RHI | MARCH 2018

PROJECT ID: 9828-00-70

WITH: N/A

COUNTY: IRON

ORDER OF SHEETS

TOTAL SHEETS = 66

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9828-00-70		

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

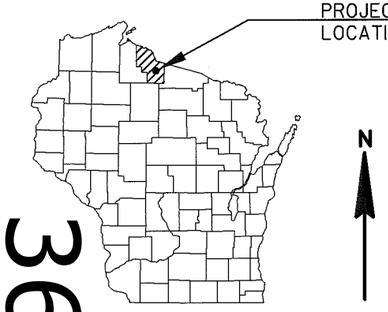
T MERCER, CRAMER LAKE ROAD

TURTLE RIVER BRIDGE B-26-042

LOCAL STREET

IRON COUNTY

STATE PROJECT NUMBER
9828-00-70

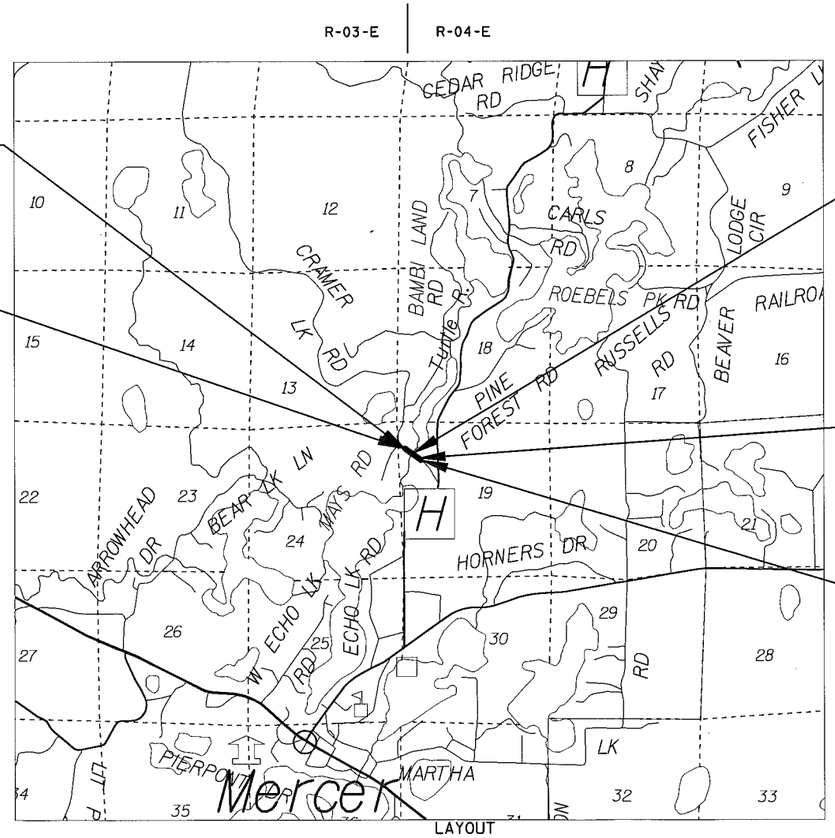


DESIGN DESIGNATION

A.A.D.T.	2018	= 100
A.A.D.T.	2038	= 170
D.H.V.		= N/A
D.D.		= N/A
T.		= 10%
DESIGN SPEED		= 45 MPH
ESALS		= 29,200

BEGIN PROJECT
STA 8+50.00
Y = 277,565.638
X = 776,673.011

BEGIN CONSTRUCTION
STA 7+25.00



STRUCTURE B-26-42

END PROJECT
STA 11+50.00

END CONSTRUCTION
STA 13+00.00

LAYOUT

SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.057 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, IRON COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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)	
FENCE LINE		**UTILITIES**	
SLOPE INTERCEPT		OVERHEAD	OH
REFERENCE LINE		ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
		STORM SEWER	SS
MARSH AREA		TELEPHONE	T
		TELEVISION	TV
WOODED OR SHRUB AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

ACCEPTED FOR TOWN OF MERCER

DATE: 10/17/17 (Signature)

Chairman (Title of Offical)

ORIGINAL PLANS PREPARED BY

CORRE

KEVIN L. MEYER E-38309-006 ELK MOUND WI WISCONSIN PROFESSIONAL ENGINEER

10/4/17

DATE: _____ (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor: CORRE, INC

Designer: CORRE, INC

Management Conultant: CEDAR CORPORATION

APPROVED FOR THE DEPARTMENT

DATE: 10-30-2017

MANAGEMENT CONSULTANT SIGNATURE

E

2

GENERAL NOTES:

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO NAV 88.

BEARINGS SHOWN ON THE PLANS ARE GRID BEARINGS TO THE NEAREST SECOND

CURVE DATA IS BASED ON THE ARC DEFINITION.

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

UTILITY REFERENCE LINES ON THE CROSS SECTIONS ARE FOR HORIZONTAL REFERENCE ONLY.

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

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS, EXACT LOCATIONS WILL BE DETERMINED BY THE E.C.I.P AND APPROVED BY THE ENGINEER IN THE FIELD.

SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND IN PLACE PRIOR TO REMOVALS.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOILED/TOPSOILED, FERTILIZED, AND SEEDED AND MULCHED.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING PAVEMENTS AT REMOVAL LIMITS.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS BUT IS MEASURED AND PAID FOR AS COMMON EXCAVATION.

UTILITY CONTACTS

* CENTURYLINK

COMMUNICATION
BRIAN HUHN
425 ELLINGSON AVENUE
PO BOX 78
HAWKINS, WI 54530

TELEPHONE: 715-532-0023
E-MAIL: BRIAN.HUHN@CENTURYLINK.COM

* WE ENERGIES

GAS
AL JABLONOWSKI
4352 COUNTY ROAD B
LAND O'LAKES, WI 54540

TELEPHONE: 906-779-2472
E-MAIL: AL.JABLONOWSKI@WE-ENERGIES.COM

* DENOTES DIGGERS HOTLINE MEMBER

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

TOWN CONTACT

JOHN SENDRA
TOWN OF MERCER CHAIRMAN
PO BOX 149
MERCER, WI 54547
TELEPHONE: 715-476-2515
E-MAIL: TOMIRON@CENTURYTEL.NET

CONSULTANT CONTACT

KEVIN MEYER, P.E.
CORRE, INC.
1802 WARDEN STREET
EAU CLAIRE, WI 54703

TELEPHONE: 715-299-1894
E-MAIL: KMEYER@CORREINC.COM

DNR LIAISON

JON SIMONSEN
DEPARTMENT OF NATURAL RESOURCES
NORTH CENTRAL DISTRICT
107 SUTLIFF
RHINELANDER, WI 54501

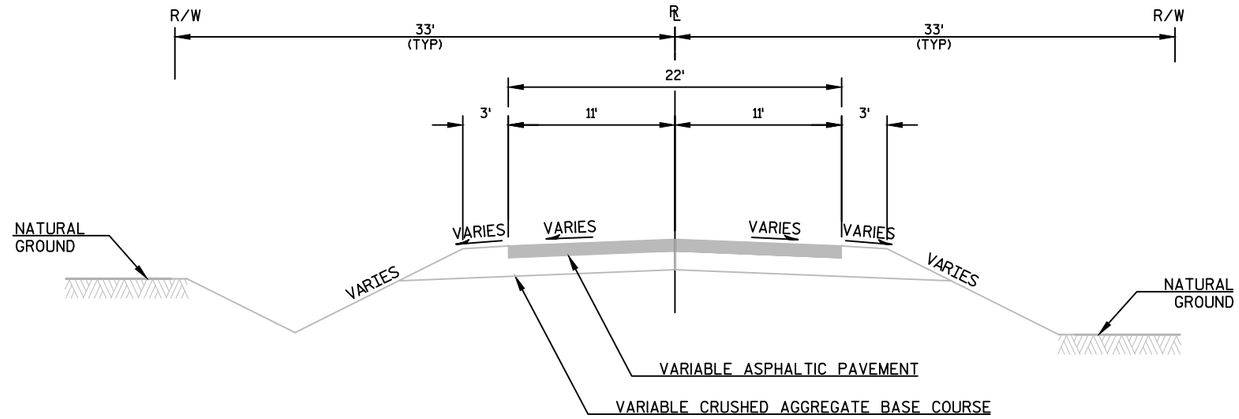
TELEPHONE: 715-367-1936
E-MAIL: JONATHON.SIMONSEN@WISCONSIN.GOV

RUNOFF COEFFICIENT TABLE

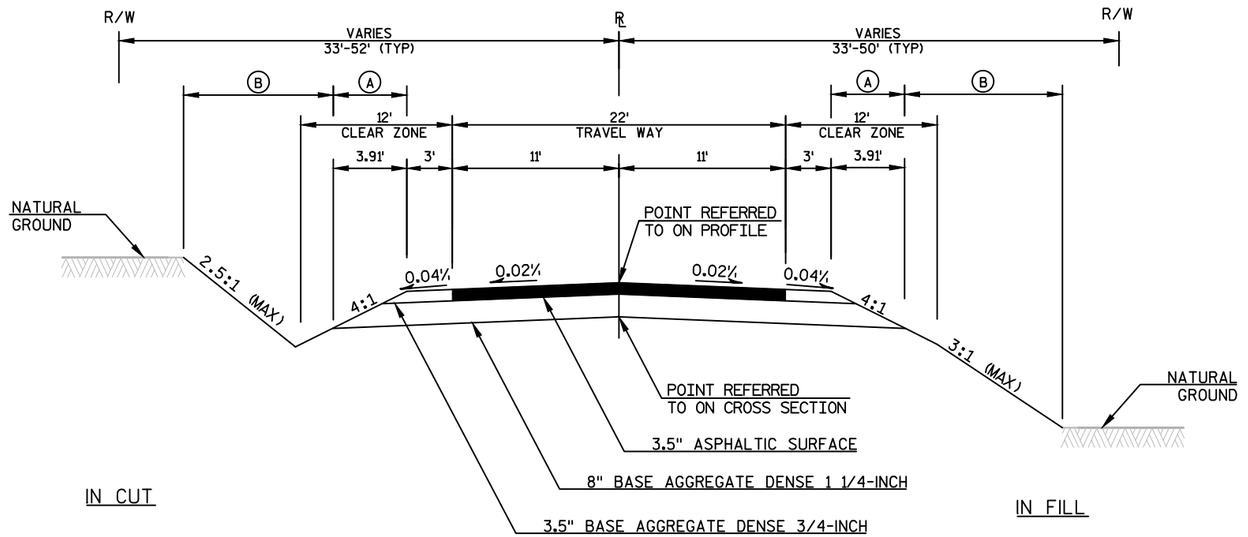
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .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 = 1.132 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.574 ACRES

2



TYPICAL EXISTING SECTION
CRAMER LAKE ROAD
STA 8+50.00 - STA 11+50.00



TYPICAL FINISHED SECTION
CRAMER LAKE ROAD
STA 8+50.00 - STA 9+73.73
STA 10+26.27 - STA 11+50.00

Ⓐ FERTILIZER TYPE B; SEEDING MIXTURE NO. 20; SEEDING TEMPORARY

Ⓑ SALVAGED TOPSOIL; MULCHING; FERTILIZER TYPE B; SEEDING MIXTURE NO. 20; SEEDING TEMPORARY

INSTALL EROSION MAT URBAN CLASS I TYPE B ON ALL SLOPES 3:1 OR GREATER OR AS SHOWN ON THE EROSION CONTROL PLAN OR AS DIRECTED BY THE ENGINEER.

PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	TYPICAL SECTIONS	SHEET 3	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020301-TS
PLOT DATE : 10/2/2017 10:45 AM PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

2

LEGEND

EROSION MAT URBAN CLASS I TYPE B

SILT FENCE

HEAVY RIPRAP

TURBIDITY BARRIER

SURFACE WATER FLOW

TURTLE RIVER

HEAVY RIPRAP AND GEOTEXTILE TYPE HR AS DETAILED IN STRUCTURE PLAN

HEAVY RIPRAP AND GEOTEXTILE TYPE HR

R/W

T.L.E.

8+00

9+00

10+00

11+00

12+00

13+00

CRAMER LAKE ROAD

HEAVY RIPRAP AND GEOTEXTILE TYPE HR

HEAVY RIPRAP AND GEOTEXTILE TYPE HR AS DETAILED IN STRUCTURE PLAN

SLOPE INTERCEPT (TYP)

BEGIN PROJECT
STA 8+50.00

HEAVY RIPRAP AND GEOTEXTILE TYPE HR AS DETAILED IN STRUCTURE PLAN

EXISTING P-26-31
2-16'X10' GALVANIZED STEEL
CULVERT PIPES, 34' LONG

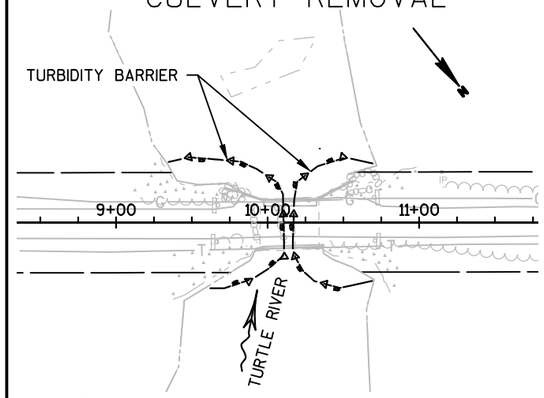
END PROJECT
STA 11+50.00

EDGE OF WATER (TYP)

TURTLE RIVER

N

CULVERT REMOVAL



NOTES:

FLOW SHALL BE MAINTAINED DURING CULVERT REMOVAL.

EXCAVATION FOR CULVERT REMOVAL SHALL BE ISOLATED FROM STREAM FLOW, METHODS AND STAGING SHALL BE OUTLINED IN CONTRACTORS E.C.I.P.

NOTES:

ALL DISTURBED AREAS SHALL BE FERTILIZED, SEEDED, AND MULCHED.

HEAVY RIPRAP AND GEOTEXTILE TYPE HR REQ'D WITHIN FILLED WATERWAY AREAS AND TO HIGH WATER$_{100}$ ELEV 1598.56.

PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	EROSION CONTROL	SHEET 4 E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022001-EC - 01
PLOT DATE : 10/23/2017 2:20 PM
PLOT BY : BOBBY JONES
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2

LEGEND

EXISTING SIGN ON POST

PROPOSED SIGN ON POST

XXX DESIGNATES SIGN ITEM NUMBER

TURTLE RIVER

B-26-42
PROPOSED STRUCTURE

N

A

W5-52L
12"X36"
102

REMOVE
102A

A

W5-52R
12"X36"
103

REMOVE
103A

R/W

TLE

TLE

R/W

7+00 8+00 9+00 10+00 11+00 12+00 13+00

CRAMER LAKE ROAD

R/W

TLE

105A

NARROW BRIDGE

REMOVE

BEGIN PROJECT
STA 8+50

101A

REMOVE

101

W5-52R
12"X36"

R/W

104

W5-52L
12"X36"

104A

REMOVE

TLE

R/W

END PROJECT
STA 11+50

WATER SURFACE

ANCHOR

RIVER BED

BRIDGE WORK

DANGER BUOY (EXAMPLE)

A DANGER BUOY PLACEMENT DETAIL
USE AS DIRECTED BY DNR PERMIT

A

A

TURTLE RIVER

EXISTING P-26-31
2-16'X10' GALVANIZED
STEEL CULVERT PIPES,
34 FT LONG

NOTES:

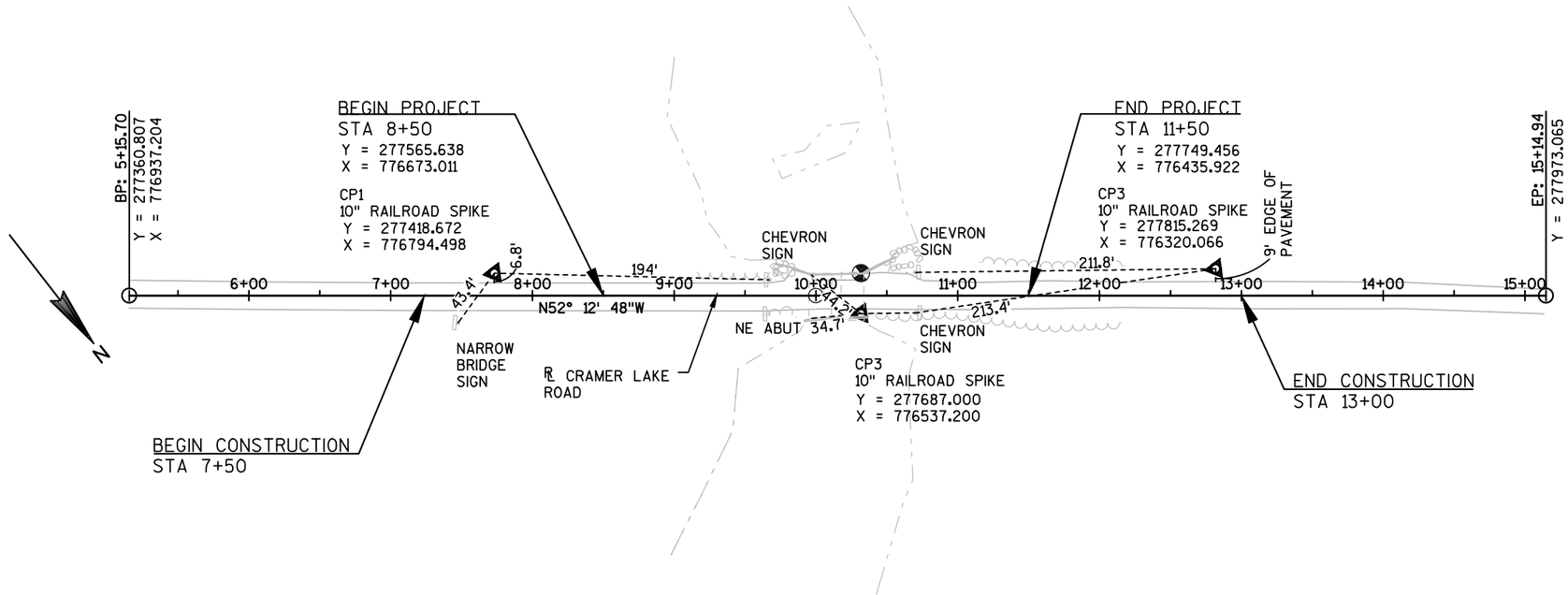
FOR SIGNING DETAILS SEE SDD'S
"SIGNING & MARKING FOR TWO LANE BRIDGES."

W5-52 SIGNS SHALL BE MOUNTED AT 4' MINIMUM
MOUNTING HEIGHT.

PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	PERMANENT SIGNING	SHEET 5 E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\SHEETSPLAN\023201-PS WITH NAVIGATIONAL SIGNING.DWG PLOT DATE : 10/2/2017 10:48 AM PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:40 FT
LAYOUT NAME - 01

2



PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	PLAN: ALIGNMENT DETAIL	SHEET 6	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\SHEETSPLAN\027201-AD.DWG
LAYOUT NAME - 027201-AD
PLOT DATE : 10/5/2017 10:41 AM
PLOT BY : BOBBY JONES
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 42

9828-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	5.000	5.000
0004	201.0205	Grubbing	STA	5.000	5.000
0006	203.0500.S	Removing Old Structure Over Waterway (station) 01. STA 10+14	LS	1.000	1.000
0008	205.0100	Excavation Common	CY	335.000	335.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-26-0042	LS	1.000	1.000
0012	208.0100	Borrow	CY	781.000	781.000
0014	210.1500	Backfill Structure Type A	TON	330.000	330.000
0016	213.0100	Finishing Roadway (project) 01. 9828-00-70	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	121.000	121.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	777.000	777.000
0022	455.0605	Tack Coat	GAL	92.000	92.000
0024	465.0105	Asphaltic Surface	TON	132.000	132.000
0026	502.0100	Concrete Masonry Bridges	CY	178.000	178.000
0028	502.3200	Protective Surface Treatment	SY	216.000	216.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	3,420.000	3,420.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	25,640.000	25,640.000
0034	513.4061	Railing Tubular Type M (structure) 01. B-26-0042	LF	149.000	149.000
0036	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000
0038	550.0500	Pile Points	EACH	14.000	14.000
0040	550.2124	Piling CIP Concrete 12 3/4 X 0.25-Inch	LF	770.000	770.000
0042	606.0300	Riprap Heavy	CY	397.000	397.000
0044	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	190.000	190.000
0046	614.2300	MGS Guardrail 3	LF	175.000	175.000
0048	614.2500	MGS Thrie Beam Transition	LF	156.000	156.000
0050	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0052	618.0100	Maintenance And Repair of Haul Roads (project) 01. 9828-00-70	EACH	1.000	1.000
0054	619.1000	Mobilization	EACH	1.000	1.000
0056	624.0100	Water	MGAL	13.000	13.000
0058	625.0500	Salvaged Topsoil	SY	2,100.000	2,100.000
0060	627.0200	Mulching	SY	2,100.000	2,100.000
0062	628.1504	Silt Fence	LF	945.000	945.000
0064	628.1520	Silt Fence Maintenance	LF	945.000	945.000
0066	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0068	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0070	628.2008	Erosion Mat Urban Class I Type B	SY	500.000	500.000
0072	628.6005	Turbidity Barriers	SY	226.000	226.000
0074	629.0210	Fertilizer Type B	CWT	1.000	1.000

9828-00-70

Line	Item	Item Description	Unit	Total	Qty
0076	630.0120	Seeding Mixture No. 20	LB	56.000	56.000
0078	630.0200	Seeding Temporary	LB	56.000	56.000
0080	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0082	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0084	638.2602	Removing Signs Type II	EACH	5.000	5.000
0086	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0088	642.5201	Field Office Type C	EACH	1.000	1.000
0090	643.0420	Traffic Control Barricades Type III	DAY	812.000	812.000
0092	643.0705	Traffic Control Warning Lights Type A	DAY	928.000	928.000
0094	643.0900	Traffic Control Signs	DAY	812.000	812.000
0096	643.5000	Traffic Control	EACH	1.000	1.000
0098	645.0111	Geotextile Type DF Schedule A	SY	72.000	72.000
0100	645.0120	Geotextile Type HR	SY	567.000	567.000
0102	650.4500	Construction Staking Subgrade	LF	250.000	250.000
0104	650.5000	Construction Staking Base	LF	250.000	250.000
0106	650.6500	Construction Staking Structure Layout (structure) 01. B-26-42	LS	1.000	1.000
0108	650.9910	Construction Staking Supplemental Control (project) 01. 9828-00-70	LS	1.000	1.000
0110	650.9920	Construction Staking Slope Stakes	LF	250.000	250.000
0112	690.0150	Sawing Asphalt	LF	40.000	40.000
0114	715.0502	Incentive Strength Concrete Structures	DOL	1,068.000	1,068.000
0116	SPV.0045	Special 01. Buoys Waterway	DAY	232.000	232.000

3

CLEARING AND GRUBBING ITEMS

STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
CATEGORY CODE 0010			
8+00 - 10+00	RT & LT	2	2
10+25 - 13+00	RT & LT	3	3
	TOTALS	**5**	**5**

3

From/To Station	Location	205.0100 Common Excavation (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6)	Mass Ordinate +/- (7)	Waste	208.0100 Borrow
		Cut (2)	EBS Excavation (3)				Factor 1.25			
7+25 - 8+50	RT	34	0	0	34	25	31	3		
7+71 - 8+50	LT	9	0	0	9	12	15	-6		
8+50 - 9+66	MAINLINE	37	0	24	13	477	596	-583		
10+34 - 11+50	MAINLINE	82	0	24	58	341	426	-368		
11+50 - 12+29	RT	64	0	0	64	0	0	64		
11+50 - 13+00	LT	109	0	0	109	0	0	109		
Total		335	0	48	287	855	1068	-781	0	781
Total Common Exc		335								

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) EBS Excavation to be backfilled with Borrow material.

(4) Salvaged/Unusable Pavement Material

(5) Available Material = Cut - Salvaged/Unusuable Pavement Material

(6) Expanded Fill Factor = 1.25

(7) The Mass Ordinate + or - Qty calculated for the Section. Plus quantity indicates an excess of material within the Section. Minus indicates a shortage of material within the Section.

3

FINISHING ROADWAY

	213.0100 EACH
CATEGORY CODE 0010	
ID 9828-00-70	1
TOTAL	**1**

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON
CATEGORY CODE 0010			
8+50 - 9+74	MAINLINE	---	186
10+26 - 11+50	MAINLINE	---	186
7+25 - 9+74	SHOULDER RT	30	119
7+70 - 9+74	SHOULDER LT	24	95
10+26 - 12+30	SHOULDER RT	24	64
10+26 - 13+00	SHOULDER LT	33	87
	UNDISTRIBUTED	10	40
	TOTALS:	**121**	**777**

ASPHALTIC ITEMS

STATION - STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
CATEGORY CODE 0010			
8+50 - 9+74	MAINLINE	46	66
10+26 - 11+50	MAINLINE	46	66
	TOTALS	**92**	**132**

3

RIPRAP & GEOTEXTILE FABRIC*

LOCATION	606.0300 RIPRAP HEAVY CY	645.0120 FABRIC TYPE HR SY
CATEGORY CODE 0010		
SE QUADRANT	23	49
SW QUADRANT	37	69
NW QUADRANT	22	54
TOTALS	**82**	**172**

*ADDITIONAL RIP RAP AND FABRIC QUANTITIES INCLUDED IN STRUCTURE PLANS TO BE PAID UNDER CATEGORY 0020

MGS GUARDRAIL ITEMS

STATION - STATION	LOCATION	614.2300 GUARDRAIL 3 LF	614.2500 THRIE BEAM TRANSITION LF	614.2610 TERMINAL EAT EACH
CATEGORY CODE 0010				
8+59 - 9+61	LT	13	39	1
8+13 - 9+65	RT	63	39	1
10+35 - 12+12	LT	88	39	1
10+39 - 11+41	RT	13	39	1
	TOTALS	**175**	**156**	**4**

MOBILIZATION

CATEGORY	619.1000 EACH
0010	0.2
0020	0.8
TOTALS	**1**

WATER

LOCATION	624.0100 MGAL
CATEGORY CODE 0010	
BASE COMPACTION	13
TOTALS	**13**

LANDSCAPING ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEED MIX NO. 20 LBS	630.0200 SEED TEMPORARY LBS
CATEGORY CODE 0010							
7+70 - 9+75	LT	436	436	---	0.3	12	12
12+25 - 12+29	RT	400	400	---	0.3	11	11
7+25 - 9+75	RT	598	598	---	0.4	16	16
12+25 - 13+00	LT	466	466	---	0.3	13	13
UNDISTRIBUTED		200	200	500	0.1	5	5
	TOTALS	**2,100**	**2,100**	**500**	**1**	**56**	**56**

EROSION CONTROL ITEMS

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 MAINTENANCE LF	MOBILIZATIONS 628.1905 EROSION CONTROL EACH	MOBILIZATIONS 628.1910 EMERGENCY EROSION CONTROL EACH
CATEGORY CODE 0010					
7+60 - 9+75	LT	215	215	1	1
7+25 - 9+75	RT	250	250	--	--
10+25 - 13+00	LT	275	275	1	1
10+25 - 12+30	RT	205	205	--	--
	TOTALS	**945**	**945**	**2**	**2**

PROJECT NO: 9828-00-00	HWY: CRAMER LAKE ROAD	COUNTY: IRON	MISCELLANEOUS QUANTITIES	SHEET NO: 10	E

3

TURBIDITY BARRIER

LOCATION	628.6005 TURBIDITY BARRIER SY
CATEGORY CODE 0010	
INSTALL FOR REMOVAL	150
SOUTH ABUTMENT	38
NORTH ABUTMENT	38
TOTALS	**226**

SIGNING ITEMS

STATION	LOCATION	SIGN NUMBER	SIGN CODE	SIZE	634.0612 POSTS WOOD 4X6X12 EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF
CATEGORY CODE 0010						
9+75	LT	101	W5-52L	12' X 36"	1	3.0
9+75	RT	101	W5-52R	12' X 36"	1	3.0
10+25	LT	101	W5-52R	12' X 36"	1	3.0
10+70	RT	101	W5-52L	12' X 36"	1	3.0
				TOTALS	**4**	**12.0**

3

REMOVING SIGN ITEMS

STATION	LOCATION	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
CATEGORY CODE 0010			
7+47	RT	1	1
9+66	RT	1	1
9+67	LT	1	1
10+70	LT	1	1
10+70	RT	1	1
	TOTALS	**5**	**5**

TRAFFIC CONTROL ITEMS

LOCATION	643.0420 BARRICADES TYPE III EACH	DAYS	643.0705 WARNING LIGHTS TYPE A EACH	DAYS	643.0900 SIGNS EACH	DAYS	645.5000 TRAFFIC CONTROL PROJECT EACH	SPV.0045.01 WATERWAY BUOYS EACH	DAYS
CATEGORY CODE 0010									
PROJECT	12	812	16	928	14	812	1	4	232
TOTALS	**12**	**812**	**16**	**928**	**14**	**812**	**1**	**4**	**232**

CONSTRUCTION STAKING ITEMS

STATION	- STATION	LOCATION	650.4500 STAKING SUBGRADE LF	650.5000 STAKING BASE LF	650.6500* STRUCTURE LAYOUT LS	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF
CATEGORY CODE 0010							
8+50	- 9+75	MAINLINE	125	125	1	1	125
10+25	- 11+50	MAINLINE	125	125	---	---	125
		TOTALS	**250**	**250**	**1**	**1**	**250**

* ALL STAKING ITEMS PART OF CATERGORY CODE 0010 OTHER THAN 650.6500 WHICH IS CATEGORY 0020

SAWING PAVEMENT ITEMS

STATION	LOCATION	690.0150 ASPHALT LF
CATEGORY CODE 0010		
8+50	MAINLINE	20
11+50	MAINLINE	20
	TOTALS	**40**

PROJECT NO: 9828-00-00	HWY: CRAMER LAKE ROAD	COUNTY: IRON	MISCELLANEOUS QUANTITIES	SHEET NO: 11	E

FILE NAME : P:\WI - NC Region\9828-00-00_Cramer Lake Rd Bridge Iron Co\300_Design\305_Quantities\305.3_Final PLOT DATE : 12/28/2017 PLOT BY : CORRE INC. PLOT NAME : PLOT SCALE : 1:1

CONVENTIONAL SYMBOLS

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

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
OFF-PREMISE SIGN
R/W MONUMENT (TO BE SET)
NON-MONUMENTED R/W POINT
FOUND IRON PIN (1-INCH UNLESS NOTED)

	COMPENSABLE	NON-COMPENSABLE
ELECTRIC POLE		
TELEPHONE POLE		
PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		

ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER 25
UTILITY NUMBER 40
PARALLEL OFFSETS

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

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

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), IRON COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

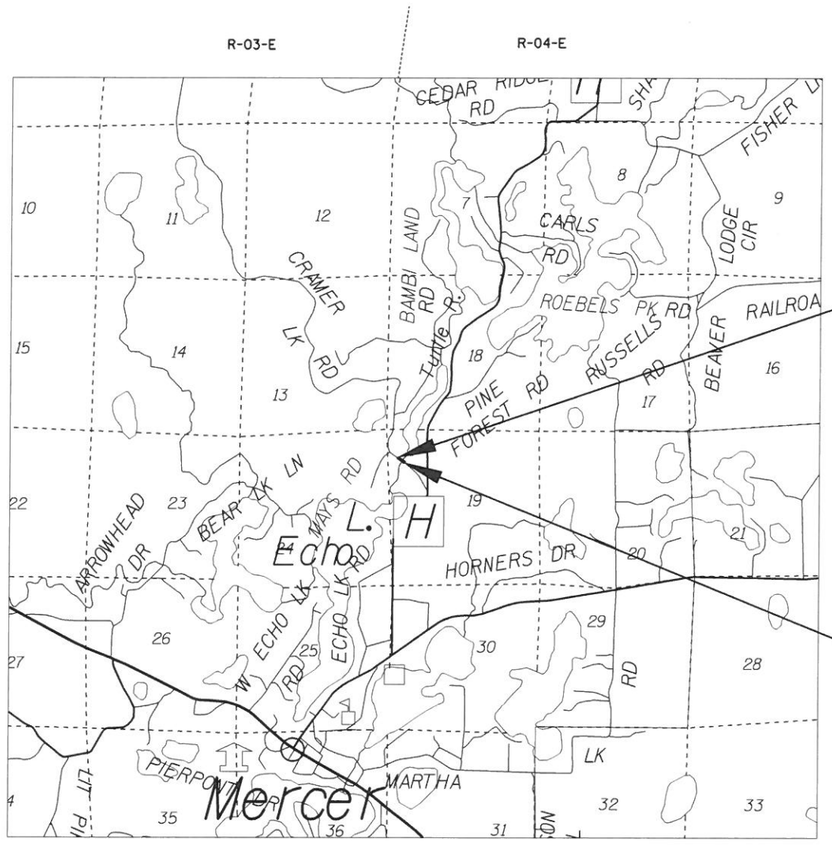
RIGHT OF WAY MONUMENTS ARE REBAR AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

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

CONVENTIONAL UTILITY SYMBOLS

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

CAUTION
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES.



END RELOCATION ORDER
STA 13+00.00
258.35' EAST AND 943.27' SOUTH OF THE NORTHEAST CORNER, SEC 19, T-43-N, R-04-E

BEGIN RELOCATION ORDER
STA 7+50.00
693.01' EAST AND 1,280.27' SOUTH OF THE NORTHEAST CORNER, SEC 19, T-43-N, R-04-E

LAYOUT
SCALE 0 — 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.104 MILES

R/W PROJECT NUMBER 9828-00-00	SHEET NUMBER	TOTAL SHEETS
R/W PROJECT NUMBER	4.01	2

PLAT OF RIGHT OF WAY REQUIRED FOR
T MERCER, CRAMER LAKE ROAD
TURTLE RIVER BRIDGE P-26-0031
LOCAL ROAD — IRON COUNTY
CONSTRUCTION PROJECT NUMBER: 9828-00-70

CORRE
1802 WARDEN STREET
EAU CLAIRE, WI 54703
(608)828-1011
www.correinc.com

WISCONSIN
BRYON J. MOTSZKO
S-2846
MENOMONIE WI
LAND SURVEYOR

I, BRYON J. MOTSZKO, REGISTERED LAND SURVEYOR, S-2846, HEREBY CERTIFY THAT I HAVE SURVEYED THE LAND DESCRIBED HEREON AND THAT THE MAP HEREON IS A CORRECT REPRESENTATION OF THAT SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE: 3/31/17 Bryon Motszko (Signature)

REVISION DATE

TOWN OF MERCER

3/31/17

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\SHEETSPLAN\040101-TI.DWG
LAYOUT NAME - 040101-TI
PLOT DATE : 3/31/2017 4:42 PM
PLOT BY : BRYON MOTSZKO, PE, PLS
PLOT NAME :
WISDOT/CADDS SHEET 50

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN.

