GRE

PROJECT ID: 3822-02-71

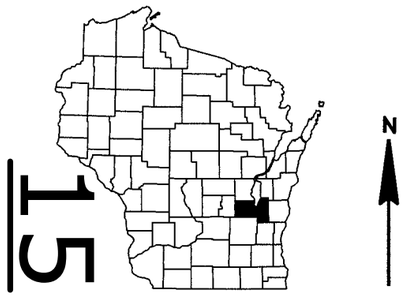
WITH: N/A

COUNTY: FOND DU LAC

December 2024

ORDER OF SHEETS

TOTAL SHEETS = 94



DESIGN DESIGNATION

A.A.D.T.	2025	=	410
A.A.D.T.	2045	=	550
D.H.V.		=	66
D.D.		=	60/40
T.		=	10.0%
DESIGN SPEED		=	35 MPH
ESALS		=	95,000 (HMA)

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

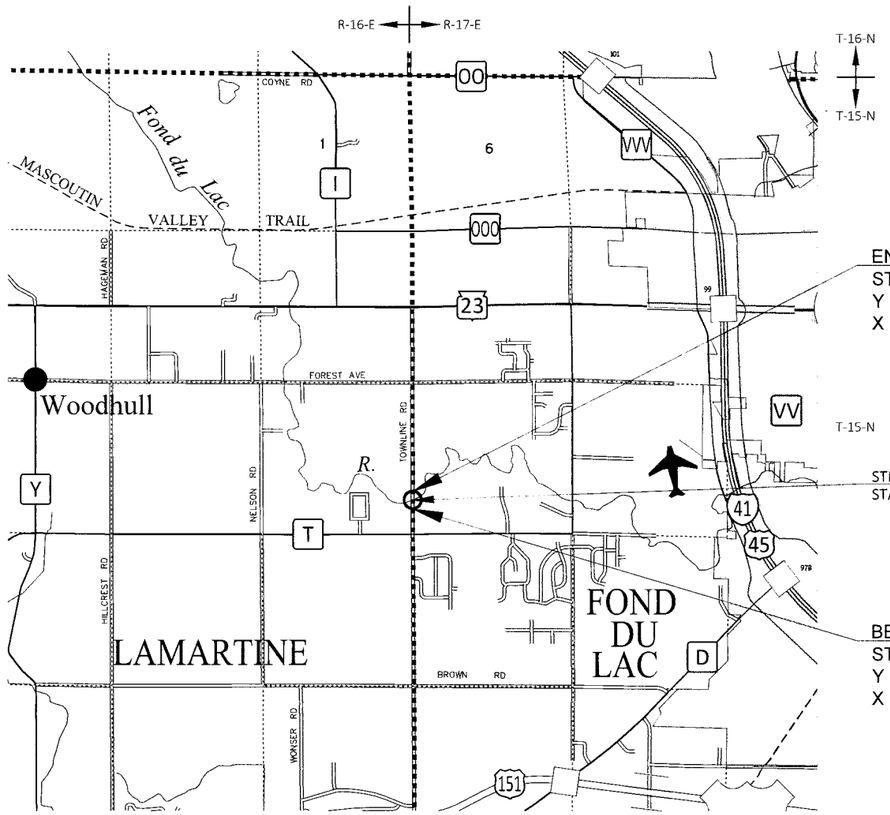
T LAMARTINE, TOWNLINE ROAD

W BRANCH FOND DU LAC RIVER BRIDGE

LOCAL STREET
FOND DU LAC COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3822-02-71	2025104	1

STATE PROJECT NUMBER
3822-02-71



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.083 Mi

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

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

ACCEPTED FOR

TOWN OF LAMARTINE

Date 7/23/2024

RANDY KUIK
TOWN CHAIRPERSON

ORIGINAL PLANS PREPARED BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac
93 South Pioneer Road, Suite 300
Fond du Lac, WI 54935
(920) 924-5720

WISCONSIN
ANDREW L. KLEMP
E-33645
FOND DU LAC, WI
PROFESSIONAL ENGINEER

DATE: 7/23/2024

ANDREW L. KLEMP, PE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	GREMMER & ASSOCIATES, INC.
Designer	GREMMER & ASSOCIATES, INC.
Project Manager	KATIE SCHWARTZ
Regional Examiner	NORTHEAST REGION
Regional Supervisor	BRIAN EDWARDS

APPROVED FOR THE DEPARTMENT

DATE: 7/25/2024

(Signature)

E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-010101-TI.DWG

PLOT DATE : 7/22/2024 3:37 PM

PLOT BY : AARON SARAUER

PLOT NAME :

GENERAL NOTES

ALL DISTANCES AND STATIONING SHOWN ON THIS PLAN ARE GROUND VALUES.

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

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

SAWCUT LOCATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD.

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

TOPSOIL, SEED AND EROSION MAT AS SHOWN IN PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE PLACED ON ALL DISTURBED AREAS, EXCLUSIVE OF THE AREA OCCUPIED BY THE NEW PAVEMENTS, SIDEWALKS, ENTRANCES, AND RELATED STRUCTURES.

SECTIONS AS SHOWN ON THE CROSS-SECTIONS INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED.

EROSION CONTROL ITEMS SHOWN ARE APPROXIMATE, THE EXACT LOCATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. EROSION CONTROL ITEMS TO BE INSTALLED PRIOR TO UPSLOPE WORK. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THAT THE MEASURE IS NO LONGER NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EROSION CONTROL MEASURE AS DIRECTED BY THE ENGINEER.

PLACE 4.0" ASPHALTIC SURFACE IN TWO LAYERS OF THE FOLLOWING THICKNESSES:

UPPER LAYER THICKNESS = 1.75"	NOMINAL GRADATION SIZE = 12.5 MM
LOWER LAYER THICKNESS = 2.25"	NOMINAL GRADATION SIZE = 19.0 MM

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

WORK RESTRICTIONS EXIST WITHIN AN UNCATALOGUED BURIAL SITE WHICH IS LOCATED IN THE SOUTHEAST QUADRANT OF THE BRIDGE. THE ARCHAEOLOGICAL SITE IS ALSO IDENTIFIED WITHIN CONSTRUCTION DETAILS.

ORDER OF SECTION 2 SHEETS

ABBREVIATIONS

A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC
A.D.T.	AVERAGE DAILY TRAFFIC
AE, AEW	APRON ENDWALL
AGG	AGGREGATE
ASPH	ASPHALT
BAD	BASE AGGREGATE DENSE
BM	BENCHMARK
CABC	CRUSHED AGGREGATE BASE COURSE
CC	CENTER OF CURVATURE
CE	COMMERCIAL ENTRANCE
C/L	CENTER LINE
CONC	CONCRETE
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
D	DEGREE OF CURVE
Δ	DELTA
D.H.V.	DESIGN HOURLY VOLUME
E	EXTERNAL DISTANCE FROM MIDPOINT OF CIRCULAR CURVE FROM ANGLE INTERSECTION
EL, ELEV	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
FE	FIELD ENTRANCE
F/L, FL	FLOW LINE
HT	HEIGHT
INTER	INTERSECTION
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
MP	MARKER POST
NC	NORMAL CROWN
NOM	NOMINAL
NOR, NORM	NORMAL
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
P.L.	PROPERTY LINE
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RO	RUN OFF LENGTH
SALV	SALVAGED
SDD	STANDARD DETAIL DRAWING(S)
SE	SUPERELEVATION
SEG	SEGMENT
SHLD	SHOULDER
S/L	SURVEY LINE
T.	PERCENT TRUCKS
T	TANGENT LENGTH
TEMP	TEMPORARY
TER	TERRACE
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
V	VELOCITY OR DESIGN SPEED
VAR	VARIABLE
VC	VERTICAL CURVE
VCL	VERTICAL CURVE LENGTH
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPRC	VERTICAL POINT OF REVERSE CURVATURE
VPT	VERTICAL POINT OF TANGENCY

DESIGN CONTACT

GREMMER & ASSOCIATES, INC.
93 S. PIONEER ROAD, SUITE 300
FOND DU LAC, WI 54935
ATTN: ANDREW KLEMP, PE
PHONE: (920) 924-5720
EMAIL: a.klemp@gremmerassociates.com

DNR AREA LIAISON

WISCONSIN DEPT. OF NATURAL RESOURCES
OSHKOSH SERVICE CENTER
625 E. COUNTY RD Y (STE 700)
OSHKOSH, WI 54901
ATTN: MARTY DILLENBURG
PHONE: (920)-410-7428
EMAIL: marty.dillenburg@wisconsin.gov

WISDOT CONTACT

WISCONSIN DEPARTMENT OF TRANSPORTATION
NORTHEAST REGION
944 VANDERPERREN WAY
GREEN BAY, WI 54304
ATTN: KATIE SCHWARTZ
PHONE: (920) 492-5652
EMAIL: katiea.schwartz@dot.wi.gov

UTILITIES

COMMUNICATIONS

AT&T WISCONSIN
70 EAST DIVISION STREET
FOND DU LAC, WI 54935
PHONE: (920) 929-1013
MOBILE: (920) 410-5104
ATTN: CHARLES BARTELT
EMAIL: cb1461@att.com

ELECTRIC & GAS

ALLIANT ENERGY
883 WEST SCOTT STREET
FOND DU LAC, WI 54937
PHONE: (920) 322-6716
ATTN: BILL BASTIAN
EMAIL: williambastian@alliantenergy.com

ELECTRIC TRANSMISSION

ATC MANAGEMENT
P.O. BOX 47
WAUKESHA, WI 53187
PHONE: (262) 506-6884
ATTN: CHRIS DAILEY
EMAIL: cdailey@atcllc.com

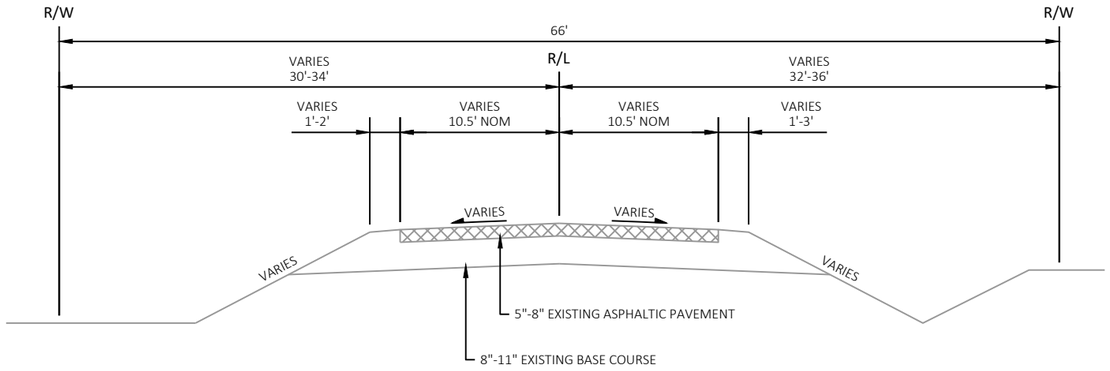
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

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 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.25 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

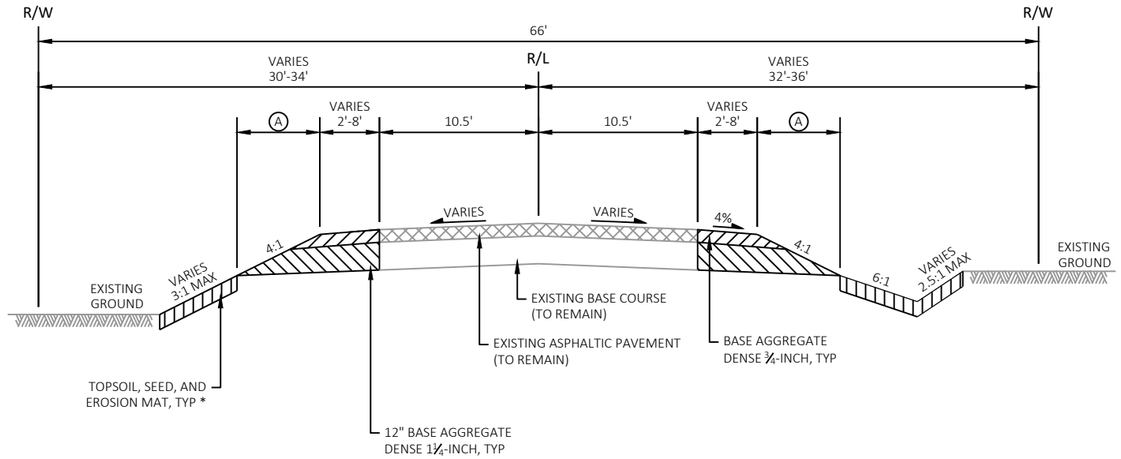
TOTAL PROJECT AREA = 1.259 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.911 ACRES



TYPICAL EXISTING SECTION

TOWNLINE ROAD
STA 6+97 - STA 9+27
STA 10+25 - STA 13+04



TYPICAL FINISHED SECTION

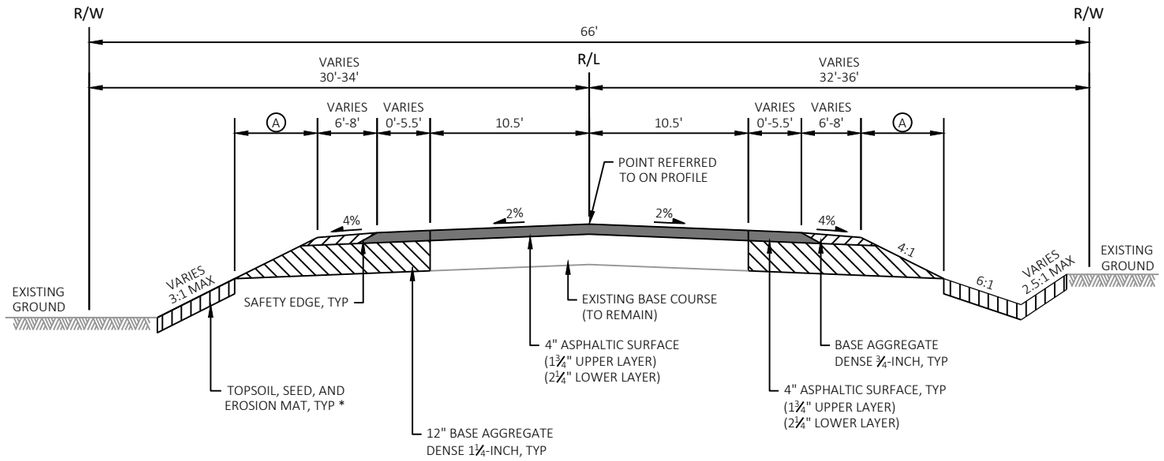
TOWNLINE ROAD
STA 6+97 - STA 7+80, RT
STA 7+23 - STA 7+80, LT
STA 12+17 - STA 12+59, RT
STA 12+17 - STA 13+04, LT

NOTES:

(A) SEEDING

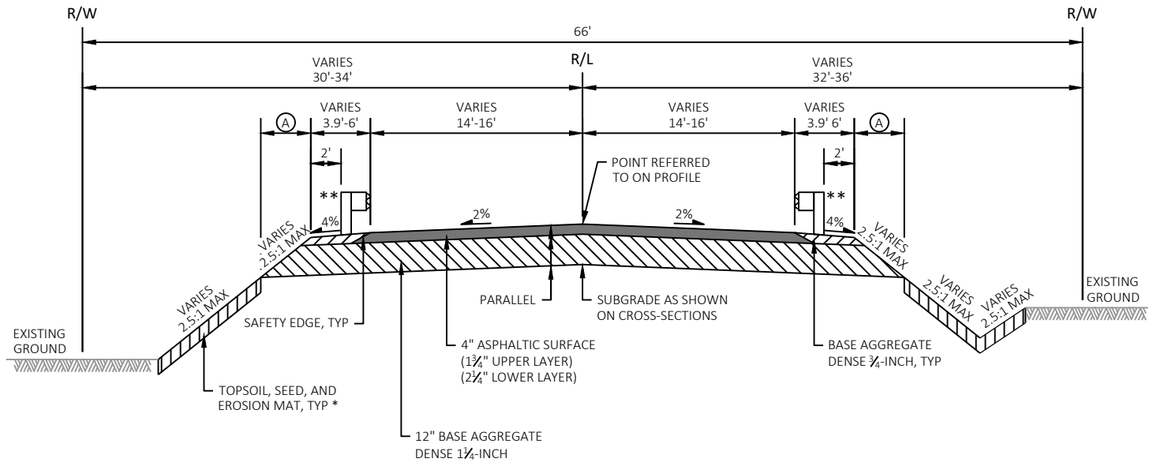
* SEE MISCELLANEOUS QUANTITIES AND EROSION CONTROL PLANS FOR LOCATIONS AND TYPES.

** SEE CONSTRUCTION DETAILS FOR BEAM GUARD LOCATIONS.



TYPICAL FINISHED SECTION

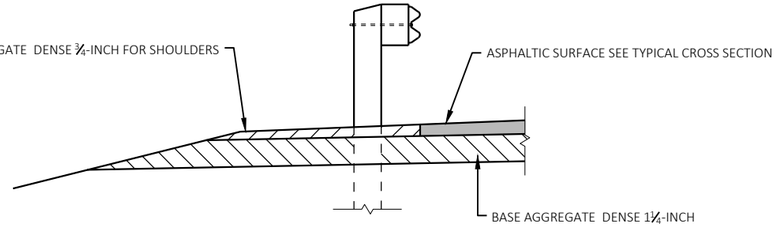
TOWNLINE ROAD
STA 7+80 - STA 8+28
STA 12+12 - STA 12+17, RT

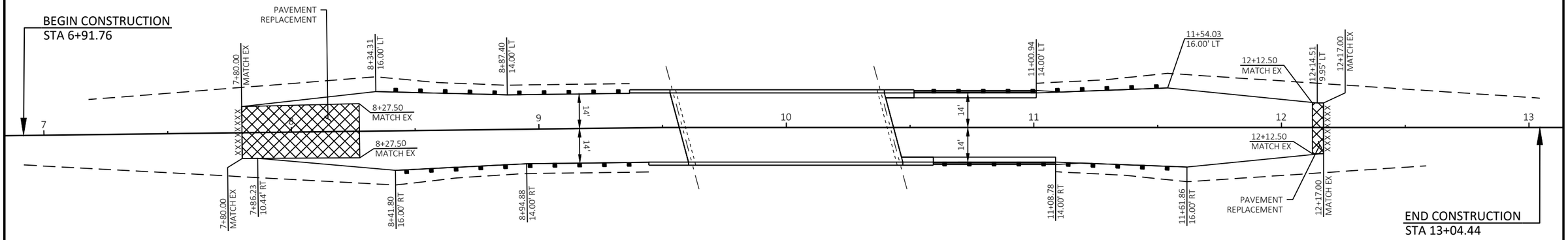


TYPICAL FINISHED SECTION

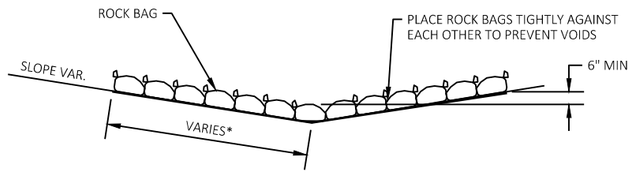
TOWNLINE ROAD
STA 8+28 - STA 9+53, LT
STA 8+28 - STA 9+61, RT
STA 10+51 - STA 12+12, LT
STA 10+60 - STA 12+12, RT

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	TYPICAL SECTIONS	SHEET 3	E

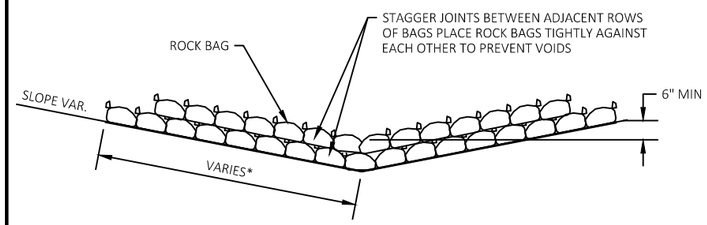




DETAIL FOR ASPHALTIC SHOULDER AT GUARDRAIL



SIDE VIEW (SINGLE LAYER)

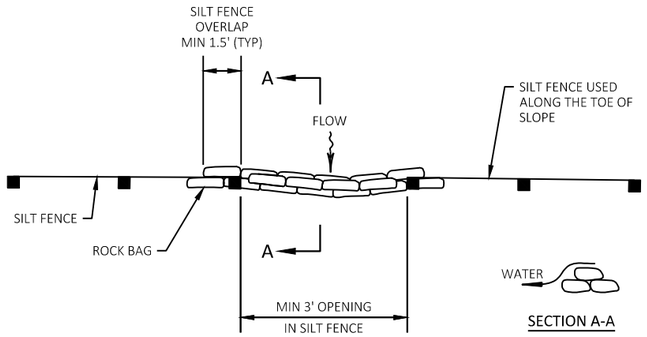


* LENGTH AND NUMBER OF BAGS MAY VARY DEPENDING ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)

ROCK BAGS DITCH CHECK

PAID AS ROCK BAGS

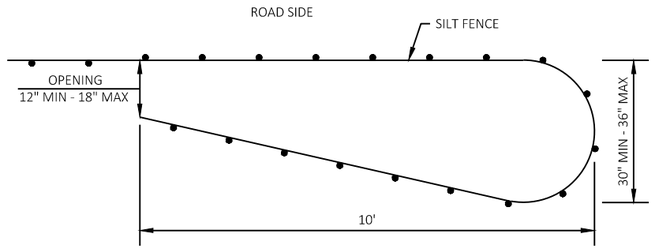


TOP VIEW

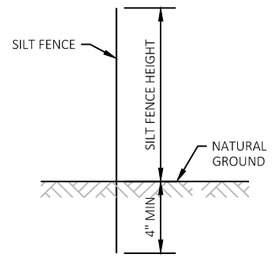
SECTION A-A

ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

NOTE:
SILT FENCE POSTS FOR THE TURN-AROUND SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND.



PLAN VIEW

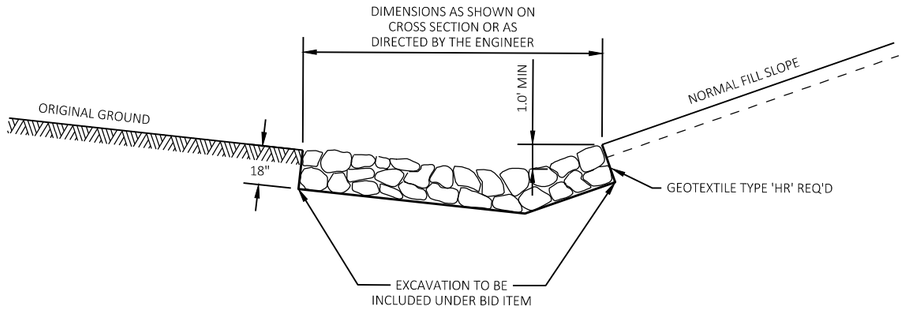


SIDE VIEW

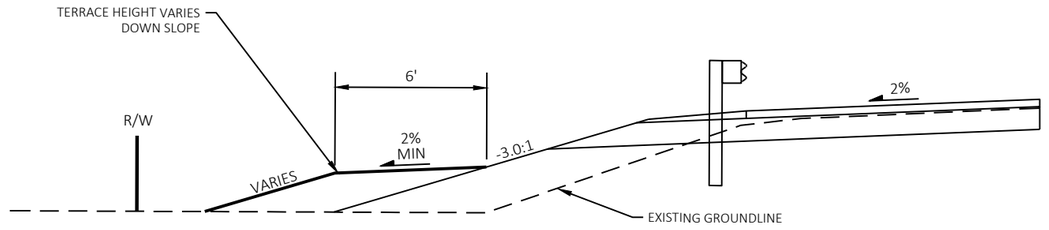
SILT FENCE TURN-AROUND DETAIL

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CONSTRUCTION DETAILS	SHEET 4	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-021001-CD.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 7/31/2024 4:18 PM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



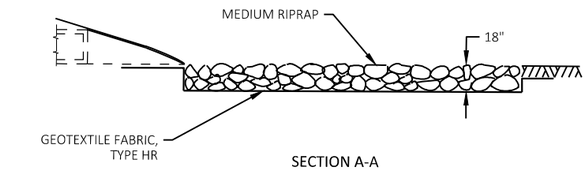
DETAIL FOR RIPRAP MEDIUM IN DITCHES



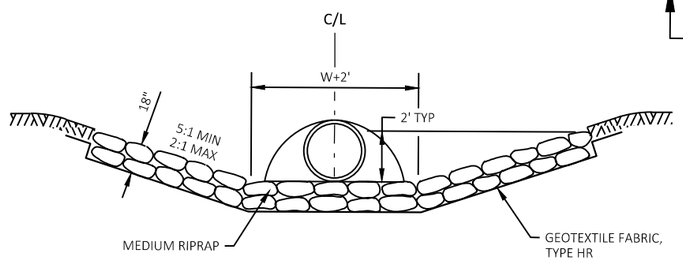
NOTES:
TOPSOIL, SEED & EROSION MAT
TERRACE SLOPE AREA, SAME AS
SHOWN IN TYPICAL SECTIONS

SEE CROSS SECTIONS FOR MORE
INFORMATION

DETAIL FOR FORESLOPE TERRACE ACCESS
(STA 11+00, LT - STA 11+62, LT)

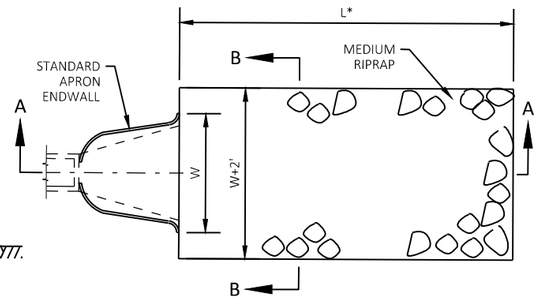


SECTION A-A



SECTION B-B

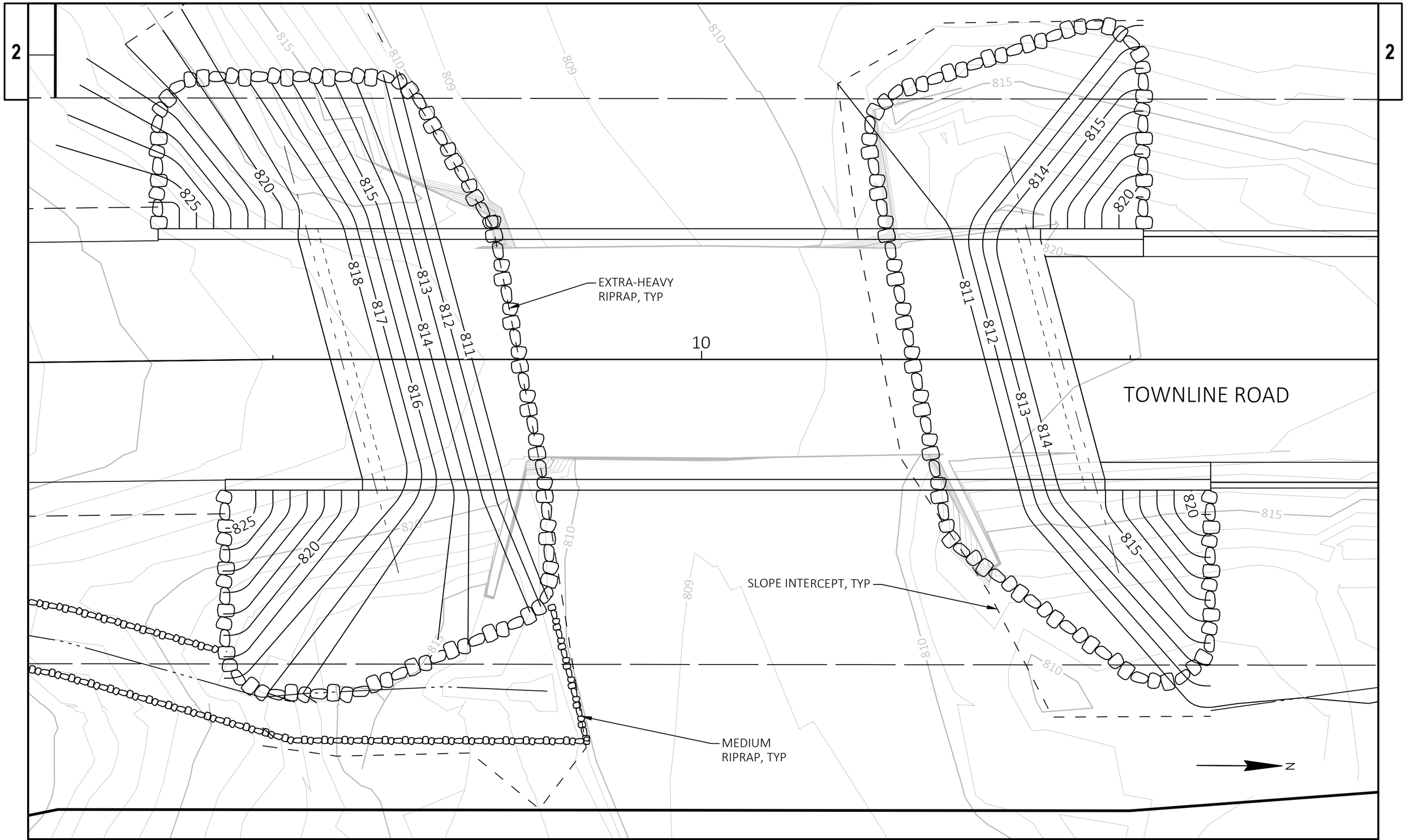
* L = 3 TIMES DIAMETER (NOR) OR 10' MINIMUM OR AS DIRECTED BY THE ENGINEER



PLAN VIEW

MEDIUM RIPRAP AND GEOTEXTILE FABRIC
DETAIL AT APRON ENDWALLS

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CONSTRUCTION DETAILS	SHEET 5	E



PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CONSTRUCTION DETAILS - RIPRAP AT STRUCTURE	SHEET 6	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-021002-CD.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 7/31/2024 4:18 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 42

2

LEGEND

- SLOPE INTERCEPT
- SILT FENCE
- TURBIDITY BARRIER
- CULVERT PIPE CHECKS
- ROCK BAGS FOR DITCH CHECK
- ROCK BAGS FOR SILT FENCE RELIEF POINT
- TEMPORARY DITCH CHECK
- INLET PROTECTION (TYPE)
- EROSION MAT URBAN CLASS I TYPE A
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP
- TRACKING PAD
- SURFACE WATER FLOW EXISTING
- SURFACE WATER FLOW PROPOSED

WHEN THE PLANS SHOW TWO INLET PROTECTION TYPES TOGETHER, USE TYPE A INLET PROTECTION DURING GRADING OPERATIONS.

FINISHING ITEMS SHALL BE SALVAGED TOPSOIL, FERTILIZER TYPE B, SEED MIX NO. 30, AND EROSION MAT URBAN CLASS I TYPE A OR B, UNLESS OTHERWISE NOTED IN THE PLANS.

DO NOT APPLY FERTILIZER WITHIN 20 FEET OF A WATERWAY OR WETLAND.

N

2

BEGIN PROJECT
STA 7+80.00

END CONSTRUCTION
STA 13+04.44

TURBIDITY BARRIER, TYP

RIPRAP MEDIUM (8.5-FT X 8-FT)

ROCK BAGS FOR SILT FENCE RELIEF POINTS, TYP

SILT FENCE, TYP

UTILIITY EASEMENT

ROCK BAGS FOR DITCH CHECKS, TYP

EXIST R/W

PROPOSED TLE

PROP R/W

EXIST R/W

TOWNLINE ROAD

EXIST R/W

10" PVC PIPE

PROP R/W

SLOPE INTERCEPT, TYP

RIPRAP MEDIUM

RIPRAP MEDIUM

WETLAND LIMITS, TYP

WEST BRANCH
FOND DU LAC RIVER

PROP R/W

BEGIN CONSTRUCTION
STA 6+91.76

END PROJECT
STA 12+17.00

RIPRAP MEDIUM (6-FT X 8-FT)

EROSION MAT URBAN CLASS I TYPE B
(8' WIDE IN DITCH BOTTOM), TYP

RIPRAP EXTRA-HEAVY, TYP

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	EROSION CONTROL PLAN	SHEET 7	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-022001-EC.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 7/31/2024 4:18 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

N

7+50.00, -25.0' LT
INLETS MEDIAN 2G-MS
100

9+40.00, -25.0' LT
APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH
100.1

10+94.69, -31.3' LT
APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH
200.1

10+94.69, -13.3' LT
INLETS 2x2.0-V
200

WETLAND LIMITS, TYP

EXIST R/W

TLE

PROP R/W

18"SS

12"SS

EXIST R/W

7 8 9 10 11 12 13

ASPHALT

TOWNLINE ROAD

PI: 9+50.00

EXIST R/W

12"SS

EXIST R/W

10" PVC PIPE

ADJUST EXISTING DRAINTILE
MATCH BACKSLOPE

PROP R/W

SLOPE INTERCEPT, TYP

WEST BRANCH
FOND DU LAC RIVER

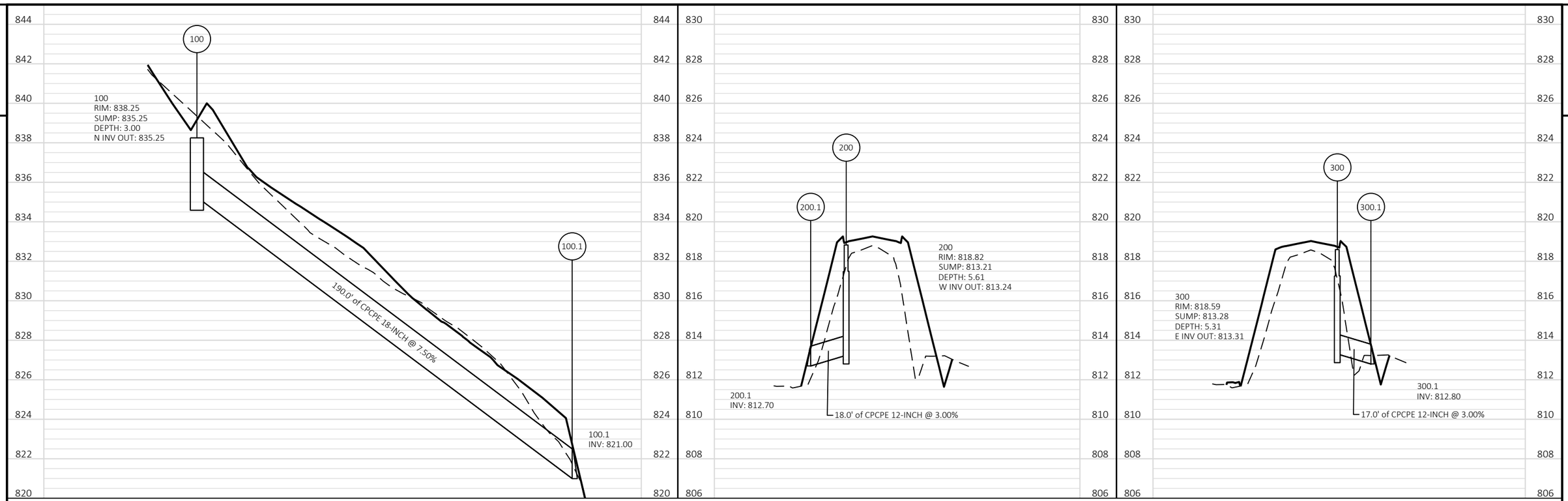
300
11+02.53, 13.3' RT
INLETS 2x2.0-V

300.1
11+02.53, 30.3' RT
APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	STORM SEWER LAYOUT	SHEET 8	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-022501-SS.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 7/31/2024 4:18 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT



STORM SEWER STRUCTURE DATA

STRUCTURE NUMBER	ALIGNMENT	STATION	OFFSET	LOCATION	TYPE	RIM/GRATE ELEVATION	STRUCTURE INV ELEV	TOTAL DEPTH	CONNECTING PIPES	PIPE DIRECTION	PIPE SIZE & TYPE	PIPE INVERT	PIPE ROUTE	PIPE LENGTH	PIPE SLOPE	REMARKS
100	TOWNLINERD	7+50.00	-25.00	LT	INLETS MEDIAN 2G-MS				100-100.1 OUT	N	CPCPE 18-INCH	835.25	TO STR: 100.1	190.00'	7.50%	
100.1	TOWNLINERD	9+40.00	-25.00	LT	APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH				100-100.1 IN	S	CPCPE 18-INCH	821.00	FROM STR: 100	--	--	
200	TOWNLINERD	10+94.69	-13.33	LT	INLETS 2X2.0-V	818.82	813.21	5.61	200-200.1 OUT	W	CPCPE 12-INCH	813.24	TO STR: 200.1	18.00'	3.00%	
200.1	TOWNLINERD	10+94.69	-31.33	LT	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH				200-200.1 IN	E	CPCPE 12-INCH	812.70	FROM STR: 200	--	--	
300	TOWNLINERD	11+02.53	13.33	RT	INLETS 2X2.0-V	818.59	813.28	5.31	300-300.1 OUT	E	CPCPE 12-INCH	813.31	TO STR: 300.1	17.00'	3.00%	
300.1	TOWNLINERD	11+02.53	30.33	RT	APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH				300-300.1 IN	W	CPCPE 12-INCH	812.80	FROM STR: 300	--	--	

2

LEGEND

- XXX — SIGN - REMOVE EXISTING AND PLACE NEW
- XXX — SIGN - REMOVE EXISTING
- EXISTING SIGN
- PROPOSED SIGN MOUNTED ON POST(S)

N

3 — W5-52L 12"X36"

5 — W5-52R 12"X36"

7 — WEIGHT LIMIT 10 TONS — REMOVE

8 — 10 TON BRIDGE 0.6 MILES AHEAD — REMOVE

LOCATED SOUTH OF THE INTERSECTION OF FOREST AVENUE AND TOWNLINE ROAD

SIGN TO REMAIN

SCHOOL BUS STOP AHEAD

UTILIITY EASEMENT

EXIST R/W

PROPOSED TLE

PROP R/W

EXIST R/W

TOWNLINE ROAD

ASPHALT

ASPHALT

7 9 10 11 12 13 14

EXIST R/W

2 — WEIGHT LIMIT 10 TONS — REMOVE

10" PVC PIPE

PROP R/W

PROP R/W

4 — W5-52R 12"X36"

SLOPE INTERCEPT, TYP

WETLAND LIMITS, TYP

WEST BRANCH FOND DU LAC RIVER

6 — W5-52L 12"X36"

1 — 10 TON BRIDGE 1/4 MILES AHEAD — REMOVE

LOCATED NORTH OF THE INTERSECTION OF CTH T AND TOWNLINE ROAD

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	SIGNING PLAN	SHEET 10	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-023201-PS.DWG
LAYOUT NAME - Sheet-01

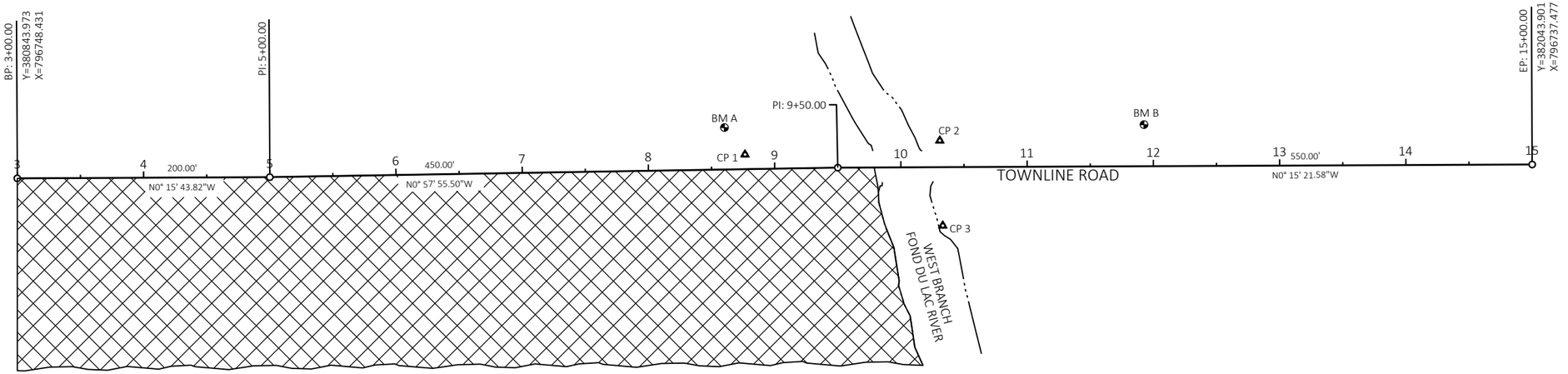
PLOT DATE : 7/31/2024 4:18 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

2

N

BURIAL SITE 47FD25/BFD-0146
(WEST BRANCH GRAVEL PIT)



BENCH MARKS		
BM	DESCRIPTION	ELEVATION
A	RAILROAD SPIKE IN POWER POLE #15-16-13, 52/10, SOUTHWEST SIDE OF BRIDGE 110' ON WEST SIDE TOWNLINE ROAD	830.48
B	RAILROAD SPIKE IN POWER POLE #15-16-13, 52/14, NORTHWEST SIDE OF BRIDGE 150' ON WEST SIDE TOWNLINE ROAD	813.73
**VERTICAL DATUM REFERENCED TO NAVD88 (2012).		

CONTROL POINT TABLE				
POINT #	DESCRIPTION	NORTHING	EASTING	ELEVATION
1	MAG NAIL IN ASPHALT, 90' SOUTH OF SOUTH END OF BRIDGE ON WEST EDGE OF ROAD, 12' FROM C/L	381420.3180	796729.5980	829.87
2	1" IRON PIPE WITH CAP NORTHWEST OF BRIDGE, 6' NORTH OF NORTH END OF BRIDGE DECK, 20' WEST OF C/L	381574.6690	796718.6860	819.17
3	1" IRON PIPE WITH CAP NORTHEAST OF BRIDGE, 5' NORTH OF NORTH END OF BRIDGE DECK, 48' EASST OF C/L	381576.9810	796785.8820	811.24

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	ALIGNMENT DIAGRAM - ARCHEOLOGICAL SITE	SHEET 11	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-027201-AD.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 7/31/2024 4:18 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

Estimate Of Quantities

3822-02-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	6.000	6.000
0004	201.0205	Grubbing	STA	6.000	6.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-20-86	EACH	1.000	1.000
0008	204.0110	Removing Asphaltic Surface	SY	140.000	140.000
0010	205.0100	Excavation Common	CY	1,748.000	1,748.000
0012	205.0400	Excavation Marsh	CY	196.000	196.000
0014	206.1001	Excavation for Structures Bridges (structure) 01. B-20-253	EACH	1.000	1.000
0016	208.0100	Borrow	CY	333.000	333.000
0018	210.1500	Backfill Structure Type A	TON	376.000	376.000
0020	213.0100	Finishing Roadway (project) 01. 3822-02-71	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	140.000	140.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,090.000	1,090.000
0026	311.0110	Breaker Run	TON	535.000	535.000
0028	416.0610	Drilled Tie Bars	EACH	24.000	24.000
0030	450.4000	HMA Cold Weather Paving	TON	254.000	254.000
0032	455.0605	Tack Coat	GAL	57.000	57.000
0034	465.0105	Asphaltic Surface	TON	254.000	254.000
0036	502.0100	Concrete Masonry Bridges	CY	199.300	199.300
0038	502.3200	Protective Surface Treatment	SY	270.000	270.000
0040	502.3210	Pigmented Surface Sealer	SY	115.000	115.000
0042	503.0137	Prestressed Girder Type I 36W-Inch	LF	340.000	340.000
0044	505.0400	Bar Steel Reinforcement HS Structures	LB	3,860.000	3,860.000
0046	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	25,770.000	25,770.000
0048	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0050	506.4000	Steel Diaphragms (structure) 01. B-20-253	EACH	6.000	6.000
0052	516.0500	Rubberized Membrane Waterproofing	SY	19.000	19.000
0054	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	2.000	2.000
0056	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	1.000	1.000
0058	530.0112	Culvert Pipe Corrugated Polyethylene 12-Inch	LF	35.000	35.000
0060	530.0118	Culvert Pipe Corrugated Polyethylene 18-Inch	LF	191.000	191.000
0062	550.0500	Pile Points	EACH	16.000	16.000
0064	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	514.000	514.000
0066	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	100.000	100.000
0068	602.3010	Concrete Surface Drains	CY	1.000	1.000
0070	606.0200	Riprap Medium	CY	183.000	183.000
0072	606.0400	Riprap Extra-Heavy	CY	330.000	330.000
0074	611.0642	Inlet Covers Type MS	EACH	2.000	2.000
0076	611.0654	Inlet Covers Type V	EACH	2.000	2.000
0078	611.3220	Inlets 2x2-FT	EACH	2.000	2.000
0080	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0082	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	170.000	170.000
0084	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0086	614.2300	MGS Guardrail 3	LF	50.000	50.000
0088	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0090	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0092	619.1000	Mobilization	EACH	1.000	1.000
0094	624.0100	Water	MGAL	17.000	17.000
0096	625.0100	Topsoil	SY	2,100.000	2,100.000
0098	628.1504	Silt Fence	LF	730.000	730.000

Estimate Of Quantities

3822-02-71

Line	Item	Item Description	Unit	Total	Qty
0100	628.1520	Silt Fence Maintenance	LF	730.000	730.000
0102	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0104	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0106	628.2008	Erosion Mat Urban Class I Type B	SY	2,100.000	2,100.000
0108	628.6005	Turbidity Barriers	SY	240.000	240.000
0110	628.7005	Inlet Protection Type A	EACH	1.000	1.000
0112	628.7010	Inlet Protection Type B	EACH	4.000	4.000
0114	628.7560	Tracking Pads	EACH	2.000	2.000
0116	628.7570	Rock Bags	EACH	440.000	440.000
0118	629.0210	Fertilizer Type B	CWT	0.800	0.800
0120	630.0130	Seeding Mixture No. 30	LB	48.000	48.000
0122	630.0500	Seed Water	MGAL	60.000	60.000
0124	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0126	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0128	638.2602	Removing Signs Type II	EACH	8.000	8.000
0130	638.3000	Removing Small Sign Supports	EACH	7.000	7.000
0132	643.0420	Traffic Control Barricades Type III	DAY	1,350.000	1,350.000
0134	643.0705	Traffic Control Warning Lights Type A	DAY	2,100.000	2,100.000
0136	643.0900	Traffic Control Signs	DAY	1,050.000	1,050.000
0138	643.5000	Traffic Control	EACH	1.000	1.000
0140	645.0111	Geotextile Type DF Schedule A	SY	92.000	92.000
0142	645.0120	Geotextile Type HR	SY	953.000	953.000
0144	645.0140	Geotextile Type SAS	SY	795.000	795.000
0146	650.4000	Construction Staking Storm Sewer	EACH	6.000	6.000
0148	650.4500	Construction Staking Subgrade	LF	527.000	527.000
0150	650.5000	Construction Staking Base	LF	527.000	527.000
0152	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	100.000	100.000
0154	650.6501	Construction Staking Structure Layout (structure) 01. B-20-253	EACH	1.000	1.000
0156	650.9911	Construction Staking Supplemental Control (project) 01. 3822-02-71	EACH	1.000	1.000
0158	650.9920	Construction Staking Slope Stakes	LF	527.000	527.000
0160	690.0150	Sawing Asphalt	LF	42.000	42.000
0162	715.0502	Incentive Strength Concrete Structures	DOL	1,200.000	1,200.000
0164	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. STA 10+00	EACH	1.000	1.000
0166	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	600.000	600.000
0168	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0170	SPV.0195	Special 01. Select Crushed Material for Travel Corridor	TON	251.000	251.000

3

CLEARING AND GRUBBING ITEMS

STATION - STATION		201.0105 CLEARING STA	201.0205 GRUBBING STA
CATEGORY CODE 0010			
7+00 - 13+00		6	6
	TOTALS	**6**	**6**

REMOVING ASPHALTIC SURFACE

STATION - STATION	LOCATION	204.0110 SY
CATEGORY CODE 0010		
7+80 - 8+28	LT & RT	130
12+12 - 12+17	LT & RT	10
	TOTAL	**140**

3

BASE AGGREGATE DENSE AND WATER ITEMS

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
CATEGORY CODE 0010				
6+92 - 9+57	LT & RT	78	542	9
10+43 - 13+04	LT & RT	62	548	8
	TOTALS	**140**	**1,090**	**17**

BASE AGGREGATE DENSE 3/4-INCH WEIGHT CALCULATIONS BASED ON 2.1 TONS/CY.
BASE AGGREGATE DENSE 1 1/4-INCH WEIGHT CALCULATIONS BASED ON 2.0 TONS/CY.

BREAKER RUN & GEOSYNTHETICS

LOCATION	311.0110 BREAKER RUN TON	645.0140 GEOTEXTILE TYPE SAS SY
CATEGORY CODE 0010		
UNDISTRIBUTED EBS	181	315
11+00 - 12+50	354	480
TOTAL	**535**	**795**

BREAKER RUN WEIGHT CALCULATIONS BASED ON 1.8 TONS/ CY.

DRILLED TIE BARS

STATION - STATION	LOCATION	416.0610 EACH
CATEGORY CODE 0010		
10+40 - 10+52	LT	12
10+47 - 10+59	RT	12
	TOTAL	**24**

ASPHALTIC ITEMS

STATION - STATION	LOCATION	450.4000 HMA COLD WEATHER TON	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
CATEGORY CODE 0010				
7+80 - 9+57	LT & RT	132	30	132
10+43 - 12+17	LT & RT	122	27	122
	TOTALS	**254**	**57**	**254**

TACK COAT CALCULATIONS BASED ON 0.050 GAL/SY
ASPHALTIC SURFACE WEIGHT CALCULATIONS BASED ON 112 LB/SY/IN.

3

3

EARTHWORK SUMMARY

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	205.0400 MARSH EXCAVATION (6)	REDUCED MARSH IN FILL (8)	REDUCED EBS IN FILL (9)	EXPANDED MARSH BACKFILL (10)	EXPANDED EBS BACKFILL (11)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
			CUT (2)	EBS EXCAVATION (3)				FACTOR 0.60	FACTOR 0.80	FACTOR 1.50	FACTOR 1.30		FACTOR 1.30				
CATEGORY CODE 0010																	
DIVISION 1																	
TOWNLINE ROAD (SOUTH)	06+91.758/09+56.706	TOWNLINE ROAD	1,427	50	68	1,359	0	0	40	0	65	99	77	1,282	1,282	0	
	DIVISION 1 SUBTOTAL		1,427	50	68	1,359	0	0	40	0	65	99	77	1,282	1,282	0	
DIVISION 2																	
TOWNLINE ROAD (NORTH)	10+43.294/13+04.443	TOWNLINE ROAD	221	50	102	119	196	118	40	294	65	476	414	-295	0	295	
TOWNLINE ROAD (NORTH)	11+00/11+62	FORESLOPE ACCESS	0	0	0	0	0	0	0	0	0	29	38	-38	0	38	
	DIVISION 2 SUBTOTAL		221	50	102	119	196	118	40	294	65	505	452	-333	0	333	
		GRAND TOTAL	1,648	100	170	1,478	196	118	80	294	130	604	528	950	1,282	333	

TOTAL EXCAVATION COMMON	1,748

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS
(2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
(3) EBS EXCAVATION TO BE BACKFILLED WITH BREAKER RUN.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL = LENGTH * TYPICAL WIDTH * TYPICAL DEPTH
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
(6) MARSH EXCAVATION - TO BE BACKFILLED WITH BREAKER RUN
(7) NOT USED
(8) REDUCED MARSH IN FILL - EXCAVATED MARSH MATERIAL IS USEABLE IN FILLS OUTSIDE THE 1:1 SLOPE. MARSH IN FILL REDUCTION FACTOR = 0.60
(9) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USEABLE IN FILLS OUTSIDE THE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 0.80
(10) EXPANDED MARSH BACKFILL - THIS IS TO BE FILLED WITH BREAKER RUN
(11) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH BREAKER RUN
(12) NOT USED
(13) 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

DRAINAGE ITEMS

STRUCTURE	STATION	OFFSET*	LOCATION	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	530.0112 CULVERT PIPE CORRUGATED POLYETHYLENE 12-INCH LF	530.0118 CULVERT PIPE CORRUGATED POLYETHYLENE 18-INCH LF	611.0642 INLET COVERS TYPE MS EACH	611.0654 INLET COVERS TYPE V EACH	611.3220 INLETS 2X2-FT EACH	611.3902 INLETS MEDIAN 2 GRATE EACH	650.4000 CONSTRUCTION STAKING STORM SEWER EACH
CATEGORY CODE 0010												
100	7+50.00	25.00' LT	TOWNLINE RD	--	--	--	191	2	--	--	1	1
100.1	9+40.00	25.00' LT	TOWNLINE RD	--	1	--	--	--	--	--	--	1
200	10+94.69	13.33' LT	TOWNLINE RD	--	--	18	--	--	1	1	--	1
200.1	10+94.69	31.33' LT	TOWNLINE RD	1	--	--	--	--	--	--	--	1
300	11+02.53	13.33' RT	TOWNLINE RD	--	--	17	--	--	1	1	--	1
300.1	11+02.53	30.33' RT	TOWNLINE RD	1	--	--	--	--	--	--	--	1
			TOTALS	**2**	**1**	**35**	**191**	**2**	**2**	**2**	**1**	**6**

REMARKS:
*STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE FOR INLETS AND END OF PIPE FOR ENDWALLS.

