LAX

MARCH 2018

PROJECT ID: 5289-00-71

WITH: N/A

COUNTY: VERNON

ORDER OF SHEETS

TOTAL SHEETS = 78

PROJECT LOCATION

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STH 82 - CTH Y

(WEST FORK KICKAPOO BRIDGE, B-62-0245)

CTH S

VERNON COUNTY

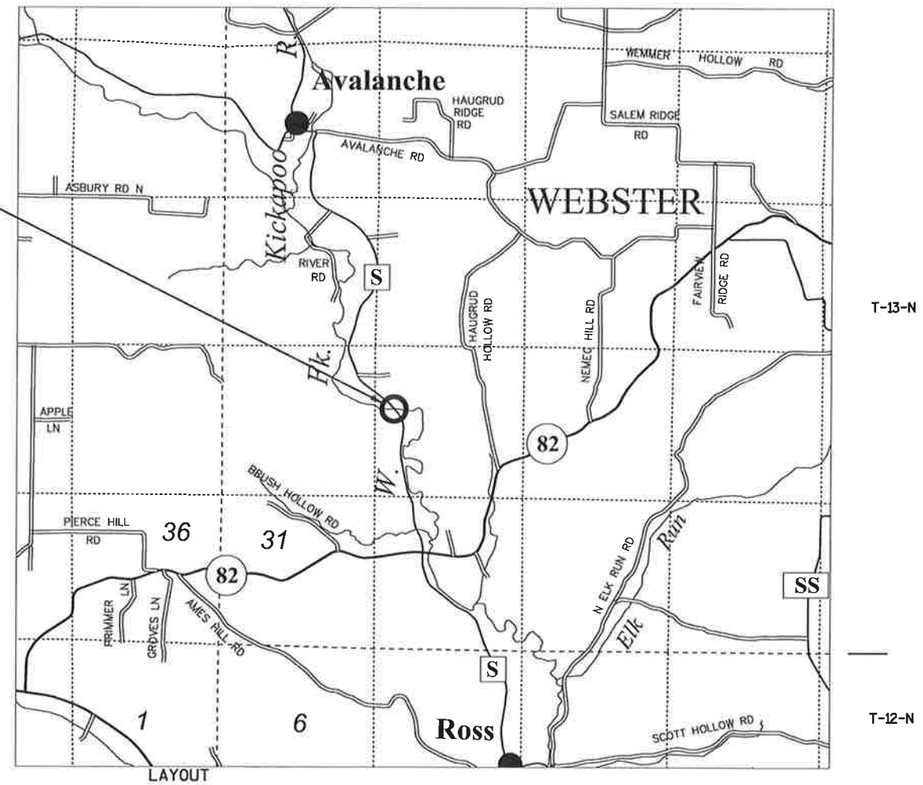
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5289-00-71	———	—

STATE PROJECT NUMBER
5289-00-71

END PROJECT
STA 12+00.00

STRUCTURE B-62-0245
STA 10+00.00

BEGIN PROJECT
STA 8+00.00
Y=156077.033
X=734382.113



LAYOUT

SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.08 MI

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

DESIGN DESIGNATION

A.A.D.T.	2018	=	520
A.A.D.T.	2038	=	630
D.H.V.		=	20
D.D.		=	60/40
T.		=	4.1%
DESIGN SPEED		=	55 MPH
ESALS		=	N/A

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	95.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE	300'REF	ELECTRIC	E
EXISTING CULVERT		OVERHEAD UTILITY	OH
PROPOSED CULVERT (Box or Pipe)		FIBER OPTIC	FO
COMBUSTIBLE FLUIDS	CAUTION	GAS	G
		SANITARY SEWER	SAN
MARSH AREA		STORM SEWER	SS
		TELEPHONE	T
WOODED OR SHRUB AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

ACCEPTED FOR
VERNON COUNTY
10-6-2017
DATE
HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY

Cedar corporation

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

WISCONSIN
JOSHUA A. WEISS
37150
OREGON
WI
PROFESSIONAL ENGINEER

10.4.2017
DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CEDAR CORPORATION
Designer	CEDAR CORPORATION
Management Consultant	KL ENGINEERING

APPROVED FOR THE DEPARTMENT
DATE: 10/7/17
(Management Consultant Signature)

E

FILE NAME : I:\CLIENTS-MENO\W\W3922 WDOT SW REGION\009 5289-00-01 CTH S WEST FORK KICKAPOO RIVER BRIDGE VERNON COUNTY\52890001\SHEETSPLAN\010101-TI.DWG PLOT DATE : 10/4/2017 9:13 AMLOT BY : BRIAN GENSKOW PLOT NAME :
LAYOUT NAME - TI

GENERAL NOTES

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

SILT FENCE TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER. SILT FENCE TO BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO BRIDGE REMOVAL.

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

THE 4" ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 2.25" LOWER LAYER AND A 1.75" UPPER LAYER.

BEARINGS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), VERNON COUNTY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER. USE SEED MIX NO. 10.

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

THE BENCHMARK IS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), VERNON COUNTY.

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

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 785-9115
KAREN KALVELAGE
karen.kalvelage@wisconsin.gov

DESIGN CONSULTANT

CEDAR CORPORATION
2820 WALTER COMMONS WEST
SUITE 142
MADISON, WI 53718
(608) 237-5842
JOSH WEISS, P.E.
josh.weiss@cedarcorp.com

VERNON COUNTY

HIGHWAY COMMISSIONER
VERNON COUNTY HIGHWAY DEPARTMENT
602 NORTH MAIN STREET
P.O. BOX 232
VIROQUA, WI 54665
(608) 637-5452
PHIL HEWITT
phil.hewitt@vernoncounty.org

UTILITIES

FRONTIER COMMUNICATIONS
2222 WEST WISCONSIN STREET
PORTAGE, WI 53901
(608) 742-9507
JERRY MOORE
jerald.r.moore@ftr.com

VERNON ELECTRIC COOPERATIVE
110 SAUGSTAD ROAD
WESTBY, WI 54667
(608) 634-3121
MARK SEE
msee@vernonelectric.org

STANDARD ABBREVIATIONS

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

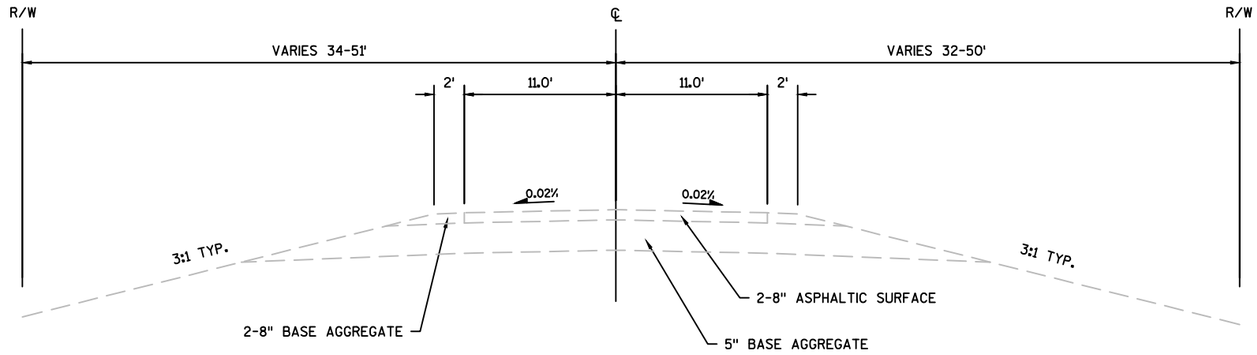
RUNOFF COEFFICIENT TABLE

	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 = 0.75 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.65 ACRES

FILE NAME : I:\CLIENTS-MENO\W\W3922 WDOT SW REGION\009 5289-00-01 CTH S WEST FORK KICKAPOO RIVER BRIDGE VERNON COUNTY\52890001\SHEETSPLAN\020101-GN.DWG PLOT DATE : 10/30/2017 1:40 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - GN

2



TYPICAL EXISTING SECTION

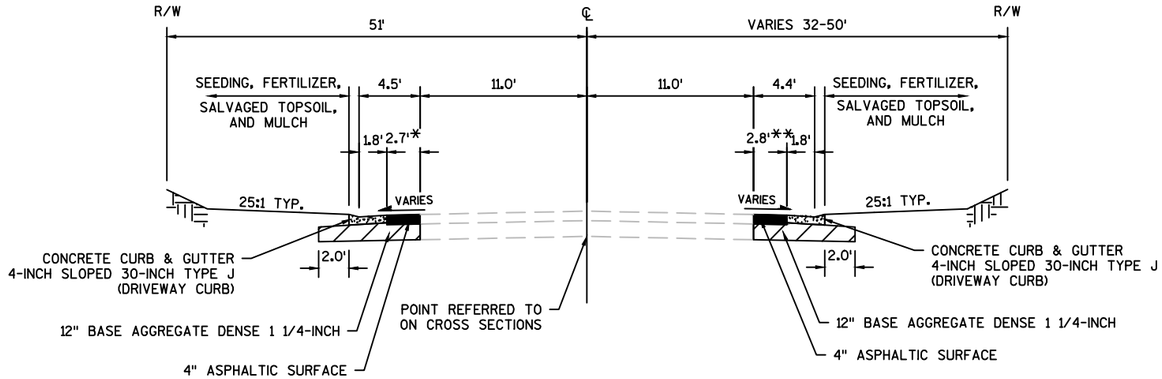
CTH S

STA 8+00.00 TO STA 9+30.37
STA 10+63.63 TO STA 12+00.00

PROJECT NO:5289-00-71	HWY:CTH S	COUNTY:VERNON	TYPICAL SECTIONS	SHEET 3	E

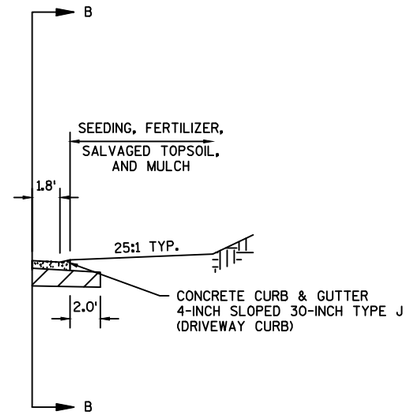
FILE NAME : I:\CLIENTS-MENO\W\W3922 WDOT SW REGION\009 5289-00-01 CTH S WEST FORK KICKAPOO RIVER BRIDGE VERNON COUNTY\52890001\SHEETSPLAN\020301-TS.DWG PLOT DATE : 10/30/2017 1:40 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 01-TS