PARCEL NUMBER	OWNER	INTEREST REQUIRED	R/W ACRES REQUIRED			TLE AREA (AC)
			NEW (AC)	EXISTING (AC)	TOTAL (AC)	
1	ANNETTE S. MARRA LIVING TRUST	TLE	---	---	---	0.05
2	GLENN H. DOXSEE AND NANCY M. DOXSEE	FEE & TLE	0.04	0.13	0.17	0.02
3	ELLIOT P. KERWIN AND ELLEN KERWIN	FEE & TLE	0.02	---	0.02	0.03
4	TODD S. JOHNSON AND SUZANNE M. CORNELIUS JOHNSON	FEE & TLE	0.02	---	0.02	0.03

NOTE:
EXISTING RIGHT-OF-WAY PLAT IS BASED ON THE EXISTING CENTERLINE (WISCONSIN STATUTE 82.31) AND SHOWN CSM's.

COORDINATE POINT TABLE		
POINT NO.	Y	X
101	277567.34	776617.19
102	277569.16	776592.62
103	277693.04	776423.82
104	277707.78	776435.25
105	277619.50	776657.63
106	277632.82	776667.96
107	277773.65	776486.32
108	277759.94	776475.69
109	277658.79	776634.46
110	277744.26	776524.23
111	277663.25	776462.24
112	277569.90	776582.65

COURSE TABLE		
COURSE	BEARING	DISTANCE
101 - 102	N85° 45' 43"W	24.64'
101 - 112	N85° 45' 43"W	34.64'
112 - 103	N52° 12' 48"W	200.97'
103 - 104	N37° 47' 12"E	18.65'
111 - 103	N52° 12' 48"W	48.61'
104 - 108	N37° 47' 12"E	66.00'
101 - 105	N37° 47' 12"E	66.00'
107 - 106	S52° 12' 48"E	229.84'
108 - 107	N37° 47' 12"E	17.35'
107 - 110	S52° 12' 48"E	47.97'
109 - 106	S52° 12' 48"E	42.38'
106 - 105	S37° 47' 12"W	16.86'

TOWN

OF

MERCER

2" IRON PIPE
Y = 276424.244
X = 776173.923

SECTION LINE = S02° 47' 12"E, 1181.600
(SEC. CORNER TO 1/16 LINE)

SECTION LINE = N02° 47' 12"W, 1181.590
(1/16 LINE TO SEC. CORNER)

BRASS CAP MONUMENT
Y = 278784.639
X = 776059.028

GOVERNMENT LOT 2

GN

MN/MS

MN/MN

STA 8+45.61 PL

1/16 LINE

561.54'
S85° 45' 43"E

TURTLE RIVER

MEANDER LINE

(1) ANNETTE S. MARRA LIVING TRUST

(2) GLENN H. DOXSEE AND NANCY M. DOXSEE

(3) ELLIOT P. KERWIN AND ELLEN KERWIN CSM #379

(4) TODD S. JOHNSON AND SUZANNE M. CORNELIUS JOHNSON
LOT 2
CSM #359

BEGIN RELOCATION ORDER
STA 7+50.00
Y = 277504.366
X = 776752.041

END RELOCATION ORDER
STA 13+00.00
Y = 277841.365
X = 776317.378

TLE - SLOPES 0.04 AC.

TLE - SLOPES 0.01 AC.

TLE - SLOPES 0.02 AC.

TLE - SLOPES 0.03 AC.

SLOPE INTERCEPT

59.45'
N85° 45' 43"W

CRAMER LAKE ROAD

N52° 12' 48"W

7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00

66'

EX R/W

1/16 LINE PL

TLE 7+50.00 32.54', LT
TLE 7+50.00 43.00', LT
8+95.16 32.86', LT
TLE 9+10.46 43.00', LT
9+15.69 46.47', LT
9+24.03 52.00', LT
10+76.38 52.00', LT
11+25.00 52.00', LT
TLE 11+25.00 43.00', LT
11+25.00 33.35', LT
TLE 12+75.00 43.00', LT
TLE 12+75.00 33.67', LT
TLE 7+75.00 33.40', RT
TLE 7+75.00 43.00', RT
8+95.16 33.14', RT
TLE 8+95.16 43.00', RT
8+95.16 50.00', RT
9+37.54 50.00', RT
10+77.03 50.00', RT
11+25.00 50.00', RT
TLE 11+25.00 43.00', RT
11+25.00 32.65', RT
TLE 12+50.00 43.00', RT
TLE 12+50.00 32.38', RT

101 102 112 111 103 104 105 106 109 110 107 108

±10'

IP

PL

MEANDER LINE

REVISION DATE	DATE 3/31/17	SCALE, FEET 0 25 50	HWY: LOCAL ROAD	STATE R/W PROJECT NUMBER 9828-00-00
	GRID FACTOR N/A		COUNTY: IRON	CONSTRUCTION PROJECT NUMBER 9828-00-70

PLAT SHEET 4.02
PS&E SHEET ---.13

FILE NAME : 040102-RP.DWG
LAYOUT NAME - 040101-RP

PLOT DATE : 3/17/2017 4:11 PM PLOT BY : BRYON MOTSZKO, PE, PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 75

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
CP1	7+73.05	10" SPIKE, 15.8' LT	1608.65
CP2	10+31.68	10" SPIKE, 12.7' RT	1604.42
CP3	12+81.89	10" SPIKE, 19.98' LT	1609.85
BM2	10+31.72	PAINTED "X" RET WALL, 15.8' LT	1605.22

ANNETTE S MARRA TRUST
CAUTION WE ENERGIES
CENTURYLINK
+59.21 14.00' LT
TLE
R/W
CP1
15:1
2'
66'
R CRAMER LAKE ROAD
3'
+13.45 14.00' RT
STA 7+25.00
BEGIN CONSTRUCTION
MATCH EXISTING
BEGIN PROJECT
STA 8+50
MATCH EXISTING
SAWCUT REQ'D
GLENN & NANCY DOXSEE
WETLANDS
+09.17 12.00' LT
52'
4'
12'
12'
12'
50'
4'
+63.40 12.00' RT
GLENN & NANCY DOXSEE
SLOPE INTERCEPT
WETLANDS
PROPOSED B-26-42
TURTLE RIVER
THOMAS & EILEEN JUNGKUNTZ
HEAVY RIPRAP AND GEOTEXTILE TYPE HR REQ'D WITHIN FILLED WATERWAY AREAS AND TO ELEV 1598.44.
WETLANDS
BM2
4'
CP2
4'
WETLANDS
EXISTING P-26-31
2-16'X10' GALVANIZED STEEL CULVERT PIPES, 34 FT LONG
+90.82 12.00' RT
ELLIOT & ELLEN KERWIN
ASPHALTIC SURFACE
+61.59 12.00' LT
SLOPE INTERCEPT
TLE
+11.56 14.00' LT
CAUTION WE ENERGIES
+75.00 43.00' LT
BAD SHOULDER
R/W
CP3
15:1
8+00
9+00
10+00
11+00
12+00
13+00
N52° 12' 48"W
CRAMER LAKE ROAD
66'
15:1
CENTURYLINK
BAD SHOULDER
R/W
TLE
+40.78 14.00' RT
TODD JOHNSON & SUZANNE CORNELIUS-JOHNSON
+50.00 43.00' RT
STA 13+00.00
END CONSTRUCTION
MATCH EXISTING
5
5

1620
1615
1610
1605
1600
1595
1590

Y = 277,565.638
X = 776,673.011

VCL = 300.00
K = 80.00

VPC STA 8+50.00
VPC EL 1607.35
STA 8+50.00
EL 1607.35

-1.95%

OBSERVED WATER ELEV 1595.218 (12-8-15)
HIGH WATER 100 YR ELEV 1598.44
PROPOSED ℄ ON PROFILE
EXISTING GROUND
VPI STA 10+00.00
VPI EL 1604.43

VPT STA 11+50.00
VPT EL 1607.13
STA 11+50.00
EL 1607.13

1.80%

END PROJECT
STA 11+50
MATCH EXISTING
SAWCUT REQ'D

STA 10+00
REMOVE EXISTING P-26-31
2-16'X10' GALVANIVED STEEL
CULVERT PIPES, 34 FT LONG

STA 10+00
STRUCTURE B-26-42 REQ'D
PROPOSED FLAT SLAB BRIDGE
24.0' CLEAR ROADWAY
52.54' LONG, 10° SKEW (RHF)

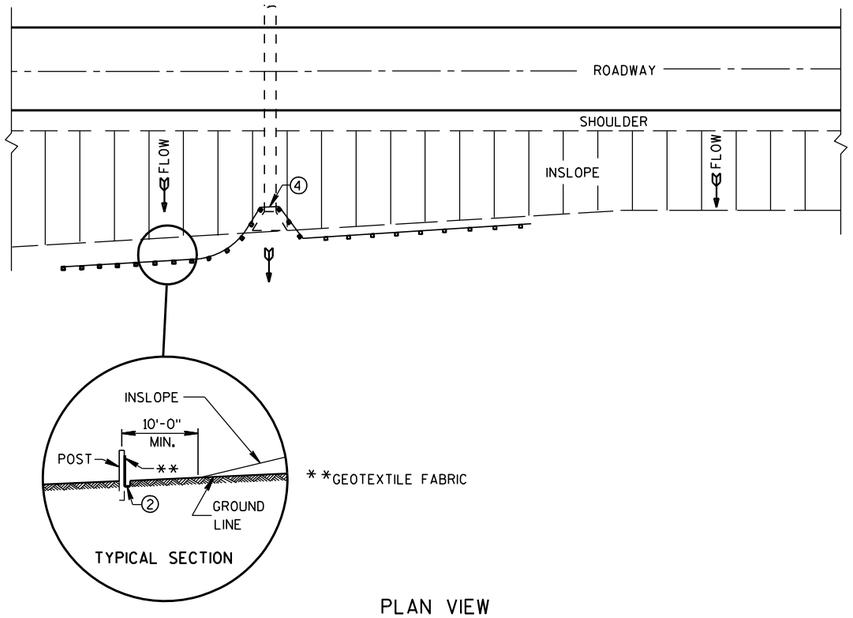
EXISTING ℄ ELEVATION
PROPOSED ℄ ELEVATION

1610.70		1609.87		1608.61		1607.35	1607.35	1606.09	1606.53	1604.83	1606.03	1604.39	1605.84	1604.74	1605.96	1605.88	1606.39	1607.13	1607.13	1608.11		1608.82		1609.44	1609.63
7+17	7+50		8+00		8+50		9+00		9+50		10+00		10+50		11+00		11+50		12+00		12+50		13+00		13+17

PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	PLAN AND PROFILE: CRAMER LAKE ROAD	SHEET 14 E

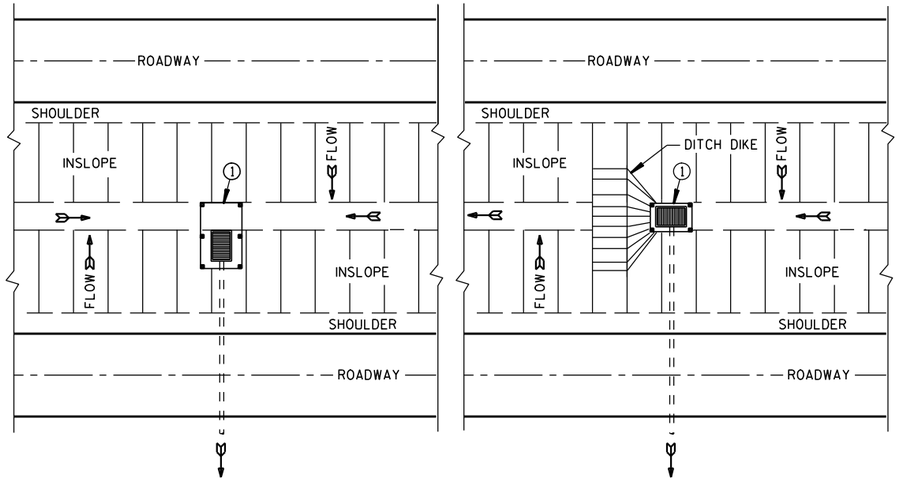
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
14B42-05A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



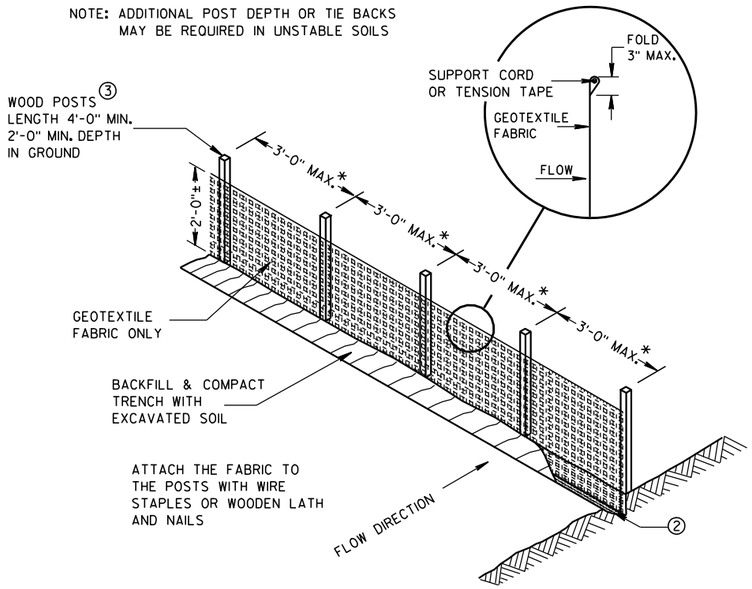
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



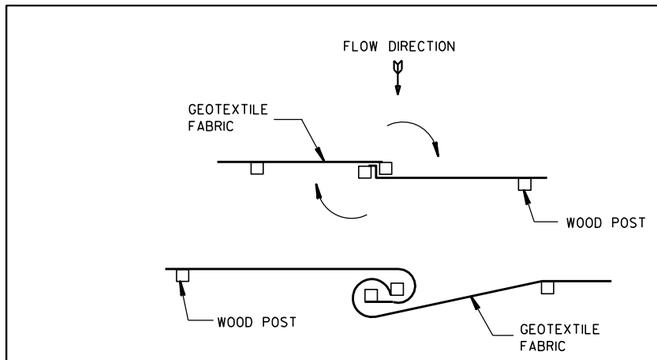
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

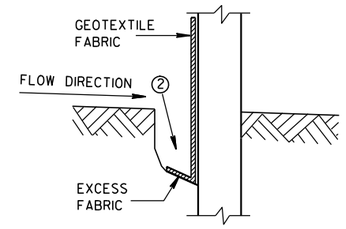


JOINING TWO LENGTHS OF SILT FENCE 5

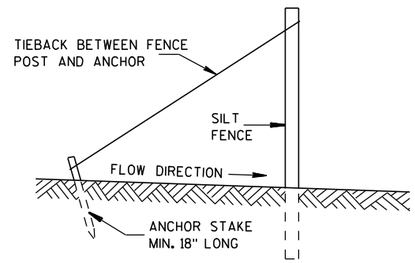
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 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 TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

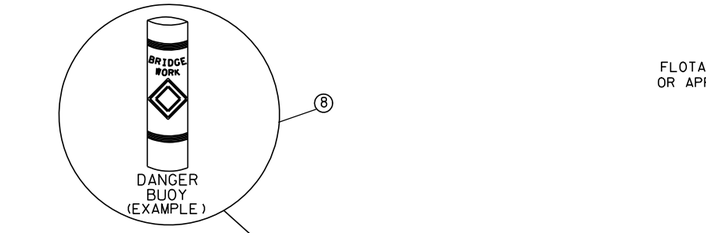
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

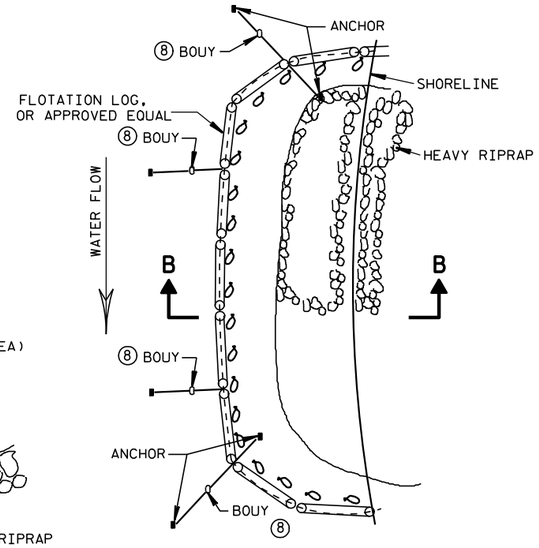
S.D.D. 8 E 9-6

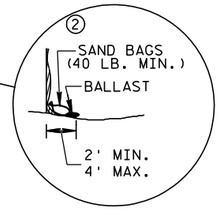
6

S.D.D. 8 E 9-6

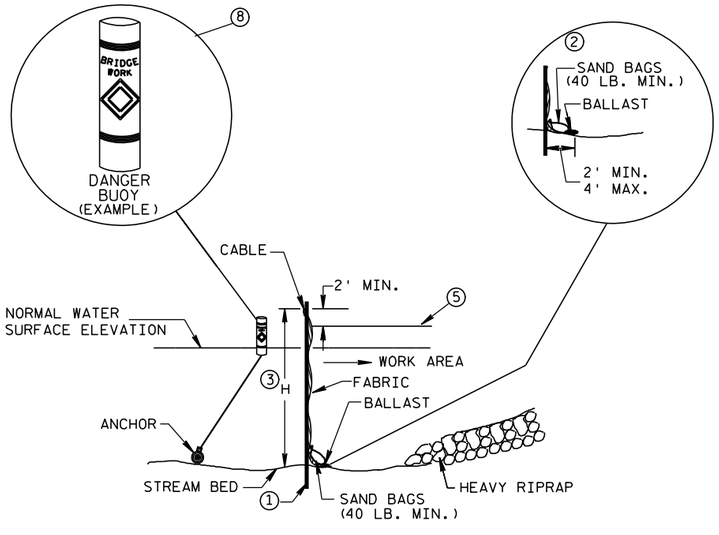


SECTION B-B

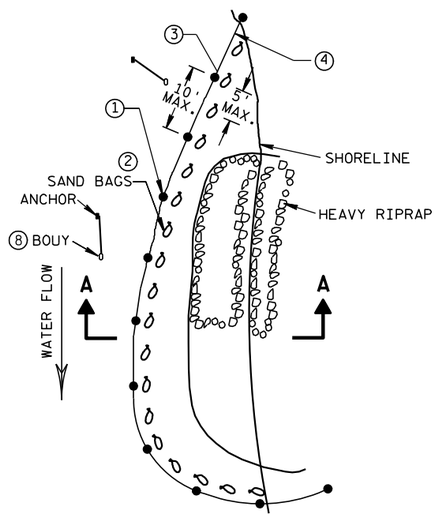




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

② 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.

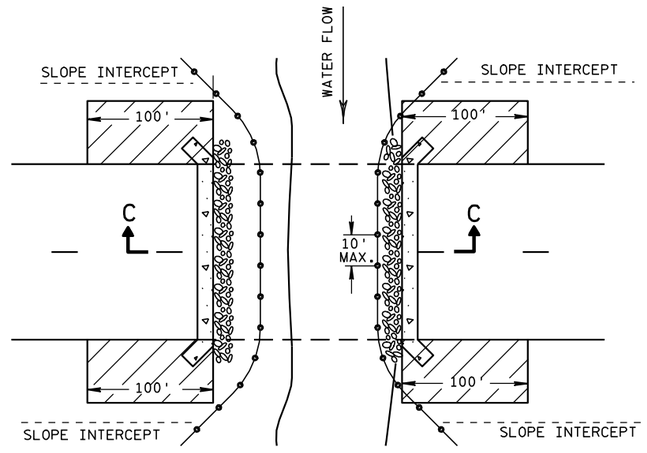
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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.

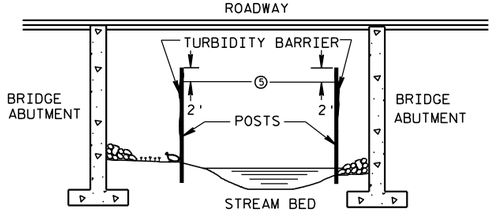
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

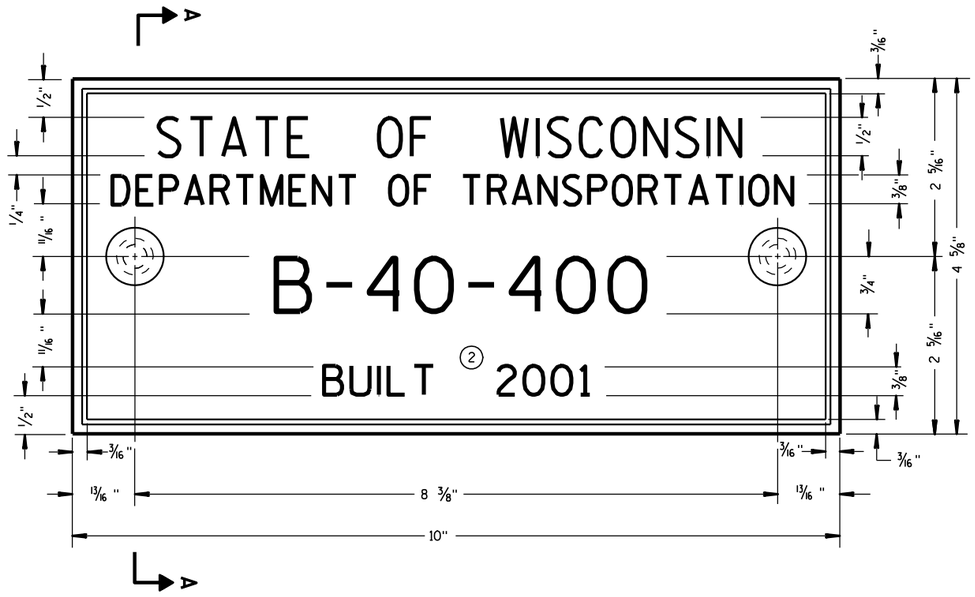
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2



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

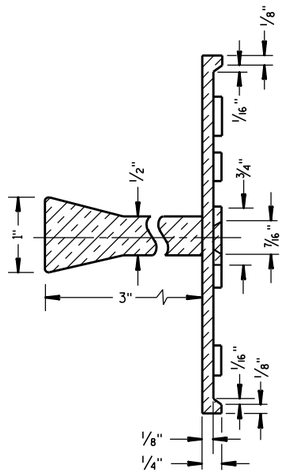
GENERAL NOTES

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.

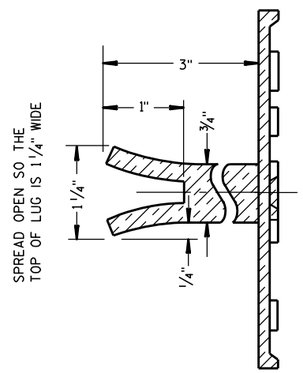
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(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

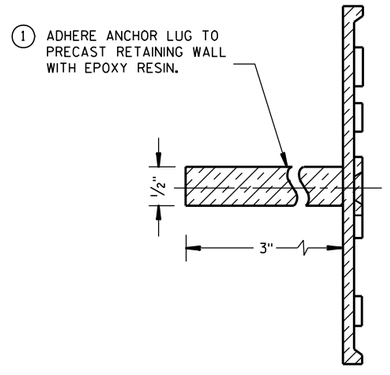
COUNTY NO.

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.

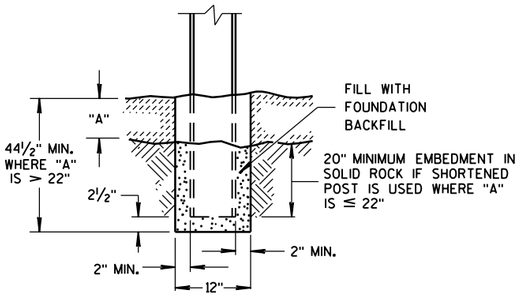
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ 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.

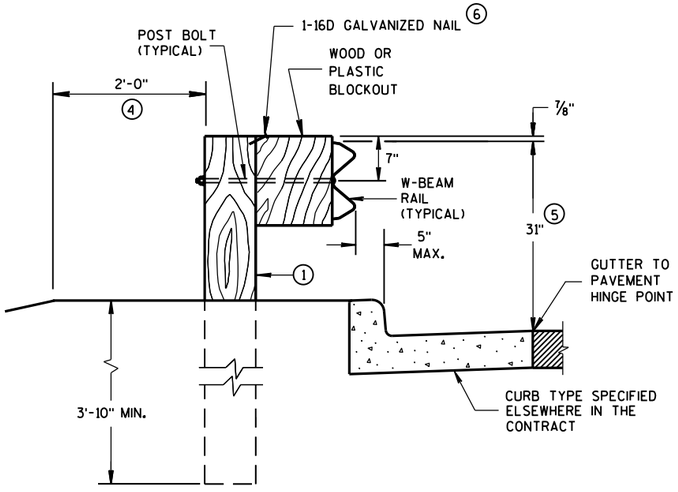
④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

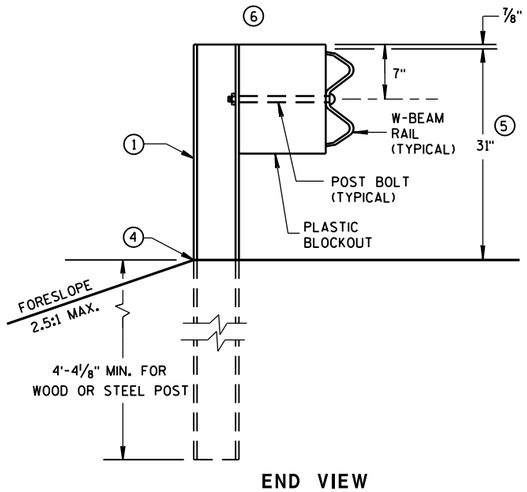
⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



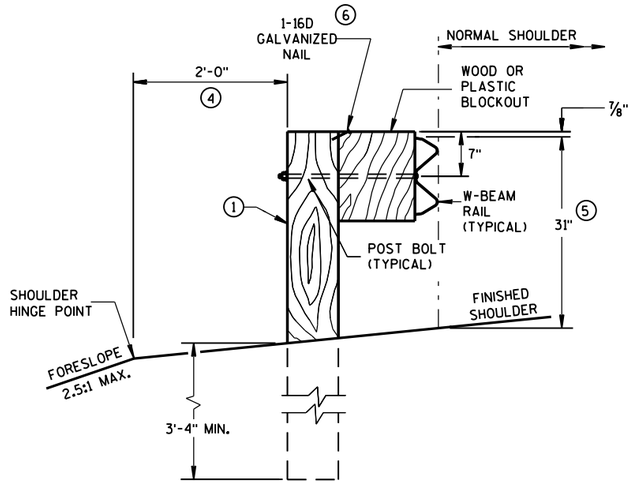
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ③



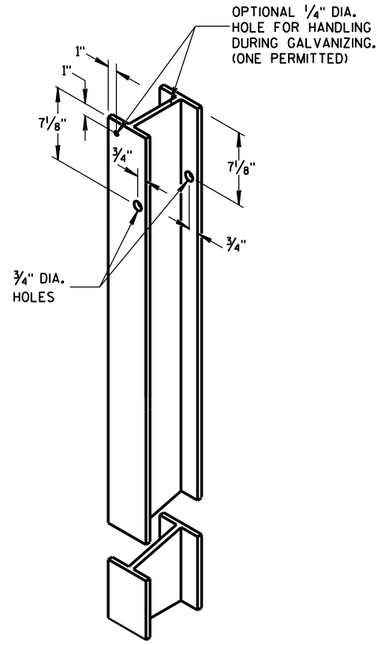
END VIEW
LOCATED ALONG A CURBED ROADWAY



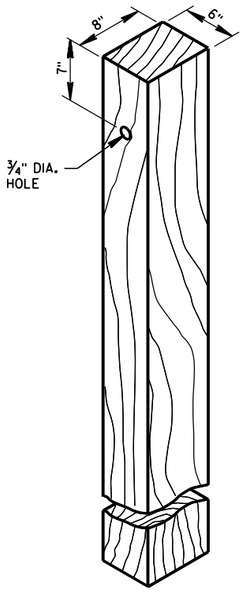
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



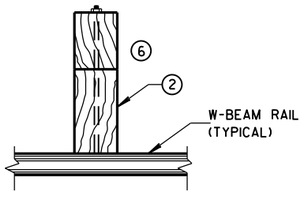
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



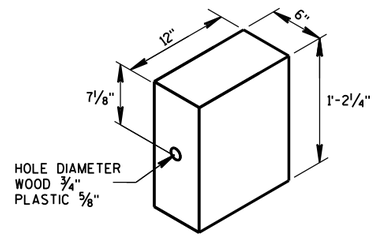
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



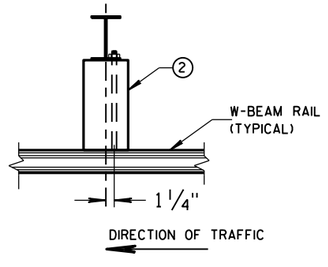
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



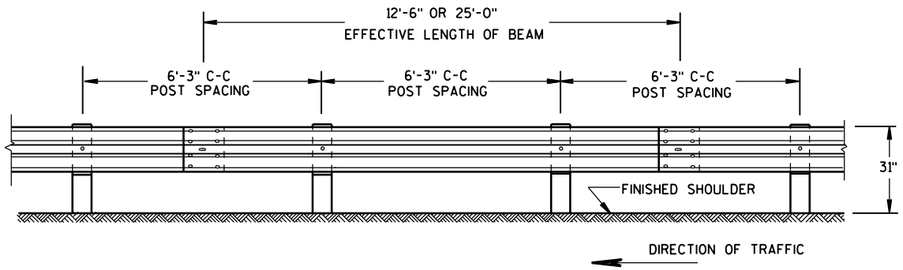
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

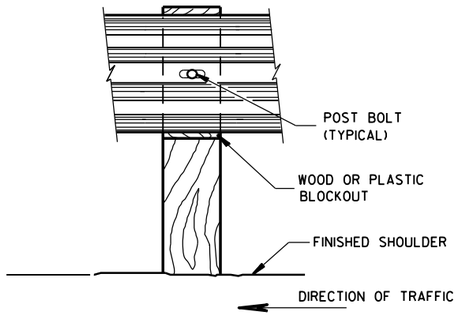
6

S.D.D. 14 B 42-5a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

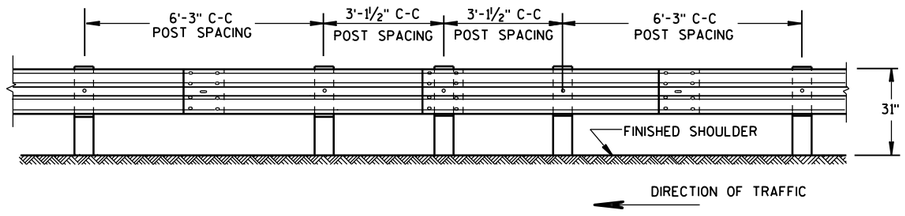
GENERAL NOTES

(8) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

(11) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

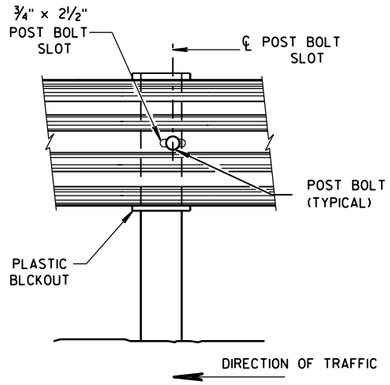
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

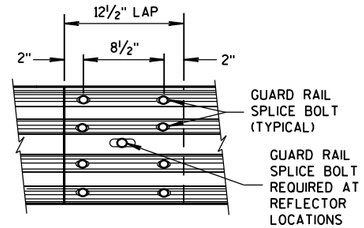


FRONT VIEW

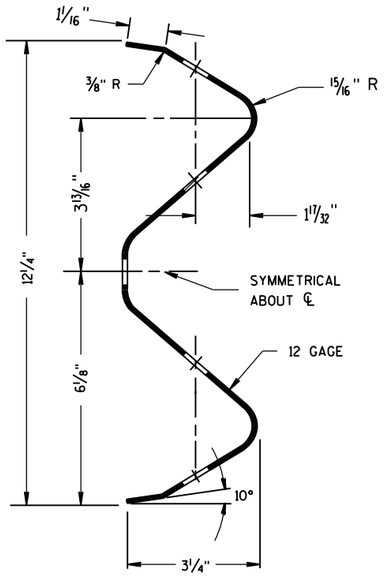
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



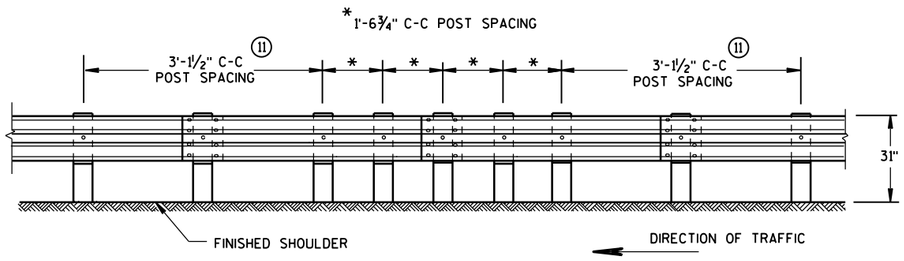
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

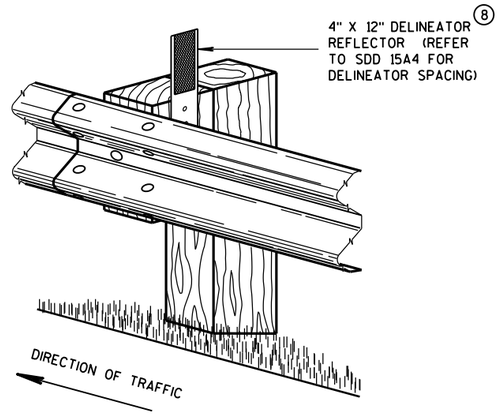


SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)



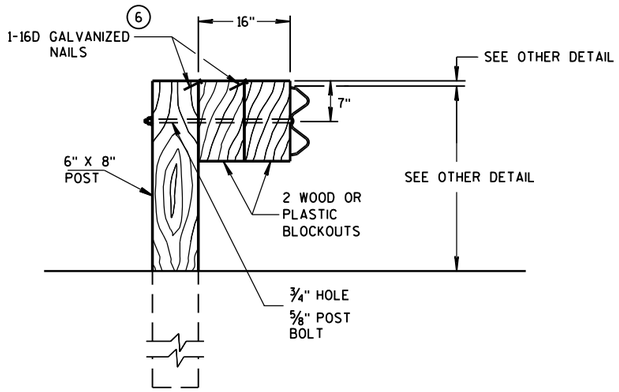
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

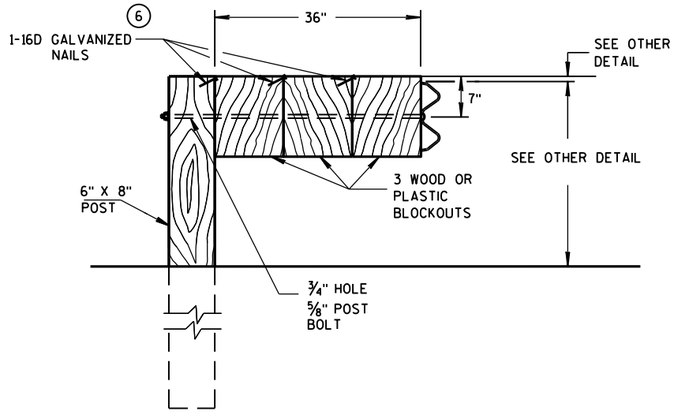
6

S.D.D. 14 B 42-5b



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.

