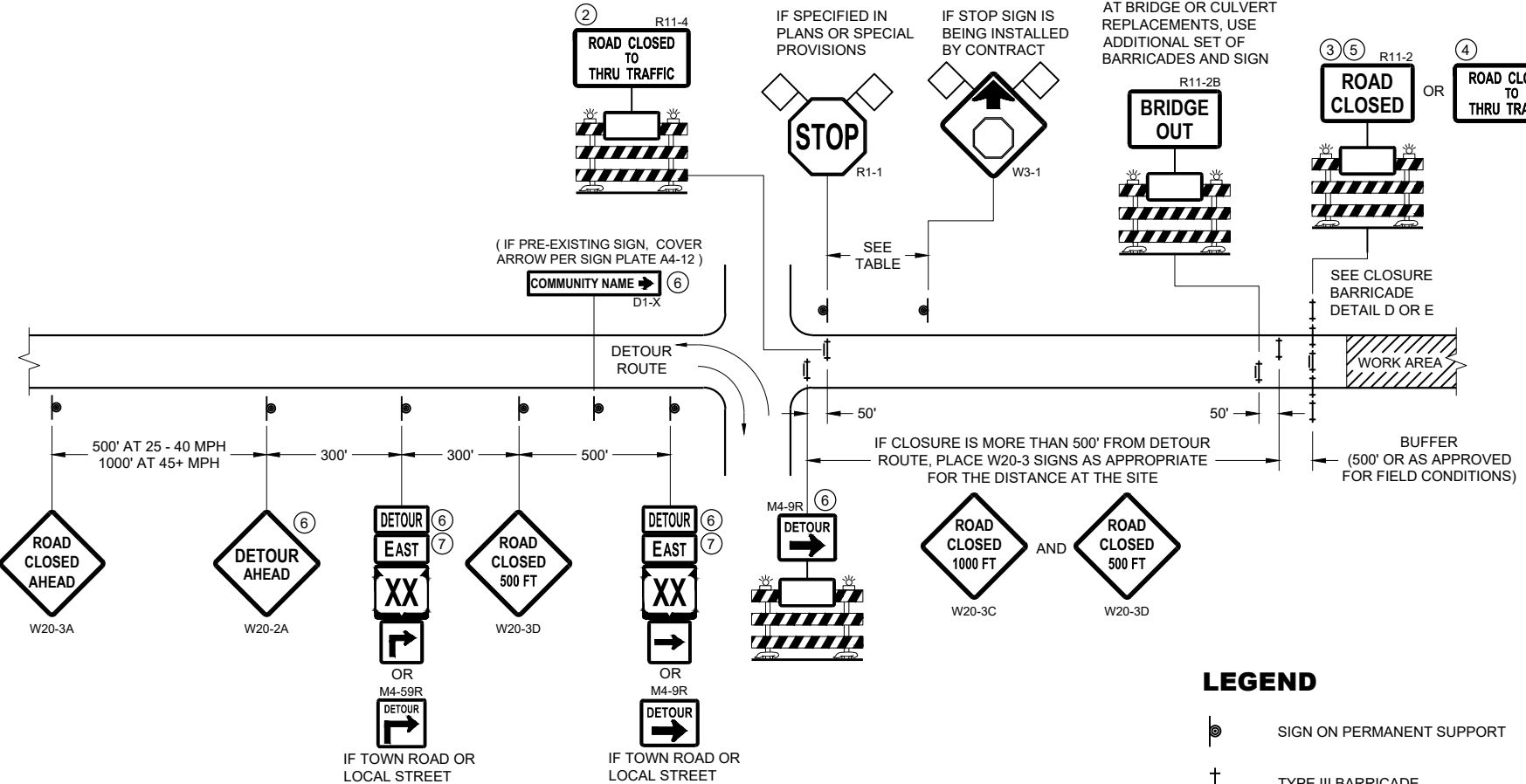
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGINEER
FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



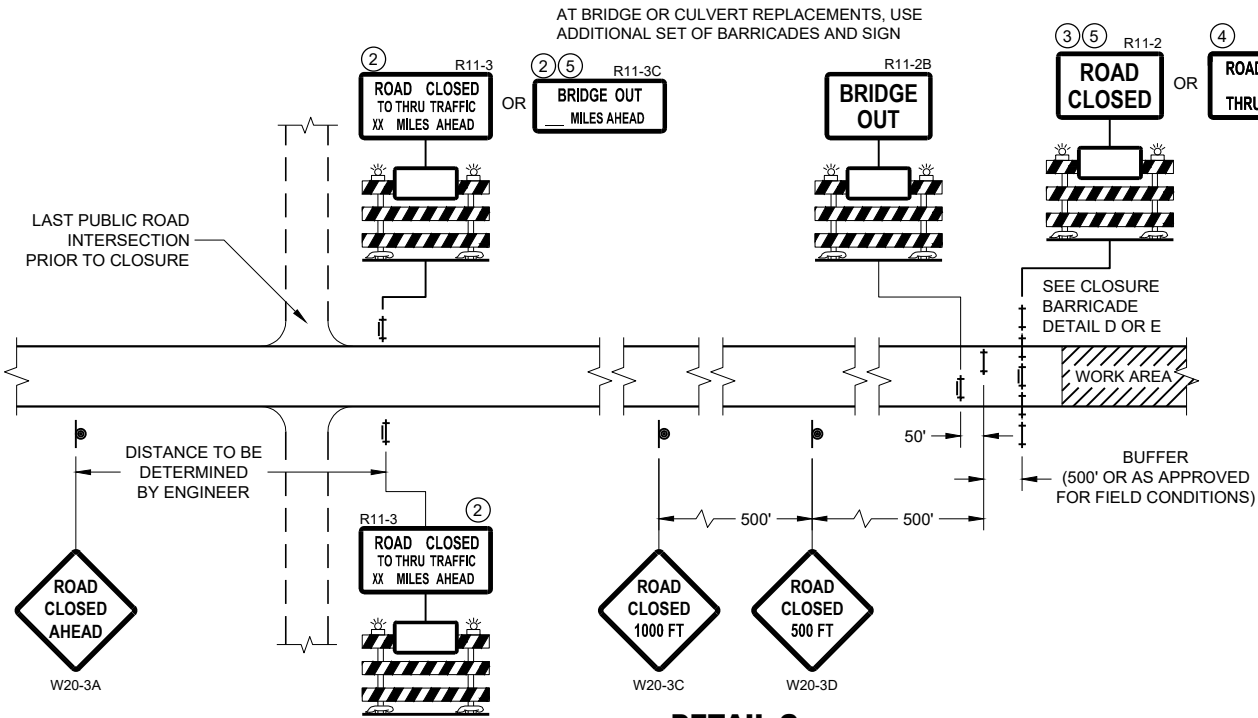
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

- 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 M1 - 5A
- OR M05 - 1 OR M06 - 1

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



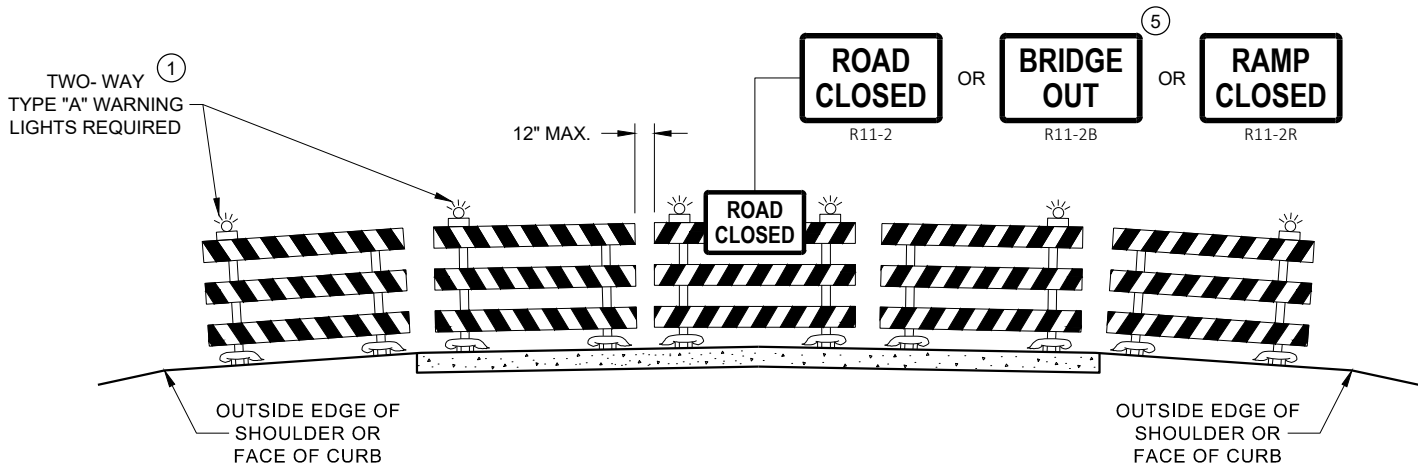
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

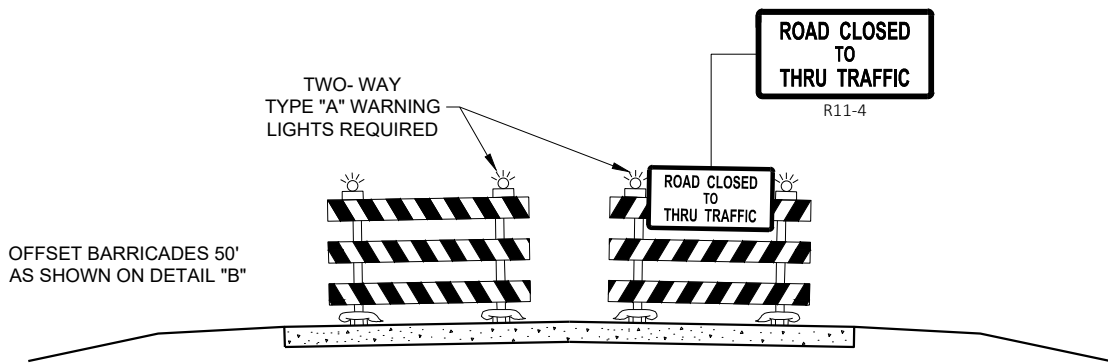
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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"

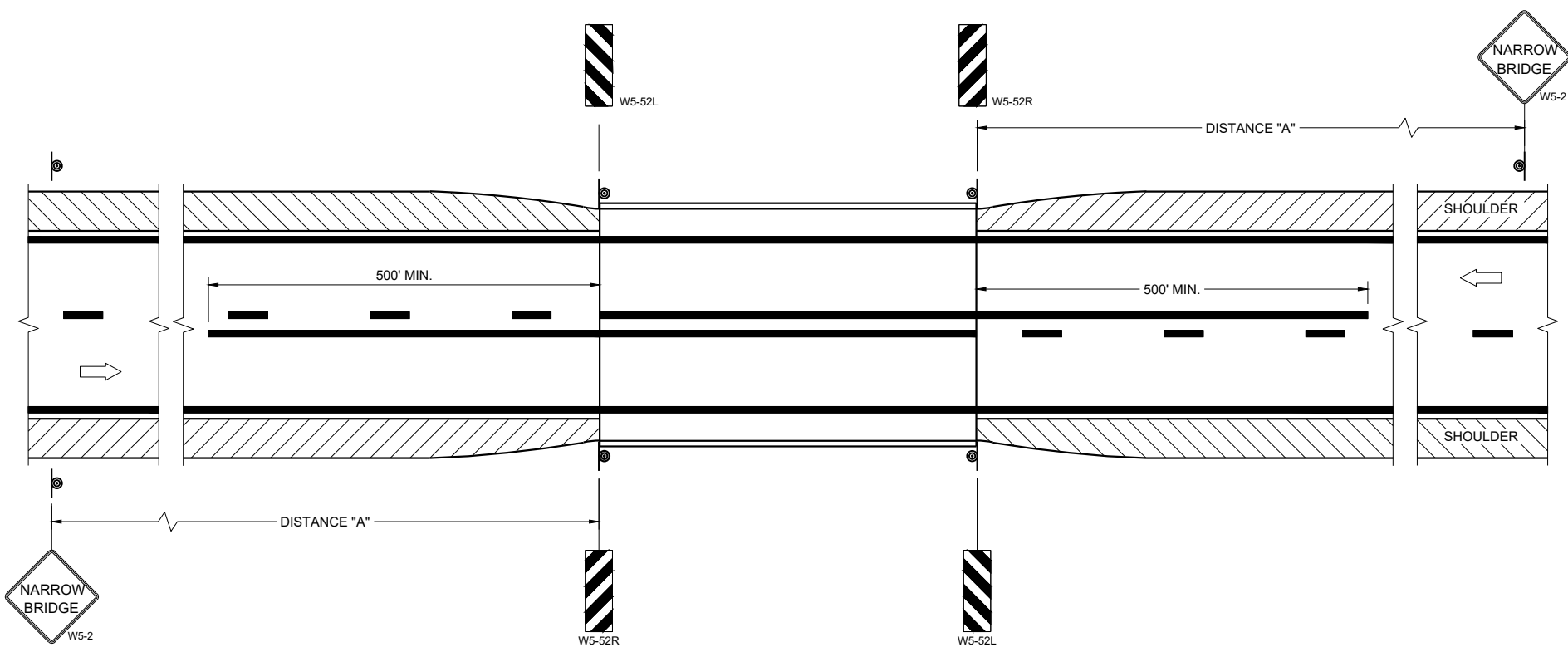
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS 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

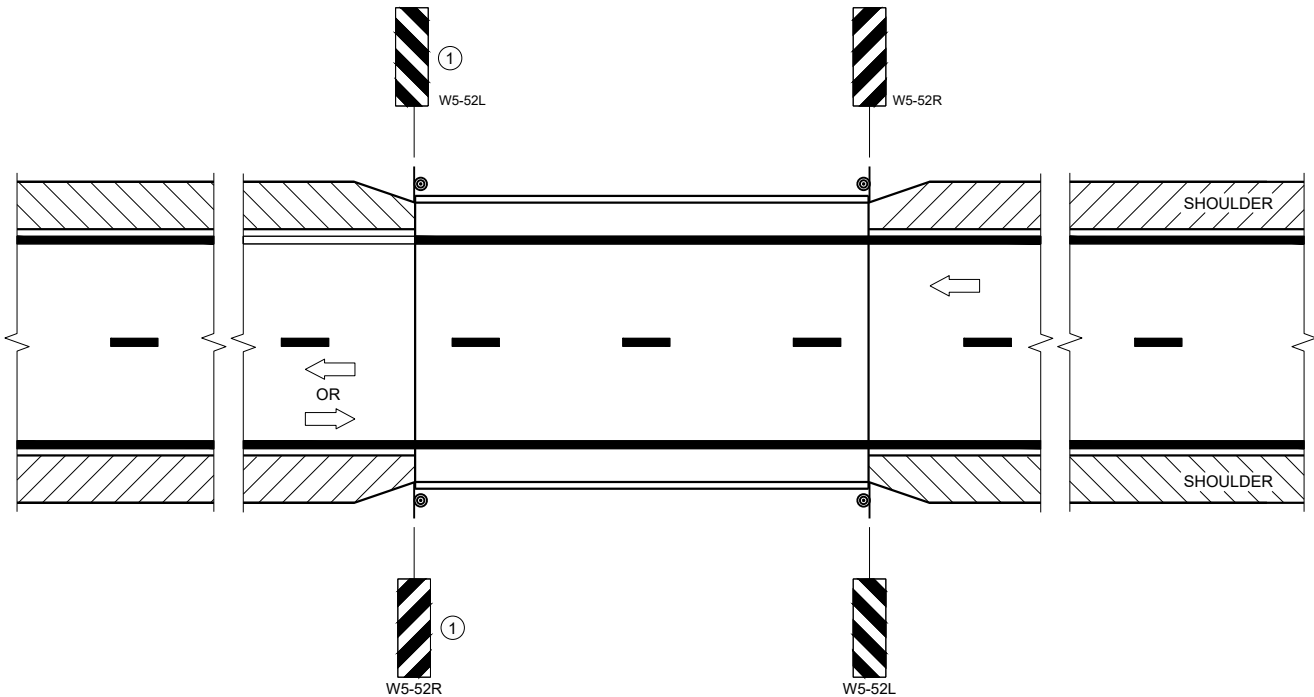
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



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

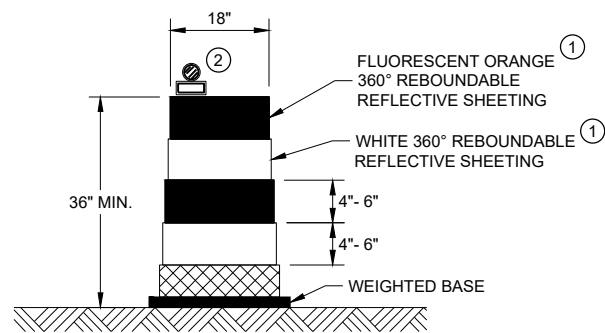
DISTANCE TABLE

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**

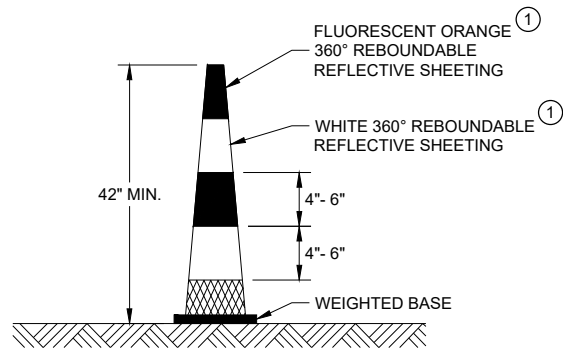
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



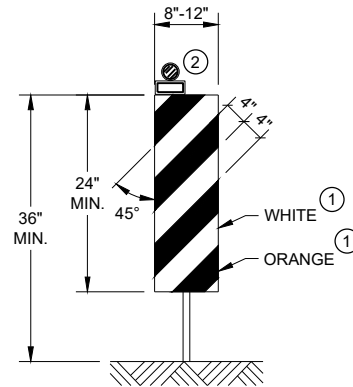
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



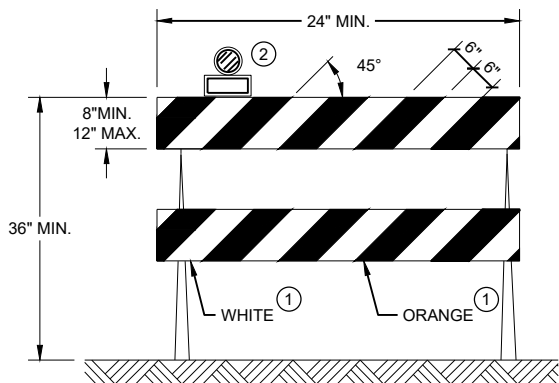
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



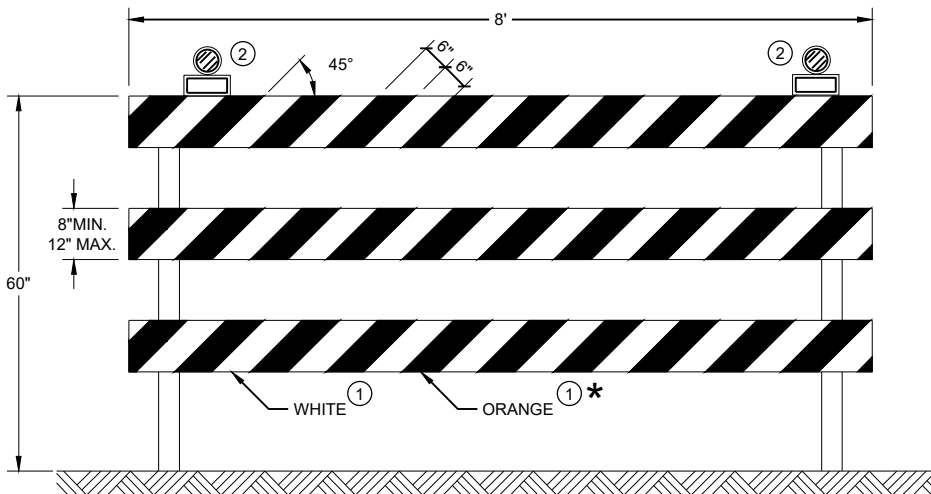
VERTICAL PANEL

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.

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.

