

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T LOYAL, MANN ROAD

N BR ONEILL CREEK BRIDGE B-10-0254

LOC STR CLARK

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7846-00-70	WISC 2024299	1

STATE PROJECT NUMBER
7846-00-70

ORDER OF SHEETS

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

TOTAL SHEETS = 46

PROJECT ID: 7846-00-70

COUNTY: CLARK

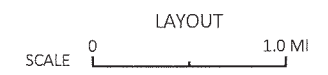
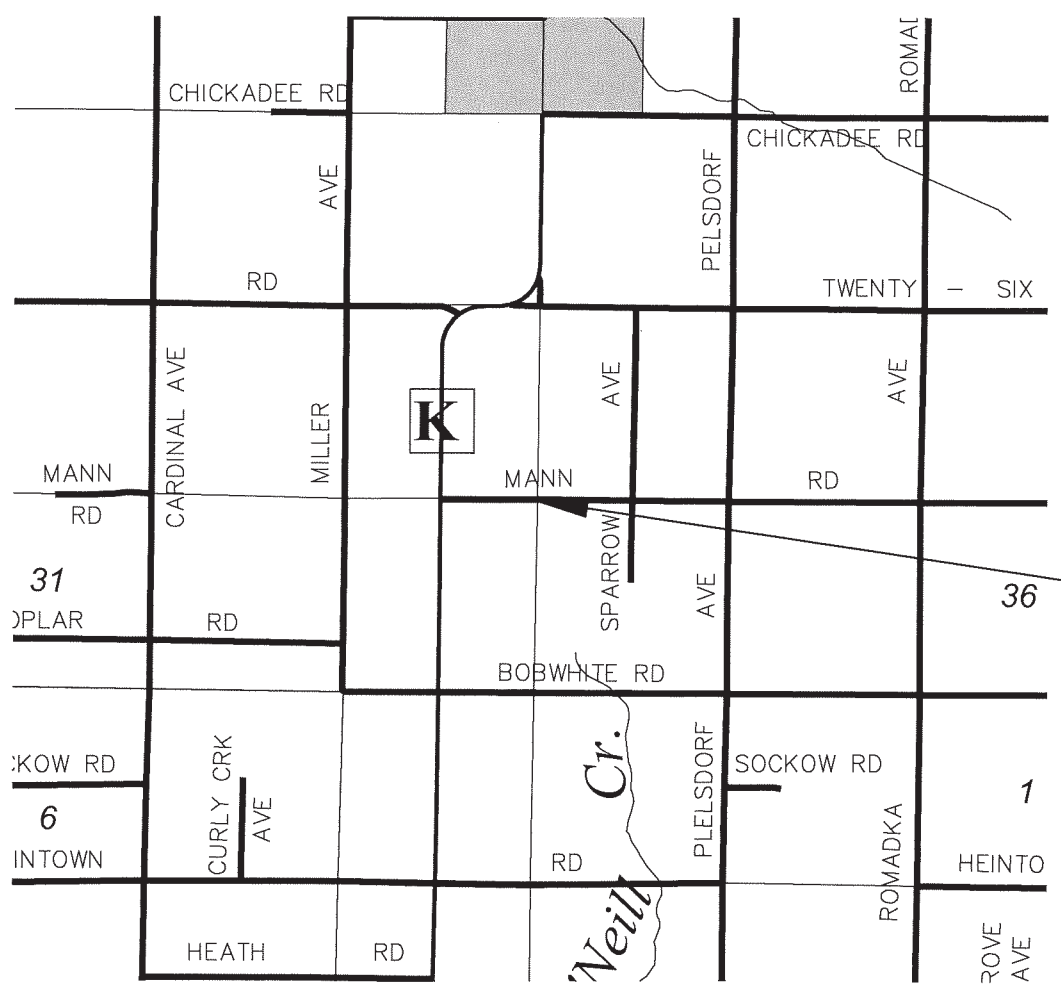


DESIGN DESIGNATION 7846-00-70

A.A.D.T. 2024	=	61
A.A.D.T. 2044	=	67
D.H.V.	=	8
D.D.	=	60/40
T.	=	15%
DESIGN SPEED	=	55 MPH
ESALS	=	22,000

CONVENTIONAL SYMBOLS

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



TOTAL NET LENGTH OF CENTERLINE = 0.026 MI

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

ELEVATIONS ARE REFERENCED TO NAVD 88 (2001). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

BEGIN CONSTRUCTION
STA 8+00.00
Y = 400344.5404
X = 710728.1762

BEGIN PROJECT
STA 9+32.00
Y = 400345.0125
X = 710860.1703

STRUCTURE B-10-0254
STA 10+00.00

END PROJECT
STA 10+68.00
Y = 400345.1529
X = 710996.1707

END CONSTRUCTION
STA 12+00.00
Y = 400345.9711
X = 711128.1736

ACCEPTED FOR
TOWN OF
LOYAL

DATE: 10-24-23 *Jesse Zabolona*
(Signature)
Chairman
(Title)

ORIGINAL PLANS PREPARED BY

Cedar
CORPORATION

MENOMONIE - MADISON - GREEN BAY - CEDARBURG
www.cedarcorp.com
800-472-7372

WISCONSIN
PROFESSIONAL ENGINEER

TROY L. PETERSON
E-31102
MENOMONIE
WI

DATE: 10-24-23 *Troy L. Peterson*
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CEDAR CORPORATION
Designer	CEDAR CORPORATION
Project Manager	TYLER RONGSTAD, PE
Regional Examiner	TOU YANG, PE
Regional Supervisor	TYLER RONGSTAD, P.E.

APPROVED FOR THE DEPARTMENT

DATE: Tyler Rongstad *Tyler Rongstad*
(Signature)

GENERAL NOTES

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

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.

DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE SALVAGED TOP SOIL, FERTILIZED, SEEDED, AND EROSION MAT CLASS I URBAN, TYPE A.

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE OF THE SLOPE INTERCEPTS. DO NOT STORE OR STOCKPILE MATERIALS IN WETLANDS

WHEN THE QUANTITY OF ITEM BASE LAYER OR SURFACE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE THICKNESS OF THE MATERIAL THAT IS SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.

THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR A MONUMENT WHICH SHALL BE SET IN THE STRUCTURE AS DESIGNATED BY ENGINEER.

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	OFF	OFFSET
AGG	AGGREGATE	PC	POINT OF CURVATURE
ET AL	AND OTHERS	PI	POINT OF INTERSECTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PT	POINT OF TANGENCY
BF	BACK FACE	POL	POINT ON LINE
BM	BENCHMARK	PE	PRIVATE ENTRANCE
C/L OR ε	CENTERLINE	PL	PROPERTY LINE
Δ	CENTRAL ANGLE OR DELTA	PSI	POUNDS/SQUARE INCH
CLR	CLEAR	PROP	PROPOSED
CONC	CONCRETE	R	RADIUS
CONST	CONSTRUCTION	RR	RAILROAD
COR	CORNER	REBAR	REINFORCEMENT BAR
CMP	CORRUGATED METAL PIPE	REQ'D	REQUIRED
CTH	COUNTY TRUNK HIGHWAY	RT	RIGHT
CR	CREEK	RHF	RIGHT-HAND FORWARD
CFS	CUBIC FEET/SECOND	R/W	RIGHT-OF-WAY
CULV	CULVERT	RD	ROAD
D	DEGREE OF CURVE	SEC	SECTION
DHV	DESIGN HOUR VOLUME	S	SOUTH
DIA	DIAMETER	SE	SOUTHEAST
E	EAST	SW	SOUTHWEST
EL	ELEVATION	STH	STATE TRUNK HIGHWAY
EST	ESTIMATED	STA	STATION
FPS	FEET PER SECOND	SE	SUPER ELEVATION
FE	FIELD ENTRANCE	T	TANGENT
FT	FOOT (FEET)	TEL	TELEPHONE
FTG	FOOTING	TEMP	TEMPORARY
FDN	FOUNDATION	TI	TEMPORARY INTEREST
FF	FRONT FACE	TLE	TEMPORARY LIMITED EASEMENT
IP	IRON PIN	TL OR T/L	TRANSIT LINE
LT	LEFT	T	TRUCKS
LHF	LEFT-HAND FORWARD	TYP	TYPICAL
L	LENGTH OF CURVE	U/G	UNDERGROUND
LF	LINEAR FOOT	USH	UNITED STATES HIGHWAY
MAX	MAXIMUM	VAR	VARIABLE
MI	MILE	V	VELOCITY
MIN	MINIMUM	VPC	VERTICAL POINT OF CURVATURE
NC	NORMAL CROWN	VPI	VERTICAL POINT OF INTERSECTION
N	NORTH	VPT	VERTICAL POINT OF TANGENCY
NE	NORTHEAST	W	WEST
NW	NORTHWEST	YB	YARD
NO	NUMBER		

DNR CONTACT

DNR BLACK RIVER FALLS SERVICE CENTER
 910 STATE HIGHWAY 54
 BLACK RIVER FALLS, WI 54615-5450
 ATTN: BRADLEY BETTHAUSER
 PH: (715) 213-9064
 EMAIL: bradley.betthausen@wisconsin.gov

UTILITY CONTACTS

* NO UTILITIES ON PROJECT

DESIGN CONSULTANT CONTACT

CEDAR CORPORATION
 604 WILSON AVENUE
 MENOMONIE, WI 54751
 ATTN: TROY L. PETERSON, P.E.
 PH: (715) 235-9081
 EMAIL: troy.peterson@cedarcorp.com

MUNICIPALITY

TOWN OF LOYAL
 W3412 CHICKADEE ROAD
 LOYAL, WI 54446
 ATTN: JESSE ZVOLENA, TOWN CHAIRMAN
 PH: (715) 613-9013
 EMAIL: jfzvolena@gmail.com








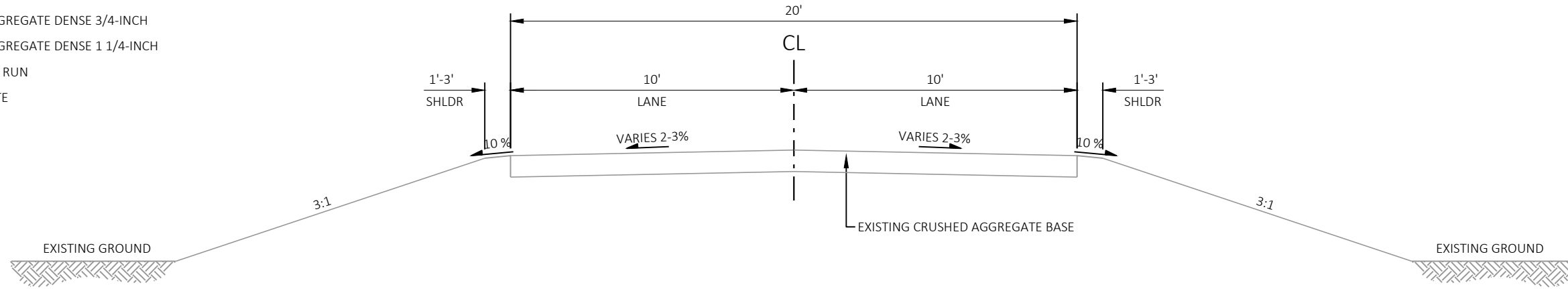
RUNOFF COEFFICIENT TABLE

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

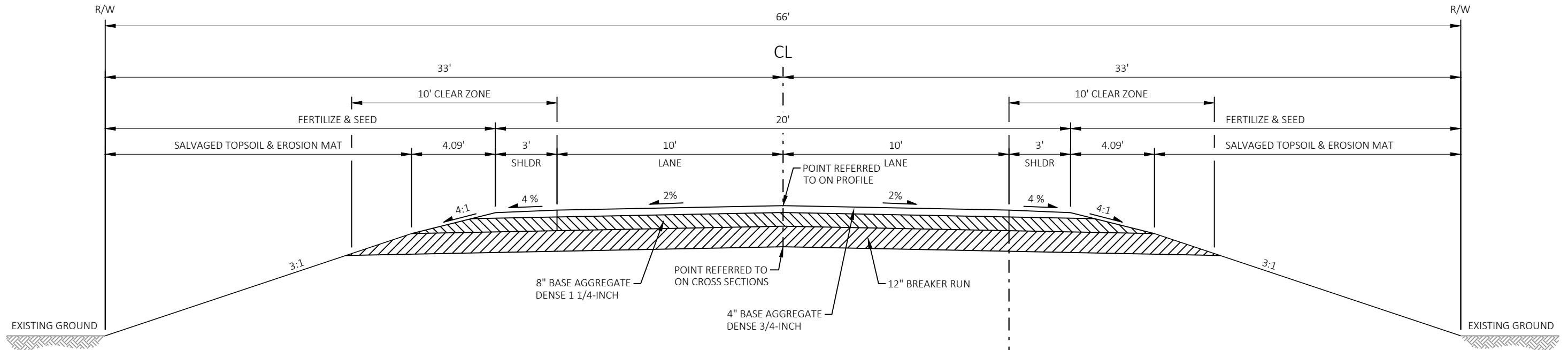
TOTAL PROJECT AREA = 0.08 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.22 ACRES

LEGEND

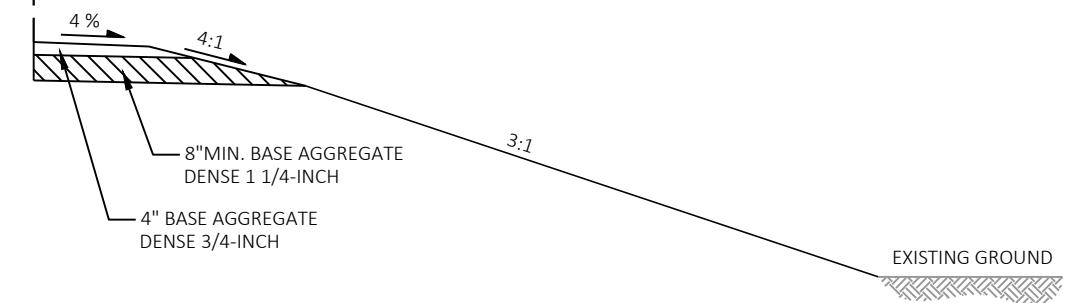
-  PROPOSED BASE AGGREGATE DENSE 3/4-INCH
-  PROPOSED BASE AGGREGATE DENSE 1 1/4-INCH
-  PROPOSED BREAKER RUN
-  EXISTING AGGREGATE
-  EXISTING GROUND



EXISTING TYPICAL SECTION
STA 9+32 - STA 10+68


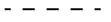
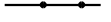
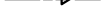





FINISHED TYPICAL SECTION
STA 9+32 - STA 10+68

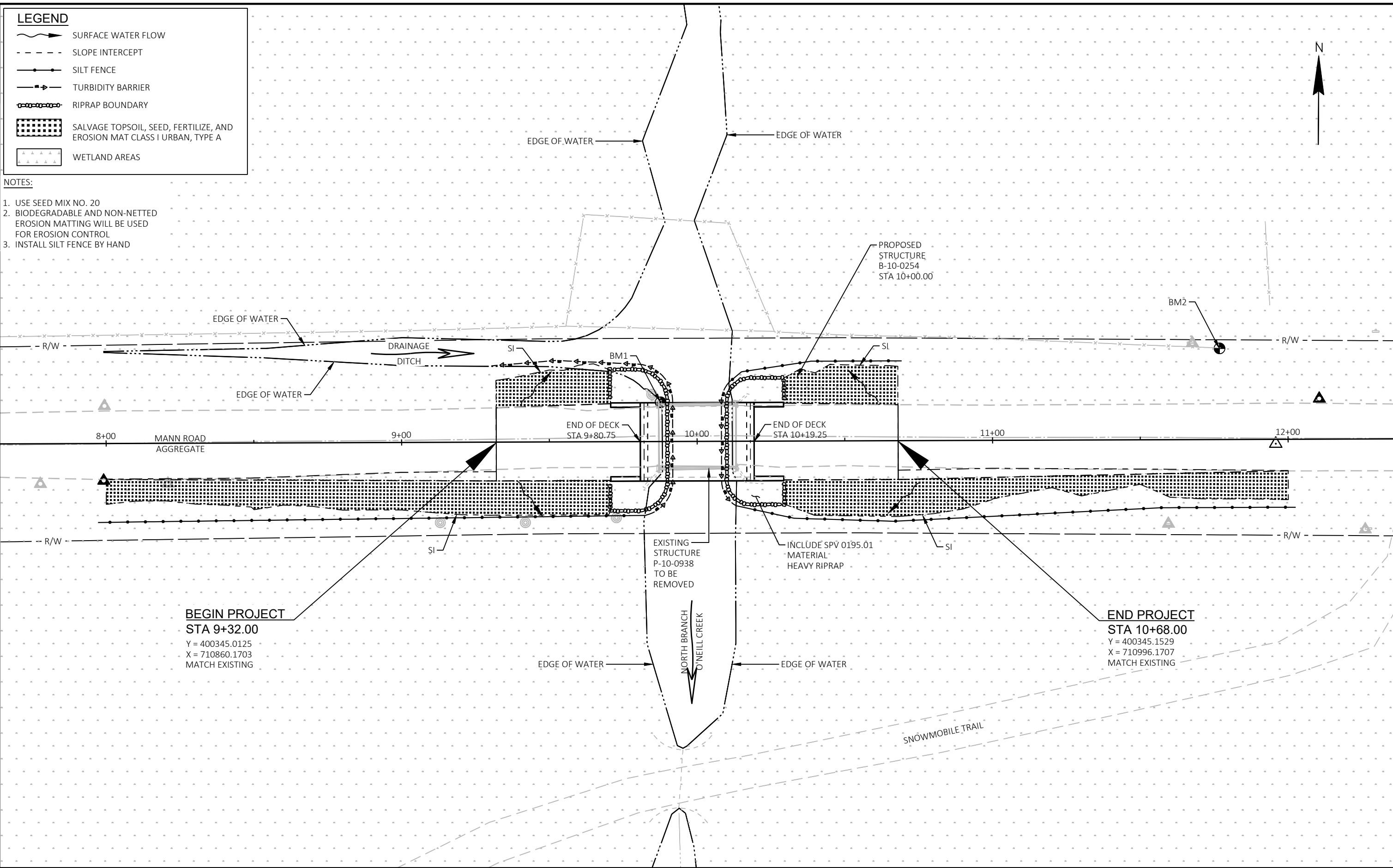


FINISHED TYPICAL SECTION - SHOULDERS
STA 8+00 RT - STA 9+32 RT
STA 10+68 RT - STA 12+00 RT

LEGEND

-  SURFACE WATER FLOW
-  SLOPE INTERCEPT
-  SILT FENCE
-  TURBIDITY BARRIER
-  RIPRAP BOUNDARY
-  SALVAGE TOPSOIL, SEED, FERTILIZE, AND EROSION MAT CLASS I URBAN, TYPE A
-  WETLAND AREAS

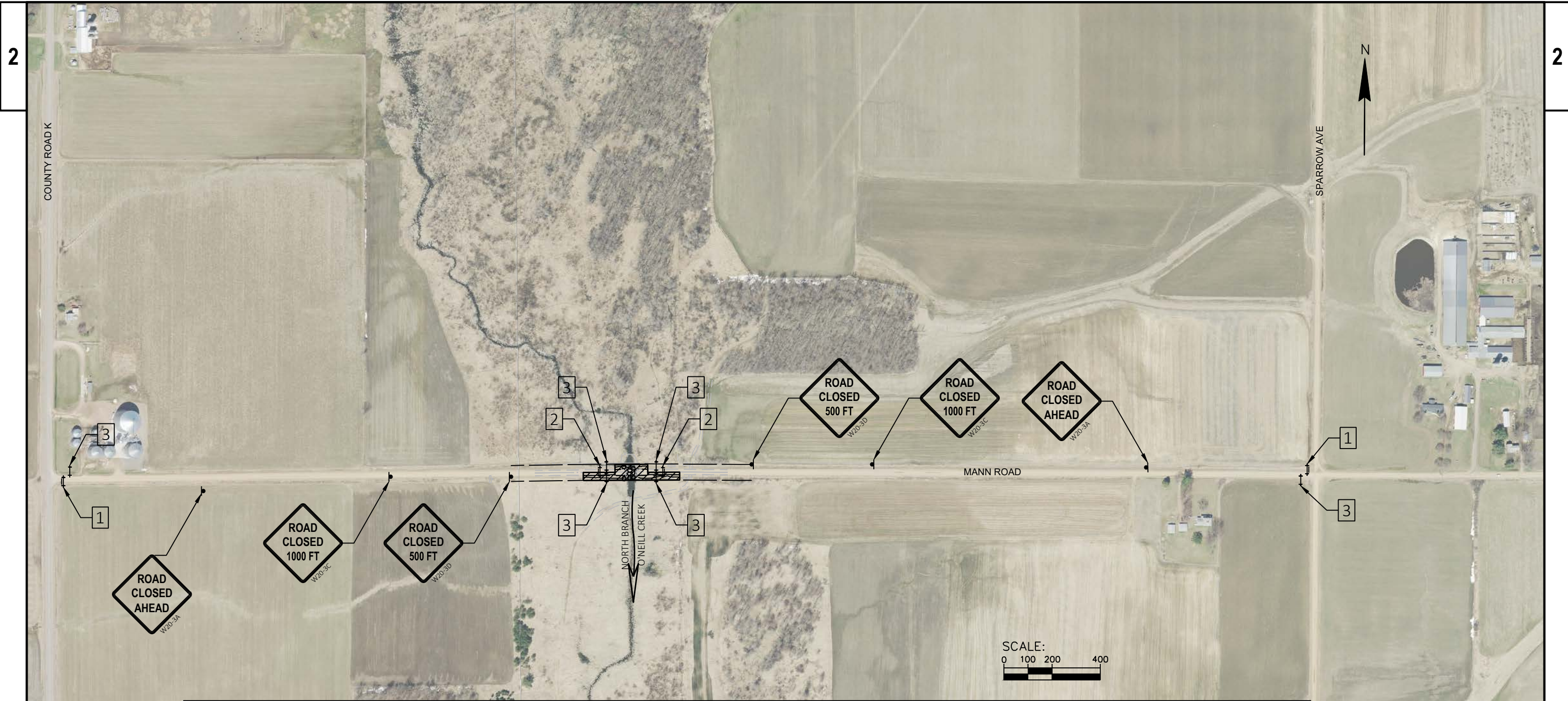
- NOTES:**
1. USE SEED MIX NO. 20
 2. BIODEGRADABLE AND NON-NETTED EROSION MATTING WILL BE USED FOR EROSION CONTROL
 3. INSTALL SILT FENCE BY HAND



BEGIN PROJECT
STA 9+32.00
 Y = 400345.0125
 X = 710860.1703
 MATCH EXISTING

END PROJECT
STA 10+68.00
 Y = 400345.1529
 X = 710996.1707
 MATCH EXISTING

PROJECT NO: 7846-00-70	HWY: MANN ROAD	COUNTY: CLARK	EROSION CONTROL	SHEET E
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GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

LEGEND

- ↑ ↓ TYPE III BARRICADE
- ↑ ↓ TYPE III BARRICADE WITH ATTACHED SIGN
- ▶ SIGN ON PERMANENT SUPPORT
- ▨ WORK AREA

1 R11-3C 60"X24" BRIDGE OUT 0.5 MILES AHEAD

2 R11-2B 48"X30" BRIDGE OUT

3 TYPE III BARRICADE

Estimate Of Quantities

7846-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-10-938	EACH	1.000	1.000
0004	205.0100	Excavation Common	CY	306.000	306.000
0006	206.1001	Excavation for Structures Bridges (structure) 01. B-10-254	EACH	1.000	1.000
0008	210.1500	Backfill Structure Type A	TON	230.000	230.000
0010	213.0100	Finishing Roadway (project) 01. 7846-00-70	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	72.000	72.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	131.000	131.000
0016	311.0110	Breaker Run	TON	197.000	197.000
0018	502.0100	Concrete Masonry Bridges	CY	125.000	125.000
0020	502.3200	Protective Surface Treatment	SY	137.000	137.000
0022	505.0400	Bar Steel Reinforcement HS Structures	LB	2,960.000	2,960.000
0024	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,280.000	15,280.000
0026	506.0105	Structural Steel Carbon	LB	480.000	480.000
0028	513.4061	Railing Tubular Type M	LF	122.000	122.000
0030	516.0500	Rubberized Membrane Waterproofing	SY	16.000	16.000
0032	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	320.000	320.000
0034	606.0300	Riprap Heavy	CY	90.000	90.000
0036	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0038	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7846-00-70	EACH	1.000	1.000
0040	619.1000	Mobilization	EACH	1.000	1.000
0042	624.0100	Water	MGAL	6.000	6.000
0044	625.0500	Salvaged Topsoil	SY	457.000	457.000
0046	628.1504	Silt Fence	LF	435.000	435.000
0048	628.1520	Silt Fence Maintenance	LF	435.000	435.000
0050	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0052	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0054	628.2006	Erosion Mat Urban Class I Type A	SY	457.000	457.000
0056	628.6005	Turbidity Barriers	SY	52.000	52.000
0058	629.0210	Fertilizer Type B	CWT	0.400	0.400
0060	630.0120	Seeding Mixture No. 20	LB	8.000	8.000
0062	630.0500	Seed Water	MGAL	5.000	5.000
0064	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0066	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0068	638.2602	Removing Signs Type II	EACH	4.000	4.000
0070	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0072	642.5001	Field Office Type B	EACH	1.000	1.000
0074	643.0420	Traffic Control Barricades Type III	DAY	500.000	500.000
0076	643.0705	Traffic Control Warning Lights Type A	DAY	1,000.000	1,000.000
0078	643.0900	Traffic Control Signs	DAY	500.000	500.000
0080	643.5000	Traffic Control	EACH	1.000	1.000
0082	645.0111	Geotextile Type DF Schedule A	SY	38.000	38.000
0084	645.0120	Geotextile Type HR	SY	170.000	170.000
0086	650.4500	Construction Staking Subgrade	LF	98.000	98.000
0088	650.5000	Construction Staking Base	LF	98.000	98.000
0090	650.6501	Construction Staking Structure Layout (structure) 01. B-10-254	EACH	1.000	1.000
0092	650.9911	Construction Staking Supplemental Control (project) 01. 7846-00-70	EACH	1.000	1.000
0094	650.9920	Construction Staking Slope Stakes	LF	362.000	362.000
0096	715.0502	Incentive Strength Concrete Structures	DOL	750.000	750.000
0098	999.2005.S	Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
0100	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000

Estimate Of Quantities

7846-00-70

Line	Item	Item Description	Unit	Total	Qty
0102	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0104	SPV.0090	Special 01. Flashing Stainless Steel	LF	77.000	77.000
0106	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	65.000	65.000

3

3

EXCAVATION

CATEGORY	STATION	TO	STATION	LOCATION	205.0100 EXCAVATION COMMON CY	REMARKS
0010	8+00	-	12+00	PROJECT	306	
TOTAL 0010					306	

MISCELLANEOUS

CATEGORY	STATION	TO	STATION	LOCATION	619.1000 MOBILIZATION EACH	642.5001 FIELD OFFICE TYPE B EACH	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 7846-00-70) EACH	REMARKS
0010	8+00	-	12+00	PROJECT	1	1	1	
TOTAL 0010					1	1	1	

AGGREGATES

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4- INCH TON	311.0110 BREAKER RUN TON	624.0100 WATER MGAL	REMARKS
0010	8+00	-	9+32	MANN ROAD	5	9	-	0	SHOULDER
0010	9+32	-	90+80.75	MANN ROAD	30	54	98	3	
0010	10+19.25	-	10+68	MANN ROAD	30	55	99	3	
0010	10+68	-	12+00	MANN ROAD	6	12	-	0	SHOULDER
TOTAL 0010					72	131	197	6	

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.6005 TURBIDITY BARRIERS SY	REMARKS
0010	8+00	-	10+00	MANN ROAD	185	185	-	-	37	
0010	10+00	-	12+00	MANN ROAD	250	250	1	1	15	
TOTAL 0010					435	435	1	1	52	

PROJECT NO: 7846-00-70

HWY: MANN ROAD

COUNTY: CLARK

MISCELLANEOUS QUANTITIES

SHEET

E

RESTORATION

CATEGORY	STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	628.2006 EROSION MAT URBAN CLASS I TYPE A SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0500 SEED WATER MGAL	REMARKS
0010	8+00	-	10+00	MANN ROAD	237	237	0.2	4	3	
0010	10+00	-	12+00	MANN ROAD	220	220	0.2	4	2	
TOTAL 0010					457	457	0.4	8	5	

TYPE II SIGNING

CATEGORY	STATION	SIDE	SIGN CODE	WXH	LOCATION	634.0614 POSTS WOOD 4X6-INCH X 14- FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	9+70.75	LT	W5-52L	12X36	MANN ROAD	1	3	1	1	
0010	9+70.75	RT	W5-52R	12X36	MANN ROAD	1	3	1	1	
0010	10+20.25	LT	W5-52L	12X36	MANN ROAD	1	3	1	1	
0010	10+20.25	RT	W5-52R	12X36	MANN ROAD	1	3	1	1	
TOTAL 0010						4	12	4	4	

TRAFFIC CONTROL

CATEGORY	LOCATION	DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS DAY	643.5000 TRAFFIC CONTROL EACH	REMARKS
0010	CTY RD K	50	100	200	50	1	
0010	MANN RD	50	300	600	400	-	
0010	SPARROW AVE	50	100	200	50	-	
TOTAL 0010			500	1,000	500	1	

STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-10-254) EACH	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (7846- 00-70) (01. B-10- 254) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	REMARKS
0010	8+00	-	9+32	MANN ROAD	-	-	-	1	132	
0010	9+32	-	90+80.75	MANN ROAD	49	49	1	-	49	
0010	10+19.25	-	10+68	MANN ROAD	49	49	-	-	49	
0010	10+68	-	12+00	MANN ROAD	-	-	-	-	132	
TOTAL 0010					98	98	1	1	362	

STRUCTURE

999.2005.S.01

MAINTAINING
BIRD DETERRENT
SYSTEM
(STATION) (01.
10+00)