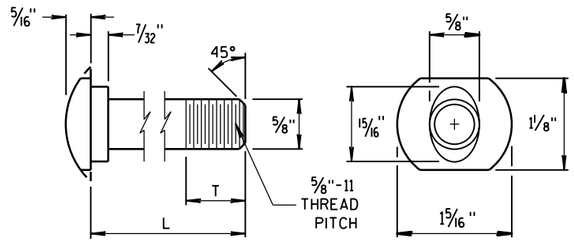


DETAIL FOR 36" BLOCKOUT DEPTH

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.

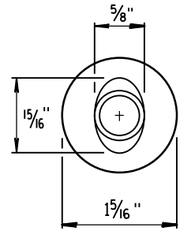
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

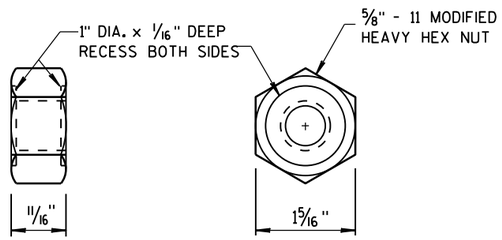


POST BOLT TABLE

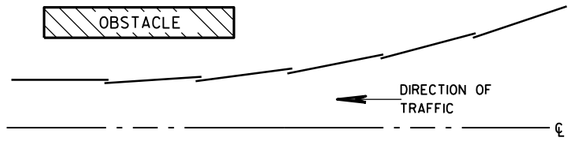
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

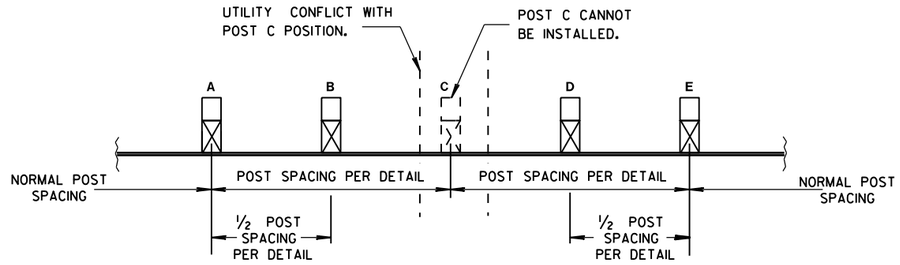


POST BOLT, SPLICE BOLT AND RECESS NUT

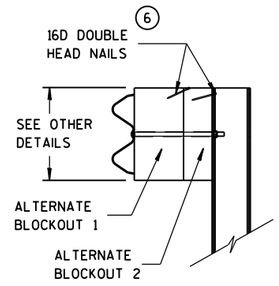


PLAN VIEW

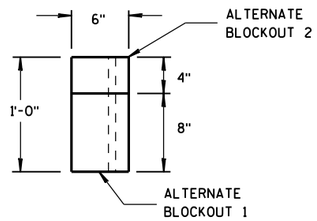
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

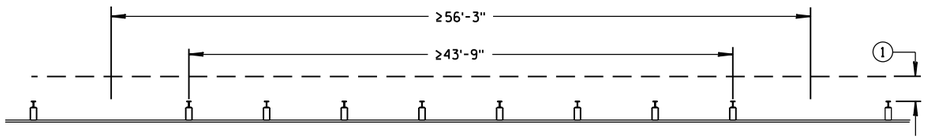
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

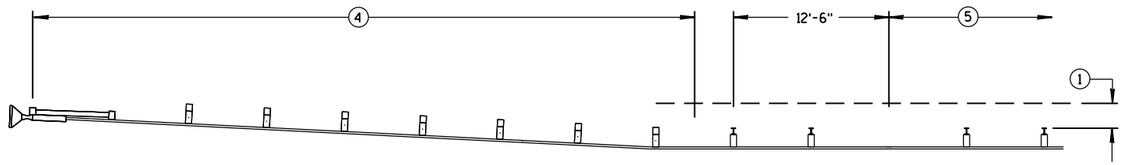
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

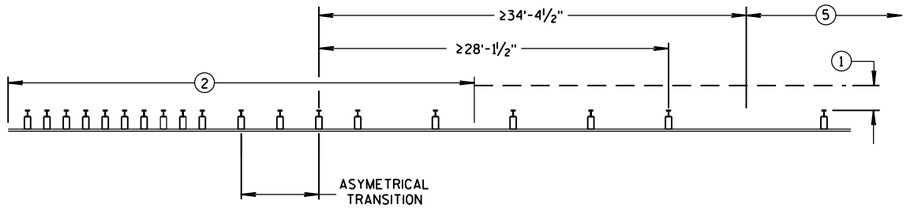
S.D.D. 14 B 42-5c



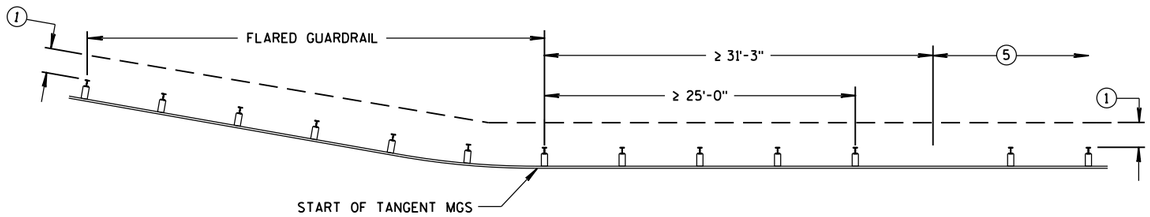
MISSING POST IN NORMAL BEAM GUARD RUN



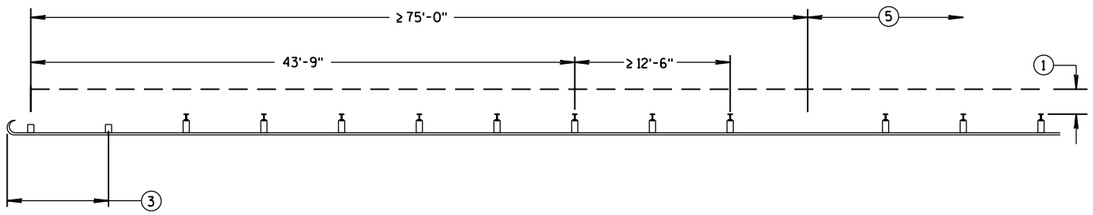
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



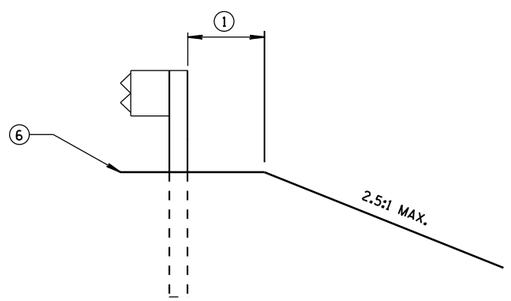
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



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
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

6

S.D.D. 14 B 42-5d

6

S.D.D. 14 B 42-5d

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 MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

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

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

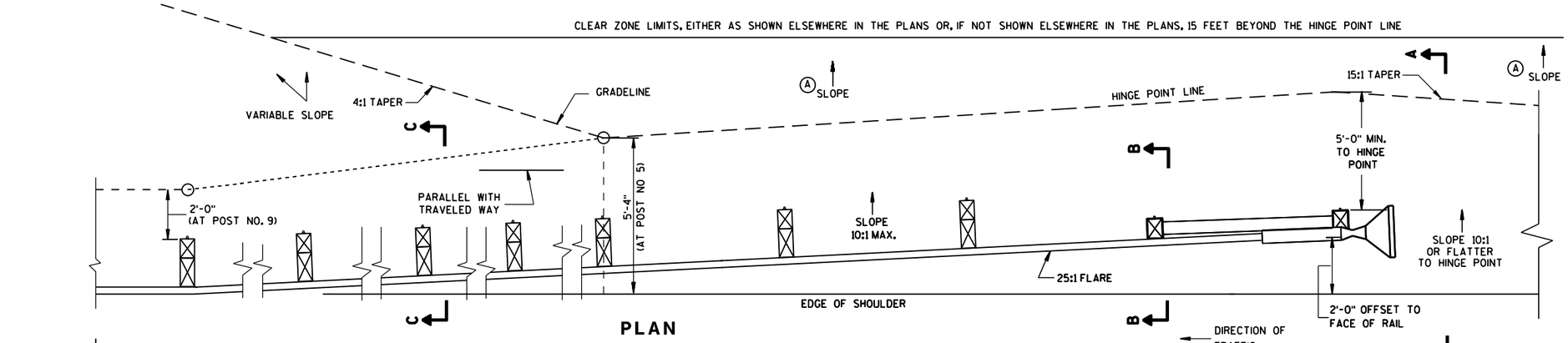
SEE SDD 14B42 FOR MORE INFORMATION.

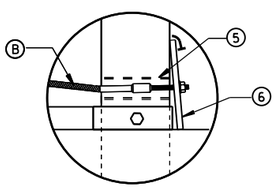
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

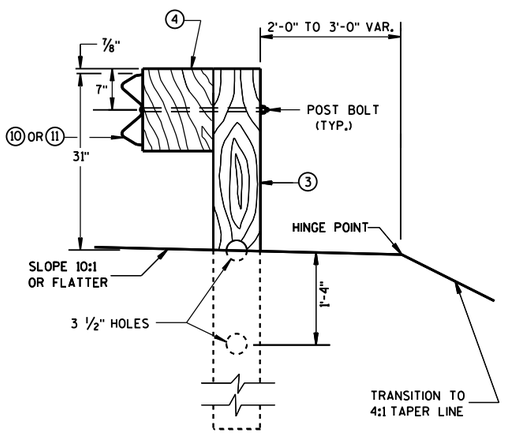
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

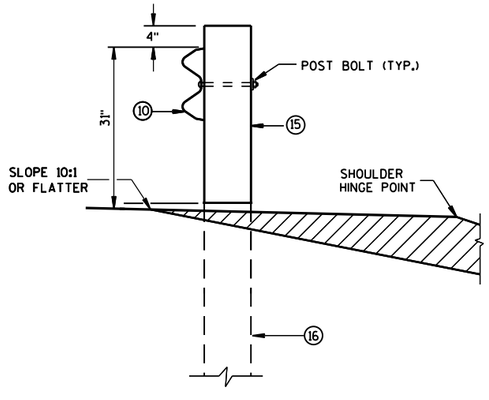
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

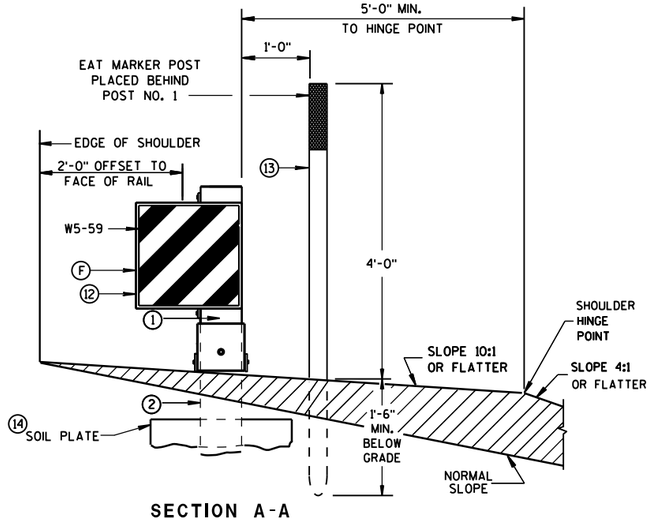
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

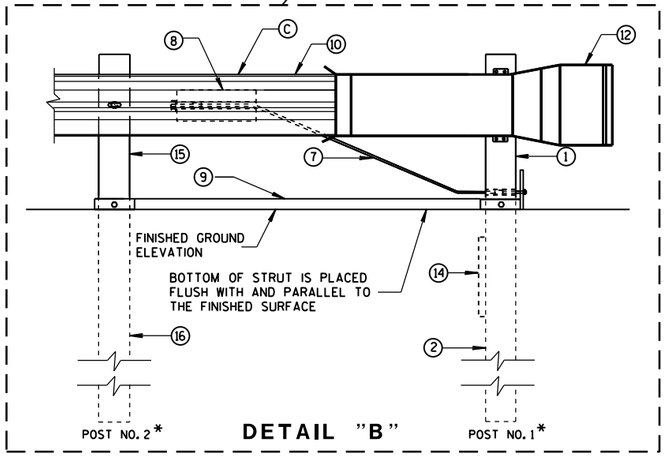








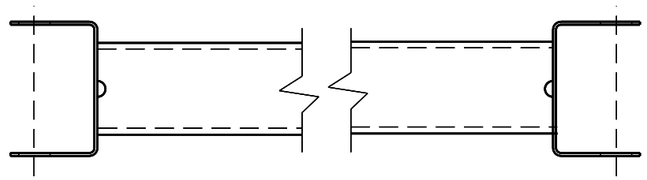




MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

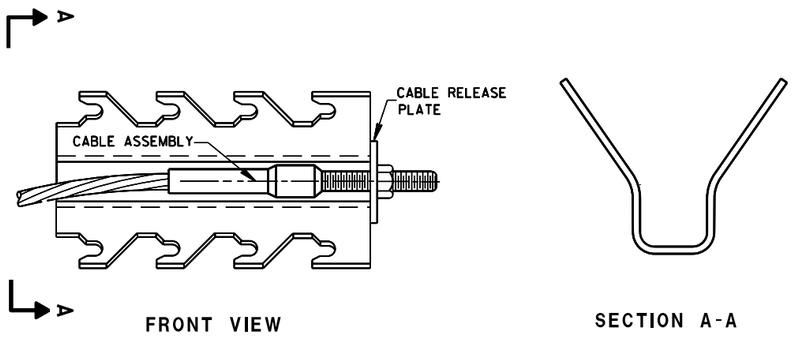
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 44-3a



(9) (H)

GENERIC GROUND STRUT



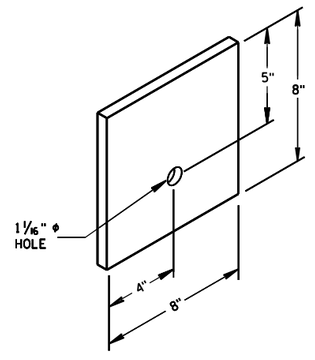
FRONT VIEW

SECTION A-A

GENERIC ANCHOR CABLE BOX (8) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'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



BEARING PLATE (6)

6

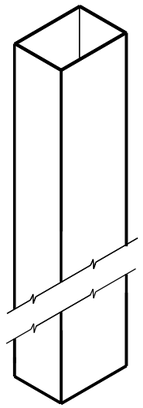
6

S.D.D. 14 B 44-3b

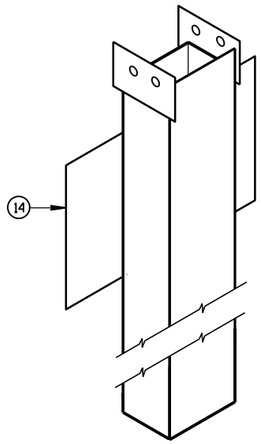
S.D.D. 14 B 44-3b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

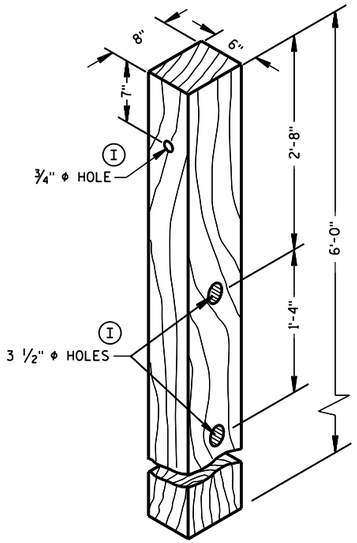
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR



UPPER POST NO. 1 (1)

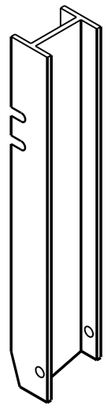


LOWER POST NO. 1 (2)

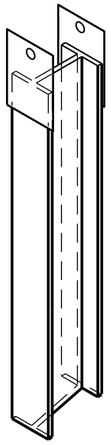


POSTS NUMBER 3-9

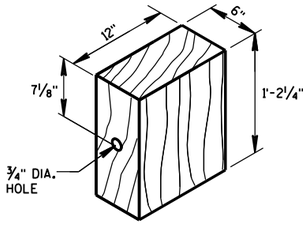
WOOD CRT POST (3)



UPPER POST NO. 2 (15)

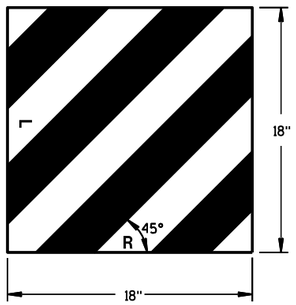


LOWER POST NO. 2 (16)



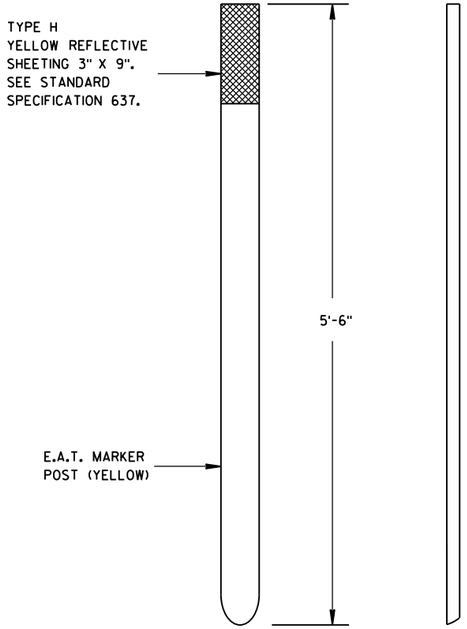
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



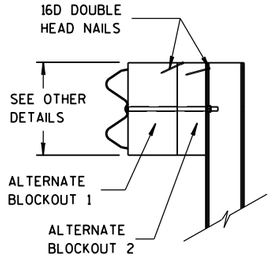
W5-59

REFLECTIVE SHEETING DETAIL (H)

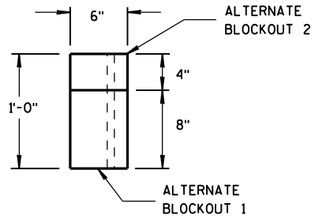


FRONT VIEW SIDE VIEW

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

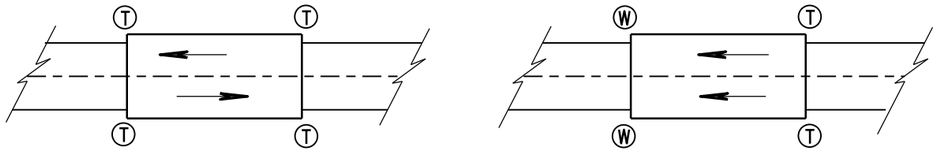
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERVISOR

FHWA

6

S.D.D. 14 B 44-3c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

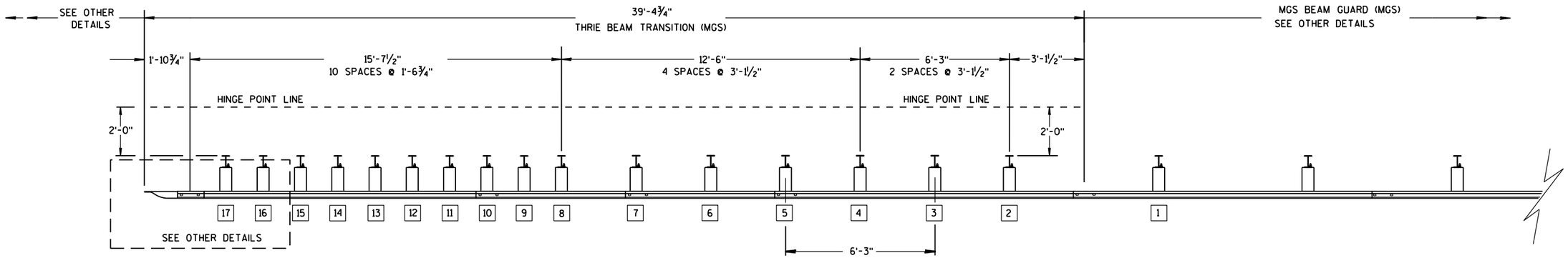
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

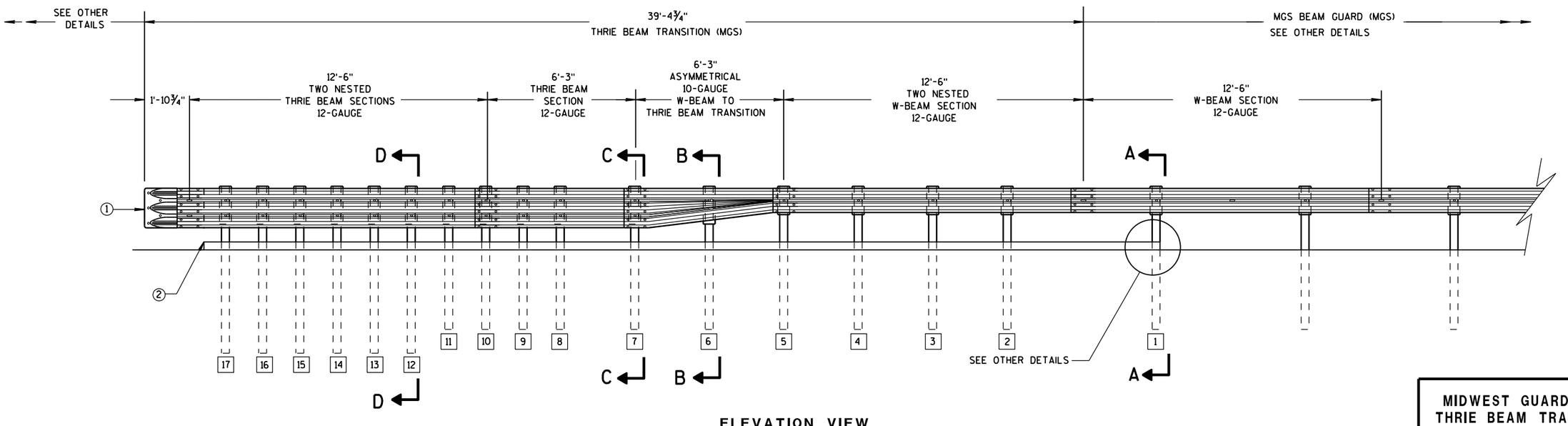
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

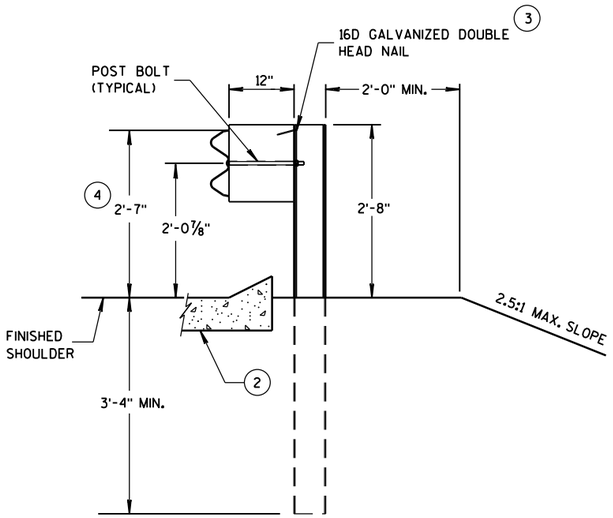
S.D.D. 14 B 45-4a

GENERAL NOTES

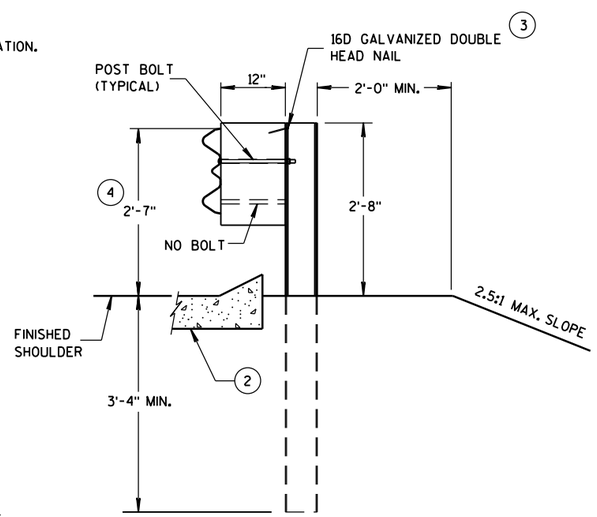
(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

(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.

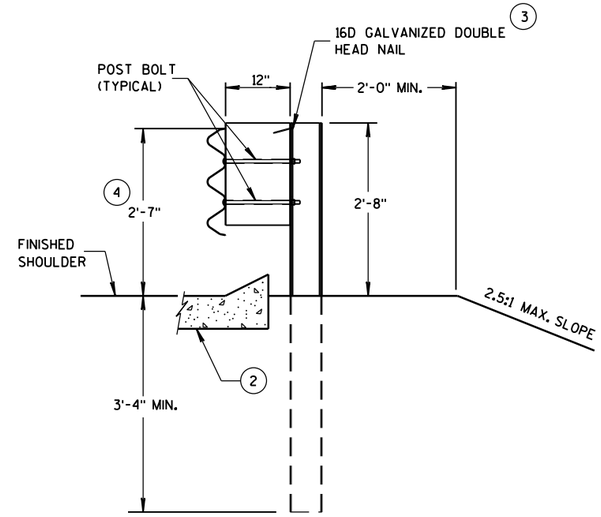
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



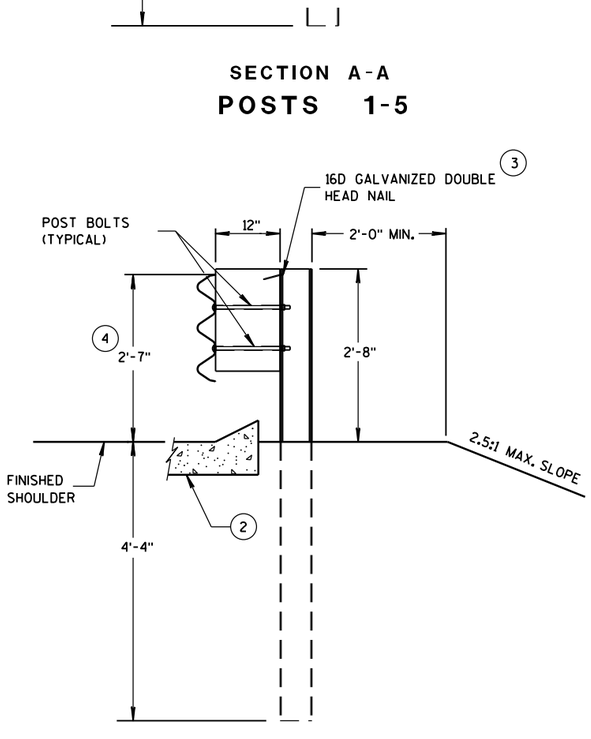
SECTION A-A
POSTS 1-5



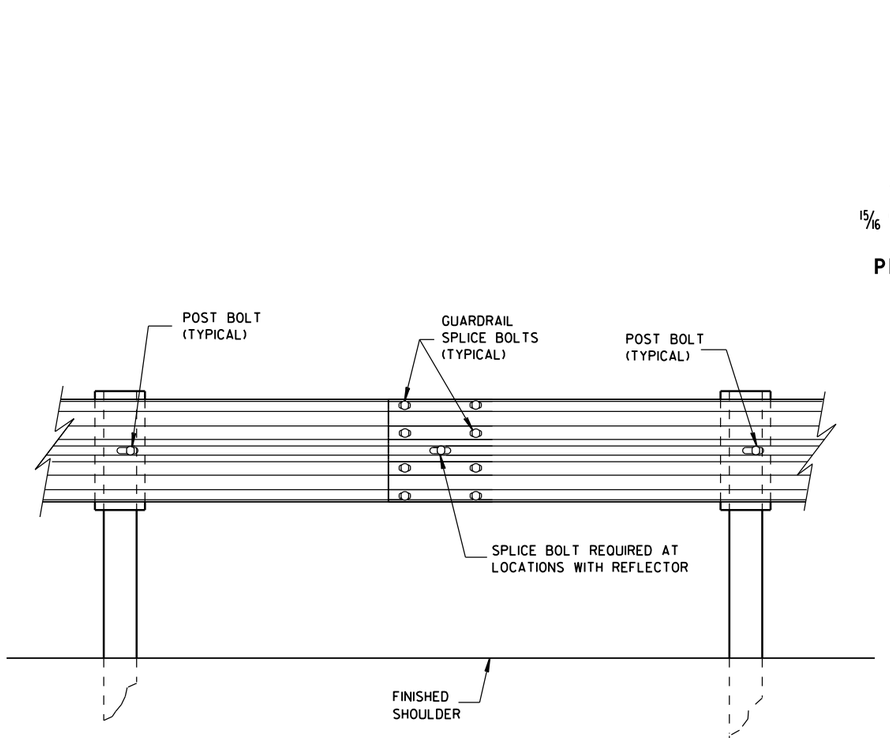
SECTION B-B
POST 6



SECTION C-C
POSTS 7-11



SECTION D-D
POSTS 12-17



SPLICE DETAIL

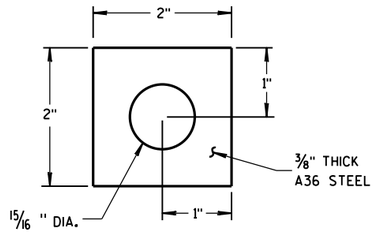
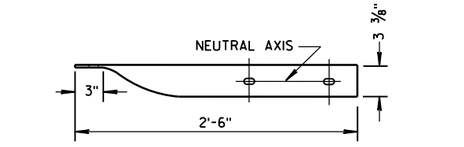
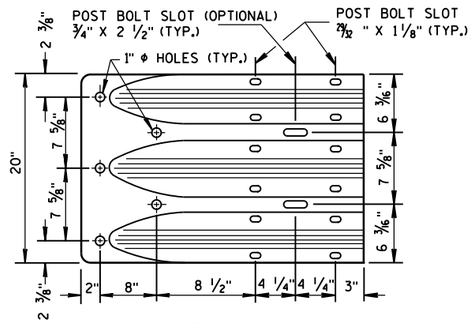
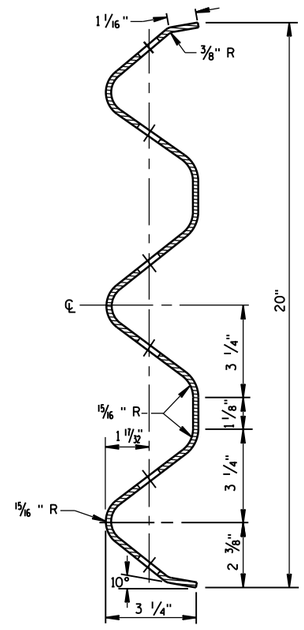


PLATE WASHER DETAIL





THRIE BEAM TERMINAL CONNECTOR



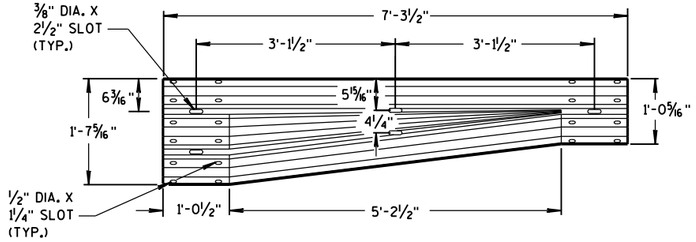
SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

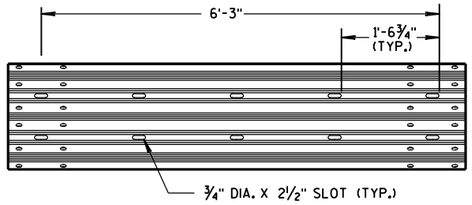
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

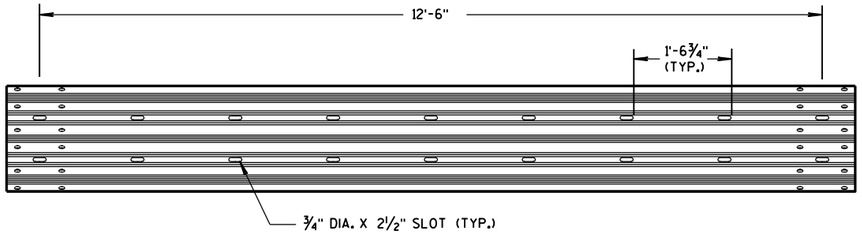
S.D.D. 14 B 45-4b



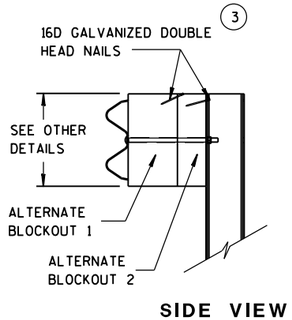
W-BEAM TO THRIE BEAM TRANSITION SECTION



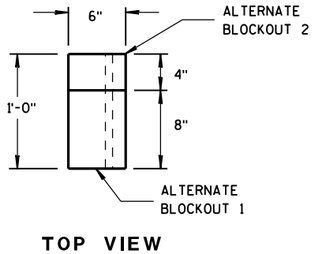
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

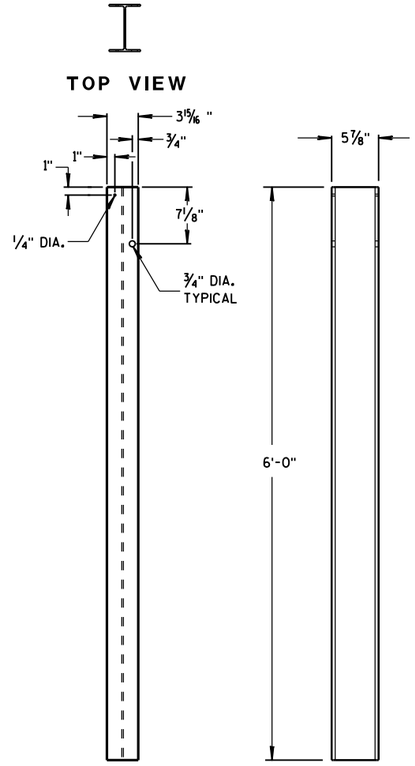


SIDE VIEW



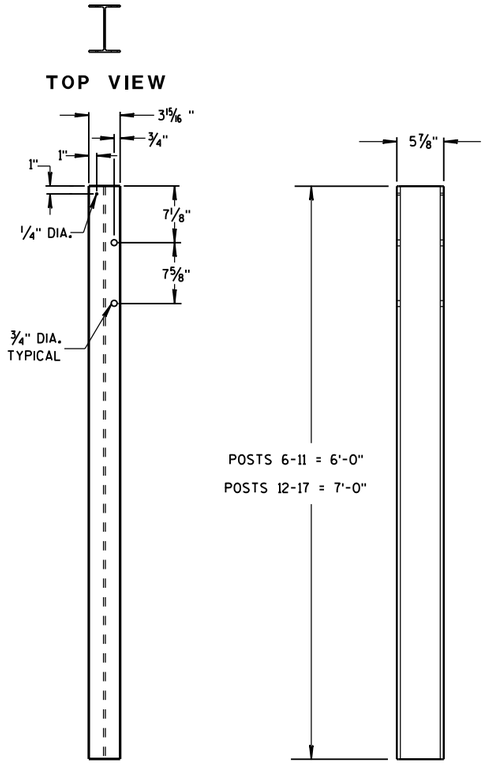
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



