

MAD  
PROJECT ID:  
WITH: N/A

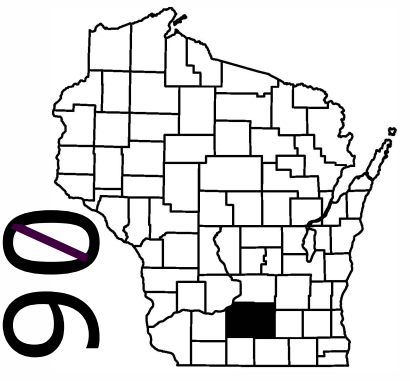
5932-00-74

COUNTY:  
DANE

AUGUST 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 (Includes Erosion Control Plan)
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 = 46



DESIGN DESIGNATION 5932-00-04

A.A.D.T.	2027	=	60
A.A.D.T.	2047	=	90
D.H.V.		=	8
D.D.		=	60/40
T.		=	10% (ASSUMED)
DESIGN SPEED		=	40 M.P.H
ESALS		=	64,100

CONVENTIONAL SYMBOLS

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

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

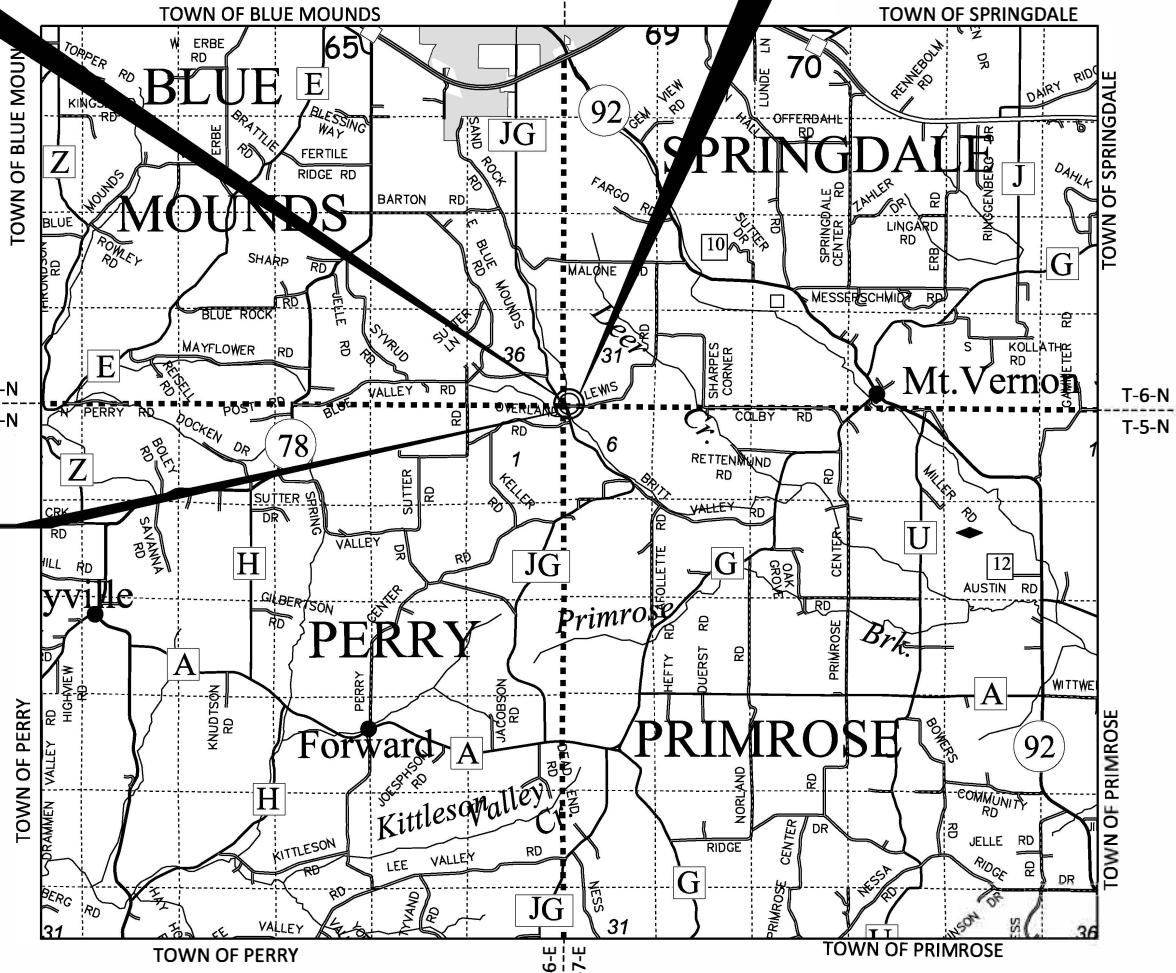
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
PLAN OF PROPOSED IMPROVEMENT  
**T PRIMROSE, LEWIS ROAD**  
W. BR. SUGAR RIVER BRIDGE B-13-0929  
LOC STR  
DANE COUNTY

5932-00-74  
STATE PROJECT NUMBER

END PROJECT  
STA. 11+40

STRUCTURE B-13-0929

BEGIN PROJECT  
STA. 10+00  
Y = 435,599.13  
X = 731,297.50



LAYOUT  
SCALE 0 2 MI  
TOTAL NET LENGTH OF CENTERLINE = 0.027 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCE MAY BE USED AS GROUND DISTANCES.

ELEVATION SHOWN ON THIS PLAN ARE REFERENCE TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD88 (2012).

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5932-00-74	WISC 2026400	1

ACCEPTED FOR  
TOWN PRIMROSE  
4-27-26 Dale Judd  
ORIGINAL PLANS PREPARED BY

**JEWELL**



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY	JEWELL ASSOCIATES ENGINEERS, INC.
Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	JEWELL ASSOCIATES ENGINEERS, INC.
Project Manager	ROBERT HANOLD, P.E.
Regional Examiner	SW REGION
Regional Supervisor	DELLA KOENIG, P.E.

APPROVED FOR THE DEPARTMENT  
DATE: 4/28/26  
(Signature)

E

**GENERAL NOTES**

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE, AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION. EXACT LOCATIONS OF EBS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

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

WHEN THE QUANTITY OF THE ITEM OF BASE AGGREGATE DENSE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.

SILT FENCE AND TURBIDITY BARRIER SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND SHALL BE IN PLACE PRIOR TO STRUCTURE REMOVAL.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

WETLANDS ARE PRESENT IN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE EQUIPMENT OR STOCKPILE MATERIALS BEYOND THE SLOPE INTERCEPT FROM STA. 10+17 - 10+65 RT., STA 10+24 - 10+48 LT., 10+69 - 11+12 RT., 10+55 - 11+40 LT.

DO NOT USE FERTILIZER IN WETLANDS.

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

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

ADJUST DITCH GRADING AS NECESSARY TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER IN THE FIELD.

ASPHALTIC SURFACE QUANTITIES WERE CALCULATED USING A RATE OF 115 LB/SY/IN.

TACK COAT WAS CALCULATED USING A RATE OF 0.05 GAL/SY.

**CONTACTS**

**WISDOT:**

WISCONSIN DEPARTMENT OF TRANSPORTATION  
2101 WRIGHT ST.  
MADISON, WI 53704  
ATTN: DONALD CARPENTER, P.E.  
PHONE: (608) 246-5317  
EMAIL: donald2.carpenter@dot.wi.gov

**DESIGN CONSULTANT:**

JEWELL ASSOCIATES ENGINEERS, INC.  
560 SUNRISE DRIVE  
SPRING GREEN, WI 53588  
ATTN: ROBERT HANOLD, P.E.  
PHONE: (608) 588-7484  
CELL: (608) 606-3568  
EMAIL: robert.hanold@jewellassoc.com

**TOWN OF PRIMROSE**

DALE JUDD, CHAIRMAN  
8468 COUNTY HIGHWAY A  
VERONA, WI 53593  
PHONE: (608) 832 - 6213  
EMAIL: clerk@townofprimrose.com

**DNR LIAISON:**

STATE OF WISCONSIN  
DNR SERVICE CENTER  
3911 FISH HATCHERY RD  
FITCHBURG WI 53711  
ATTN: ERIC HEGGELUND  
PHONE: (608) 228-7927  
EMAIL: eric.heggelund@wisconsin.gov

**UTILITIES**

**COMMUNICATIONS**

MOUNT HOREB TELEPHONE CO  
ATTN: SCOTT E. CARROLL, P.E.  
200 E MAIN STREET, PO BOX 65  
MOUNT HOREB, WI 53572  
PHONE: (608) 643-6477 EXT. 118  
CELL: (608) 963-8440  
EMAIL: scarroll@kapitan-eng.com

**ELECTRIC**

ALLIANT ENERGY  
ATTN: LANE MCCORMICK  
2147 COUNTY ROAD PB  
VERONA, WI 53593  
PHONE: (920) 979-7262  
EMAIL: lancemccormick@alliantenergy.com

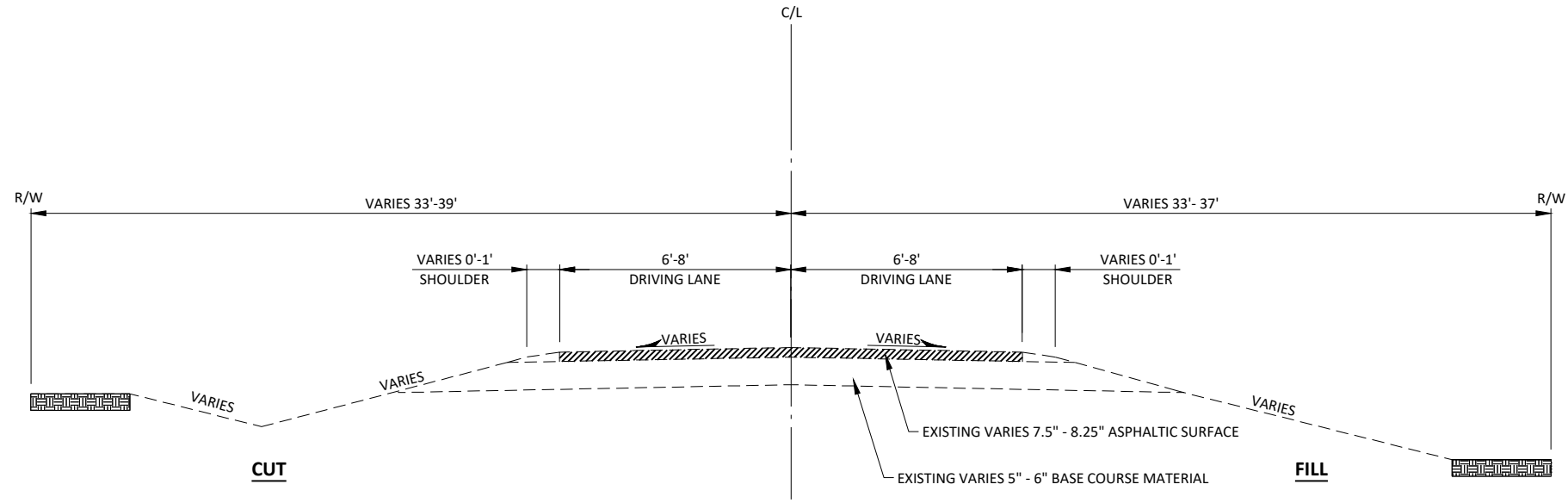
**LIST OF STANDARD ABBREVIATIONS**

ABUT	Abutment	INV	Invert	SALV	Salvaged
AC	Acre	IP	Iron Pipe or Pin	SAN S	Sanitary Sewer
AGG	Aggregate	IRS	Iron Rod Set	SEC	Section
AH	Ahead	JT	Joint	SHLDR	Shoulder
<	Angle	JCT	Junction	SHR	Shrinkage
ASPH	Asphaltic	LHF	Left-Hand Forward	SW	Sidewalk
AVG	Average	L	Length of Curve	S	South
ADT	Average Daily Traffic	LN FT or LF	Linear Foot	SQ	Square
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BK	Back	MH	Manhole	SY or SQ YD	Square Yard
BF	Back Face	MB	Mailbox	STD	Standard
BM	Bench Mark	ML or M/L	Match Line	SDD	Standard Detail Drawings
BR	Bridge	N	North	STH	State Trunk Highways
C or C/L	Center Line	Y	North Grid Coordinate	STA	Station
CC	Center to Center	O.A.L.	Overall Length	SS	Storm Sewer
CTH	County Trunk Highway	OD	Outside Diameter	SG	Subgrade
CR	Creek	PLE	Permanent Limited Easement	SE	Superelevation
CR	Crushed		Point	SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PT	Point of Curvature	SV	Septic Vent
CP	Culvert Pipe	PC	Point of Intersection	T	Tangent
C & G	Curb and Gutter	PI	Point of Reverse Curvature	TEL	Telephone
D	Degree of Curve	PRC	Point of Tangency	TEMP	Temporary
DHV	Design Hour Volume	PT	Point On Curve	TI	Temporary Interest
DIA	Diameter	POC	Point on Tangent	TLE	Temporary Limited Easement
E	East	POT	Polyvinyl Chloride	t	Ton
X	East Grid Coordinate	PVC	Portland Cement Concrete	T or TN	Town
ELEC	Electric (al)	PCC	Pound	TRANS	Transition
EL or ELEV	Elevation	LB	Pounds Per Square Inch	TL or T/L	Transit Line
ESALS	Equivalent Single Axle Loads	PSI	Private Entrance	T	Trucks (percent of)
EBS	Excavation Below Subgrade	PE	Radius	TYP	Typical
ESTR	Existing Sign to Remain	R	Railroad	UNCL	Unclassified
FF	Face to Face	RR	Range	UG	Underground Cable
FE	Field Entrance	R	Reference Line	USH	United States Highway
F	Fill	RL or R/L	Reference Point	VAR	Variable
FG	Finished Grade	RP	Reinforced Concrete Culvert	V	Velocity or Design Speed
FL or F/L	Flow Line	RCCP	Pipe	VERT	Vertical
FT	Foot	REQ'D	Required	VC	Vertical Curve
FTG	Footing	RES	Residence or Residential	VOL	Volume
GN	Grid North	RW	Retaining Wall	WM	Water Main
HT	Height	RT	Right	WV	Water Valve
CWT	Hundredweight	RHF	Right-Hand Forward	W	West
HYD	Hydrant	R/W	Right-of-Way	WB	Westbound
INL	Inlet	R	River	YD	Yard
ID	Inside Diameter	RD	Road		
		RDWY	Roadway		



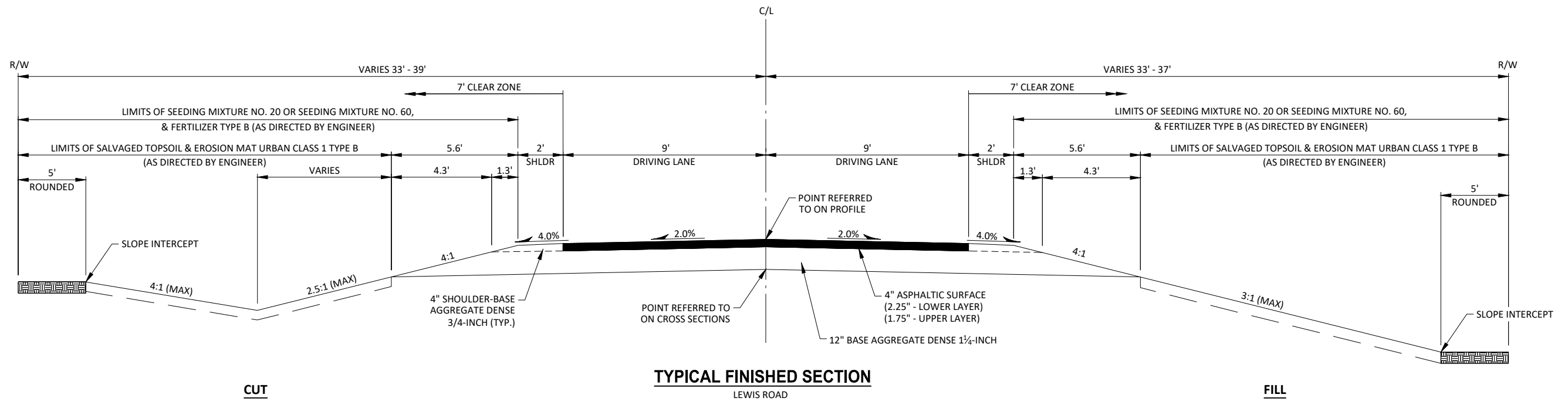
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA= 0.19 ACRES  
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.15 ACRES



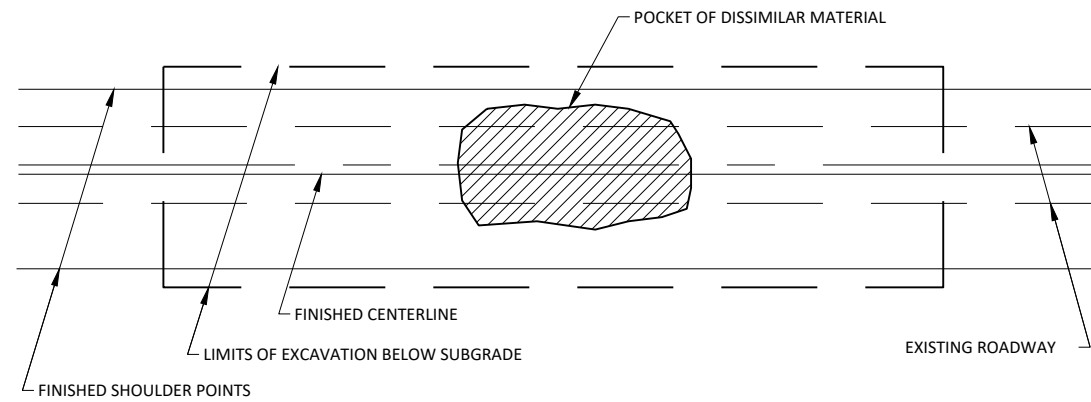
**TYPICAL EXISTING SECTION**

LEWIS ROAD  
STA. 10+00 - STA. 11+40

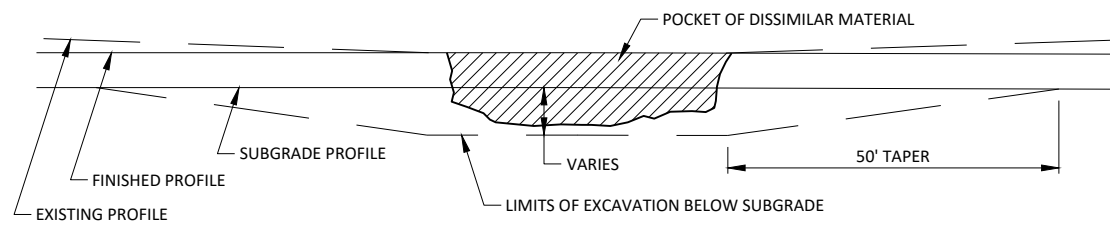


**TYPICAL FINISHED SECTION**

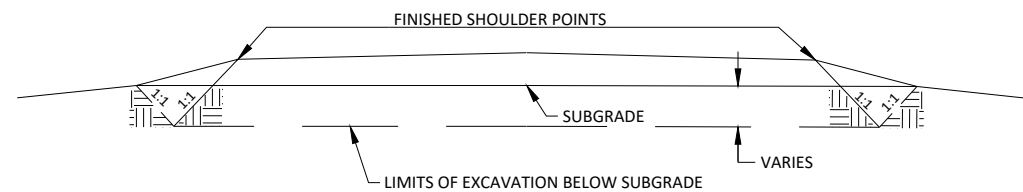
LEWIS ROAD  
STA. 10+00 - STA. 11+40



**PLAN VIEW**



**PROFILE VIEW**



**CROSS SECTION VIEW**

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.
3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.

**EXCAVATION BELOW SUBGRADE (E.B.S.) DETAIL**

LEGEND

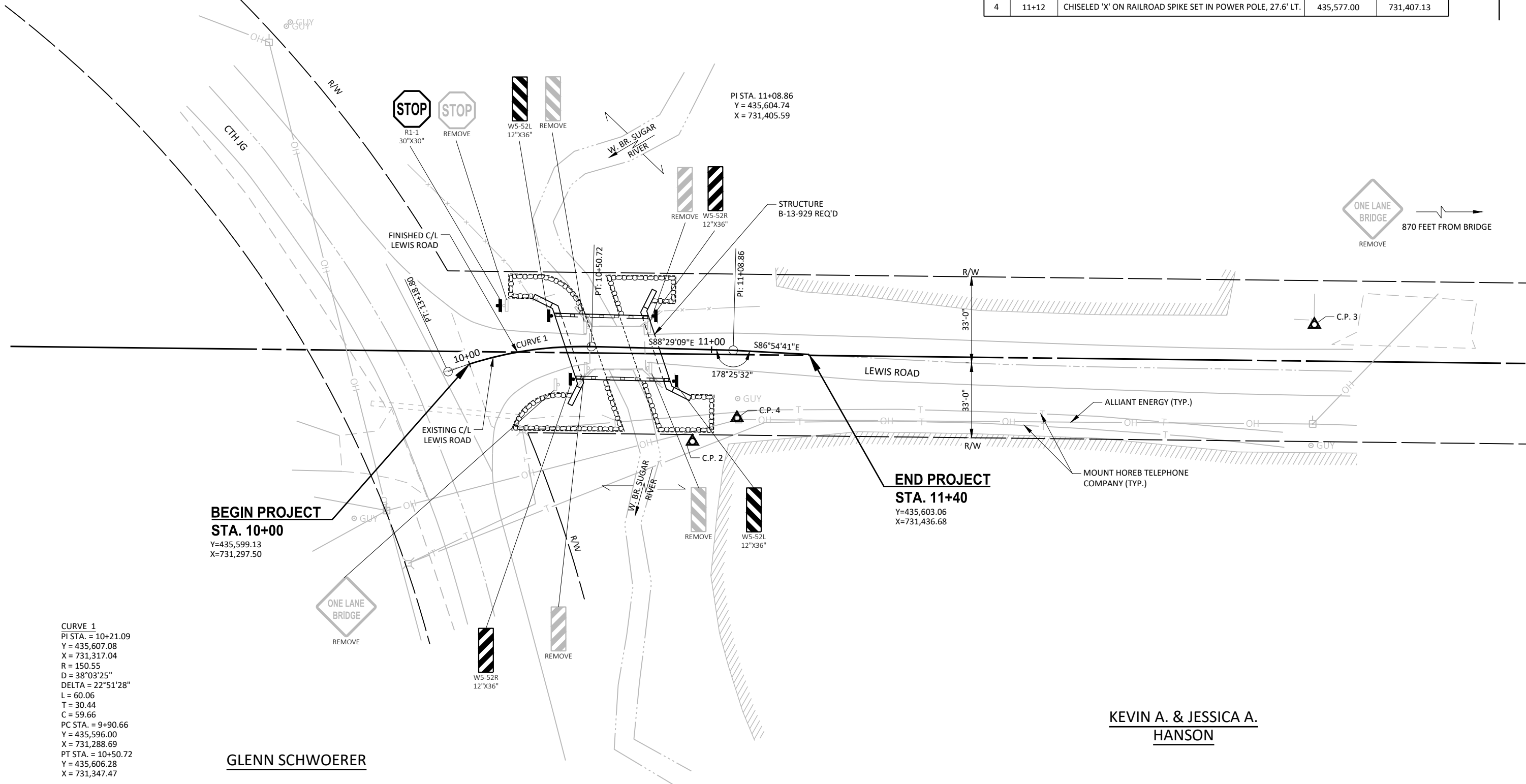
	REMOVING SIGNS TYPE II/REMOVING SMALL SIGN SUPPORTS
	SIGNS TYPE II REFLECTIVE F OR H ON POSTS

**CONTROL POINTS**

NO.	STA.	DESCRIPTION	Y	X
2	10+93	3/4" IRON REBAR SET, 37.8' RT.	435,567.3610	731,388.86
3	13+47	3/4" IRON REBAR SET, 18.7' LT.	435,615.32	731,643.87
4	11+12	CHISELED 'X' ON RAILROAD SPIKE SET IN POWER POLE, 27.6' LT.	435,577.00	731,407.13



**TALLARD FARMS AND LAND LLC**



**BEGIN PROJECT  
STA. 10+00**  
Y=435,599.13  
X=731,297.50

**END PROJECT  
STA. 11+40**  
Y=435,603.06  
X=731,436.68

**CURVE 1**  
PI STA. = 10+21.09  
Y = 435,607.08  
X = 731,317.04  
R = 150.55  
D = 38°03'25"  
DELTA = 22°51'28"  
L = 60.06  
T = 30.44  
C = 59.66  
PC STA. = 9+90.66  
Y = 435,596.00  
X = 731,288.69  
PT STA. = 10+50.72  
Y = 435,606.28  
X = 731,347.47

**GLENN SCHWOERER**

**KEVIN A. & JESSICA A.  
HANSON**

Estimate Of Quantities

5932-00-74

Line	Item	Item Description	Unit	Total	Qty
0002	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. P-13-0944	EACH	1.000	1.000
0004	205.0100	Excavation Common	CY	80.000	80.000
0006	206.1001	Excavation for Structures Bridges (structure) 01. B-13-0929	EACH	1.000	1.000
0008	210.1500	Backfill Structure Type A	TON	250.000	250.000
0010	213.0100	Finishing Roadway (project) 01. 5932-00-74	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	16.000	16.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	300.000	300.000
0016	455.0605	Tack Coat	GAL	16.000	16.000
0018	465.0105	Asphaltic Surface	TON	72.000	72.000
0020	502.0100	Concrete Masonry Bridges	CY	122.000	122.000
0022	502.3200	Protective Surface Treatment	SY	165.000	165.000
0024	505.0400	Bar Steel Reinforcement HS Structures	LB	4,280.000	4,280.000
0026	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	14,990.000	14,990.000
0028	513.4061	Railing Tubular Type M	LF	81.000	81.000
0030	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0032	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	455.000	455.000
0034	606.0300	Riprap Heavy	CY	240.000	240.000
0036	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0038	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5932-00-74	EACH	1.000	1.000
0040	619.1000	Mobilization	EACH	1.000	1.000
0042	624.0100	Water	MGAL	4.700	4.700
0044	625.0500	Salvaged Topsoil	SY	200.000	200.000
0046	628.1504	Silt Fence	LF	325.000	325.000
0048	628.1520	Silt Fence Maintenance	LF	650.000	650.000
0050	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0052	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0054	628.2008	Erosion Mat Urban Class I Type B	SY	200.000	200.000
0056	628.6005	Turbidity Barriers	SY	230.000	230.000
0058	628.7504	Temporary Ditch Checks	LF	24.000	24.000
0060	629.0210	Fertilizer Type B	CWT	1.000	1.000
0062	630.0120	Seeding Mixture No. 20	LB	17.000	17.000
0064	630.0160	Seeding Mixture No. 60	LB	1.000	1.000
0066	630.0200	Seeding Temporary	LB	12.000	12.000
0068	630.0500	Seed Water	MGAL	8.500	8.500
0070	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	5.000	5.000
0072	637.2210	Signs Type II Reflective H	SF	5.180	5.180
0074	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0076	638.2602	Removing Signs Type II	EACH	7.000	7.000
0078	638.3000	Removing Small Sign Supports	EACH	7.000	7.000
0080	642.5001	Field Office Type B	EACH	1.000	1.000
0082	643.0420	Traffic Control Barricades Type III	DAY	840.000	840.000
0084	643.0705	Traffic Control Warning Lights Type A	DAY	1,200.000	1,200.000
0086	643.0900	Traffic Control Signs	DAY	1,080.000	1,080.000
0088	643.5000	Traffic Control	EACH	1.000	1.000
0090	645.0111	Geotextile Type DF Schedule A	SY	100.000	100.000
0092	645.0120	Geotextile Type HR	SY	380.000	380.000
0094	650.4500	Construction Staking Subgrade	LF	101.000	101.000
0096	650.5000	Construction Staking Base	LF	101.000	101.000
0098	650.6501	Construction Staking Structure Layout (structure) 01. B-13-0929	EACH	1.000	1.000

Estimate Of Quantities

5932-00-74

Line	Item	Item Description	Unit	Total	Qty
0100	650.9911	Construction Staking Supplemental Control (project) 0.1 5932-00-74	EACH	1.000	1.000
0102	650.9920	Construction Staking Slope Stakes	LF	101.000	101.000
0104	690.0150	Sawing Asphalt	LF	73.000	73.000
0106	715.0502	Incentive Strength Concrete Structures	DOL	702.000	702.000
0108	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. STA 10+59	EACH	1.000	1.000
0110	SPV.0180	Special 01. Mowing	SY	810.000	810.000

**EARTHWORK SUMMARY**

FROM/TO STA	LOCATION	205.0100	AVAILABLE MATERIAL (CY) (1)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY)	MASS ORDINATE +/- (CY) (3)
		COMMON EXCAVATION CUT (2)			FACTOR 1.25 (2)	
10+00 - 11+40	MAINLINE	80	80	24	30	50

TOTALS = 80 80 24 30 50

NOTES:  
 1.) AVAILABLE MATERIAL=CUT  
 2.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = (UNEXPANDED FILL)\*1.25  
 3.) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

**BASE AGGREGATE DENSE**

STATION - STATION	LOCATION	305.0110	305.0120
		BASE AGGREGATE DENSE 3/4-INCH (TON)	BASE AGGREGATE DENSE 1 1/4-INCH (TON)
10+00 - 11+40	MAINLINE	16	300
TOTALS =		16	300

3

3

**ASPHALTIC SURFACE**

STATION - STATION	LOCATION	455.0605	465.0105
		TACK COAT (GAL)	ASPHALTIC SURFACE (TON)
10+00 - 11+40	MAINLINE	16	72
TOTALS =		16	72

**WATER**

STATION - STATION	LOCATION	624.0100
		WATER (MGAL)
10+00 - 11+40	MAINLINE	4.7
TOTALS =		4.7

**SILT FENCE**

STATION - STATION	LOCATION	628.1504	628.1520
		SILT FENCE (LF)	SILT FENCE MAINTENANCE (LF)
10+00 - 10+40	MAINLINE, LT.	60	120
10+00 - 10+40	MAINLINE, RT.	50	100
10+80 - 11+40	MAINLINE, RT.	60	120
10+80 - 11+40	MAINLINE, LT.	90	180
-	UNDISTRIBUTED	65	130
TOTALS =		325	650

**FINISHING ITEMS**

STATION - STATION	LOCATION	625.0500	628.2008	629.0210	630.0120	630.0160	630.0200	630.0500
		SALVAGED TOPSOIL (SY)	EROSION MAT URBAN CLASS I TYPE B (SY)	FERTILIZER TYPE B (CWT)	SEEDING MIXTURE NO. 20 (LB)	SEEDING MIXTURE NO. 60 (LB)	SEEDING TEMPORARY (LB)	SEED WATER (MGAL)
10+00 - 11+40	MAINLINE	160	160.00	0.4	13	0.5	10	6.8
-	UNDISTRIBUTED	40	40	0.6	4	0.5	2	1.7
TOTALS =		200	200	1.0	17	1	12	8.5