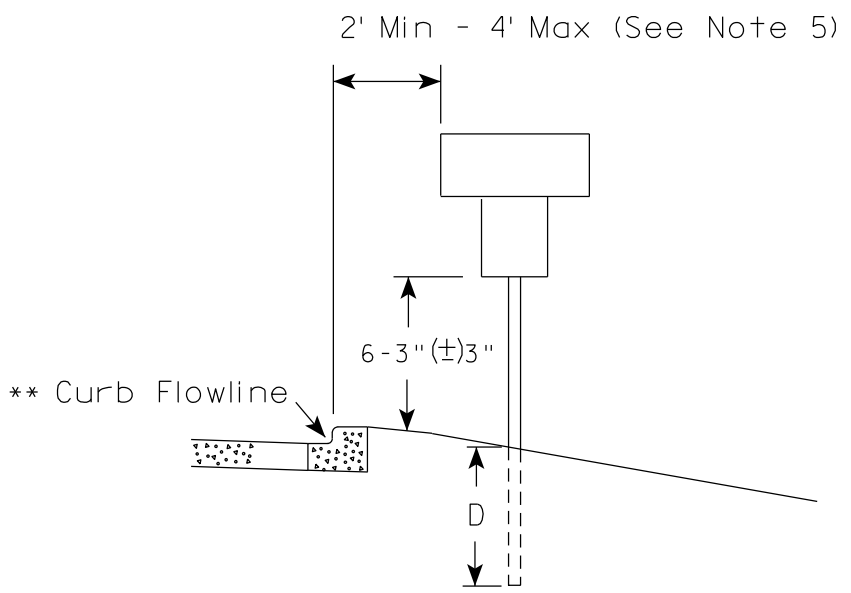
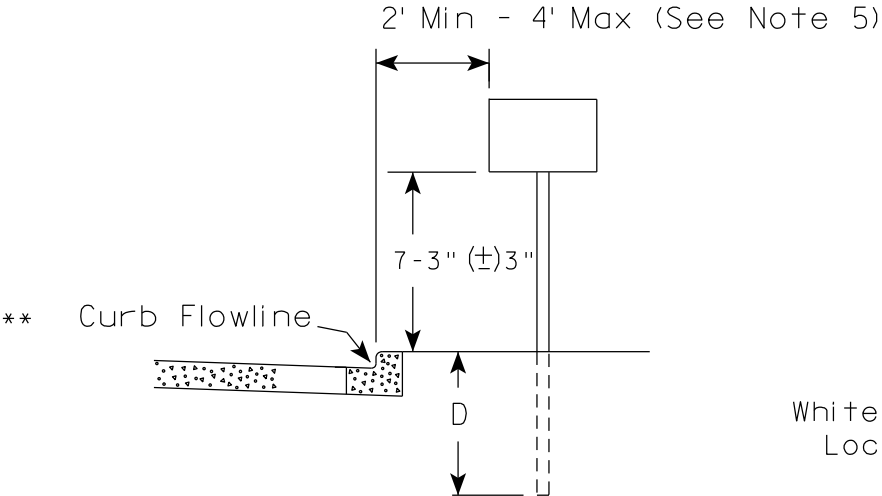
**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

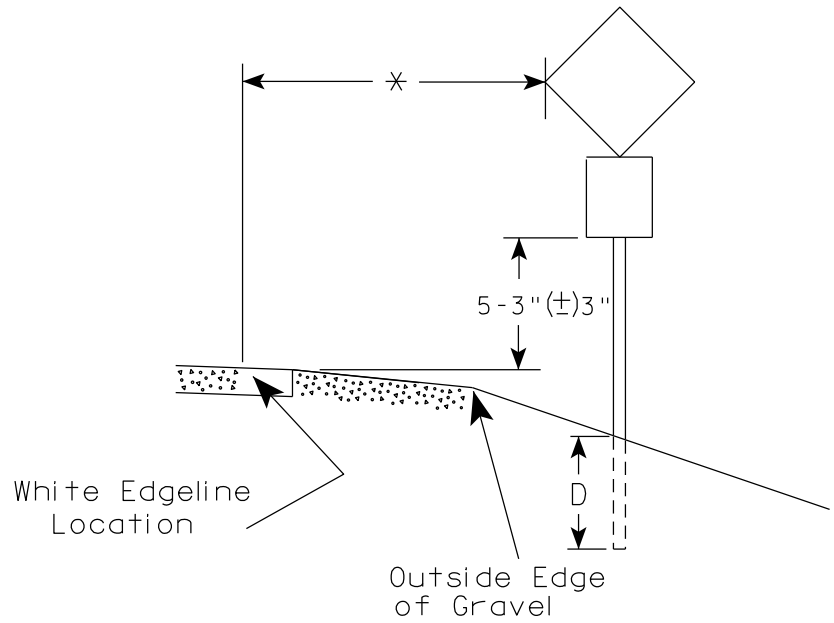
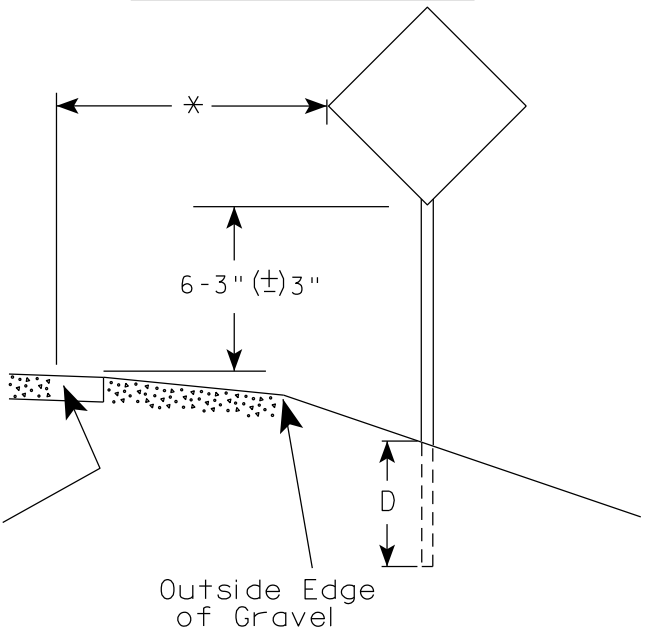
APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

URBAN AREA



RURAL AREA (See Note 2)



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 directed by the 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.

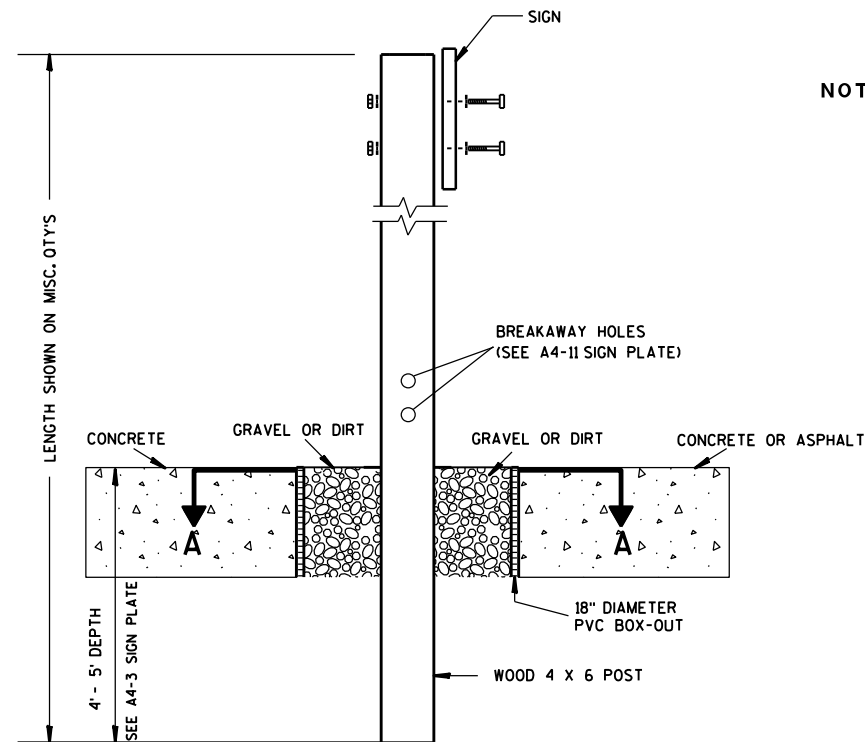
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

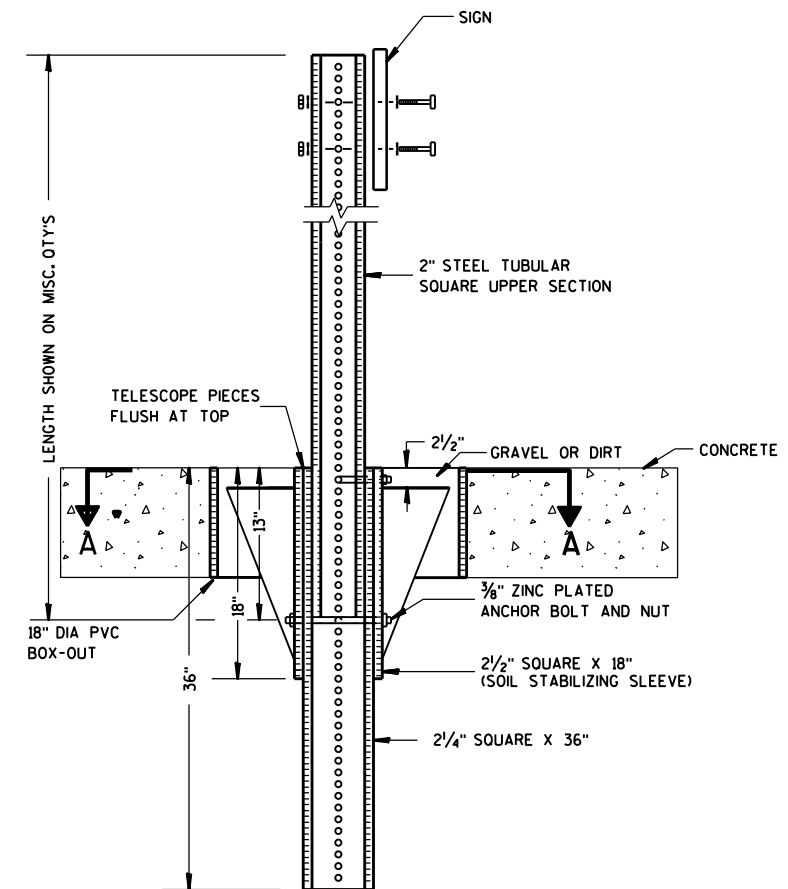
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

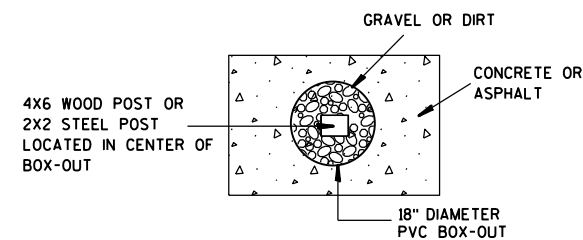
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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:

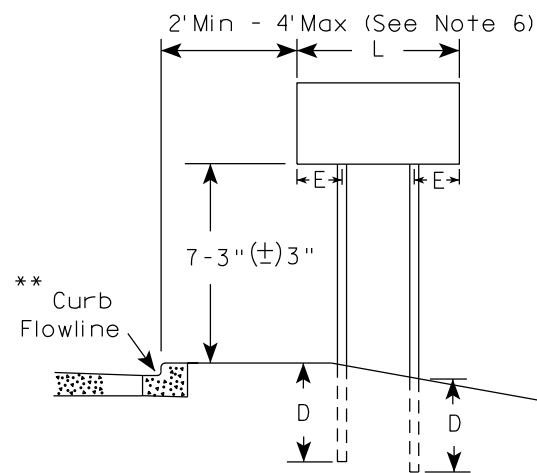
HWY:

COUNTY:

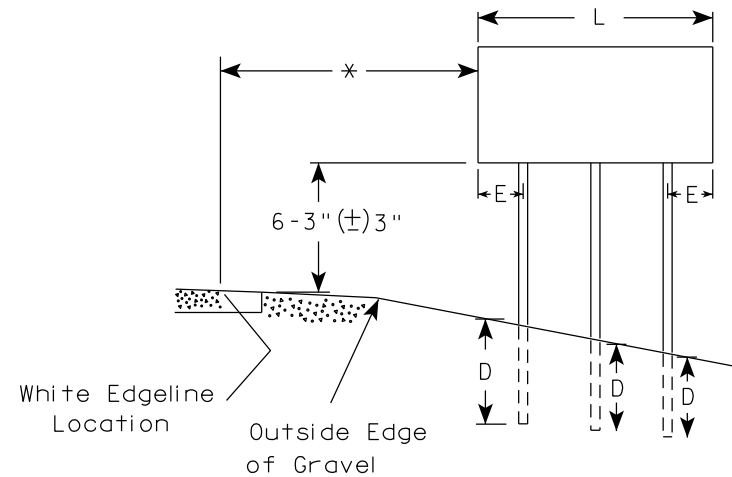
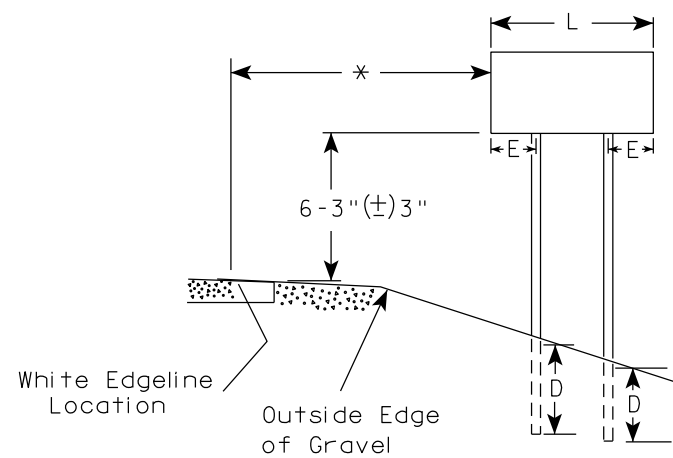
SHEET NO:

E

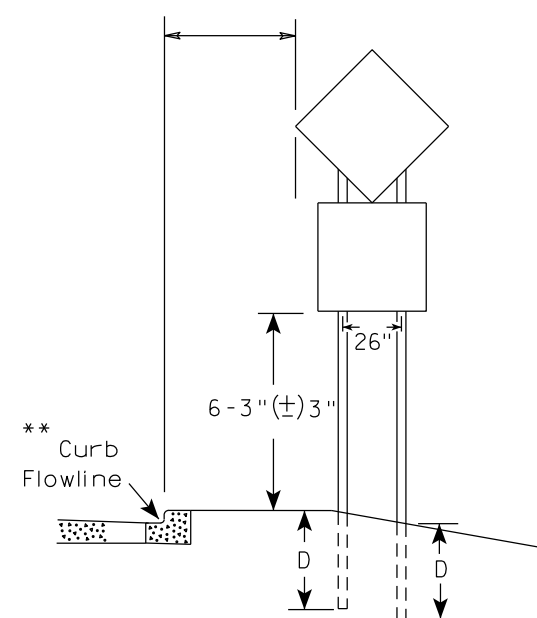
URBAN AREA



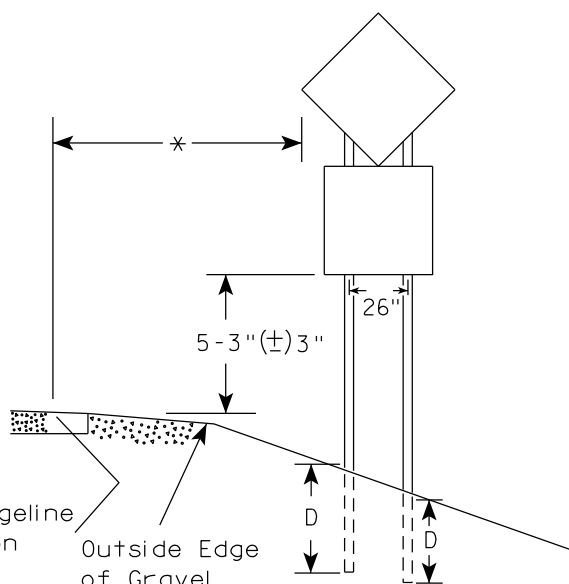
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



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"

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

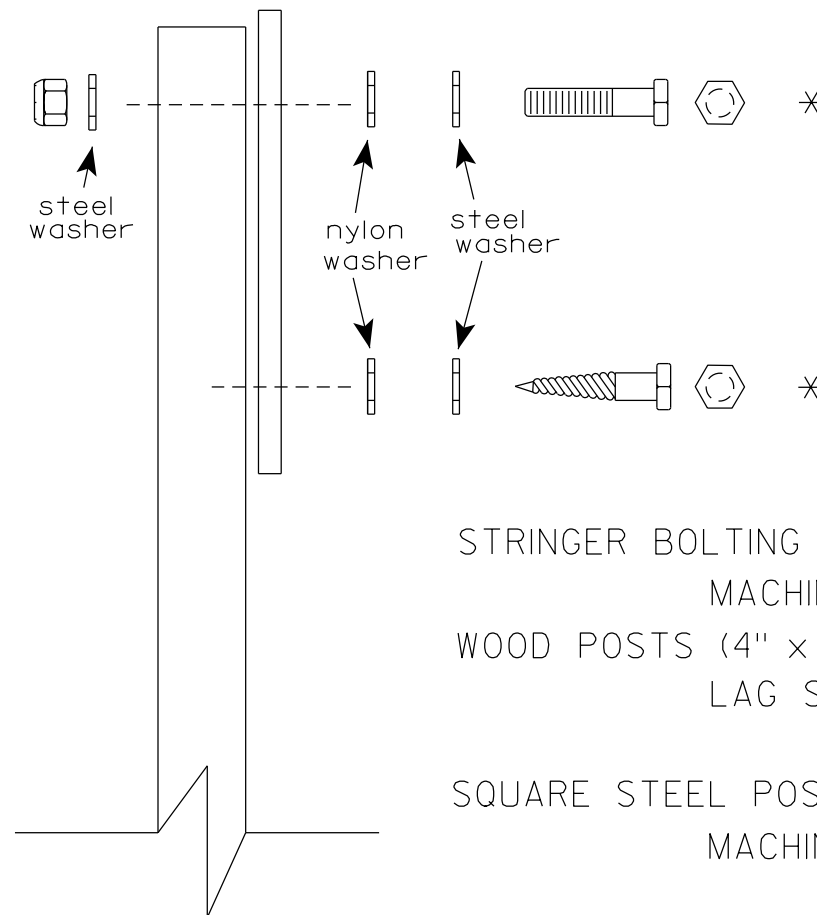
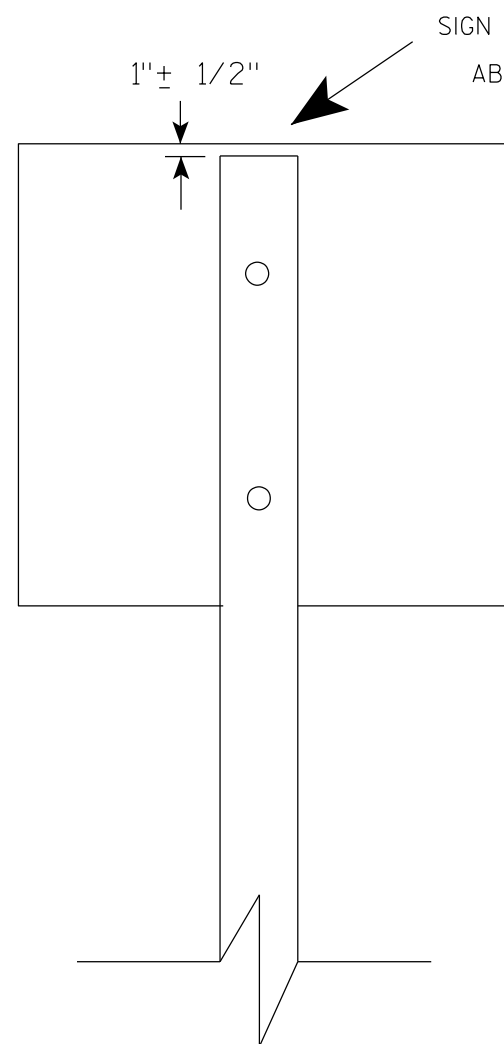
GENERAL NOTES

- For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
- The (±) tolerance for mounting height is 3 inches.
- J-Assemblies are considered to be one sign for mounting height.
- Offset distance shall be consistent with existing signs or consistent throughout length of project.
- Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the engineer.
- 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.



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.

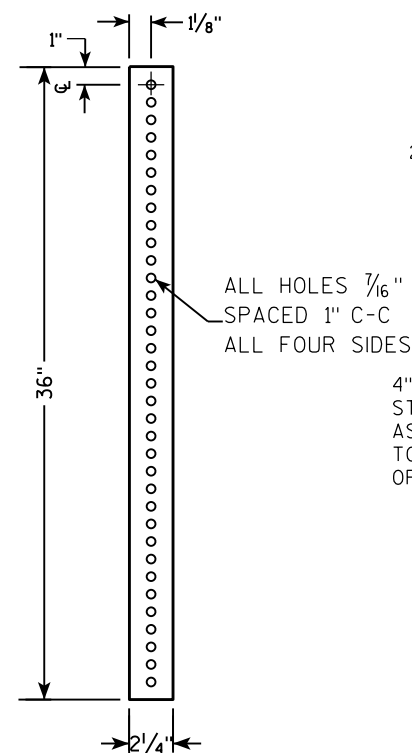
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

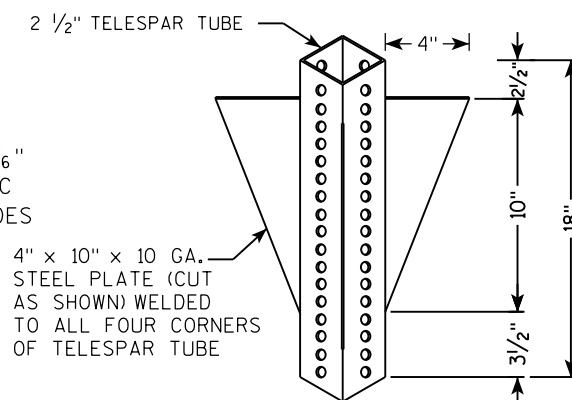
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

**2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



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



TECHNICAL DRAWING OF A SIGN POST ASSEMBLY.

Side View Labels:

- SIGN
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
- 2" STEEL TUBULAR SQUARE UPPER SECTION
- ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES
- $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT
- 2 1/2" GRAVEL OR DIRT
- $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- 2 1/4" SQUARE X 36"

Cross Section Labels:

- TELESCOPE PIECES FLUSH AT TOP
- 13"
- 18"
- 36"
- 18" DIA SCHEDULE 40 PVC BOX-OUT

Vertical Dimension:

- LENGTH SHOWN ON MISC. QTY'S

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY.