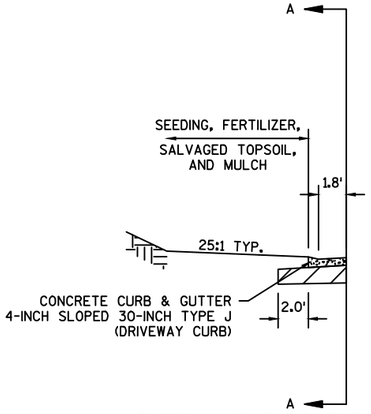
SUPERELEVATION TABLE		
STATION	CROSS SLOPE	
	LT ('/')	RT ('/')
8+00.00	-0.032	0.0
8+36.36	-0.02	-0.02
9+13.14	-0.02	-0.02



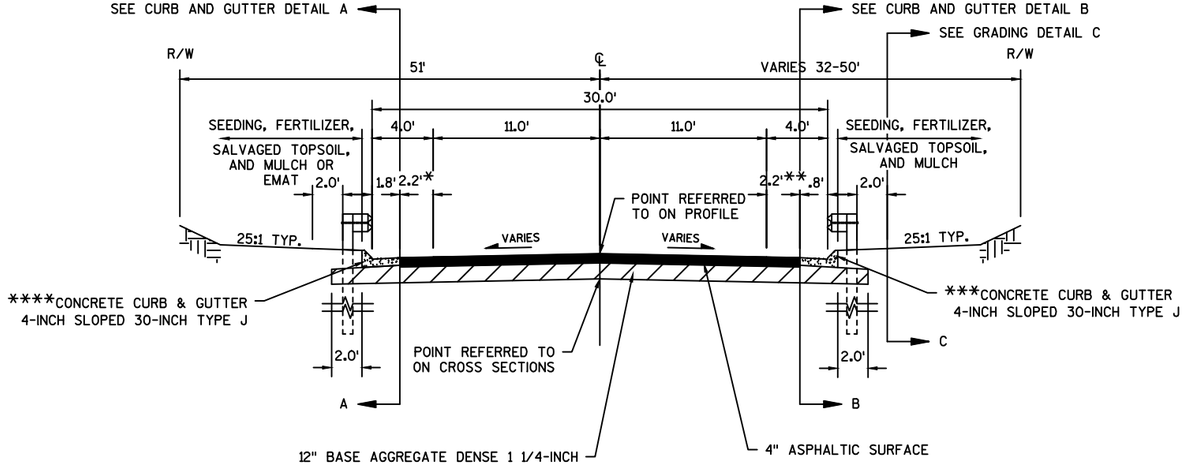
TYPICAL FINISHED SECTION
CTH S

STA 7+50.00 TO STA 8+00.00
*VARIES 0-2.7' STA 7+50.00 TO STA 8+00.00
**VARIES 0-2.8' STA 7+50.00 TO STA 8+00.00





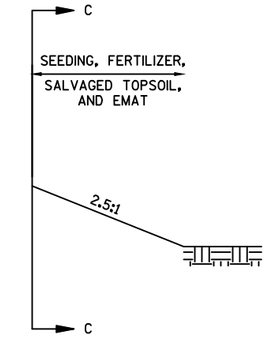
TYPICAL FINISHED SECTION
CURB AND GUTTER DETAIL
STA 8+00.00 TO STA 8+46.13



TYPICAL FINISHED SECTION
CTH S

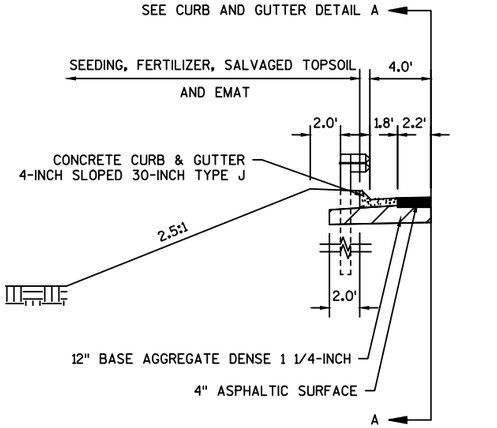
STA 8+00.00 TO STA 9+13.14
*VARIES 2.7-4.2' STA 8+00.00 TO STA 8+46.13
*VARIES 2.2-4.2' STA 8+46.13 TO STA 8+96.27
**VARIES 2.6-4.2' STA 8+00.00 TO STA 8+15.79
**VARIES 2.2-4.2' STA 8+15.79 TO STA 8+69.41
***DRIVEWAY CURB STA 8+00.00 TO STA 8+28.17
****DRIVEWAY CURB STA 8+00.00 TO STA 8+58.73

TYPICAL FINISHED SECTION
CURB AND GUTTER DETAIL
STA 8+00.00 TO STA 8+15.79



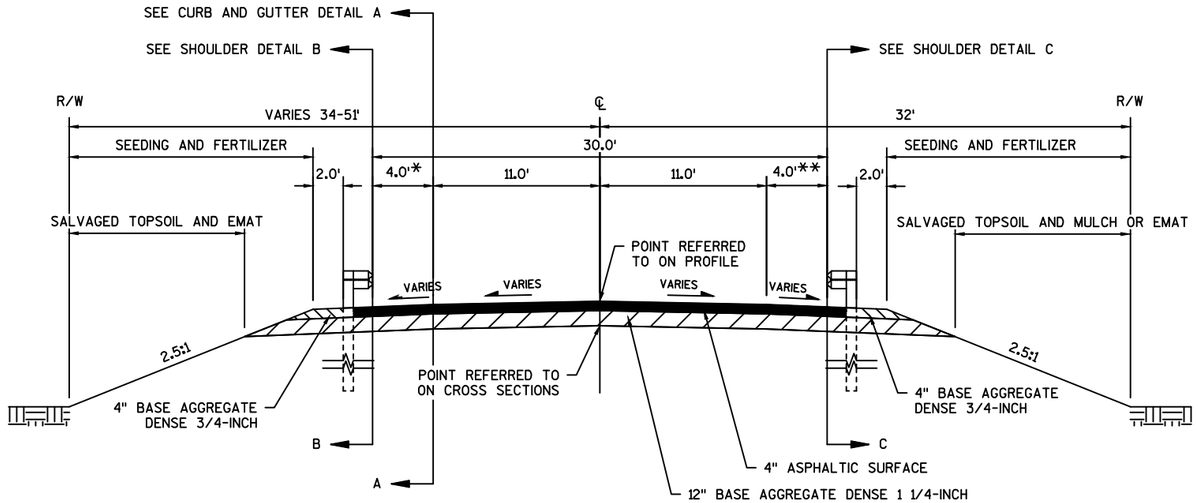
TYPICAL FINISHED SECTION
GRADING DETAIL
STA 8+50.00 TO STA 9+13.14

PROJECT NO:5289-00-71	HWY: CTH S	COUNTY: VERNON	TYPICAL SECTIONS	SHEET 4	E



TYPICAL FINISHED SECTION

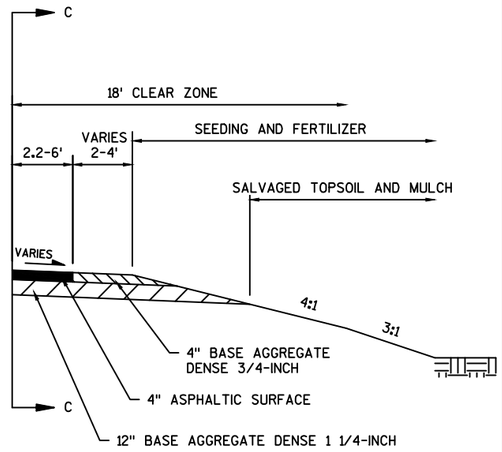
CURB AND GUTTER DETAIL
STA 10+89.09 TO STA 11+00.57



TYPICAL FINISHED SECTION

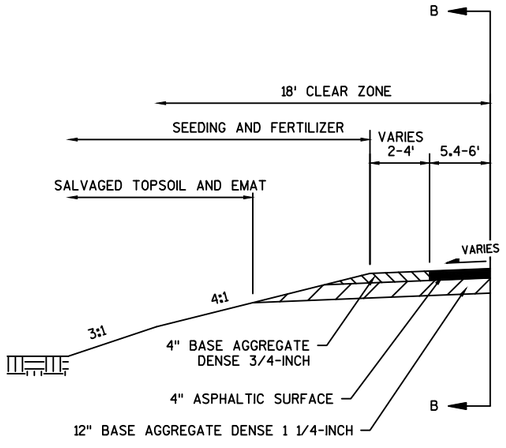
CTH S

STA 10+80.86 TO STA 12+00.00
*VARIES 4-6' STA 11+28.85 TO STA 11+79.37
*VARIES 4.7-6' STA 11+79.37 TO STA 12+00.00
**VARIES 4-6' STA 10+97.41 TO STA 11+46.96
**VARIES 2.2-6' STA 11+46.96 TO STA 12+00.00