**MOBILIZATION EROSION CONTROL**

PROJECT	628.1905	628.1910
	MOBILIZATION EROSION CONTROL (EACH)	MOBILIZATION EMERGENCY EROSION CONTROL (EACH)
5625-00-75	4	2
TOTALS =		2

**TURBIDITY BARRIER**

LOCATION	628.6005	
	(SY)	
WEST ABUTMENT	100	
EAST ABUTMENT	85	
UNDISTRIBUTED	45	
TOTALS =		230

**TEMPORARY DITCH CHECKS**

STATION - STATION	LOCATION	628.7504
		(LF)
10+35	MAINLINE RT.	8
10+91	MAINLINE RT.	8
-	UNDISTRIBUTED	8
TOTAL =		24

**CONSTRUCTION STAKING**

STATION -STATION	LOCATION	650.4500 SUBGRADE (L.F.)	650.5000 BASE (L.F.)	650.9920 SLOPES STAKES (L.F.)
10+00 - 10+53	MAINLINE	40	40	40
10+79 - 11+40	MAINLINE	61	61	61
5932-00-74	PROJECT	-	-	-
TOTAL =		101	101	101

**PERMANENT SIGNING**

APPROX. STATION	POSITION	LOCATION	SIGN CODE	SIGN DESCRIPTION	SIGN SIZE	634.0614 POSTS WOOD 4X6- INCH X 14-FT (EACH)	637.2210 SIGNS STYPE II REFLECTIVE H (SF)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
10+18	LEFT	MAINLINE	R1-1	STOP	30X30	---	---	---	1	1
10+18	LEFT	MAINLINE	R1-1	STOP	30X30	1	5.18	---	---	---
10+36	RIGHT	MAINLINE	W5-3	ONE LANE BRIDGE	---	---	---	---	1	1
10+36	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	---	3.00	---	---
10+43	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	---	3.00	---	---
10+49	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	---	---	---	1	1
10+49	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	---	---	---	1	1
10+73	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	---	---	---	1	1
10+74	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	---	---	---	1	1
10+74	LEFT	MAINLINE	W5-52L	BRIDGE HASH MARKS	12X36	1	---	3.00	---	---
10+84	RIGHT	MAINLINE	W5-52R	BRIDGE HASH MARKS	12X36	1	---	3.00	---	---
19+00	LEFT	MAINLINE	W5-3	ONE LANE BRIDGE	---	---	---	---	1	1
TOTALS =						5	5.18	12.00	7	7

**TRAFFIC CONTROL**

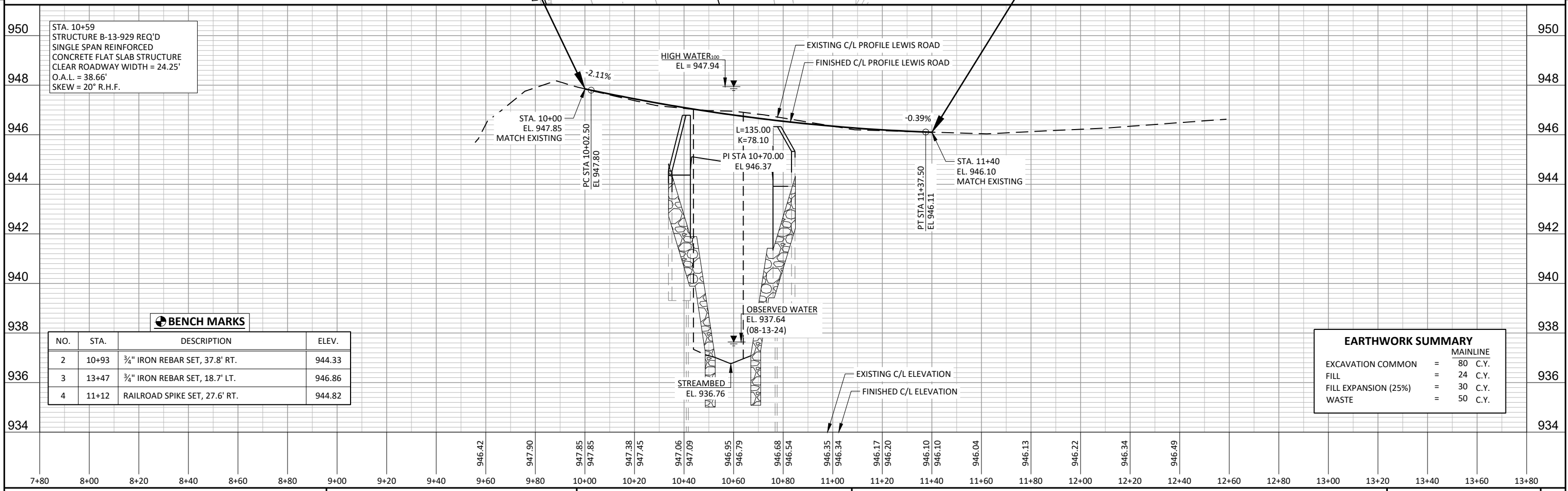
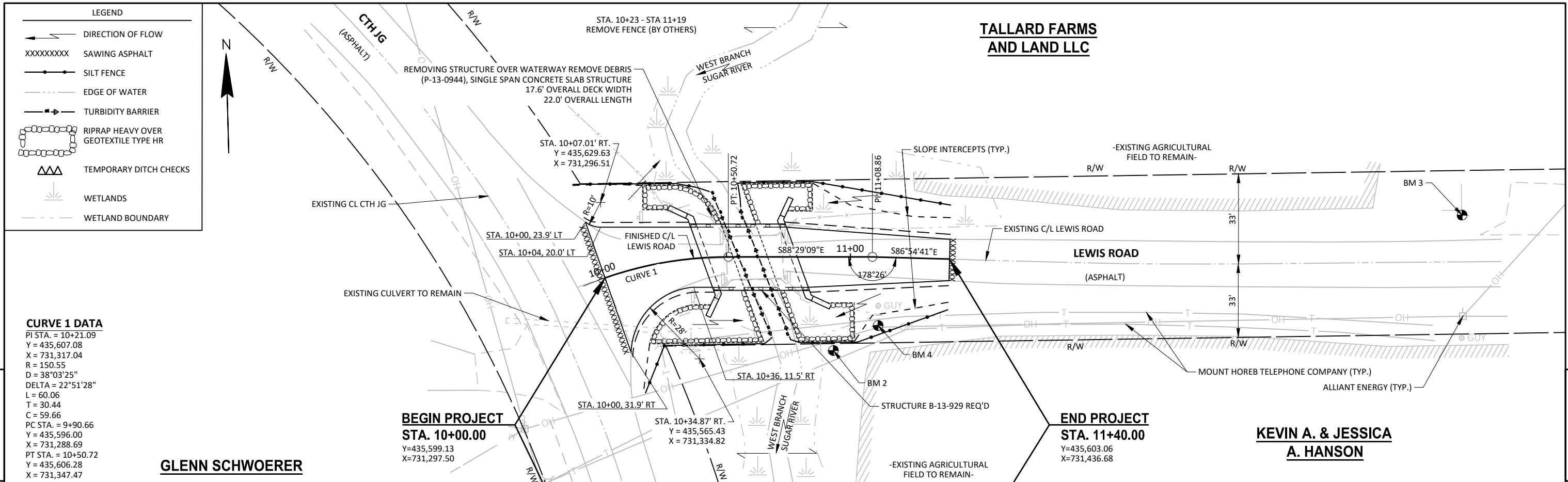
LOCATION	643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)
PROJECT	840	1,200	1,080
TOTALS =	840	1,200	1,080

**SAWING ASPHALT**

STATION	LOCATION	690.0150 (LF)
10+00	MAINLINE	56
11+40	MAINLINE	17
TOTAL =		73

**MOWING**

STATION	LOCATION	SPV.0180.01 (SY)
10+00 - 10+50	MAINLINE	332
10+73 - 11+40	MAINLINE	478
TOTAL =		810

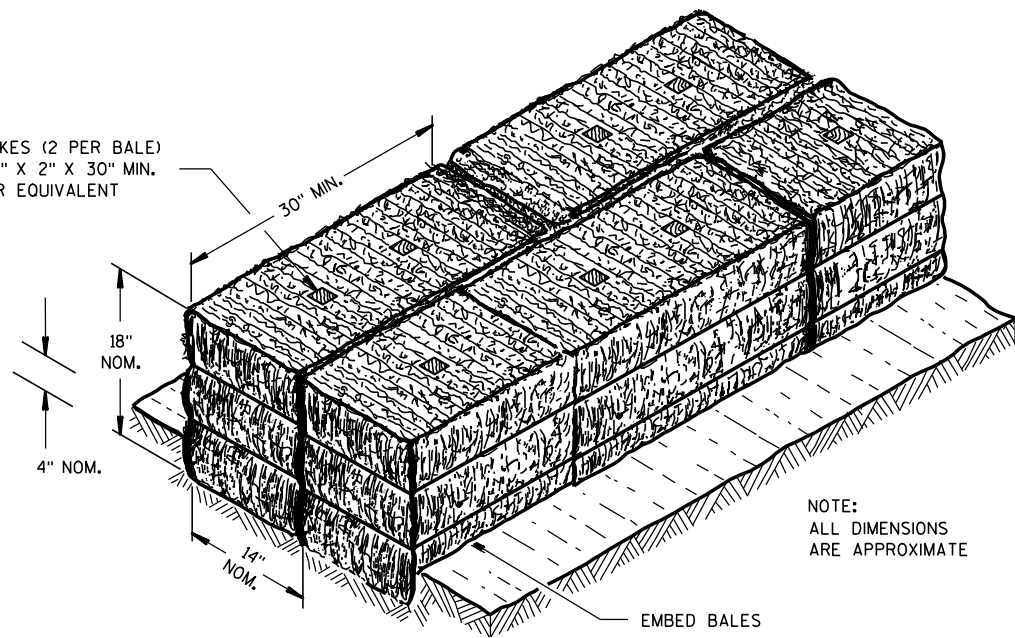


FILE NAME: S:\PROJECTS\W11725 WISDOT - LEWIS ROAD BRIDGE - TOWN OF PRIMROSE\SHEETS\PLAN & PROFILE SHEETS\W11725\_P&P.DWG      PLOT DATE: 4/22/2026 1:18:35 PM      PLOT BY: MITCHELL NYBERG      PLOT SCALE: 1" = 1'      LAYOUT: MAINLINE

## Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
15C02-10A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-10B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-11B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

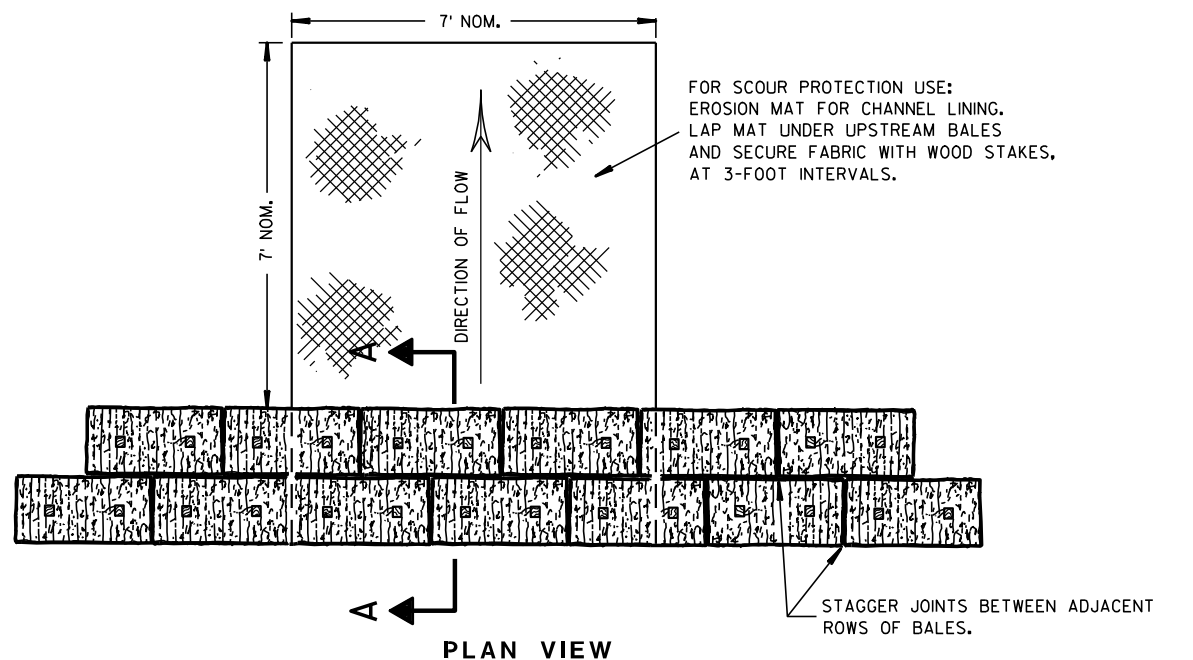
WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

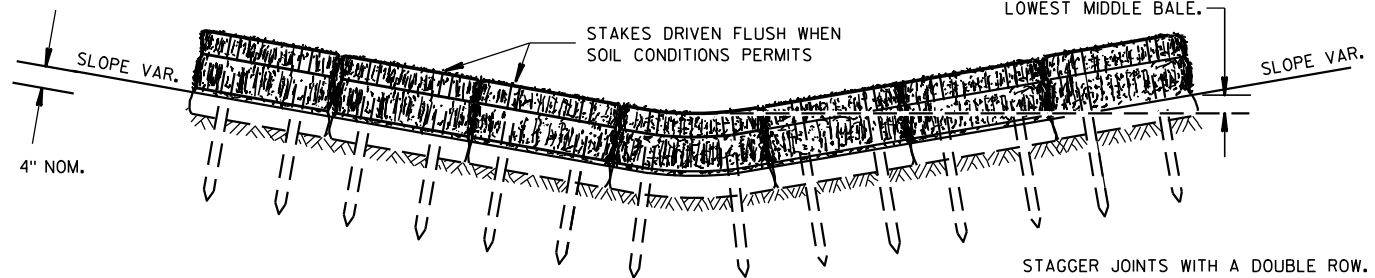
EMBED BALES

SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT  
ROWS OF BALES.



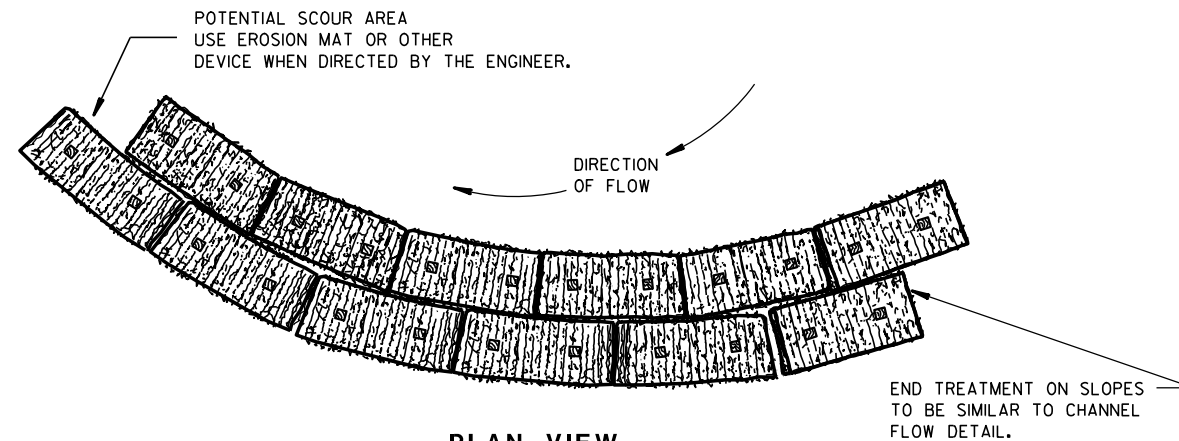
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

**GENERAL NOTES**

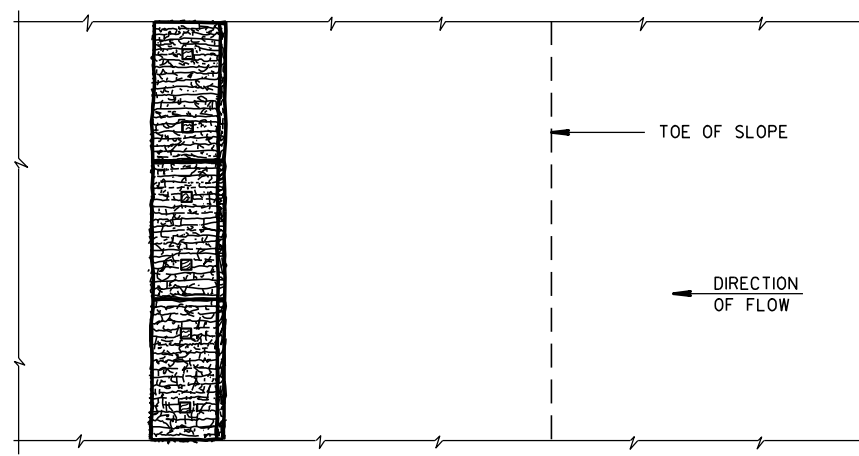
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

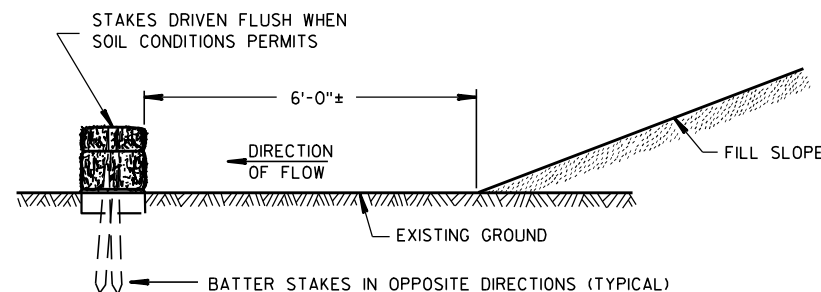


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

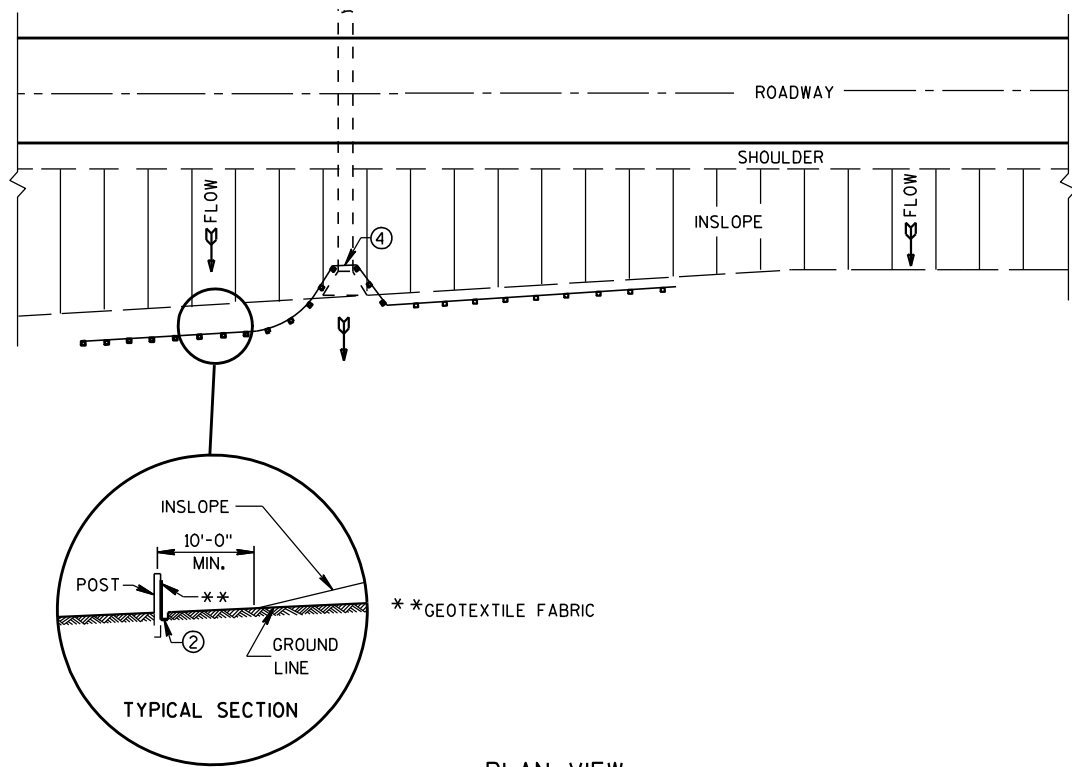
WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

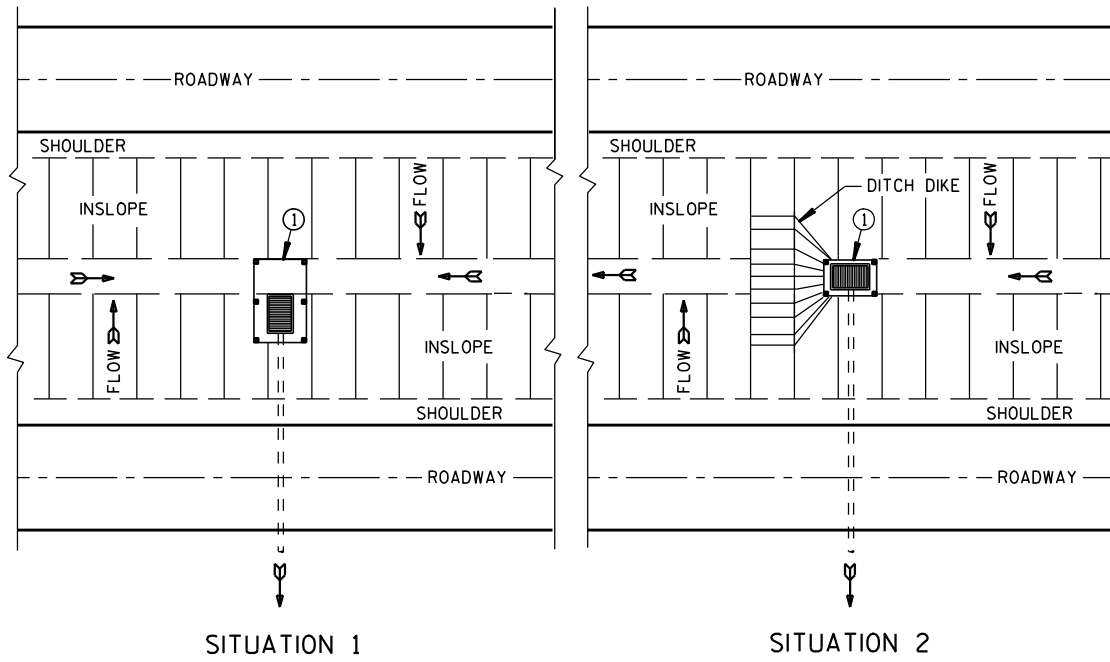
**TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
6/04/02 /S/ Beth Cann  
DATE CHIEF ROADWAY DEVELOPER 12 ENGINEER  
FHWA



PLAN VIEW  
TYPICAL APPLICATION OF SILT FENCE

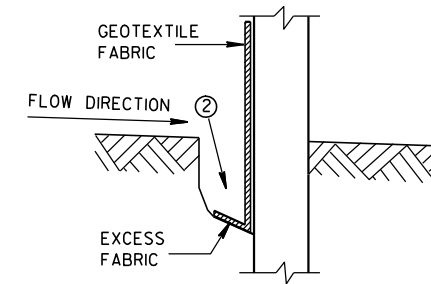


SITUATION 1 SITUATION 2  
PLAN VIEW  
SILT FENCE AT MEDIAN SURFACE DRAINS

**GENERAL NOTES**

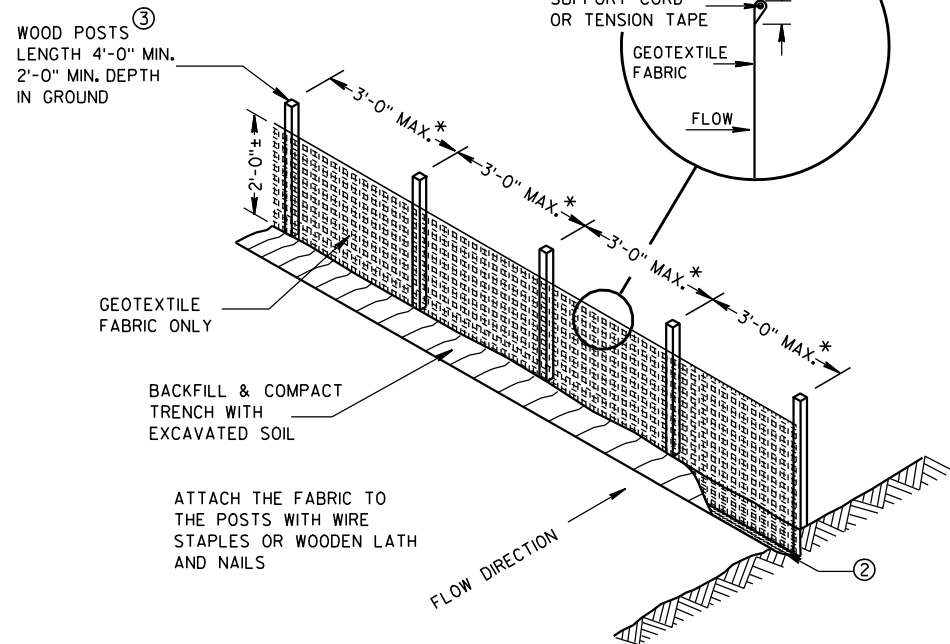
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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



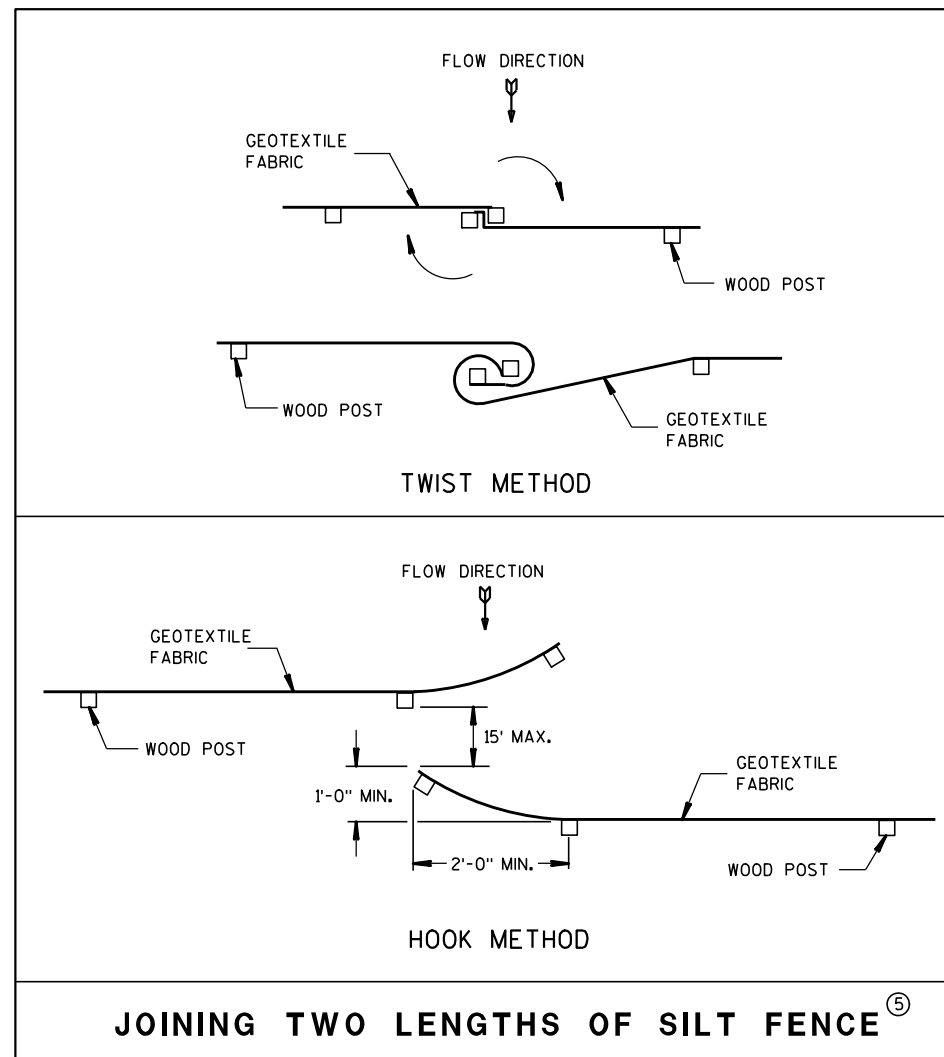
TRENCH DETAIL

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

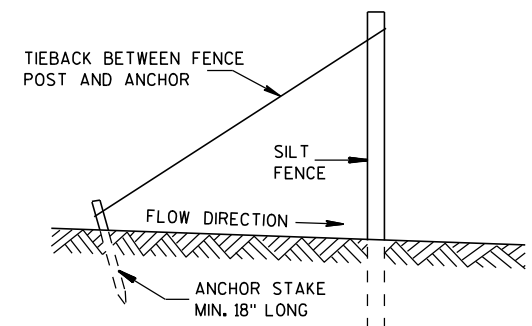


SILT FENCE

\* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

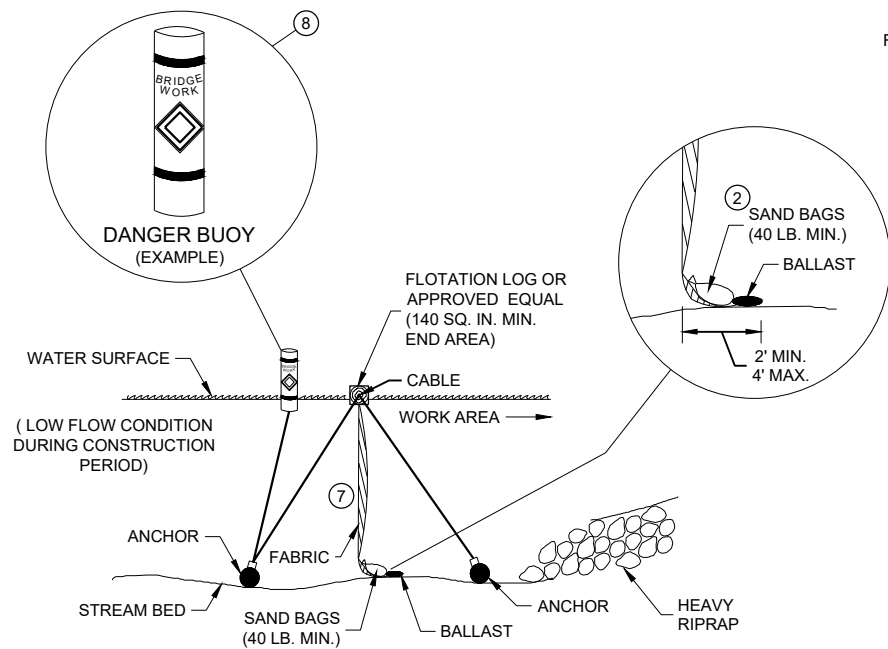


SILT FENCE TIE BACK  
(WHEN REQUIRED BY THE ENGINEER)