Side View Dimensions:

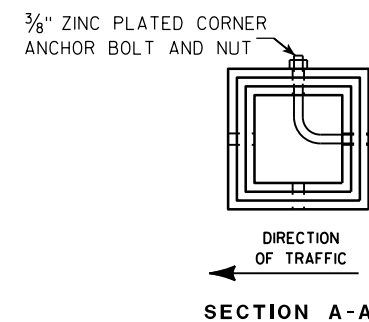
- Overall height: LENGTH SHOWN ON MISC. Q'TYS
- Section 1: 2" STEEL TUBULAR SQUARE UPPER SECTION
- Section 2: 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- Section 3: 2 1/4" SQUARE X 36"
- Section 4: 36" (Total length of the lower square section)
- Section 5: 18"
- Section 6: 12"

Top View Dimensions:

- Overall width: 36"
- Section 1: 18"
- Section 2: 12"

Material and Assembly Specifications:

- ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES
- 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
- 3/8" ZINC PLATED ANCHOR BOLT AND NUT
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- 2 1/4" SQUARE X 36"
- TELESCOPE PIECES FLUSH AT TOP
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
- SIGN



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 NO. A4-9.9

PROJECT NO:

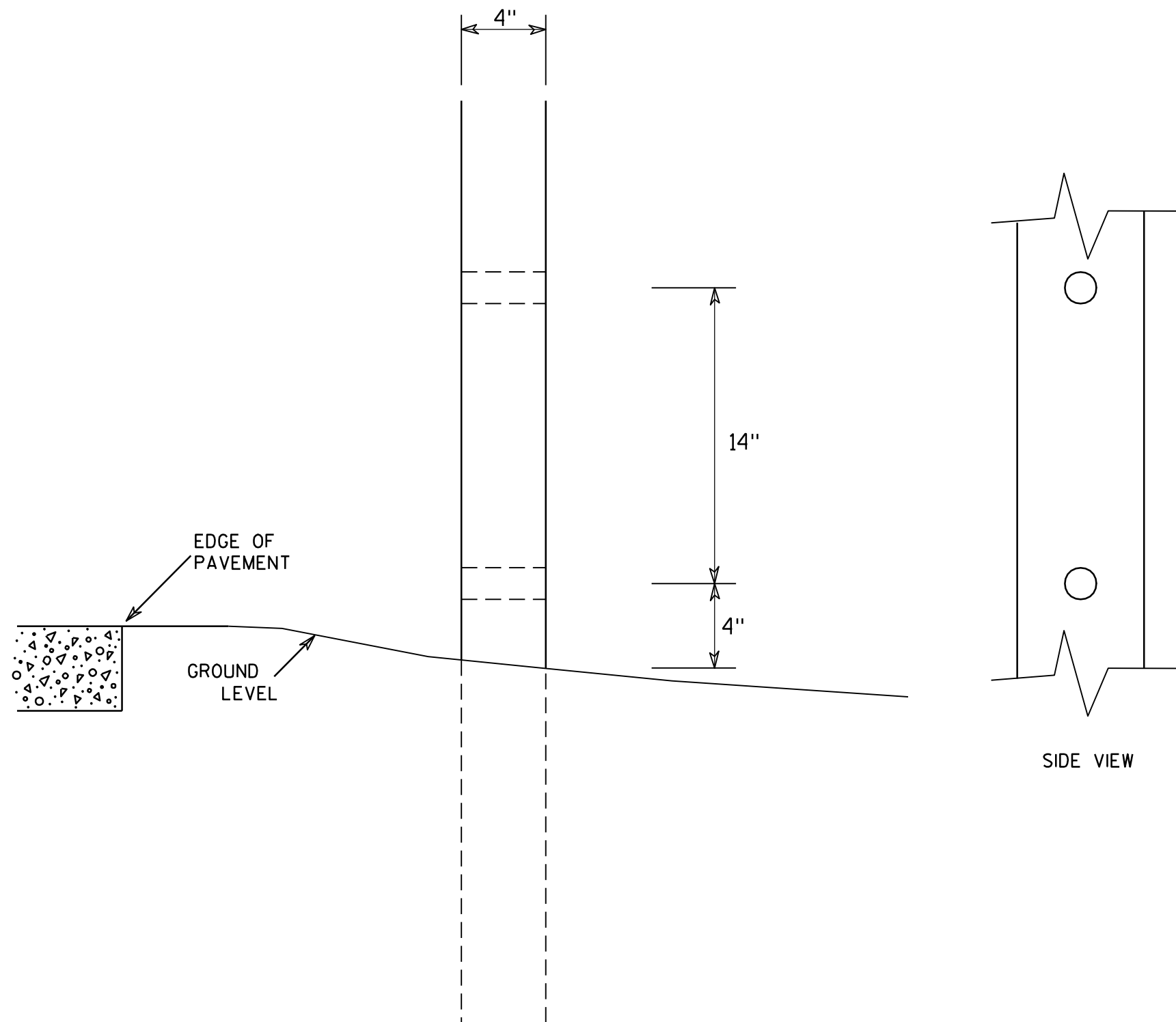
HWY:

COUNTY:

SHEET NO:

T

7

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

**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:

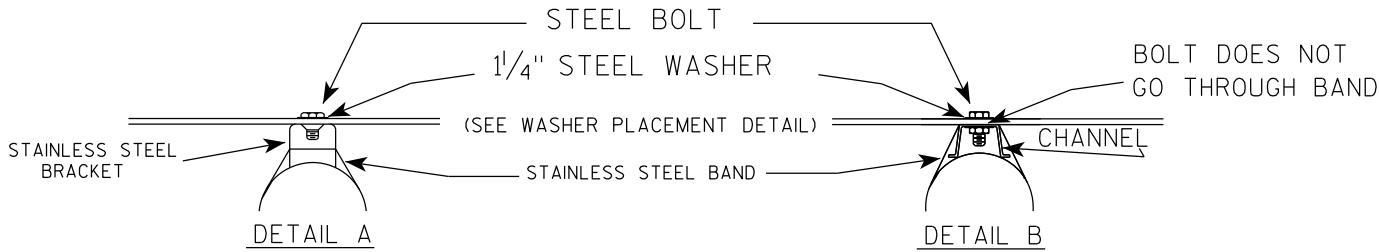
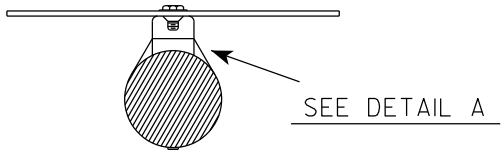
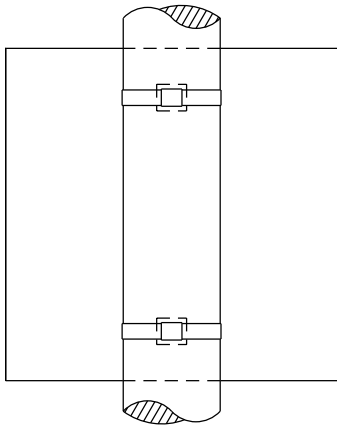
COUNTY:

SHEET NO:

E

BANDING

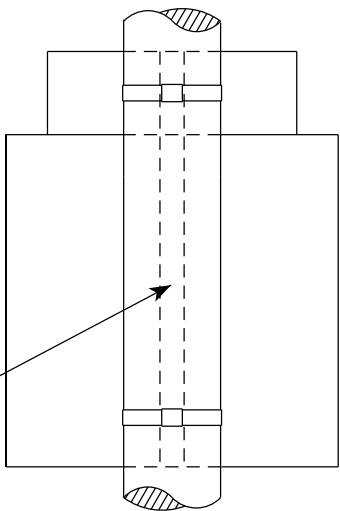
SINGLE SIGN



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 $\frac{3}{4}$ " 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

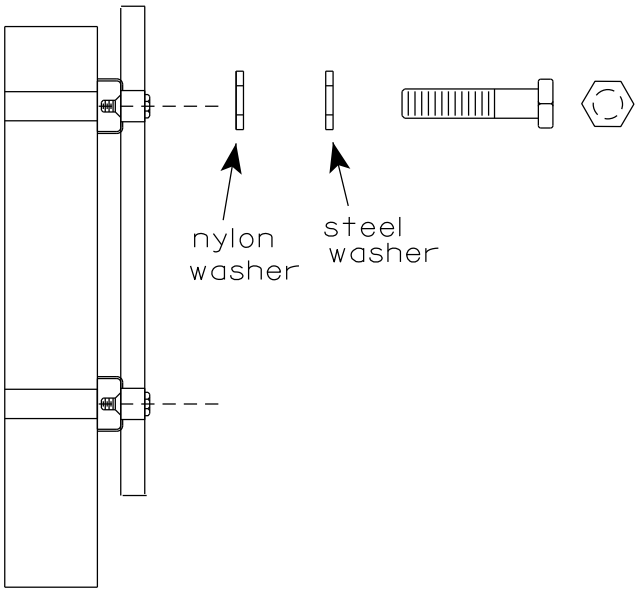
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

WASHER PLACEMENT

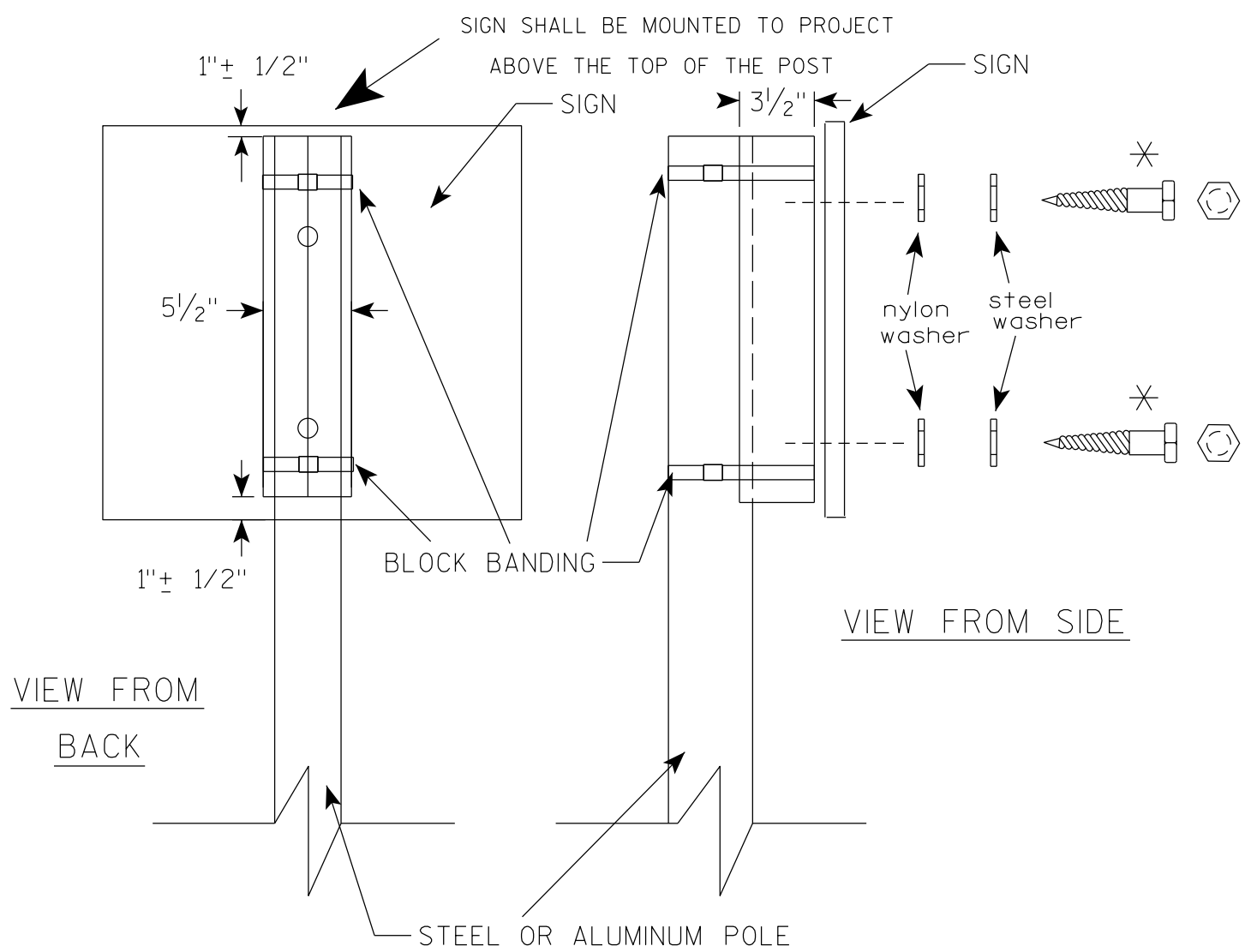


WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

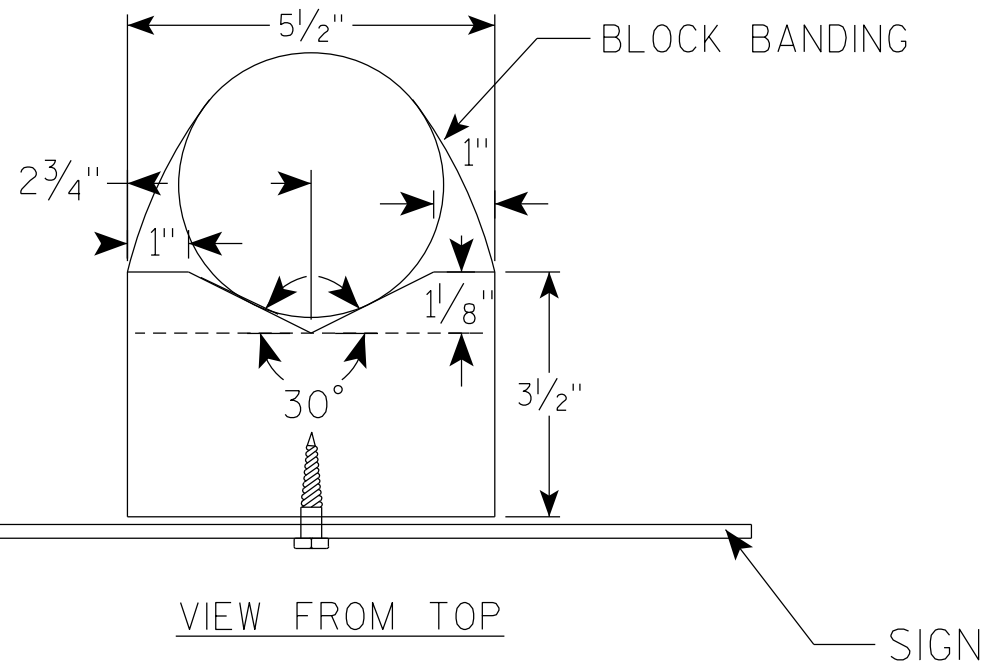
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

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, $\frac{3}{4}$ " 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 NORMALLY 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 $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

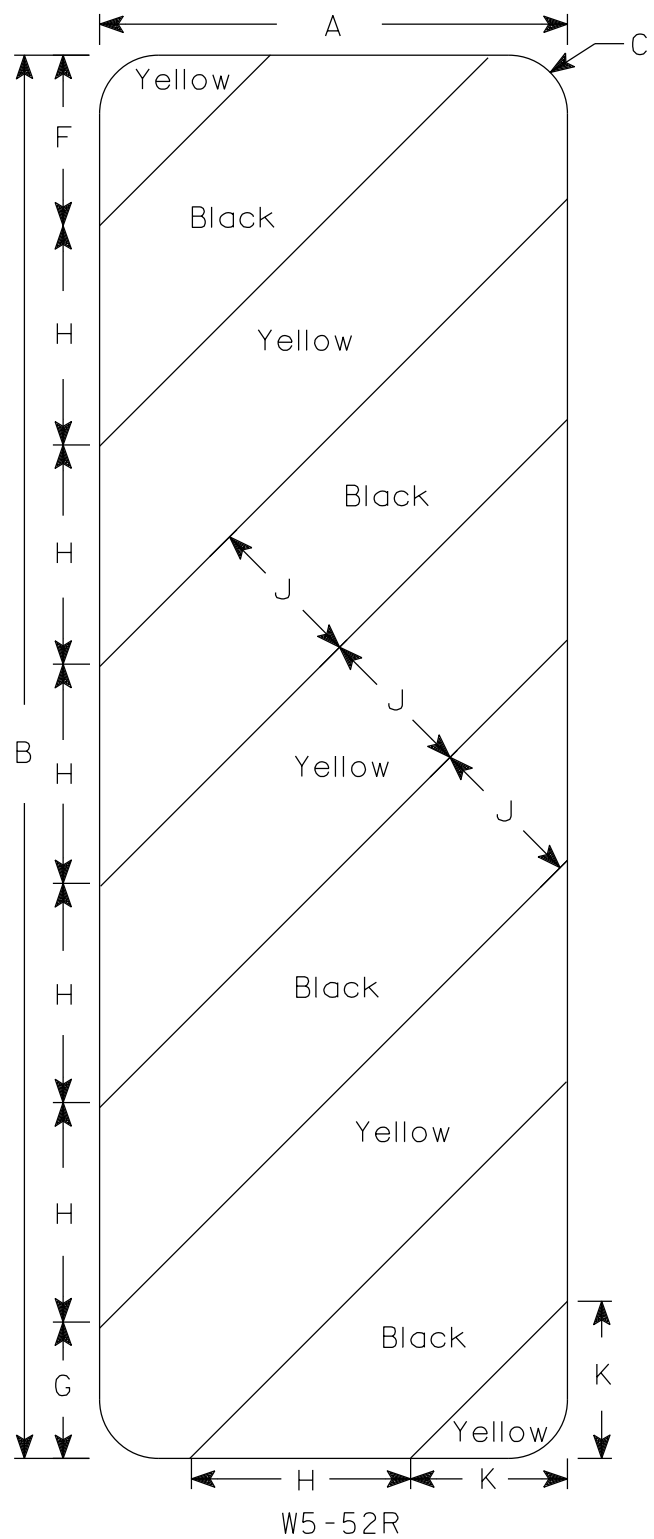
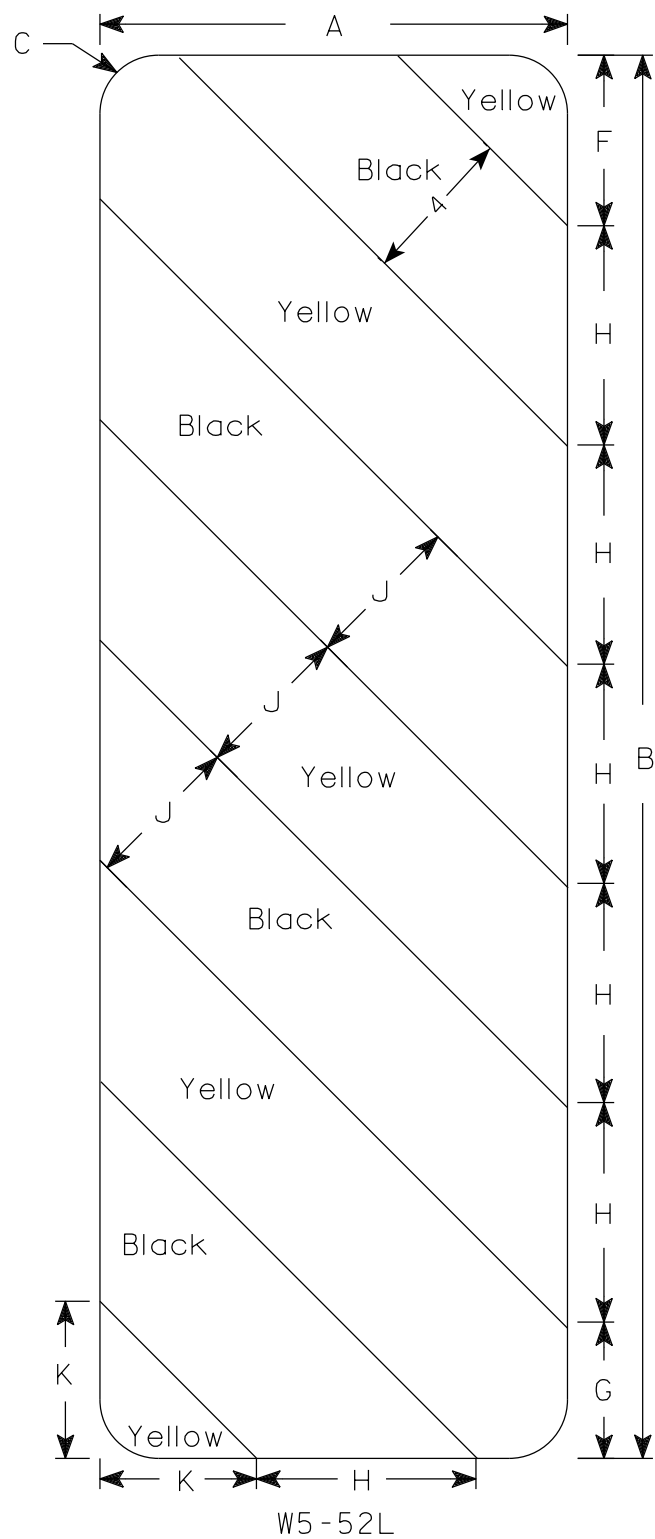
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

SHEET NO:

E



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																											

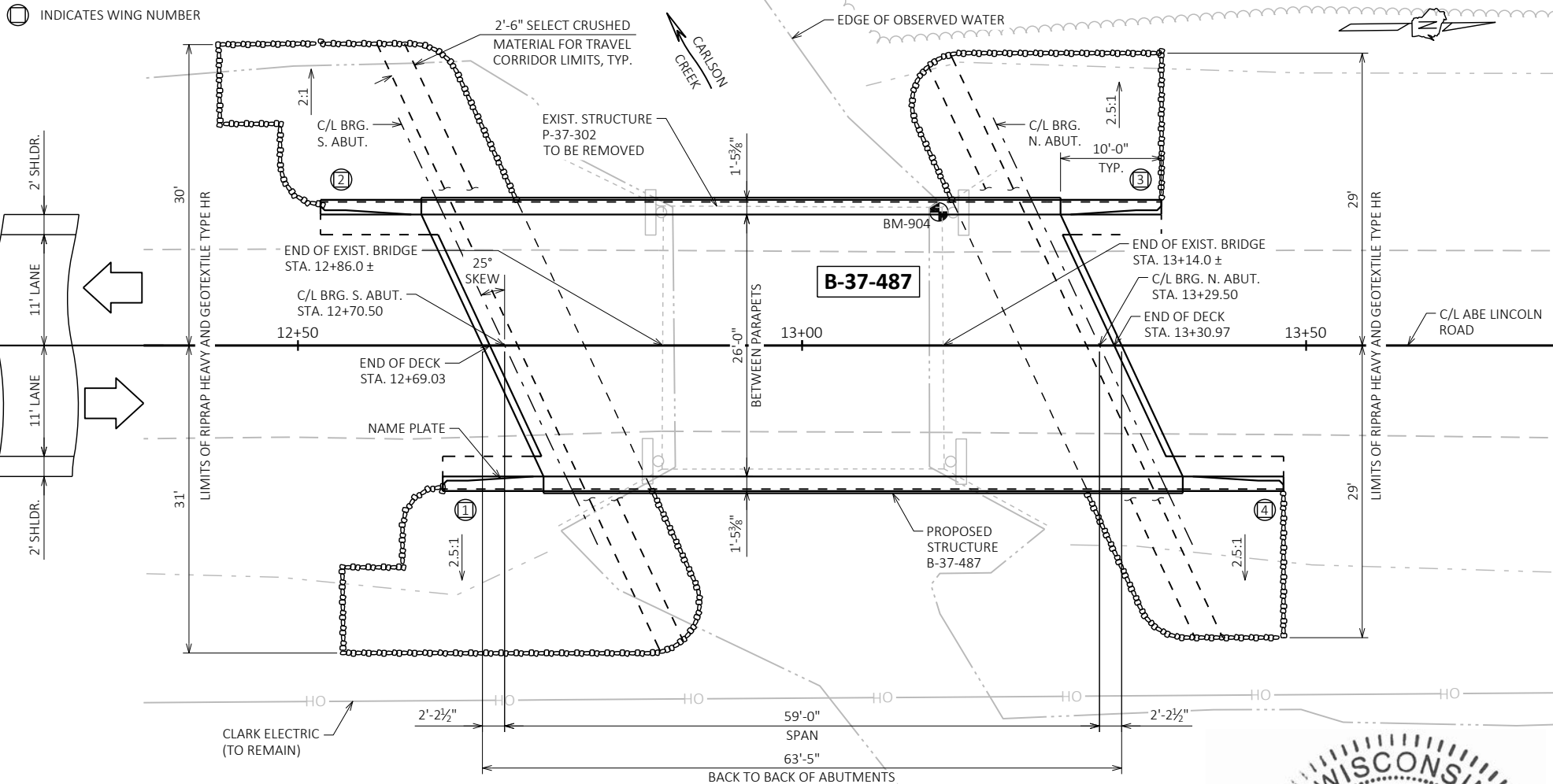
STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

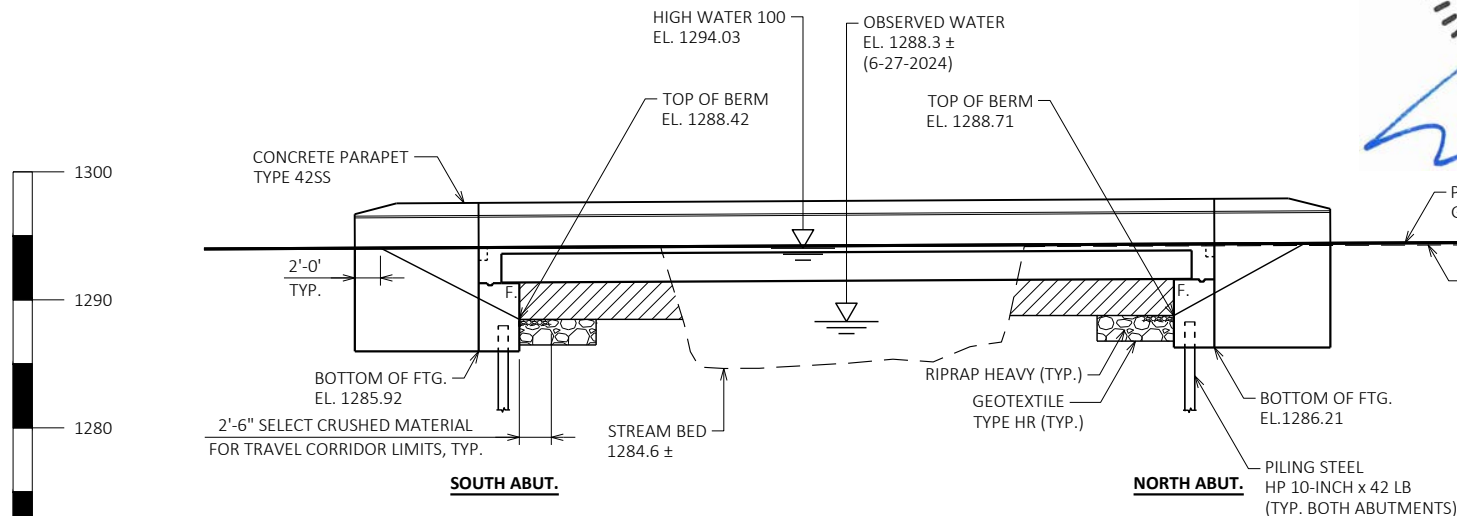
DATE 3/4/2024 PLATE NO. W5-52.10

INDICATES WING NUMBER



PLAN

(SINGLE SPAN 27-INCH PRESTRESSED BOX GIRDER BRIDGE)

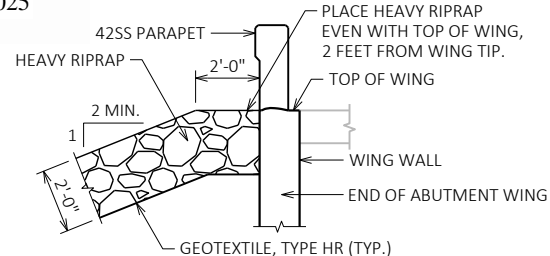


ELEVATION

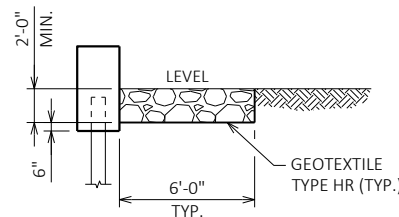
(NORMAL TO CARLSON CREEK)
(LOOKING WEST)

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
903	10+20.74, 11.7' LT.	CAPPED REBAR	1294.00
904	13+13.57, 13.2' LT.	BM/NAME PLATE BOLT	1293.56



TYPICAL FILL SECTION AT WING TIPS



RIPRAP DETAIL

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.20
OPERATING RATING: RF = 1.56
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

27-INCH PRESTRESSED BOX GIRDERS:
CONCRETE MASONRY $f'_c = 8,000$ PSI
STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB. SEATED IN PRE-BORED HOLES CORED A MINIMUM OF 3 FEET INTO SOUND GRANITE. PILE DRIVING NOT REQUIRED. TEMPORARY CASING REQUIRED.
ESTIMATED 16' LONG AT SOUTH ABUT.
ESTIMATED 11' LONG AT NORTH ABUT.

**THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS 165 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

HYDRAULIC DATA

100-YEAR FREQUENCY:

$Q_{100} = 1,200$ C.F.S.
 $V_{100} = 8.4$ F.P.S.
 $HW_{100} = EL. 1294.03$
WATERWAY AREA = 144 SQ. FT.
DRAINAGE AREA = 4.8 SQ. MI.
OVERTOPPING FREQUENCY = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

$Q_2 = 300$ C.F.S.
 $V_2 = 2.4$ F.P.S.
 $HW_2 = EL. 1290.85$

TRAFFIC DATA

ABE LINCOLN ROAD

ADT = 90 (2026)
ADT = 100 (2046)
R.D.S. = 55 MPH

LIST OF DRAWINGS:

- GENERAL PLAN
- CROSS SECTION & QUANTITIES
- SUBSURFACE EXPLORATION
- SOUTH ABUTMENT
- SOUTH ABUTMENT DETAILS
- NORTH ABUTMENT
- NORTH ABUTMENT DETAILS
- 27" PRESTRESSED BOX GIRDER DETAILS 1
- 27" PRESTRESSED BOX GIRDER DETAILS 2
- 27" PRESTRESSED BOX GIRDER DETAILS 3
- SUPERSTRUCTURE
- SUPERSTRUCTURE DETAILS
- SINGLE SLOPE PARAPET 42SS

STRUCTURE DESIGN CONTACTS:

AARON BONK (WISDOT BOS) 608-261-0261
ERIC PRICE (CORRE, INC.) 608-826-6146

NO.	DATE	REVISION	BY
CORRE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED		08/21/25	DATE
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-37-487			
ABE LINCOLN ROAD OVER CARLSON CREEK			
COUNTY	MARATHON	TOWN	EAU PLEINE AND BRIGHTON
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION			
DESIGNED BY	SMS	DESIGNED CK'D	ETP
DRAWN BY	ETP	PKF	PLANS CK'D
GENERAL PLAN			SHEET 1 OF 13

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 $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-37-487" SHALL BE THE EXISTING GROUNDLINE.

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

AN AVERAGE DECK THICKNESS OF $6\frac{3}{8}$ " WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

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 EXISTING STRUCTURE P-37-302, TO BE REMOVED, IS A SINGLE SPAN STEEL GIRDER BRIDGE, 28.0 FT. LONG WITH A 23.0 FT. CLEAR WIDTH.

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

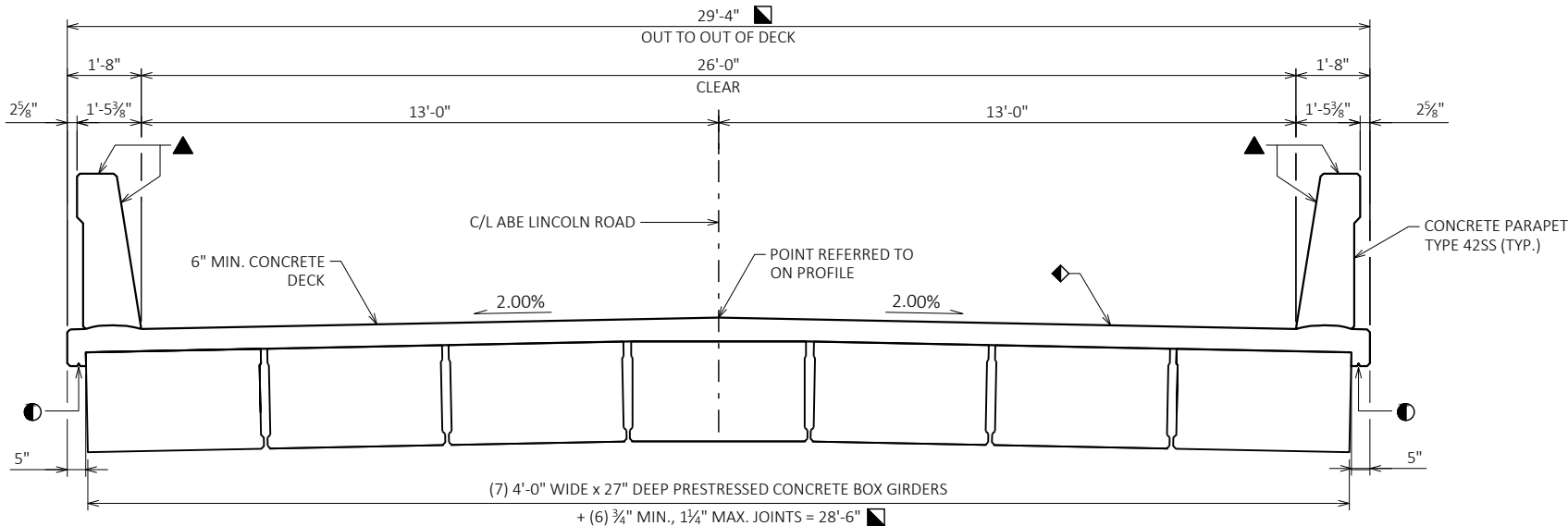
ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.

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

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

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.

CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS. CONCRETE POURED UNDERWATER SHALL NOT EXCEED 10.0 FEET IN DEPTH UNLESS APPROVED OTHERWISE.

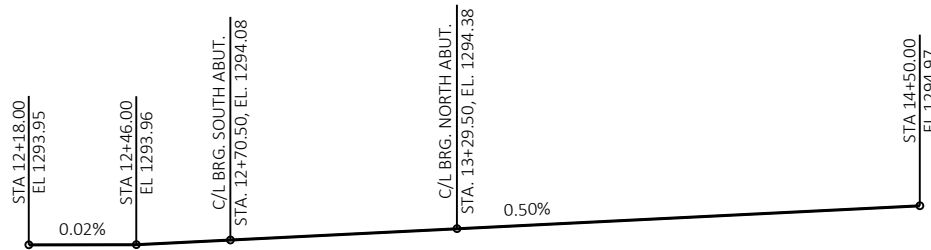


LEGEND

- DRIP EDGE REQ'D. EXTEND 6" FROM F.F. OF ABUTMENT BODY.
- ◆ COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS.
- DIMENSION ASSUMES 1" JOINT WIDTH. JOINT WIDTH DIMENSIONS MAY VARY DUE TO $\pm \frac{1}{4}$ " JOINT TOLERANCES.
- ▲ COAT FRONT FACE AND TOP OF PARAPETS WITH "PIGMENTED SURFACE SEALER".

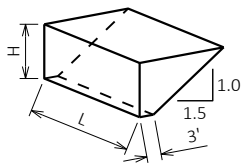
CROSS SECTION THRU BRIDGE

(LOOKING NORTH)



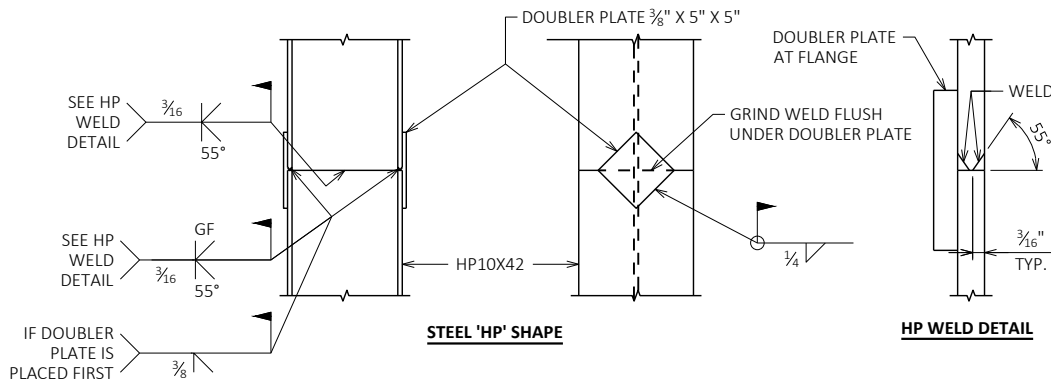
PROFILE GRADE LINE

(ABE LINCOLN ROAD)



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)
 $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)$
 $V_{CY} = V_{CF}(EF)/27$
 $V_{TON} = V_{CY}(2.0)$

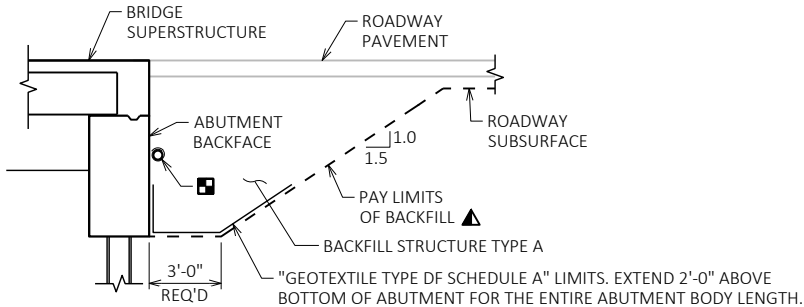


'HP' PILE DETAILS

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUTMENT	NORTH ABUTMENT	SUPER.	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS P-37-302	EACH	--	--	--	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-37-487	EACH	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	145	145	--	290
502.0100	CONCRETE MASONRY BRIDGES	CY	37.4	37.5	62.7	138
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	--	180	180
502.3210	PIGMENTED SURFACE SEALER	SY	10	10	62	82
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,070	2,070	--	4,140
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,010	2,010	7,690	11,710
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	7	7	--	14
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	10	--	20
550.0010	PRE-BORING UNCONSOLIDATED MATERIALS	LF	84	54	--	138
550.1100	PIILING STEEL HP 10-INCH X 42 LB	LF	96	66	--	162
606.0300	RIPRAP HEAVY	CY	105	80	--	185
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	95	95	--	190
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	31	31	--	62
645.0120	GEOTEXTILE TYPE HR	SY	175	135	--	310
SPV.0090	PRESTRESSED GIRDER BOX TYPE 27-INCH	LF	--	--	418	418
SPV.0195	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	10	10	--	20
	NON-BID ITEMS					
	FILLER	SIZE	--	--	--	1/2"

ALL ITEMS ARE CATEGORY 0020

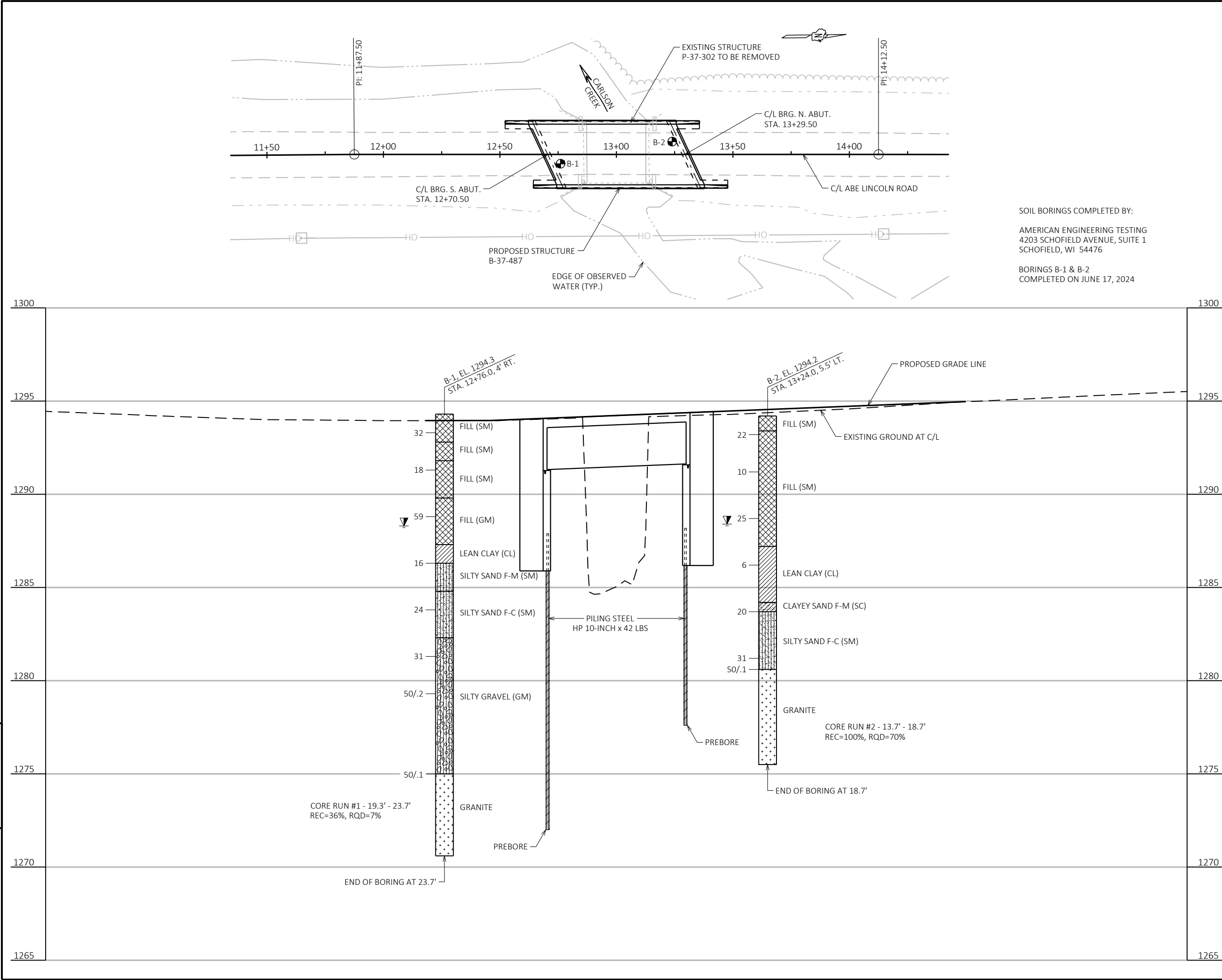


TYPICAL SECTION THRU ABUTMENT

▲ 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.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487			
	DRAWN BY	PKF	PLANS CK'D ETP
CROSS SECTION & QUANTITIES		SHEET 2 OF 13	



STATE PROJECT NUMBER

6678-02-70

MATERIAL SYMBOLS

ASPHALT

CONCRETE

SAND

BOULDERS OR COBBLES

SHALE

TOPSOIL

FILL

CLAY

LIMESTONE

SANDSTONE

PEAT

GRAVEL

SILT

BEDROCK (UNKNOWN)

IGNEOUS/META

LEGEND OF BORING

BORING #/EL. STA./OFFSET

ST

0.25

17

F-C

COBBLE OR BOULDER

WEATHERED LIMESTONE

CORE RUN #1 - 24'-29'

REC=80%, RQD=72%

(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

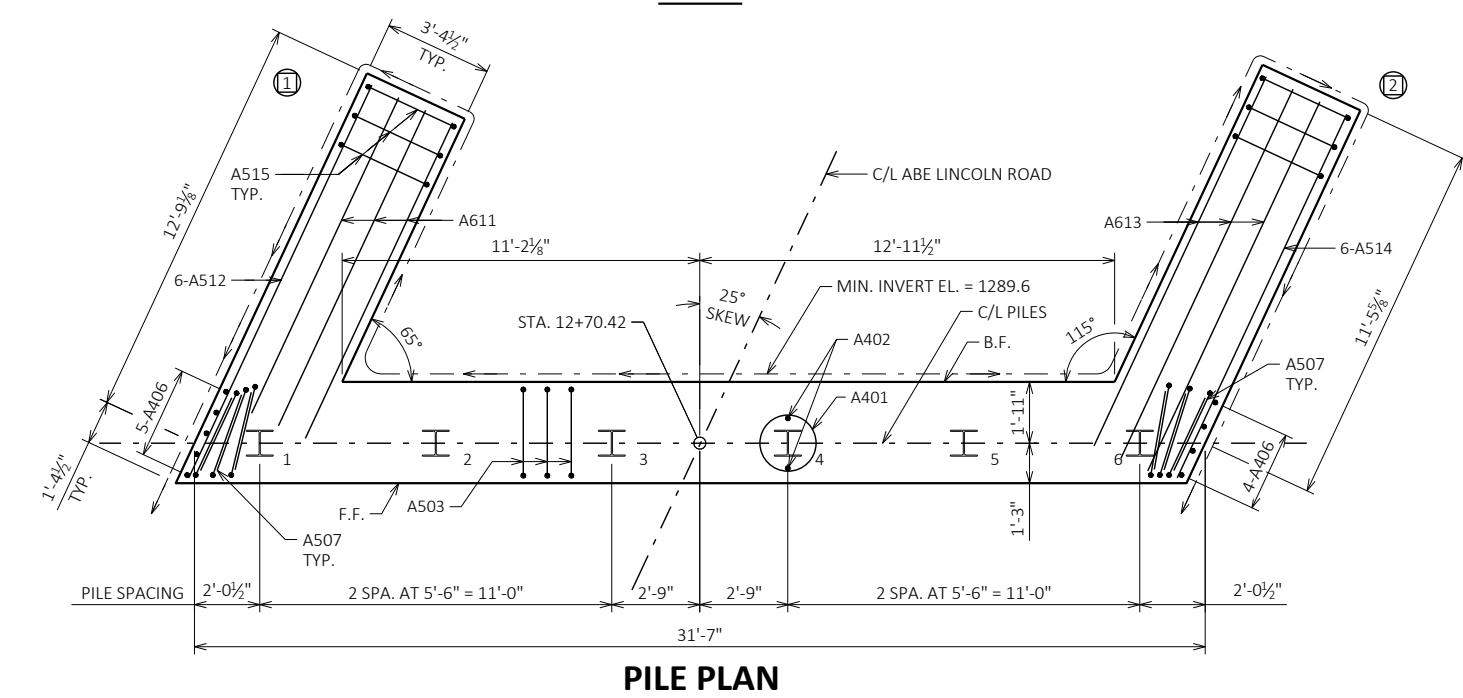
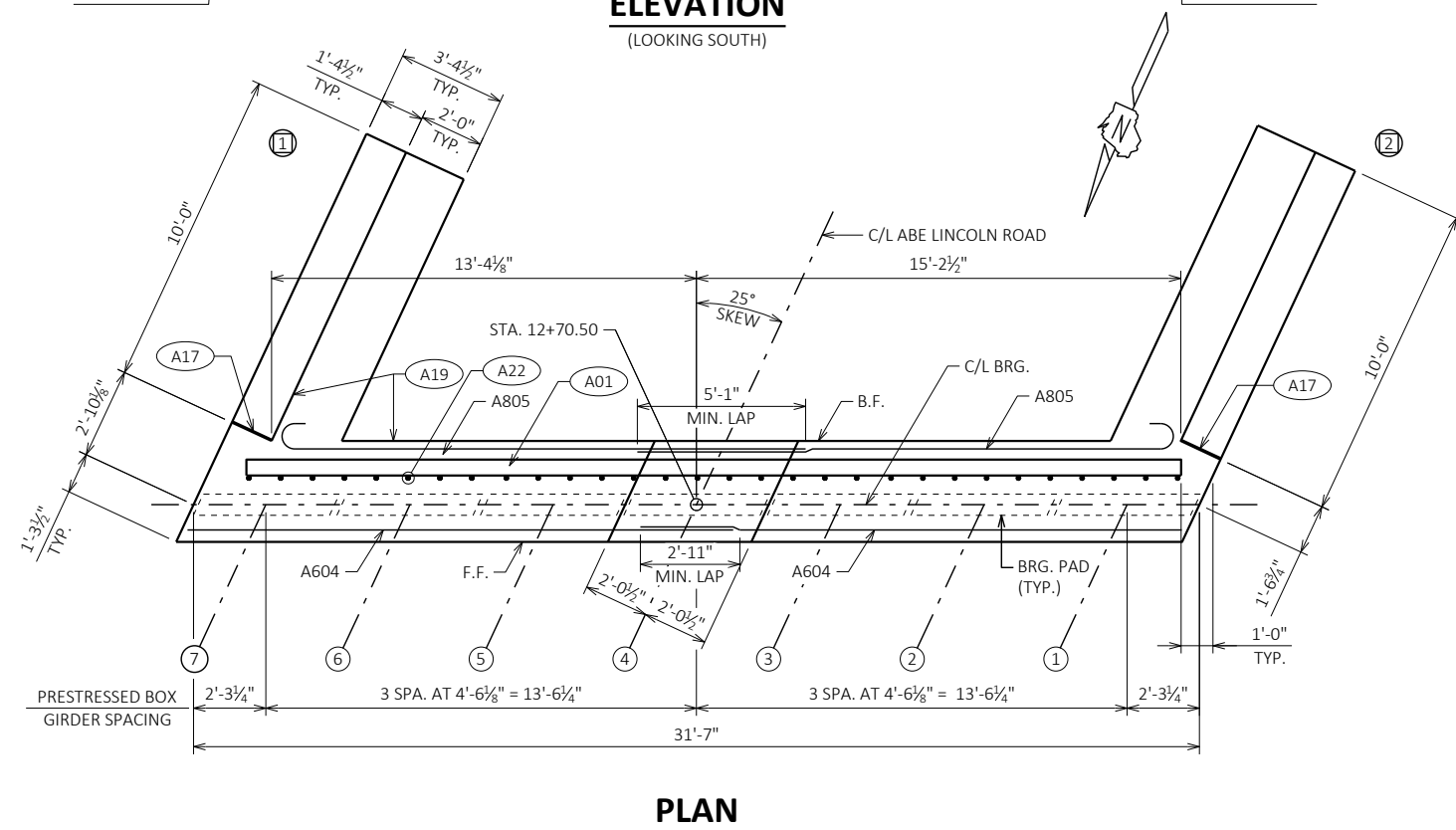
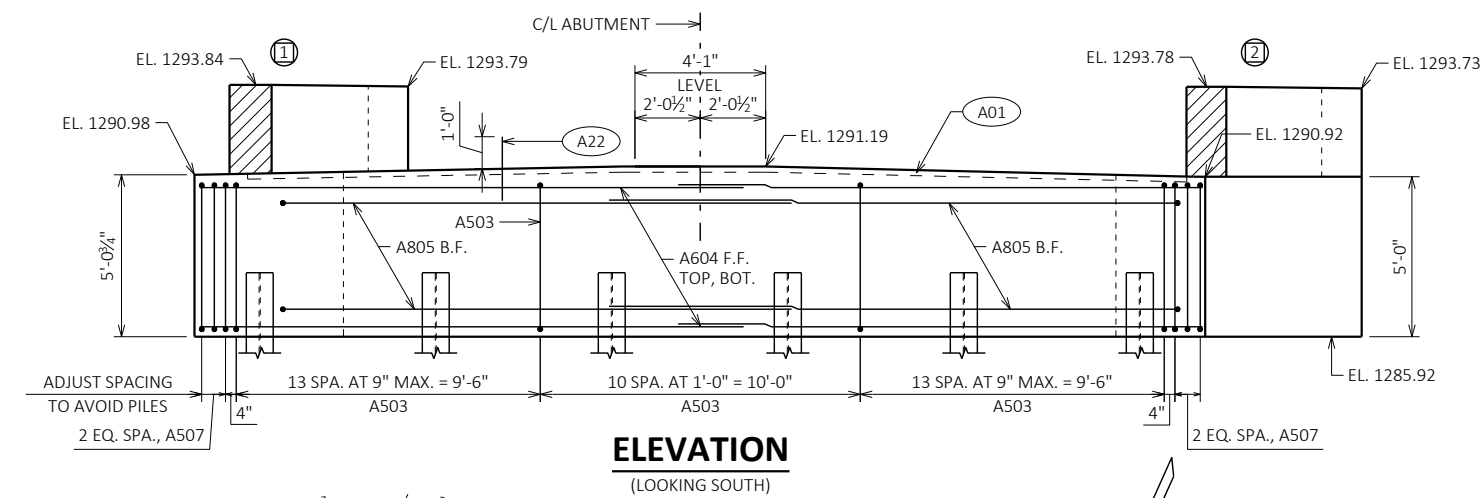
ABBREVIATIONS