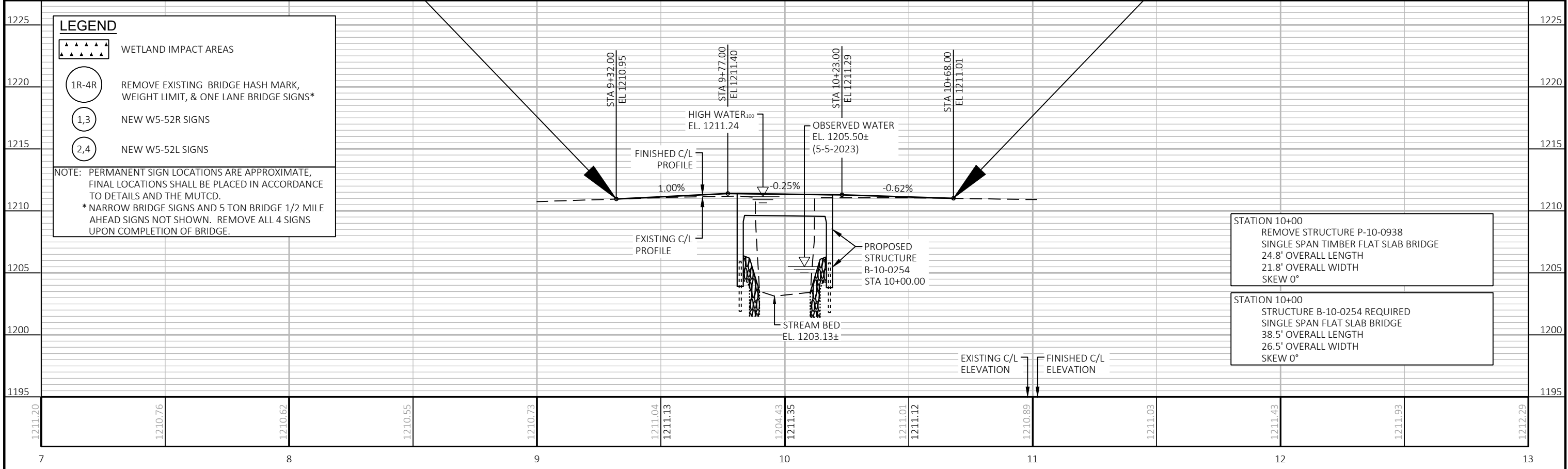
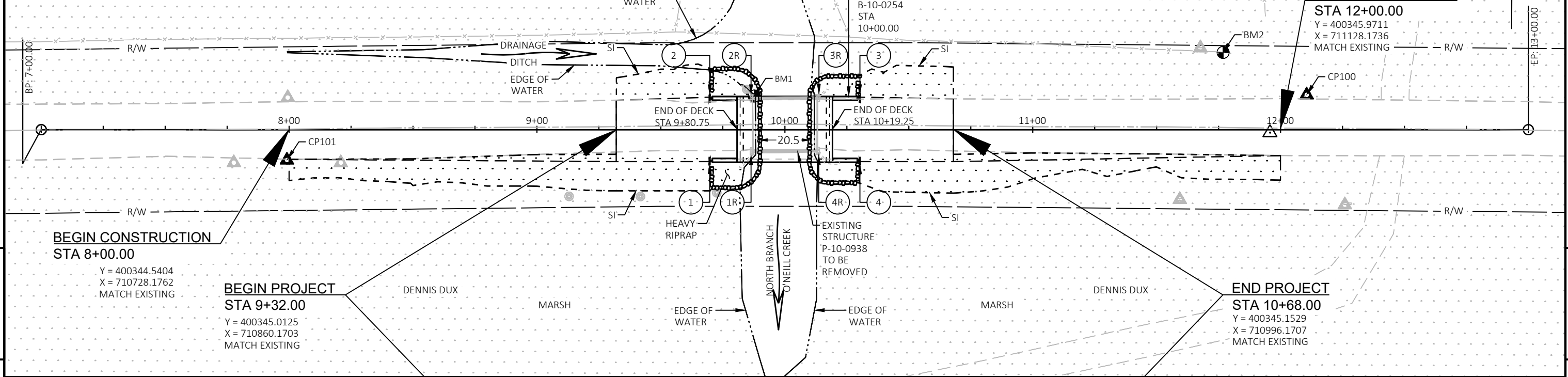
CATEGORY	STATION	LOCATION	EACH	REMARKS
0020	10+00	STRUCTURE	1	
TOTAL 0020			1	

HAUL ROADS

618.0100.01
MAINTENANCE
AND REPAIR OF
HAUL ROADS
(PROJECT) (01.
7846-00-70)

CATEGORY	STATION	TO	STATION	LOCATION	EACH	REMARKS
0030	8+00	-	12+00	PROJECT	1	
TOTAL 0030					1	

BENCHMARKS & CONTROL POINTS						
NO.	STATION	OFFSET	DESCRIPTION	ELEV.	EASTING	NORTHING
BM1	9+87.6	13.4 L	SPIKE, IN NW WING WALL	1211.084'	710915.7556'	400358.6189'
BM2	11+76.8	31.0 L	COTTON SPINDLE	1210.836'	711104.8879'	400376.8570'
BM3	NA	NA	COTTON SPINDLE	1213.707'	710276.1721'	400374.2679'
CP 100	12+10.5	13.9 L	MAG SPIKE	1211.117'	711138.6597'	400359.8690'
CP 101	7+99.1	12.4 RT	MAG SPIKE	1210.214'	710727.3144'	400332.1361'



LEGEND

- ▲▲▲▲ WETLAND IMPACT AREAS
- 1R-4R REMOVE EXISTING BRIDGE HASH MARK, WEIGHT LIMIT, & ONE LANE BRIDGE SIGNS*
- 1,3 NEW W5-52R SIGNS
- 2,4 NEW W5-52L SIGNS

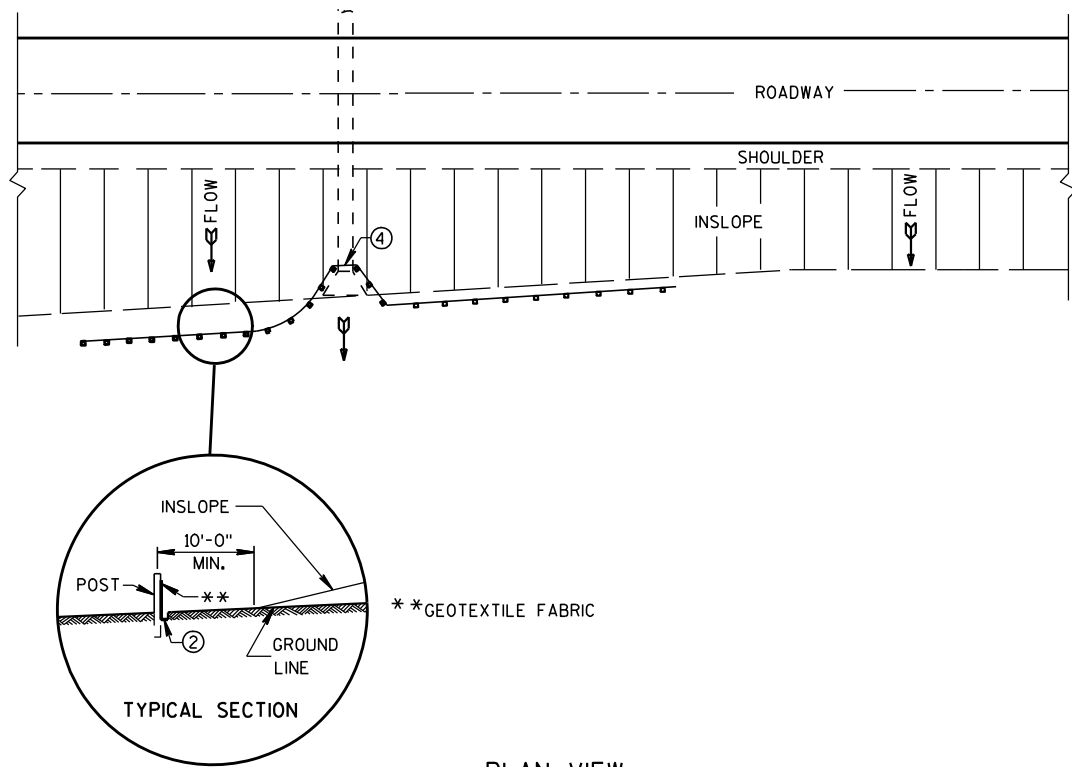
NOTE: PERMANENT SIGN LOCATIONS ARE APPROXIMATE, FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.
* NARROW BRIDGE SIGNS AND 5 TON BRIDGE 1/2 MILE AHEAD SIGNS NOT SHOWN. REMOVE ALL 4 SIGNS UPON COMPLETION OF BRIDGE.

STATION 10+00
REMOVE STRUCTURE P-10-0938
SINGLE SPAN TIMBER FLAT SLAB BRIDGE
24.8' OVERALL LENGTH
21.8' OVERALL WIDTH
SKEW 0°

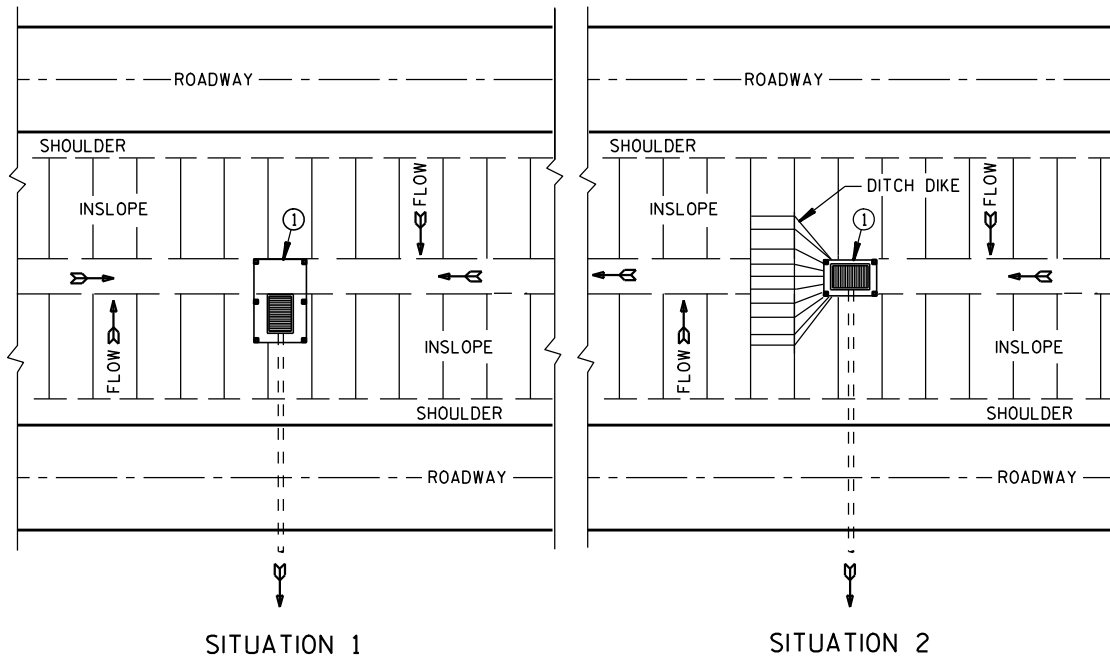
STATION 10+00
STRUCTURE B-10-0254 REQUIRED
SINGLE SPAN FLAT SLAB BRIDGE
38.5' OVERALL LENGTH
26.5' OVERALL WIDTH
SKEW 0°

Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

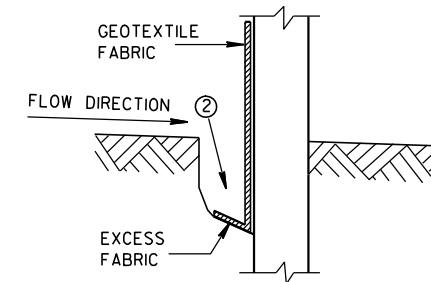


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

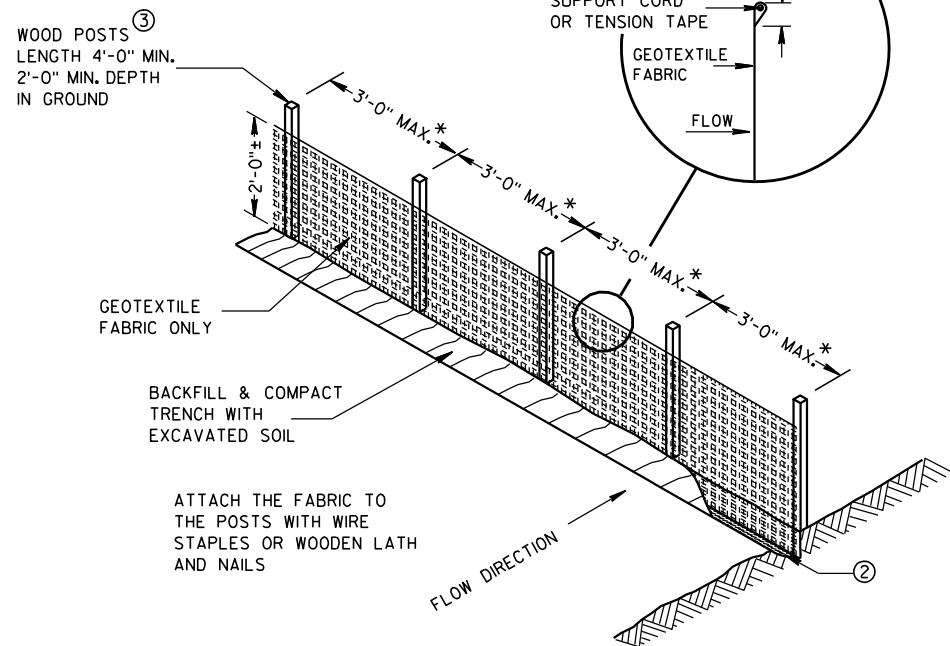
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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.



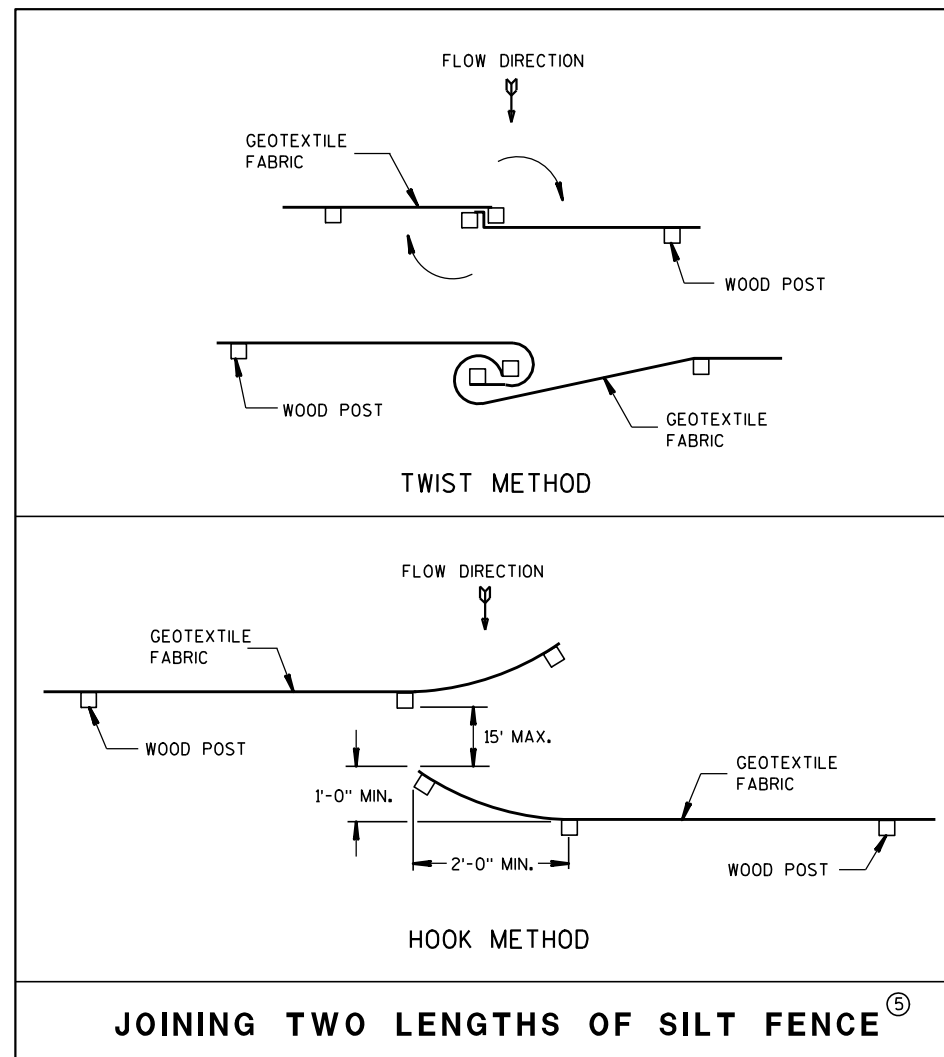
TRENCH DETAIL

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

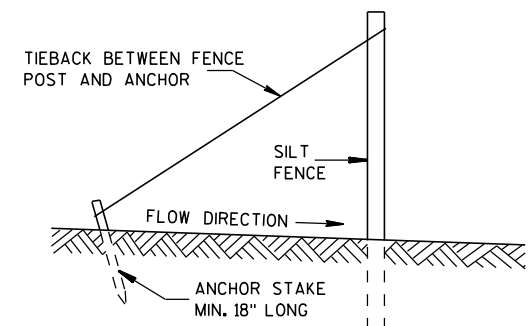


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤

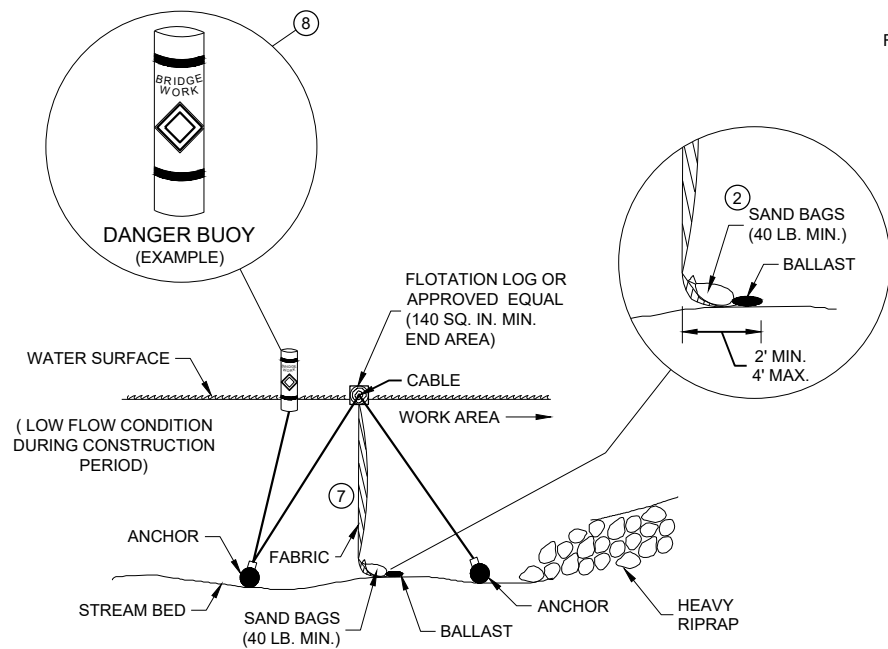


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

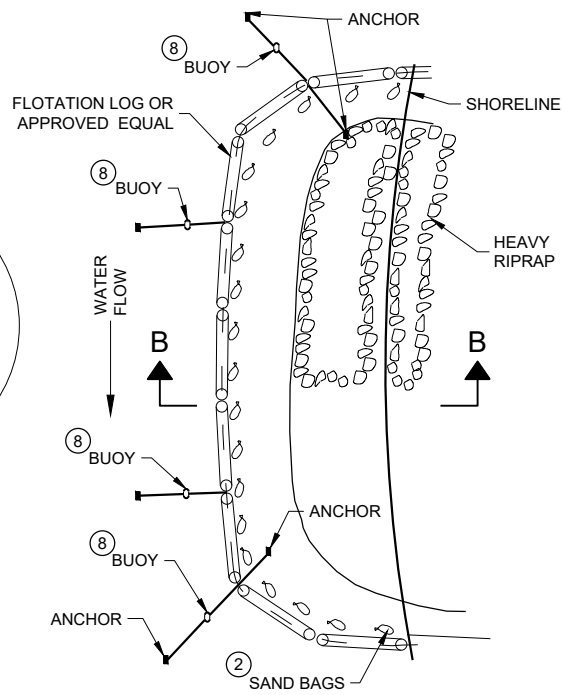
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

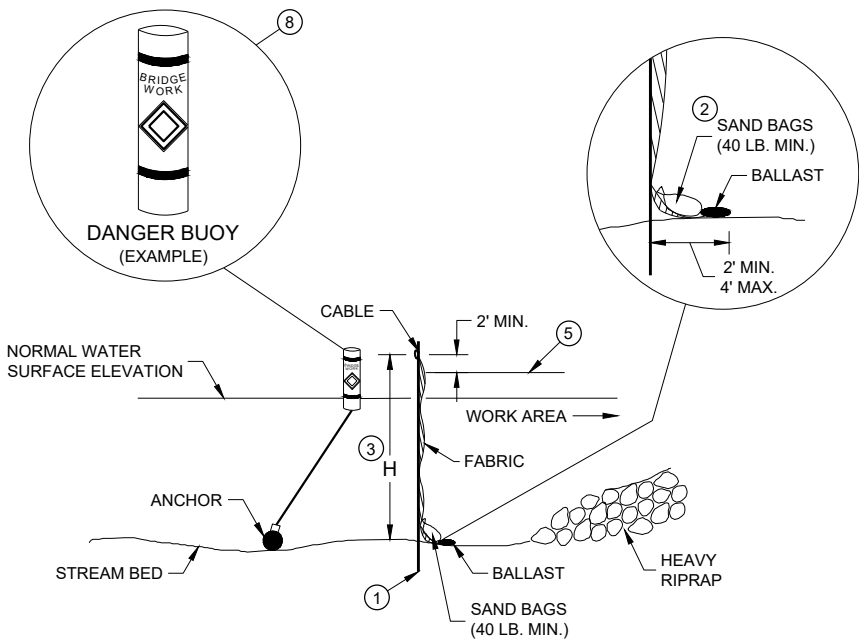


SECTION B - B

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

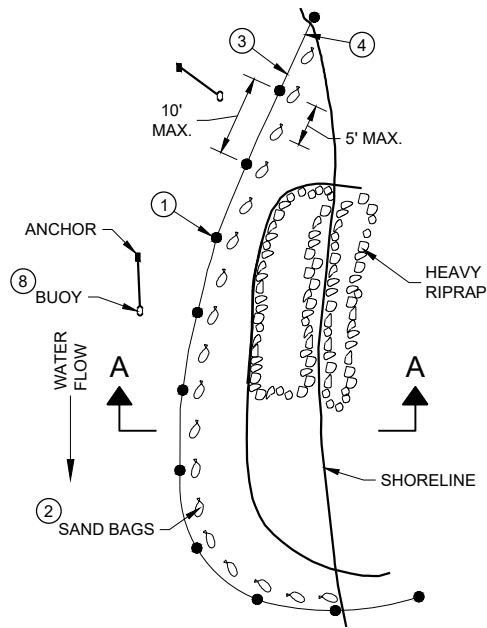


PLAN VIEW



SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW

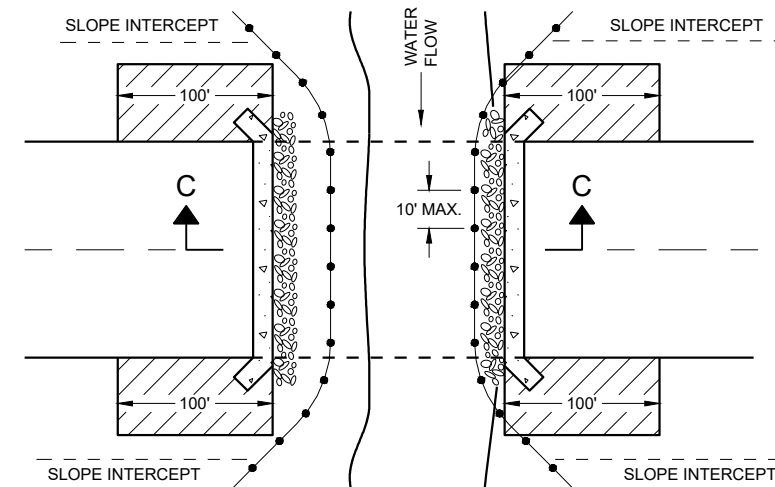
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

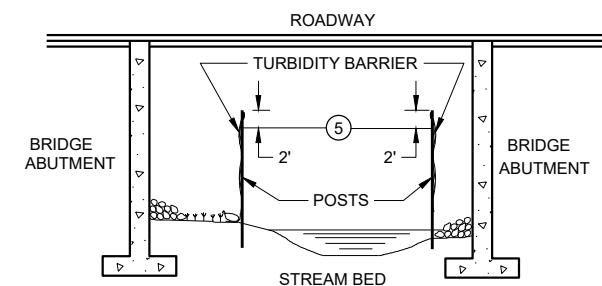
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

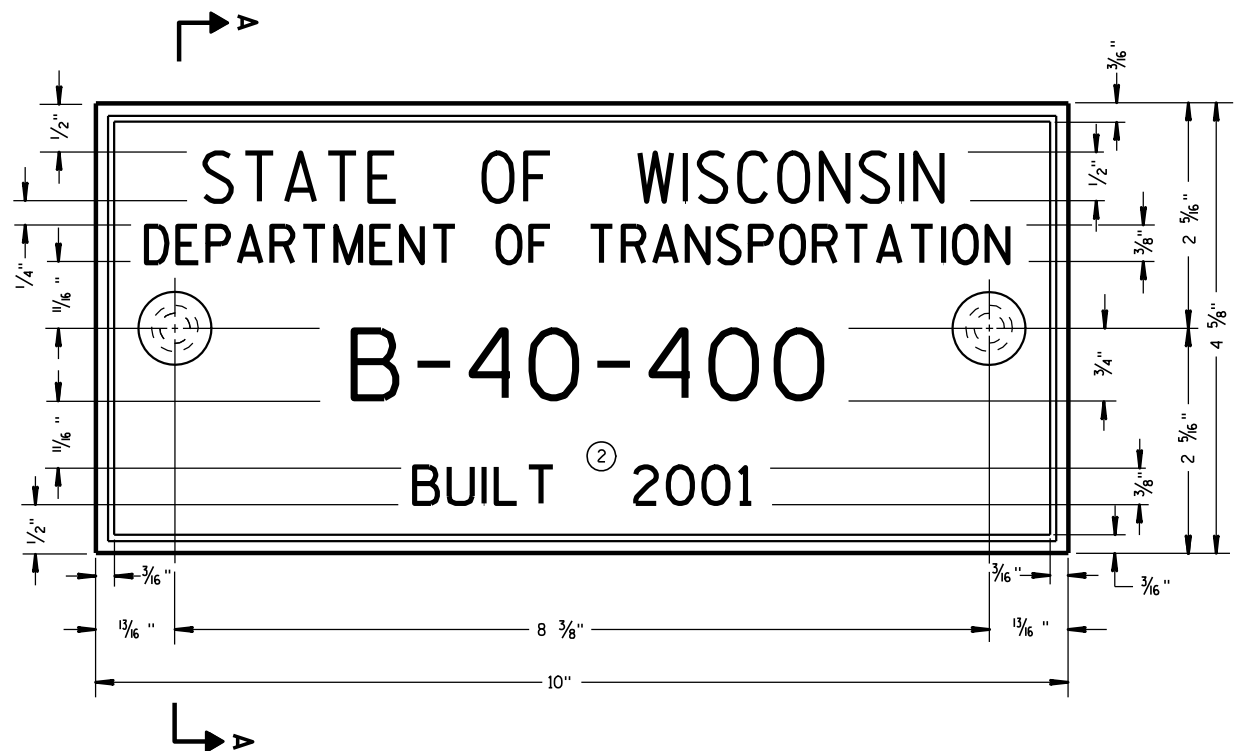
**TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES**

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



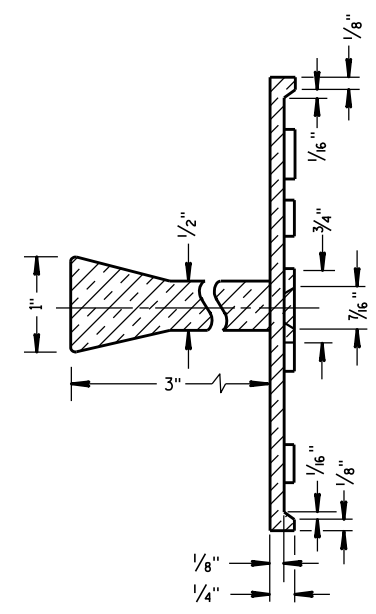
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

GENERAL NOTES

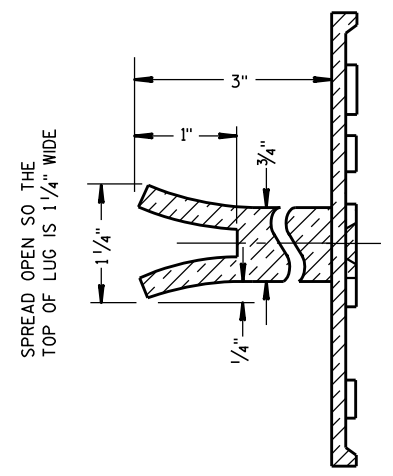
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

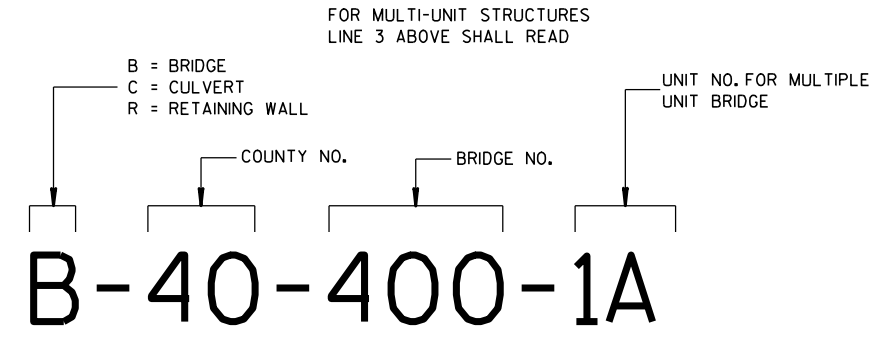
- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A