**SILT FENCE**

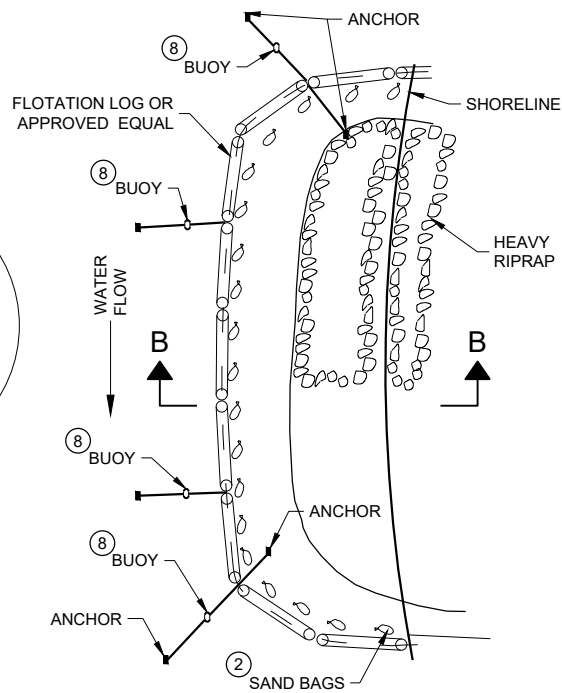
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
4-29-05 /S/ Beth Cann  
DATE CHIEF ROADWAY DEVELOP 13 INEER  
FHWA

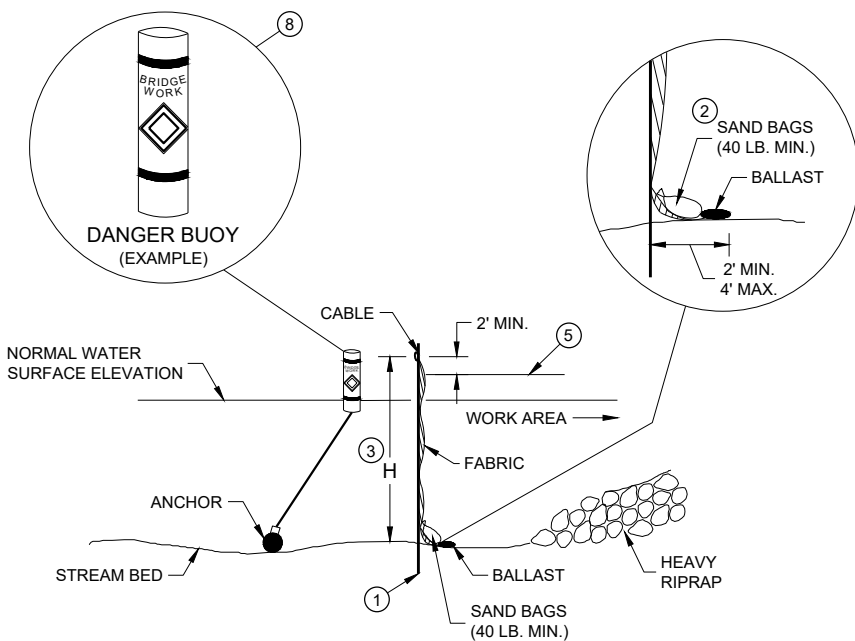


**SECTION B - B**

**TURBIDITY BARRIER - FLOAT ALTERNATIVE  
CAUTION - SEE NOTE 6**

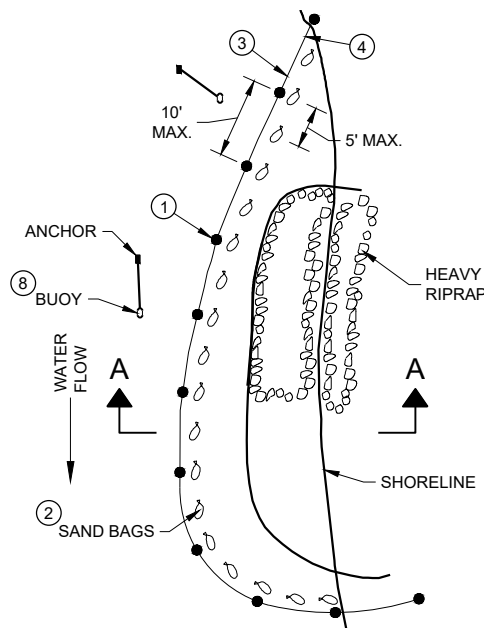


**PLAN VIEW**



**SECTION A - A**

**TURBIDITY BARRIER - STANDARD POST INSTALLATION**



**PLAN VIEW**

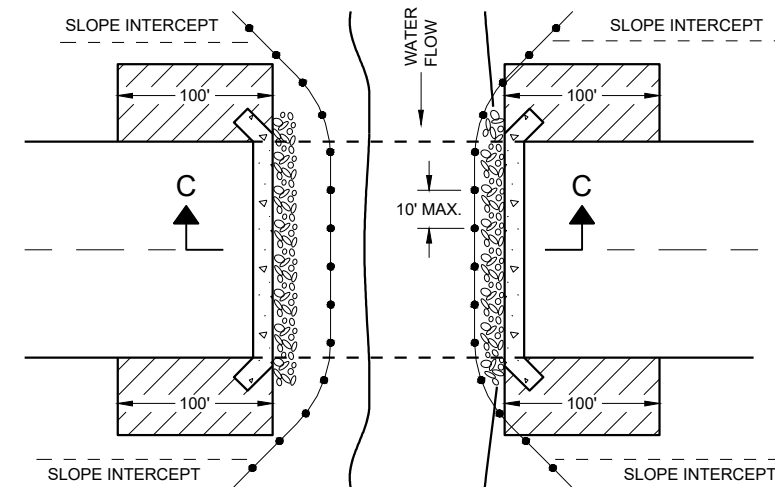
**TURBIDITY BARRIER PLACEMENT DETAILS**

**GENERAL NOTES**

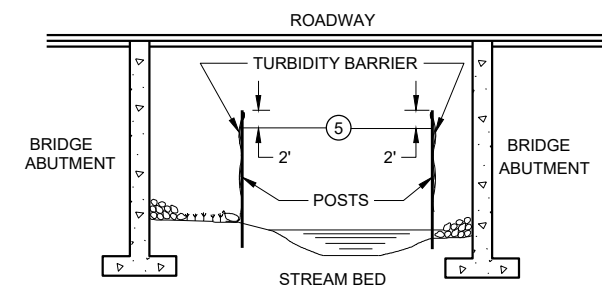
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



**PLAN VIEW**



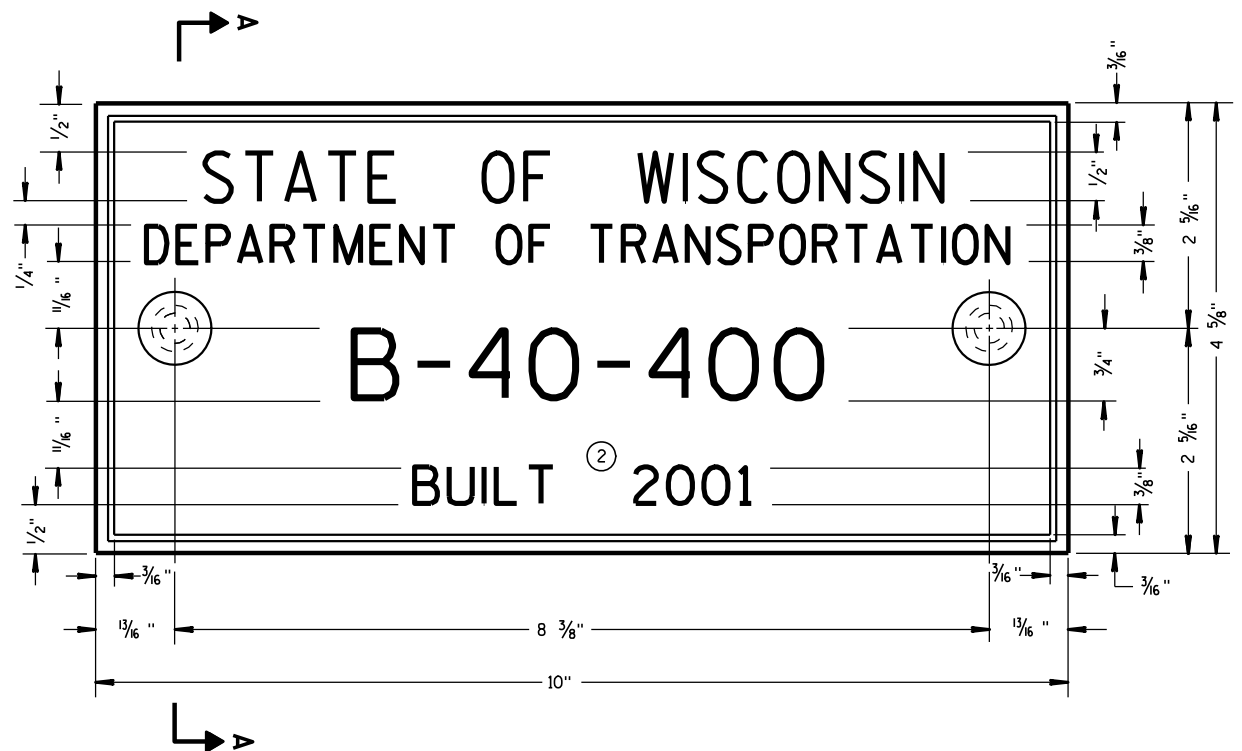
**SECTION C - C**

**TURBIDITY BARRIER DETAIL SHOWING  
TYPICAL PLACEMENT AT STRUCTURES**

**TURBIDITY BARRIER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
6/4/02 DATE /S/ Beth Cannestra  
DATE CHIEF ROADWAY DEVELOPER 14  
ENGINEER  
FHWA



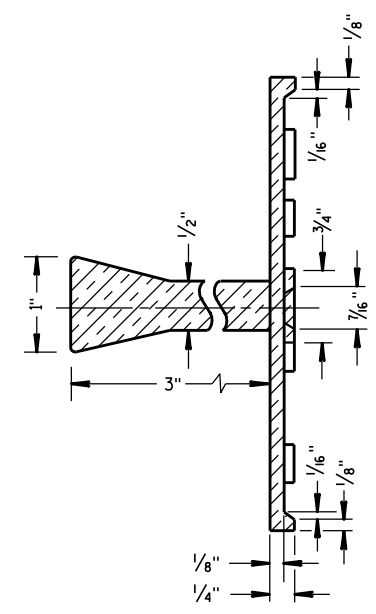
**TYPICAL NAME PLATE**  
(BRIDGES, CULVERTS, AND RETAINING WALLS)

**GENERAL NOTES**

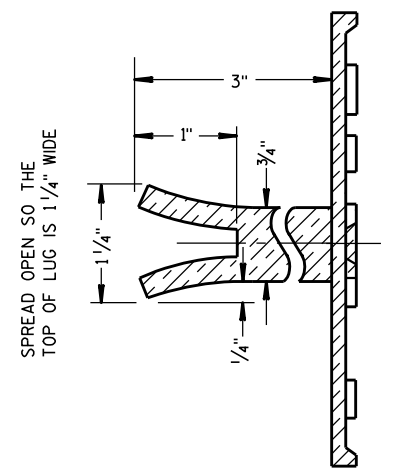
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

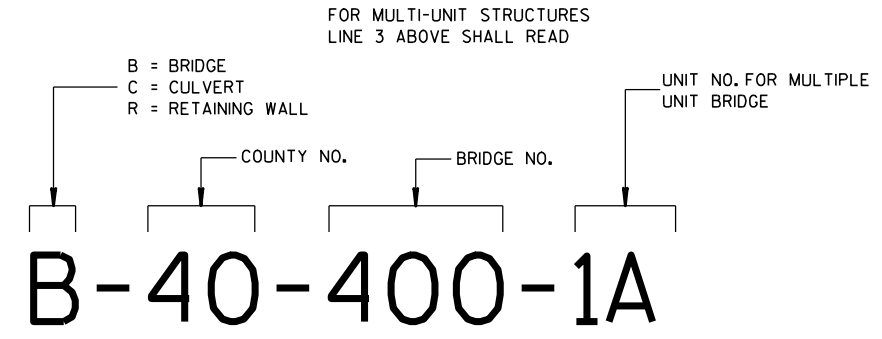
- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



**SECTION A-A**

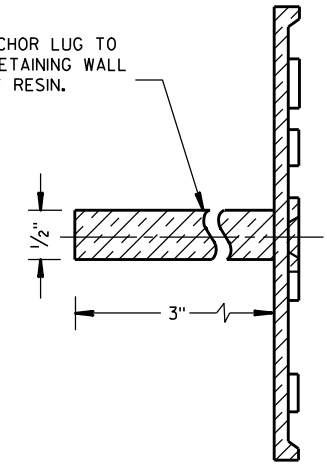


**ALTERNATE LUG**



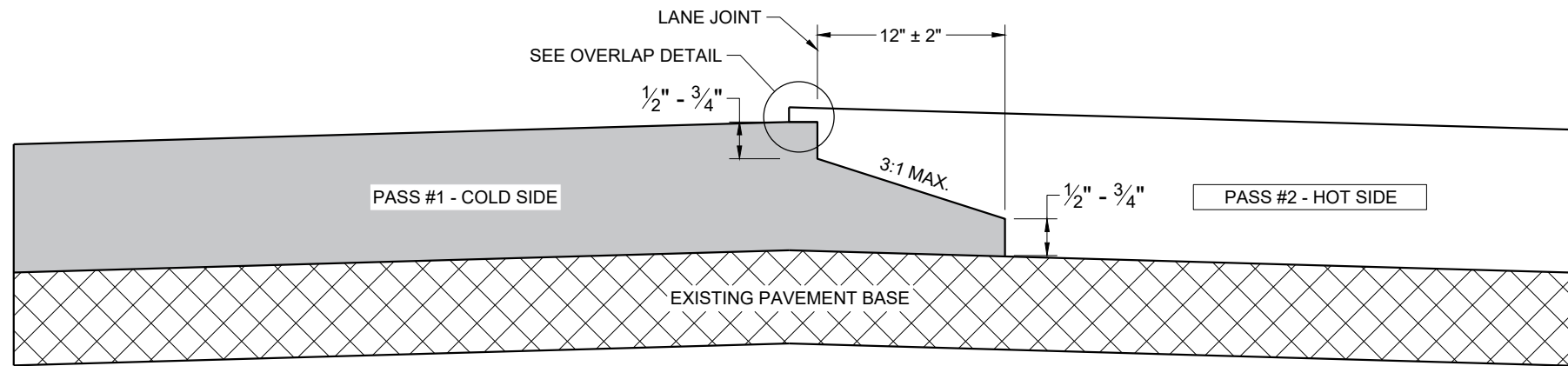
**NUMBERING DESIGNATION  
MULTI-UNIT STRUCTURES**

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.

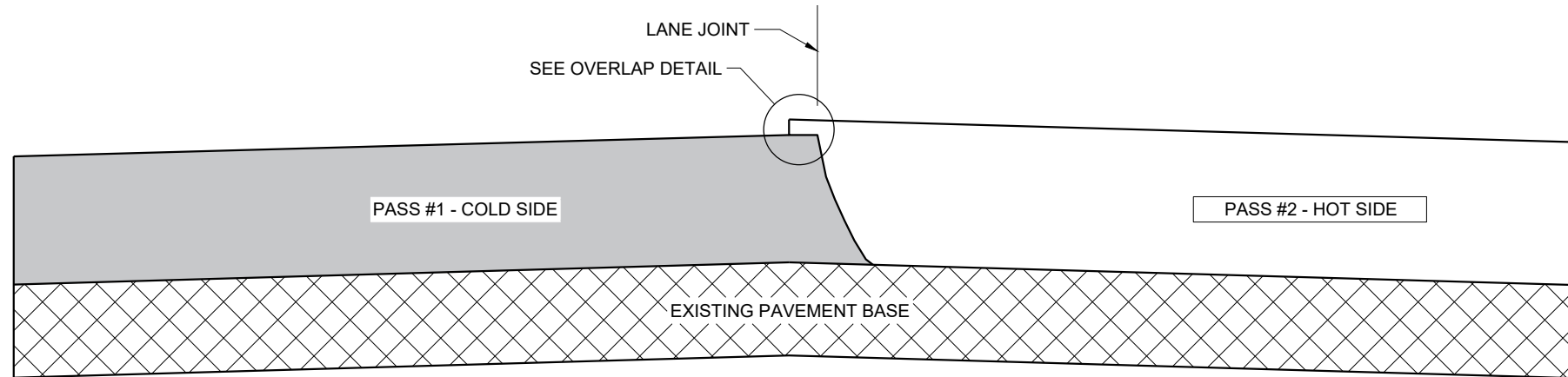


**ALTERNATE LUG**  
(FOR ATTACHMENT TO PRECAST STRUCTURES)

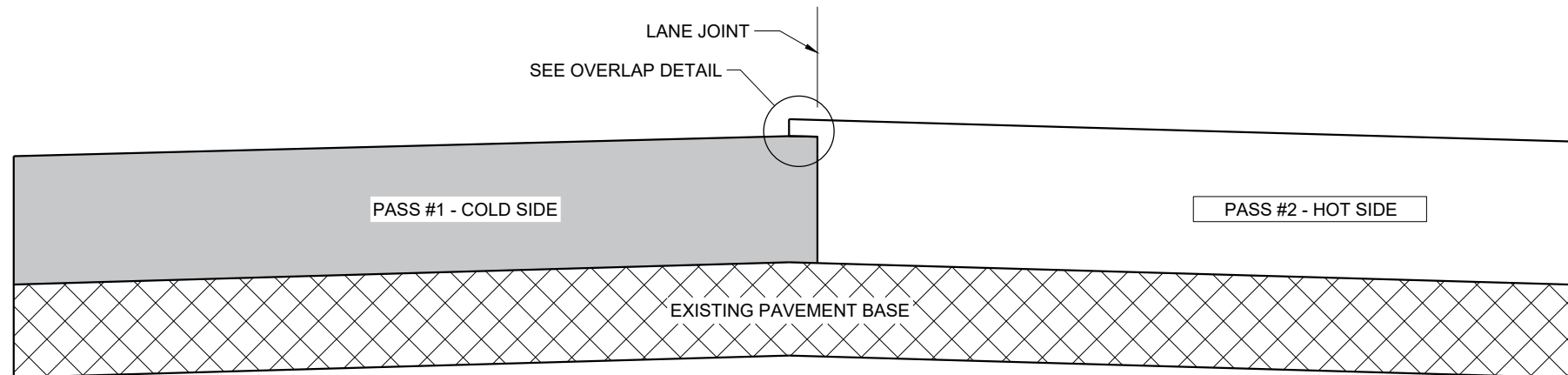
<b>NAME PLATE (STRUCTURES)</b>		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED DATE 3/26/10	/S/ Scot Beck CHIEF STRUCTURAL DEVELOPER	15 EER
FHWA		



**TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)**

**GENERAL NOTES**

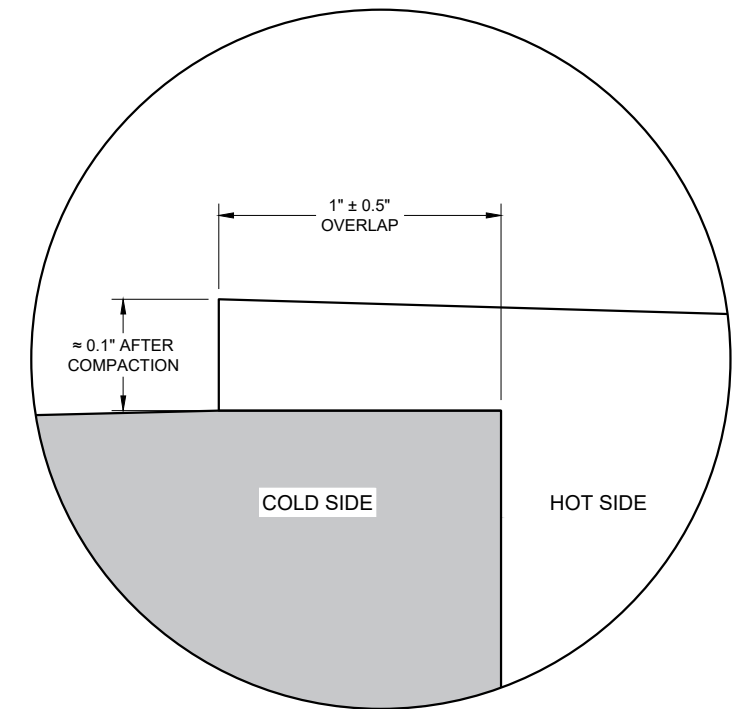
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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)**

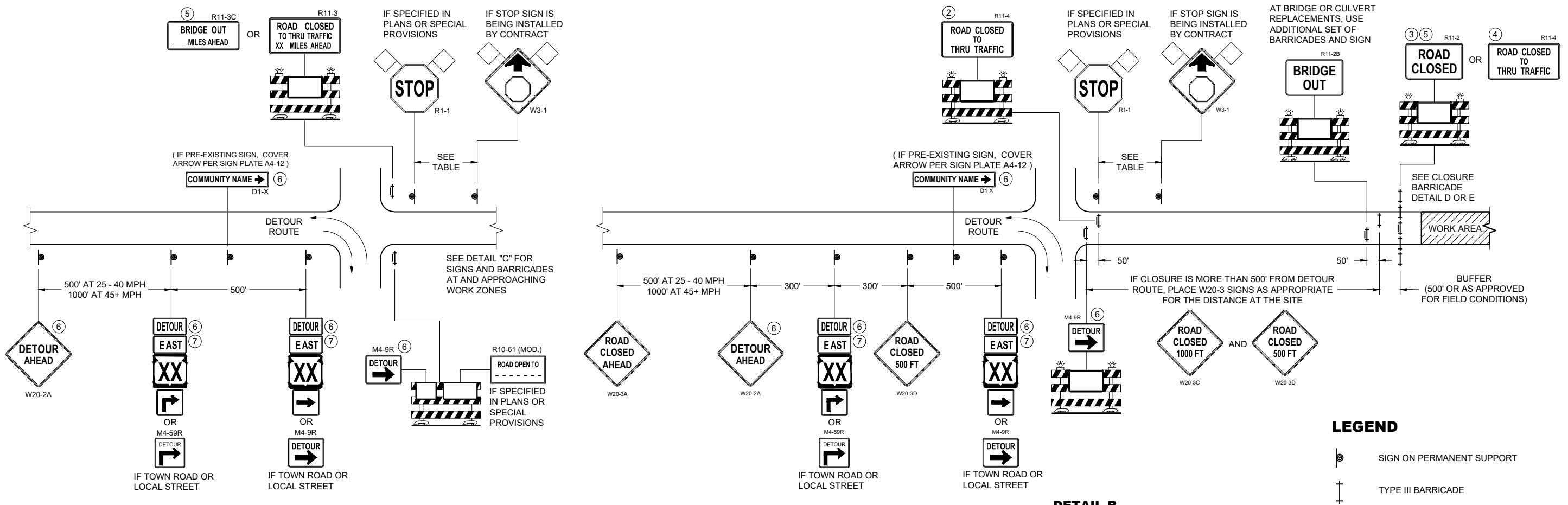
6

6

SDD 13C19 - 03

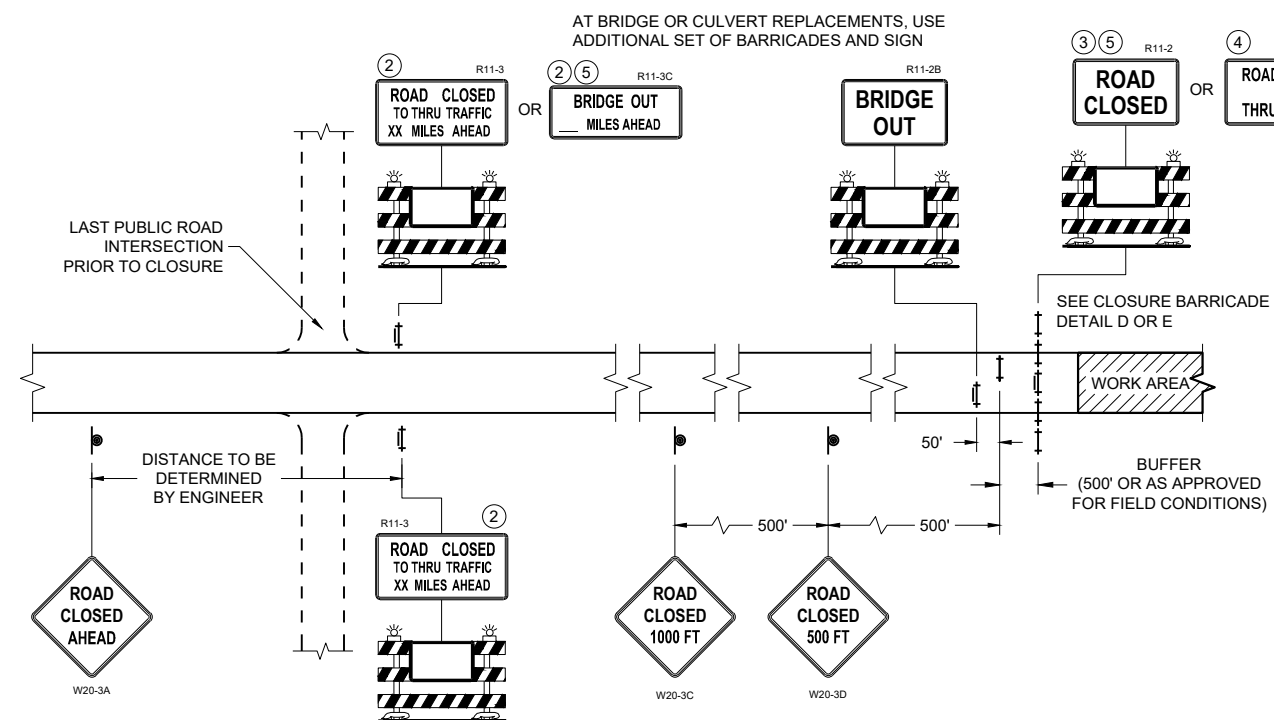
SDD 13C19 - 03

<b>HMA LONGITUDINAL JOINTS</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGIN 16
<small>FHWA</small>	



**DETAIL A**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
 WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM  
 DETOUR ROUTE ( 1000 FEET IF URBAN )

**DETAIL B**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
 WORK ZONE LESS THAN 1/2 MILE FROM  
 DETOUR ROUTE ( 1000 FEET IF URBAN )



**DETAIL C**  
**MAINLINE CLOSURE, NO POSTED DETOUR**

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

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

**LEGEND**

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

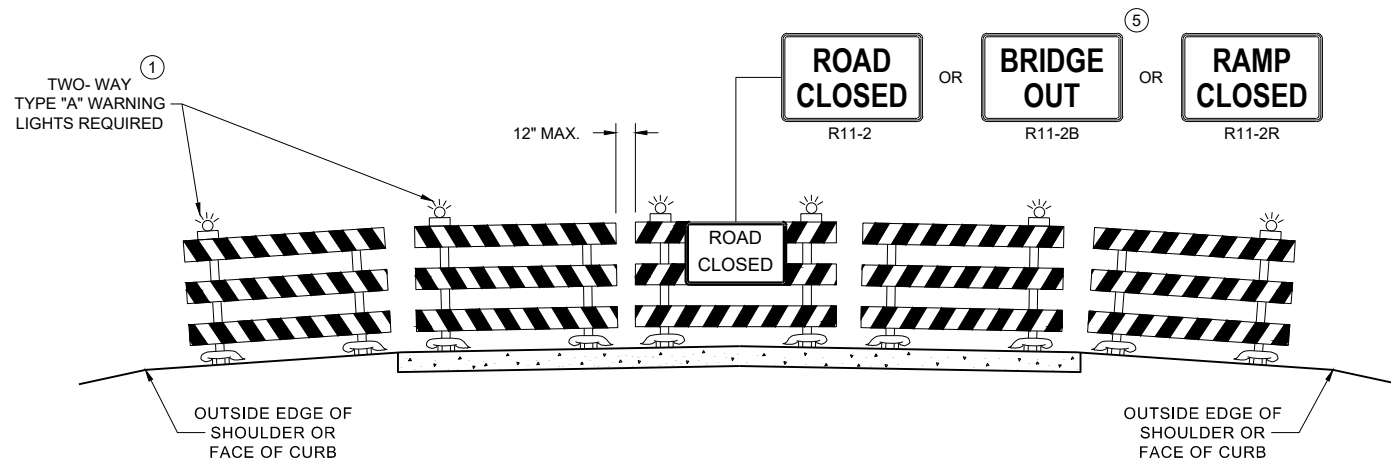
M4 - 8  
 M3 - X  
 M1 - 4 OR M1 - 6 OR M1 - 5A  
 M05 - 1 OR M06 - 1