TYPICAL FINISHED SECTION

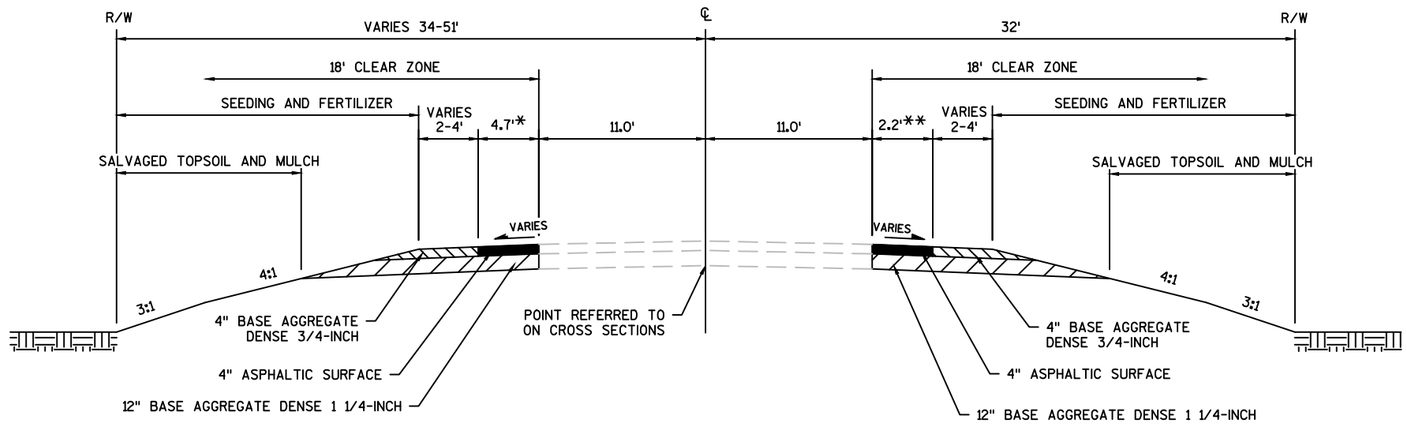
SHOULDER DETAIL DETAIL
STA 11+46.96 TO STA 12+00.00



TYPICAL FINISHED SECTION

SHOULDER DETAIL DETAIL
STA 11+79.37 TO STA 12+00.00

SUPERELEVATION TABLE		
STATION	CROSS SLOPE	
	LT ('/')	RT ('/')
10+80.86	-0.02	-0.02
11+66.00	-0.02	-0.02
12+00.00	-0.033	0.003

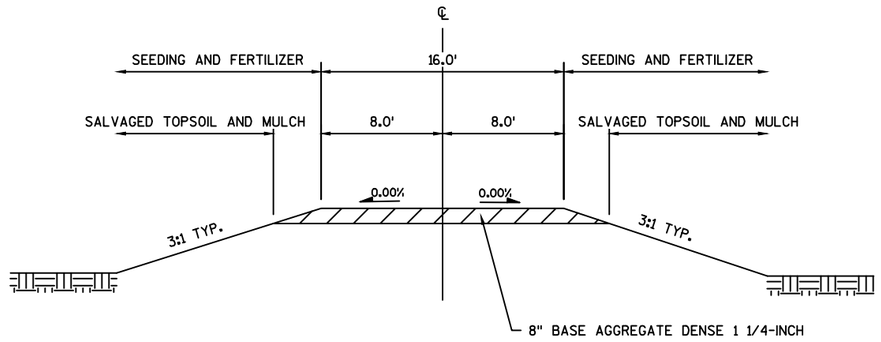


TYPICAL FINISHED SECTION

CTH S

STA 12+00.00 TO STA 12+75.65
*VARIES 0-4.7' STA 12+00.00 TO STA 12+58.84
*0' STA 12+58.84 TO STA 12+75.65
**VARIES 0-2.2' STA 12+00.00 TO STA 12+41.50
*0' STA 12+54.87 TO STA 12+75.65

2



TYPICAL FINISHED SECTION

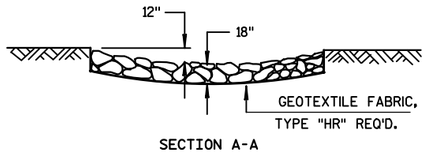
DEAVER DRIVE

STA 50+15.24 TO STA 52+47.68

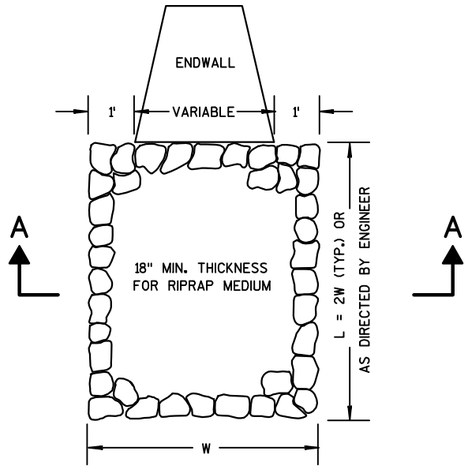
PROJECT NO:5289-00-71	HWY:CTH S	COUNTY:VERNON	TYPICAL SECTIONS	SHEET 6	E

FILE NAME : I:\CLIENTS-MENO\W\W3922 WDOT SW REGION\009 5289-00-01 CTH S WEST FORK KICKAPOO RIVER BRIDGE VERNON COUNTY\52890001\SHEETSPLAN\020301-TS.DWG PLOT DATE : 10/30/2017 1:40 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 04-TS

2



SECTION A-A



RIPRAP MEDIUM TREATMENT AT CULVERTS

PROJECT NO:5289-00-71	HWY:CTH S	COUNTY:VERNON	CONSTRUCTION DETAIL	SHEET 7	E

5289-00-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0008	205.0100	Excavation Common **P**	CY	813.000	813.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-62-245	LS	1.000	1.000
0012	208.0100	Borrow	CY	2,207.000	2,207.000
0014	210.1500	Backfill Structure Type A	TON	640.000	640.000
0016	213.0100	Finishing Roadway (project) 01. 5289-00-71	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	48.000	48.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,046.000	1,046.000
0022	415.0120	Concrete Pavement 12-Inch	SY	32.000	32.000
0024	415.0410	Concrete Pavement Approach Slab	SY	118.000	118.000
0026	455.0605	Tack Coat	GAL	40.000	40.000
0028	465.0105	Asphaltic Surface	TON	180.000	180.000
0030	465.0315	Asphaltic Flumes	SY	40.000	40.000
0032	502.0100	Concrete Masonry Bridges	CY	371.000	371.000
0034	502.3200	Protective Surface Treatment	SY	400.000	400.000
0036	502.3210	Pigmented Surface Sealer	SY	130.000	130.000
0038	503.0128	Prestressed Girder Type I 28-Inch	LF	700.500	700.500
0040	505.0400	Bar Steel Reinforcement HS Structures	LB	6,720.000	6,720.000
0042	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	39,930.000	39,930.000
0044	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	24.000	24.000
0046	506.4000	Steel Diaphragms (structure) 01. B-62-245	EACH	10.000	10.000
0048	516.0500	Rubberized Membrane Waterproofing	SY	22.000	22.000
0050	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	4.000	4.000
0052	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	268.000	268.000
0054	550.0020	Pre-Boring Rock or Consolidated Materials	LF	60.000	60.000
0056	550.0500	Pile Points	EACH	16.000	16.000
0058	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	160.000	160.000
0060	550.1120	Piling Steel HP 12-Inch X 53 Lb	LF	150.000	150.000
0062	601.0574	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type G	LF	38.000	38.000
0064	601.0576	Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type J	LF	335.000	335.000
0066	606.0200	Riprap Medium	CY	14.000	14.000
0068	606.0300	Riprap Heavy	CY	315.000	315.000
0070	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	200.000	200.000
0072	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0074	614.2500	MGS Thrie Beam Transition	LF	160.000	160.000
0076	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000

5289-00-71

Line	Item	Item Description	Unit	Total	Qty
0078	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5289-00-71	EACH	1.000	1.000
0080	619.1000	Mobilization	EACH	1.000	1.000
0082	624.0100	Water	MGAL	20.000	20.000
0084	625.0500	Salvaged Topsoil **P**	SY	2,605.000	2,605.000
0086	627.0200	Mulching **P**	SY	1,808.000	1,808.000
0088	628.1504	Silt Fence	LF	578.000	578.000
0090	628.1520	Silt Fence Maintenance	LF	578.000	578.000
0092	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0094	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0096	628.2008	Erosion Mat Urban Class I Type B	SY	943.000	943.000
0098	628.6005	Turbidity Barriers	SY	206.000	206.000
0100	629.0210	Fertilizer Type B **P**	CWT	1.800	1.800
0102	630.0110	Seeding Mixture No. 10 **P**	LB	40.000	40.000
0104	630.0200	Seeding Temporary **P**	LB	78.000	78.000
0106	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0108	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0110	638.2101	Moving Signs Type I	EACH	1.000	1.000
0112	638.2602	Removing Signs Type II	EACH	4.000	4.000
0114	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0116	642.5001	Field Office Type B	EACH	1.000	1.000
0118	643.0420	Traffic Control Barricades Type III	DAY	1,476.000	1,476.000
0120	643.0705	Traffic Control Warning Lights Type A	DAY	1,968.000	1,968.000
0122	643.0900	Traffic Control Signs	DAY	1,148.000	1,148.000
0124	643.5000	Traffic Control	EACH	1.000	1.000
0126	645.0111	Geotextile Type DF Schedule A	SY	50.000	50.000
0128	645.0120	Geotextile Type HR	SY	593.000	593.000
0130	646.1020	Marking Line Epoxy 4-Inch	LF	1,600.000	1,600.000
0132	650.4500	Construction Staking Subgrade	LF	278.000	278.000
0134	650.5000	Construction Staking Base	LF	278.000	278.000
0136	650.6500	Construction Staking Structure Layout (structure) 01. B-62-245	LS	1.000	1.000
0138	650.9910	Construction Staking Supplemental Control (project) 01. 5289-00-71	LS	1.000	1.000
0140	650.9920	Construction Staking Slope Stakes	LF	278.000	278.000
0142	690.0150	Sawing Asphalt	LF	296.000	296.000
0144	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0146	715.0502	Incentive Strength Concrete Structures	DOL	2,226.000	2,226.000