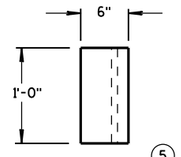
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5

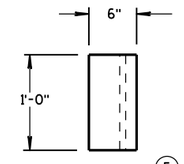


FRONT VIEW SIDE VIEW

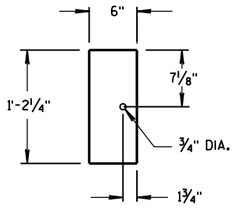
STEEL POSTS 6-17



TOP VIEW (5)

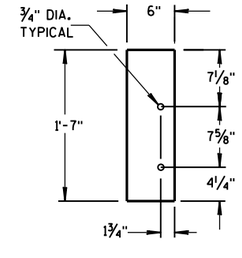


TOP VIEW (5)



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.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

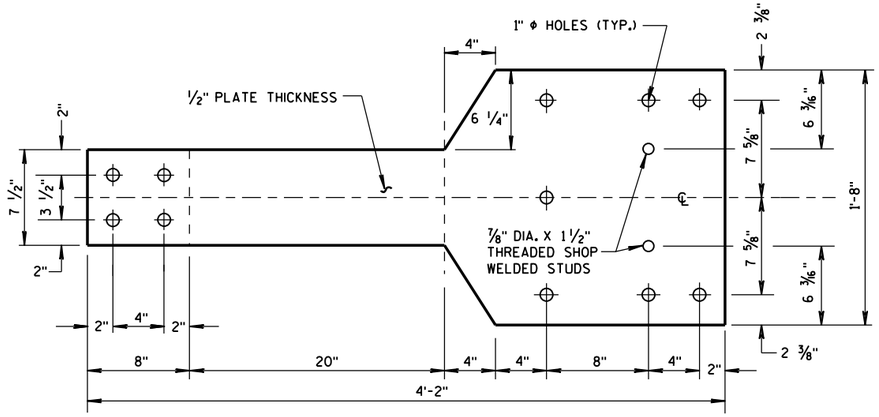
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

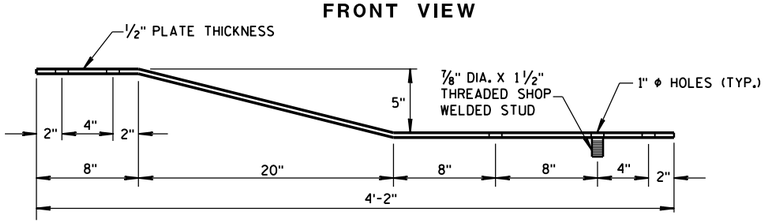
S.D.D. 14 B 45-4c

GENERAL NOTES

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

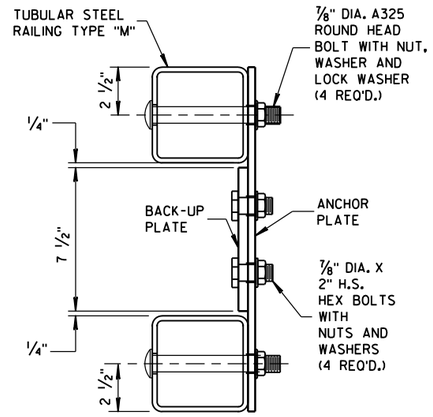


FRONT VIEW

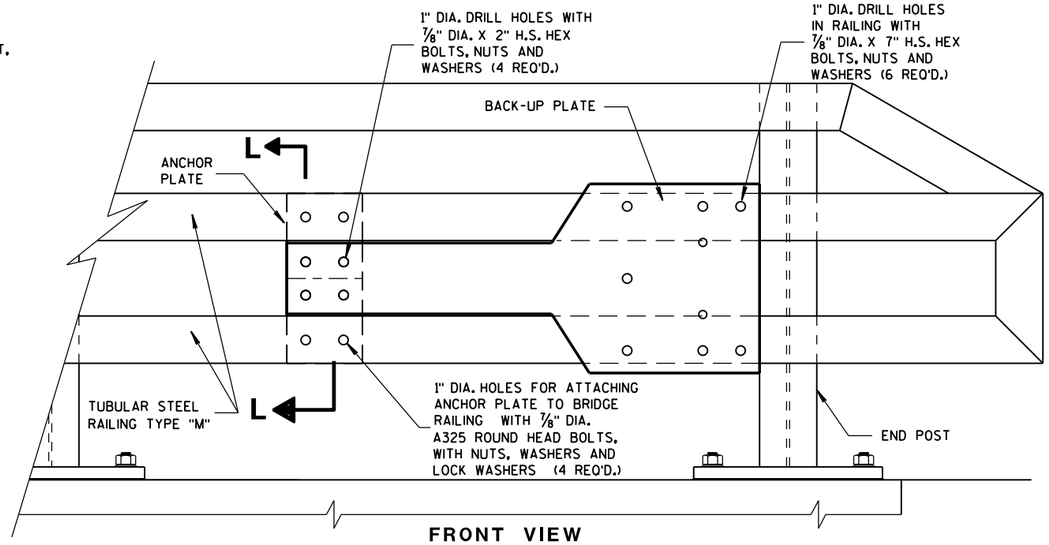


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

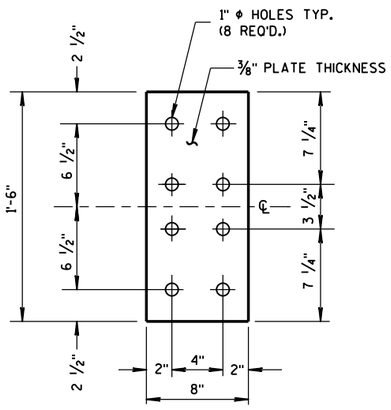


SECTION L-L



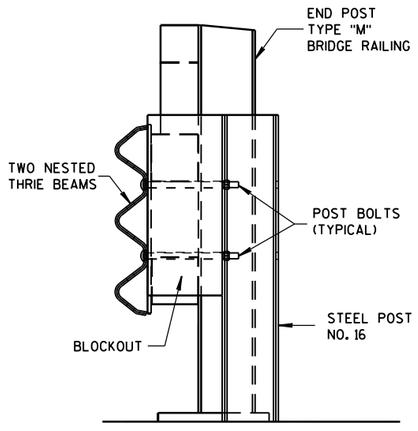
FRONT VIEW

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

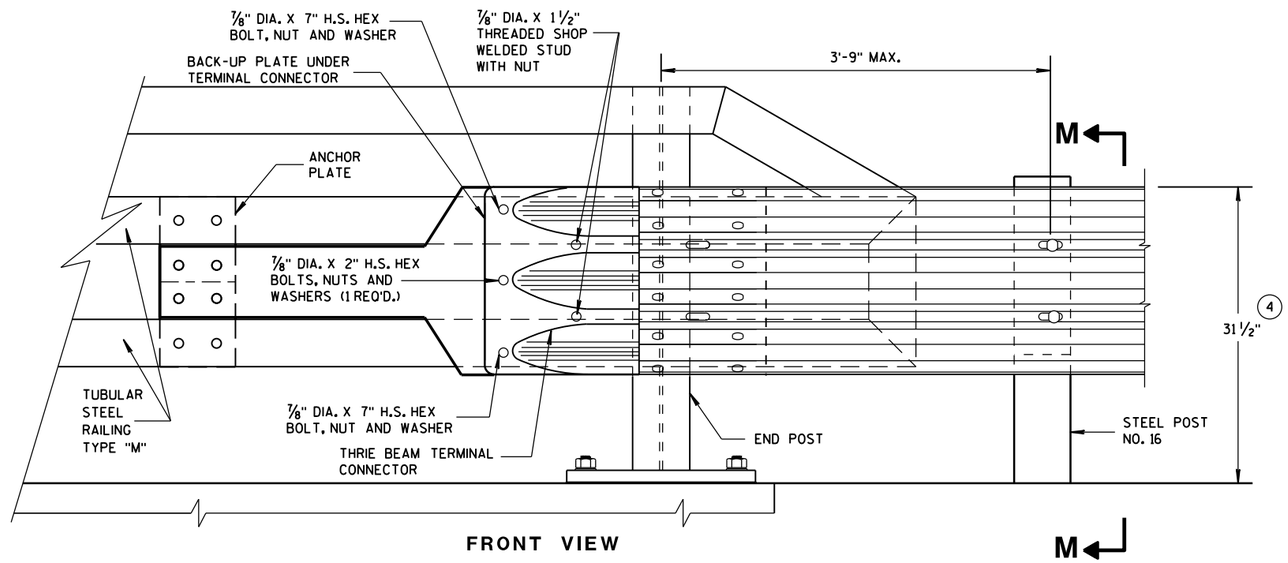


FRONT VIEW

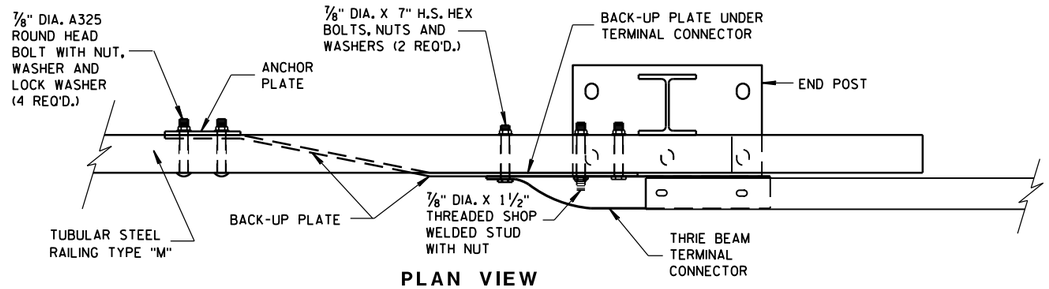
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

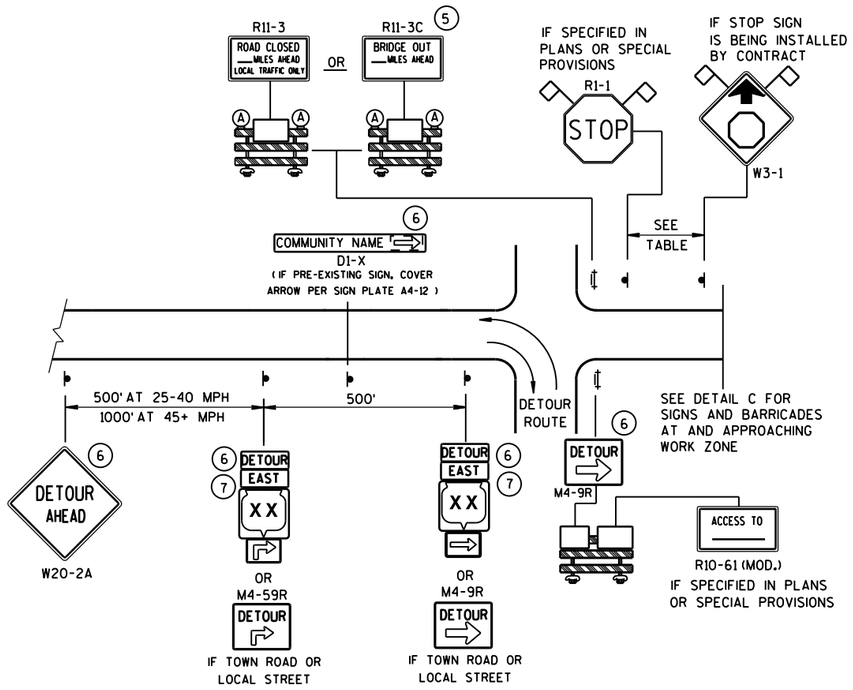
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 45-4h

6

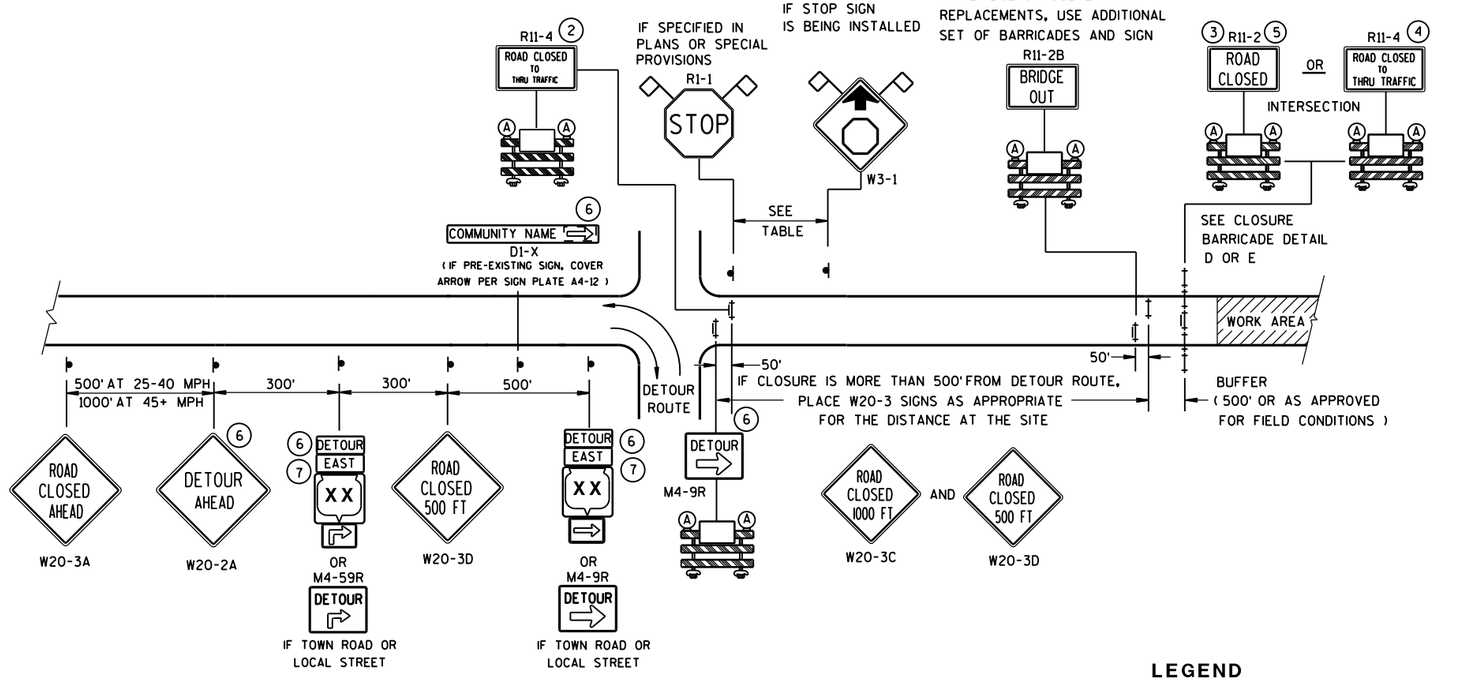
S.D.D. 14 B 45-4h



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

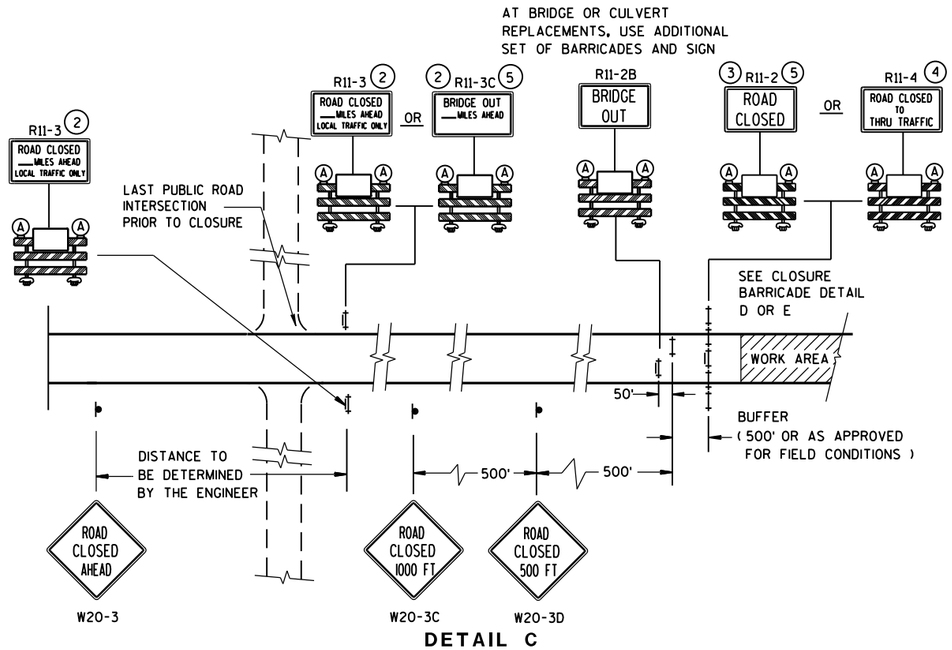
WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



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
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

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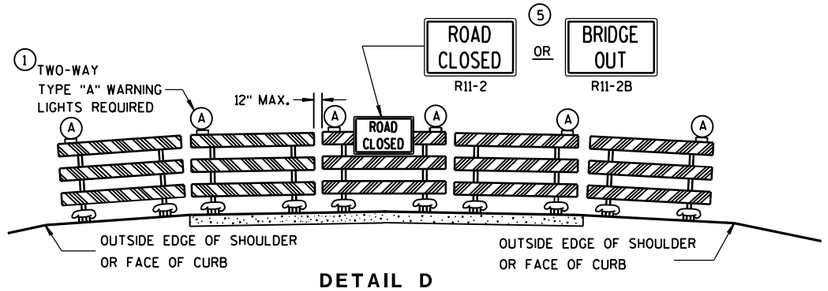
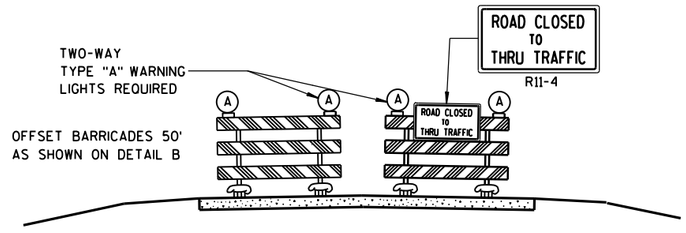
S.D.D. 15 C 2-6a



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)
- M05-1 AND M06-1 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 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 LANE 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 MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FIC

FHWA

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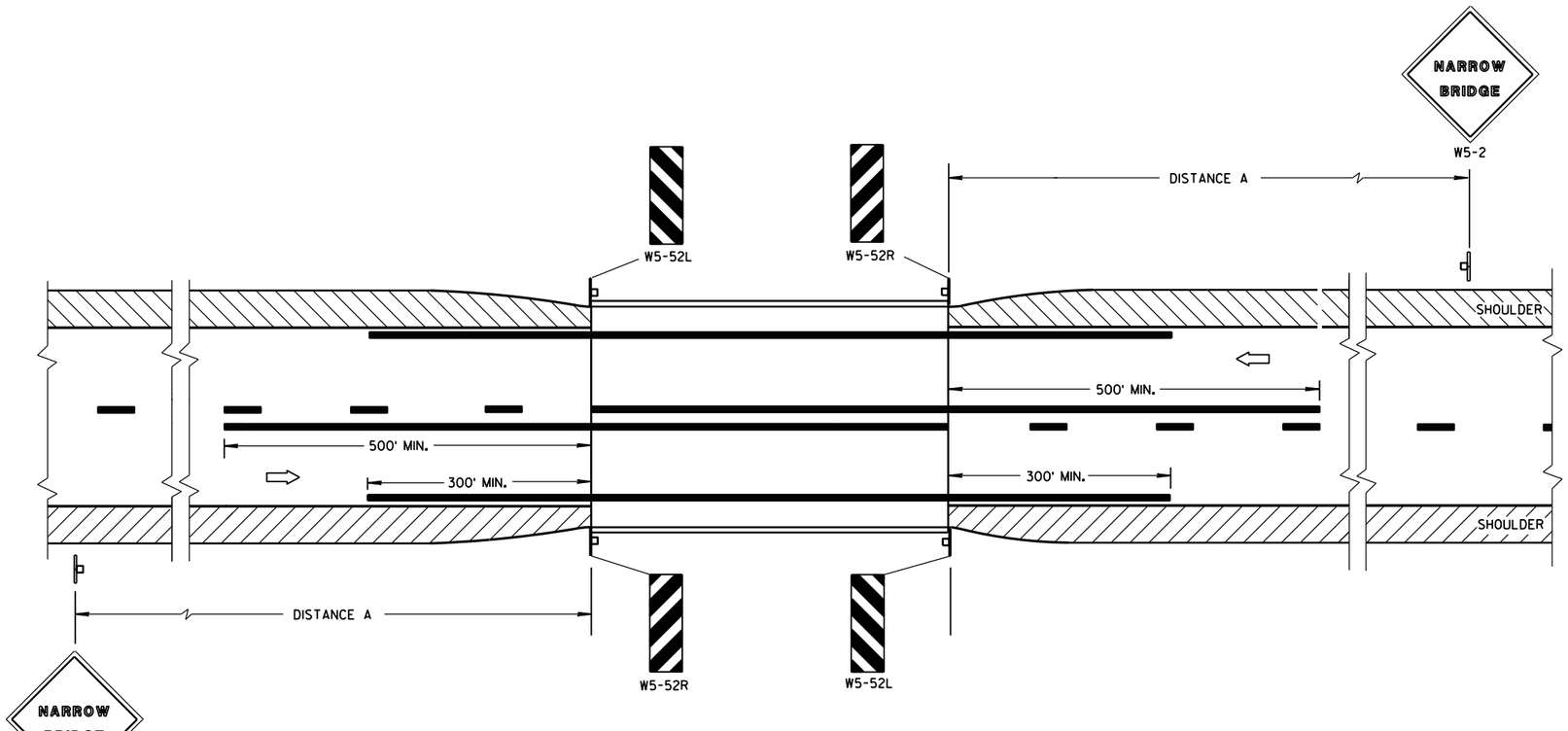
S.D.D. 15 C 2-6b



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

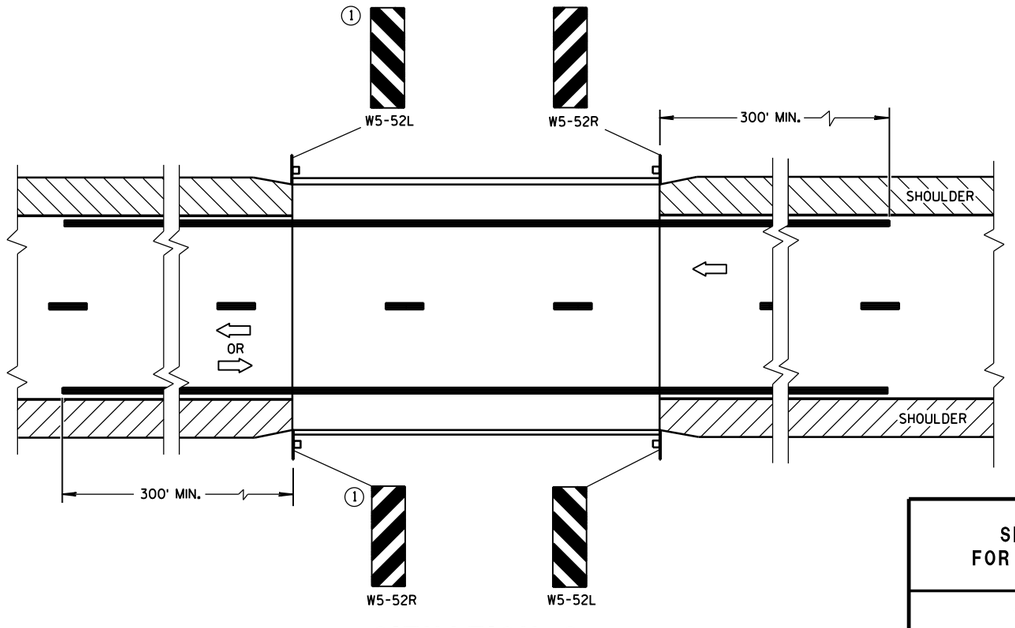
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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[illegible]EER
FHWA

6

S.D.D. 15 C 6-9

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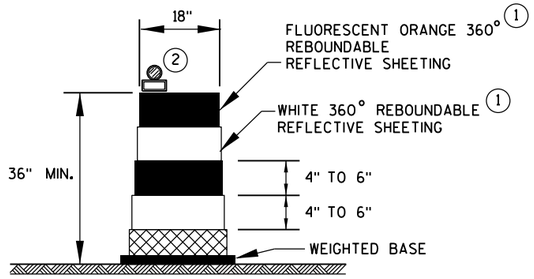
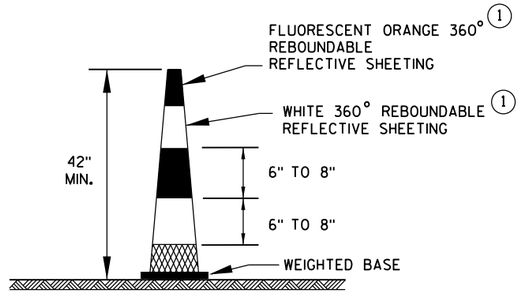
S.D.D. 15 C 6-9



DRUM

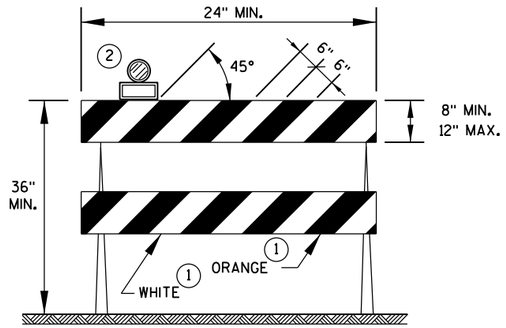


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

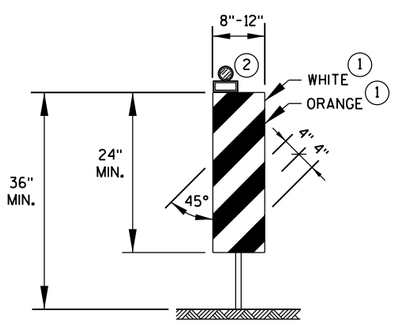
GENERAL NOTES

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



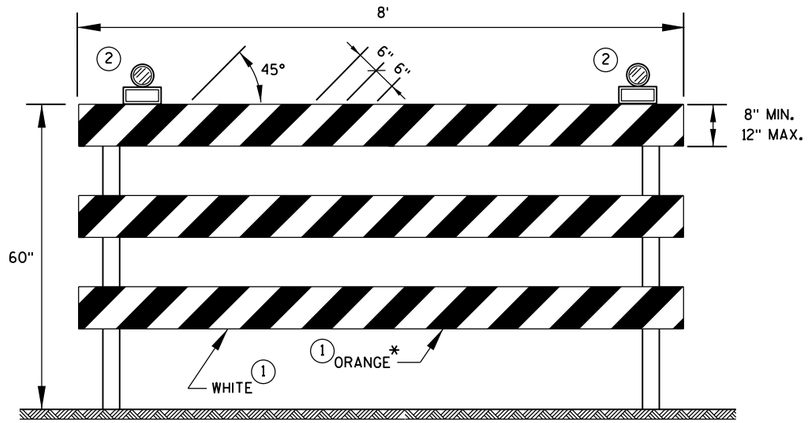
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

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

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017 — DATE

/S/ Andrew Heidtke — WORK ZONE ENG

FHWA

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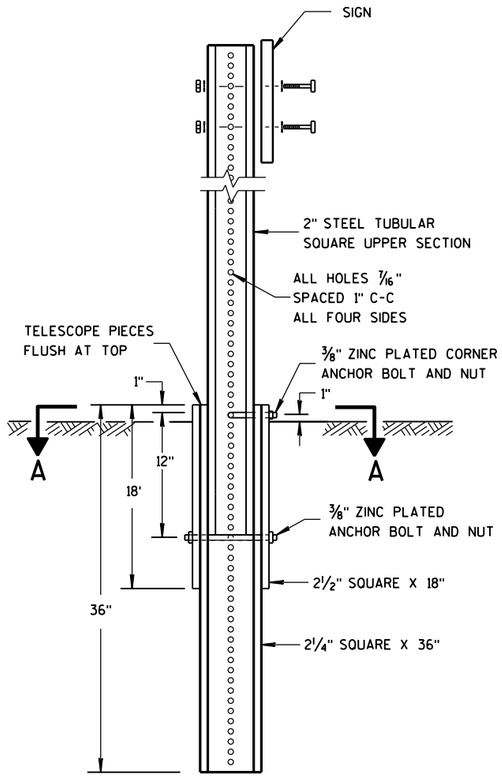
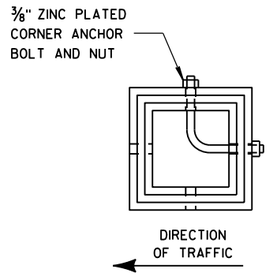
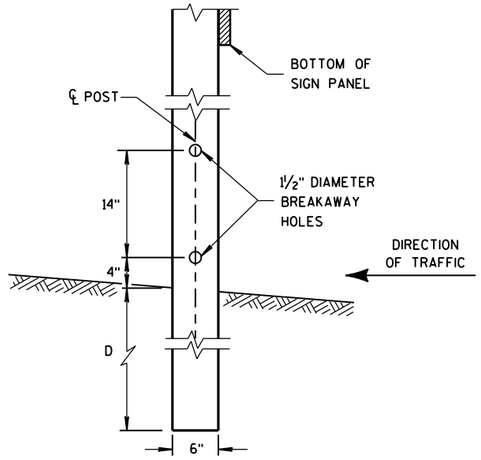
S.D.D. 15 C 11-7b



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



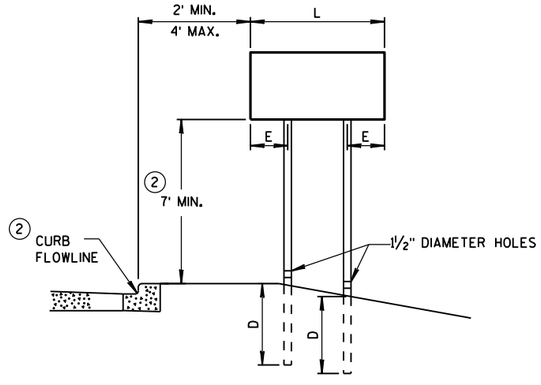
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

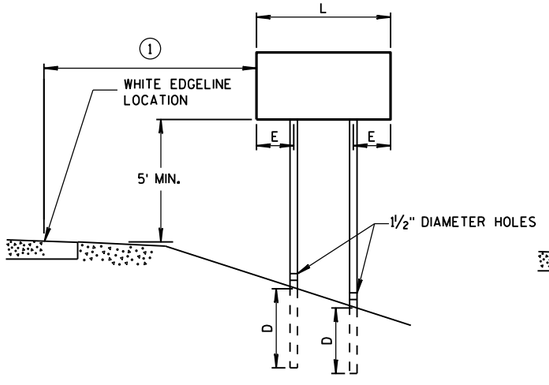
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

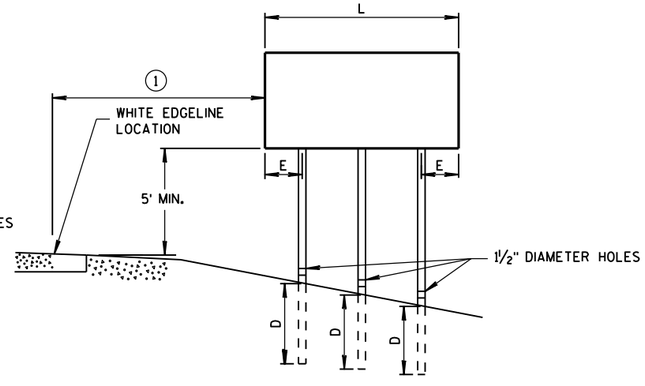
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

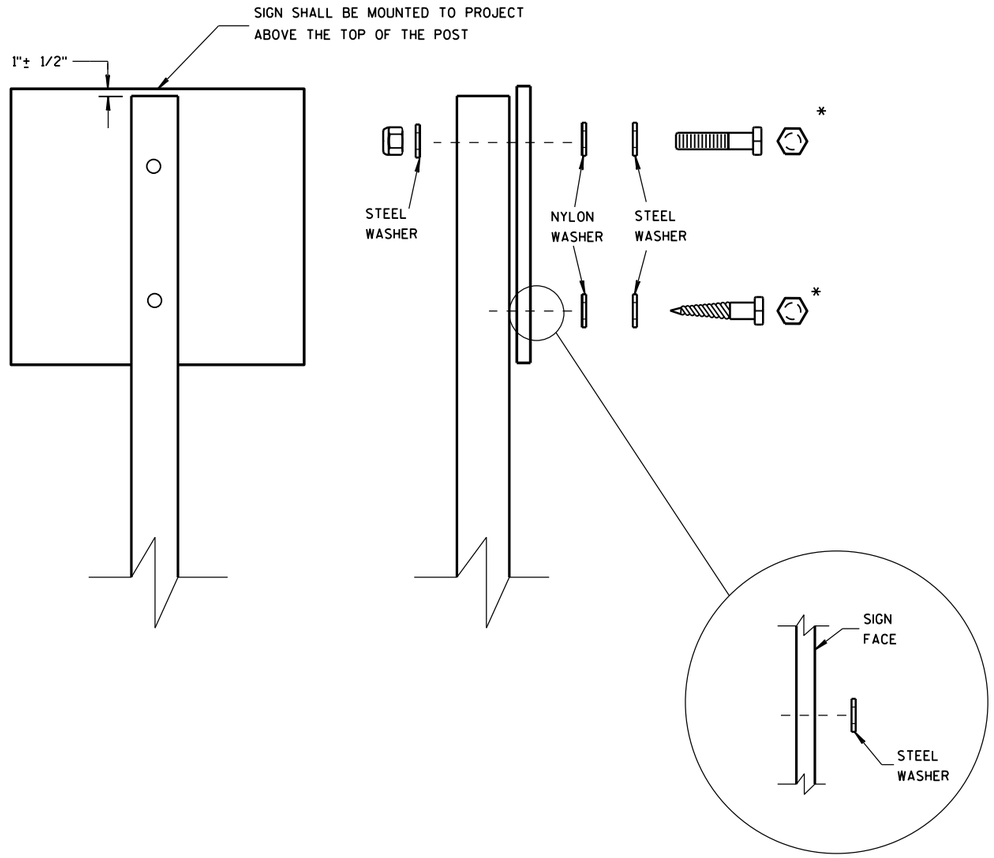
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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 POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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 FOR ALL TYPE H SIGNS

* 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

S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

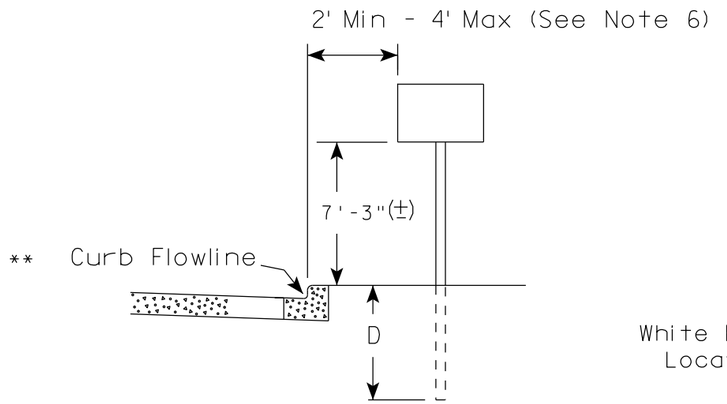
APPROVED

June 2017
DATE

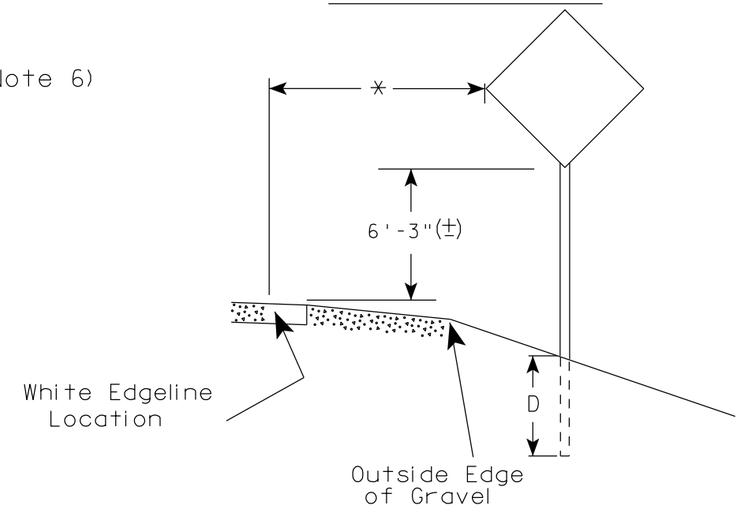
/S/ Andrew Heldtke
WORK ZONE ENG

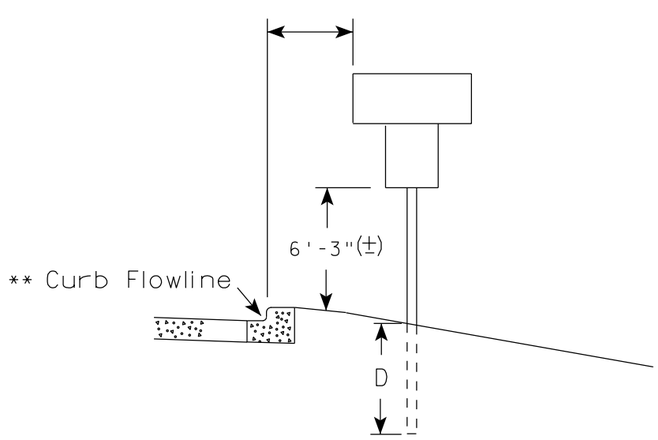
FHWA

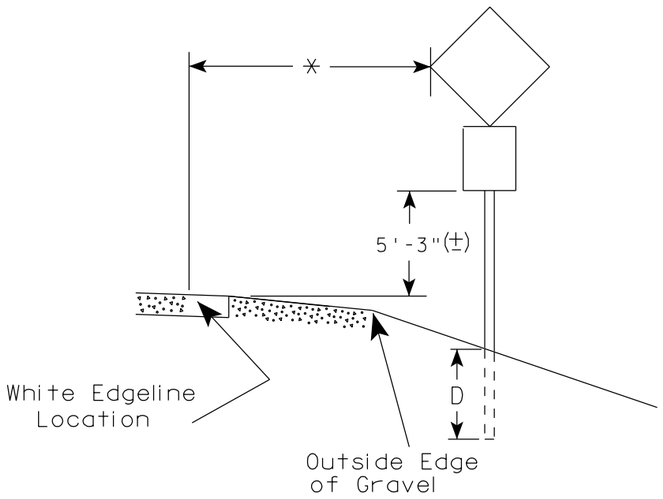
URBAN AREA



RURAL AREA (See Note 2)







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 barrier wall, see A4-10 sign plate.
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 J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. 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), 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" (±).