CONCRETE CURB AND GUTTER ITEMS

STATION - STATION	LOCATION	601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF
CATEGORY CODE 0010			
10+51 - 11+01	LT	50	50
10+59 - 11+09	RT	50	50
	TOTALS	**100**	**100**

CONCRETE SURFACE DRAINS

STATION	LOCATION	602.3010 CY
CATEGORY CODE 0010		
10+40 - 10+52	LT	0.5
10+47 - 10+59	RT	0.5
	TOTAL	**1.0**

RIPRAP AND GEOTEXTILE FABRIC ITEMS

STATION - STATION	LOCATION	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
CATEGORY CODE 0010			
7+12 - 9+87	RT	124	346
7+23 - 7+57	LT	15	45
10+95	LT	4	13
11+03	RT	3	10
UNDISTRIBUTED		37	103
	TOTALS	**183**	**517**

MGS GUARDRAIL ITEMS

STATION - STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
CATEGORY CODE 0010				
8+32 - 9+43	LT	12.5	39.4	1.0
8+46 - 9+48	RT	12.5	39.4	1.0
10+52 - 11+54	LT	12.5	39.4	1.0
10+59 - 11+62	RT	12.5	39.4	1.0
	TOTALS	**50.0**	**157.6**	**4.0**

3

RESTORATION ITEMS

STATION - STATION	LOCATION	625.0100 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEED MIX NO. 30 LB	630.0500 SEED WATER MGAL
CATEGORY CODE 0010						
6+92 - 9+67	LT & RT	782	782	0.6	19	23
10+43 - 13+04	LT & RT	894	894	--	20	25
UNDISTRIBUTED		424	424	0.2	9	12
	TOTALS	**2,100**	**2,100**	**0.8**	**48**	**60**

NOTES: DO NOT APPLY FERTILIZER WITHIN 20 FEET OF A BODY OF WATER OR WETLAND

EROSION CONTROL ITEMS

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	628.7005 INLET PROTECTION TYPE A EACH	628.7010 INLET PROTECTION TYPE B EACH	628.7560 TRACKING PADS EACH	628.7570 ROCK BAGS EACH
CATEGORY CODE 0010										
PROJECT 3822-02-71		--	--	5	3	--	--	--	2	--
6+95 - 9+80	RT	48	48	--	--	--	--	--	--	227
7+20 - 9+60	LT	161	161	--	--	--	1	1	--	30
9+60 - 9+90	LT & RT	--	--	--	--	69	--	--	--	--
9+92 - 10+11	LT & RT	--	--	--	--	58	--	--	--	--
9+95 - 10+35	LT & RT	--	--	--	--	67	--	--	--	--
10+00 - 13+17	LT	324	324	--	--	--	--	--	--	34
10+28 - 11+50	RT	51	51	--	--	--	--	--	--	47
10+95	LT	--	--	--	--	--	--	1	--	--
11+03	RT	--	--	--	--	--	--	1	--	--
UNDISTRIBUTED		146	146	--	--	46	--	1	--	102
	TOTALS	**730**	**730**	**5**	**3**	**240**	**1**	**4**	**2**	**440**

3

SIGNING ITEMS

SIGN NUMBER	EXISTING STATION	EXISTING LOCATION	PROPOSED STATION	PROPOSED LOCATION	ROADWAY	SIGN CODE	SIZE	634.0612 POSTS WOOD 4X6X12 EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
CATEGORY CODE 0010												
1	--	NORTH OF CTH T	--	--	TOWNLINE ROAD	--	---	--	--	1	1	10 TON BRIDGE 1/4 MILES AHEAD
2	6+66	RT	--	--	TOWNLINE ROAD	--	---	--	--	1	1	10 TON BRIDGE
3	9+73	LT	9+35	LT	TOWNLINE ROAD	W5-52L	12X36	1	3	1	1	--
4	9+75	RT	9+42	RT	TOWNLINE ROAD	W5-52R	12X36	1	3	1	1	--
5	10+28	LT	10+54	LT	TOWNLINE ROAD	W5-52L	12X36	1	3	1	1	--
6	10+31	RT	10+61	RT	TOWNLINE ROAD	W5-52R	12X36	1	3	1	1	--
7	11+38	LT	--	--	TOWNLINE ROAD	--	---	--	--	1	1	10 TON BRIDGE
8	--	SOUTH OF FOREST AVE	--	--	TOWNLINE ROAD	--	---	--	--	1	--	10 TON BRIDGE 0.6 MILES AHEAD
						TOTALS		**4**	**12**	**8**	**7**	

3

TRAFFIC CONTROL ITEMS

LOCATION	NUMBER OF DAYS IN SERVICE	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO. REQ'D	643.0420 TRAFFIC CONTROL BARRICADES TYPE III TOTAL DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO. REQ'D	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A TOTAL DAY	643.0900 TRAFFIC CONTROL SIGNS NO. REQ'D	643.0900 TRAFFIC CONTROL SIGNS TOTAL DAY	643.5000 TRAFFIC CONTROL EACH
CATEGORY CODE 0010								
PROJECT 3822-02-71	75	--	--	--	--	--	--	1
TOWNLINE ROAD / CTH T	75	*2*	150	*4*	300	*3*	225	--
SOUTH PROJECT LIMITS	75	*7*	525	*10*	750	*4*	300	--
NORTH PROJECT LIMITS	75	*7*	525	*10*	750	*4*	300	--
TOWNLINE ROAD / FOREST AVENUE	75	*2*	150	*4*	300	*3*	225	--
	TOTALS		**1,350**		**2,100**		**1,050**	**1**

SAWING ASPHALT

STATION	LOCATION	690.0150 LF
CATEGORY CODE 0010		
7+80	LT & RT	21
12+17	LT & RT	21
	TOTAL	**42**

CONSTRUCTION STAKING ITEMS

STATION - STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6501 CONSTRUCTION STAKING STRUCTURE LAYOUT EACH	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
CATEGORY CODE 0010						
01. PROJECT 3822-02-71		--	--	--	1	--
6+92 - 9+57	LT & RT	265	265	--	--	265
10+43 - 13+04	LT & RT	262	262	--	--	262
CATEGORY CODE 0010 SUBTOTALS		527	527	--	1	527
CATEGORY CODE 0020						
01. B-20-253		--	--	1	--	--
CATEGORY CODE 0020 SUBTOTALS		--	--	1	--	--
	TOTALS	**527**	**527**	**1**	**1**	**527**

INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM

STATION	999.2000.S EACH
CATEGORY CODE 0010	
10+00	1
TOTAL	**1**

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W LINE
PROPERTY LINE
LOT, TIE, AND OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)
TEMP. LIMITED EASEMENT AREA
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
BUILDING (TO BE REMOVED)
BRIDGE

PARCEL NUMBER (25)
UTILITY NUMBER (40)
SECTION CORNER
NOTATION FOR COMBUSTABLE FLUIDS (CAUTION)
NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES (CAUTION)
R/W MONUMENT
NON-MONUMENTED R/W POINT
FOUND IRON PIN
VALVE (GAS, WATER, ETC.)
SIGN
OFF-PREMISE SIGN
PARALLEL OFFSETS

ACCESS CONTROLLED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
NATIONAL GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT

CONVENTIONAL UTILITY SYMBOLS

WATER	W
GAS	G
TELEPHONE	T
OVERHEAD TRANSMISSION LINES	OH
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS
ELECTRIC TOWER	

	NON-COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		

CURVE DATA ABBREVIATIONS

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

CONVENTIONAL ABBREVIATIONS

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

NOTES:

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

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 MONUMENTS (TYPICALLY 1" X 24" IRON PIPES), UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

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

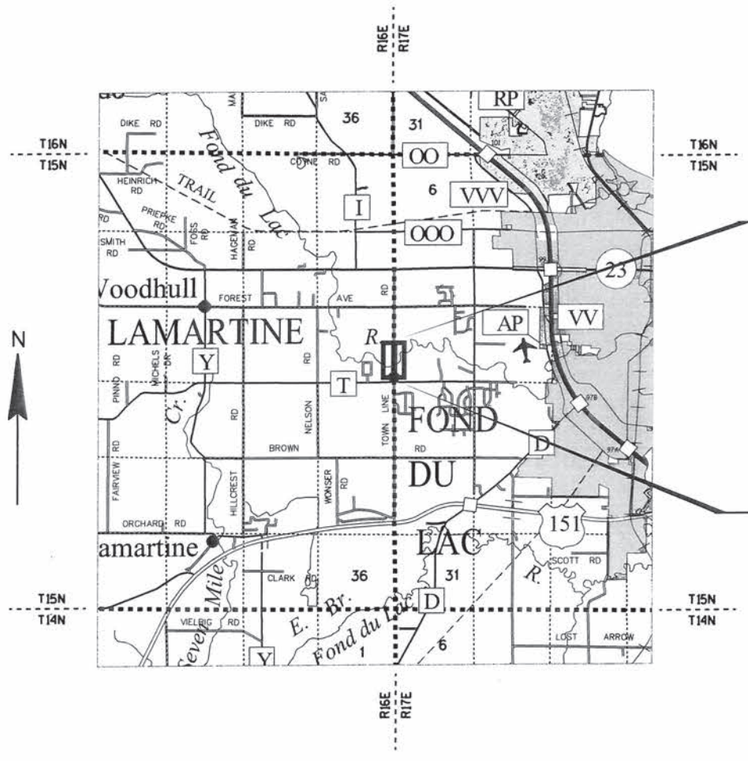
A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY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

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

FOR THE CURRENT ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN GREEN BAY.

PARCEL AND UTILITY IDENTIFICATION NUMBERS MAY NOT POINT TO ALL AREAS OF ACQUISITION, AS NOTED ON THE DETAIL PAGES.

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



TOTAL NET LENGTH OF CENTERLINE = 0.114 MI.

END RELOCATION ORDER
12+99.96
Y 381843.879
X 796741.300
1501.58' NORTH AND 4.97' WEST OF THE SOUTHWEST CORNER OF SECTION 18, T15N, R17E

BEGIN RELOCATION ORDER
7+00.01
Y 381243.940
X 796743.286
901.64' NORTH AND 2.98' WEST OF THE SOUTHWEST CORNER OF SECTION 18, T15N, R17E

CAUTION:
THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
3822-02-00		
PROJECT NUMBER 3822-02-00	4.01	2

PLAT OF RIGHT OF WAY REQUIRED FOR

TOWN OF LAMARTINE
WEST BRANCH FOND DU LAC RIVER BRIDGE

TOWNLINE ROAD	FOND DU LAC COUNTY

ACCEPTED FOR
TOWN OF LAMARTINE
9/19/23 DATE
RANDY KUK
TOWN CHAIRPERSON

ACCEPTED FOR
TOWN OF FOND DU LAC
9/20/23 DATE
JEFF MONTSMA
TOWN CHAIRPERSON

ORIGINAL PLAT PREPARED BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac
120 Wilshire Boulevard North • Stevens Point, WI 54481
(715) 341-4363 • fax (715) 341-1556

8/15/2023 DATE
AARON PARKS, PLS

AARON PARKS S-2861 STEVENS POINT WIS
WISCONSIN LAND SURVEYOR

REVISION DATE
7/8/2024 N.C.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED FOR THE DEPARTMENT

DATE: _____ _____ (Signature)

APPRAISAL DATE: 8/15/2023

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\\RW\DWG\040101-RP.DWG
PLOT DATE : 8/22/2023 2:40 PM
PLOT BY : AARON PARKS
PLOT NAME :

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER	INTEREST REQUIRED	FEE R/W ACRE(S) REQUIRED NEW	EXISTING	TOTAL	T.L.E. ACRE(S) TEMP.
1	BRUCE T. BALSON AND SANDRA J. BALSON, AS TRUSTEES OF THE BRUCE AND SANDRA BALSON FAMILY TRUST	FEE	0.126	0	0.126	0
2	MARK GRUNEWALD & JANEL R. GRUNEWALD	FEE & TLE	0.074	0	0.074	0.024
3	TRIPLE B HOMESTEAD, LLC	FEE	0.096	0	0.096	0
4	RAEMOND R. THERN & CAROL THERN (LC VENDOR) FOND DU LAC LOST ARROW CLUB, INC (LC VENDEE)	FEE	0.046	0	0.046	0

PARCEL 2 – TLE

FROM POINT	TO POINT	BEARING	DISTANCE
6	101	N00°11'23"W	1126.21'
101	310	S89°48'37"W	33.00'
310	401	S00°11'23"E	205.02'
401	402	S89°48'37"W	5.00'
402	403	N00°11'23"W	205.02'
403	310	N89°48'37"E	5.00'

COURSE TABLE

FROM POINT	TO POINT	BEARING	DISTANCE
6	100	N00°11'23"W	901.65'
100	101	N00°11'23"W	224.56'
101	310	S89°48'37"W	33.00'
310	309	S89°48'37"W	17.00'
309	308	N00°11'23"W	235.36'
308	307	N06°43'58"E	141.05'
307	103	N89°48'37"E	33.00'
103	102	S00°11'23"E	24.92'
102	306	N89°48'37"E	33.00'
306	305	S04°30'39"E	225.62'
305	304	S00°11'23"E	124.35'
304	303	S11°31'11"E	76.29'
303	302	S00°11'23"E	50.00'
302	301	S11°01'04"W	102.84'
301	300	S89°48'37"W	12.00'
300	100	S89°48'37"W	33.00'

ALLIANT ENERGY (80)
ELECTRIC
DOC. #1002286
PARCEL 2

DOC. #1004219
PARCEL 4

AT&T (81)
TELEPHONE
NO EASEMENT OF RECORD
PARCEL 2

ATC MANAGEMENT, INC (82)
ELECTRIC
DOC. #705431 & 91435
PARCELS 2 & 4

LAMARTINE

(4)
T12-15-16-13-13-003-00
RAEMOND R. THERN AND CAROL THERN (LC VENDOR)
FOND DU LAC LOST ARROW CLUB, INC. (LC VENDEE)

(2)
T12-15-16-13-16-001-00
MARK GRUNEWALD AND
JANEL R. GRUNEWALD

SE 1/4-SE 1/4

TOWN

SIXTEENTH LINE

NE 1/4-SE 1/4

15' WIDE ELECTRIC EASEMENT
DOC. #1002286

15' WIDE ELECTRIC EASEMENT
DOC. #1004219

PI: 9+50
Y: 381493.901
X: 796739.934
DELTA: 179°17'26" LT.

PROPOSED R/W

TEL
PP
PED

EXISTING R/W

TLE FOR GRADING

R/L N00°57'56"W

R/L N00°15'22"W

SECTION LINE

N00°11'23"W 2629.69'

TOWNLINE ROAD

7+63.55 S/L

POST

10" PVC PIPE

SLOPE INTERCEPT TYP.

NW 1/4-SW 1/4

FOND DU LAC

(6)
Y 380342.298
X 796746.270
FD. BERNTSEN MONUMENT

Y 382971.969
X 796737.567
FROM TIES

(1)
T09-15-17-18-11-002-00
BRUCE T. BALSON AND SANDRA J. BALSON, AS TRUSTEES OF THE BRUCE AND SANDRA BALSON FAMILY TRUST

TOWN
LOT 1
CSM #5076
V31/P19
DOC. #596296

SW 1/4-SW 1/4

(3)
T09-15-17-18-11-007-00
TRIPLE B HOMESTEAD, LLC

(3)
T09-15-17-18-10-001-00
TRIPLE B HOMESTEAD, LLC

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER	INTEREST REQUIRED
80	ALLIANT ENERGY	RELEASE OF RIGHTS
81	AT&T	RELEASE OF RIGHTS
82	ATC MANAGEMENT, INC	RELEASE OF RIGHTS

COORDINATE TABLE

POINT	Y	X
6	380342.298	796746.270
100	381243.940	796743.286
101	381468.501	796742.543
102	381818.955	796741.383
103	381843.879	796741.300
300	381244.049	796776.286
301	381244.089	796788.286
302	381345.032	796807.940
303	381395.036	796807.774
304	381469.790	796792.539
305	381594.142	796792.127
306	381819.065	796774.383
307	381843.770	796708.300
308	381703.694	796691.764
309	381468.336	796692.543
310	381468.392	796709.543
401	381263.374	796710.221
402	381263.358	796705.221
403	381468.375	796704.543

BASIS FOR EXISTING R/W

ROUTE	SOURCE
TOWNLINE ROAD	CSM #5076-31-19

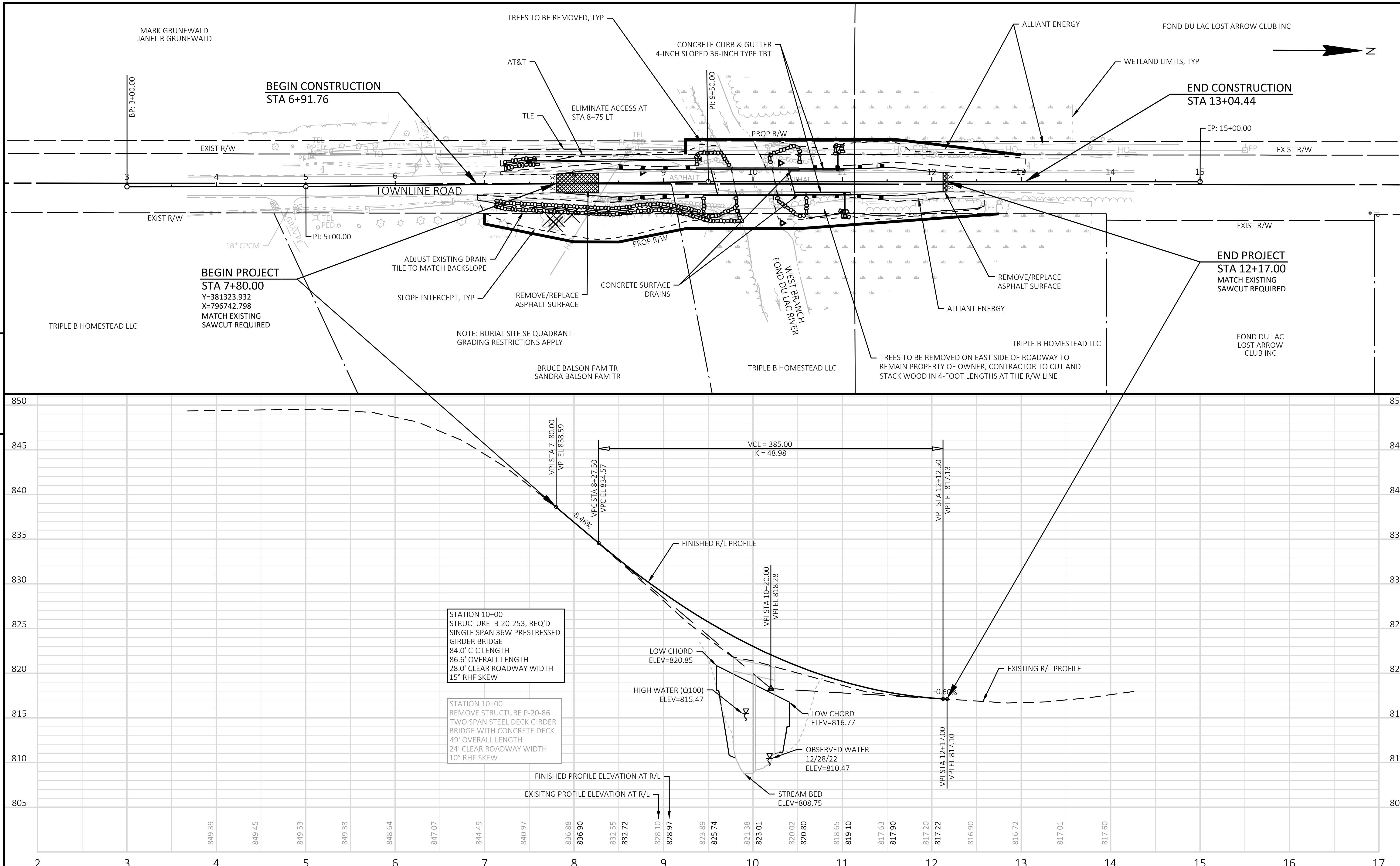
CAUTION:
THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS.

REVISION DATE JULY 8, 2024	DATE 8/15/2023	HWY: TOWNLINE ROAD	PLAT SHEET 4.02
	GRID FACTOR	COUNTY: FOND DU LAC	PS&E SHEET 20
	SCALE, FEET 0 25 50	STATE R/W PROJECT NUMBER 3822-02-00	E
		CONSTRUCTION PROJECT NUMBER 3822-02-71	

FILE NAME : 040102-RP.DWG
LAYOUT NAME - 4.02

PLOT DATE : 7/15/2024 6:59 AM PLOT BY : AARON PARKS PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 75

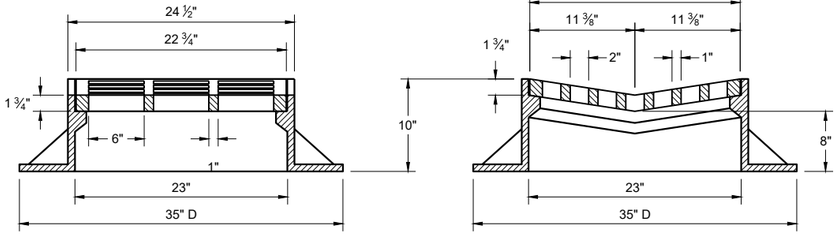


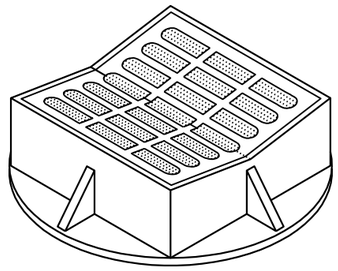
PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	PLAN AND PROFILE: TOWNLINE ROAD	SHEET 21	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-050101-PP.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 7/31/2024 4:20 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:100 FT

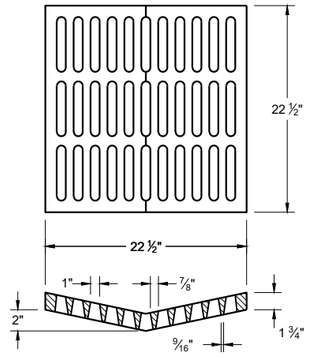
Standard Detail Drawing List

08A05-21B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-21D	INLET COVERS TYPE V, V-B, & VV-B
08C07-03	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT, 2.5X3-FT & 2X3.5-FT
08C08-03	INLETS MEDIAN 1 AND 2 GRATE
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D03-09A	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08D03-09B	CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E11-02	TURBIDITY BARRIER
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS





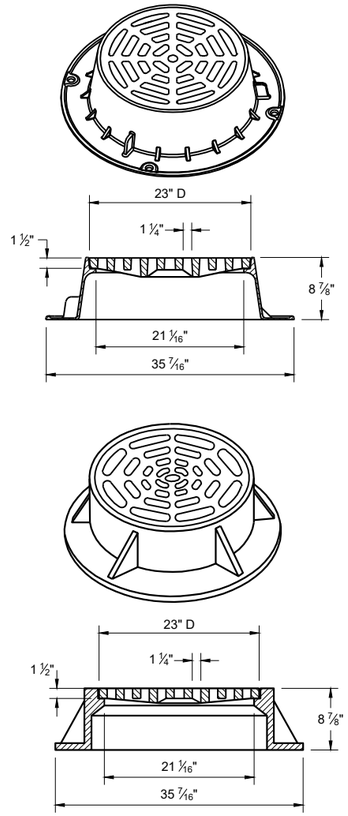
TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE

NOTED AS TYPE B - A ON THE DRAINAGE TABLE



TYPE "C"

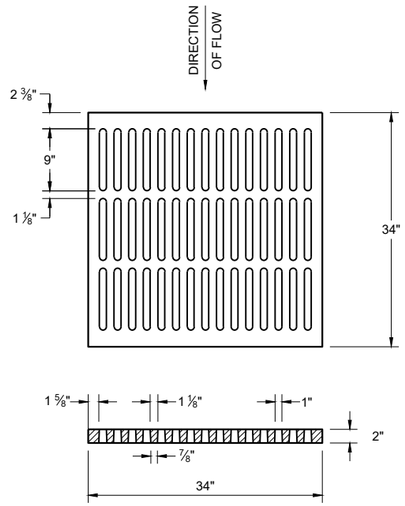
NOTE: EITHER CASTING IS ACCEPTABLE

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

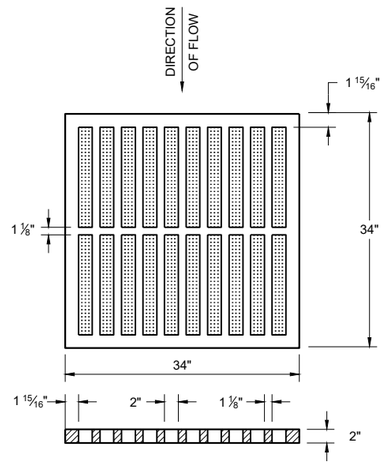
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED

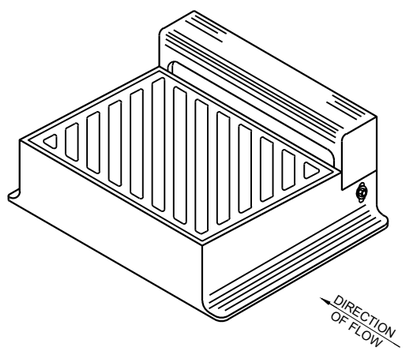
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



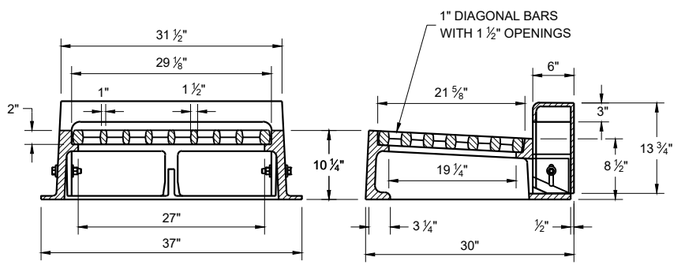
TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS

NOTED AS TYPE MS ON THE DRAINAGE TABLE



DIAGONAL SLOTS SHALL BE ORIENTEDTO THE DIRECTION OF FLOW AS ILLUSTRATED.
GRATES ARE MANUFACTURED TO BE REVERSIBLE.



TYPE "WM"

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

INLET COVERS TYPES B, B-A, C, MS, MS-A AND WM

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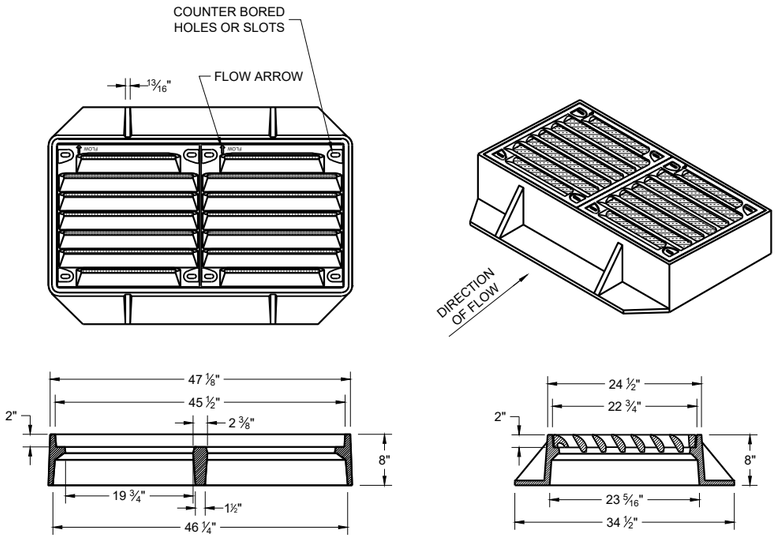
GENERAL NOTES

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.

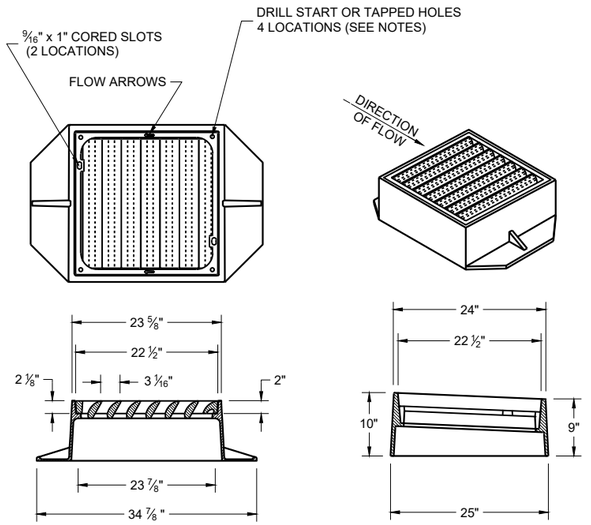
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.



TYPE "VV-B"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER
ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

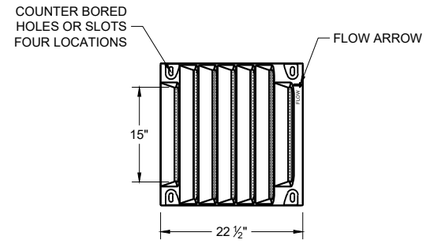
TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 35B
⅜" DIA. X 1/16" DRILL START IN 8 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



TYPE "V"

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER ALL DRILLING AND TAPPING GRATES AND FRAMES BY CASTING MANUFACTURER

TYPE V
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A
⅜" DIA. X 1/16" DRILL START IN 4 LOCATIONS
GRATE - CAST GRAY IRON ASTM A-48, CLASS 35B



BOLT DOWN GRATE FOR TYPE "V" AND "VV-B" COVER

NOTES: ALL HARDWARE TO BE SUPPLIED BY CASTING MANUFACTURER NOTED AS TYPE "V-B" OR "VV-B" (FOR DOUBLE GRATE) ON DRAINAGE TABLE

TAP ½" -13 HOLES IN FOUR LOCATIONS PER GRATE IN FRAME TO BOLT GRATE(S).
FRAME - CAST GRAY IRON ASTM A48 CLASS 40A

GRATE - CAST DUCTILE IRON ASTM A536, 55+KSI YIELD
BOLTS - ½" -13 STAINLESS STEEL BOLTS WITH WASHERS
TORQUE BOLTS TO MANUFACTURER SPECIFICATION DO NOT OVERTIGHTEN.

INLET COVERS
TYPES V, V-B, AND VV-B

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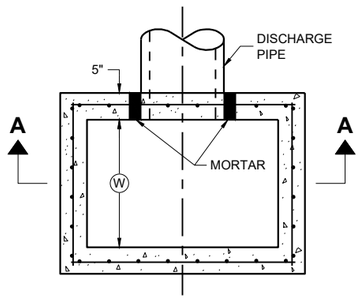
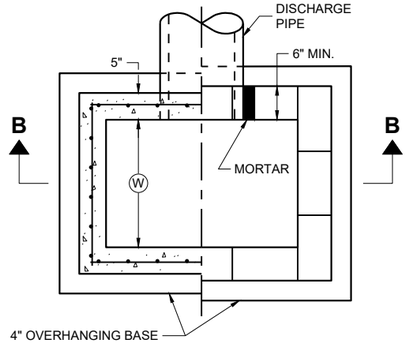
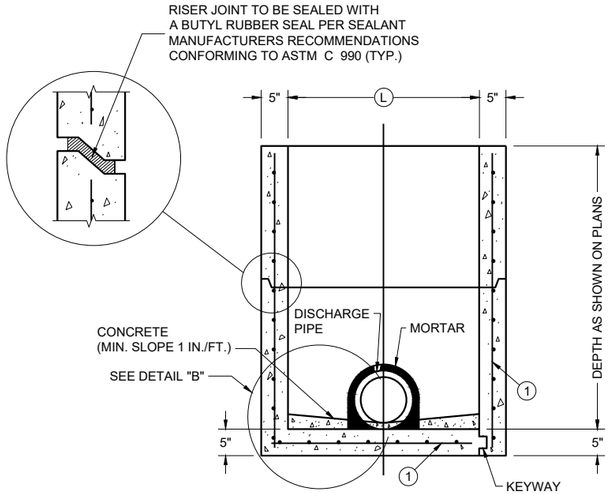


PLAN VIEW



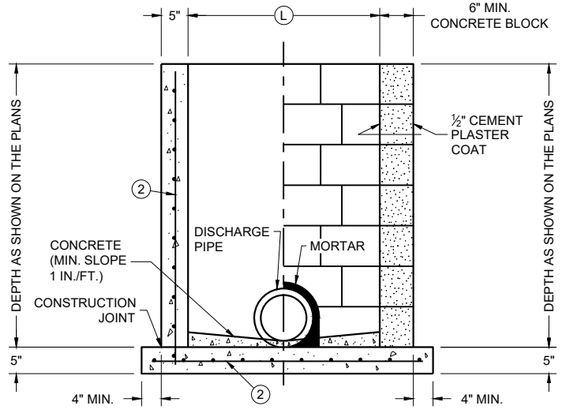
PLAN VIEW



PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE

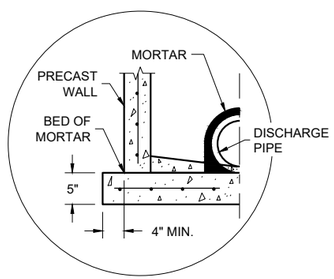
SECTION A - A



CAST IN PLACE REINFORCED CONCRETE

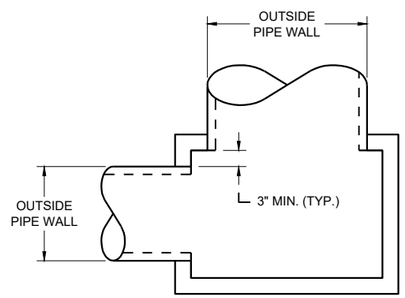
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)

SECTION B - B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "B"



DETAIL "A"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

(1) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913
(2) CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

CATCH BASIN COVER MATRIX

INLET SIZE	WIDTH (W) (FT.)	LENGTH (L) (FT.)	INLET COVER TYPE									
			ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM	V V-B
2 X 2-FT	2	2	X	X				X				
2 X 2.5-FT	2	2.5			X			X	X	X	X	
2 X 3-FT	2	3					X					
2.5 X 3-FT	2.5	3				X						
2 X 3.5-FT	2	3.5										X

PIPE MATRIX

CATCH BASIN SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	WIDTH (IN)	LENGTH (IN)
2 X 2-FT	12	12
2 X 2.5-FT	12	18
2 X 3-FT	12	24
2.5 X 3-FT	18	24
2 X 3.5-FT	12	30

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2X3.5-FT

INLETS 2 X 2-FT, 2 X 2.5-FT, 2 X 3-FT, 2.5 X 3-FT AND 2 X 3.5-FT

STATE OF WISCONSIN
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ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

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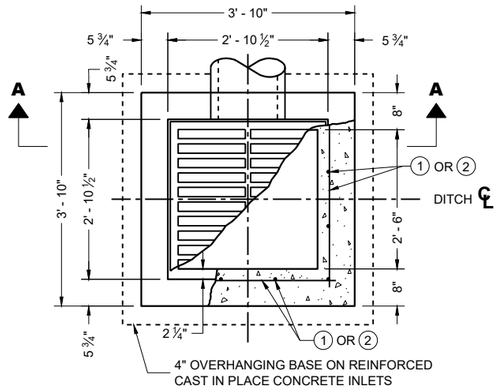
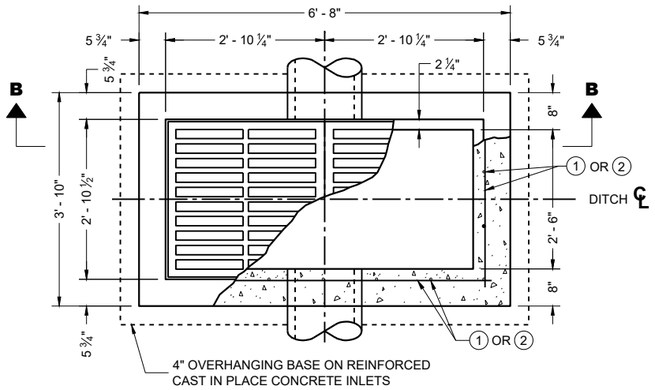
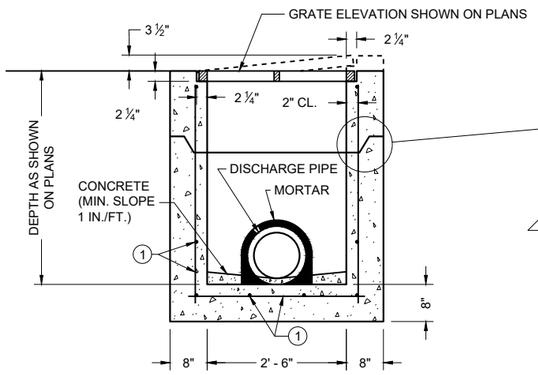


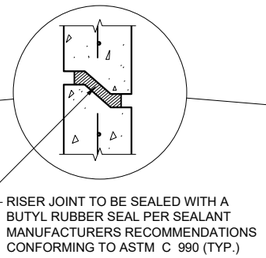
PLAN VIEW

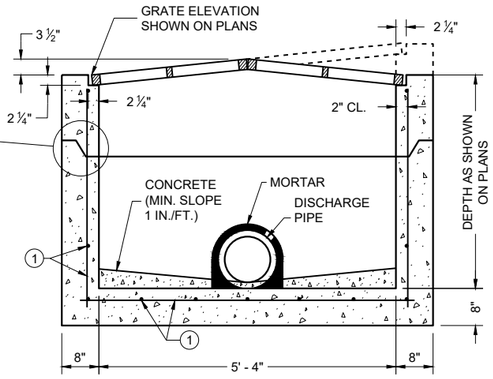


PLAN VIEW

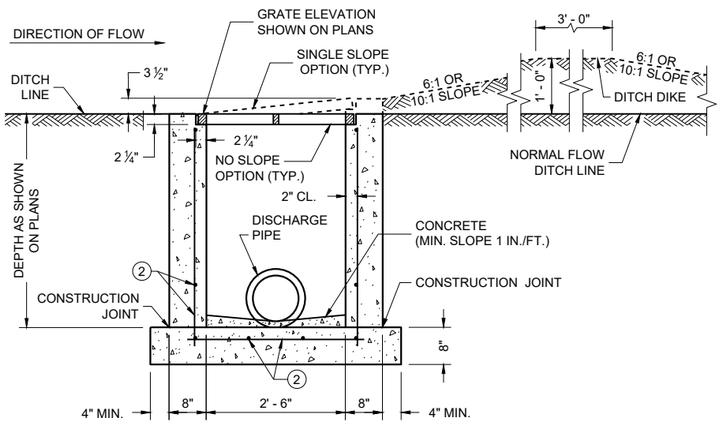


PRECAST REINFORCED CONCRETE SECTION A - A



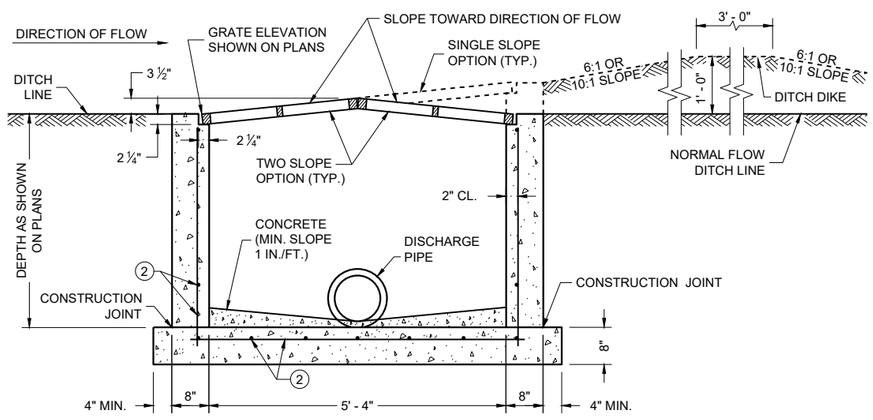


PRECAST REINFORCED CONCRETE SECTION B - B



REINFORCED CAST IN PLACE CONCRETE SECTION A - A

INLETS MEDIAN 1 GRATE



REINFORCED CAST IN PLACE CONCRETE SECTION B - B

INLETS MEDIAN 2 GRATE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP N0T SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

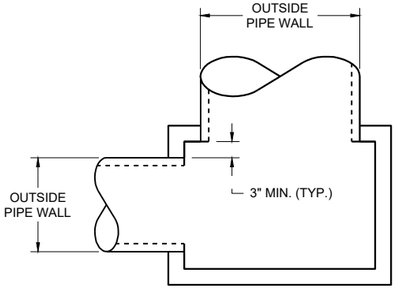
ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

(1) FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

(2) CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.



DETAIL "A"

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42

INLETS
MEDIAN 1 AND 2 GRATE

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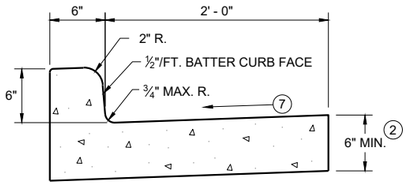
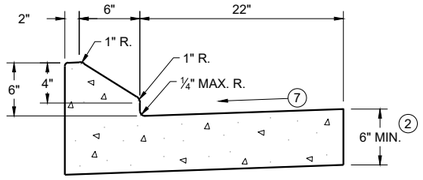
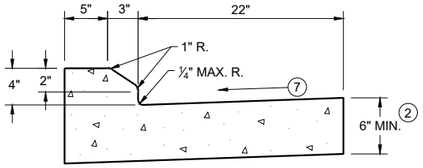


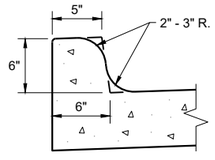
TYPES A (1) & D



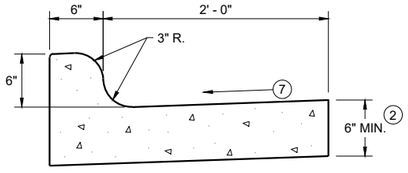
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

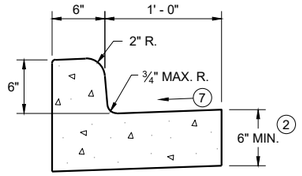


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



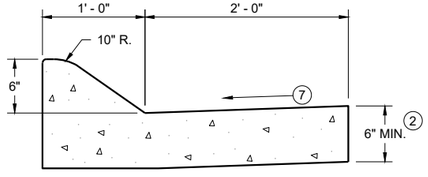
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

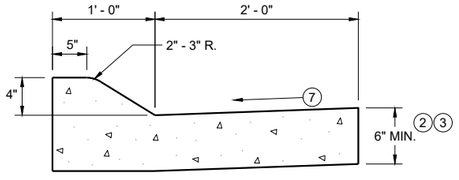


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

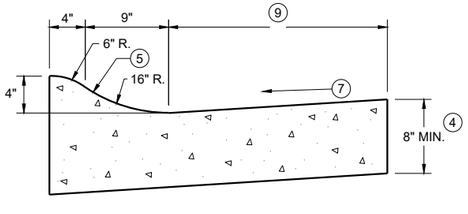


6" SLOPED CURB TYPES A (1) & D



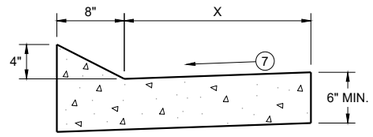
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

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

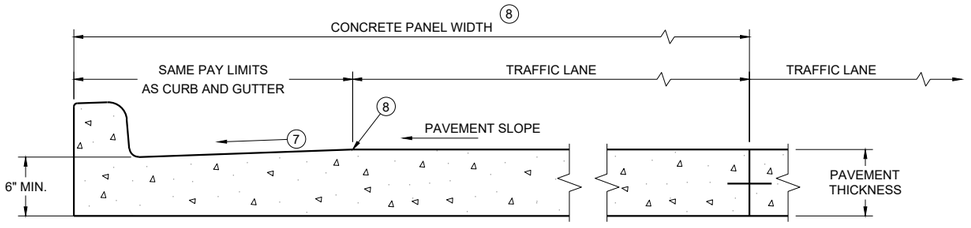


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

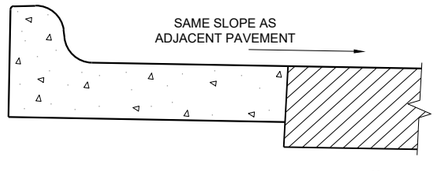
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB AND GUTTER *

* BIKE LANE IS NOT SHOWN



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

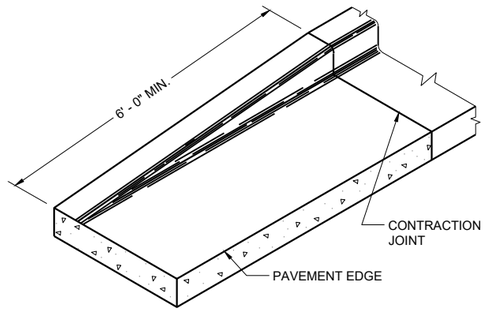
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

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

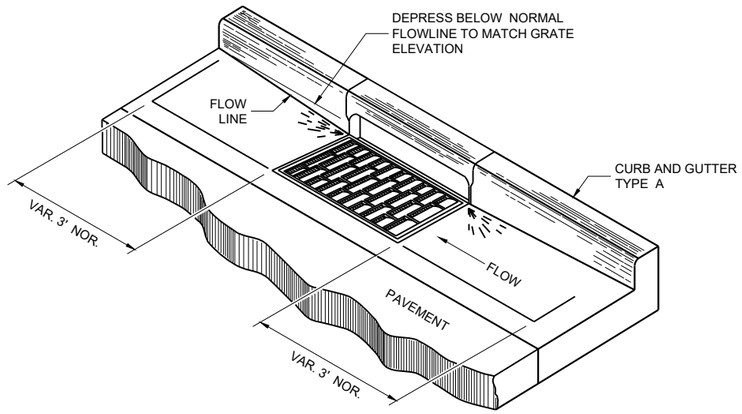
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D01-23a



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

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

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

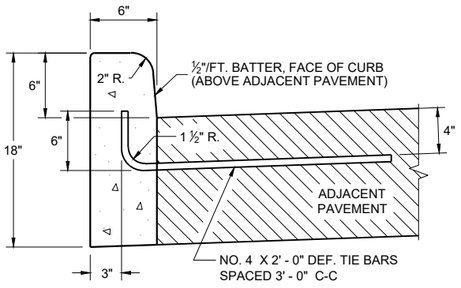
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

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

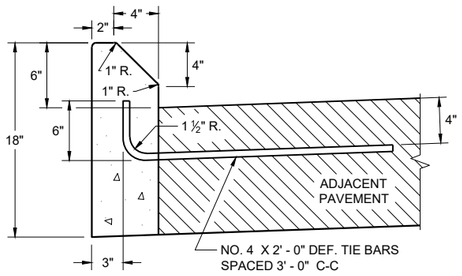
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

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

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

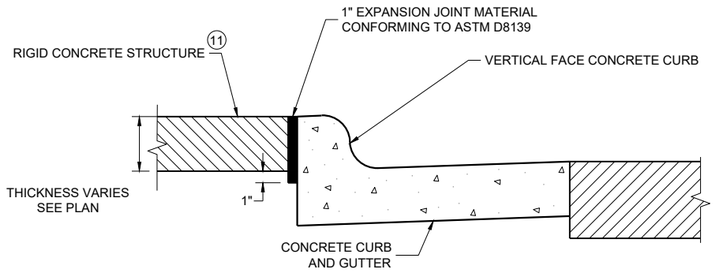


TYPES A (1) & D

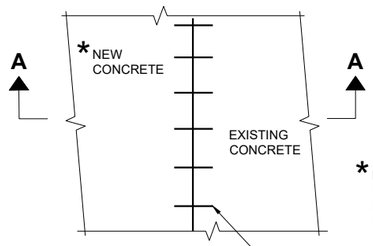


TYPES G (1) & J

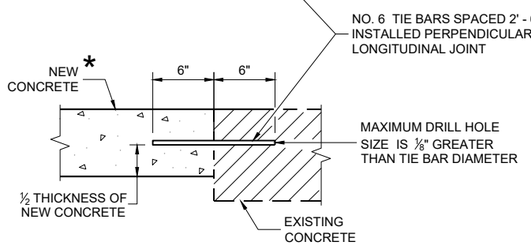
CONCRETE CURB



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

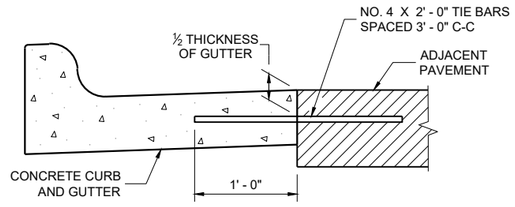


PLAN VIEW

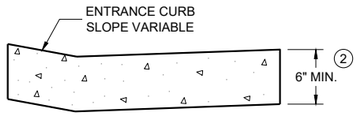


SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

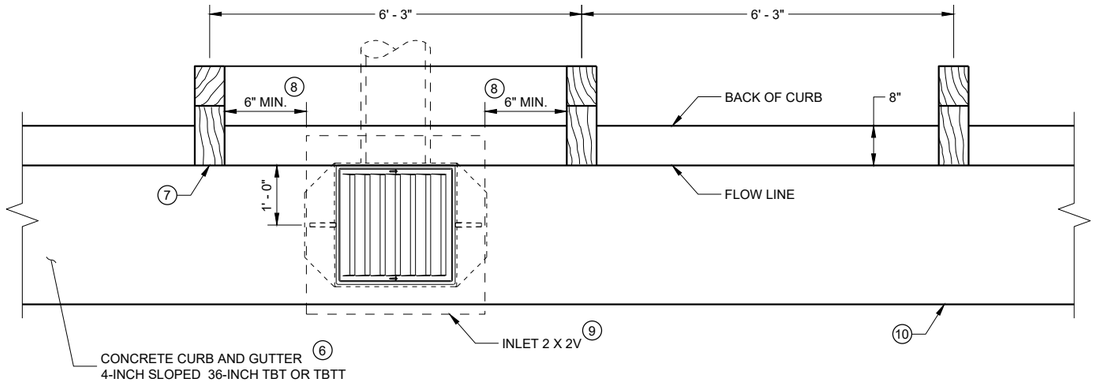
CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

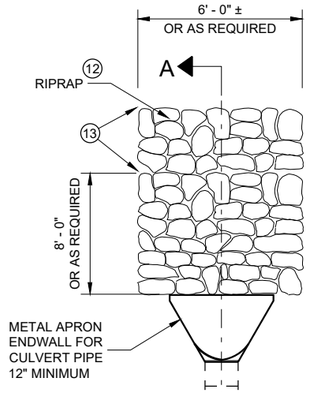
FHWA

6
SDD 08D01-23b



INLET PLAN VIEW

(NOTE: RAIL NOT SHOWN FOR CLARITY)



12" MINIMUM CULVERT PIPE
CORRUGATED POLYETHYLENE
OR POLYPROPYLENE AS SPECIFIED

GENERAL NOTES

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

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

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

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

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

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

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

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

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

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

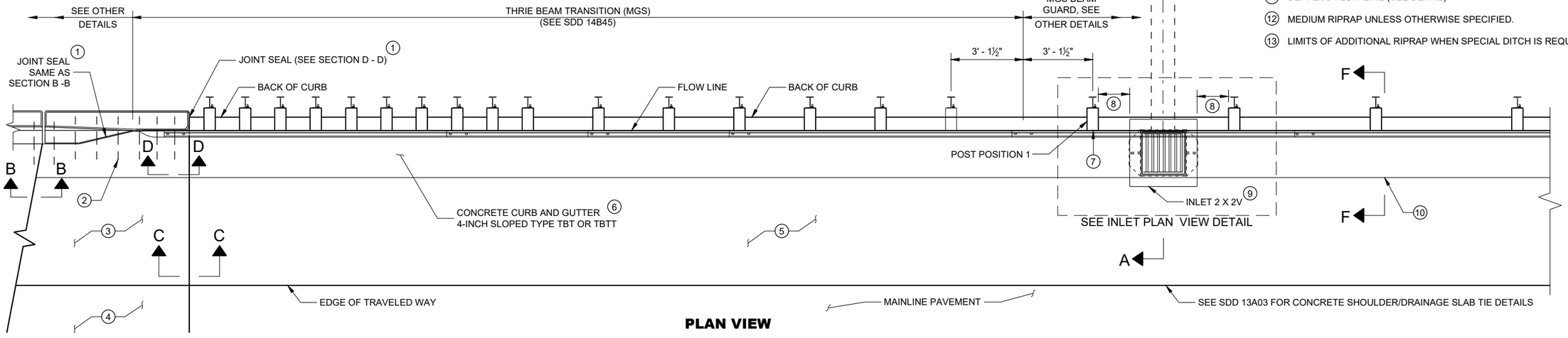
(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