DIVISION	STATIONING	LOCATION	205.0100 COMMON EXCAVATION (CY) **P**	SALVAGED / UNUSABLE PAVEMENT MATERIAL (1)	AVAILABLE MATERIAL (CY) (2)	UNEXPANDED FILL	EXPANDED FILL	MASS ORDINATE +/- (3)	208.0100 BORROW (CY)
			CUT				FACTOR 1.30		
1	7+50 - 9+38	SOUTH APPROACH	214	68	146	203	264	-118	118
DIVISION 1 SUBTOTAL			214	68	146	203	264	-118	118
2	10+57 - 12+00	NORTH APPROACH	264	125	139	525	682	-543	543
DIVISION 2 SUBTOTAL			264	125	139	525	682	-543	543
3	50+20 - 52+48	DEAVER DRIVE	335	0	335	1447	1881	-1546	1546
DIVISION 3 SUBTOTAL			335	0	335	1447	1881	-1546	1546
GRAND TOTAL			813	193	620	2175	2827	-2207	2207
TOTAL COMMON EXCAVATION =			813						2207

1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
2) AVAILABLE MATERIAL = CUT MINUS THE SALVAGED/UNUSABLE PAVEMENT MATERIAL
3) THE MASS ORDINATE = A + OR - QUANTITY CALCULATED FOR THE DIVISON. A POSITIVE QUANTITY INDICATES AN EXCESS OF MATERIAL.

P PAY PLAN QUANTITY

CLEARING & GRUBBING

STATION - STATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
8+00 - 9+00	1	1
ITEM TOTALS	1	1

FINISHING ROADWAY

PROJECT	LOCATION	213.0100 EACH
5289-00-71	CTH S	1
ITEM TOTAL		1

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
CTH S			
8+00 - 9+38		0	354
10+57 - 12+00		48	489
DEAVER DRIVE			
50+20 - 52+48		0	203
ITEM TOTAL		48	1046

NOTE: TABLE QUANTITIES ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

FILE NAME : I:\CLIENTS-MENO\W\W3922 WDOT SW REGION\009 5289-00-01 CTH S WEST FORK KICKAPOO RIVER BRIDGE VERNON COUNTY\52890001\SHEETS\PLAN\030201-MQ.DWG LAYOUT NAME - 030201_MQ
PLOT DATE = 10/30/2017 1:41 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : ********** WISDOT/CADDS SHEET 42

3

CONCRETE PAVEMENT

STATION - STATION	LOCATION	415.0120 12-INCH SY	415.0410 APPROACH SLAB SY	REMARKS
9+13 - 9+38		17	59	CONC SHLD
10+57 - 10+81		15	59	CONC SHLD
ITEM TOTAL		32	118	

CONCRETE CURB & GUTTER

STATION - STATION	LOCATION	601.0574 4-INCH SLOPED 30-INCH TYPE G LF	601.0576 4-INCH SLOPED 30-INCH TYPE J LF	REMARKS
7+50 - 9+09	RT	--	160	
7+50 - 9+13	LT	--	163	
9+13 - 9+36	LT	23	--	
10+58 - 10+72	RT	15	--	
10+89 -11+01	LT	--	12	
ITEM TOTAL		38	335	

3

ASPHALTIC SURFACE

STATION	LOCATION	455.0605* TACK COAT GAL	465.0105 TON	465.0315 APHALTIC FLUMES SY
8+00 - 9+38		18	81	13
10+57 - 12+00		22	99	27
ITEM TOTAL		40	180	40

*APPLICATION RATE = 0.050 GAL/SY

MGS GUARDRAIL

STATION - STATION	LOCATION	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
8+46 - 9+39	LT	40	1
8+15 - 9+08	RT	40	1
10+86 - 11+79	LT	40	1
10+55 - 11+47	RT	40	1
ITEM TOTALS		160	4

CULVERT PIPE

STATION	LOCATION	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH EACH	521.3118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	THICKNESS INCHES
7+50 - 9+18	LT	2	167	0.064
7+50 - 8+50	RT	2	101	0.064
ITEM TOTAL		4	268	

MAINETNANCE AND REPAIR OF HAUL ROADS

PROJECT	LOCATION	618.0100 LS
CATEGORY 0030 5289-00-71	CTH S	1
ITEM TOTAL		1

NOTE: TABLE QUANTITIES ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

3

SALVAGED TOPSOIL, MULCH, FERTILIZER, AND SEEDING

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY **P**	627.0200 MULCHING SY **P**	629.0210 FERTILIZER TYPE B CWT **P**	630.0110 SEEDING MIXTURE NO. 10 LB **P**	630.0200 SEEDING TEMPORARY LB **P**
CTH S						
7+50 - 9+09	RT	287	79	0.2	4	8
7+50 - 9+37	LT	233	216	0.1	3	6
10+27 - 12+75	RT	578	331	0.4	8	16
10+85 - 12+75	LT	485	--	0.3	7	13
DEAVER DR						
50+33 - 52+48	RT/LT	1022	1022	0.6	14	28
UNDISTRIBUTED		--	160	0.2	4	7
ITEM TOTAL		2605	1808	1.8	40	78

P Pay Plan Quantity

EROSION CONTROL ITEMS

STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS 1 TYPE B SY	628.6005 TURBIDITY BARRIER SY	REMARKS
CTH S						
8+50 - 9+08	RT	73	73	208	--	
9+00 - 9+61	LT	60	60	--	--	
9+18 - 9+36	LT	--	--	17	--	
9+66		--	--	--	112	
10+33		--	--	--	94	
10+26 - 11+15	RT	--	--	247	--	
10+85 - 12+75	LT	205	205	471	--	
DEAVER DR						
50+09 - 52+48	RT/LT	240	240	--	--	
ITEM TOTALS		578	578	943	206	

3

MOBILIZATIONS

PROJECT	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
CATEGORY 0010			
5289-00-71	0.25	3	2
CATEGORY 0020			
5289-00-71	0.75	--	--
ITEM TOTALS	1	3	2

FIELD OFFICE

PROJECT	642.5001 TYPE B EACH
5289-00-71	1
ITEM TOTAL	1

WATER

STATION -STATION	LOCATION	624.0100 MGAL	REMARKS
8+00 - 12+00	CTH S	20	BASE COMPACTION DUST CONTROL
ITEM TOTALS		20	

RIPRAP MEDIUM

STATION	LOCATION	606.0200 CY	645.0120 GEOTEXTILE TYPE HR SY	REMARKS
CTH S				
8+50 - 8+63	RT	5	3	CULVERT
8+85 - 8-91	RT	2	4	FLUME
9+18 - 9+31	LT	5	10	CULVERT
10+75 - 10+81	RT	1	3	FLUME
11+04 - 11+10	LT	1	3	FLUME
ITEM TOTALS		14	23	

NOTE: TABLE QUANTITIES ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

SIGNING QUANTITIES

LOCATION	SIGN CODE	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	638.2101 MOVING SIGNS EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
NW BRIDGE CORNER	W5-52 R	3	1	--	1	1	
SW BRIDGE CORNER	W5-52 L	3	1	--	1	1	
NE BRIDGE CORNER	W5-52 L	3	1	--	1	1	
SE BRIDGE CORNER	W5-52 R	3	1	--	1	1	
8+22 LT	--	--	--	1	--	--	ADOPT-A-HIGHWAY
ITEM TOTAL		12	4	1	4	4	

TRAFFIC CONTROL

STATION - STATION	643.5000 TRAFFIC CONTROL EACH	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0900 SIGNS DAYS
CTH S	1	1476	1968	1148
ITEM TOTAL	1	1476	1968	1148

CONSTRUCTION STAKING

STATION - STATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6500 STRUCTURE LAYOUT (B-62-245) LS	650.9910 SUPPLEMENTAL CONTROL (5289-00-71) LS	650.9920 SLOPE STAKES LF
CATEGORY 0010					
8+00 - 12+00	278	278	--	--	278
PROJECT 5289-00-71	--	--	--	1	--
CATEGORY 0020					
10+00	--	--	1	--	--
ITEM TOTAL	278	278	1	1	278

PAVEMENT MARKING

STATION - STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	REMARKS
8+00 - 12+00	CENTER LINE	800	DOUBLE YELLOW
8+00 - 12+00	EDGE LINE	800	WHITE
ITEM TOTALS		1,600	

INCENTIVE STRENGTH CONCRETE PAVEMENT

PROJECT	715.0415 DOL
5289-00-71	500
ITEM TOTAL	500

SAWING

STATION	LOCATION	690.0150 ASPHALT LF
7+50 - 8+00	RT/LT	100
8+00		22
12+00		22
12+00 - 12+76	RT/LT	152
ITEM TOTAL		296

NOTE: TABLE QUANTITIES ARE CATEGORY 0010 UNLESS OTHERWISE NOTED.