POST EMBEDMENT DEPTH

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

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

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

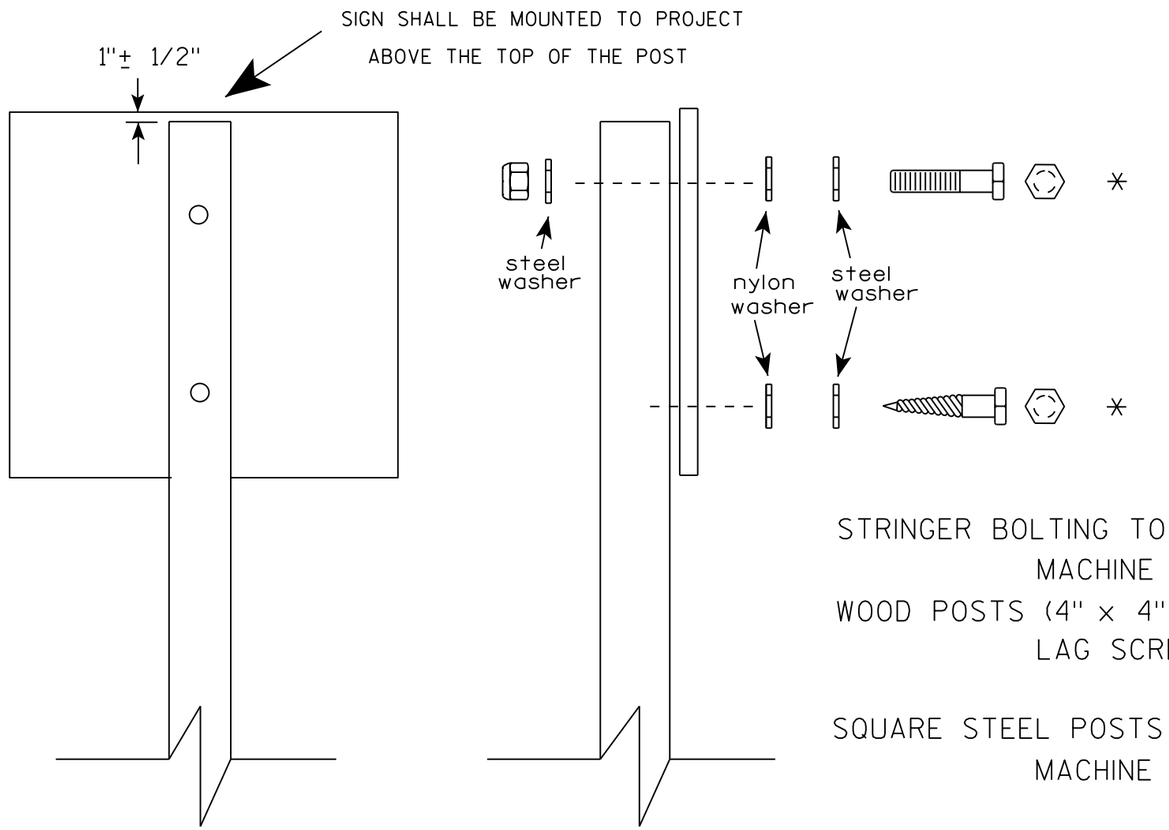
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	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 4" or 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

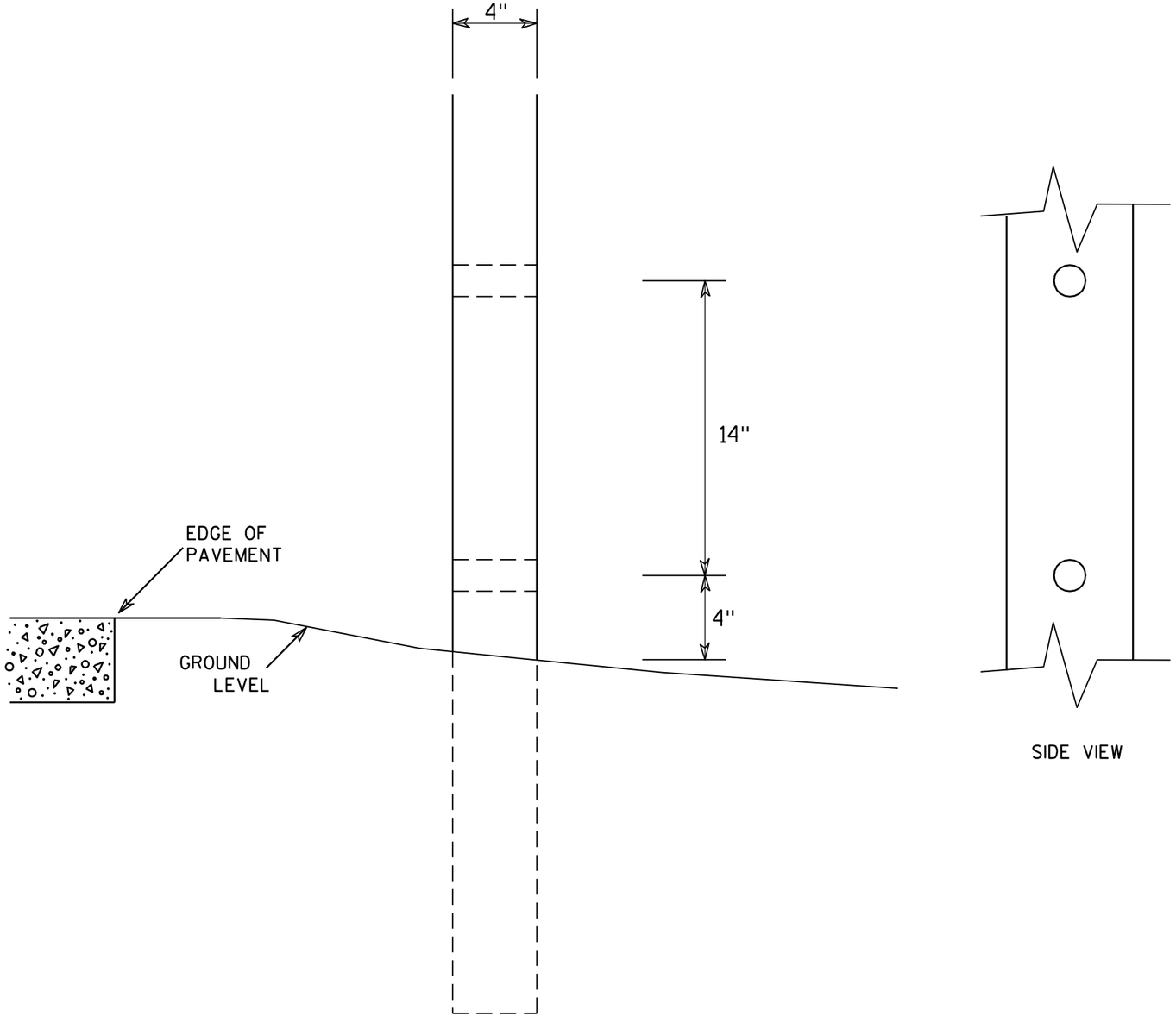
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$



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

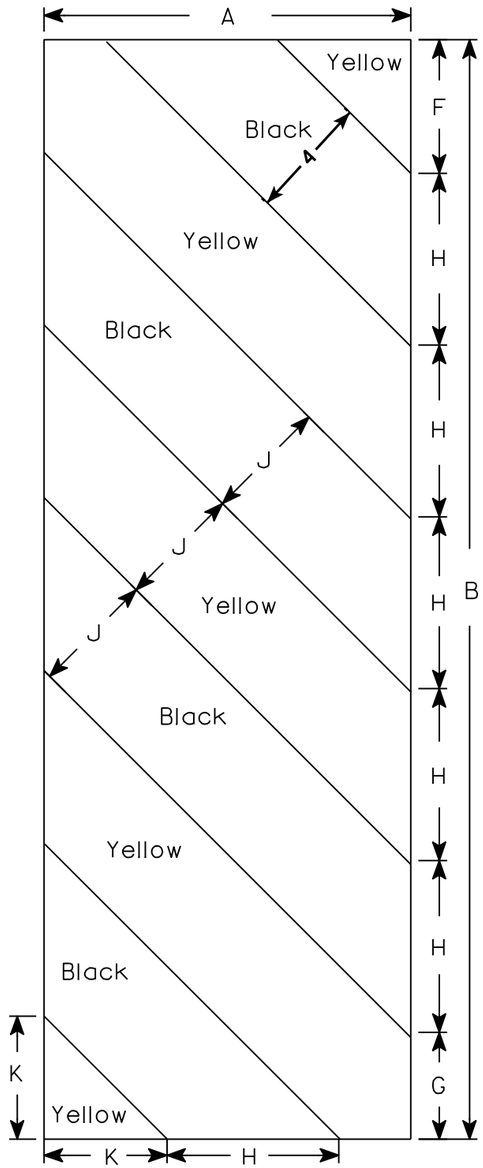
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

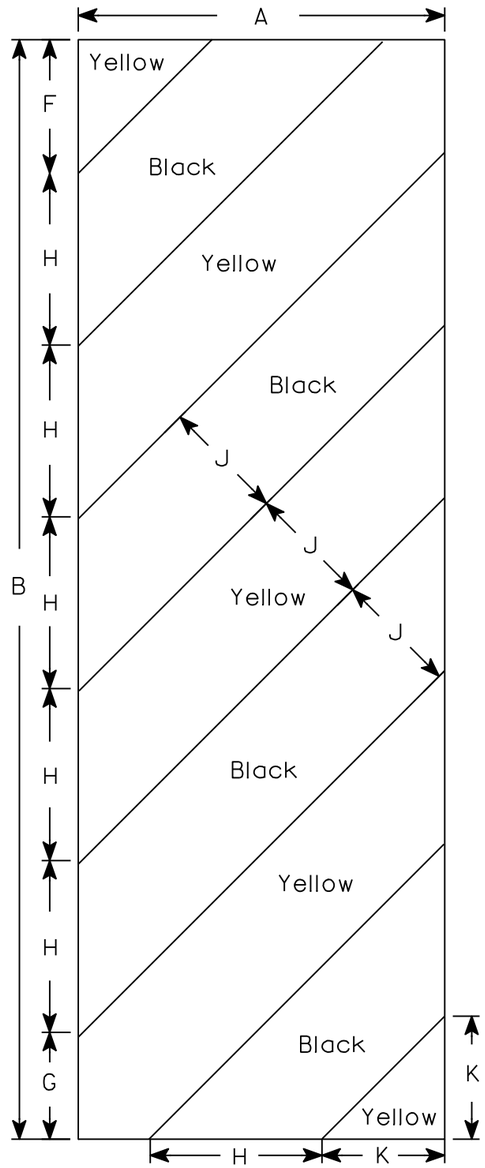
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 38	E



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

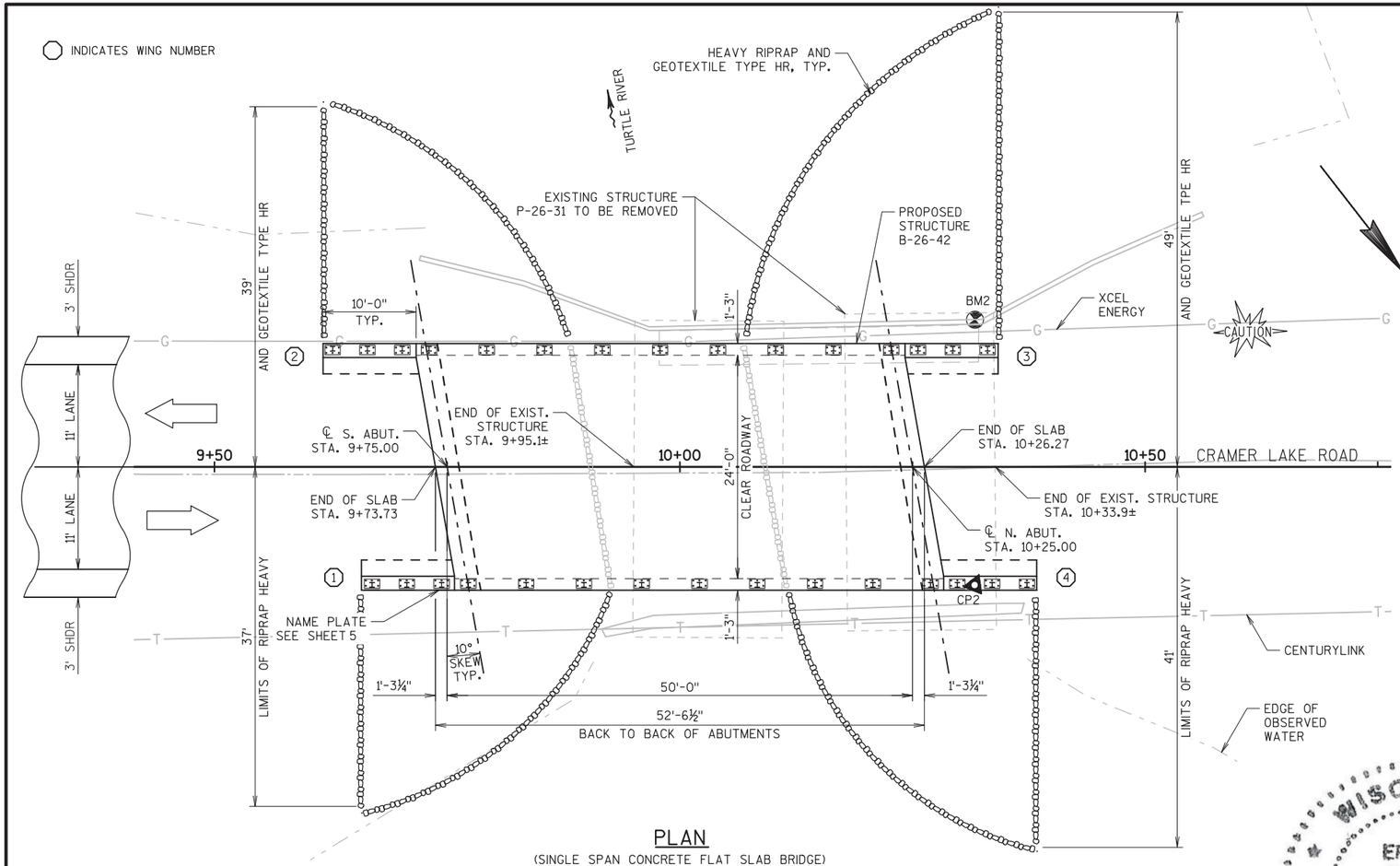
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 39 | E

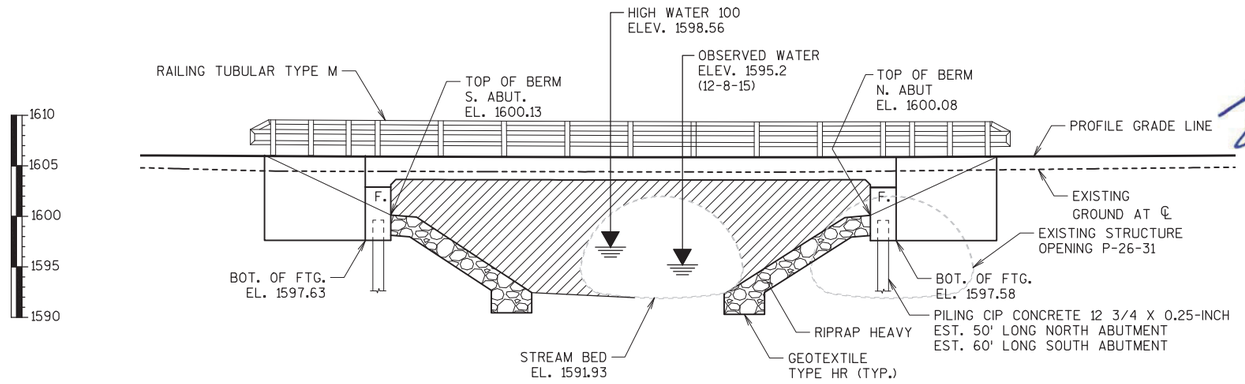
STATE PROJECT NUMBER

9828-00-70



PLAN

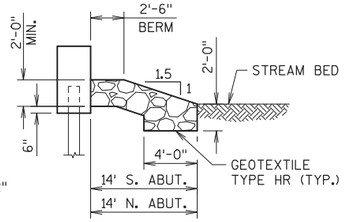
(SINGLE SPAN CONCRETE FLAT SLAB BRIDGE)



ELEVATION

(LOOKING WEST)

AREA TO EXCAVATE INCLUDED IN "EXCAVATION FOR STRUCTURES BRIDGES B-26-42"



RIPRAP DETAIL

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
CP1	7+73.05	10" SPIKE, 15.8' LT	1608.65
CP2	10+31.68	10" SPIKE, 12.7' RT	1604.42
CP3	12+81.89	10" SPIKE, 19.98' LT	1609.85
BM2	10+31.72	PAINTED "X" RET WALL, 15.8' LT	1605.22

DESIGN DATA

LIVE LOAD:

DESIGN LOADING ——— HL-93
INVENTORY RATING FACTOR ——— 1.11
OPERATIONAL RATING FACTOR ——— 1.44
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) ——— 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF

MATERIAL PROPERITIES

CONCRETE MASONRY, SLAB ——— f'c = 4,000 psi
ALL OTHER ——— f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT ——— fy = 60,000 psi

TRAFFIC DATA

ADT (2018) = 100
ADT (2038) = 170
DESIGN SPEED = 45 MPH

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 12 3/4 X 0.25-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110* TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 50' LONG AT THE NORTH ABUTMENT AND 60' LONG AT THE SOUTH ABUTMENT.

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

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100} = 920 C.F.S.
VEL. = 6.4 F.P.S.
HW_{100} = EL. 1598.56
WATERWAY AREA = 143 SQ. FT.
DRAINAGE AREA = 79.8 SQ. MI.
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

Q_2 = 420 C.F.S.
VEL. = 4.3 F.P.S.
HW_2 = EL. 1596.77

LIST OF DRAWINGS

WISCONSIN PROFESSIONAL ENGINEER
ERIC T. PRICE E-39027 MADISON WI
September 1, 2017

NO.	DATE	REVISION	BY

CORRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 11/08/17
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-26-42

CRAMER LAKE ROAD OVER TURTLE RIVER

COUNTY	TOWN/~~CITY/VILLAGE~~
IRON	MERCER

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ERA	ETP	PKF	ETP

GENERAL PLAN

SHEET 1 OF 10

40

BRIDGE OFFICE CONTACT
BILL DREHER, P.E.
TELEPHONE: (608) 266-8489

CONSULTANT CONTACT
ERIC PRICE, P.E.
TELEPHONE: (608) 826-6146

8

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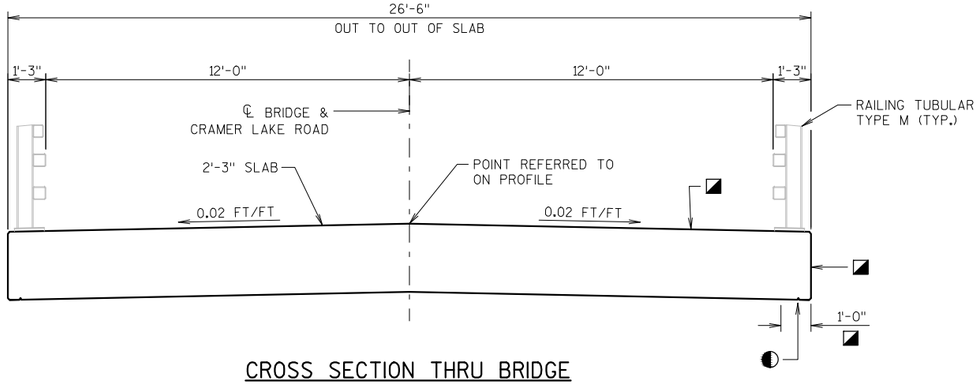
FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\503_STRUCTURES\502.4_FINAL\080101 GP_CRAMERLKRD.DWG PLOT DATE : 9/1/2017 10:16 AM PLOT BY : BOBBY JONES



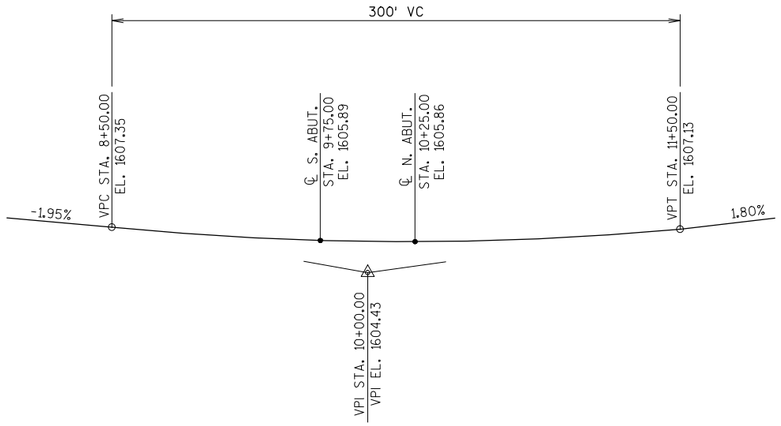
CROSS SECTION THRU BRIDGE

(LOOKING NORTH)

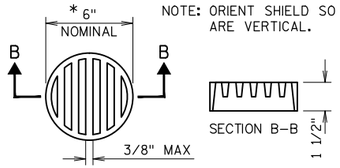
LEGEND

◐ 3/4" V-GROOVE REQ'D. EXTEND TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM.

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



PROFILE GRADE LINE



* DIMENSION IS APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

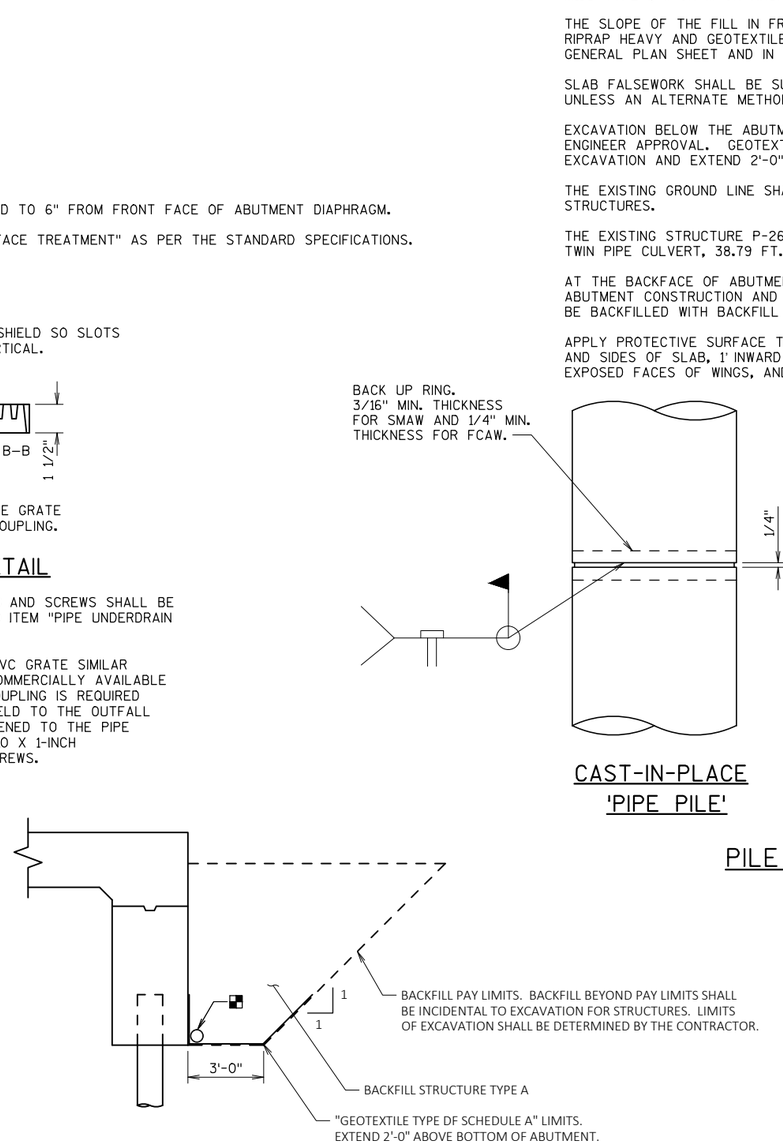
RODENT SHIELD DETAIL

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 OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

TOTAL ESTIMATED QUANTITIES

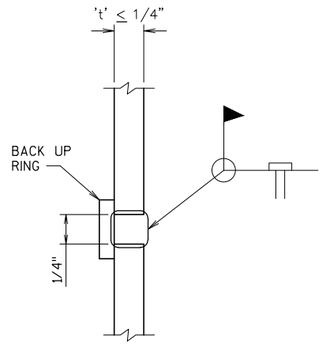
BID NUMBER	BID ITEM	UNIT	SOUTH ABUT	NORTH ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 10+14	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-26-42	LS	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	165	165	-----	330
502.0100	CONCRETE MASONRY BRIDGES	CY	29	29	120	178
502.3200	PROTECTIVE SURFACE TREATMENT	SY	12	12	192	216
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,710	1,710	-----	3,420
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,410	1,410	22,820	25,640
513.4061	RAILING TUBULAR TYPE M B-26-42	LF	22	22	105	149
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	10	-----	20
550.0500	PILE POINTS	EACH	7	7	-----	14
550.2124	PILING CIP CONCRETE 12 3/4 X 0.25-INCH	LF	420	350	-----	770
606.0300	RIPRAP HEAVY	CY	140	175	-----	315
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	95	95	-----	190
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	36	36	-----	72
645.0120	GEOTEXTILE TYPE HR	SY	175	220	-----	395
	NON-BID ITEMS					
	FILLER	SIZE	-----	-----	-----	½" & ¾"



STRUCTURE BACKFILL LIMITS

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

CAST-IN-PLACE 'PIPE PILE'



CIP PILE WELD DETAIL

PILE SPLICE DETAILS

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE I, II OR III OR AASHTO DESIGNATION M213.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

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

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

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES.

THE EXISTING STRUCTURE P-26-31, TO BE REMOVED, IS A GALVANIZED STEEL TWIN PIPE CULVERT, 38.79 FT. LONG WITH AN 18.0 FT. CLEAR ROADWAY WIDTH.

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 BACKFILL STRUCTURE TYPE A.

APPLY PROTECTIVE SURFACE TREATMENT TO THE FOLLOWING AREAS: FULL WIDTH AND SIDES OF SLAB, 1' INWARD ON EXTERIOR UNDERSIDES OF SLAB, TOP AND EXPOSED FACES OF WINGS, AND THE END 1'OF THE FRONT FACE OF ABUTMENTS.