**BARRICADES AND SIGNS  
 FOR MAINLINE CLOSURES**

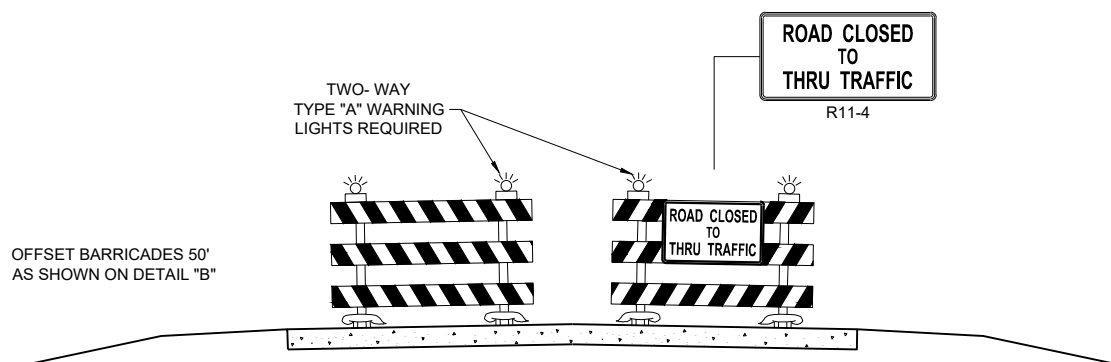
STATE OF WISCONSIN  
 DEPARTMENT OF TRANSPORTATION

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

FHWA 17



**DETAIL D**  
**ROAD CLOSURE BARRICADE DETAIL**  
**APPROACH VIEW**



**DETAIL E**  
**LANE CLOSURE BARRICADE DETAIL**  
**APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

**GENERAL NOTES**

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

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

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

- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

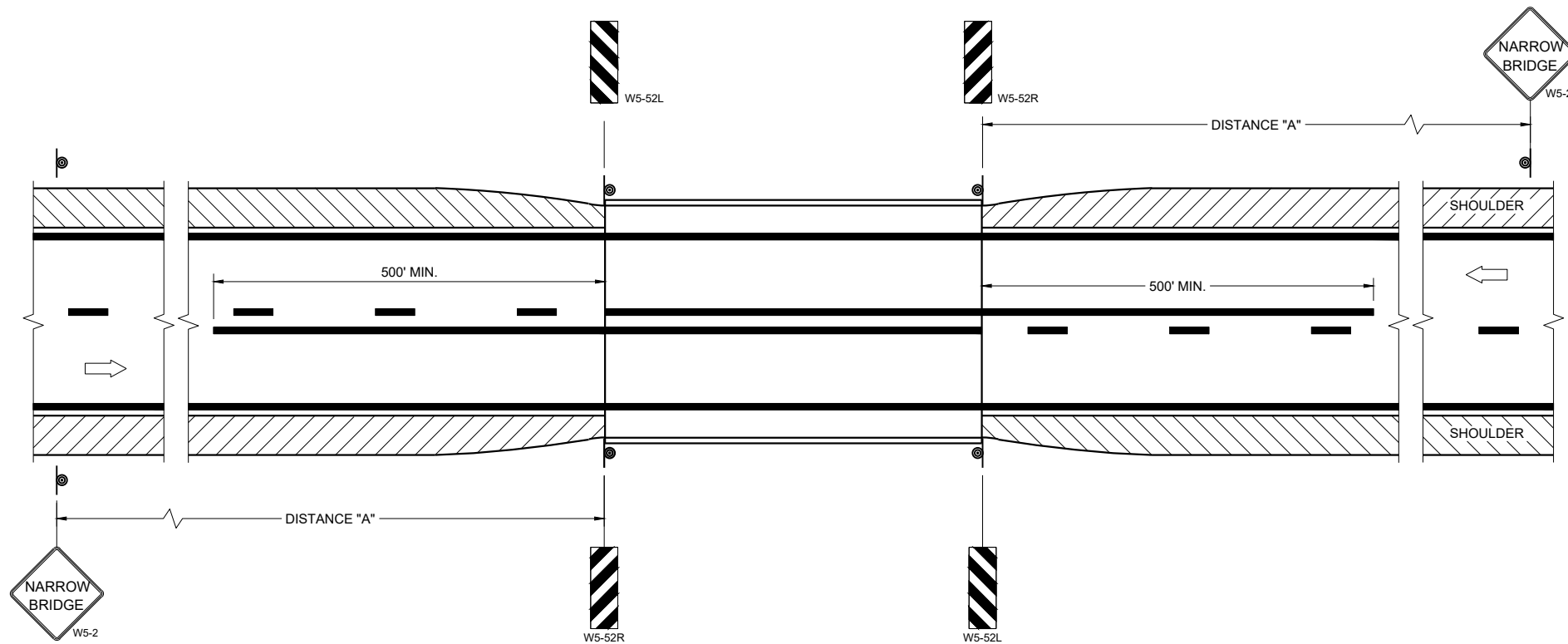
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6

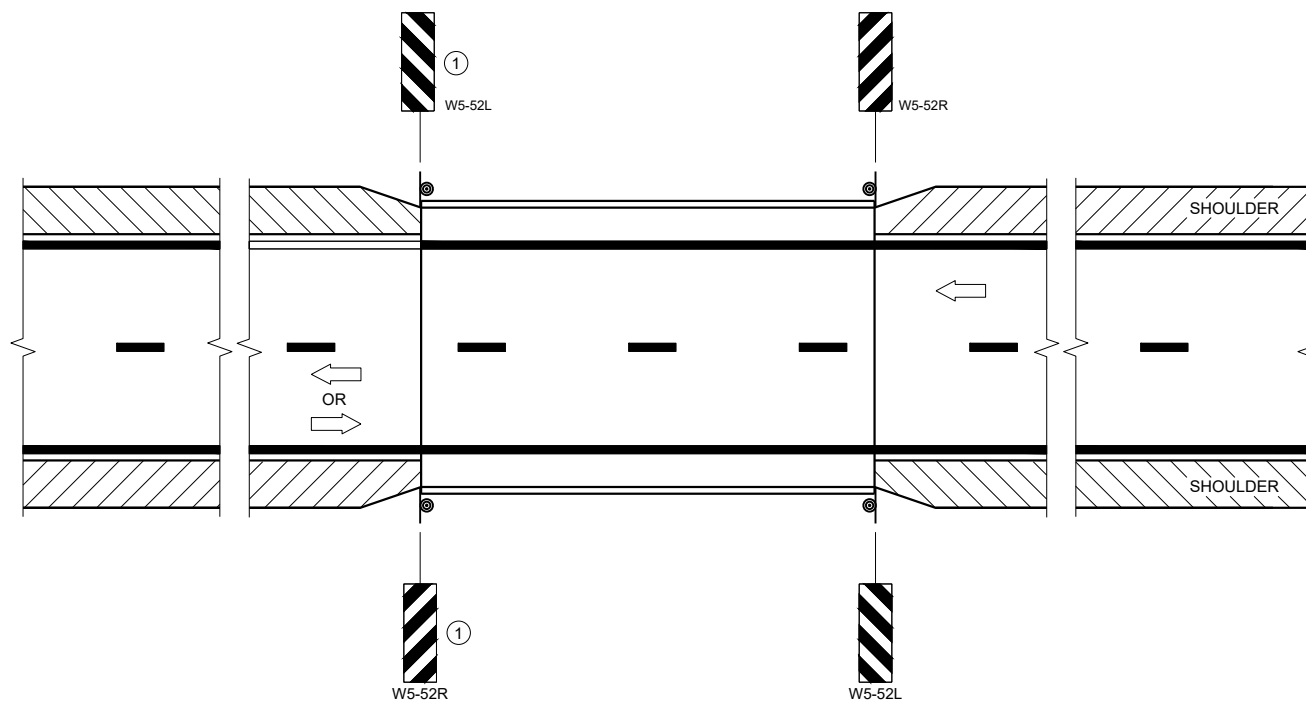
SDD 15C02-10b

SDD 15C02-10b

<b>BARRICADES AND SIGNS FOR VARIOUS CLOSURES</b>	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2025 DATE	/s/ Andrew Heidtke WORK ZONE ENGINEER
FHWA 18	



**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'

6

6

SDD 15C06-12

SDD 15C06-12

**SIGNING AND MARKING  
FOR TWO LANE BRIDGES**

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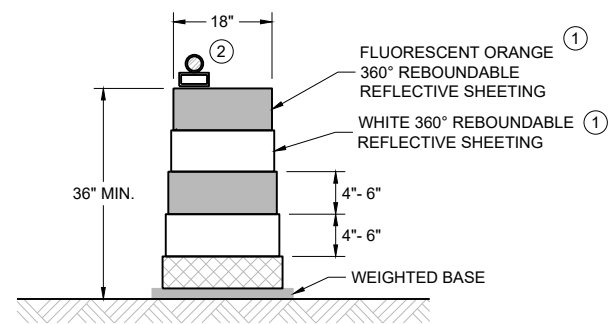
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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APPROVED \_\_\_\_\_ /S/ Jeannie Silver  
 DATE \_\_\_\_\_  
Statewide Pavement Marking Engineer

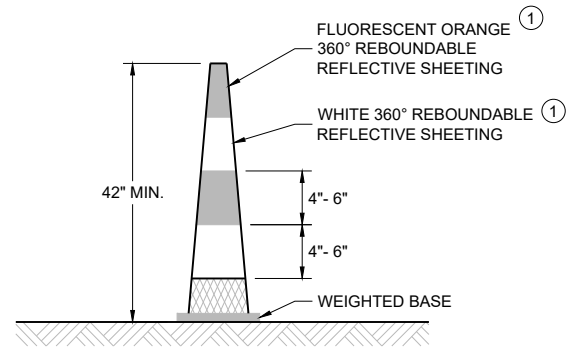
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FHWA 19



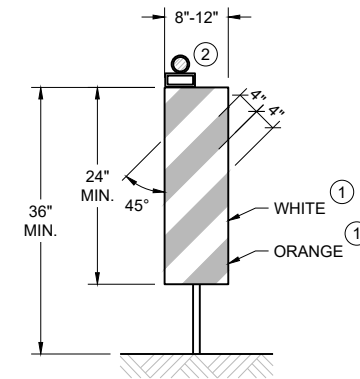
**DRUM**

BALLAST WIDTHS  
RANGE FROM 24"-36"



**42" CONE**

DO NOT USE IN TAPERS  
1/2 SPACING OF DRUMS  
BALLAST WIDTHS  
RANGE FROM 14"-20"

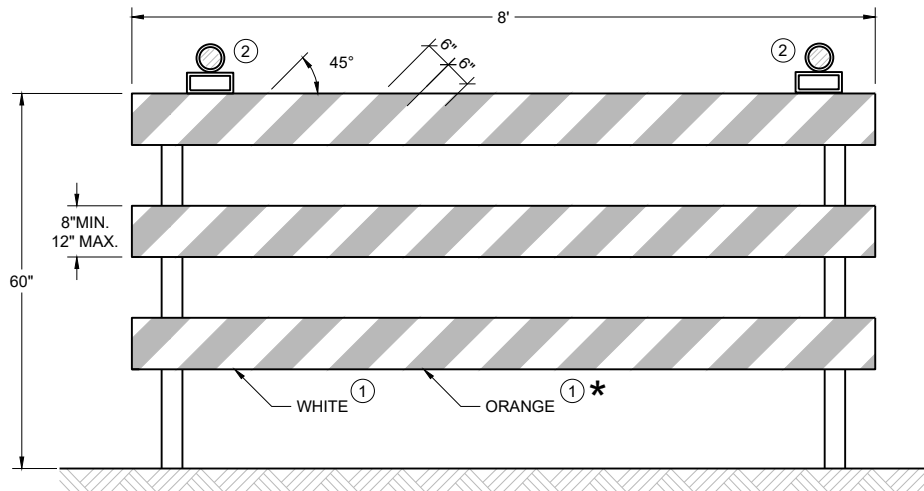


**VERTICAL PANEL**

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

**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.



**TYPE III BARRICADE**

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

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

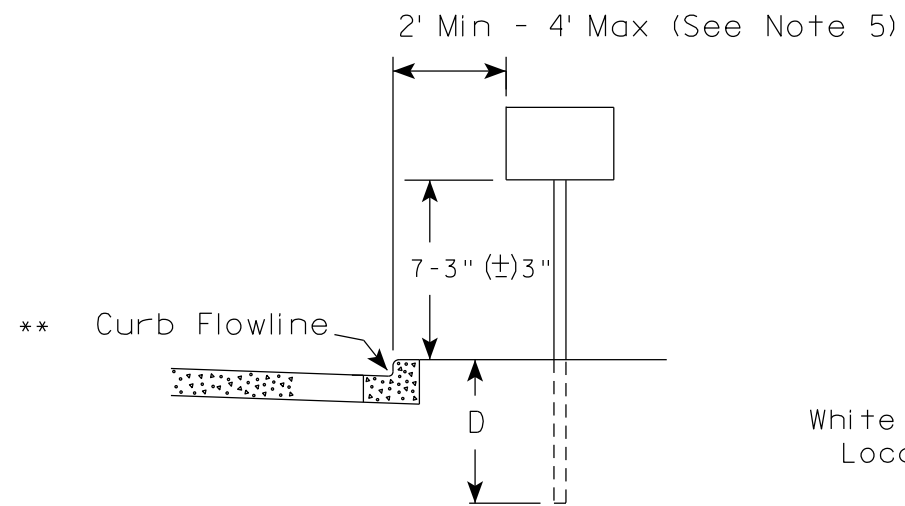
**CHANNELIZING DEVICES  
DRUMS, CONES, BARRICADES  
AND VERTICAL PANELS**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2026 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER

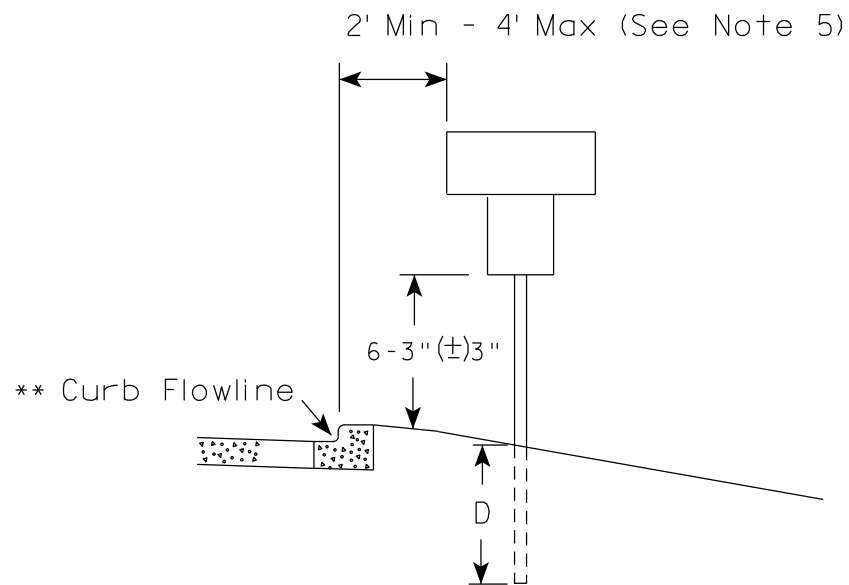
URBAN AREA

RURAL AREA (See Note 2)



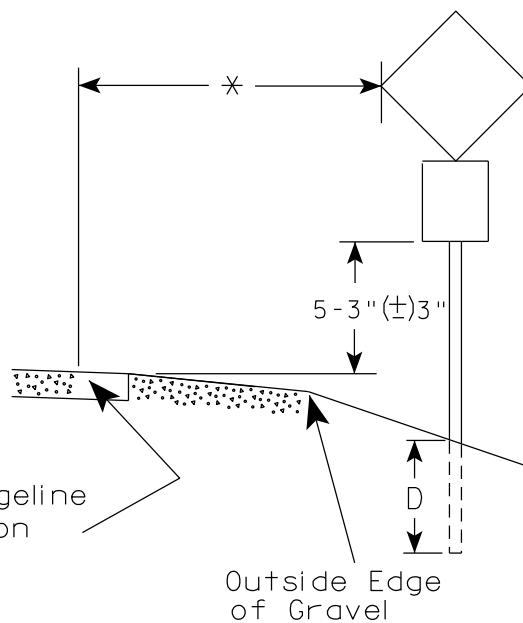
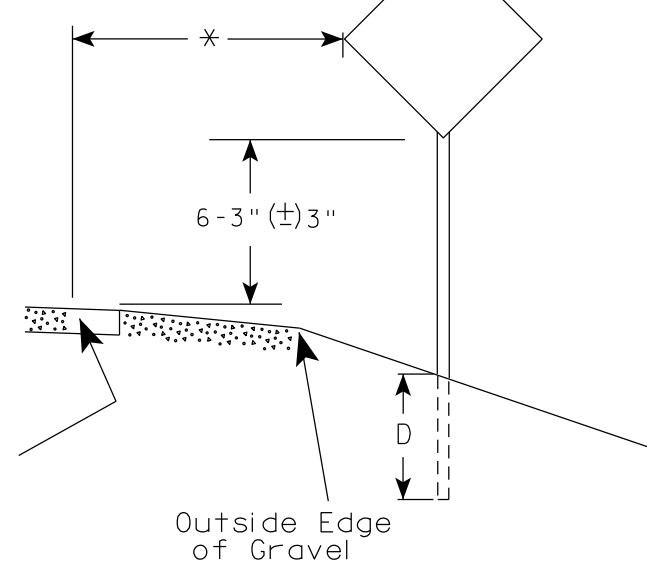
White Edgeline Location

Outside Edge of Gravel



White Edgeline Location

Outside Edge of Gravel



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

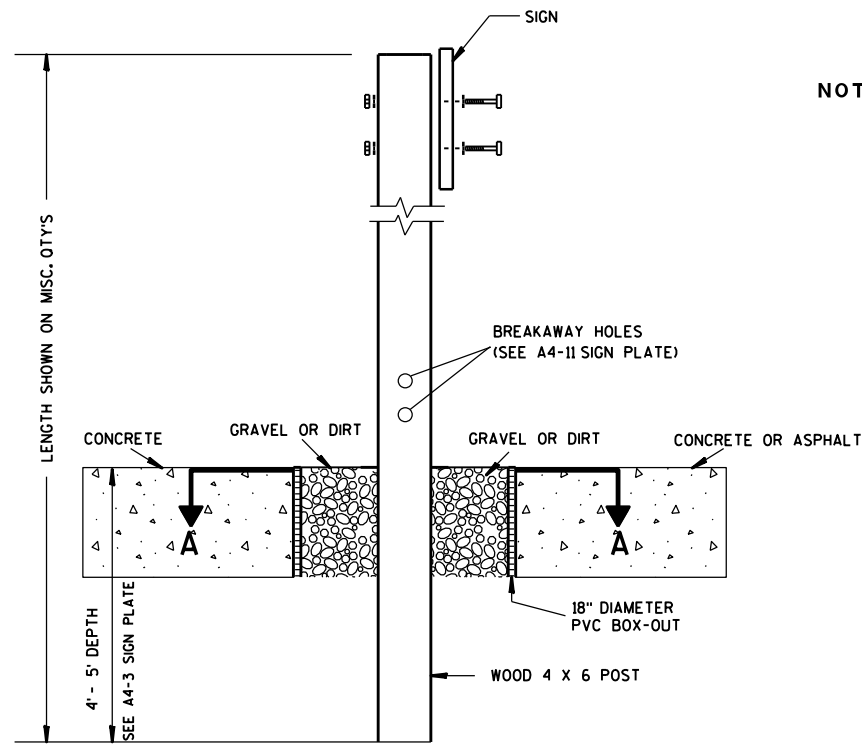
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R Raub*  
for State Traffic Engineer

DATE 12/6/23

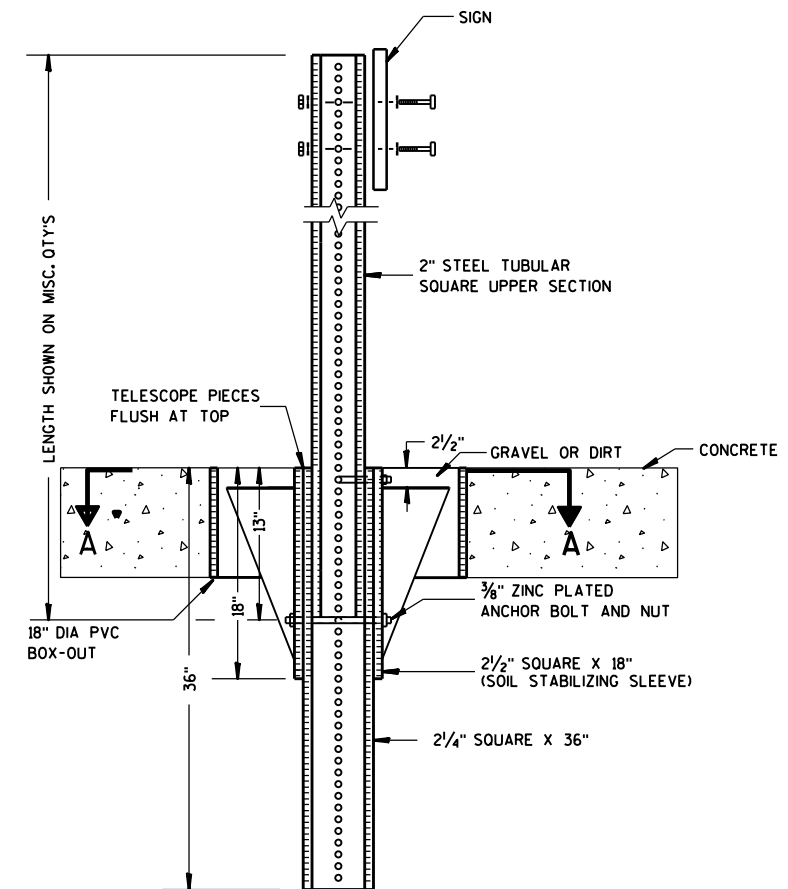
PLATE NO. A4-3.23



**ELEVATION VIEW**

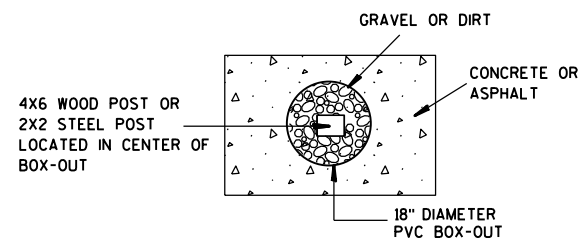
**DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT**

- 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 PLAT 22 A4-3B.1

GENERAL NOTES

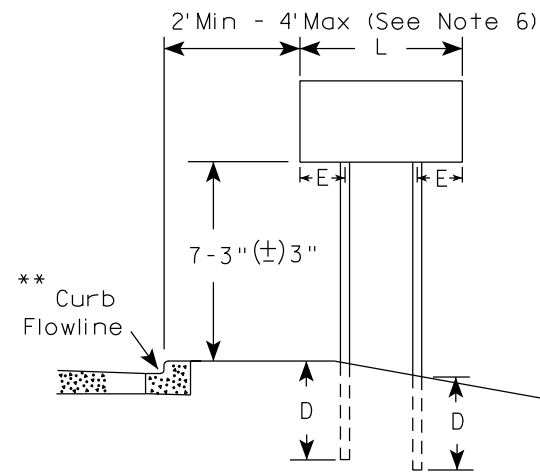
- For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
- See tables below for required number of posts.
- For expressways and freeways, mounting height is 7'-3" ( $\pm$  3") or 6'-3" ( $\pm$  3") depending upon existence of sub-sign.
- The ( $\pm$ ) tolerance for mounting 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" ( $\pm$  3") or as directed by the engineer.
- The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" ( $\pm$  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" ( $\pm$  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.

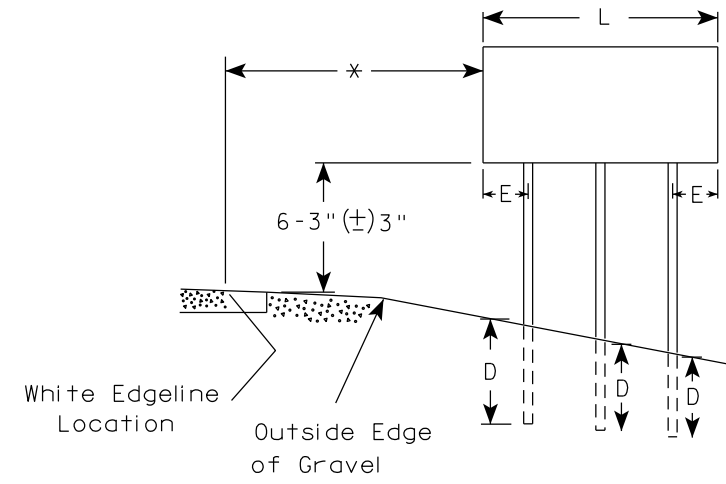
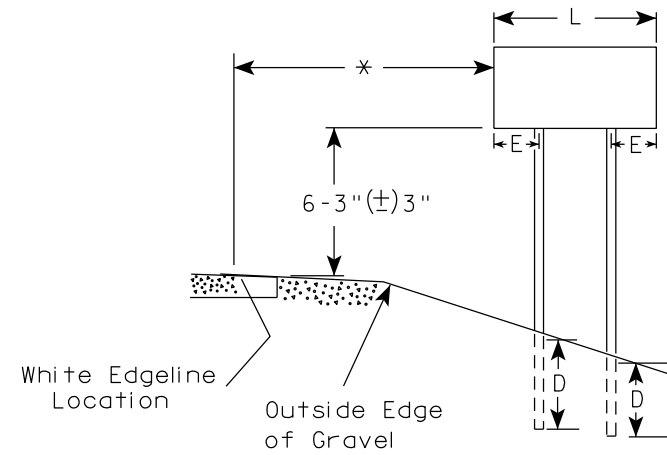
\*\* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of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

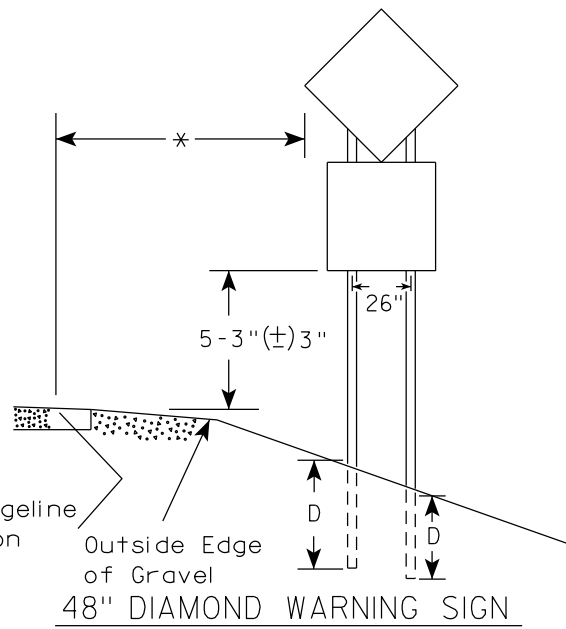
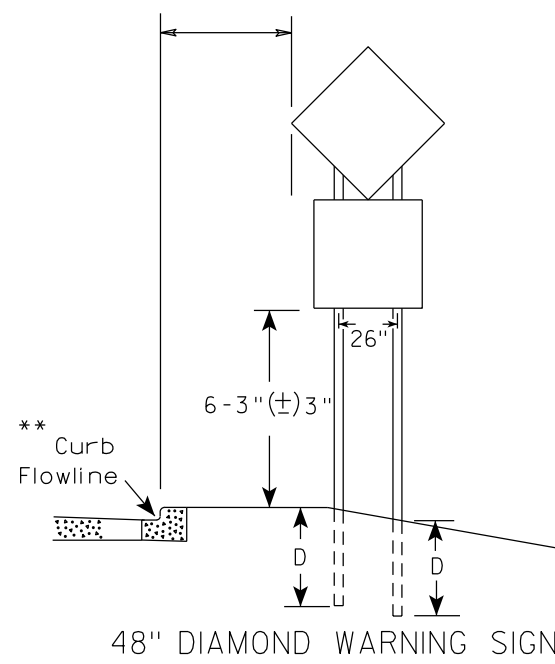
URBAN AREA



RURAL AREA (See Note 3)



URBAN AREA



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

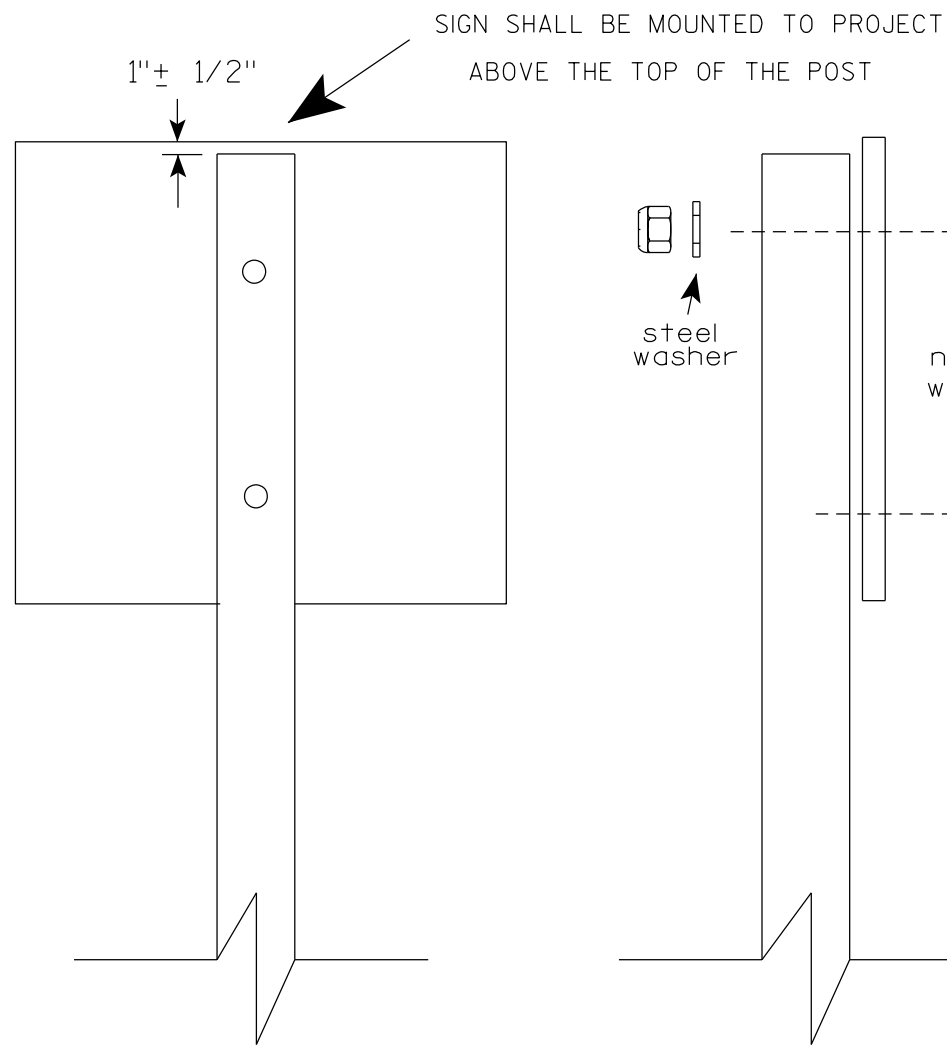
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION  
 APPROVED *Matthew R. Rauch*  
 For State Traffic Engineer  
 DATE 12/6/23 PLATE NO. A4-4.16



