SUP

MARCH 2021

PROJECT ID: 8793-00-72

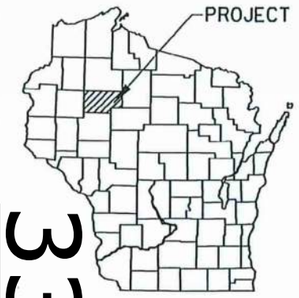
WITH:

COUNTY: RUSK

33

ORDER OF SHEETS

TOTAL SHEETS = 72



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

SCL - GLEN FLORA

MIDDLE FORK MAIN CREEK BR B-54-0137

CTH B

RUSK COUNTY

STATE PROJECT NUMBER
8793-00-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8793-00-72	WISC 2021245	1

ACCEPTED FOR COUNTY OF RUSK
BY
10/14/20 (DATE) (HIGHWAY COMMISSIONER)

ORIGINAL PLANS PREPARED BY
AECOM

WISCONSIN
MICHELLE M. GUOIN
E-37165
WAUSAU, WI
PROFESSIONAL ENGINEER

10/12/2020 (DATE) (SIGNATURE)

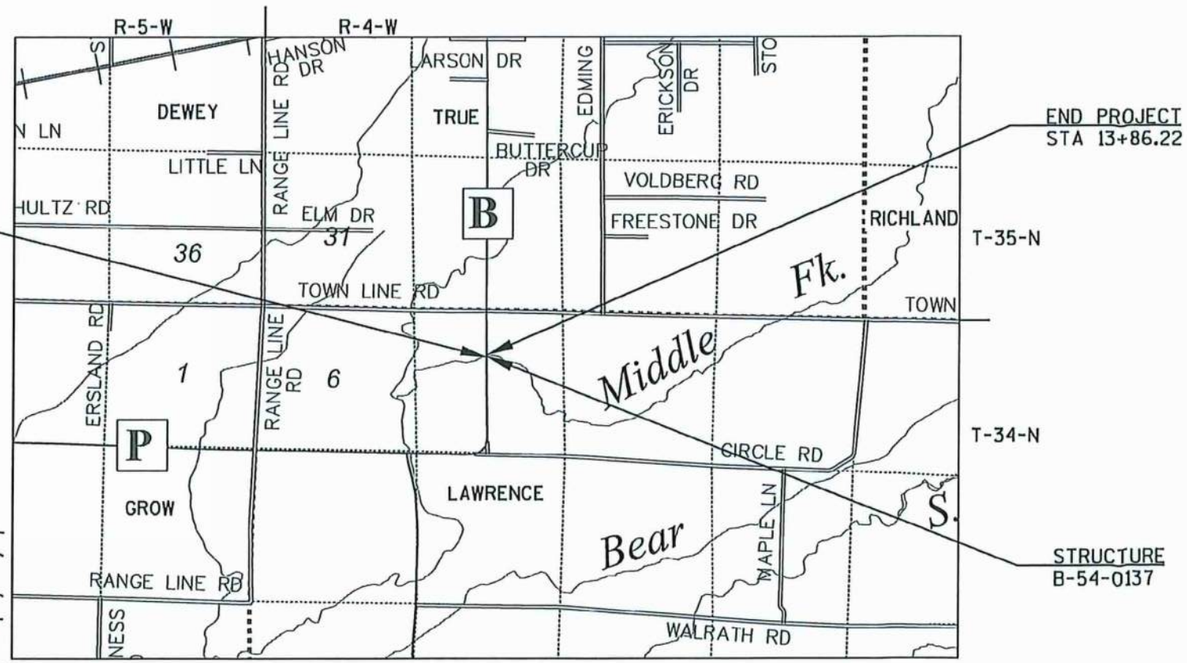
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AECOM
Designer	AECOM
Project Manager	Matthew Van Natta, PE
Regional Examiner	Tou Yang, PE
Regional Supervisor	Andrew Stensland, PE

APPROVED FOR THE DEPARTMENT
DATE: 10/9/2020 (Signature)

E



DESIGN DESIGNATION

A.A.D.T.	2021	=	545
A.A.D.T.	2041	=	600
D.H.V.		=	55
D.D.		=	60/40
T.		=	6.6%
DESIGN SPEED		=	30 MPH
ESALS		=	88,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE	300 EW	ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
MARSH AREA		STORM SEWER	SS
WOODED OR SHRUB AREA		TELEPHONE	T
		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

LAYOUT
SCALE 0 1.0 MI

TOTAL NET LENGTH OF CENTERLINE = 0.029 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), RUSK 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 (2011). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

FILE NAME : C:\ONEDRIVE\ONEDRIVE - AECOM DIRECTORY\SHARED FOLDERS\60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0101_TI.DWG PLOT DATE : 10/12/2020 5:04 PM PLOT BY : NEMEC, ELIZABETH PLOT NAME :

LIST OF STANDARD ABBREVIATIONS

ABUT.	ABUTMENT
AGG.	AGGREGATE
APPROX.	APPROXIMATE
A.E.W	APRON ENDWALL
ASPH.	ASPHALTIC
A.D.T.	AVERAGE DAILY TRAFFIC
AZ.	AZIMUTH
BK.	BACK
BEG.	BEGIN
B.M.	BENCH MARK
C/L	CENTER LINE
CONC.	CONCRETE
CONST.	CONSTRUCTION
CO.	COUNTY
C.T.H.	COUNTY TRUNK HIGHWAY
X-SEC.	CROSS SECTION
CR.	CRUSHED
CFS.	CUBIC FEET/SECOND
C.Y., CU. YD.	CUBIC YARD
CULV.	CULVERT
C.P.	CULVERT PIPE
D.O.T.	DEPARTMENT OF TRANSPORTATION
D.H.V.	DESIGN HOUR VOLUME
DIA.	DIAMETER
D.	DIRECTIONAL DISTRIBUTION
DISCH. OR DIS.	DISCHARGE
EA.	EACH
ELECT.	ELECTRIC
EL. OR ELEV.	ELEVATION
EMB.	EMBANKMENT
E.B.S.	EXCAVATION BELOW SUBGRADE
EXIST.	EXISTING
FERT.	FERTILIZE
F.E.	FIELD ENTRANCE
FIN.	FINISHED
FT.	FOOT
F.L.	FLOW LINE
GA.	GAUGE
HORIZ.	HORIZONTAL
CWT.	HUNDREDWEIGHT
INL.	INLET
LT.	LEFT
L.H.F.	LEFT-HAND FORWARD
LIN.	LINEAR
LIN. FT.	LINEAR FOOT
L.S.	LUMP SUM
MAX.	MAXIMUM
MI.	MILE
MISC.	MISCELLANEOUS
N.E.	NORTH EAST
N.W.	NORTH WEST
PAV'T	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.O.T.	POINT OF TANGENT
LB.	POUND
P.E.	PRIVATE ENTRANCE
PROJ.	PROJECT
R.	RANGE
REQ'D	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT-HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SHR.	SHRINKAGE
SL.	SLOPE
STD.	STANDARD
S.D.D.	STANDARD DETAIL DRAWING
S.T.H.	STATE TRUNK HIGHWAY
STA.	STATION
S.P.P.A.	STRUCTURAL PLATE PIPE ARCH
STRUCT.	STRUCTURE
SURF.	SURFACE
TEL.	TELEPHONE
TN.	TOWN
T.	TRUCKS (PERCENT OF)
UNCL.	UNCLASSIFIED
U.G.	UNDERGROUND
V.	VELOCITY
V.C.	VERTICAL CURVE

GENERAL NOTES

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

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

SECTIONS AS SHOWN ON THE CROSS SECTION SHEETS INCLUDE THE THICKNESS OF TOPSOIL.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREA WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND EMATTED AS DIRECTED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD. FIELD ADJUST SILT FENCE TO FIT EXISTING CONDITIONS.

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE THE SLOPE INTERCEPTS.

THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR AN ALUMINUM MONUMENT TO SET IN THE STRUCTURE AS DESIGNATED BY THE ENGINEER.

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 1.002 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.771 ACRES

UTILITY CONTACTS

JUMP RIVER ELECTRIC COOPERATIVE (ELECTRIC)
ATTN: SAM HOWARD
1102 WEST 9TH STREET PO BOX 99
LADYSMITH, WI 54548
PHONE: 715-532-5524
showard@jrec.com

CENTURYLINK (COMMUNICATION)
ATTN: BRIAN HUHN
425 ELLINGTON AVENUE
PO BOX 78
HAWKINS, WI 54530
PHONE: 715-532-0023
Brian.huhn@centurylink.com

DNR CONTACT

DEPARTMENT OF NATURAL RESOURCES
ATTN: LEAH NICOL
1300 WEST CLAIRMONT AVENUE
EAU CLAIRE, WI 54701
715-934-9014
leah.nicol@wisconsin.gov

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

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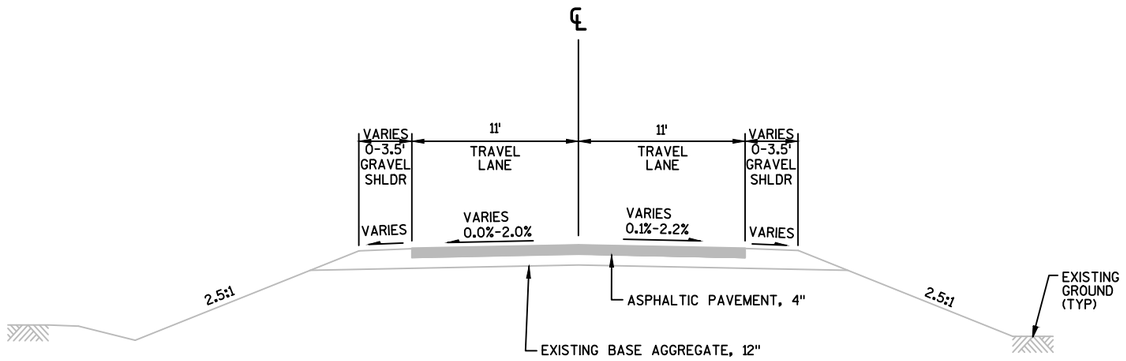
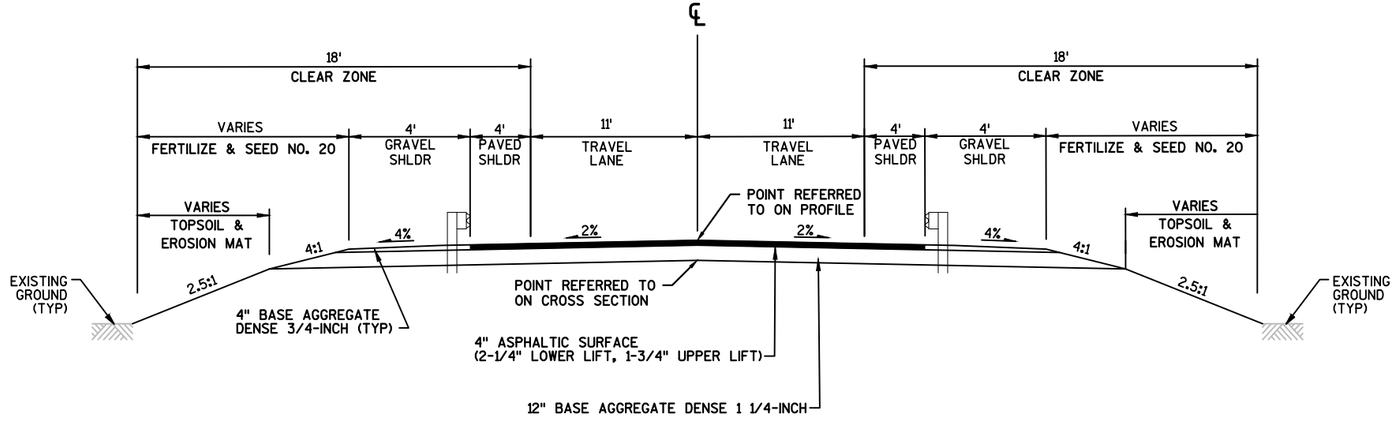


TYPICAL EXISTING SECTION - CTH B OVER MIDDLE FORK MAIN CREEK

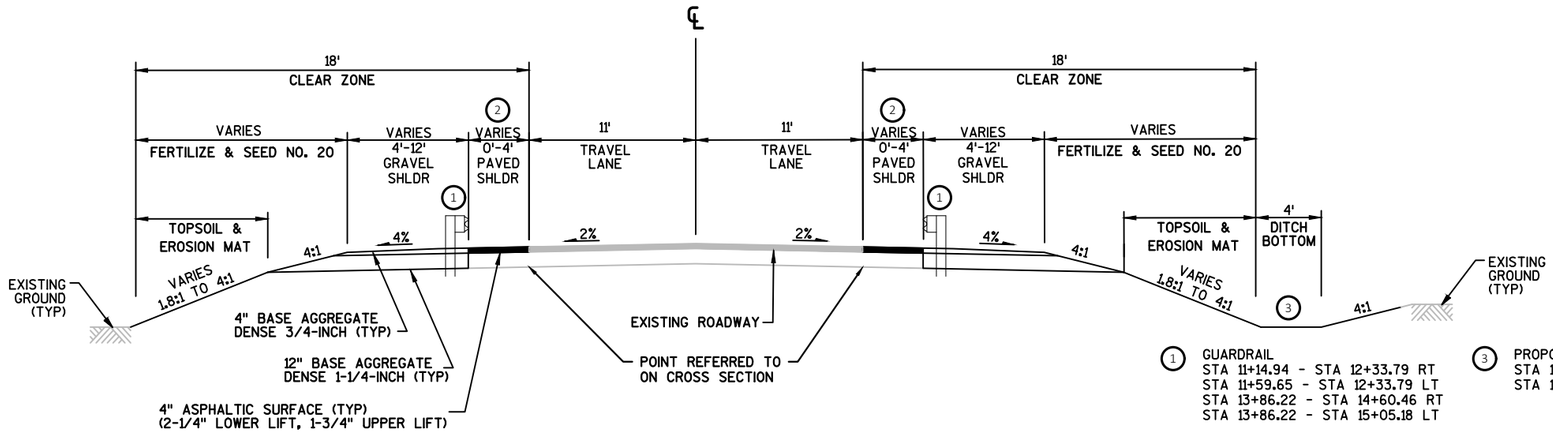
STA. 10+54.94 - 12+74.79
STA. 13+45.33 - 15+65.17



TYPICAL FINISHED SECTION - CTH B OVER MIDDLE FORK MAIN CREEK

STA. 12+33.79 - 12+74.79
STA. 13+45.33 - 13+86.22

2



TYPICAL FINISHED SECTION - CTH B OVER MIDDLE FORK MAIN CREEK

STA. 10+54.94 - 12+33.79
STA. 13+86.22 - 15+65.17

1. GUARDRAIL
   STA 11+14.94 - STA 12+33.79 RT
   STA 11+59.65 - STA 12+33.79 LT
   STA 13+86.22 - STA 14+60.46 RT
   STA 13+86.22 - STA 15+05.18 LT

2. PAVED SHOULDER
   STA 12+16.16 - STA 12+33.79 RT
   STA 12+10.87 - STA 12+33.79 LT

3. PROPOSED DITCH
   STA 10+54.95, RT - STA 11+50.00, RT
   STA 10+99.61, LT - STA 11+50.00, LT

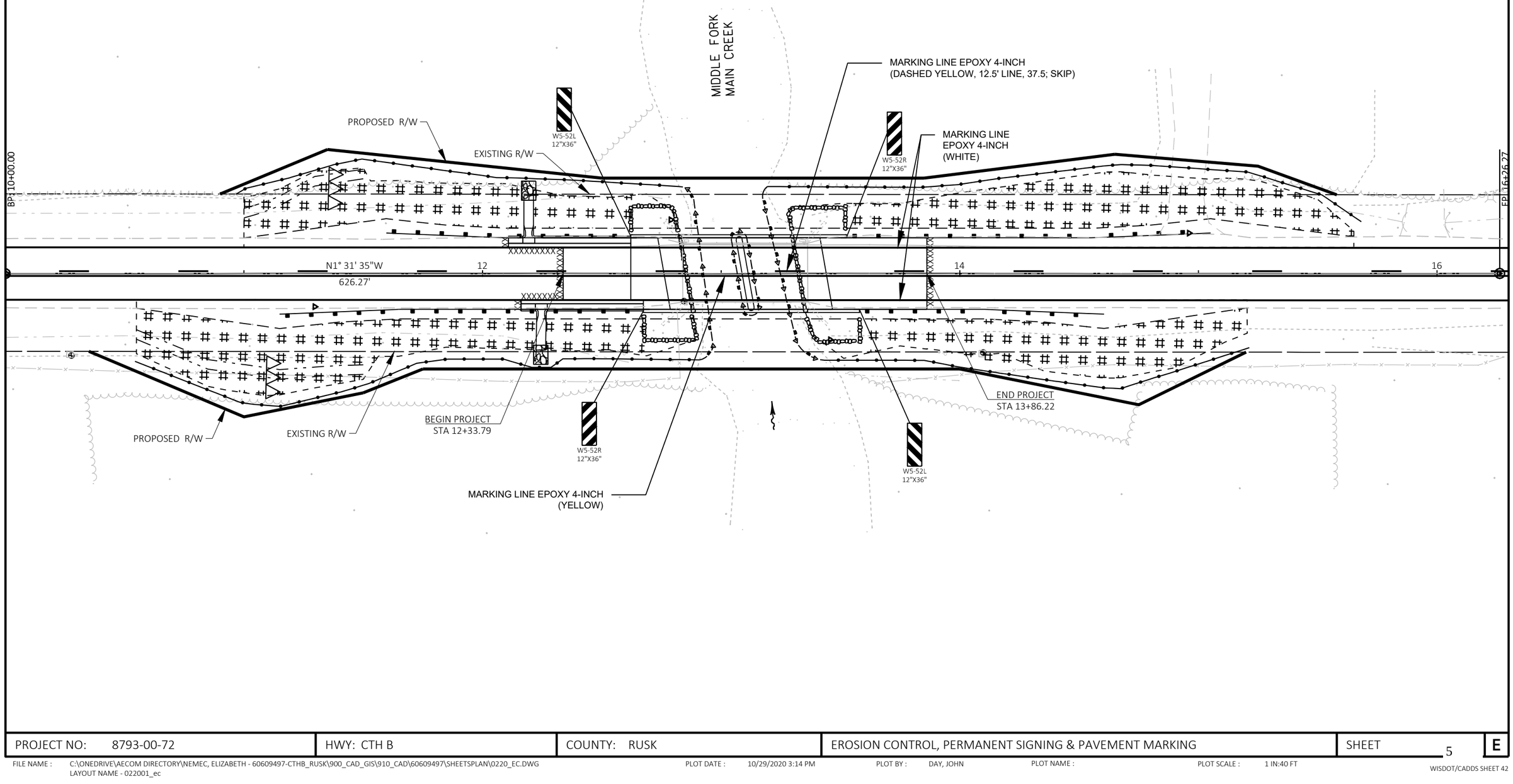
PROJECT NO:8793-00-72	CTH B	COUNTY:RUSK	TYPICAL SECTIONS	SHEET 4	E

NOTE: PAVEMENT MARKING TO MEET REQUIREMENTS OF SDD "SIGNING AND MARKING FOR TWO LANE BRIDGES."

LEGEND

- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- SLOPE INTERCEPT
- TURBIDITY BARRIER
- TEMPORARY DITCH CHECK
- SURFACE WATER FLOW
- RIP RAP HEAVY
- RIP RAP MEDIUM

N



PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	EROSION CONTROL, PERMANENT SIGNING & PAVEMENT MARKING	SHEET 5	E

FILE NAME : C:\ONEDRIVE\AECOM DIRECTORY\NEMEC, ELIZABETH - 60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0220_EC.DWG
LAYOUT NAME - 022001_ec

PLOT DATE : 10/29/2020 3:14 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

8793-00-72

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	4.000	4.000
0004	201.0205	Grubbing	STA	4.000	4.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 13+10	LS	1.000	1.000
0008	204.0170	Removing Fence	LF	155.000	155.000
0010	205.0100	Excavation Common	CY	341.000	341.000
0012	206.1000	Excavation for Structures Bridges (structure) 01. B-54-137	LS	1.000	1.000
0014	208.0100	Borrow	CY	882.000	882.000
0016	210.1500	Backfill Structure Type A	TON	240.000	240.000
0018	213.0100	Finishing Roadway (project) 01. 8793-00-72	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	150.000	150.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	238.000	238.000
0024	416.1010	Concrete Surface Drains	CY	4.000	4.000
0026	455.0605	Tack Coat	GAL	23.000	23.000
0028	465.0105	Asphaltic Surface	TON	69.000	69.000
0030	502.0100	Concrete Masonry Bridges	CY	252.000	252.000
0032	502.3200	Protective Surface Treatment	SY	240.000	240.000
0034	502.3210	Pigmented Surface Sealer	SY	90.000	90.000
0036	505.0400	Bar Steel Reinforcement HS Structures	LB	5,510.000	5,510.000
0038	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	37,820.000	37,820.000
0040	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0042	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	535.000	535.000
0044	601.0588	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	LF	102.000	102.000
0046	606.0200	Riprap Medium	CY	6.000	6.000
0048	606.0300	Riprap Heavy	CY	150.000	150.000
0050	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0052	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0054	614.2300	MGS Guardrail 3	LF	150.000	150.000
0056	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0058	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0060	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8793-00-72	EACH	1.000	1.000
0062	619.1000	Mobilization	EACH	1.000	1.000
0064	624.0100	Water	MGAL	4.000	4.000
0066	625.0100	Topsoil	SY	1,477.000	1,477.000
0068	628.1504	Silt Fence	LF	869.000	869.000
0070	628.1520	Silt Fence Maintenance	LF	869.000	869.000
0072	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000

8793-00-72

Line	Item	Item Description	Unit	Total	Qty
0076	628.2008	Erosion Mat Urban Class I Type B	SY	1,477.000	1,477.000
0078	628.6005	Turbidity Barriers	SY	280.000	280.000
0080	628.7504	Temporary Ditch Checks	LF	8.000	8.000
0082	629.0210	Fertilizer Type B	CWT	0.930	0.930
0084	630.0120	Seeding Mixture No. 20	LB	27.000	27.000
0086	630.0500	Seed Water	MGAL	33.000	33.000
0088	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0090	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0092	638.2602	Removing Signs Type II	EACH	4.000	4.000
0094	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0096	642.5001	Field Office Type B	EACH	1.000	1.000
0098	643.0420	Traffic Control Barricades Type III	DAY	1,620.000	1,620.000
0100	643.0705	Traffic Control Warning Lights Type A	DAY	1,440.000	1,440.000
0102	643.0900	Traffic Control Signs	DAY	1,620.000	1,620.000
0104	643.5000	Traffic Control	EACH	1.000	1.000
0106	645.0111	Geotextile Type DF Schedule A	SY	100.000	100.000
0108	645.0120	Geotextile Type HR	SY	360.000	360.000
0110	646.1020	Marking Line Epoxy 4-Inch	LF	2,262.000	2,262.000
0112	650.4500	Construction Staking Subgrade	LF	460.000	460.000
0114	650.5000	Construction Staking Base	LF	100.000	100.000
0116	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	102.000	102.000
0118	650.6500	Construction Staking Structure Layout (structure) 01. B-54-137	LS	1.000	1.000
0120	650.9910	Construction Staking Supplemental Control (project) 01. 8793-00-72	LS	1.000	1.000
0122	650.9920	Construction Staking Slope Stakes	LF	460.000	460.000
0124	690.0150	Sawing Asphalt	LF	86.000	86.000
0126	715.0502	Incentive Strength Concrete Structures	DOL	1,512.000	1,512.000
0128	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0130	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

3

CLEARING AND GRUBBING

STATION	-	STATION	201.0105 CLEARING	201.0205 GRUBBING
10+54	-	12+84	2	2
13+36	-	15+66	2	2
PROJECT 8793-00-72 TOTAL			4	4

REMOVING FENCE

STATION	-	STATION	204.0170 REMOVING FENCE LF
10+72	-	11+51	80
12+82			15
14+33	-	14+92	60
PROJECT 8793-00-72 TOTAL			155

FINISHING ROADWAY

PROJECT	213.0100 FINISHING ROADWAY EACH
8793-00-72	1
PROJECT 8793-00-72 TOTAL	1

3

BASE AGGREGATE DENSE

STATION	-	STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL
10+55	-	12+34	CTH B, SHOULDERS	64	---	0.7
12+34	-	12+79	CTH B, MAINLINE	---	119	1.2
12+34	-	12+79	CTH B, SHOULDERS	9	---	0.1
13+41	-	13+86	CTH B, MAINLINE	---	119	1.2
13+41	-	13+86	CTH B, SHOULDERS	9	---	0.1
13+86	-	15+65	CTH B, SHOULDERS	69	---	0.7
PROJECT 8793-00-72 TOTAL				150	238	4

CONCRETE SURFACE DRAIN

STATION	-	STATION	OFFEST	416.1010 CONCRETE SURFACE DRAINS CY
12+17		12+22	LT	2
12+22		12+27	RT	2
PROJECT 8793-00-72 TOTAL				4

ASPHALTIC ITEMS

STATION	-	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
12+11	-	12+34	CTH B, SHOULDER PATCHING	1	1
12+34	-	12+78	CTH B, MAINLINE UPPER LAYER	---	11
12+34	-	12+78	CTH B, MAINLINE LOWER LAYER	8	14
12+34	-	12+79	CTH B, SHOULDERS UPPER LAYER	---	4
12+34	-	12+79	CTH B, SHOULDERS LOWER LAYER	3	5
13+42	-	13+86	CTH B, MAINLINE UPPER LAYER	---	11
13+42	-	13+86	CTH B, MAINLINE LOWER LAYER	8	14
13+41	-	13+86	CTH B, SHOULDERS UPPER LAYER	---	4
13+41	-	13+86	CTH B, SHOULDERS LOWER LAYER	3	5
PROJECT 8793-00-72 TOTAL				23	69

CONCRETE CURB & GUTTER

STATION	-	STATION	OFFSET	601.0588 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE TBT LF
12+11	-	12+62	LT	51
12+16	-	12+67	RT	51
PROJECT 8793-00-72 TOTAL				102

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

DIVISION	FROM/TO STATION	LOCATION	205.0100 COMMON EXCAVATION (1) CUT (2)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (3)	AVAILABLE MATERIAL (4)	UNEXPANDED FILL	EXPANDED FILL (5) FACTOR 1.25	MASS ORDINATE +/- (6)	WASTE	208.0100 BORROW
CTH B	10+55 to 12+75	MAINLINE, SOUTH APPROACH	160	67	93	407	509	-416	0	416
CTH B	13+10 to 15+65	MAINLINE, NORTH APPROACH	180	73	108	459	574	-466	0	466
TOTAL			341	140	201	867	1,083	-882	0	882
TOTAL COMMON EXC			341							

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(3) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL

(5) EXPANDED FILL FACTOR = 1.25 **EXPANDED FILL = (UNEXPANDED FILL) * FILL FACTOR**

(6) 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.

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

GUARDRAIL

STATION	-	STATION	OFFSET	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
11+15	-	11+68	RT	---	---	1
11+68	-	12+31	RT	62.5	---	---
12+31	-	12+70	RT	---	39.4	---
11+60	-	12+13	LT	---	---	1
12+13	-	12+25	LT	12.5	---	---
12+25	-	12+65	LT	---	39.4	---
13+55	-	13+95	RT	---	39.4	---
13+95	-	14+07	RT	12.5	---	---
14+07	-	14+60	RT	---	---	1
13+50	-	13+90	LT	---	39.4	---
13+90	-	14+52	LT	62.5	---	---
14+52	-	15+05	LT	---	---	1
PROJECT 8793-00-72 TOTAL				**150**	**157.6**	**4**

RIPRAP

STATION	-	STATION	OFFSET	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
12+16	-	12+22	LT	3	10
12+22	-	12+27	RT	3	10
PROJECT 8793-00-72 TOTAL				**6**	**20**

MAINTENANCE AND REPAIR OF HAUL ROADS (CATEGORY 0030)

PROJECT	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS EACH
8793-00-72	1
PROJECT 8793-00-72 TOTAL	1

MOBILIZATION

PROJECT	619.1000 MOBILIZATION EACH
8793-00-72	1
PROJECT 8793-00-72 TOTAL	1

EROSION CONTROL MOBILIZATION

PROJECT	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATION EMERGENCY EROSION CONTROL EACH
8793-00-72	3	2
PROJECT 8793-00-72 TOTAL	**3**	**2**

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

LANDSCAPING

STATION	-	STATION	OFFSET	625.0100 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0500 SEED WATER MGAL
10+55	-	12+68	RT	457	457	0.29	8.3	10.3
11+00	-	12+62	LT	319	319	0.20	5.8	7.2
13+52	-	15+65	LT	390	390	0.25	7.1	8.8
13+58	-	15+20	RT	311	311	0.20	5.6	7.0
PROJECT 8793-00-72 TOTAL				**1,477**	**1,477**	**0.93**	**27**	**33**

EROSION CONTROL

STATION	-	STATION	OFFSET	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIERS SY	628.7504 TEMPORARY DITCH CHECKS LF
10+54	-	12+91	RT	245	245	---	---
10+97	-	12+82	LT	189	189	---	---
11+11			RT	---	---	---	4
11+38			LT	---	---	---	4
12+82	-	12+97	LT/RT	---	---	92	---
13+04	-	13+16	LT/RT	---	---	92	---
13+17	-	13+45	LT/RT	---	---	96	---
13+19	-	15+68	LT	255	255	---	---
13+45	-	15+21	RT	180	180	---	---
PROJECT 8793-00-72 TOTAL				**869**	**869**	**280**	**8**

PERMANENT SIGNING

STATION	OFFSET	SIGN CODE	634.0612 POSTS WOOD 4X6-INCH 12-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
12+62	LT	W5-52L	1	3	---	---
12+67	RT	W5-52R	1	3	---	---
12+85	LT	W5-52L	---	---	1	1
12+85	RT	W5-52R	---	---	1	1
13+35	LT	W5-52R	---	---	1	1
13+35	RT	W5-52L	---	---	1	1
13+53	LT	W5-52R	1	3	---	---
13+58	RT	W5-52L	1	3	---	---
PROJECT 8793-00-72 TOTAL			**4**	**12**	**4**	**4**

FIELD OFFICE

PROJECT	642.5001 TYPE B EACH
8793-00-72	1
PROJECT 8793-00-72 TOTAL	1

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

TRAFFIC CONTROL

LOCATION	DAYS IN SERVICE	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO.	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO.	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS NO.	643.0900 TRAFFIC CONTROL SIGNS DAY
8793-00-72	90	18	1,620	16	1,440	18	1,620
PROJECT 8793-00-72 TOTAL			**1,620**		**1,440**		**1,620**

CONSTRUCTION STAKING

STATION	-	STATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT B-54-0137 (CATEGORY 0020) LS	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 8793-00-72 LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
10+54	-	12+34	180	---	---	---	---	180
12+11	-	12+62	---	---	51	---	---	---
12+16	-	12+67	---	---	51	---	---	---
12+34	-	12+84	50	50	---	---	---	50
13+36	-	13+86	50	50	---	---	---	50
13+86	-	15+66	180	---	---	---	---	180
8793-00-72			---	---	---	1	1	---
PROJECT 8793-00-72 TOTAL			**460**	**100**	**102**	**1**	**1**	**460**

3

TRAFFIC CONTROL

PROJECT	643.5000 TRAFFIC CONTROL EACH
8793-00-72	1
PROJECT 8793-00-72 TOTAL	1

PAVEMENT MARKING ITEMS

STATION	-	STATION	TYPE	646.1020 MARKING LINE EPOXY 4-INCH YELLOW LF	646.1020 MARKING LINE EPOXY 4-INCH WHITE LF
9+62	-	16+58	EDGELINE (SOLID)	---	1,392
9+62	-	16+58	CENTERLINE (DASHED/SOLID)	870	---
PROJECT 8793-00-72 TOTAL					**2,262**

SAWING ASPHALT

STATION	-	STATION	LOCATION	690.0150 SAWING ASPHALT LF
12+11	-	12+34	CTH B	63
13+86			CTH B	23
PROJECT 8793-00-72 TOTAL				**86**

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED.

BENCH MARKS			
NO.	STATION/OFFSET	DESCRIPTION	ELEV.
1	10+28, 34' RT	60D NAIL IN EAST FACE OF PP #5.9	1220.76
2	12+84, 12' RT	CHISELED SQUARE IN SE CORNER OF BRIDGE DECK	1221.82
3	14+10, 33' RT	60D NAIL IN WEST FACE PP #5.8	1218.83

STA 11+59.65, 17' LT - STA 12+09.61, 15' LT
MGS GUARDRAIL TERMINAL EAT

STA 12+09.61, 15' LT - STA 12+25.25, 15' LT
MGS GUARDRAIL 3

STA 12+25.25, 15' LT - STA 12+64.65, 15' LT
MGS THRIE BEAM TRANSITION

STA 13+50.18, 15' LT - STA 13+89.58, 15' LT
MGS THRIE BEAM TRANSITION

STA 13+89.58, 15' LT - STA 14+55.22, 15' LT
MGS GUARDRAIL 3

STA 14+55.22, 15' LT - STA 15+05.18, 17' LT
MGS GUARDRAIL TERMINAL EAT

IRENE SCHMIDT, AS VENDOR; AND PHILLIP SCHMIDT, AS VENDEE UNDER LAND CONTRACT RECORDED JULY 9, 2018 AS DOCUMENT No. 348761

MIDDLE FORK MAIN CREEK

N

PL

CONTROL POINT 4
Y=561770.550
X= 866353.900

BP 10+00.00

BEGIN 4:1 FORESLOPE GRADING
STA. 11+29.65, LT

SLOPE INTERCEPT

CONCRETE SURFACE DRAIN

PROPOSED DITCH

7:1 TAPER

11+00.00, -14.91' LT

BEGIN CONSTRUCTION
STA 10+54.95

CONTROL POINT 7
Y= 562048.253
X= 866324.037

PROPOSED R/W

CENTURYLINK (COMMUNICATION)

EXISTING R/W

SLOPE INTERCEPT

CONTROL POINT 8
Y= 562265.499
X= 866323.801

END 4:1 FORESLOPE GRADING
STA. 15+35.18, LT

8:1 TAPER

CONTROL POINT 1
Y= 562395.756
X= 866337.270

15+65.17, -15.41' LT

STA. 12+76.06
SKEW 10°

STA. 13+45.33
SKEW 10°

CTH B

N1° 31' 35"W

12

14

16

10+54.95, 14.53' RT

BM 1

BM 2

BM 3

15+20.47, 14.41' RT

END CONSTRUCTION
STA 15+65.17

7:1 TAPER

BEGIN 4:1 FORESLOPE GRADING
STA. 10+84.95, RT

SLOPE INTERCEPT

CONTROL POINT 3
Y= 561900.032
X= 866364.382

REMOVING FENCE

EXISTING R/W

REMOVE STRUCTURE P-54-0032

CONTROL POINT 6
Y= 562116.343
X= 866372.483

SLOPE INTERCEPT

REMOVING FENCE

PROPOSED DITCH

REMOVING FENCE

STA 11+14.94, 17' RT - STA 11+64.91, 15' RT
MGS GUARDRAIL TERMINAL EAT

STA 11+64.91, 15' RT - STA 12+30.54, 15' RT
MGS GUARDRAIL 3

STA 12+30.54, 15' RT - STA 12+69.94, 15' RT
MGS THRIE BEAM TRANSITION

JACOB SCHMIDT

BEGIN PROJECT
STA 12+33.79

CONCRETE CURB & GUTTER
4-INCH SLOPED 36-INCH TYPE TBT

STRUCTURE B-54-0137 REQUIRED

PROPOSED R/W

PL

JUMP RIVER ELECTRIC COOPERATIVE

LARRY JOE ROMANOWSKI

END PROJECT
STA 13+86.22

END 4:1 FORESLOPE GRADING
STA. 14+90.46, RT

STA 13+55.47, 15' RT - STA 13+94.87, 15' RT
MGS THRIE BEAM TRANSITION

STA 13+94.87, 15' RT - STA 14+10.49, 15' RT
MGS GUARDRAIL 3

STA 14+10.49, 15' RT - STA 14+60.46, 17' RT
MGS GUARDRAIL TERMINAL EAT

STA 13+10.14
STRUCTURE B-54-0137 REQUIRED
TWO-SPAN FLAT CONCRETE SLAB
70'-6 1/2" OVERALL LENGTH
30'-0" CLEAR ROADWAY WIDTH
10° SKEW

VCL = 31.87
K = 36.30

VCL = 58.09
K = 22.43

VPC STA 12+51.67
VPC EL 1222.01

VPI STA 12+67.60
VPI EL 1222.01

VPT STA 12+83.54
VPT EL 1222.14

VPC STA 13+26.43
VPC EL 1222.50

VPI STA 13+55.47
VPI EL 1222.75

STA 13+86.22
EL 1223.80

-0.04%

0.84%

3.43%

STA 12+33.79
EL 1222.02

VPT STA 13+84.52
VPT EL 1223.75

PROPOSED LEFT DITCH

1217.72

1217.68

1217.12

1217.07

1218.01

PROPOSED RIGHT DITCH

HIGH WATER 100
EL. 1219.76

OBSERVED WATER LEVEL
EL. 1213.51 (7/10/2019)

STREAM BED
EL. 1211.47

EXISTING ELEVATION

PROPOSED ELEVATION

STA 13+10.14
REMOVE STRUCTURE P-54-0032
SINGLE SPAN STEEL GIRDER BRIDGE
52'-8" OVERALL LENGTH
24'-0" CLEAR ROADWAY WIDTH
0° SKEW

1235
1230
1225
1220
1215
1210
1207

1222.74 | 1222.50 | 1222.28 | 1222.06 | 1222.02 | 1222.02 | 1212.08 | 1222.28 | 1222.85 | 1222.83 | 1224.30 | 1226.47 | 1229.21 | 1232.31 | 1235.50

10 11 12 13 14 15 16

PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	PLAN AND PROFILE:	SHEET 13	E

FILE NAME : C:\ONEDRIVE\AECOM DIRECTORY\NEMEC, ELIZABETH - 60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0501_PP.DWG
LAYOUT NAME - 050101_pp

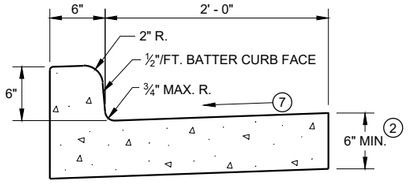
PLOT DATE : 10/30/2020 9:41 AM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44

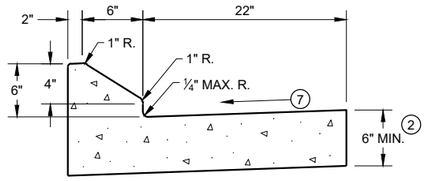
Standard Detail Drawing List

08D01-21A	CONCRETE CURB & GUTTER
08D02-07A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

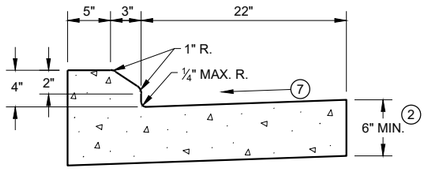
6



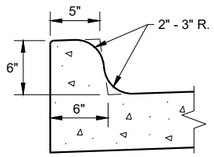
TYPES A[1] & D



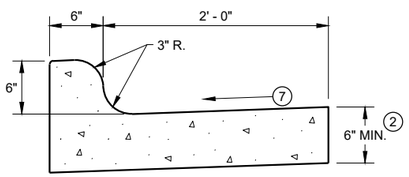
6" SLOPED CURB TYPES G[1] & J



4" SLOPED CURB TYPES G[1] & J

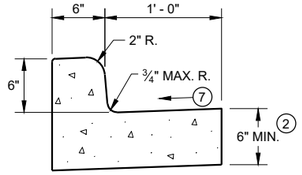


TYPES K[1] & L
(OPTIONAL CURB SHAPE)



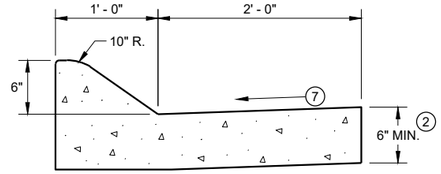
TYPES K[1] & L

CONCRETE CURB AND GUTTER 30"

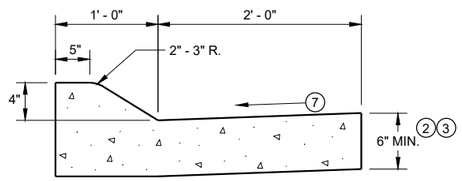


TYPES A[1] & D

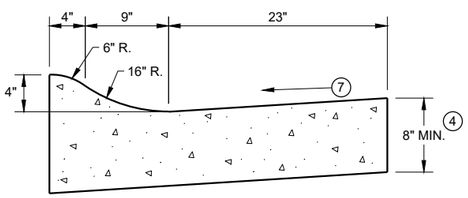
CONCRETE CURB AND GUTTER 18"



6" SLOPED CURB TYPES A[1] & D



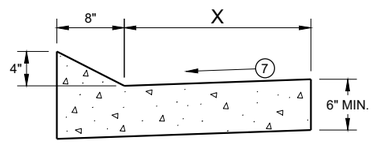
4" SLOPED CURB TYPES A[1] & D



4" SLOPED CURB TYPES R[1] & T[5]

CONCRETE CURB AND GUTTER 36"

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

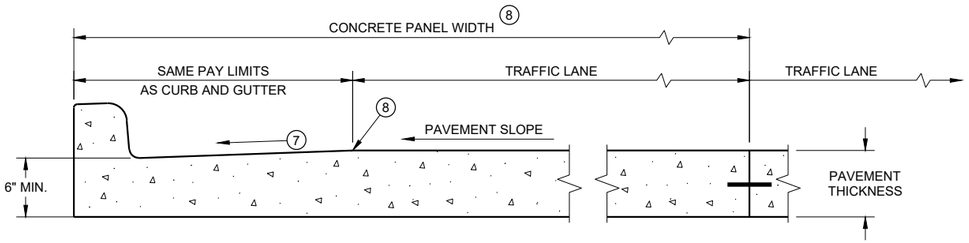


TYPES TBT & TBTT[1]

CONCRETE CURB AND GUTTER

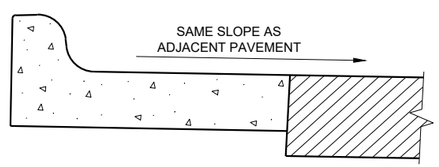
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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. 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.