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
5289-00-01		
FEDERAL PROJECT NUMBER	4.01	2

PLAT OF RIGHT OF WAY REQUIRED FOR

STH 82 – CTH Y

West Fork Kickapoo River Bridge B-62-0245

CTH S — VERNON COUNTY

CONSTRUCTION PROJECT NUMBER
5289-00-71

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) IP

	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

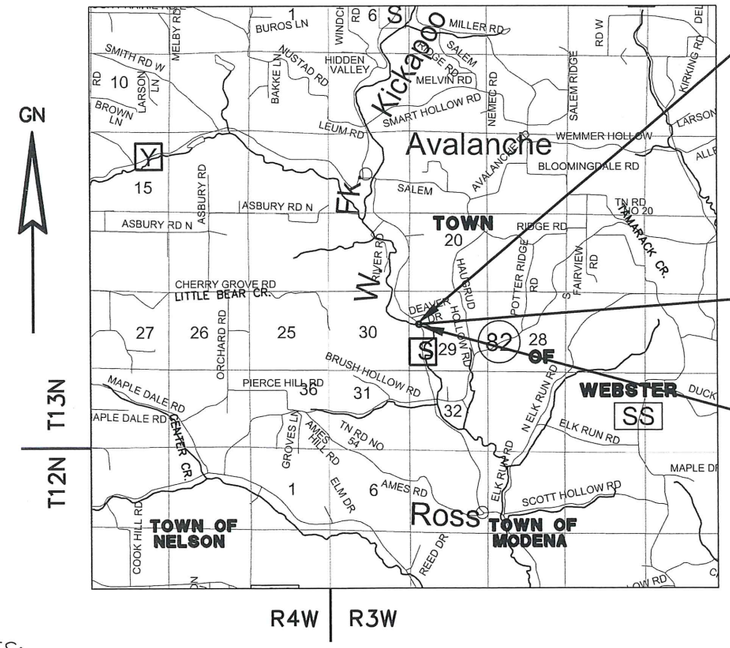
ACCESS RIGHTS	AR	POINT OF INTERSECTION	PI
ACRES	AC	PROPERTY LINE	PL
AHEAD	AH	RECORDED AS	(100')
ALUMINUM	ALUM	REEL / IMAGE	R/I
AND OTHERS	ET AL	REFERENCE LINE	R/L
BACK	BK	REMAINING	REM
BLOCK	BLK	RESTICTIVE DEVELOPMENT EASEMENT	RDE
CENTERLINE	C/L	RIGHT	RT
CERTIFIED SURVEY MAP	CSM	RIGHT OF WAY	R/W
CONCRETE	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

SCALE, MILES: 0 — 1/2 — 1

TOTAL NET LENGTH OF CENTERLINE = 0.09 MILE



END RELOCATION ORDER

1127.1 N AND 460.1 FEET E OF THE W QUARTER COR OF SEC 29, T13N R3W

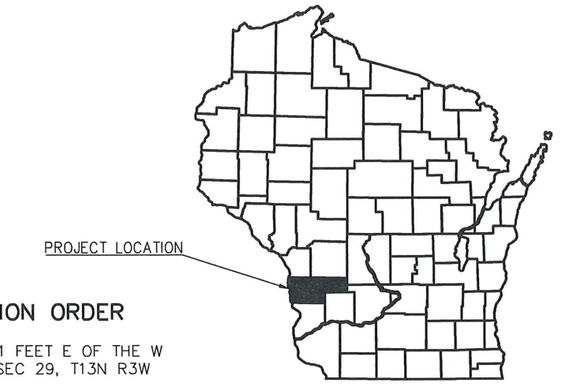
STA 13+26.73
Y – 156463.143
X – 734024.640

STRUCTURE B-62-0245

BEGIN RELOCATION ORDER

957.8 N AND 776.3 FEET E OF THE W QUARTER COR OF SEC 29, T13N R3W

STA 8+63.83
Y – 156125.709
X – 734340.830



NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), VERNON COUNTY. 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 TYPE 2 MONUMENTS (TYPICALLY ¾" x 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

REVISION DATE:

APPROVED FOR VERNON COUNTY

8-8-17 — DATE — SIGNATURE

ORIGINAL PLAT PREPARED BY

Cedar corporation
604 Wilson Avenue
Menomonie, Wisconsin 54751
715-235-9081
800-472-7372
FAX 715-235-2727
www.cedarcorp.com
engineers • architects • planners • environmental specialists
land surveyors • landscape architects • interior designers

WISCONSIN
ERIC E LINDAAS
S-2919
McFARLAND WI
LAND SURVEYOR

08-03-17 — DATE — (Signature)

SCHEDULE OF LANDS & INTERESTS REQUIRED

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

PARCEL NUMBER	OWNER(S) NAME	INTEREST REQUIRED	RIGHT OF WAY REQ. NEW	EXIST.	TOTAL	TLE S.F.
1	ELIZABETH B. CIFANI	FEE, TLE	0.18 AC.	--	0.18 AC.	1473
2	JEFFERY & DIANA GARRETT	TLE	--	--	--	2528
3	WEST FORK TROUT HAVEN LLC	TLE	--	--	--	133
20	VERNON ELECTRIC COOP	RELEASE OF RIGHTS				

EXISTING COUNTY HIGHWAY S RIGHT OF WAY SHOWN IS BASED HIGHWAY CONVEYANCE VOLUME 170, PAGE 615, PLATS OF SURVEYS IN THE AREA. DEAVER LANE BASED ON THE CENTERLINE AS SURVEYED BY F CROOK SURVEY 11-23-87 ss. 82.31.

ML OVERALL (C2-C4)
PI STA = 12+14.03
Y = 156389.328
X = 734110.290
DELTA = 8°04'28"
D = 3°34'35"
T = 113.07'
L = 225.76'
R = 1602.00'
PC STA = 11+00.96
Y = 156304.214
X = 734184.723
PT STA = 13+26.73
Y = 156463.143
X = 734024.640
BK = N41°10'13.0"W
AH = N49°14'41.1"W

CURVE C1
DELTA = 4°02'53"
D = 2°43'14"
T = 74.43'
L = 148.79'
R = 2106.00'
BK = N37°07'20"W

CURVE C2
DELTA = 2°34'57"
D = 3°34'35"
T = 36.11'
L = 72.21'
R = 1602.00'
CB= N42°27'42"W
LC= 72.20'

CURVE C3
DELTA = 1°04'42"
D = 3°34'35"
T = 15.08'
L = 30.15'
R = 1602.00'
CB= N44°17'31"W
LC= 30.15'

CURVE C4
DELTA = 4°24'49"
D = 3°34'35"
T = 61.73'
L = 123.40'
R = 1602.00'
CB= N47°02'17"W
LC= 123.37'

1" IRON PIPE (FND)
Y = 158406.164
X = 733533.660

1-1-2" IP (FND)
Y = 155771.301
X = 733564.514

S00°40'15"E
2635.04'

N65°27'44"E
853.39'

S87°12'22"E
1031.28'

E-W QUARTER LINE

CURVE C7
DELTA = 58°50'52"
D = 69°01'52"
T = 46.81'
L = 85.25'
R = 83.00'
CB = S88°56'47"W
LC = 81.55'

CURVE C8
DELTA = 48°35'41"
D = 65°06'32"
T = 39.73'
L = 74.64'
R = 88.00'
CB= S85°55'37"E
LC= 72.42'

CURVE C10
DELTA = 01°59'12"
D = 03°25'50"
T = 28.96'
L = 57.91'
R = 1670.10'
CB= N45°13'27"W
LC= 57.90'

CURVE C11
DELTA = 5°15'53"
D = 3°34'19"
T = 73.75'
L = 147.40'
R = 1604.10'
CB= S44°04'59"E
LC= 147.34'

CURVE C5
PI STA = 50+50.66
Y = 156392.511
X = 734172.570
DELTA = 72°07'23"
D = 114°35'30"
T = 36.41'
L = 62.94'
R = 50.00'
PC STA = 50+14.25
Y = 156367.332
X = 734146.271
PT STA = 50+77.19
Y = 156375.210
X = 734204.606
BK = N46°14'49.9"E
AH = S61°37'46.7"E

CURVE C6
PI STA = 52+22.54
Y = 156306.143
X = 734332.502
DELTA = 29°28'24"
D = 57°17'45"
T = 26.30'
L = 51.44'
R = 100.00'
PC STA = 51+96.24
Y = 156318.641
X = 734309.358
PT STA = 52+47.68
Y = 156306.649
X = 734358.800
BK = S61°37'46.8"E
AH = N88°53'49.0"E

END RELOCATION ORDER
STA. 13+26.73
Y = 156463.143
X = 734024.640

1 ELIZABETH B. CIFANI
TLE - SLOPES 1473 SF.

JEFFERY & DIANA GARRET 2
TLE- SLOPES 2528 SF.

STA 11+73.17 CTH S =
STA 50+00 DEAVER DRIVE

VERNON ELECTRIC COOP 20
RELEASE OF RIGHTS

WEST FORK TROUT HAVEN LLC 3
TLE- SLOPES 133 SF.

TOWN OF WEBSTER

C.T.H. "S"

DEAVER DR.

W. FORK KICKAPOO RIVER

B-62-0245

FEE 0.18 AC.

PC: 50+14.25
PT: 50+77.19
PC: 51+96.24
EP: 52+47.68
PC: 11+00.96

237.14'
N41°10'13"W

SLOPE INTERCEPT (TYP.)