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

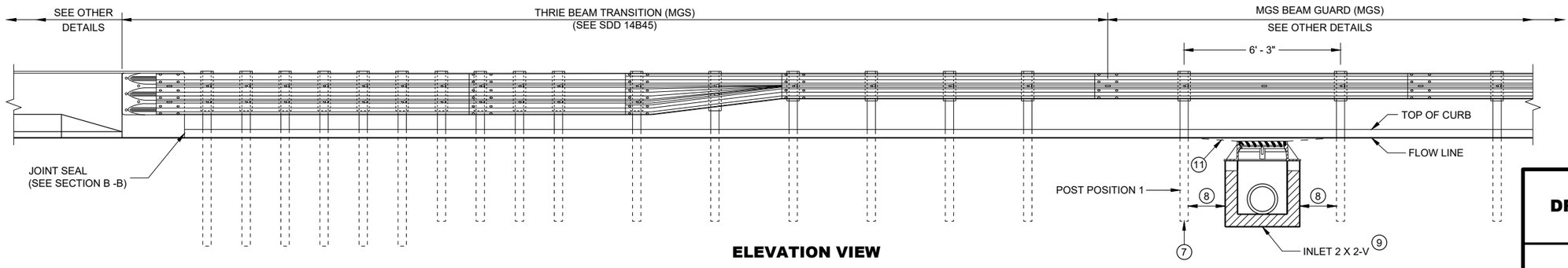
(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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



PLAN VIEW



ELEVATION VIEW

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D03 - 09a

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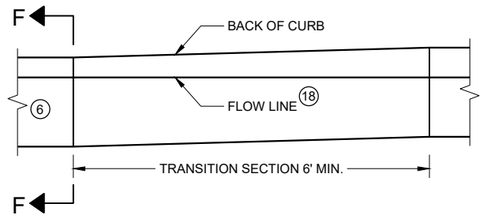
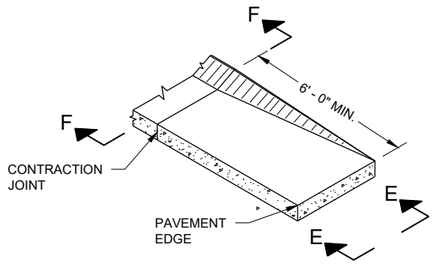
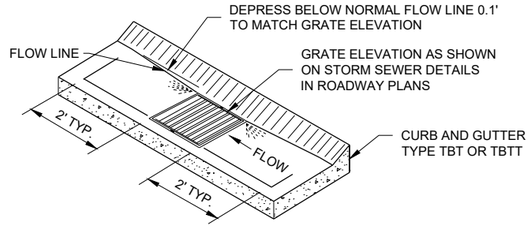
SDD 08D03 - 09a



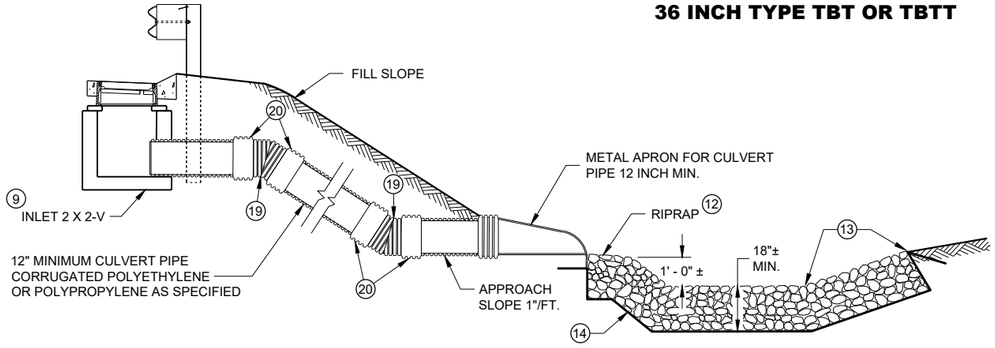
CURB AND GUTTER TRANSITION SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



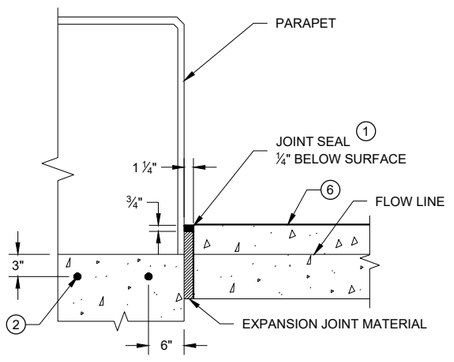
CURB AND GUTTER END SECTION CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



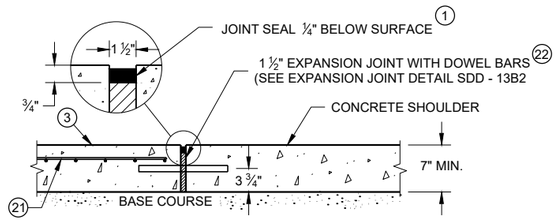
CURB AND GUTTER FLOW LINE DEPRESSION AT INLETS CONCRETE CURB AND GUTTER 4-INCH SLOPED 36 INCH TYPE TBT OR TBTT



SECTION A - A

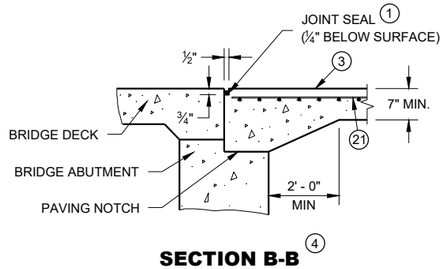


SECTION D - D

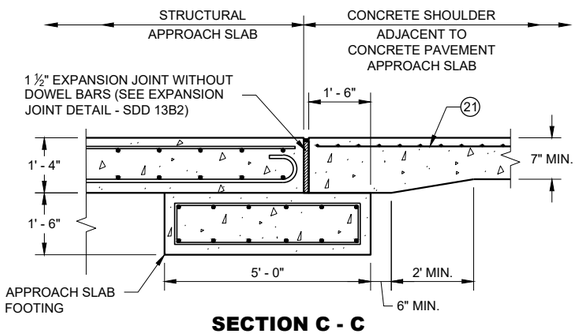


SECTION C - C

JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS

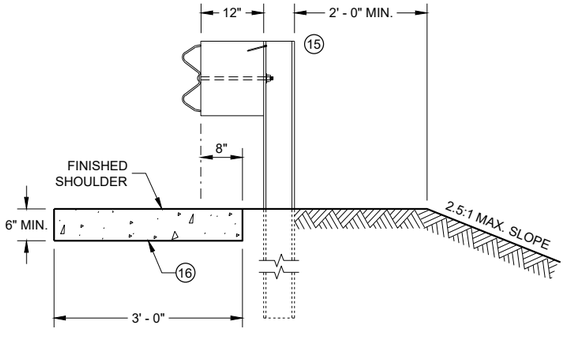


SECTION B-B 4

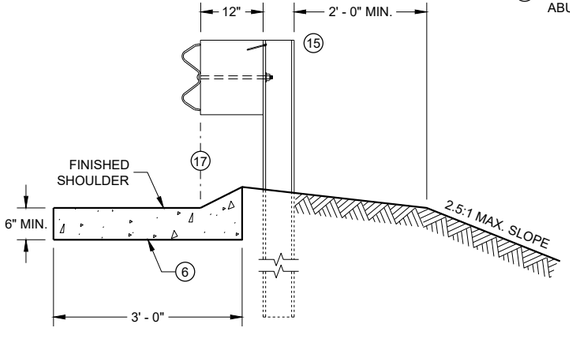


SECTION C - C

JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



SECTION E - E



SECTION F - F

GENERAL NOTES

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

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

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

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

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

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

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

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

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

(8) CENTER DRAINAGE STRUCTURE BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE WALL OF DRAINAGE STRUCTURE TO POSTS.

(9) SEE SDD 08A05 AND 08C07 FOR DETAILS. SEE ROADWAY PLANS FOR LOCATION.

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

(11) DEPRESS FLOW LINE (SEE DETAIL)

(12) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(14) GEOTEXTILE TYPE HR.

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

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

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

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

(19) MANUFACTURER SUPPLIED BEND.

(20) MANUFACTURER SUPPLIED EXTERNAL MECHANICAL COUPLING OR A MANUFACTURER RECOMMENDED COUPLING WITH A MASTIC IMPREGNATED GEOTEXTILE WRAP AND MECHANICAL FASTENING BANDS.

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

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

CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES

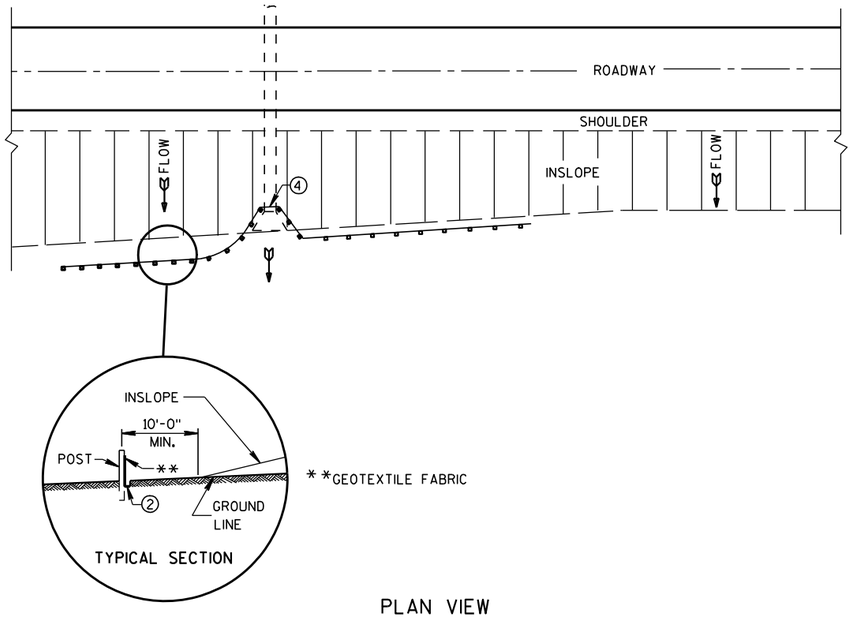
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

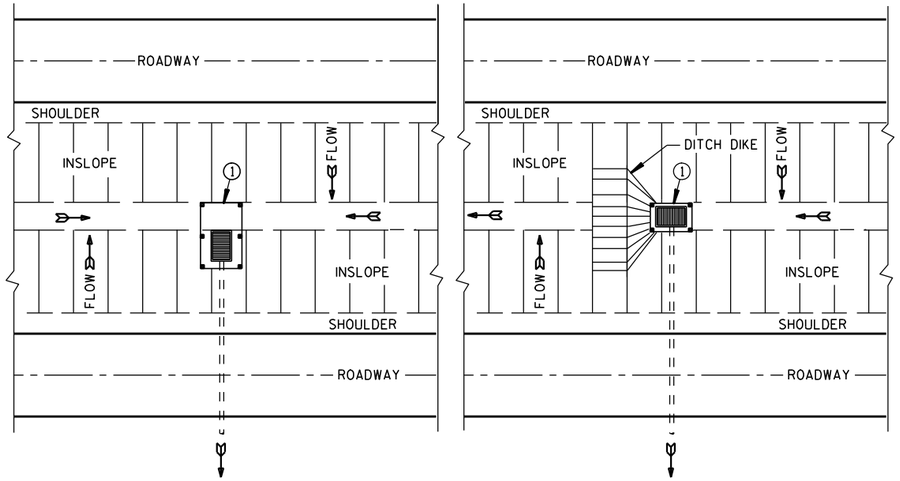
6

SDD 08D03 - 09b



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



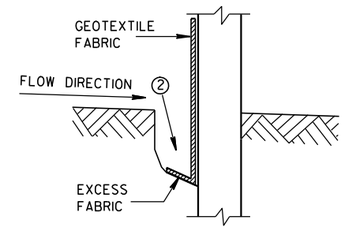
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

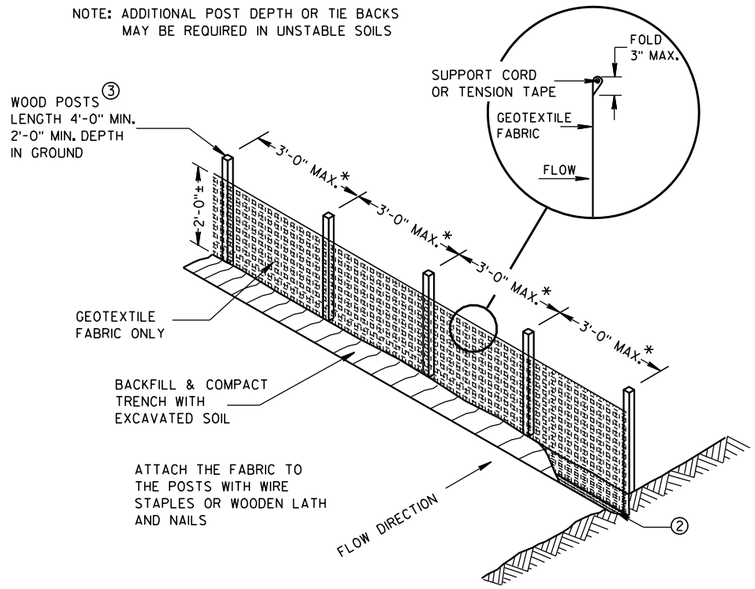
GENERAL NOTES

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

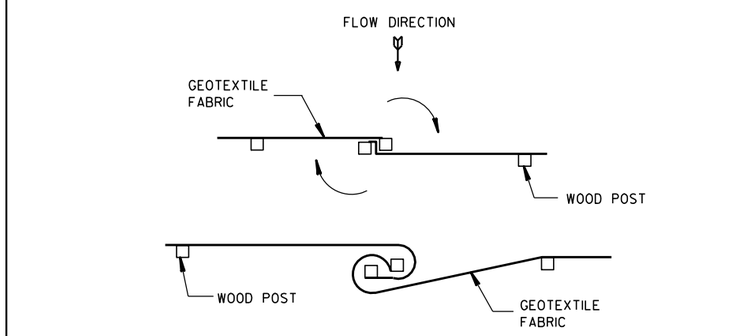
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



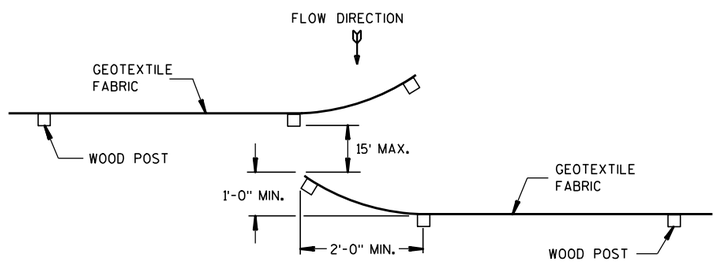
TRENCH DETAIL



SILT FENCE

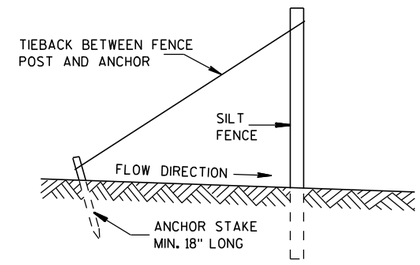


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

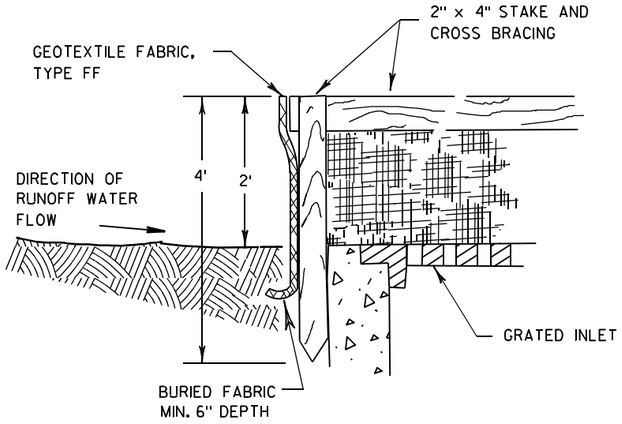
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

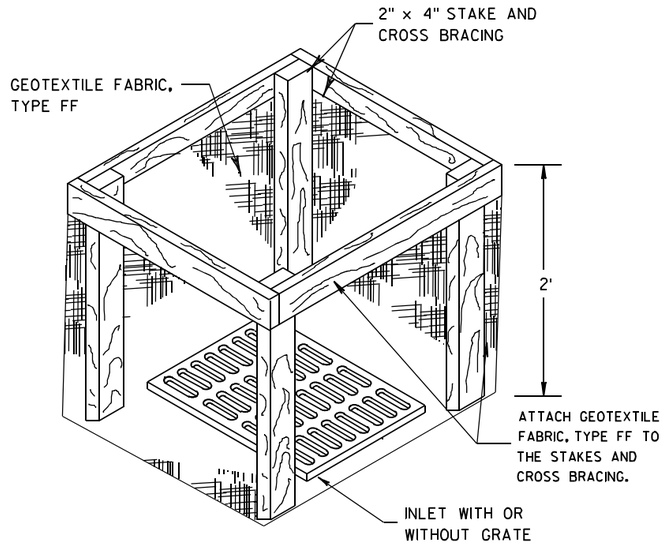
6

S.D.D. 8 E 9-6

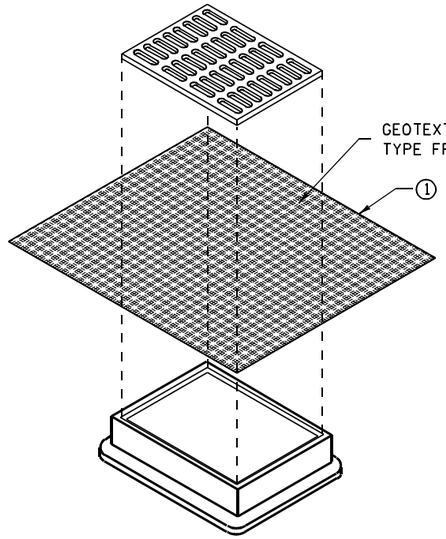
6

S.D.D. 8 E 9-6



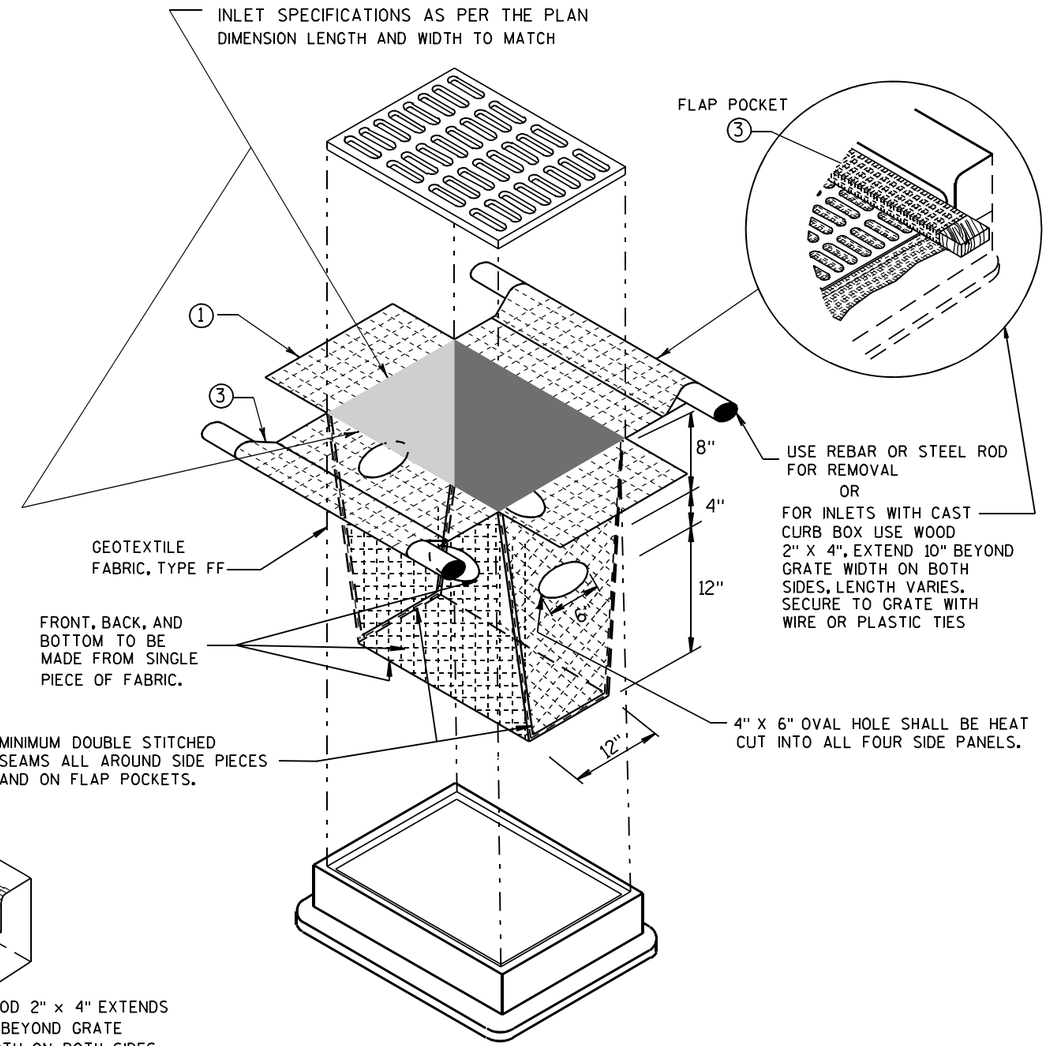


INLET PROTECTION, TYPE A



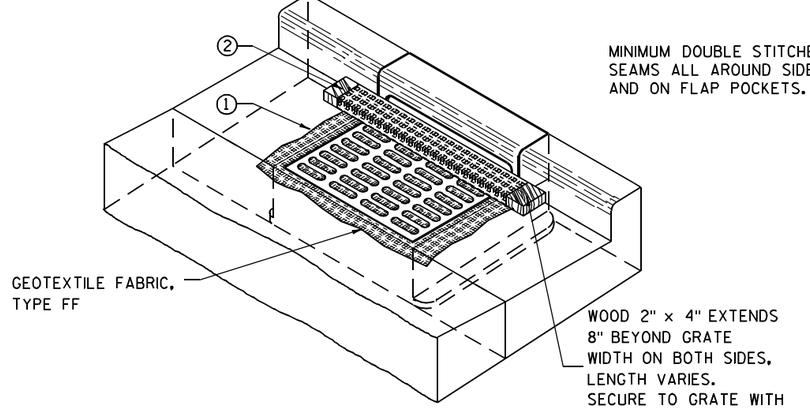
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

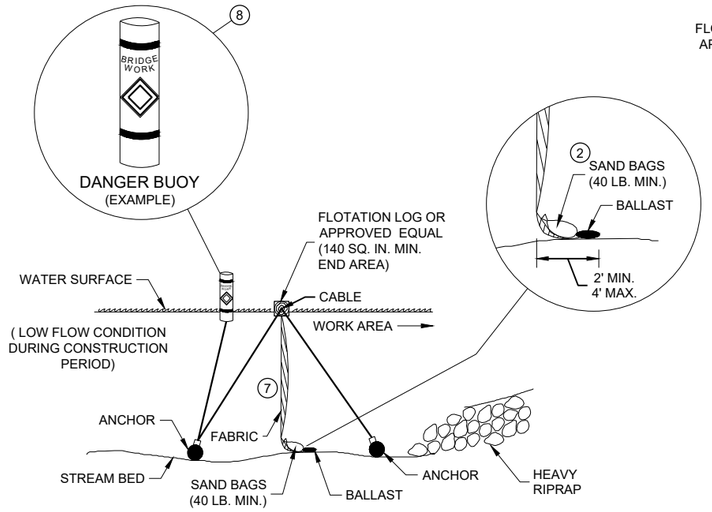
APPROVED

10/16/02
DATE

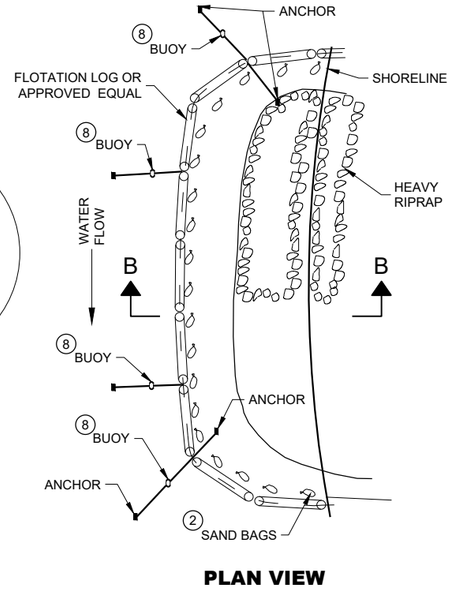
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2

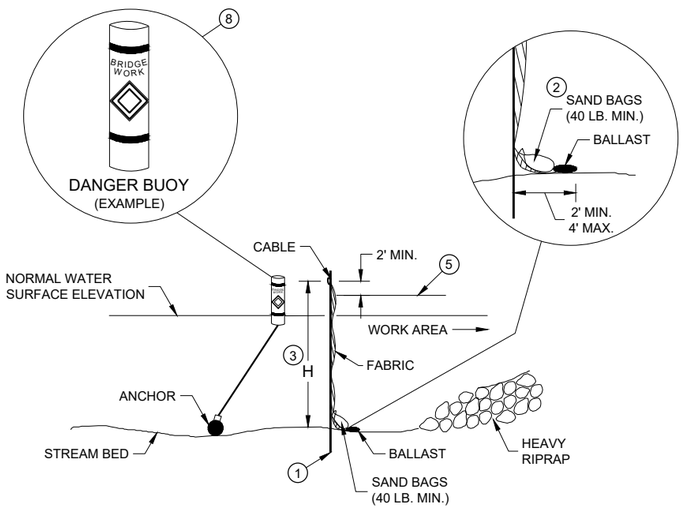


SECTION B - B

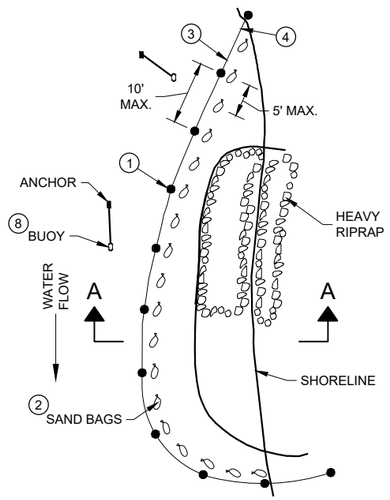


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

(1) DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

(2) SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

(3) WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.

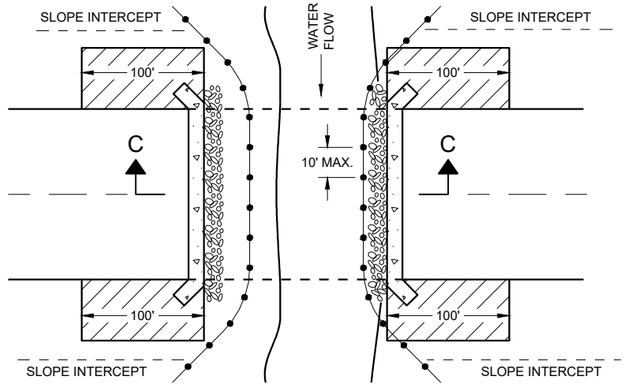
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

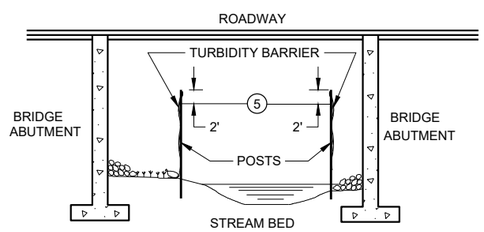
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(7) ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

(8) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

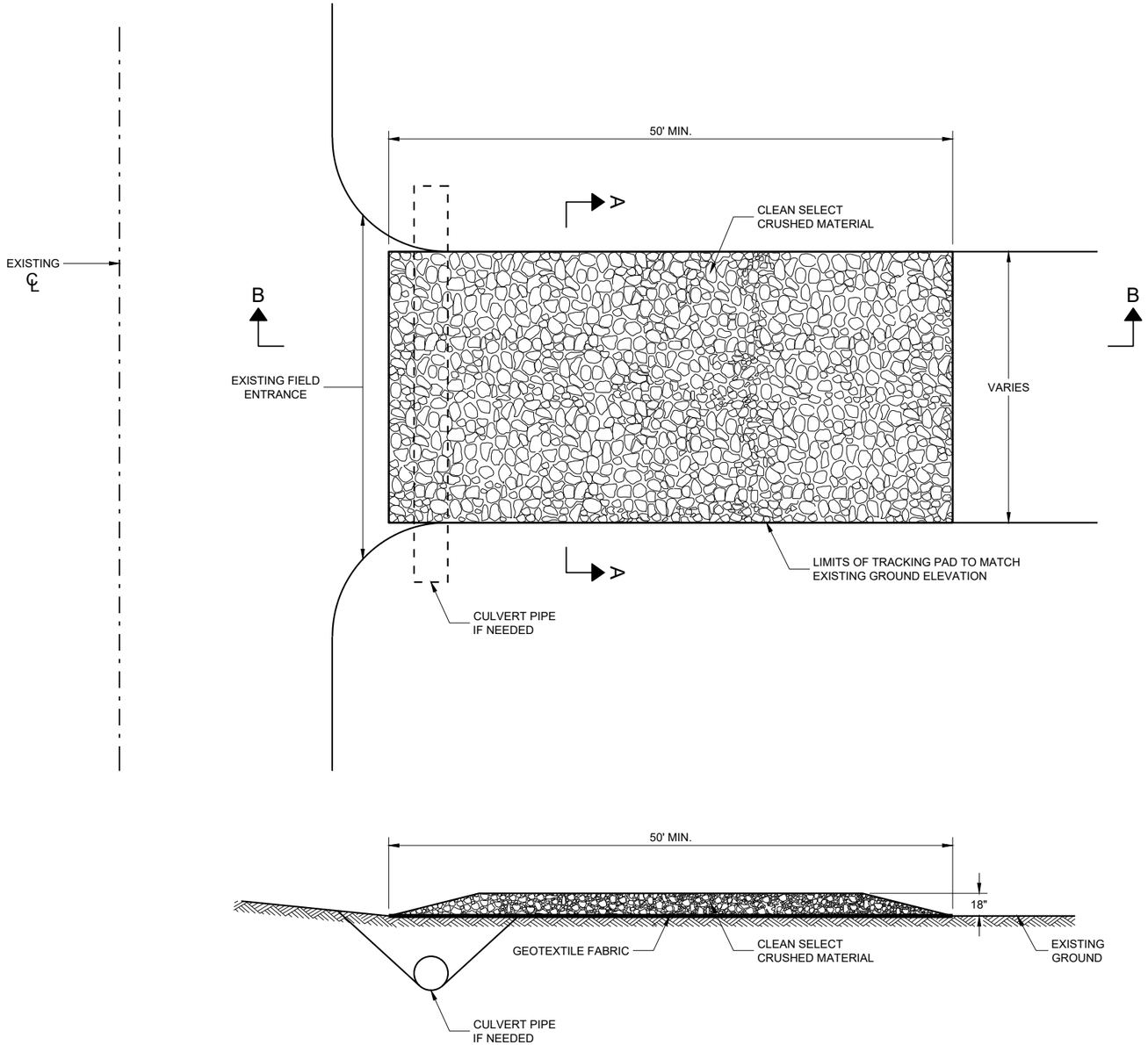
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6
SDD 08E11 - 02



SECTION B - B

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

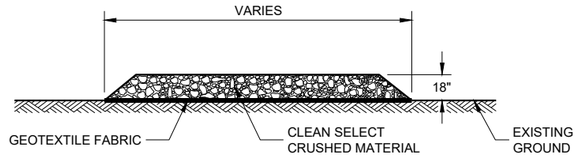
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A - A

6

SDD 08E14 - 01

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/24/2011
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVE ENGINEER

FHWA

6

SDD 08E14 - 01

METAL APRON ENDWALLS

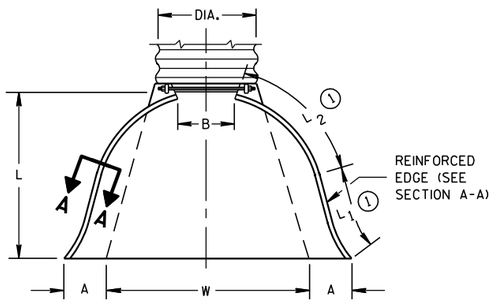
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

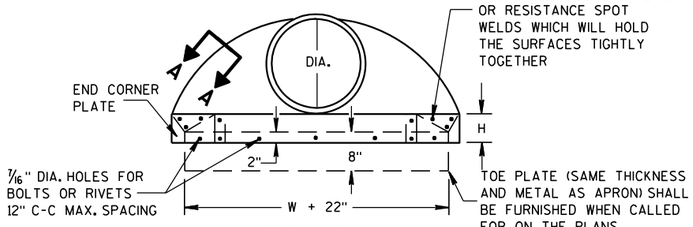
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

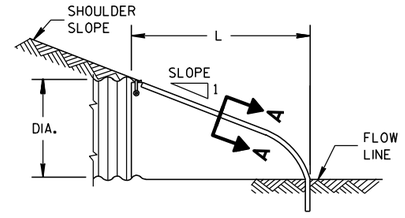
*MINIMUM
**MAXIMUM



PLAN VIEW

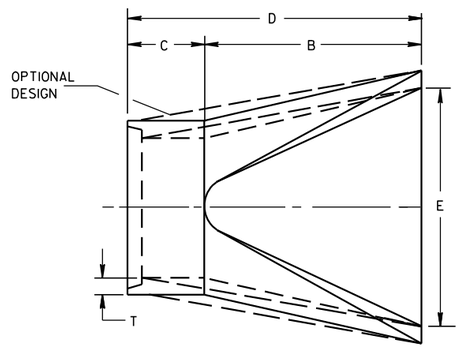


END VIEW

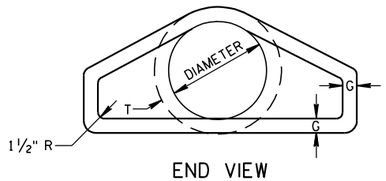


SIDE ELEVATION

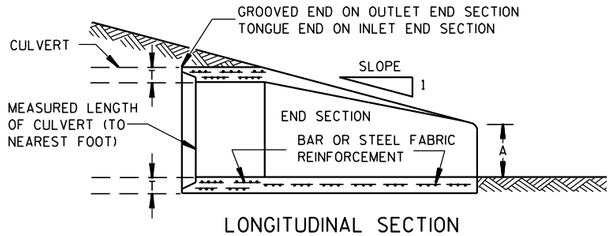
METAL ENDWALLS



PLAN

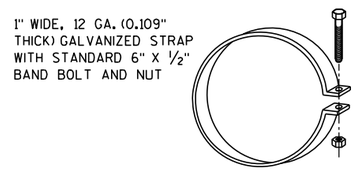


END VIEW



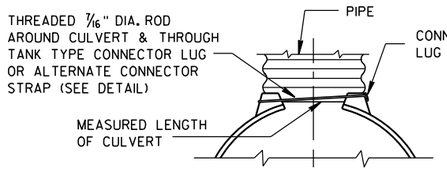
LONGITUDINAL SECTION

CONCRETE ENDWALLS

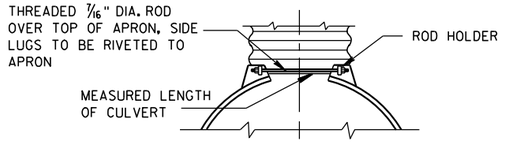


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

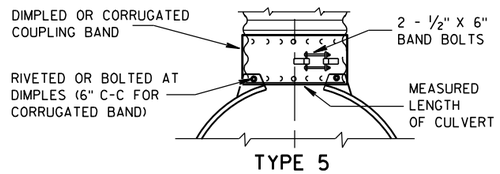


TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE

TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

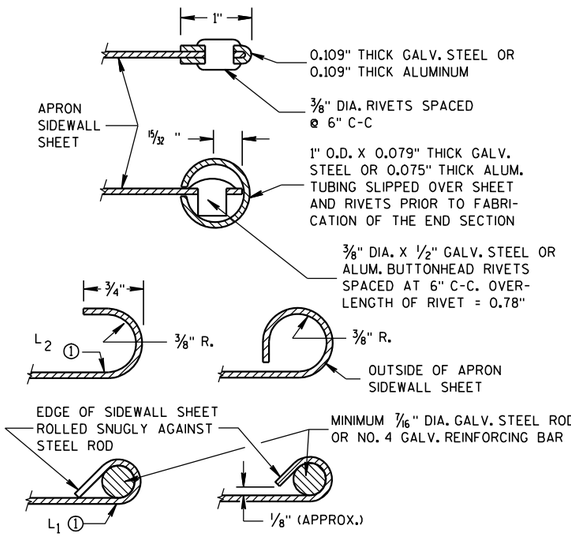
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

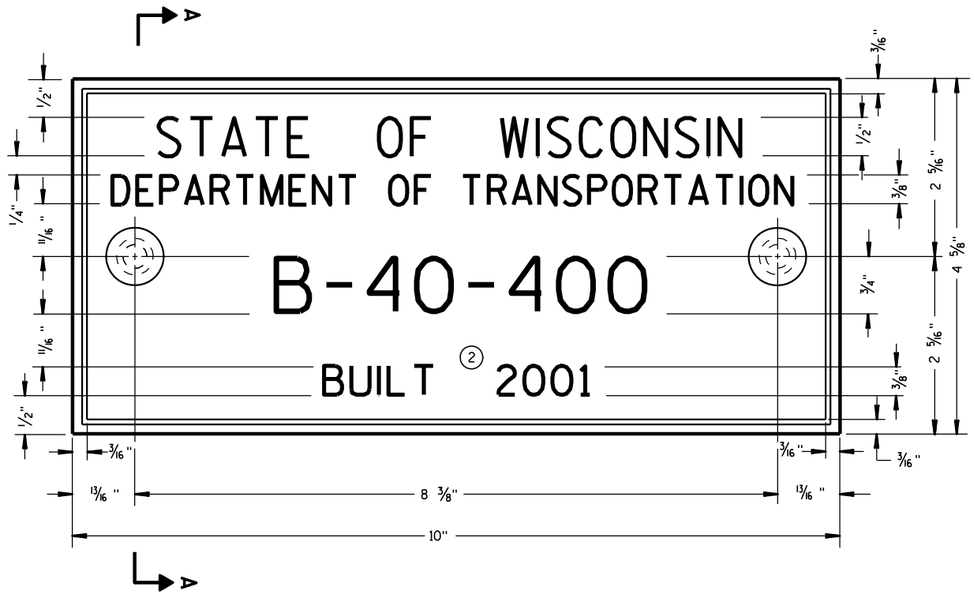
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 F 1-11



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

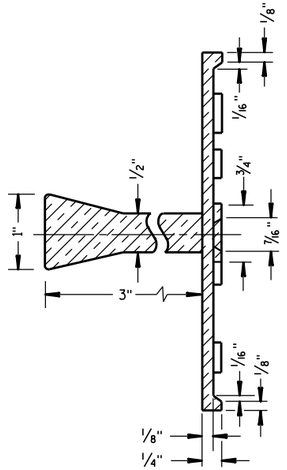
GENERAL NOTES

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

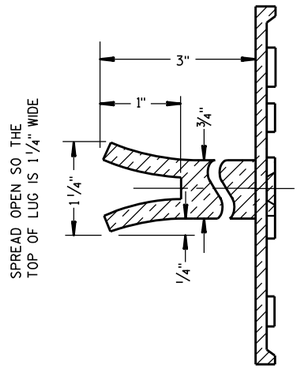
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

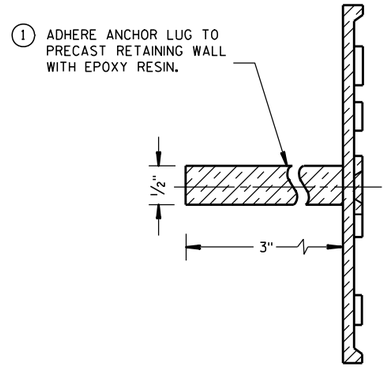
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

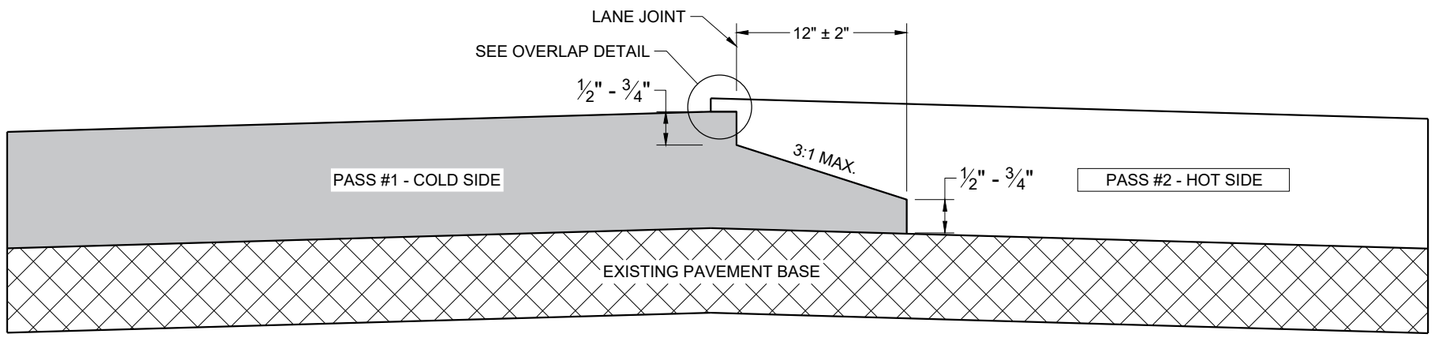
3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

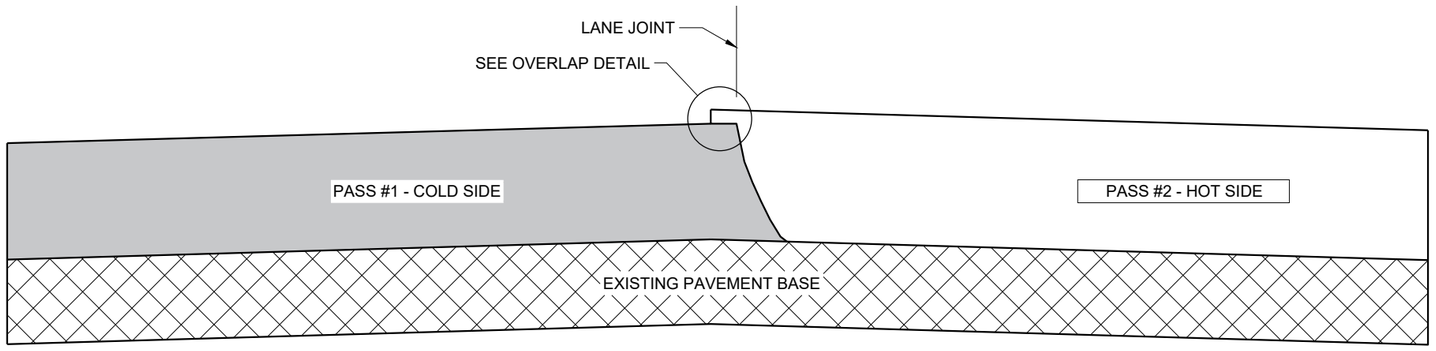
FHWA

6

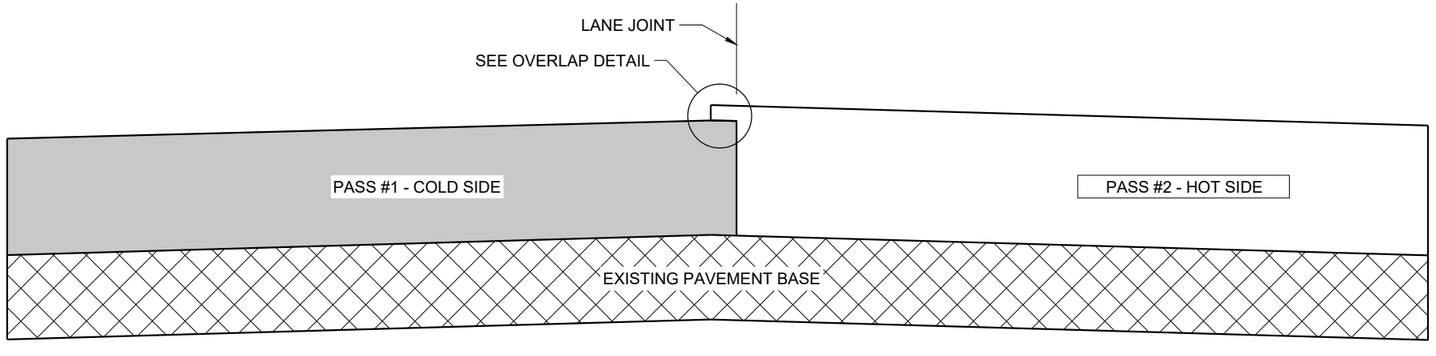
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

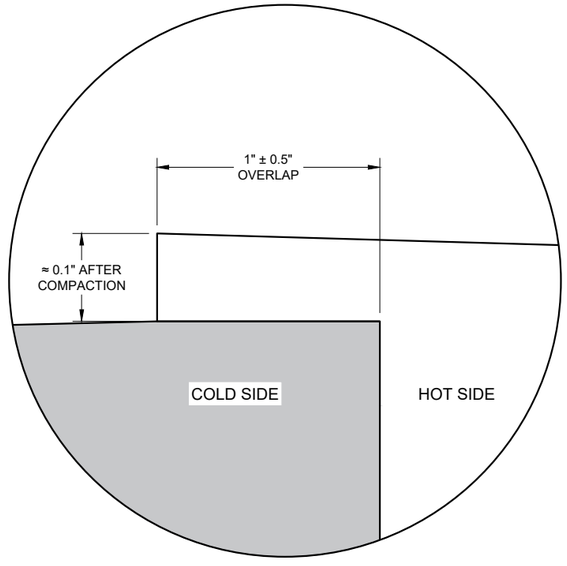
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

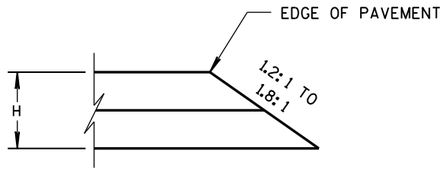
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

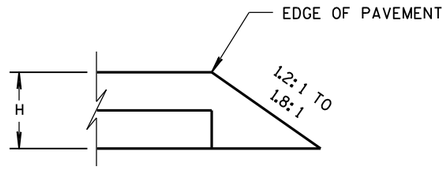
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



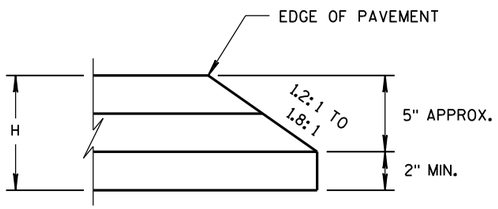
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



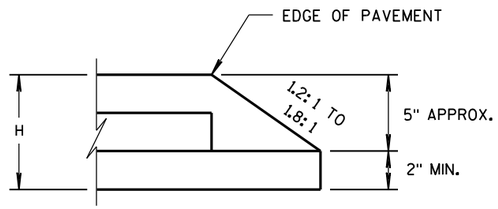
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

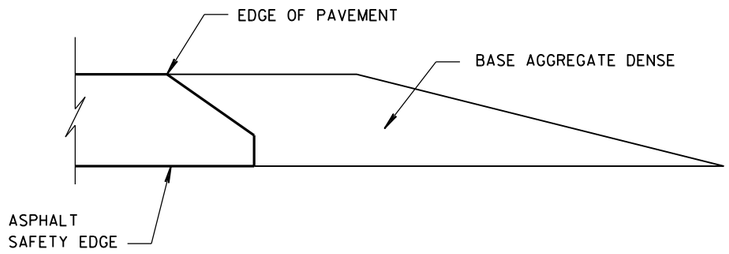
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

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

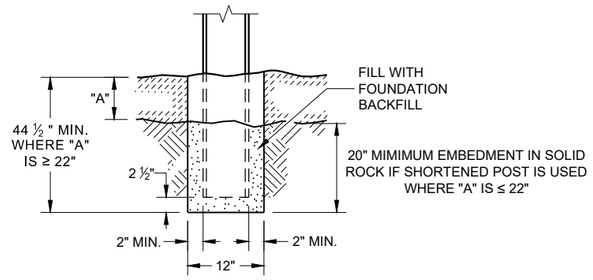
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

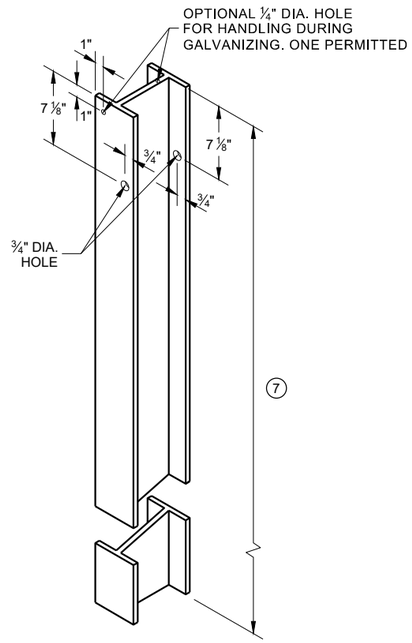
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

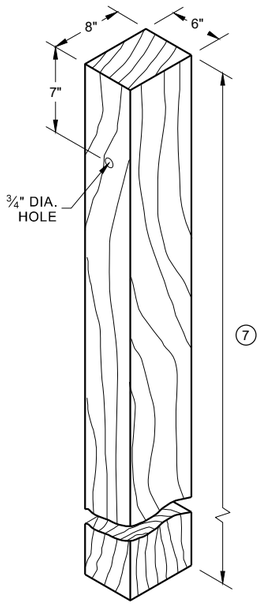
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



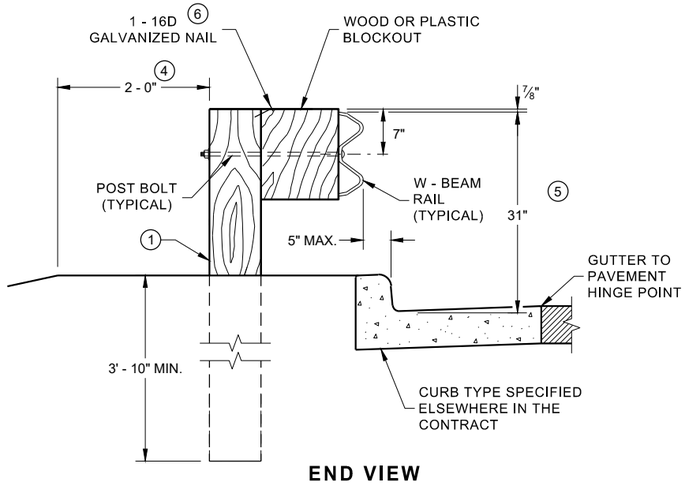
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



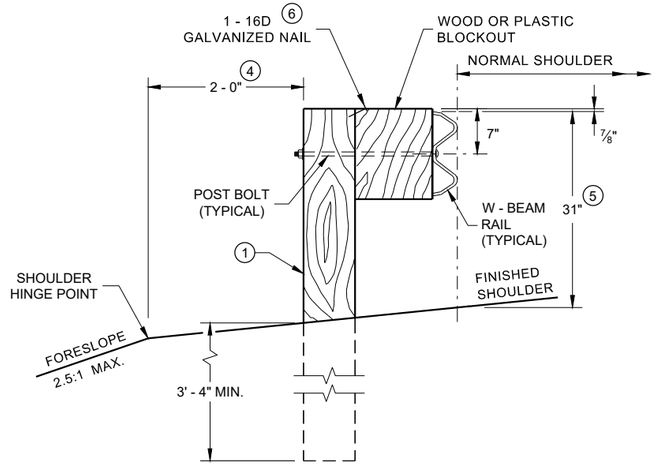
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