STATE PROJECT NUMBER

9828-00-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-26-42

DRAWN BY PKF | PLANS CK'D. ETP

ORIGINAL PLAN PREPARED BY
CORRE

CROSS SECTION & QUANTITIES

SHEET 2 OF 10

41

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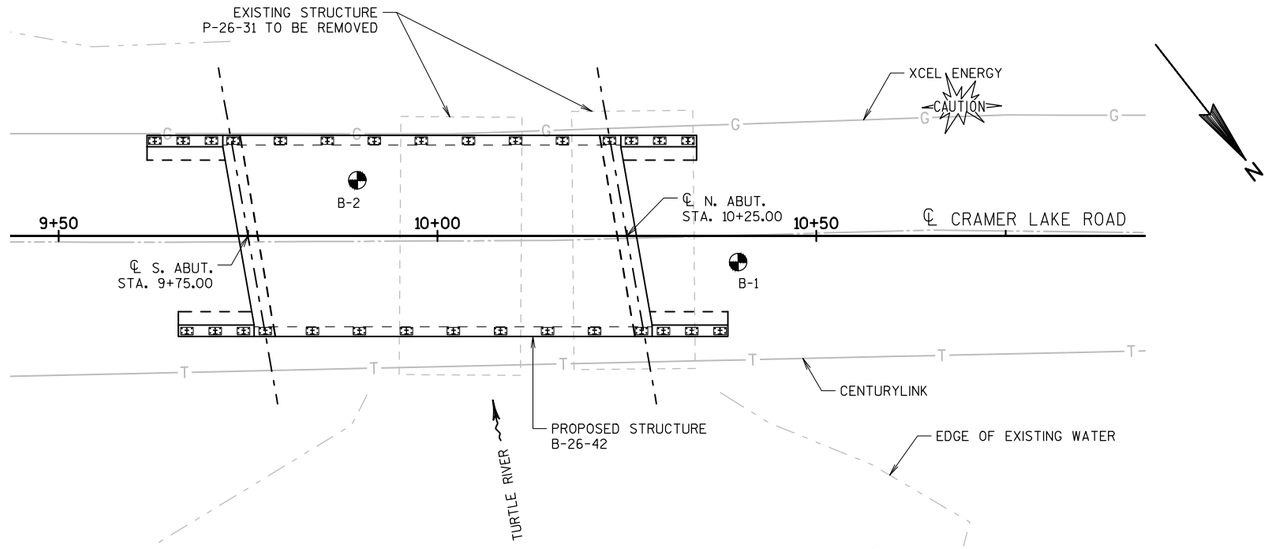
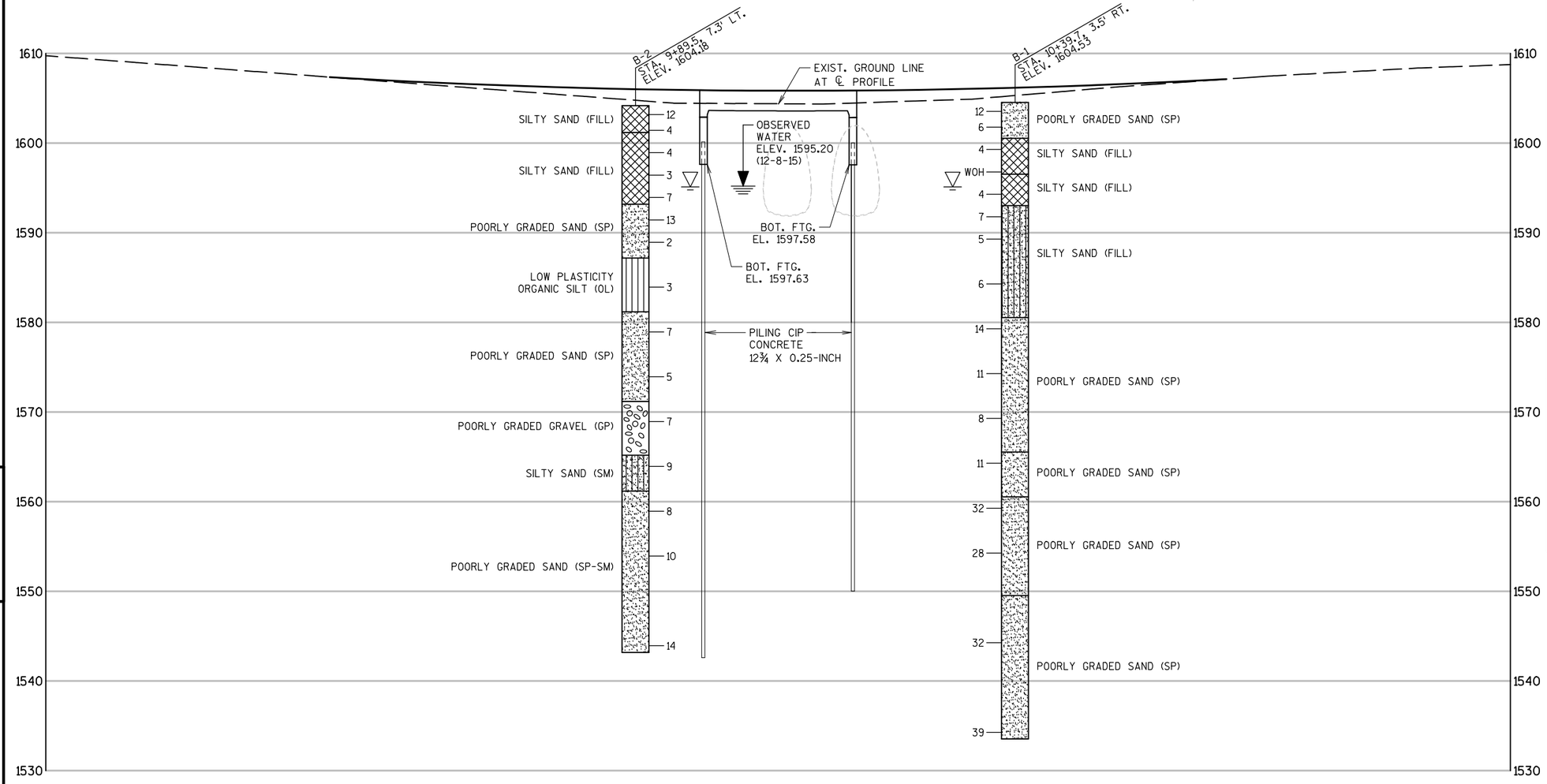
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	DECEMBER 11, 2015	277684.597	776525.212
2	DECEMBER 14, 2015	277645.292	776558.301
BORINGS COMPLETED BY: TWIN PORTS TESTING INC.			
REPORT COMPLETED BY: TWIN PORTS TESTING INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) IRON COUNTY			





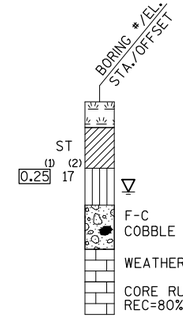
STATE PROJECT NUMBER

9828-00-70

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-26-42

DRAWN BY PKF | PLANS CK'D. ETP

SUBSURFACE EXPLORATION

SHEET 3 OF 10

42

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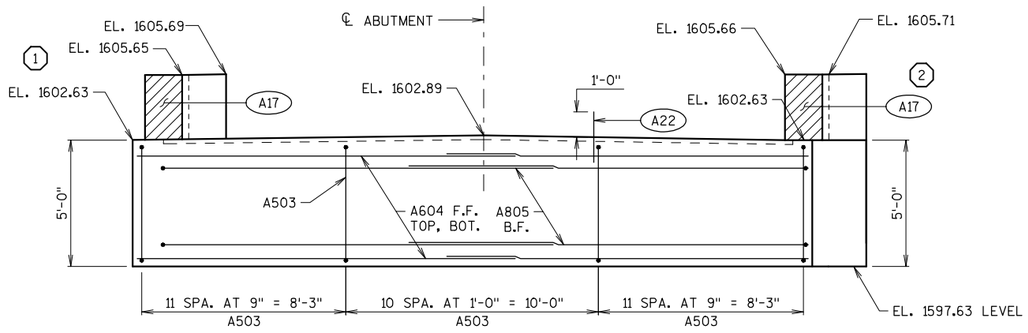
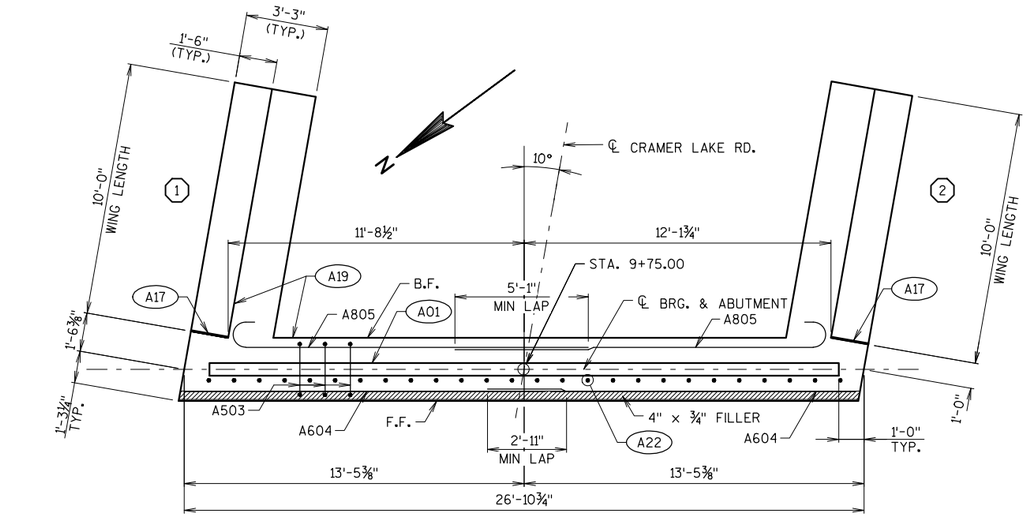
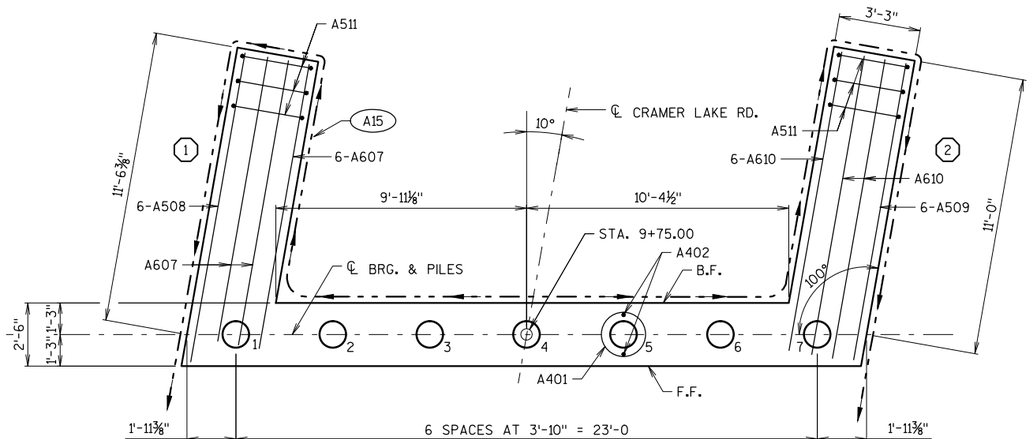


ELEVATION
(LOOKING WEST)



PLAN



PILE PLAN

LEGEND

⬡ INDICATES WING NUMBER

(A01) KEYED CONST. JOINT FORMED BY BEVELED 2" x 6".

(A09) ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 12 3/4 X 0.25-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. SEE ADDITIONAL FOUNDATION DATA ON SHEET 1 AND PILE SPLICE DETAILS ON SHEET 2.

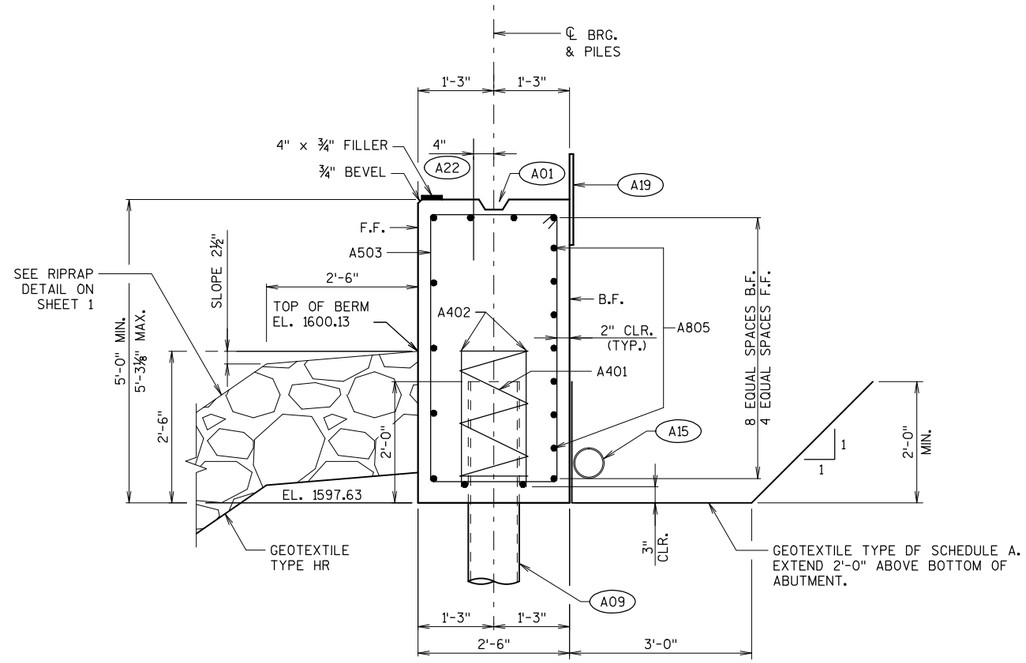
(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMNOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A22) A506 BARS AT 1'-0". THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

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



SECTION THRU BODY
HORIZONTAL BARS NOT OTHERWISE IDENTIFIED ARE A604 BARS

STATE PROJECT NUMBER

9828-00-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-26-42

DRAWN BY PKF | PLANS CK'D. ETP

ORIGINAL PLAN PREPARED BY CORRE

SOUTH ABUTMENT

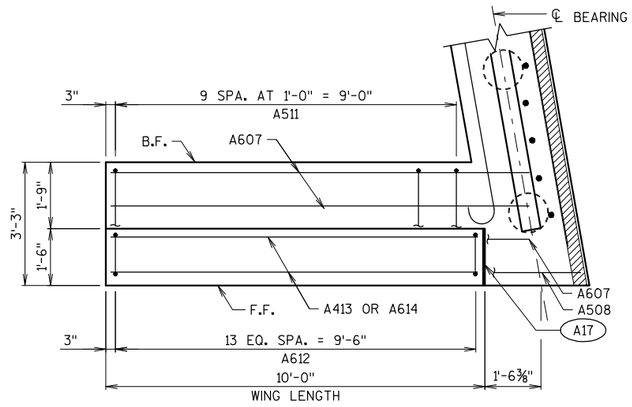
SHEET 4 OF 10

43

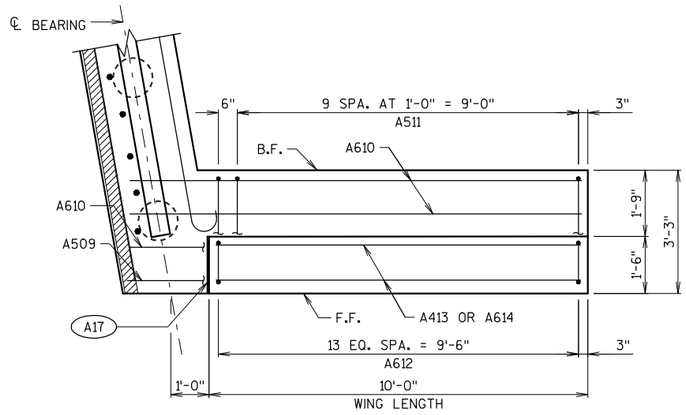
8

8

FILE NAME : P:±WI - NC REGION±9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO±500_CADD±503_STRUCTURES±502.4_FINAL±080401 SA_CRAMERLKRD.DWG PLOT DATE : 9/1/2017 10:18 AM PLOT BY : BOBBY JONES



PLAN WING 1



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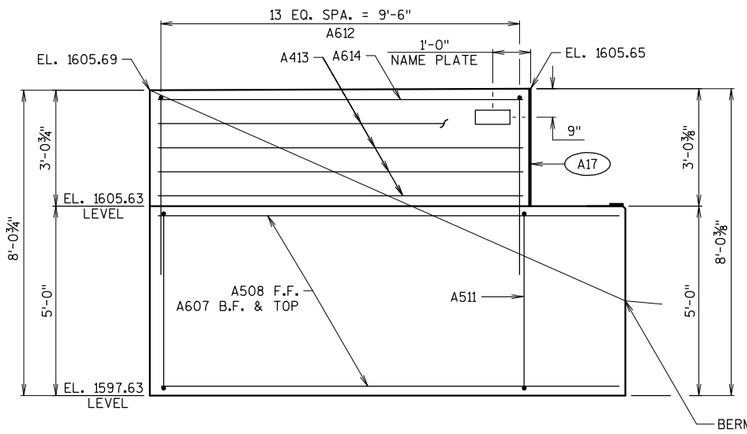
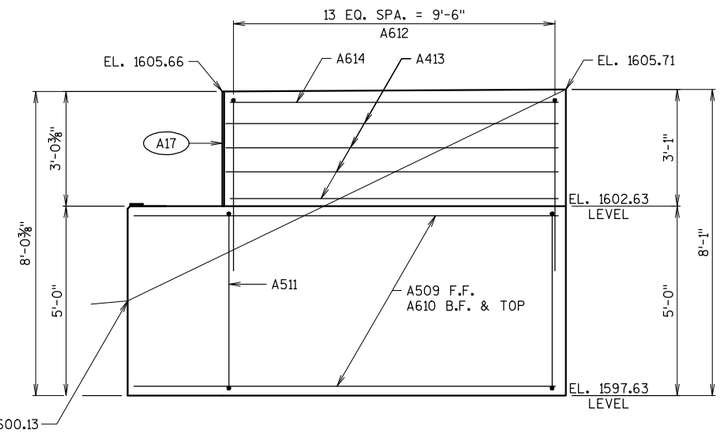


ELEVATION WING 1



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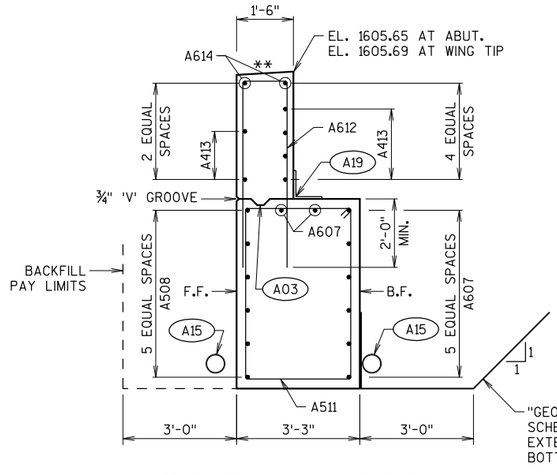
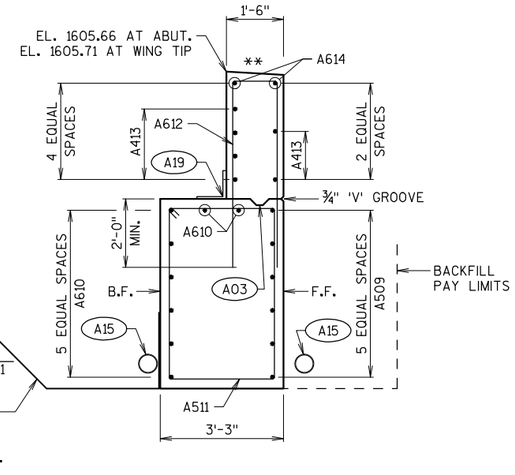


SECTION THRU WING 1



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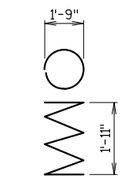
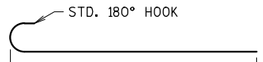


A401



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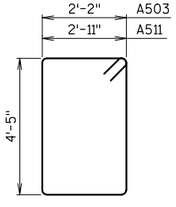
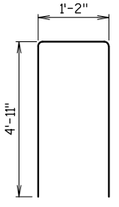


A503, A511



A612

STATE PROJECT NUMBER

9828-00-70

BILL OF BARS - SOUTH ABUTMENT

DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
NON-COATED BARS					TOTAL WEIGHT = 1,710 LBS
A401	7	28'-0"	X		BODY - AT PILES - 1 PER PILE VERT.
A402	14	2'-3"			BODY - AT PILES - 2 PER PILE VERT.
A503	33	13'-10"	X		BODY - STIRRUPS VERT.
A604	22	14'-9"			BODY - B.F. & F.F. HORIZ.
A805	14	15'-9"	X		BODY - B.F. HORIZ.
COATED BARS					TOTAL WEIGHT = 1,410 LBS
A506	26	2'-0"			BODY - TOP VERT.
A607	8	11'-5"			WING 1 - B.F. & TOP HORIZ.
A508	6	12'-5"			WING 1 - F.F. HORIZ.
A509	6	11'-11"			WING 2 - F.F. HORIZ.
A610	8	11'-11"			WING 2 - B.F. & TOP HORIZ.
A511	21	15'-4"	X		WINGS 1 & 2 - STIRRUPS TRANS.
A612	28	10'-8"	X		WINGS 1 & 2 VERT.
A413	12	9'-8"			WINGS 1 & 2 - B.F. & F.F. HORIZ.
A614	4	9'-8"			WINGS 1 & 2 - TOP HORIZ.

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

LEGEND

(A03) OPTIONAL KEYED CONST. JOINT FORMED BY BEVELED 2" x 6" (18" RUBBERIZED MEMBRANE WATERPROOFING AT B.F. & ¾" "V" GROOVE AT F.F. IF JOINT IS USED).

(A09) ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 12 3/4 X 0.25-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. SEE ADDITIONAL FOUNDATION DATA ON SHEET 1 AND PILE SPLICE DETAILS ON SHEET 2.

(A15) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMNOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE

** MATCH SLOPE OF ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-26-42

DRAWN BY PKF | PLANS CK'D. ETP

ORIGINAL PLAN PREPARED BY CORRE

SOUTH ABUTMENT DETAILS

SHEET 5 OF 10

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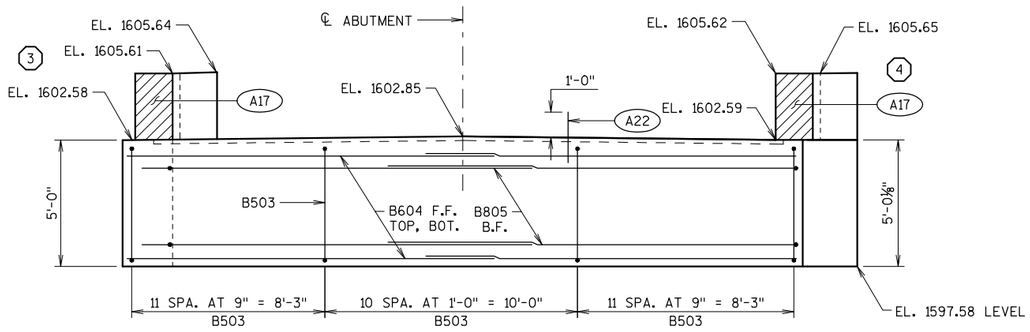
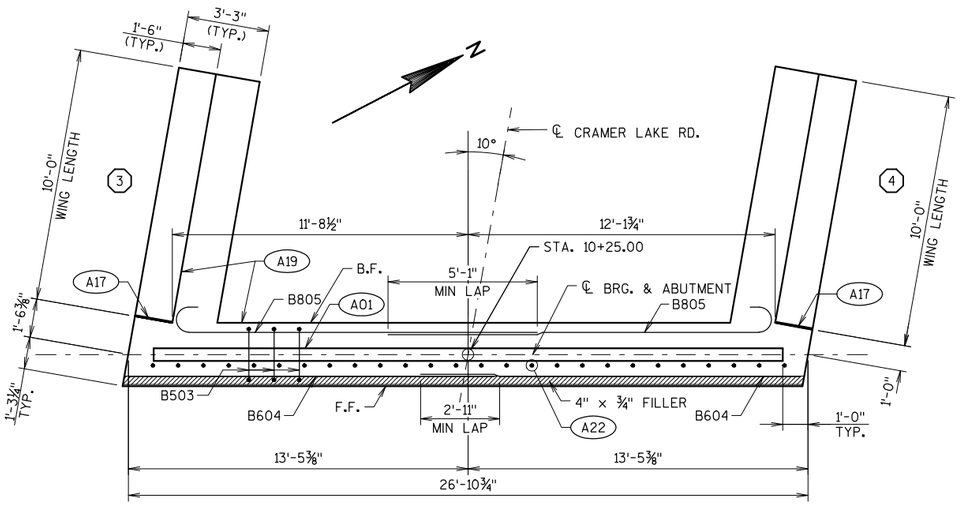
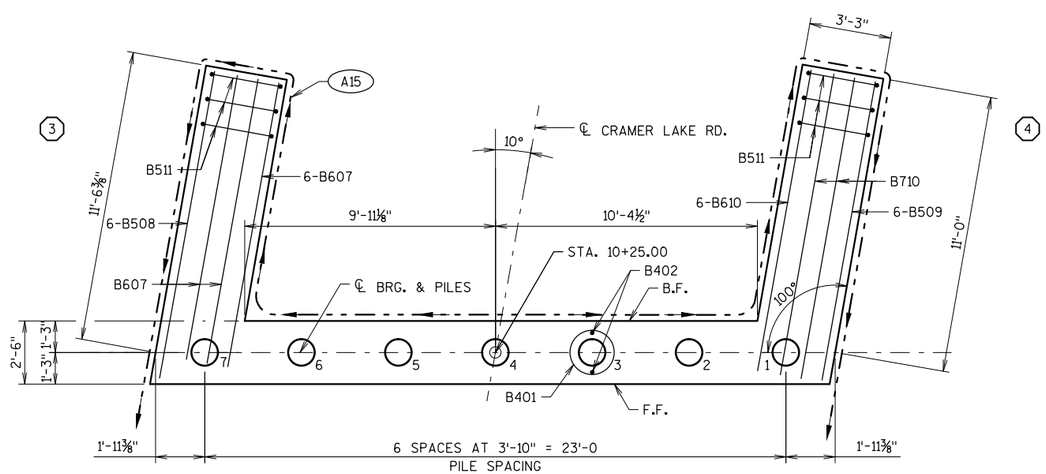


ELEVATION
(LOOKING EAST)



PLAN



PILE PLAN

LEGEND

⬡ INDICATES WING NUMBER

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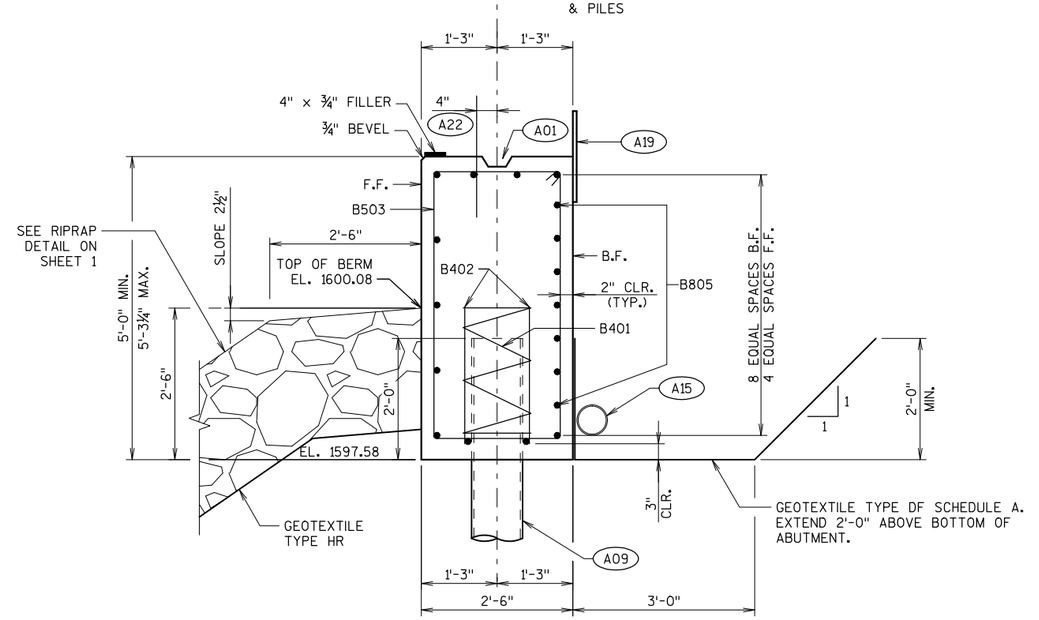
(A22) B506 BARS AT 1'-0". THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

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



SECTION THRU BODY
HORIZONTAL BARS NOT OTHERWISE IDENTIFIED ARE B604 BARS

STATE PROJECT NUMBER

9828-00-70

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-26-42

DRAWN BY PKF | PLANS CK'D. ETP

ORIGINAL PLAN PREPARED BY
CORRE

NORTH ABUTMENT

SHEET 6 OF 10

45

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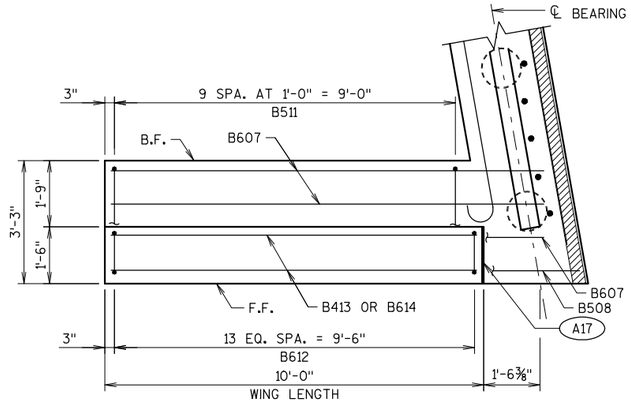

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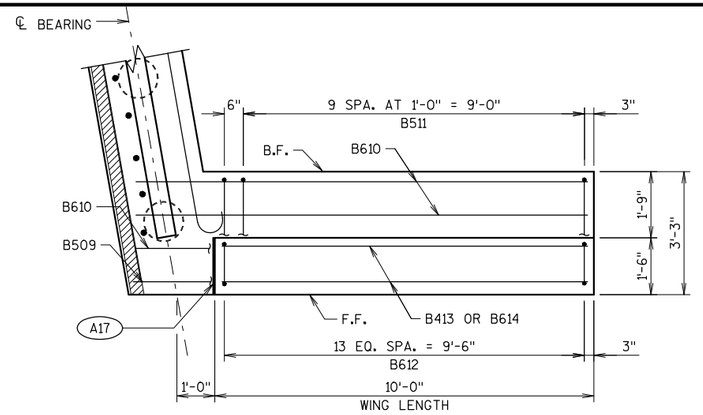
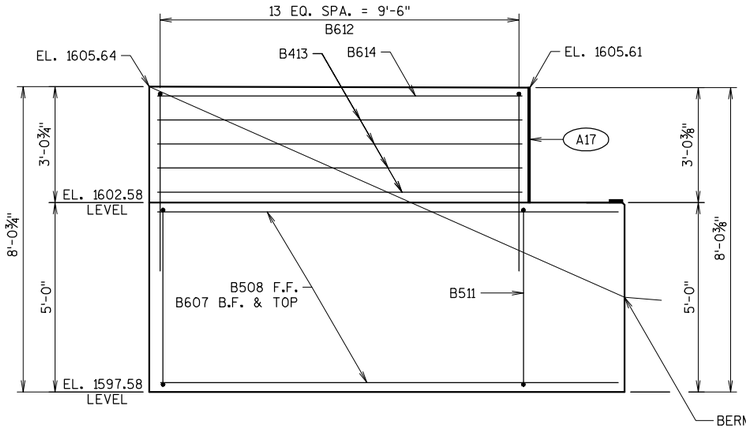
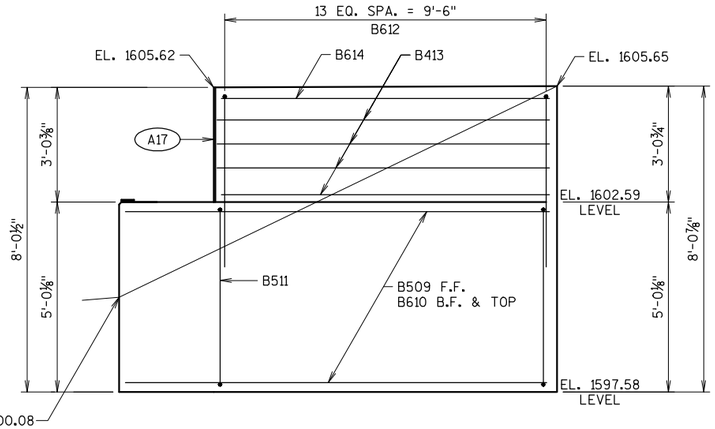


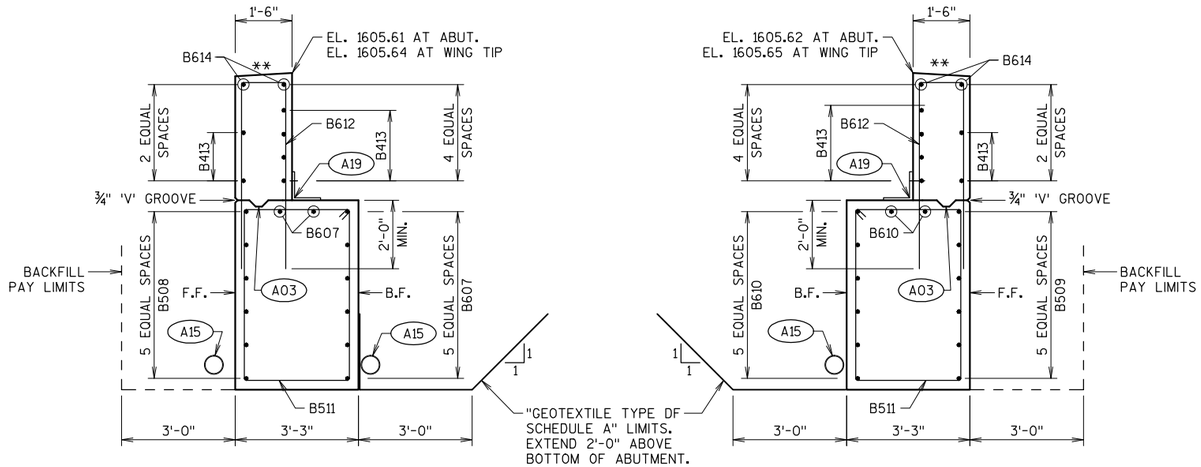
PLAN WING 4



ELEVATION WING 3



ELEVATION WING 4



SECTION THRU WING 3

SECTION THRU WING 4

STATE PROJECT NUMBER

9828-00-70

BILL OF BARS - NORTH ABUTMENT

DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
NON-COATED BARS					TOTAL WEIGHT = 1,710 LBS
B401	7	28'-0"	X		BODY - AT PILES - 1 PER PILE VERT.
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B503	33	13'-10"	X		BODY - STIRRUPS VERT.
B604	22	14'-9"			BODY - B.F. & F.F. HORIZ.
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THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

LEGEND

(A03) OPTIONAL KEYED CONST. JOINT FORMED BY BEVELED 2" × 6" (18" RUBBERIZED MEMBRANE WATERPROOFING AT B.F. & ¾" "V" GROOVE AT F.F. IF JOINT IS USED).

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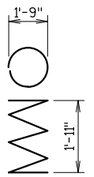
(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE



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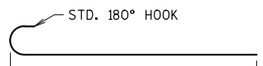
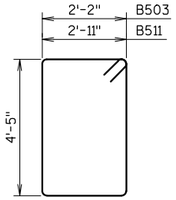
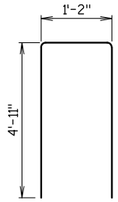


B805



B503, B511



B612

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-26-42

DRAWN BY PKF | PLANS CK'D. ETP

ORIGINAL PLAN PREPARED BY CORRE

NORTH ABUTMENT DETAILS

SHEET 7 OF 10

46

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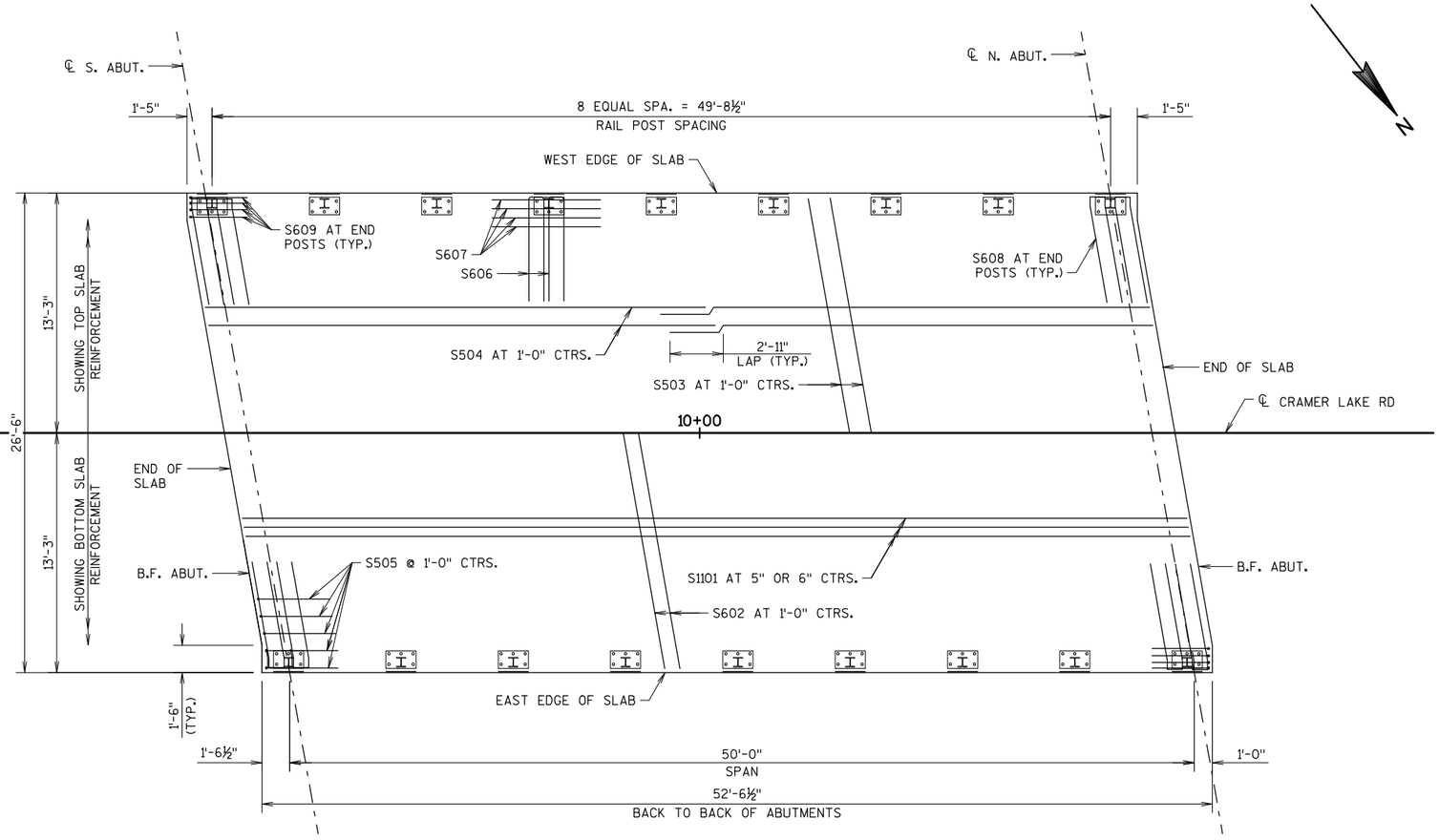
8

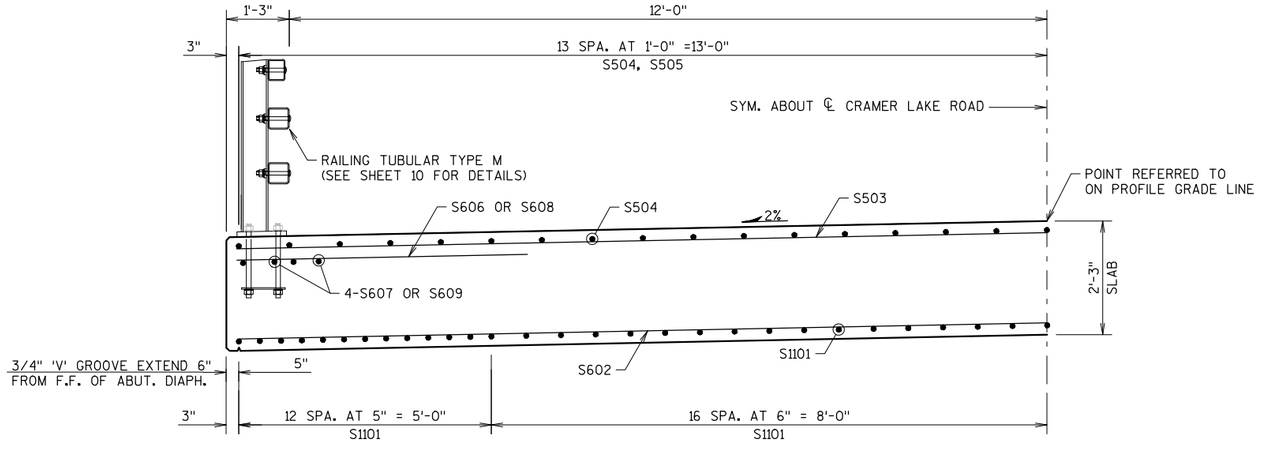
FILE NAME : P:±WI - NC REGION±9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO±500_CADD±503_STRUCTURES±502.4_FINAL±080501 NA_CRAMERLKRD.DWG PLOT DATE : 9/1/2017 10:19 AM PLOT BY : BOBBY JONES

STATE PROJECT NUMBER

9828-00-70



PLAN



TYPICAL SECTION THRU SLAB

NOTES

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.