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.

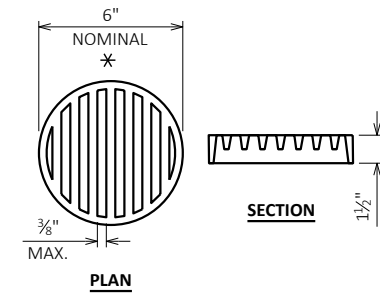
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487			
DRAWN BY		PKF	PLANS CK'D ETP
SUBSURFACE EXPLORATION		SHEET 3 OF 13	



LEGEND

-  INDICATES WING NUMBER
-  INDICATES GIRDER NUMBER
-  CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.
-  SUPPORT ABUTMENT ON PILING STEEL HP 10-INCH x 42 LB SEATED IN PRE-BORED HOLES CORED A MINIMUM OF 3 FEET INTO SOUND GRANITE. ESTIMATED 16' LONG. SEE ADDITIONAL FOUNDATION DATA ON SHEET 1.
-  PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
-  1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/2" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
-  18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
-  A510 BARS @ 1'-0". THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

B.F. DENOTES BACK FACE
F.F. DENOTES FRONT FACE

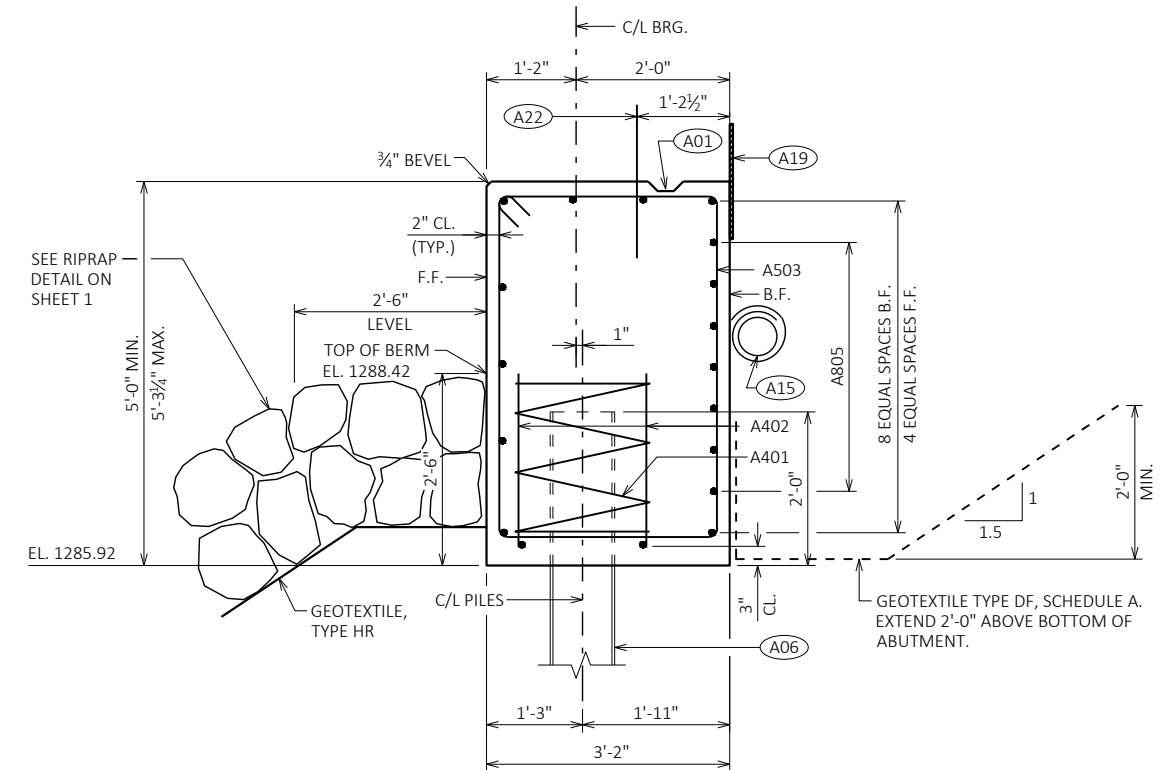


RODENT SHIELD DETAIL

- * 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 COMMERCIALY 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.



SECTION THRU BODY

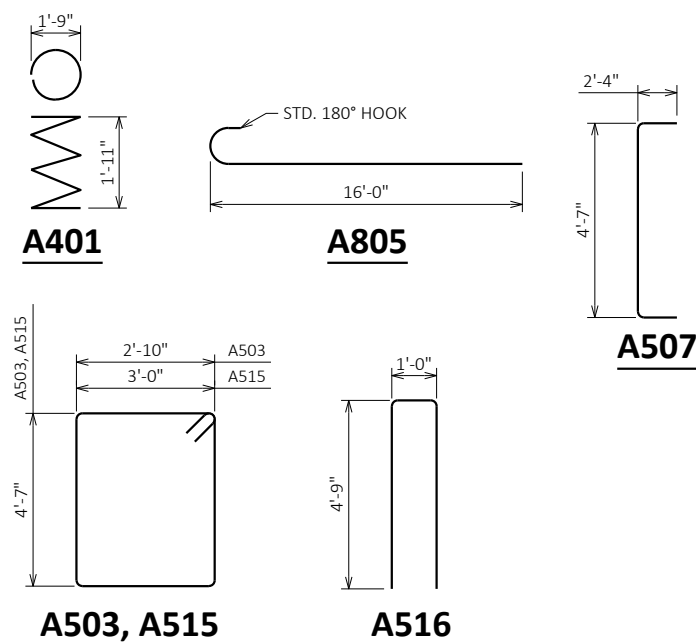
HORIZONTAL BARS NOT OTHERWISE IDENTIFIED
ARE A604 BARS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487			
		DRAWN BY	PKF PLANS CK'D ETP
SOUTH ABUTMENT		SHEET 4 OF 13	

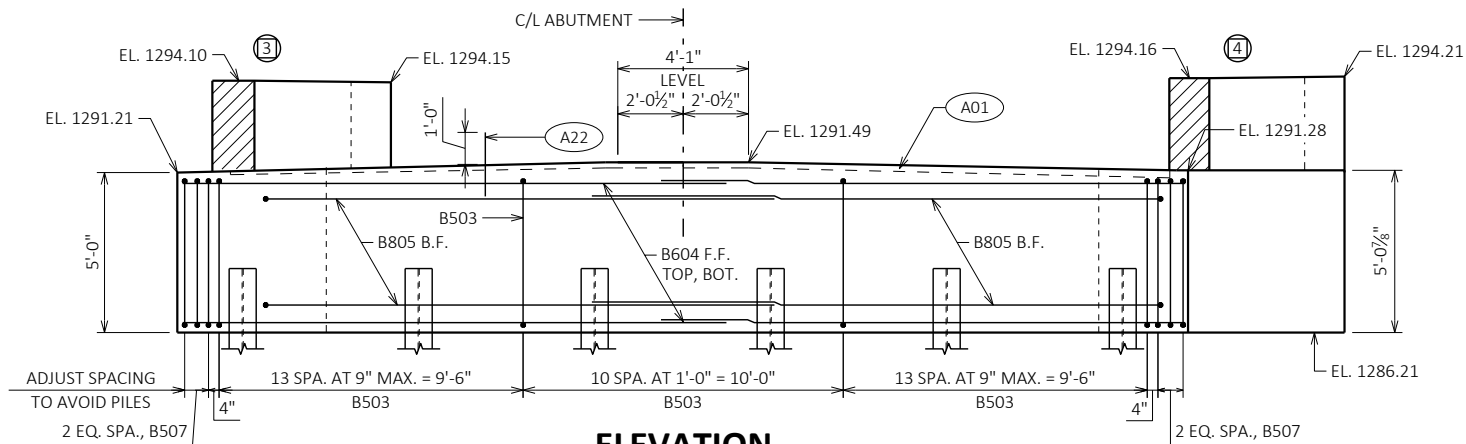
BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
UNCOATED BARS					TOTAL WEIGHT = 2,070 LBS
A401	6	28'-0"	X		BODY - AT PILES - 1 PER PILE VERT.
A402	12	2'-3"			BODY - AT PILES - 2 PER PILE VERT.
A503	37	15'-6"	X		BODY - STIRRUPS VERT.
A604	22	17'-1"			BODY - TOP, F.F. & BOT. HORIZ.
A805	14	16'-11"	X		BODY - B.F. HORIZ.
A406	9	4'-7"			BODY - ENDS VERT.
A507	12	9'-0"	X		BODY - STIRRUPS - ENDS VERT.
COATED BARS					TOTAL WEIGHT = 1,310 LBS
A510	30	2'-0"			BODY - TOP VERT.
A611	8	11'-0"			WING 1 FTG. - B.F. & TOP HORIZ.
A512	6	13'-7"			WING 1 FTG. - F.F. HORIZ.
A613	8	12'-11"			WING 2 FTG. - B.F. & TOP HORIZ.
A514	6	12'-6"			WING 2 FTG. - F.F. HORIZ.
A515	21	15'-10"	X		WINGS 1 & 2 FTG. - STIRRUPS VERT.
A516	28	10'-3"	X		WINGS - STIRRUPS VERT.
A417	14	9'-8"			WINGS - F.F. & B.F. HORIZ.
A618	4	9'-8"			WINGS - TOP HORIZ.

LEGEND

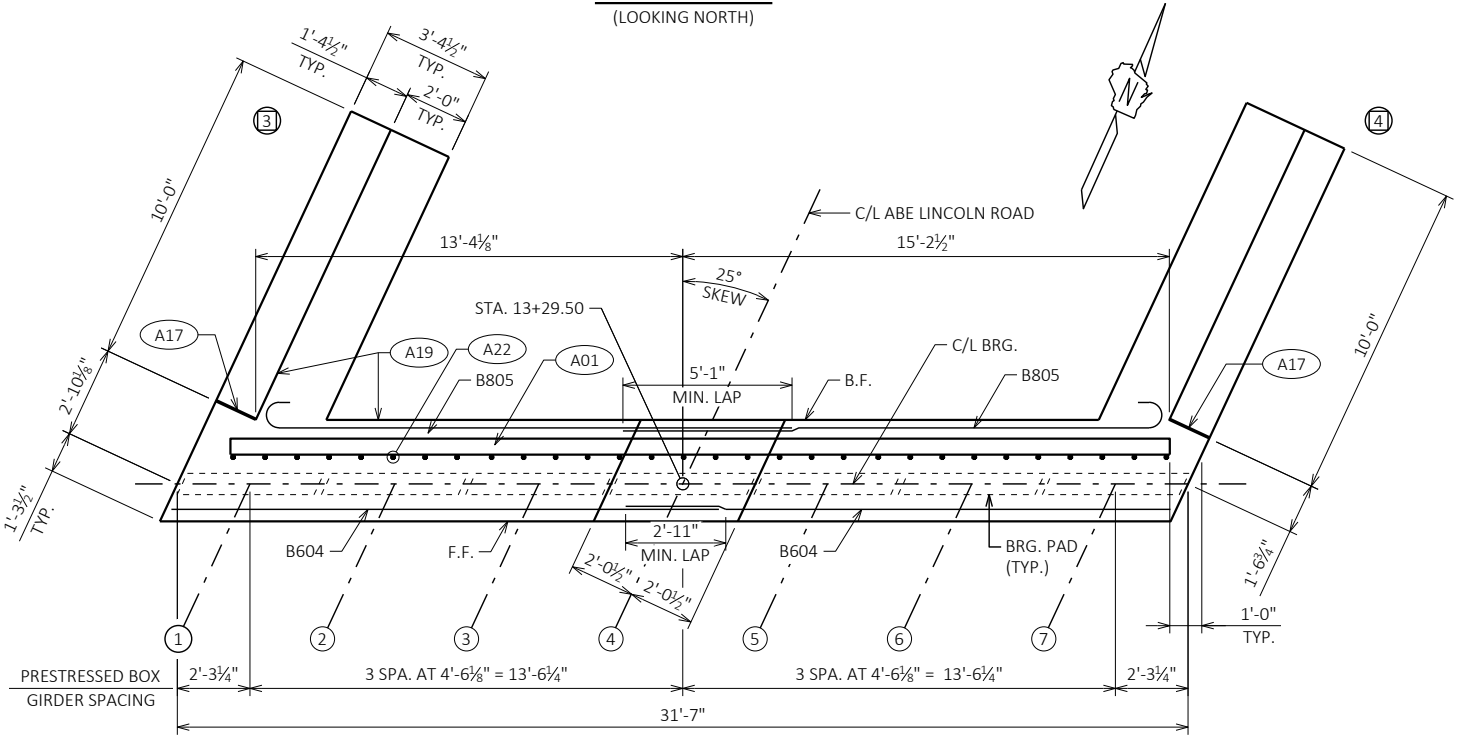
- B.F. DENOTES BACK FACE
F.F. DENOTES FRONT FACE



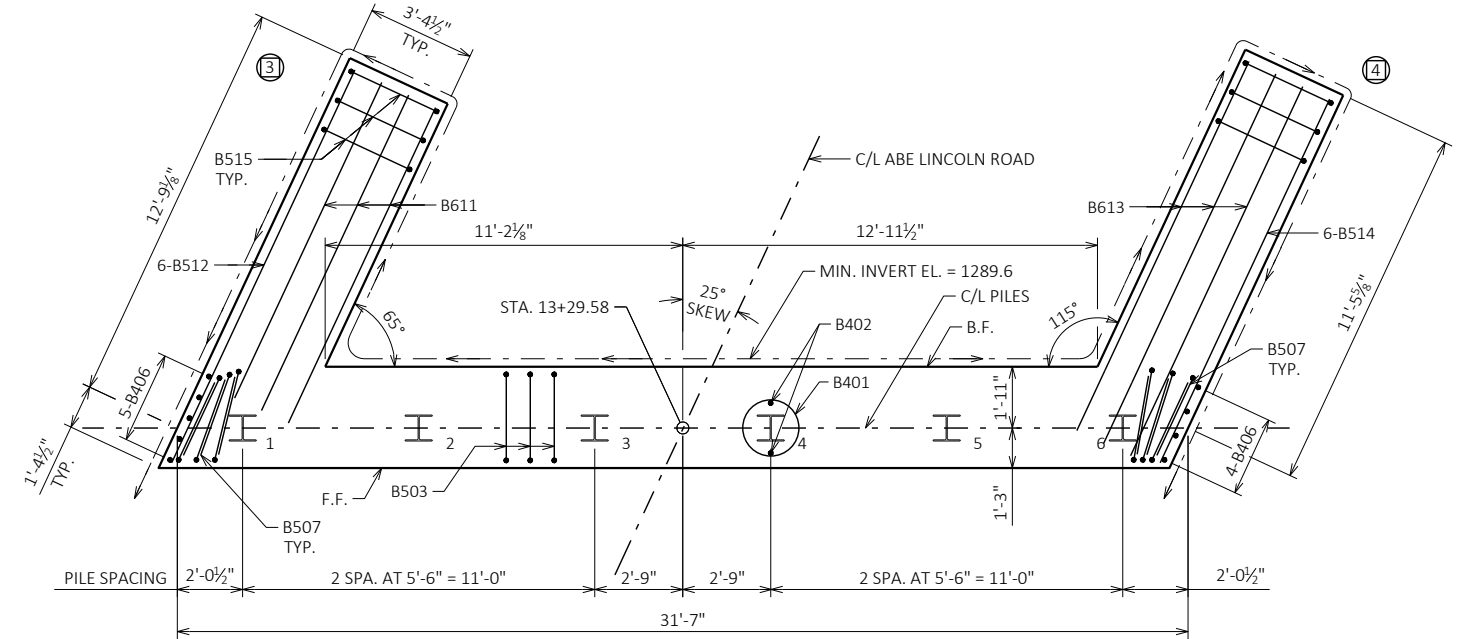
NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-37-487					
			DRAWN BY	PKF	PLANS CK'D ETP
SOUTH ABUTMENT DETAILS				SHEET 5 OF 13	



ELEVATION
(LOOKING NORTH)



PLAN

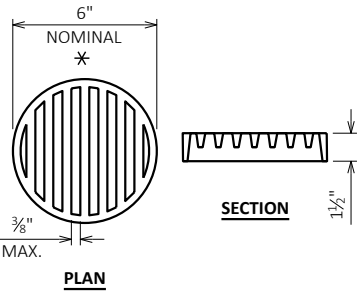


PILE PLAN

LEGEND

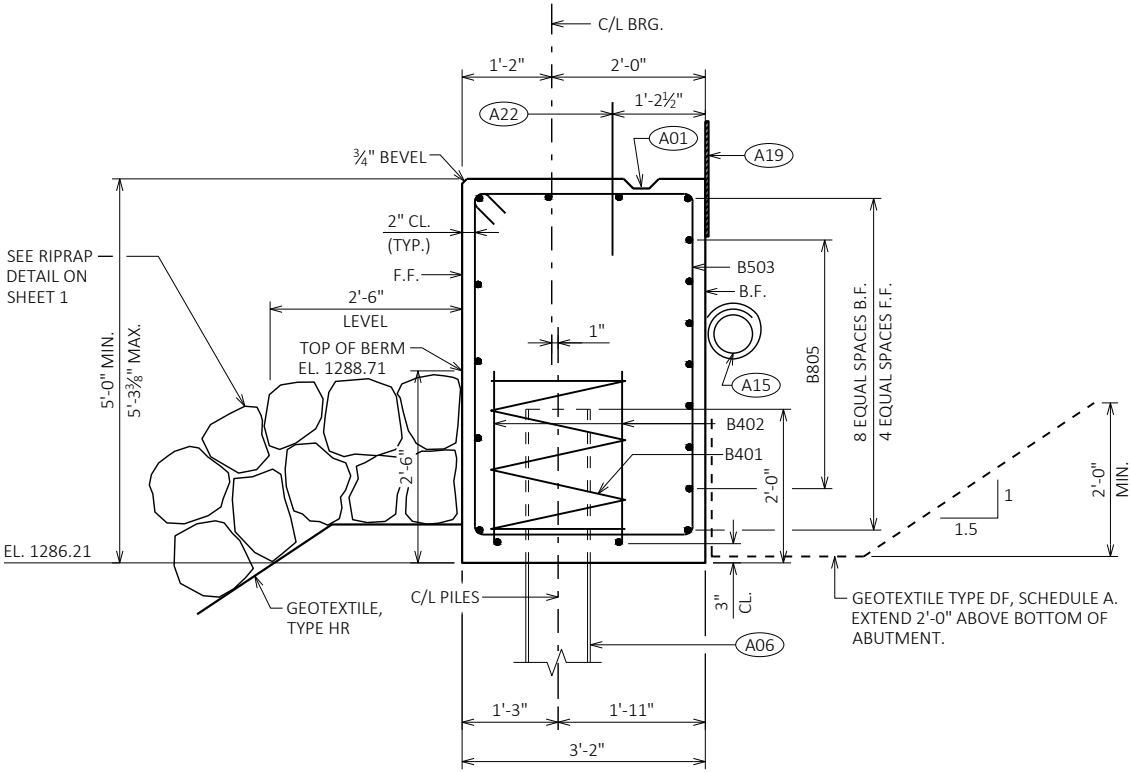
- INDICATES WING NUMBER
- INDICATES GIRDER NUMBER
- A01 CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.
- A06 SUPPORT ABUTMENT ON PILING STEEL HP 10-INCH x 42 LB SEATED IN PRE-BORED HOLES CORED A MINIMUM OF 3 FEET INTO SOUND GRANITE. ESTIMATED 11' LONG. SEE ADDITIONAL FOUNDATION DATA ON SHEET 1.
- A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- A17 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- A22 B510 BARS @ 1'-0". THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

B.F. DENOTES BACK FACE
F.F. DENOTES FRONT FACE



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 COMMERCIALY 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.