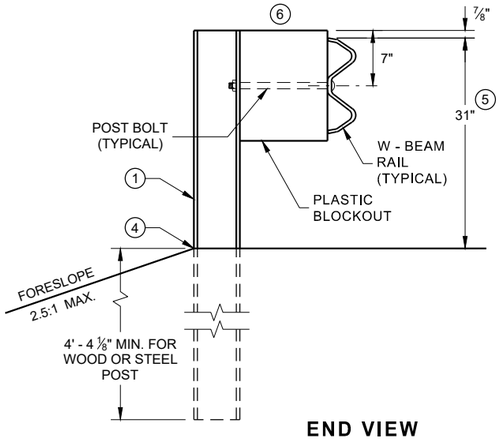
WOOD POST (6" X 8") NOMINAL (1)



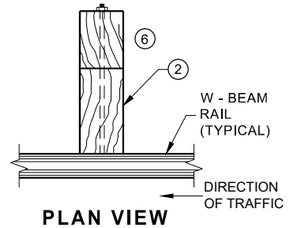
END VIEW
LOCATED ALONG A CURBED ROADWAY



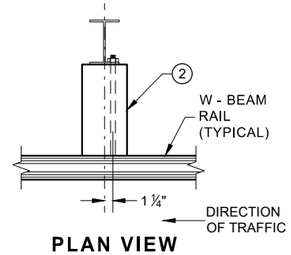
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



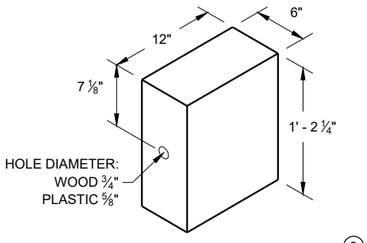
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B42 - 07a

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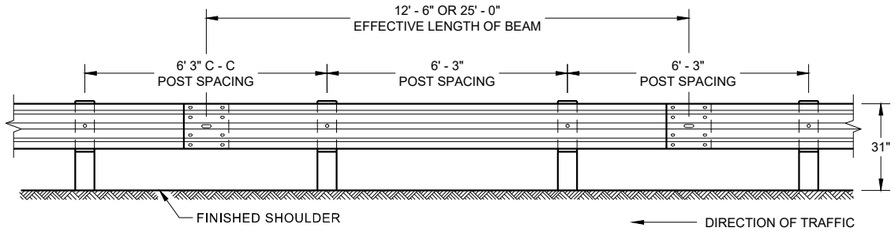
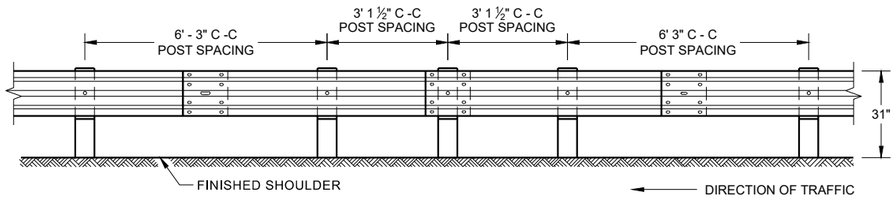
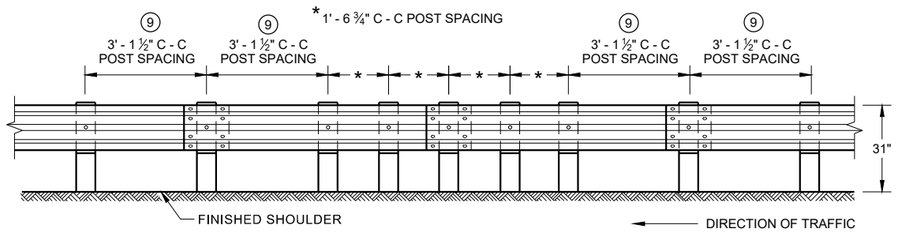
SDD 14B42 - 07a



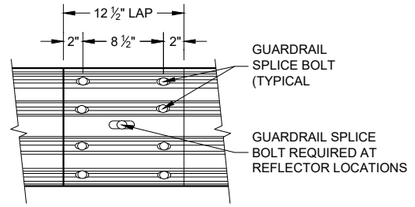
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

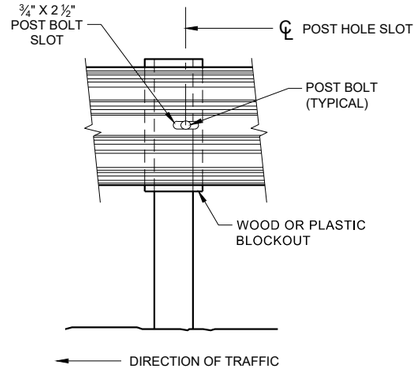
GENERAL NOTES

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

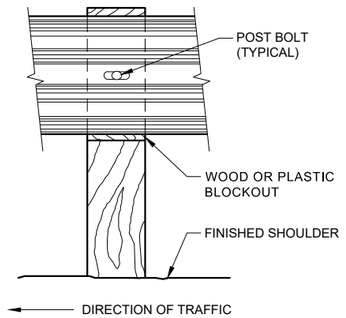
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

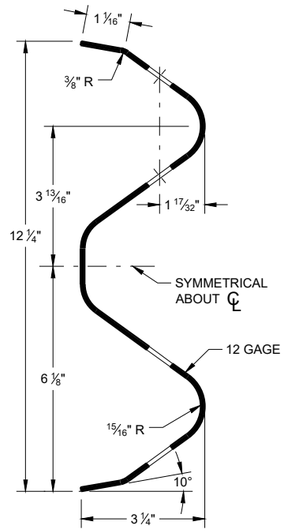
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



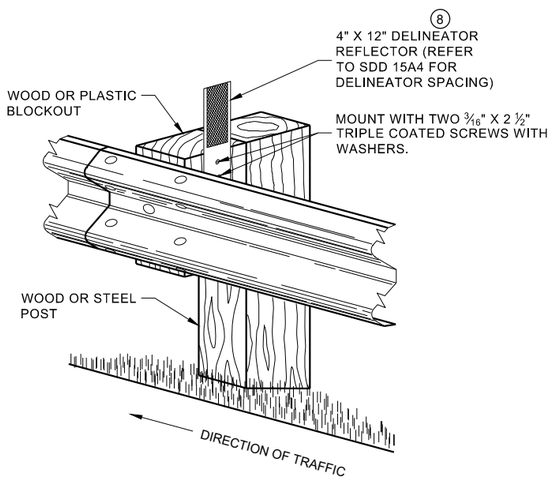
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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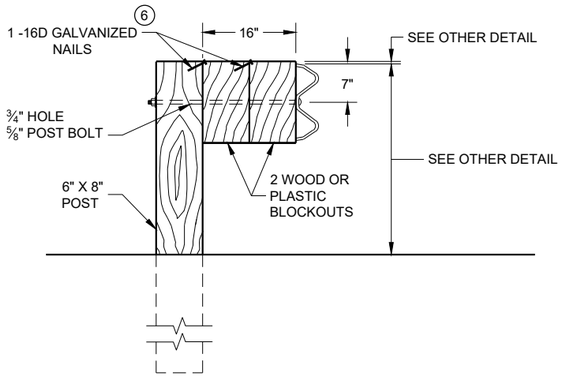
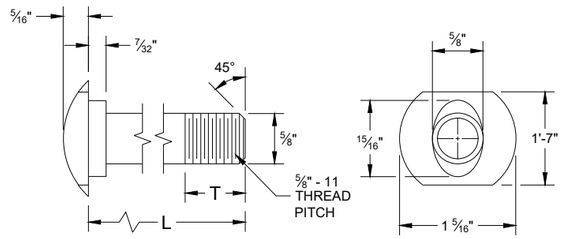


DETAIL FOR 16" BLOCKOUT DEPTH

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

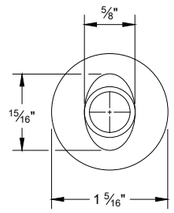
NOTE:

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

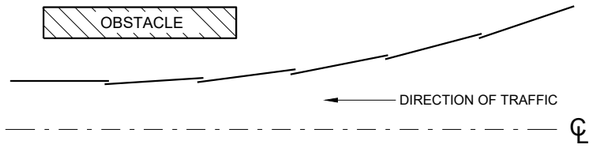


POST BOLT TABLE

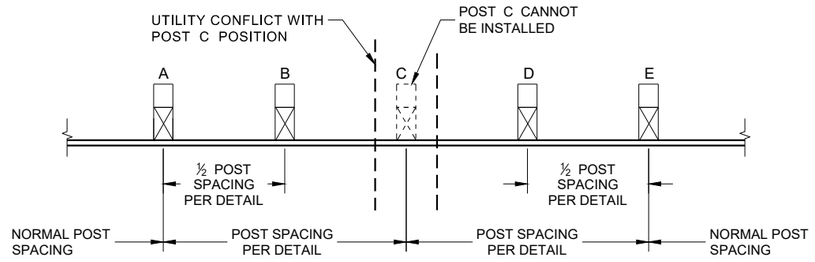
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



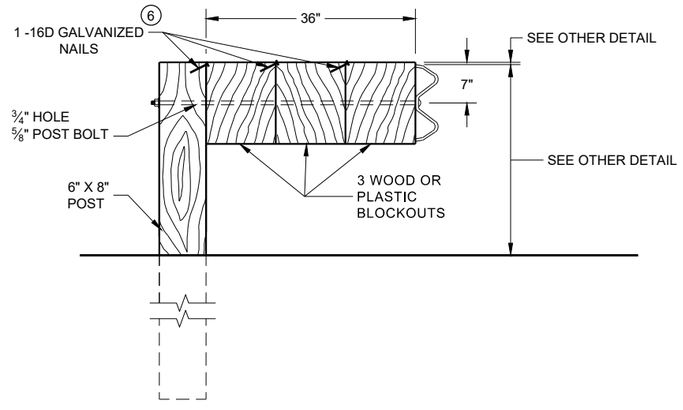
ALTERNATE BOLT HEAD



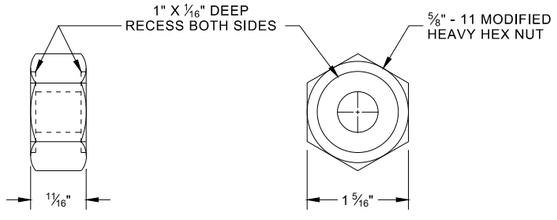
PLAN VIEW
BEAM LAPPING DETAIL



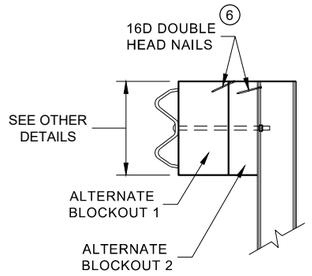
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



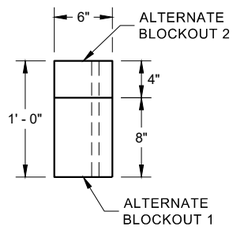
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

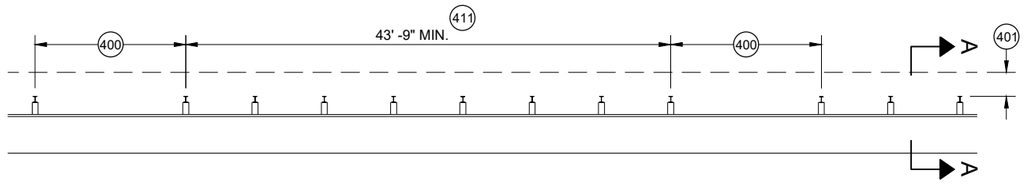
ALTERNATE WOOD BLOCKOUT DETAIL

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

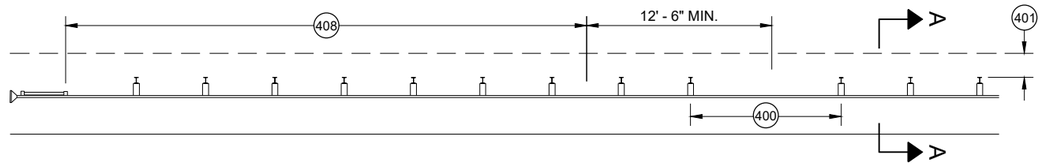
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

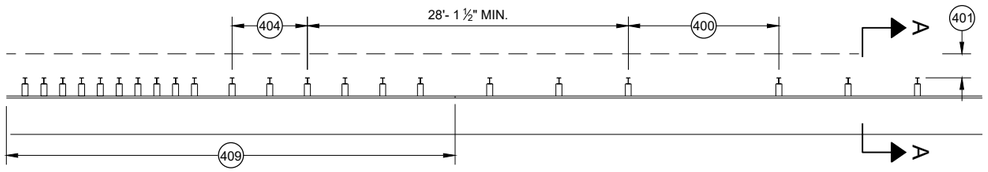
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



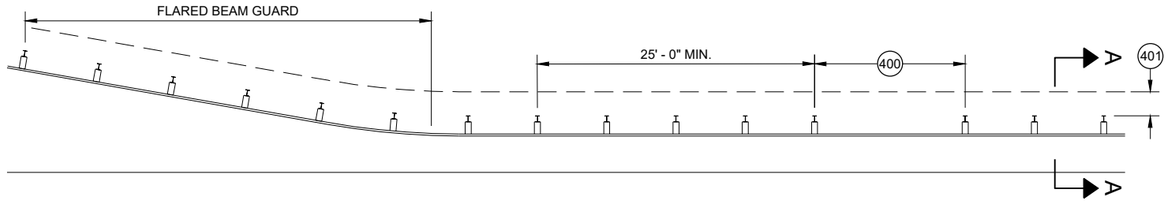
MISSING POST IN MGS GUARDRAIL



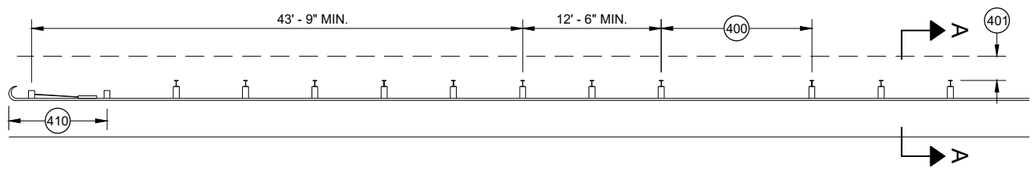
MISSING POST IN MGS GUARDRAIL NEAR EAT



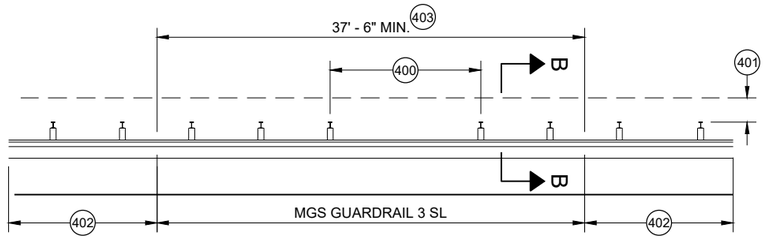
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

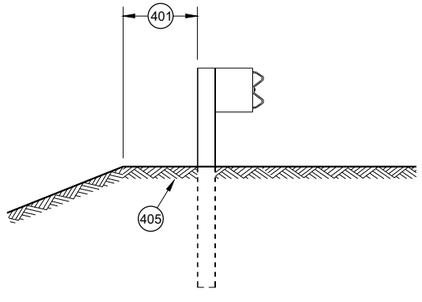


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

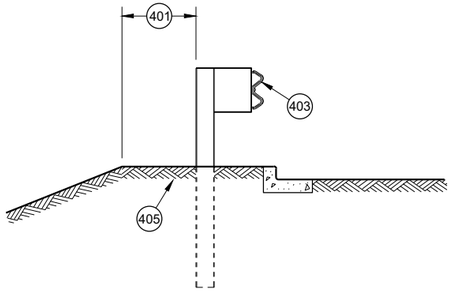


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

(400) MAX SPAN 12' - 6"
(401) 2' MIN.
(402) MGS GUARDRAIL 3
(403) NESTING BEAM GUARD
(404) ASYMMETRIC TRANSITION
(405) SOIL WELL DRAINED AND COMPACTED
(406) SEE OTHER DRAWINGS IN THIS SDD
(407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
(408) SEE SDD 14B44
(409) SEE SDD 14B45
(410) SEE SDD 14B47
(411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

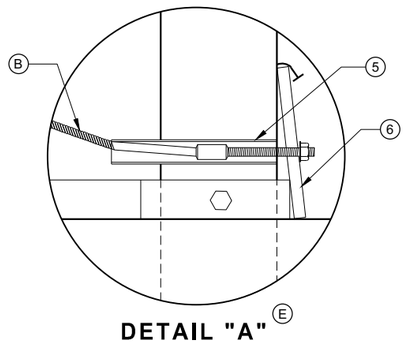
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

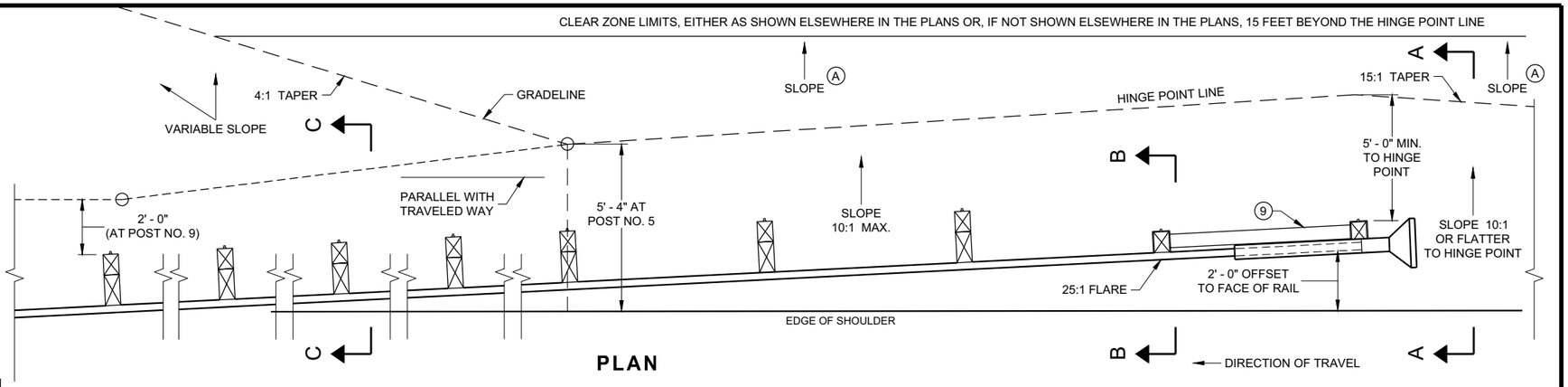
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

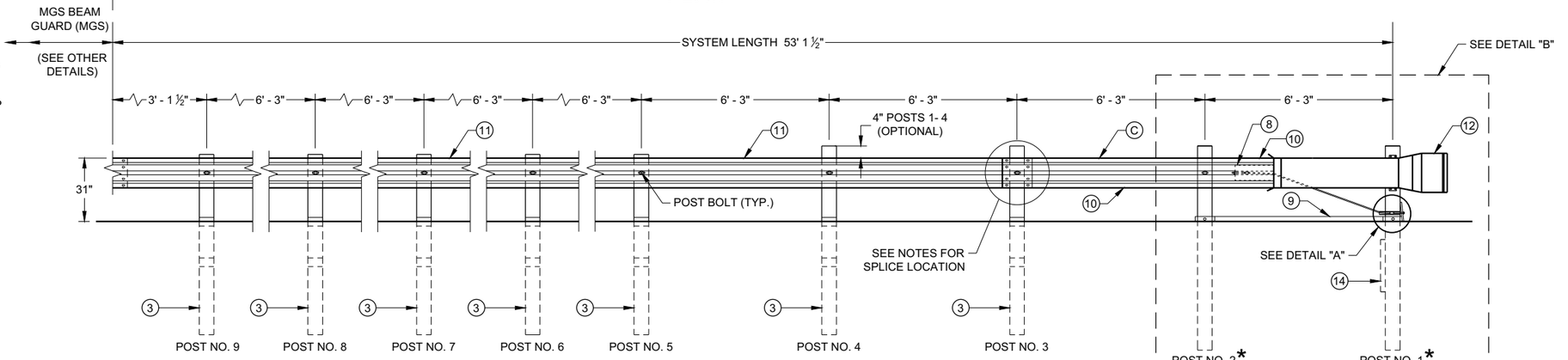
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



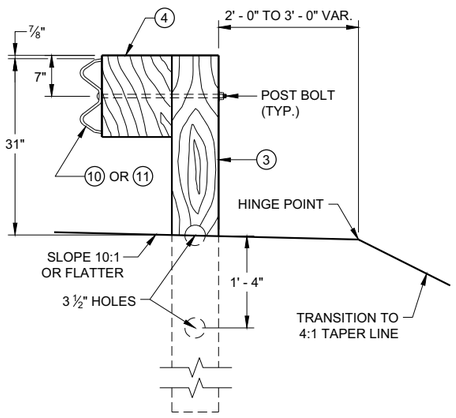
DETAIL "A" (E)



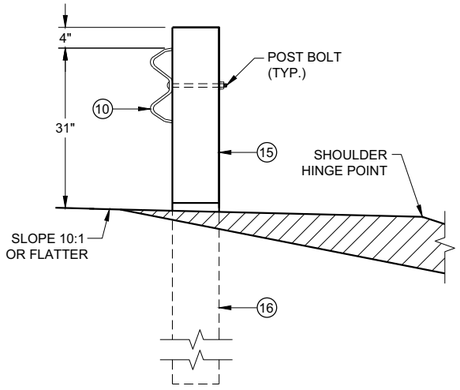
PLAN



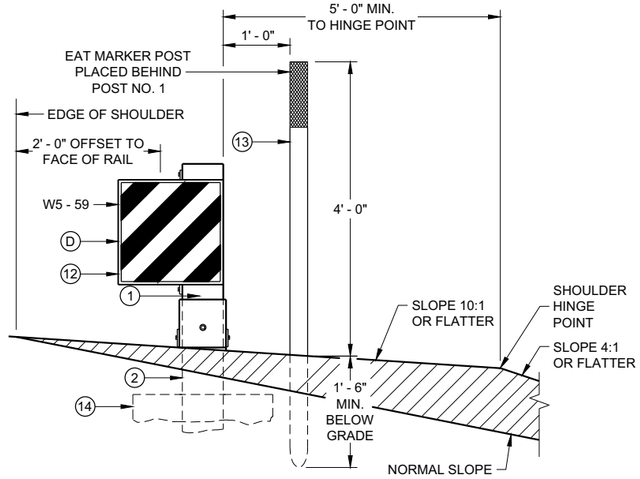
ELEVATION



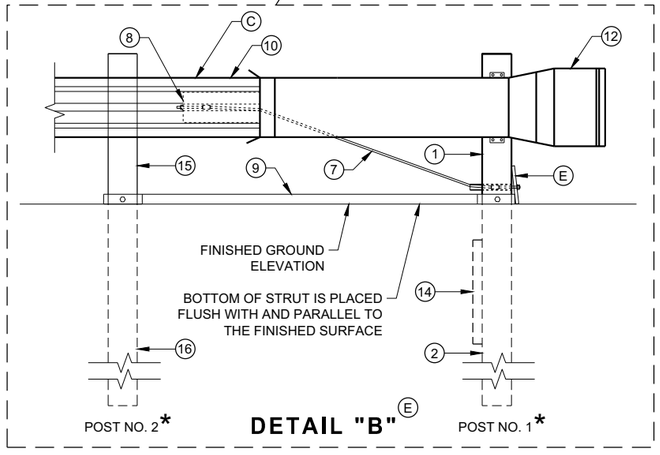
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



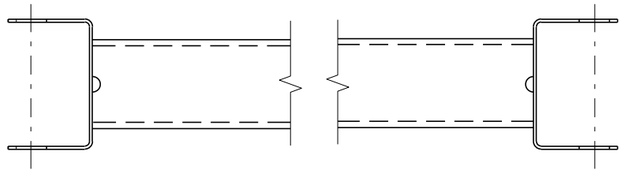
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

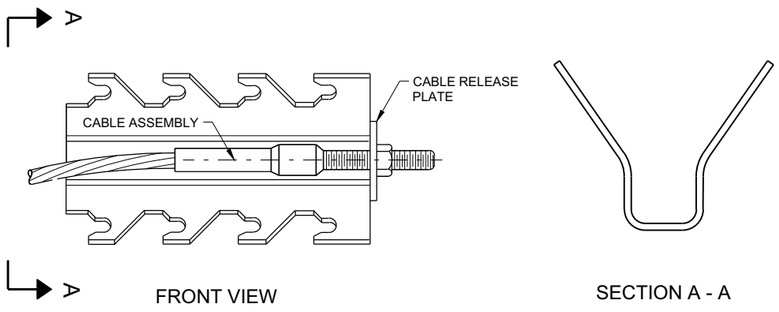
SDD 14B44 - 04a



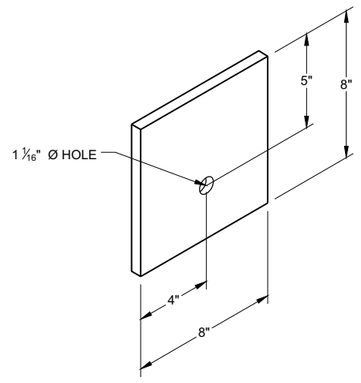
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX ⑧ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

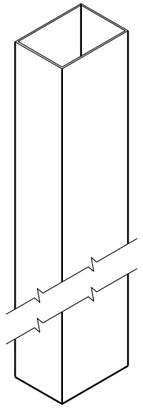
6

SDD 14B44 - 04b

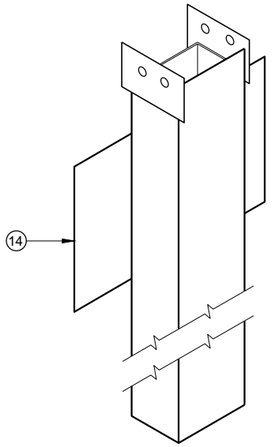
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

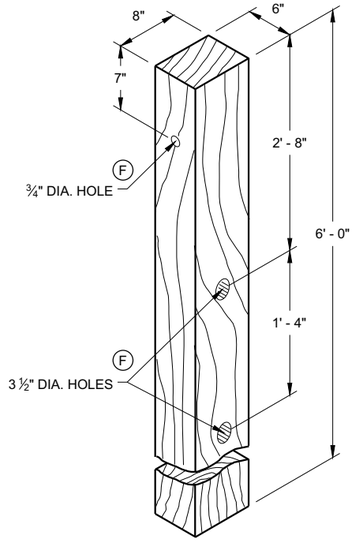
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



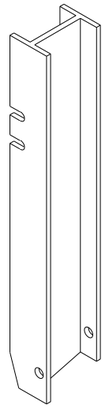
UPPER POST NO. 1 (1) (E)



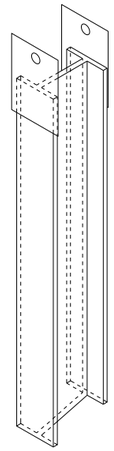
LOWER POST NO. 1 (2) (E)



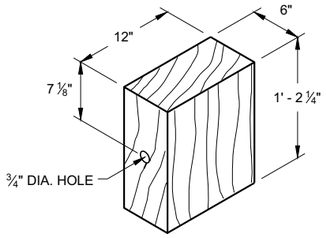
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



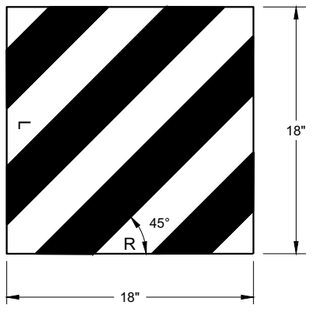
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

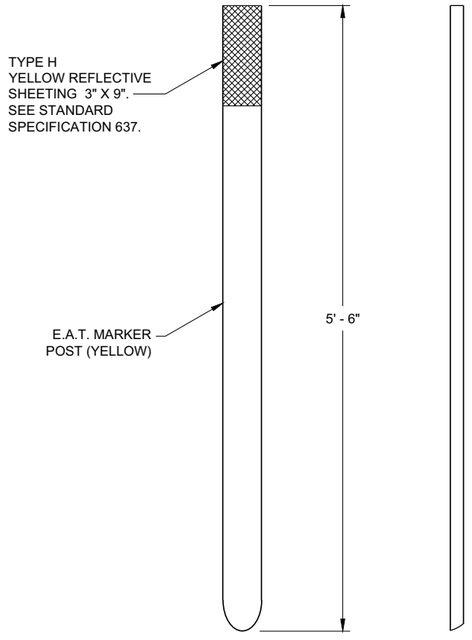


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



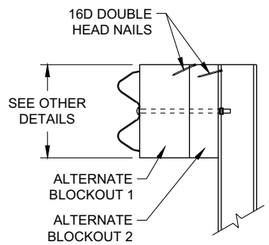
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

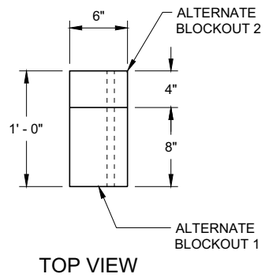


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

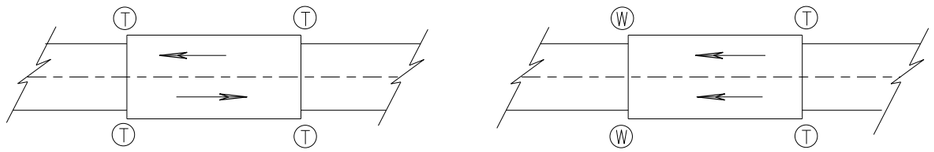
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

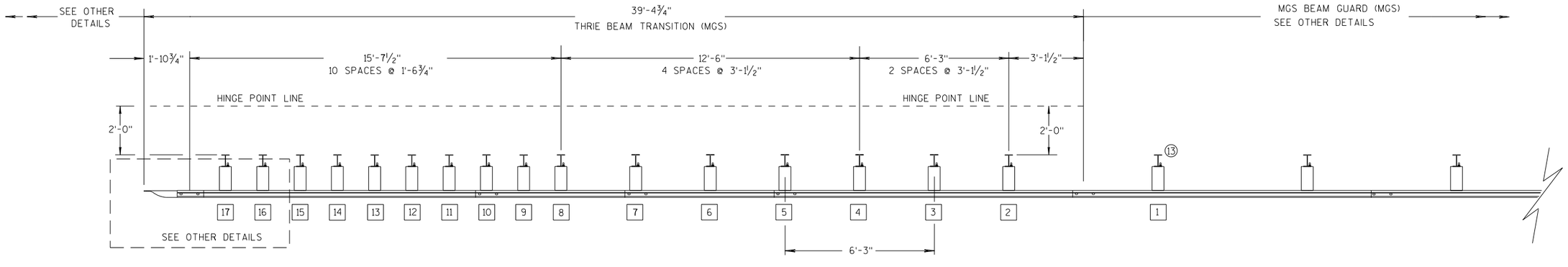
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

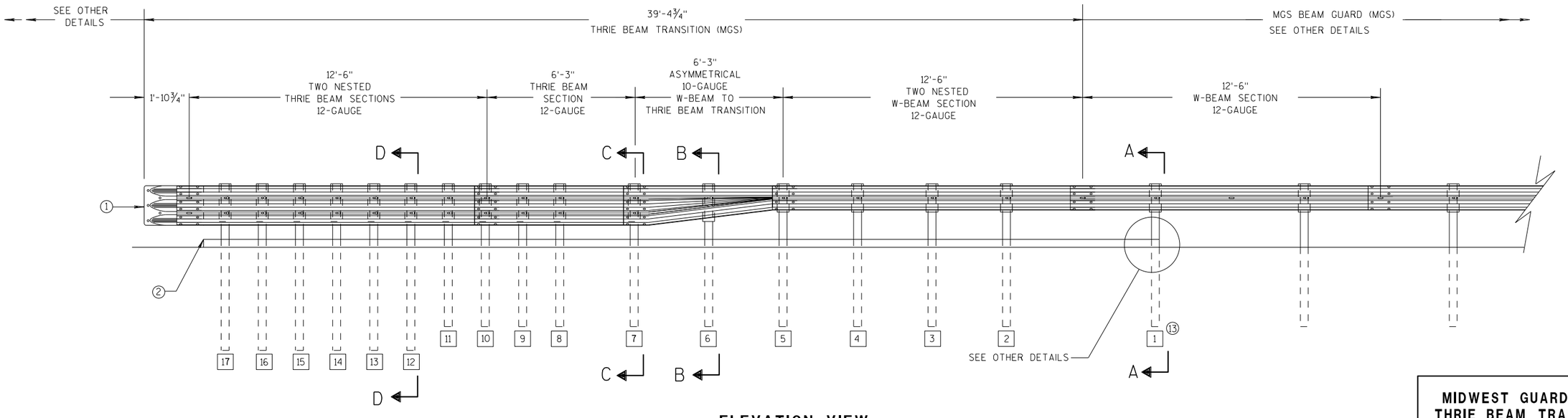
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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

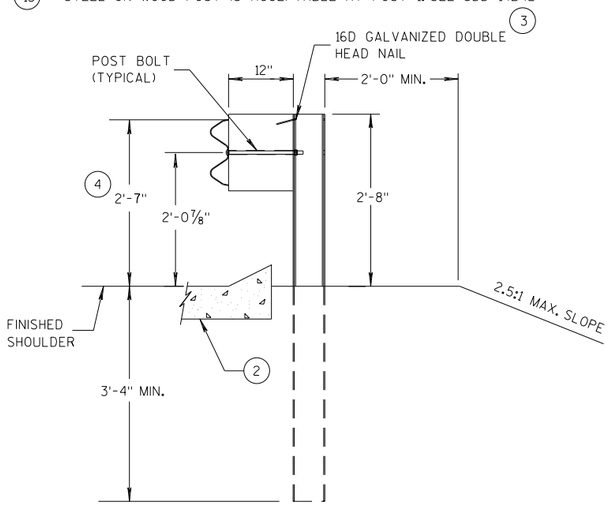
GENERAL NOTES

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

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

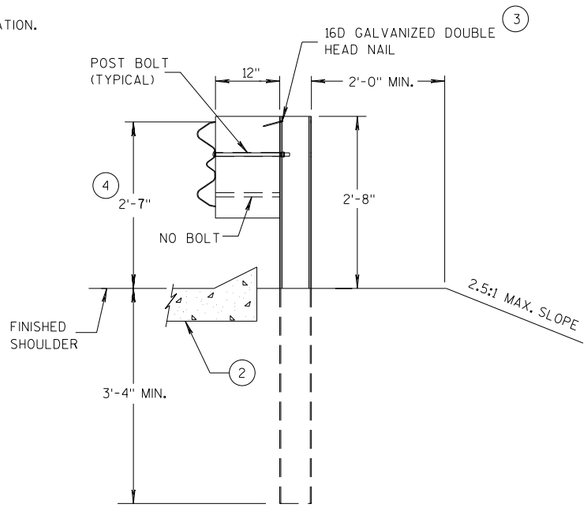
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



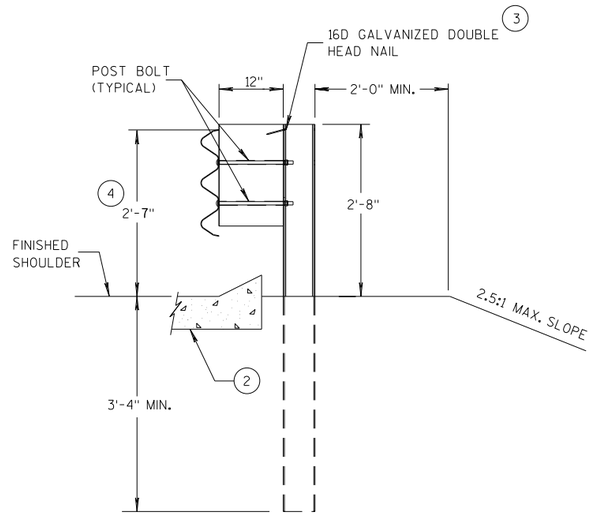
SECTION A-A (13)

POSTS 1-5



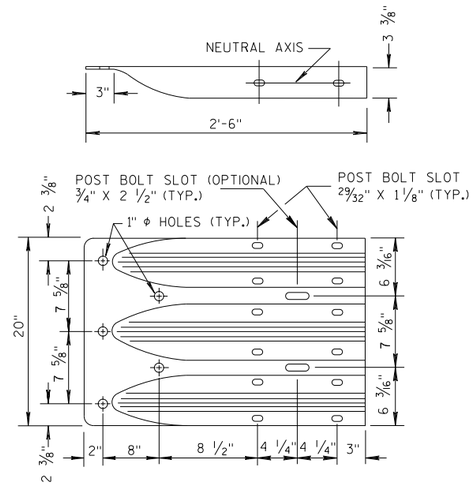
SECTION B-B

POST 6

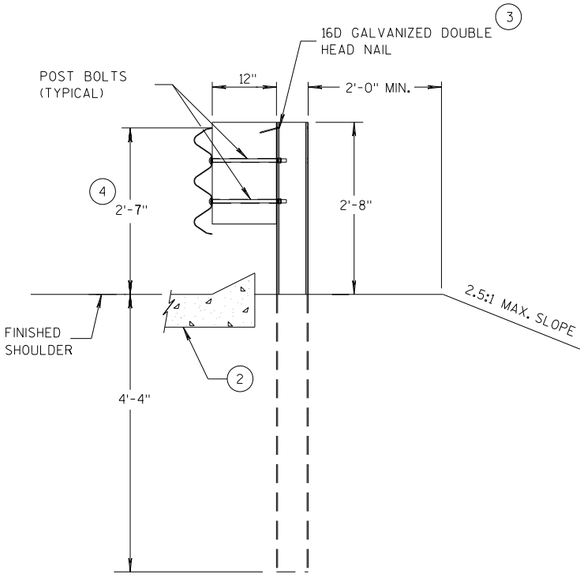


SECTION C-C

POSTS 7-11

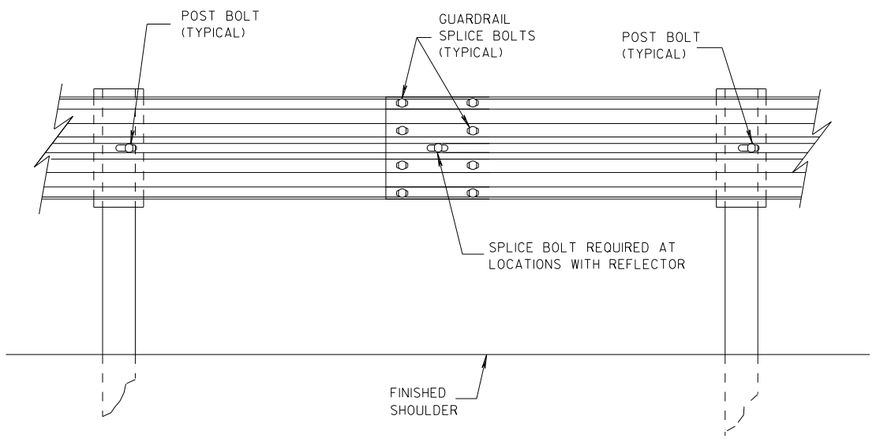


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

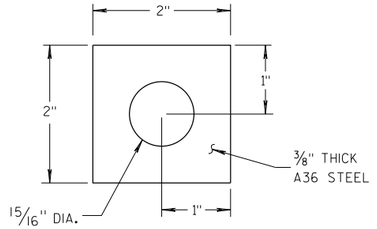
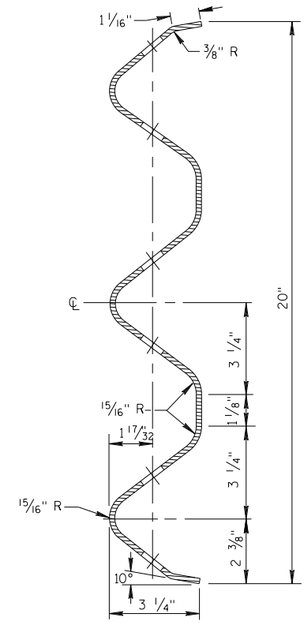


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 47

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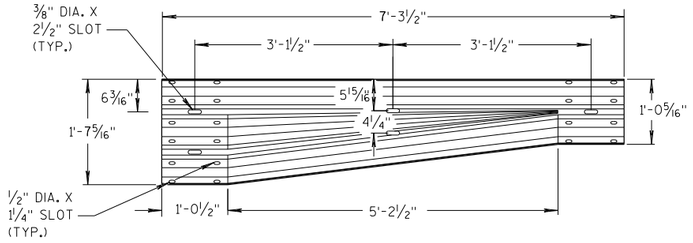
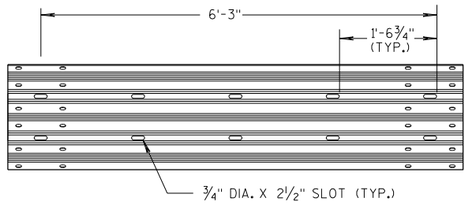
S.D.D. 14 B 45-5b

6

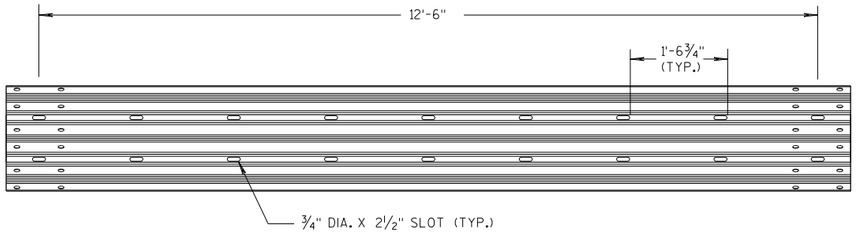
S.D.D. 14 B 45-5b



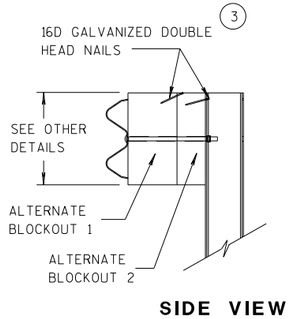
W-BEAM TO THRIE BEAM TRANSITION SECTION



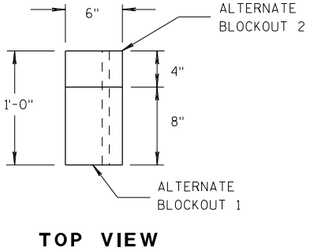
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

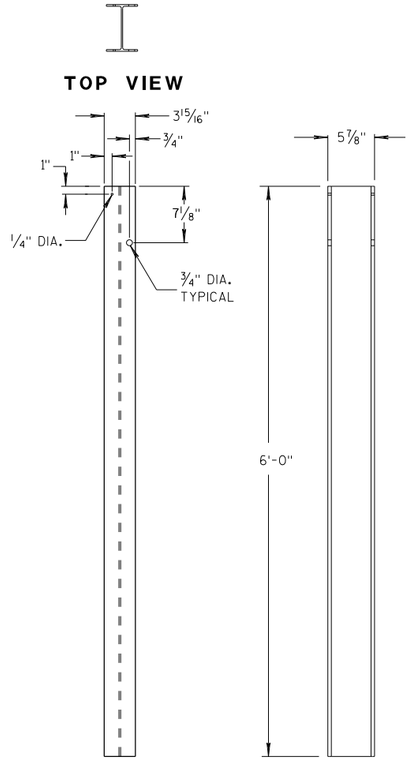


SIDE VIEW



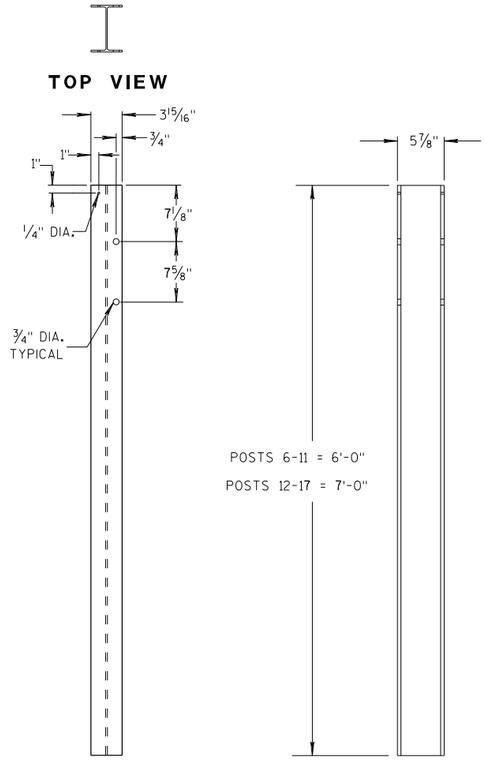
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



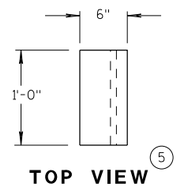
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

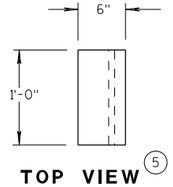


FRONT VIEW SIDE VIEW

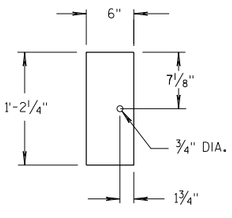
STEEL POSTS 6-17



TOP VIEW (5)

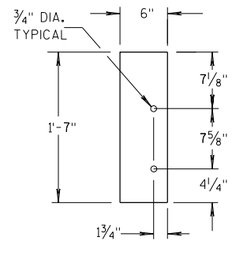


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

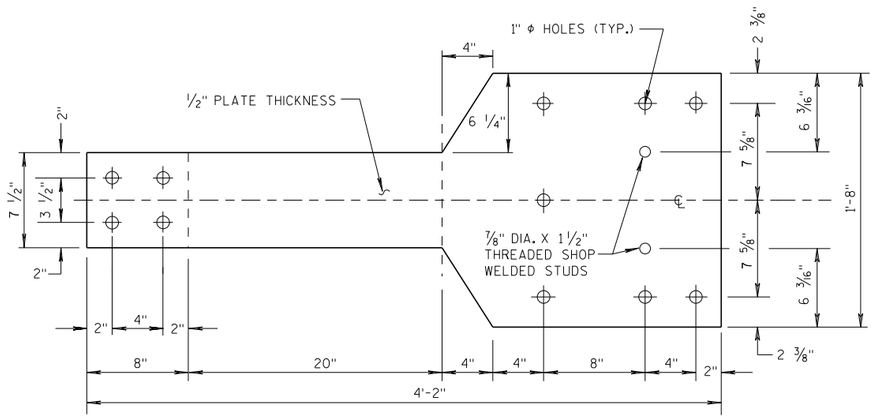
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

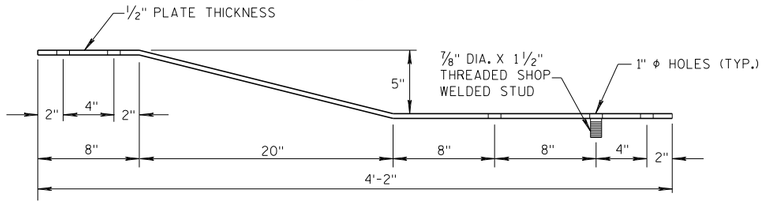
S.D.D. 14 B 45-5c

GENERAL NOTES

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

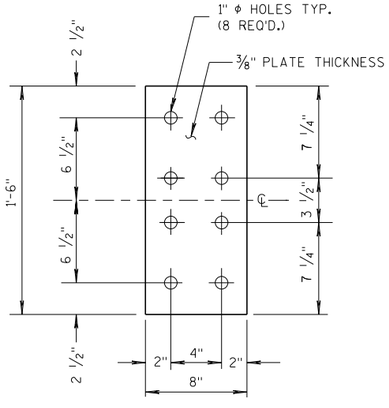


FRONT VIEW



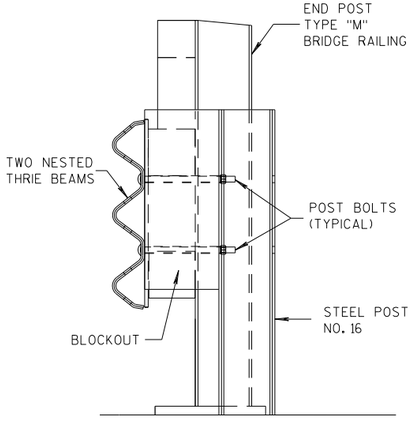
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

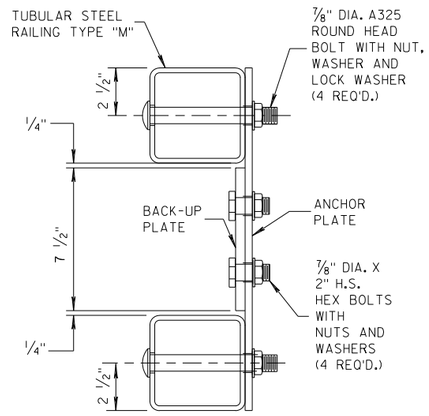


FRONT VIEW

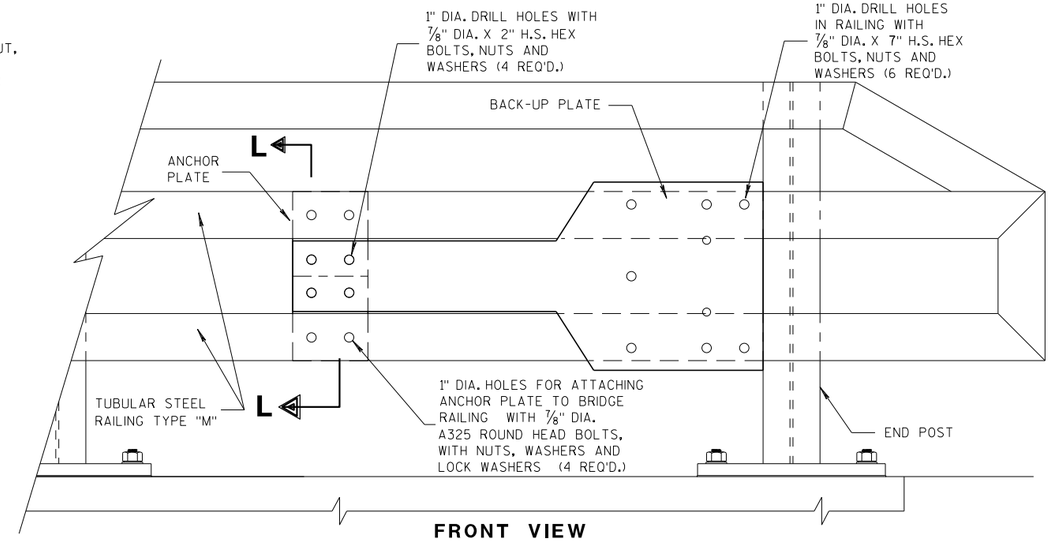
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