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 08D01 - 21a

GENERAL NOTES

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

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

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

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

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

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

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

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

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

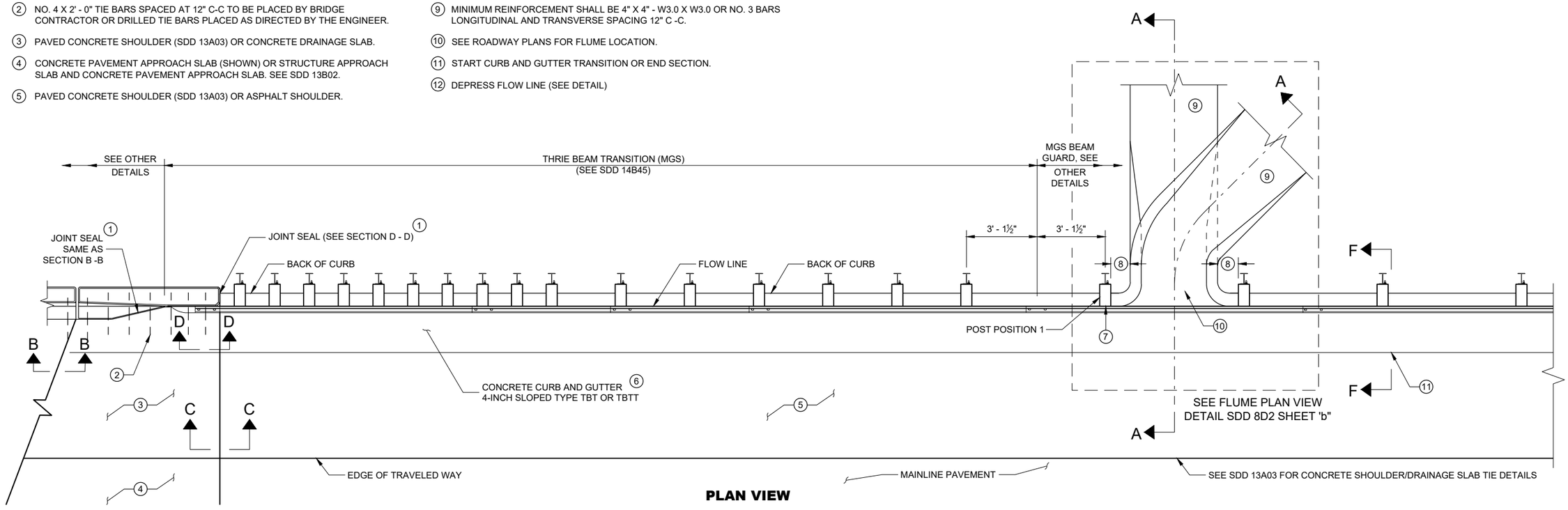
(8) CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.

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

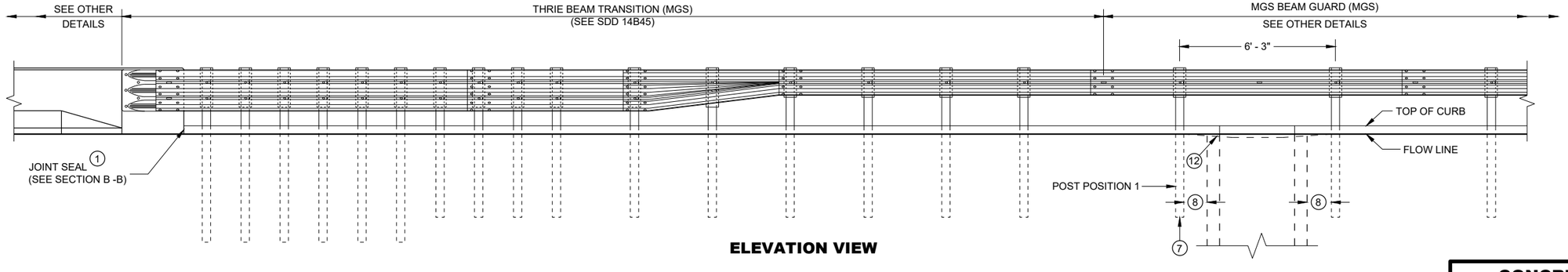
(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)



PLAN VIEW



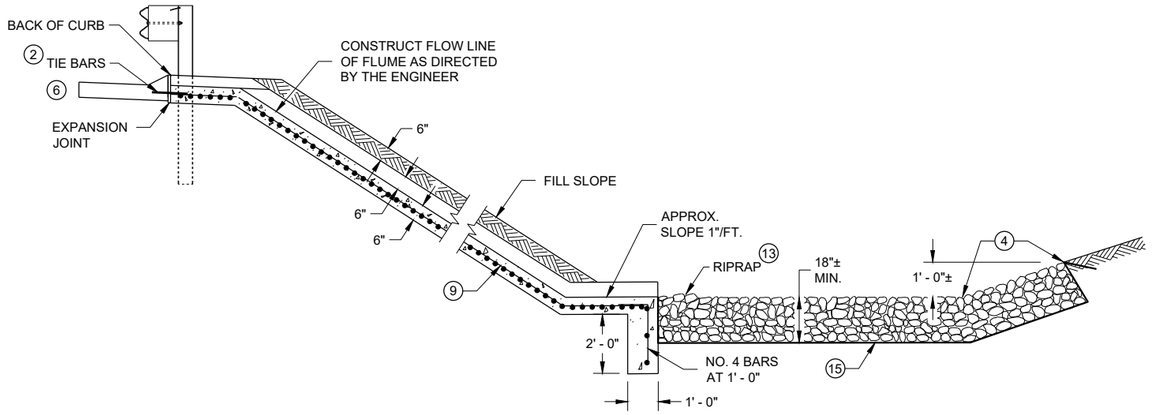
ELEVATION VIEW

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

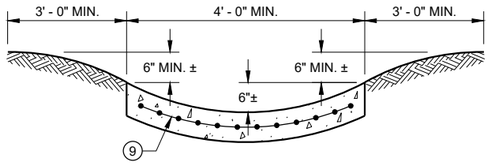
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D02 - 07a

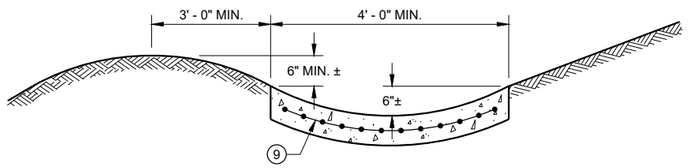
SDD 08D02 - 07a



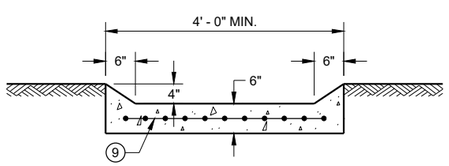
SECTION A - A



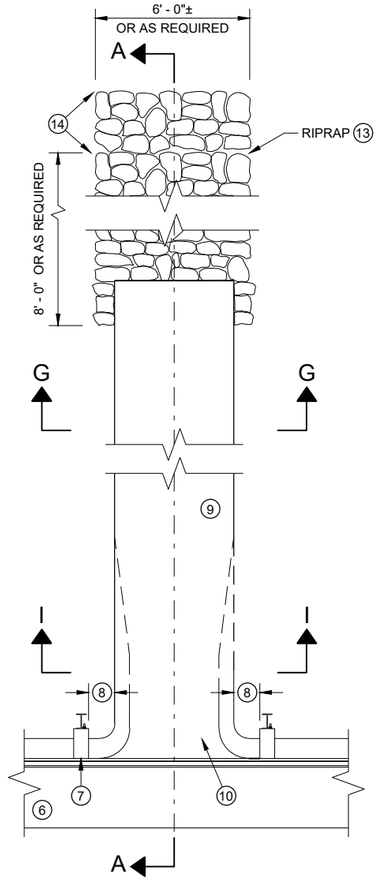
SECTION G - G



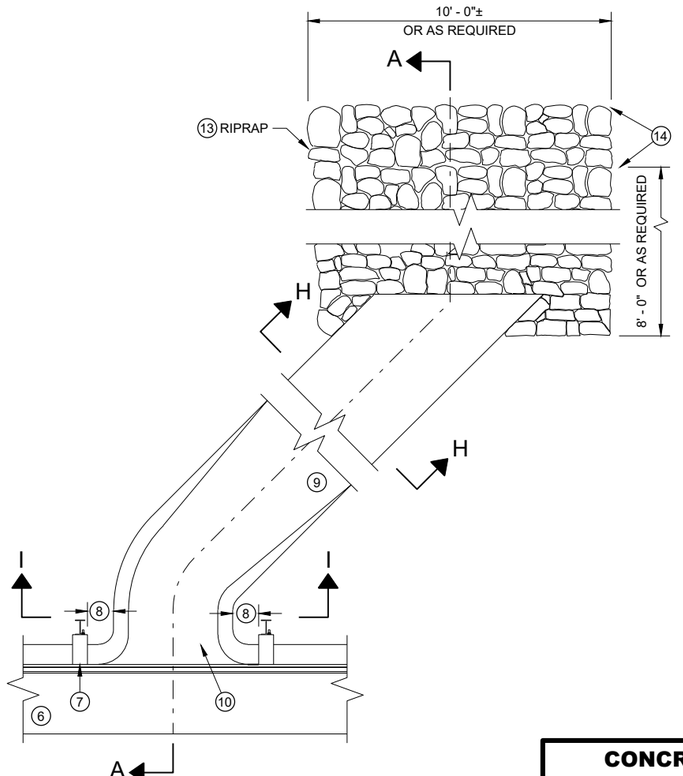
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(15) GEOTEXTILE FABRIC TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

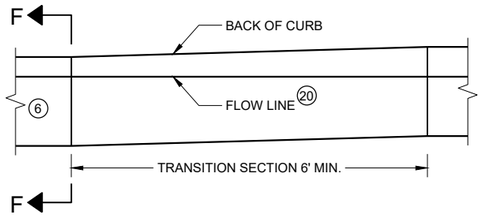
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

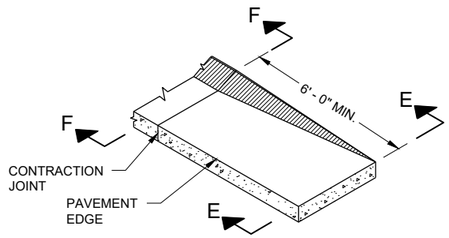
SDD 08D02 - 07b

6

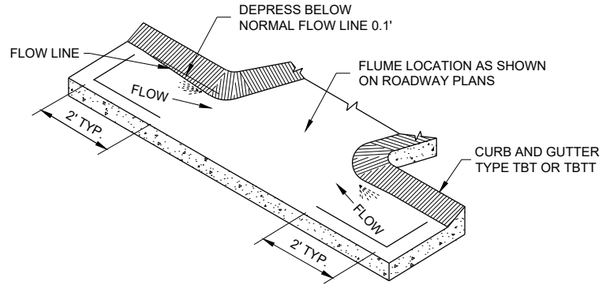
SDD 08D02 - 07b



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

(10) SEE ROADWAY PLANS FOR FLUME LOCATION.

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

(12) DEPRESS FLOW LINE (SEE DETAIL)

(13) MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.

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

(15) GEOTEXTILE FABRIC TYPE HR.

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

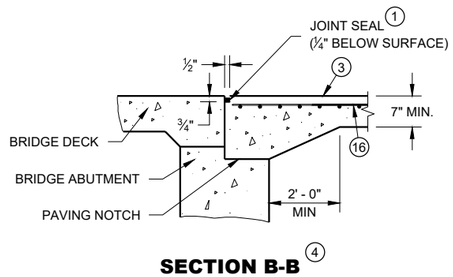
(17) MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.

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

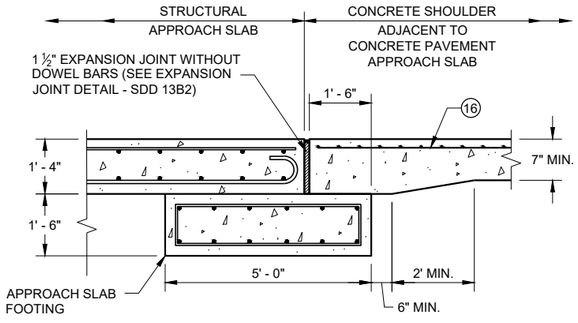
(19) ALIGN FACE OF POST BLOCK WITH FLOW LINE.

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

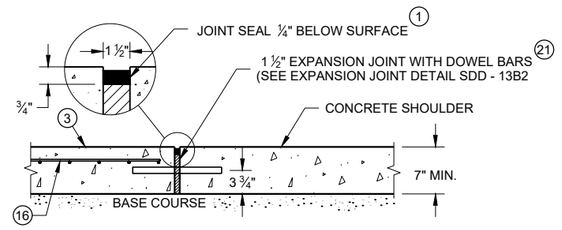
(21) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



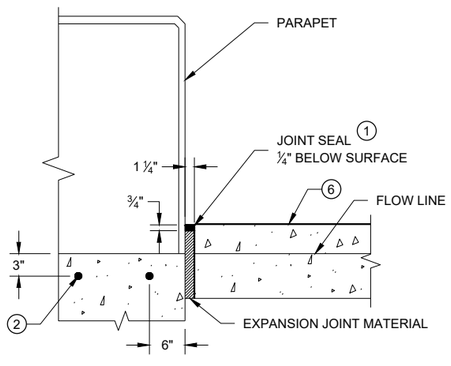
SECTION B-B (4)



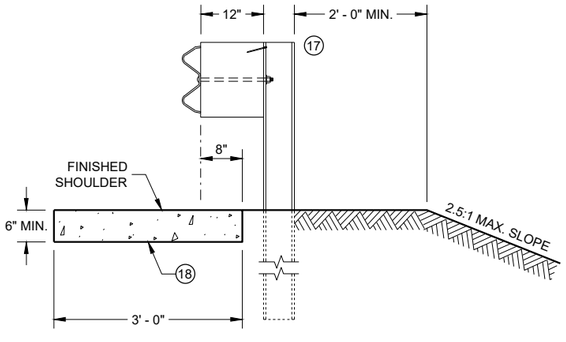
SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL APPROACH SLAB AND CONCRETE APPROACH SLAB



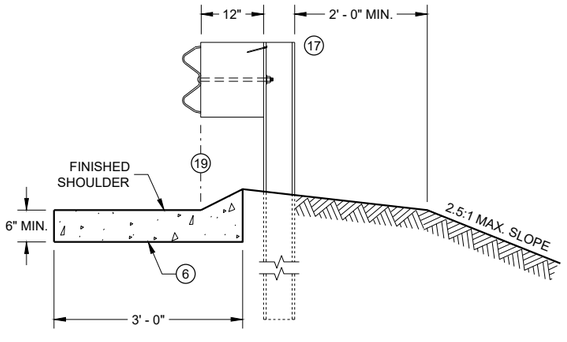
SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH WITH CONCRETE SHOULDERS



SECTION D - D



SECTION E - E



SECTION F - F

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

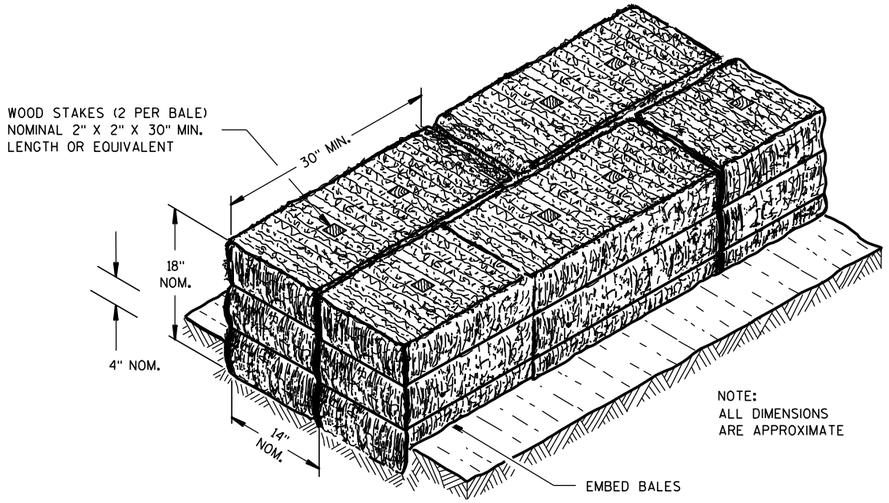
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

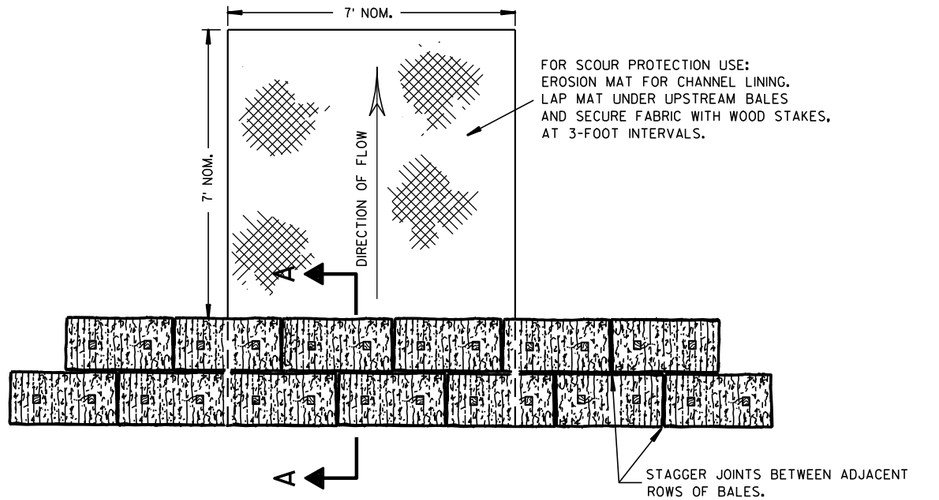
FHWA

SDD 08D02 - 07c

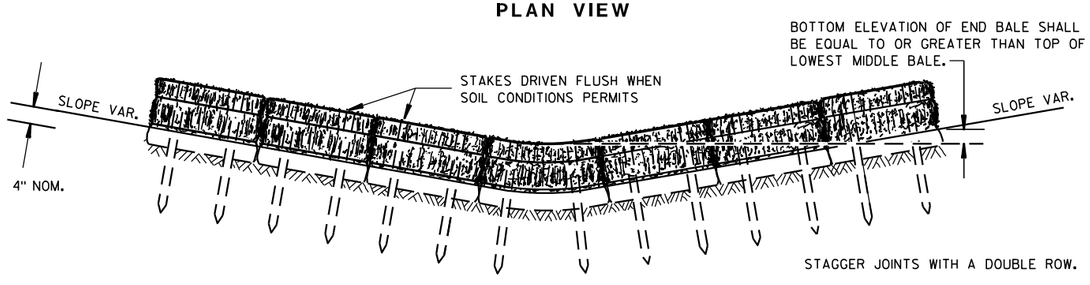
SDD 08D02 - 07c



SECTION A-A



PLAN VIEW



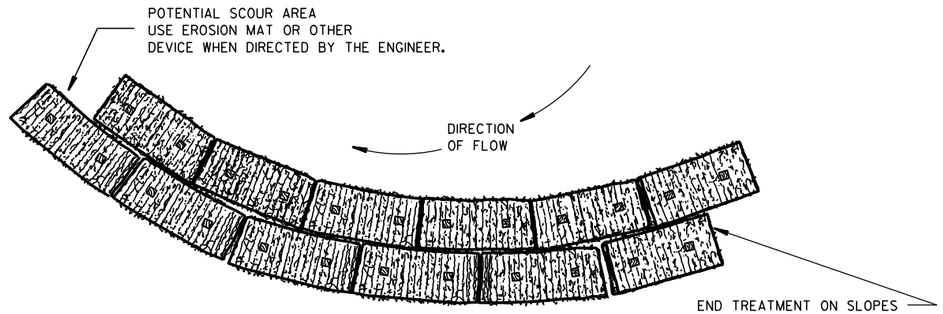
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

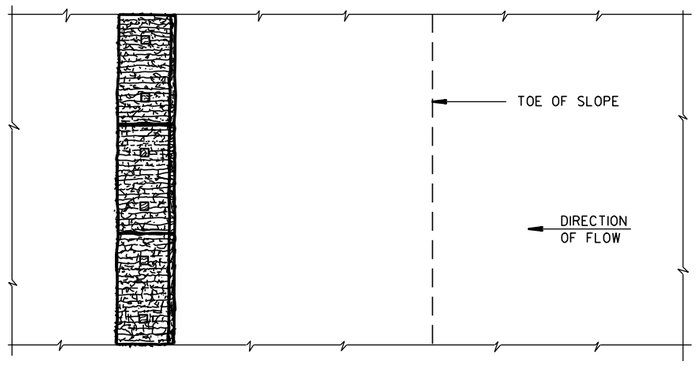
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

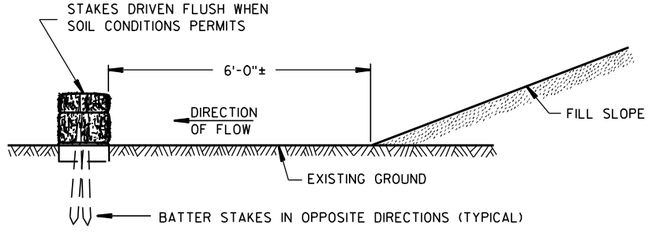


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

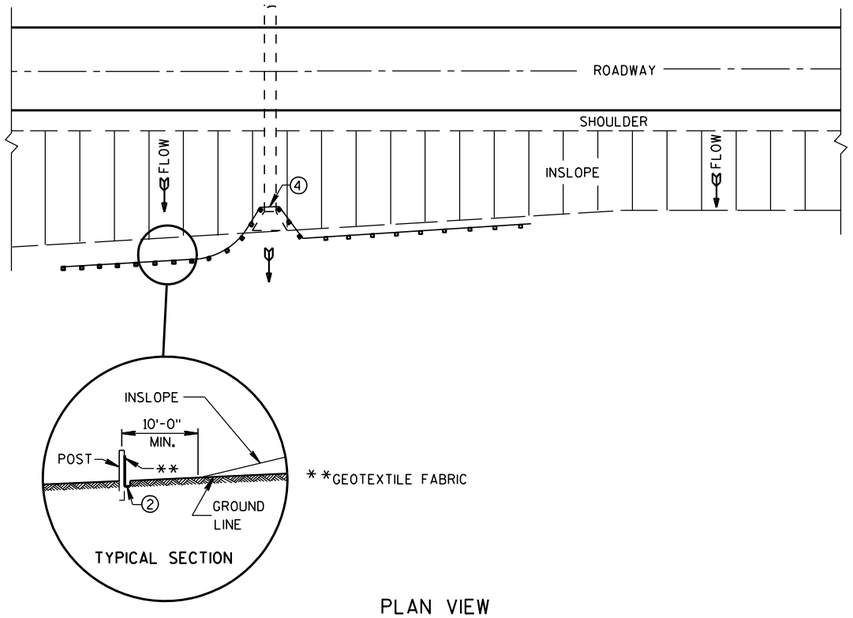
APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

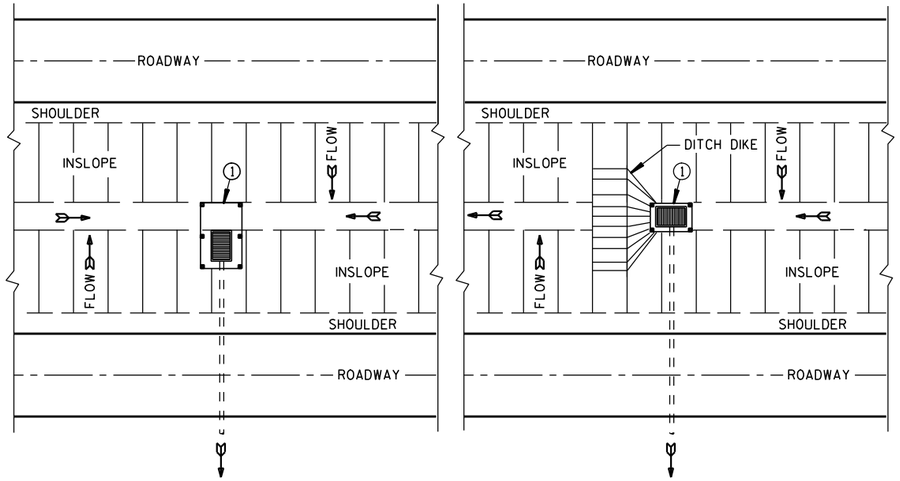
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



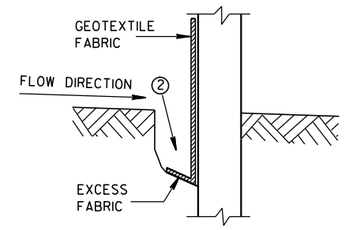
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

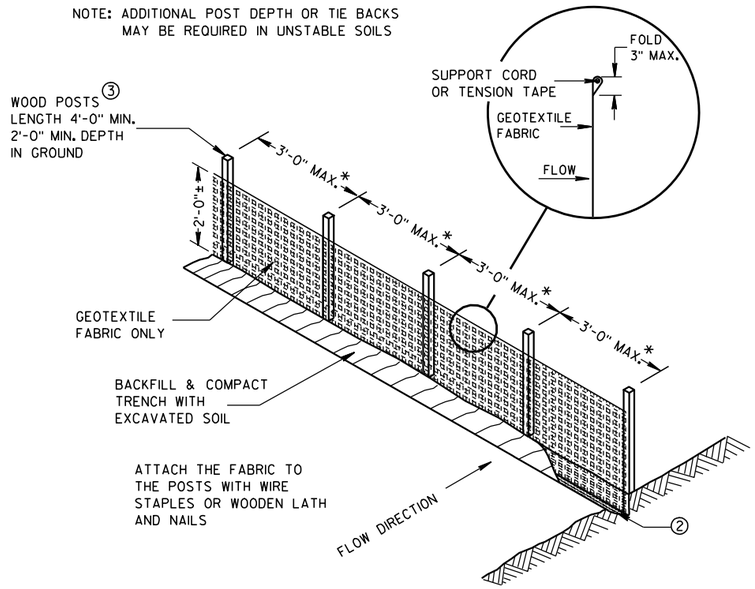
GENERAL NOTES

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

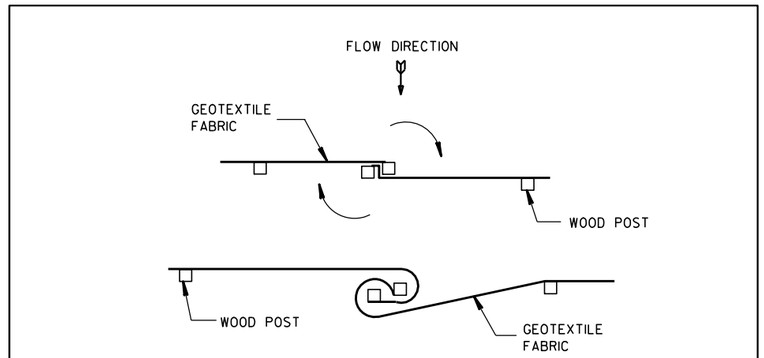
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



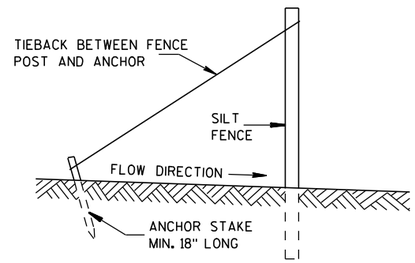
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

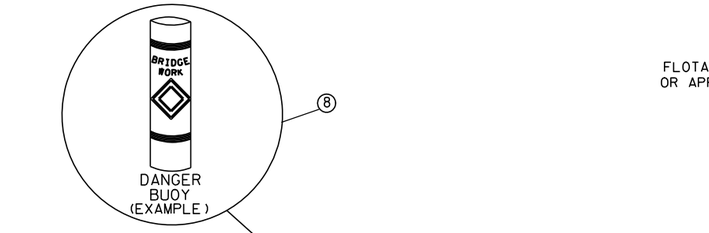
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

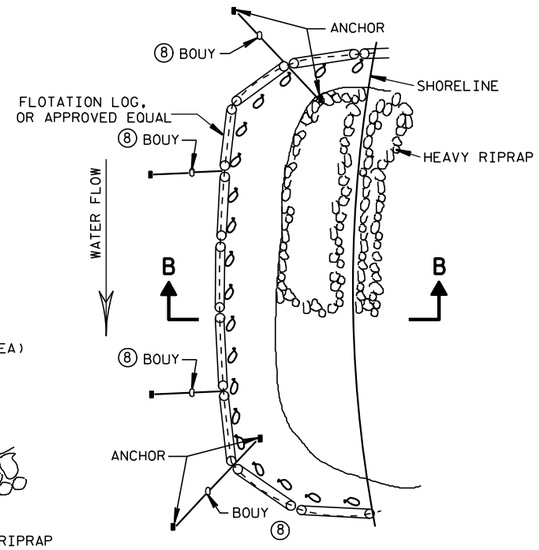
S.D.D. 8 E 9-6

6

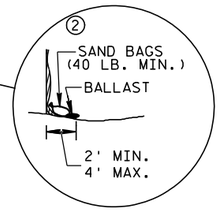
S.D.D. 8 E 9-6

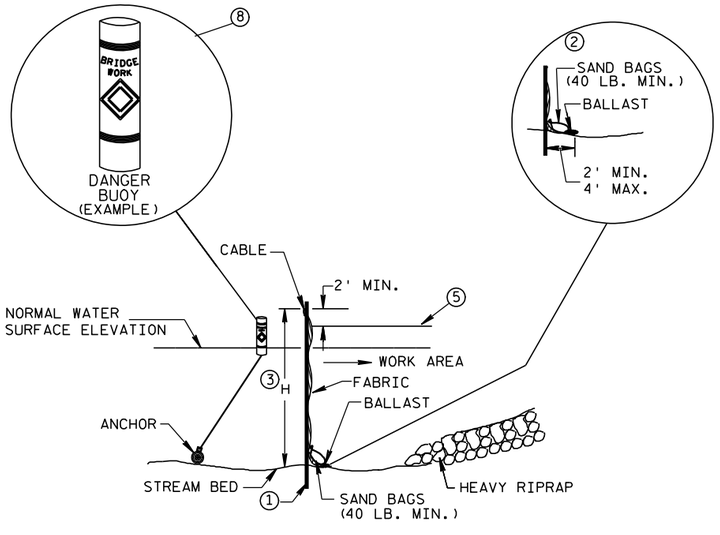


SECTION B-B

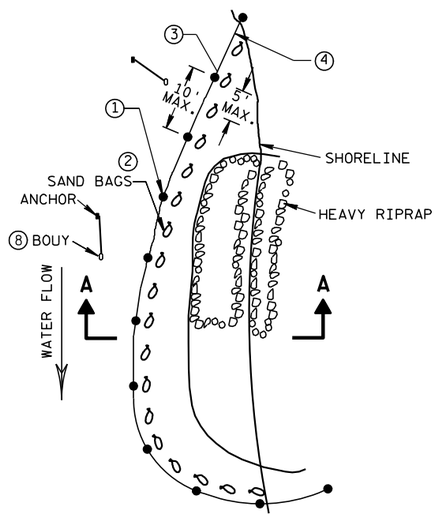


TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6





SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

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 SANDBAGS 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 FT., POST SPACING MAY NEED TO BE DECREASED.