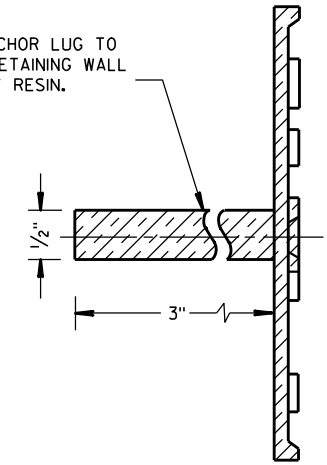


ALTERNATE LUG



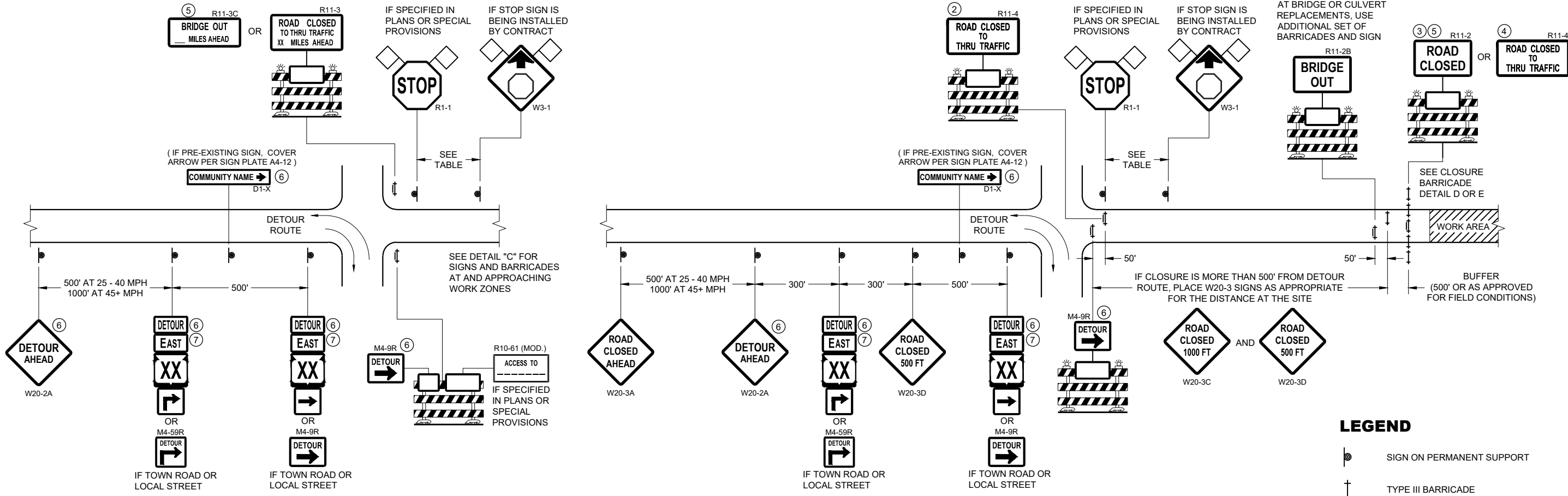
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

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



**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**

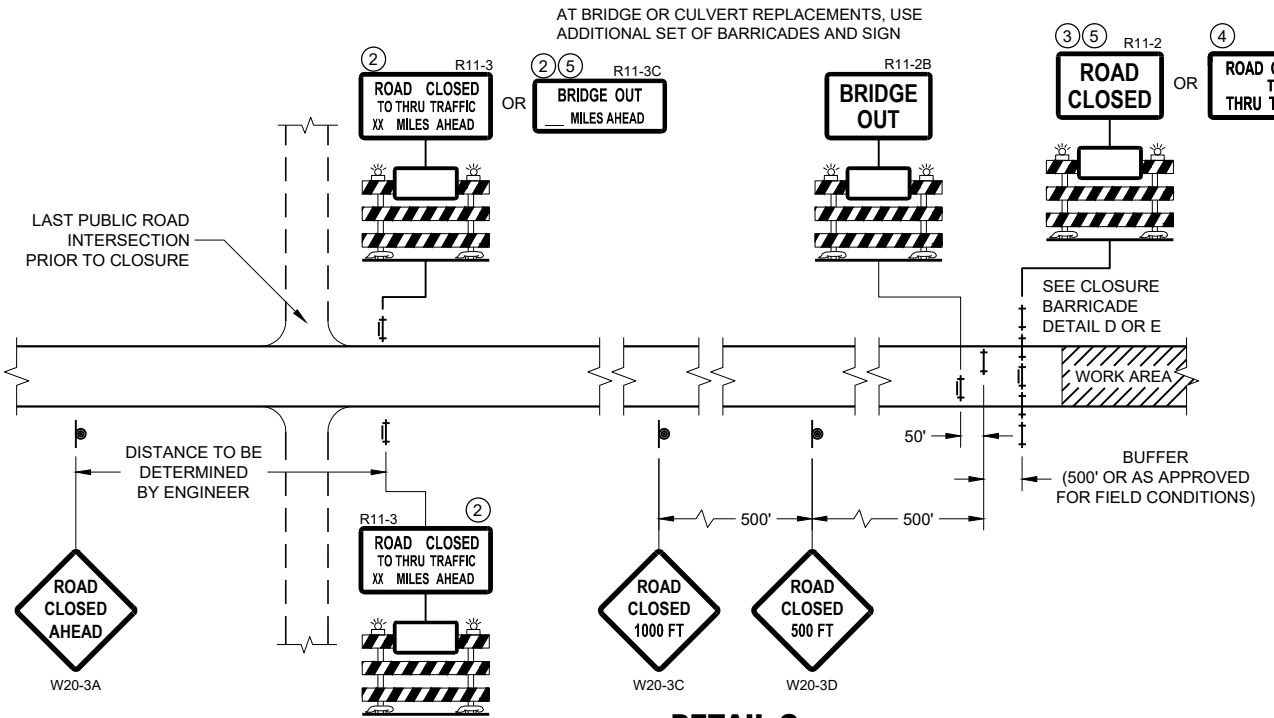
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

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)

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

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



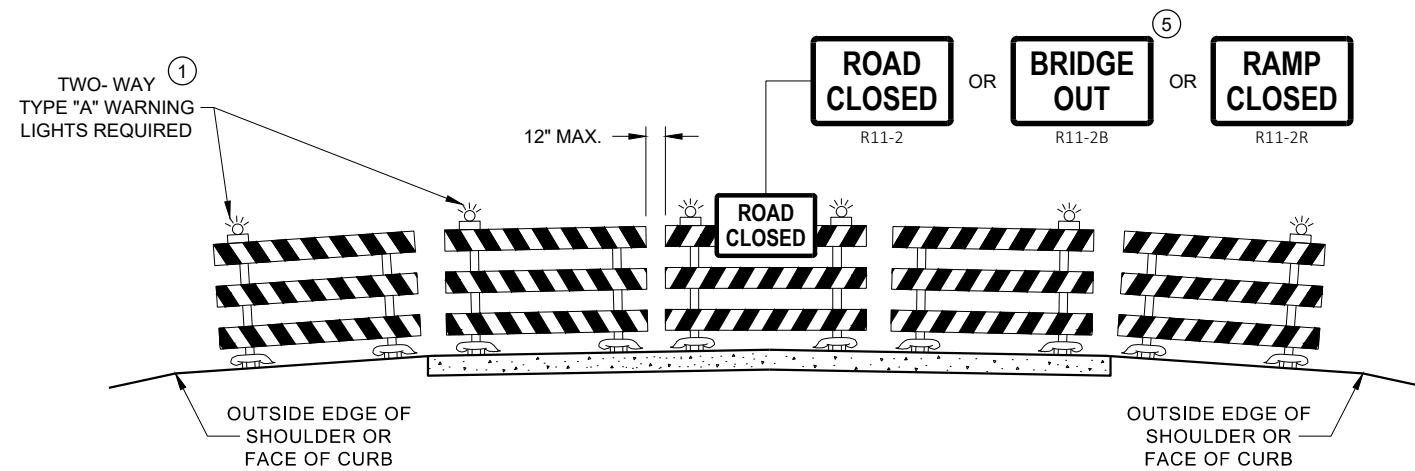
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

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

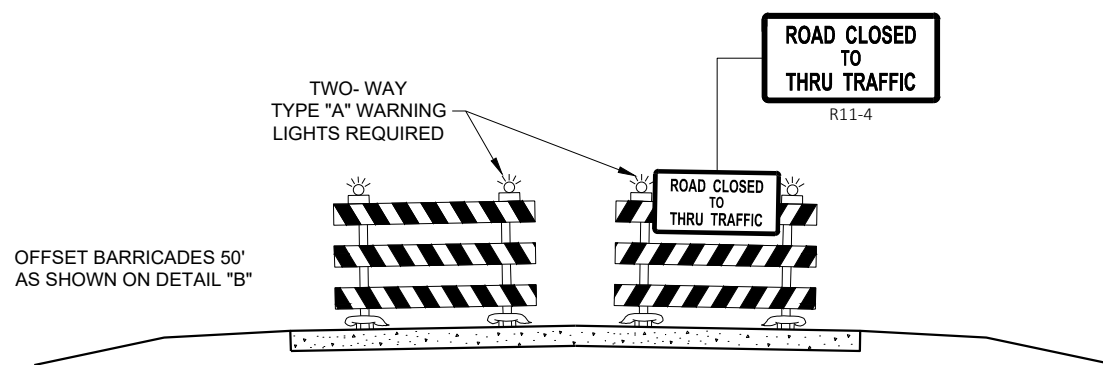
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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



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

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

GENERAL NOTES

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

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




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

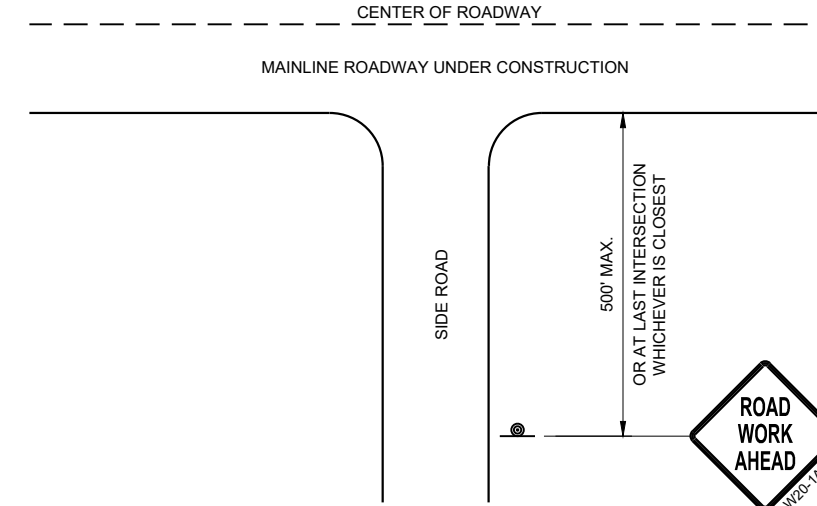
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

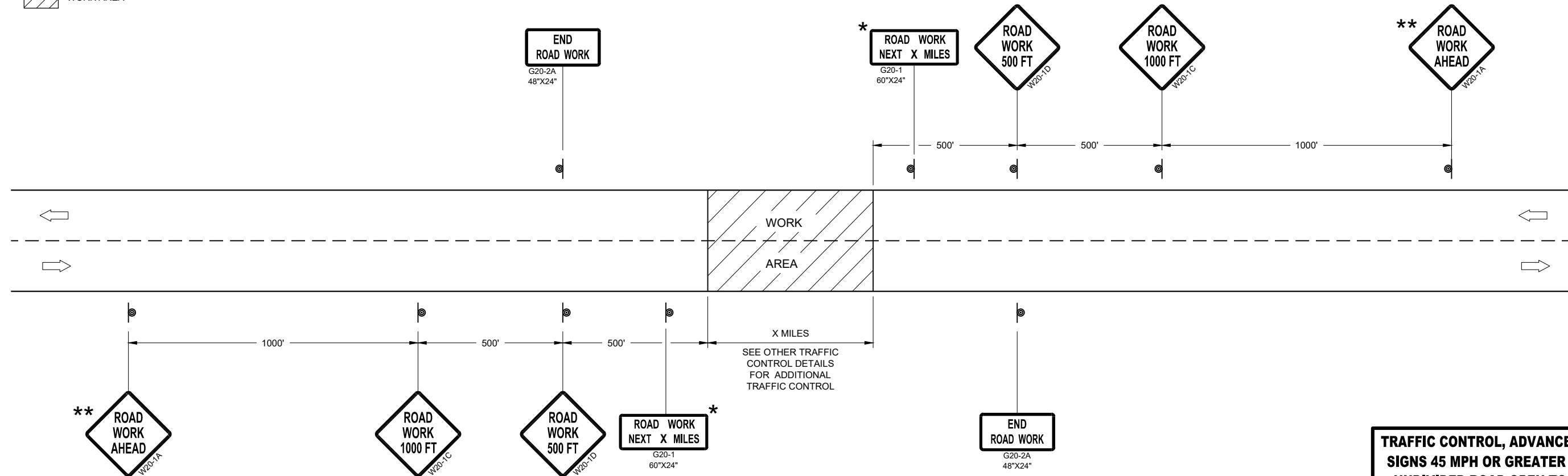
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**



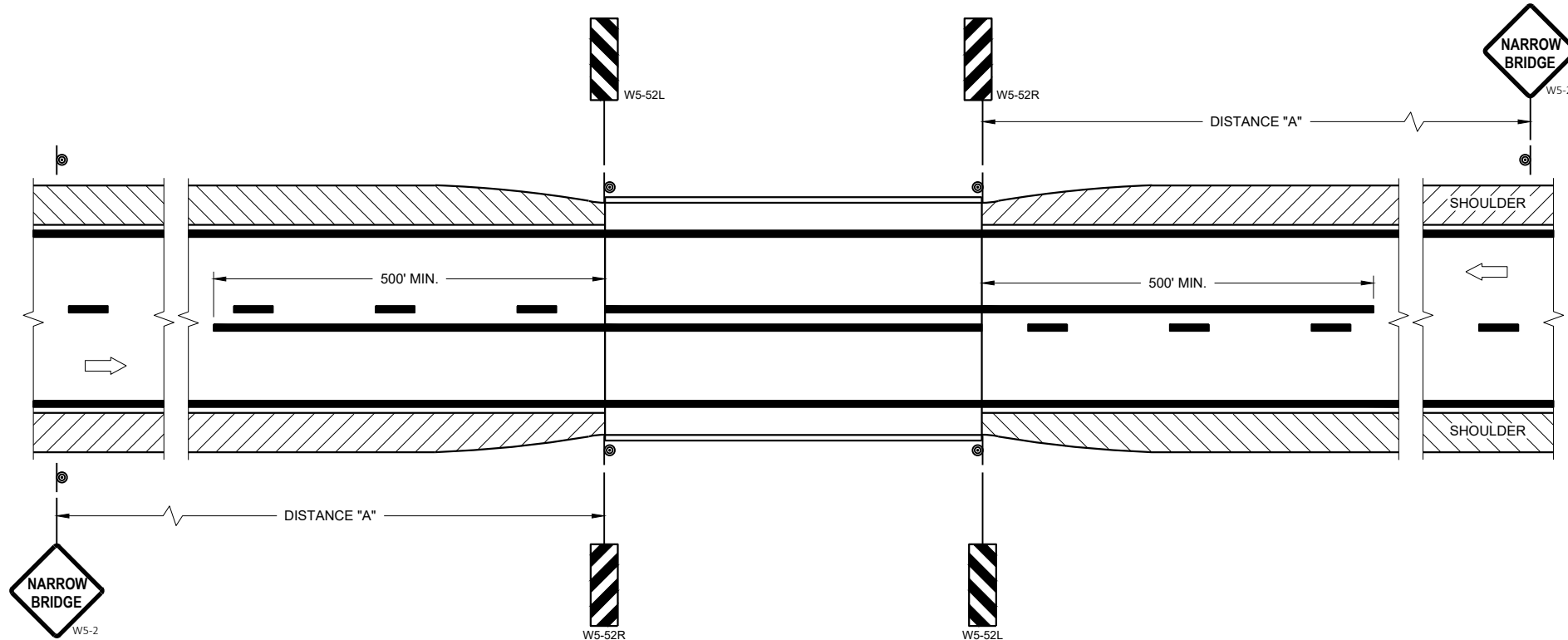
TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

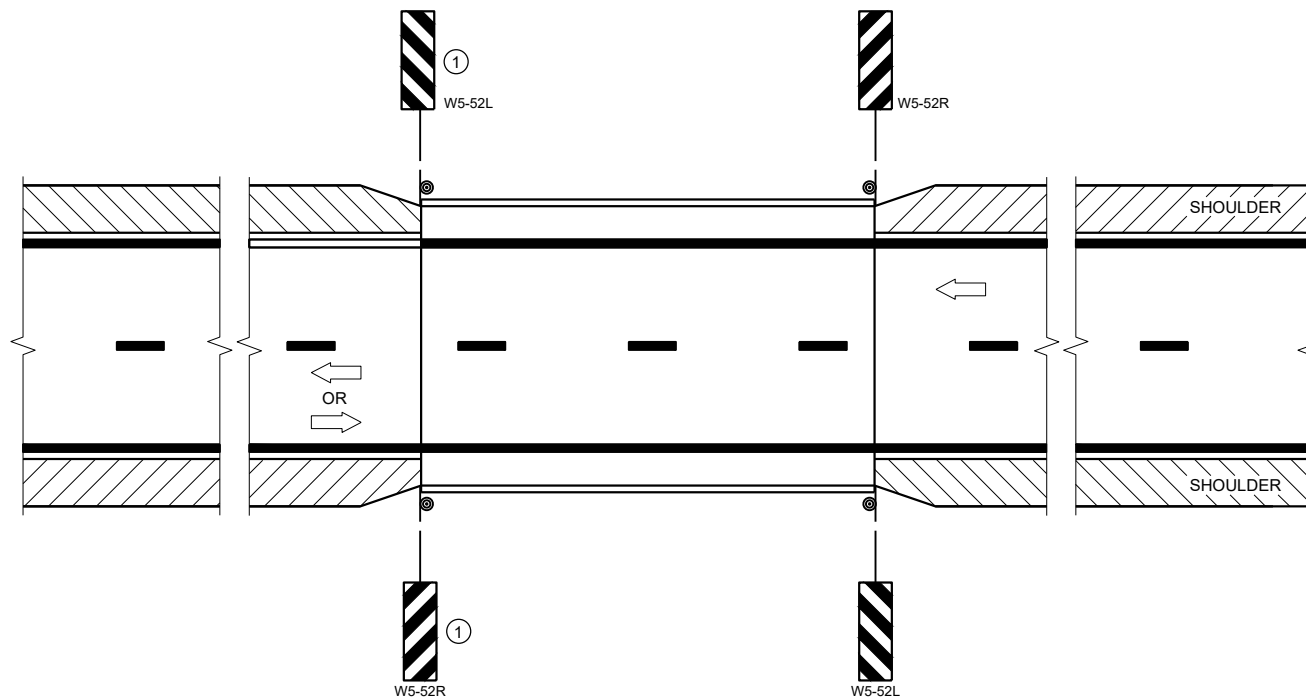
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE July 2018 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



SITUATION 1
 WARRANTING CRITERIA:
 BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

⊙ SIGN ON PERMANENT SUPPORT

➡ DIRECTION OF TRAFFIC

DISTANCE TABLE

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

6

6

SDD 15C06-12

SDD 15C06-12

SIGNING AND MARKING FOR TWO LANE BRIDGES

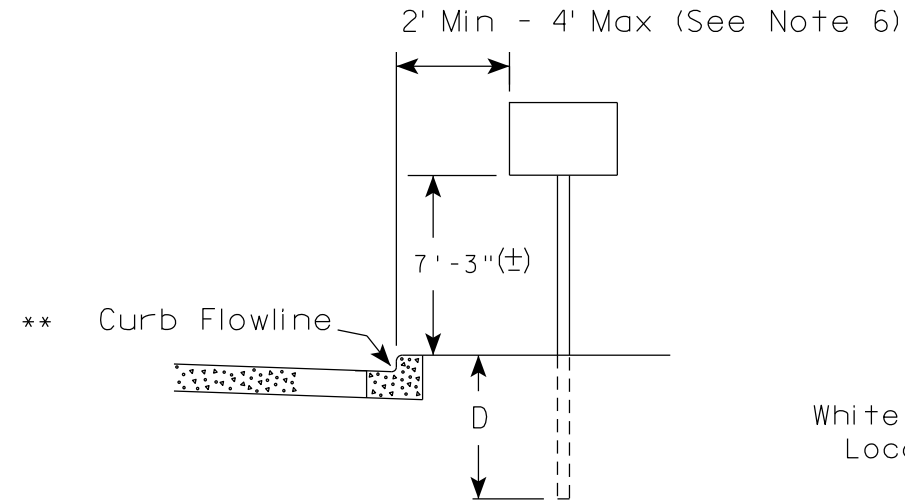
STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2023 /S/ Jeannie Silver
 DATE STATE SIGNING AND MARKING ENGINEER

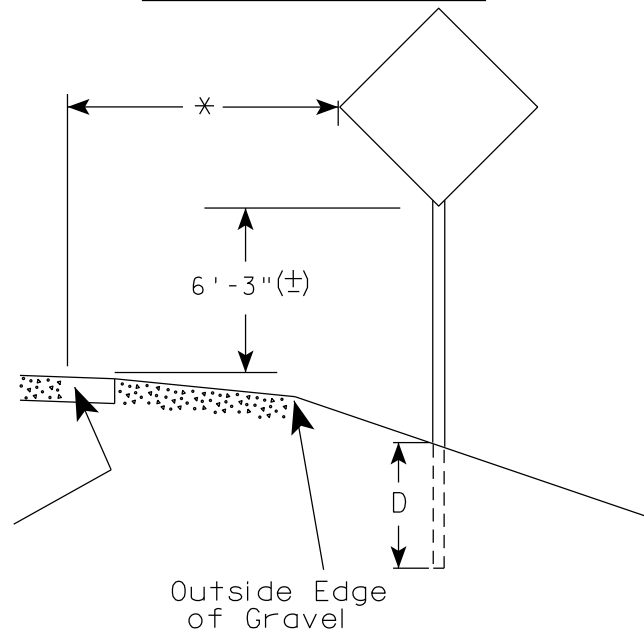
FHWA

URBAN AREA

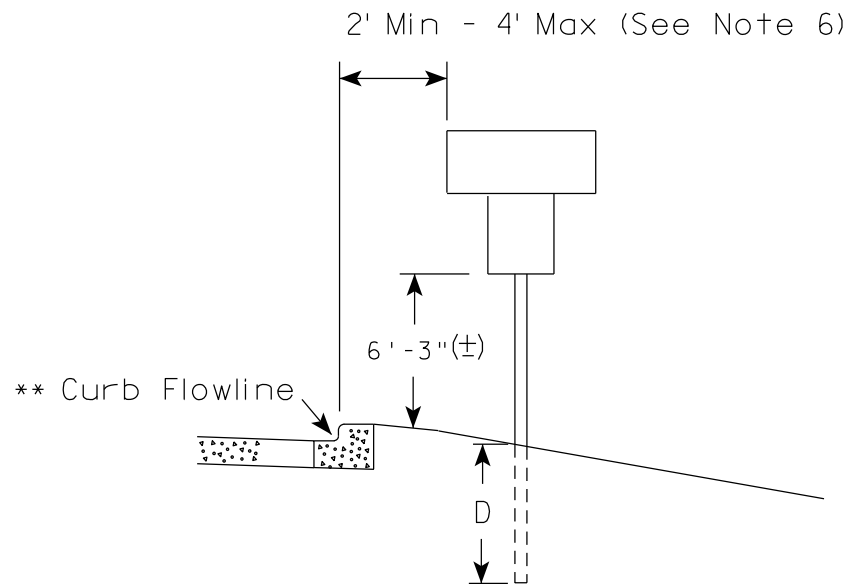
RURAL AREA (See Note 2)



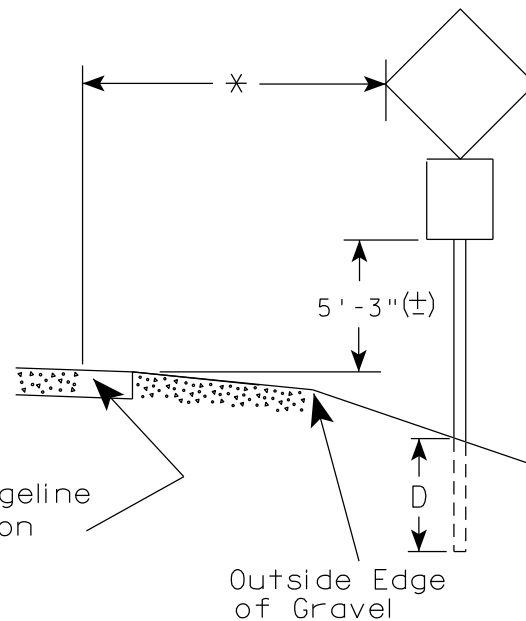
White Edgeline Location



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" (±). 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. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.

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

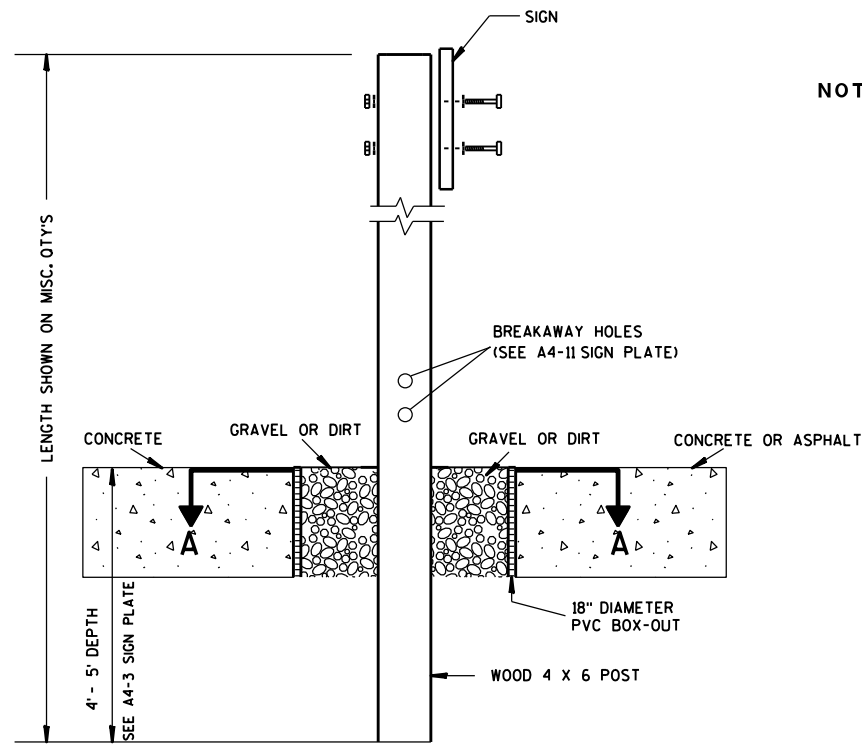
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

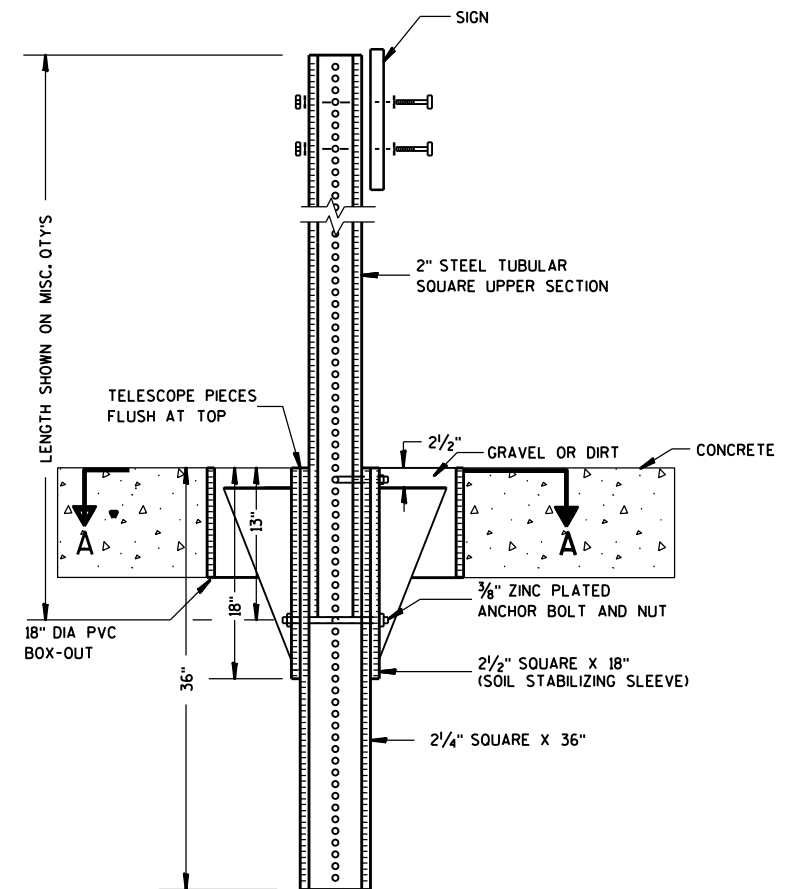
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

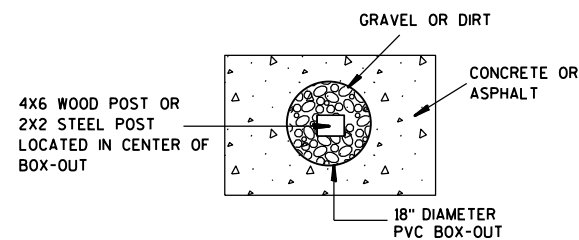
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

**SIGN POST
BOX-OUTS
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

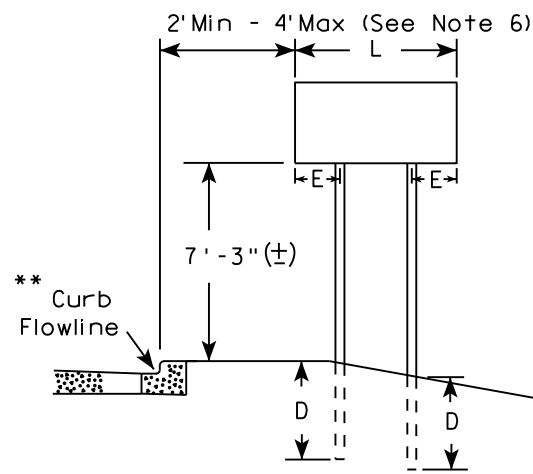
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

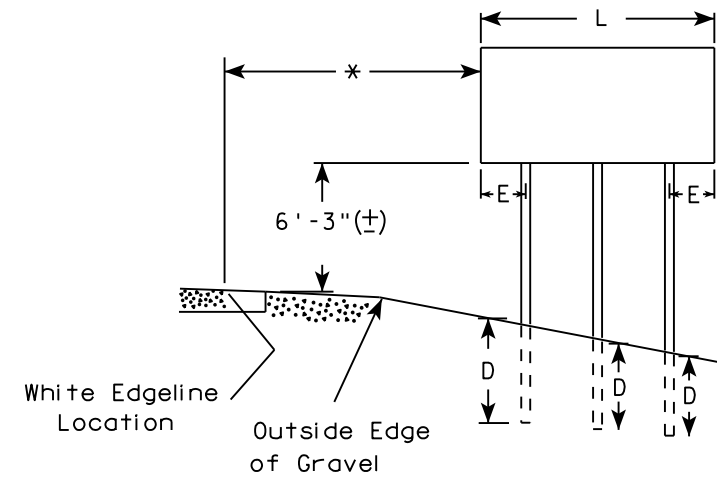
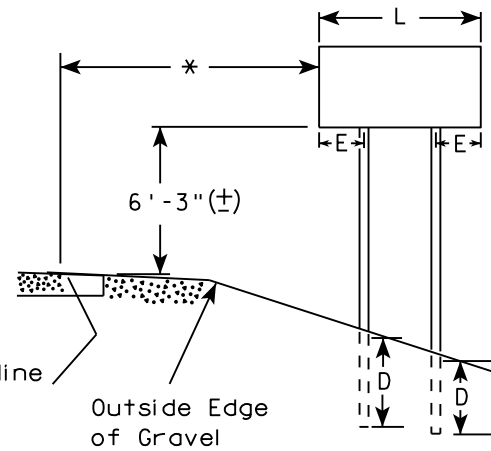
GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-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" (±).