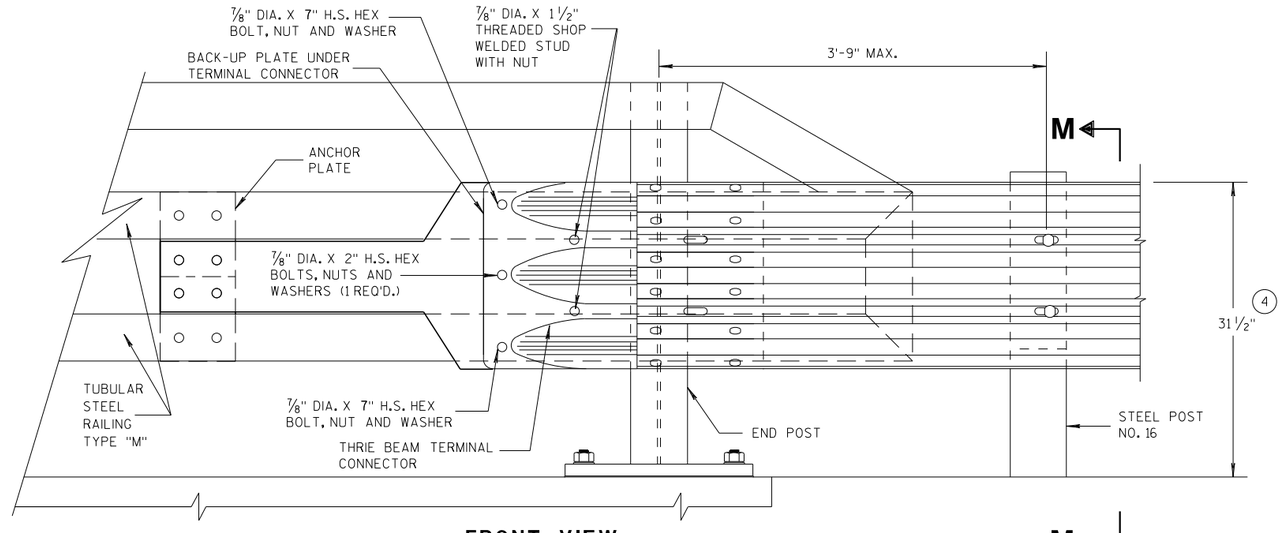


SECTION L-L

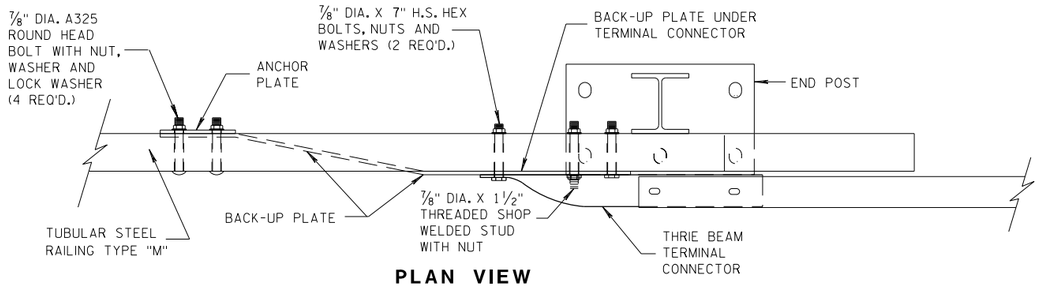


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

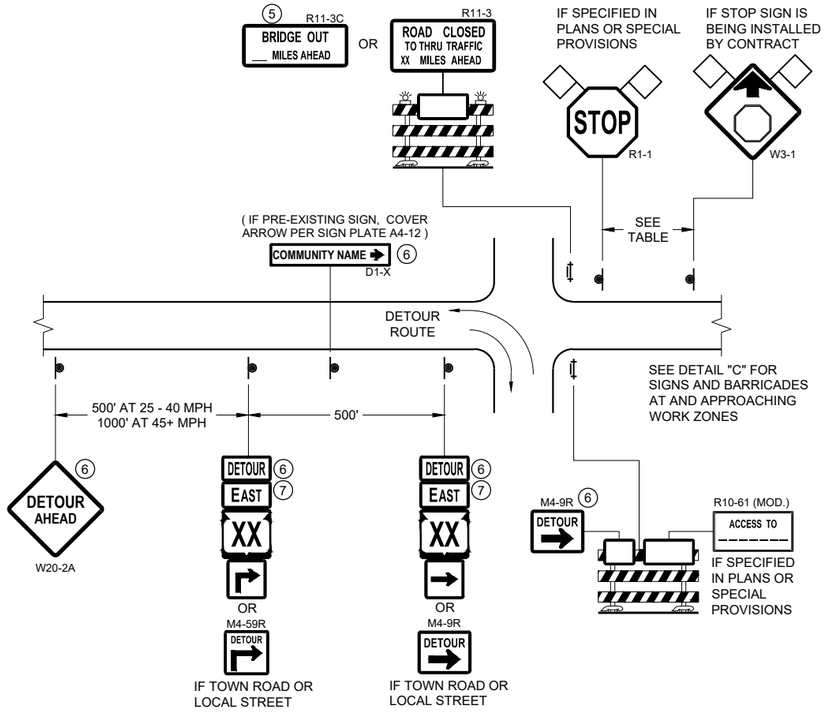
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA

6

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

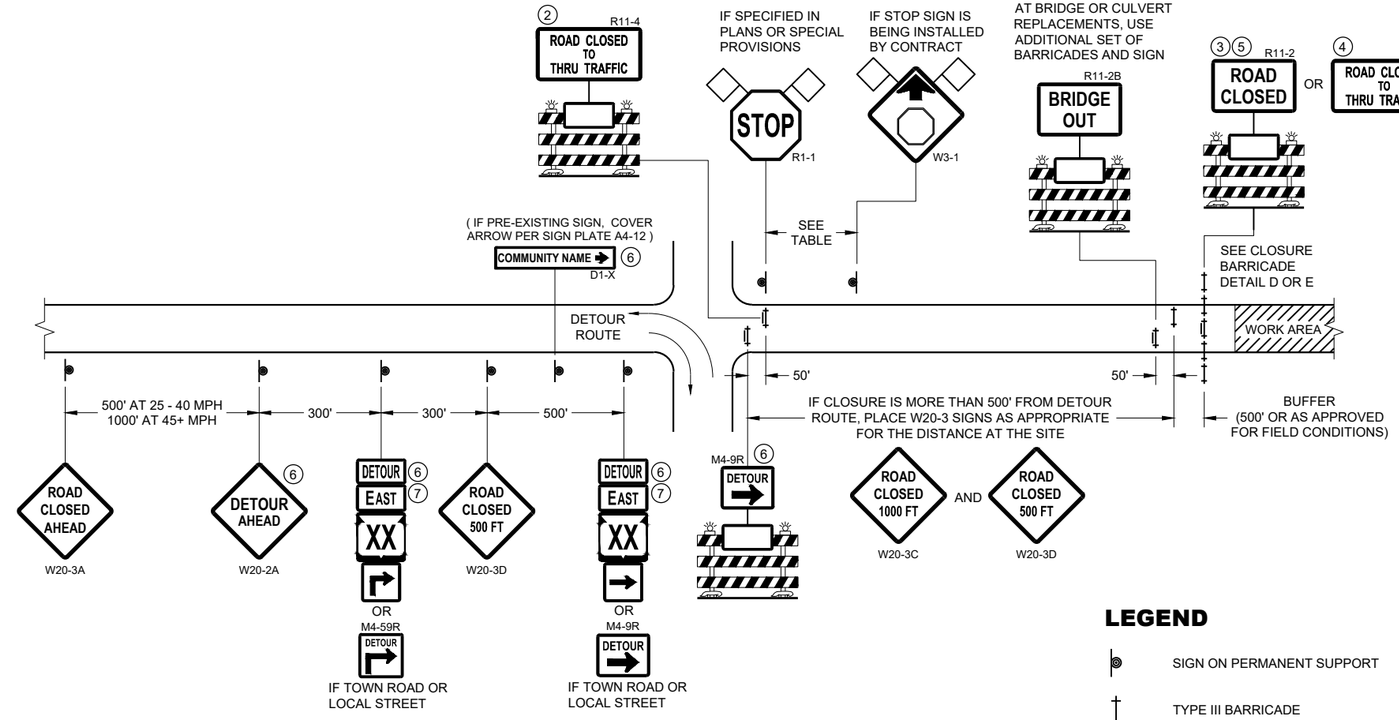
6

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



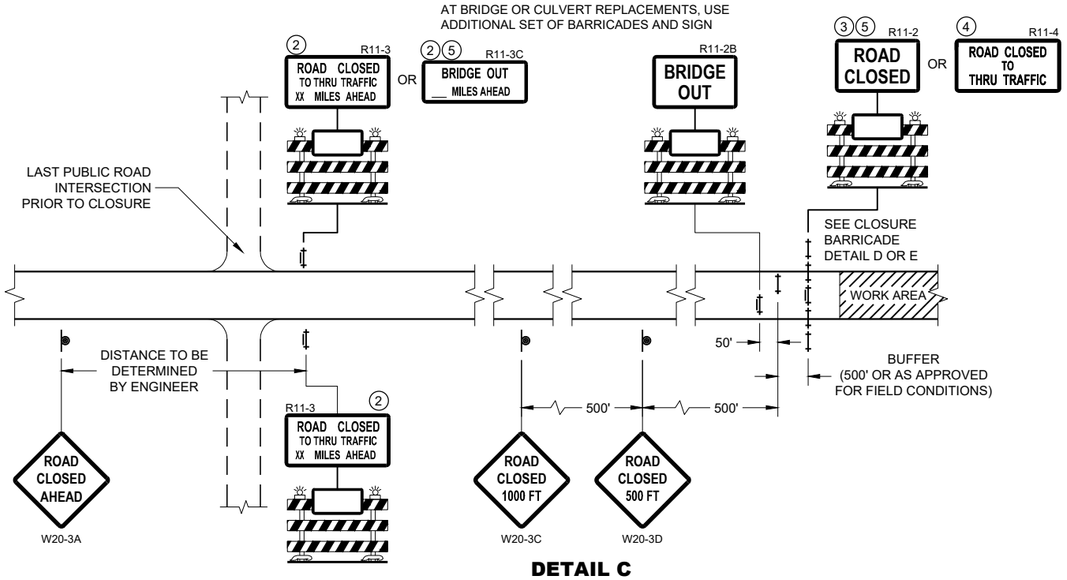
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

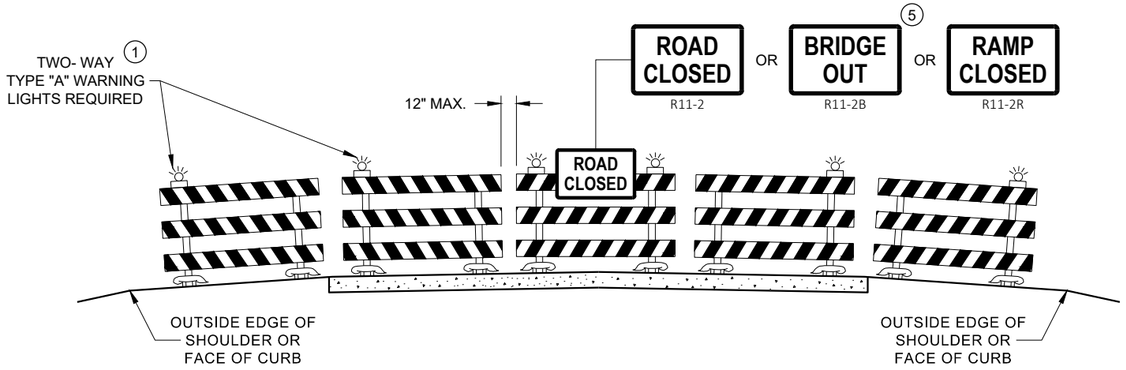
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

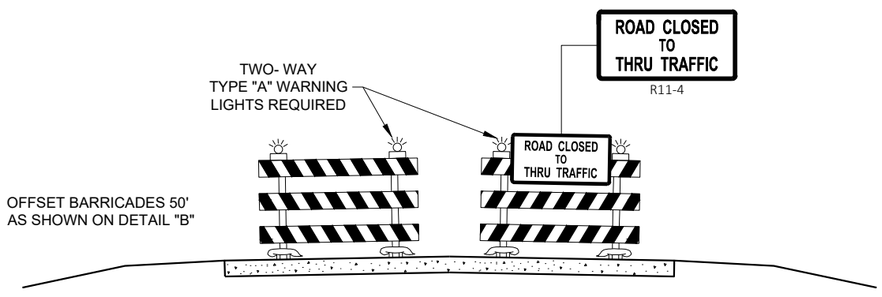
6

SDD 15C02 - 09a

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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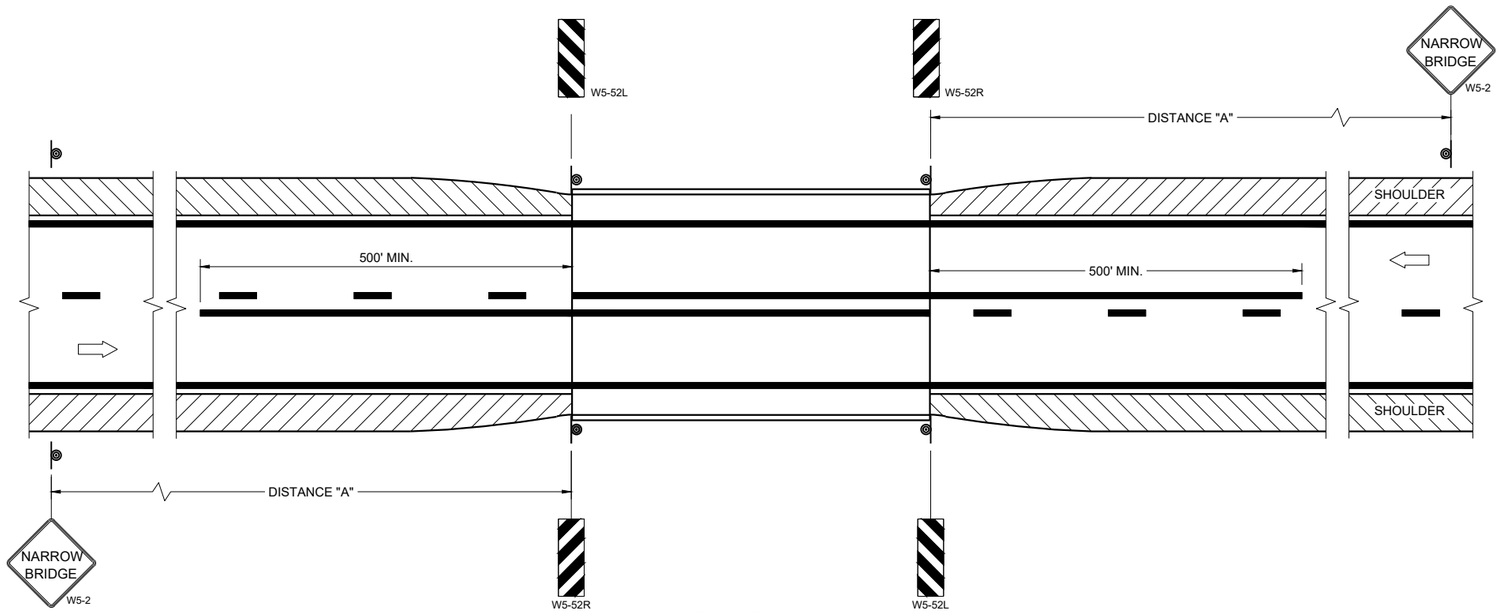
SDD 15C02 - 09b

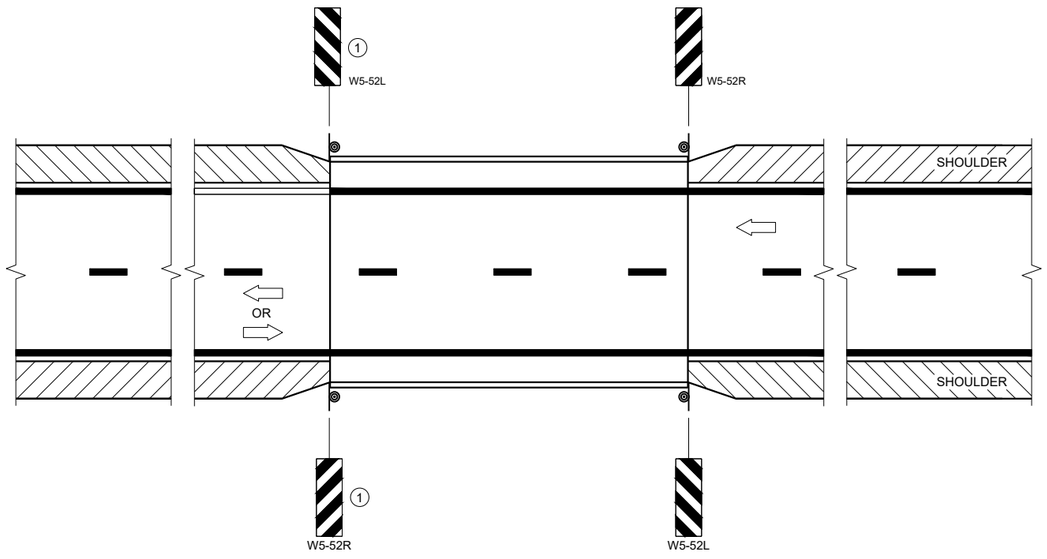
6

SDD 15C02 - 09b



SITUATION 1

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



SITUATION 2

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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

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

SIGNING AND MARKING FOR TWO LANE BRIDGES

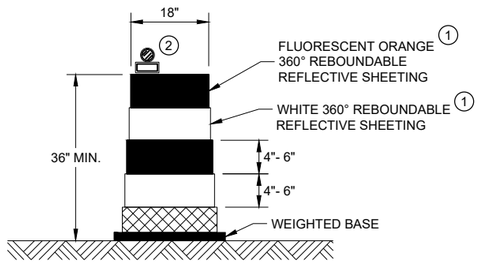
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15C06-12

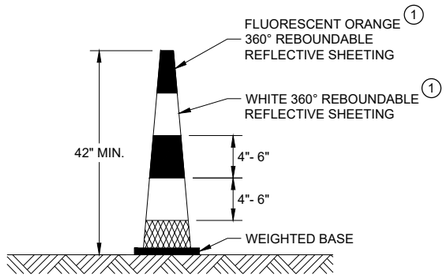
GENERAL NOTES

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



DRUM

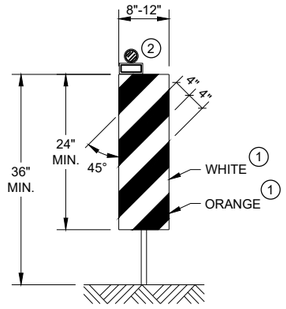
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

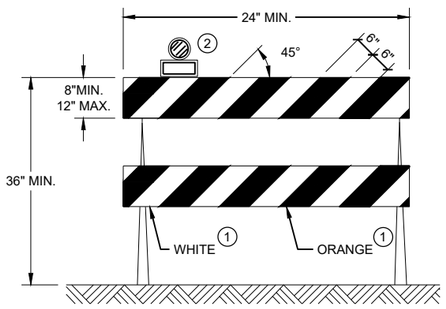
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



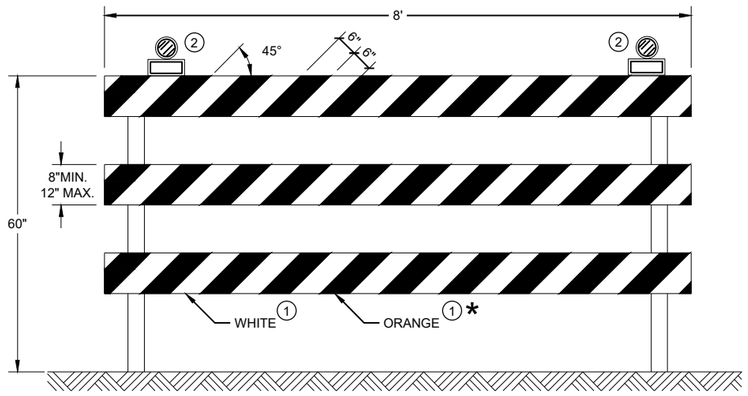
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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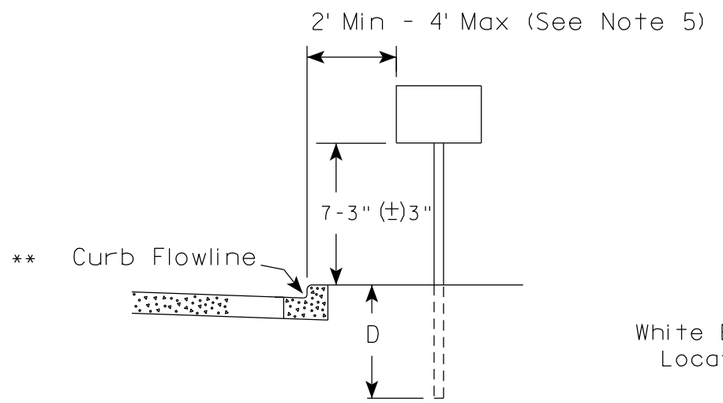
SDD 15C11 - 10b

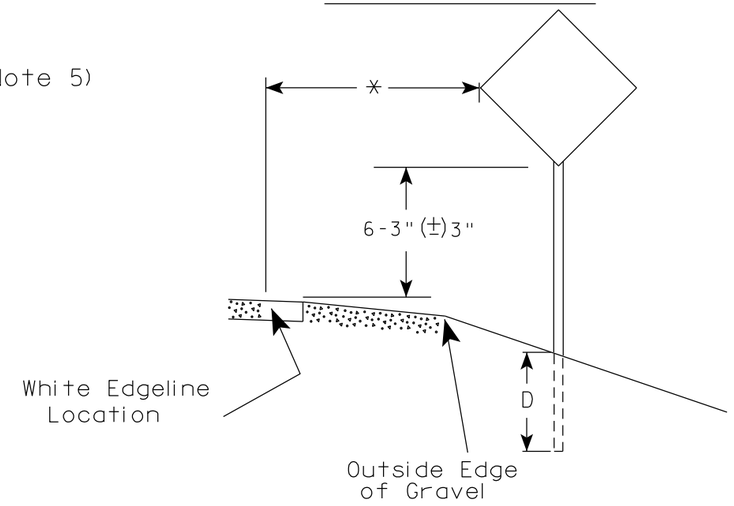
6

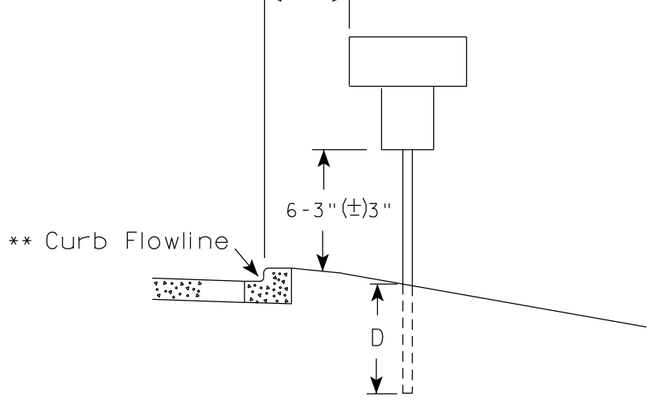
SDD 15C11 - 10b

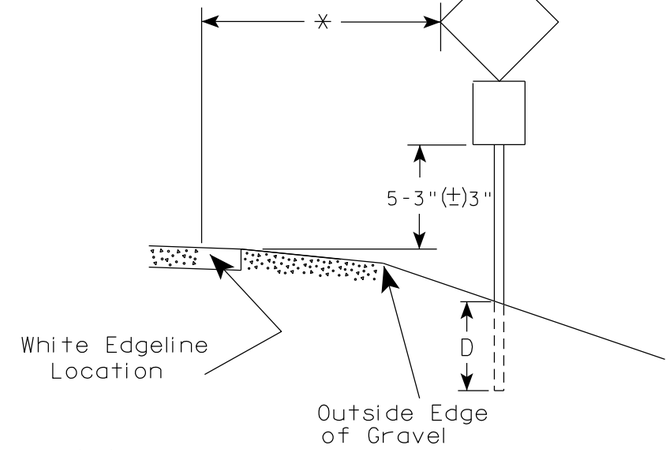
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directd by the Engineer.

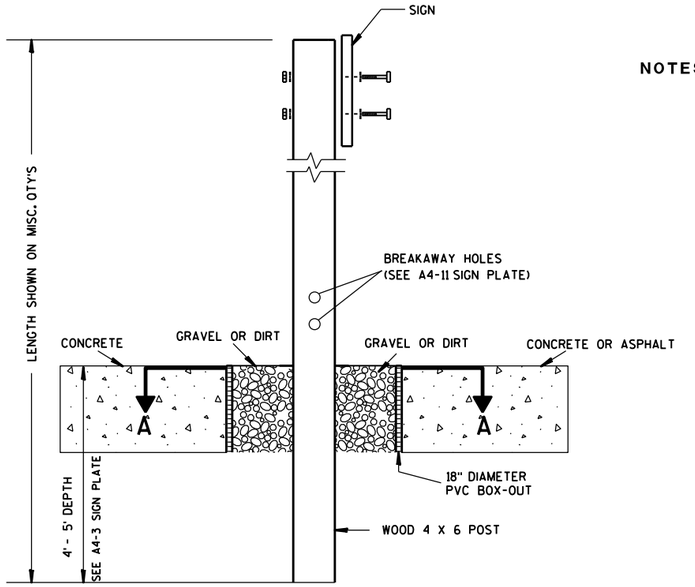
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

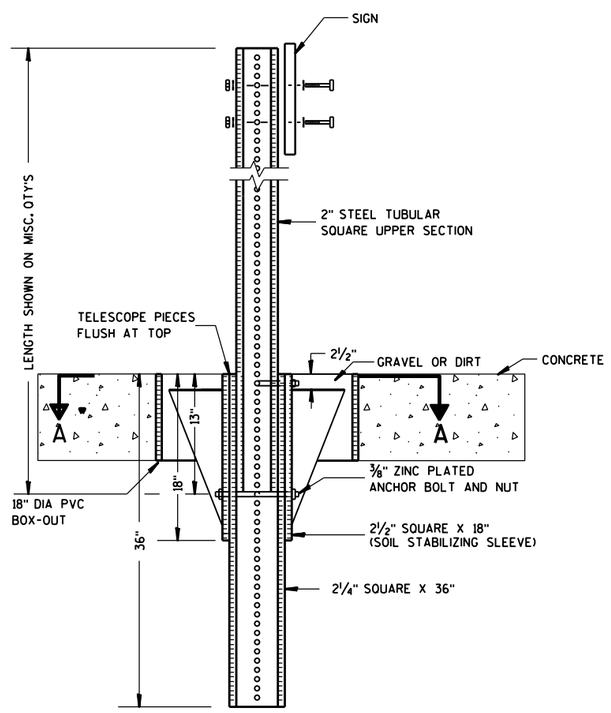
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 54	E



ELEVATION VIEW

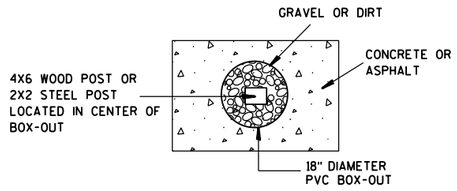
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

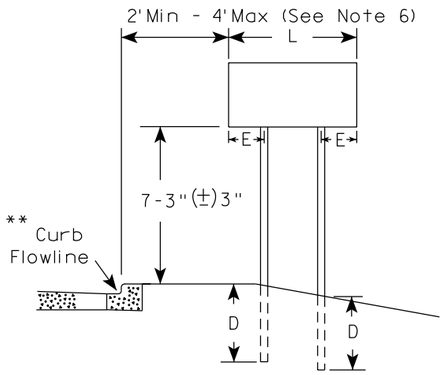
APPROVED Matthew R Rauch
for State Traffic Engineer

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

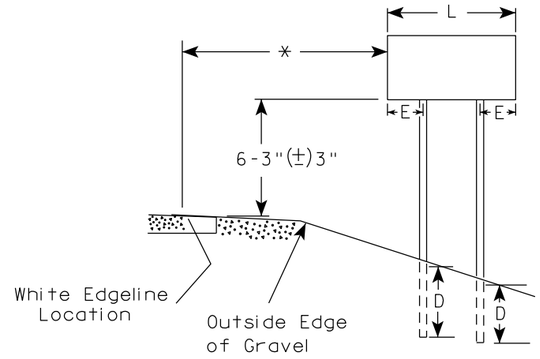
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

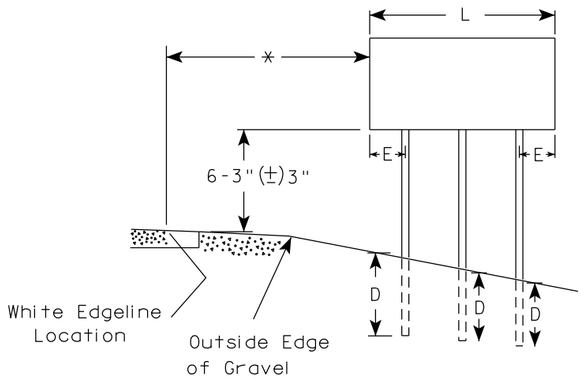
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

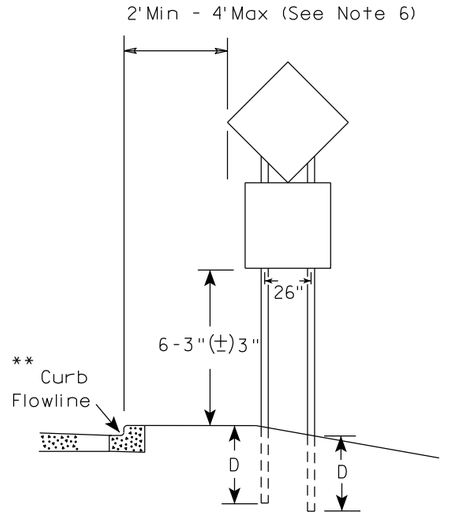
URBAN AREA



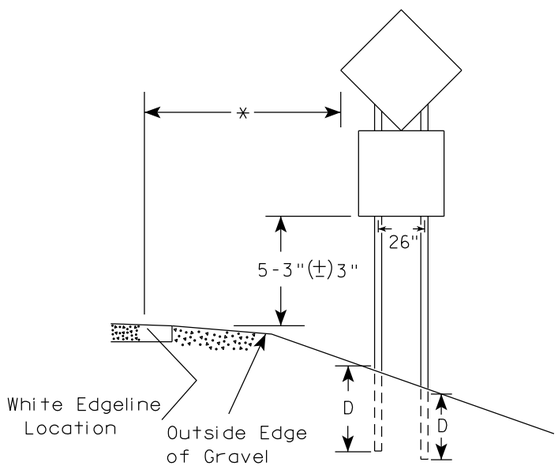
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

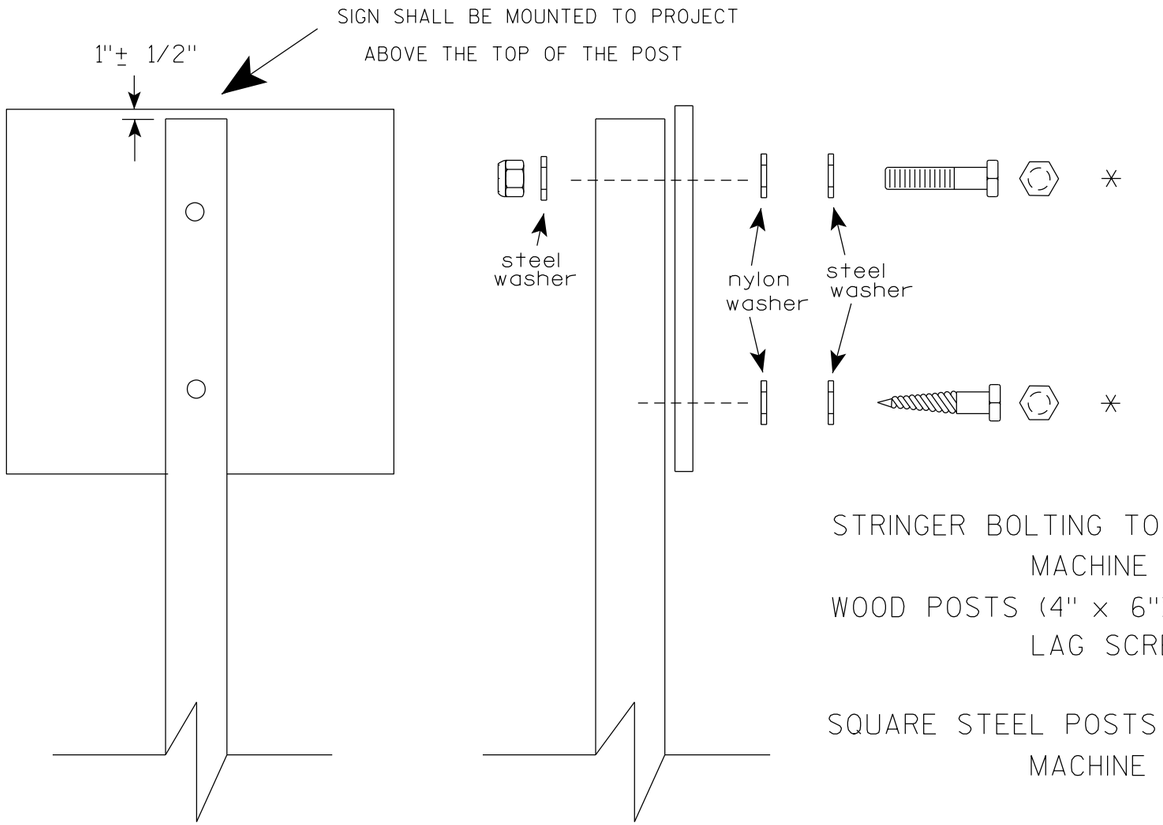
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

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



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS

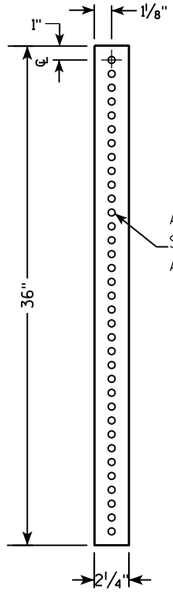
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

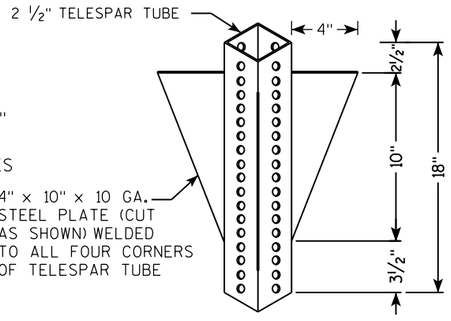
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

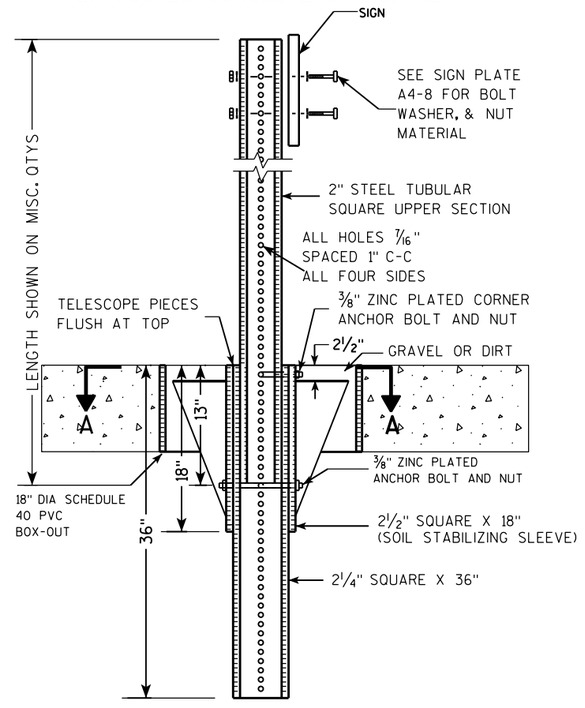
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



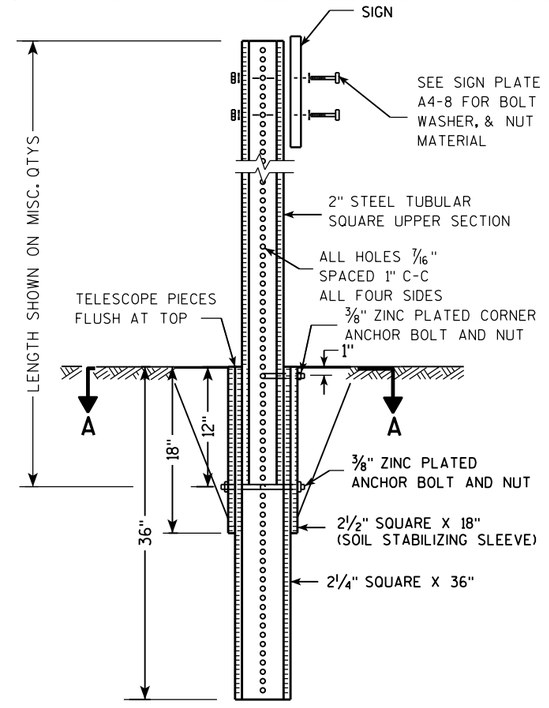
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

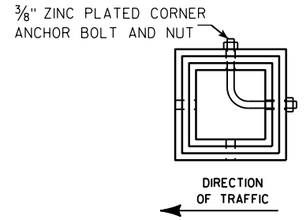


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

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

TUBULAR STEEL
SIGN POST
A4-9

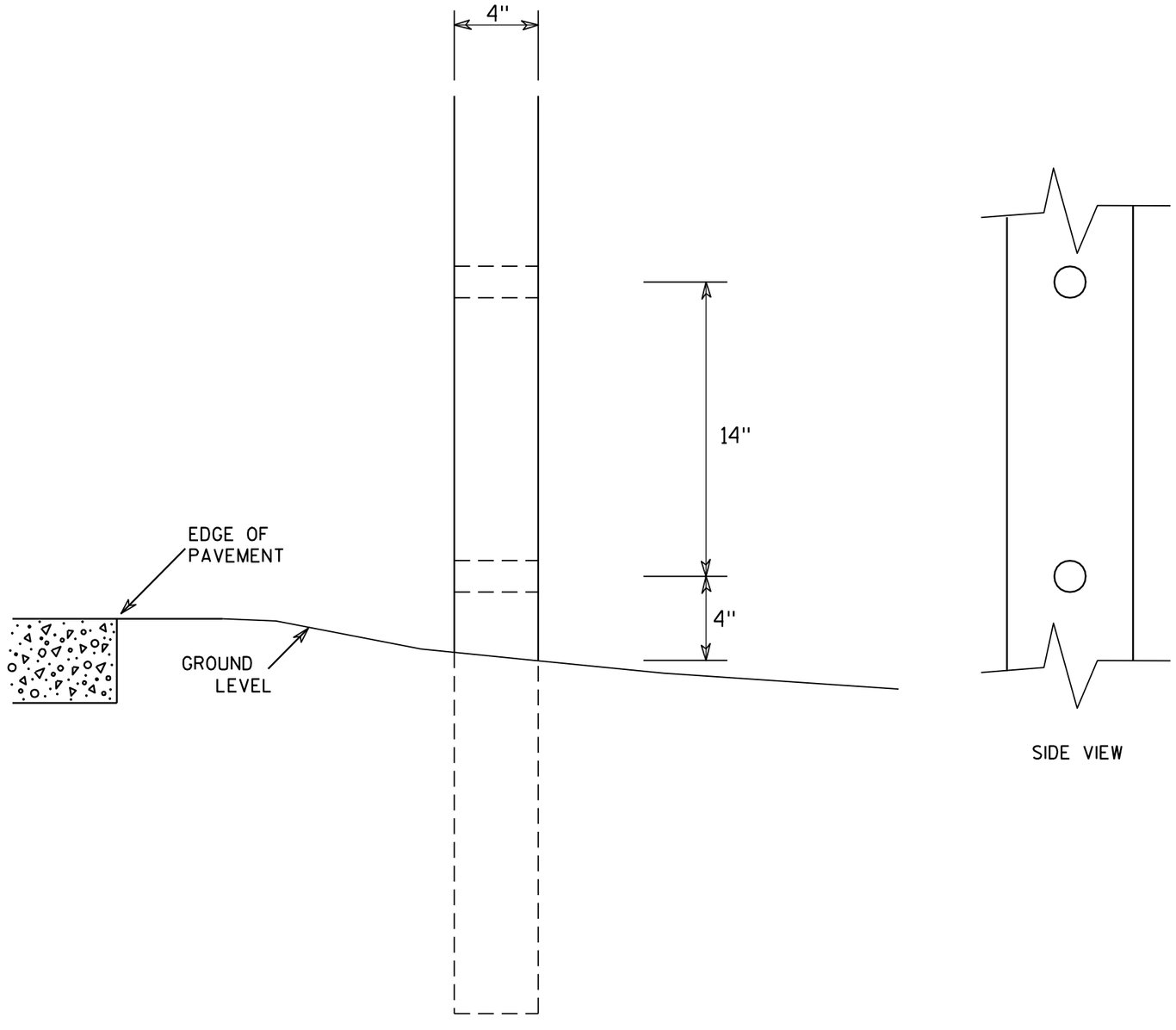
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

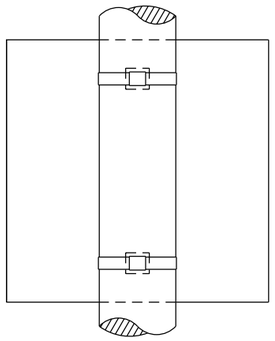
APPROVED Chester J Spang
for State Traffic Engineer

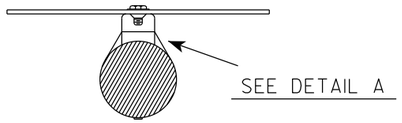
DATE 3/27/97 PLATE NO. A4-11.2

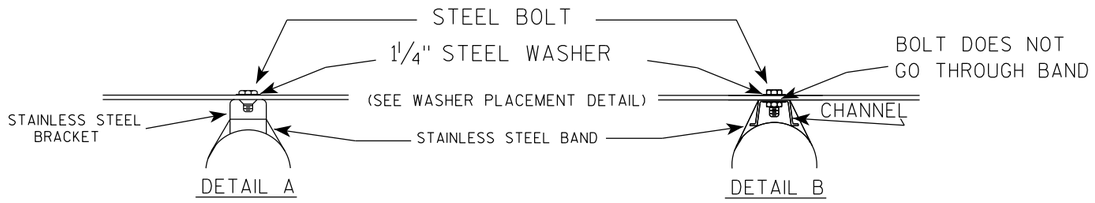
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 59	E

BANDING

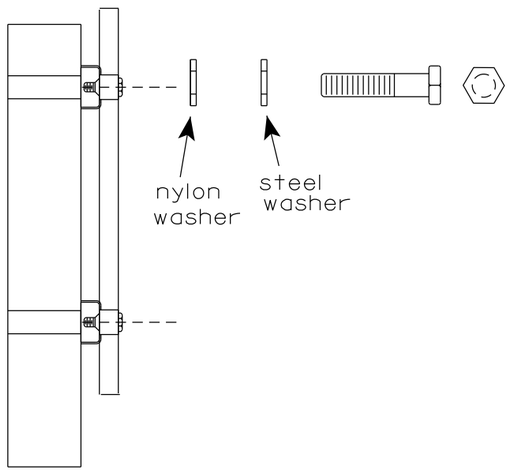
SINGLE SIGN







WASHER PLACEMENT

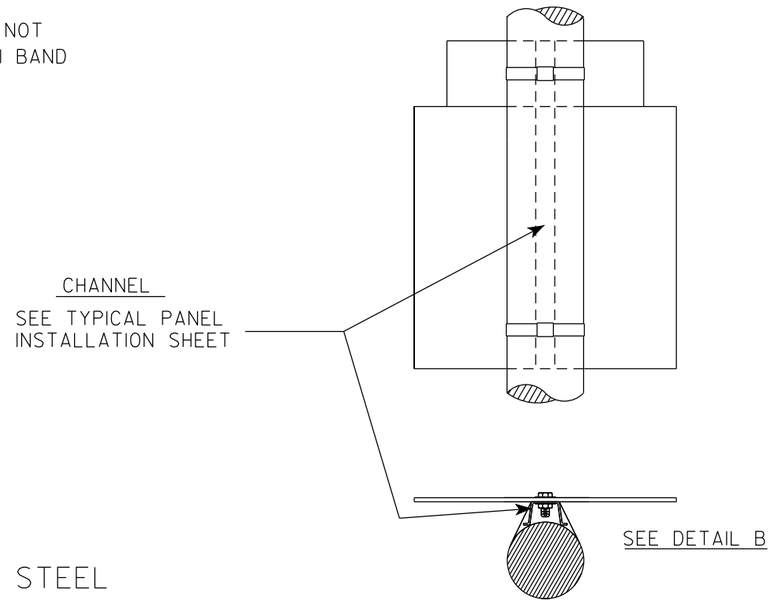


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

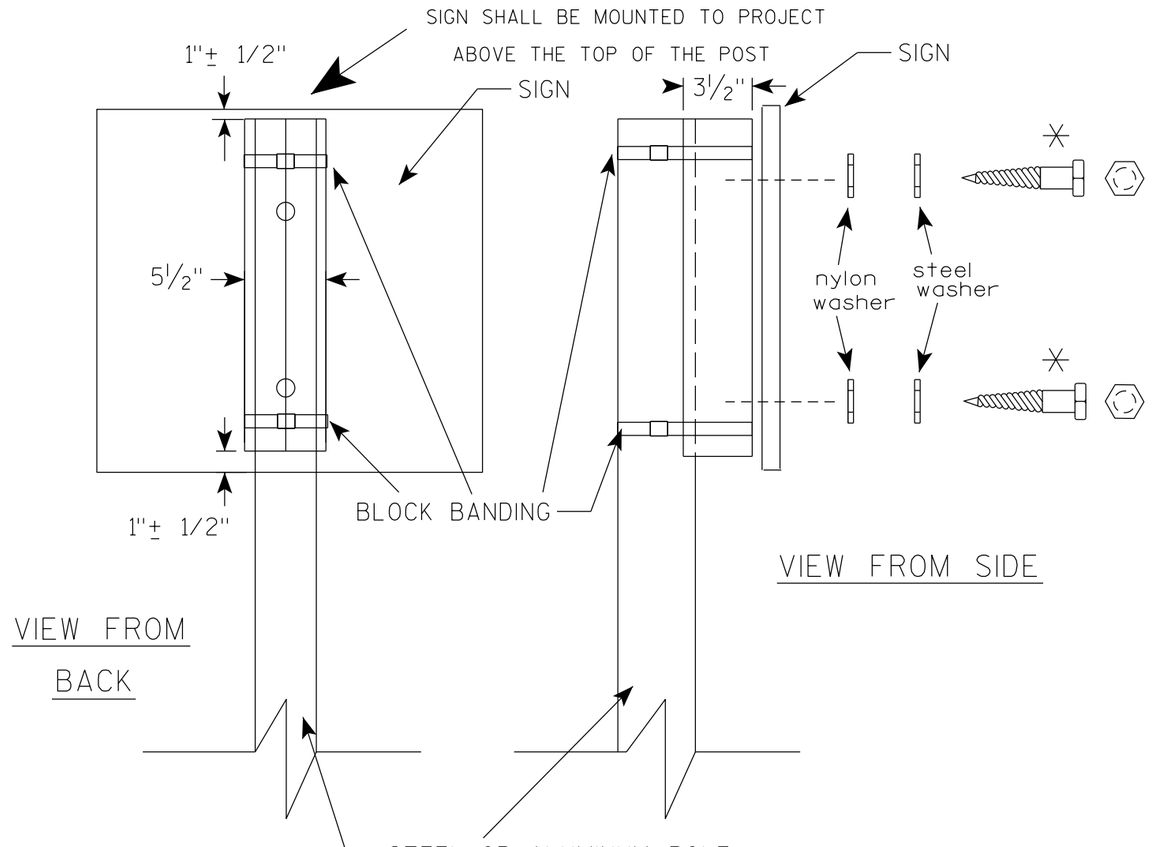
WISCONSIN DEPT OF TRANSPORTATION

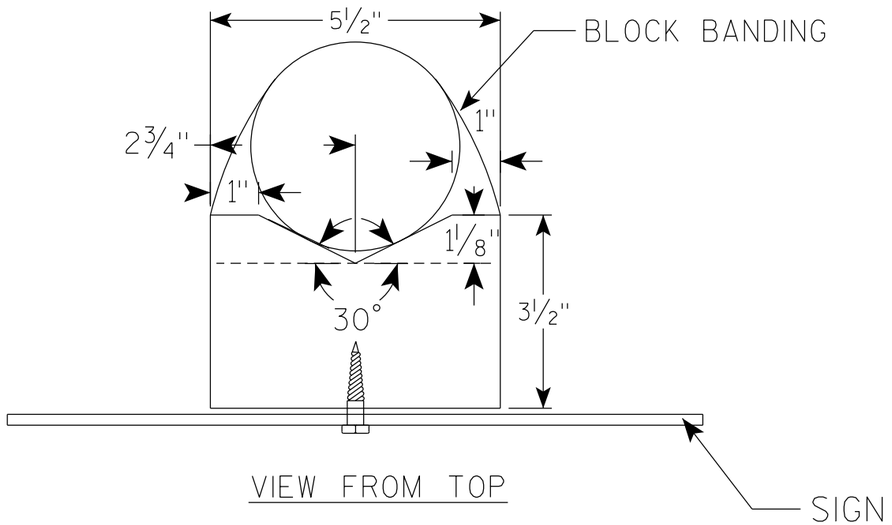
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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

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





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

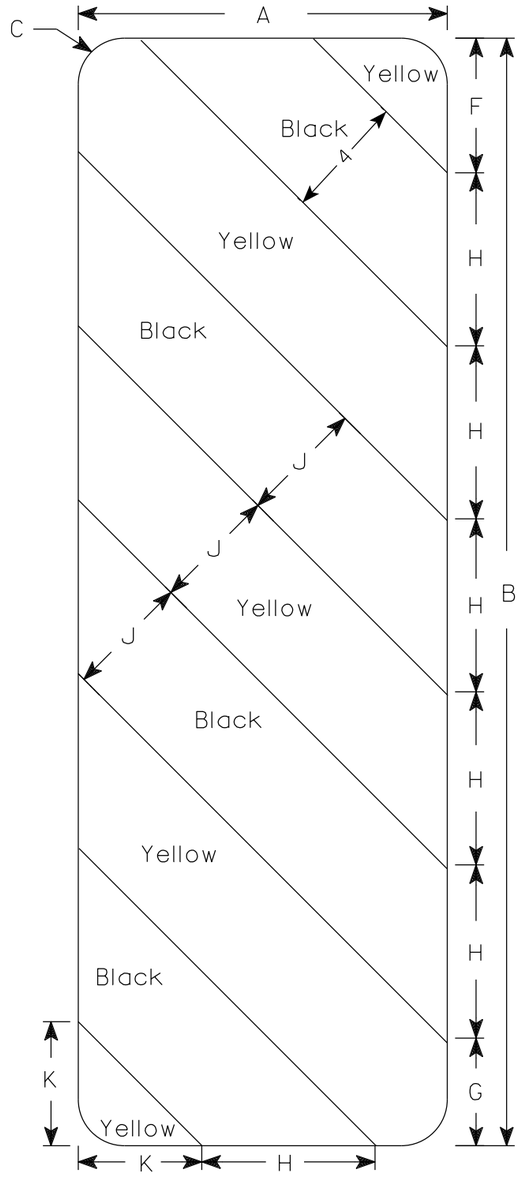
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

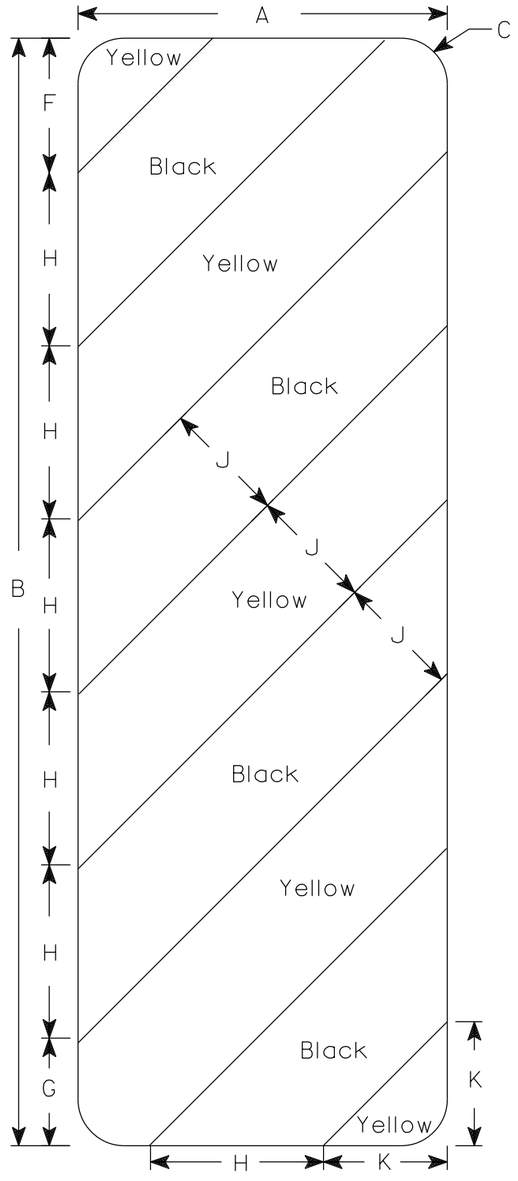
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 61 E



W5-52L



W5-52R

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

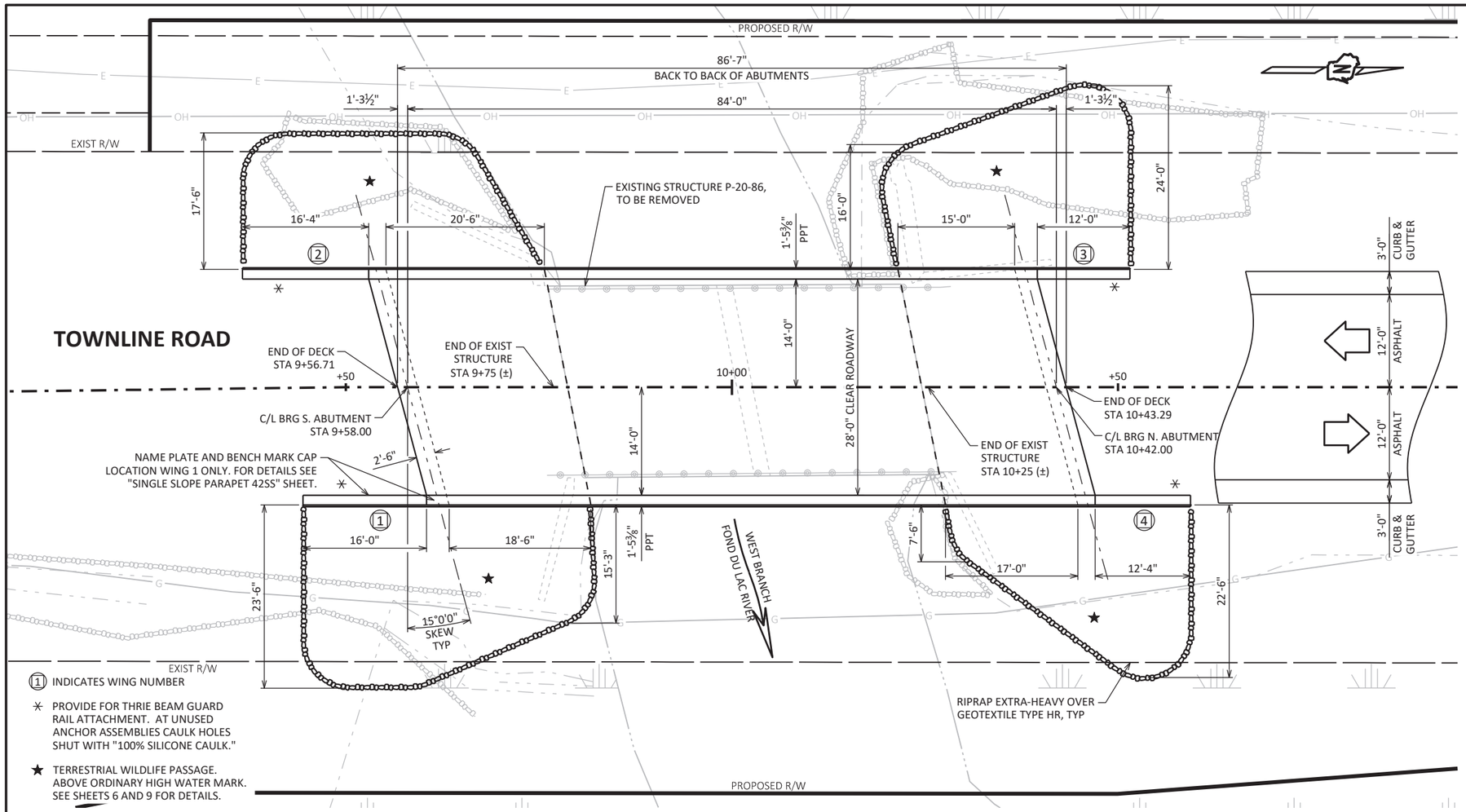
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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

7

7



(1) INDICATES WING NUMBER

✳ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT. AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK."