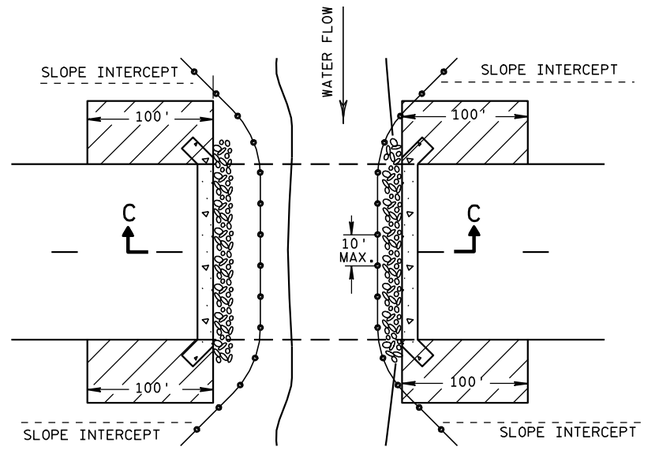
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

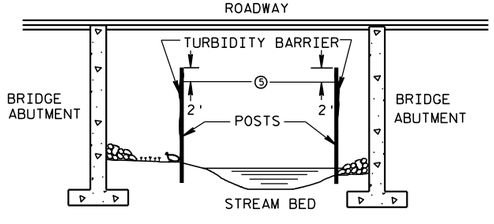
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

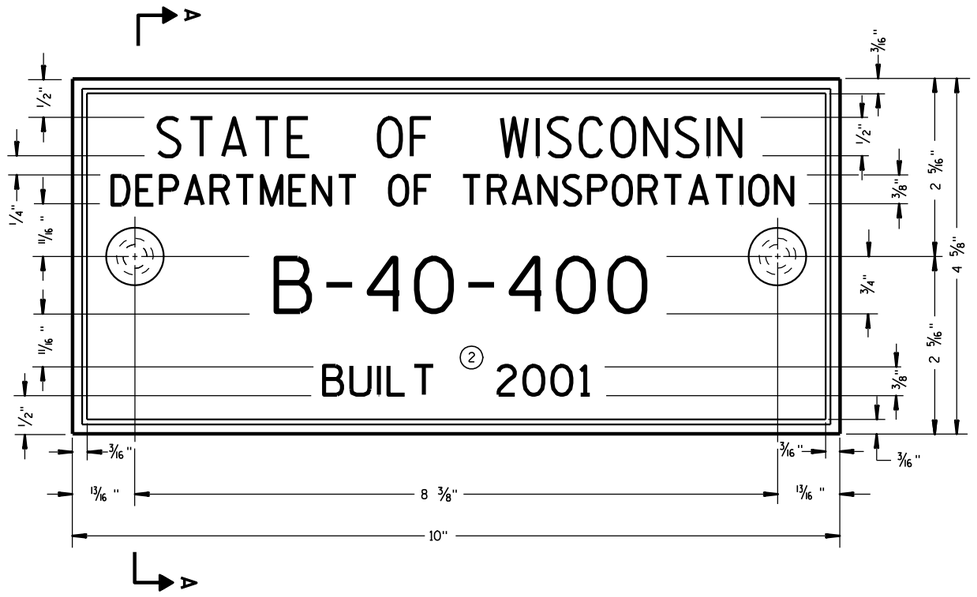
TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

TURBIDITY BARRIER PLACEMENT DETAILS



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)

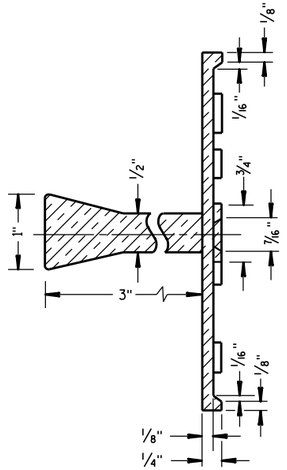
GENERAL NOTES

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

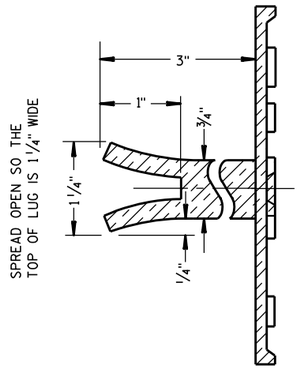
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

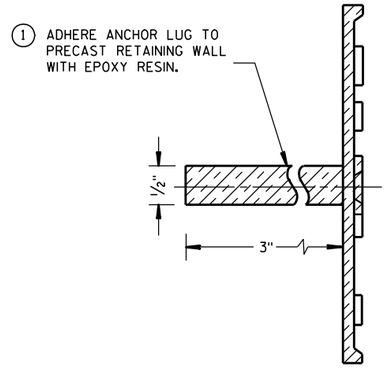
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION MULTI-UNIT STRUCTURES



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

6

S.D.D. 12 A 3-10

6

S.D.D. 12 A 3-10

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

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

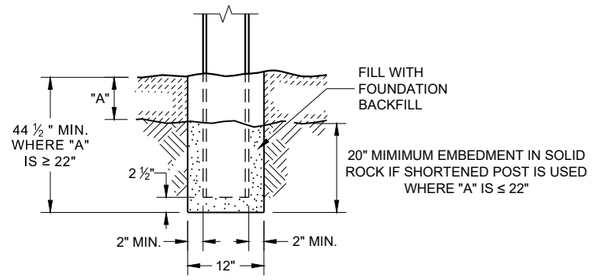
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

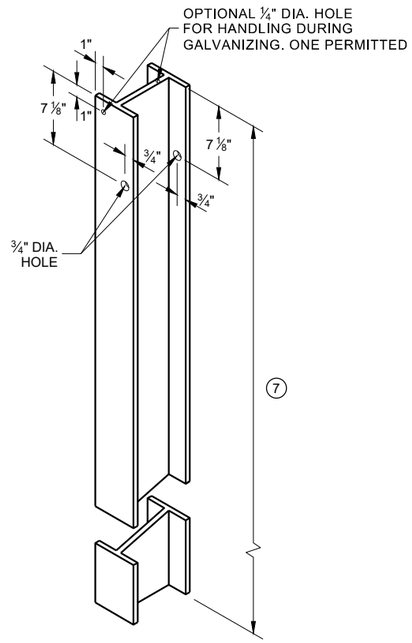
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS +1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

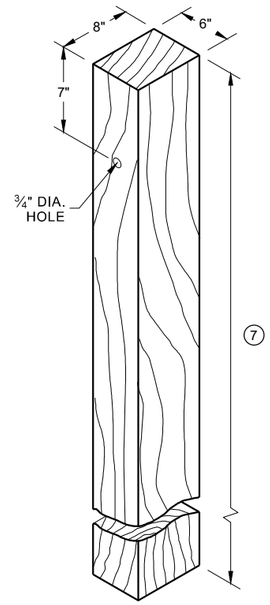
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



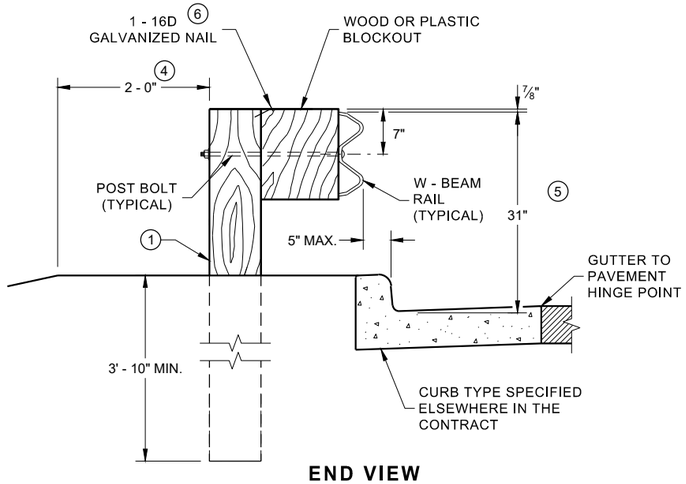
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



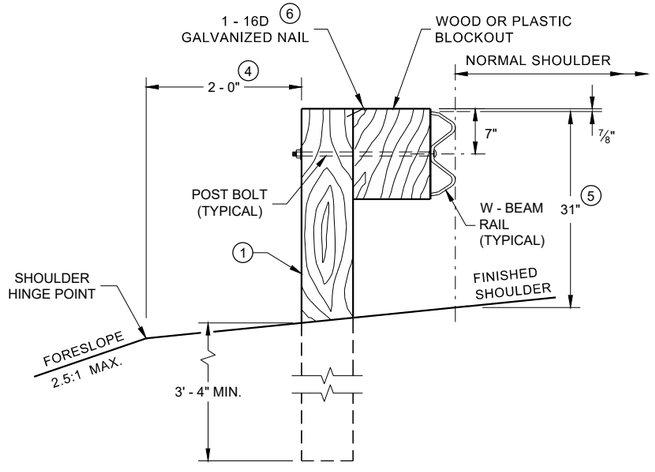
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



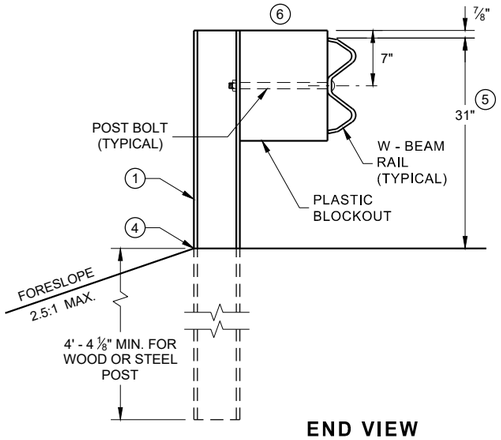
WOOD POST (6" X 8") NOMINAL (1)



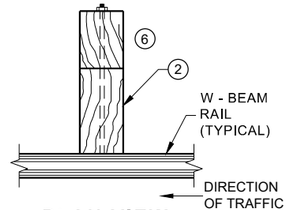
END VIEW
LOCATED ALONG A CURBED ROADWAY



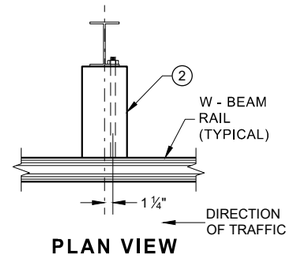
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



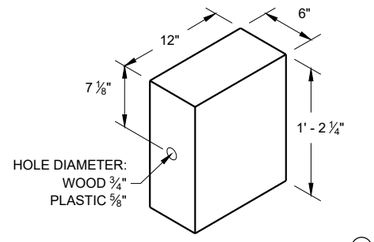
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM

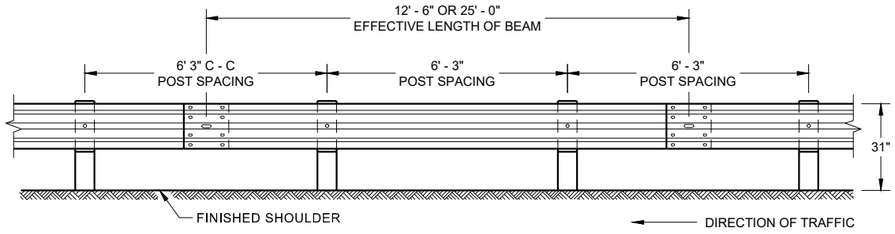


WOOD OR PLASTIC BLOCKOUT (2)

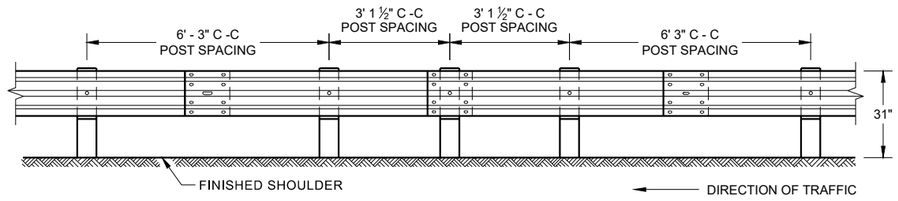
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

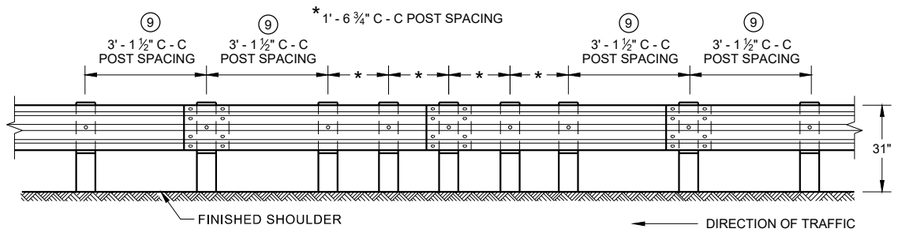
6
SDD 14B42 - 06a



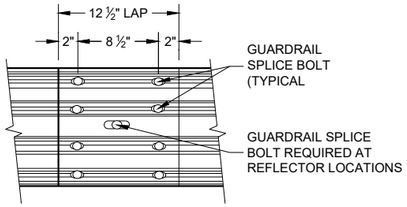
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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

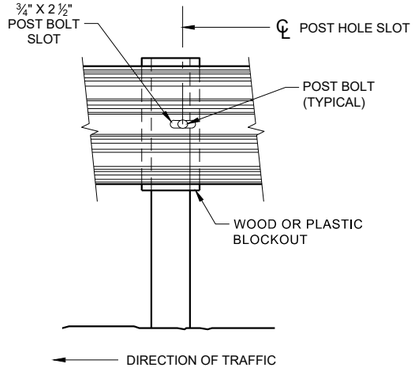
GENERAL NOTES

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

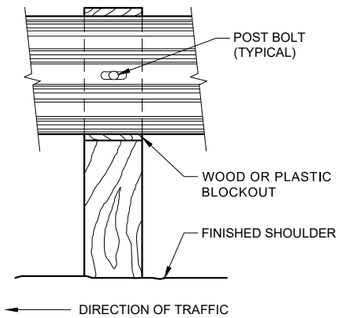
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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.

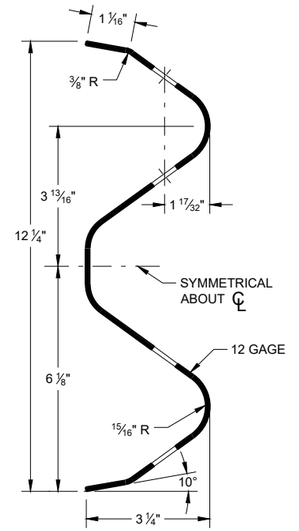
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



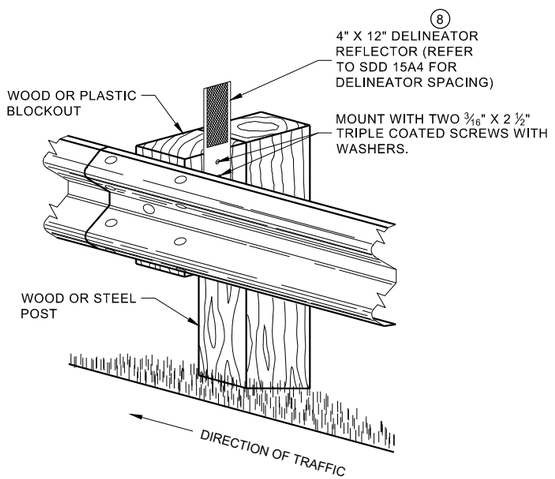
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



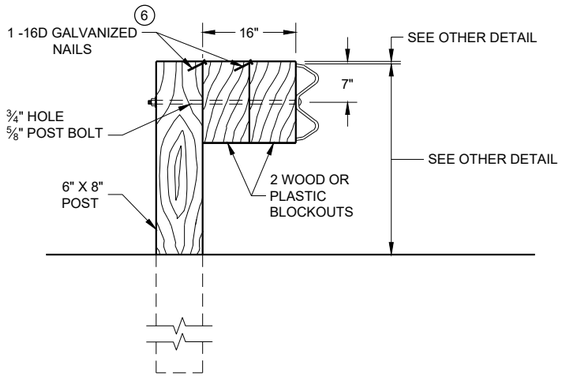
ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

SDD 14B42 - 06b

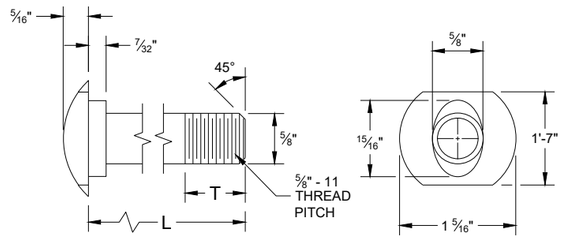


DETAIL FOR 16" BLOCKOUT DEPTH

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.

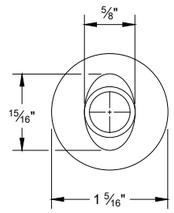
NOTE:

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.

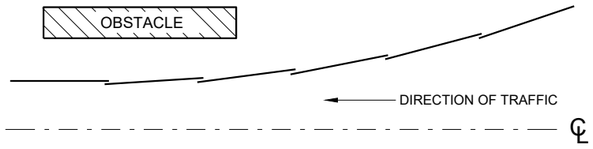


POST BOLT TABLE

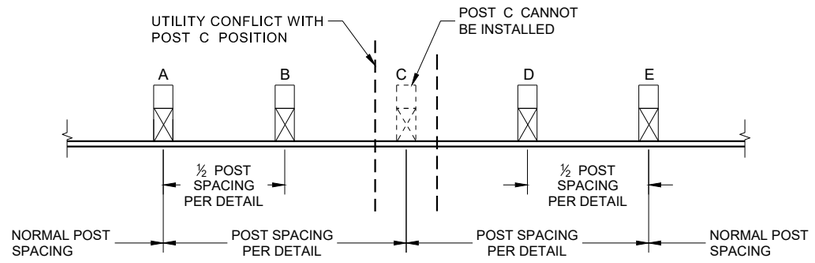
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



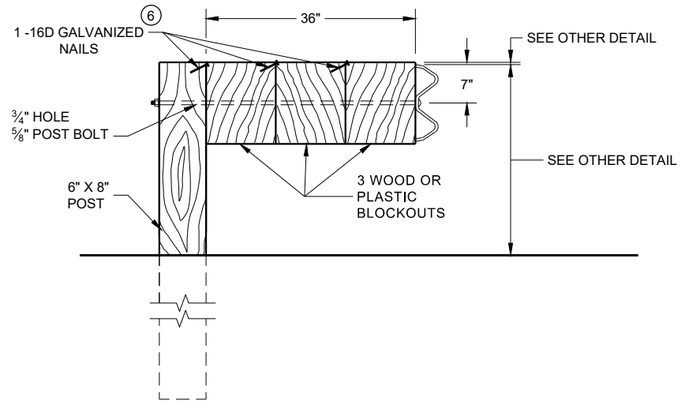
ALTERNATE BOLT HEAD



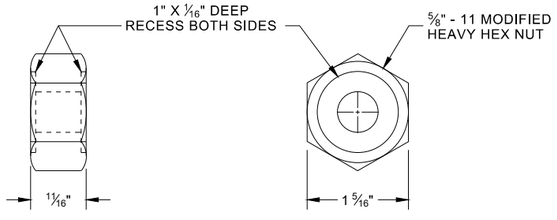
PLAN VIEW
BEAM LAPPING DETAIL



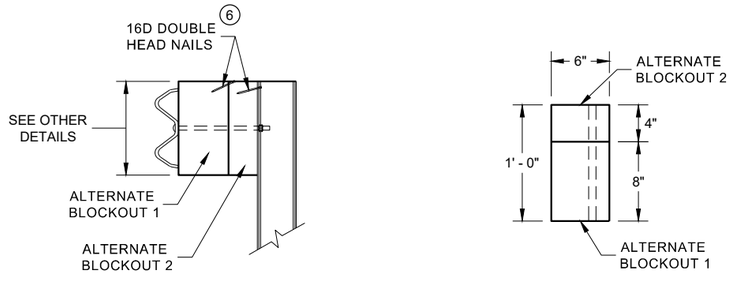
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



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.

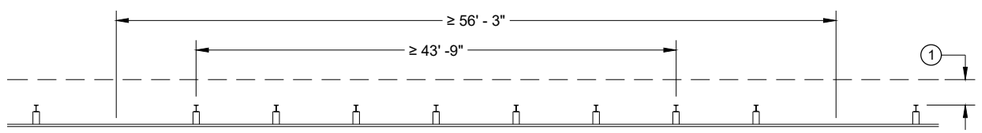
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

(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.

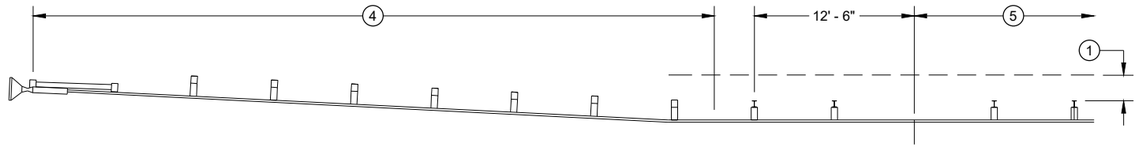
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

6

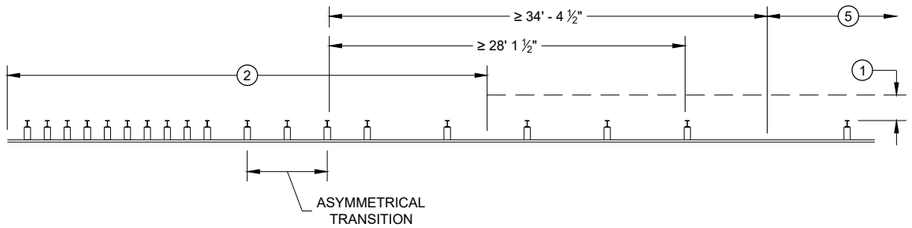
SDD 14B42 - 06c



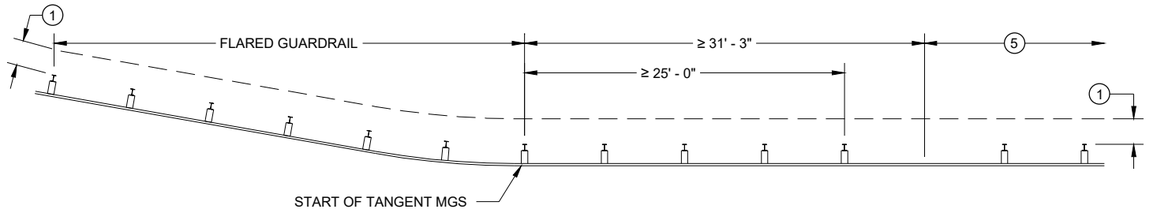
MISSING POST IN NORMAL BEAM GUARD RUN



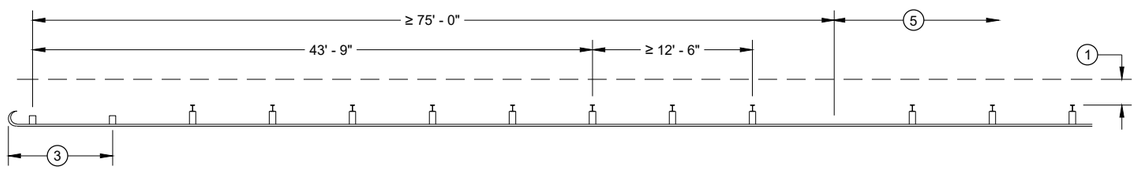
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



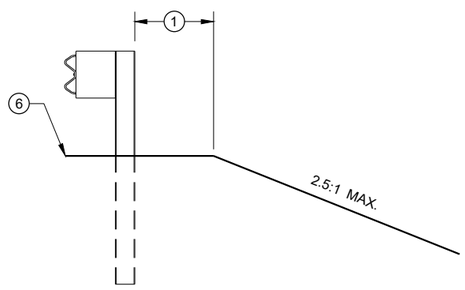
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

1. MINIMUM OF 2 FEET OF GRADING BEHIND POST.
2. SEE SDD 14B45 FOR MORE DETAILS.
3. SEE SDD 14B47 FOR MORE DETAILS.
4. SEE SDD 14B44 FOR MORE DETAILS.
5. SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
6. SEE PLAN FOR SHOULDER DESIGN.

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

SDD 14B42 - 06d

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.

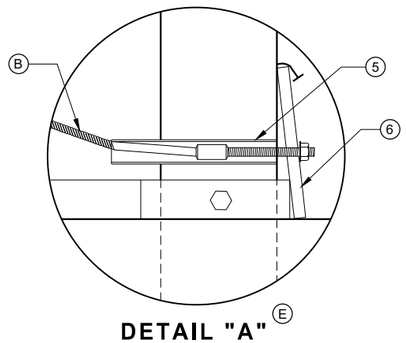
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

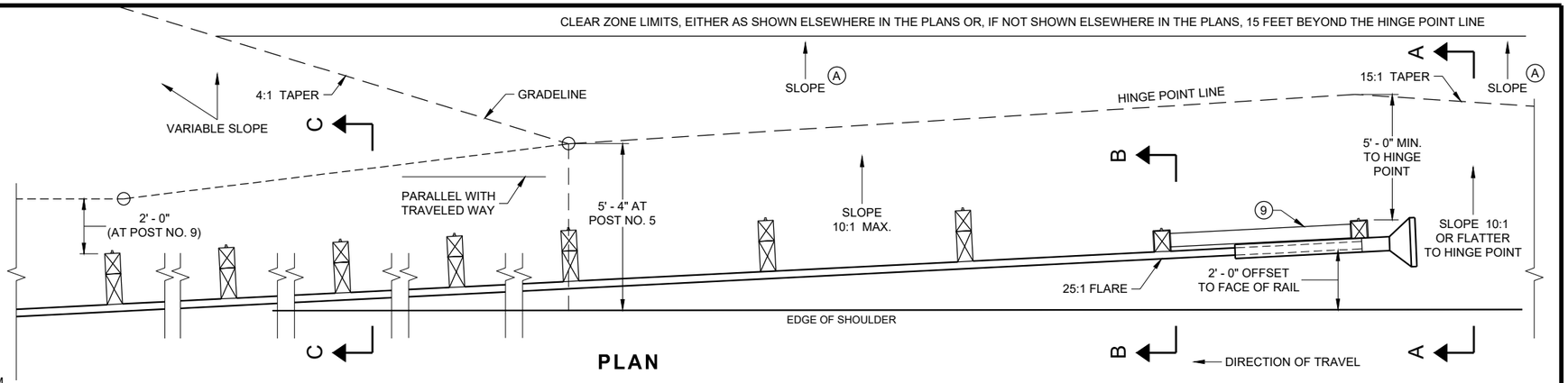
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

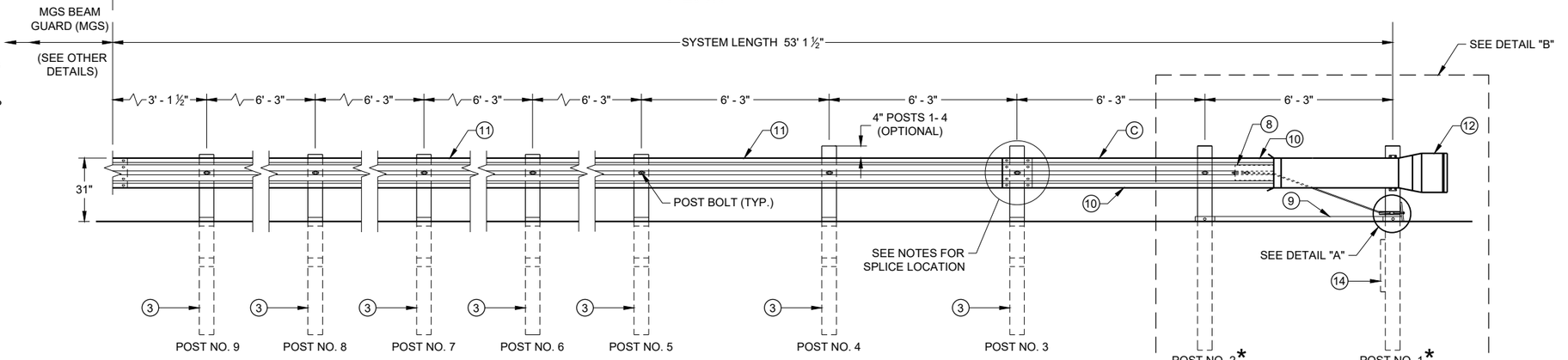
THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



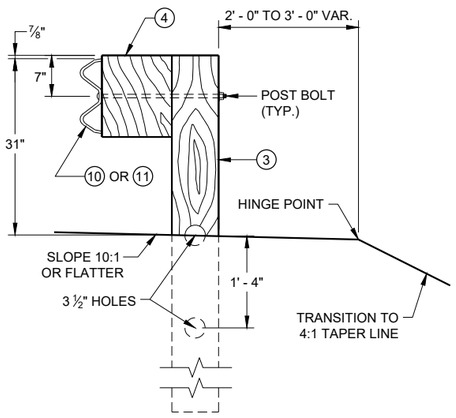
DETAIL "A" (E)



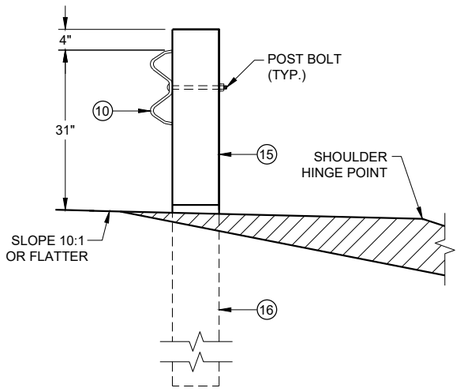
PLAN



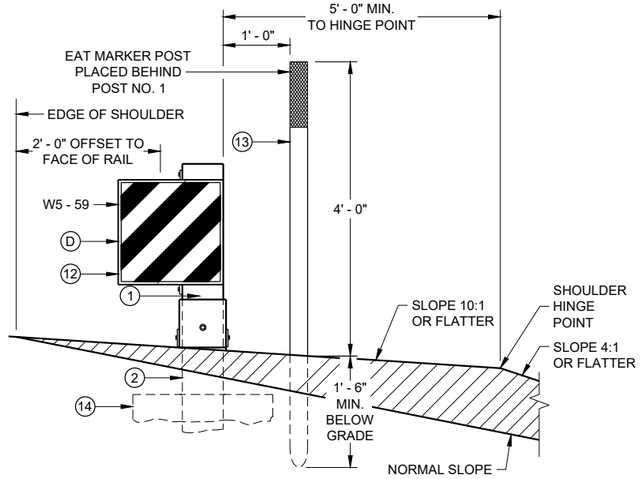
ELEVATION



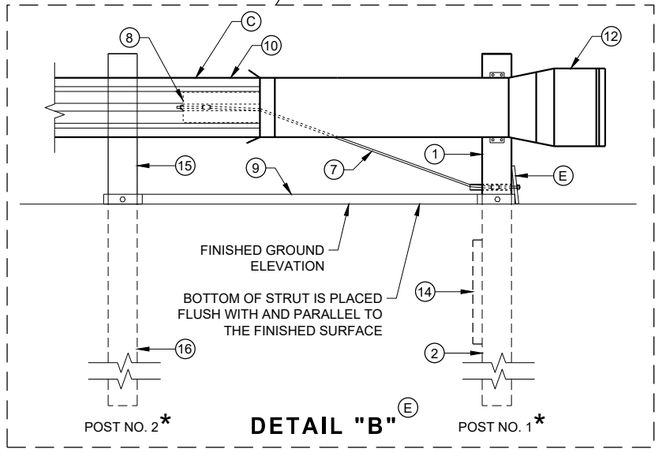
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



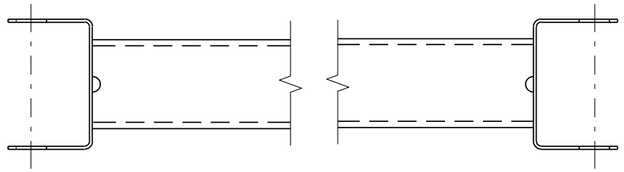
DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

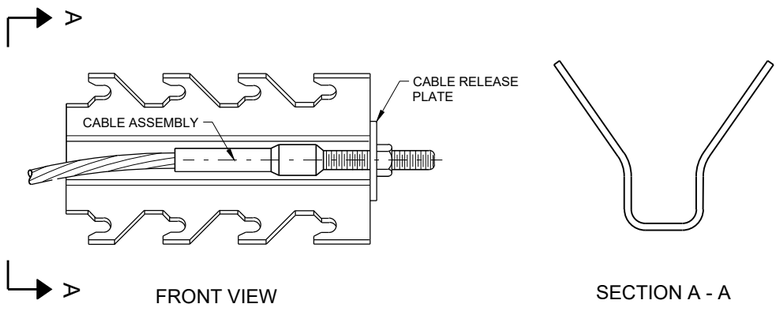
SDD 14B44 - 04a



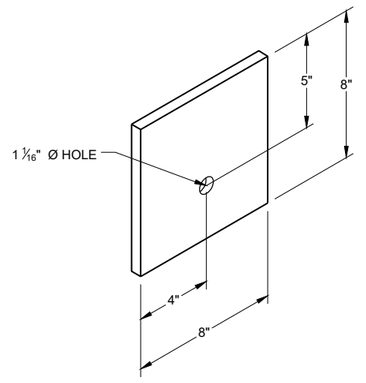
GENERIC GROUND STRUT ⑨ Ⓔ

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 ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

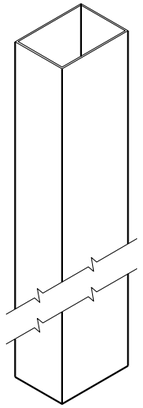
6

SDD 14B44 - 04b

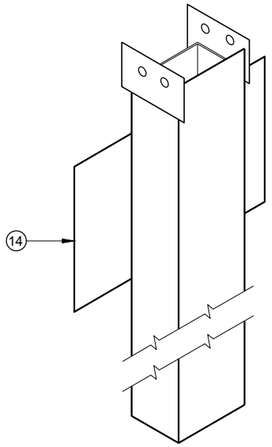
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

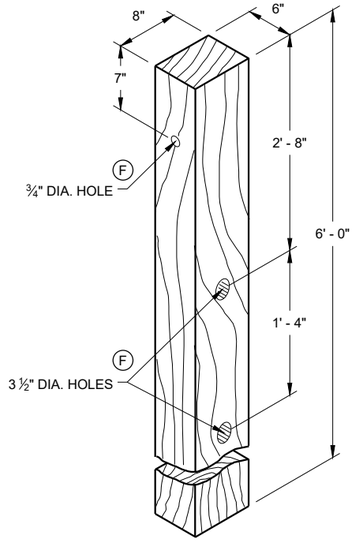
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



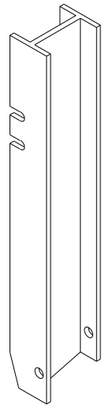
UPPER POST NO. 1 (1) (E)



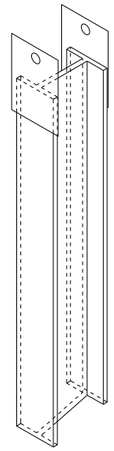
LOWER POST NO. 1 (2) (E)



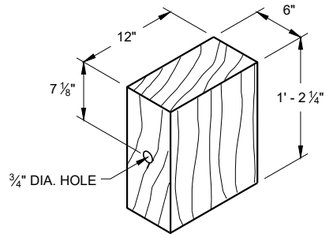
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



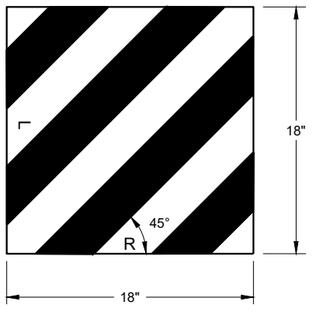
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

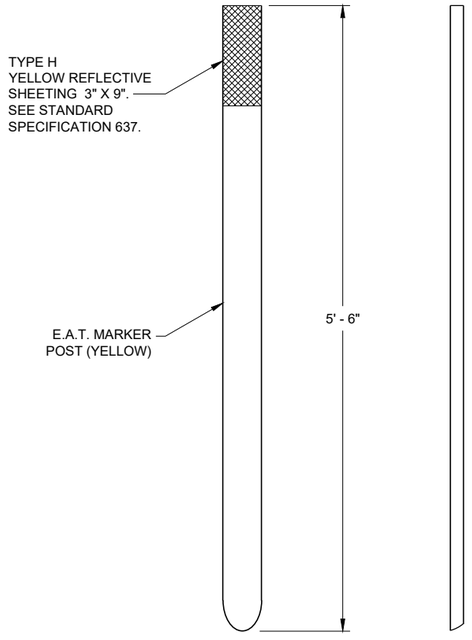


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



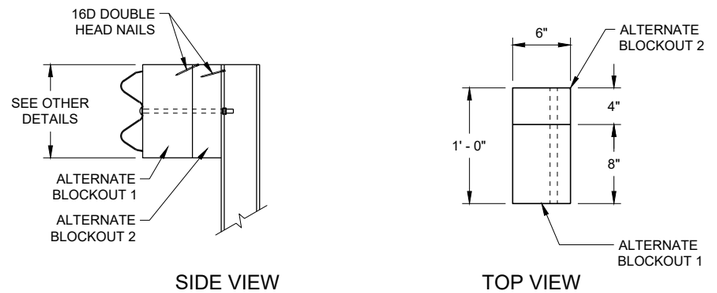
W5 - 59

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)

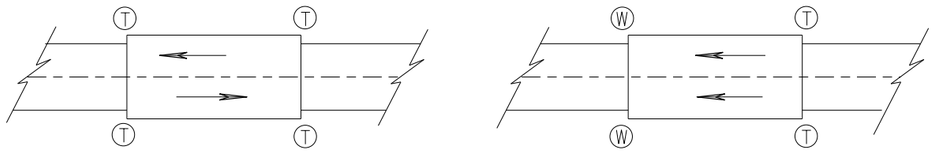
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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.

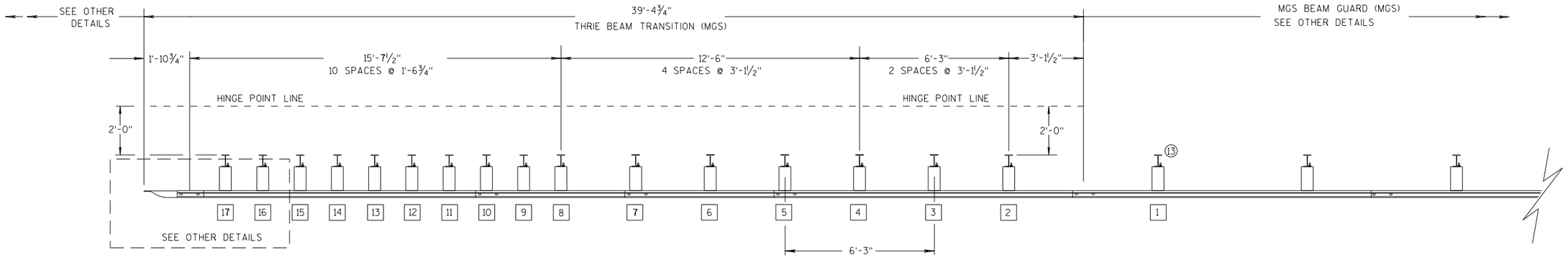
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

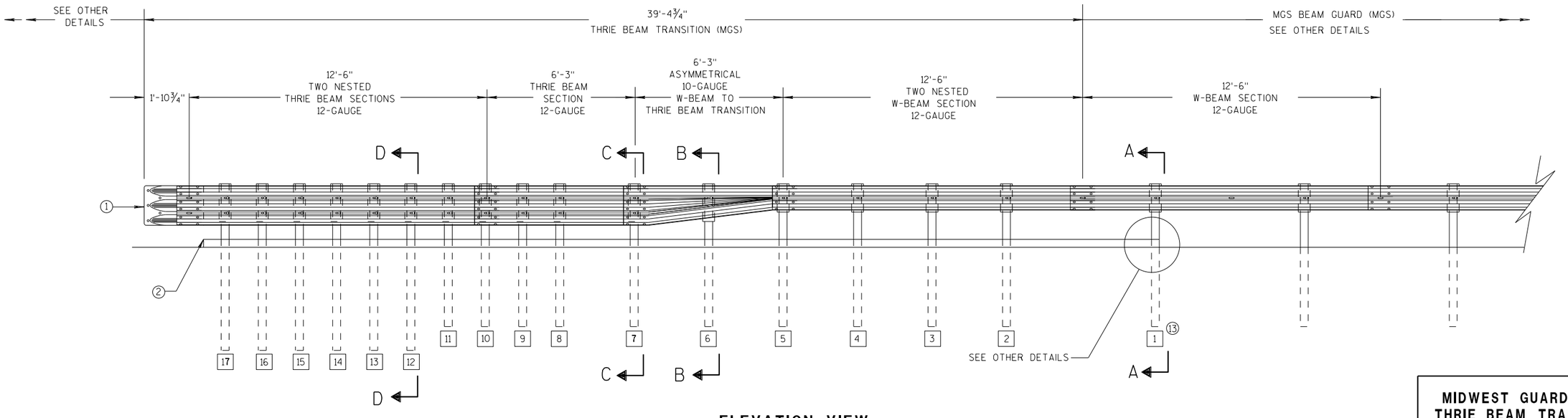
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

(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

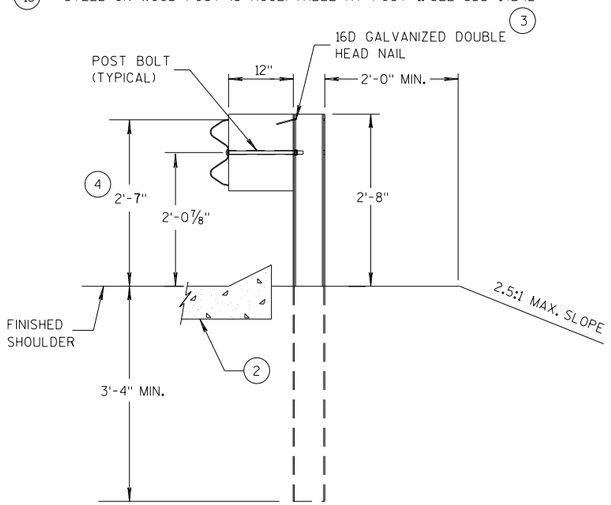
GENERAL NOTES

(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.