SECTION THRU BODY

HORIZONTAL BARS NOT OTHERWISE IDENTIFIED
ARE B604 BARS

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487			
DRAWN BY		PKF	PLANS CK'D ETP
NORTH ABUTMENT		SHEET 6 OF 13	

BILL OF BARS - NORTH ABUTMENT

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
UNCOATED BARS					TOTAL WEIGHT = 2,070 LBS
B401	6	28'-0"	X		BODY - AT PILES - 1 PER PILE VERT.
B402	12	2'-3"			BODY - AT PILES - 2 PER PILE VERT.
B503	37	15'-6"	X		BODY - STIRRUPS VERT.
B604	22	17'-1"			BODY - TOP, F.F. & BOT. HORIZ.
B805	14	16'-11"	X		BODY - B.F. HORIZ.
B406	9	4'-7"			BODY - ENDS VERT.
B507	12	9'-0"	X		BODY - STIRRUPS - ENDS VERT.
COATED BARS					TOTAL WEIGHT = 1,310 LBS
B510	30	2'-0"			BODY - TOP VERT.
B611	8	11'-0"			WING 3 FTG. - B.F. & TOP HORIZ.
B512	6	13'-7"			WING 3 FTG. - F.F. HORIZ.
B613	8	12'-11"			WING 4 FTG. - B.F. & TOP HORIZ.
B514	6	12'-6"			WING 4 FTG. - F.F. HORIZ.
B515	21	15'-10"	X		WINGS 3 & 4 FTG. - STIRRUPS VERT.
B516	28	10'-5"	X		WINGS - STIRRUPS VERT.
B417	14	9'-8"			WINGS - F.F. & B.F. HORIZ.
B618	4	9'-8"			WINGS - TOP HORIZ.

THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

LEGEND

- A01

OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6 (18" RUBBERIZED MEMBRANE WATERPROOFING AT B.F. & ¾" "V" GROOVE AT F.F. IF JOINT IS USED).
- A15

PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- A17

½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ½" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- A19

18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- A21

FOR PPT. BARS & DIMENSIONS SEE SHEET NO. 13.

B.F. DENOTES BACK FACE
F.F. DENOTES FRONT FACE

PLAN - WING 3

PLAN - WING 4

ELEVATION - WING 3

ELEVATION - WING 4

SECTION THRU WING 3

SECTION THRU WING 4

B401

B805

B507

B503, B515

B516

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487			
DRAWN BY		PKF	PLANS CK'D ETP
NORTH ABUTMENT DETAILS		SHEET 7 OF 13	

NOTES

THE CONCRETE MIX FOR THE PRESTRESSED BOX GIRDERS SHALL CONFORM TO SECTION 503.2.2 OF THE STANDARD SPECIFICATIONS.

AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO THE BOTTOM OF THE GIRDERS AND THE EXTERIOR FACE OF EXTERIOR GIRDERS. DO NOT APPLY CONCRETE SEALER OR EPOXY TO THE SHEAR KEY OR THE TOP OF GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR CONCRETE ABUTMENTS, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER.

FOUR WAY SLING MUST BE USED TO ENGAGE ALL 4 LIFTING DEVICES ON BOTH ENDS OF UNITS.

POST-TENSIONING OF THE TRANSVERSE TENDONS SHALL NOT BEGIN UNTIL THE GROUT BETWEEN THE PRECAST BOX GIRDERS HAS BEEN ALLOWED TO CURE FOR 48 HOURS AND GROUT HAS REACHED A COMPRESSIVE STRENGTH OF 3,000 PSI.

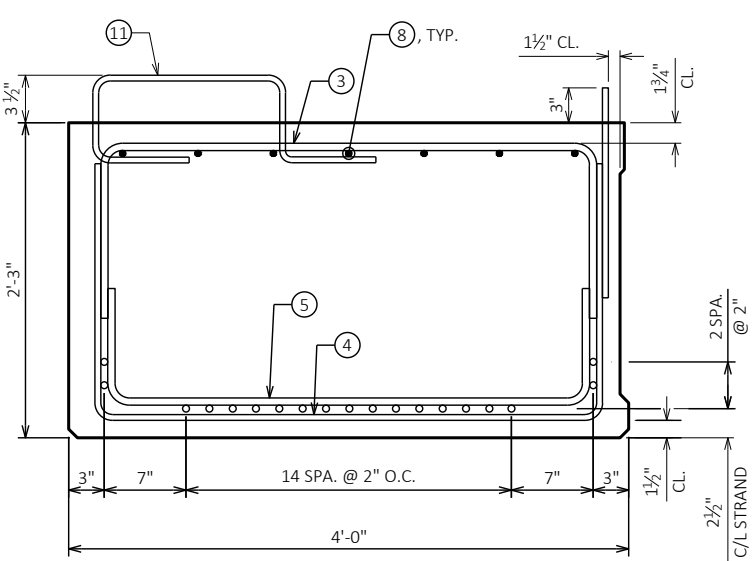
SEAL WASHER SHALL BE SPONGE NEOPRENE GASKET 3/4" MIN. THICK. STRESS POCKETS SHALL BE FILLED WITH CHLORIDE FREE NON-SHRINK GROUT AFTER POST-TENSIONING.

TRANSITION BETWEEN CHANGING SLOPES OF POST-TENSIONING DUCTS SHALL BE PROVIDED BY EITHER A CIRCULAR OR PARABOLIC CURVE WITH A MINIMUM LENGTH OF 3'-0".

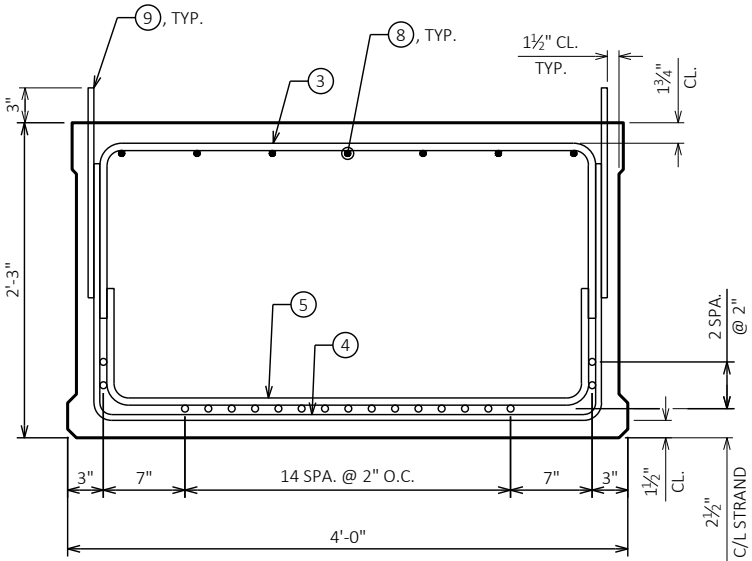
PRESTRESSING STRANDS SHALL BE 0.6" DIA. - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

LEGEND

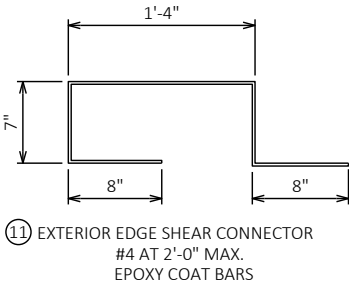
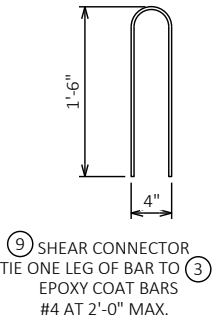
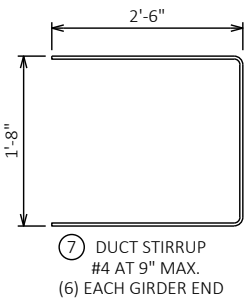
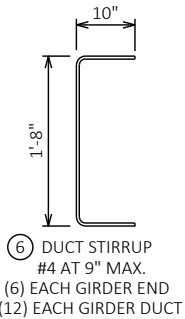
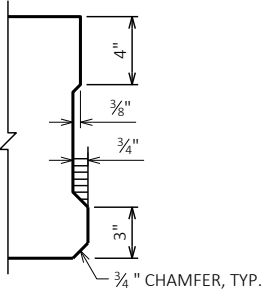
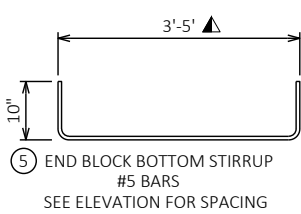
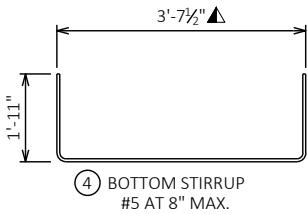
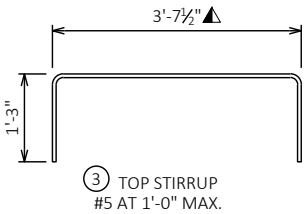
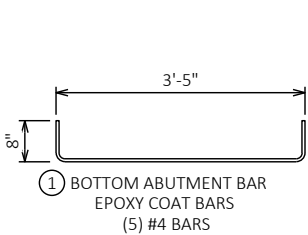
- ▲ DIMENSION GIVEN FOR STIRRUPS PERPENDICULAR TO THE PRESTRESSED BOX GIRDER LENGTH. ADJUST THE DIMENSION FOR STIRRUPS AT SKEWED PRESTRESSED BOX GIRDER ENDS.



SECTION THRU EXTERIOR GIRDER



SECTION THRU INTERIOR GIRDER



SHEAR KEY RECESS
DETAIL

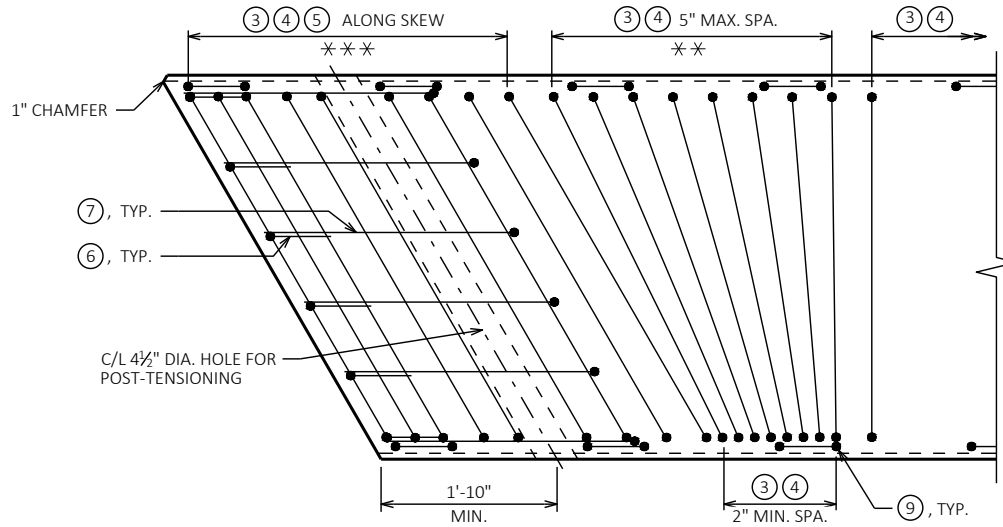
OMIT SHEAR KEY ON EXTERIOR FACE OF EXTERIOR GIRDERS.

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487		DRAWN BY PKF PLANS CK'D ETP	
27" PRESTRESSED BOX GIRDER DETAILS 1		SHEET 8 OF 13	

SCALE =

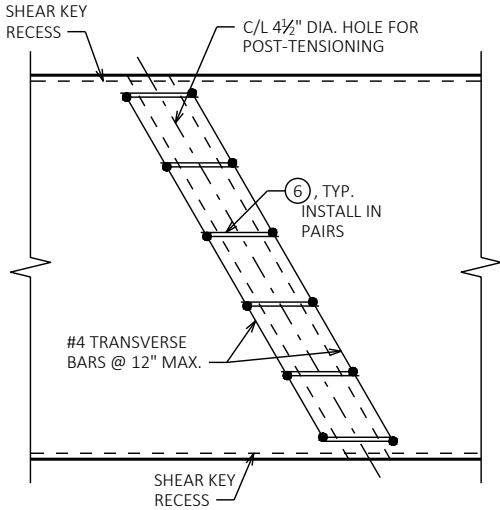
LEGEND

- ◆ BARS PLACED PARALLEL TO GIRDERS. SPACING IS PERPENDICULAR TO THE C/L OF THE GIRDERS.
- * * PLACE AT 5" MAX. SPACING UNTIL PERPENDICULAR TO THE C/L OF THE GIRDER.
- * * * PLACE ALONG SKEW FROM END OF PRESTRESSED BOX GIRDER UNTIL ALL END BLOCK BOTTOM STIRRUP BARS, (5), ARE PLACED.

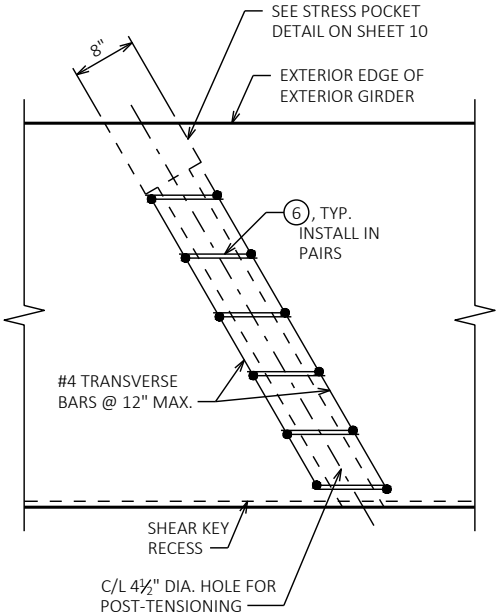


PART GIRDER PLAN WITH SKEW

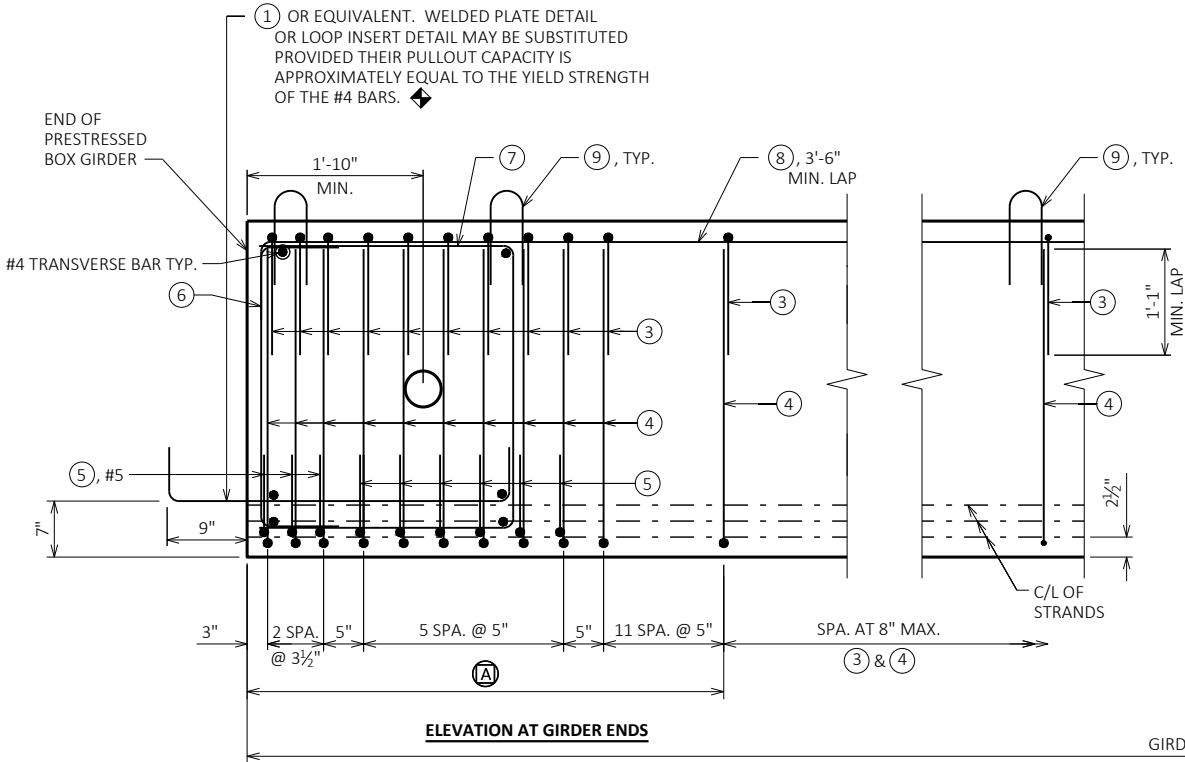
(1) & #4 TRANSVERSE BARS NOT SHOWN FOR CLARITY



INTERIOR GIRDER DUCT PLAN



EXTERIOR GIRDER DUCT PLAN

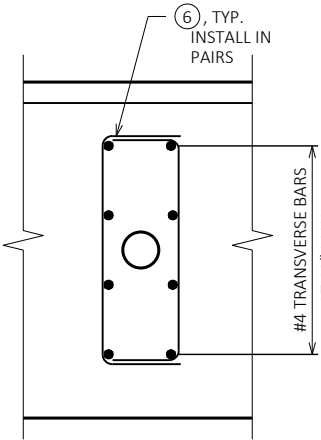


ELEVATION AT GIRDER ENDS

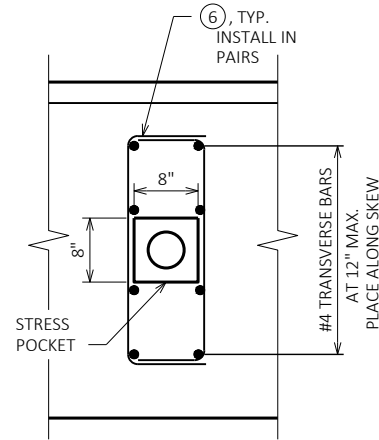
GIRDER LENGTH = "L"

GIRDER ELEVATION

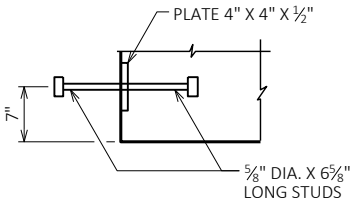
(A) DETAIL TYP. AT EACH END



INTERIOR GIRDER DUCT ELEVATION

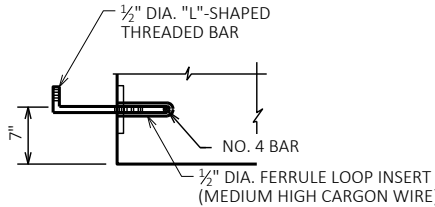


EXTERIOR GIRDER DUCT ELEVATION



WELDED PLATE DETAIL

(EQUIVALENT TO ONE #4 BAR)



LOOP INSERT DETAIL

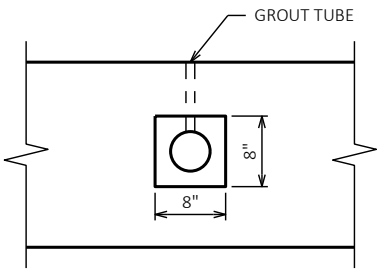
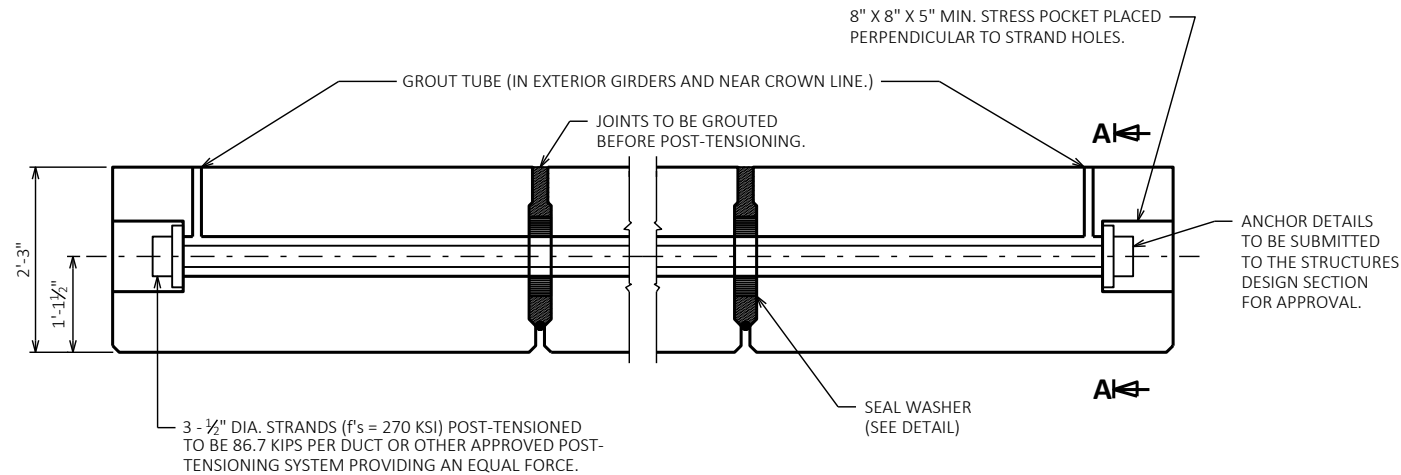
GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.)		CONC. STRGTH. f'c (P.S.I.)	DIA. OF STRAND (IN.)	UNDRAPED PATTERN		
			1/4 PT.	1/2 PT.			TOTAL NO. OF STRANDS	TOTAL INITIAL PRESTRESSED FORCE (KIPS)	f'c1 (P.S.I.)
1	1 - 7	59'-8"	0.2	0.3	8,000	0.6	19	835	*

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

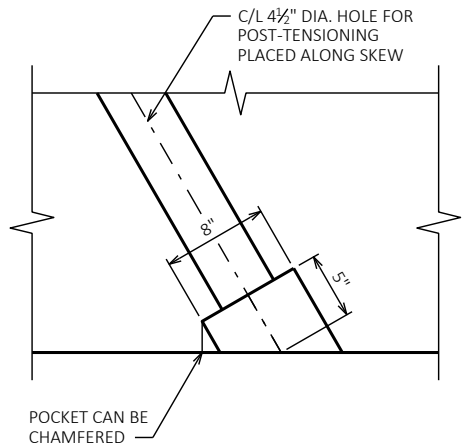
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487			
DRAWN BY		PKF	PLANS CK'D ETP
27" PRESTRESSED BOX GIRDER DETAILS 2		SHEET 9 OF 13	

SCALE =

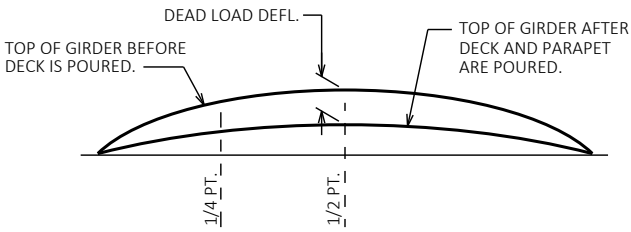
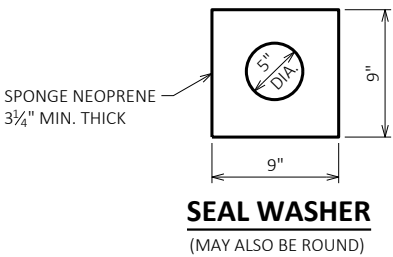


SECTION A-A

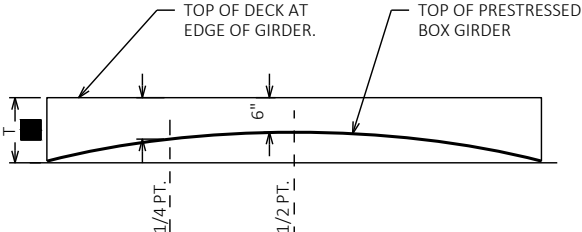
POST-TENSIONING DETAILS - ONE DUCT PER DIAPHRAGM



STRESS POCKET DETAIL



DEAD LOAD DEFLECTION DIAGRAM



DECK THICKNESS DIAGRAM

NOTES

NOTE: AN AVERAGE DECK THICKNESS OF 6 3/8" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

VARIATIONS TO THE GRADE LINE OVER 1/4" MUST BE SUBMITTED BY THE FIELD ENGINEER TO THE STRUCTURES DESIGN SECTION FOR REVIEW.