BEGIN RELOCATION ORDER
STA. 8+63.83
Y = 156125.709
X = 734340.830

PT: 8+63.83

BP STA. 7+15.04
Y = 156010.342
X = 734434.741

RW / P.L.
P.L.
RW
33'
50'

TLE COORDINATE TABLE

POINT	Y	X	STATION	OFFSET
200	156288.386	734131.639	11+24.74	-50.2'
201	156361.765	734054.141	12+35.00	-55.0'
202	156405.482	734041.874	12+75.00	-31.6'
203	156443.532	734097.685	12+60.00	34.3'
204	156444.322	734112.515	12+50.00	45.0'
205	156410.093	734155.016	12+02.93	49.7'
206	156408.646	734222.663	50+77.19'	38.0'
207	156372.576	734289.456	51+53.10'	38.0'
208	156368.176	734287.081	51+53.10'	33.0'

COORDINATE TABLE

POINT	Y	X	STATION	OFFSET
80	156357.480	734135.980	50+00.00	0'
80	--	--	11+73.17	0'
81	156379.062	734114.925	12+03.32	0'
82	156306.649	734358.800	52+47.68	0'
85	156159.106	734379.019	8+63.83	50.73'
101	156093.383	734303.865	8+63.83	49.1'
84	156270.757	734280.529	10+12.71	50.09'
105	156402.747	734138.751	12+03.32	33.6'
106	156404.247	734220.287	50+77.19	33.0'
107	156338.745	734341.580	52+23.59	30.41'
108	156489.666	734047.498	13+26.73	35.0'

SW - NW

LINE TABLE

LINE	BEARING	DISTANCE
81-105	N45°10'08"E	33.60'
106-107	S61°37'47"E	137.85'
107-82	S28°12'52"E	36.42'
82-83	S01°50'00"E	33.37'
83-84	S88°10'00"W	79.38'
84-85	S41°24'59"E	148.88'
85-99	N48°49'47"E	50.73'
99-101	S48°49'47"W	49.10'
101-102	S41°27'03"W	260.17'
102-200	N48°32'57"E	17.00'
102-103	S46°33'52"E	15.73'
103-201	N46°33'52"W	91.00'
201-202	N15°40'25"W	45.41'
98-104	N40°45'19"E	30.99'
98-108	N40°45'19"E	35.01'
108-105	S46°23'36"W	126.02'
203-204	N86°56'58"E	14.89'
204-205	S51°09'12"E	48.68'
206-207	S61°37'47"E	75.91'
207-208	S28°22'13"W	5.00'
L1	N46°14'50"E	14.25'
L2	S61°37'47"E	119.05'
79-200	S83°31'51"W	40.60'
200-103	S88°57'28"W	24.17'

WISCONSIN
ERIC E LINDAAS
S-2919
McFARLAND WI
LAND SURVEYOR

8-8-17
08/03/2017

GN

	SCALE: FEET 0 50 100	ROAD: CTH S	R/W PROJECT NUMBER: 5289-00-01	PLAT SHEET 4.02	
		COUNTY: VERNON	CONSTRUCTION PROJECT NUMBER: 5289-00-71	R/W SHEET 15	E

FILE NAME : I:\CLIENTS-MENO\W\W3922 WDOT SW REGION\009 5289-00-01 CTH S WEST FORK KICKAPOO RIVER BRIDGE VERNON COUNTY\52890001\RW\RW_PAGE.DWG
APPRAISAL PLAT DATE : _____

NOTES

Ⓐ CONCRETE PAVEMENT 12-INCH
Ⓑ ASPHALTIC SHOULDER
Ⓒ CONCRETE CURB & GUTTER TYPE G
Ⓓ CONCRETE CURB & GUTTER TYPE J

CONSTRUCT DRIVEWAY CURB
STA 7+50.00 - STA 8+58.73 LT

CONSTRUCT 4-INCH SLOPED 30-INCH CURB
STA 8+58.73 - STA 9+36.08 LT

PI STA = 7+89.46
Y = 156069.684
X = 734389.824
DELTA = 4°02'53"
D = 2°43'14"
T = 74.43'
L = 148.79'
R = 2106.00'
PC STA = 7+15.04
Y = 156010.341
X = 734434.741
PT STA = 8+63.83
Y = 156125.709
X = 734340.830
BK = N37°07'20.4"W
AH = N41°10'13.0"W

GREGORY WAHL
WEST FORK TROUT HAVEN LLC
27131 R ST
STERLING, IL 61081

STA 8+46.39 - STA 8+99.71
MGS GUARDRAIL TERMINAL EAT REQ'D
STA 8+46.39, 17.0' LT - POST #1

STA 8+99.71 - STA 9+39.15, LT
MGS THRIE BEAM TRANSITION REQ'D

STA 10+86.02 - STA 11+25.69, LT
MGS THRIE BEAM TRANSITION REQ'D

STA 11+25.69 - STA 11+79.37
MGS GUARDRAIL TERMINAL EAT REQ'D
STA 11+79.37, 17.0' LT - POST #1

PI STA = 12+14.03
Y = 156389.328
X = 734110.290
DELTA = 8°04'28"
D = 3°34'35"
T = 113.07'
L = 225.76'
R = 1602.00'
PC STA = 11+00.96
Y = 156304.214
X = 734184.723
PT STA = 13+26.73
Y = 156463.143
X = 734024.640
BK = N41°10'13.0"W
AH = N49°14'41.1"W

JEFFREY & DIANA GARRETT
S4129 COUNTY RD S
VIROQUA, WI 54665

BEGIN CONSTRUCTION
STA 7+50.00, LT

SLOPE INTERCEPT

END DRIVEWAY CURB
BEGIN 10:1 TRANSITION TO
4" SLOPED 30-INCH CURB
STA 8+58.73, 14.8' LT

CULVERT PIPE
CORRUGATED STEEL
18-INCH

FRONTIER
COMMUNICATIONS

ASPHALTIC
FLUME

RIPRAP
HEAVY

WETLAND
BOUNDARY

R/W

PT: 8+63.83

ASPHALTIC
FLUME

SLOPE
INTERCEPT

VERNON
ELECTRIC
COOP

BM1

TLE

END CONSTRUCTION
STA 12+75.65, LT

8+00 CTH S 9+00 10+00 N41° 10' 13"W 11+00 12+00 13+00

STA 11+73.17 CTH S =
STA 50+00.00 DEAVER DRIVE

BEGIN CONSTRUCTION
STA 7+50.00, RT

CULVERT PIPE
CORRUGATED STEEL
18-INCH

PAUL & KIMBERLY KRAHN
S4296 COUNTY RD S
VIROQUA, WI 54665

FRONTIER
COMMUNICATIONS

END DRIVEWAY CURB
BEGIN 10:1 TRANSITION TO
4" SLOPED 30-INCH CURB
STA 8+28.17, 14.6' RT

SLOPE
INTERCEPT

R/W

WEST FORK
KICKAPOO RIVER

ASPHALTIC
FLUME

PROPOSED
STRUCTURE
B-62-0245
STA 9+97.00

EXISTING
STRUCTURE
P-62-0973
TO BE
REMOVED

ASPHALTIC
FLUME

PC: 11+00.96

END CONSTRUCTION
STA 12+75.65, RT

R/W

SLOPE
INTERCEPT

TLE

WETLAND
BOUNDARY

BEGIN PROJECT
STA 8+00.00
Y=156077.033
X=734382.113
MATCH EXISTING
SAWCUT REQ'D

CONSTRUCT DRIVEWAY CURB
STA 7+50.00 - STA 8+28.17 RT

CONSTRUCT 4-INCH SLOPED 30-INCH CURB
STA 8+28.17 - STA 9+08.91 RT

STA 8+15.79 - STA 8+68.53
MGS GUARDRAIL TERMINAL EAT REQ'D
STA 8+15.79, 17.0' RT - POST #1

STA 8+68.53 - STA 9+07.98, RT
MGS THRIE BEAM TRANSITION REQ'D

WETLAND
BOUNDARY

SLOPE
INTERCEPT

CAUTION

DEAVER DRIVE
51+00

ELIZABETH CIFANI
1424 CRAIN ST
EVANSTON, IL 60202

STA 10+54.84 - STA 10+94.29, RT
MGS THRIE BEAM TRANSITION REQ'D

STA 10+94.29 - STA 11+46.96
MGS GUARDRAIL TERMINAL EAT REQ'D
STA 11+46.96, 17.0' RT - POST #1

R/W

END PROJECT
STA 12+00.00
Y=156376.703
X=734117.256
MATCH EXISTING
SAWCUT REQ'D

LEGEND
- SILT FENCE
- TURBIDITY BARRIER
- RIPRAP
- EROSION MAT URBAN CLASS I, TYPE B

VCL = 75.00
K = 252.75

VCL = 100.00
K = 211.16

STA 8+00.00 EL 828.51
STA 12+00.00 EL 826.62

-0.80%
-0.50%
-0.03%

PROPOSED
℄ PROFILE

EXISTING
℄ PROFILE

PROPOSED
STRUCTURE
B-62-0245
STA 9+97.00

TYPE I
28-INCH

HIGH WATER
EL 821.72

EXISTING
STRUCTURE
P-62-0973
TO BE
REMOVED

OBSERVED WATER
EL 809.64
(12-8-15)

VPC STA 8+00.00 VPC EL 828.51
VPI STA 8+37.50 VPI EL 828.21
VPT STA 8+75.00 VPT EL 828.02
VPC STA 11+00.00 VPC EL 826.89
VPI STA 11+50.00 VPI EL 826.64
VPT STA 12+00.00 VPT EL 826.62

STATION 10+00
REMOVE STRUCTURE P-62-0973
TWO SPAN STEEL DECK GIRDER BRIDGE
120.0' OVERALL LENGTH
28.0' OVERALL WIDTH
SKEW 40° LHF SKEW

STATION 9+97
STRUCTURE B-62-0245 REQUIRED
TWO SPAN CONCRETE DECK GIRDER BRIDGE
121.0' OVERALL LENGTH
32.5' OVERALL WIDTH
SKEW 40° LHF