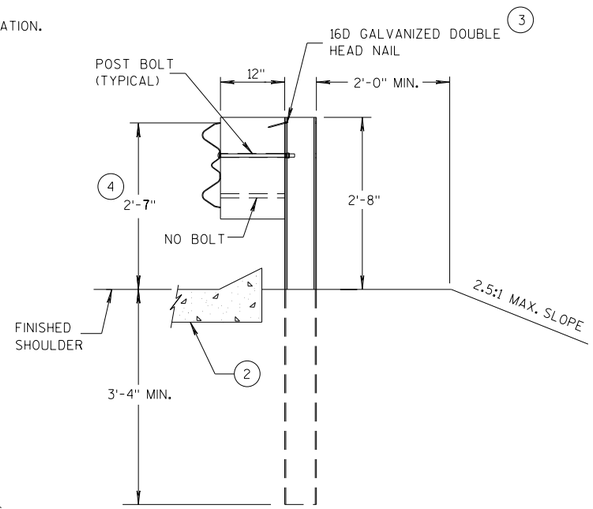
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



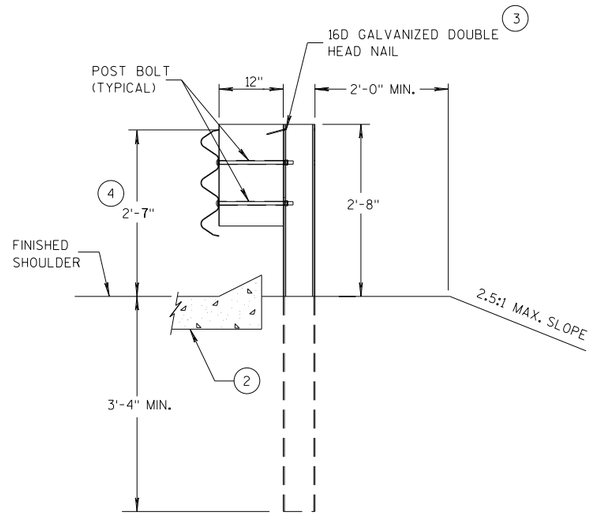
SECTION A-A (13)

POSTS 1-5



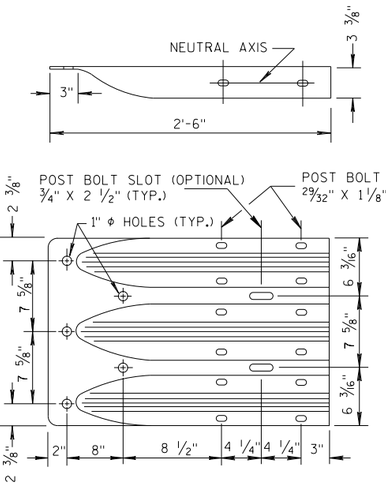
SECTION B-B

POST 6

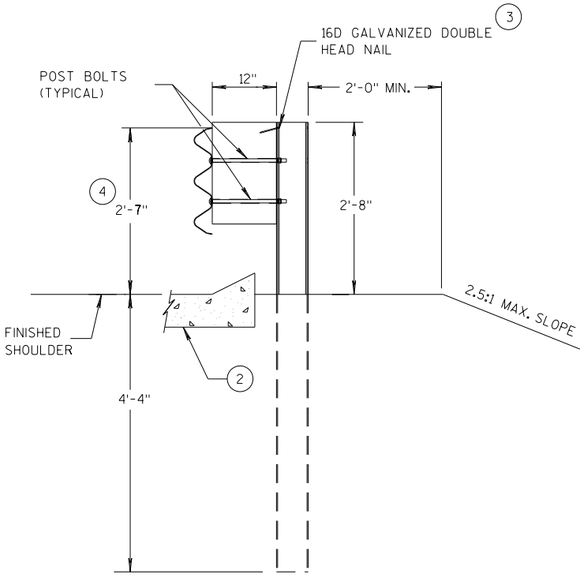


SECTION C-C

POSTS 7-11

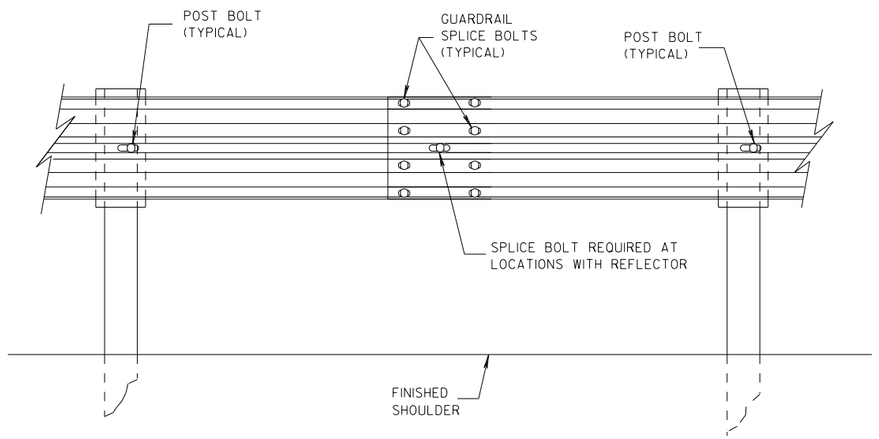


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

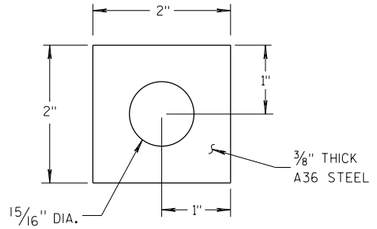
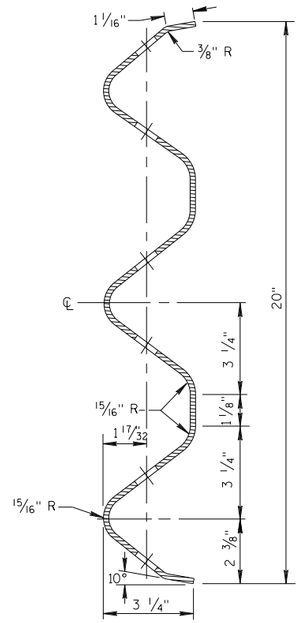


PLATE WASHER DETAIL



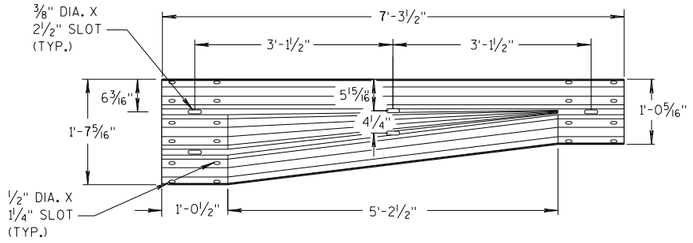
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

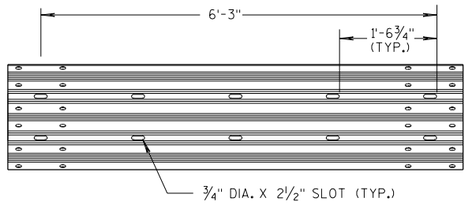
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOF

6

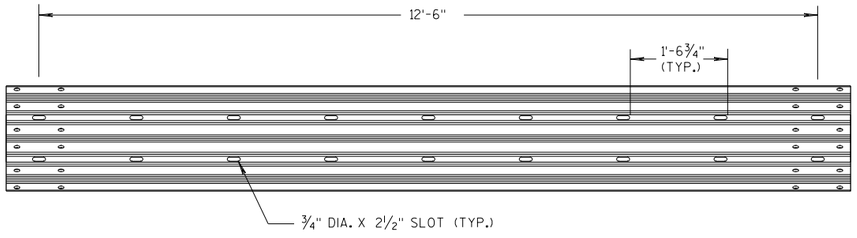
S.D.D. 14 B 45-5b



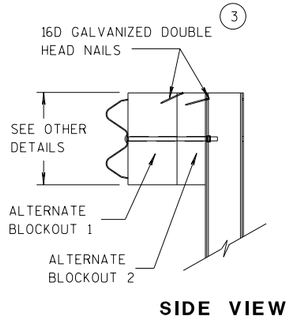
W-BEAM TO THRIE BEAM TRANSITION SECTION



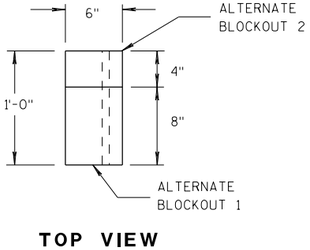
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

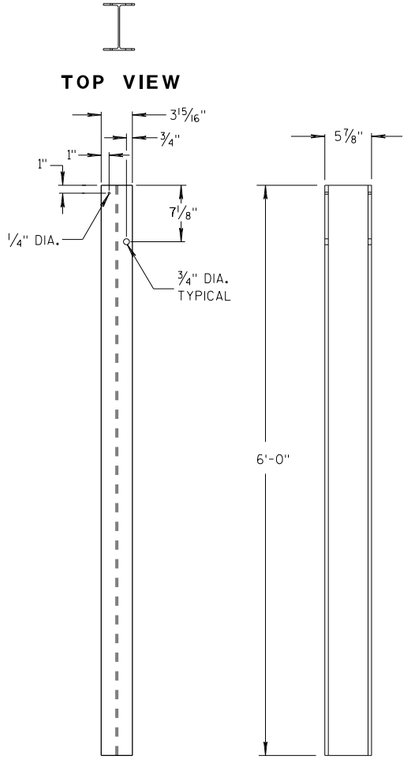


SIDE VIEW



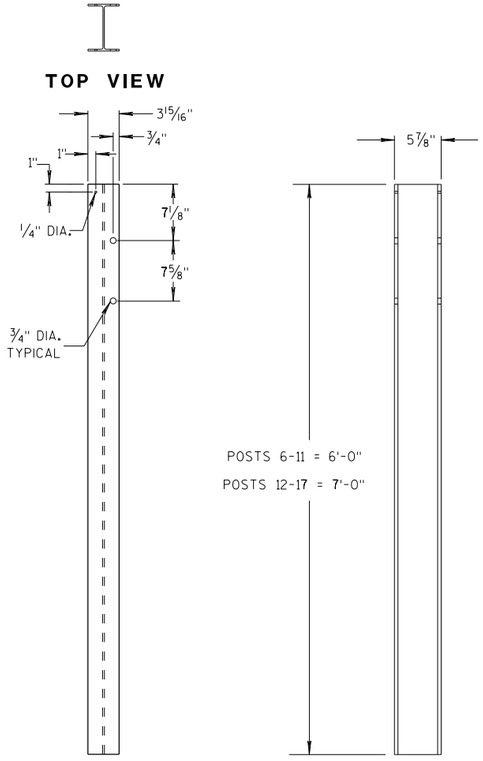
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



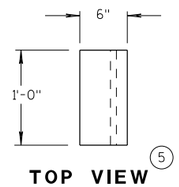
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

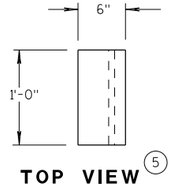


FRONT VIEW SIDE VIEW

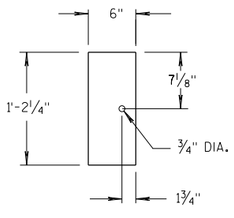
STEEL POSTS 6-17



TOP VIEW (5)

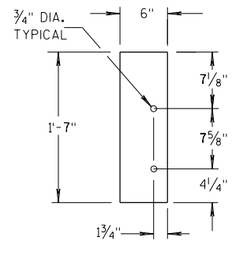


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

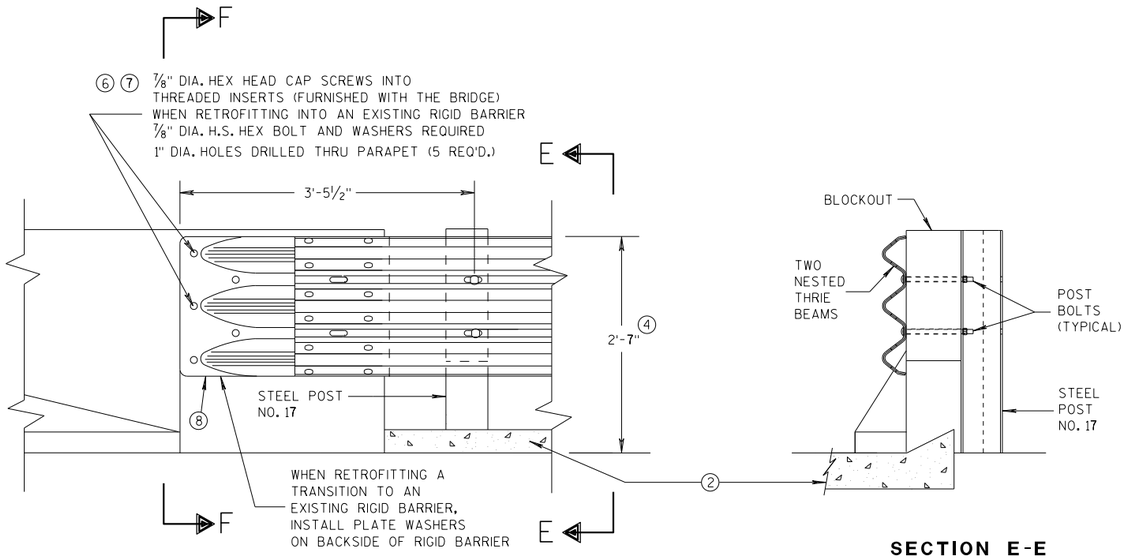
(13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

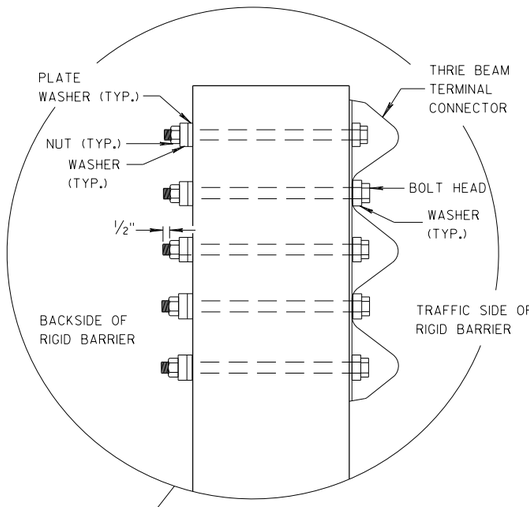
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

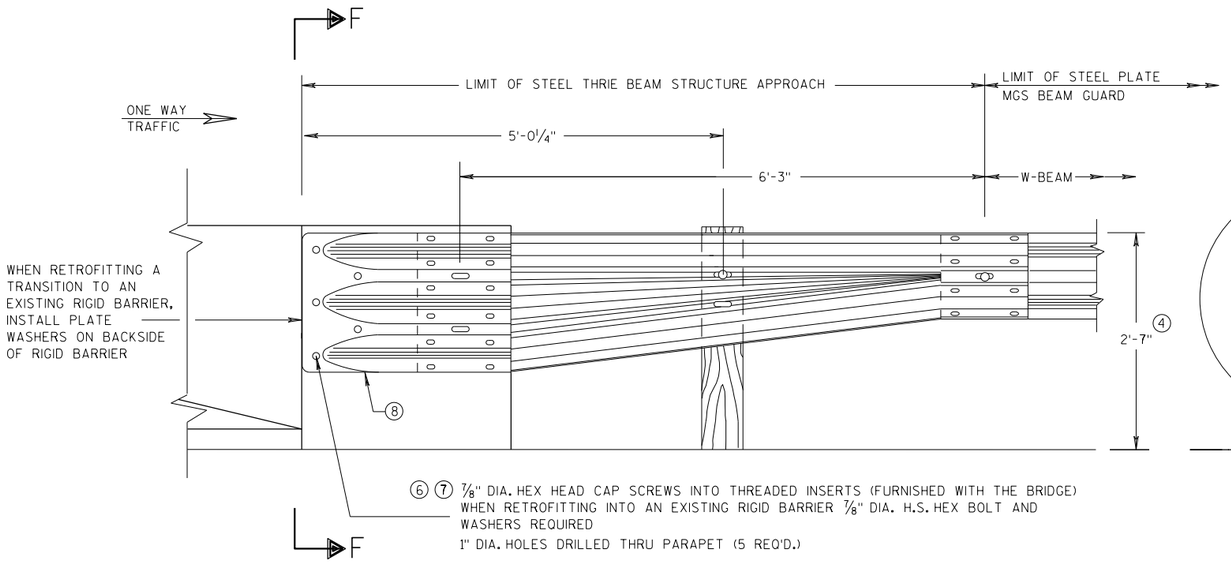
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

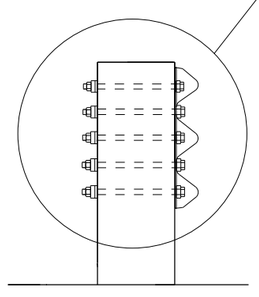
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

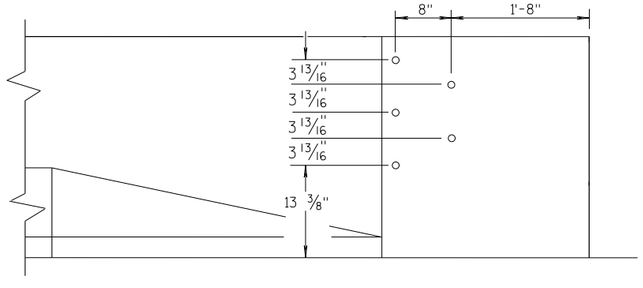




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

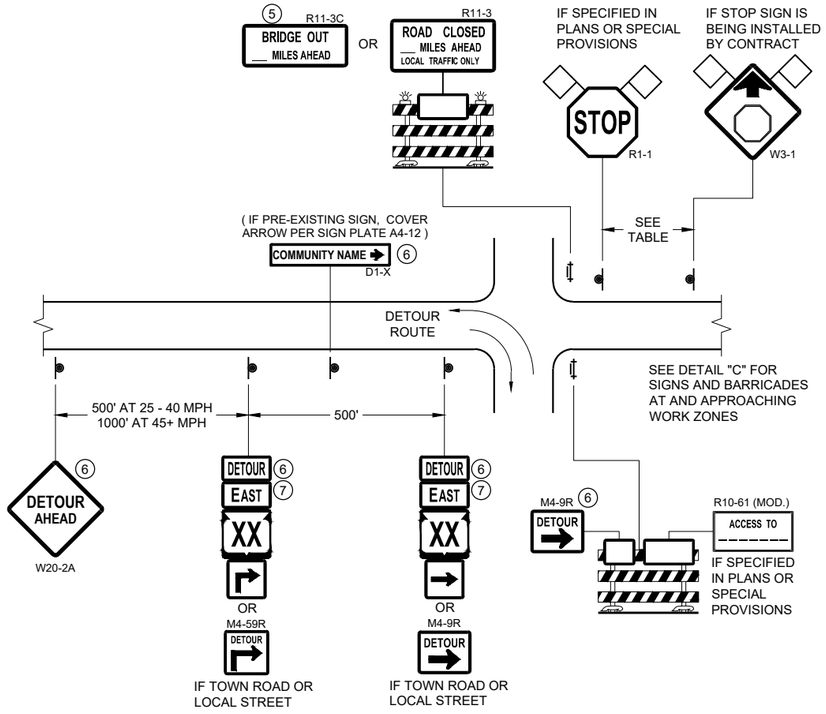
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVI
NT
FHWA

6

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

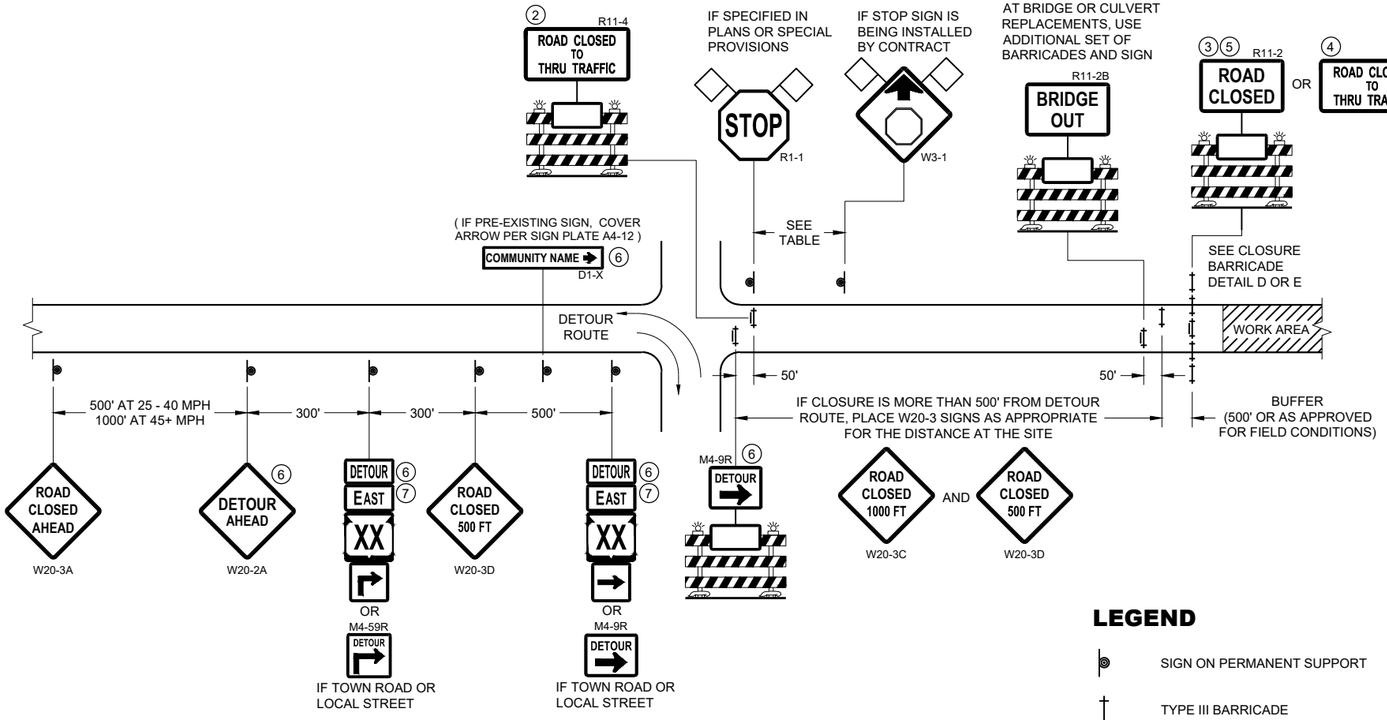
6

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



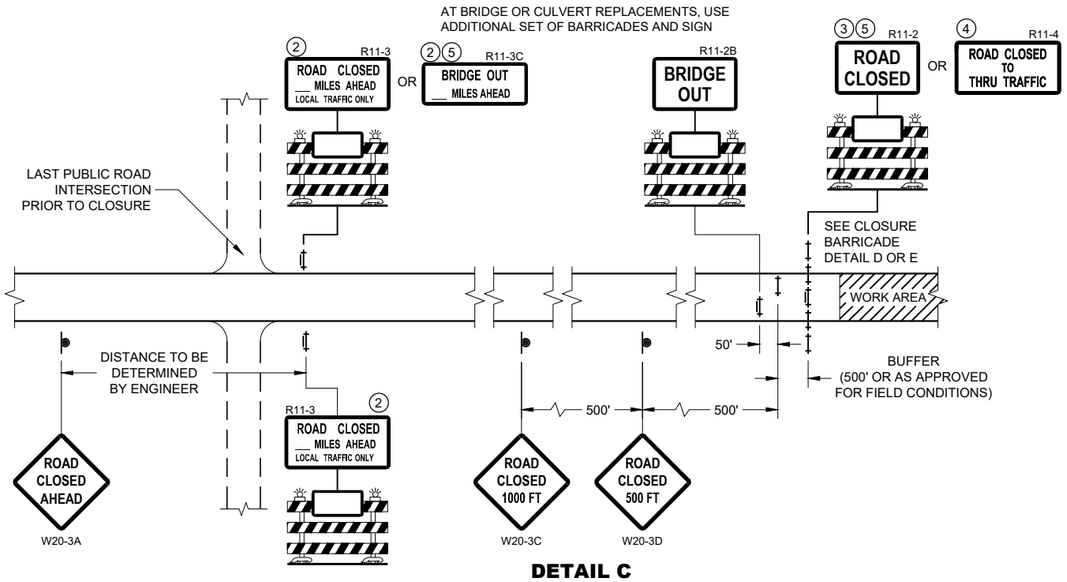
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

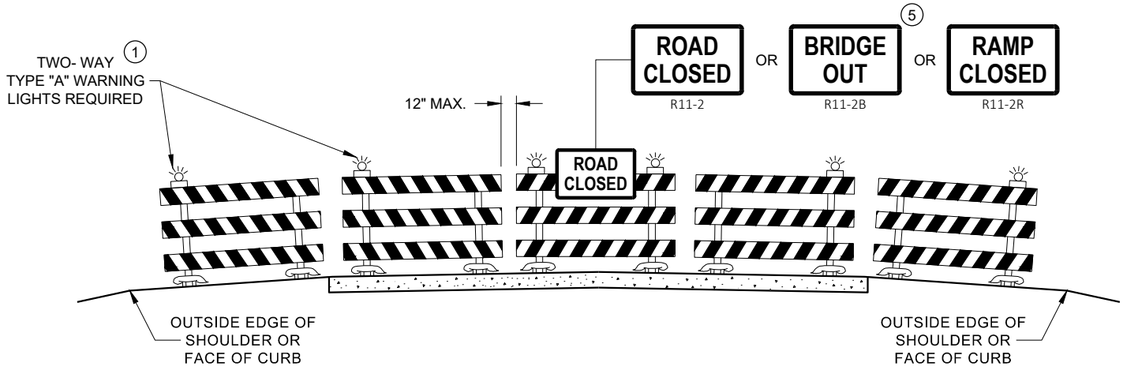
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

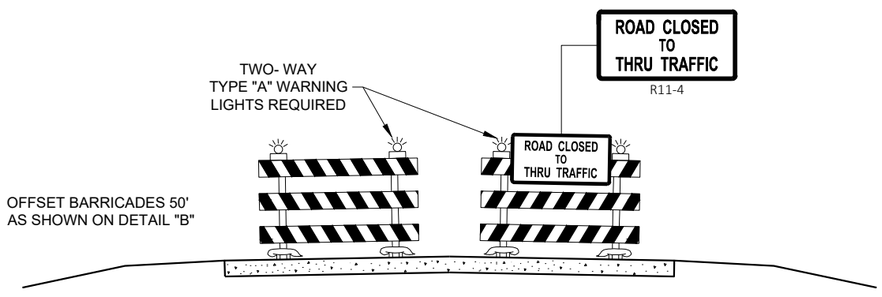
6

SDD 15C02 - 08a

SDD 15C02 - 08a



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.

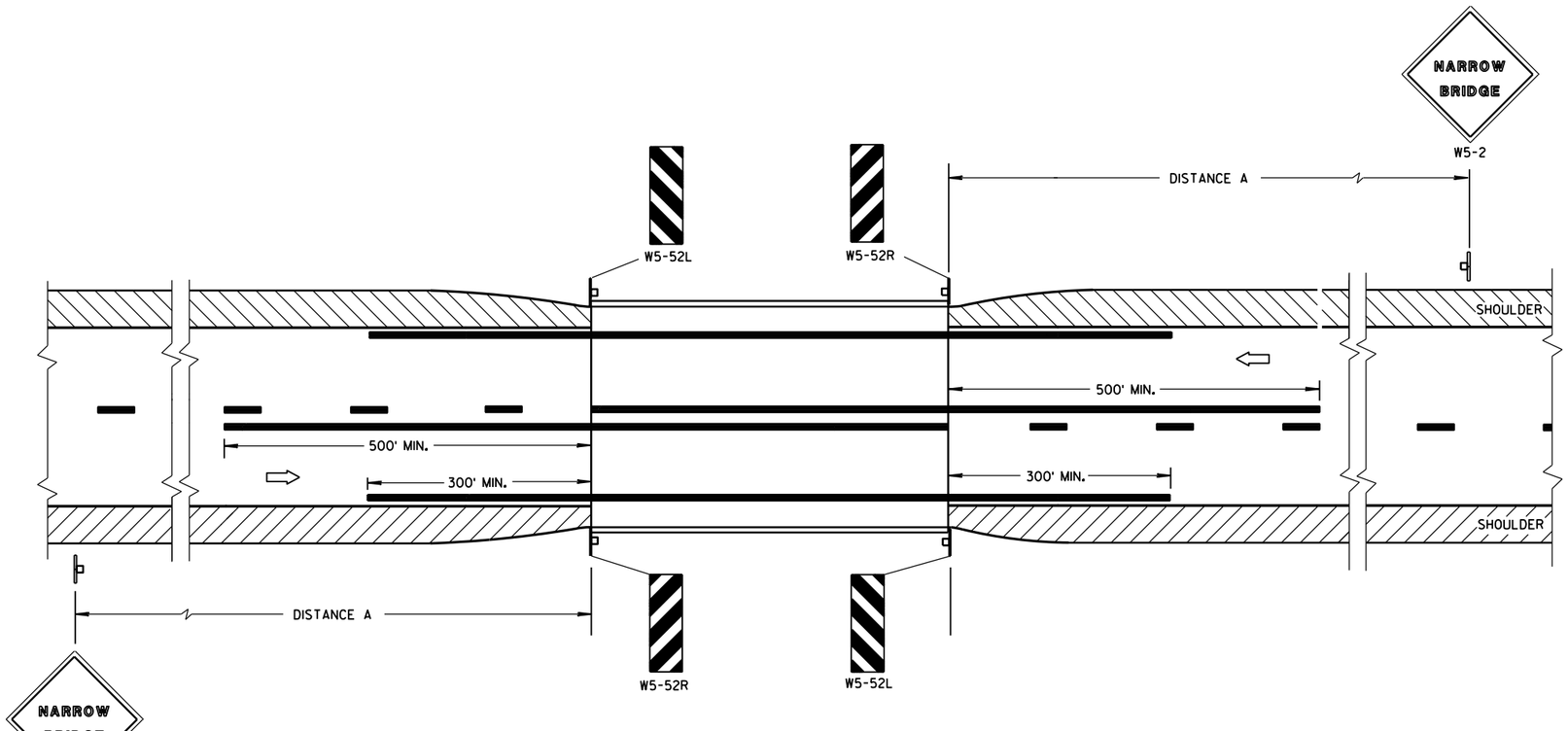
BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

6

SDD 15C02 - 08b



SITUATION 1

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

DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

GENERAL NOTES

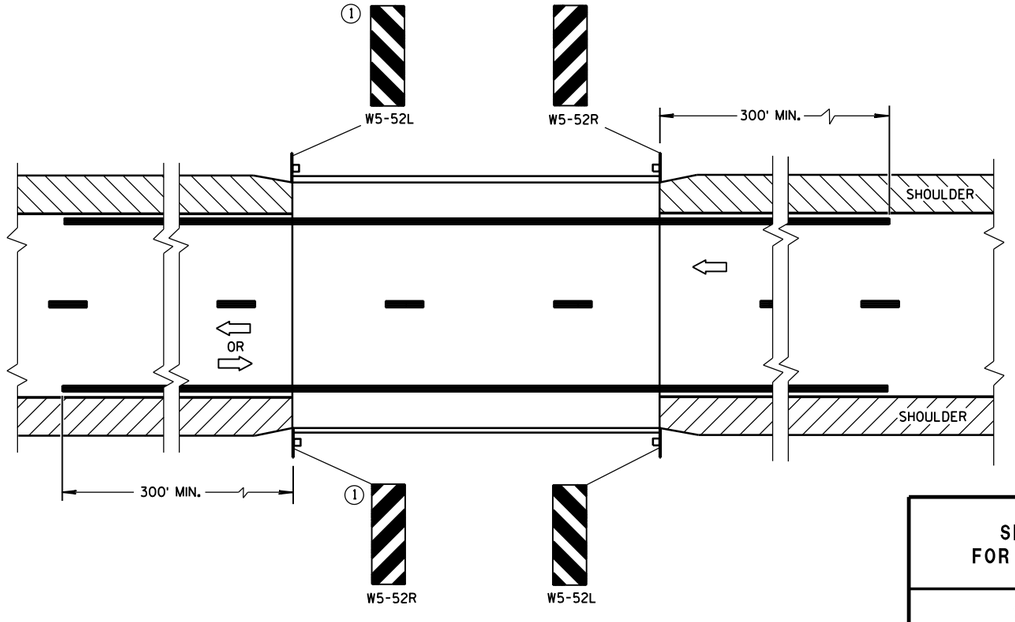
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR ...IEER
FHWA

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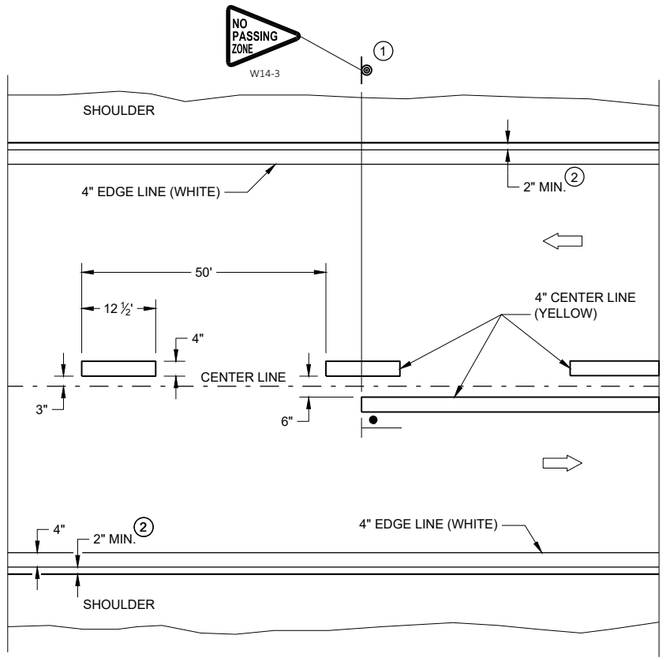
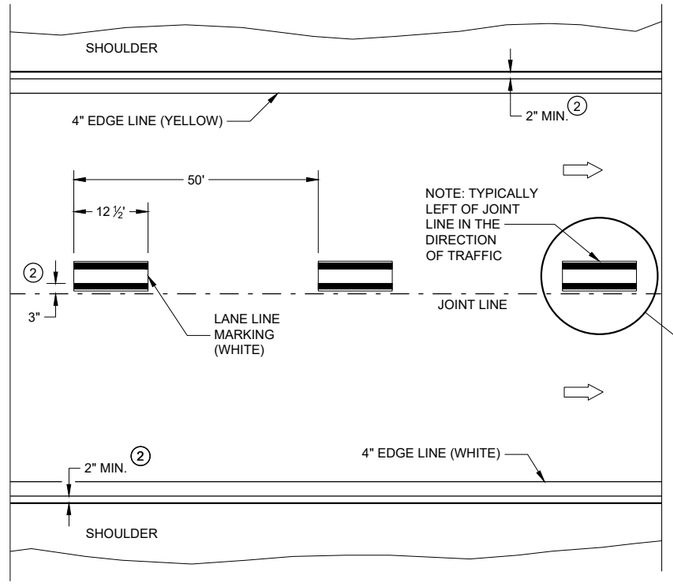
S.D.D. 15 C 6-9

6

S.D.D. 15 C 6-9

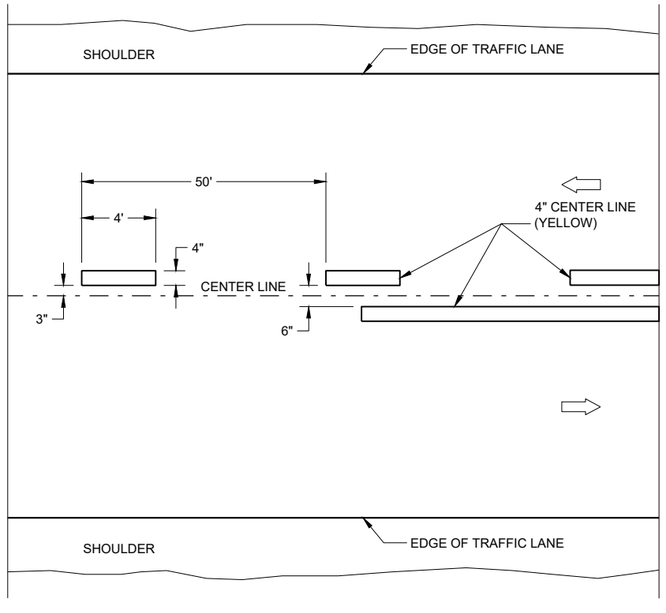


TWO WAY TRAFFIC

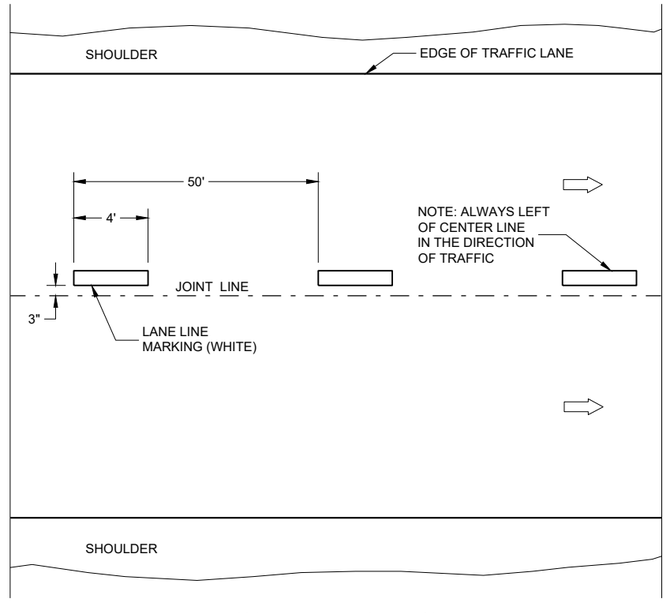


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

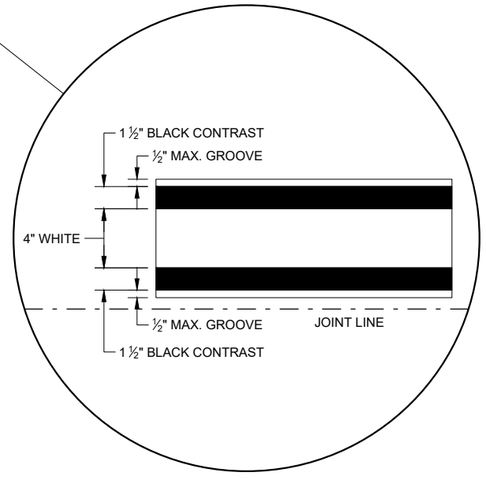
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITH 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

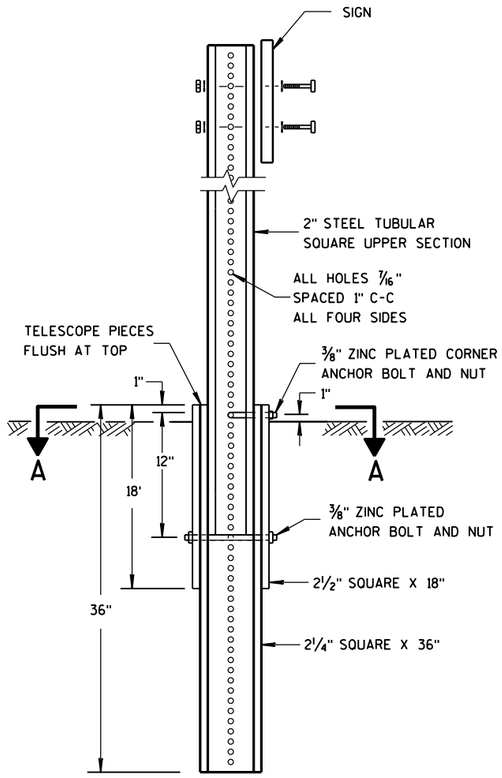
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Matthew Rauch
STATEWIDE SIGNING AND M ENGINEER

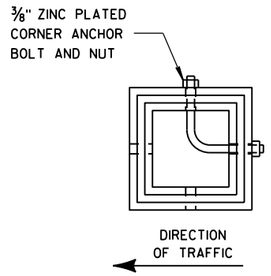
FHWA

SDD 15C08 - 20a

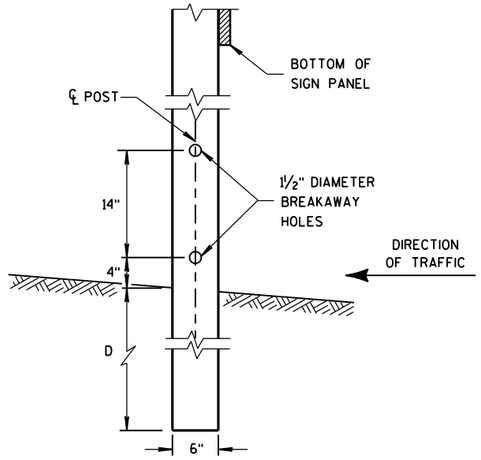
SDD 15C08 - 20a



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



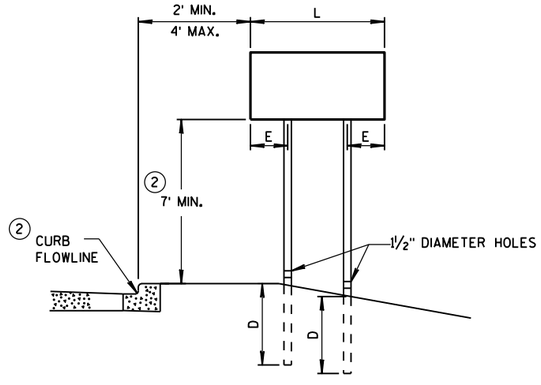
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

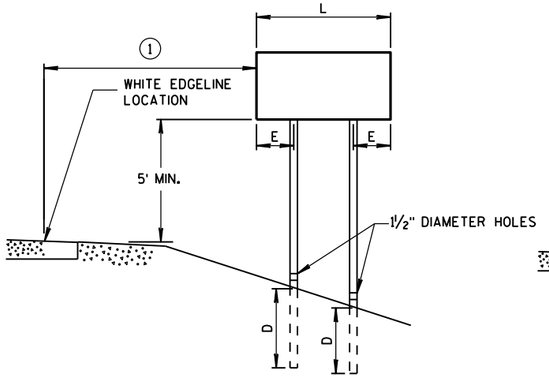
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

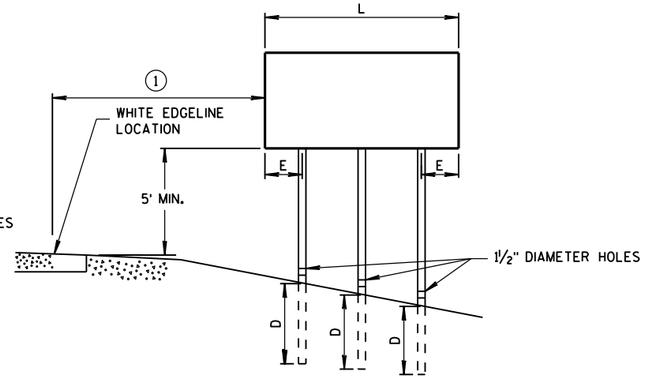
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

(3) FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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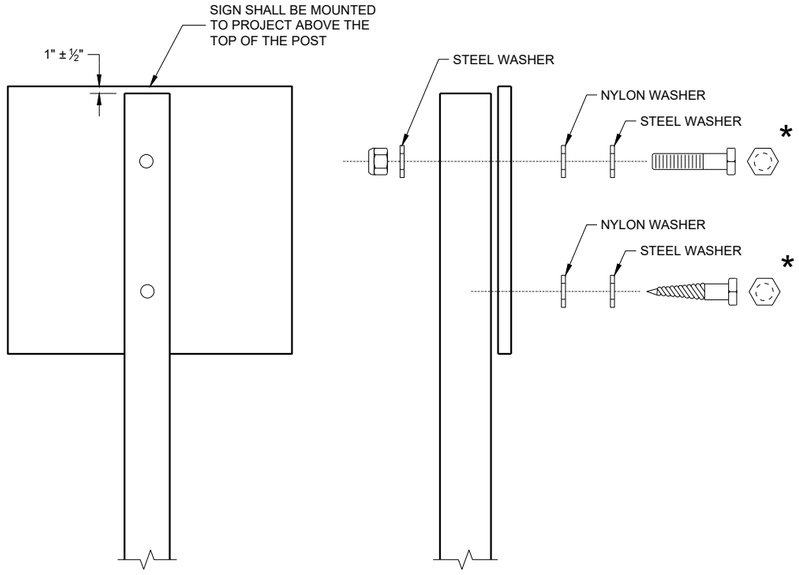
S.D.D. 15 D 38-2a



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.