DEAD LOAD DEFLECTIONS ARE FOUND ON SHEET 9.

TO DETERMINE DECK THICKNESS AT GIRDER ENDS FOLLOW THIS PROCESS:

6" MIN. DECK SLAB THICKNESS
+ FIELD MEASURED GIRDER CAMBER (AT MID SPAN)
- DEADLOAD DEFLECTION (AT MIDSPAN)
= DECK THICKNESS, T

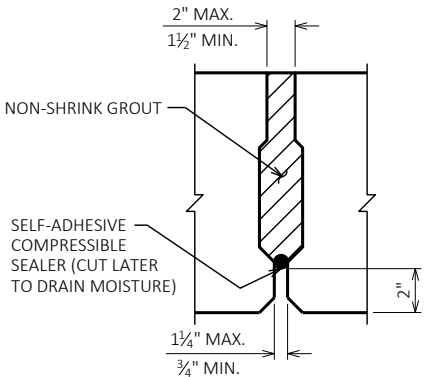
NOTE: PLAN DECK THICKNESS BASED ON THEORETICAL INITIAL CAMBER VALUE. 1/4 PT. MAY BE INTERPOLATED. USE FIELD MEASURED GIRDER CAMBER FOR ACTUAL DECK THICKNESS. THE 1/4 PT. IS INTERPOLATED BETWEEN DECK THICKNESS AT THE END OF DECK AND MIDSPAN.

* * 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	1.0	

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE FIELD MEASURED GIRDER CAMBER.

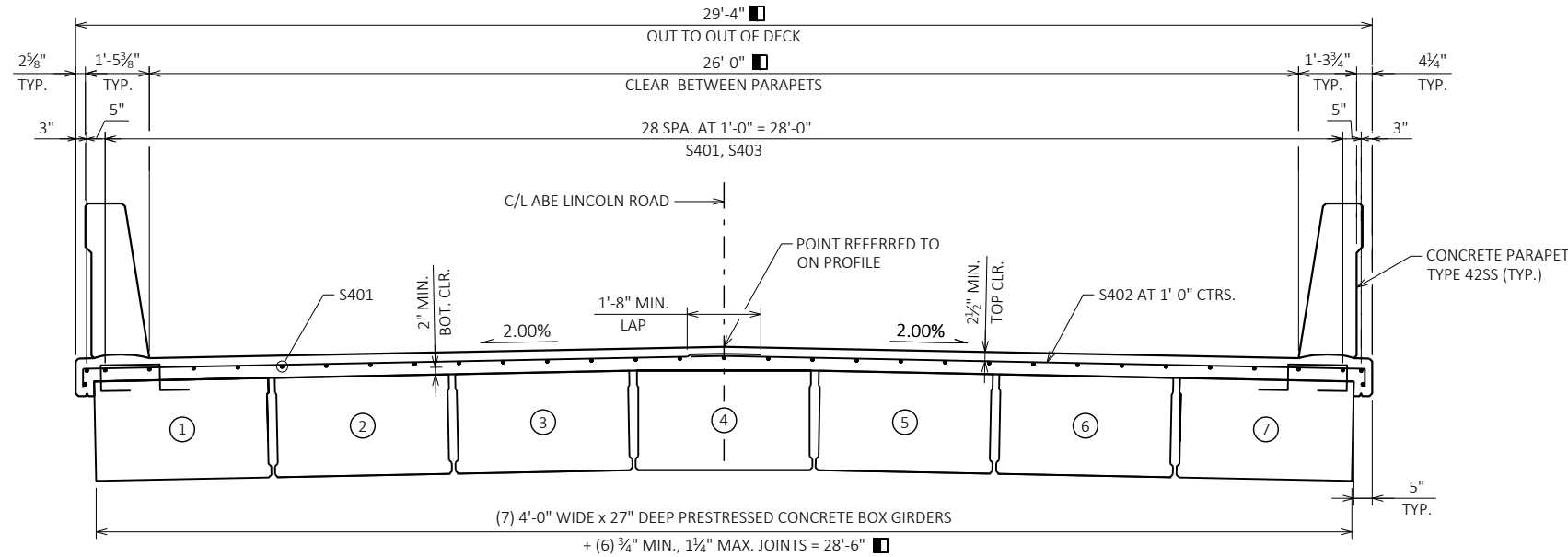
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



SHEAR KEY DETAIL

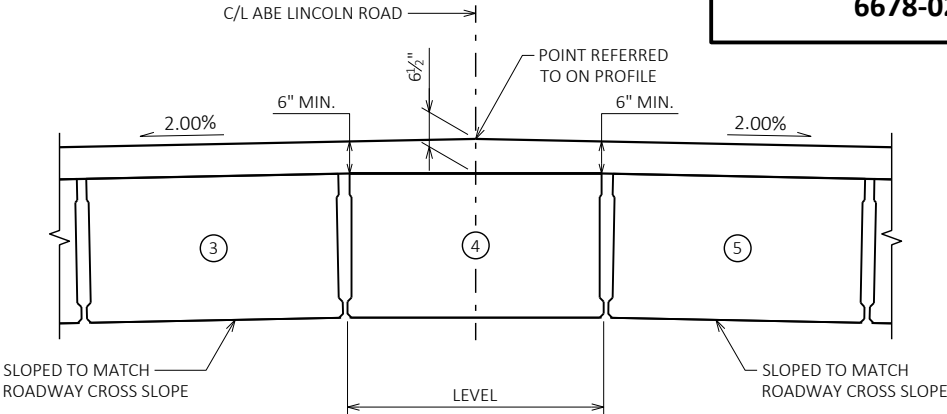
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487			
DRAWN BY		PKF	PLANS CK'D ETP
27" PRESTRESSED BOX GIRDER DETAILS 3		SHEET 10 OF 13	

SCALE =

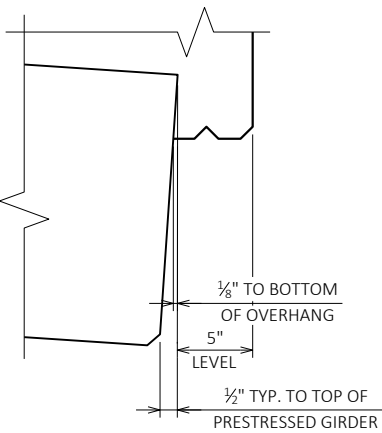


CROSS SECTION THRU BRIDGE

(LOOKING NORTH)

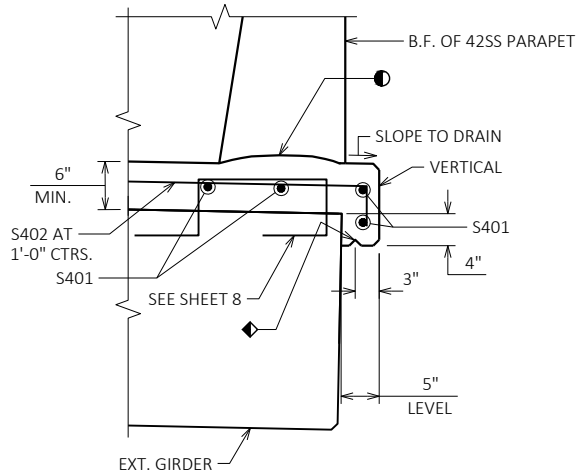


CROWN DETAIL AT LOCATION OF MIN. DECK THICKNESS



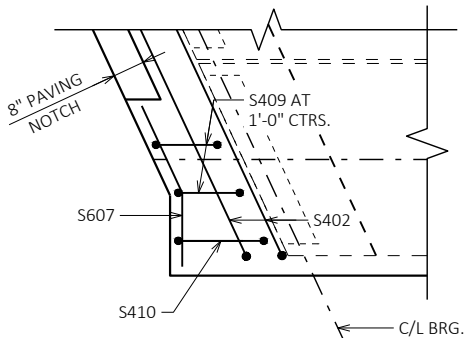
GIRDER EDGE DETAIL

(LOOKING NORTH)

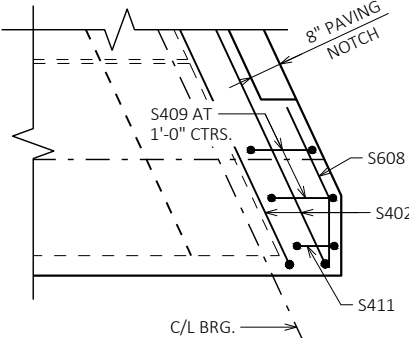


OVERHANG DETAIL

PARAPET REIN. NOT SHOWN FOR CLARITY



CORNER DETAIL AT WINGS 1 & 3

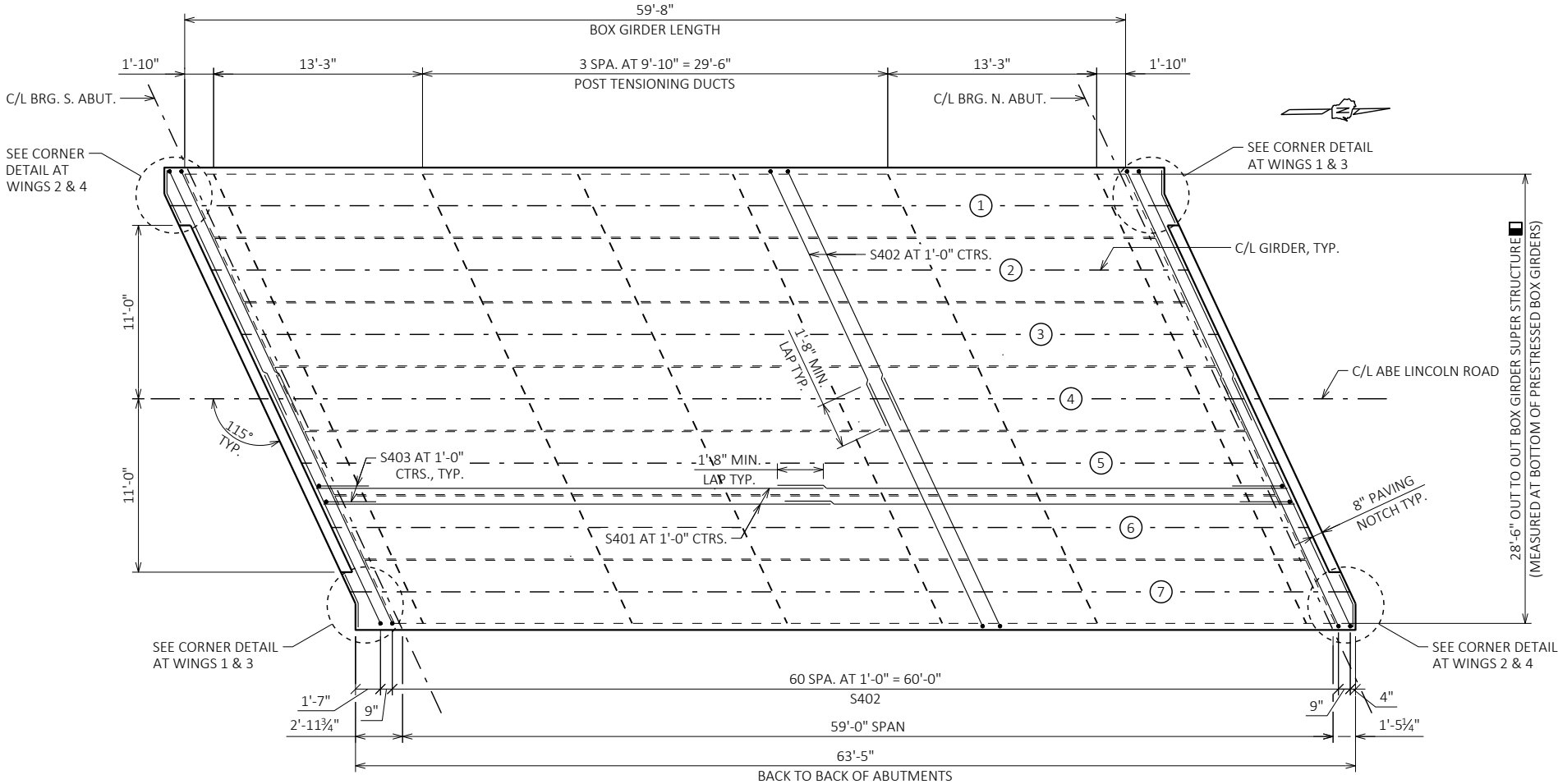


CORNER DETAIL AT WINGS 2 & 4

LEGEND

- INDICATES GIRDER NUMBER
- CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH
- ◆ 3/4" DRIP GROOVE. EXTEND GROOVE TO 6" FROM FRONT FACE OF ABUT DIAPHRAGM.
- DIMENSION ASSUMES 1" JOINT WIDTH. JOINT DIMENSIONS MAY VARY DUE TO ±1/4" JOINT TOLERANCES.
- B.F. DENOTES BACK FACE
FF. DENOTES FRONT FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487			
DRAWN BY		PKF	PLANS CK'D ETP
SUPERSTRUCTURE		SHEET 11 OF 13	



PLAN VIEW

BILL OF BARS - SUPERSTRUCTURE

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 7,690 LBS
S401	66	32'-5"			DECK - TOP LONG.
S402	126	16'-11"	X		DECK - TOP TRANS.
S403	66	4'-1"	X		DECK - TOP AT ABUTMENTS LONG.
S404	46	3'-8"	X		ABUTMENT DIAPHRAGMS & DECK VERT.
S405	46	6'-4"	X		ABUTMENT DIAPHRAGMS VERT.
**					S606 36 17'-10" ABUTMENT DIAPHRAGMS HORIZ.
					S607 2 3'-6" X DECK CORNERS NEAR WINGS 1 & 3 TRANS.
					S608 2 3'-6" X DECK CORNERS NEAR WINGS 2 & 4 TRANS.
					S409 8 8'-2" X ABUTMENT DIAPHRAGMS VERT.
					S410 2 9'-2" X ABUTMENT DIAPHRAGMS NEAR WINGS 1 & 3 VERT.
					S411 2 7'-2" X ABUTMENT DIAPHRAGMS NEAR WINGS 2 & 4 VERT.
					S520 192 4'-5" X PARAPETS VERT.
					S521 192 6'-8" X PARAPETS VERT.
***					S522 32 32'-5" PARAPETS LONG.

THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

LEGEND

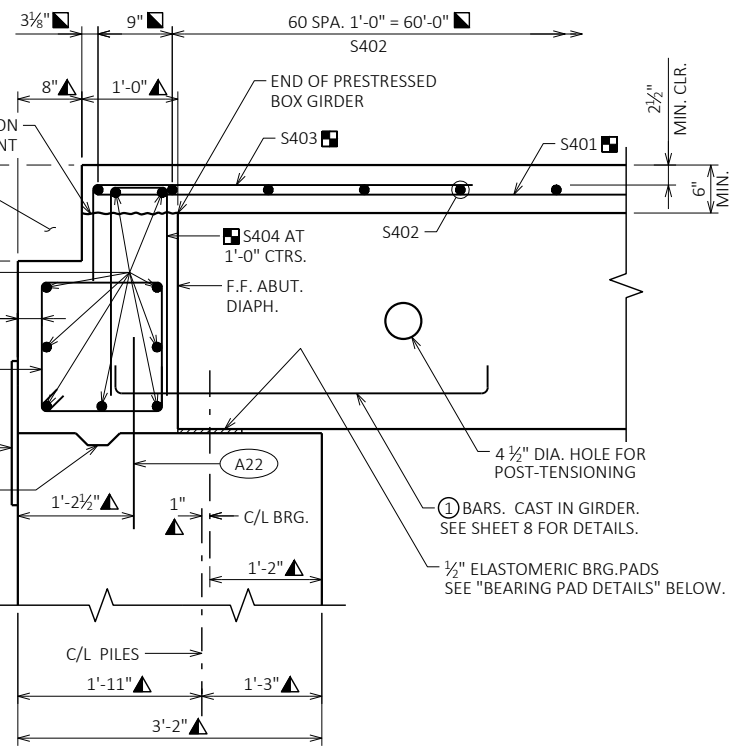
- INDICATES GIRDER NUMBER
- (A03) CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A22) A510 OR B510 BARS @ 1'-0". THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- ** BAR LENGTH ACCOUNTS FOR A 3'-6" MINIMUM LAP.
- *** BAR LENGTH ACCOUNTS FOR A 1'-9" MINIMUM LAP.
- CONST. JOINT - STRIKE OFF AS SHOWN AND LEAVE ROUGH.
- ◆ ¾" DRIP GROOVE. EXTEND GROOVE TO 6" FROM FRONT FACE OF ABUT. DIAPHRAGM.
- BARS PLACED PARALLEL TO GIRDERS. SPACING PERPENDICULAR TO C/L GIRDERS.

B.F. DENOTES BACK FACE
F.F. DENOTES FRONT FACE

TOP OF DECK ELEVATIONS

LOCATION	S. ABUT.	0.1 PT	0.2 PT	0.3 PT	0.4 PT	0.5 PT	0.6 PT	0.7 PT	0.8 PT	0.9 PT	N. ABUT.
* W. EDGE OF DECK (14'-8" LT)	1293.75	1293.78	1293.81	1293.84	1293.87	1293.90	1293.93	1293.96	1293.99	1294.02	1294.05
CROWN	1294.08	1294.11	1294.14	1294.17	1294.20	1294.23	1294.26	1294.29	1294.32	1294.35	1294.38
* E. EDGE OF DECK (14'-8" RT)	1293.82	1293.85	1293.88	1293.91	1293.94	1293.97	1294.00	1294.03	1294.06	1294.09	1294.12

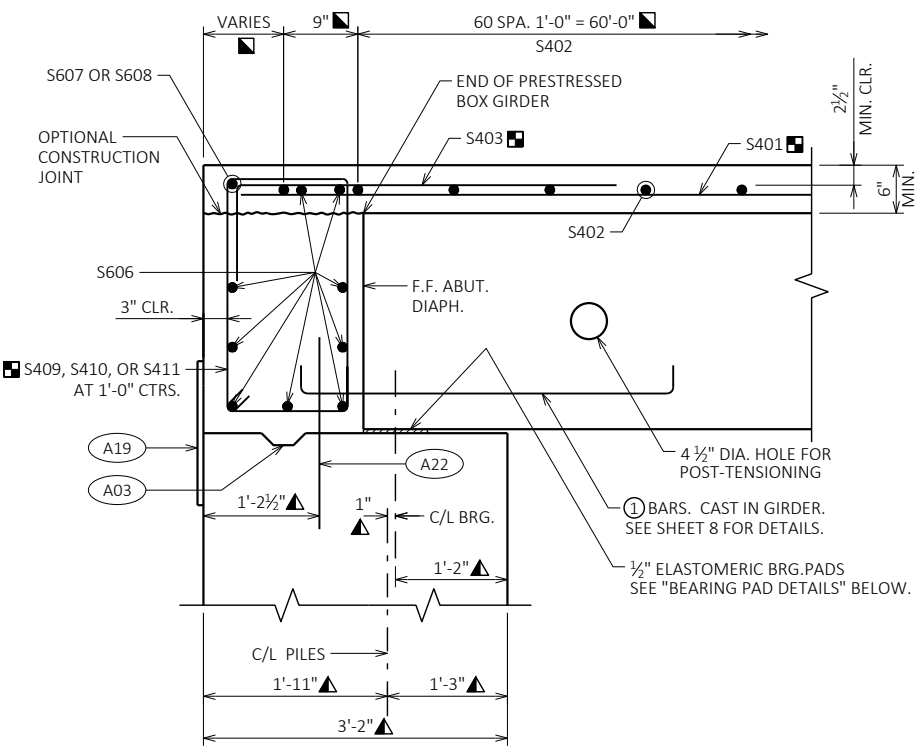
* ELEVATIONS BASED ON 1" JOINTS BETWEEN GIRDERS. ELEVATIONS GIVEN AT OUTSIDE EDGE OF DECK OVERHANG.



SECTION THRU SUPERSTRUCTURE

(SHOWN AT PAVING NOTCH)

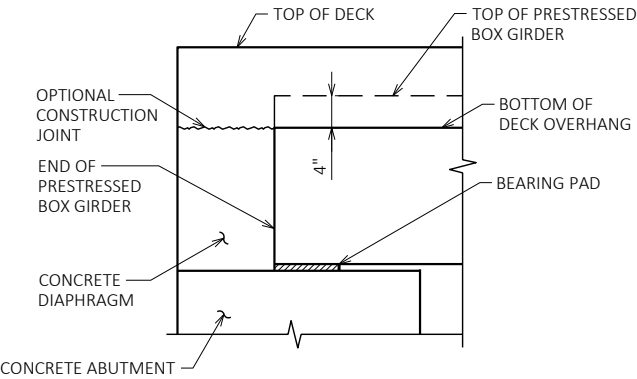
- ▲ DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS.
- DIMENSION IS TAKEN PARALLEL TO C/L ABE LINCOLN ROAD.