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ℄ OF SUBSTRUCTURE UNITS.

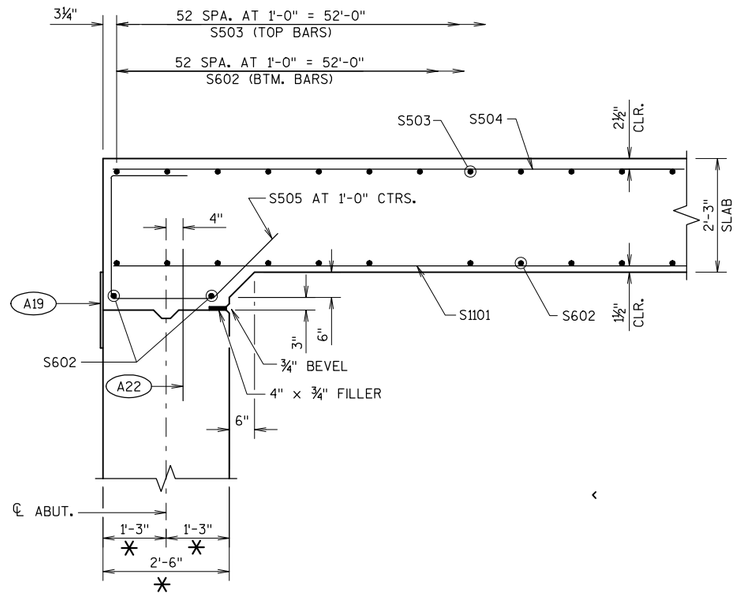
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

LEGEND

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.

(A22) A506 OR B506 BARS AT 1'-0". THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

✳ DIMENSION IS NORMAL TO ℄ SUBSTRUCTURE.



PARTIAL LONGITUDINAL SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-26-42

DRAWN BY PKF | PLANS CK'D. ETP

ORIGINAL PLAN PREPARED BY CORRE

SUPERSTRUCTURE

SHEET 8 OF 10

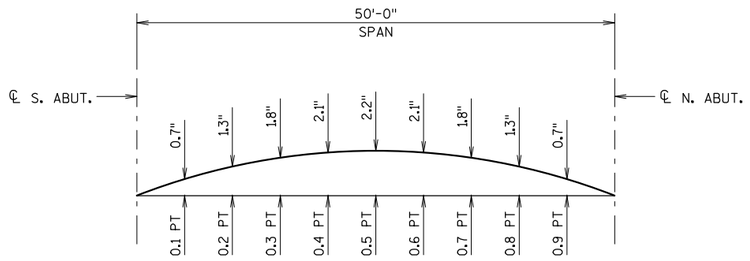
47

8

8

STATE PROJECT NUMBER

9828-00-70



CAMBER DIAGRAM

PROVIDE CAMBER AS SHOWN ABOVE TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. THIS DOES NOT INCLUDE ANY ALLOWANCE FOR FORM SETTLEMENT.

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

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)

EQUALS TOP OF SLAB FALSEWORK ELEVATION.

TOP OF DECK ELEVATIONS

LOCATION	℄ OF S. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ OF N. ABUT.
WEST EDGE OF SLAB	1605.63	1605.61	1605.60	1605.59	1605.58	1605.57	1605.56	1605.56	1605.57	1605.57	1605.58
℄ STRUCTURE	1605.89	1605.87	1605.86	1605.85	1605.84	1605.84	1605.83	1605.84	1605.84	1605.85	1605.86
EAST EDGE OF SLAB	1605.62	1605.60	1605.59	1605.58	1605.57	1605.56	1605.56	1605.57	1605.57	1605.58	1605.59

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

SURVEY TOP OF SLAB ELEVATIONS

SPAN POINT	S. ABUT.	0.5	N. ABUT.
WEST EDGE OF SLAB			
℄ STRUCTURE			
EAST EDGE OF SLAB			

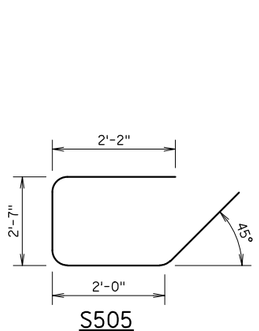
PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

BILL OF BARS - SUPERSTRUCTURE

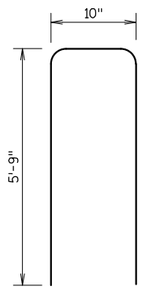
DIMENSIONS IN BENDING DETAILS ARE OUT-TO-OUT OF BAR.

BAR MARK	NO. REQ'D	LENGTH	BENT	BAR SERIES	LOCATION
COATED BARS					TOTAL WEIGHT = 22,820 LBS
S1101	57	52'-2"			SLAB - BTM LONGIT.
S602	57	26'-6"			SLAB - BTM TRANS.
S503	53	26'-6"			SLAB - TOP TRANS.
S504	54	27'-7"			SLAB - TOP LONGIT.
S505	54	8'-7"	X		SLAB - AT ABUTMENTS TRANS.
S606	28	12'-0"	X		SLAB - TOP - AT INT. RAIL POSTS TRANS.
S607	56	6'-0"			SLAB - TOP - AT INT. RAIL POSTS LONGIT.
S608	8	12'-4"	X		SLAB - TOP - AT EXT. RAIL POSTS TRANS.
S609	16	4'-2"	X		SLAB - TOP - AT EXT. RAIL POSTS LONGIT.

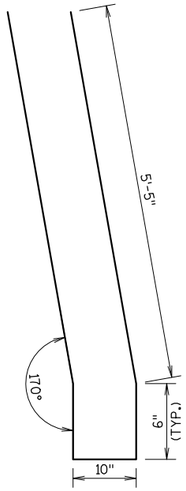
THE FIRST DIGIT OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.



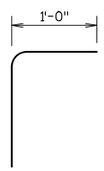
S505



S606



S608



S609

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-26-42

DRAWN BY PKF | PLANS CK'D. ETP

ORIGINAL PLAN PREPARED BY CORRE

SUPERSTRUCTURE DETAILS

SHEET 9 OF 10

48

8

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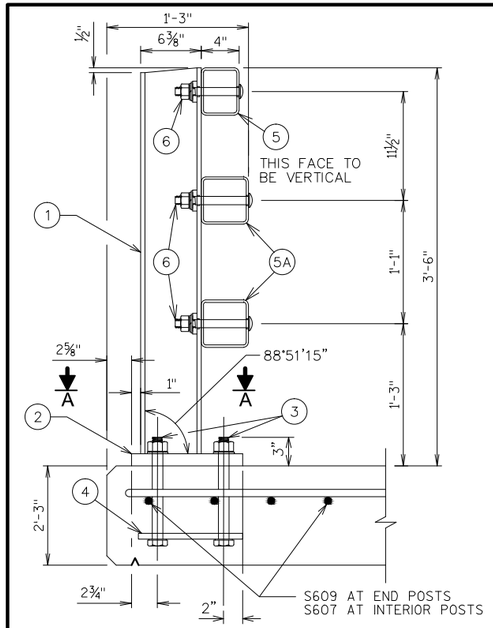
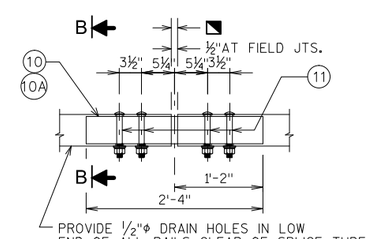
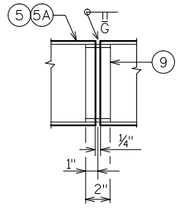


SECTION THRU RAILING ON DECK

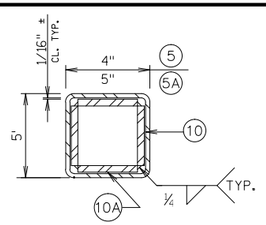


FIELD ERECTION JOINT DETAIL

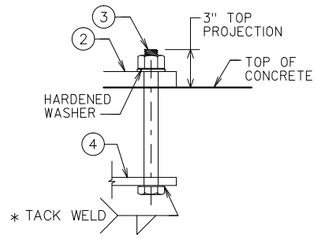


SHOP RAIL SPLICE DETAIL

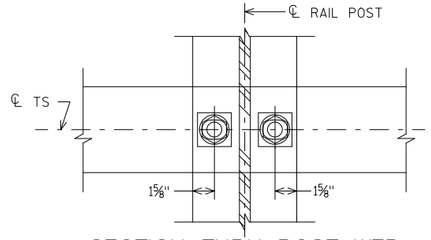
(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



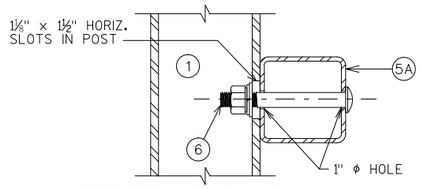
SECTION B–B



ANCHOR BOLTS



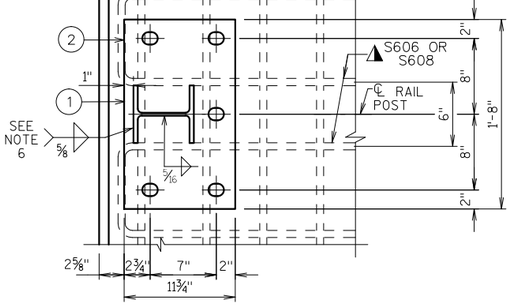
SECTION THRU POST WEB



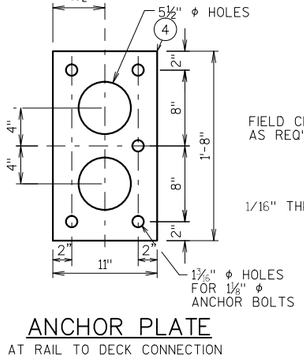
SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS

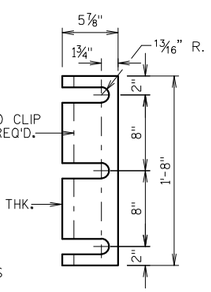


SECTION A–A

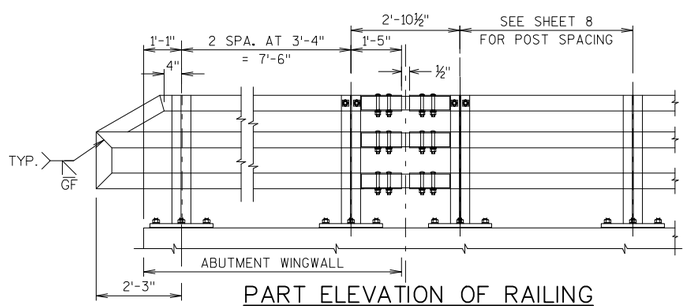


ANCHOR PLATE

AT RAIL TO DECK CONNECTION



POST SHIM DETAIL



PART ELEVATION OF RAILING

STATE PROJECT NUMBER

9828-00-70

LEGEND

(1) W6 x 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

(2) PLATE 1¼" x 11¾" x 1'-8" WITH 1⅝" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

(3) ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)

(4) ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1⅜" DIA. HOLES FOR ANCHOR BOLTS NO. 3

(5) TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(5A) TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(6) ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

(7) ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.

(8) 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.

(9) SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".

(10) ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

(10A) ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

(11) ⅞" ϕ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16 " X 1" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16 " X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

(12) ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-26-42" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 ksi. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.

⚠ TIE TO TOP MAT OF STEEL.

* FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-26-42

DRAWN BY PKF | PLANS CK'D. ETP

ORIGINAL PLAN PREPARED BY
CORRE

RAILING TUBULAR TYPE M

SHEET 10 OF 10

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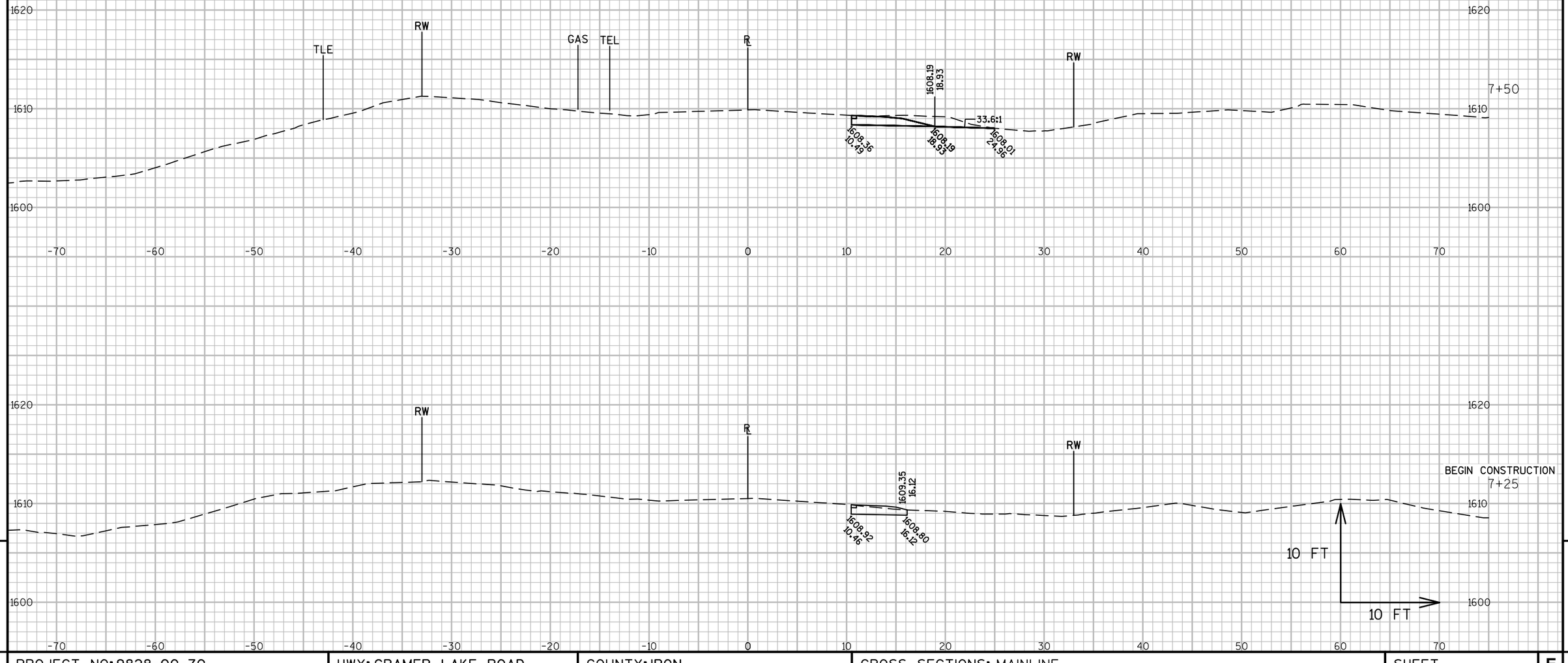
STATION	Distance	AREA (SF) Cut	Salvaged/Unusable Pavement Material	Fill	EBS	Incremental Vol (CY) (Unadjusted) Cut Note 1	Salvaged/Unusable Pavement Material Note 2	Fill Note 3	EBS	Cumulative Vol (CY) Cut 1.00 Note 1	Expanded Fill 1.25	Expanded EBS Backfill 1.30 Note 5	Reduced EBS in Fill 0.80 Note 7	Mass Ordinate Note 8
7+25 RT	0.00	4.02	0.00	-	-	-	-	-	-	-	-	-	-	0
7+50 RT	25.00	11.69	0.00	-	-	7	-	-	-	7	-	-	-	7
8+00 RT	50.00	8.46	0.00	-	-	19	-	-	-	26	-	-	-	26
8+50 RT	50.00	-	0.00	26.91	-	8	-	25	-	34	31	-	-	3
					TOTAL =	34	0	25	0					
7+71 LT	0.00	5.33	0.00	-	-	-	-	-	-	-	-	-	-	0
8+00 LT	29.00	3.11	0.00	1.30	-	5	-	1	-	5	1	-	-	4
8+50 LT	50.00	2.00	0.00	10.73	-	5	-	11	-	9	15	-	-	-6
					TOTAL =	9	0	12	0					
8+50	0.00	19.75	5.50	37.64	-	-	-	-	-	-	-	-	-	0
9+00	50.00	9.98	5.50	86.90	-	28	10	115	-	28	144	-	-	-127
9+50	50.00	-	5.50	188.91	-	9	10	255	-	37	463	-	-	-447
9+62	12.00	-	5.50	180.97	-	-	2	82	-	37	566	-	-	-552
9+66	4.00	-	5.50	138.16	-	-	1	24	-	37	596	-	-	-583
					TOTAL =	37	24	477	0					
STRUCTURE B-26-42														
10+34	0.00	1.78	5.50	313.78	-	-	-	-	-	-	-	-	-	0
10+38	4.00	0.20	5.50	301.09	-	0	1	45	-	0	56	-	-	-57
10+50	12.00	0.10	5.50	168.77	-	0	2	104	-	0	186	-	-	-189
11+00	50.00	13.29	5.50	19.07	-	12	10	174	-	12	404	-	-	-405
11+50	50.00	62.03	5.50	-	-	70	10	18	-	82	426	-	-	-367
					TOTAL =	82	24	341	0					
11+50 RT	0.00	31.50	0.00	-	-	-	-	-	-	-	-	-	-	0
12+00 RT	50.00	14.09	0.00	-	-	42	-	-	-	42	-	-	-	42
12+29 RT	29.00	26.31	0.00	-	-	22	-	-	-	64	-	-	-	64
					TOTAL =	64	0	0	0					
11+50 LT	0.00	14.50	0.00	-	-	-	-	-	-	-	-	-	-	0
12+00 LT	50.00	27.03	0.00	-	-	38	-	-	-	38	-	-	-	38
12+50 LT	50.00	21.90	0.00	-	-	45	-	-	-	84	-	-	-	84
13+00 LT	50.00	4.98	0.00	-	-	25	-	-	-	109	-	-	-	109
					TOTAL =	109	0	0	0					
					PROJECT TOTAL =	335	47	854	0					

(NOTE 1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(NOTE 2) DOES NOT SHOW UP IN CROSS SECTIONS.
(NOTE 3) DOES NOT INCLUDE UNUSABLE PAVEMENT VOLUME.
(NOTE 5) WILL BE BACKFILLED WITH BORROW.
(NOTE 7) REDUCED EBS IN FILL: EXCAVATED EBS MATERIAL IS USABLE IN FILLS OUTSIDE THE 1:1 SLOPE.
(NOTE 8) THE MASS ORDINATE +/- QTY CALCLATED FOR EACH SECTION. + QTY INDICATES AN EXCESS OF MATERIAL. - INDICATED A SHORTAGE OF MATERIAL. M.O. INCLUDES UNUSABLE MATERIAL.



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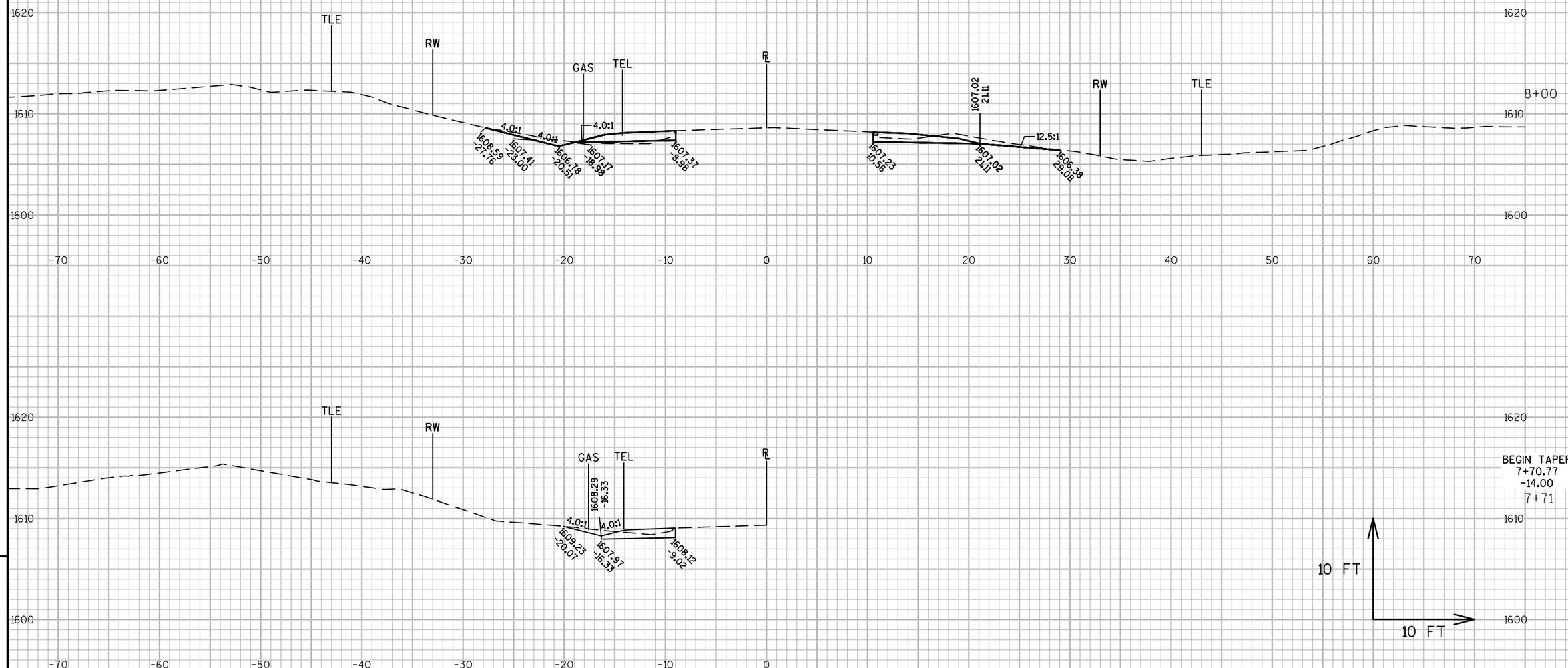
9

PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 51	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:51 AM
LAYOUT NAME - 090101-XS
PLOT BY : BOBBY JONES
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



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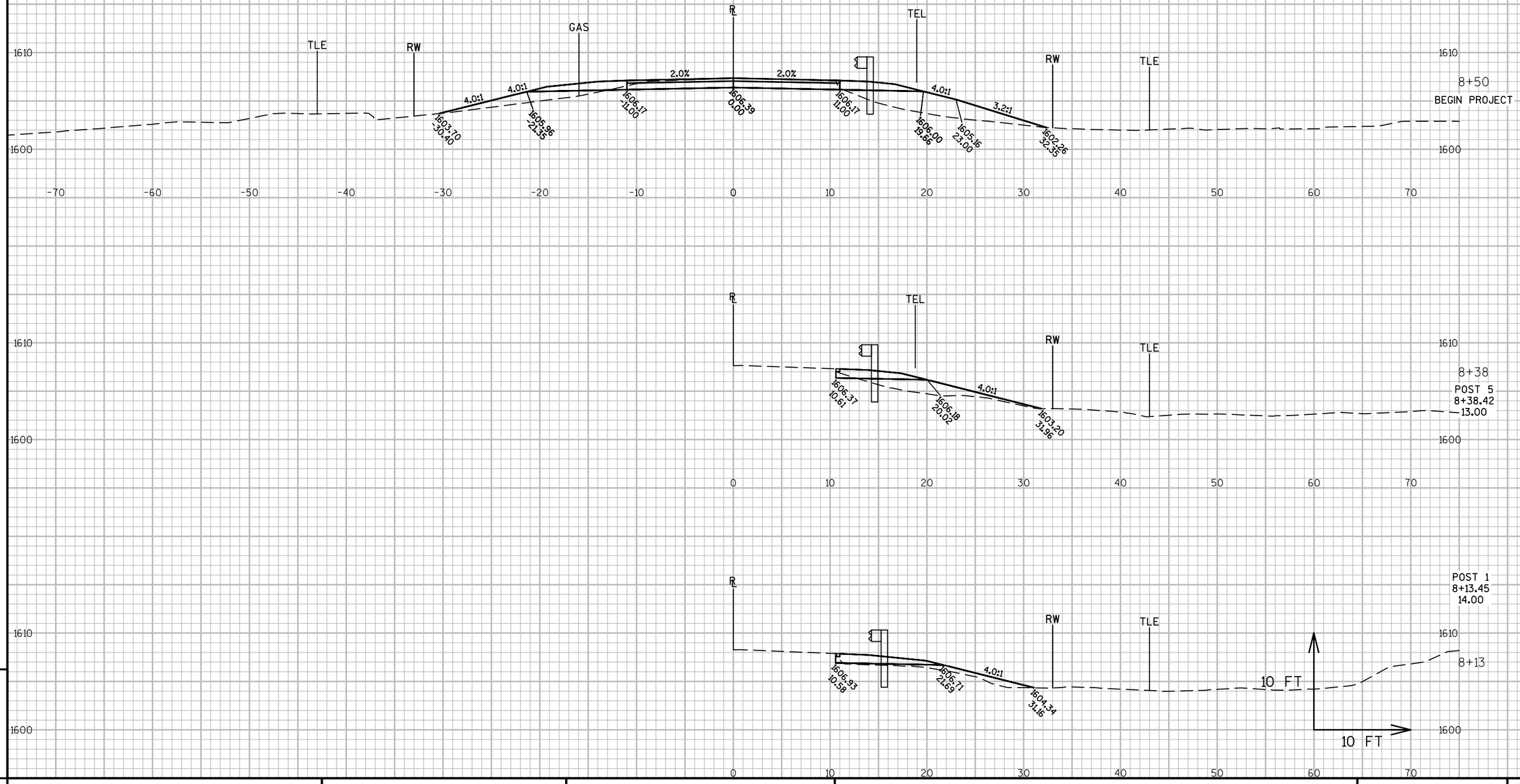
PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 52	E

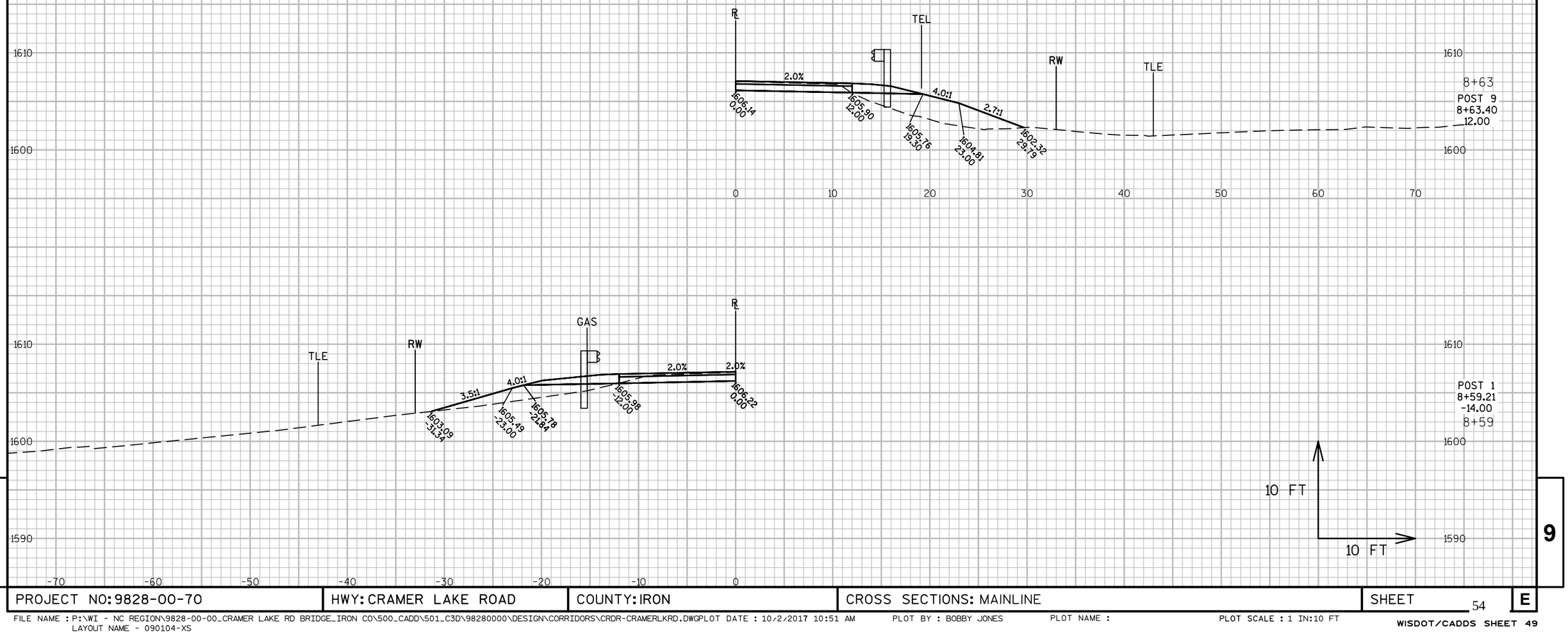
FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:51 AM
LAYOUT NAME - 090102-XS
PLOT BY : BOBBY JONES
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 53	E

9

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:51 AM
LAYOUT NAME - 090103-XS
PLOT BY : BOBBY JONES
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



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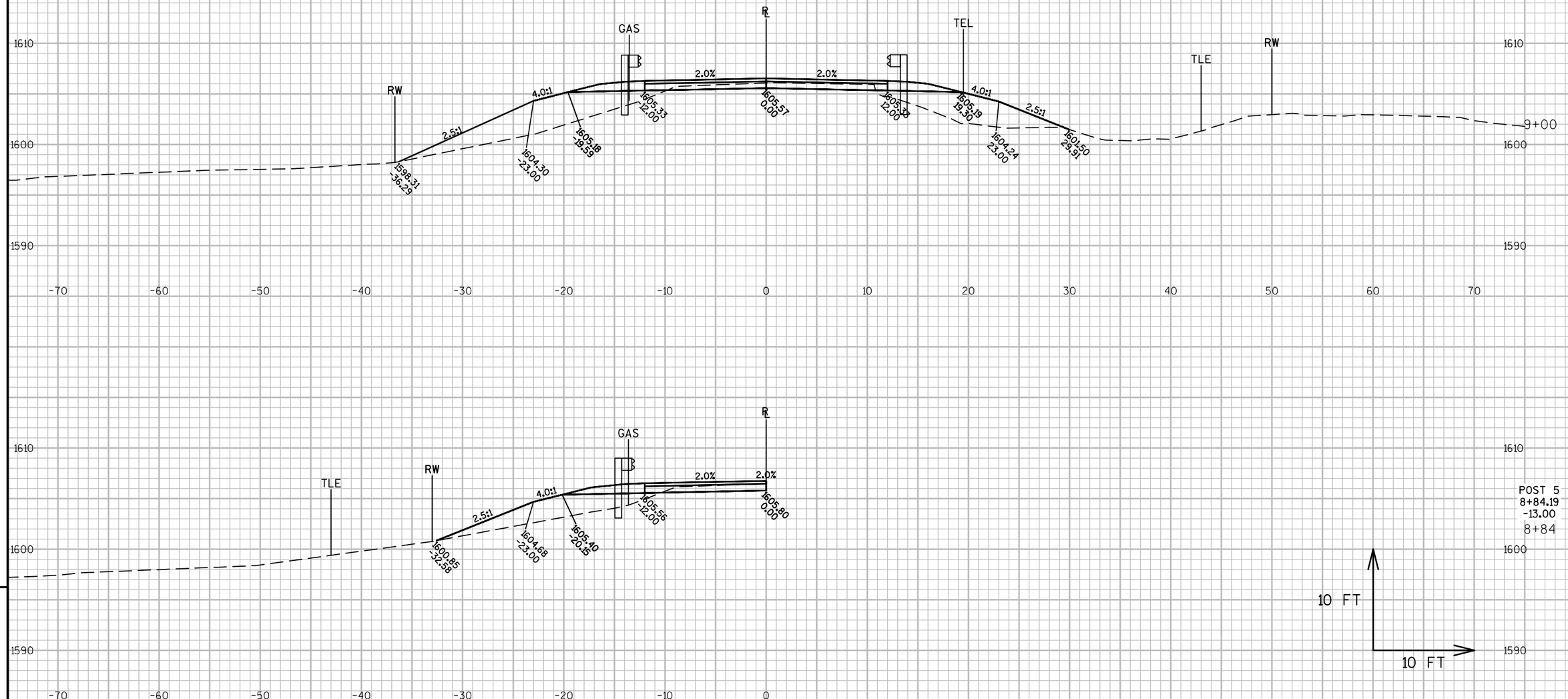
PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 54	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:51 AM
LAYOUT NAME - 090104-XS
PLOT BY : BOBBY JONES
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