WOOD POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH, GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

6

SDD 15D38 - 02b

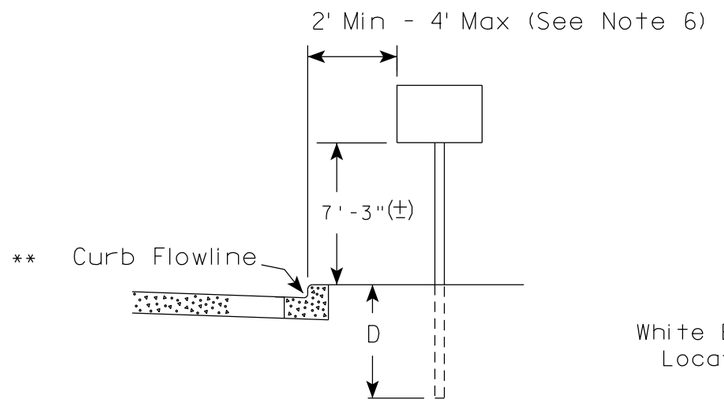
SDD15D38 - 02b

ATTACHMENT OF SIGNS TO POSTS

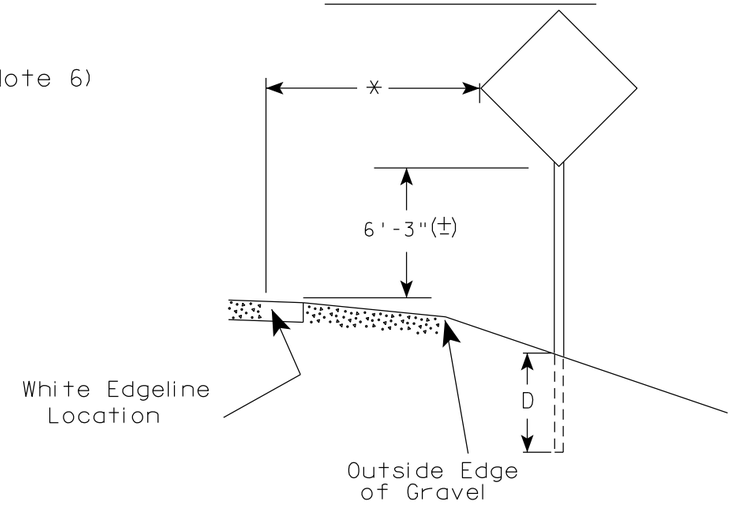
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

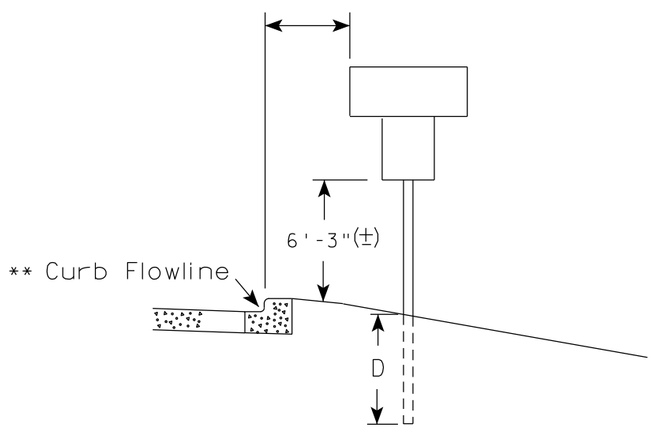
APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

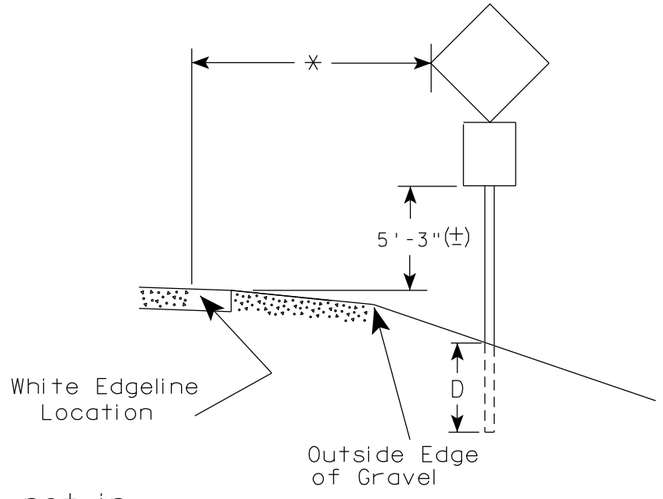
URBAN AREA



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" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

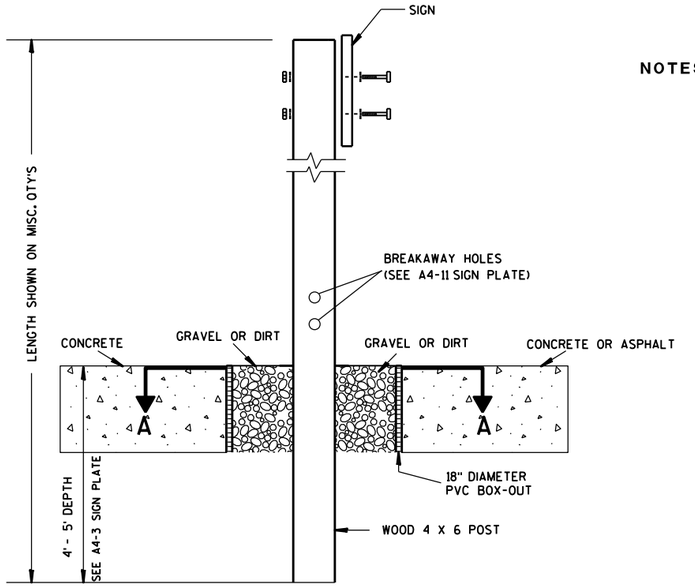
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

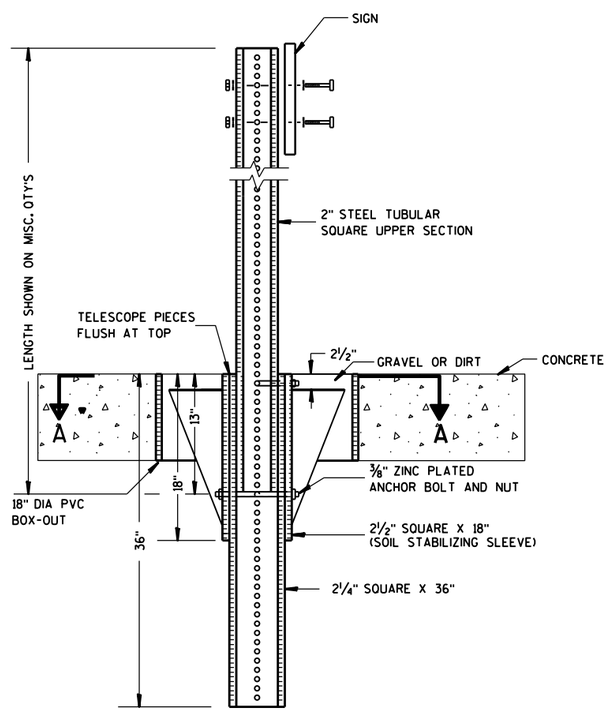
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 40	E



ELEVATION VIEW

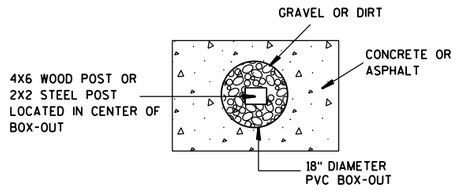
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

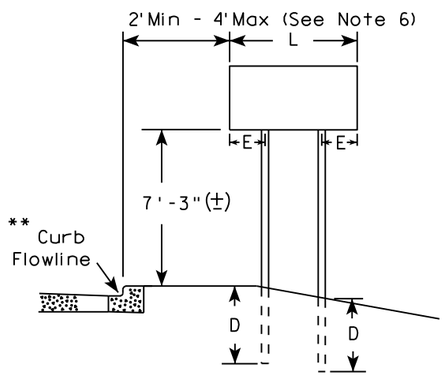
APPROVED Matthew R Rauch
for State Traffic Engineer

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

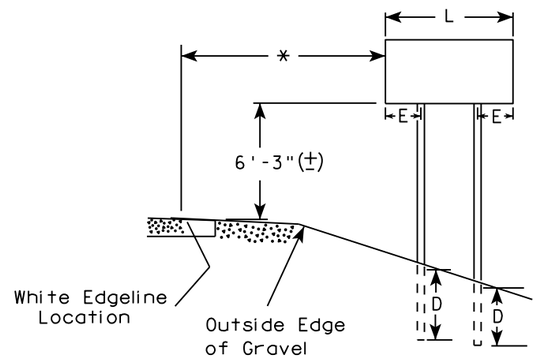
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

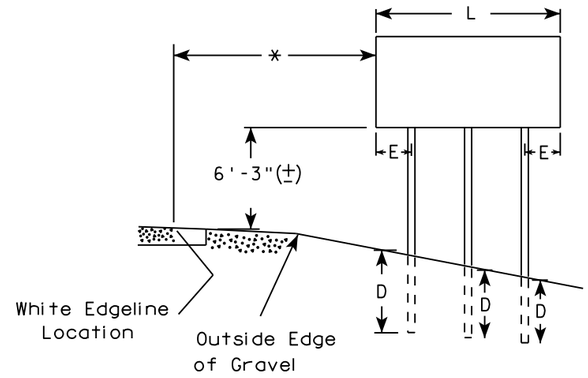
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

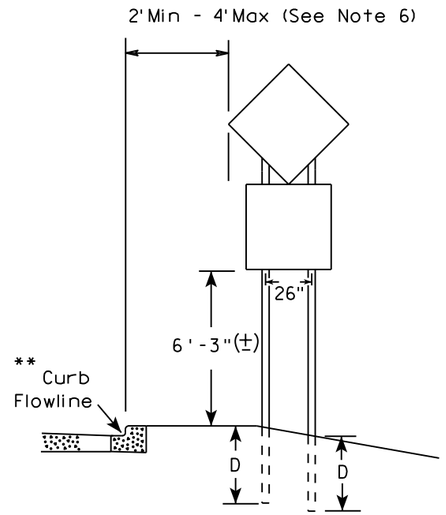
URBAN AREA



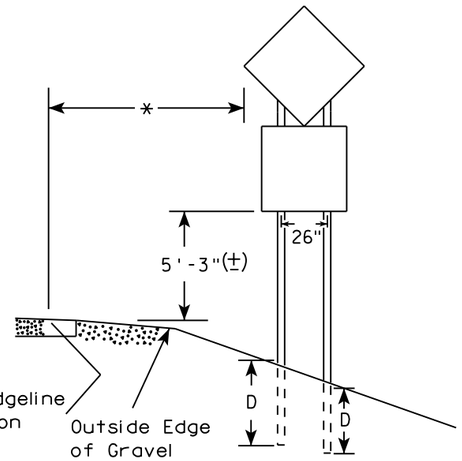
RURAL AREA (See Note 3)







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

* 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

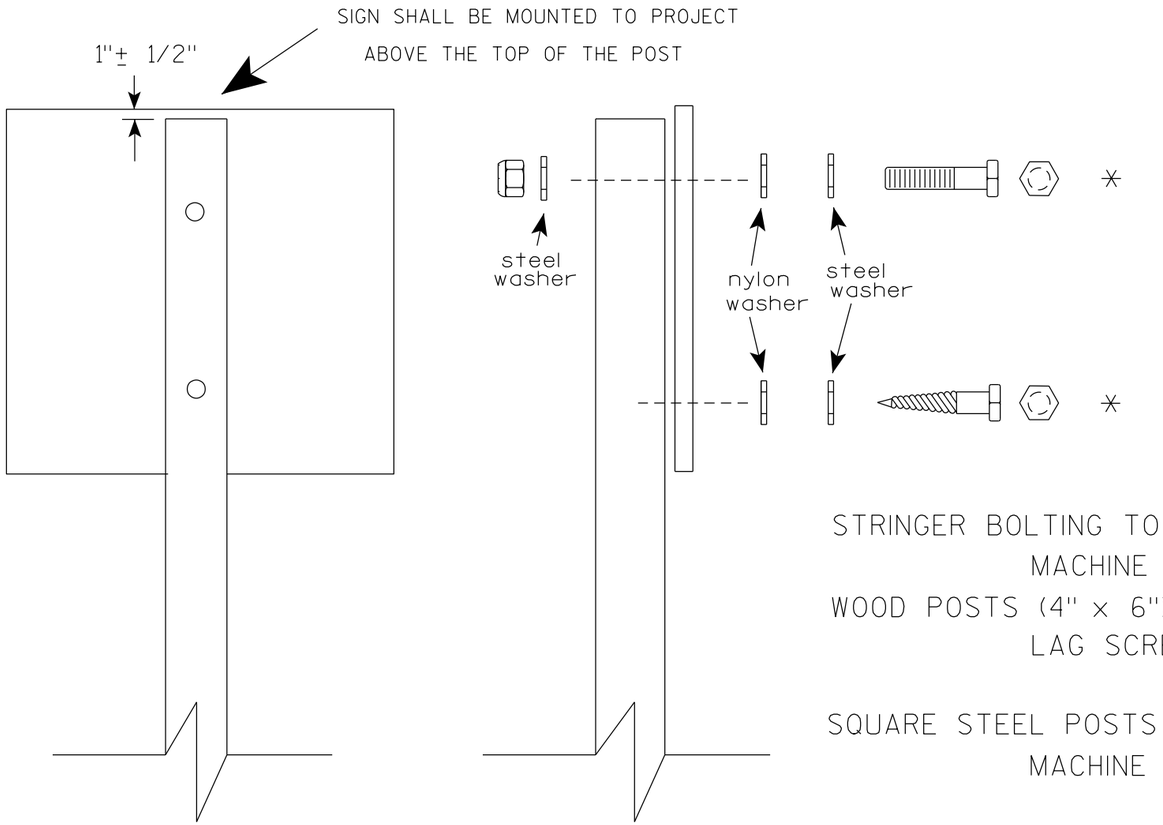
APPROVED Matthew R Rauch
For State Traffic Engineer

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

7

7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 42 | 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

PROJECT NO:

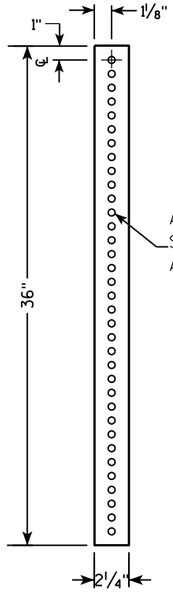
SHEET NO: 43 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 01-APRIL-2020 PLOT BY : dotc4c

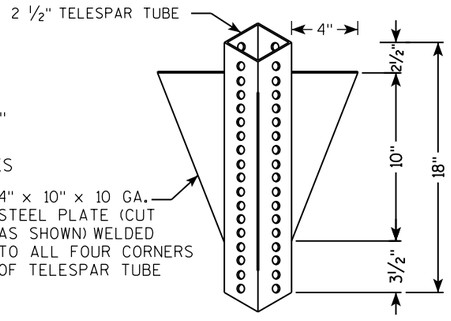
WISDOT/CADDS SHEET 42

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

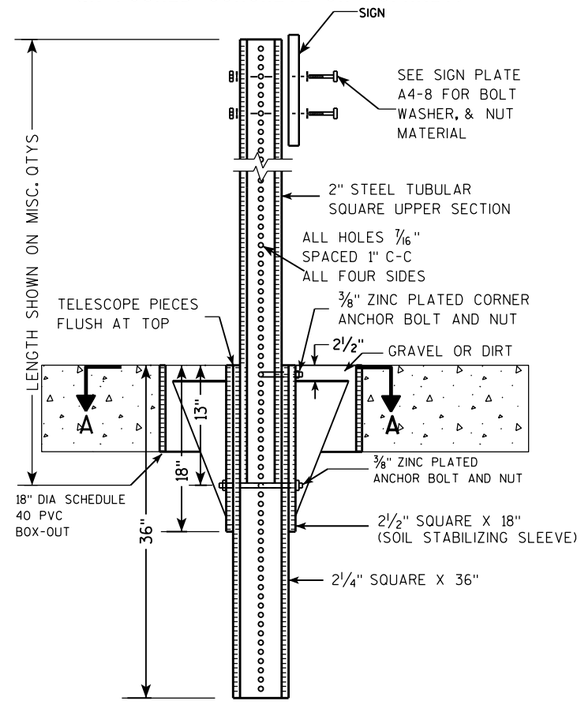
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



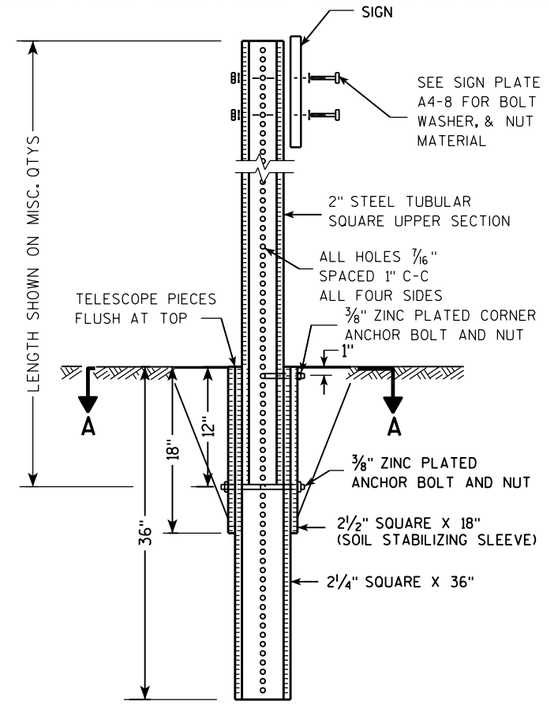
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

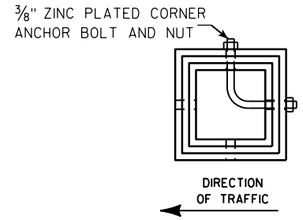


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

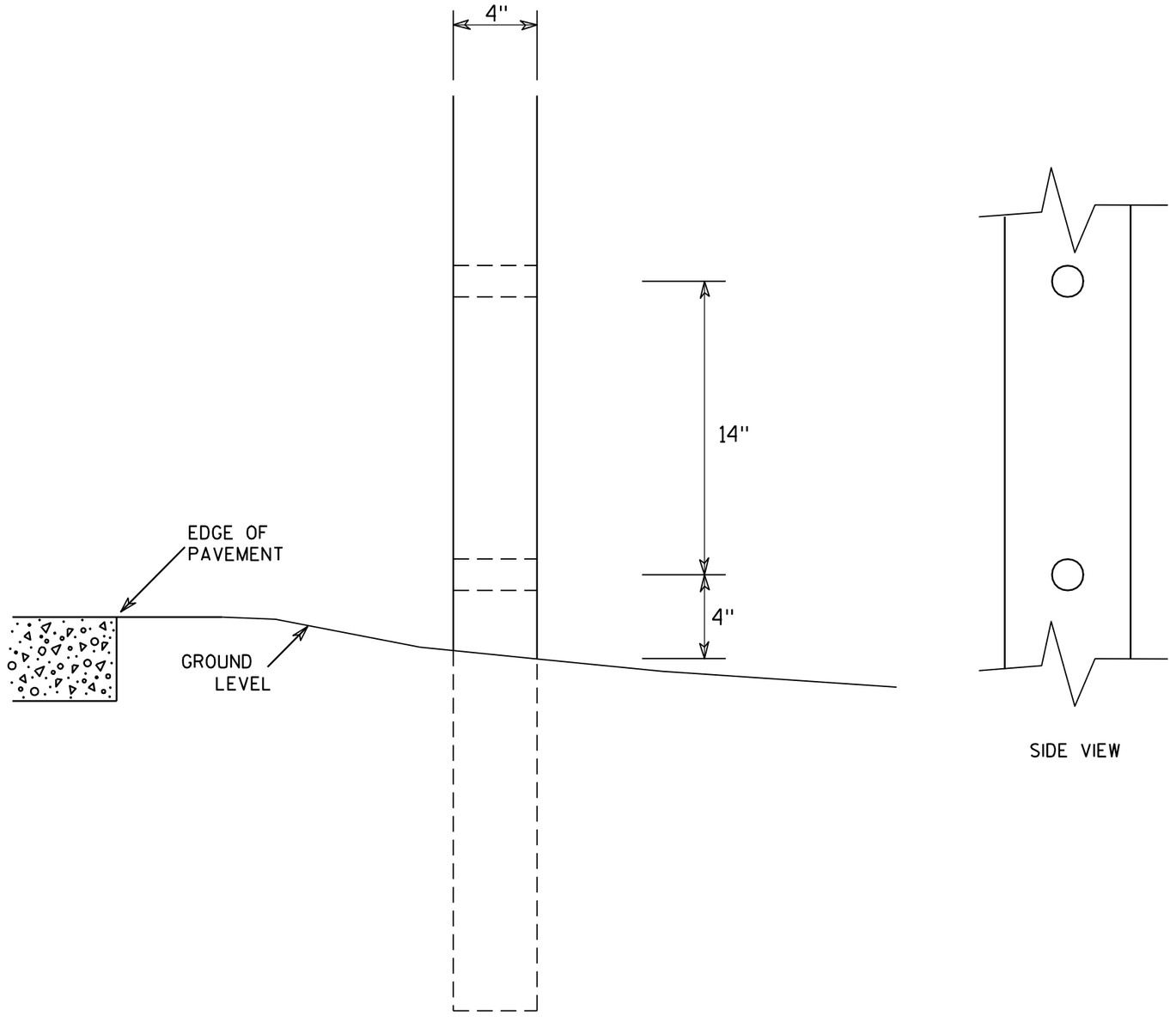
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 44 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

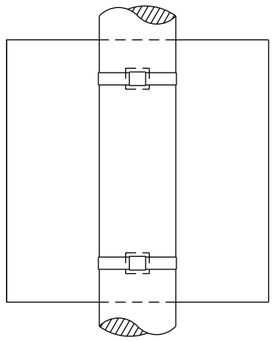
APPROVED Chester J Spang
for State Traffic Engineer

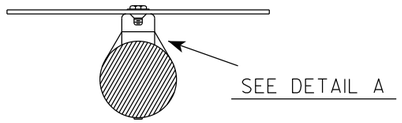
DATE 3/27/97 PLATE NO. A4-11.2

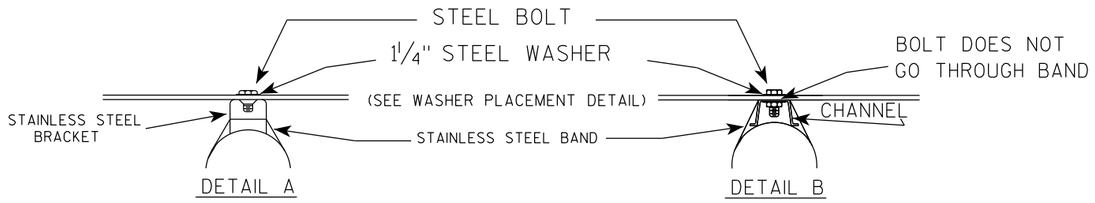
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 45	E

BANDING

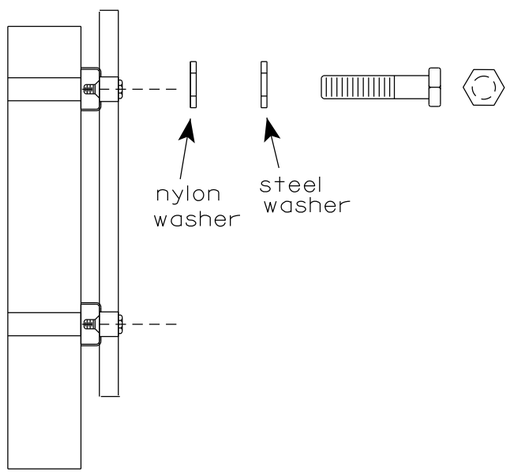
SINGLE SIGN







WASHER PLACEMENT

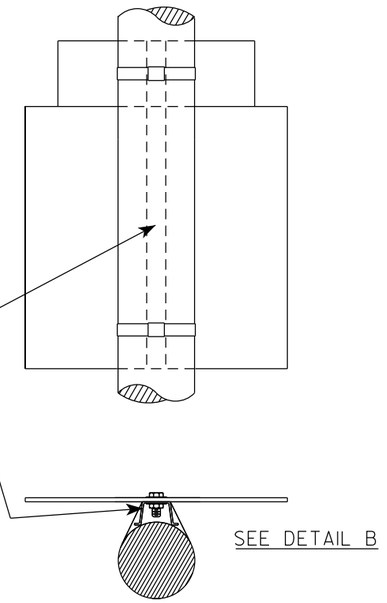


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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

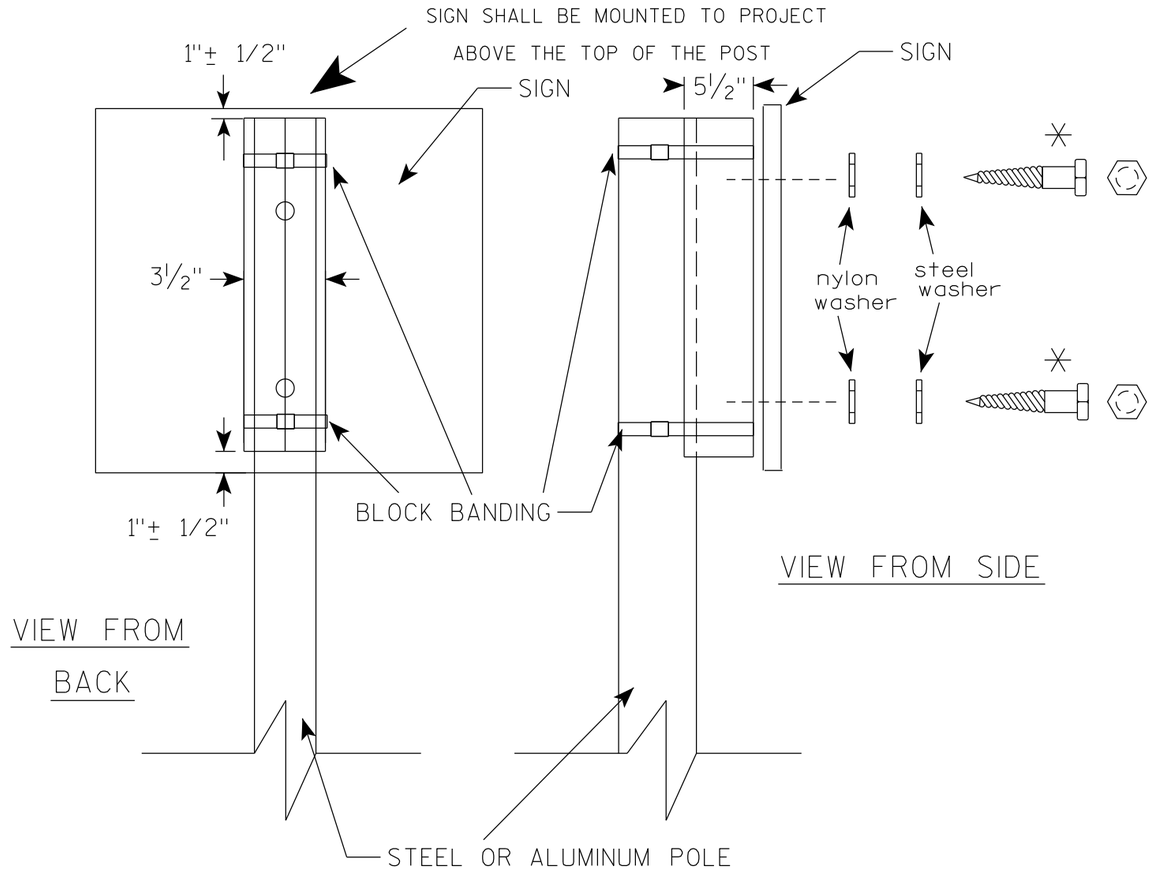
WISCONSIN DEPT OF TRANSPORTATION

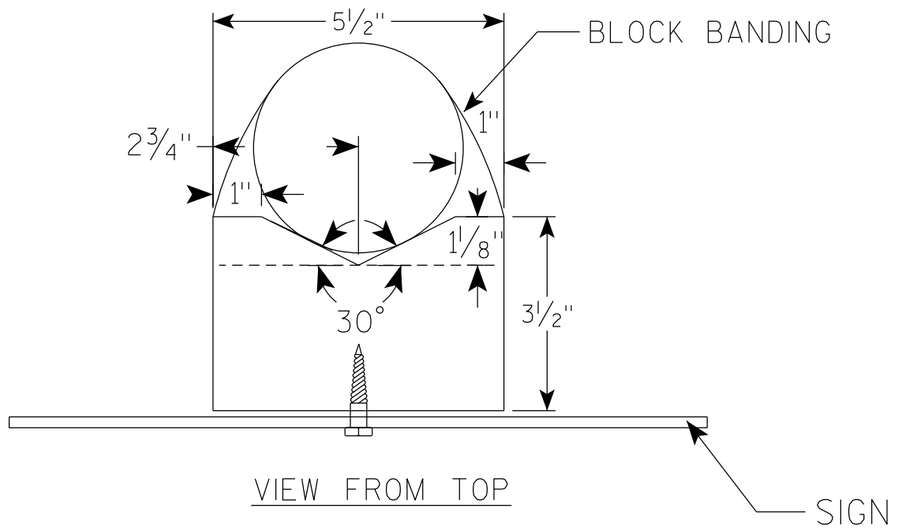
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 46	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

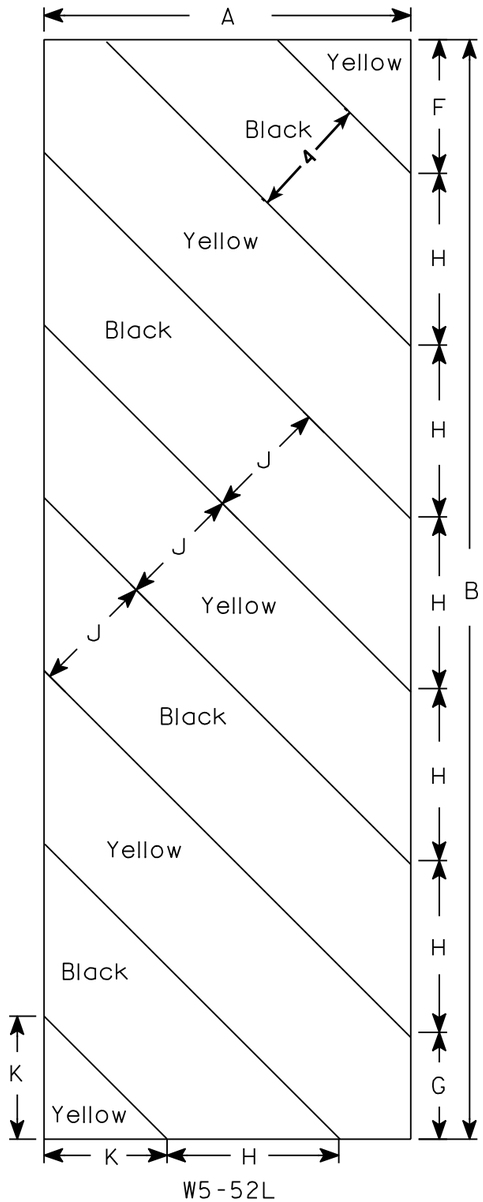
✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

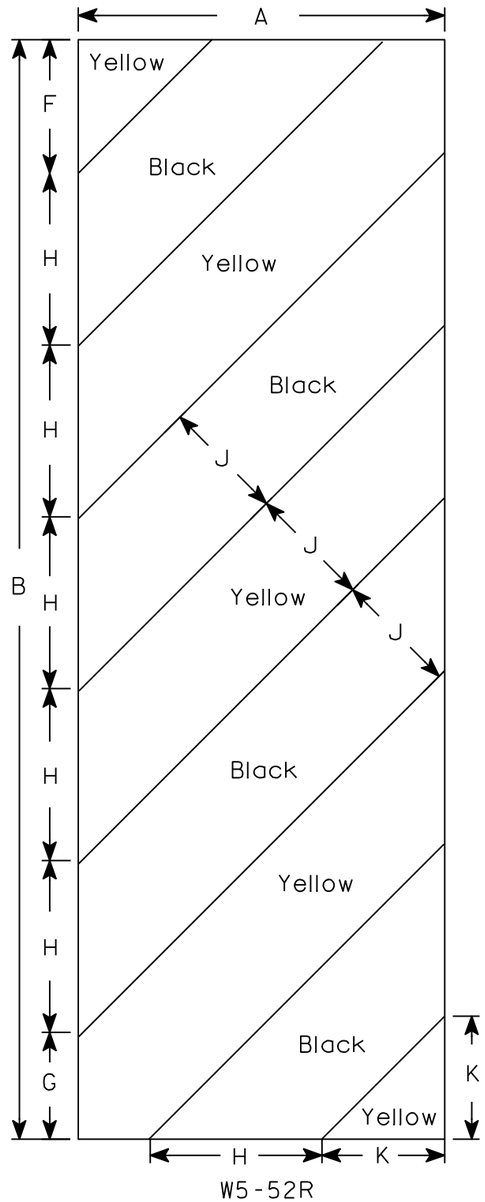
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 48 | E

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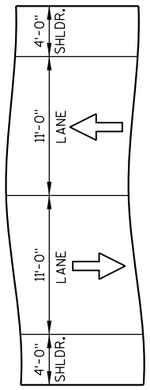
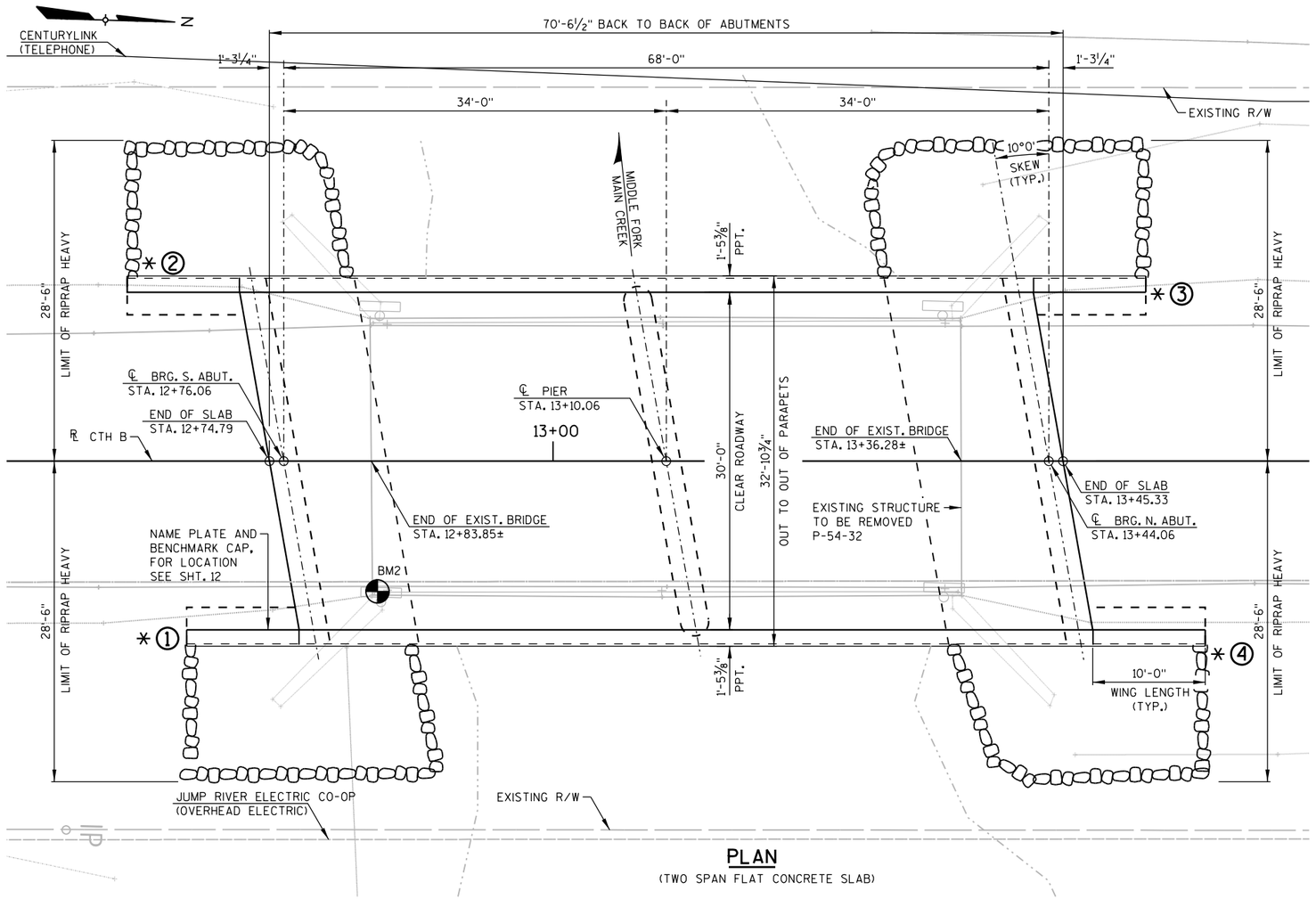
PLOT DATE: 8/31/2020 BATCH PRINT SHEET 1 OF 1
PLOT TIME: 8:25:04 AM

8

* PROVIDE FOR THRIE BEAM GUARDRAIL ATTACHMENT.