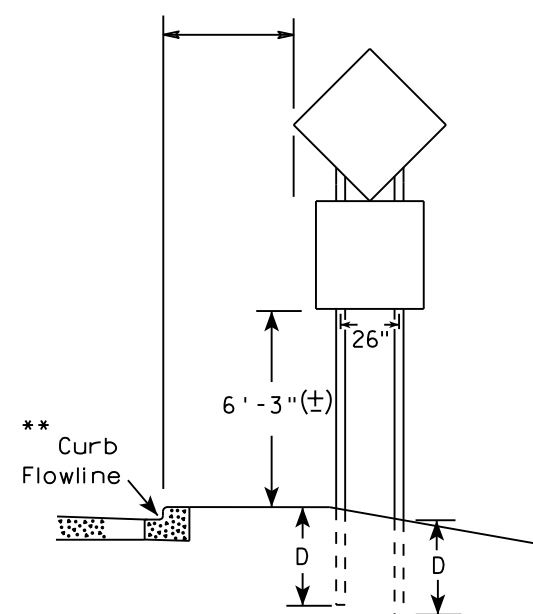
URBAN AREA



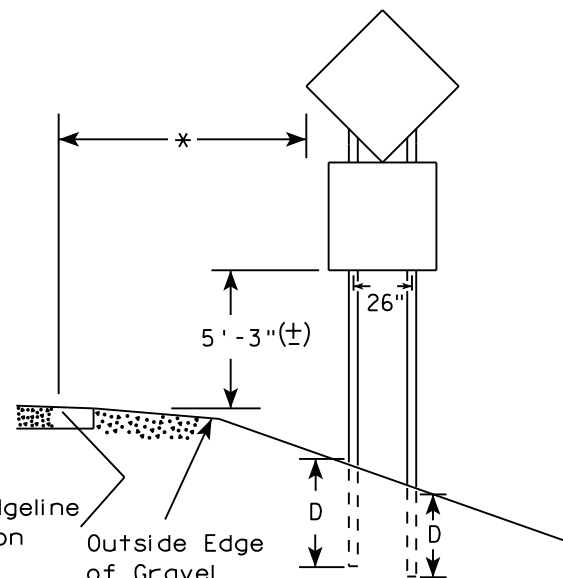
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

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

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

POST EMBEDMENT DEPTH

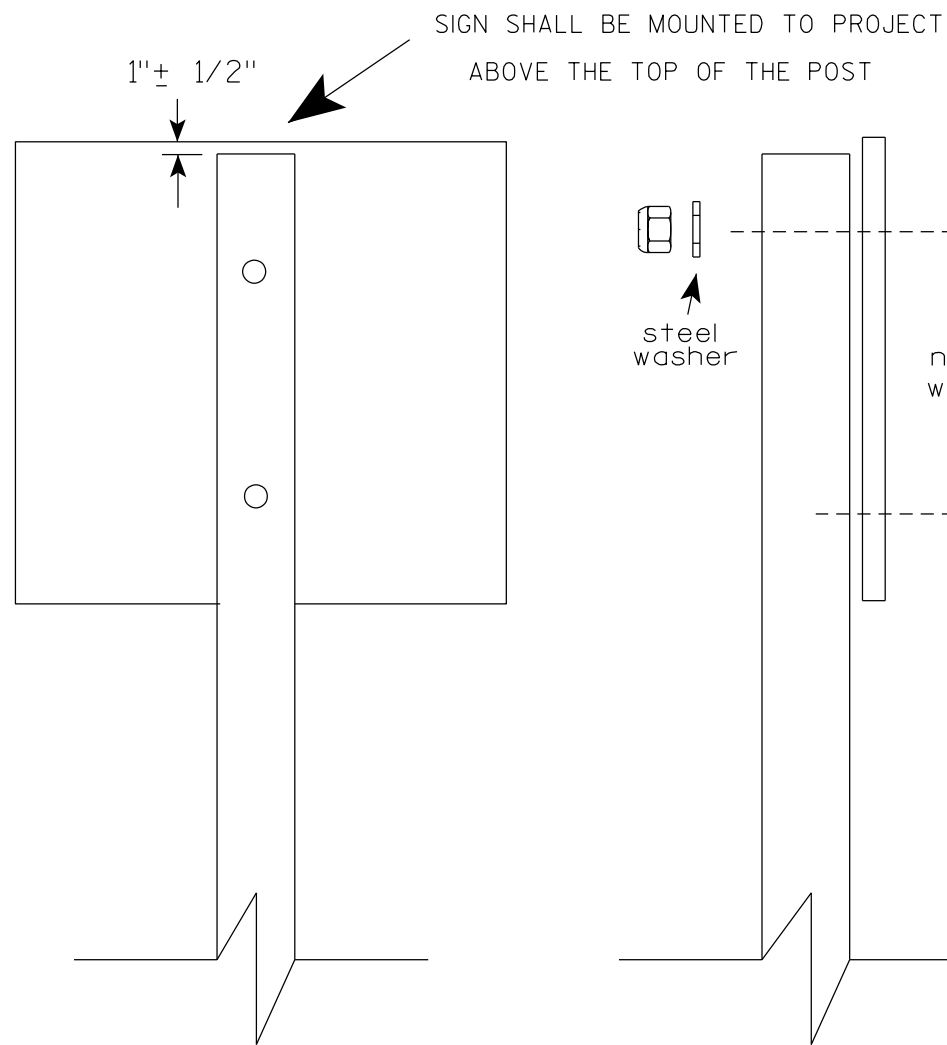
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15



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

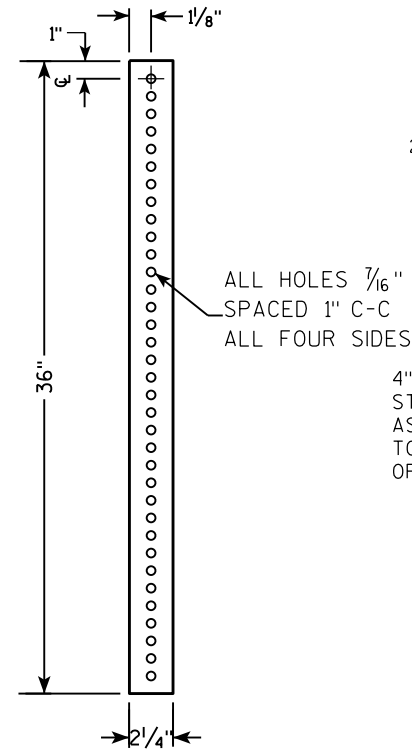
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

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

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

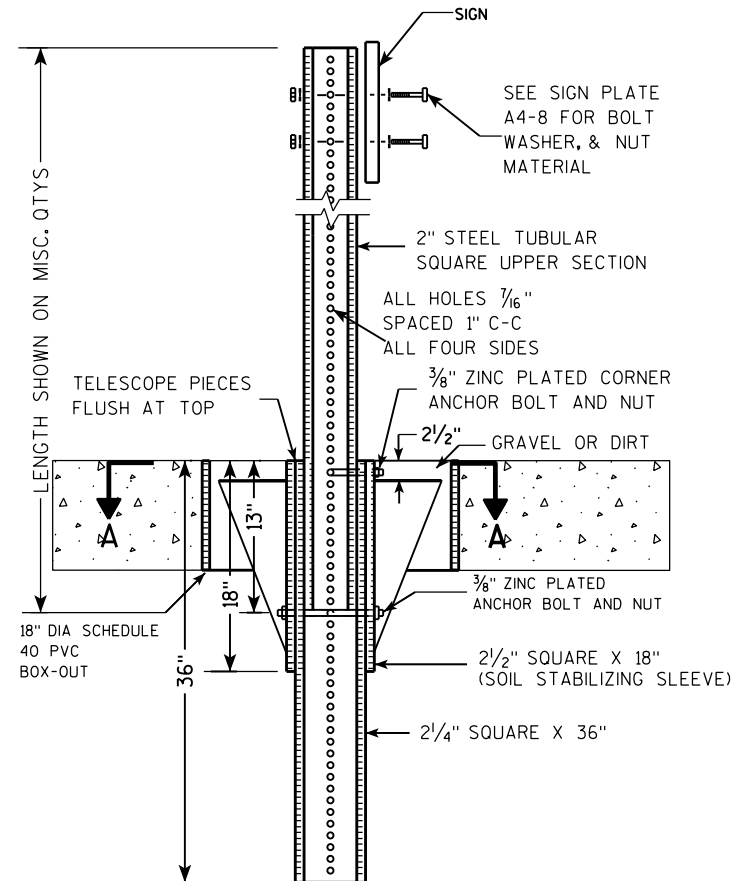
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



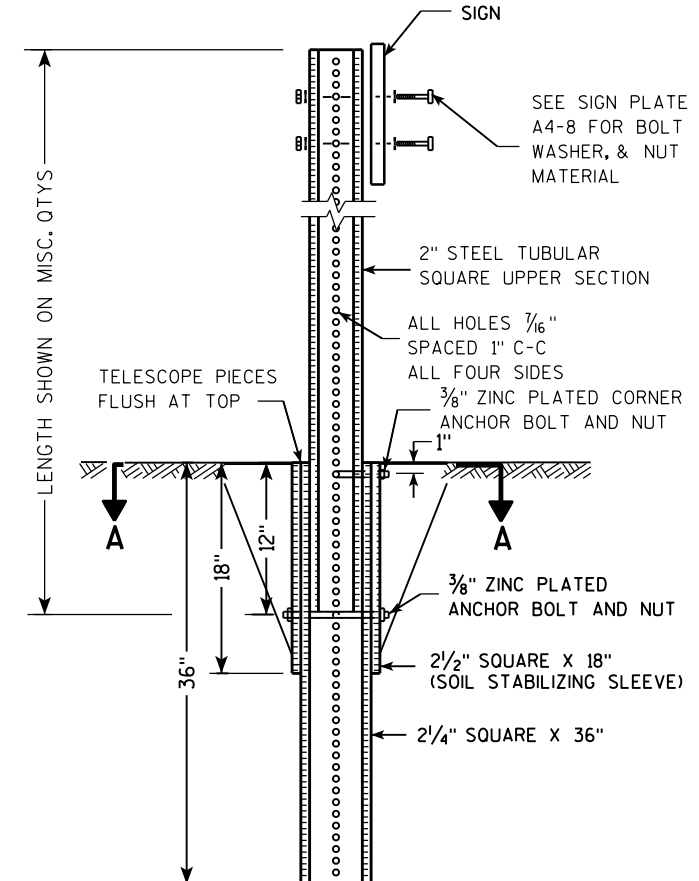
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**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 PLATE NO. A4-9.9

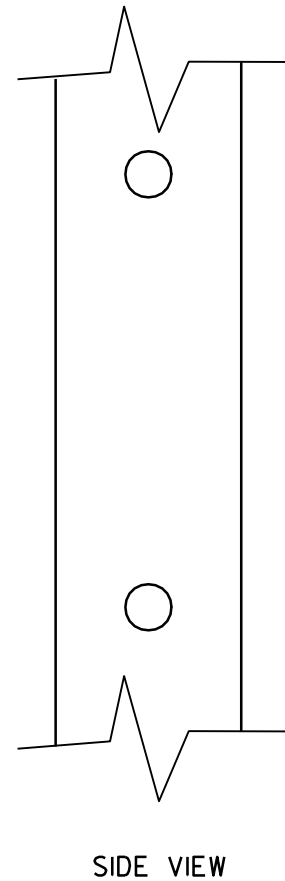
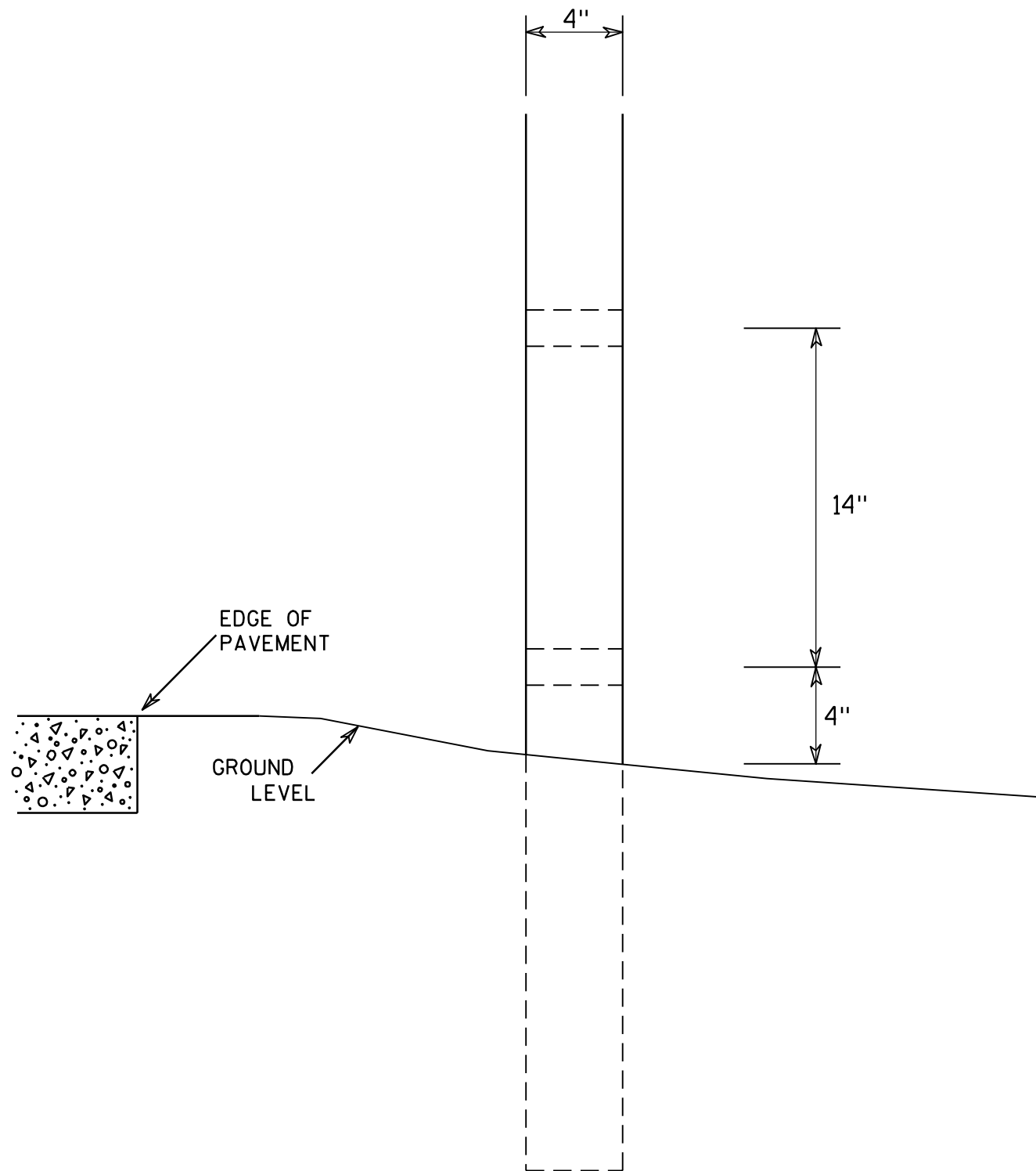
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



GENERAL NOTES

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

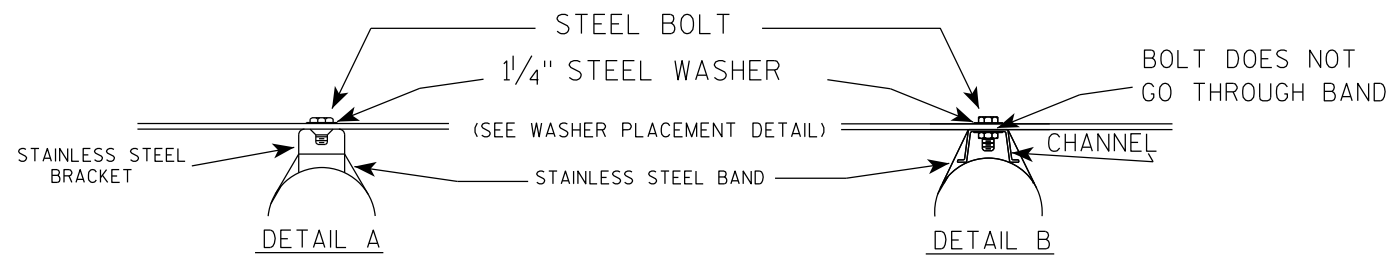
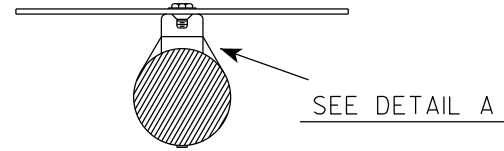
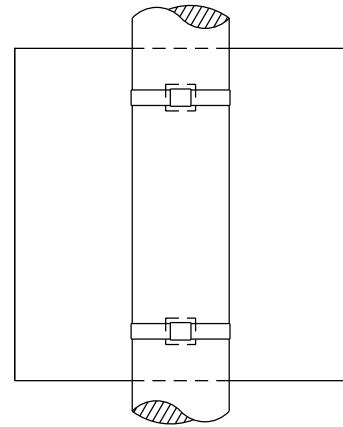
7

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4 X 6 WOOD POST MODIFICATIONS	
<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

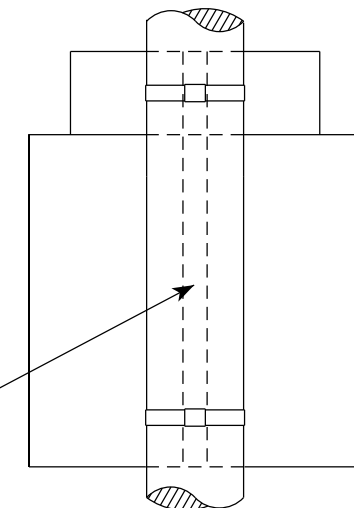
SINGLE SIGN



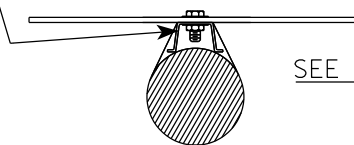
GENERAL NOTES

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

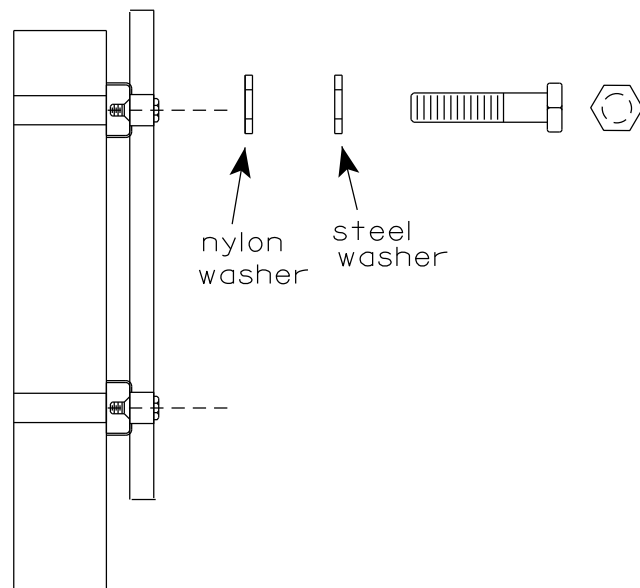
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

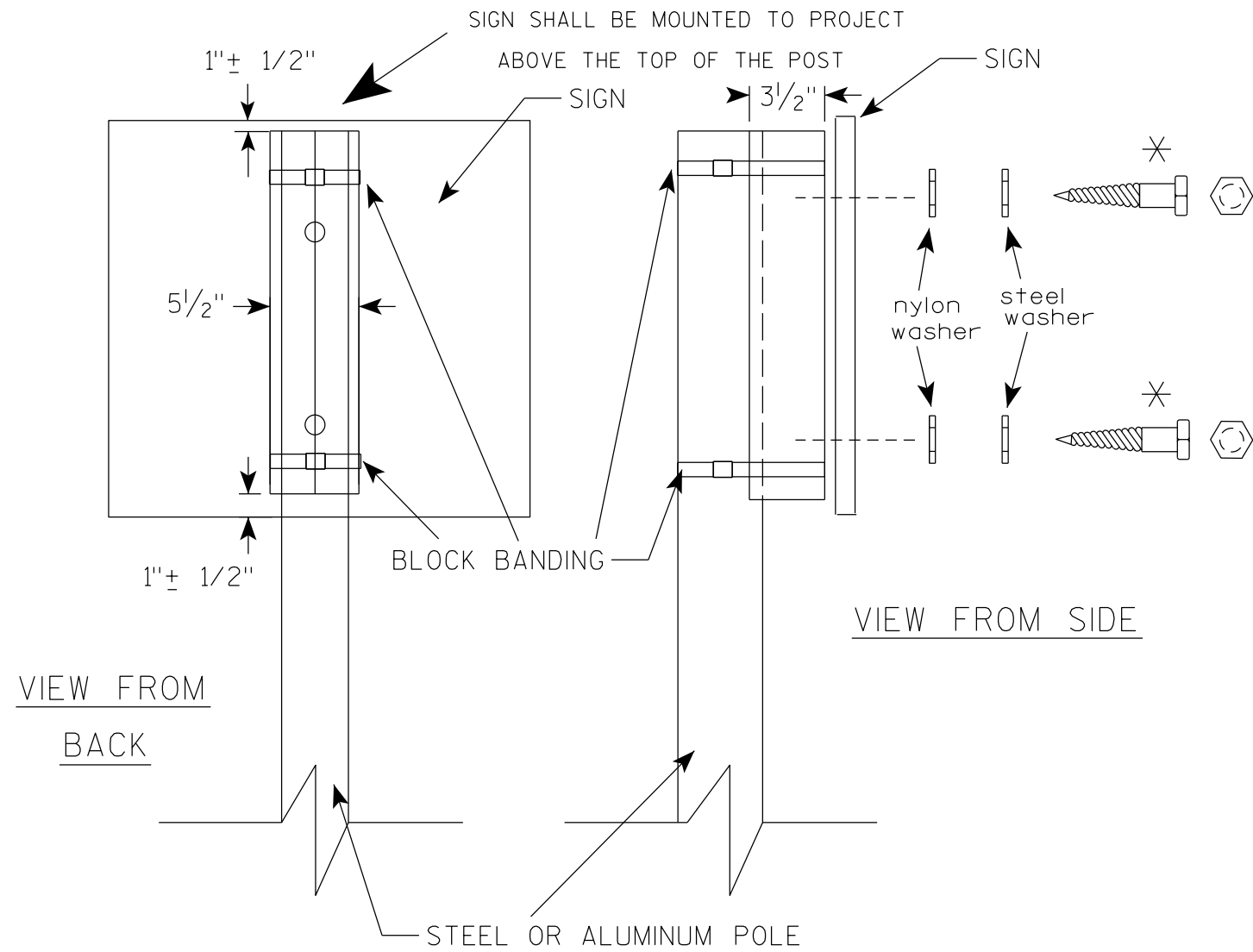


WASHER PLACEMENT



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

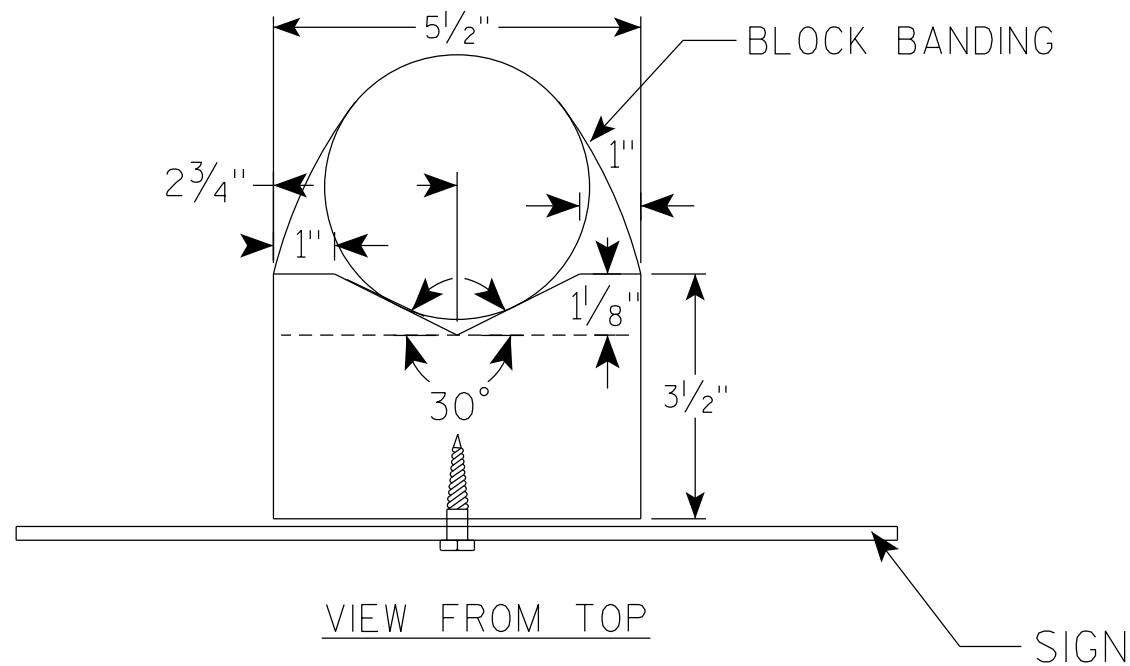
STANDARD SIGN SIGN BANDING DETAILS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-9.4



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

PROJECT NO:

SHEET NO:

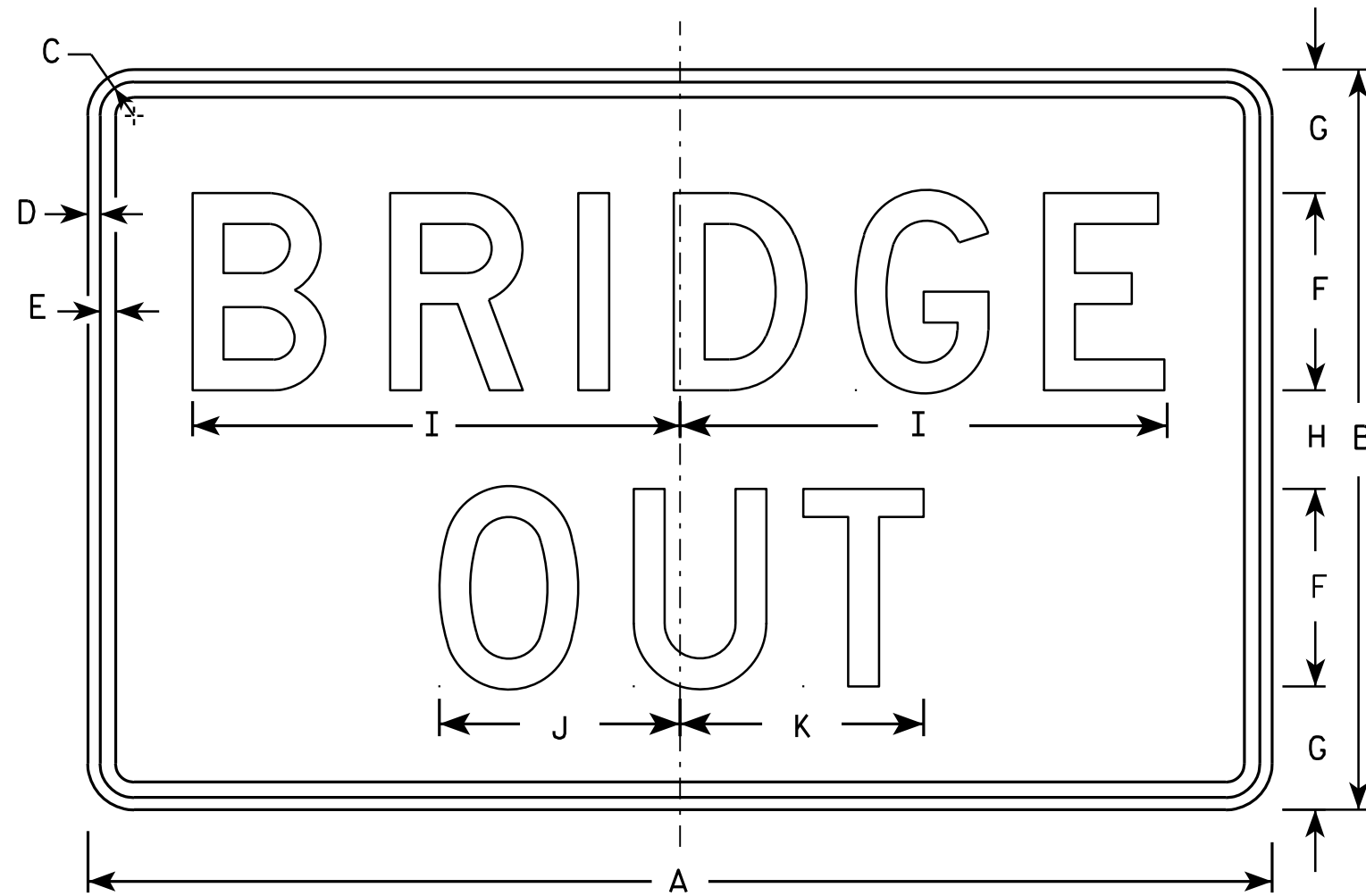
E

7

7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R11-2B

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	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