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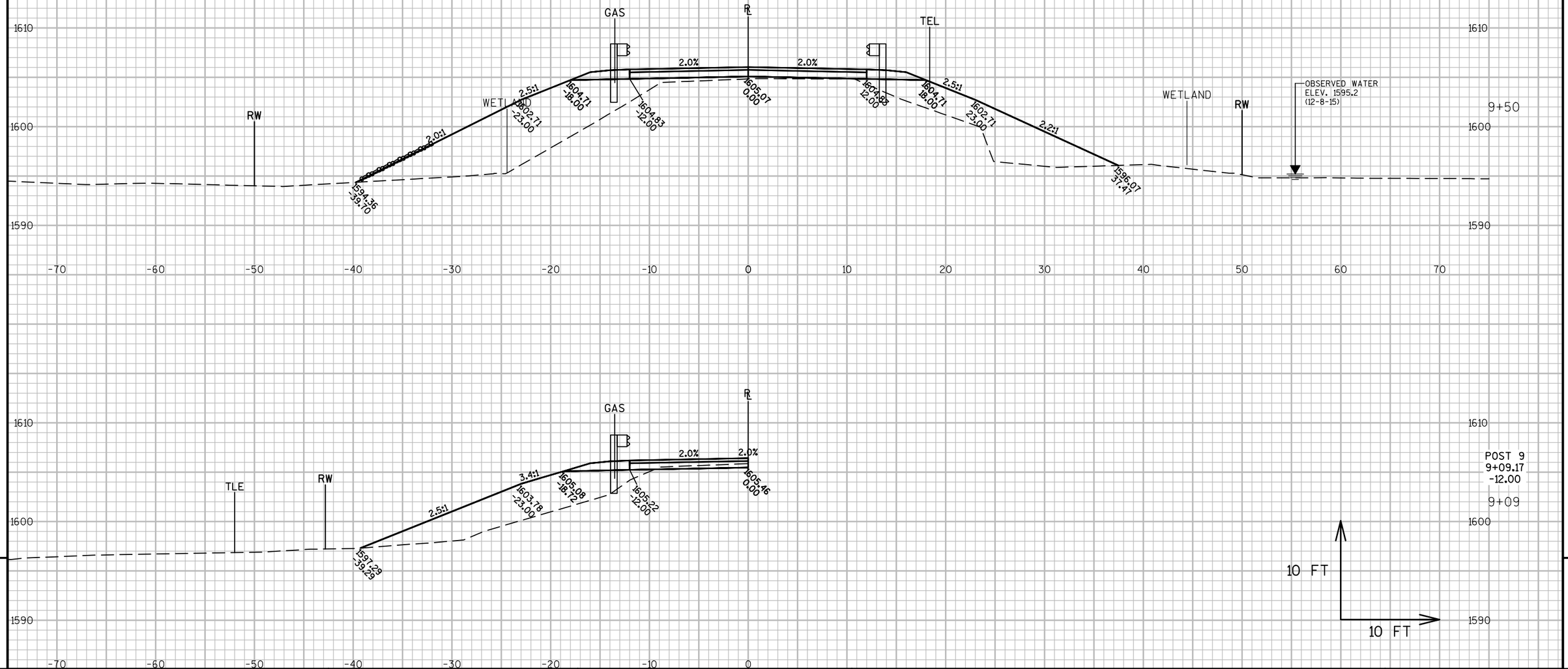
PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 55	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:52 AM
LAYOUT NAME - 090105-XS
PLOT BY : BOBBY JONES
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



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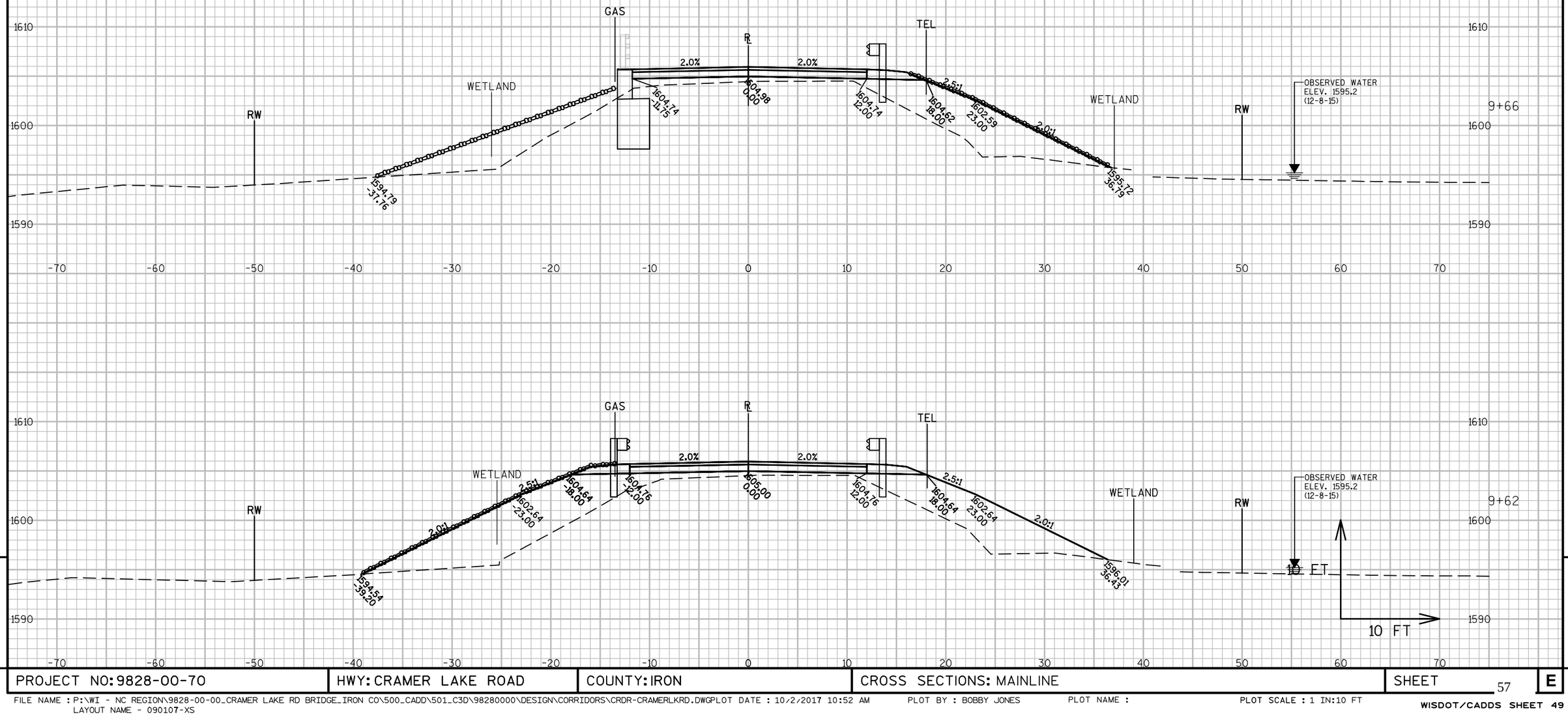
PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 56	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/4/2017 7:30 AM
LAYOUT NAME - 090106-XS
PLOT BY : BOBBY JONES
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49



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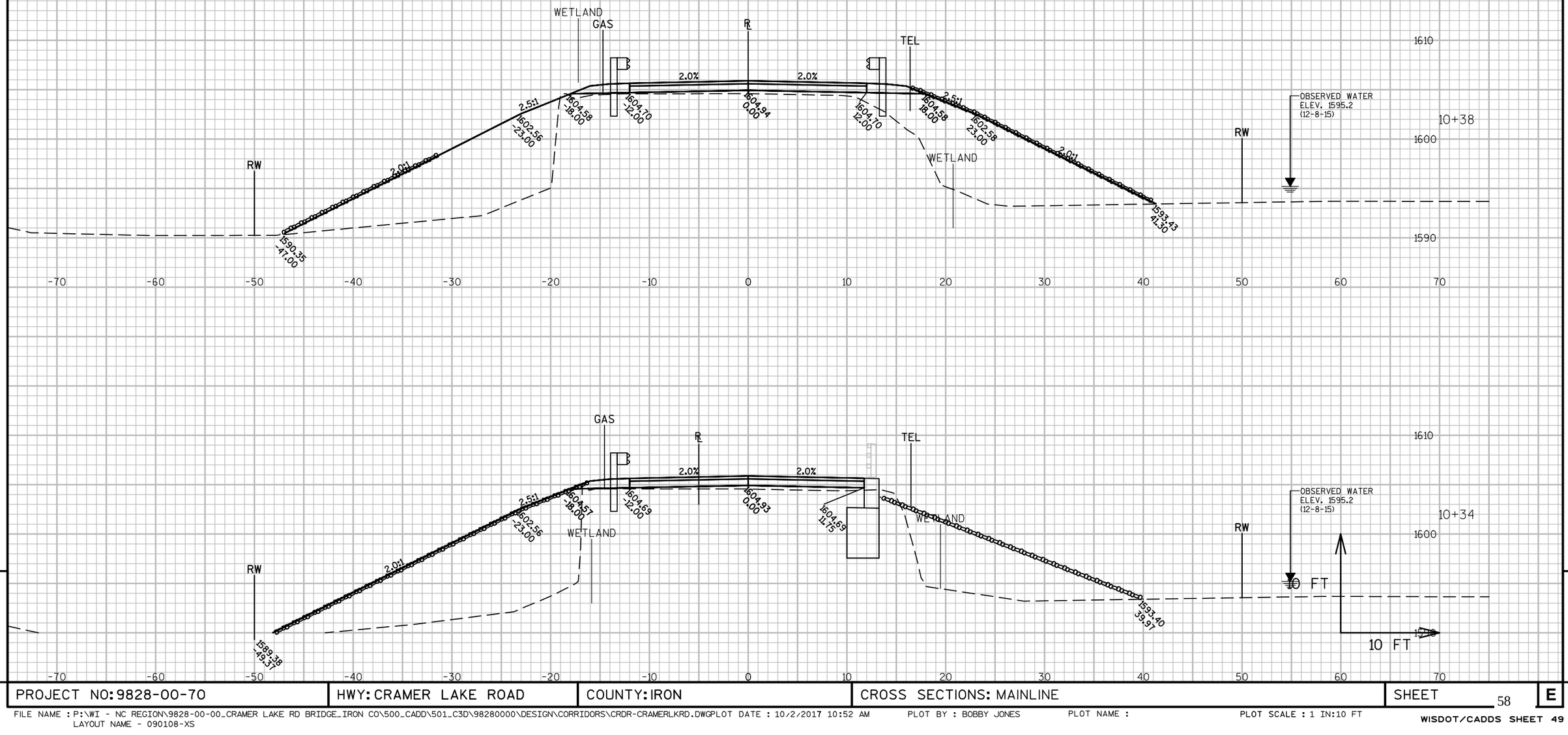
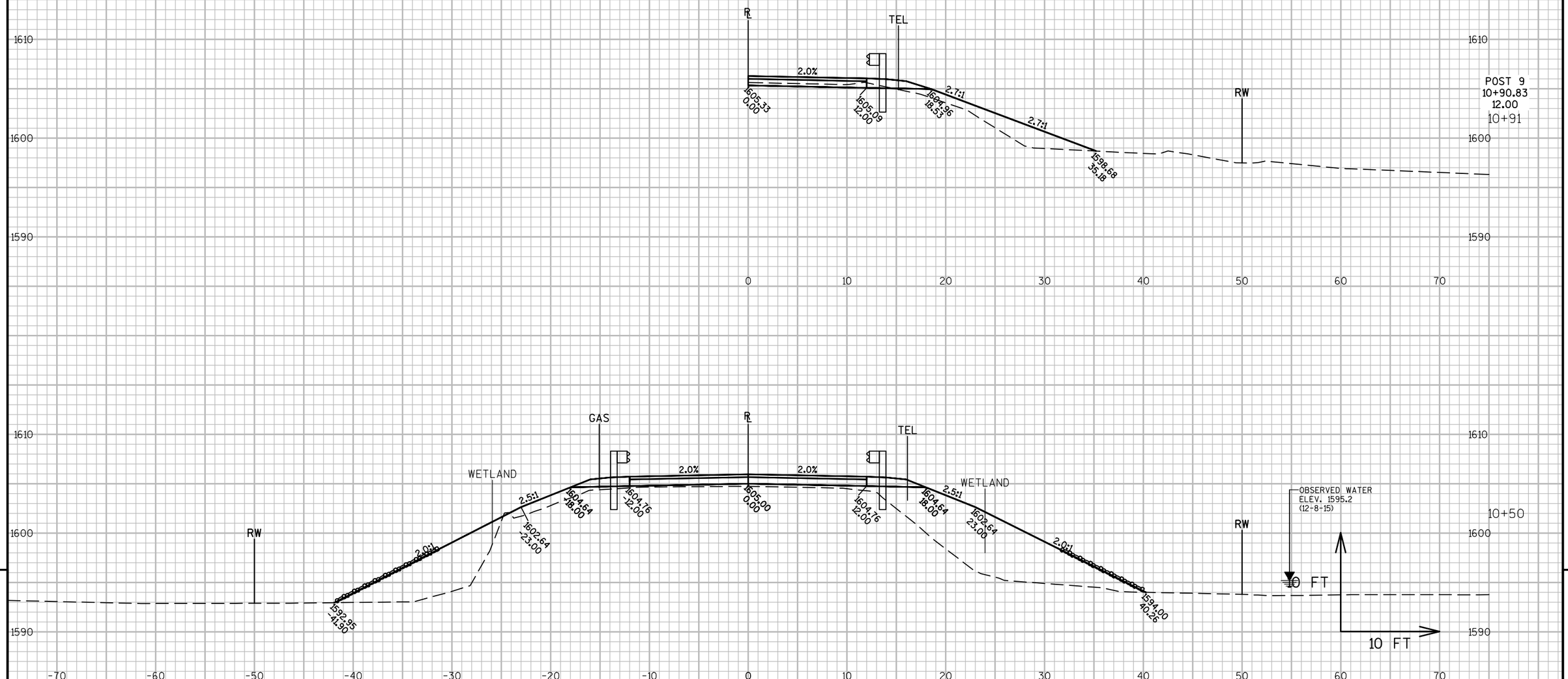
PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 57	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:52 AM PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 090107-XS



PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 58	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:52 AM PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 090108-XS



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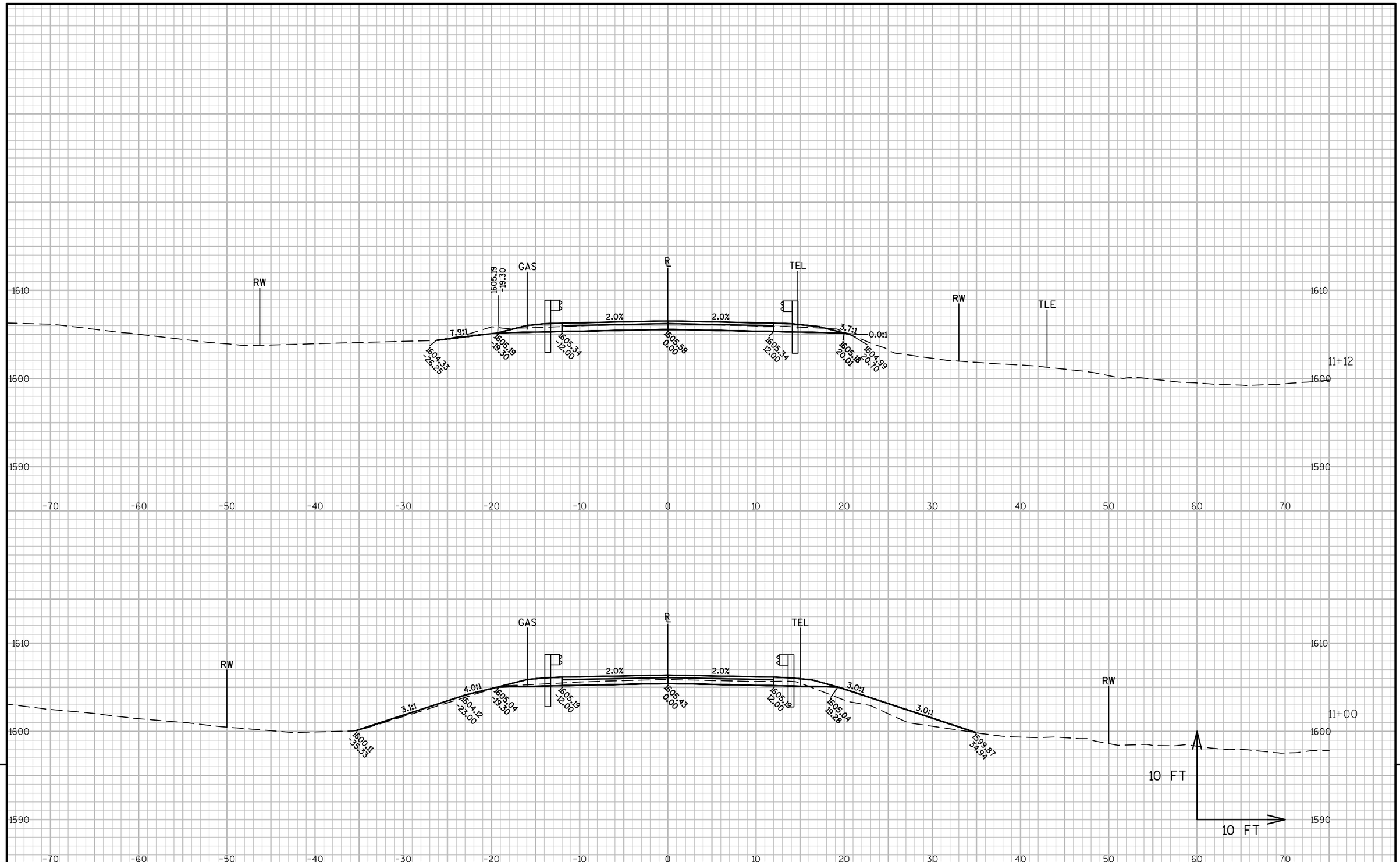
PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 59	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:52 AM
LAYOUT NAME - 090109-XS

PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:10 FT

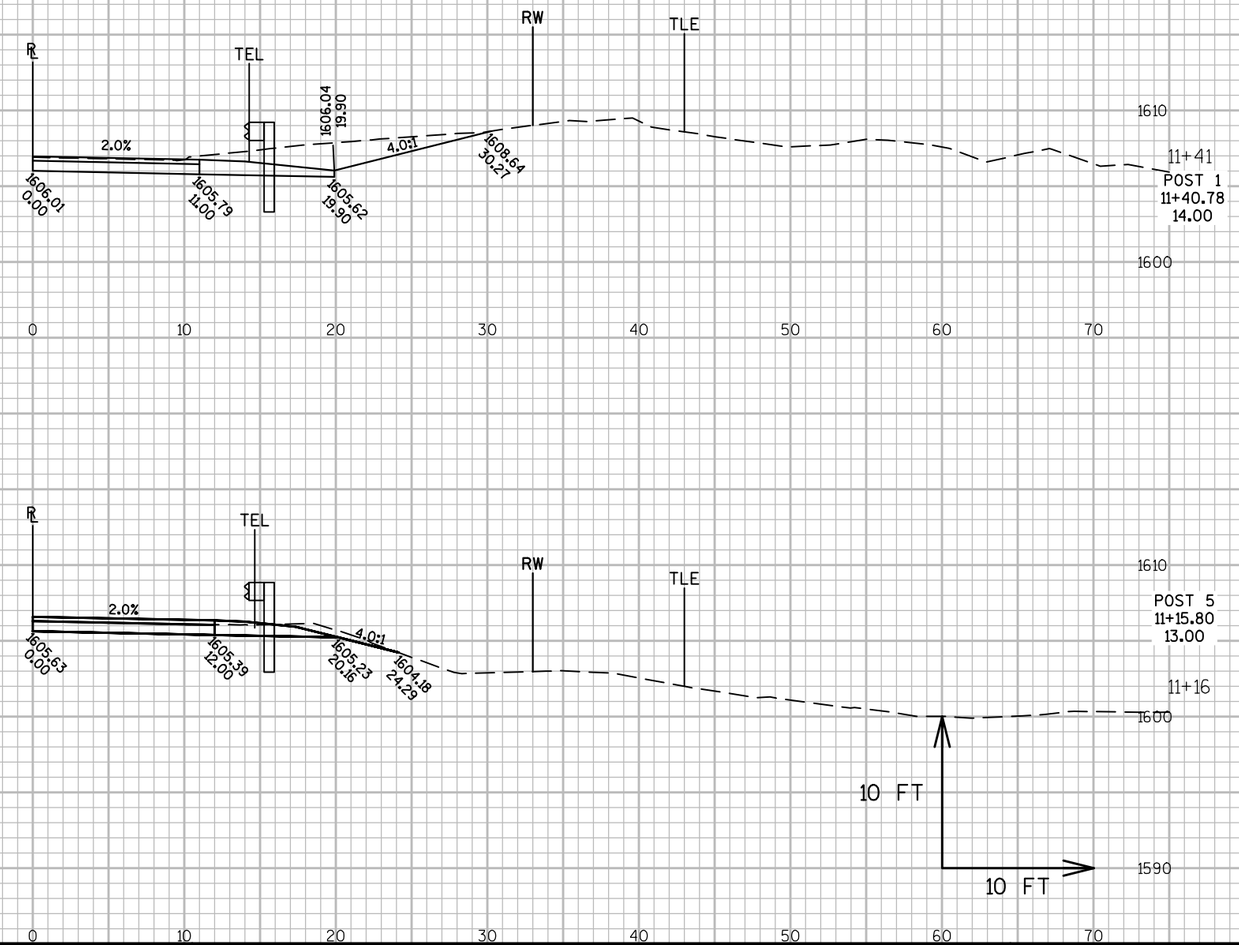


PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 60	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:52 AM
LAYOUT NAME - 090110-XS

PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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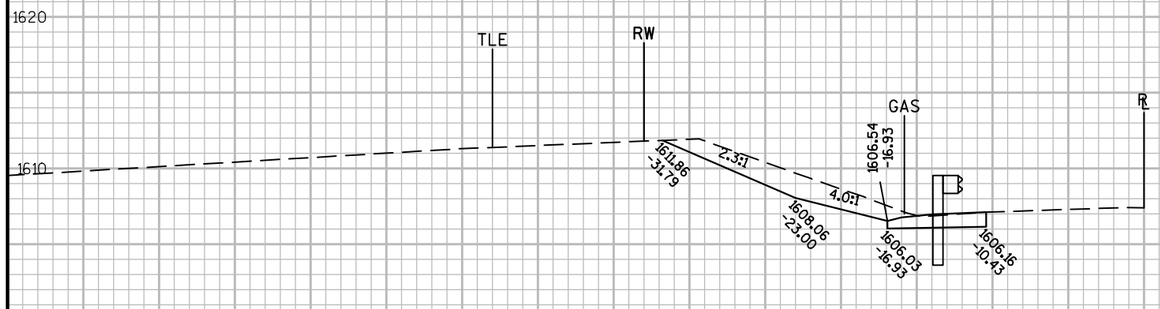
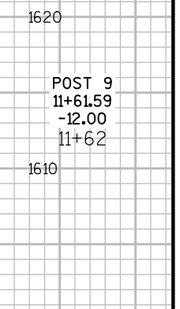
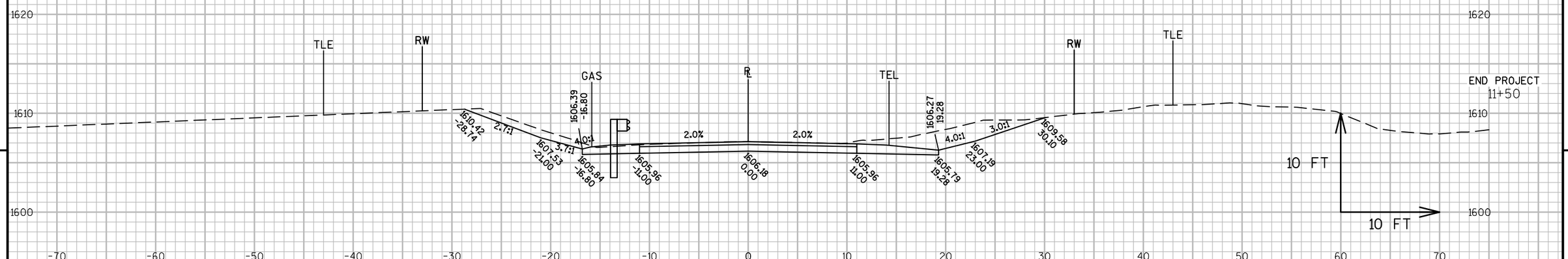
PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 61	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:52 AM PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 090111-XS







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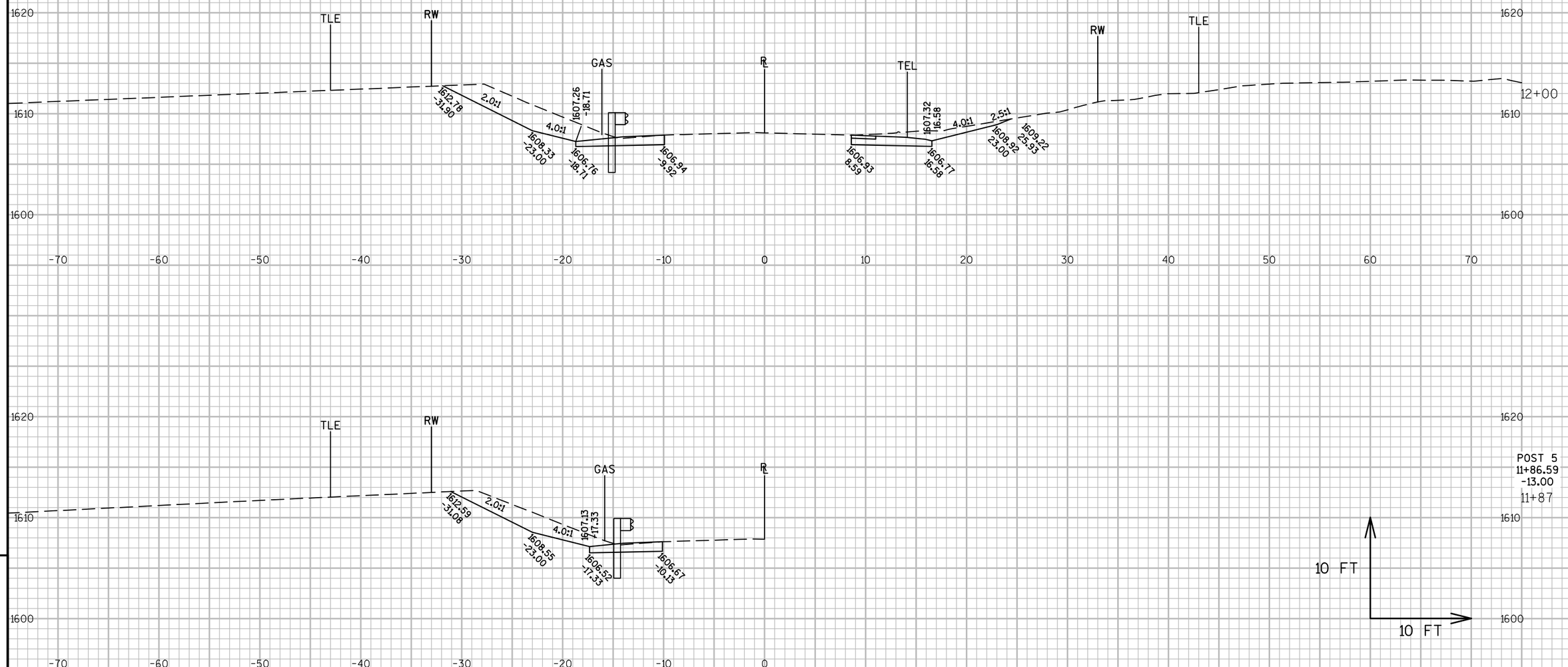
PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 62	E



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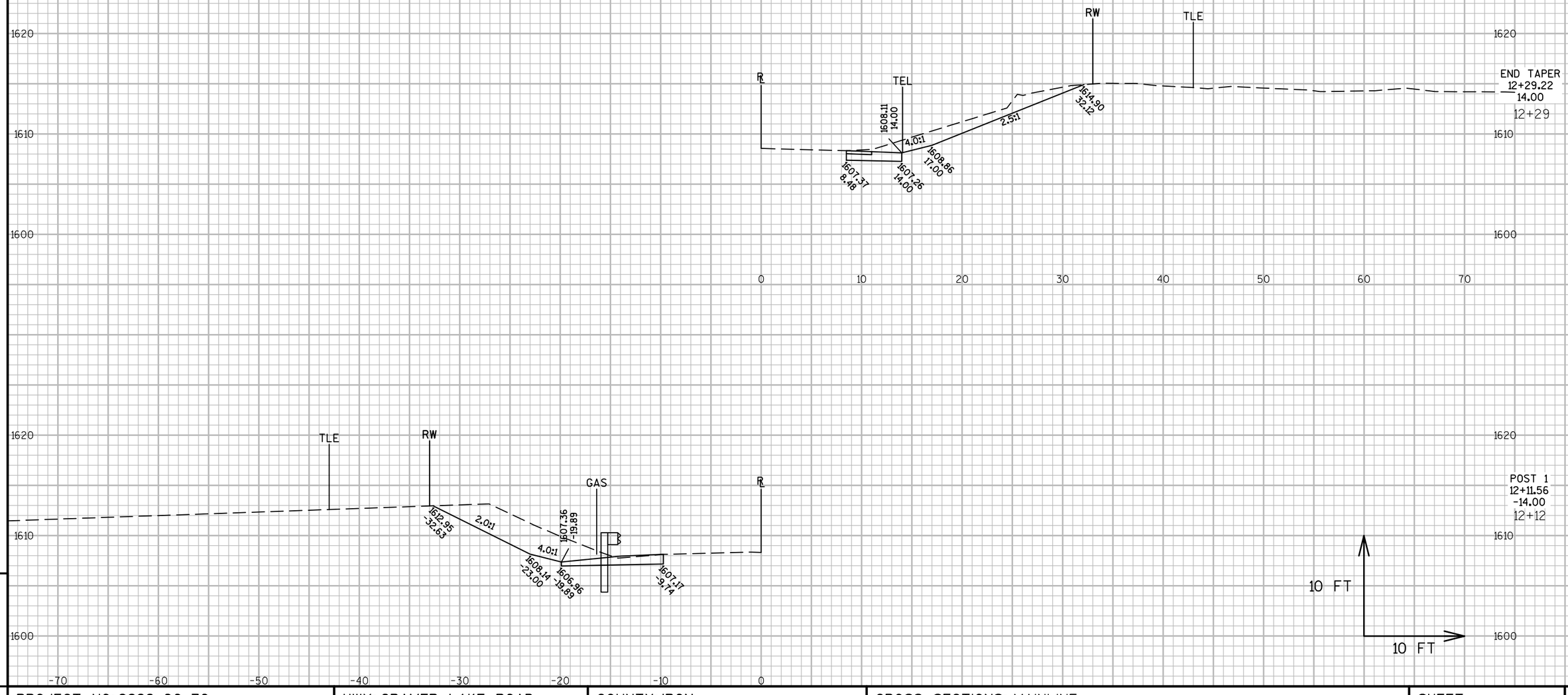
PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 63	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:52 AM
LAYOUT NAME - 090113-XS
PLOT BY : BOBBY JONES
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



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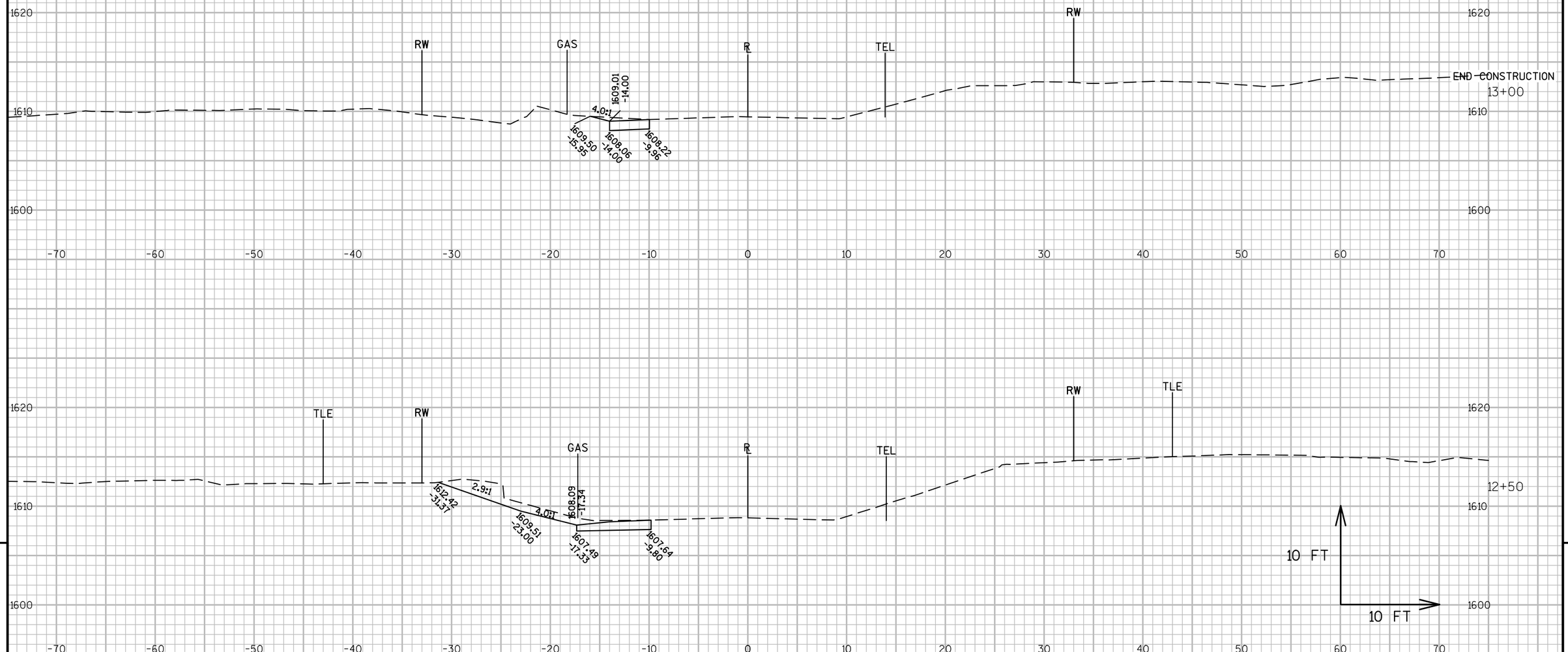
PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 64	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWG PLOT DATE : 10/2/2017 10:52 AM
LAYOUT NAME - 090114-XS

PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:10 FT



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PROJECT NO: 9828-00-70	HWY: CRAMER LAKE ROAD	COUNTY: IRON	CROSS SECTIONS: MAINLINE	SHEET 65	E

FILE NAME : P:\WI - NC REGION\9828-00-00_CRAMER LAKE RD BRIDGE_IRON CO\500_CADD\501_C3D\98280000\DESIGN\CORRIDORS\CRDR-CRAMERLKRD.DWGPLOT DATE : 10/2/2017 10:52 AM
LAYOUT NAME - 090115-XS

PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:10 FT

Wisconsin Department of Transportation

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