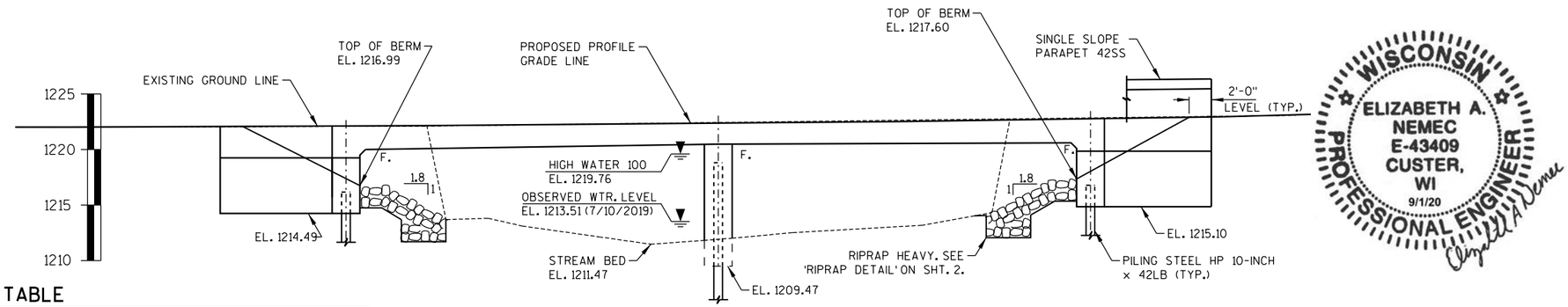
Ⓧ INDICATES WING NUMBER





PLAN

(TWO SPAN FLAT CONCRETE SLAB)



ELEVATION

NORMAL TO MIDDLE FORK OF MAIN CREEK

BENCH MARK TABLE

NO.	STATION	DESCRIPTION	ELEVATION
1	10+28, 34' RT.	60d NAIL IN EAST FACE OF PP #5.9	1220.76
2	12+84, 12' RT.	CHISELED SQUARE IN SE CORNER OF BRIDGE DECK.	1221.82
3	14+10, 33' RT.	60d NAIL IN WEST FACE OF PP #5.8	1218.83

HORIZ. DATUM - NAD83/2011, VERTICAL DATUM - NAVD 88 (2012),
COORDINATE SYSTEM: WCCS, RUSK COUNTY

STATE PROJECT NUMBER

8793-00-72

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR = 1.30
OPERATING RATING FACTOR = 1.69
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF.

MATERIAL PROPERTIES:

CONCRETE MASONRY – SUPERSTRUCTURE — f'c = 4,000 P.S.I.
– ALL OTHER — f'c = 3,500 P.S.I.

BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH x 42LB. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30'-0" LONG FOR THE SOUTH ABUTMENT AND 35'-0" LONG FOR THE NORTH ABUTMENT.

PIER TO BE SUPPORTED ON PILING STEEL HP 10-INCH x 42LB. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30'-0" LONG.

** 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 THE MODIFIED GATE DYNAMIC FORMULA TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q100	2100 CFS
VELOCITY	6.2 FPS
HIGH WATER ELEVATION	1219.76
WATERWAY AREA	341 SQ. FT.
DRAINAGE AREA	22.6 SQ. MI.
ROAD OVERTOPPING	N/A
SCOUR CRITICAL CODE	5

2 YEAR FREQUENCY

Q2	560 CFS
VELOCITY	5.2 FPS
HIGH WATER 2 ELEVATION	1215.74

TRAFFIC VOLUME

CTH B
A.D.T. (2021) = 545
A.D.T. (2041) = 600
DESIGN SPEED = 30 MPH

LIST OF DRAWINGS

STRUCTURES DESIGN CONTACTS

BRIDGE OFFICE:
AARON BONK (608) 261-0261

CONSULTANT:
BETH NEMEC (715) 342-3069

AECOM PROJECT NO. 60609497

WISCONSIN PROFESSIONAL ENGINEER
ELIZABETH A. NEMEC
E-43409
CUSTER, WI
9/1/20

NO.	DATE	REVISION	BY

AECOM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/30/20
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-54-137

CTH B OVER MIDDLE FORK MAIN CREEK

COUNTY	TOWN/CITY/VILLAGE
RUSK	LAWRENCE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
EAN	CAB	KAM	EAN

GENERAL PLAN

SHEET 1 OF 12
49

8

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PLOT DATE: 9/1/2020 PLOT TIME: 12:12:46 PM BATCH PRINT SHEET 1 OF 1

STATE PROJECT NUMBER

8793-00-72

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE 'HR' WITHIN THE LIMITS SHOWN ON THIS SHEET AND ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.

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

THE EXISTING STRUCTURE (P-54-32) IS A SINGLE SPAN STEEL DECK GIRDER BRIDGE, 52.7' LONG x 24.7' WIDE, TO BE REMOVED.

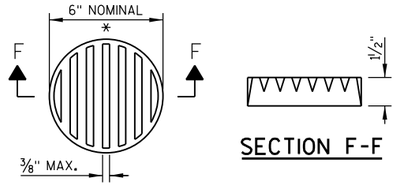
ALL REQUIRED REMOVAL OF THE EXISTING SUBSTRUCTURES IS INCLUDED IN THE BID ITEM "REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS, STATION 13+10."

EXCAVATION REQUIRED UNDER THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-54-137" IS NOT USED TO BALANCE THE EARTHWORK.

AT THE BACKFACE 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.

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

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



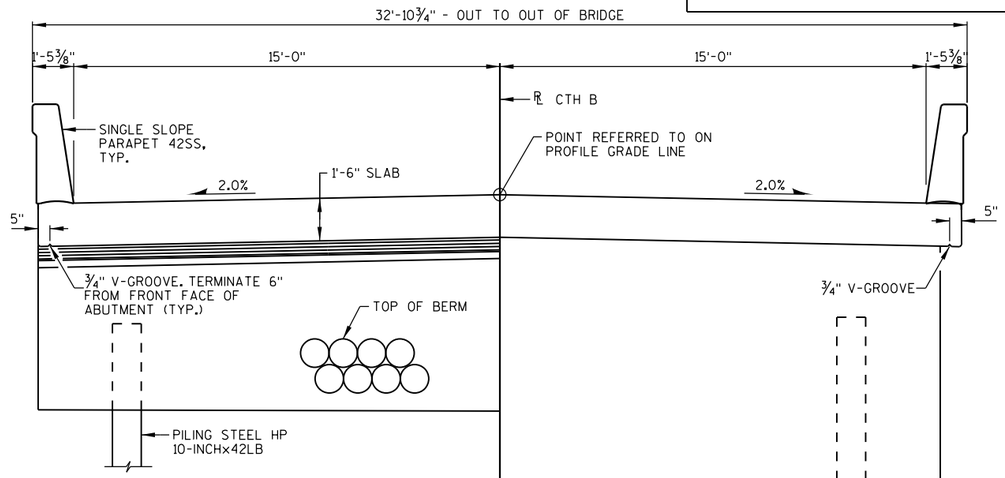
SECTION F-F

RODENT SHIELD DETAIL

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

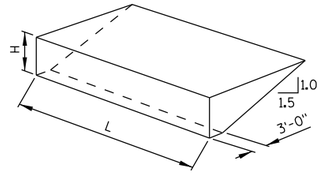
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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.



CROSS-SECTION THRU ROADWAY

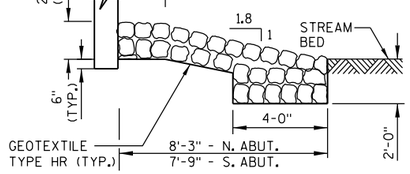
(LOOKING NORTH)



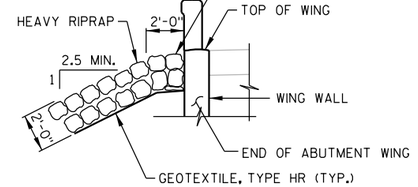
WINGS PARALLEL TO ROADWAY

ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT, 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)



RIPRAP DETAIL

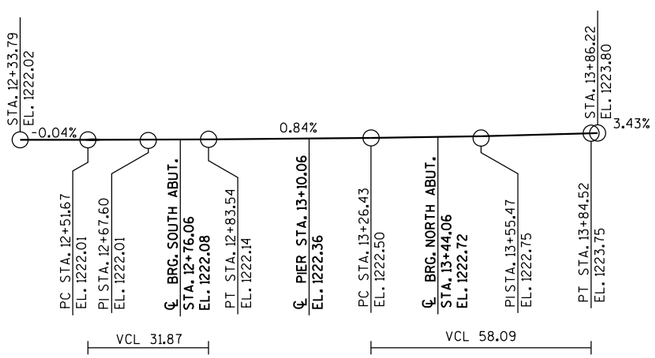


TYPICAL FILL SECTION AT WING TIPS

(TYP. BOTH ABUTMENTS)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUTMENT	PIER	NORTH ABUTMENT	SUPER.	TOTALS
203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS, STATION 13+10	LS					1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-54-137	LS					1
210.1500	BACKFILL STRUCTURE TYPE A	TON	120		120		240
502.0100	CONCRETE MASONRY BRIDGES	CY	33	33	34	152	252
502.3200	PROTECTIVE SURFACE TREATMENT	SY				240	240
502.3210	PIGMENTED SURFACE SEALER	SY	10		10	70	90
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,915	1,680	1,915		5,510
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2,020	70	2,000	33,730	37,820
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9		9		18
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	150	210	175		535
606.0300	RIPRAP HEAVY	CY	70		80		150
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80		80		160
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2		2		4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	50		50		100
645.0120	GEOTEXTILE TYPE HR	SY	160		180		340
	NON-BID ITEMS						
	FILLER	SIZE					1/2" & 3/4"



PROFILE GRADE LINE, CTH B

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-137

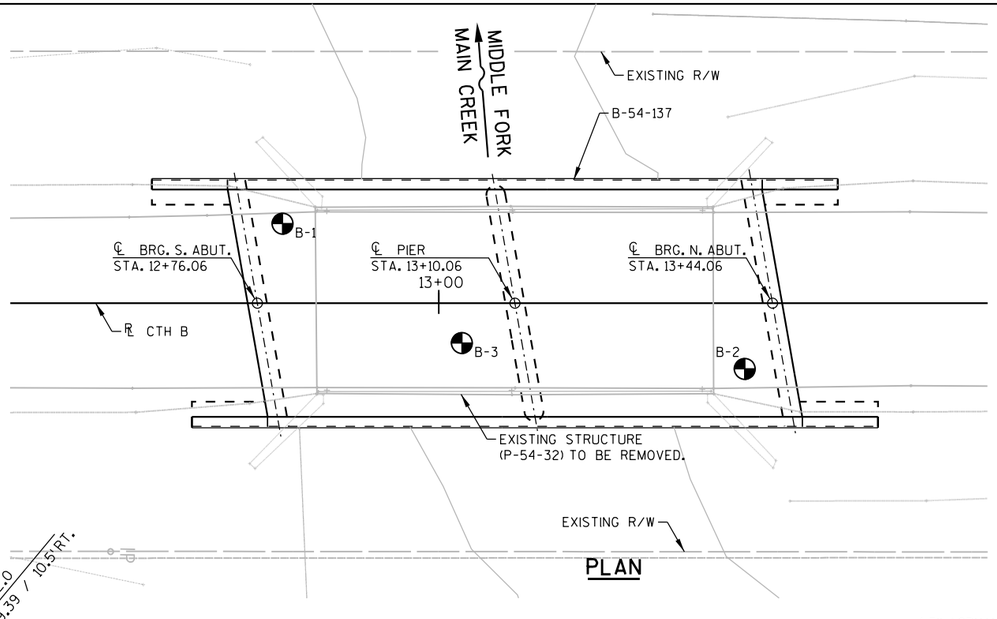
DRAWN BY TRA | PLANS CK'D. EAN

CROSS SECTION & QUANTITIES

SHEET 2 OF 12

50

BORING #	DATE COMPLETED
B1	9/23/2019
B2	9/23/2019
B3	9/23/2019
BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC.	
REPORT COMPLETED BY: 10/23/2019	
ALL COORDINATES REFERENCED TO WCCS RUSK COUNTY	



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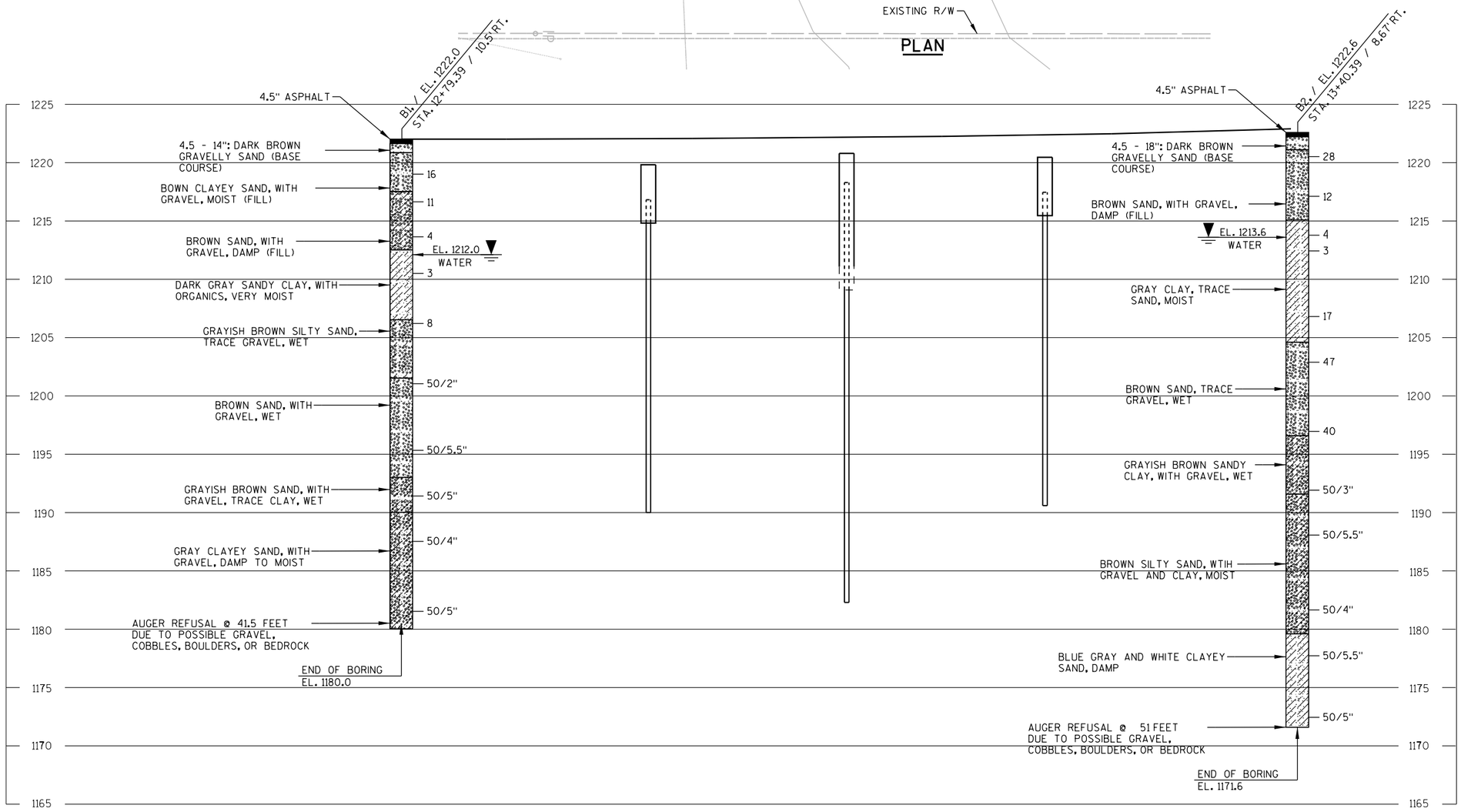


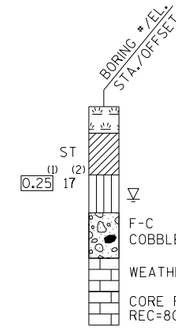
STATE PROJECT NUMBER

8793-00-72

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-54-137

DRAWN BY TRA | PLANS CK'D. EAN

SUBSURFACE EXPLORATION 1

SHEET 3 OF 12
51

8

8

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BATCH PRINT SHEET 1 OF 1

BORING #	DATE COMPLETED
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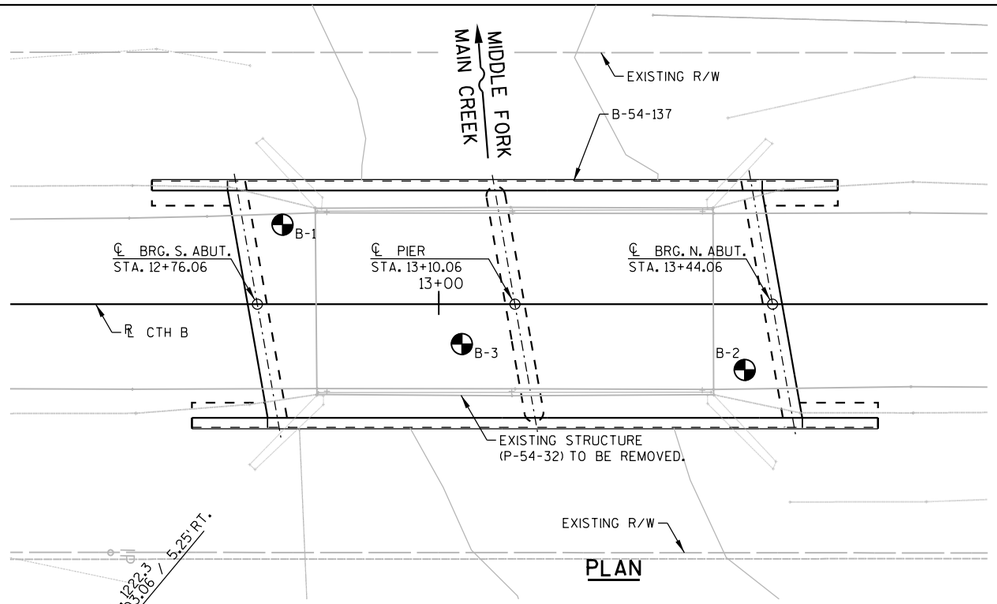
B2	9/23/2019
B3	9/23/2019
BORINGS COMPLETED BY: PROFESSIONAL SERVICE INDUSTRIES, INC.	
REPORT COMPLETED BY: 10/23/2019	
ALL COORDINATES REFERENCED TO WCCS RUSK COUNTY	



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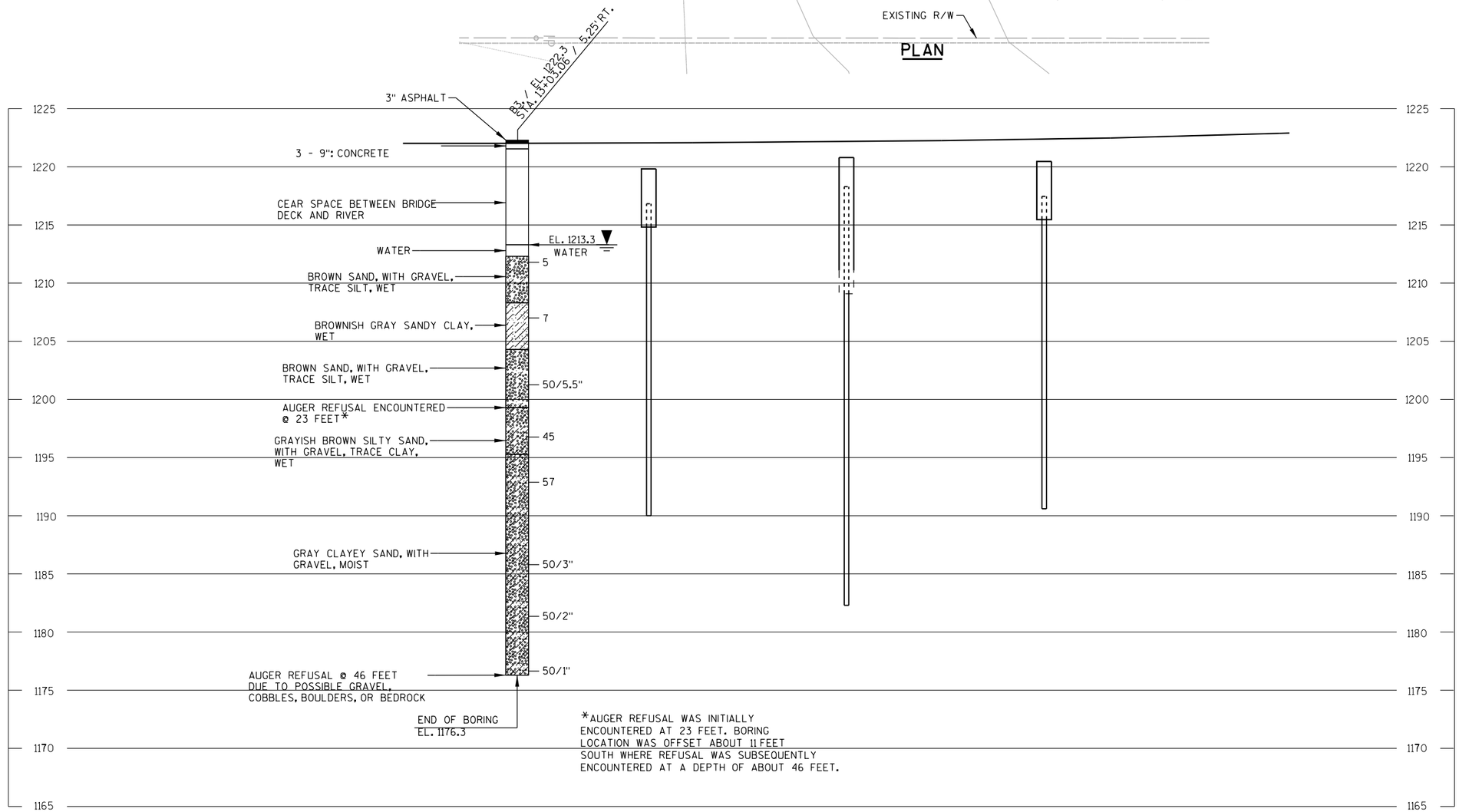


*AUGER REFUSAL WAS INITIALLY ENCOUNTERED AT 23 FEET. BORING LOCATION WAS OFFSET ABOUT 11 FEET SOUTH WHERE REFUSAL WAS SUBSEQUENTLY ENCOUNTERED AT A DEPTH OF ABOUT 46 FEET.

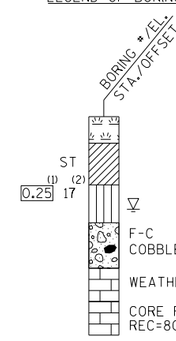
STATE PROJECT NUMBER

8793-00-72

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)

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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-54-137

DRAWN BY TRA | PLANS CK'D. EAN

SUBSURFACE EXPLORATION 2

SHEET 4 OF 12
52

8

8

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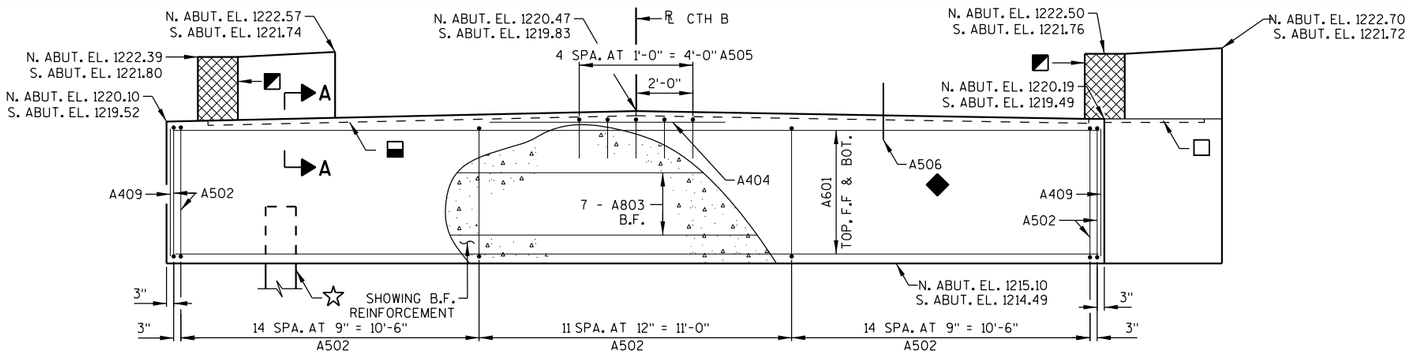
BATCH PRINT SHEET 1 OF 1

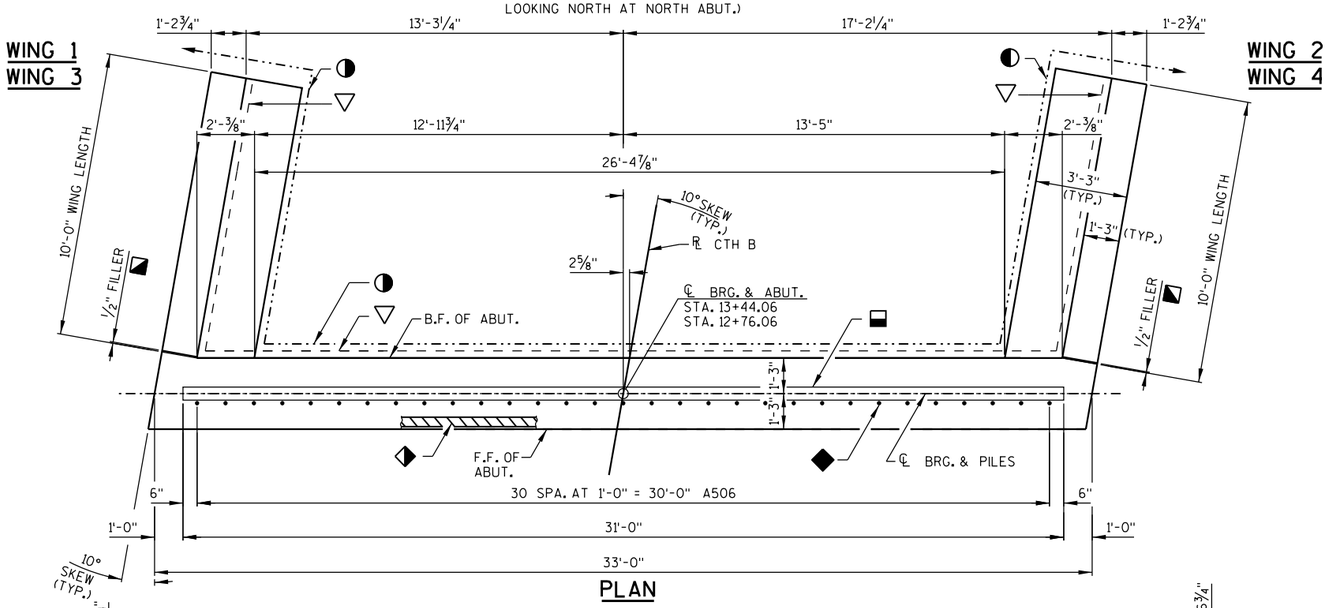
STATE PROJECT NUMBER

8793-00-72

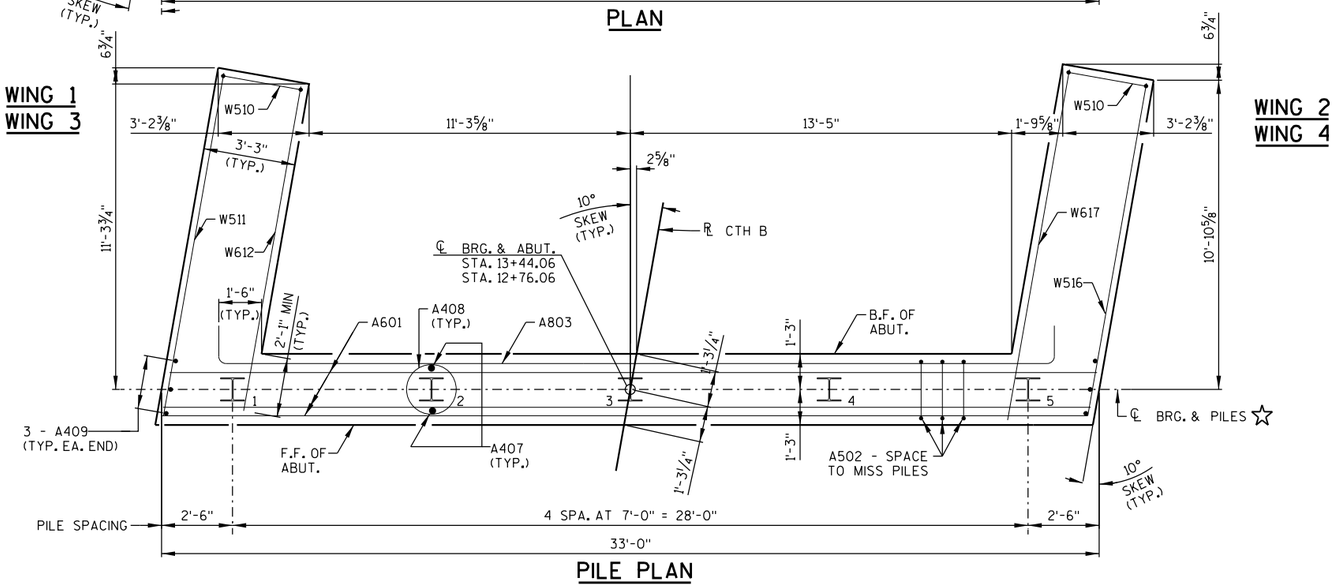


ELEVATION

(LOOKING SOUTH AT SOUTH ABUT.
LOOKING NORTH AT NORTH ABUT.)



PLAN



PILE PLAN

NOTES

ELEVATIONS AND DIMENSIONS ARE GIVEN AT THE ℄ OF ABUTMENT. FOR WING DETAILS AND ELEVATIONS SEE SHEETS 6 & 7.

WING LENGTH INCLUDES ½" FILLER.

DO NOT PLACE FILL ABOVE 3'-0" FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

SPACE A502 BARS TO MISS PILING.

LEGEND

☆ SUPPORT ABUTMENTS ON PILING STEEL HP 10-INCH × 42 LB. SEE FOUNDATION DATA ON THIS SHEET AND PILE SPLICE DETAIL ON SHEET 8.

◑ PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. DRAIN BOTH ABUTMENTS TO DOWNSTREAM SIDE OF BRIDGE. ATTACH RODENT SHIELD AT ENDS OF PIPE. SEE SHT. 2.

◪ ½" FILLER TO EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

◆ A506 OR P506 AT 1'-0". BARS MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT PRIOR TO ITS INITIAL SET. EMBED 1'-0".

▽ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

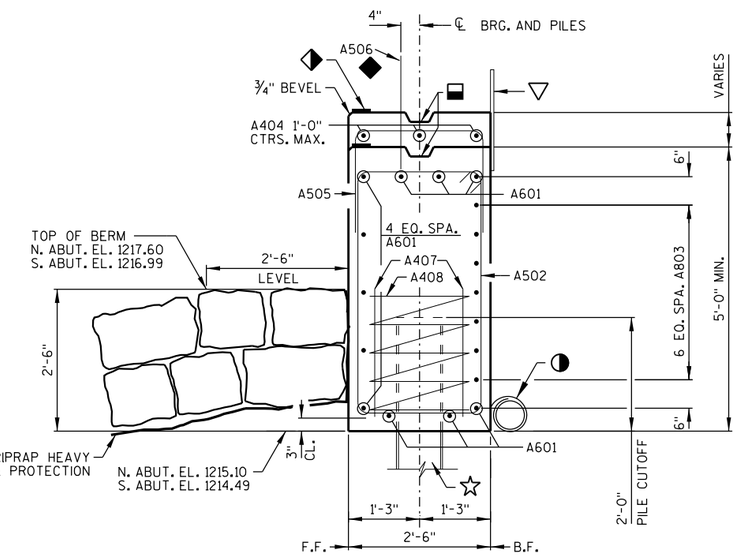
◈ 4"×¾" FILLER - TO EXTEND FULL LENGTH OF ABUTMENT BODY.

▬ KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"×6".

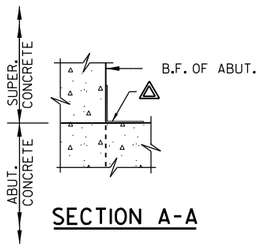
△ PLACE BOTTOM HALF OF RUBBERIZED MEMBRANE WATERPROOFING. HORIZONTAL IN THIS AREA.

PILE NOTE

ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH × 42 LB. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30'-0" LONG FOR THE SOUTH ABUTMENT AND 35'-0" LONG FOR THE NORTH ABUTMENT.



TYPICAL SECTION THRU BODY



SECTION A-A

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-137

DRAWN BY TRA | PLANS CK'D. EAN

ABUTMENTS

SHEET 5 OF 12
53

8

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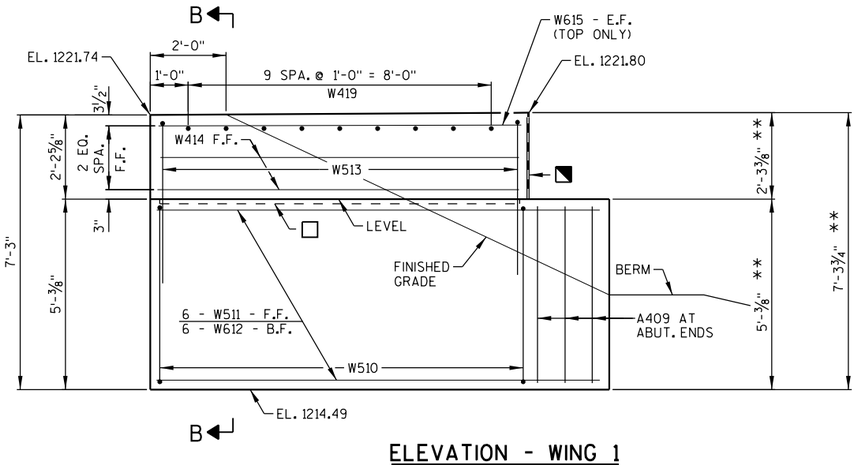
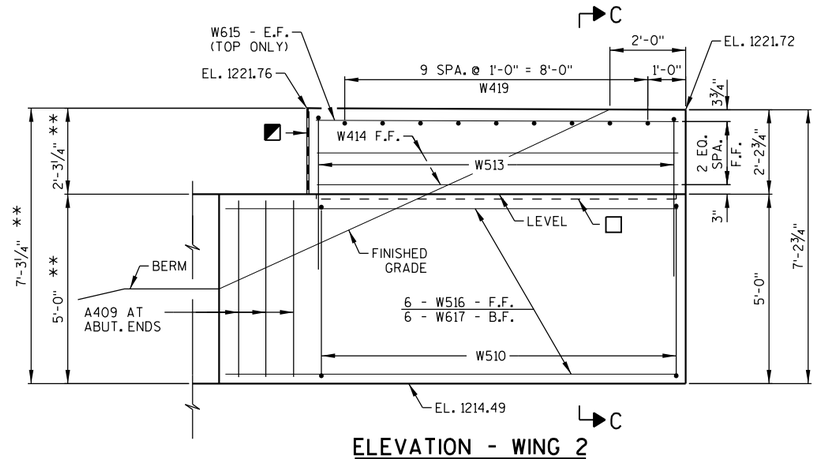
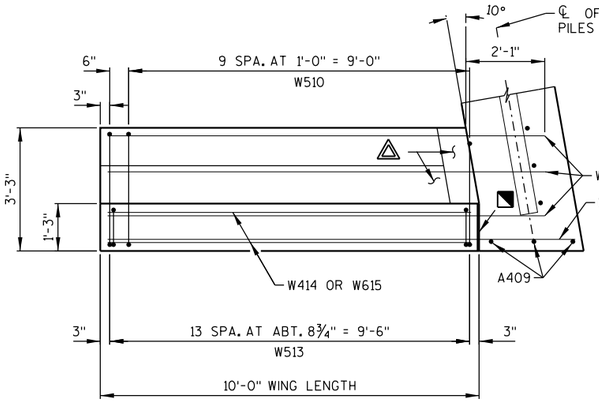


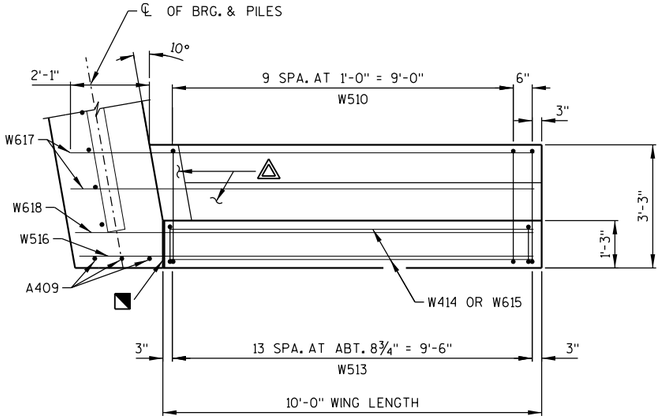
ELEVATION - WING 1



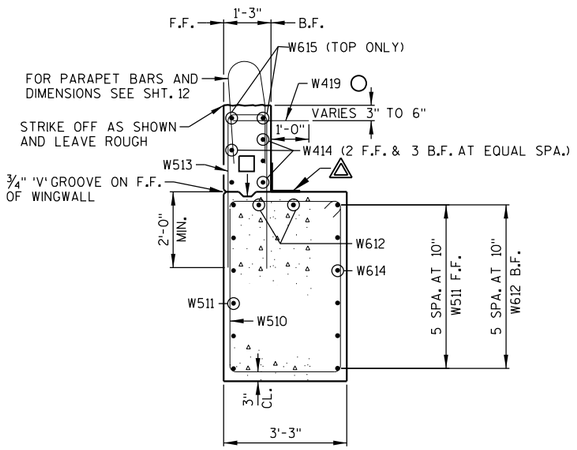
ELEVATION - WING 2



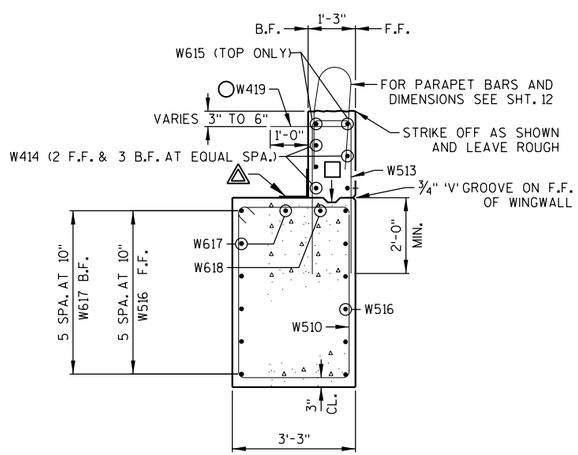
PLAN - WING 1



PLAN - WING 2



SECTION B-B



SECTION C-C

LEGEND

** DIMENSIONS ARE GIVEN AT THE B.F. OF ABUTMENT.

□ OPTIONAL CONSTRUCTION JOINT KEYWAY FORMED BY A BEVELED 2"×6", WITH RUBBERIZED MEMBRANE WATERPROOFING ON BACKFACE.