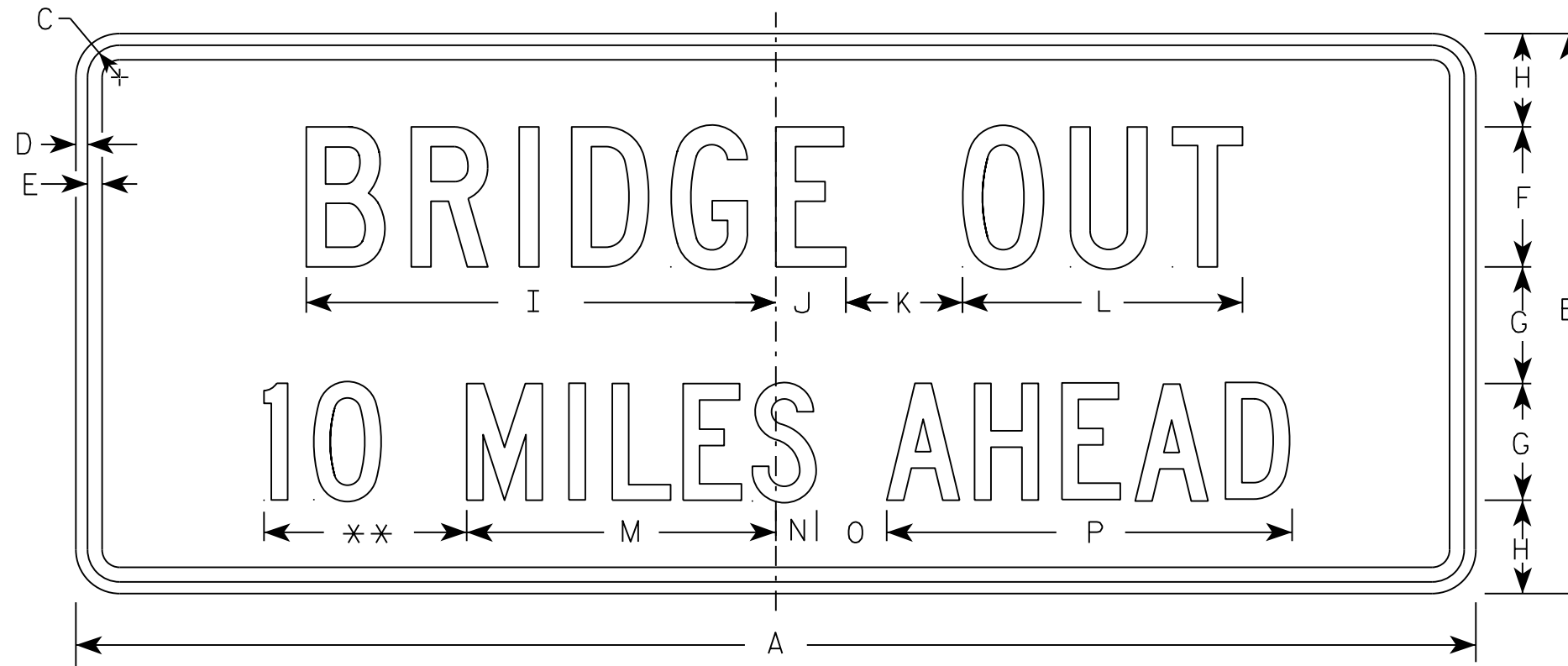
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO: _____ SHEET NO: _____ E

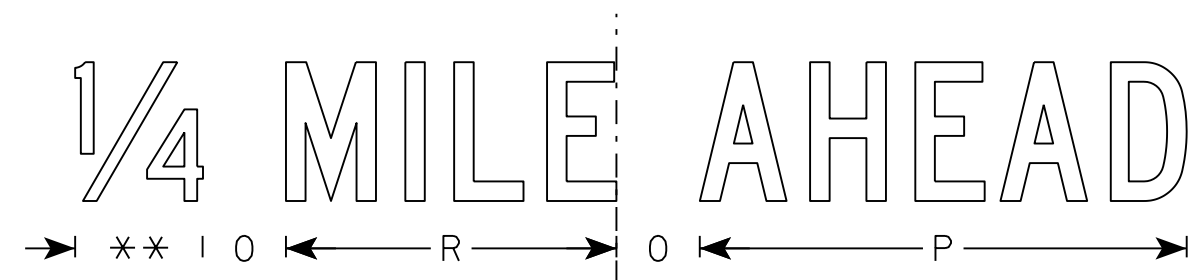
NOTES

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



R11-3C

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	15	1 3/8	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8									3.75
2S	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
2M	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

WISCONSIN DEPT OF TRANSPORTATION

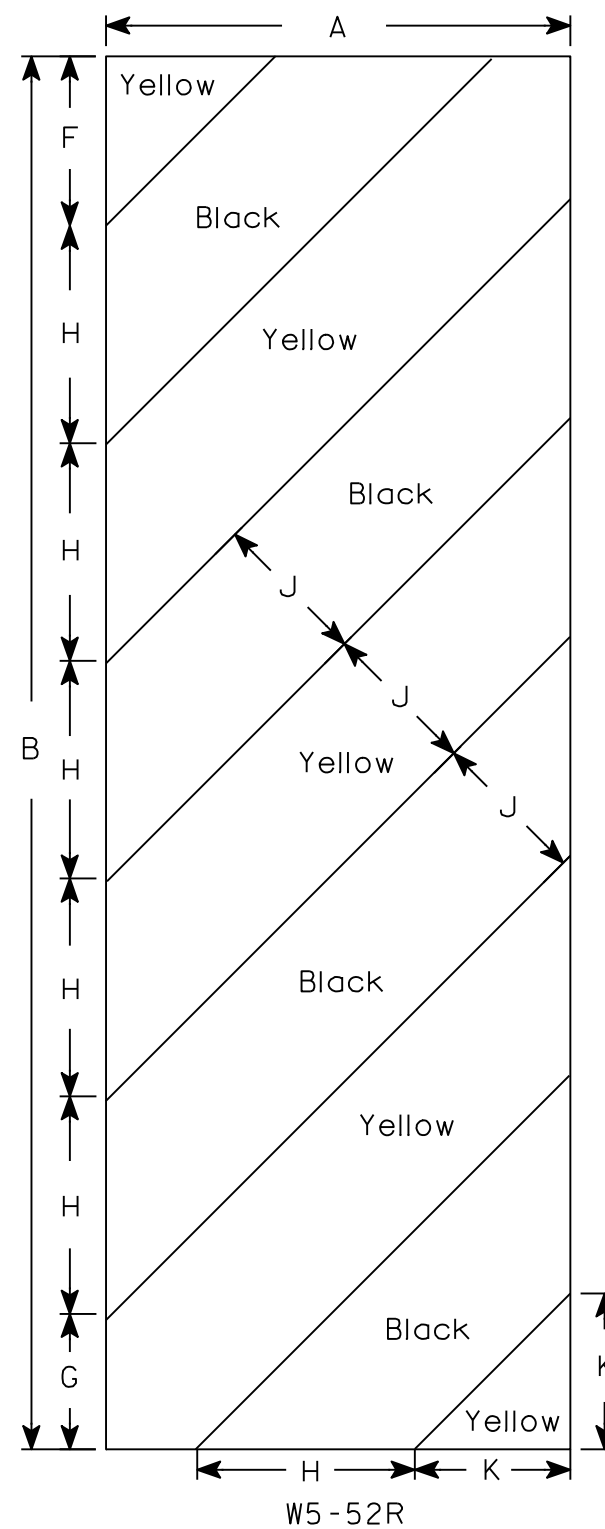
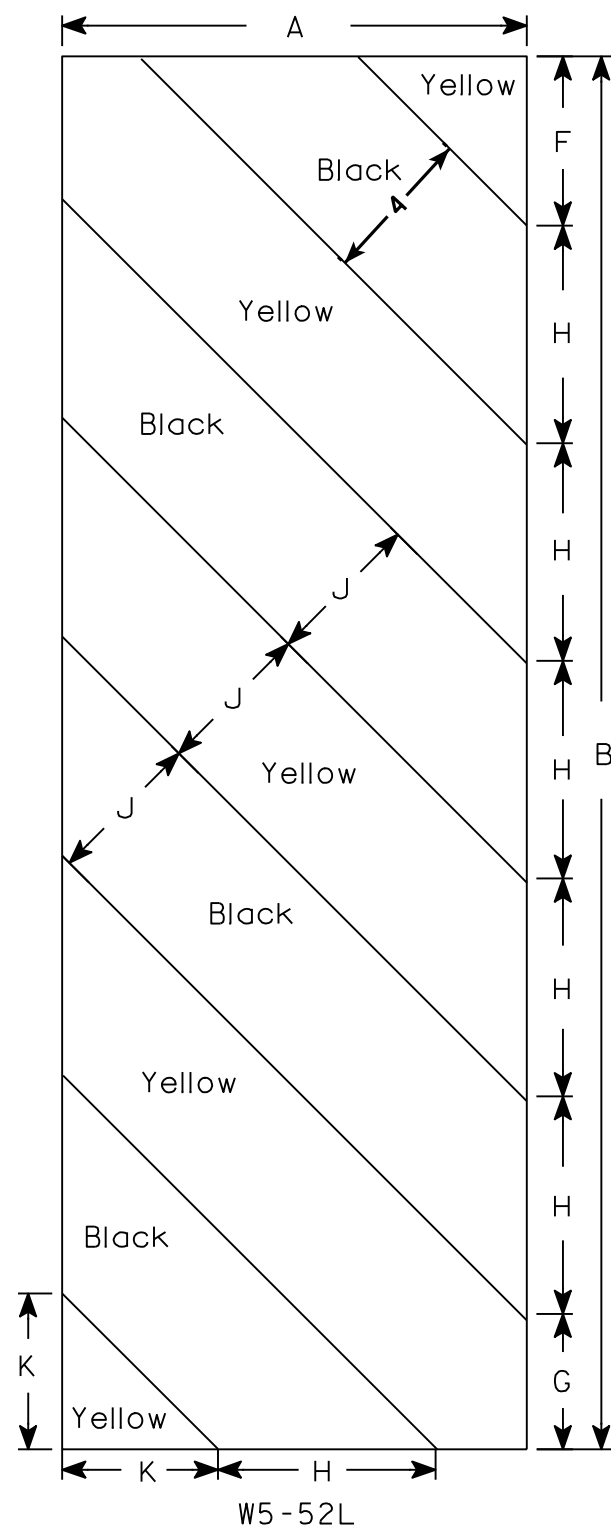
APPROVED
Matthew R. Rauch
For State Traffic Engineer

DATE 7/28/16 PLATE NO. R11-3C.3

PROJECT NO:

SHEET NO:

E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. 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				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

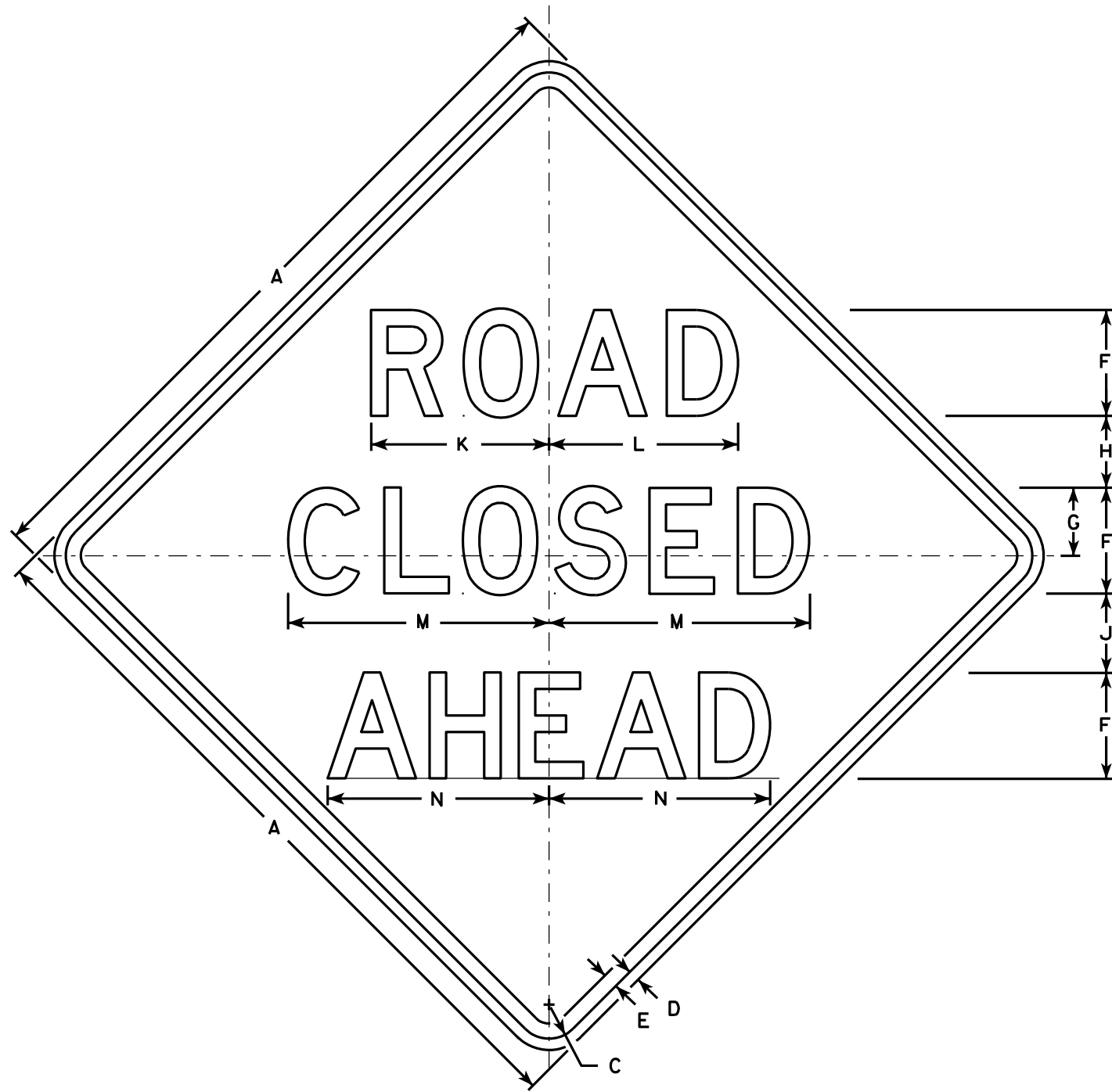
STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

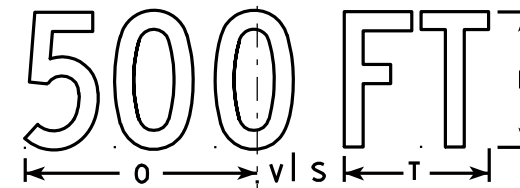
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

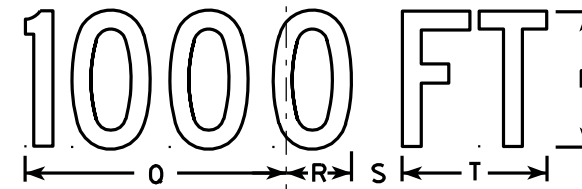
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: _____ E



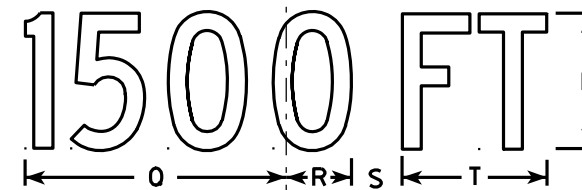
W20-3A



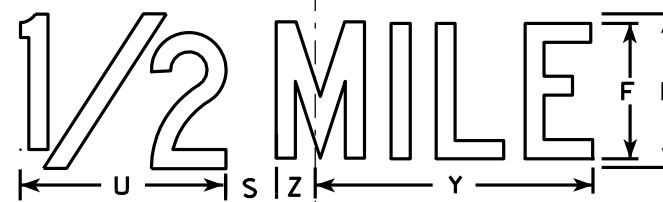
W20-3D



W20-3C



W20-3B



W20-3G



W20-3F

NOTES

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

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	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

DESIGN DATA

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

LIVE LOAD:

DESIGN LOADING	HL - 93
INVENTORY RATING FACTOR	RF = 1.17
OPERATING RATING FACTOR	RF = 1.52
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY	
SLAB	$f_c = 4,000$ PSI
ALL OTHER	$f_c = 3,500$ PSI
BAR STEEL REINFORCEMENT, GRADE 60	$f_y = 60,000$ PSI
(INCLUDES STAINLESS STEEL REINFORCEMENT)	

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100}	1300	C.F.S.
Q_{BRIDGE}	1035.77	C.F.S.
VEL.	4.79	F.P.S.
HW ₁₀₀	EL. 1211.24	
WATERWAY AREA	159.47	SQ. FT.
DRAINAGE AREA	3.19	SQ. MI.
SCOUR CRITICAL CODE	8	

2 YEAR FREQUENCY

Q_2 TOTAL	259	C.F.S.
VEL.	1.72	F.P.S.
HW ₂	EL. 1208.91	

TRAFFIC DATA

AADT (2023)	60
AADT (2043)	63
DESIGN SPEED	55 MPH

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10x42, WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION.

ESTIMATED LENGTH 40'-0" WEST ABUTMENT
ESTIMATED LENGTH 40'-0" 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.

BENCHMARKS			
NO	STA	DESCRIPTION	ELEV
1	9+88±	MAG NAIL IN NW WING WALL, 11.4' LT. OF C/L	1211.08'
2	11+77±	COTTON SPINDLE IN WOOD POST, 30.1' LT. OF C/L	1210.84'
3	3+48±	COTTON SPINDLE IN WOOD POST, 35.4' LT. OF C/L	1213.71'

BRIDGE OFFICE CONTACT

AARON M. BONK
(608) 261-0261

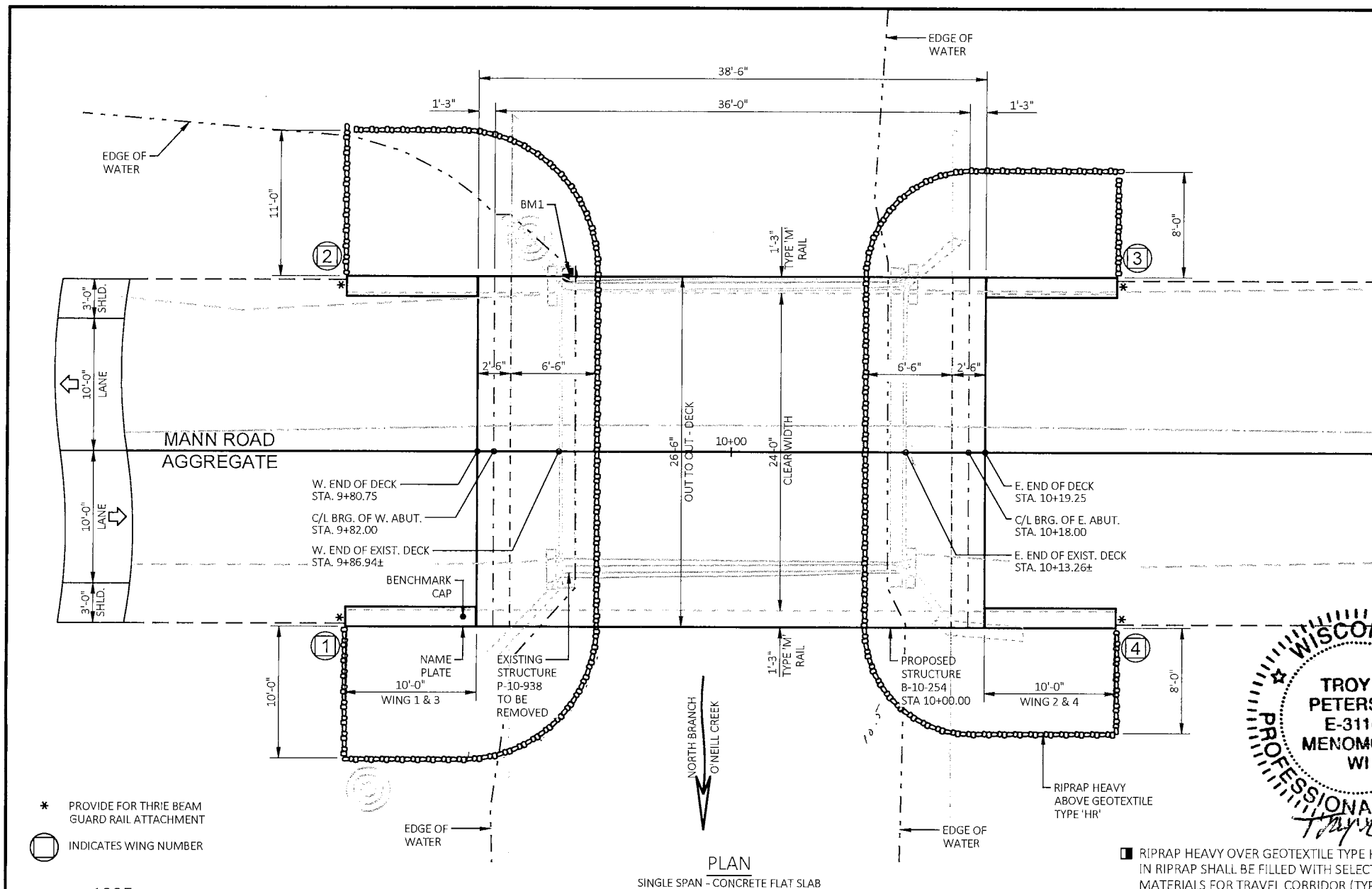
CONSULTANT CONTACT

TROY L. PETERSON
(715) 235-9081

LIST OF DRAWINGS

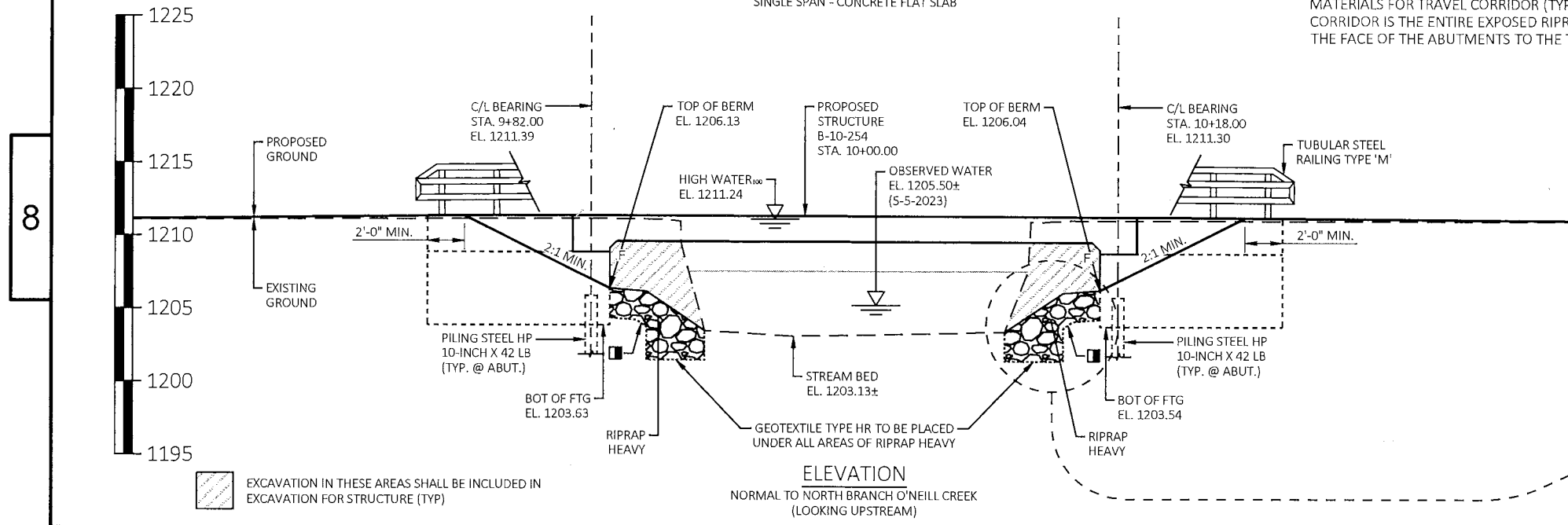
- GENERAL PLAN
- CROSS SECTION, QUANTITIES, & NOTES
- SUBSURFACE EXPLORATION
- WEST ABUTMENT
- EAST ABUTMENT
- ABUTMENT DETAILS
- SUPERSTRUCTURE
- SUPERSTRUCTURE DETAILS
- RAILING TUBULAR TYPE M

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
Cedar CORPORATION			
www.cedarcorp.com 800-472-7372			
ACCEPTED	SDR 11/15/23		DATE
CHIEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-10-254			
MANN ROAD BRIDGE OVER NORTH BRANCH O'NEILL CREEK			
COUNTY	CLARK	TOWN/CITY/VILLAGE	LOYAL
DESIGN SPEC. ASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	TLP	DESIGN CK'D.	CCW
DRAWN BY	NIT	PLANS CK'D.	TLP
GENERAL PLAN			SHEET 1 OF 9

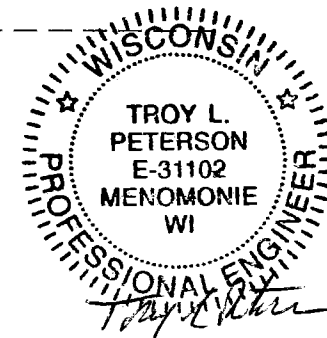


PLAN
SINGLE SPAN - CONCRETE FLAT SLAB

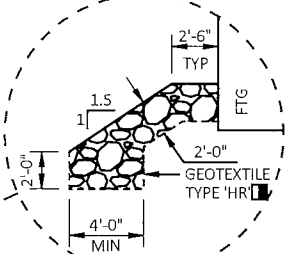
- * PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT
- INDICATES WING NUMBER



ELEVATION
NORMAL TO NORTH BRANCH O'NEILL CREEK (LOOKING UPSTREAM)



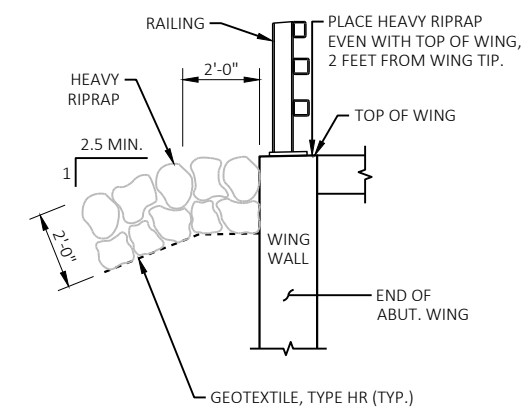
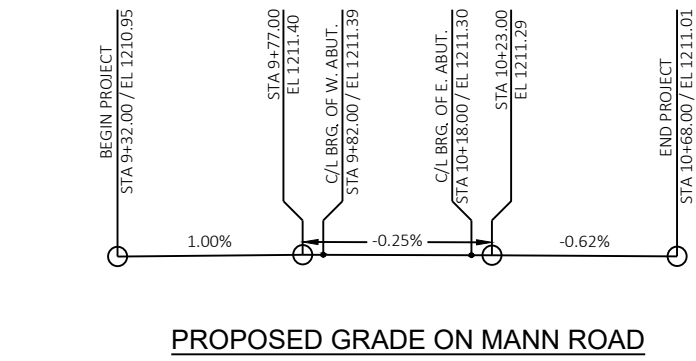
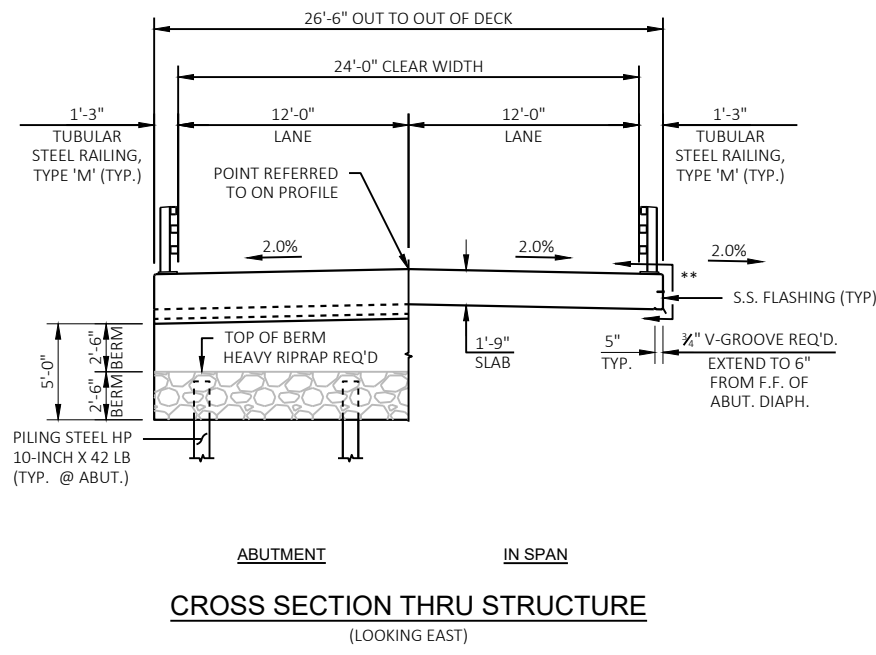
■ RIPRAP HEAVY OVER GEOTEXTILE TYPE HR. ALL VOIDS IN RIPRAP SHALL BE FILLED WITH SELECT CRUSHED MATERIALS FOR TRAVEL CORRIDOR (TYP). TRAVEL CORRIDOR IS THE ENTIRE EXPOSED RIPRAP AREA FROM THE FACE OF THE ABUTMENTS TO THE TOE OF RIPRAP.