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

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS  
TO POSTS

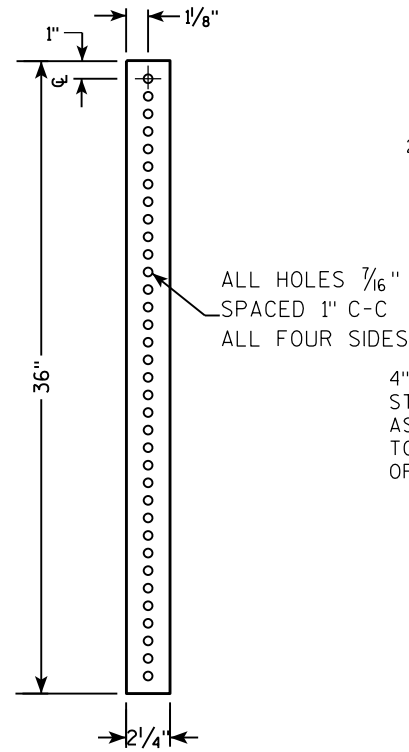
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*  
For State Traffic Engineer

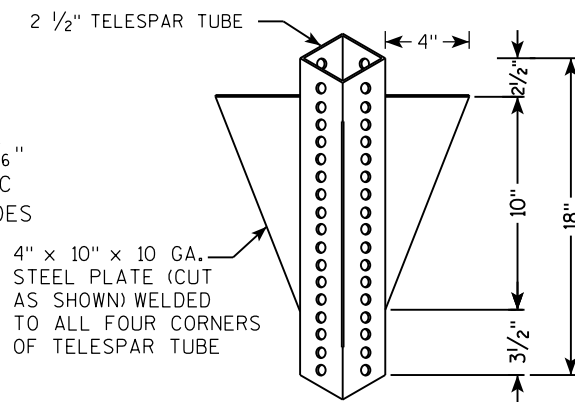
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS  
TWO PIECE SYSTEM**

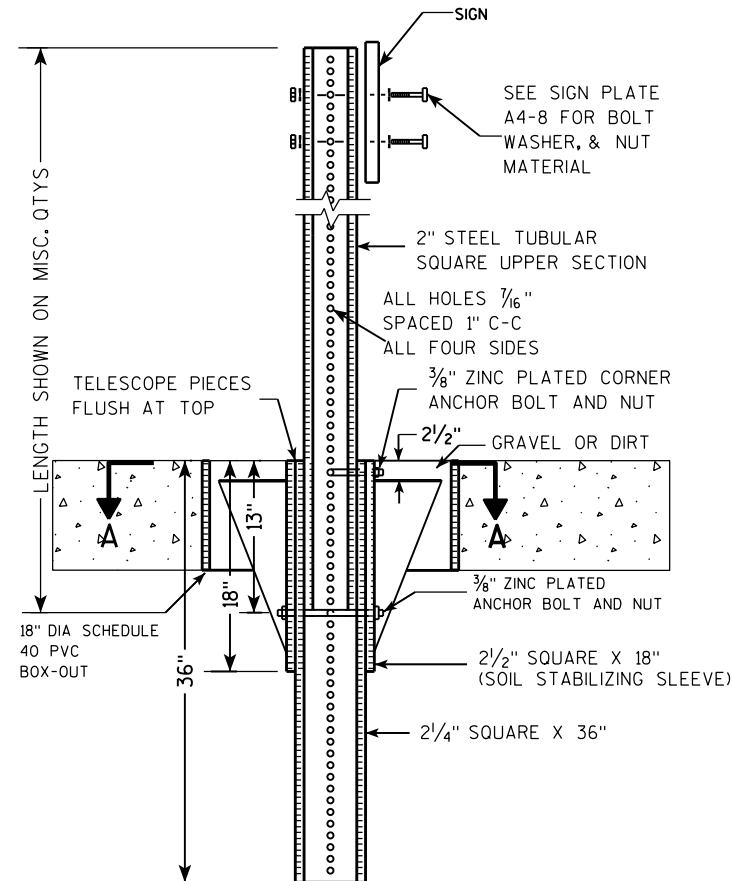
2 1/4" SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH



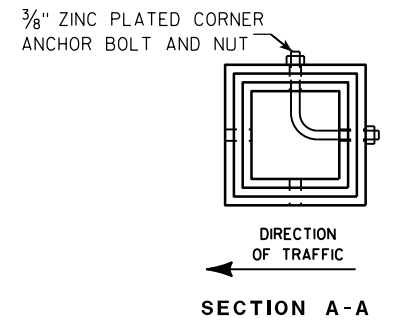
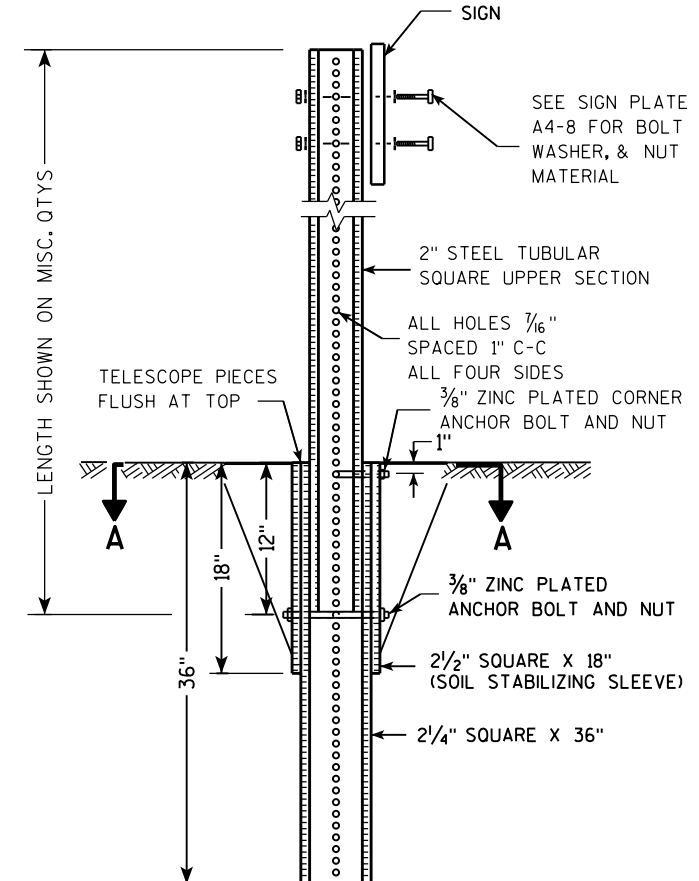
2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH



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



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



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

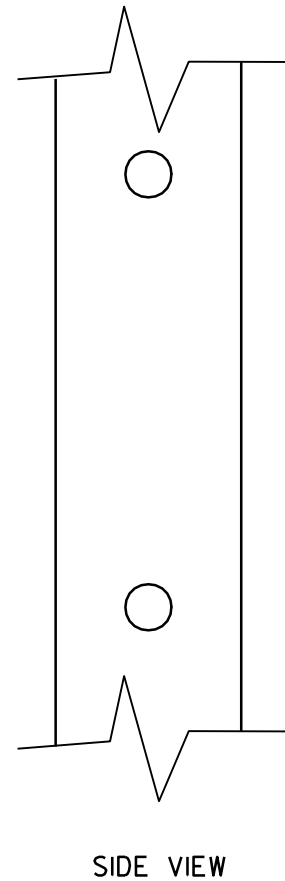
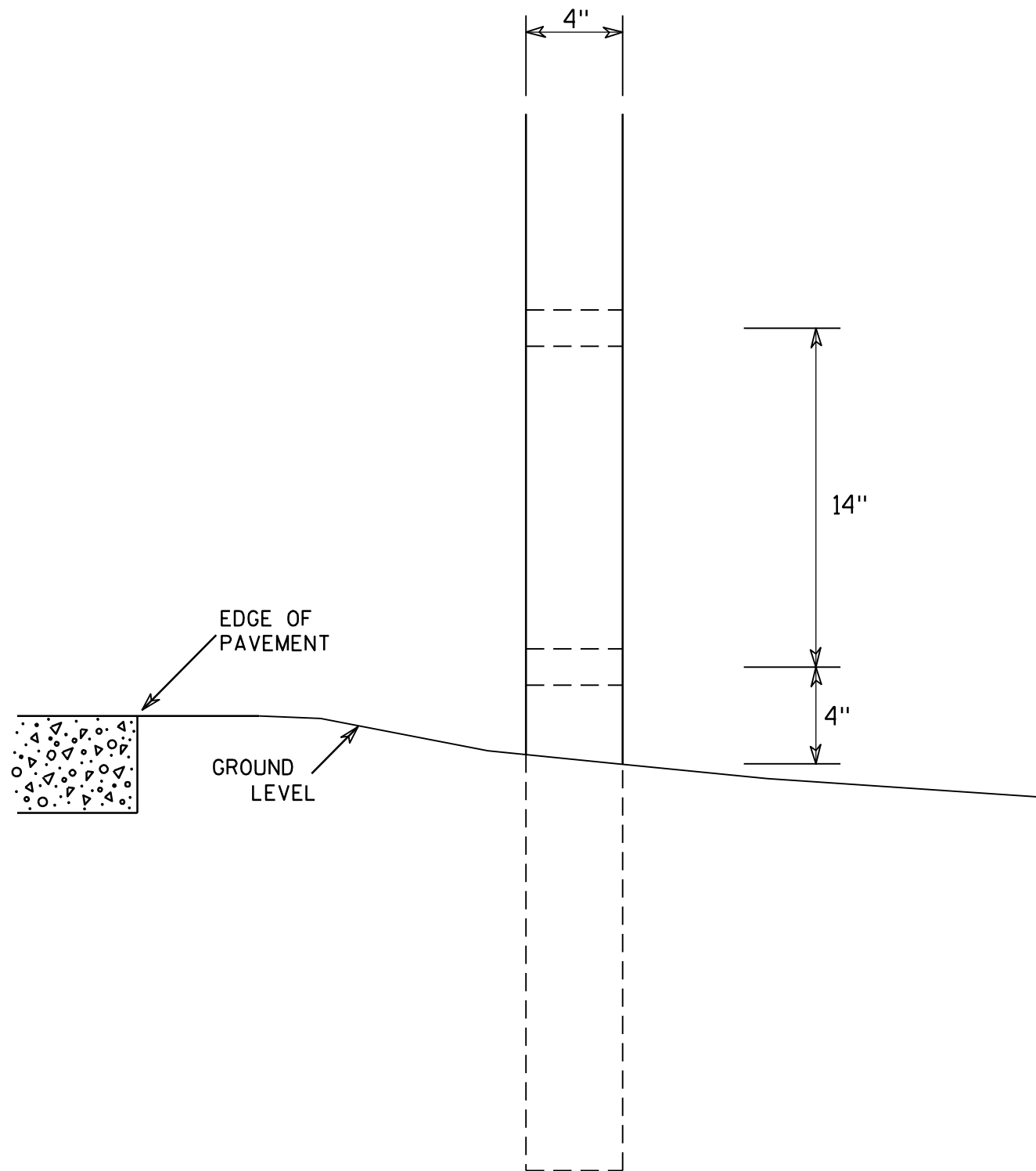
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL  
SIGN POST  
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/05/15 PLAT 25 14-9.9



GENERAL NOTES

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

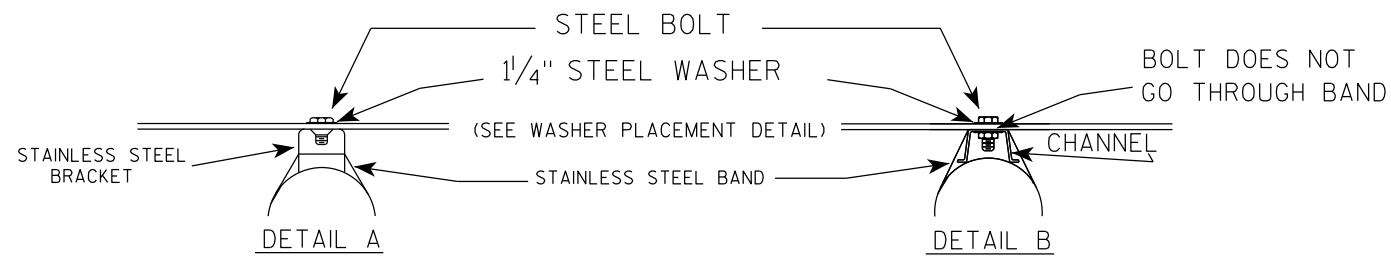
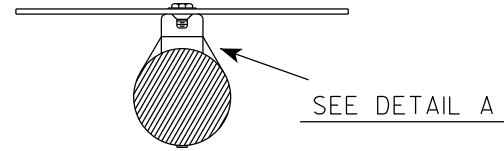
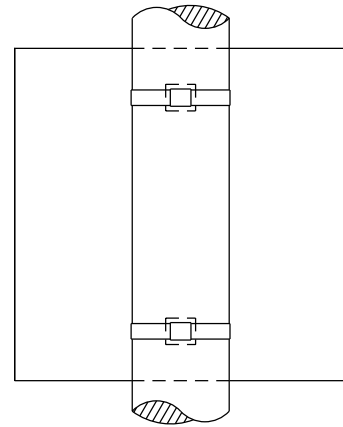
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7

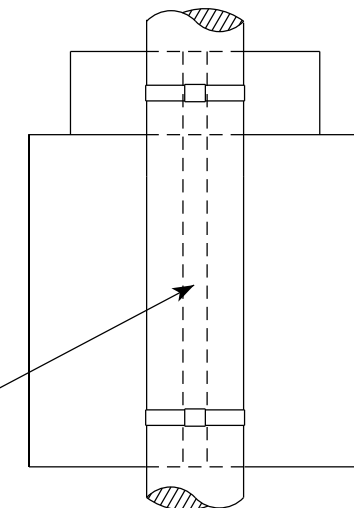
<b>4 X 6 WOOD POST MODIFICATIONS</b>	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

# BANDING

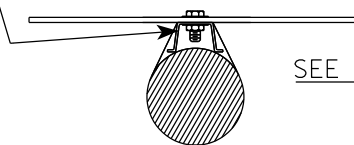
SINGLE SIGN



"J" ASSEMBLY

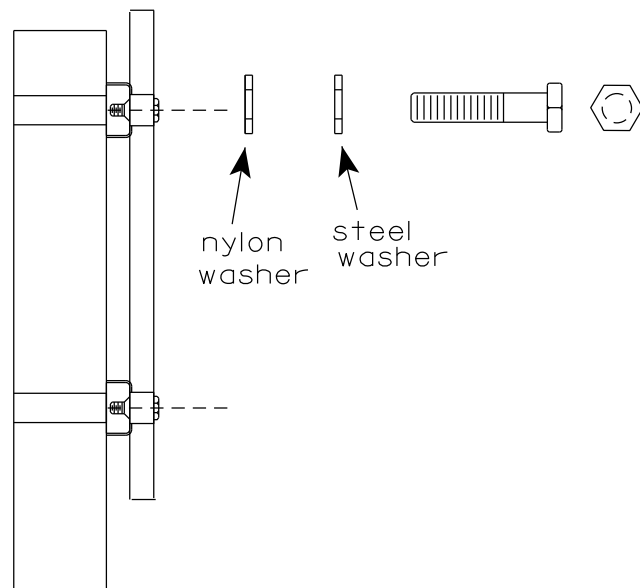


CHANNEL  
SEE TYPICAL PANEL  
INSTALLATION SHEET



- 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

WASHER PLACEMENT



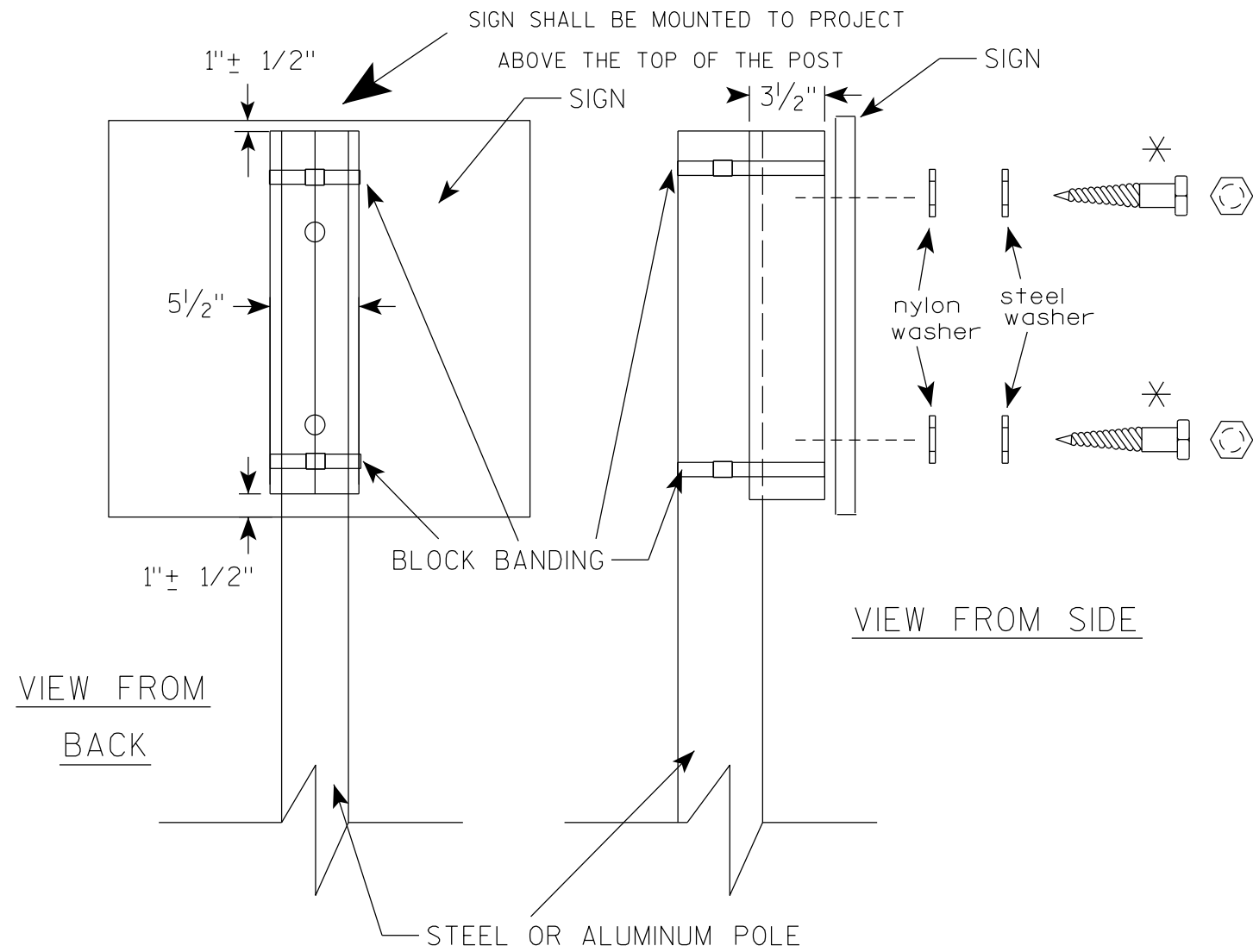
WASHERS (ALL POSTS) -  
 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
 1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
 FOR ALL TYPE H SIGNS

STANDARD SIGN  
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

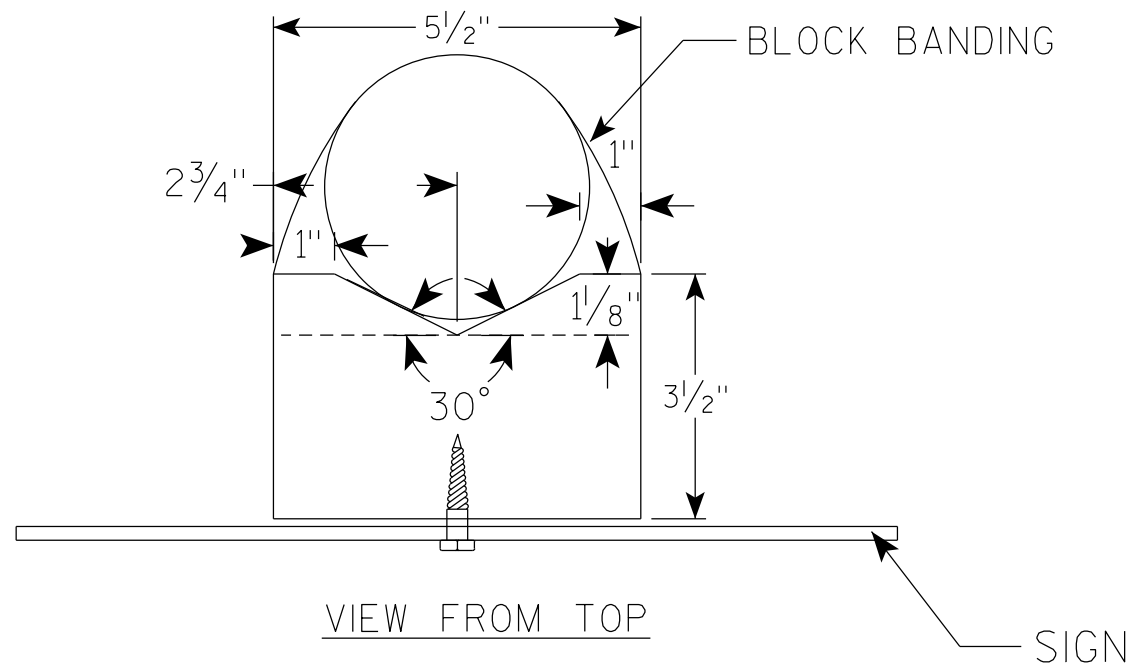
DATE 6/10/19 PLATE NO. A5-9.4



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, 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 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

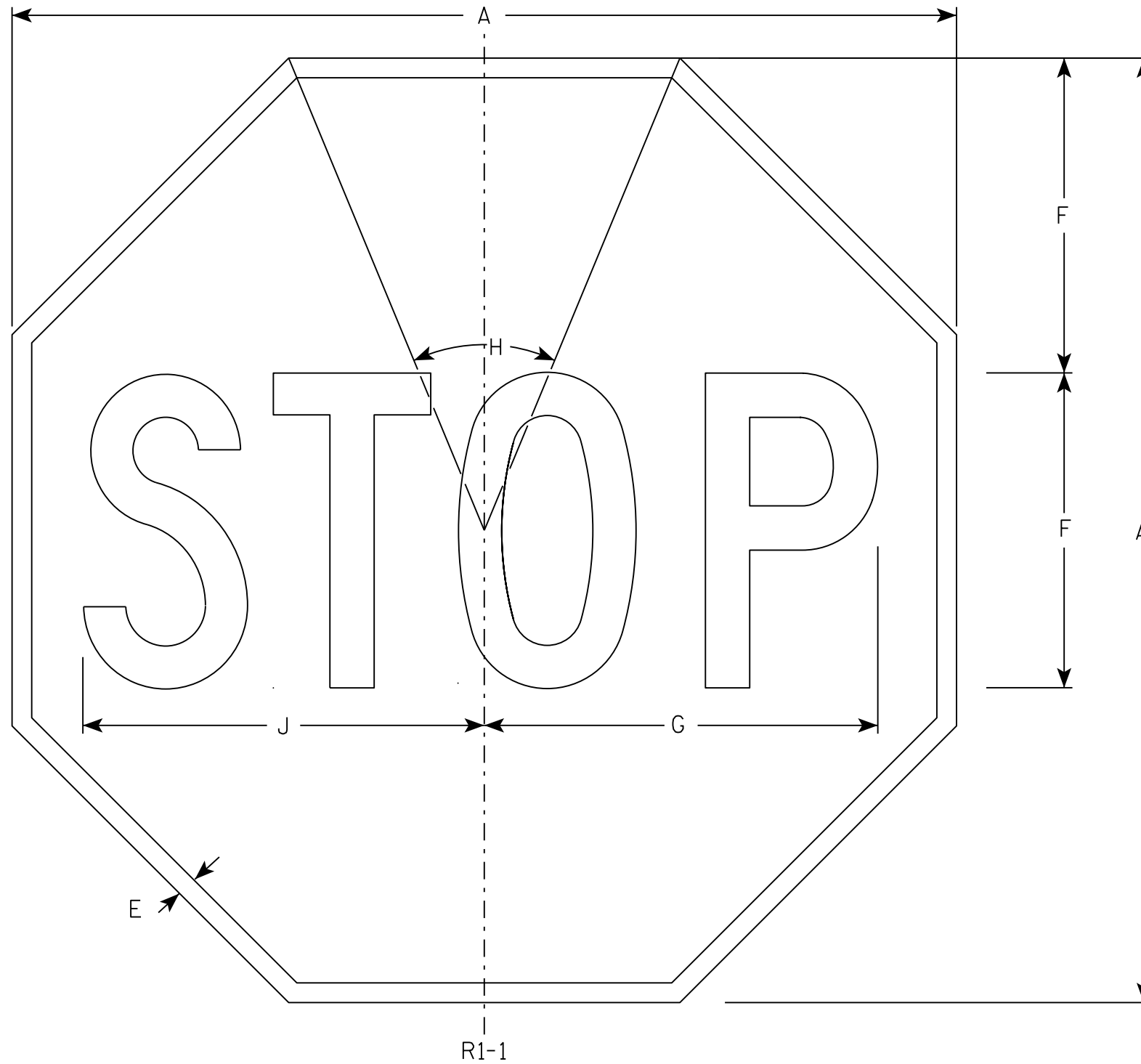
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL ( V-BLOCK OPTION )	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 4/19/2022	PLATE NO. A5-10.3

NOTES

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



7

7

R1-1

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

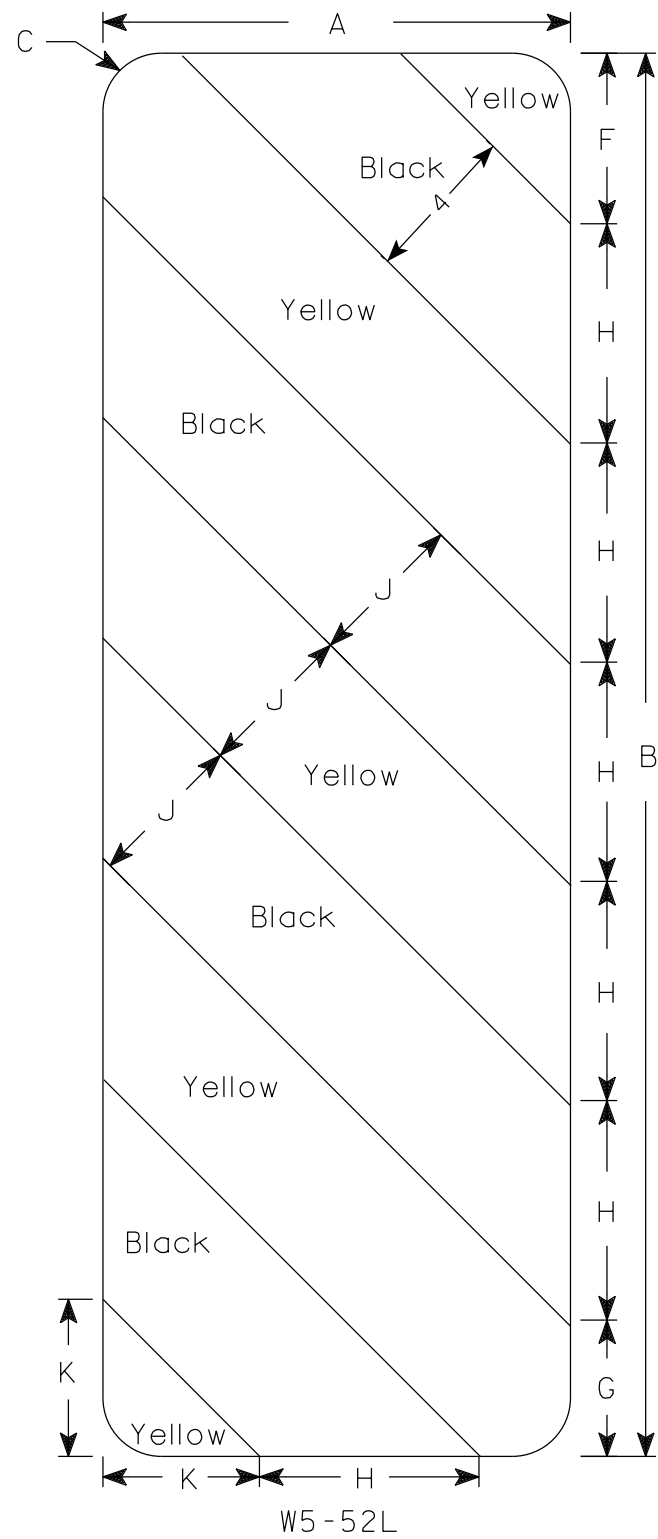
STANDARD SIGN  
R1-1

WISCONSIN DEPT OF TRANSPORTATION

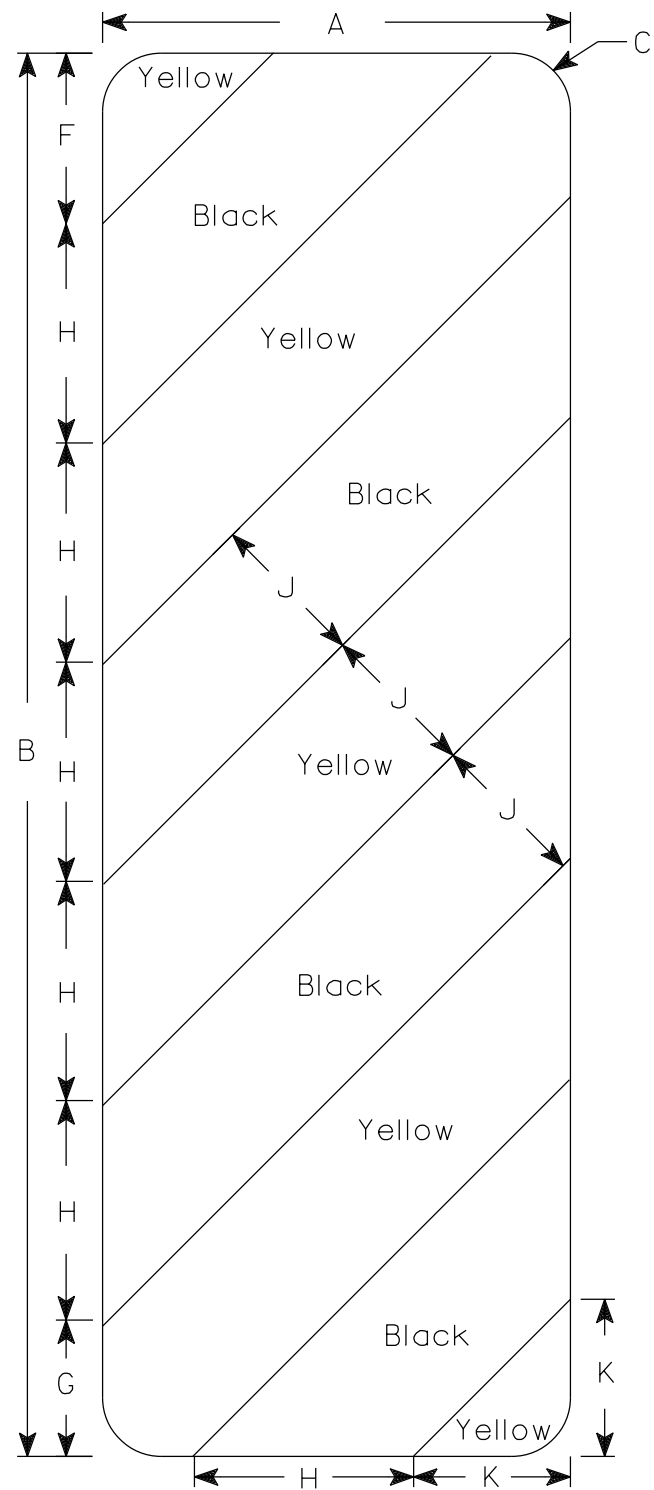
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