○ W419 AT 1'-0" ALONG ENTIRE WING LENGTH. PLACE IN WINGS ADJACENT TO SURFACE DRAIN APRON ONLY.

FOR ADDITIONAL SYMBOL DESCRIPTIONS SEE SHT. 5.

NOTE

FOR TYPICAL FILL SECTION AT WING TIPS SEE SHT. 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-137

DRAWN BY TRA | PLANS CK'D. EAN

WINGS 1 & 2

SHEET 6 OF 12
54

8

8

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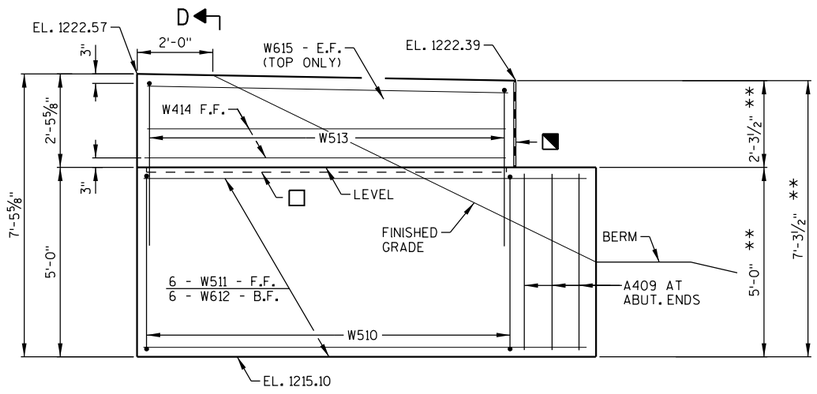
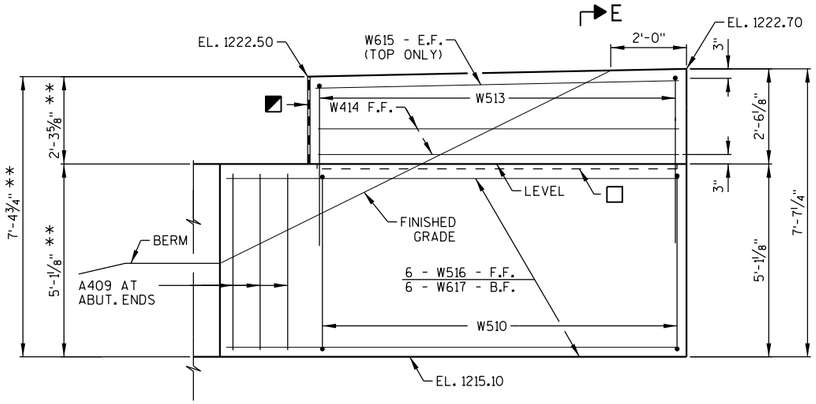
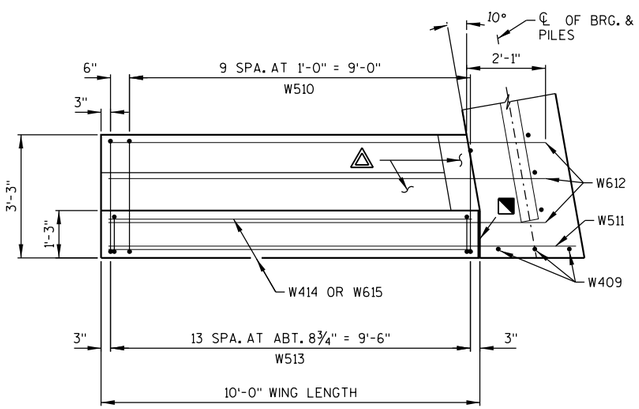


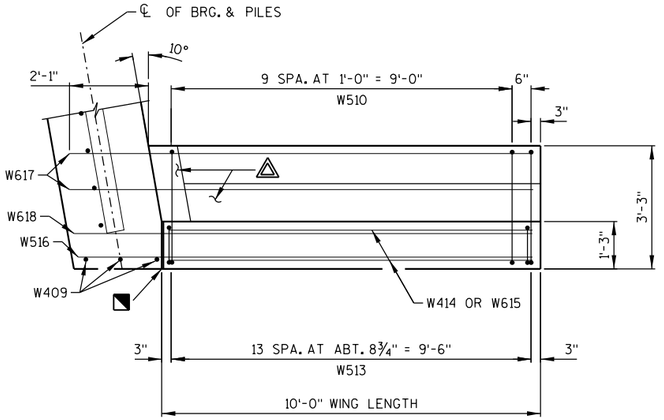
ELEVATION - WING 3



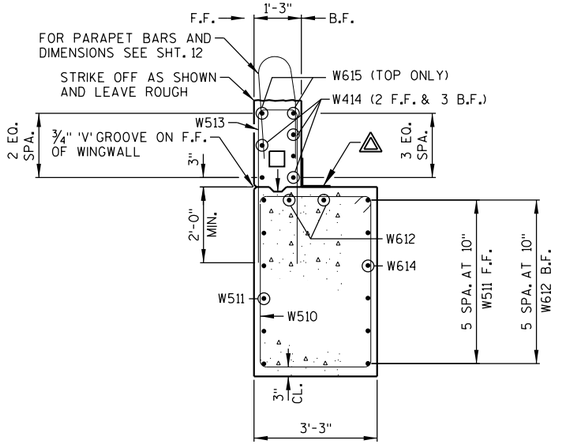
ELEVATION - WING 4



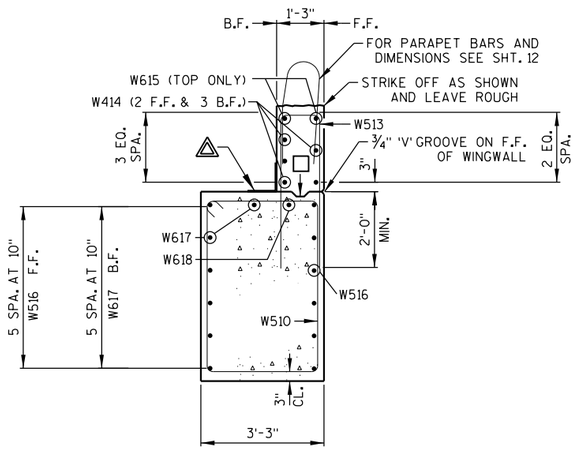
PLAN - WING 3



PLAN - WING 4



SECTION D-D



SECTION E-E

LEGEND

** DIMENSIONS ARE GIVEN AT THE B.F. OF ABUTMENT.

☐ OPTIONAL CONSTRUCTION JOINT KEYWAY FORMED BY A BEVELED 2"×6", WITH RUBBERIZED MEMBRANE WATERPROOFING ON BACKFACE.

FOR ADDITIONAL SYMBOL DESCRIPTIONS SEE SHT. 5.

NOTE

FOR TYPICAL FILL SECTION AT WING TIPS SEE SHT. 2

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-137

DRAWN BY TRA | PLANS CK'D. EAN

WINGS 3 & 4

SHEET 7 OF 12
55

8

8

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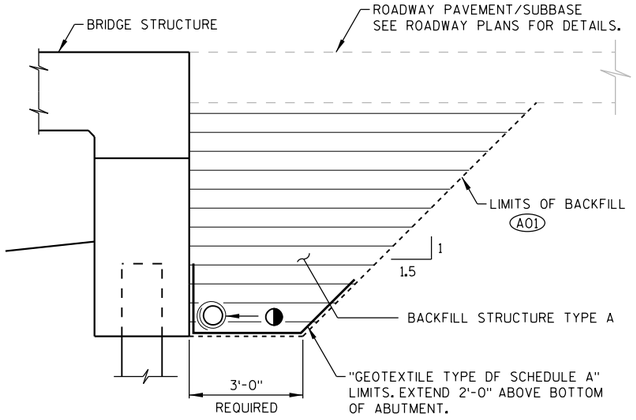


SECTION THRU ABUTMENT

BACKFILL STRUCTURE LIMITS

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-37-458" SHALL BE THE EXISTING GROUNDLINE.

(A01) BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

AT THE BACKFACE 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.

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 THE BOTTOM OF THE ABUTMENT.

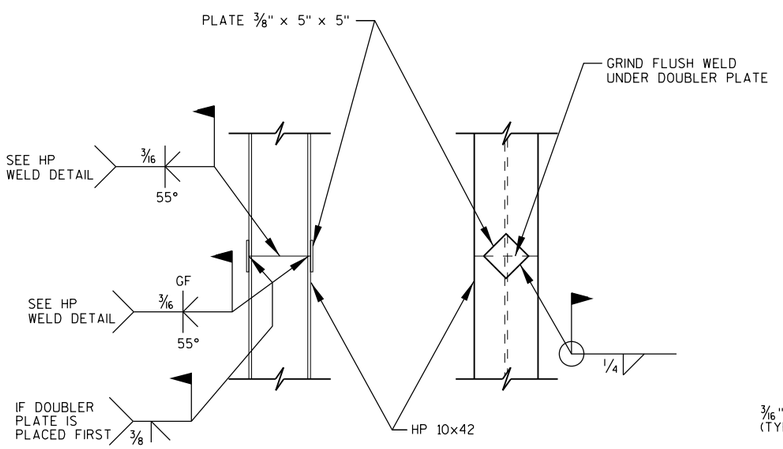
◑ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO "EXCAVATION FOR STRUCTURES BRIDGES B-37-458".

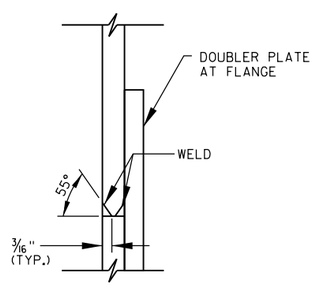
BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
BOTH ABUTMENTS INCLUDED IN THIS BILL OF BARS

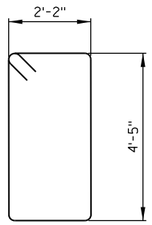
MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
UNCOATED BARS						TOTAL WEIGHT = 3,830 LBS
A601	22	32-8			ABUT. F.F. TOP & BOTTOM	HORIZ.
A502	84	14-0	X		ABUT. STIRRUP	VERT.
A803	14	31-8	X		ABUT. B.F.	HORIZ.
A404	6	9-0			ABUT. TOP	HORIZ.
A505	10	4-9	X		ABUT. TOP	VERT.
A407	20	2-3			ABUT. DOWELS AT PILES	VERT.
A408	10	28-0	X		ABUT. AT PILES	VERT.
A409	12	4-7			ABUT. AT ENDS	VERT.
COATED BARS						TOTAL WEIGHT = 2,560 LBS
A506	62	2-0			ABUT. DOWELS	VERT.
W510	44	15-6	X		WINGS 1 - 4 STIRRUP	VERT.
W511	12	12-4			WINGS 1 & 3 F.F.	HORIZ.
W612	16	11-7			WINGS 1 & 3 B.F. & TOP	HORIZ.
W513	56	9-9	X		WINGS 1 - 4 TOP	VERT.
W414	20	9-7			WINGS 1 - 4 TOP	HORIZ.
W615	8	9-7			WINGS 1 - 4 TOP	HORIZ.
W516	12	11-11			WINGS 2 & 4 F.F.	HORIZ.
W617	14	12-4			WINGS 2 & 4 B.F. & TOP	HORIZ.
W618	2	12-1			WINGS 2 & 4 TOP	HORIZ.
W419	18	2-0			WINGS 1 & 2 DOWELS	HORIZ.



PILE SPLICE DETAIL



WELD DETAIL



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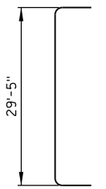

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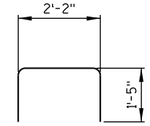

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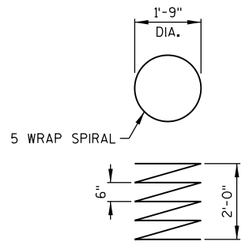

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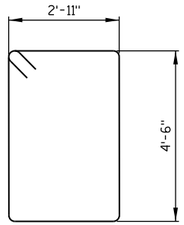

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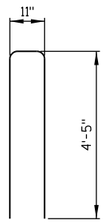

W613

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-137

DRAWN BY TRA | PLANS CK'D. EAN

ABUTMENT DETAILS

SHEET 8 OF 12
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8

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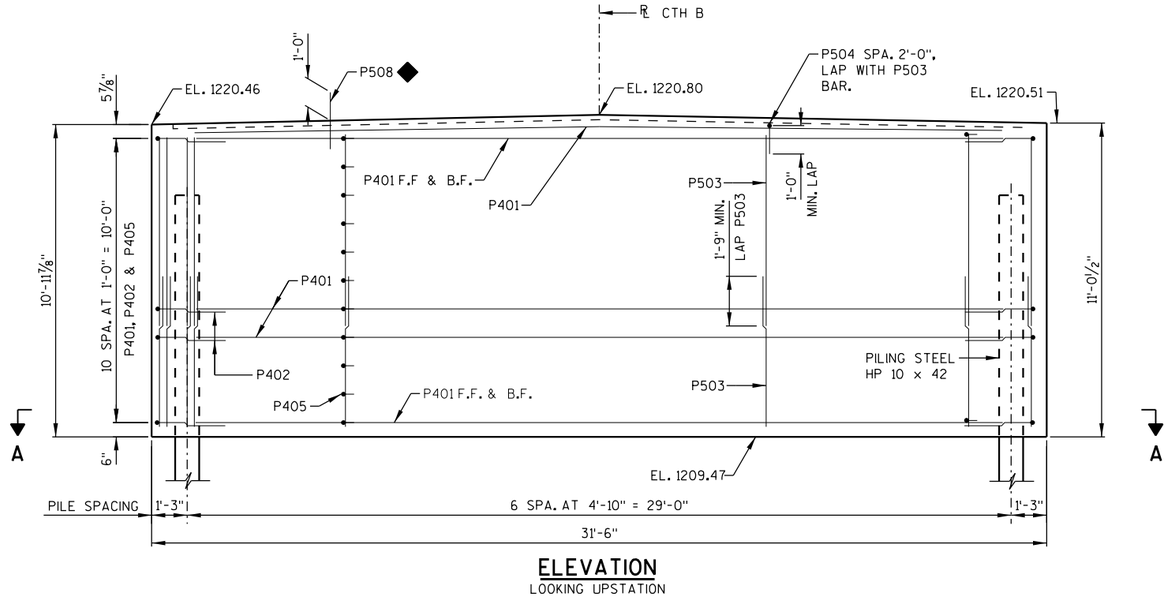
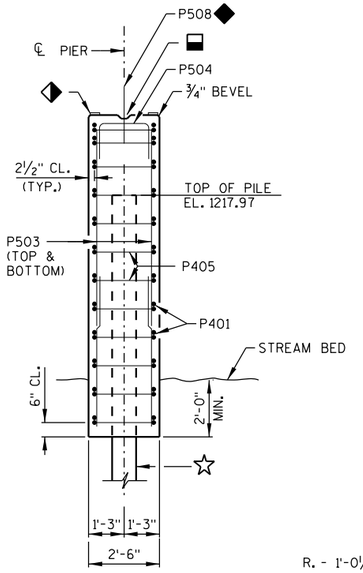
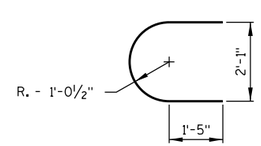


ELEVATION
LOOKING UPSTATION



TYPICAL SECTION THRU PIER



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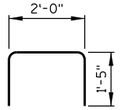

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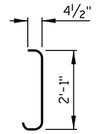

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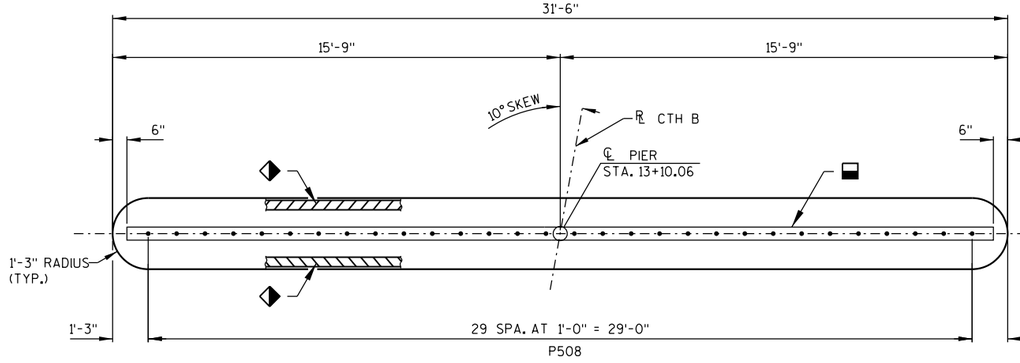
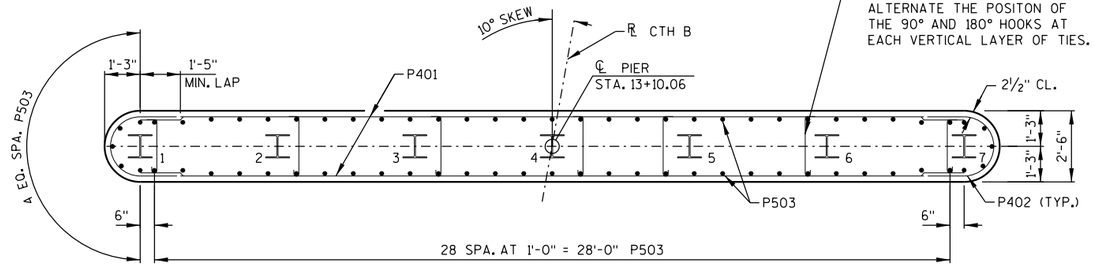


PLAN



SECTION A-A

BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
LENGTH SHOWN FOR BAR IS AN AVG. LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION	
UNCOATED BARS					TOTAL WEIGHT = 1,680 LBS	
P401	24	29-0			PIER BODY	HORIZ.
P402	22	6-2	X		PIER BODY AT ENDS	HORIZ.
P503	136	6-4			PIER BODY	VERT.
P504	15	4-7	X		PIER BODY AT TOP	HORIZ.
P405	77	2-11	X		PIER BODY AT PILES	HORIZ.
COATED BARS					TOTAL WEIGHT = 70 LBS	
P506	30	2-0			PIER BODY - DOWELS	VERT.

LEGEND
FOR SYMBOL DESCRIPTIONS SEE SHT. 5

NOTES
EXCAVATE TO EL. 1209.47 BEFORE DRIVING PILING. EXCAVATION IS INCIDENTAL TO BID ITEM "EXCAVATION FOR STRUCTURES B-54-137"

AT PIER 1, CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH STANDARD SPEC 502.3.5.3. CONCRETE POURED UNDERWATER SHALL NOT EXCEED 10.0 FEET IN DEPTH, UNLESS APPROVED OTHERWISE.

PILE NOTE
ABUTMENT TO BE SUPPORTED ON PILING STEEL HP 10-INCH x 42 LB. PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30'-0" LONG.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-137

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PIER

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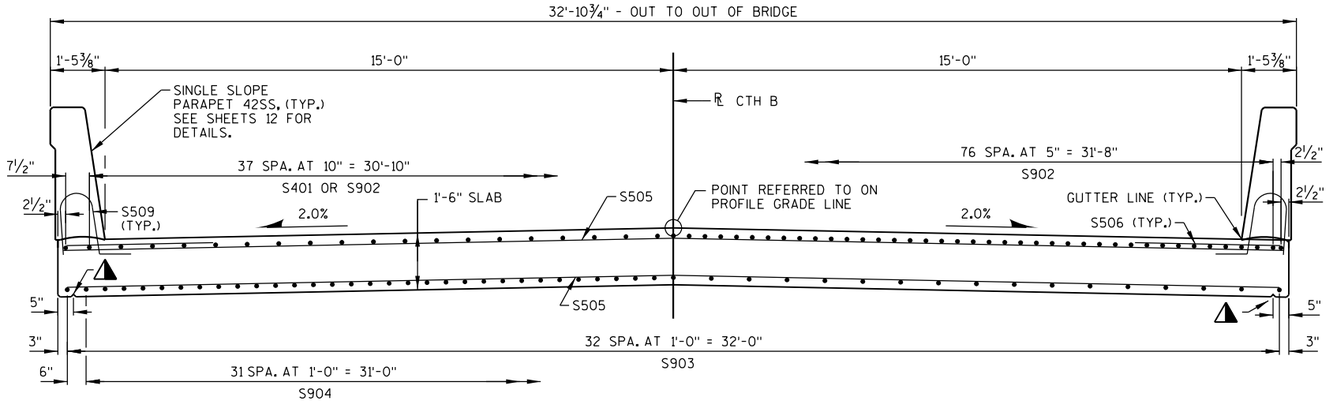


IN SPAN AT PIER

CROSS SECTION THRU ROADWAY

(LOOKING UPSTATION)

NOTES

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

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

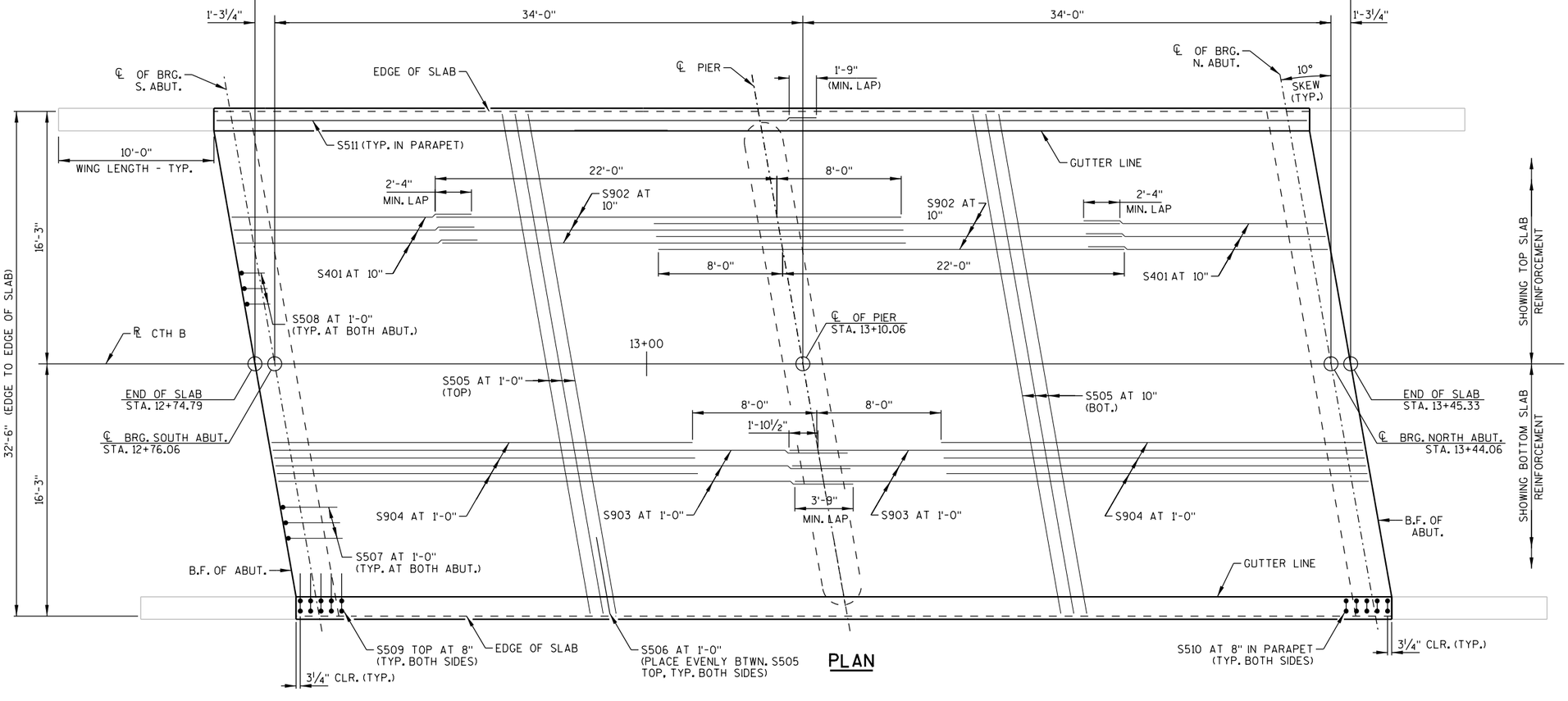
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, ℄ OF PIER AND AT 5/10 PT. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF DECK AND CROWN OR ℄.

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

LEGEND

▲ ¾" CONTINUOUS V-GROOVE, TERMINATE 6" FROM FRONT FACE OF ABUTMENTS.



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-137

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SUPERSTRUCTURE

SHEET 10 OF 12
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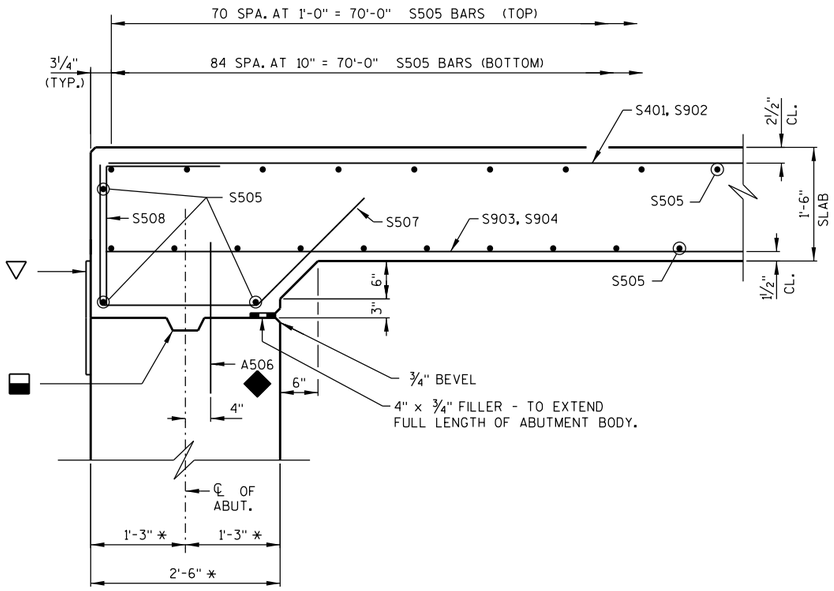
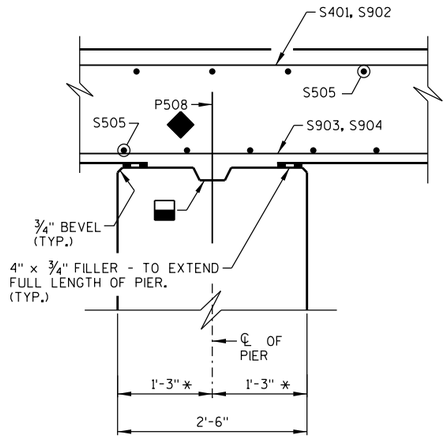


ABUTMENT DETAIL



PIER DETAIL

LEGEND

* DIMENSION TAKEN NORMAL TO SUBSTRUCTURE UNIT.

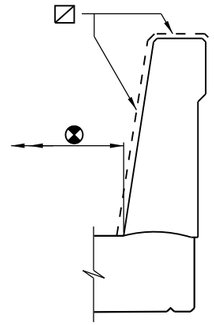
COAT WITH "PIGMENTED SURFACE SEALER" AS PER THE STANDARD SPECIFICATIONS.

KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6".

18" RUBBERIZED MEMBRANE WATERPROOFING, SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

A506 OR P508 SPACED 1'-0", COATED. BARS MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT PRIOR TO ITS INITIAL SET EMBED 1'-0".

COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER STANDARD SPECIFICATIONS.



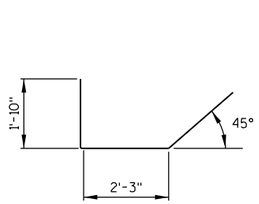
SURFACE PROTECTION DETAIL

PARTIAL LONGITUDINAL SECTION

BILL OF BARS

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
BOTH ABUTMENTS INCLUDED IN THIS BILL OF BARS

COATED BARS					TOTAL WEIGHT = 33,730 LBS	
S401	80	15-6			SLAB - TOP AT ENDS	HORIZ.
S902	80	30-0			SLAB - TOP	HORIZ.
S903	66	37-0			SLAB - BOTTOM	HORIZ.
S904	64	27-2			SLAB - BOTTOM	HORIZ.
S505	162	32-7			SLAB - TOP & BOTTOM	TRANS.
S506	140	5-0			SLAB - TOP AT SIDES	TRANS.
S507	66	6-0	X		SLAB AT ABUT	VERT.
S508	66	3-3	X		SLAB AT ABUT	VERT.
S509	212	4-5	X		SLAB - PARAPET	VERT.
S510	212	6-8	X		PARAPET	VERT.
S511	32	36-0			PARAPET	HORIZ.



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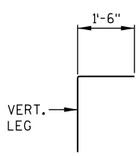

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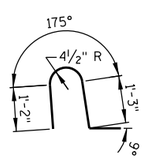

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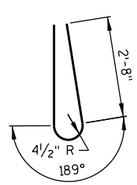

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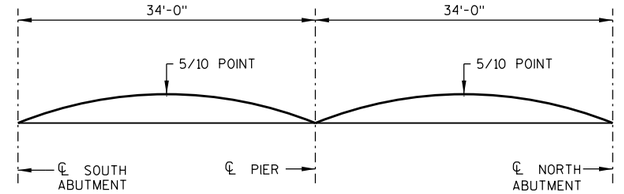

CAMBER DIAGRAM

SPAN 1	CL 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.	CL BRG. PIER
CAMBER (IN.)	0.0	0.2	0.4	0.5	0.5	0.5	0.4	0.3	0.2	0.1	0.0

SPAN 2	CL BRG. PIER	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.	CL BRG. N.
CAMBER (IN.)	0.0	0.1	0.2	0.3	0.4	0.5	0.0	0.5	0.4	0.2	0.0

TOP OF DECK ELEVATIONS - SPAN 1

SPAN 1	CL 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.	CL BRG. PIER
WEST EDGE OF DECK	1222.07	1222.09	1222.11	1222.14	1222.17	1222.20	1222.22	1222.25	1222.28	1222.31	1222.34
CL OF DECK	1222.08	1222.11	1222.13	1222.16	1222.19	1222.22	1222.25	1222.28	1222.31	1222.33	1222.36
EAST EDGE OF DECK	1222.10	1222.13	1222.16	1222.19	1222.21	1222.24	1222.27	1222.30	1222.33	1222.36	1222.39

TOP OF DECK ELEVATIONS - SPAN 2

SPAN 2	CL BRG. PIER	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.	CL BRG. N. ABUT
WEST EDGE OF DECK	1222.34	1222.37	1222.40	1222.42	1222.45	1222.48	1222.51	1222.55	1222.58	1222.63	1222.68
CL OF DECK	1222.36	1222.39	1222.42	1222.45	1222.48	1222.51	1222.54	1222.58	1222.62	1222.67	1222.72
EAST EDGE OF DECK	1222.39	1222.42	1222.44	1222.47	1222.50	1222.54	1222.57	1222.61	1222.66	1222.71	1222.77

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-137

DRAWN BY TRA | PLANS CK'D. EAN

SUPERSTRUCTURE DETAILS

SHEET 11 OF 12
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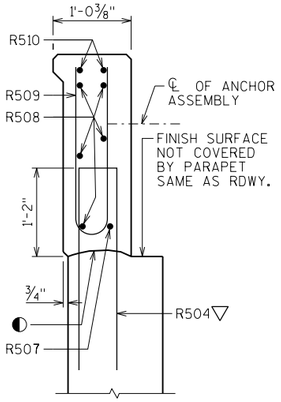
8793-00-72



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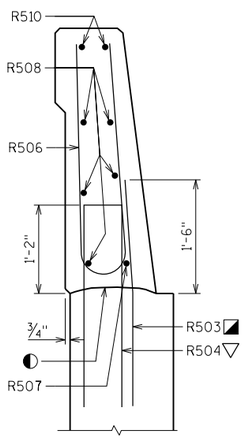

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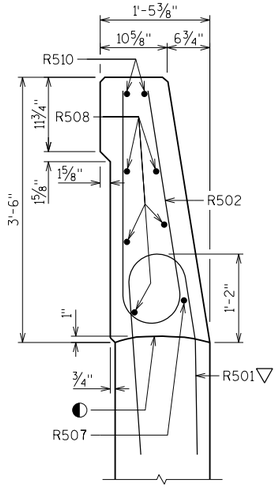

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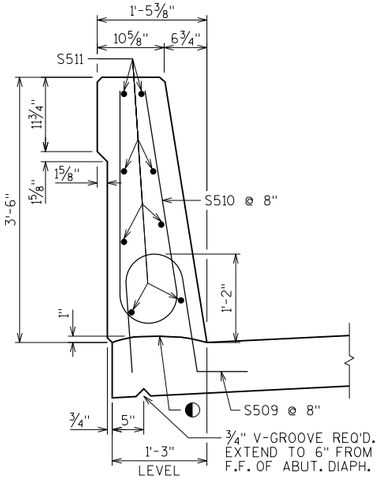
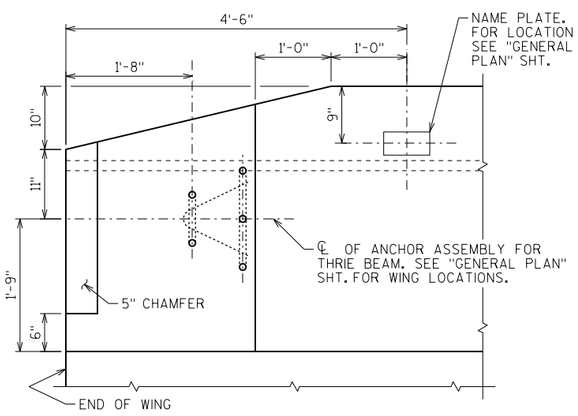


SECTION THRU PARAPET ON DECK



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

BILL OF BARS

FOR ABUTMENT PARAPETS

BAR MARK	COAT	SOUTH ABUT.	NORTH ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	6	6	5'-10	X		PARAPET VERT.
R502	X	6	6	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	2	9'-6"	X		PARAPET HORIZ.
R508	X	10	10	9'-6"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	4	9'-7"	X		PARAPET HORIZ.

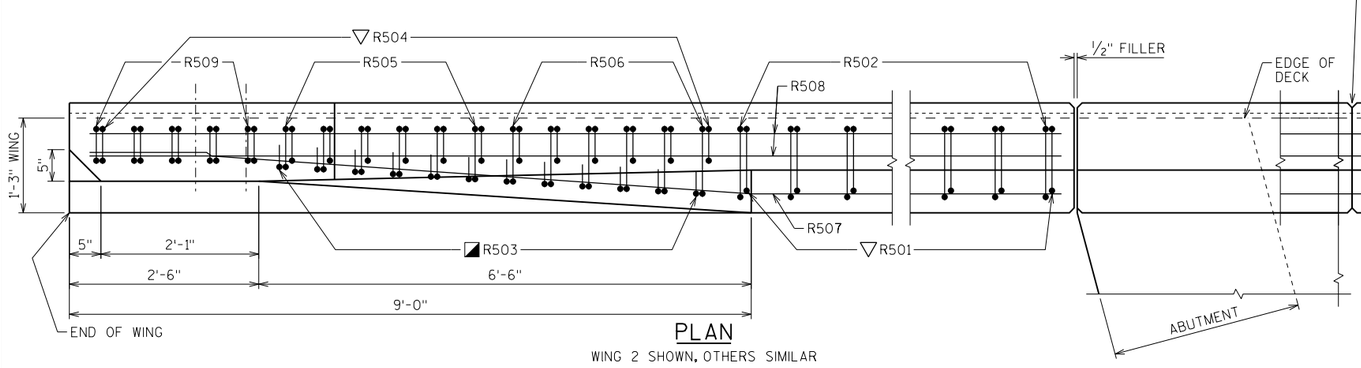
730# FOR SOUTH ABUTMENT
730# FOR NORTH ABUTMENT

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

BAR SERIES TABLE

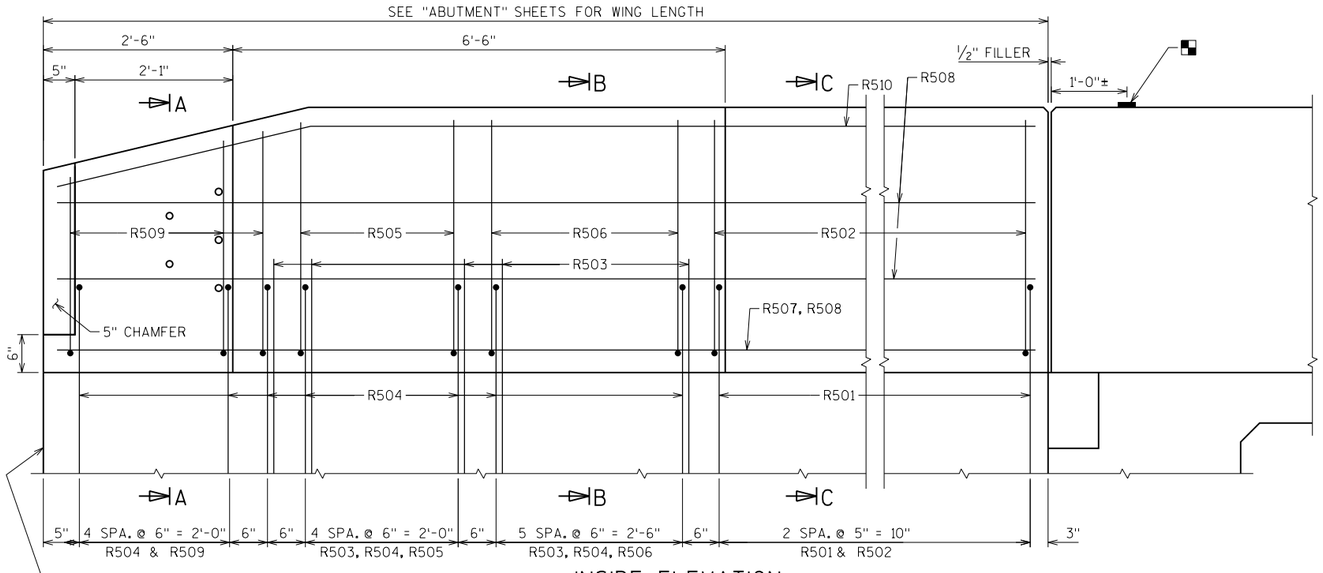
BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.