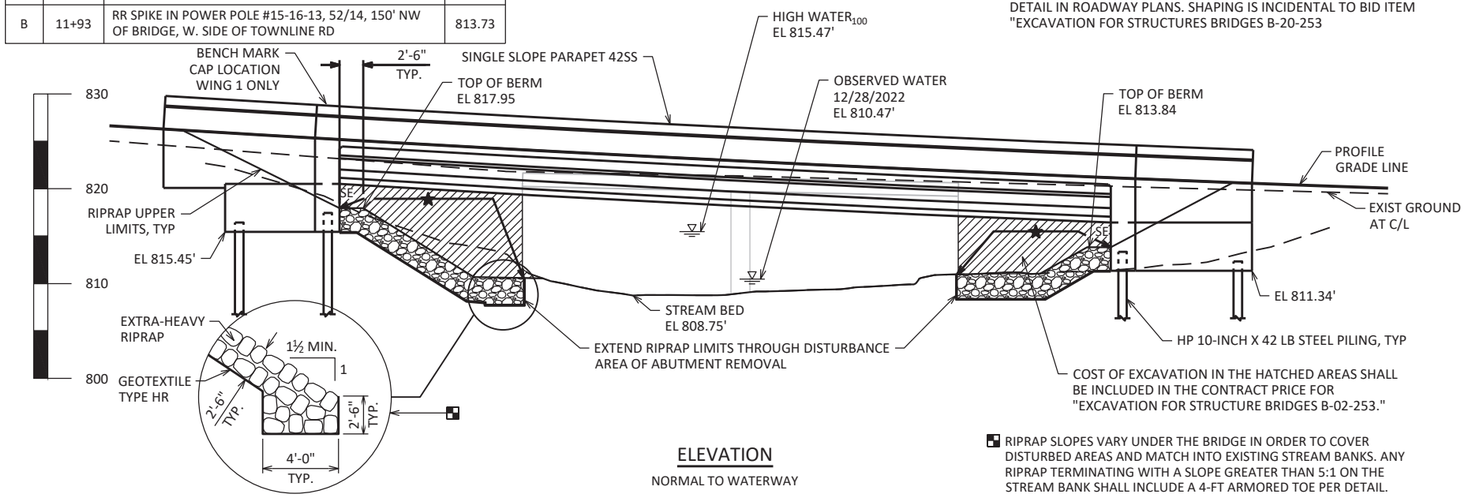
★ TERRESTRIAL WILDLIFE PASSAGE. ABOVE ORDINARY HIGH WATER MARK. SEE SHEETS 6 AND 9 FOR DETAILS.

BENCH MARKS

BM	STA	DESCRIPTION	ELEV
A	8+61	RR SPIKE IN POWER POLE #15-16-13, 52/10, 110' SW OF BRIDGE, W. SIDE OF TOWNLINE RD	830.48
B	11+93	RR SPIKE IN POWER POLE #15-16-13, 52/14, 150' NW OF BRIDGE, W. SIDE OF TOWNLINE RD	813.73

PLAN

SINGLE SPAN 36W" PRESTRESSED CONCRETE GIRDER



ELEVATION

NORMAL TO WATERWAY

STATE PROJECT NUMBER

3822-02-71

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.21
OPERATING RATING: RF = 1.61
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

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

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

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

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 170 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 35'- 0" LONG AT SOUTH ABUTMENT.
ESTIMATED 30'- 0" LONG AT NORTH ABUTMENT.

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

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 2,000 C.F.S.
V_{100}= 9.5 F.P.S.
HW_{100}= EL. 815.47
WATERWAY AREA = 210 SQ. FT.
DRAINAGE AREA = 79.4 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

Q_2= 600 C.F.S.
V_2= 5.3 F.P.S.
HW_2= EL. 812.25

TRAFFIC DATA

TOWNLINE ROAD:

ADT = 410 (2025)
ADT = 550 (2045)
R.D.S. = 35 MPH

LIST OF DRAWINGS:

1. GENERAL PLAN
2. QUANTITIES AND CROSS SECTION
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT WING DETAILS
6. SOUTH ABUTMENT DETAILS
7. NORTH ABUTMENT
8. NORTH ABUTMENT WING DETAILS
9. NORTH ABUTMENT DETAILS
10. 36W" PRESTRESSED GIRDER DETAILS
11. 36W" PRESTRESSED GIRDER DETAILS
12. STEEL DIAPHRAGMS
13. SUPERSTRUCTURE
14. SUPERSTRUCTURE DETAILS
15. SUPERSTRUCTURE DETAILS
16. SINGLE SLOPE PARAPET 42SS

STRUCTURE DESIGN CONTACTS:

CONSULTANT CONTACT: ANDREW KLEMP 920-924-5720
BRIDGE OFFICE CONTACT: AARON BONK 608-261-0261

NO.	DATE	REVISION	BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac

WISCONSIN
RYAN T. ARNDT
E-41765
FOND DU LAC, WI
8-1-24
PROFESSIONAL ENGINEER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/05/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-20-253

TOWNLINE ROAD OVER WEST BRANCH FOND DU LAC RIVER

COUNTY	TOWN
FOND DU LAC	LAMARTINE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
RTA	ALK	MJK	ALK

GENERAL PLAN

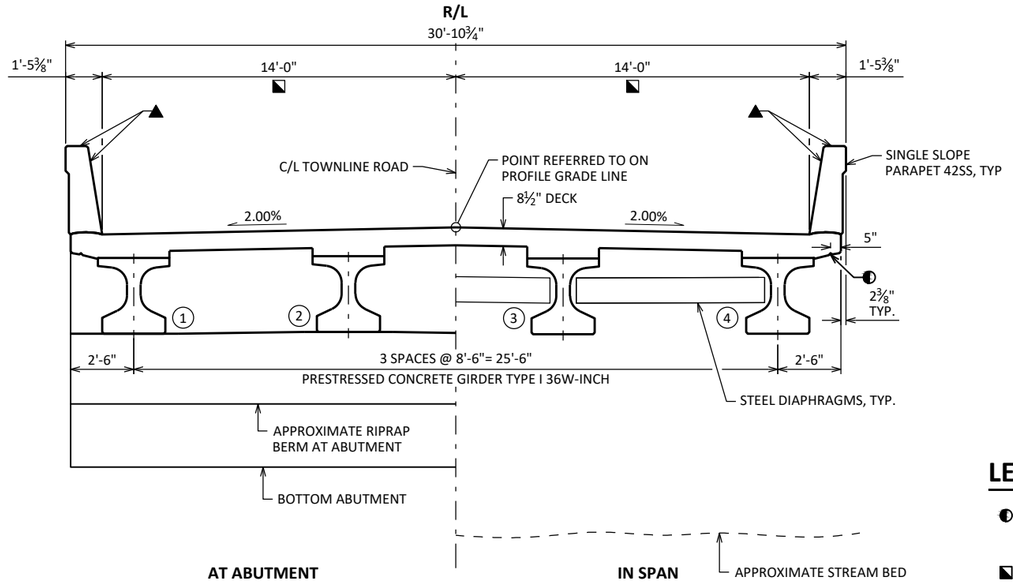
SHEET 1 OF 16
63

SCALE = 16.0

8

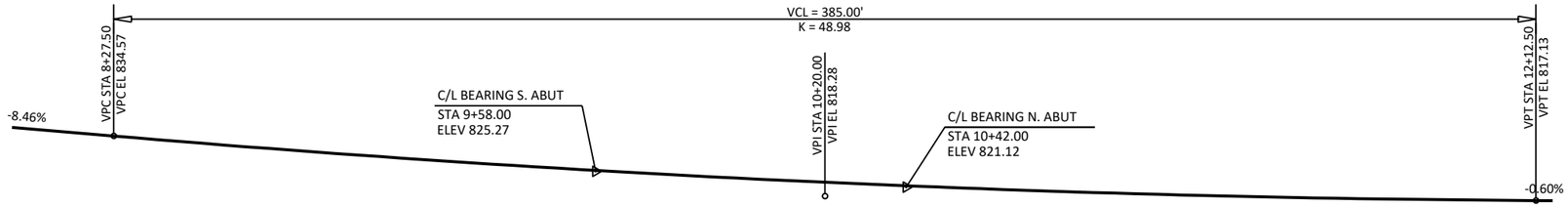
8

FILE NAME: S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-080101-BR.DWG
LAYOUT NAME: SHT1
PLOT DATE : ----
PLOT BY : AARON SARAUER
I.D. 3822-02-00
DATE: JUL 2024



CROSS SECTION THRU BRIDGE

LOOKING NORTH



PROFILE GRADE LINE

TOWNLINE ROAD

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S ABUT	N ABUT	SUPER	TOTAL
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-20-86	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-20-253	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	188	188	---	376
502.0100	CONCRETE MASONRY BRIDGES	CY	34.7	34.3	130.3	199.3
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	270	270
502.3210	PIGMENTED SURFACE SEALER	SY	---	---	115	115
503.0137	PRESTRESSED GIRDER TYPE I 36W-INCH	LF	---	---	340	340
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2110	1750	---	3,860
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1960	1560	22250	25,770
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	---	---	8	8
506.4000	STEEL DIAPHRAGMS B-20-253	EACH	---	---	6	6
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	10	---	19
550.0500	PILE POINTS	EACH	8	8	---	16
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	277	237	---	514
606.0400	RIPRAP EXTRA-HEAVY	CY	181	149	---	330
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	82	88	---	170
614.0150	ANCHOR ASSEMBLY FOR STEEL PLATE BEAM GUARD	EACH	---	---	4	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	44	48	---	92
645.0120	GEOTEXTILE TYPE HR	SY	239	197	---	436
SPV.0195	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	137	114	---	251
	NON-BID ITEMS					
-----	JOINT FILLER	SIZE	---	---	---	1/2" & 3/4"
-----	NAME PLATE					

LEGEND

- ◐ ¾" V-GROOVE REQ'D. EXTEND 6" FROM F.F. OF ABUTMENT BODY.
- ◪ COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS.
- ▲ COAT WITH "PIGMENTED SURFACE SEALER" AS PER THE STANDARD SPECIFICATIONS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-20-253" SHALL BE THE EXISTING GROUNDLINE.

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

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

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

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

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

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH EXTRA-HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1, THE ABUTMENT DETAILS, AND CONSTRUCTION DETAIL IN THE ROADWAY PLANS.

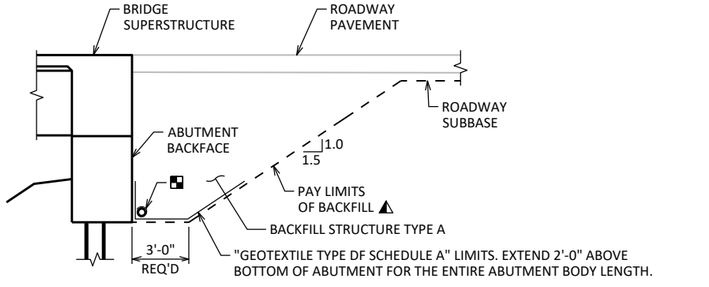
AT ABUTMENTS, HP 12X53 STEEL PILING MAY BE USED IN LIEU OF HP 10X42 STEEL PILING. PAYMENT SHALL BE BASED ON BID PRICE FOR HP 10X42 STEEL PILING.

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "36W PRESTRESSED GIRDER DETAILS 2" SHEET.

AT ABUTMENTS CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

REMOVING STRUCTURE ITEM SHALL INCLUDE A TWO SPAN STEEL DECK GIRDER BRIDGE WITH A CONCRETE DECK.

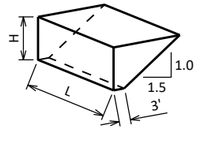
SHAPE SLOPES N FRONT OF ABUTMENTS PER CONSTRUCTION DETAILS WITHIN THE ROADWAY PLANS. SHAPING IS INCIDENTAL TO BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-20-253."



TYPICAL SECTION THRU ABUTMENT

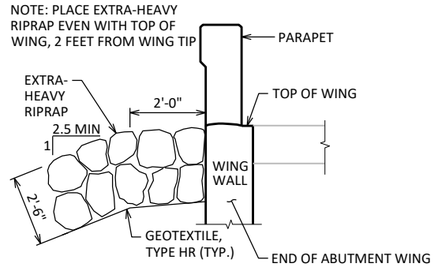
▲ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

◪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



ABUTMENT BACKFILL DIAGRAM

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



TYPICAL FILL SECTION AT WING TIPS

STATE PROJECT NUMBER

3822-02-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

QUANTITIES AND CROSS SECTION

SHEET 2
64

SCALE = 6.00

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-01	05/08/2023	381501.9	796747.9
B-02	05/09/2023	381585.9	796731.5

BORINGS COMPLETED BY: ECS MIDWEST, LLC

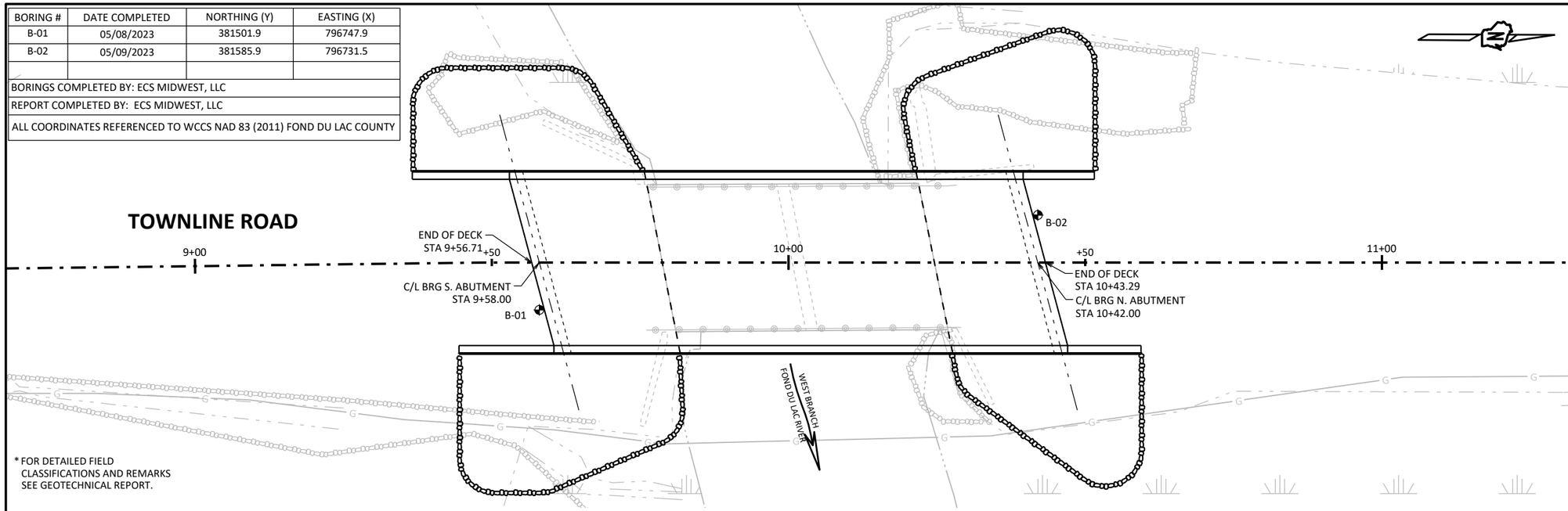
REPORT COMPLETED BY: ECS MIDWEST, LLC

ALL COORDINATES REFERENCED TO WCCS NAD 83 (2011) FOND DU LAC COUNTY

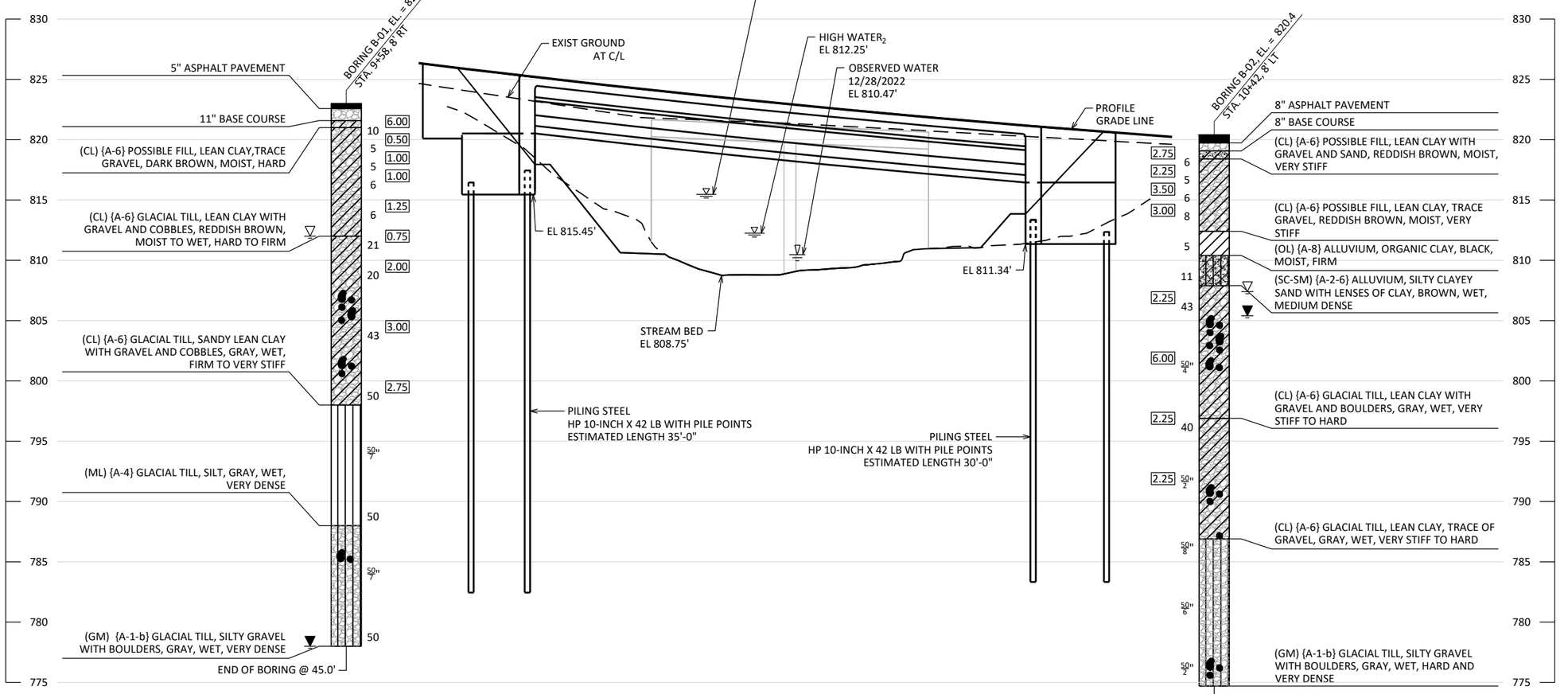
STATE PROJECT NUMBER

3822-02-71

TOWNLINE ROAD



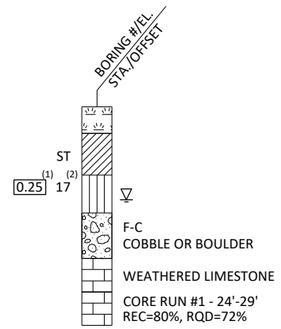
* FOR DETAILED FIELD CLASSIFICATIONS AND REMARKS SEE GEOTECHNICAL REPORT.



MATERIAL SYMBOLS

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

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

F-FINE · M-MEDIUM · C-COARSE · ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK · PLANS CK'D ALK

SUBSURFACE EXPLORATION

SHEET 3
65

SCALE = 20.0

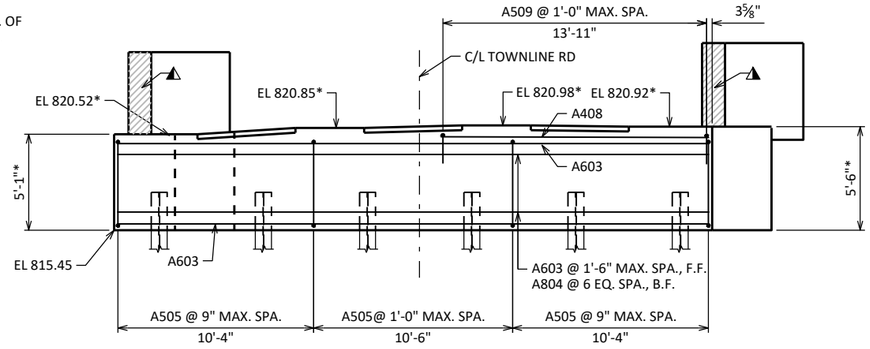
8

8

FILE NAME: S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-080101-BR.DWG

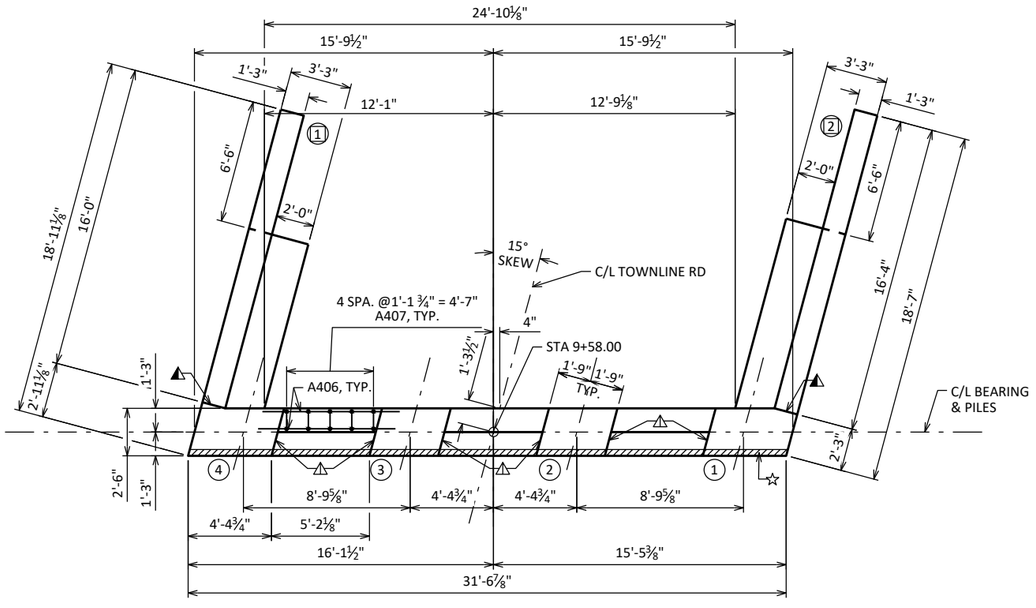
LAYOUT NAME: SHT3 · PLOT DATE : ---- · PLOT BY : AARON SARAUER · I.D. 3822-02-00 · DATE: JUL 2024

*ELEVATIONS AND DIMENSIONS AT C/L OF BRG. OF SOUTH ABUTMENT. SEE SHEET #6 FOR DETAILS.

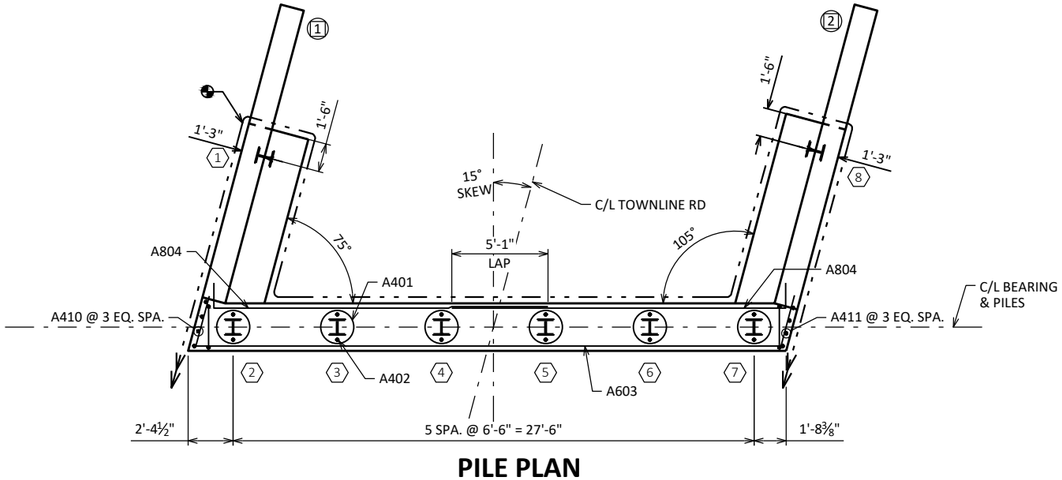


ELEVATION

(LOOKING SOUTH)



PLAN

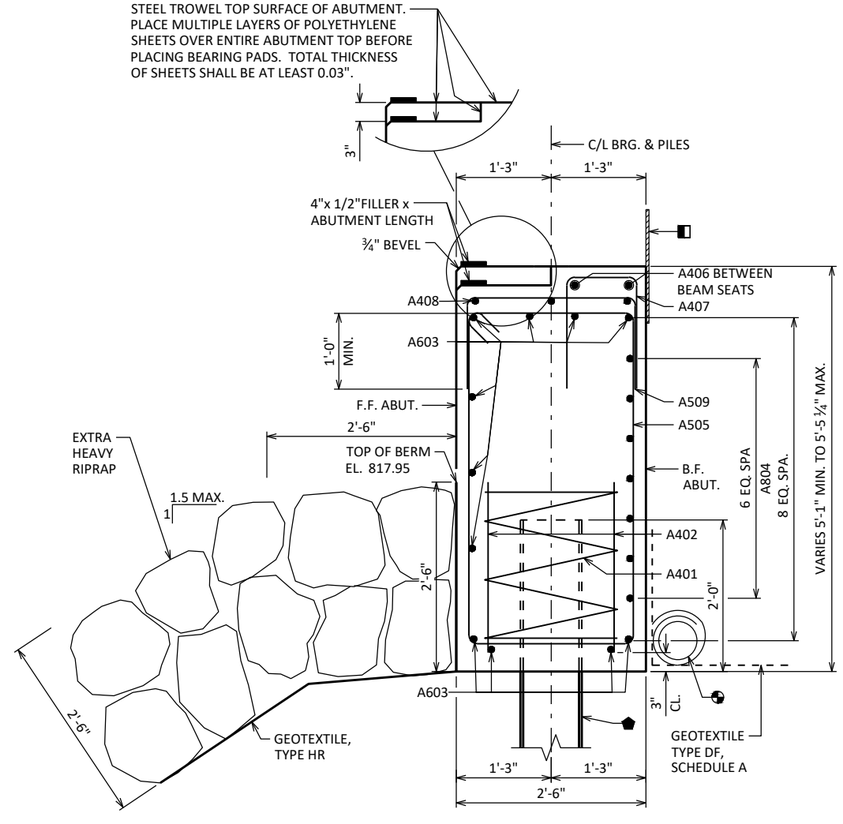


PILE PLAN

LEGEND

- INDICATES WING NUMBER
- INDICATES GIRDER NUMBER
- INDICATES PILE NUMBER
- F.F. FRONT FACE
- B.F. BACK FACE
- SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 35'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 170 TONS PER PILE.
- 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- 4" X ½" PREFORMED JOINT FILLER, LENGTH OF ABUTMENT.
- ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".



SECTION THRU BODY

STATE PROJECT NUMBER

3822-02-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

SOUTH ABUTMENT

SHEET 4
66

SCALE = 8.00

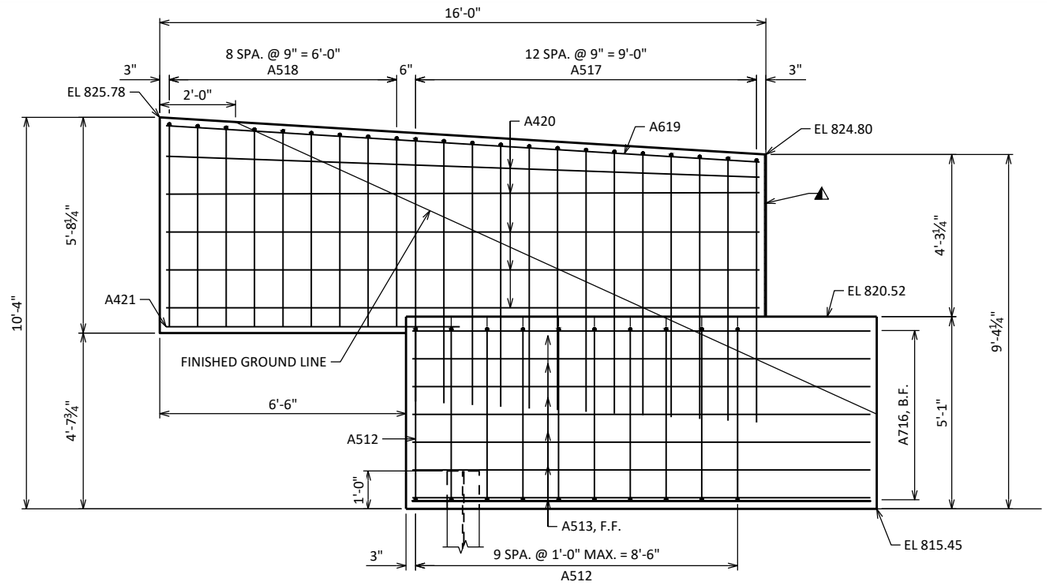
8

8

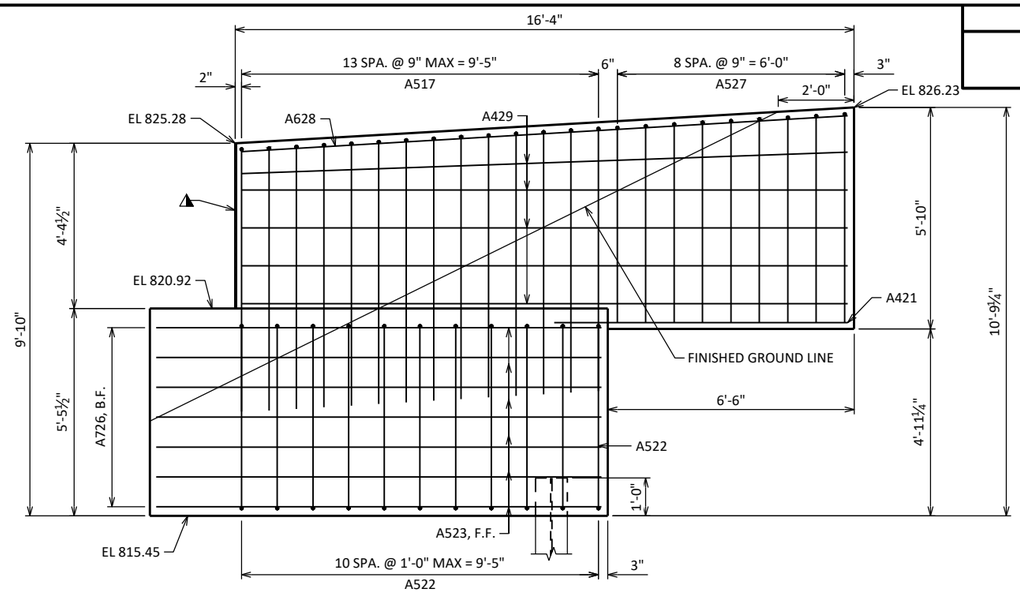
FILE NAME: S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-080102-BR.DWG
LAYOUT NAME: SHT4
PLOT DATE : ----
PLOT BY : AARON SARAUER
I.D. 3822-02-00
DATE: JUL 2024

STATE PROJECT NUMBER

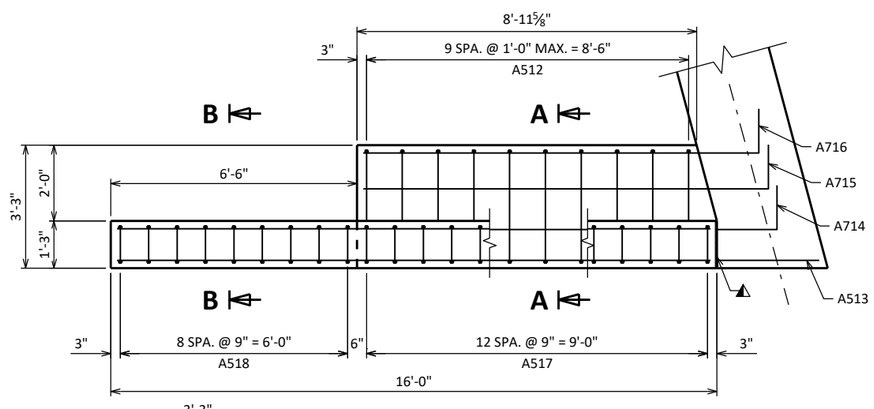
3822-02-71



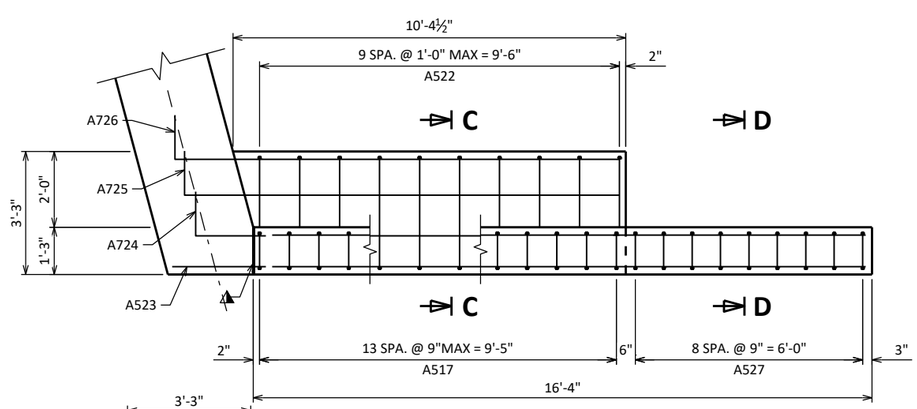
WING 1 ELEVATION



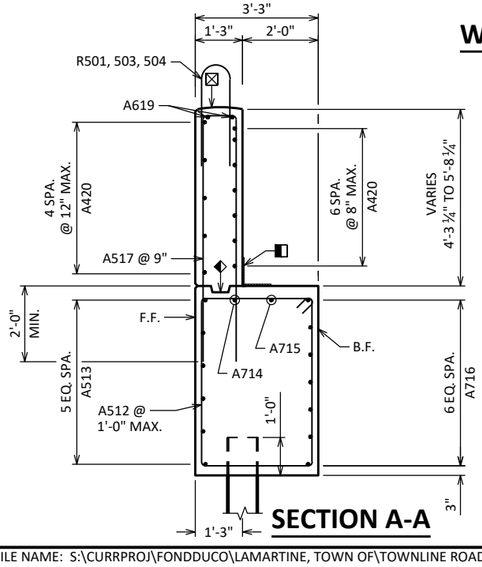
WING 2 ELEVATION



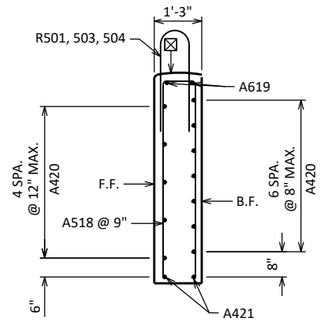
WING 1 PLAN



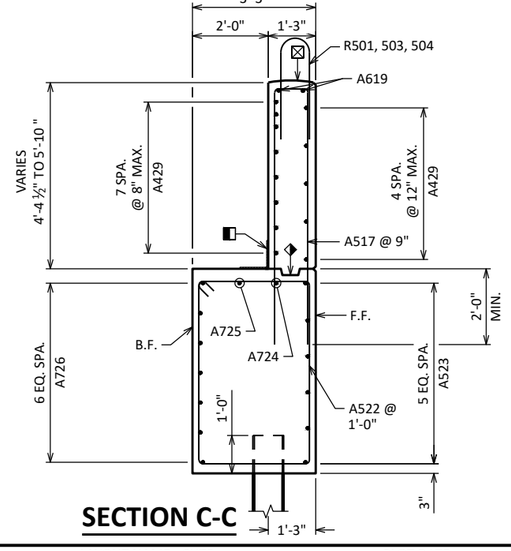
WING 2 PLAN



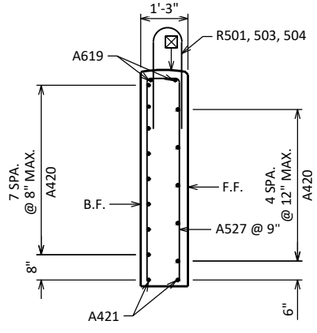
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

LEGEND

- INDICATES WING NUMBER
- F.F. FRONT FACE
- B.F. BACK FACE
- 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅜" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- CONSTRUCTION JOINT. STRIKE OFF AND LEAVE ROUGH
- OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

SOUTH ABUTMENT WING DETAILS

SHEET 5
67

SCALE = 4.00

8

8

STATE PROJECT NUMBER

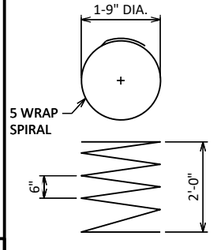
3822-02-71

BILL OF BARS

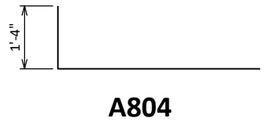
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		6	28'-0"	X		BODY - PILES
A402		12	2'-3"			BODY - PILES
A603		11	31'-2"			BODY - HORIZONTAL - F.F., TOP, BOTTOM
A804		14	18'-9"	X		BODY - HORIZONTAL - B.F.
A505		40	13'-6"	X		BODY - TIES
A406		6	7'-3"			BODY - HORIZONTAL
A407		15	4'-3"	X		BODY - VERTICAL
A408		3	14'-2"			BODY - HORIZONTAL
A509		15	4'-11"	X		BODY - TIE UPPER - VERTICAL
A410		4	4'-7"			ABUTMENT END - VERTICAL - EAST
A411		4	4'-11"			ABUTMENT END - VERTICAL - WEST
A512	X	10	15'-6"	X		WING 1 - VERTICAL STIRRUPS
A513	X	6	12'-1"			WING 1 - HORIZONTAL - F.F.
A714	X	1	11'-9"	X		WING 1 - HORIZONTAL - TOP
A715	X	1	11'-8"	X		WING 1 - HORIZONTAL - TOP
A716	X	7	11'-5"	X		WING 1 - HORIZONTAL - B.F.
A517	X	28	14'-6"	X		WINGS UPPER WINGS - VERTICAL
A518	X	9	10'-11"	X	△	WING 1 UPPER WING - VERTICAL
A619	X	2	15'-8"			WING 1 UPPER WING - HORIZONTAL
A420	X	12	15'-8"			WING 1 UPPER WING - HORIZONTAL
A421	X	4	8'-1"			WINGS UPPER WING - HORIZONTAL
A522	X	11	16'-1"	X		WING 2 - VERTICAL STIRRUPS
A523	X	6	12'-0"			WING 2 - HORIZONTAL - F.F.
A724	X	1	12'-7"	X		WING 2 - HORIZONTAL - TOP
A725	X	1	12'-10"	X		WING 2 - HORIZONTAL - TOP
A726	X	7	13'-1"	X		WING 2 - HORIZONTAL - B.F.
A527	X	9	11'-3"	X	△	WING 2 UPPER WING - VERTICAL
A628	X	2	16'-0"			WING 2 UPPER WING - HORIZONTAL
A429	X	13	16'-0"			WING 2 UPPER WING - HORIZONTAL

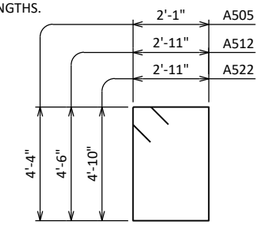
△ LENGTH SHOWN FOR BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



A401

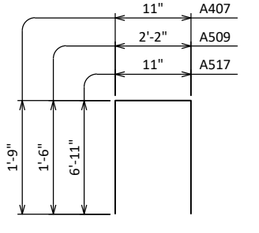


A804

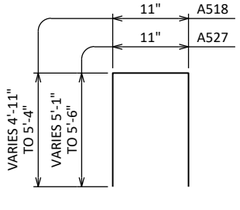


A505, A512, A522

A714, A715, A716, A724, A725, A726



A407, A509, A517



A518, A527

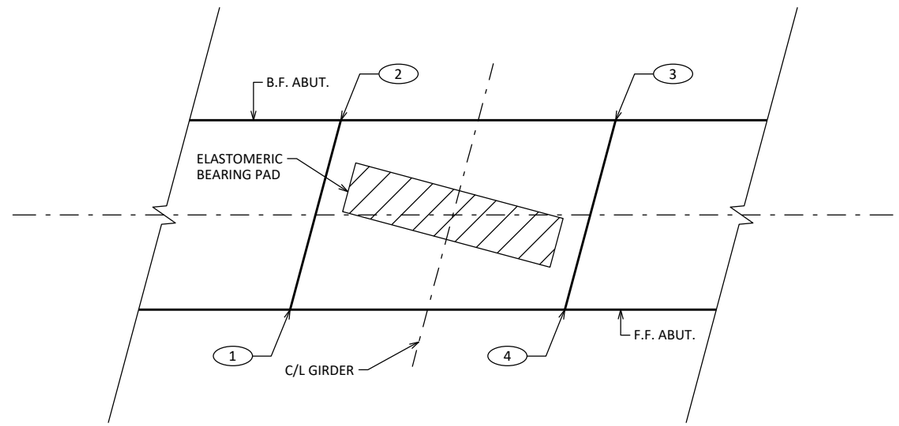
BAR SERIES TABLE

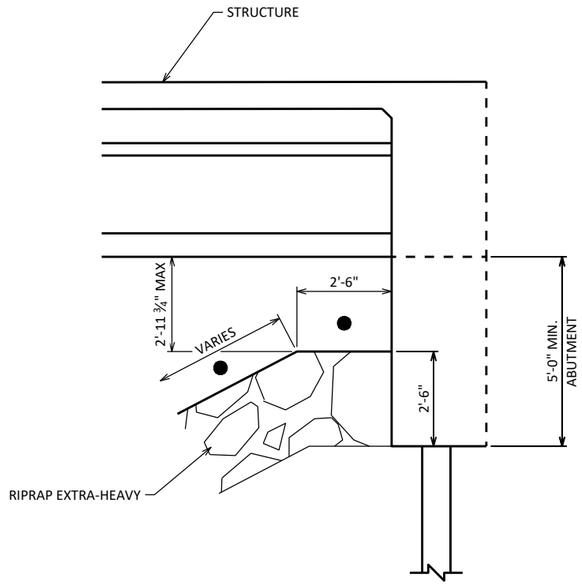
BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
A518	1 SERIES OF 9	10'-6" TO 11'-4"
A527	1 SERIES OF 9	10'-10" TO 11'-8"

ABUTMENT SLOPED BEAM SEAT ELEVATIONS

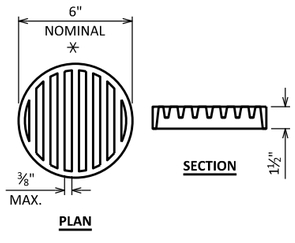
GIRDER	ELEVATION AT POINTS				
	C/L OF BRG.	1	2	3	4
1	820.92	820.85	820.95	820.99	820.89
2	820.98	820.90	821.02	821.06	820.94
3	820.85	820.77	820.89	820.93	820.81
4	820.52	820.45	820.55	820.59	820.49





TERRESTRIAL WILDLIFE PASSAGE DETAIL

● FILL VOIDS IN ALL EXTRA-HEAVY RIPRAP WITH SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR TO FULLY FILL ALL VOIDS AND LEAVE, ON AVERAGE, THREE INCHES ABOVE THE LOWEST ROCK POINTS WHERE THEY ABUT EACH OTHER. PROVIDE LEVEL SURFACE OF THE TERRESTRIAL WILDLIFE PASSAGE.

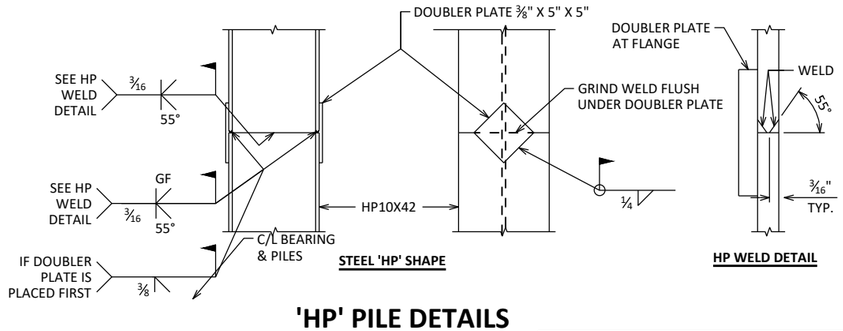


RODENT SHIELD DETAIL

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

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

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



'HP' PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

SOUTH ABUTMENT DETAILS

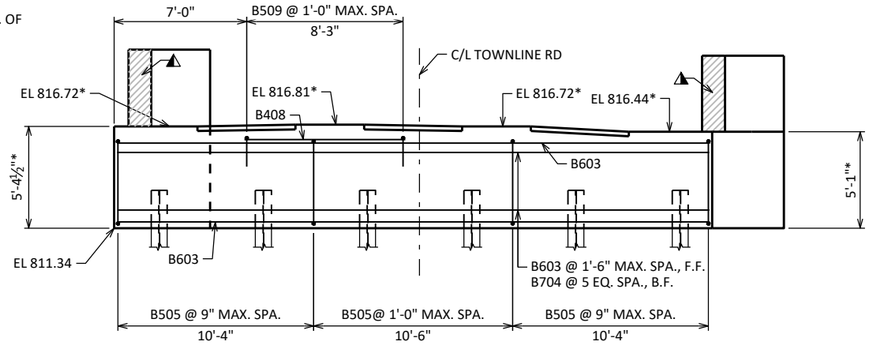
SHEET 6
68

SCALE = 2.00

8

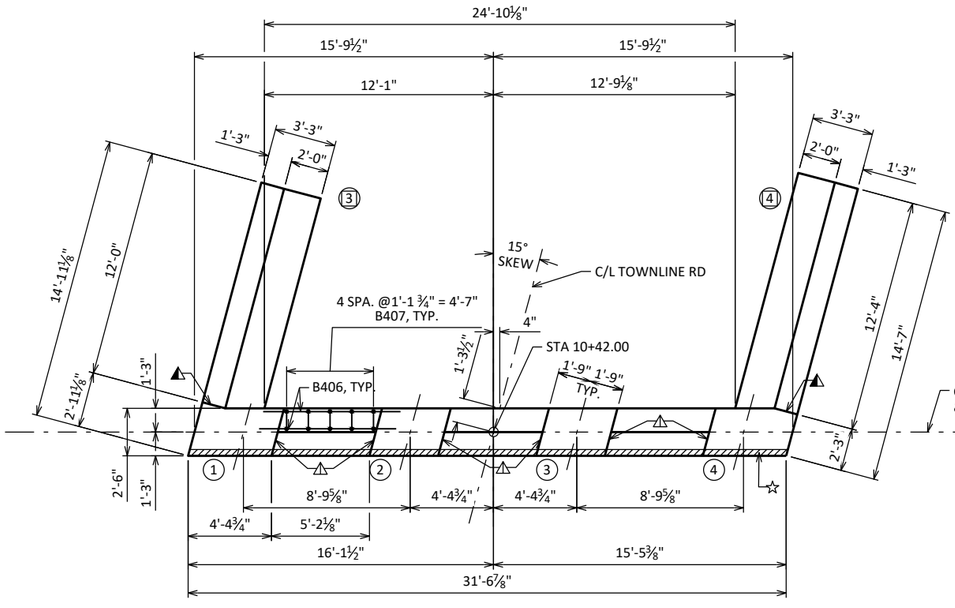
FILE NAME: S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-080102-BR.DWG
LAYOUT NAME: SHT6
PLOT DATE : ----
PLOT BY : AARON SARAUER
I.D. 3822-02-00
DATE: JUL 2024

*ELEVATIONS AND DIMENSIONS AT C/L OF BRG. OF NORTH ABUTMENT. SEE SHEET #9 FOR DETAILS.

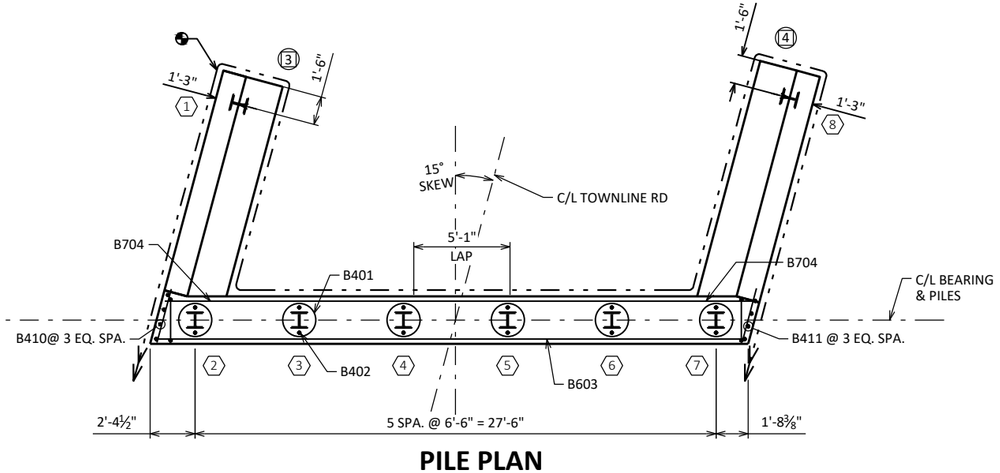


ELEVATION

(LOOKING NORTH)



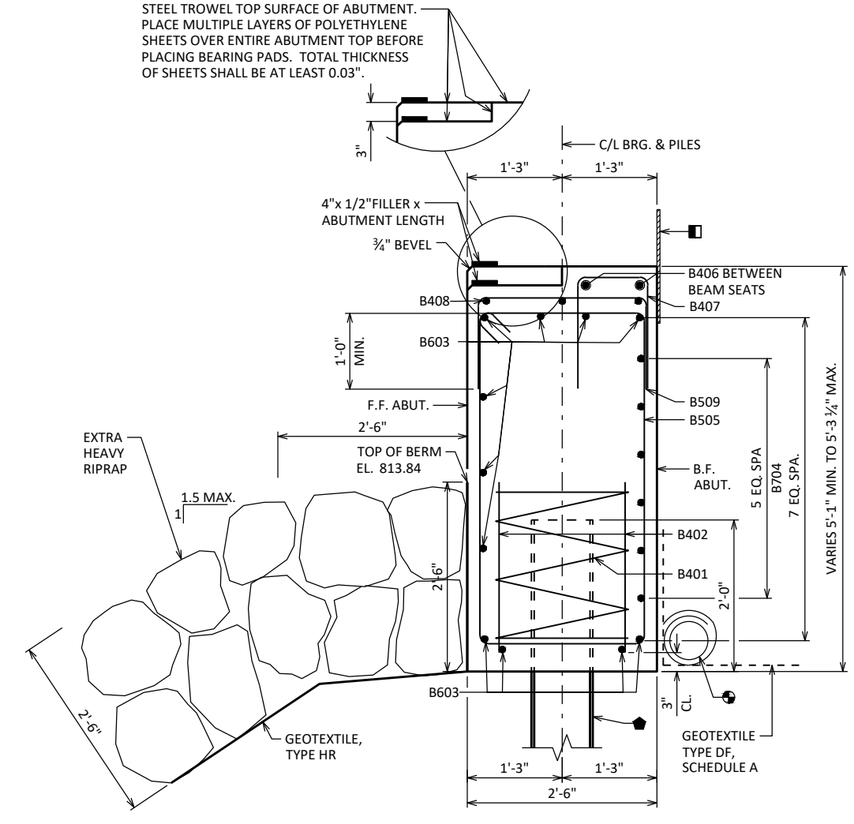
PLAN



PILE PLAN

LEGEND

- INDICATES WING NUMBER
- INDICATES GRIDER NUMBER
- INDICATES PILE NUMBER
- F.F. FRONT FACE
- B.F. BACK FACE
- SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 170 TONS PER PILE.
- 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- 4" X ½" PREFORMED JOINT FILLER, LENGTH OF ABUTMENT.
- ¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
- PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.