GENERAL NOTES

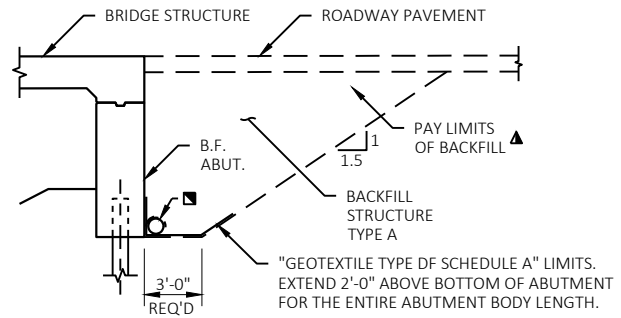
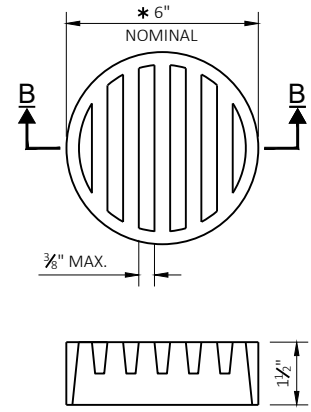
- DRAWINGS SHALL NOT BE SCALED.
- ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
- ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.
- JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE 'HR' TO THE EXTENT SHOWN ON SHEETS 1 AND 2 AND IN THE ABUTMENT DETAILS.
- THE EXISTING STRUCTURE (P-10-938) IS A 24.8' LONG BY 21.8' WIDE SINGLE SPAN TIMBER FLAT SLAB BRIDGE.
- ** PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND EDGES OF THE SLAB AND TO THE OUTSIDE 1'-0" OF THE UNDERSIDE OF THE SLAB.

- THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-10-254" SHALL BE THE EXISTING GRADE LINE.
- AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE IN PLACE BEFORE ABUTMENT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.
- AT ABUTMENTS, CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.
- SLAB FALSE WORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.
- ▲ BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

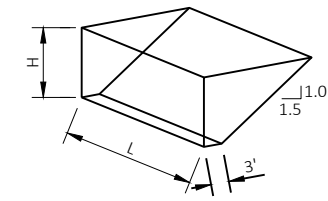


RODENT SHIELD DETAIL

- * DIMENSION IS APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.
- THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".
- THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

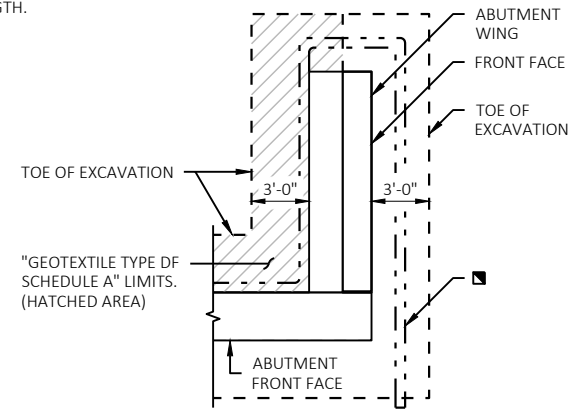


STRUCTURE BACKFILL & LIMITS

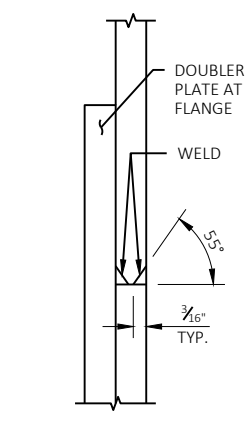


ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

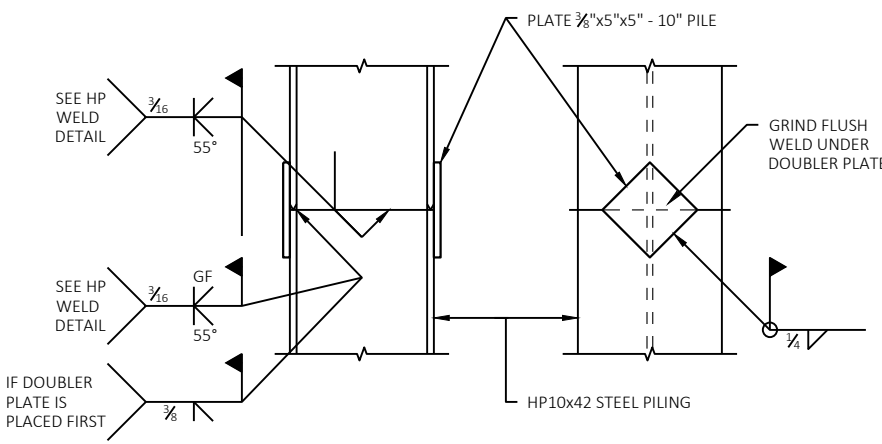
- L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
- H = AVERAGE ABUTMENT FILL HEIGHT (FT)
- EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS & 1.00 FOR TON BID ITEMS)
- $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)$
- $V_{CY} = V_{CF} / 27$
- $V_{TON} = V_{CY} (2.0)$



ABUTMENT PLAN WITH WING



HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR



PILE SPLICE DETAILS

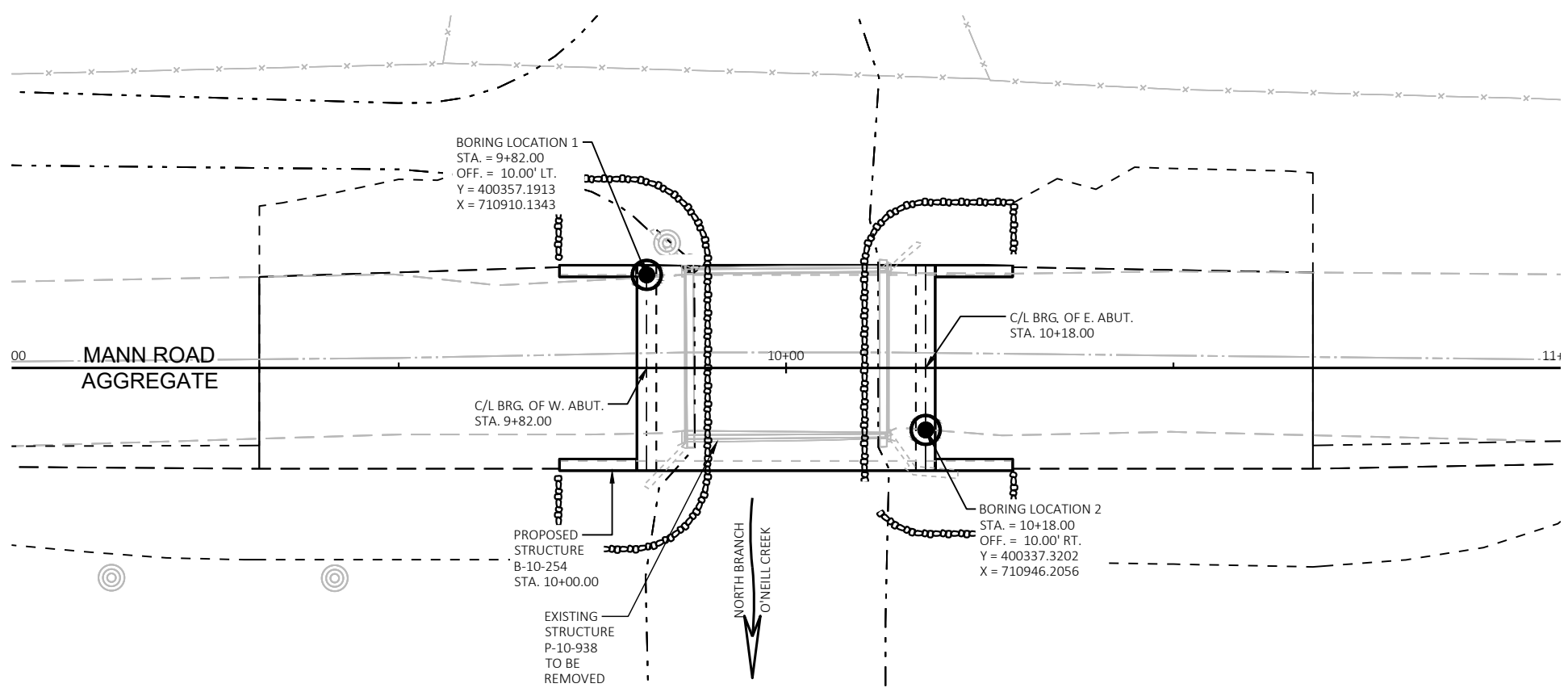
TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	WEST ABUT.	EAST ABUT.	SUPER.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-10-938	EACH	-	-	-	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-10-254	EACH	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	115	115	-	230
502.0100	CONCRETE MASONRY BRIDGES	CY	27.3	27.4	70.3	125
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	137	137
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1480	1480	-	2960
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1360	1360	12560	15280
506.0105	STRUCTURAL STEEL CARBON	LB	-	-	480	480
513.4061	RAILING TUBULAR TYPE M	LF	-	-	122	122
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8	8	-	16
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	160	160	-	320
606.0300	RIPRAP HEAVY	CY	50	40	-	90
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80	80	-	160
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	19	19	-	38
645.0120	GEOTEXTILE TYPE HR	SY	90	80	-	170
SPV.0090.01	FLASHING STAINLESS STEEL	LF	-	-	77	77
SPV.0195.01	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	35	30	-	65
	NON-BID ITEMS					
	FILLER	SIZE	-	-	-	1/2" X 3/4"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-254			
DRAWN BY NJT		PLANS CK'D. TLP	
CROSS SECTION, QUANTITIES, & NOTES			SHEET 2 OF 9

8

8



SUBSURFACE NOTES

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

BORINGS & REPORT COMPLETED BY:

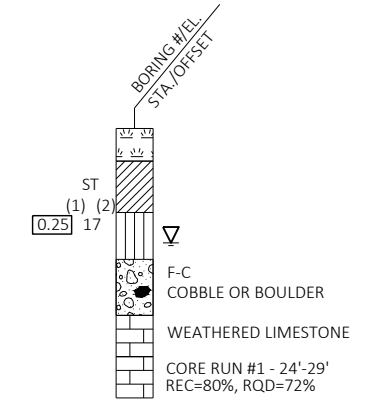
CHOSEN VALLEY TESTING, INC.
1019 SECOND AVENUE SW
ONALASKA, WI 54650
(608) 782-5505

BORINGS PERFORMED ON:
4/12/2023 - B1
4/12/2023 - B2

MATERIAL SYMBOLS

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

LEGEND OF BORING



- (1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
- (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

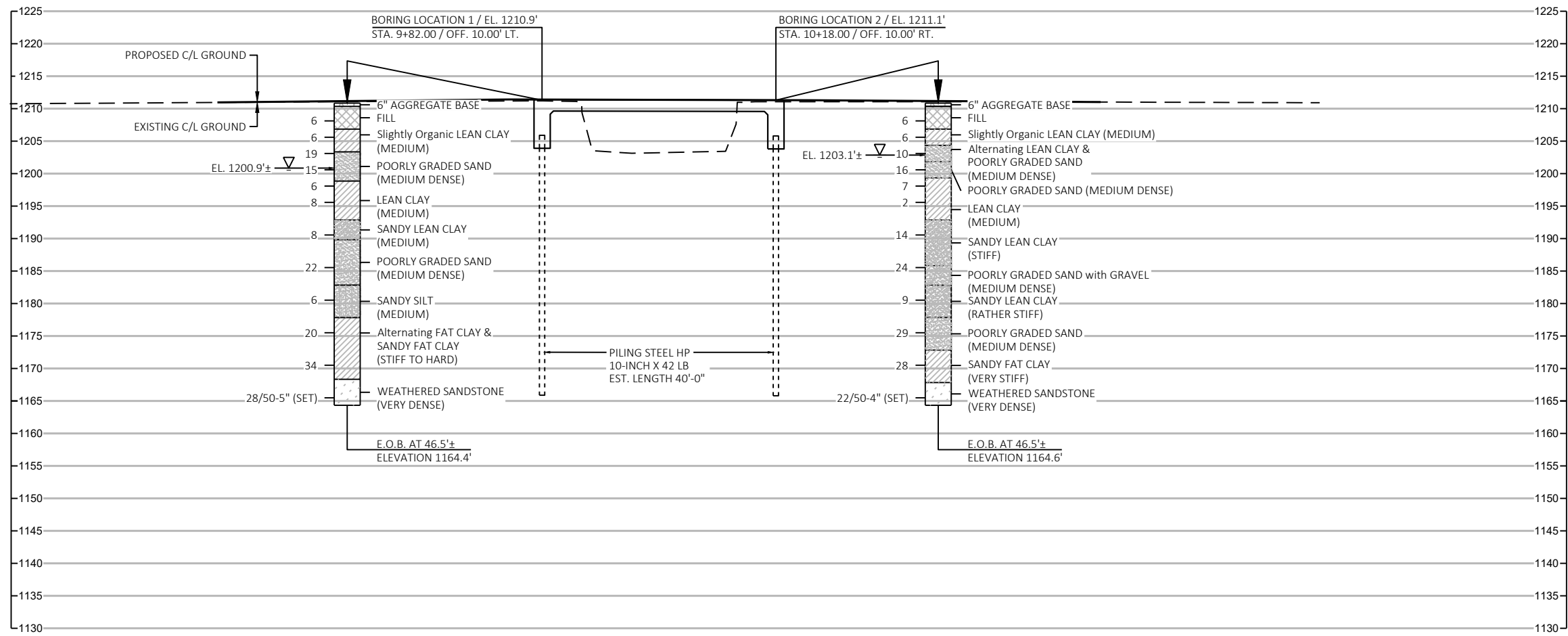
- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▼ AFTER DRILLING

ABBREVIATIONS

F-Fine M-Medium C-Coarse st-shelby tube

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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



ELEVATION

8

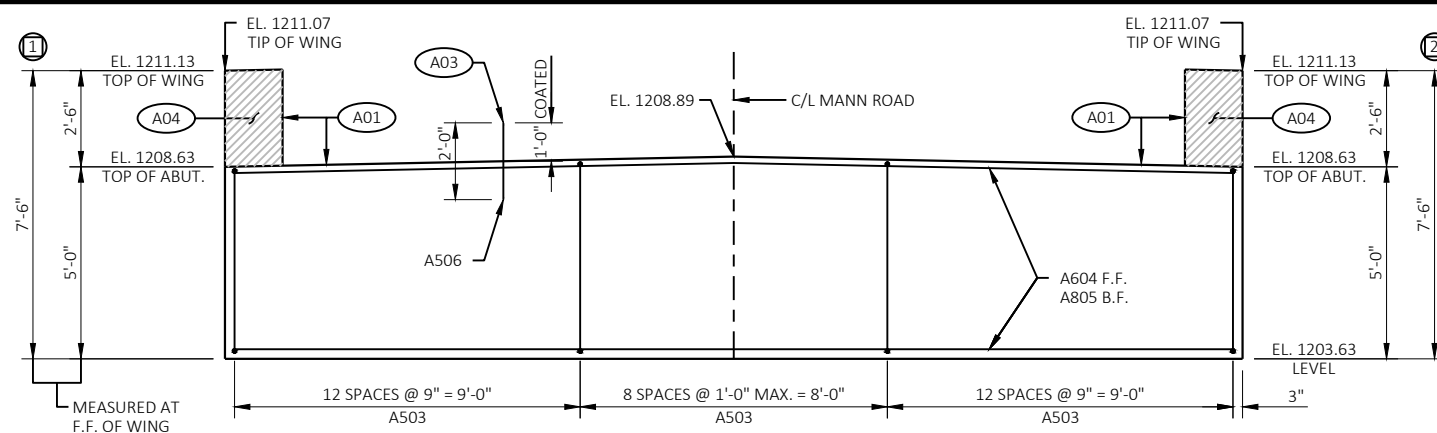
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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-254			
DRAWN BY NJT		PLANS CK'D. TLP	
SUBSURFACE EXPLORATION		SHEET 3 OF 9	

BILL OF BARS

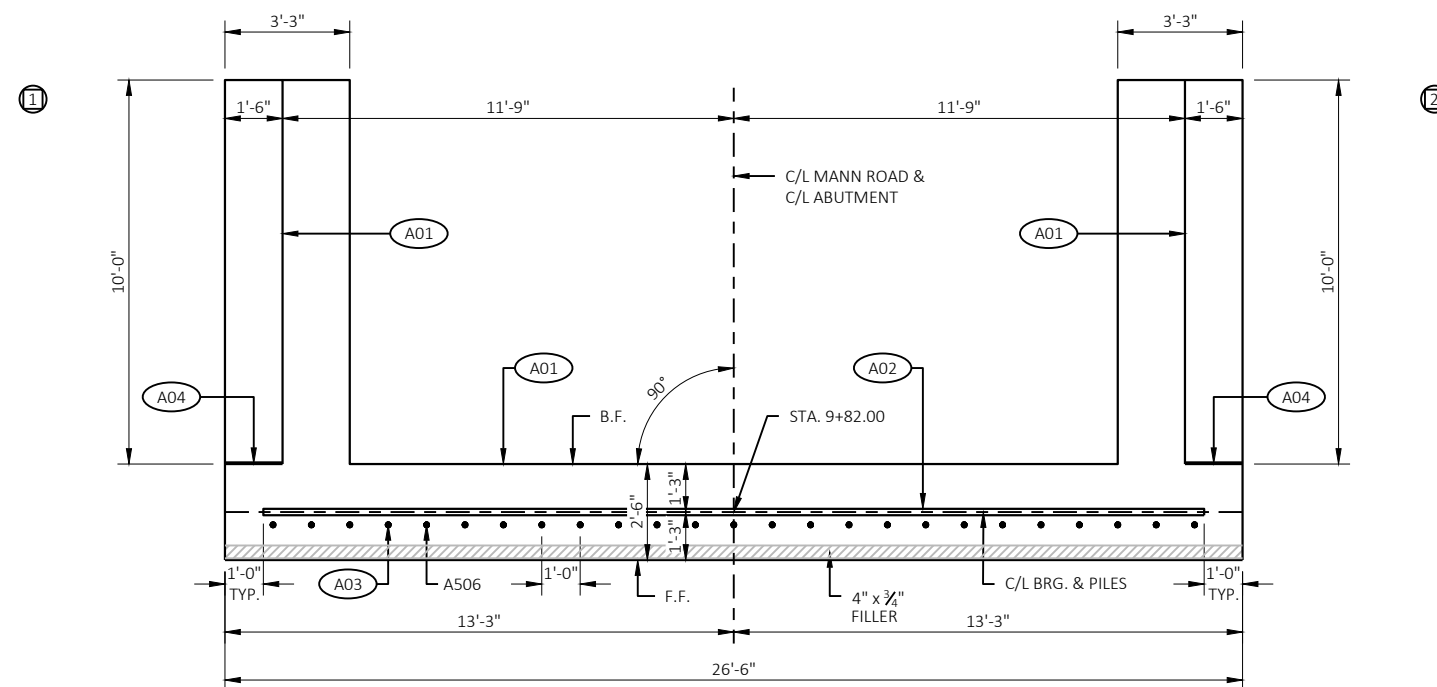
BAR MARK	COMT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
A401		4	28'-0"	X		BODY - ONE PER PILE
A402		8	2'-3"			BODY - TWO PER PILE
A503		33	13'-10"	X		BODY - STIRRUPS
A604		11	26'-0"			BODY - HORIZ.
A805		7	26'-0"			BODY - HORIZ. B.F.
A506	X	25	2'-0"			BODY - VERT. DOWELS
A607	X	4	9'-7"			WING 1 & 2 - HORIZ. TOP
A408	X	10	9'-7"			WING 1 & 2 - HORIZ.
A609	X	28	9'-6"	X		WING 1 & 2 - VERT. TOP
A510	X	22	15'-7"	X		WING 1 & 2 - VERT. BASE
A511	X	12	11'-7"			WING 1 & 2 BASE HORIZ. F.F.
A612	X	12	11'-11"			WING 1 & 2 BASE HORIZ. B.F.
A613	X	4	11'-11"			WING 1 & 2 BASE HORIZ. TOP

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

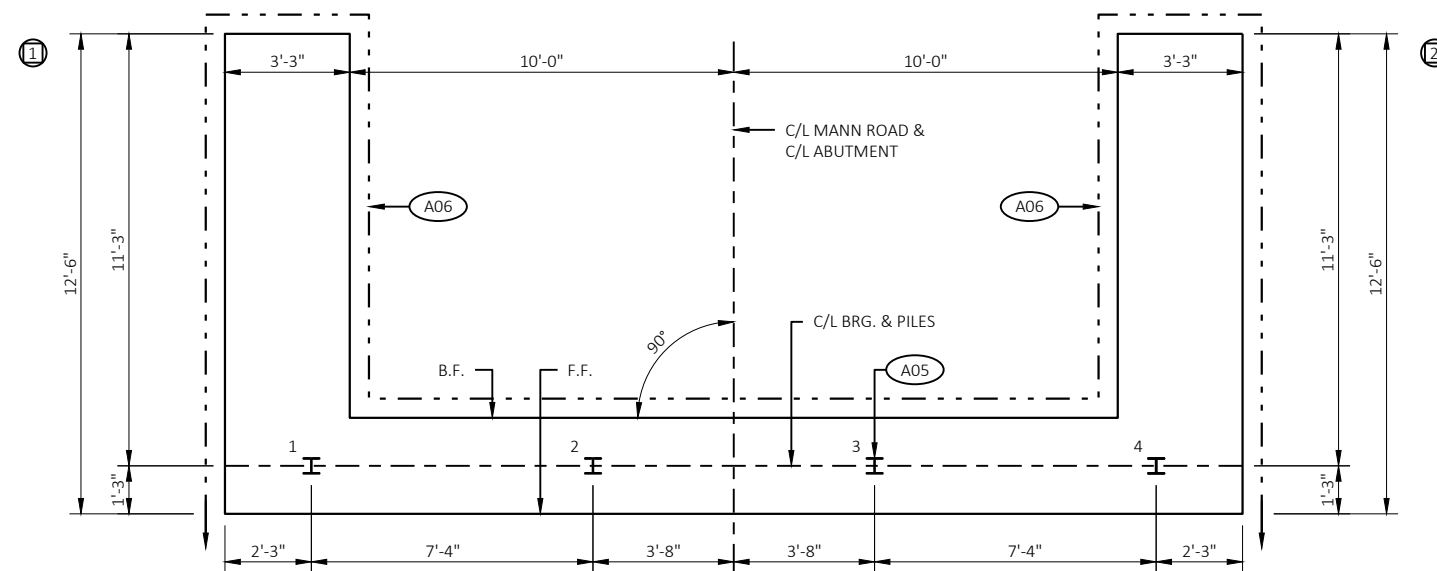


ELEVATION
(LOOKING WEST)

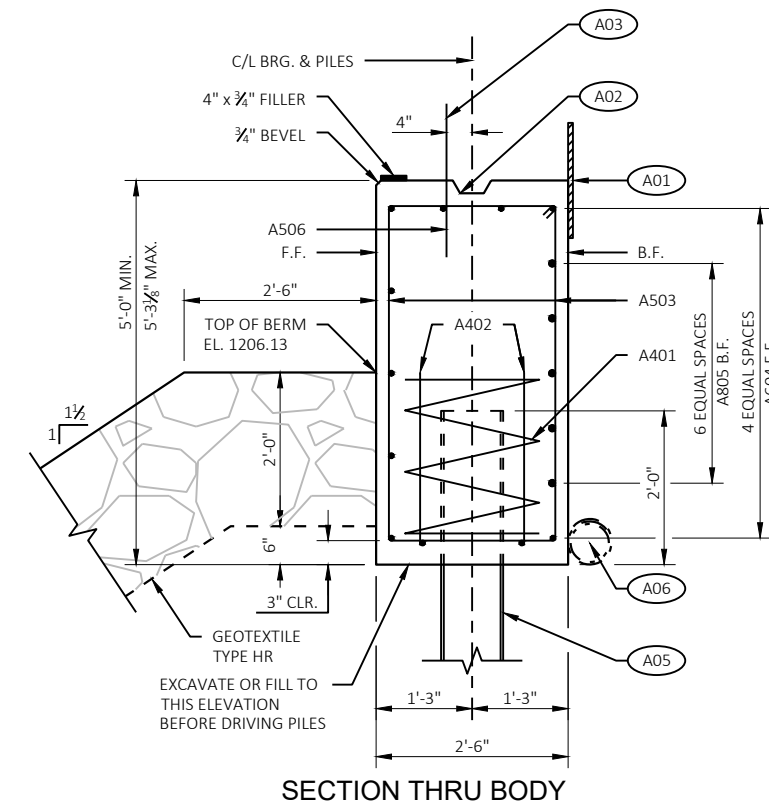
NOTE: DISPLACE A503 BARS INTERFERING WITH PILING



PLAN



PILE PLAN



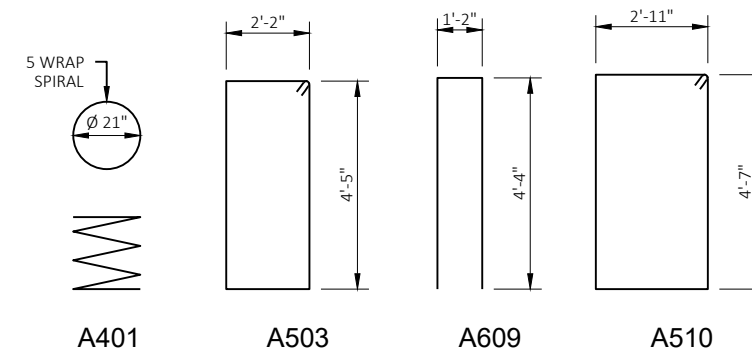
SECTION THRU BODY

NOTE: B.F. = BACK FACE
F.F. = FRONT FACE

LEGEND

- Ⓚ INDICATES WING NUMBER
- Ⓚ A01 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- Ⓚ A02 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2 X 6.
- Ⓚ A03 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- Ⓚ A04 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- Ⓚ A05 STEEL PILING HP 10 X 42 WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH = 40 LF.
- Ⓚ A06 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-254			
DRAWN BY NJT		PLANS CK'D. TLP	
WEST ABUTMENT			SHEET 4 OF 9



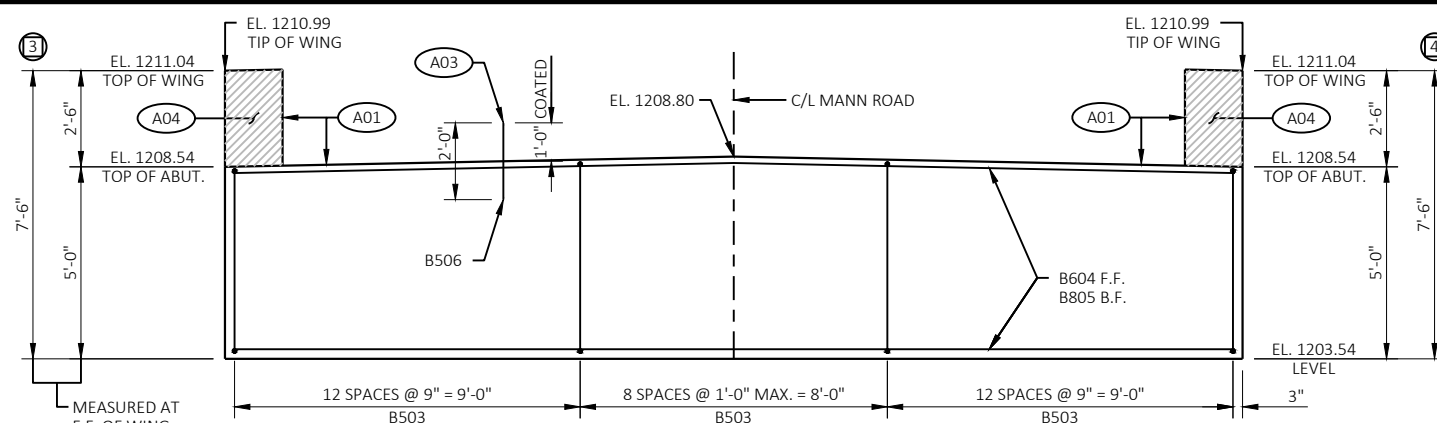
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8