EXISTING ℄ ELEVATION
FINISHED ℄ ELEVATION

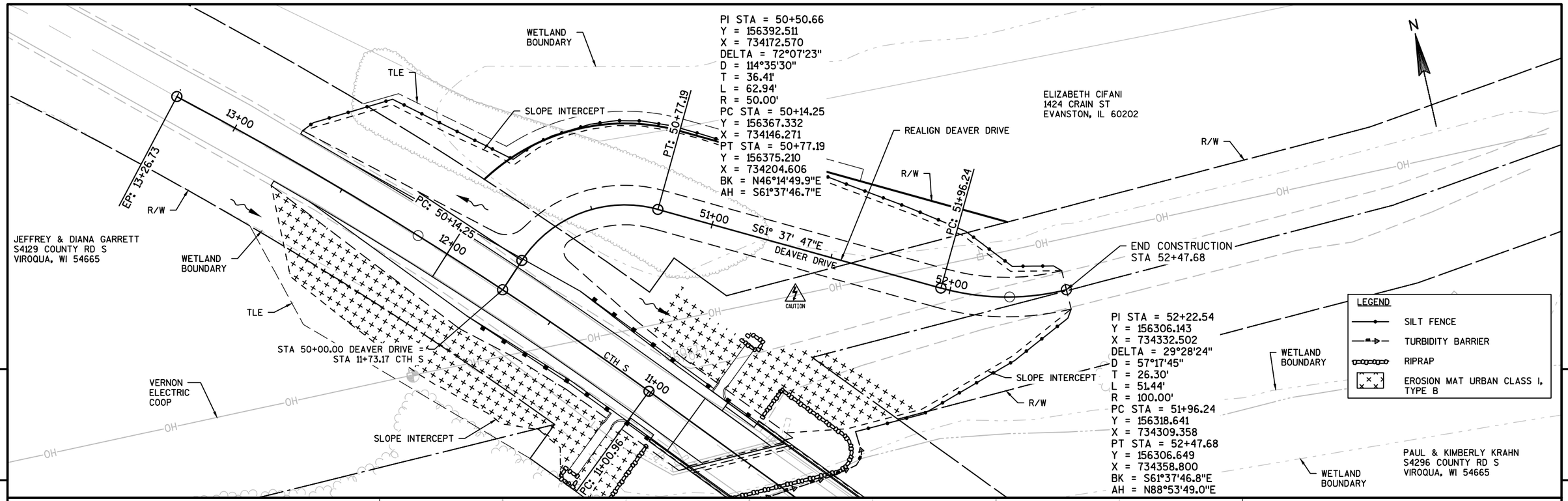
829.11 828.51 828.51 828.01 828.16 827.44 827.89 816.16 827.64 808.20 827.39 816.47 827.14 826.69 826.89 826.58 826.70 826.62 826.62 826.62 826.56

BENCHMARKS			
NO	STA	DESCRIPTION	ELEV
1	11+85	SET 8" NAIL IN POWER POLE (@ 49.18' LT)	819.57'
2	N/A	MONUMENT ON SW PARAPET OF B-62-0174	816.25'

NOTE: POSITIONS SHOWN ARE WISCONSIN COUNTY COORDINATES, VERNON, NAD 88 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

PROJECT NO: 5289-00-71	HWY: CTH S	COUNTY: VERNON	PLAN AND PROFILE: CTH S	SHEET 16	E

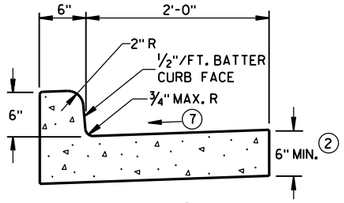
FILE NAME : I:\CLIENTS-MENO\W\W3922 WDOT SW REGION\009 5289-00-01 CTH S WEST FORK KICKAPOO RIVER BRIDGE VERNON COUNTY\52890001\SHEETSPLAN\050101-PP.DWG PLOT DATE : 10/30/2017 1:36 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1 IN:40 FT
LAYOUT NAME - 01-PP



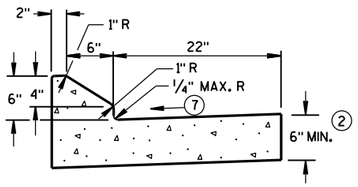
PROJECT NO: 5289-00-71	HWY: CTH S	COUNTY: VERNON	PLAN AND PROFILE: DEAVER DRIVE	SHEET 17	E

Standard Detail Drawing List

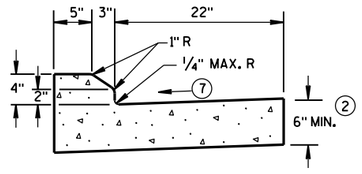
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
13A03-06	CONCRETE PAVEMENT SHOULDERS
13B02-08A	CONCRETE PAVEMENT APPROACH SLAB
13B02-08B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
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)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	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



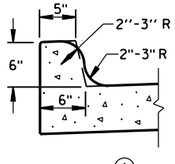
TYPES A (1) & D



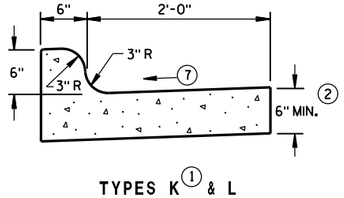
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

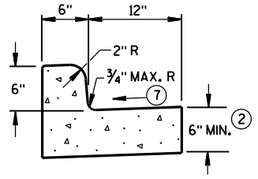


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



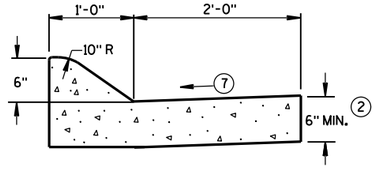
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

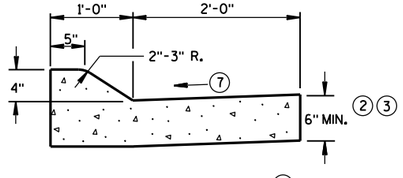


TYPES A (1) & D

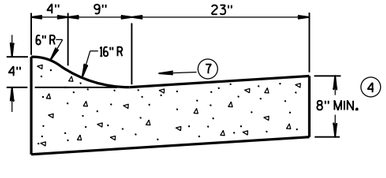
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

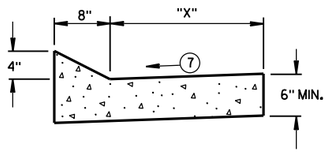


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

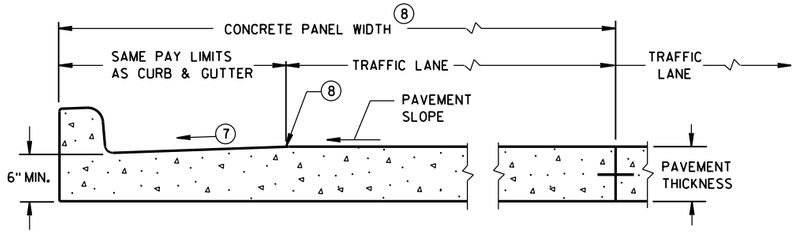
CONCRETE CURB & GUTTER 36"



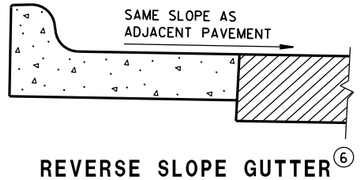
TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT *
WITH INTEGRAL CURB & GUTTER



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

GENERAL NOTES

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

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

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

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

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

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

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

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

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

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

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

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

PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

* BIKE LANE IS NOT SHOWN.

CONCRETE CURB & GUTTER

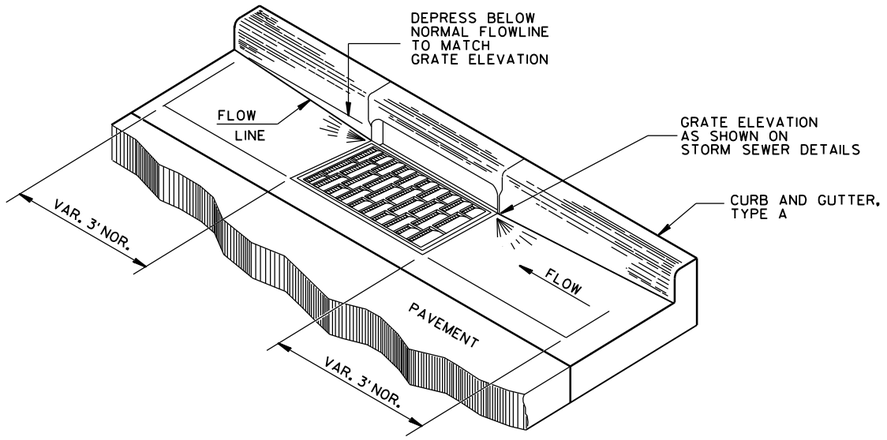
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO...