SECTION THRU SUPERSTRUCTURE

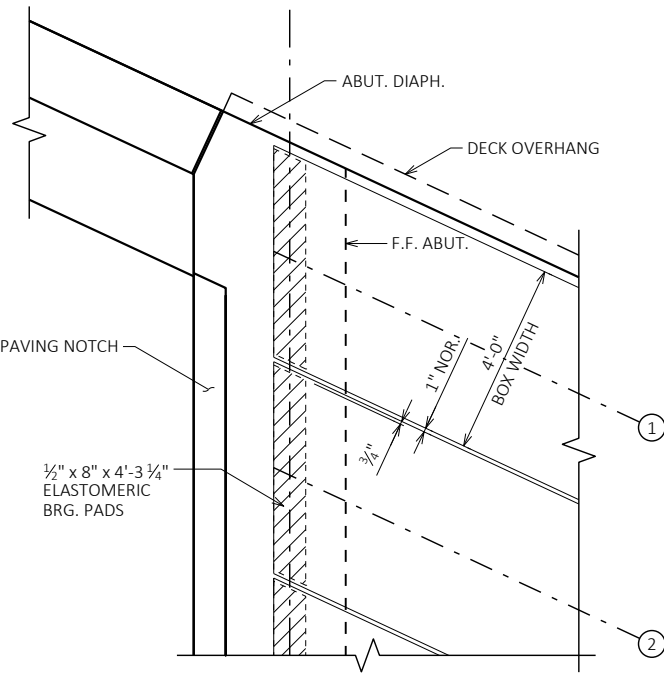
(SHOWN OUTSIDE OF PAVING NOTCH LIMITS)

- ▲ DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS.
- DIMENSION IS TAKEN PARALLEL TO C/L ABE LINCOLN ROAD.

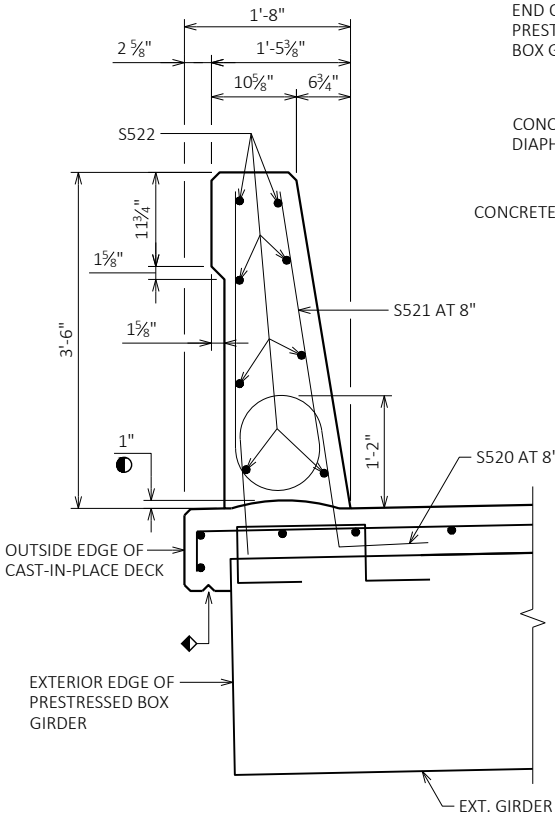


ELEVATION

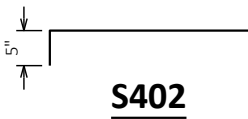
(SHOWING DECK OVERHANG TERMINATION AT CONCRETE ABUTMENT)



BEARING PAD DETAILS



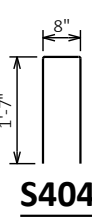
SECTION THRU PARAPET ON BRIDGE



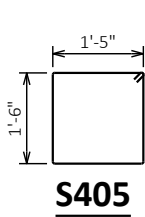
S402



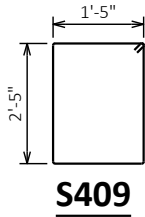
S403



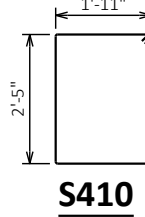
S404



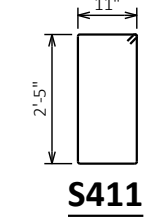
S405



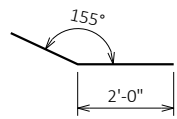
S409



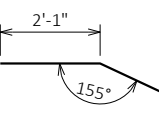
S410



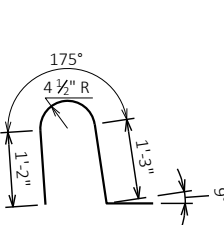
S411



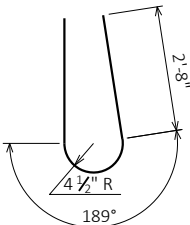
S607



S608



S520



S521

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487			
DRAWN BY		PKF	PLANS CK'D ETP
SUPERSTRUCTURE DETAILS		SHEET 12 OF 13	

BILL OF BARS - PARAPETS

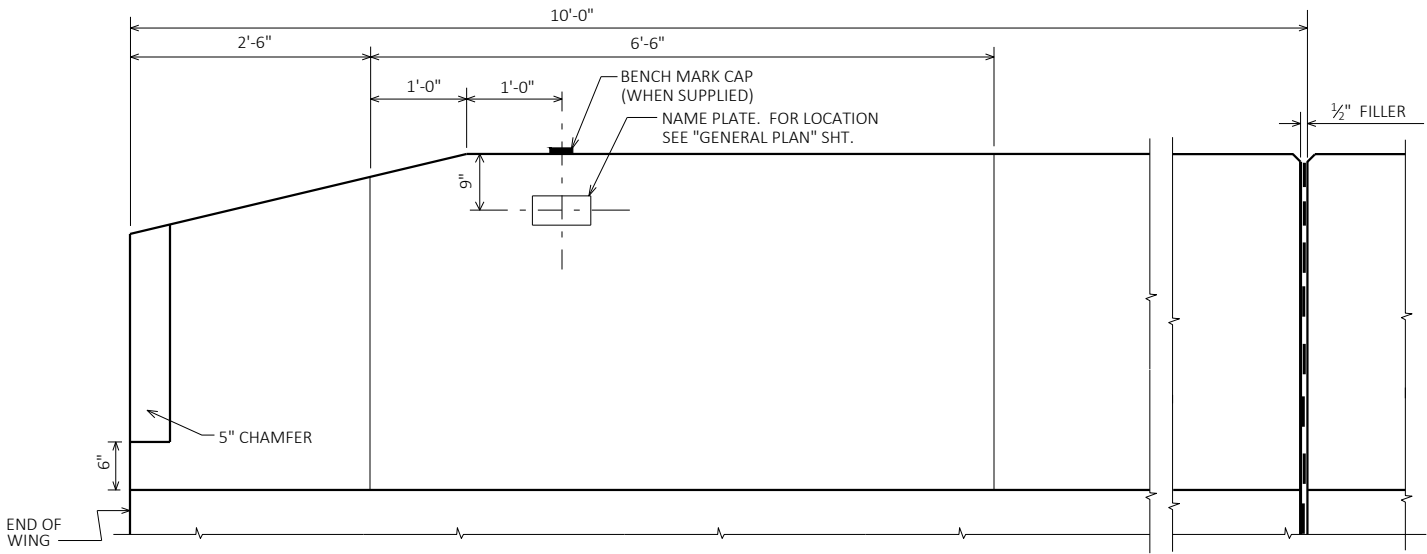
BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 1,400 LBS
R501	8	5'-10"	X		PARAPET - WINGS VERT.
R502	8	6'-8"	X		PARAPET - WINGS VERT.
R503	48	3'-0"	X		PARAPET - WINGS VERT.
R504	68	5'-7"	X		PARAPET - WINGS VERT.
R505	20	6'-5"	X		PARAPET - WINGS VERT.
R506	24	6'-6"	X		PARAPET - WINGS VERT.
R507	4	9'-5"	X		PARAPET - WINGS HORIZ.
R508	20	9'-8"			PARAPET - WINGS HORIZ.
R509	24	5'-5"	X	X	PARAPET - WINGS VERT.
R510	8	9'-8"	X		PARAPET - WINGS HORIZ.

THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.
TABLE INCLUDES BARS FOR BOTH ABUTMENTS.

BAR SERIES TABLE

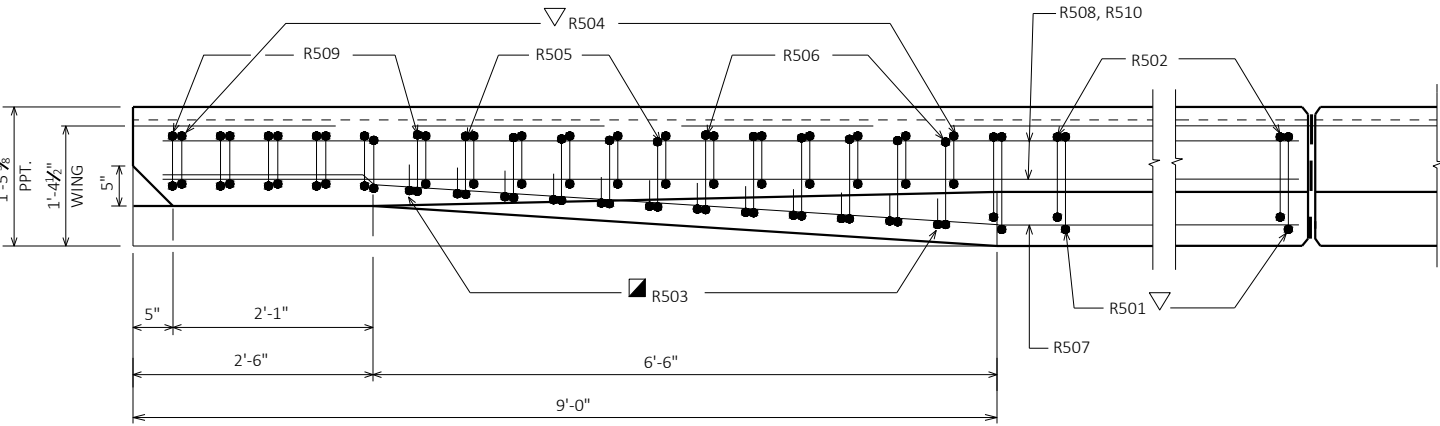
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



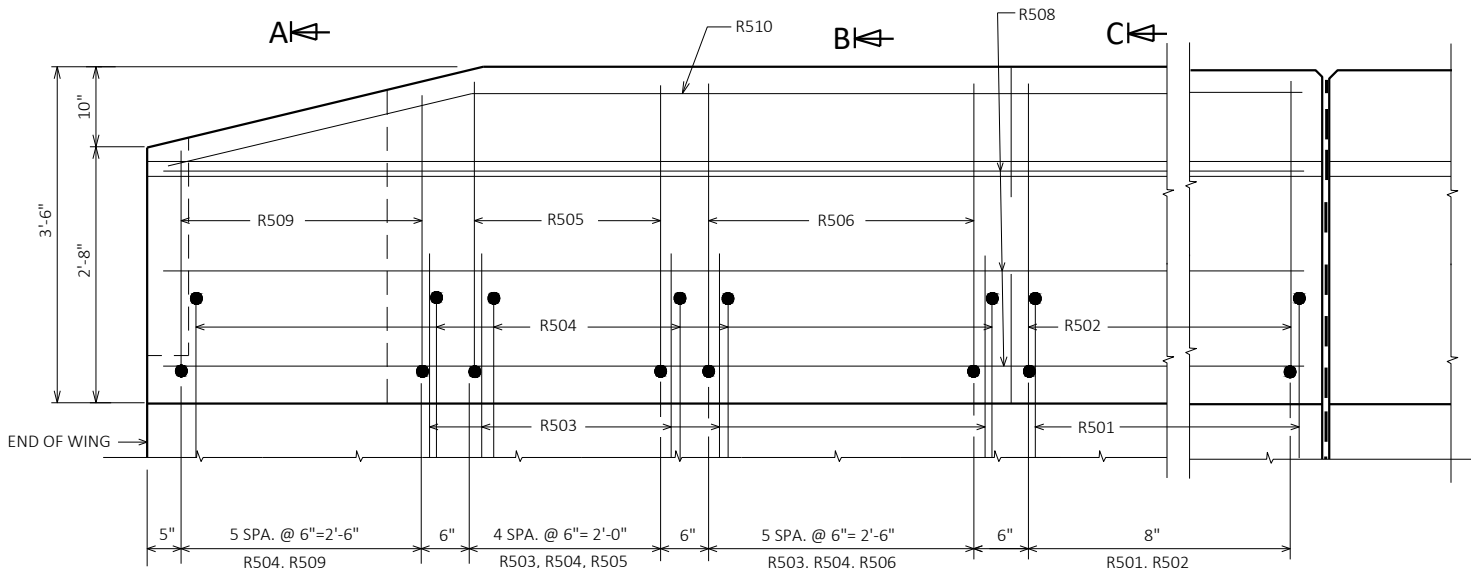
INSIDE ELEVATION

(WING 2 SHOWN, OTHERS SIMILAR)



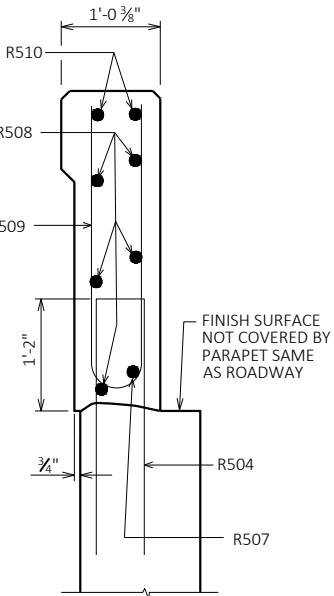
PLAN

(WING 2 SHOWN, OTHERS SIMILAR)

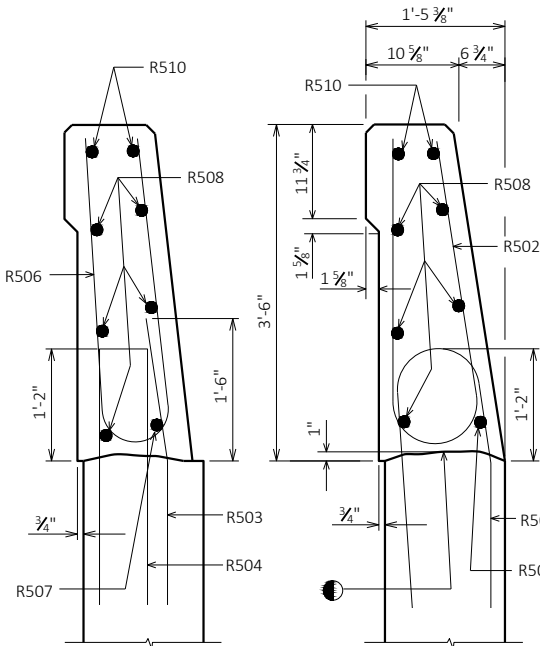


OUTSIDE ELEVATION

(WING 2 SHOWN, OTHERS SIMILAR)

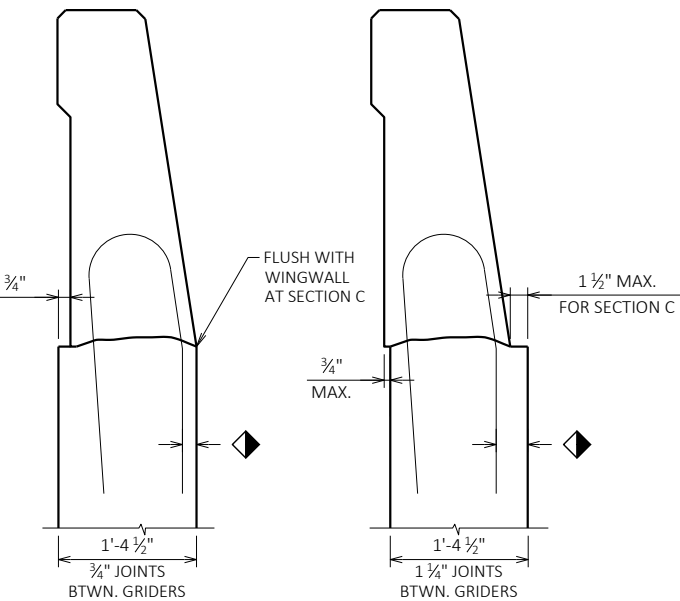
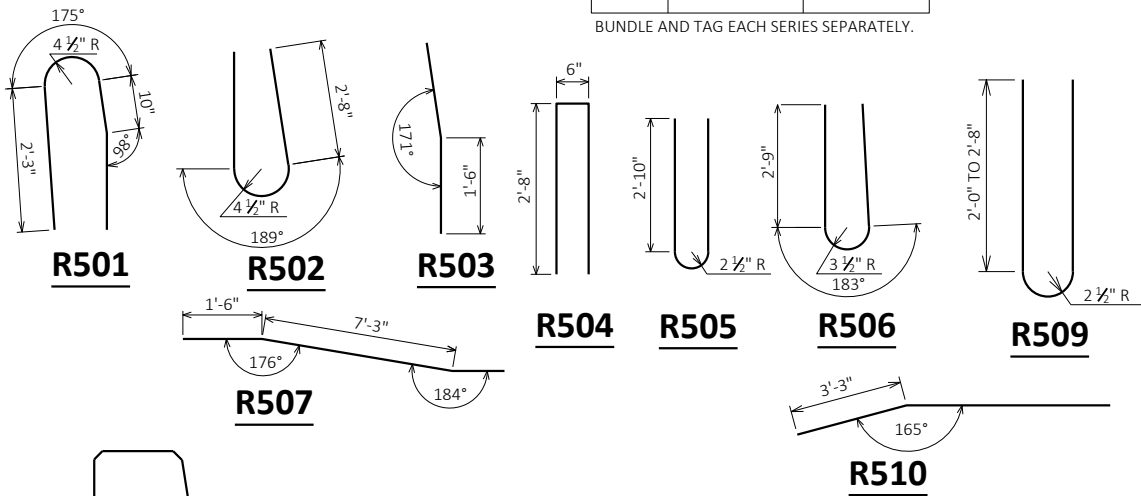


SECTION A



SECTION B

SECTION C



PARAPET LOCATION ON WING

CONTRACTOR TO DETERMINE CLEAR DISTANCE TO REBAR BASED ON FINAL POST-TENSIONED SUPERSTRUCTURE WIDTH. MAINTAIN 2" MIN. CLR.

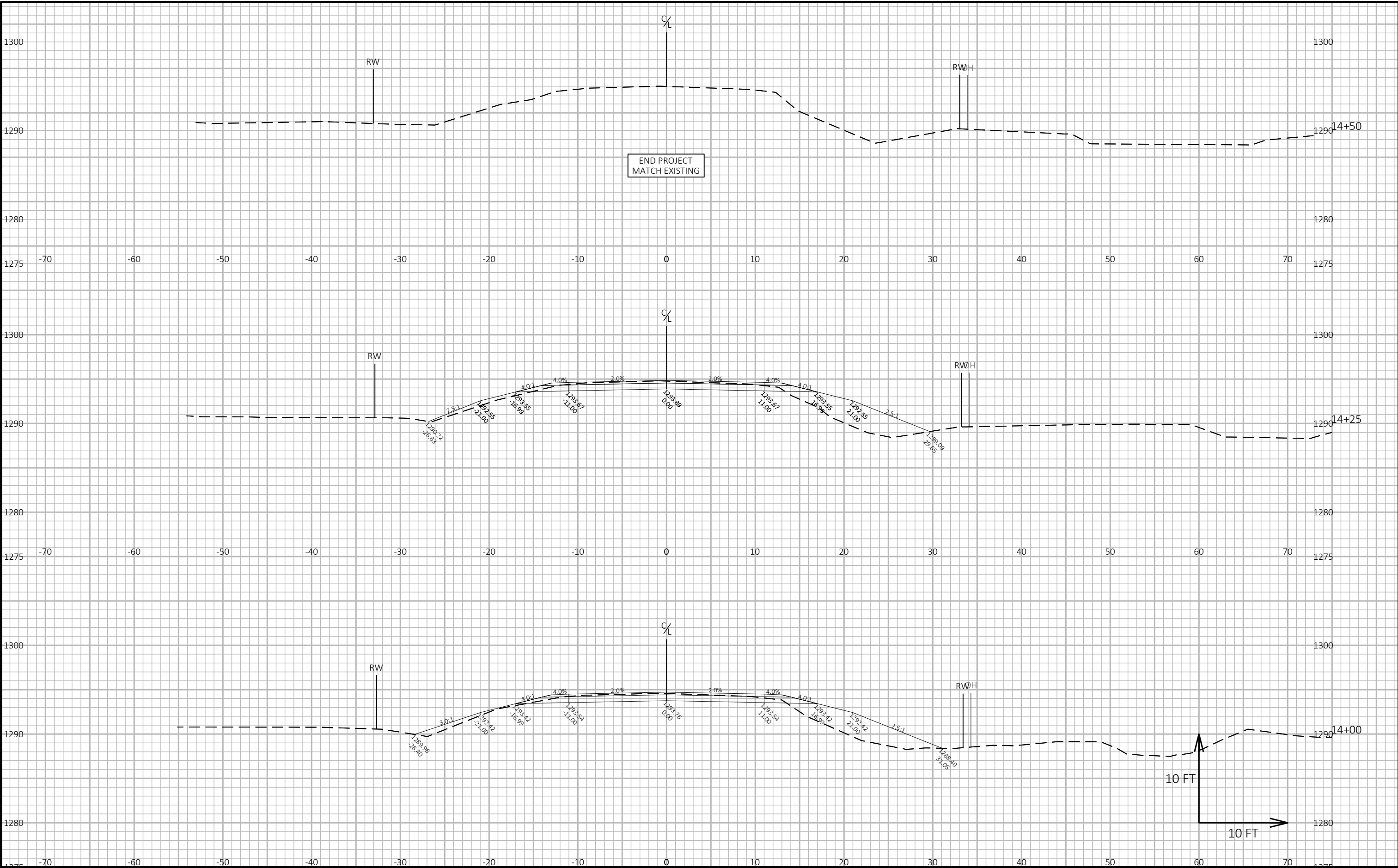
LEGEND

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-37-487			
DRAWN BY		PKF	PLANS CK'D ETP
SINGLE SLOPE PARAPET 42SS		SHEET 13 OF 13	

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	NOTE 1	1.25	NOTE 4
12+18.00	1218.00	0.00	23.14	36.65	0	0	0	0	0	0
12+25.00	1225.00	7.00	23.48	37.45	6	0	10	6	13	-7
12+50.00	1250.00	25.00	23.79	42.38	22	0	37	28	59	-31
12+52.23	1252.23	2.23	24.05	42.93	2	0	4	30	64	-34
12+64.36	1264.36	12.13	23.08	45.54	11	0	20	41	89	-48
STRUCTURE B-37-487										
13+36.00	1336.00	71.64	19.82	45.94	0	0	0	41	89	-48
13+47.77	1347.77	11.77	19.73	42.64	9	0	19	50	113	-63
13+50.00	1350.00	2.23	19.75	41.31	2	0	3	52	116	-64
13+75.00	1375.00	25.00	19.56	21.93	18	0	29	70	153	-83
14+00.00	1400.00	25.00	19.59	34.94	18	0	26	88	185	-97
14+25.00	1425.00	25.00	21.12	34.51	19	0	32	107	225	-118
14+50.00	1450.00	25.00	22.60	28.06	20	0	29	127	261	-134

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - MASS ORDINATE	(CUT - SALVAGED PAVT) - (FILL*FILL FACTOR)



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PROJECT NO: 6678-02-70	HWY: ABE LINCOLN ROAD	COUNTY: MARATHON	CROSS SECTIONS: ABE LINCOLN ROAD	SHEET E
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Notes



Wisconsin Department of Transportation

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