BILL OF BARS

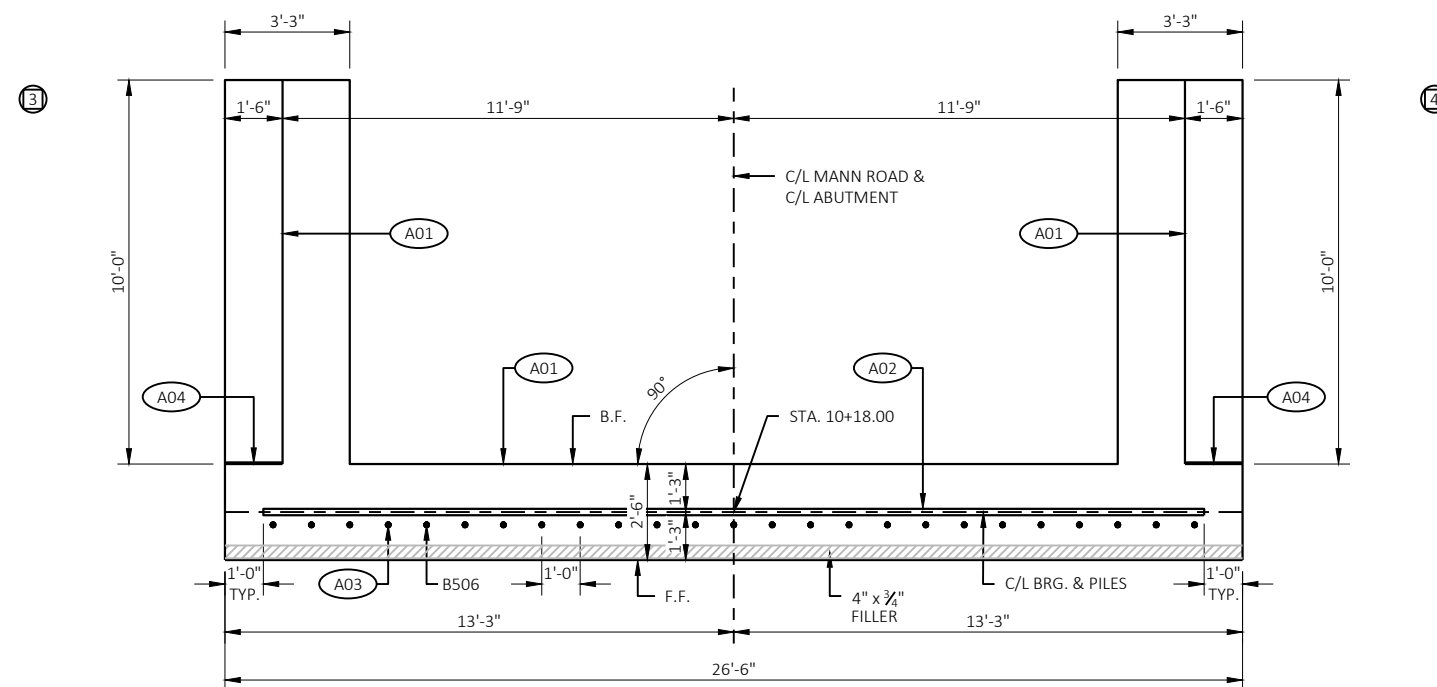
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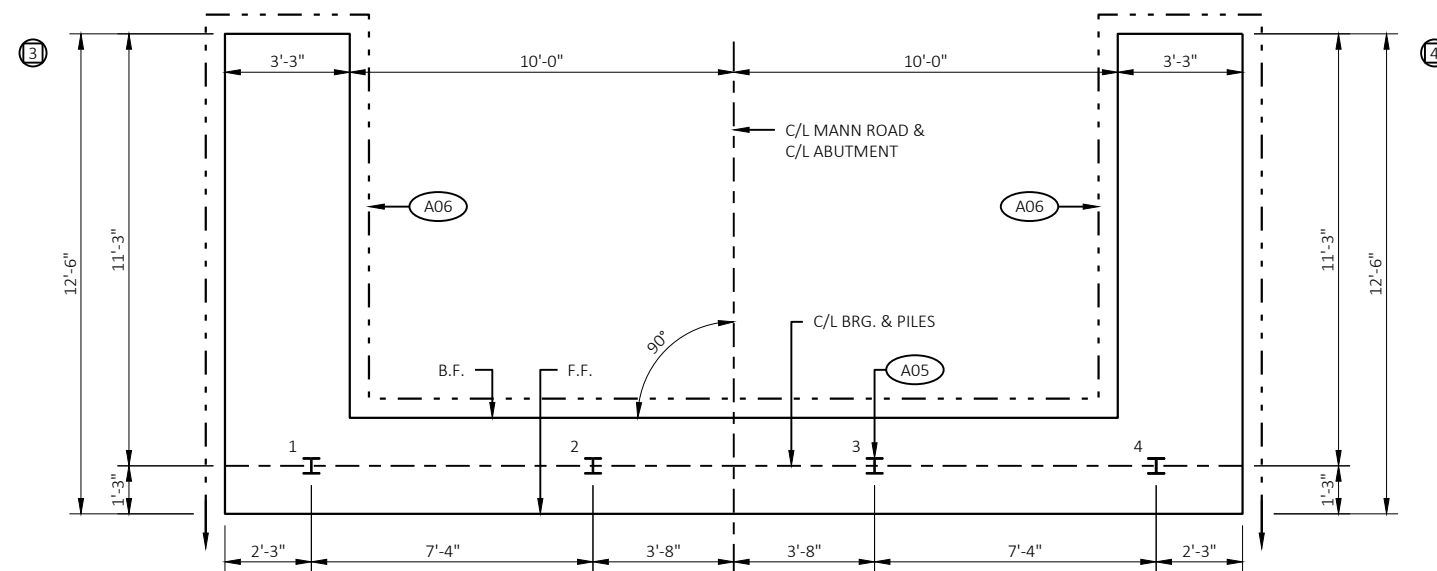


ELEVATION
(LOOKING EAST)

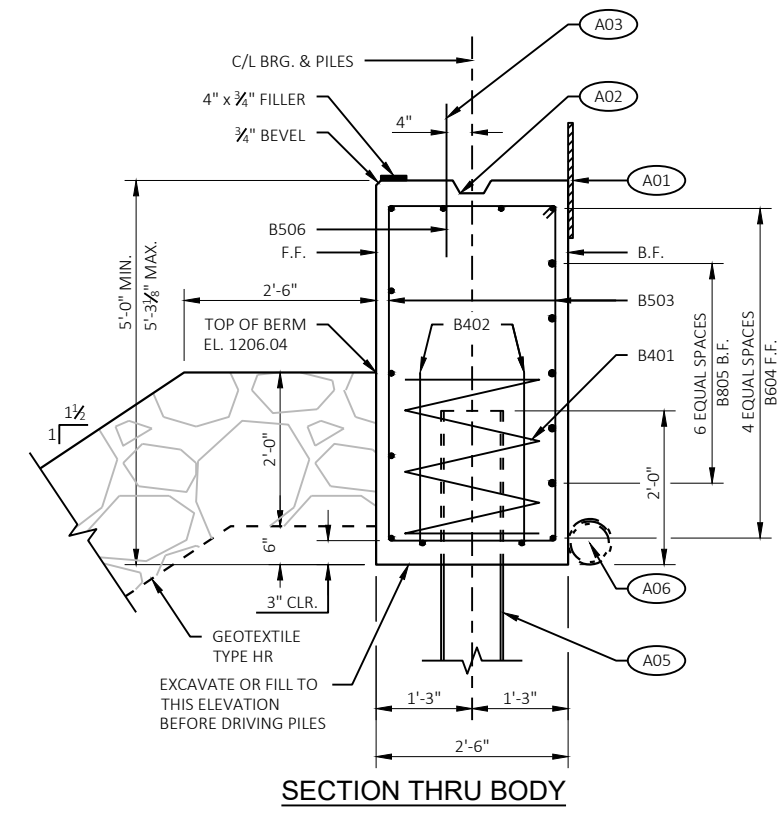
NOTE: DISPLACE B503 BARS INTERFERING WITH PILING



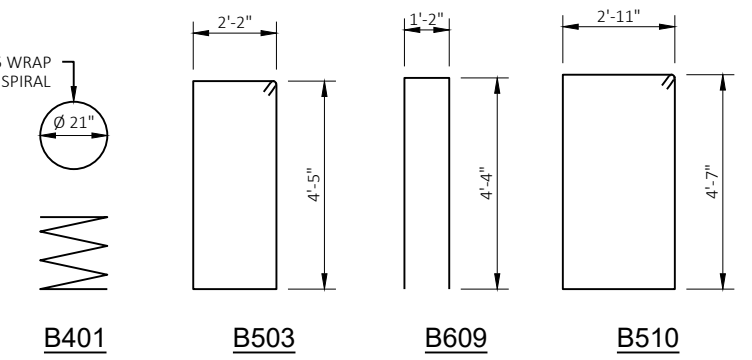
PLAN



PILE PLAN



SECTION THRU BODY

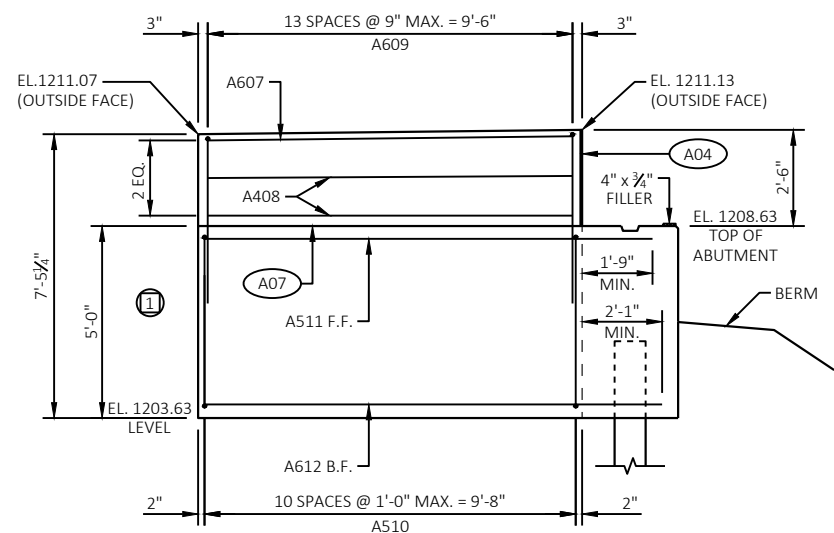


NOTE: B.F. = BACK FACE
F.F. = FRONT FACE

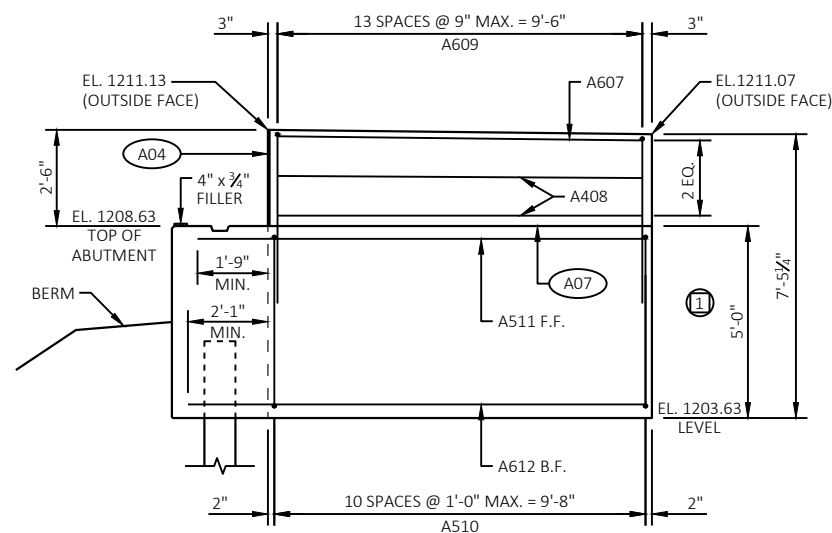
LEGEND

- ⊙ INDICATES WING NUMBER
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- ⊙ A05 STEEL PILING HP 10 X 42 WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH = 40 LF.
- ⊙ A06 PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

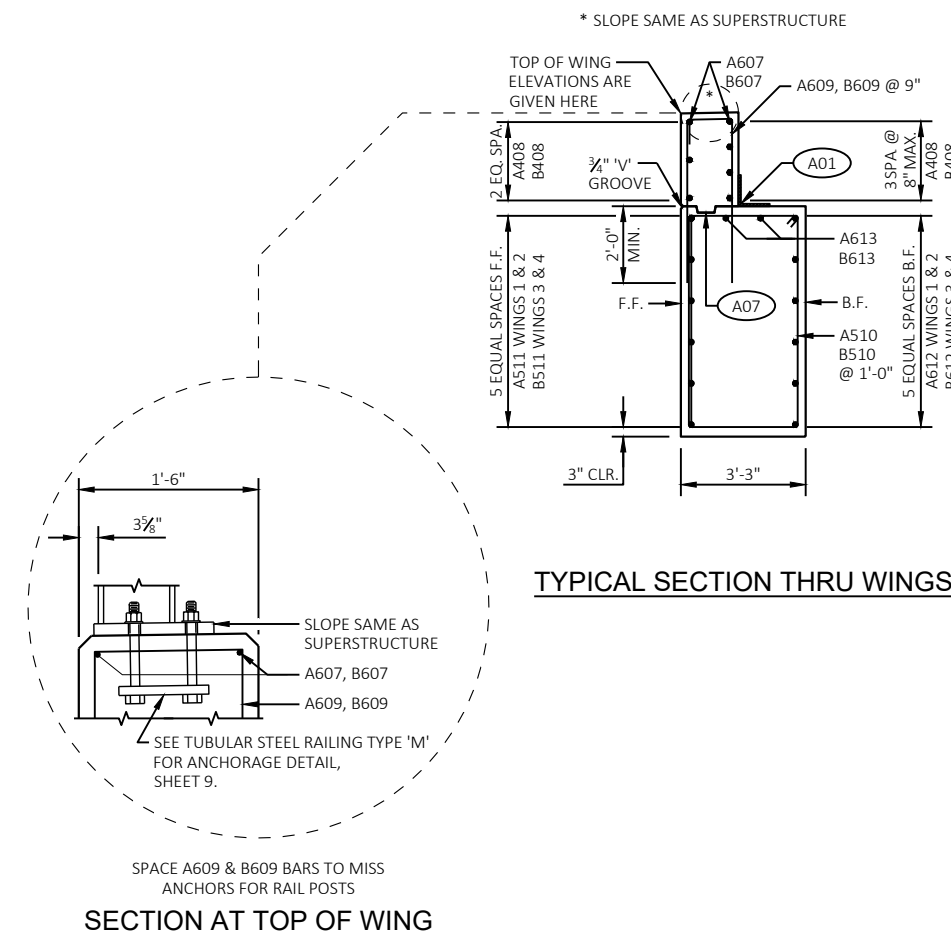
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-254			
DRAWN BY NJT		PLANS CK'D. TLP	
EAST ABUTMENT			SHEET 5 OF 9



WEST ABUTMENT WINGS



EAST ABUTMENT WINGS



TYPICAL SECTION THRU WINGS

SECTION AT TOP OF WING

NOTE: B.F. = BACK FACE
F.F. = FRONT FACE

LEGEND

- ⊖ INDICATES WING NUMBER
- ⊖ A01 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- ⊖ A04 SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- ⊖ A07 OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2 X 6. (18" R.M.W. AT B.F. AND 3/4" V GROOVE AT F.F. OF WING WALL IF JOINT IS USED).

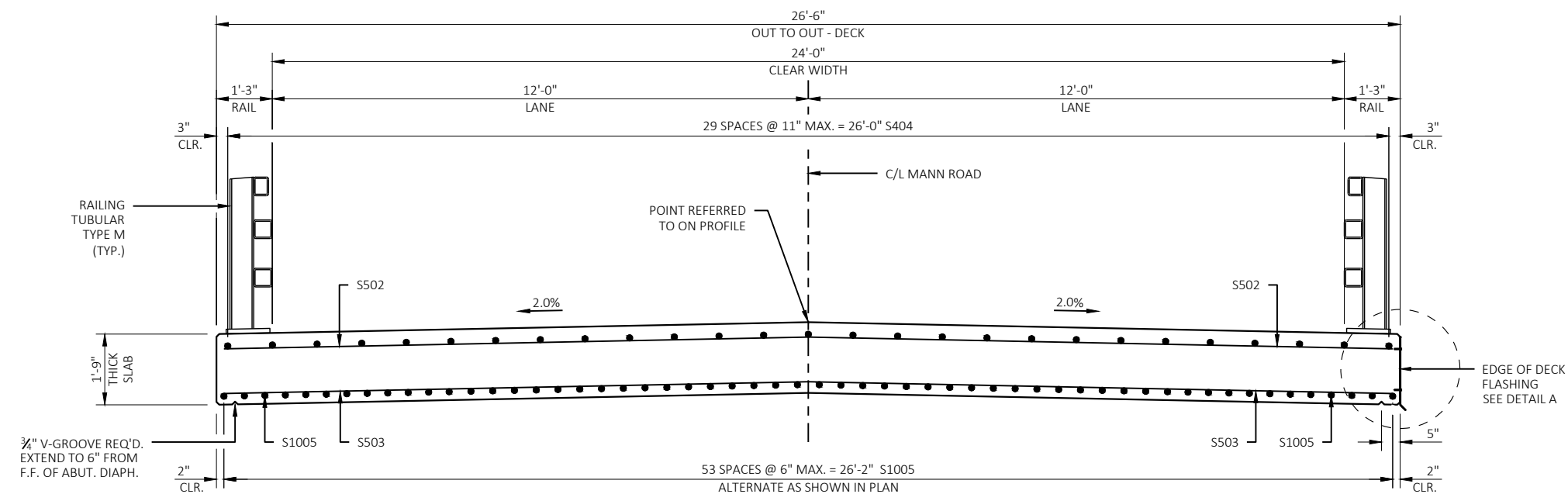
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-254			
DRAWN BY NJT		PLANS CK'D. TLP	
ABUTMENT DETAILS		SHEET 6 OF 9	

BILL OF BARS

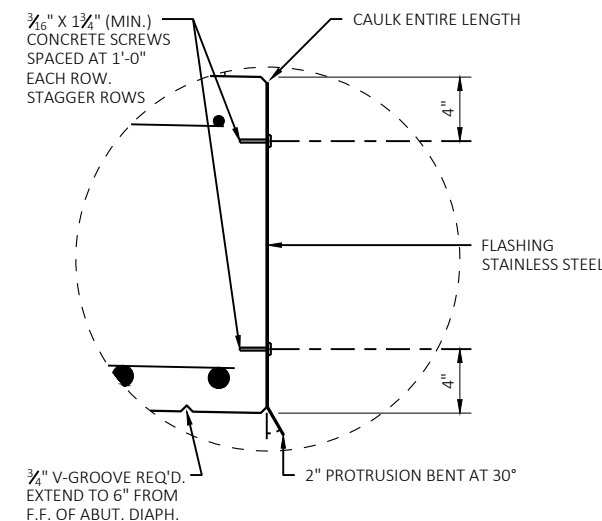
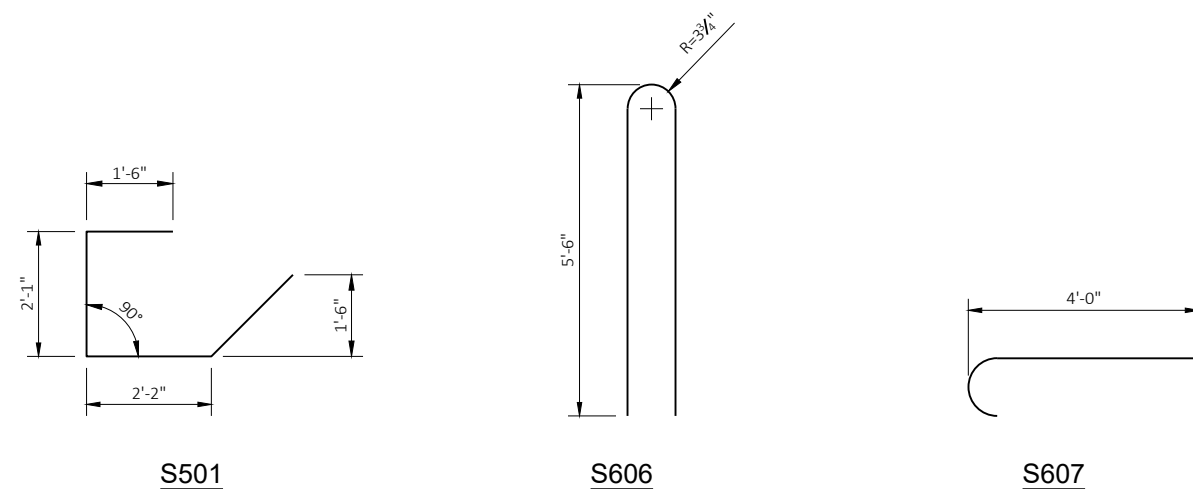
12560# COATED

BAR MARK	COAT	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	54	7'-7"	X		AT END OF DECK
S502	X	45	26'-2"			SLAB, TOP, TRANSVERSE
S503	X	55	26'-2"			SLAB, BOTTOM, TRANSVERSE
S404	X	30	38'-2"			SLAB, TOP, LONGITUDINAL
S1005	X	54	33'-1"			SLAB, BOTTOM, LONGITUDINAL
S606	X	28	11'-4"	X		AT RAIL POSTS
S607	X	16	4'-8"	X		AT END RAIL POSTS
S608	X	40	6'-0"			AT INTERIOR RAIL POSTS

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.



CROSS SECTION THRU ROADWAY



NOTES

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

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE C/L OF SUBSTRUCTURE UNITS.

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

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTIONS ONLY EQUAL APPROXIMATELY 1/3 OF CAMBER VALUES SHOWN.

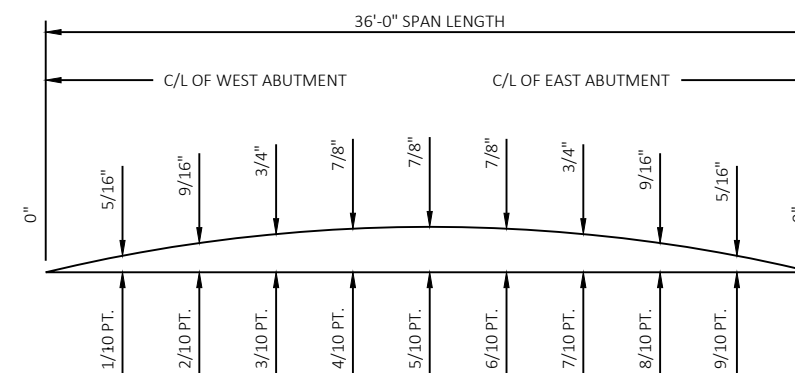
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATION AT THE C/L OF ABUTMENTS, AND AT 5/10 PTS. TO VERIFY CAMBER, TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR C/L.

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, CAULK, 3/16" CONCRETE SCREWS AND CLEANING THE EDGE OF DECK PRIOR TO ATTACHMENT OF THE FLASHING.

TOP OF DECK ELEVATIONS

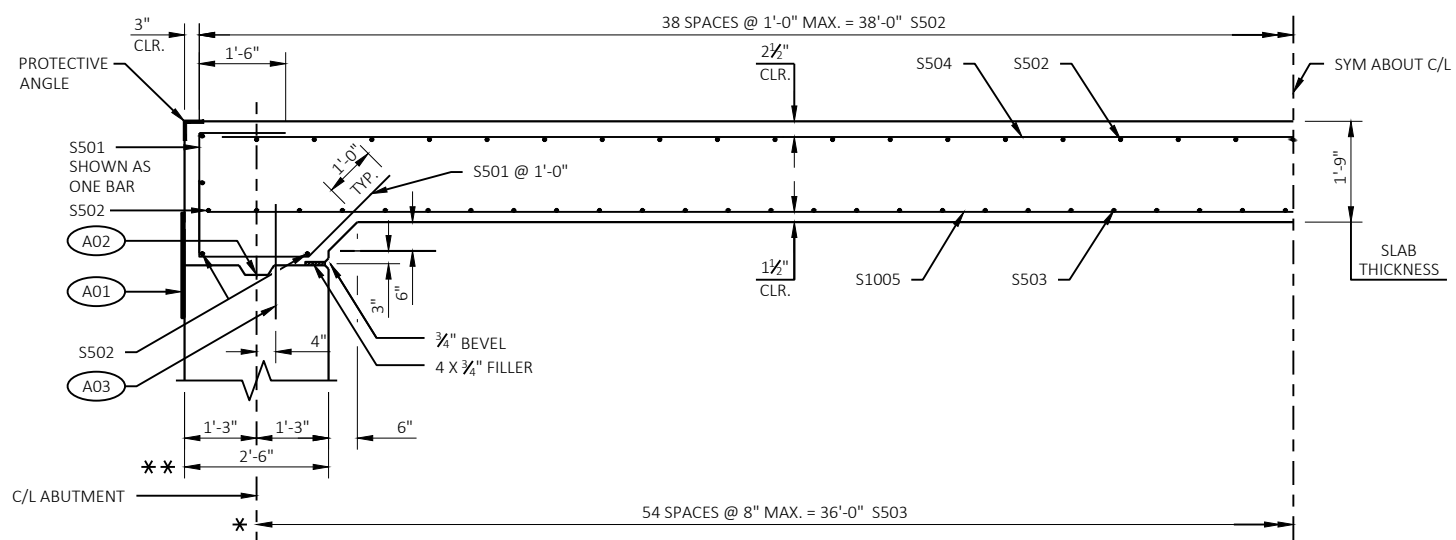
LOCATION	WEST ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	EAST ABUT.
NORTH EDGE OF DECK	1211.13	1211.12	1211.11	1211.10	1211.09	1211.09	1211.08	1211.07	1211.06	1211.05	1211.04
C/L OF BRIDGE DECK	1211.39	1211.38	1211.37	1211.36	1211.35	1211.35	1211.34	1211.33	1211.32	1211.31	1211.30
SOUTH EDGE OF DECK	1211.13	1211.12	1211.11	1211.10	1211.09	1211.09	1211.08	1211.07	1211.06	1211.05	1211.04

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

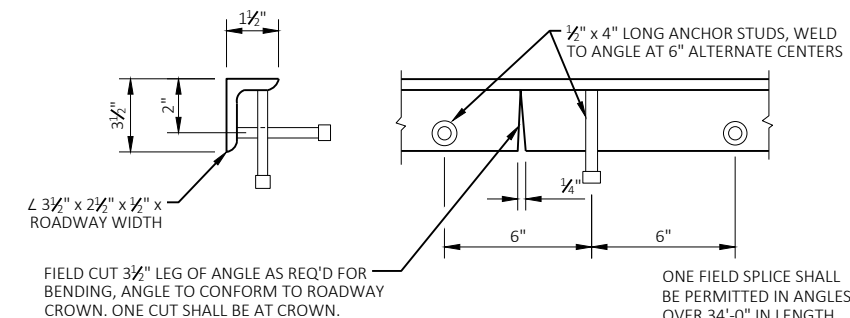


CAMBER DIAGRAM

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-254			
DRAWN BY		NJT	PLANS CK'D. TLP
SUPERSTRUCTURE			SHEET 7 OF 9

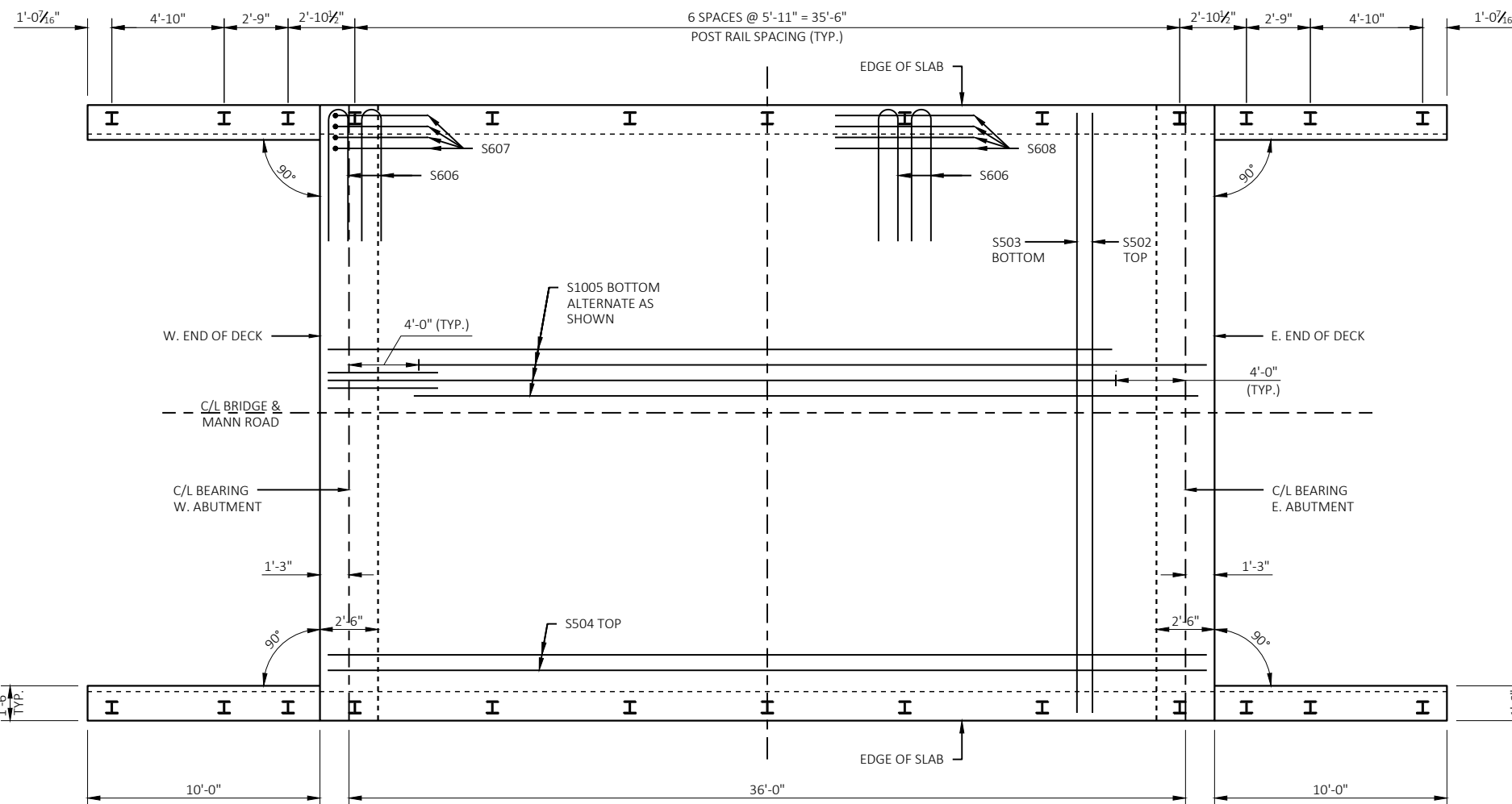


PART LONGITUDINAL SECTION



PROTECTION ANGLE ARMOR

SANDBLAST PROTECTION ANGLE AFTER FABRICATION PER NOTES. AFTER BLAST CLEANING, THE PROTECTION ANGLE SHALL BE HOT DIPPED GALVANIZED.



PLAN

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	C/L WEST ABUT.	5/10 PT	C/L EAST ABUT.
NORTH EDGE OF DECK			
CROWN			
SOUTH EDGE OF DECK			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF ABUTMENTS, THE C/L OF PIERS AND AT 5/10 PTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG OUTER LINES AND CROWN OR R/L. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

LEGEND

- A01 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- A02 KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2 X 6.
- A03 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.