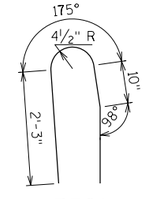
PLAN

WING 2 SHOWN, OTHERS SIMILAR

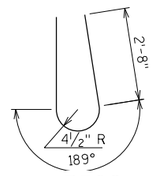


INSIDE ELEVATION

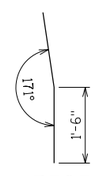
WING 2 SHOWN, OTHERS SIMILAR



R501

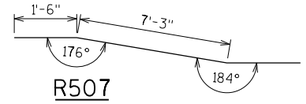


R502

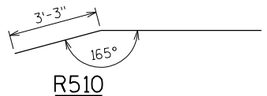


R503

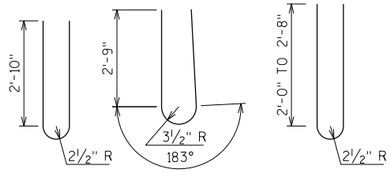
R504



R507



R510



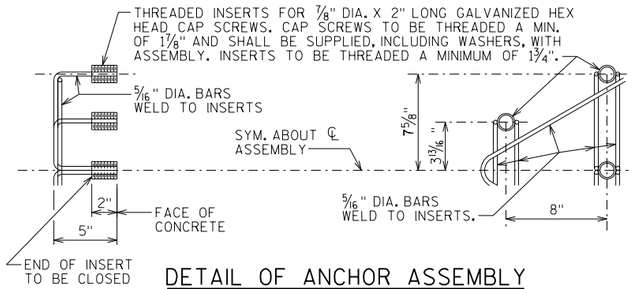
R505 R506 R509

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.

◐ CONST. JOINT - STRIKE OFF AS SHOWN

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

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



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-137

DRAWN BY TRA | PLANS CK'D. EAN

SINGLE SLOPE PARAPET 42SS

SHEET 12 OF 12

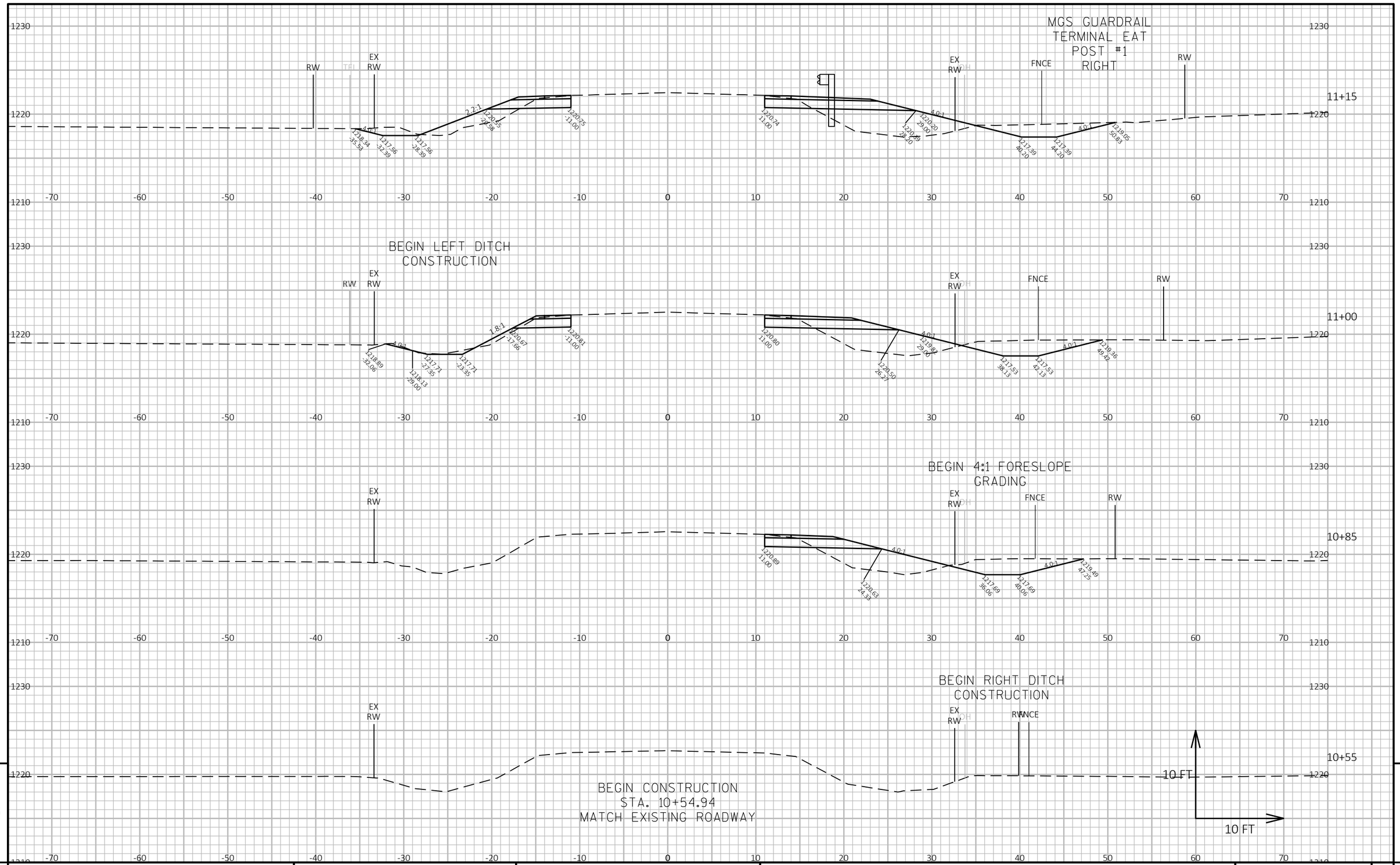
60

8

8

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL 1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
10+54.95	1055		0.0	8.3	0.0	0	0	0	0	0	0
10+84.95	1085	30	22.6	8.3	25.2	13	9	14	0	17	-14
11+00.00	1100	15	31.1	8.3	32.0	15	5	16	0	37	-24
11+14.95	1115	15	29.6	8.3	47.5	17	5	22	0	65	-39
11+29.65	1130	15	19.8	8.3	62.4	13	4	30	0	102	-67
11+39.94	1140	10	17.5	8.3	68.5	7	3	25	0	134	-95
11+50.00	1150	10	14.2	8.3	77.3	6	3	27	0	167	-126
11+59.66	1160	10	10.3	8.3	79.5	4	3	28	0	203	-159
11+64.91	1165	5	10.4	8.3	78.4	2	2	15	0	222	-178
11+84.65	1185	20	10.8	8.3	61.3	8	6	51	0	286	-240
12+00.00	1200	15	11.1	8.3	61.7	6	5	35	0	329	-282
12+09.62	1210	10	11.8	8.3	63.6	4	3	22	0	357	-309
12+33.79	1234	24	11.9	8.3	41.8	11	7	47	0	416	-365
12+50.00	1250	16	42.4	8.3	35.0	16	5	23	0	445	-382
12+74.79	1275	25	40.7	8.3	77.4	38	8	52	0	509	-416
					Column totals	160	67	407			

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL 1.25	MASS ORDINATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
13+10.06	1310	0	0.0	0.0	0.0	0	0	0	0	0	0
13+45.33	1345	35	45.3	8.3	64.9	30	5	42	0	53	-29
13+50.00	1350	5	48.4	8.3	42.4	8	1	9	0	65	-34
13+86.22	1386	36	44.1	8.3	25.8	62	11	46	0	122	-40
14+00.00	1400	14	12.0	8.3	41.9	14	4	17	0	143	-51
14+10.50	1411	11	11.7	8.3	55.5	5	3	19	0	167	-74
14+35.48	1435	25	11.5	8.3	85.0	11	8	65	0	248	-152
14+50.00	1450	15	11.5	8.3	92.1	6	4	48	0	308	-210
14+55.21	1455	5	11.6	8.3	94.6	2	2	18	0	330	-232
14+60.47	1460	5	11.8	8.3	122.8	2	2	21	0	357	-257
14+80.19	1480	20	13.2	8.3	82.4	9	6	75	0	450	-348
14+90.46	1490	10	14.6	8.3	49.2	5	3	25	0	482	-377
15+00.00	1500	10	15.3	8.3	32.7	5	3	14	0	500	-393
15+05.18	1505	5	14.7	8.3	37.9	3	2	7	0	508	-400
15+20.46	1520	15	11.8	8.3	41.7	7	5	23	0	536	-425
15+35.18	1535	15	6.5	8.3	24.9	5	4	18	0	559	-447
15+50.00	1550	15	6.5	8.3	9.1	4	5	9	0	571	-460
15+65.17	1565	15	0.0	8.3	0.0	2	5	3	0	574	-466
					Column totals	180	73	459			



9

9

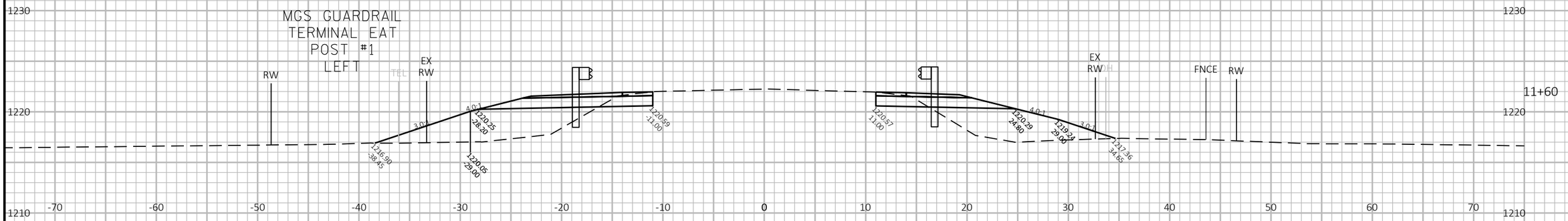
PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	CROSS SECTIONS: CTH B	SHEET 63	E

FILE NAME : C:\ONEDRIVE\AECOM DIRECTORY\NEMEC, ELIZABETH - 60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0902_XS.DWG
LAYOUT NAME - 090201_xs

PLOT DATE : 10/26/2020 1:19 PM PLOT BY : DAY, JOHN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

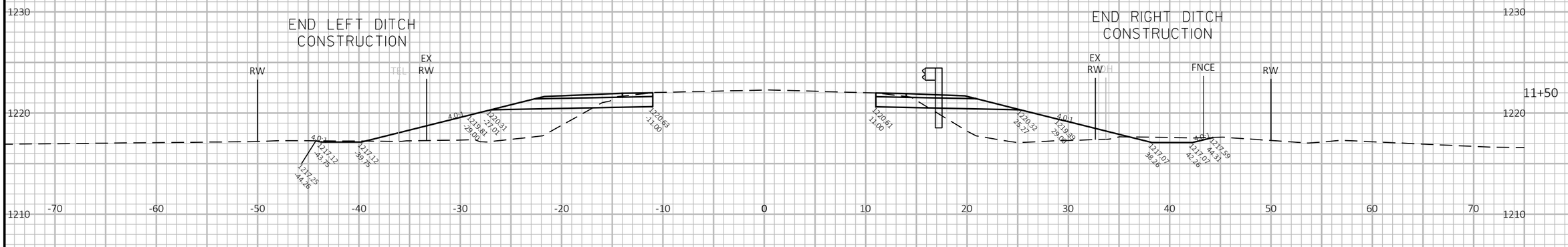
WISDOT/CADDS SHEET 49

MGS GUARDRAIL
TERMINAL EAT
POST #1
LEFT

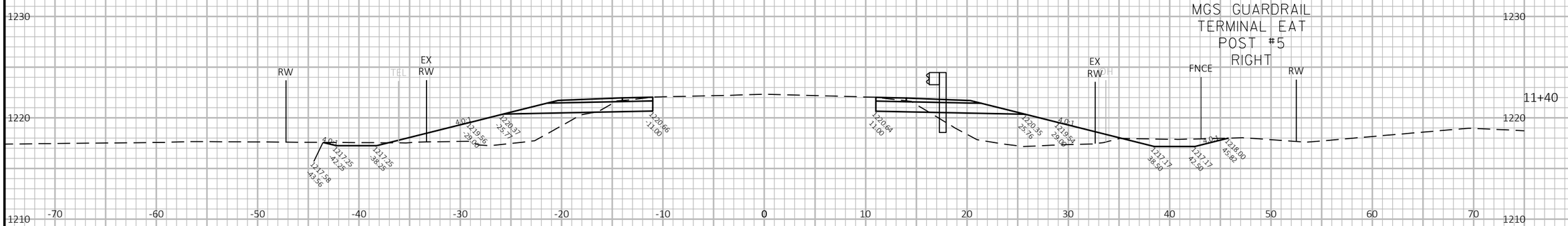


END LEFT DITCH
CONSTRUCTION

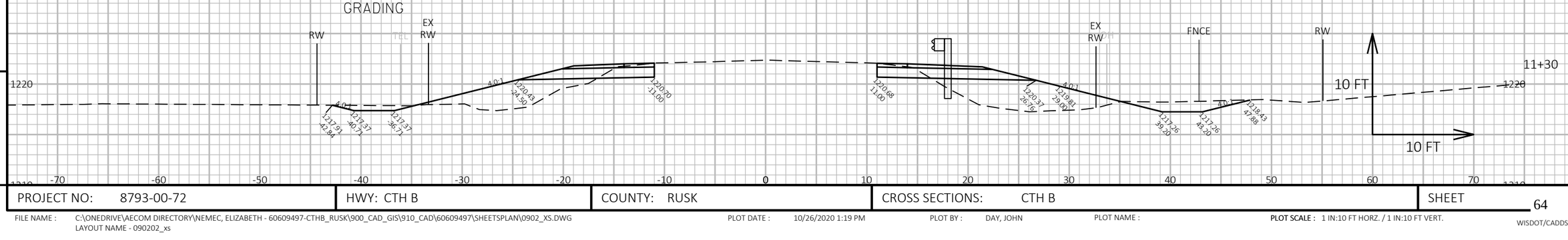
END RIGHT DITCH
CONSTRUCTION



MGS GUARDRAIL
TERMINAL EAT
POST #5
RIGHT



BEGIN 4:1 FORESLOPE
GRADING



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9

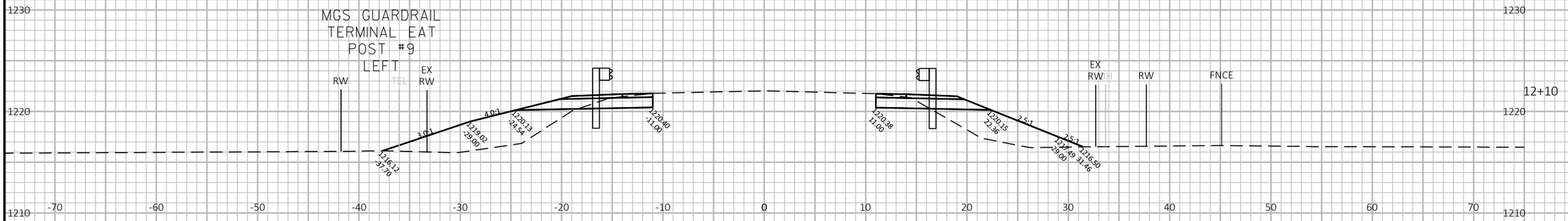
PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	CROSS SECTIONS: CTH B	SHEET 64	E

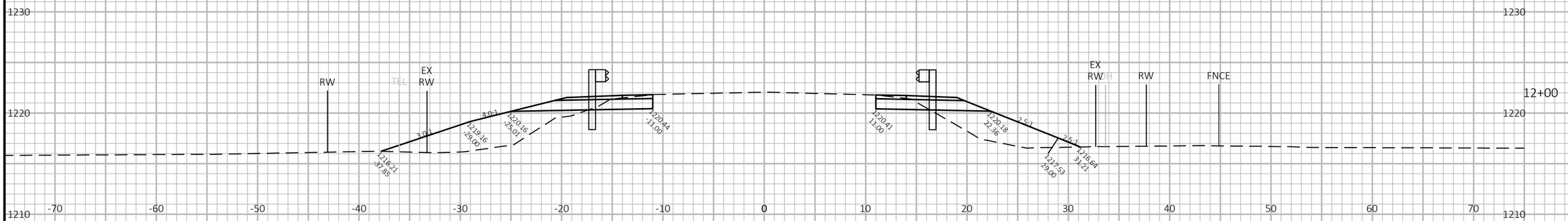
FILE NAME : C:\ONEDRIVE\AECOM DIRECTORY\NEMEC, ELIZABETH - 60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0902_XS.DWG
LAYOUT NAME - 090202_xs

PLOT DATE : 10/26/2020 1:19 PM PLOT BY : DAY, JOHN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

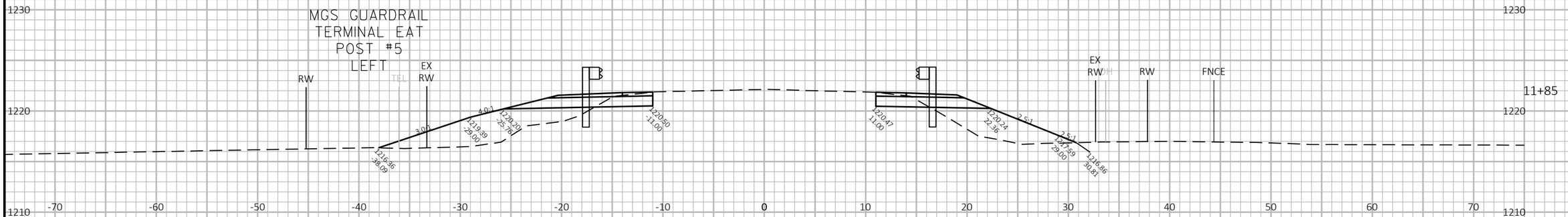
WISDOT/CADDS SHEET 49

MGS GUARDRAIL
TERMINAL EAT
POST #9
LEFT

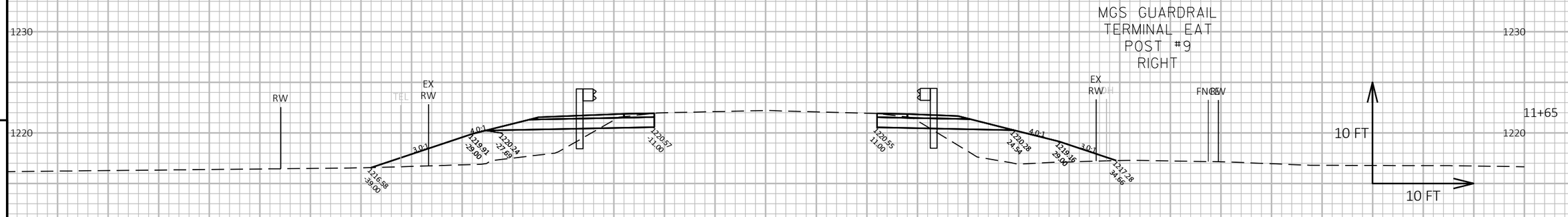




MGS GUARDRAIL
TERMINAL EAT
POST #5
LEFT



MGS GUARDRAIL
TERMINAL EAT
POST #9
RIGHT



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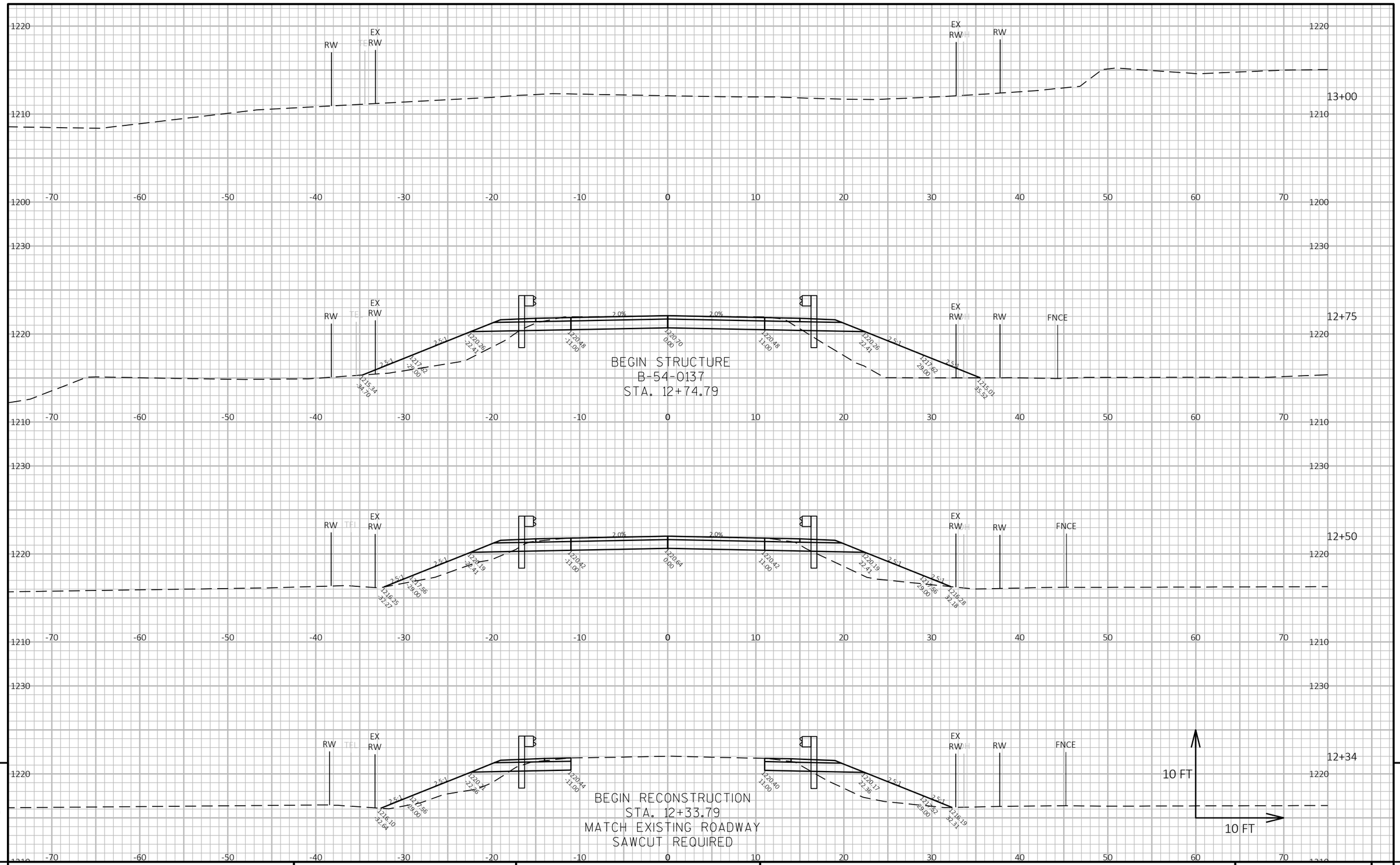
9

PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	CROSS SECTIONS: CTH B	SHEET 65	E

FILE NAME : C:\ONEDRIVE\AECOM DIRECTORY\NEMEC, ELIZABETH - 60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0902_XS.DWG
LAYOUT NAME - 090203_xs

PLOT DATE : 10/26/2020 1:19 PM PLOT BY : DAY, JOHN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

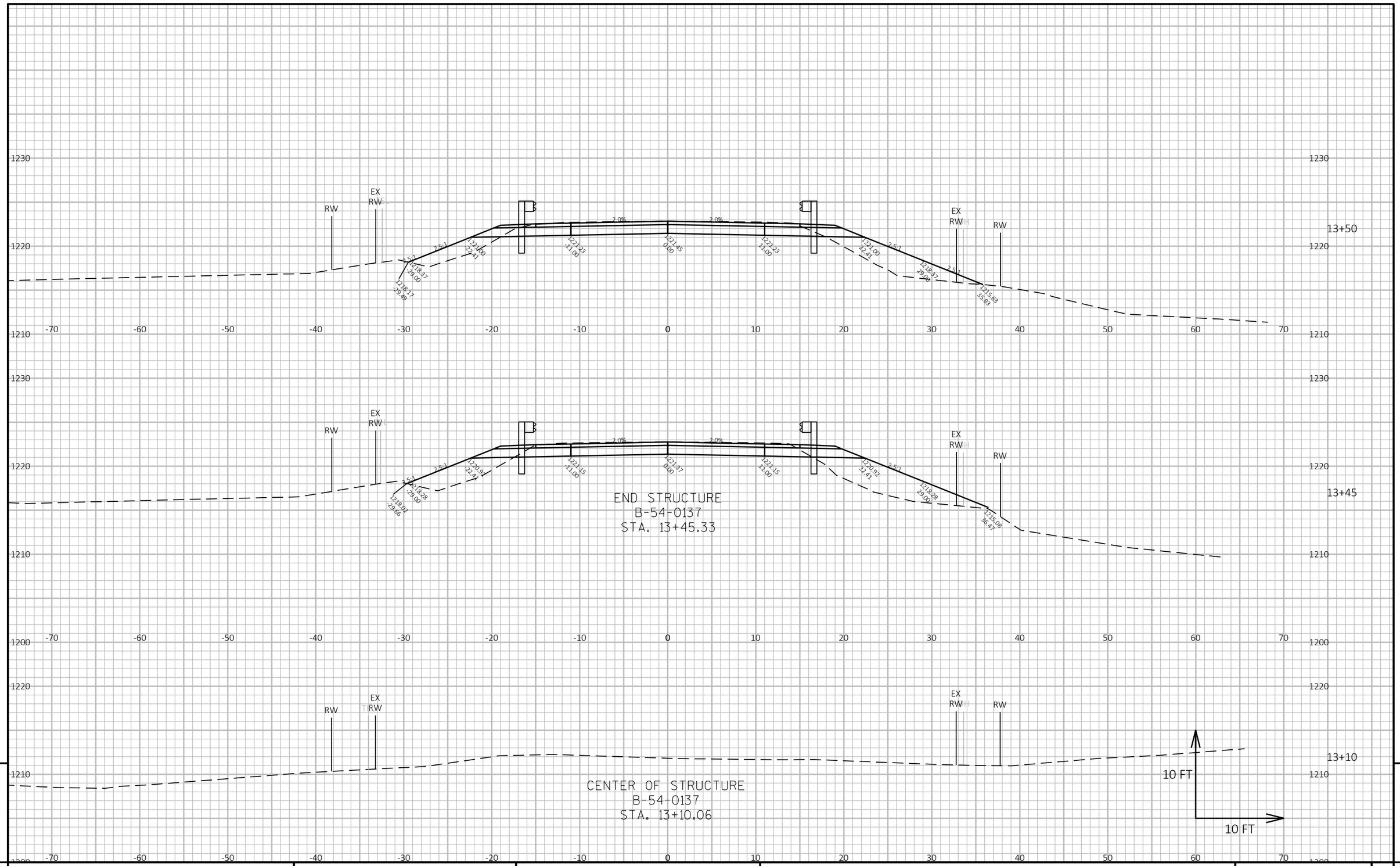
9

PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	CROSS SECTIONS: CTH B	SHEET 66	E

FILE NAME : C:\ONEDRIVE\AECOM DIRECTORY\NEMEC, ELIZABETH - 60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0902_XS.DWG
LAYOUT NAME - 090204_xs

PLOT DATE : 10/26/2020 1:19 PM PLOT BY : DAY, JOHN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

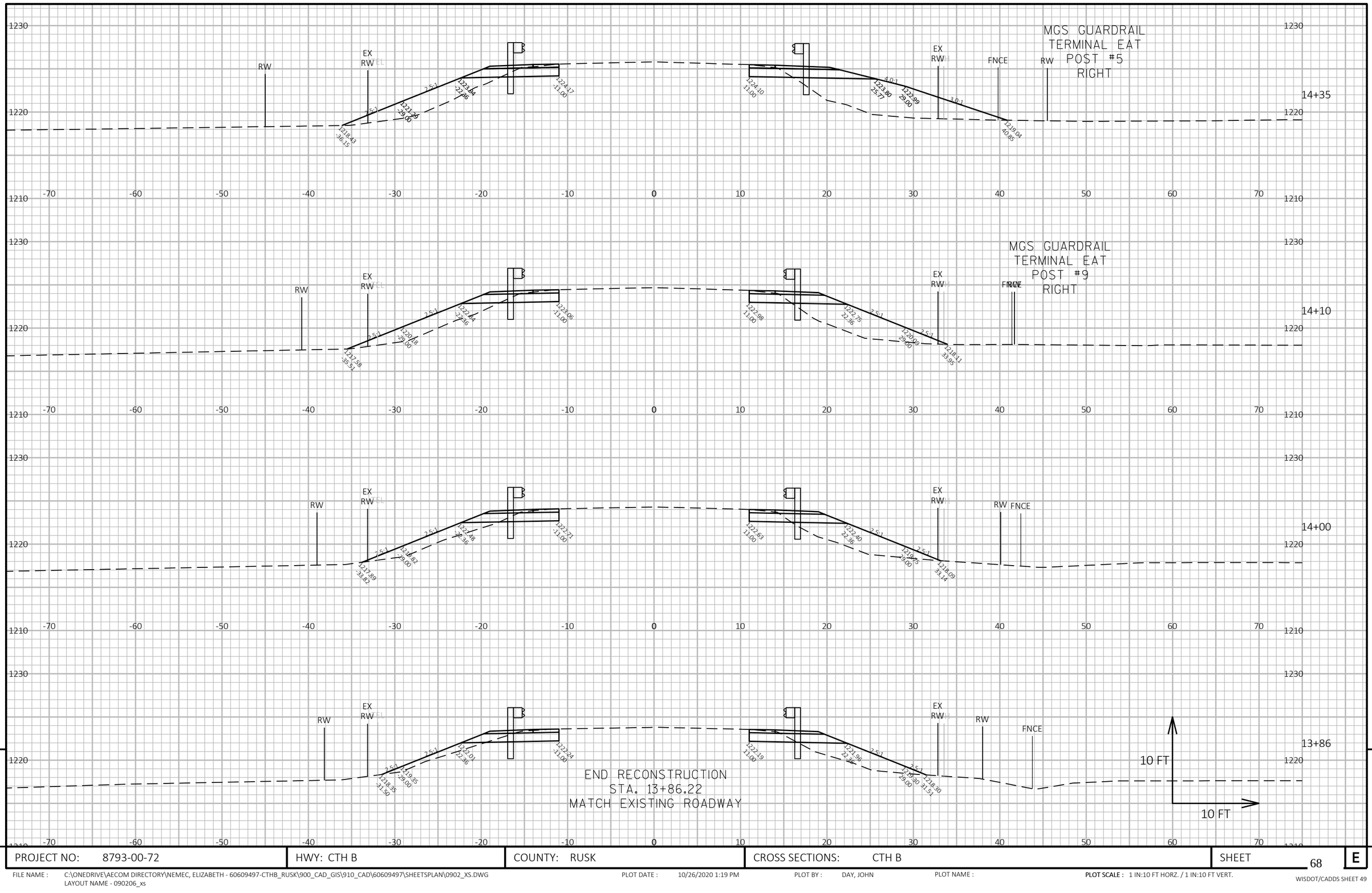


9

9

PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	CROSS SECTIONS: CTH B	SHEET 67	E

FILE NAME : C:\ONEDRIVE\AECOM DIRECTORY\NEMEC, ELIZABETH - 60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0902_XS.DWG
LAYOUT NAME - 090205_xs
PLOT DATE : 10/26/2020 1:19 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49



9

9

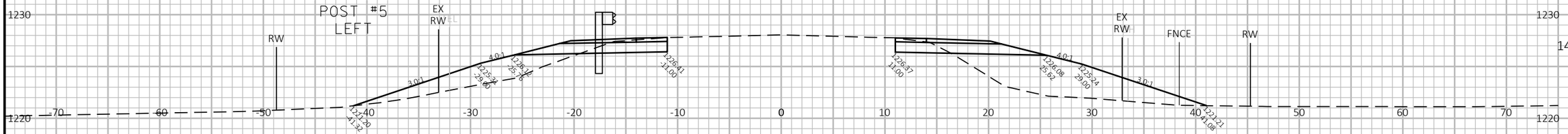
PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	CROSS SECTIONS: CTH B	SHEET 68	E

FILE NAME : C:\ONEDRIVE\AECOM DIRECTORY\NEMEC, ELIZABETH - 60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0902_XS.DWG
LAYOUT NAME - 090206_xs

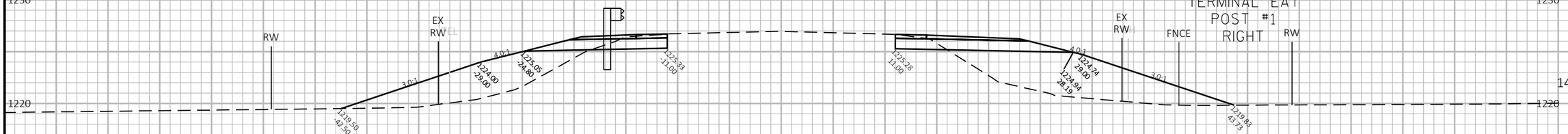
PLOT DATE : 10/26/2020 1:19 PM PLOT BY : DAY, JOHN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

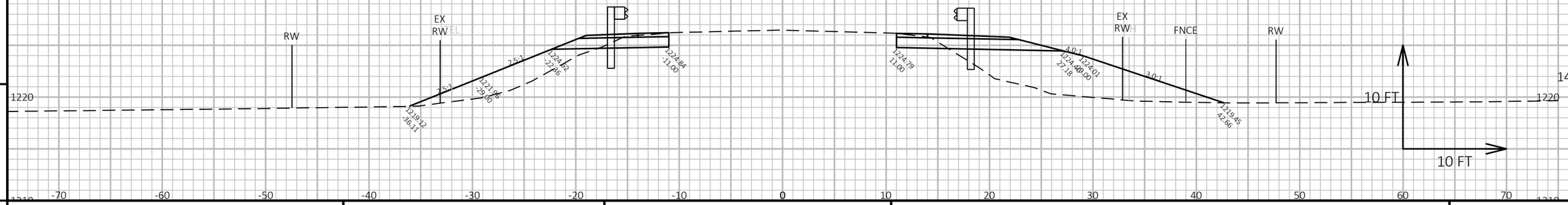
MGS GUARDRAIL
TERMINAL EAT
POST #5
LEFT



MGS GUARDRAIL
TERMINAL EAT
POST #1
RIGHT



MGS GUARDRAIL
TERMINAL EAT
POST #9
LEFT



PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	CROSS SECTIONS: CTH B	SHEET 69	E

FILE NAME : C:\ONEDRIVE\AECOM DIRECTORY\NEMEC, ELIZABETH - 60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0902_XS.DWG
LAYOUT NAME - 090207_xs

PLOT DATE : 10/26/2020 1:19 PM PLOT BY : DAY, JOHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

END 4:1 FORESLOPE GRADING

RW

EX RW

EL

1225.94
-36.46

3.0:1

1228.43
-29.00

4.0:1

1229.50
-24.75

1229.77
-11.00

EX RW

FNCE

15+35

MGS GUARDRAIL TERMINAL EAT POST #1 LEFT

RW

EX RW

EL

1223.85
-39.56

3.0:1

1227.46
-29.02

4.0:1

1227.57
-26.19

1227.91
-11.00

1227.88
11.00

2.8:1

1227.68
20.58

3.0:1

1224.72
29.00

1223.76
31.81

EX RW

RW

FNCE

15+05

RW

EX RW

EL

1225.54
-32.10

3.0:1

1227.27
-27.69

4.0:1

1226.84
-29.00

1227.60
-11.00

1227.86
11.00

1227.35
21.75

3.2:1

1225.08
29.00

3.0:1

1223.22
34.52

EX RW

FNCE

RW

15+00

END 4:1 FORESLOPE GRADING

RW

EX RW

EL

1225.51
-30.92

3.0:1

1226.45
-29.00

4.0:1

1226.76
-26.76

1227.03
-11.00

1226.99
11.00

1226.73
24.27

4.0:1

1225.84
29.00

3.0:1

1227.08
30.00

EX RW

FNCE

RW

14+90

10 FT

10 FT

9

9

PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	CROSS SECTIONS: CTH B	SHEET 70	E

FILE NAME : C:\ONEDRIVE\AECOM DIRECTORY\NEMEC, ELIZABETH - 60609497-CTHB_RUSK\900_CAD_GIS\910_CAD\60609497\SHEETSPLAN\0902_XS.DWG
LAYOUT NAME - 090208_xs

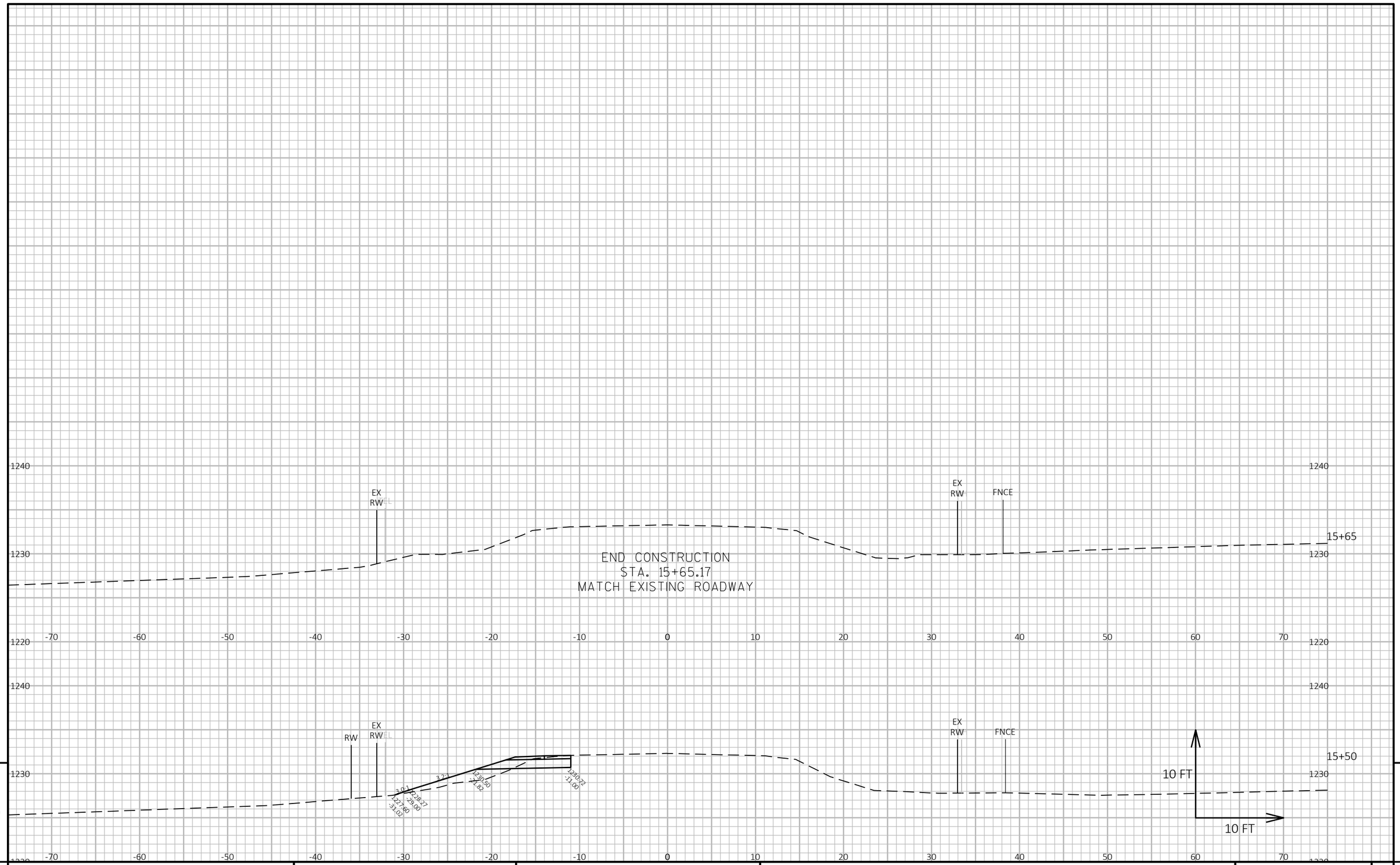
PLOT DATE : 10/26/2020 1:19 PM

PLOT BY : DAY, JOHN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 8793-00-72	HWY: CTH B	COUNTY: RUSK	CROSS SECTIONS: CTH B	SHEET 71	E

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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