PROJECT NO: \_\_\_\_\_ HWY: \_\_\_\_\_ COUNTY: \_\_\_\_\_ SHEET NO: 29 **E**



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Yellow  
Message - Black
3. Alternate colors of stripes as shown.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	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

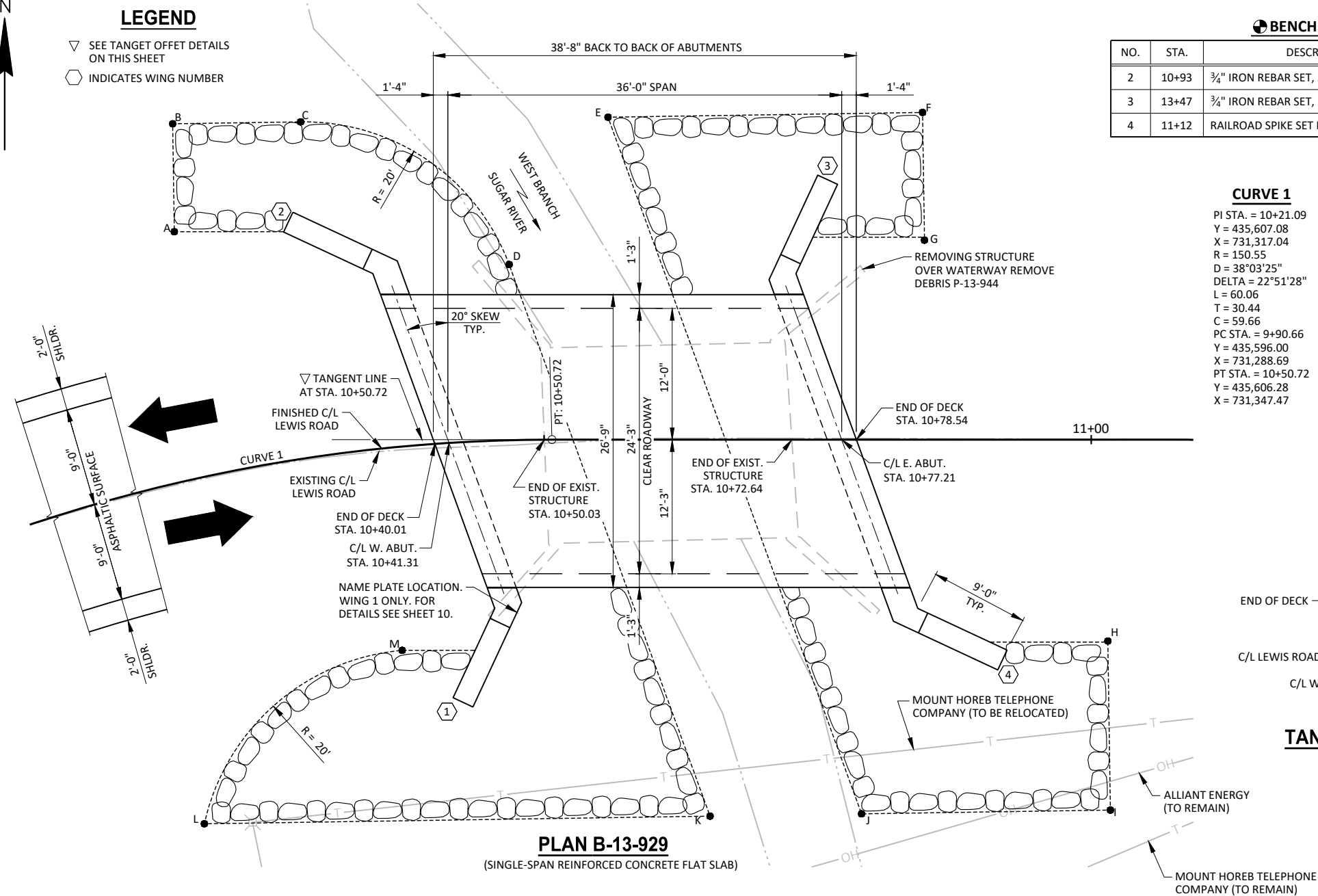
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

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

LEGEND

- ▽ SEE TANGENT OFFSET DETAILS ON THIS SHEET
- INDICATES WING NUMBER



BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
2	10+93	3/4" IRON REBAR SET, 37.8' RT.	944.33
3	13+47	3/4" IRON REBAR SET, 18.7' LT.	946.86
4	11+12	RAILROAD SPIKE SET IN POWER POLE, 27.6' RT.	944.82

CURVE 1

PI STA. = 10+21.09  
 Y = 435,607.08  
 X = 731,317.04  
 R = 150.55  
 D = 38°03'25"  
 DELTA = 22°51'28"  
 L = 60.06  
 T = 30.44  
 C = 59.66  
 PC STA. = 9+90.66  
 Y = 435,596.00  
 X = 731,288.69  
 PT STA. = 10+50.72  
 Y = 435,606.28  
 X = 731,347.47

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	10+20	22' LT.
B	10+22	32' LT.
C	10+32	31' LT.
D	10+47	16' LT.
E	10+56	29' LT.
F	10+85	30' LT.
G	10+85	18' LT.
H	11+02	18' RT.
I	11+02	34' RT.
J	10+79	34' RT.
K	10+65	34' RT.
L	10+10	31' RT.
M	10+35	19' RT.

DESIGN DATA

LIVE LOAD:

DESIGN LOADING \_\_\_\_\_ HL-93  
 INVENTORY RATING FACTOR \_\_\_\_\_ RF = 1.22  
 OPERATING RATING FACTOR \_\_\_\_\_ RF = 1.58  
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) \_\_\_\_\_ 250 KIPS  
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SUPERSTRUCTURE \_\_\_\_\_ f'c = 4,000 P.S.I.  
 ALL OTHER \_\_\_\_\_ f'c = 3,500 P.S.I.  
 HIGH-STRENGTH BAR STEEL \_\_\_\_\_  
 REINFORCEMENT, GRADE 60 \_\_\_\_\_ fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS\*\* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 35 FT PILE LENGTHS AT WEST ABUTMENT AND 30 FT PILE LENGTHS AT EAST ABUTMENT.

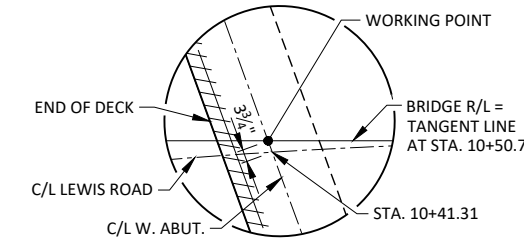
\*\*THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA

A.D.T. (2027) \_\_\_\_\_ 60  
 A.D.T. (2047) \_\_\_\_\_ 90  
 DESIGN SPEED \_\_\_\_\_ 45 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY  
 DRAINAGE AREA \_\_\_\_\_ 6.1 SQ. MI.  
 Q<sub>100</sub> TOTAL \_\_\_\_\_ 2,700 C.F.S.  
 THROUGH STRUCTURE \_\_\_\_\_ 1,428 C.F.S.  
 OVERTOPPING ROADWAY \_\_\_\_\_ 1,272  
 VELOCITY - THROUGH STRUCTURE \_\_\_\_\_ 7.6 F.P.S.  
 WATERWAY AREA - THROUGH STRUCTURE \_\_\_\_\_ 188.0 SQ. FT.  
 HIGH WATER<sub>100</sub> ELEVATION \_\_\_\_\_ 947.93  
 SCOUR CRITICAL CODE \_\_\_\_\_ 5  
 EROSION CONTROL  
 Q<sub>2</sub> \_\_\_\_\_ 280 C.F.S.  
 VELOCITY<sub>2</sub> \_\_\_\_\_ 2.2 F.P.S.  
 HIGH WATER<sub>2</sub> ELEVATION \_\_\_\_\_ 942.99  
 DESIGN ROADWAY OVERFLOW FREQUENCY \_\_\_\_\_ 14 YRS.  
 ROADWAY OVERFLOW FREQUENCY \_\_\_\_\_ 1,162  
 Q<sub>14</sub> \_\_\_\_\_ 1,162  
 HIGH WATER<sub>14</sub> ELEVATION \_\_\_\_\_ 946.22

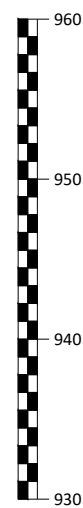


WEST ABUTMENT TANGENT OFFSET DETAILS

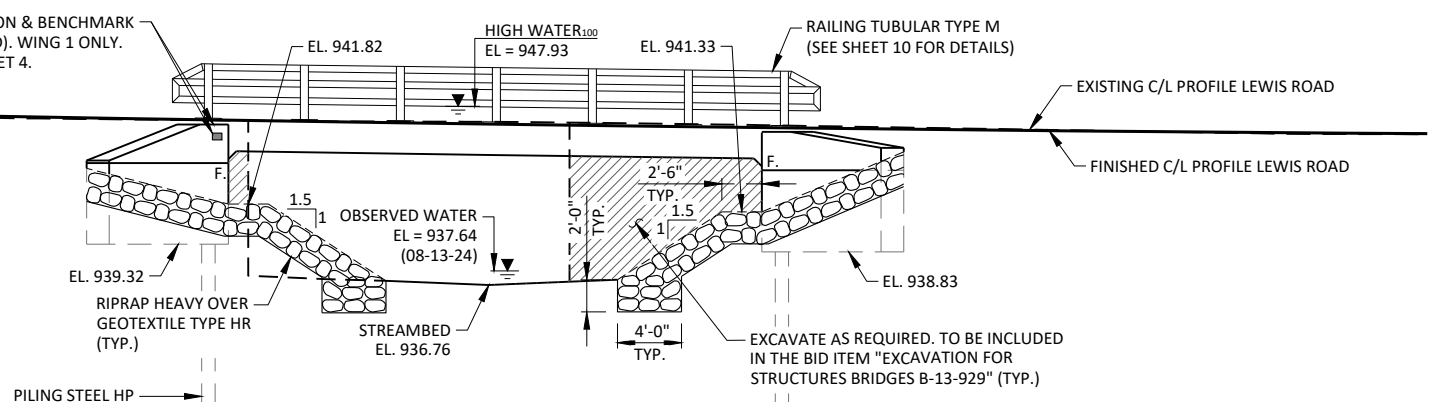
LIST OF DRAWINGS

GENERAL PLAN	1.
CROSS SECTION AND QUANTITIES	2.
SUBSURFACE EXPLORATION	3.
WEST ABUTMENT	4.
WEST ABUTMENT DETAILS	5.
EAST ABUTMENT	6.
EAST ABUTMENT DETAILS	7.
SUPERSTRUCTURE	8.
SUPERSTRUCTURE DETAILS	9.
TUBULAR STEEL RAILING TYPE M	10.

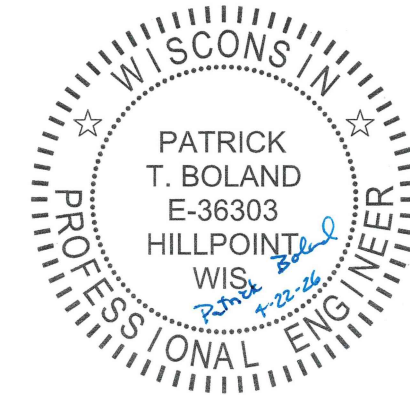
PLAN B-13-929 (SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)



NAME PLATE LOCATION & BENCHMARK CAP (WHEN SUPPLIED). WING 1 ONLY. FOR DETAILS SEE SHEET 4.



ELEVATION (NORMAL TO WEST BRANCH SUGAR RIVER)



DESIGN CONSULTANT  
 PATRICK BOLAND, PE  
 (608) 588-7484  
 BRIDGE OFFICE CONTACT  
 AARON BONK, PE  
 (608) 261-0261

NO.	DATE	REVISION	BY
<b>JEWELL</b>			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED	[Signature]		JLR DATE 05/11/26
<b>STRUCTURE B-13-929</b>			
LEWIS ROAD OVER WEST BRANCH SUGAR RIVER			
COUNTY	DANE	TOWN/VILLAGE	PRIMROSE
DESIGN SPEC.	AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS		
DESIGNED BY	MAN	DESIGN CK'D.	PTB
DRAWN BY	MAN	PLANS CK'D.	PTB
<b>GENERAL PLAN</b>			SHEET 1 OF 10 31

**GENERAL NOTES**

DRAWINGS SHALL NOT BE SCALED.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NAVD88 (2012 ADJUSTMENT).

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

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION M153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

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

ANY EXCAVATION BELOW THE ABUTMENT AND ASSOCIATED ABUTMENT BEDDING MATERIALS REQUIRE THE APPROVAL OF THE ENGINEER IN THE FIELD.

AT THE DECK, APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK (CONCRETE MATERIAL ONLY), THE SIDES OF THE DECK, AND THE EXTERIOR 12" OF THE UNDERSIDE OF THE DECK. AT THE ABUTMENTS, APPLY TO THE TOP AND EXTERIOR EXPOSED FACES OF WINGS AND THE FRONT FACE OF ABUTMENTS TO 12" PAST THE EDGE OF SLAB. SEE THIS SHEET FOR DETAIL.

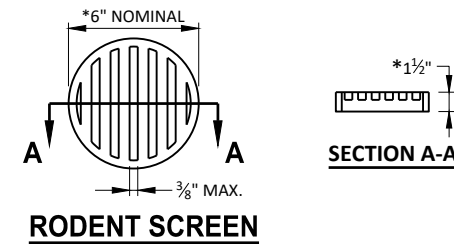
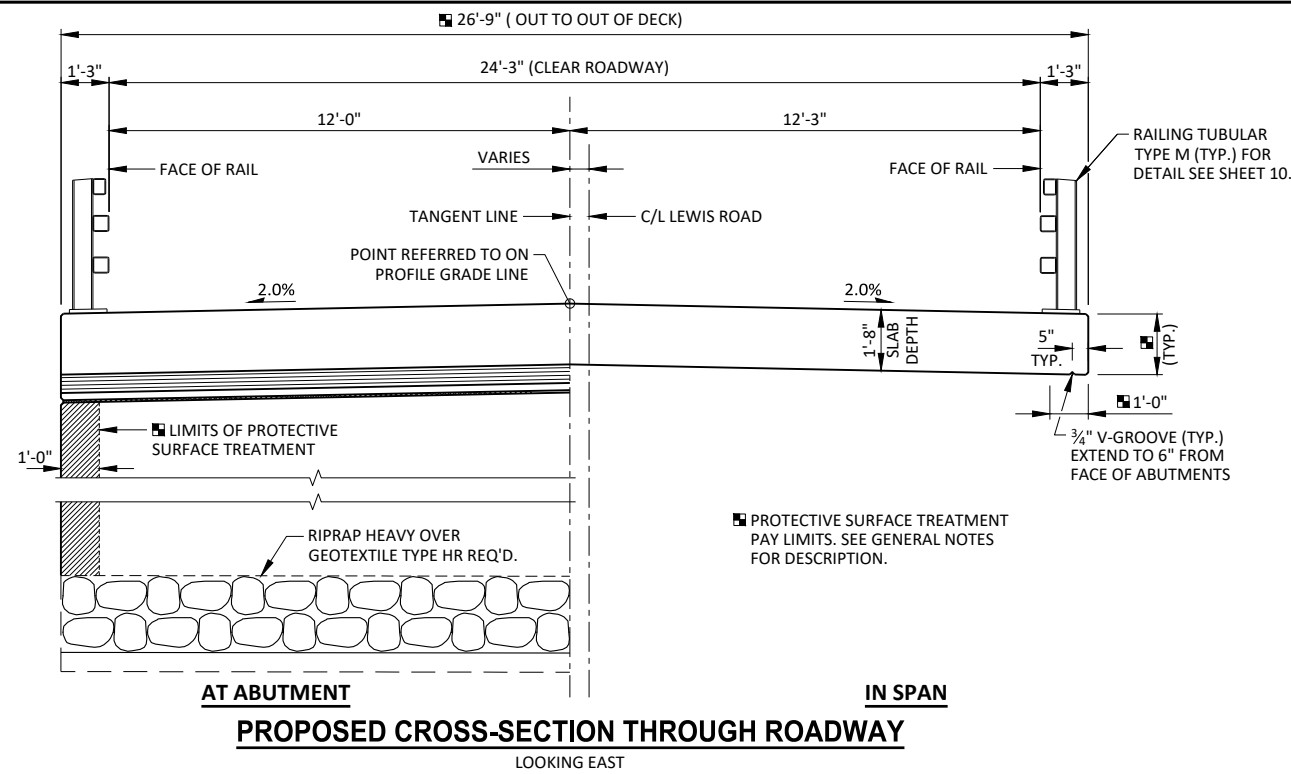
ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER IN THE FIELD.

THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

THE EXISTING STRUCTURE (P-13-944) IS A SINGLE SPAN CONCRETE SLAB STRUCTURE SUPPORTED ON CONCRETE ABUTMENTS. THE STRUCTURE HAS A 17.6' BRIDGE WIDTH AND IS 22.0' LONG AND SHALL BE REMOVED.

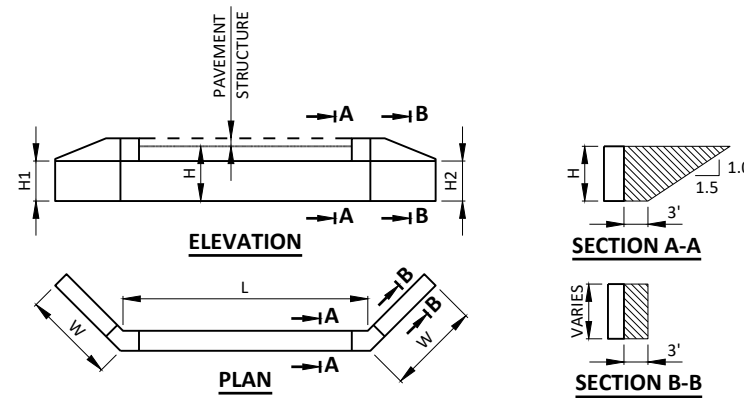


NOTES:  
\* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SHIELD SO SLOTS ARE VERTICAL.

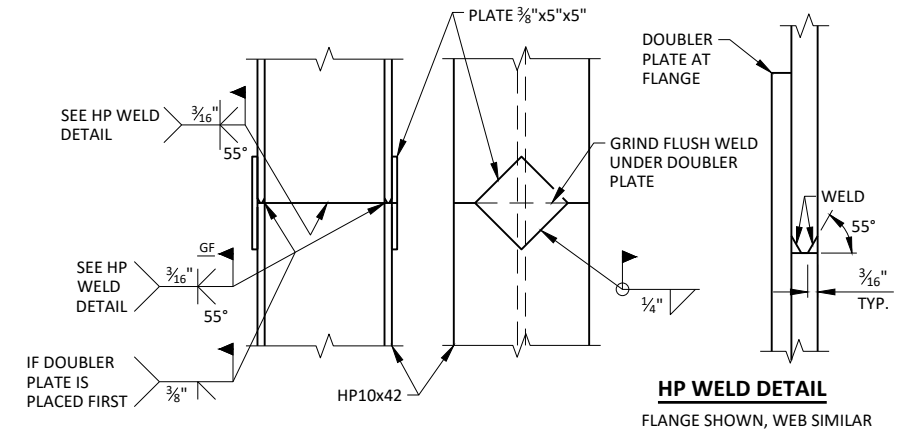
COST OF THE RODENT SCREEN, PIPE COUPLING, AND SCREWS ARE INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

THE RODENT SCREEN 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 THE SCREEN TO THE EXPOSED ENDS OF THE PIPE UNDERDRAIN. THE SCREEN SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



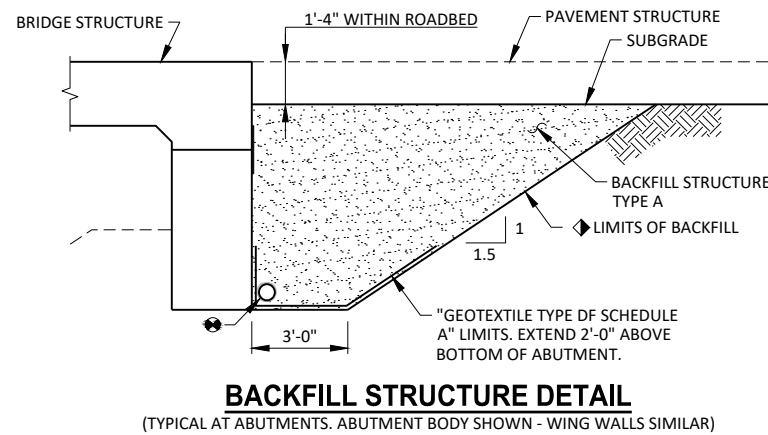
**ABUTMENT BACKFILL DIAGRAM**

- L = ABUTMENT BODY LENGTH AT BACK FACE (FT)
- H = AVERAGE ABUTMENT FILL HEIGHT (FT)
- H1&H2 = WING HEIGHT AT TIP (FT)
- W = WING LENGTH (FT)
- $V_{CF} = (L)[(3.0)(H) + (\frac{1}{2})(1.5H)(H)] + (3.0)(\frac{1}{2})(H1+H+H2)(W)$
- $V_{TON} = (V_{CF})(\frac{1}{2})(2.0 \text{ TON/CY})$



**PILE SPLICE DETAIL**

STEEL "HP" PILE MATERIAL SHALL BE ASTM A 572 GRADE 50.



**BACKFILL STRUCTURE DETAIL**

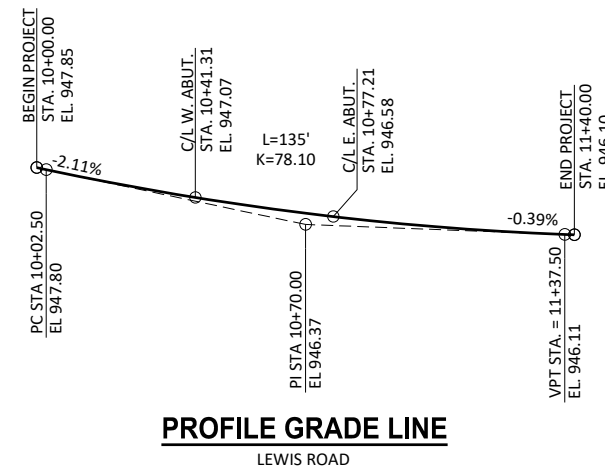
(TYPICAL AT ABUTMENTS. ABUTMENT BODY SHOWN - WING WALLS SIMILAR)

BACKFILL STRUCTURE TYPE A PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO THE BID ITEM "EXCAVATION FOR STRUCTURES B-13-929". LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON THIS SHEET. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

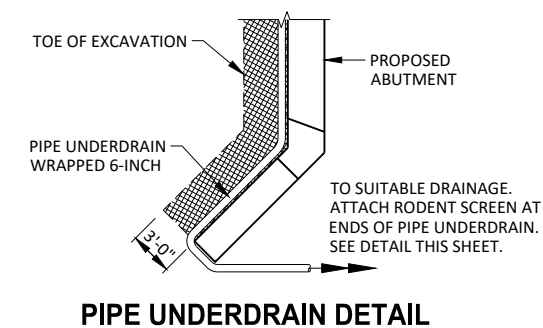
**TOTAL ESTIMATED QUANTITIES**

ITEM NUMBER	ITEM DESCRIPTION	UNIT	W. ABUT.	SUPER	E. ABUT.	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS P-13-944	EACH	--	--	--	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-13-929	EACH	--	--	--	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	125	--	125	250
502.0100	CONCRETE MASONRY BRIDGES	CY	26.9	68.4	26.7	122
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	165	--	165
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,140	--	2,140	4,280
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,390	12,210	1,390	14,990
513.4061	RAILING TUBULAR TYPE M	LF	--	81	--	81
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	--	6	12
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	245	--	210	455
606.0300	RIPRAP HEAVY	CY	130	--	110	240
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	--	75	150
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	50	--	50	100
645.0120	GEOTEXTILE TYPE HR	SY	205	--	175	380
NON-BID ITEMS						
FILLER		SIZE				1/2" & 3/4"
NAME PLATE						



**PROFILE GRADE LINE**

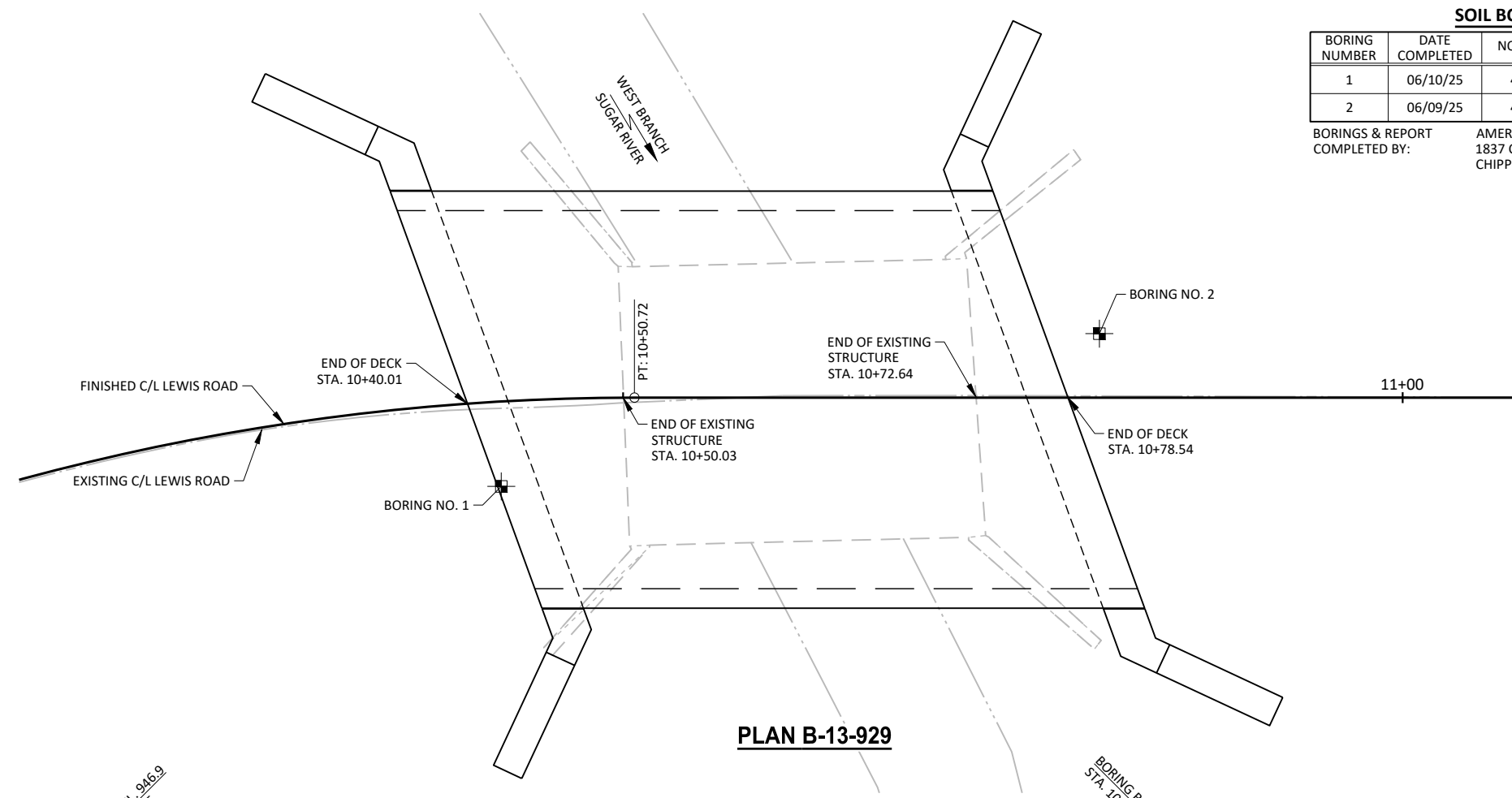
LEWIS ROAD



**PIPE UNDERDRAIN DETAIL**

TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN. SEE DETAIL THIS SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-13-929</b>			
DRAWN BY		MAN	PLANS CK'D. PTB
<b>CROSS SECTION AND QUANTITIES</b>			SHEET 2 OF 10
			32



**PLAN B-13-929**

SOIL BORINGS			
BORING NUMBER	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	06/10/25	435,600.8	731,338.8
2	06/09/25	435,609.6	731,377.4

BORINGS & REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING  
1837 COUNTY HIGHWAY OO  
CHIPPEWA FALLS, WI 54729

STATE PROJECT NUMBER  
**5932-00-74**

**MATERIAL SYMBOLS**

Asphalt	Topsoil	Peat
Concrete	Fill	Gravel
Sand	Clay	Silt
Boulders or Cobbles	Limestone	Bedrock (unknown)
Shale	Sandstone	Igneous/meta

**LEGEND OF BORING**

0.25 (1) 17 (2)

ST

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 ELEVATIONS**

▽ AT TIME OF DRILLING

▽ END OF DRILLING

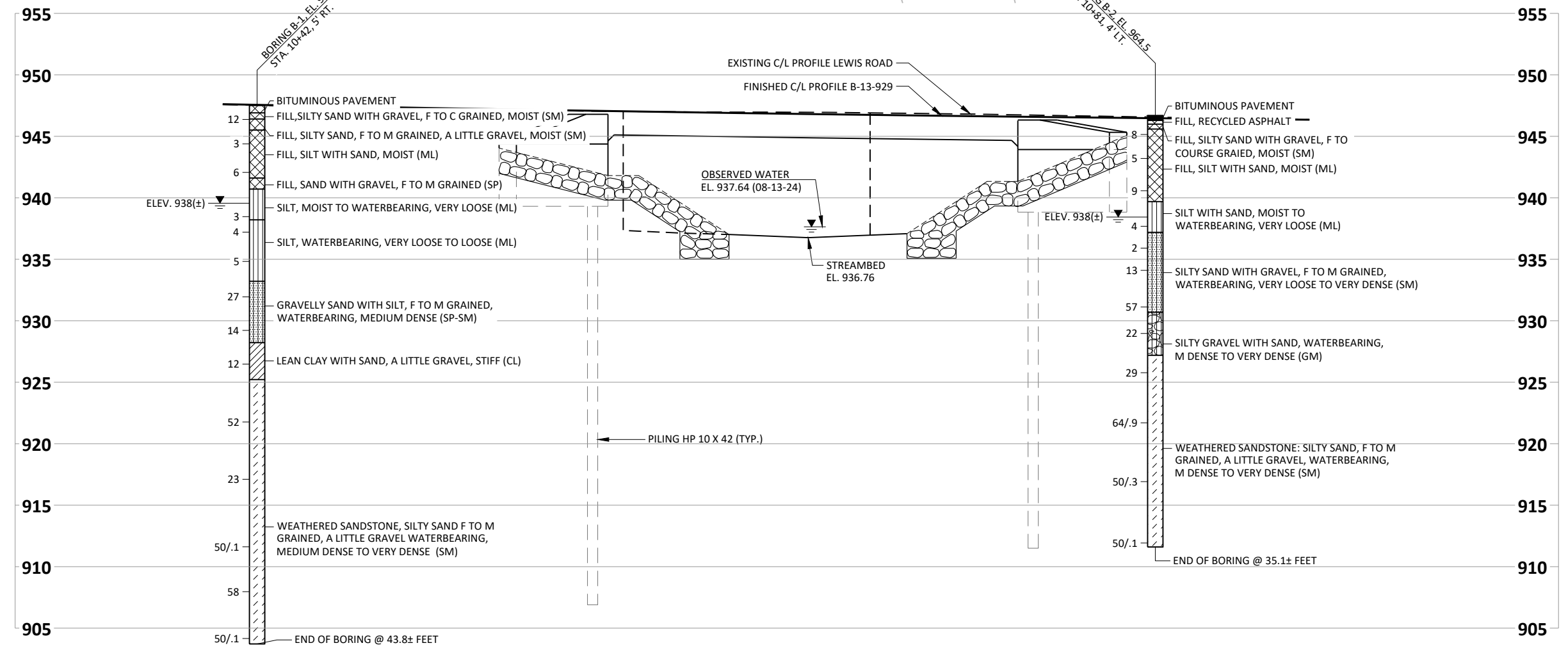
▽ AFTER DRILLING

**ABBREVIATIONS**

F-FINE M-MEDIUM C-COURSE 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.