SECTION THRU BODY

STATE PROJECT NUMBER

3822-02-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

NORTH ABUTMENT

SHEET 7
69

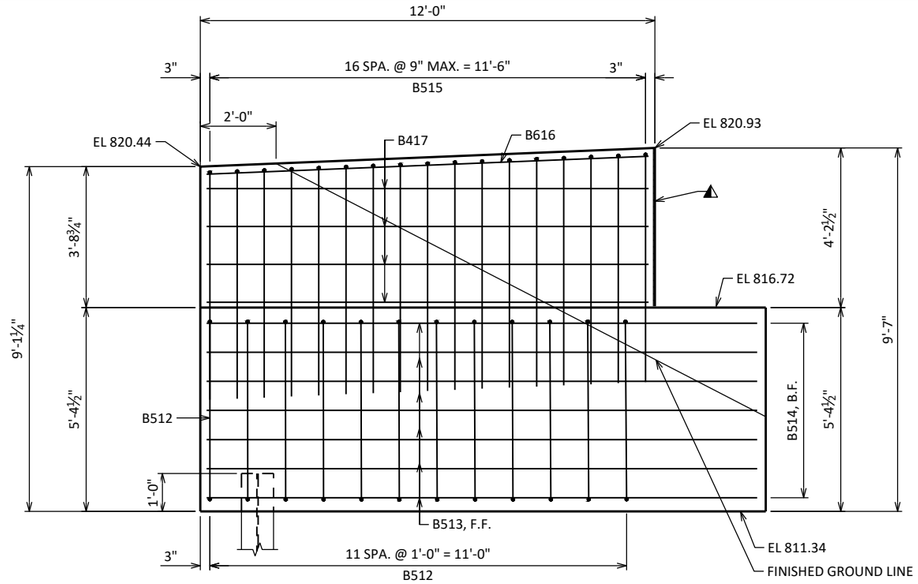
SCALE = 8.00

8

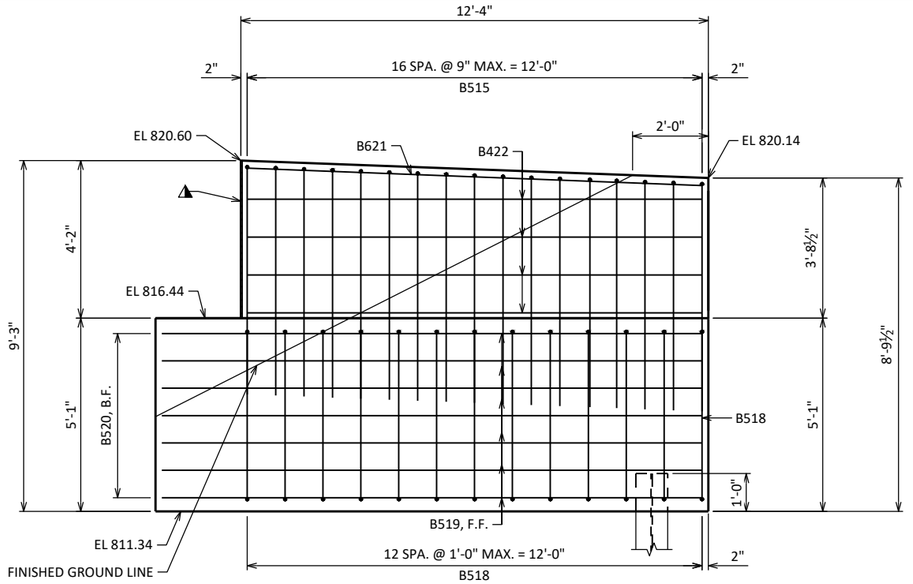
8

STATE PROJECT NUMBER

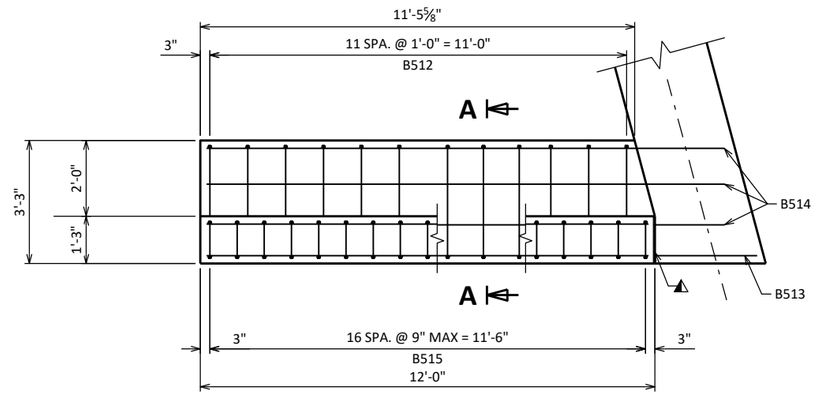
3822-02-71



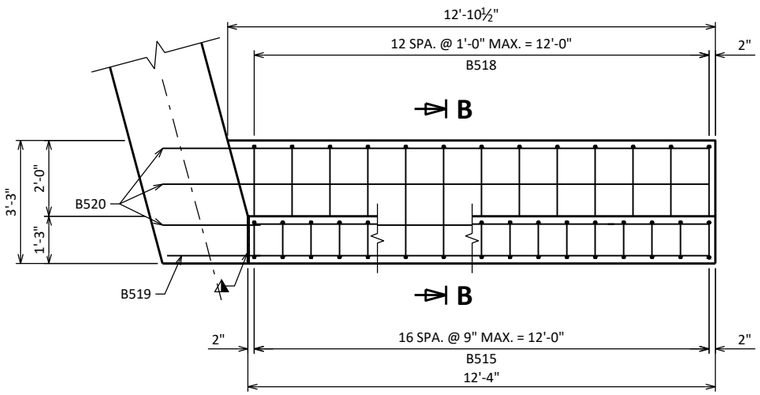
WING 3 ELEVATION



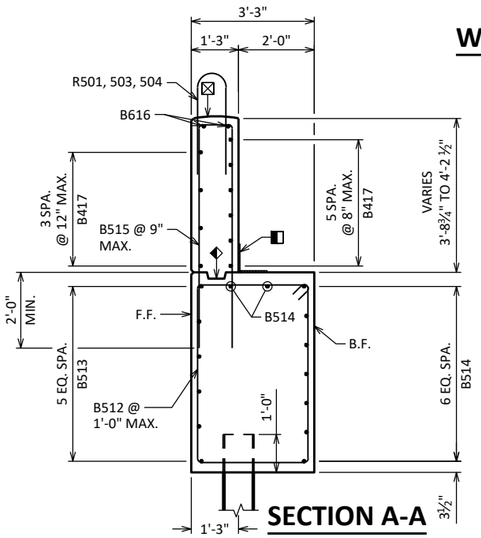
WING 4 ELEVATION



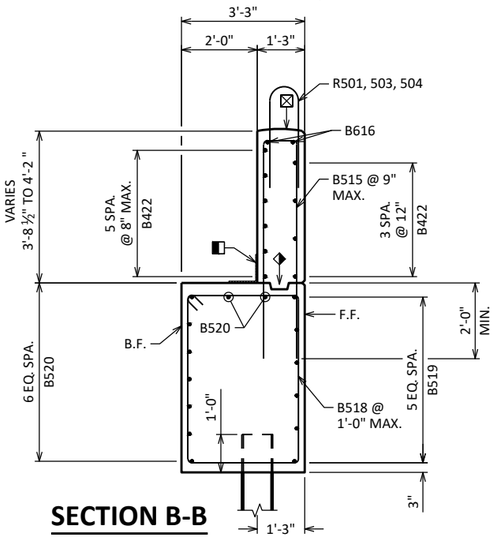
WING 3 PLAN



WING 4 PLAN



SECTION A-A



SECTION B-B

LEGEND

- INDICATES WING NUMBER
- F.F. FRONT FACE
- B.F. BACK FACE
- 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- CONSTRUCTION JOINT. STRIKE OFF AND LEAVE ROUGH
- OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

NORTH ABUTMENT WING DETAILS

SHEET 8
70

SCALE = 4.00

8

8

FILE NAME: S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-080102-BR.DWG
LAYOUT NAME: SHT8
PLOT DATE : ----
PLOT BY : AARON SARAUER
I.D. 3822-02-00
DATE: JUL 2024

STATE PROJECT NUMBER

3822-02-71

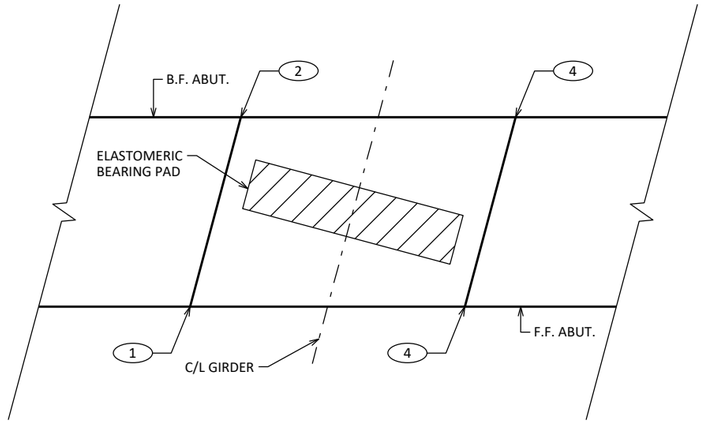
BILL OF BARS

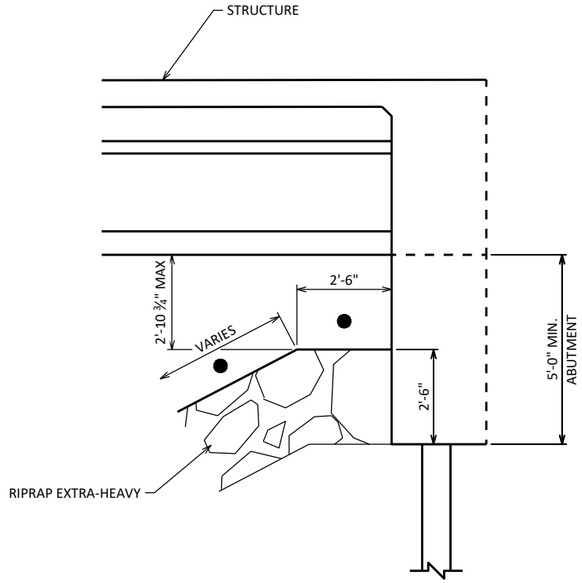
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		6	28'-0"	X		BODY - PILES
B402		12	2'-3"			BODY - PILES
B603		11	31'-2"			BODY - HORIZONTAL - F.F., TOP, BOTTOM
B704		6	31'-2"			BODY - HORIZONTAL - B.F.
B505		40	13'-6"	X		BODY - TIES
B406		6	7'-3"			BODY - HORIZONTAL
B407		15	4'-1"	X		BODY - VERTICAL
B408		3	8'-6"			BODY - HORIZONTAL
B509		10	4'-11"	X		BODY - TIE UPPER - VERTICAL
B410		4	4'-10"			ABUTMENT END - VERTICAL - WEST
B411		4	4'-7"			ABUTMENT END - VERTICAL - EAST
B512	X	12	15'-11"	X		WING 3 - VERTICAL STIRRUPS
B513	X	6	14'-6"			WING 3 - HORIZONTAL - F.F.
B514	X	9	13'-8"			WING 3 - HORIZONTAL - TOP, B.F.
B515	X	34	12'-8"	X		WINGS UPPER WING - VERTICAL
B616	X	2	11'-8"			WING 3 UPPER WING - HORIZONTAL
B417	X	10	11'-8"			WING 3 UPPER WING - HORIZONTAL
B518	X	13	15'-6"	X		WING 4 - VERTICAL STIRRUPS
B519	X	6	14'-7"			WING 4 - HORIZONTAL - F.F.
B520	X	9	14'-9"			WING 4 - HORIZONTAL - TOP, B.F.
B621	X	2	12'-0"			WING 4 UPPER WING - HORIZONTAL
B422	X	10	12'-0"			WING 4 UPPER WING - HORIZONTAL

ABUTMENT SLOPED BEAM SEAT ELEVATIONS

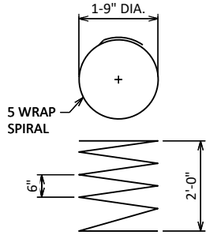
GIRDER	ELEVATION AT POINTS				
	C/L OF BRG.	1	2	3	4
1	816.72	816.82	816.67	816.62	816.77
2	816.81	816.91	816.76	816.71	816.86
3	816.72	816.82	816.67	816.62	816.77
4	816.44	816.54	816.39	816.34	816.49



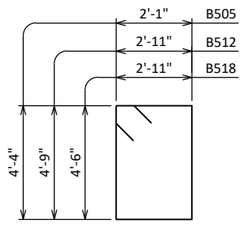


TERRESTRIAL WILDLIFE PASSAGE DETAIL

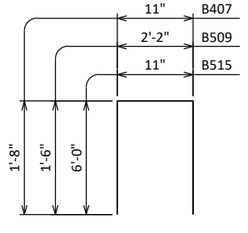
● FILL VOIDS IN ALL EXTRA-HEAVY RIPRAP WITH SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR TO FULLY FILL ALL VOIDS AND LEAVE, ON AVERAGE, THREE INCHES ABOVE THE LOWEST ROCK POINTS WHERE THEY ABUT EACH OTHER. PROVIDE LEVEL SURFACE OF THE TERRESTRIAL WILDLIFE PASSAGE.



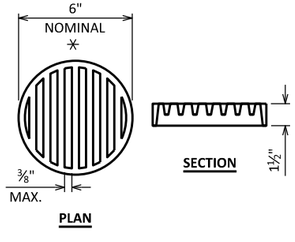
B401



B505, B512, B518



B407, B509, B515

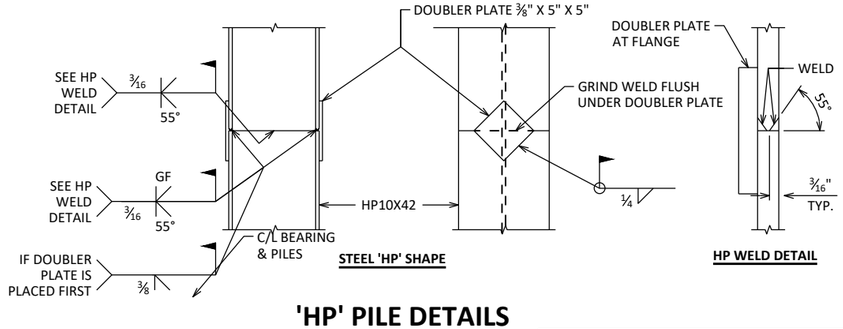


RODENT SHIELD DETAIL

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

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

THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



'HP' PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

NORTH ABUTMENT DETAILS

SHEET 9
71

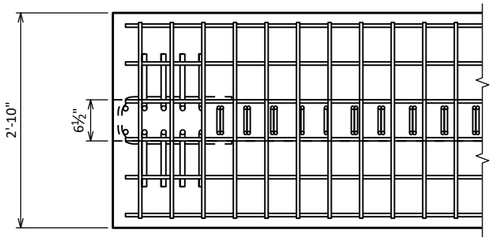
SCALE = #####

8

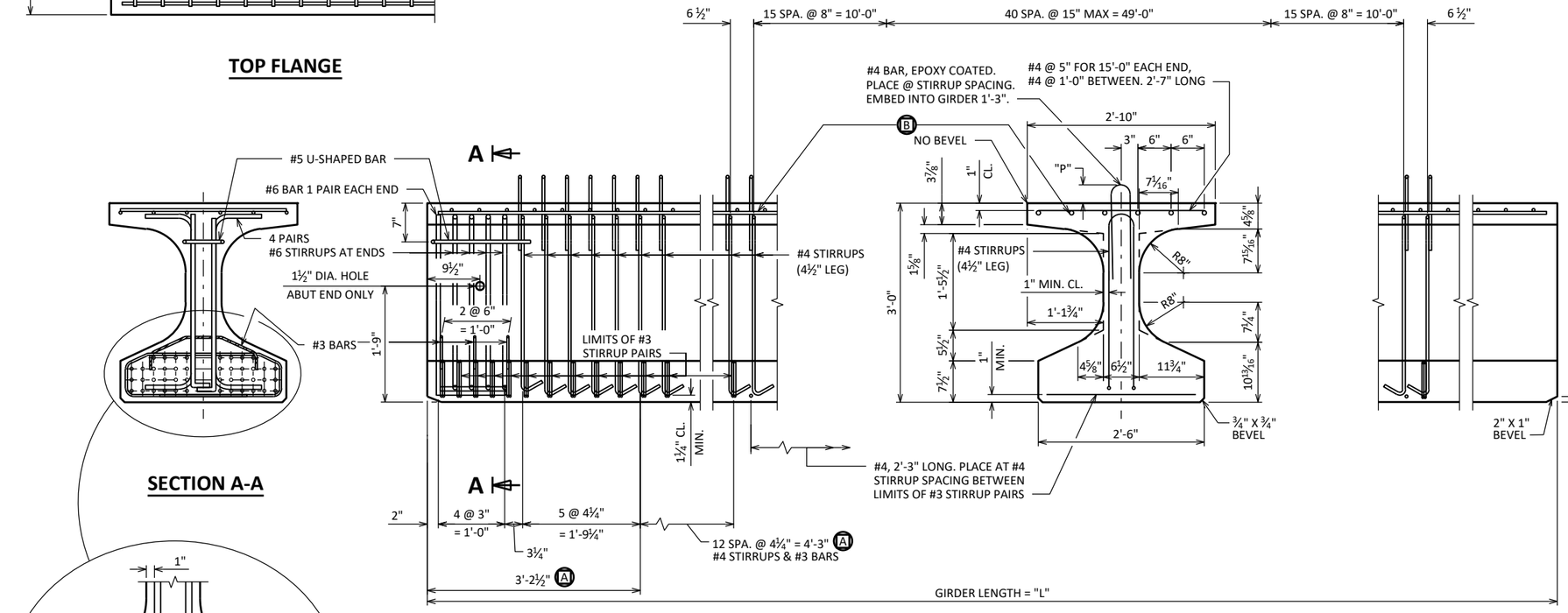
8

STATE PROJECT NUMBER

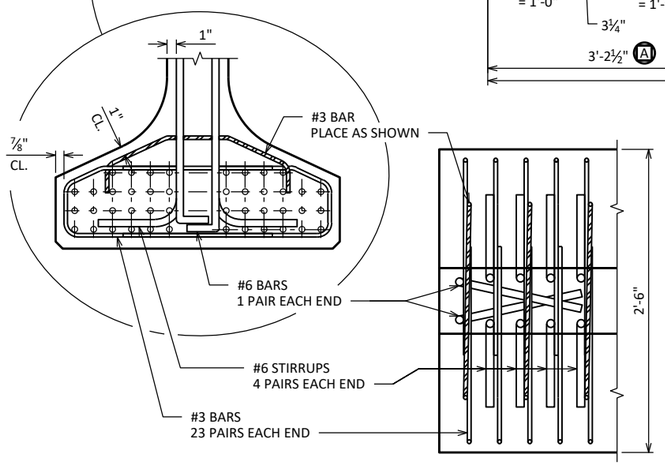
3822-02-71



TOP FLANGE



SECTION A-A



BOTTOM FLANGE

SIDE VIEW & TYPICAL SECTION IN SPAN

(A) DETAIL TYP. AT EACH END

(B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 2'-4"

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 8" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 8" OF THE TOP FLANGE.

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

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.4 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

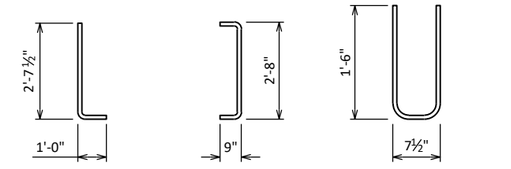
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

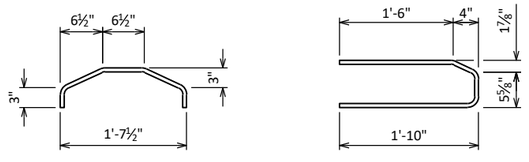
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DESIGN SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

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

FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.





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

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f'_c (P.S.I.)	"P" (IN.)			DIA. OF STRAND (IN.)	DRAPED PATTERN						UNDRAPED PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10		1ST ⅓ OF GIRDER	MID ⅓ OF GIRDER	END ⅓ OF GIRDER		TOTAL NO. OF STRANDS	f'_{ci} (P.S.I.) ⚹	(IN.) "A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f'_{ci} (P.S.I.) ⚹
1	1, 4	85'-0"	0.6	1.0	1.4	1.6	1.7	1.6	1.4	1.0	0.6	8,000	8"	7"	8"	0.60	34	6,800	31	11½	14½	5	---	---
1	2, 3	85'-0"	0.6	1.2	1.7	2.0	2.1	2.0	1.7	1.2	0.6	8,000	8"	7"	8"	0.60	34	6,800	31	11½	14½	5	---	---

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

36W'' PRESTRESSED GIRDER DETAILS

SHEET 10
72

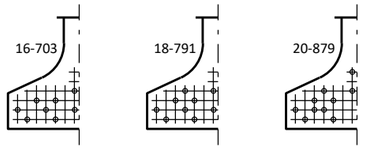
SCALE = 2.00

8

8

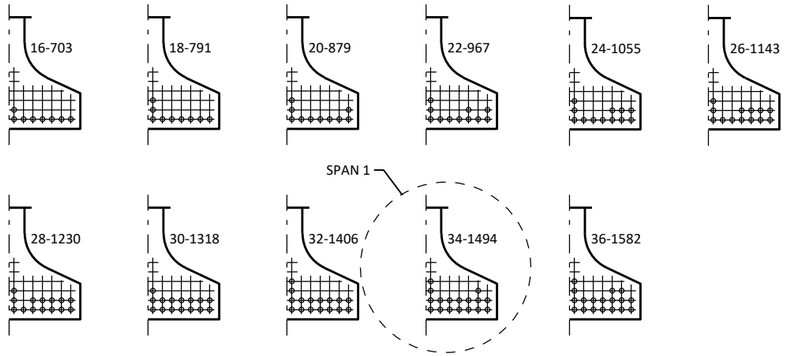
STATE PROJECT NUMBER

3822-02-71



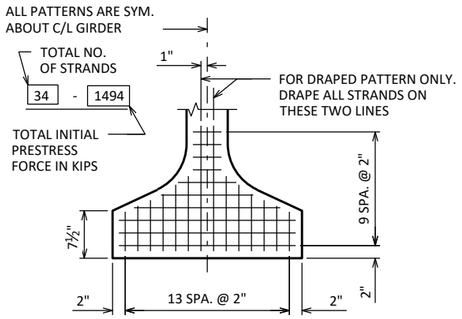
STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS

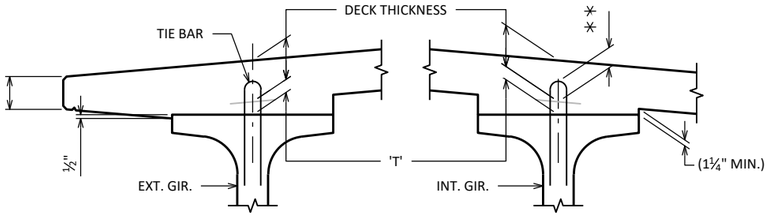


ARRANGEMENT AT C/L SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



TYP. STRAND PATTERN



DECK HAUNCH DETAIL

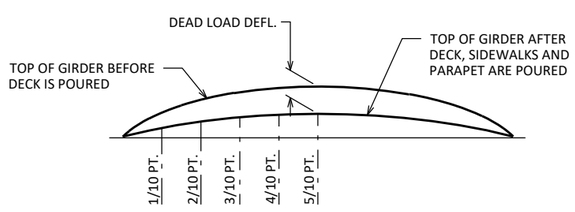
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

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

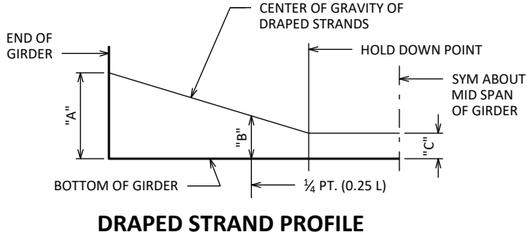
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

	TOP OF DECK ELEV. AT FINAL GRADE
-	TOP OF GIRDER ELEVATION
+	DEAD LOAD DEFLECTION
-	DECK THICKNESS
=	HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DEAD LOAD DEFLECTION DIAGRAM



DRAPED STRAND PROFILE

⁑ THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) ⁑
1	3.7

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

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

36W'' PRESTRESSED GIRDER DETAILS

SHEET 11
73

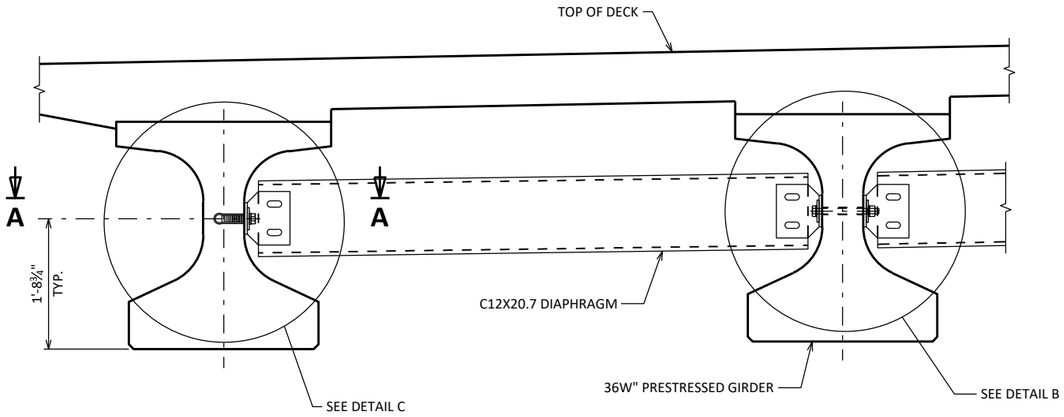
SCALE = 2.00

8

8

STATE PROJECT NUMBER

3822-02-71



EXTERIOR GIRDER **INTERIOR GIRDER**

PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

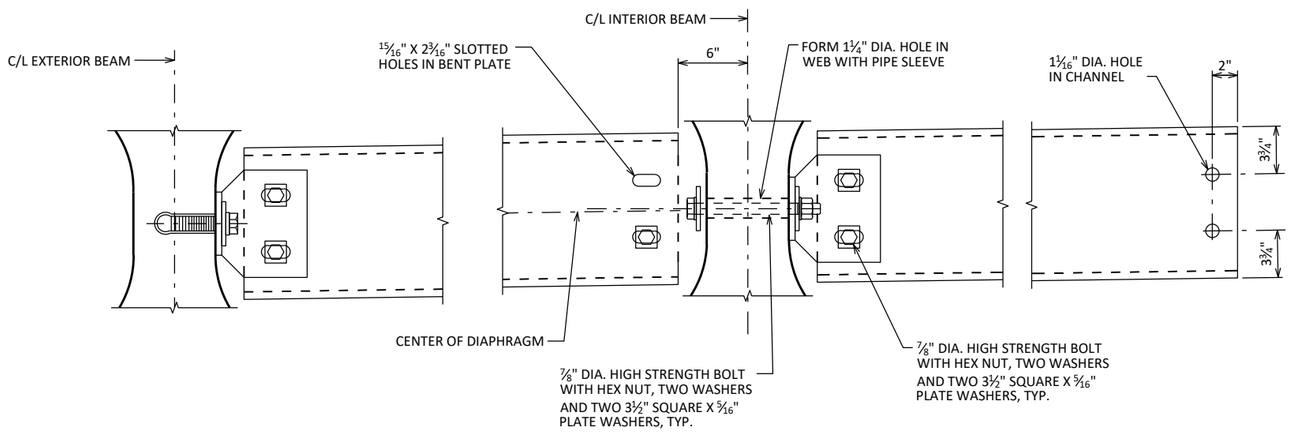
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-20-253", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

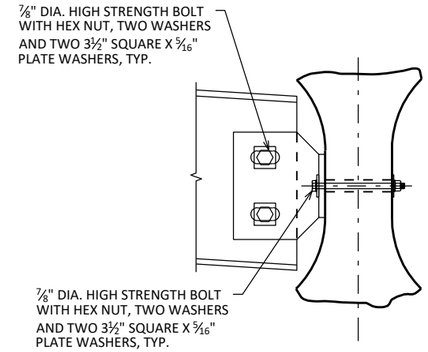
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

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

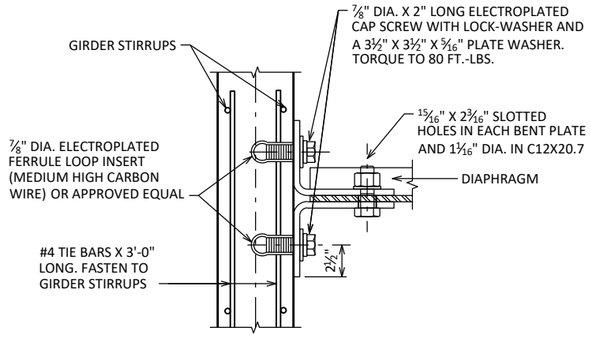
STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS ¼ TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.



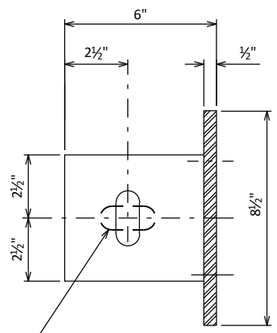
DETAIL C **DETAIL B**



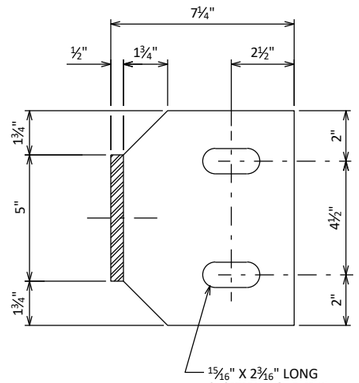
SECTION AT INTERIOR GIRDERS THRU DIAPHRAGM FOR SKEW ANGLES > 10°



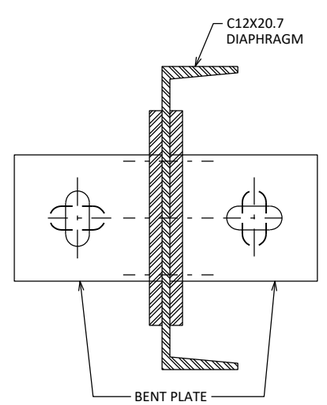
SECTION A-A
(FOR EXTERIOR ATTACHMENT)



BEAM FACE



DIAPHRAGM FACE



ATTACHMENT TO CHANNEL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

STEEL DIAPHRAGMS

SHEET 12
74

SCALE = 2.00

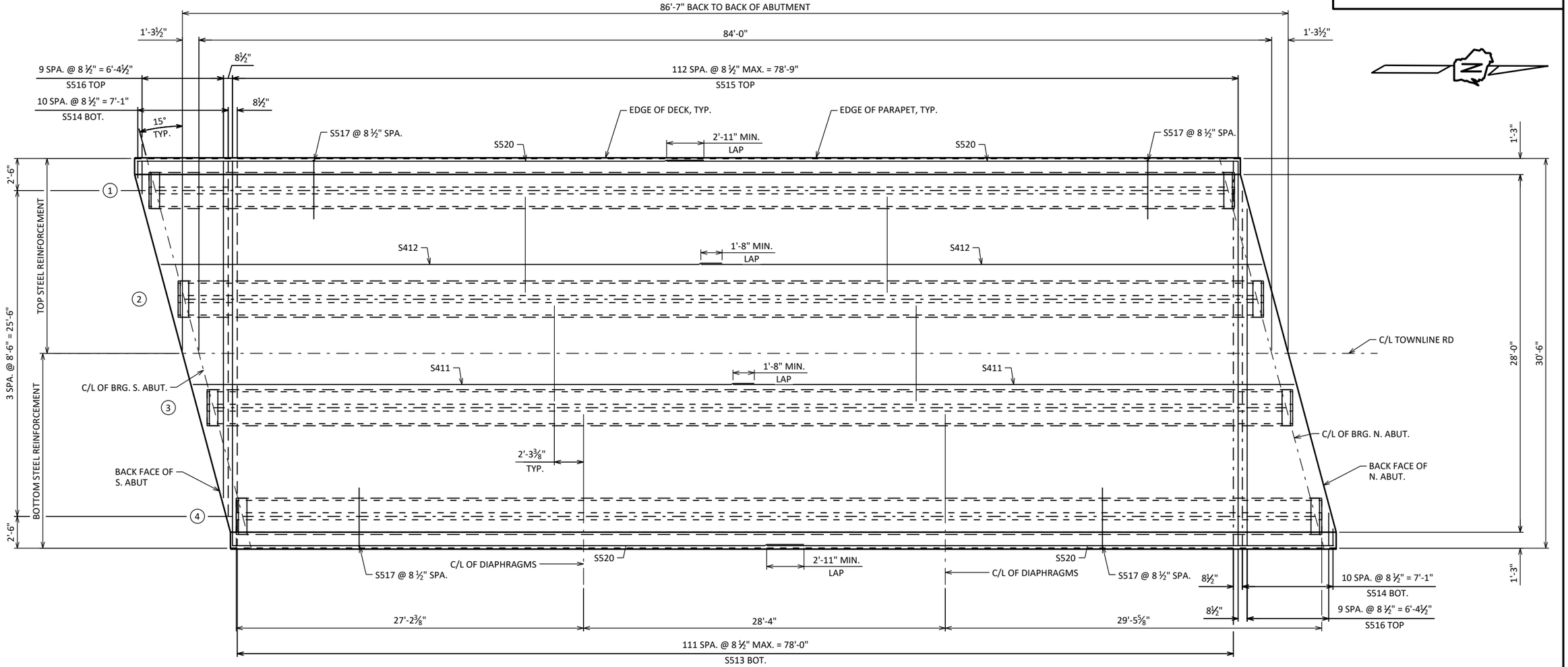
8

8

FILE NAME: S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-080102-BR.DWG
LAYOUT NAME: SHT12
PLOT DATE : ----
PLOT BY : AARON SARAUER
I.D. 3822-02-00
DATE: JUL 2024

STATE PROJECT NUMBER

3822-02-71



TOP OF DECK ELEVATIONS

SPAN	LOCATION	C/L BRG. S. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. N. ABUT.
1	W. EDGE OF DECK	825.20	824.71	824.24	823.78	823.34	822.91	822.50	822.10	821.71	821.34	820.98
	GIRDER 1	825.21	824.73	824.25	823.80	823.36	822.93	822.52	822.12	821.73	821.36	821.01
	GIRDER 2	825.25	824.77	824.30	823.85	823.41	822.98	822.58	822.18	821.80	821.43	821.08
	R/L	825.27	824.79	824.32	823.87	823.43	823.01	822.61	822.21	821.83	821.47	821.12
	GIRDER 3	825.12	824.64	824.17	823.73	823.29	822.87	822.47	822.08	821.70	821.34	820.99
	GIRDER 4	824.81	824.34	823.88	823.44	823.01	822.59	822.19	821.80	821.43	821.07	820.73
	E. EDGE OF DECK	824.73	824.25	823.80	823.35	822.92	822.51	822.11	821.72	821.35	820.99	820.65

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

SUPERSTRUCTURE

SHEET 13
75

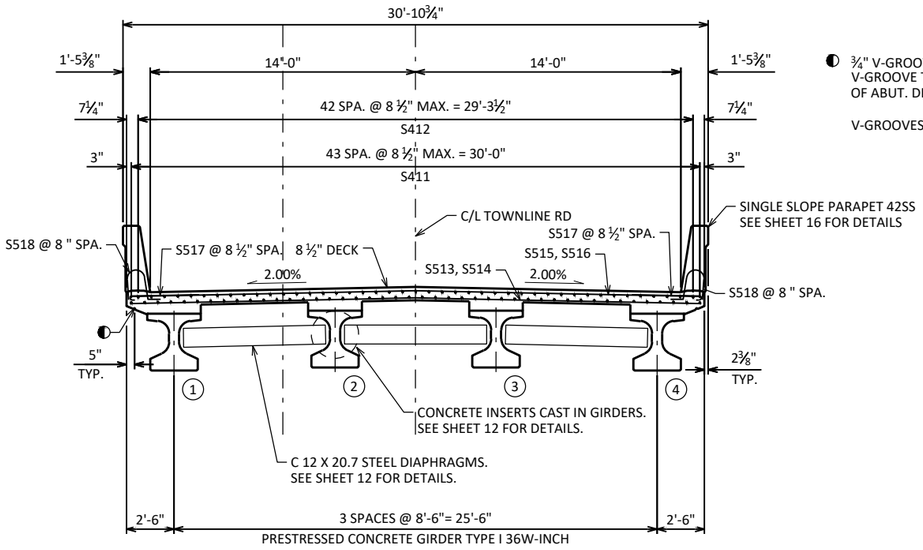
SCALE = NTS

8

8

STATE PROJECT NUMBER

3822-02-71



CROSS SECTION THRU BRIDGE

◐ ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT. DIAPHRAGM.

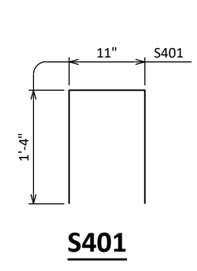
V-GROOVES ARE REQUIRED.

BILL OF BARS

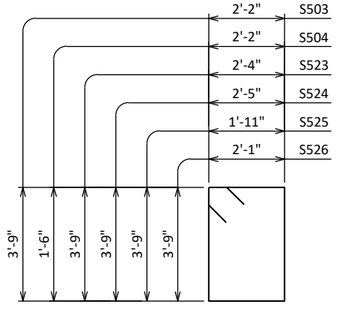
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	
S401	X	36	3'-5"	X		DIAPH. @ ABUT. - VERT. @ NOTCH
S402	X	12	4'-7"			DIAPH. @ ABUT. - HORIZ. @ NOTCH
S503	X	48	12'-2"	X		DIAPH. @ ABUT. - VERTICAL
S504	X	16	7'-8"	X		DIAPH. @ ABUT. - VERTICAL
S605	X	10	31'-2"			DIAPH. @ ABUT. - HORIZONTAL
S606	X	24	4'-7"			DIAPH. @ ABUT. - HORIZ. BETW. GIRDERS
S607	X	4	5'-9"	X		DIAPH. @ ABUT. - HORIZ. @ EXT. GIRDERS 1, 3
S608	X	2	4'-4"	X		DIAPH. @ ABUT. - HORIZ. @ EXT. GIRDERS 1, 3
S409	X	8	3'-9"			DIAPH. @ ABUT. - VERT. @ EXT. GIRDERS
S510	X	16	6'-0"			DIAPH @ ABUT. - HORIZ. THRU GIRDERS
S411	X	88	44'-1"			DECK - LONGITUDINAL - BOTTOM
S412	X	86	44'-1"			DECK - LONGITUDINAL - TOP
S513	X	112	30'-2"			DECK - TRANSVERSE - BOTTOM
S514	X	22	14'-7"		△	DECK - TRANSVERSE - BOTTOM
S515	X	113	30'-2"			DECK - TRANSVERSE - TOP
S516	X	20	14'-6"		△	DECK - TRANSVERSE - TOP
S517	X	246	4'-7"	X		DECK - TRANSVERSE - EDGE
S518	X	262	4'-5"	X		DECK - PARAPET - VERTICAL
S519	X	262	6'-8"	X		DECK - PARAPET - VERTICAL
S520	X	32	44'-10"			DECK - PARAPET - HORIZONTAL
S621	X	4	5'-6"	X		DIAPH. @ ABUT. - HORIZ. @ EXT. GIRDERS 2, 4
S622	X	2	4'-5"	X		DIAPH. @ ABUT. - HORIZ. @ EXT. GIRDERS 2, 4
S523	X	2	12'-6"	X		DIAPH. @ CORNERS 1, 3 - VERTICAL
S524	X	2	12'-8"	X		DIAPH. @ CORNERS 1, 3 - VERTICAL
S525	X	2	11'-11"	X		DIAPH. @ CORNERS 2, 4 - VERTICAL
S526	X	2	12'-1"	X		DIAPH. @ CORNERS 2, 4 - VERTICAL

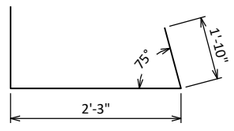
△ LENGTH SHOWN FOR BAR SERIES IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.



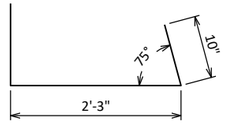
S401



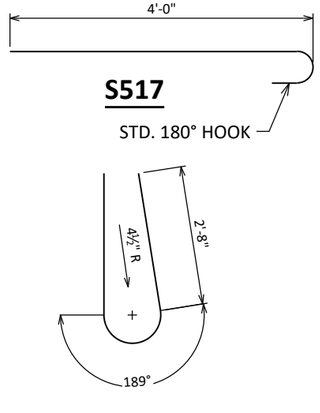
S503, S504, S523, S524, S525, S526



S607

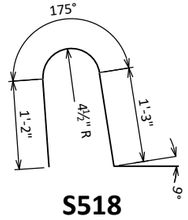


S608

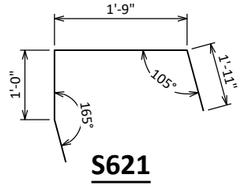


S517

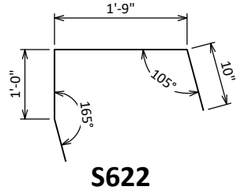
S519



S518



S621

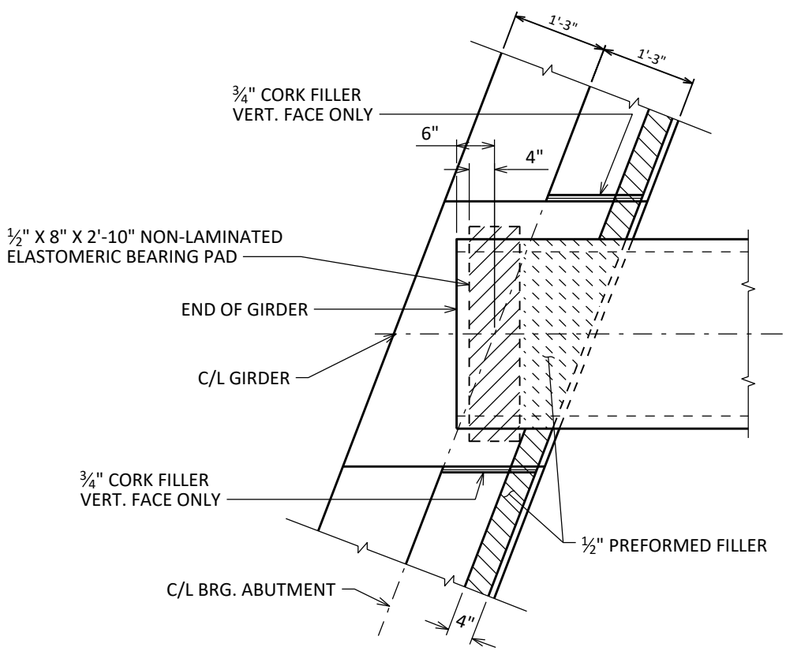


S622

BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
S514	2 SERIES OF 11	1'-5" TO 27'-9"
S516	2 SERIES OF 10	2'-7" TO 26'-5"



BEARING PAD DETAIL

AT ABUTMENTS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

SUPERSTRUCTURE DETAILS

SHEET 14
76

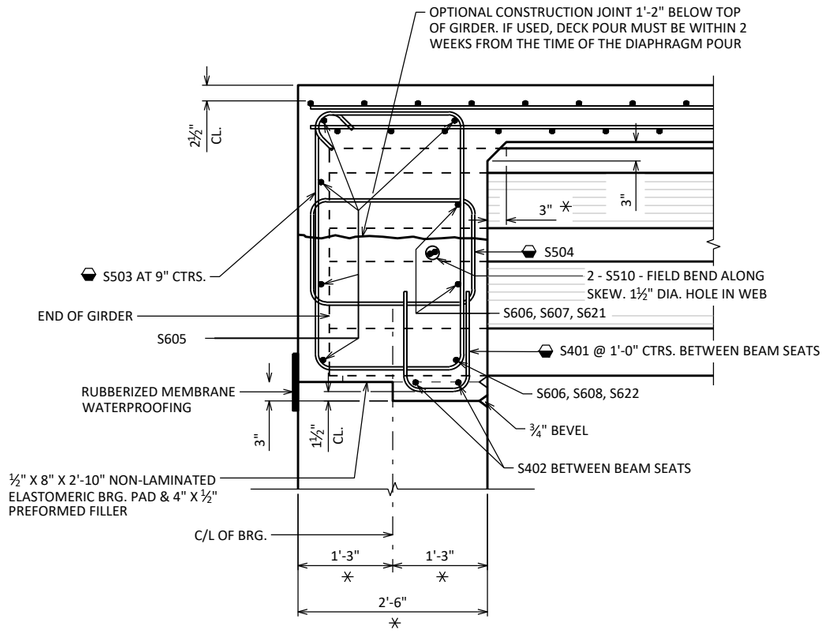
SCALE = NTS

8

8

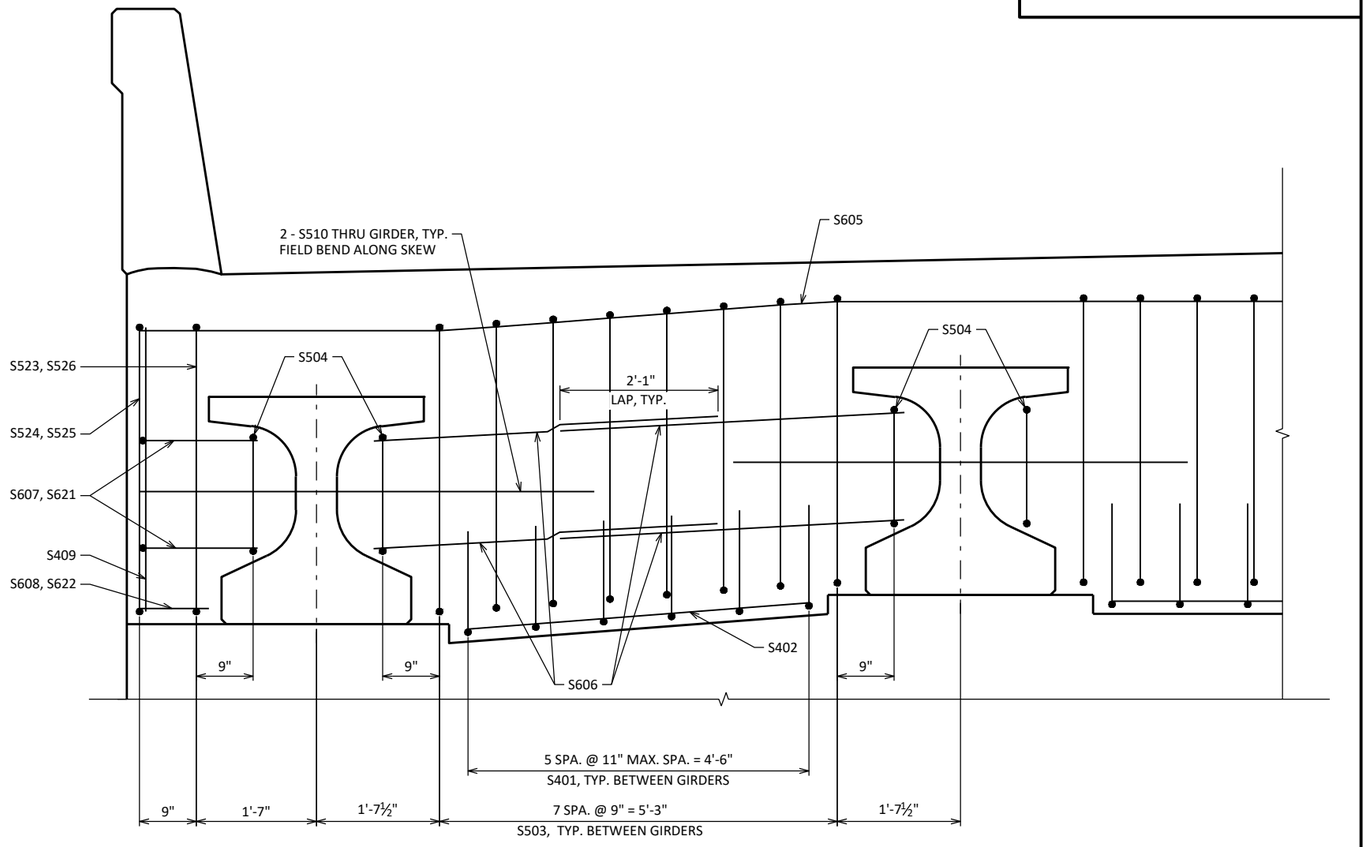
STATE PROJECT NUMBER

3822-02-71



PART LONGIT. SECTION

AT ABUTMENTS

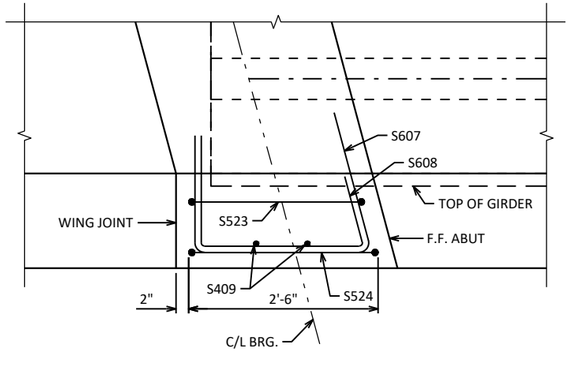


PART TRANS. SECTION

AT ABUTMENT DIAPHRAGMS

✳ DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS.

BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO C/L GIRDERS.