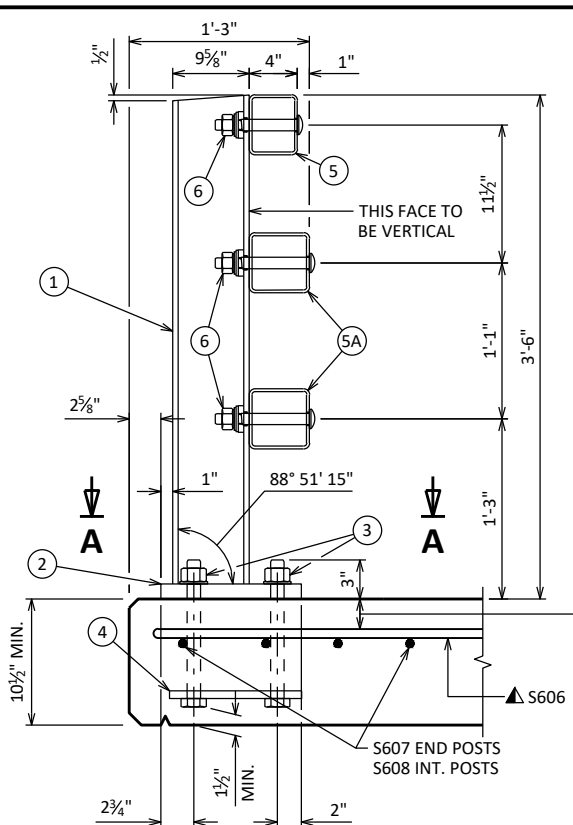
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-10-254			
DRAWN BY NJT		PLANS CK'D. TLP	
SUPERSTRUCTURE DETAILS			SHEET 8 OF 9

LEGEND

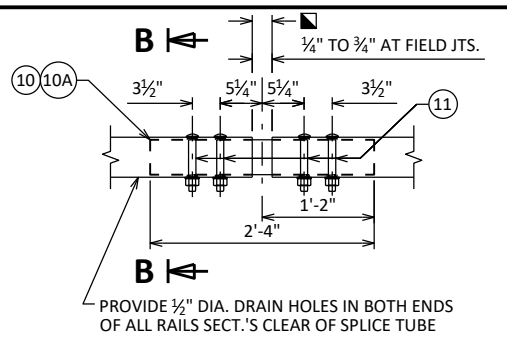
- ① W6 X 25 WITH 1 1/8" X 1 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- ② PLATE 1 1/4" X 1 1/4" X 1'-8" WITH 1 1/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.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

GENERAL NOTES

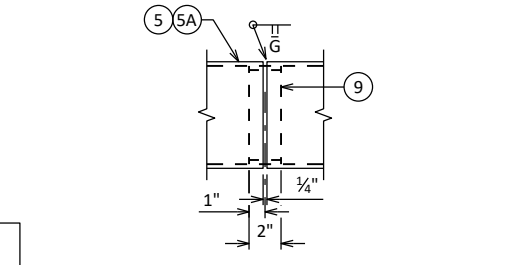
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES,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



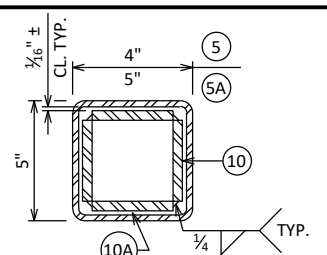
SECTION THRU RAILING ON DECK



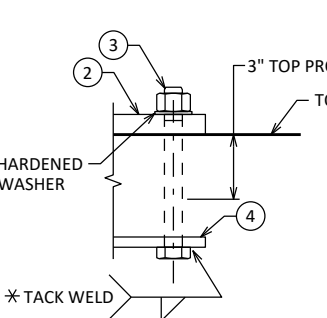
FIELD ERECTION JOINT DETAIL



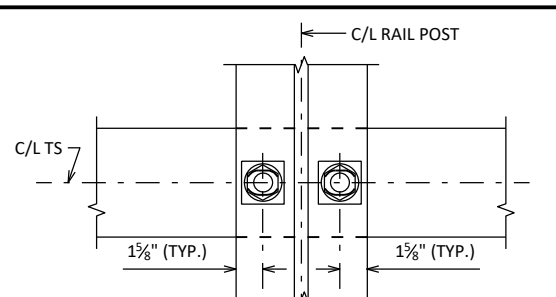
SHOP RAIL SPLICE DETAIL



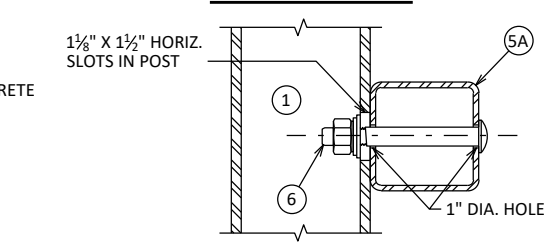
SECTION B-B



ANCHOR BOLTS

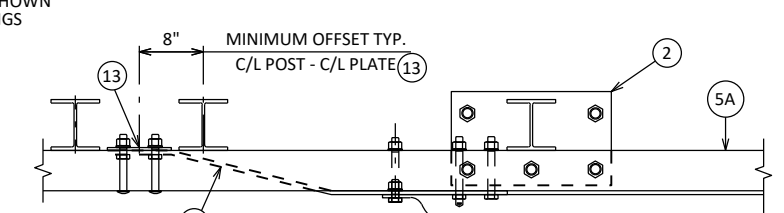


SECTION THRU POST WEB

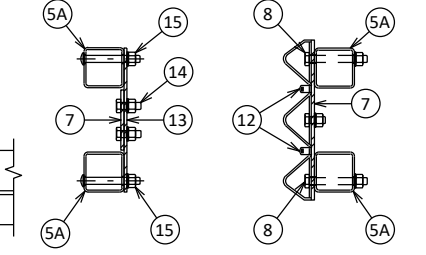


SECTION THRU RAIL

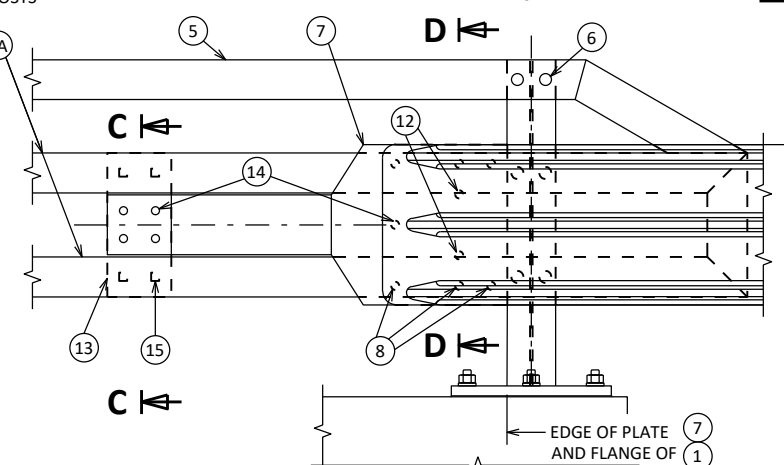
TYPICAL RAIL TO POST CONNECTIONS



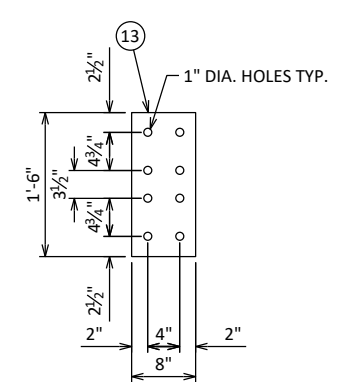
TOP VIEW AT END POST



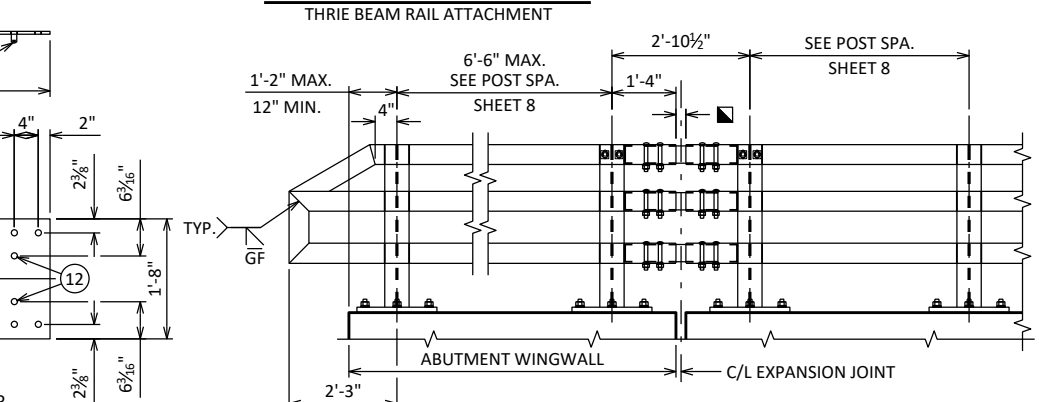
SECTION C-C SECTION D-D



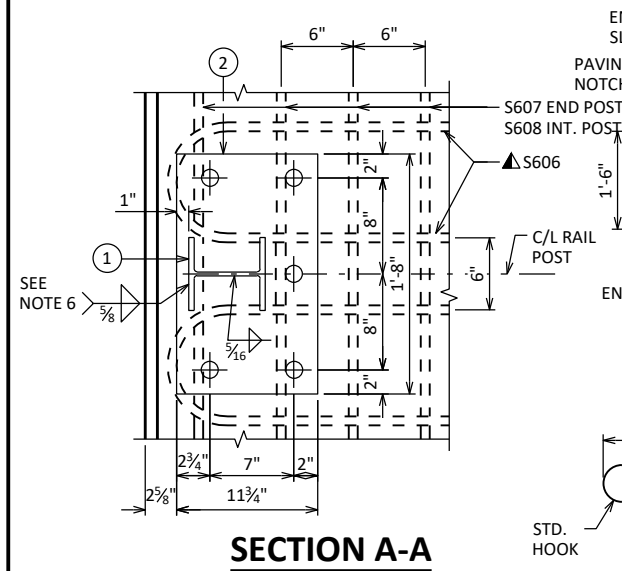
DETAIL AT END POST



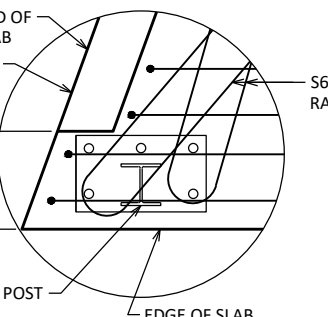
ANCHOR PLATE AT BEAM GUARD ATTACHMENT



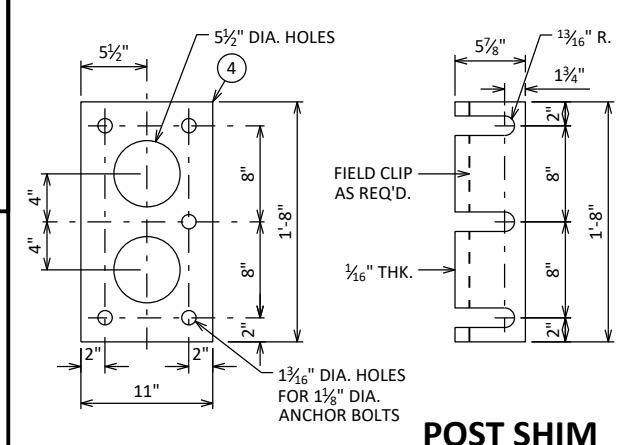
PART ELEVATION OF RAILING



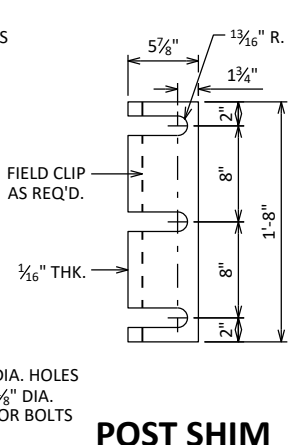
SECTION A-A



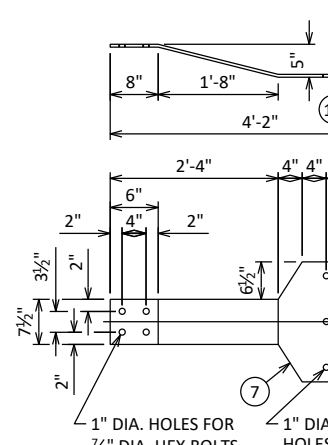
END POST DETAIL



ANCHOR PLATE AT RAIL TO DECK CONNECTION



POST SHIM DETAIL



BACK-UP PLATE DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-10-254			
DRAWN BY		PLANS CK'D	
TUBULAR STEEL RAILING TYPE "M"		SHEET 9 OF 9	

- ▲ TIE TO TOP MAT OF STEEL.
- * ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.
- RDWY. OPENING OR 2 1/2" MIN. FOR STRIP SEAL EXP. JOINT & (1/4" TO 3/4") OPENING FOR A1 ABUTMENT.

DIVISION -1- LCL-MANN RD

STATION	REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)			
			CUT	FILL	CUT	FILL	CUT	EXPANDED FILL	MASS ORDINATE	
										NOTE 1
08+00	800.00	0.00	4.34	0.00	0	0	0	0	0	
08+50	850.00	50.00	4.47	0.09	8	0	8	0	8	
09+00	900.00	50.00	3.61	0.62	7	1	15	1	14	
09+32	932.01	32.01	61.17	2.70	38	2	53	4	49	
09+50	950.00	17.99	58.37	3.96	40	2	93	6	87	
09+70	970.00	20.00	53.77	4.21	42	3	135	10	125	
09+80.715	980.72	10.72	46.70	8.33	20	2	155	13	143	
09+81	981.00	0.28	0.00	0.00	0	0	155	13	143	
10+19	1019.00	38.00	0.00	0.00	0	0	155	13	143	
10+19.25	1019.25	0.25	50.94	0.81	0	0	155	13	143	
10+30	1030.00	10.75	56.89	7.75	21	2	176	15	161	
10+50	1050.00	20.00	56.58	9.33	42	6	218	23	196	
10+68	1068.00	18.00	59.83	6.29	39	5	257	29	228	
11+00	1100.00	32.00	3.57	0.34	38	4	295	34	261	
11+50	1150.00	50.00	3.13	0.00	6	0	301	34	267	
12+00	1199.99	49.99	2.62	1.23	5	1	306	35	271	
Total						28				

Notes:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	(EXPANDED FILL - CUT)

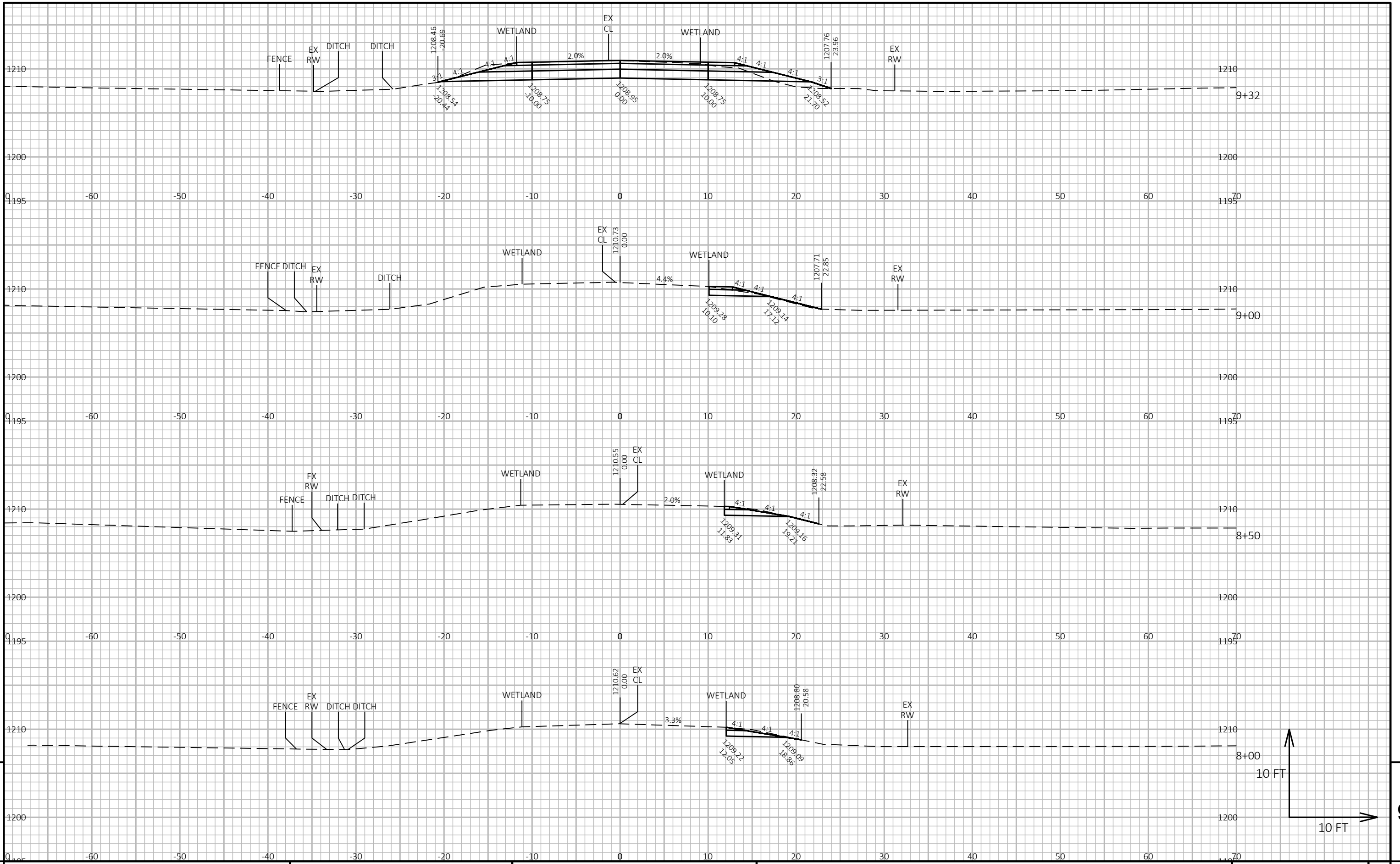
DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
			CUT (2)			FACTOR 1.25				
DIVISION 1										
Mann Road	8+00-12+00	Mann Road	306	306	28	35	271			
DIVISION 1 SUBTOTAL			306	306	28	35	271			
GRAND TOTAL			306	306	28	35	271	0	0	
TOTAL COMMON EXC			306							

NOTES:

- (1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
- (2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
- (5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (13) EXPANDED FILL FACTOR = 1.25
- DEPENDENT ON SELECTIONS: **EXPANDED FILL = (UNEXPANDED FILL) * FILL FACTOR**
- (14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- (15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

9

9



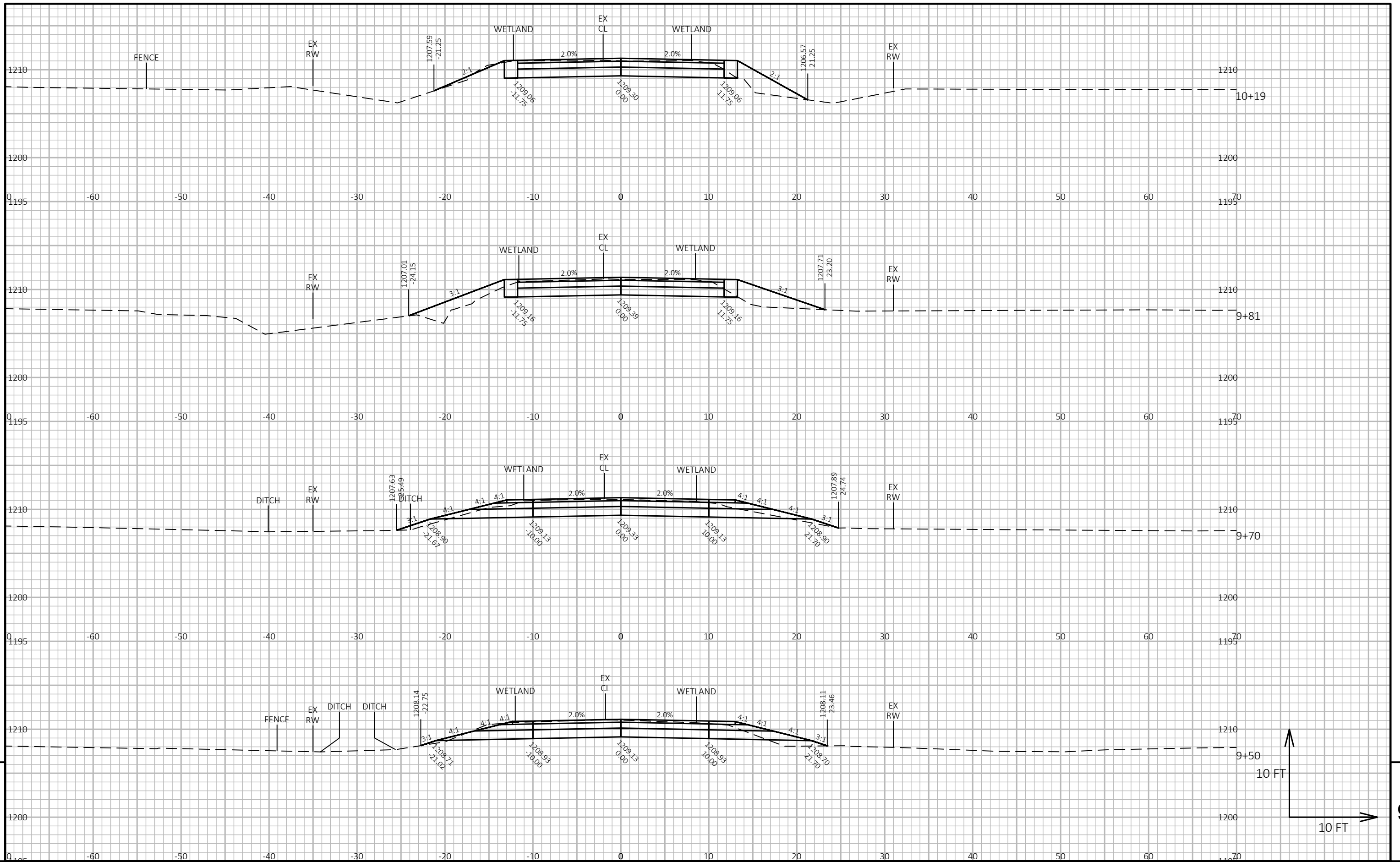
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9

PROJECT NO: 7846-00-70 HWY: MANN ROAD COUNTY: CLARK CROSS SECTIONS: MANN ROAD SHEET: E

FILE NAME: I:\CLIENTS-MENOW\W3900 WDOT NW REGION - EAU CLAIRE\029 7846-00-00 T LOYAL MANN ROAD N BR ONEILL CREEK P-10-0938\04 CADD\78460000\090101-XS.DWG PLOT DATE: 10/27/2023 10:44 AM PLOT BY: JORDAN DISTERHAFT PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME: xs-1



PROJECT NO: 7846-00-70

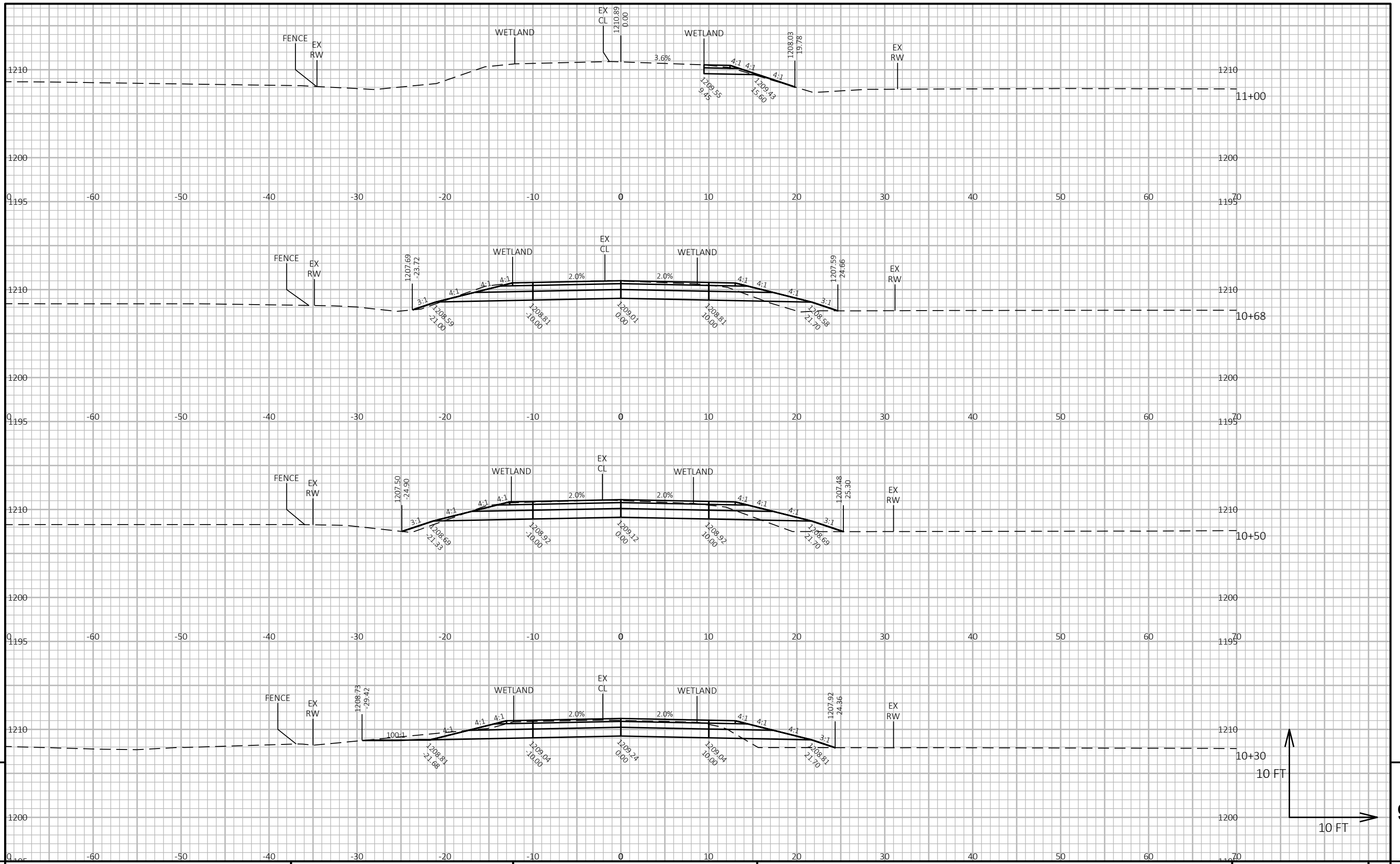
HWY: MANN ROAD

COUNTY: CLARK

CROSS SECTIONS: MANN ROAD

SHEET

E



9

9

PROJECT NO: 7846-00-70

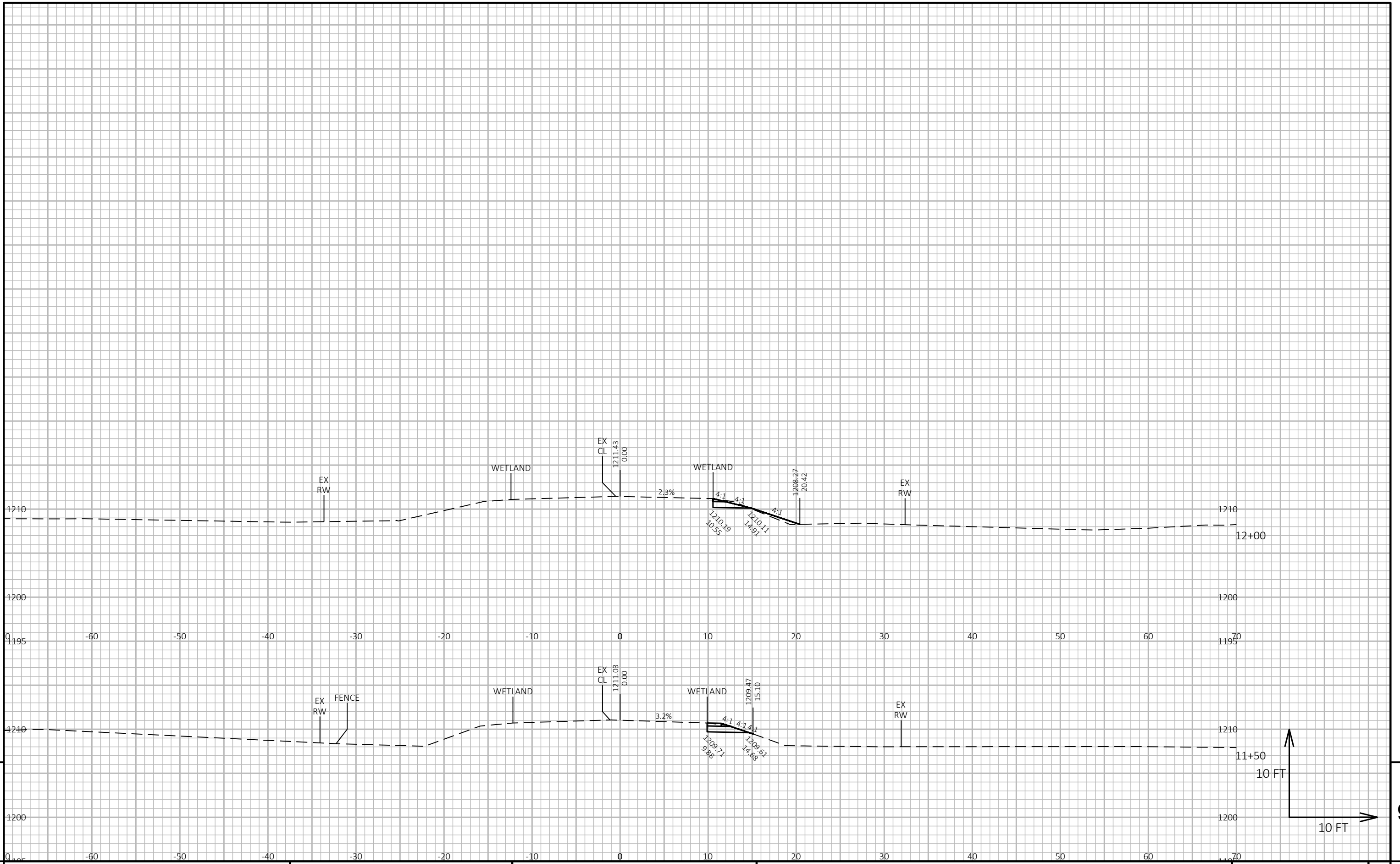
HWY: MANN ROAD

COUNTY: CLARK

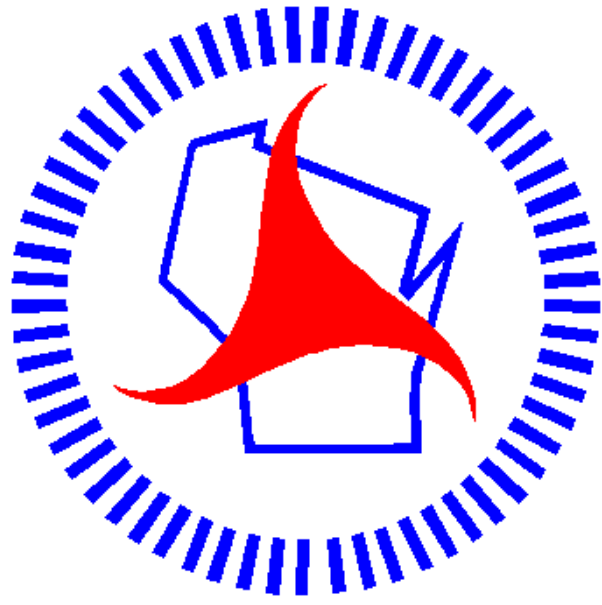
CROSS SECTIONS: MANN ROAD

SHEET

E



PROJECT NO: 7846-00-70	HWY: MANN ROAD	COUNTY: CLARK	CROSS SECTIONS: MANN ROAD	SHEET	E
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Wisconsin Department of Transportation

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