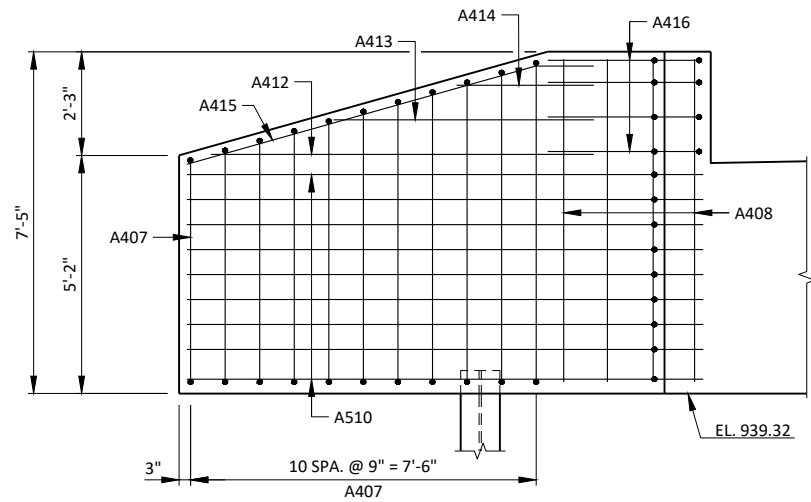


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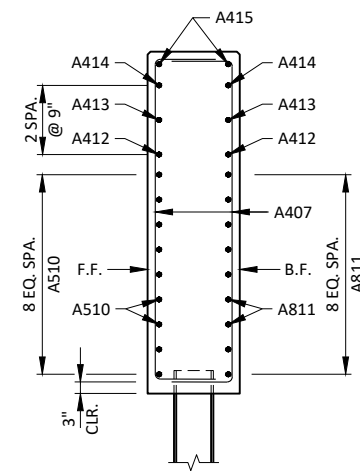
8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-13-929</b>			
DRAWN BY: MAN		PLANS CKD: PTB	
<b>SUBSURFACE EXPLORATION</b>		SHEET 3 OF 10	
		33	

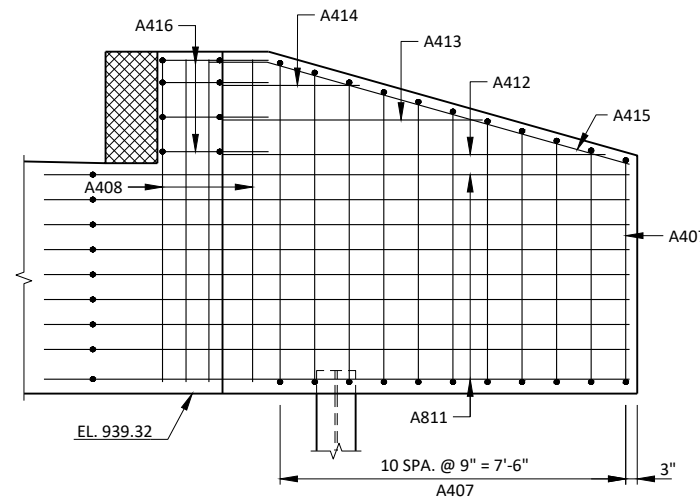




F.F. ELEVATION - WING 1



SECTION A-A



B.F. ELEVATION - WING 1

**BILL OF BARS  
WEST ABUTMENT**

**1,390 LB (COATED)  
2,140 LB (UNCOATED)**

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	66	6-1	X			BODY - VERT. - F.F. & B.F.
A502	33	7-11	X			BODY - VERT. - TOP
A403	24	2-10	X			TIE BARS
A504	9	33-1				BODY - HORIZ. - F.F.
A805	18	22-8	X			BODY - HORIZ. - B.F.
A506	26	2-0		X		BODY - VERT. - DOWELS
A407	22	8-4	X	X	*	WING 1 - VERT. - F.F. & B.F.
A408	8	7-0	X			WING 1 - VERT.
A409	2	2-9		X		WING 1 - VERT. - TOP
A510	9	11-10	X	X		WING 1 - HORIZ. - F.F.
A811	9	13-4	X	X		WING 1 - HORIZ. - B.F.
A412	2	8-4		X		WING 1 - HORIZ. - F.F. & B.F.
A413	2	5-8		X		WING 1 - HORIZ. - F.F. & B.F.
A414	2	3-0		X		WING 1 - HORIZ. - F.F. & B.F.
A415	2	9-2	X	X		WING 1 - HORIZ. - F.F. & B.F. - TOP
A416	4	8-8	X	X		WING 1 - HORIZ. - TOP
A417	22	9-1	X	X	*	WING 2 - VERT. - F.F. & B.F.
A418	10	7-1	X			WING 2 - VERT.
A519	9	11-10	X	X		WING 2 - HORIZ. - F.F.
A820	9	13-4	X	X		WING 2 - HORIZ. - B.F.
A421	4	8-10	X			WING 2 - HORIZ. - F.F. & B.F.
A422	2	5-6		X		WING 2 - HORIZ. - F.F. & B.F.
A423	2	8-10	X	X		WING 2 - HORIZ. - F.F. & B.F. - TOP
A424	4	10-5	X	X		WING 2 - HORIZ. - TOP

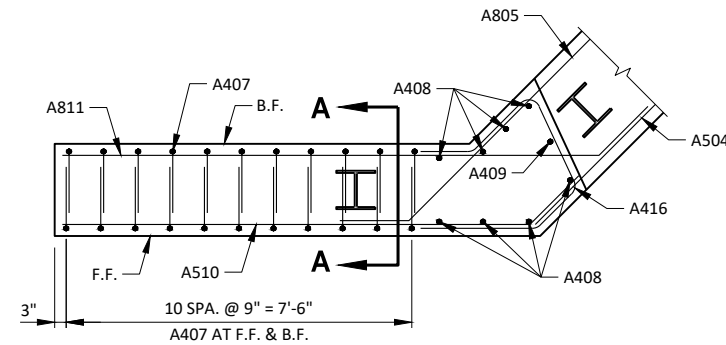
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.  
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.  
\* LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

**BAR SERIES TABLE**

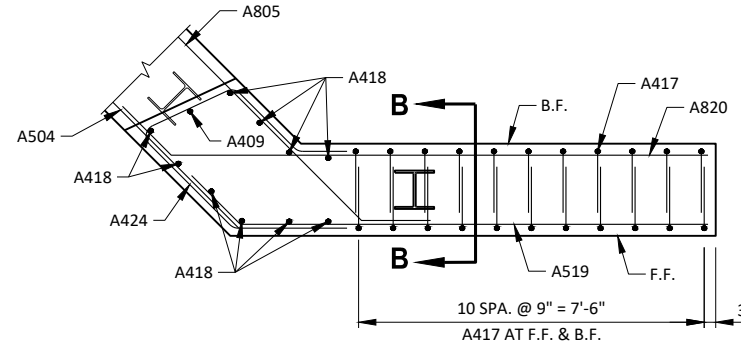
BAR MARK	NO. REQ'D.	LENGTH
A407	2 SERIES OF 11	7-3 TO 9-5
A417	2 SERIES OF 11	8-7 TO 9-7

**NOTES**

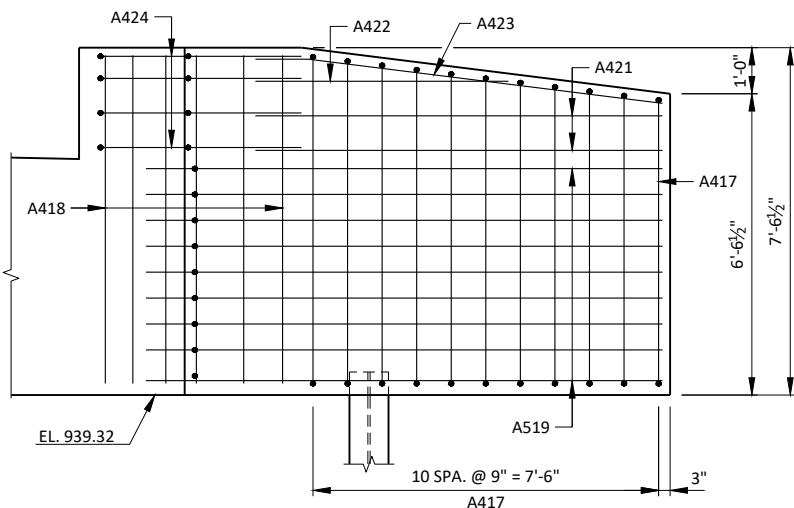
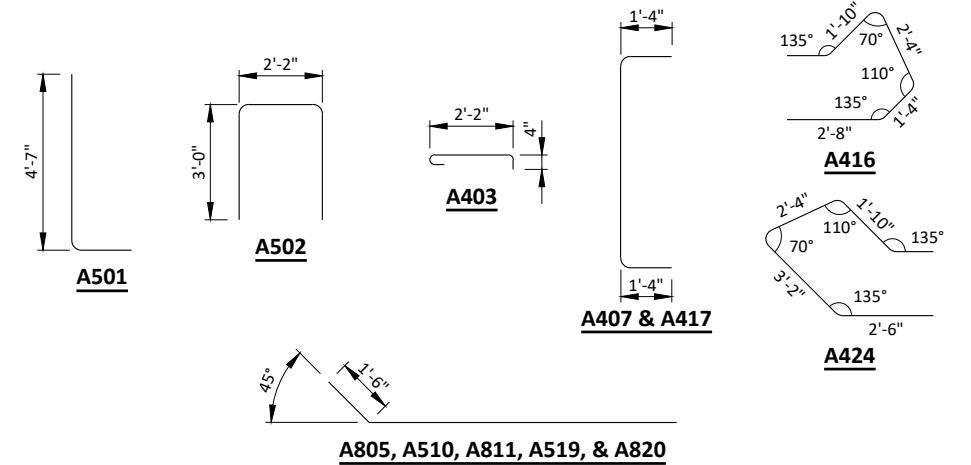
SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.  
SPACE REINFORCEMENT TO MISS PILING  
F.F. - FRONT FACE  
B.F. - BACK FACE



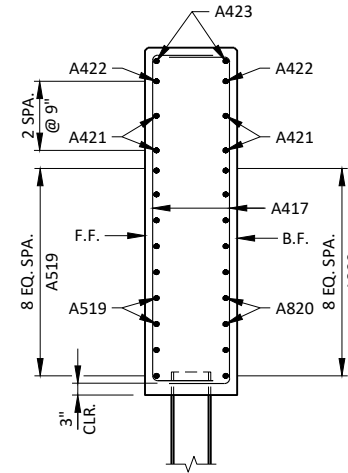
PLAN VIEW - WING 1



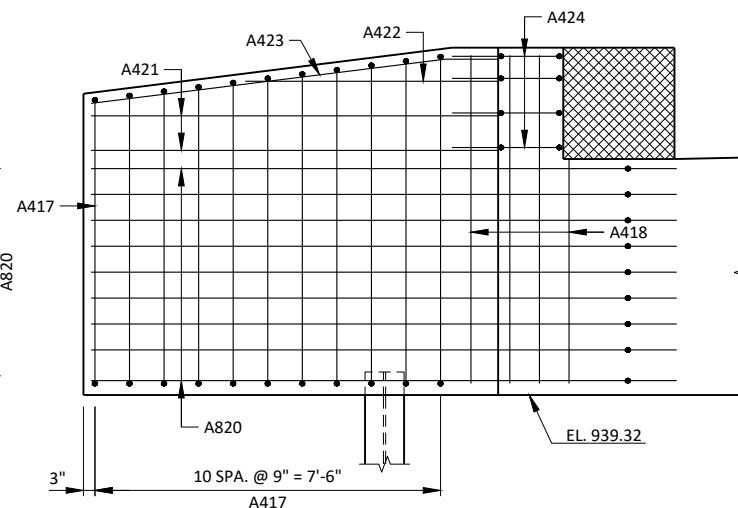
PLAN VIEW - WING 2



F.F. ELEVATION - WING 2



SECTION B-B



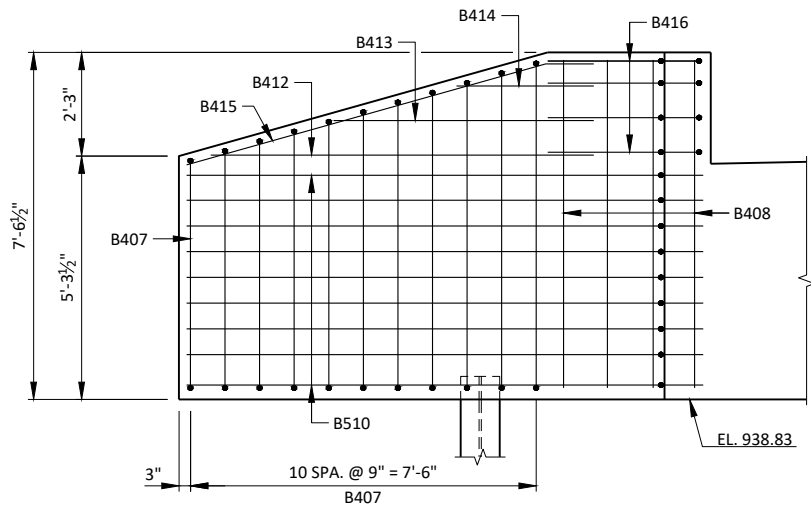
B.F. ELEVATION - WING 2

**A415 & A423**

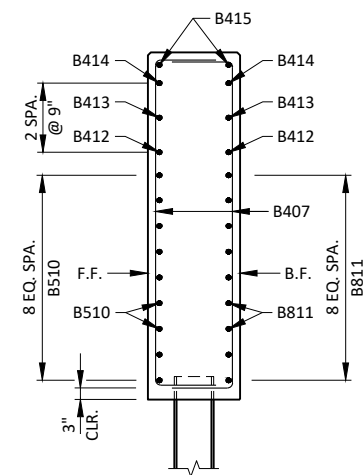
MARK	'A'
A415	164°17'
A423	172°52'

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-13-929</b>			
DRAWN BY		MAN	PLANS CK'D. PTB
<b>WEST ABUTMENT DETAILS</b>			SHEET 5 OF 10
			35

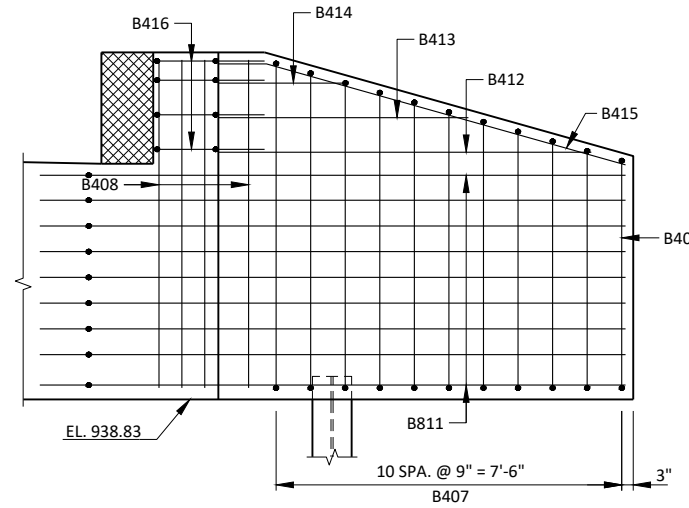




F.F. ELEVATION - WING 3



SECTION A-A



B.F. ELEVATION - WING 3

**BILL OF BARS  
EAST ABUTMENT**

**1,390 LB (COATED)  
2,140 LB (UNCOATED)**

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
B501	66	6-1	X			BODY - VERT. - F.F. & B.F.
B502	33	7-11	X			BODY - VERT. - TOP
B403	24	2-10	X			TIE BARS
B504	9	33-1				BODY - HORIZ. - F.F.
B805	18	22-8	X			BODY - HORIZ. - B.F.
B506	26	2-0		X		BODY - VERT. - DOWELS
B407	22	8-6	X	X	*	WING 3 - VERT. - F.F. & B.F.
B408	8	7-1	X			WING 3 - VERT.
B409	2	2-9		X		WING 3 - VERT. - TOP
B510	9	11-10	X	X		WING 3 - HORIZ. - F.F.
B811	9	13-4	X	X		WING 3 - HORIZ. - B.F.
B412	2	8-4		X		WING 3 - HORIZ. - F.F. & B.F.
B413	2	5-8		X		WING 3 - HORIZ. - F.F. & B.F.
B414	2	3-0		X		WING 3 - HORIZ. - F.F. & B.F.
B415	2	9-2	X	X		WING 3 - HORIZ. - F.F. & B.F. - TOP
B416	4	8-8	X	X		WING 3 - HORIZ. - TOP
B417	22	9-0	X	X	*	WING 4 - VERT. - F.F. & B.F.
B418	10	7-0		X		WING 4 - VERT.
B519	9	11-10	X	X		WING 4 - HORIZ. - F.F.
B820	9	13-4	X	X		WING 4 - HORIZ. - B.F.
B421	4	8-10		X		WING 4 - HORIZ. - F.F. & B.F.
B422	2	5-6		X		WING 4 - HORIZ. - F.F. & B.F.
B423	2	8-10	X	X		WING 4 - HORIZ. - F.F. & B.F. - TOP
B424	4	10-5	X	X		WING 4 - HORIZ. - TOP

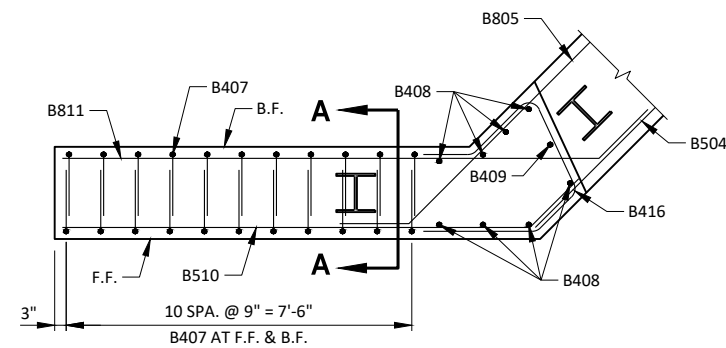
NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.  
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.  
\* LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

**BAR SERIES TABLE**

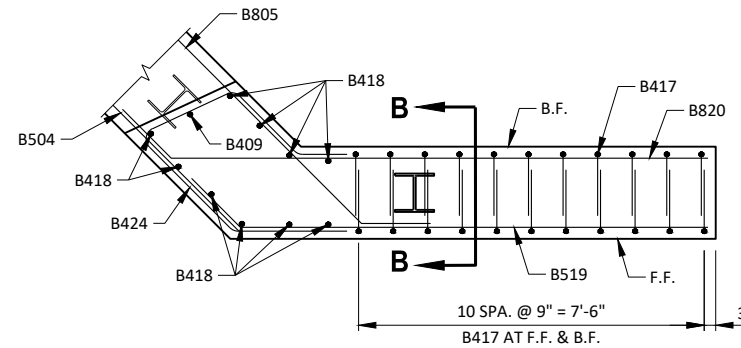
BAR MARK	NO. REQ'D.	LENGTH
B407	2 SERIES OF 11	7-5 TO 9-7
B417	2 SERIES OF 11	8-6 TO 9-6

**NOTES**

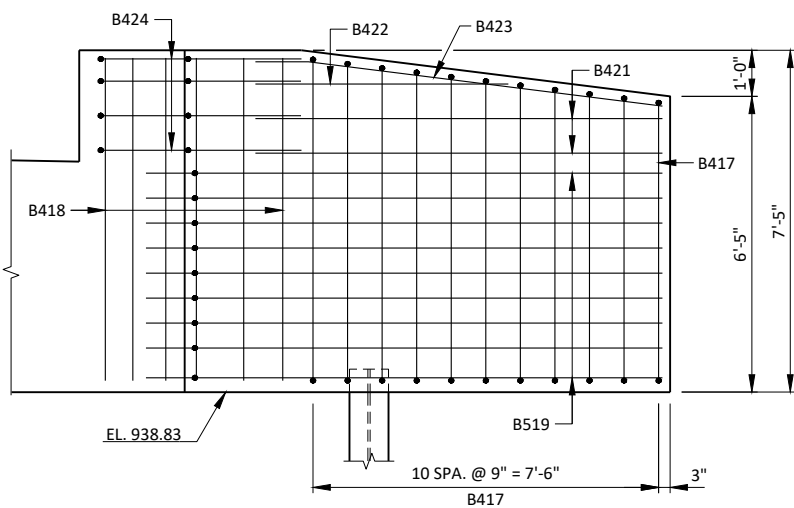
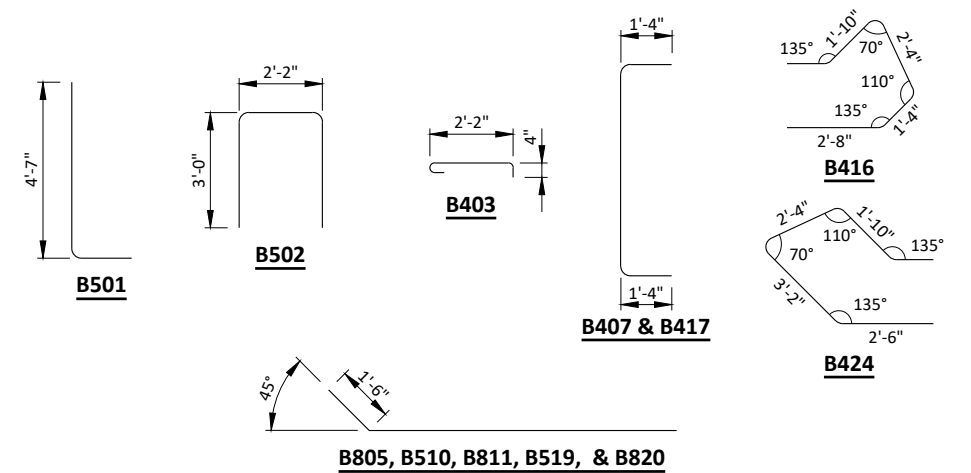
SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE THIS SHEET FOR BILL OF BARS.  
SPACE REINFORCEMENT TO MISS PILING  
F.F. - FRONT FACE  
B.F. - BACK FACE



PLAN VIEW - WING 3



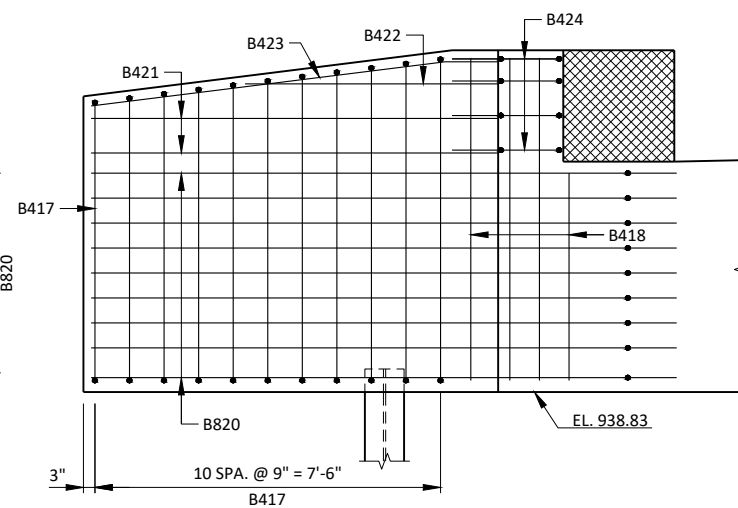
PLAN VIEW - WING 4



F.F. ELEVATION - WING 4



SECTION B-B

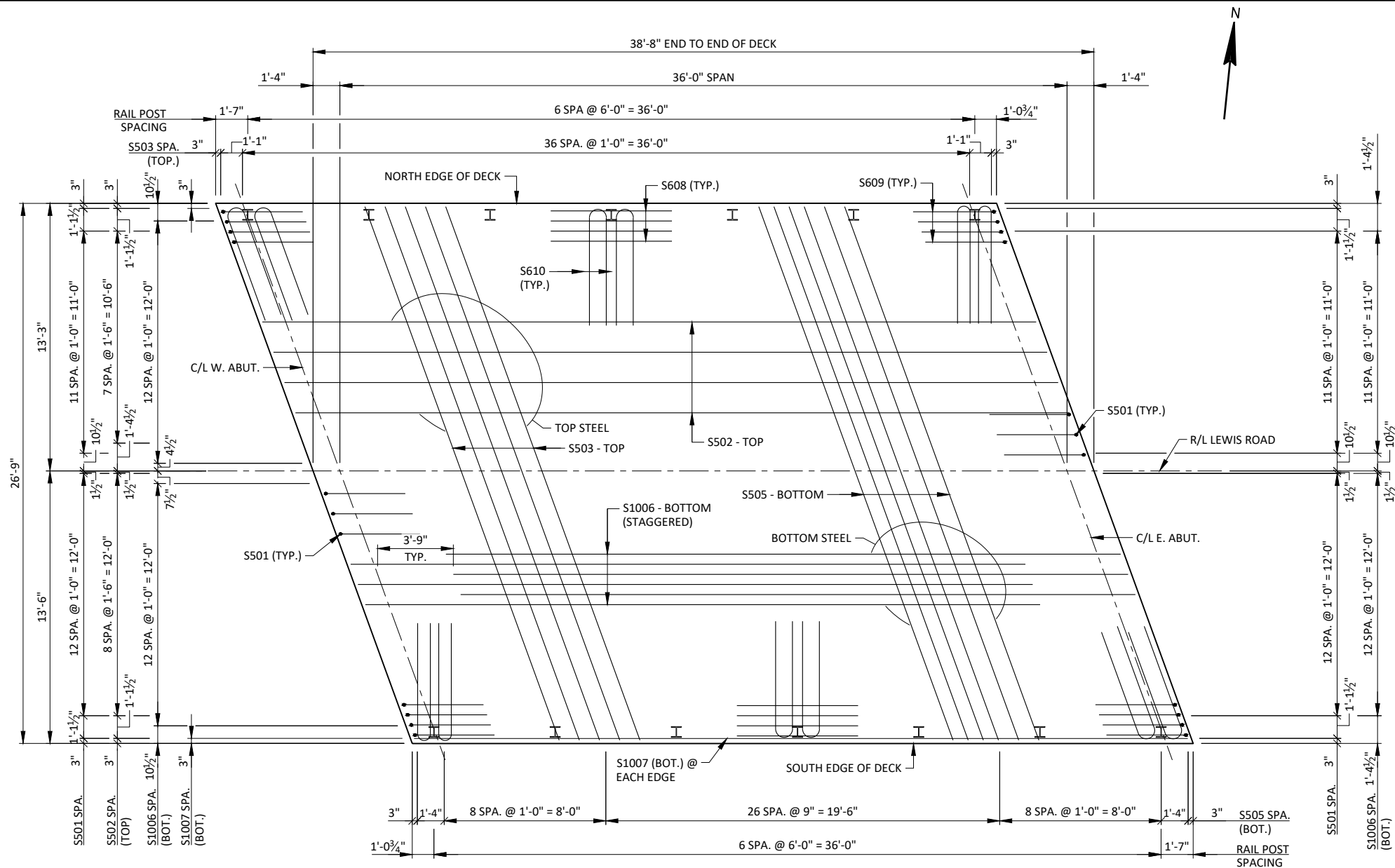


B.F. ELEVATION - WING 4

**B415 & B423**

MARK	'A'
B415	164°17'
B423	172°52'

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-13-929</b>			
DRAWN BY		MAN	PLANS CK'D. PTB
<b>EAST ABUTMENT DETAILS</b>			SHEET 7 OF 10
			37



PLAN

**NOTES**

SUPPORT ALTERNATE TOP TRANSVERSE BARS IN SLAB BY INDIVIDUAL BAR CHAIRS AT APPROX. 3'-0" CENTERS. SUPPORT BOTTOM LONGITUDINAL BARS BY CONTINUOUS BAR CHAIRS AT APPROX. 4'-0" CENTERS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

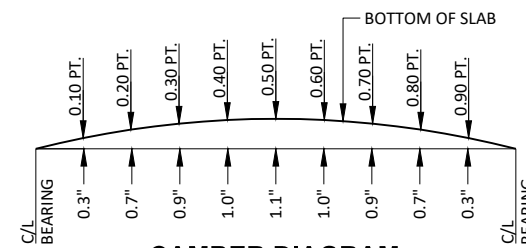
**SURVEY TOP OF DECK ELEVATIONS**

	W. ABUT.	0.50 PT.	E. ABUT.
NORTH EDGE OF DECK			
CENTER LINE			
SOUTH EDGE OF DECK			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF THE ABUTMENTS AND AT 0.50 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG THE EDGE OF DECK AND CENTER LINE. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