PLAN VIEW DIAPHRAGM END

WINGS 1 & 3 SHOWN
(WINGS 2 & 4 SIMILAR)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

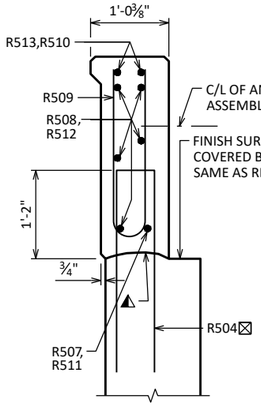
STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

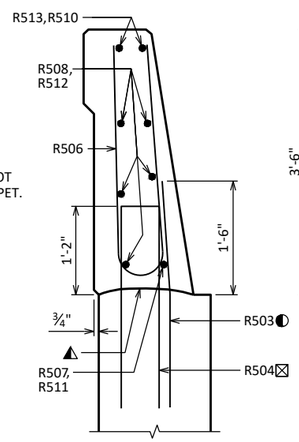
SUPERSTRUCTURE DETAILS

SHEET 15
77

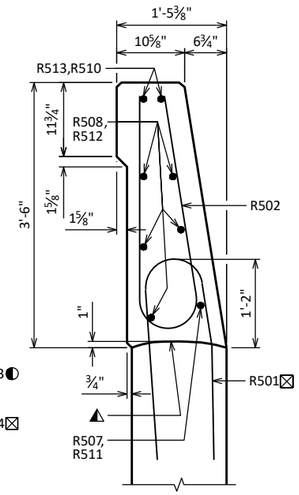
SCALE = NTS



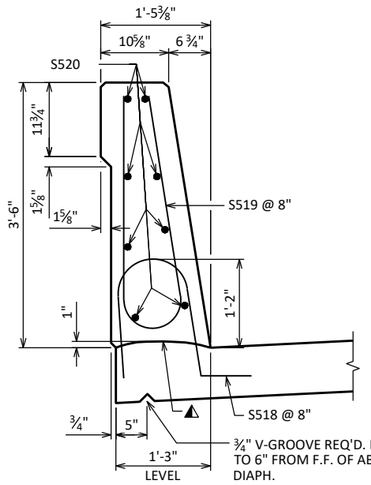
SECTION A-A



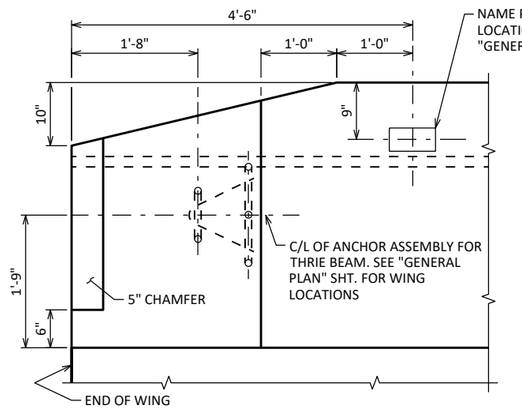
SECTION B-B



SECTION C-C



SECTION THRU PARAPET ON DECK



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

STATE PROJECT NUMBER

3822-02-71

BILL OF BARS

FOR WING PARAPETS

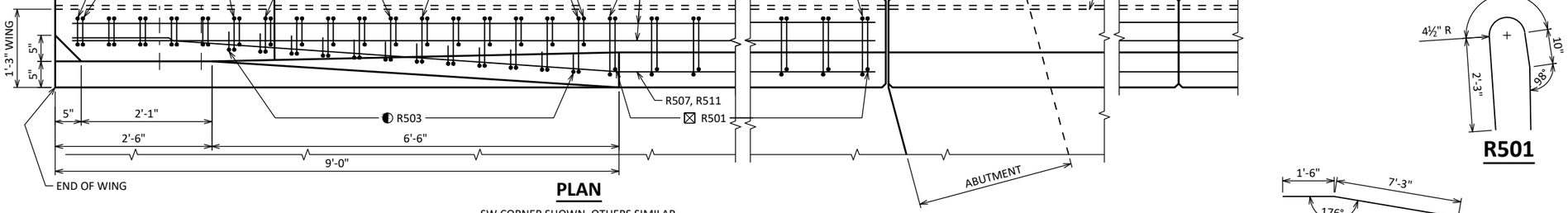
BAR MARK	COAT	SOUTH ABUT.	NORTH ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	24	12	5'-10"	X		PARAPET VERT.
R502	X	24	12	6'-8"	X		PARAPET VERT.
R503	X	24	24	3'-0"	X		PARAPET VERT.
R504	X	34	34	5'-7"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	---	15'-6"	X		PARAPET HORIZ.
R508	X	10	---	15'-8"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	✳	PARAPET VERT.
R510	X	4	---	15'-9"	X		PARAPET HORIZ.
R511	X	---	2	11'-6"	X		PARAPET HORIZ.
R512	X	---	10	11'-8"			PARAPET HORIZ.
R513	X	---	4	11'-9"	X		PARAPET HORIZ.

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

BAR SERIES TABLE

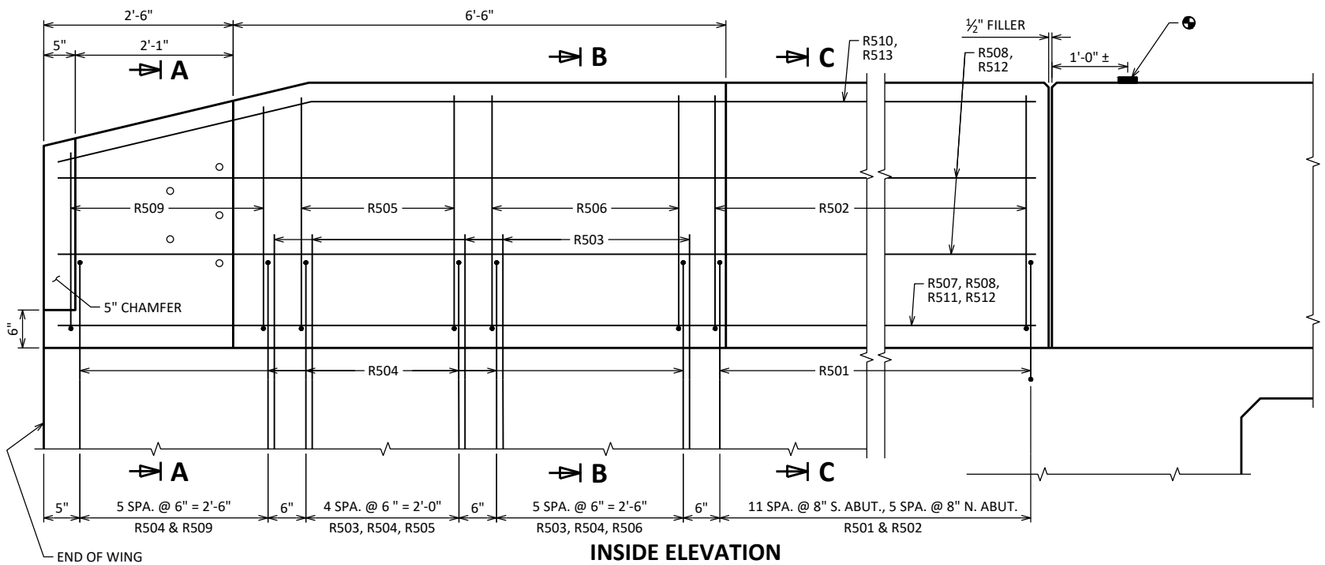
BUNDLE AND TAG EACH SERIES SEPARATELY.

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



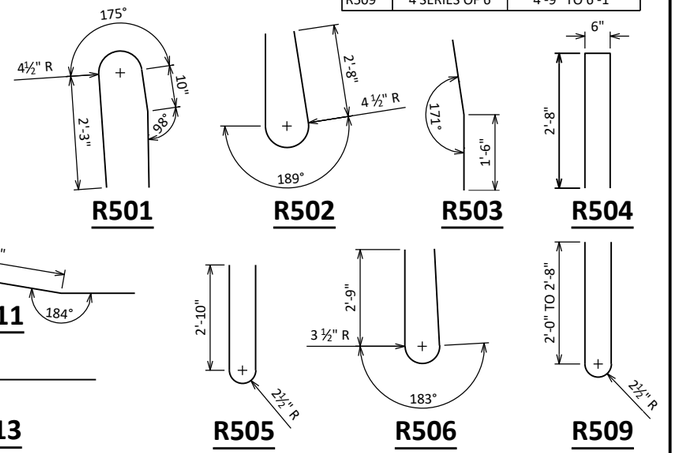
PLAN

SW CORNER SHOWN, OTHERS SIMILAR

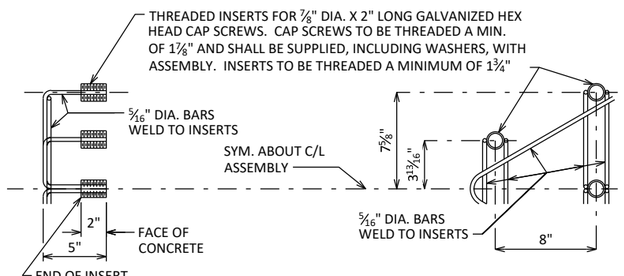


INSIDE ELEVATION

SW CORNER SHOWN, OTHERS SIMILAR



BENCH MARK CAP (WHEN SUPPLIED). AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASTM F2329.

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

△ CONST. JOINT - STRIKE OFF AS SHOWN

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-20-253

DRAWN BY MJK | PLANS CK'D ALK

SINGLE SLOPE PARAPET 42SS

SHEET 16
78

SCALE = NTS

8

8

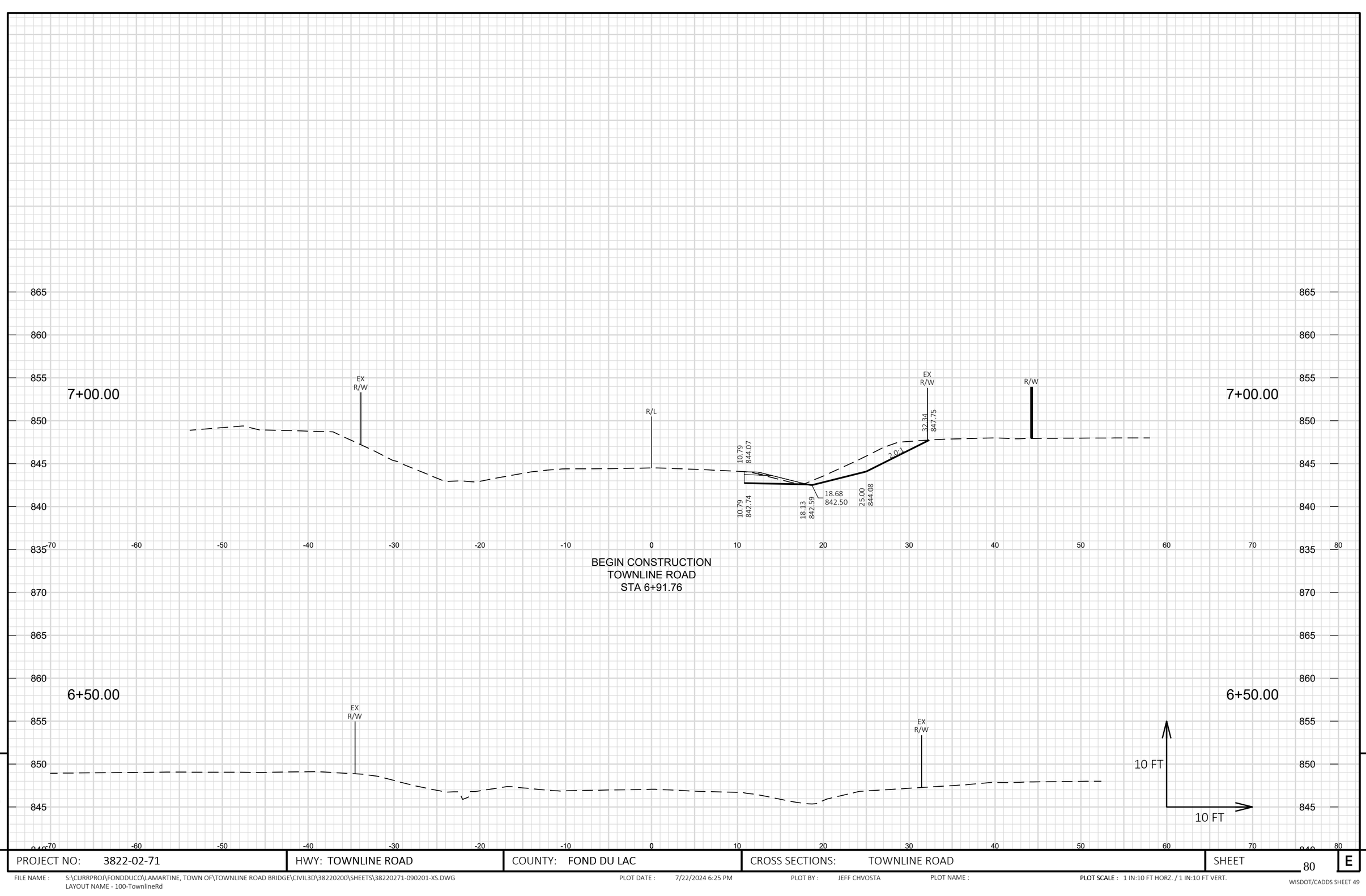
DIVISION 1 - TOWNLINE ROAD (SOUTH)

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
		CUT	FILL	MARSH EXC	CUT NOTE 1	FILL NOTE 3	MARSH EXC	CUT 1.00 NOTE 1	EXPANDED FILL 1.30	EXPANDED MARSH BACKFILL 1.50 NOTE 4	REDUCED MARSH IN FILL 0.60 NOTE 6	MASS ORDINATE NOTE 8
06+91.758	0.00	4.32	0.04	0.00	0	0	0	0	0	0	0	0
07+00	8.24	21.29	0.00	0.00	4	0	0	4	0	0	0	4
07+50	50.00	135.90	0.59	0.00	146	1	0	150	1	0	0	149
08+00	50.00	258.62	4.23	0.00	365	4	0	515	7	0	0	509
08+50	50.00	253.87	2.45	0.00	475	6	0	990	14	0	0	976
09+00	50.00	96.75	15.74	0.00	325	17	0	1,315	36	0	0	1,279
09+50	50.00	12.60	49.69	0.00	101	61	0	1,416	116	0	0	1,300
09+56.706	6.71	75.45	30.49	0.00	11	10	0	1,427	129	0	0	1,298
					1,427	99	0					

DIVISION 2 - TOWNLINE ROAD (NORTH)

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)				
		CUT	FILL	MARSH EXC	CUT NOTE 1	FILL NOTE 3	MARSH EXC	CUT 1.00 NOTE 1	EXPANDED FILL 1.30	EXPANDED MARSH BACKFILL 1.50 NOTE 4	REDUCED MARSH IN FILL 0.60 NOTE 6	MASS ORDINATE NOTE 8
10+43.294	0.00	127.98	1.77	0.00	0	0	0	0	0	0	0	0
10+50	6.71	15.39	24.81	0.00	18	3	0	18	4	0	0	14
11+00	50.00	24.19	87.57	17.14	37	104	16	55	127	24	10	-72
11+50	50.00	29.64	78.49	43.33	50	154	56	105	283	108	43	-178
12+00	50.00	35.83	44.32	29.14	61	114	67	166	379	209	83	-213
12+50	50.00	9.07	31.29	16.10	42	70	42	208	437	272	109	-229
13+00	50.00	4.38	2.50	0.00	12	31	15	220	466	294	118	-246
13+04.443	4.44	4.35	2.07	0.00	1	0	0	221	466	294	118	-245
					221	476	196					

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - EXPANDED MARSH BACKFILL	WILL BE BACKFILLED WITH BREAKER RUN
5 - EXPANDED EBS	NOT USED
6 - REDUCED MARSH IN FILL	REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL
7 - REDUCED EBS IN FILL	NOT USED
8 - MASS ORDINATE	IF MARSH AND EBS TO BE BACKFILLED WITH GRANULAR: [CUT - SALVAGED PAVT - ((FILL - REDUCED MARSH IN FILL - REDUCED EBS IN FILL - EXPANDED ROCK) * FILL FACTOR)]

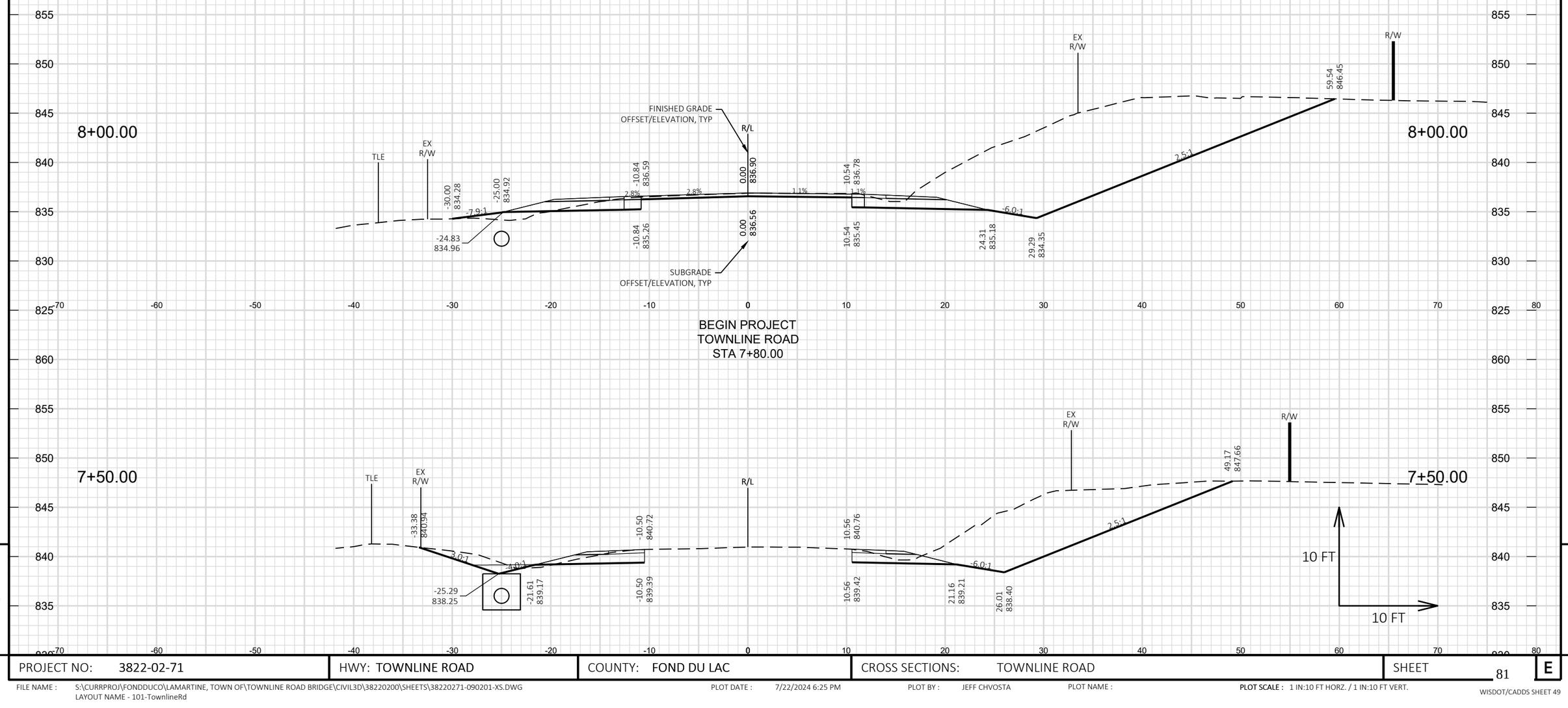


PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 9 E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 100-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

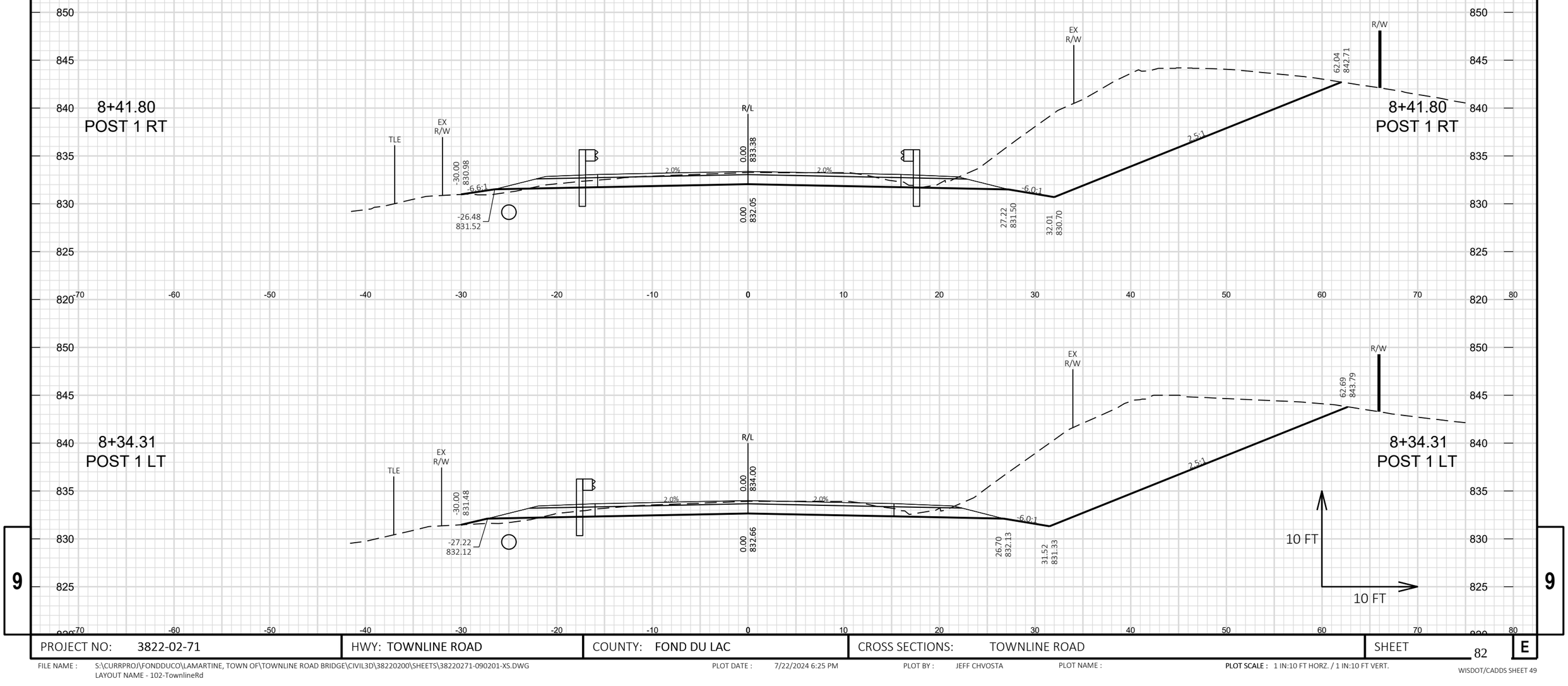
9

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 81	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 101-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

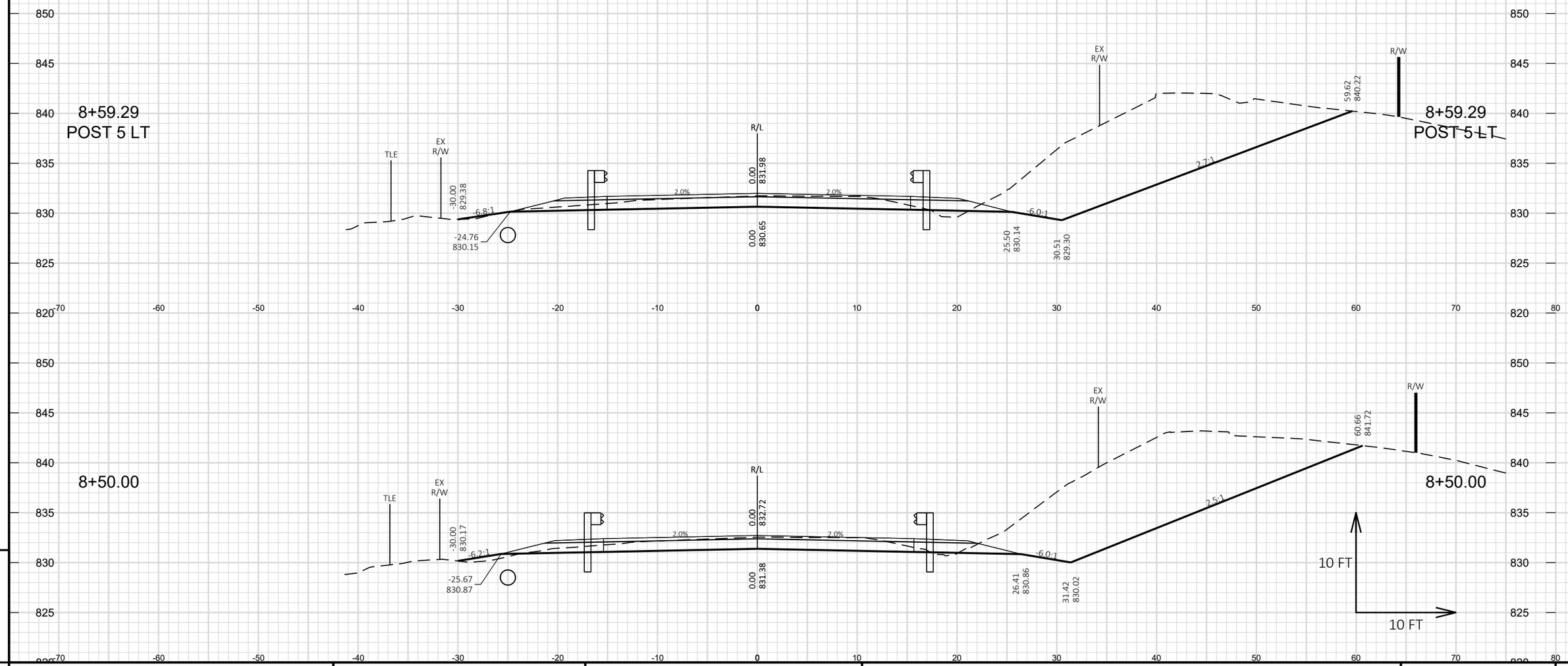


PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 82 E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 102-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

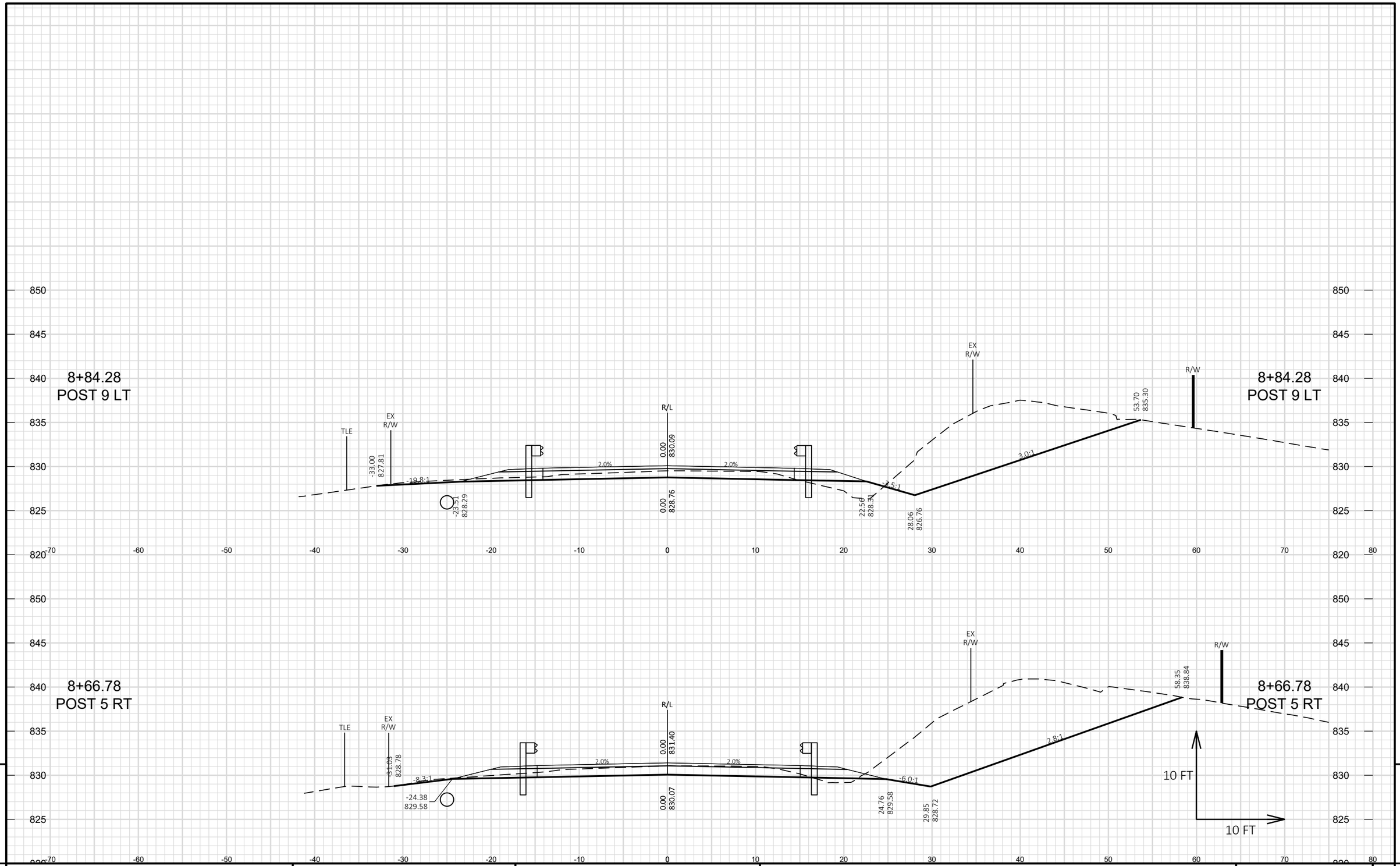


PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 83	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 103-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

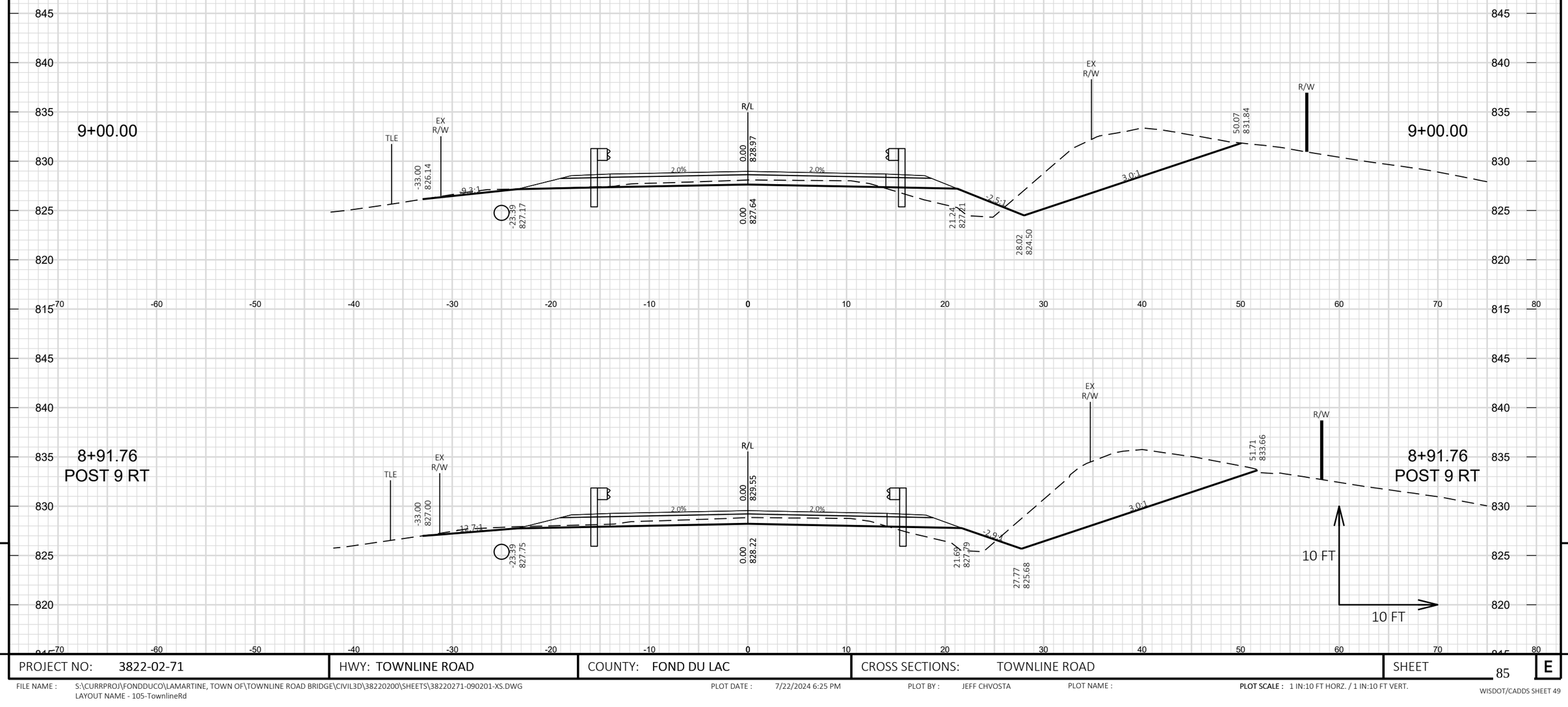
9

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 84	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 104-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 85	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 105-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

STRUCTURE B-20-253
STA 10+00.00

10+00.00

R/W

EX R/W

EX R/W

R/W

10+00.00

9+50.00

R/L

STRUCTURE WING

2.0%

0.00 825.74

0.00 824.40

STRUCTURE WING

9+50.00

10 FT

10 FT

9

9

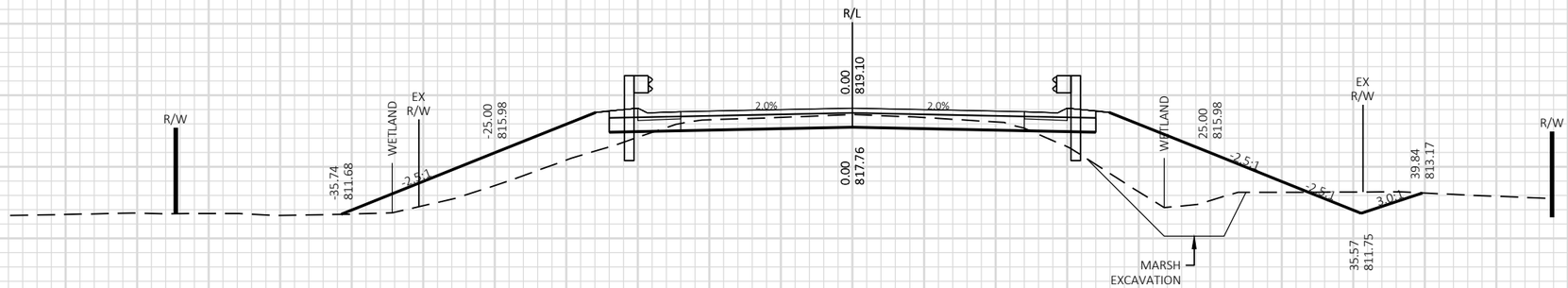
PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 86	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 106-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

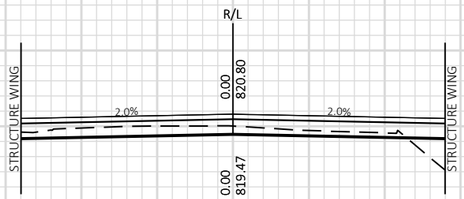
WISDOT/CADDS SHEET 49

11+00.00

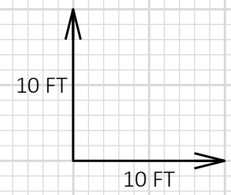


11+00.00

10+50.00



10+50.00



835 830 825 820 815 810 805

-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80

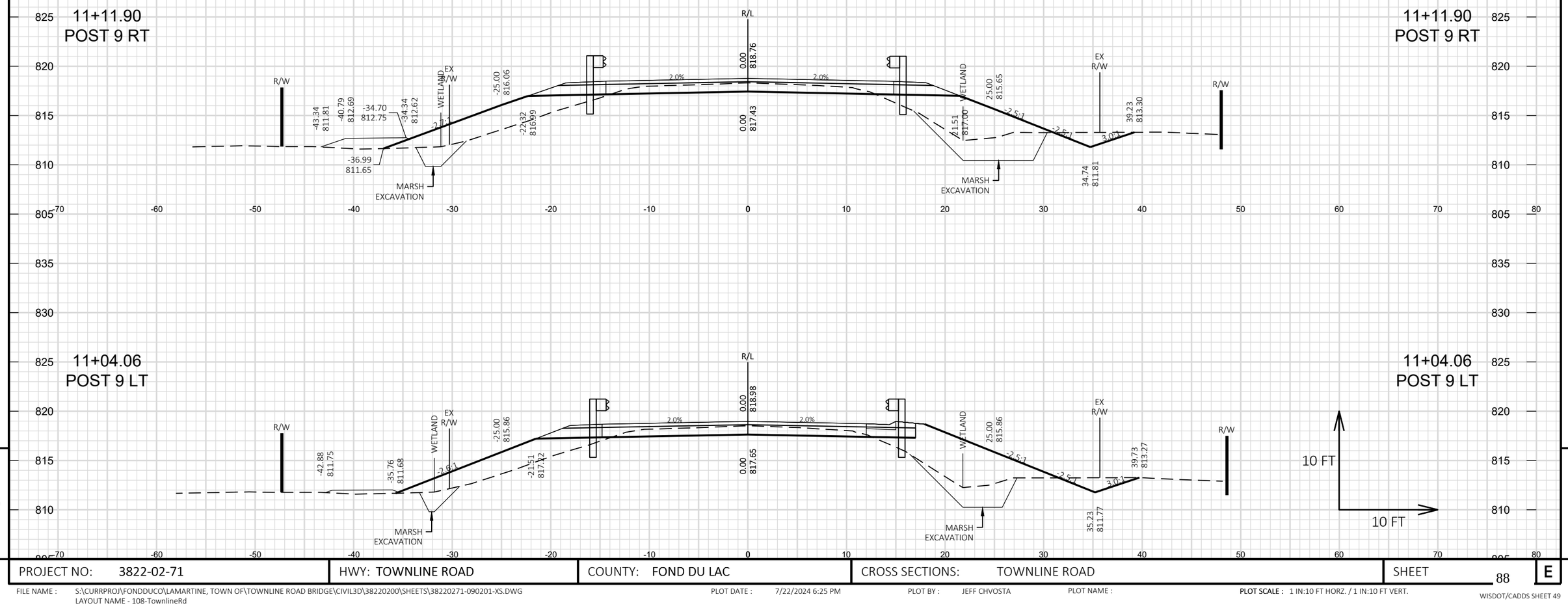
9

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 87	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 107-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 88	E

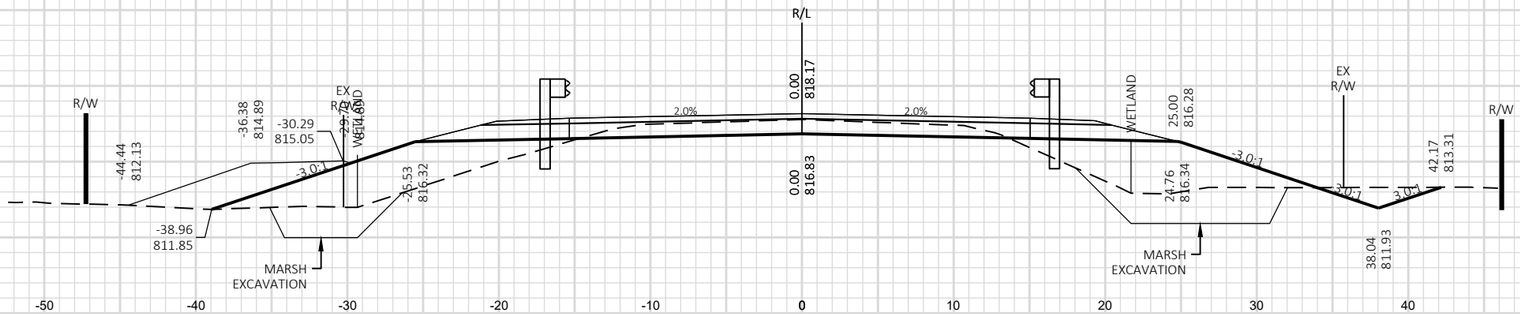
9

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 108-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

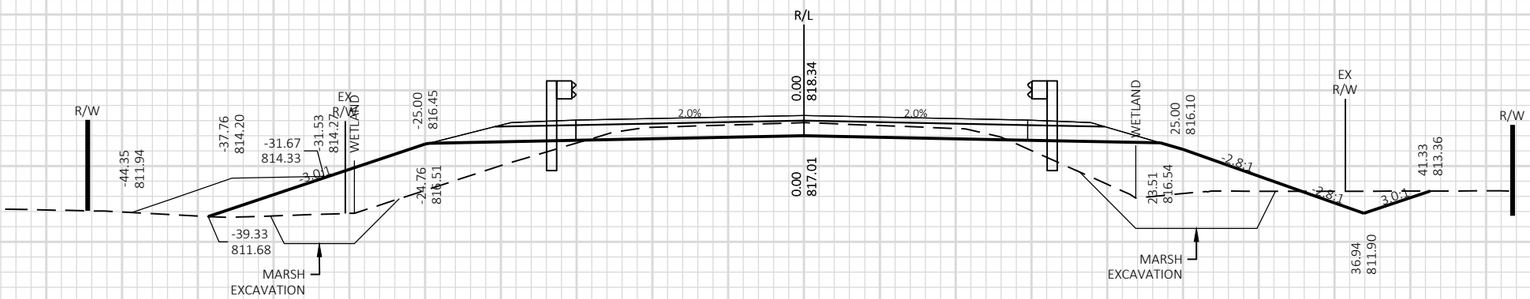
WISDOT/CADDS SHEET 49

11+36.88
POST 5 RT

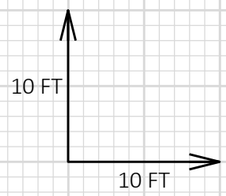


11+36.88
POST 5 RT

11+29.04
POST 5 LT



11+29.04
POST 5 LT



9

9

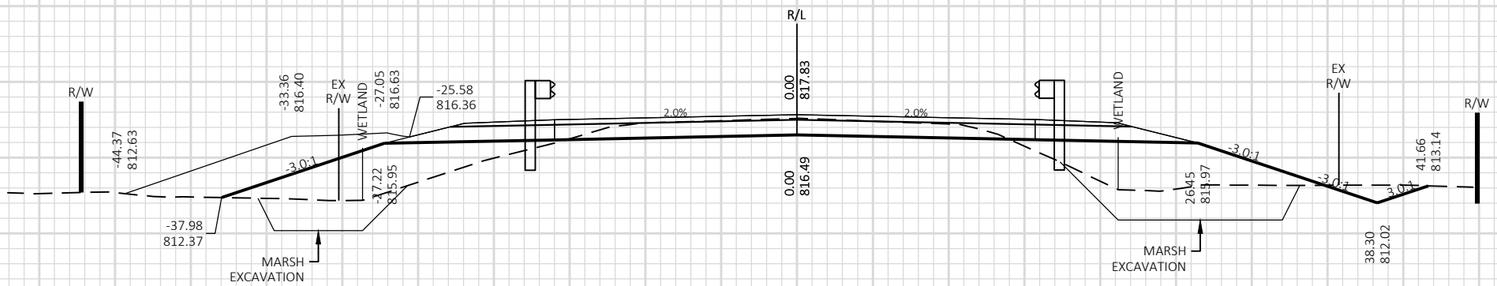
PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 89	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 109-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

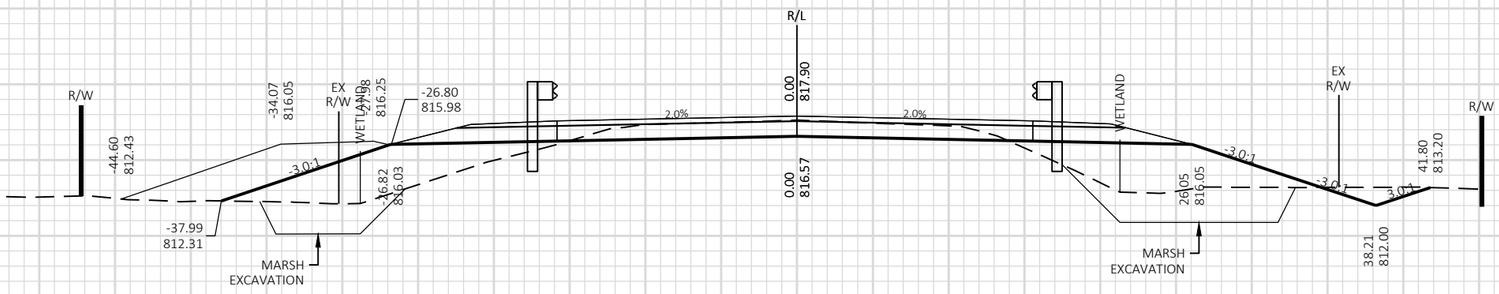
WISDOT/CADDS SHEET 49

11+54.03
POST 1 LT

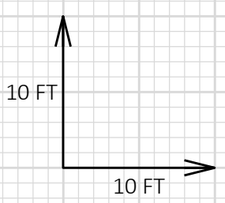


11+54.03
POST 1 LT

11+50.00



11+50.00



9

9

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 90	E

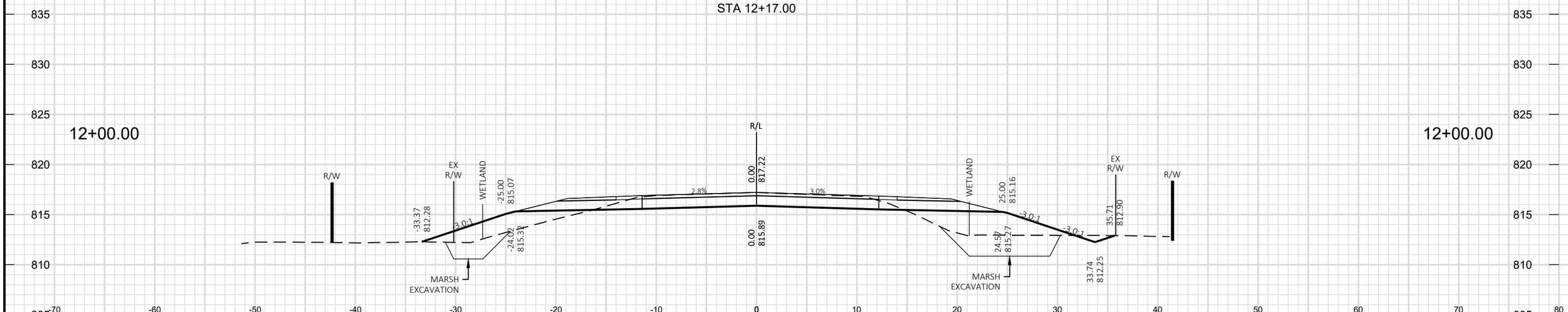
FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 110-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END PROJECT
TOWNLINE ROAD
STA 12+17.00

12+00.00



11+61.86
POST 1 RT

9

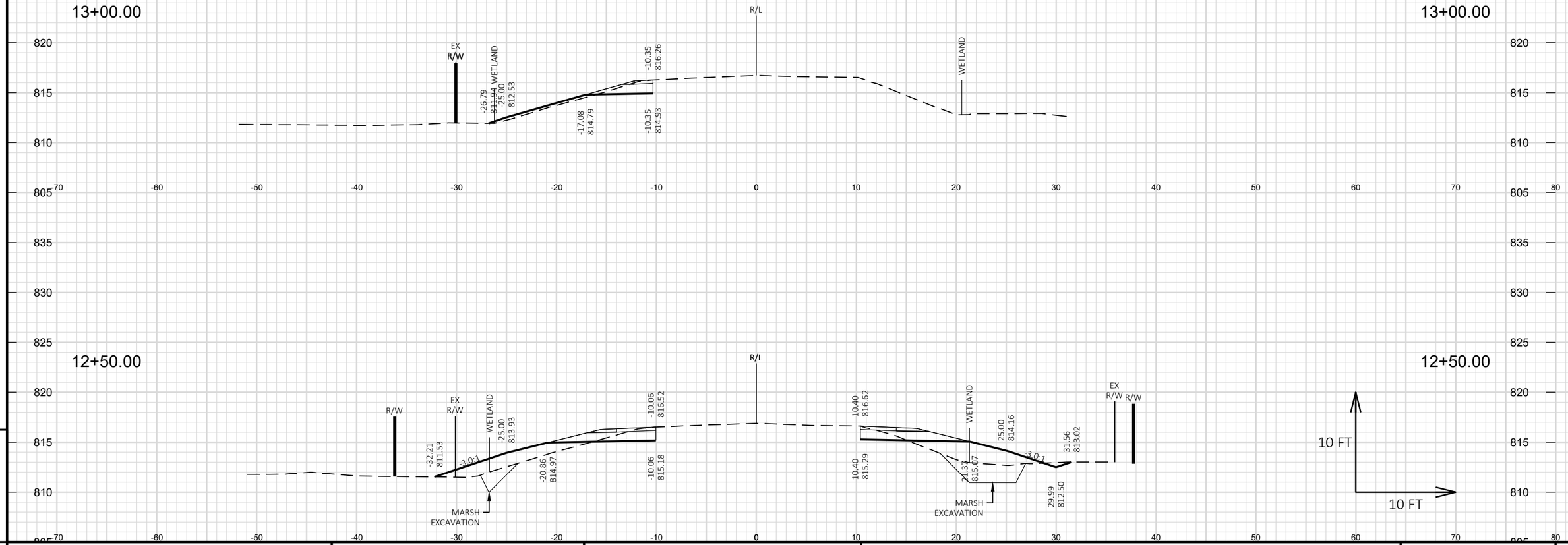
9

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 91 E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 111-TownlineRd
PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

END CONSTRUCTION
TOWNLINE ROAD
STA 13+04.44

13+00.00



13+00.00

12+50.00

12+50.00

9

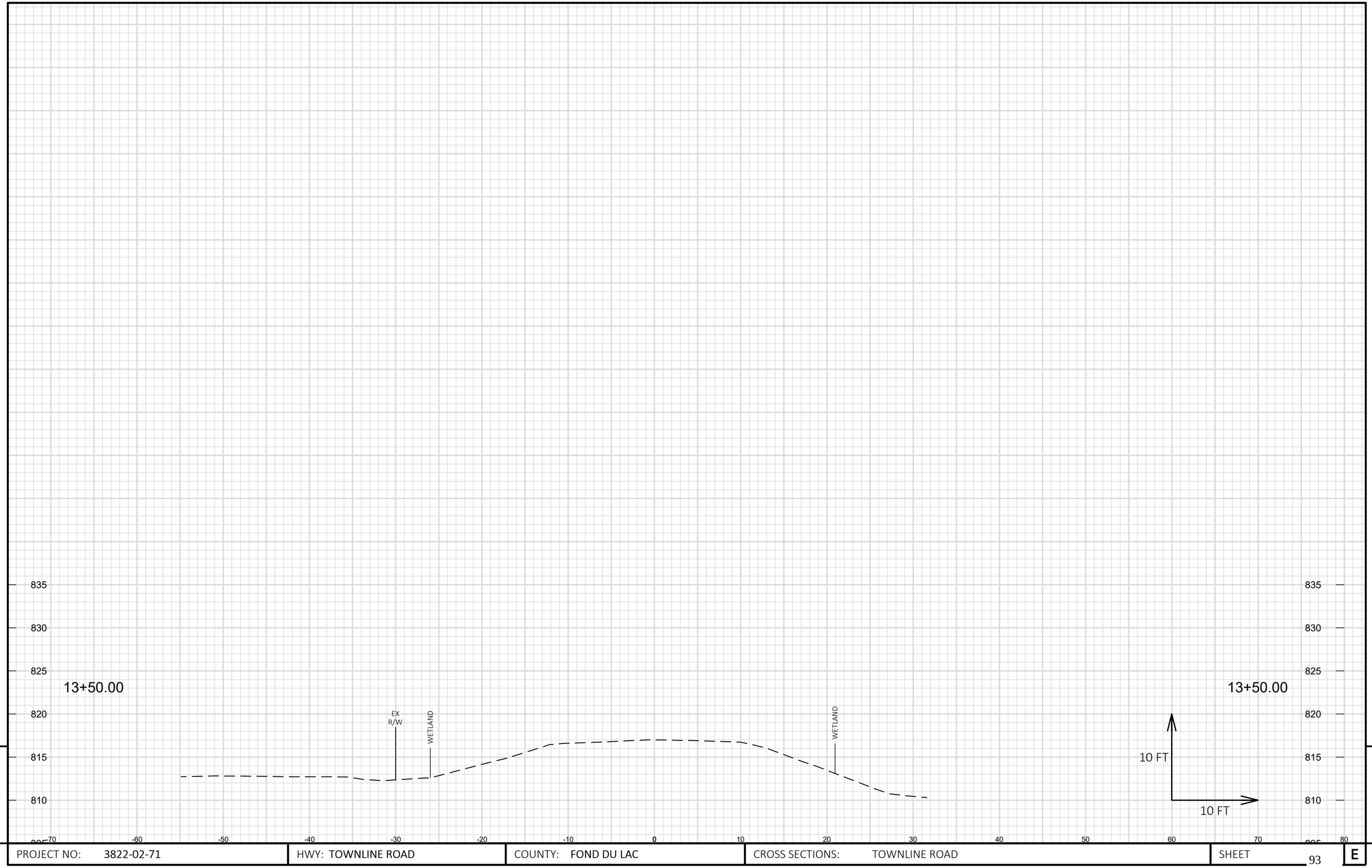
9

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 92	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 112-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 3822-02-71	HWY: TOWNLINE ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: TOWNLINE ROAD	SHEET 93	E

FILE NAME : S:\CURRPROJ\FONDDUCO\LAMARTINE, TOWN OF\TOWNLINE ROAD BRIDGE\CIVIL3D\38220200\SHEETS\38220271-090201-XS.DWG
LAYOUT NAME - 113-TownlineRd

PLOT DATE : 7/22/2024 6:25 PM PLOT BY : JEFF CHVOSTA PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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