**TOP OF DECK ELEVATIONS**

	C/L W. ABUT.	0.10 PNT.	0.20 PNT.	0.30 PNT.	0.40 PNT.	0.50 PNT.	0.60 PNT.	0.70 PNT.	0.80 PNT.	0.90 PNT.	C/L E. ABUT.
N. EDGE	946.86	946.81	946.76	946.71	946.66	946.61	946.56	946.51	946.46	946.41	946.37
C/L	947.07	947.02	946.96	946.91	946.86	946.80	946.76	946.71	946.66	946.62	946.58
S. EDGE	946.74	946.67	946.62	946.57	946.52	946.47	946.42	946.38	946.33	946.29	946.25

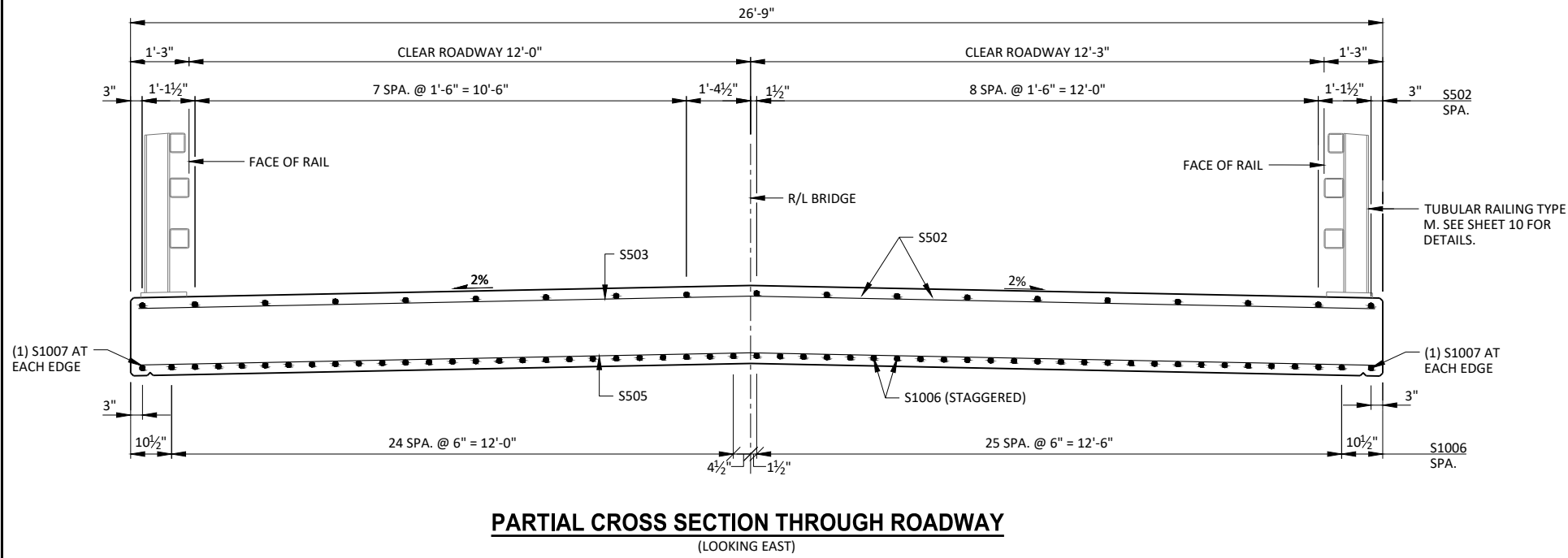


**CAMBER DIAGRAM**

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPAN AS SHOWN TO PROVIDE FOR THEORETICAL DEADLOAD DEFLECTION AND FUTURE PLASTIC FLOW. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB OR CENTER LINE FOLLOW THIS PROCEDURE:  
 TOP OF SLAB ELEVATION AT FINAL GRADE  
 -SLAB THICKNESS  
 +CAMBER  
 +FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (COMPUTED BY CONTRACTOR)  
 =TOP OF SLAB FALSEWORK ELEVATION.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-13-929</b>			
DRAWN BY		PLANS CK'D.	PTB
MAN			
<b>SUPERSTRUCTURE</b>			SHEET 8 OF 10 38



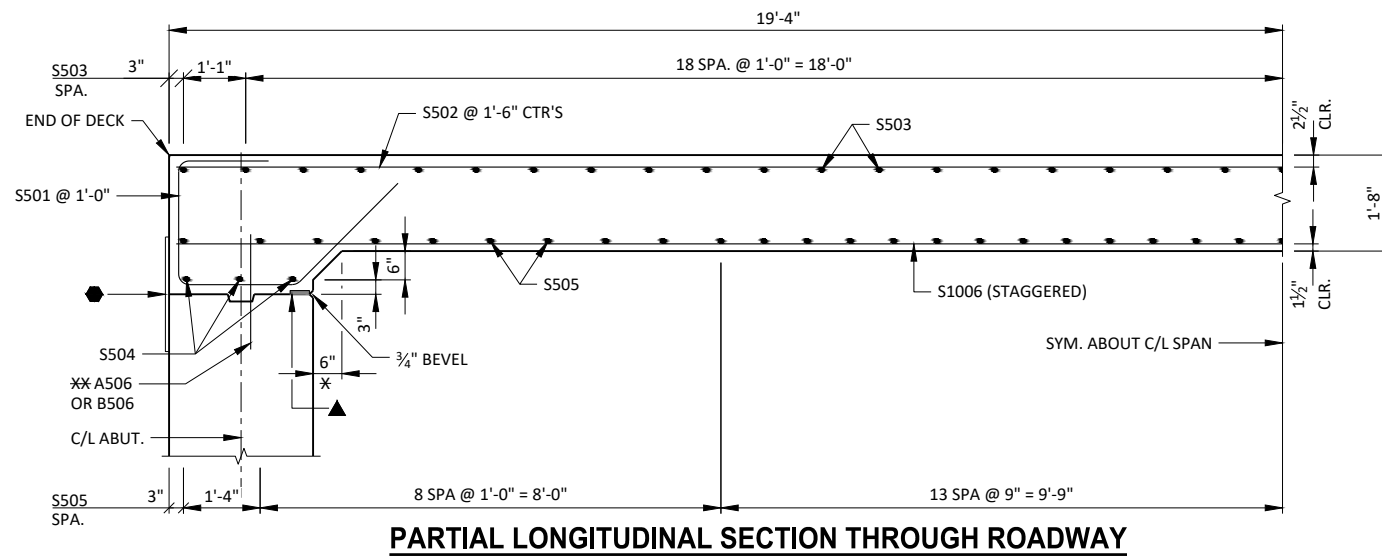
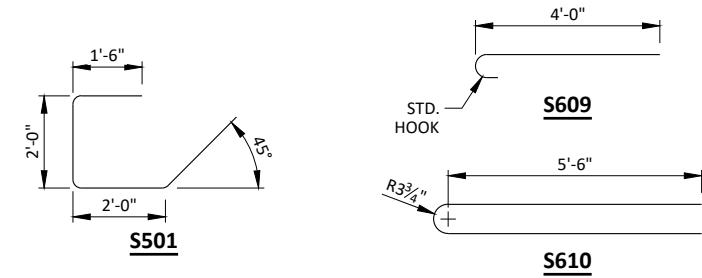
**PARTIAL CROSS SECTION THROUGH ROADWAY**  
(LOOKING EAST)

**BILL OF BARS**  
**SUPERSTRUCTURE** **12,210 LB (COATED)**

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	LOCATION
S501	54	7-3	X	X	ENDS OF DECK
S502	19	38-3		X	SLAB - TOP - LONGIT.
S503	39	28-1		X	SLAB - TOP - TRANS.
S504	6	28-1		X	SLAB - BOTTOM - TRANS.
S505	37	28-1		X	SLAB - BOTTOM - AT ABUT
S1006	51	33-5		X	SLAB - BOTTOM - LONGIT.
S1007	2	38-3		X	SLAB - BOTTOM - LONGIT. AT EDGES
S608	40	6-0		X	RAIL POSTS - INTERIOR
S609	16	4-8	X	X	RAIL POSTS - CORNERS
S610	28	12-0	X	X	RAIL POSTS

NOTES: THE FIRST DIGIT OF A THREE DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



**PARTIAL LONGITUDINAL SECTION THROUGH ROADWAY**

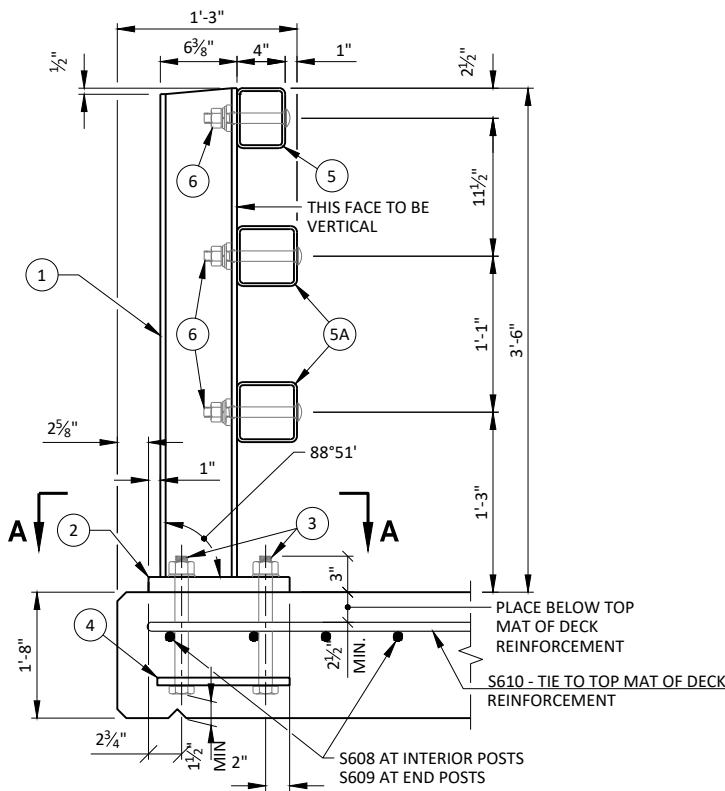
**LEGEND**

- 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- ▲ 3/4" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- \* DIMENSION IS NORMAL TO THE C/L OF SUBSTRUCTURE UNITS.
- \*\* SEE SHEET 4 AND SHEET 6 FOR PLACEMENT OF ABUTMENT BARS.

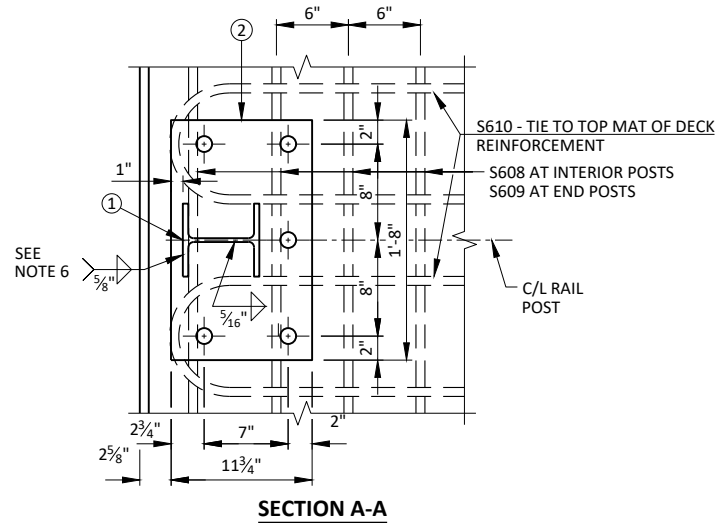
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-13-929</b>			
DRAWN BY		MAN	PLANS CK'D. PTB
<b>SUPERSTRUCTURE DETAILS</b>		SHEET 9 OF 10	
		39	

**LEGEND**

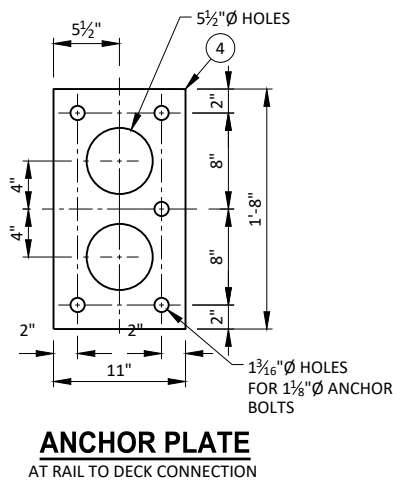
- ① W6x25 WITH 1 1/8" x 1 1/2" HORIZONTAL SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1 1/4"x11 3/4"x1'-8" WITH 1 1/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- ③ ASTM A449 - 1 1/8" DIA. X 1'-3" LONG ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING.
- ④ 3/8"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3.
- ⑤ TSS 5x4x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑤A TSS 5x5x0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- ⑥ 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16"x1 1/2"x1 1/2" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).
- ⑨ SPLICE SLEEVE FABRICATED FROM 3/4" PLATE. PROVIDE "SLIDING FIT".
- ⑩ 3/8"x3 3/8"x2'-4" PLATE. 2 PER RAIL USED IN NO. 5 & 5A.
- ⑩A 3/8"x2 5/8"x2'-4" PLATE USED IN NO. 5, 3/8"x3 3/8"x2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- ⑪ 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 3/16"x1 1/2" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND 1 5/16"x2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 1 3/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.



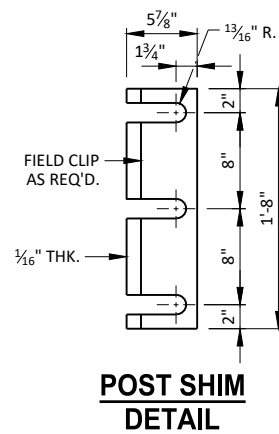
**SECTION THROUGH RAILING ON DECK**



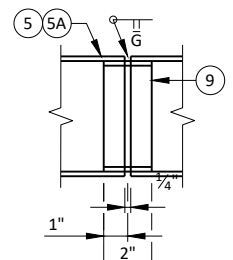
**SECTION A-A**



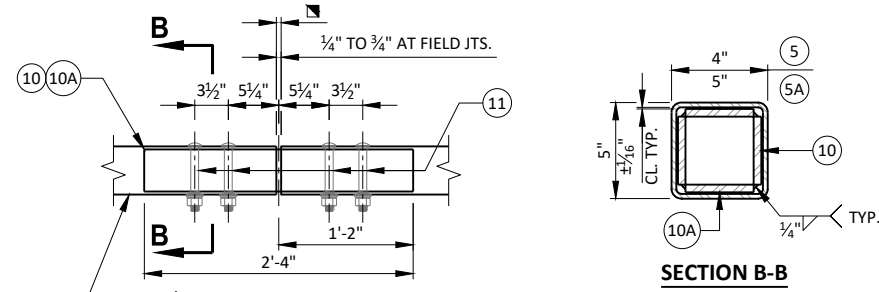
**ANCHOR PLATE AT RAIL TO DECK CONNECTION**



**POST SHIM DETAIL**

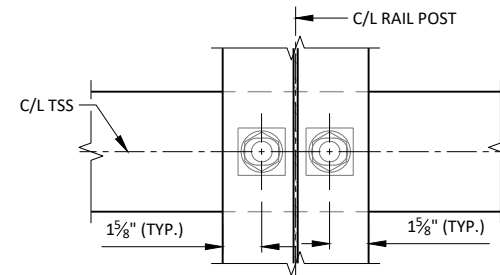


**SHOP RAIL SPLICE DETAIL**  
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

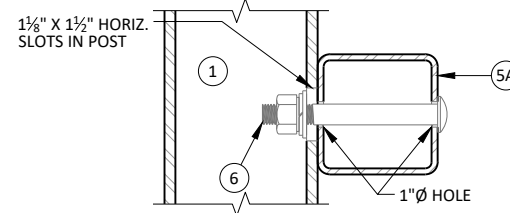


**FIELD ERECTION JOINT DETAIL**

RDWY. OPENING OR 2 1/2" MIN. FOR STRIP SEAL EXP. JOINT & (3/4" TO 3/4") OPENING FOR A1 ABUTMENT.



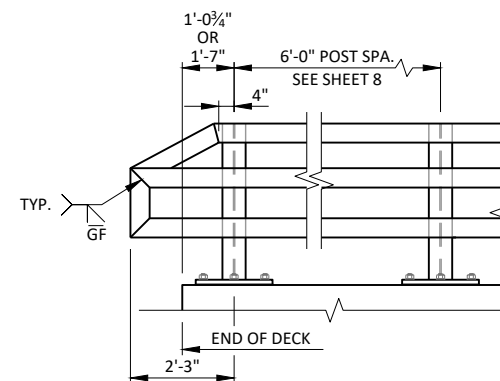
**SECTION THROUGH POST WEB**



**SECTION THROUGH RAIL**

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

**TYPICAL RAIL TO POST CONNECTIONS**



**PART ELEVATION OF RAILING**

**GENERAL NOTES**

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-13-929</b>			
DRAWN BY		PLANS CK'D.	
MAN		PTB	
<b>TUBULAR STEEL RAILING TYPE M</b>		SHEET 10 OF 10	
		40	

EARTHWORK-LEWIS ROAD

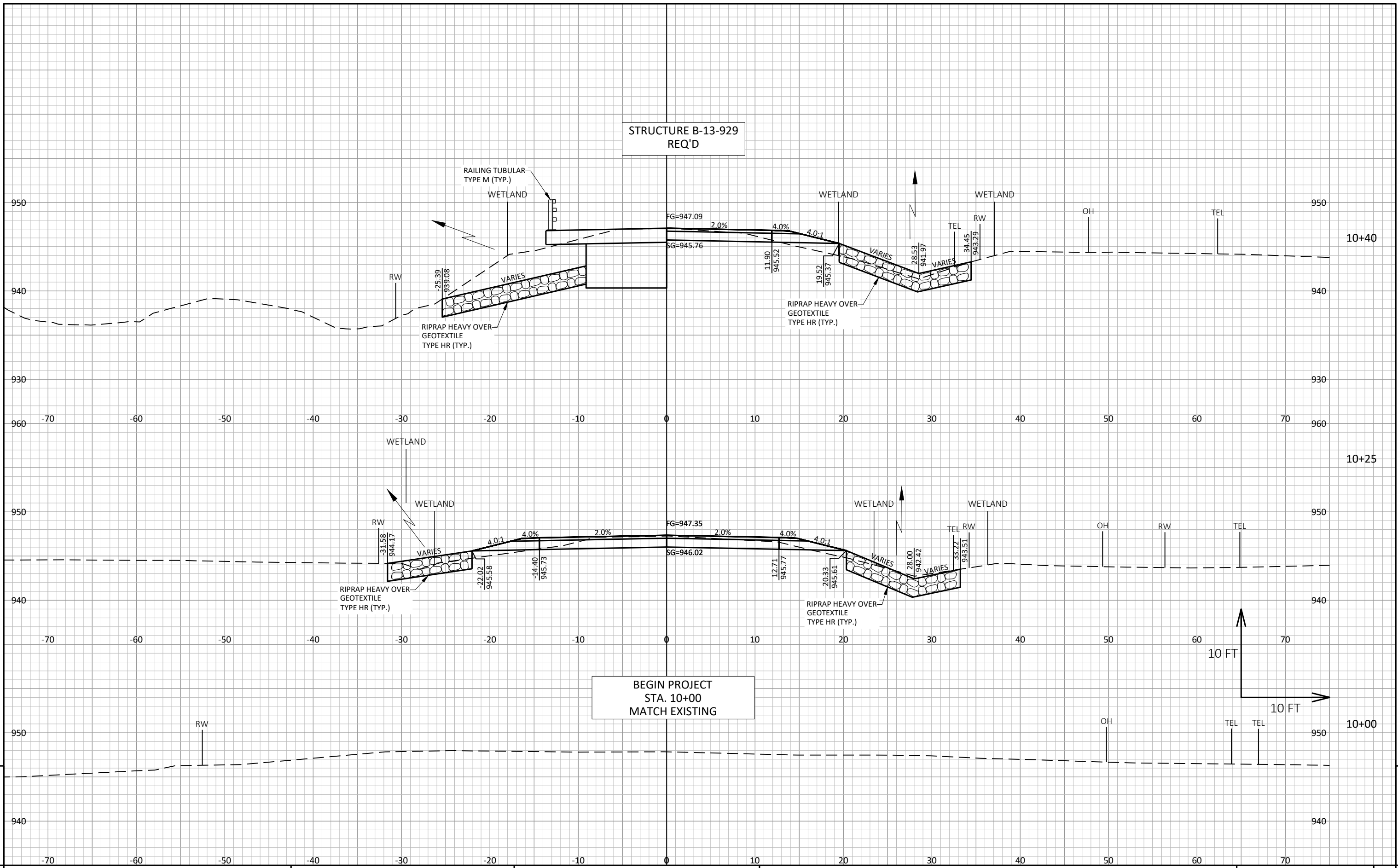
STATION	AREA (SF)		INCREMENTAL VOL (CY)			CUMMULATIVE VOLUME (CY)			
	CUT	FILL	CUT NOTE 1	FILL	FILL (25%) NOTE 2	CUT 1.00 NOTE 1	FILL	FILL (25%) NOTE 2	MASS ORDINATE NOTE 3
10+00	0	0	13	2	3	13	2	3	11
10+25	29	5	15	4	5	28	6	8	21
10+40	24	9	0	0	0	28	6	8	21
11+79	25	23	0	0	0	28	6	8	21
11+00	25	8	19	12	15	47	18	23	24
11+25	29	3	25	5	6	72	23	29	43
11+40	0	0	8	1	1	80	24	30	50

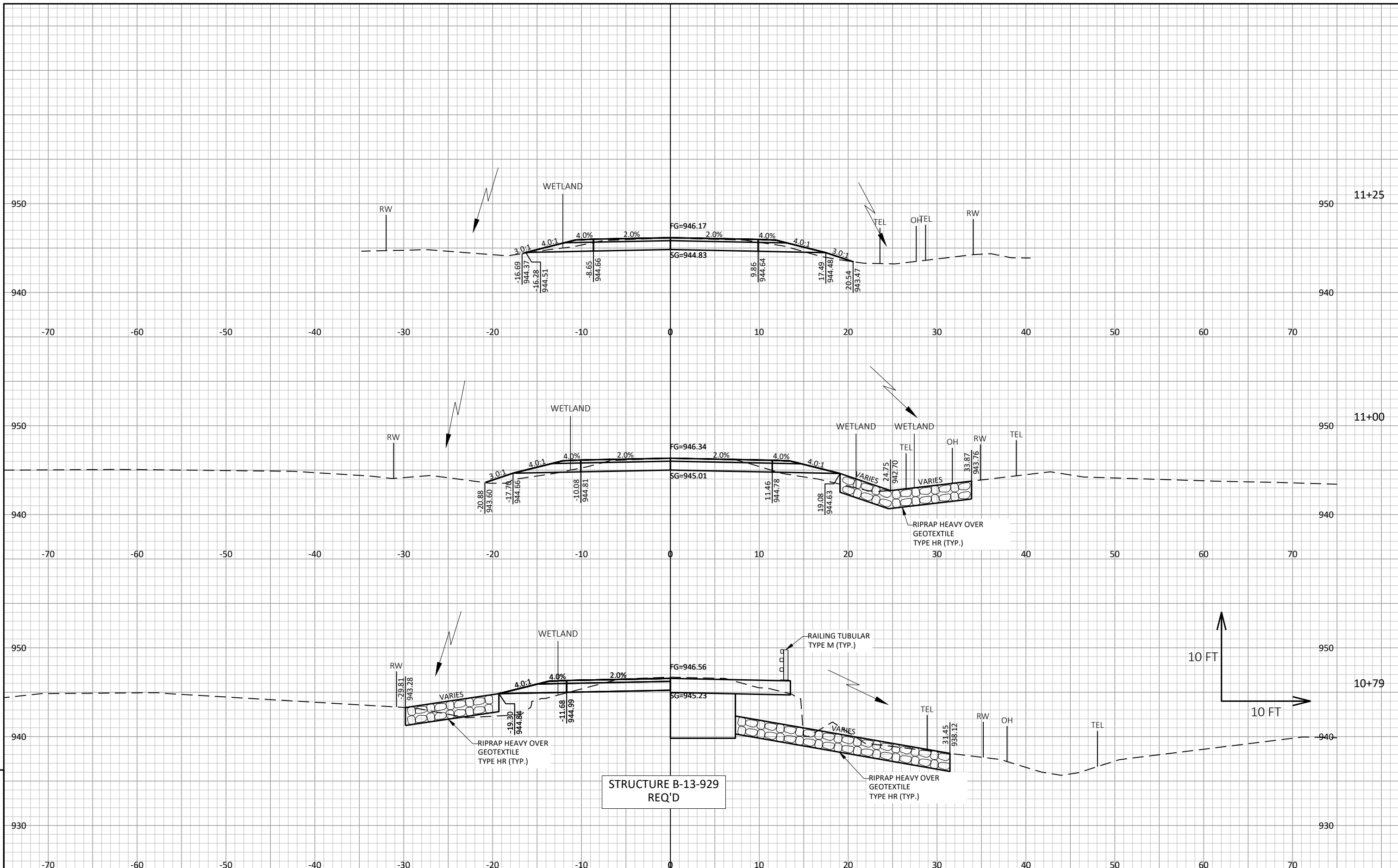
COLUMN TOTALS = 80 24 30 50

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - FILL 25%	(UNEXPANDED FILL)*1.25
3 - MASS ORDINATE	CUT + ROCK (10%) +REDUCED MARSH (60%) - FILL (25%)

9

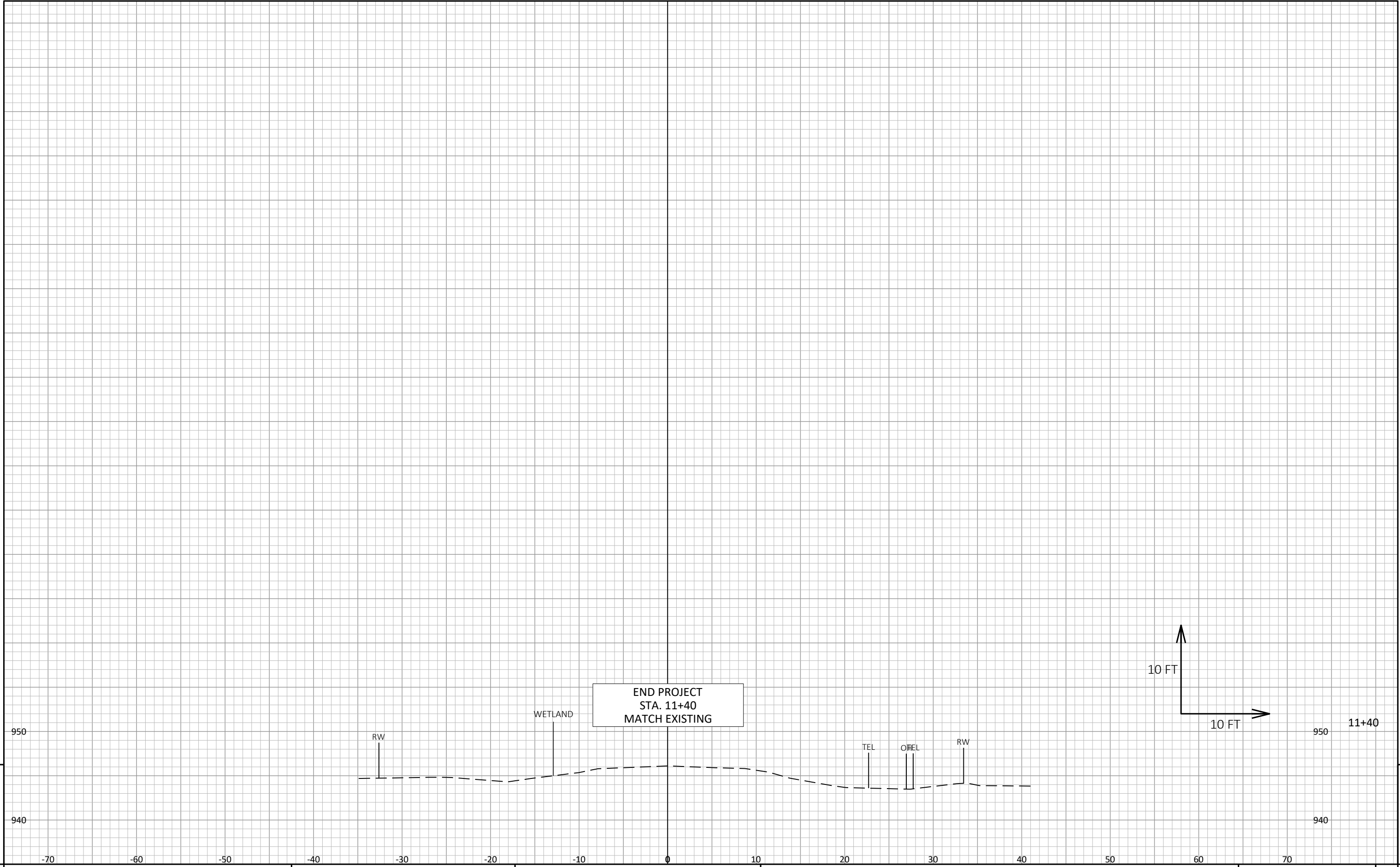
9



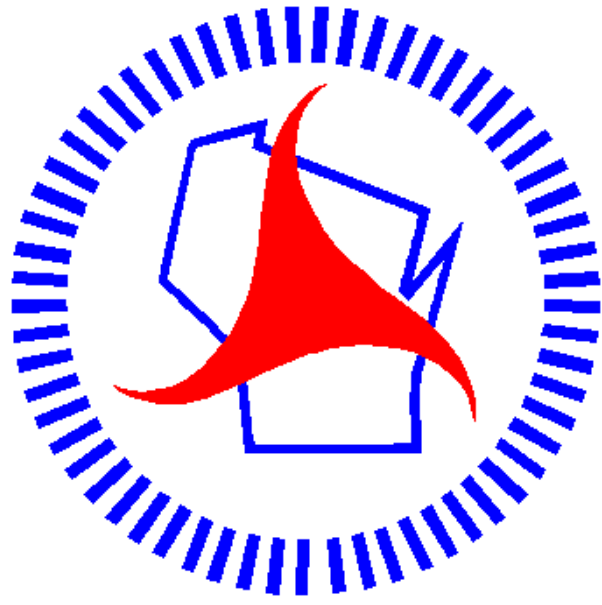


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# Notes



## ***Wisconsin Department of Transportation***

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