6

S.D.D. 8 D 1-20a

6

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

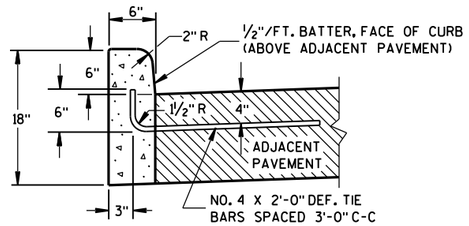
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

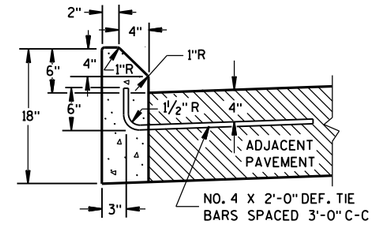
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

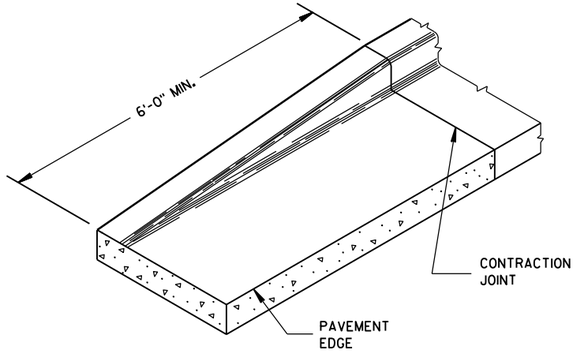


TYPES A(1) & D

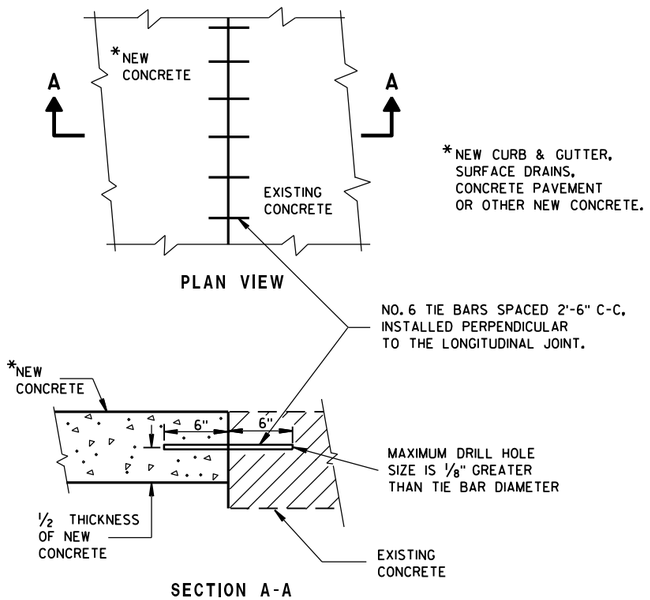


TYPES G(1) & J

CONCRETE CURB



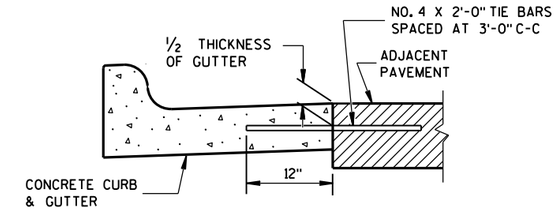
END SECTION CURB & GUTTER



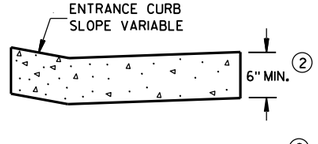
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS 20 ENT
UNIT SUPERVISOR
FHWA

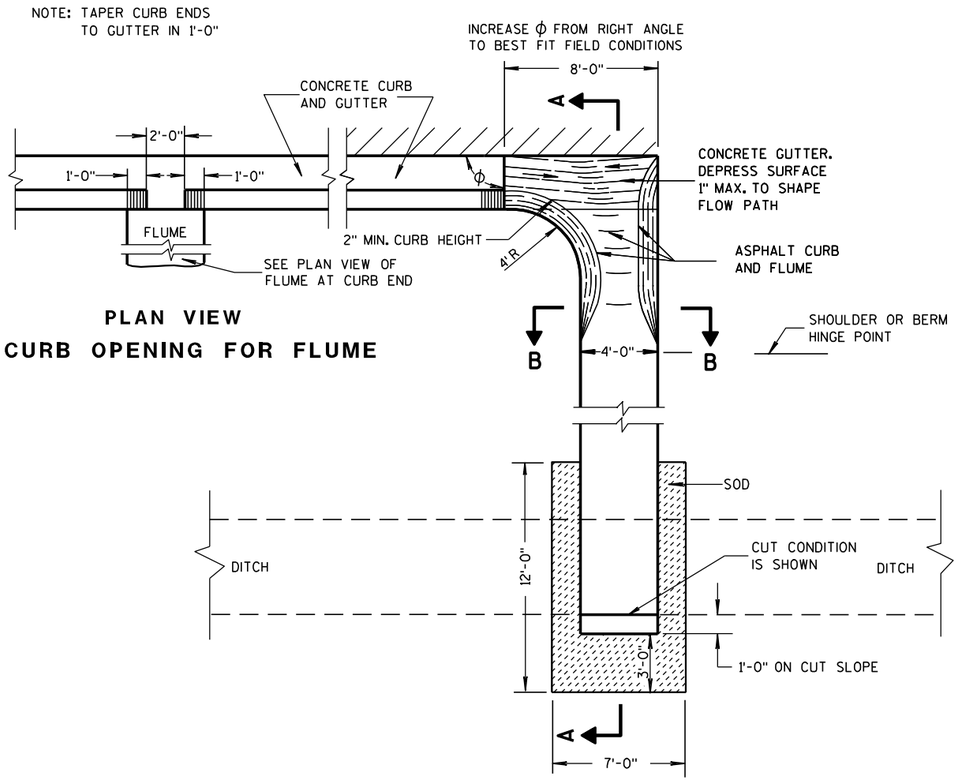
6

S.D.D. 8 D 1-20b

6

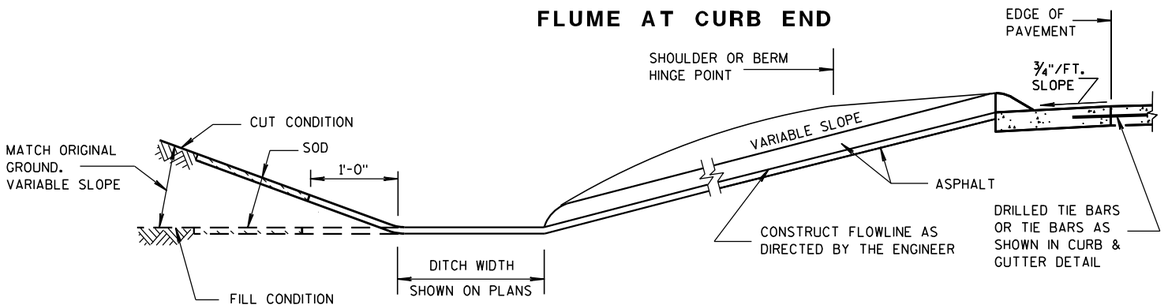
S.D.D. 8 D 1-20b

ASPHALTIC FLUME

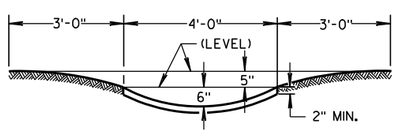


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

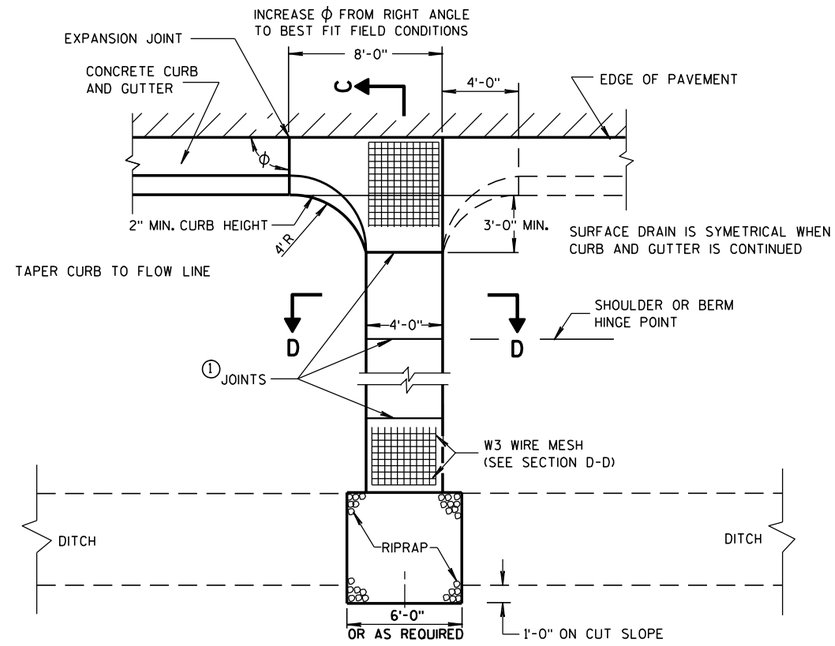
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

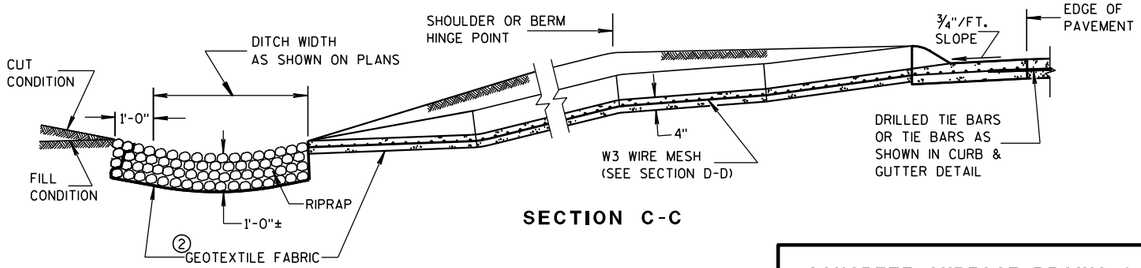
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

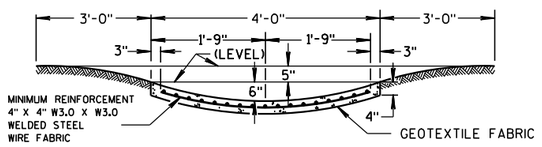
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-4-08 DATE — /S/ Jerry H. Zogg ROADWAY STANDARDS ENGINEER — MENT

FHWA

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S.D.D. 8 D 4-5

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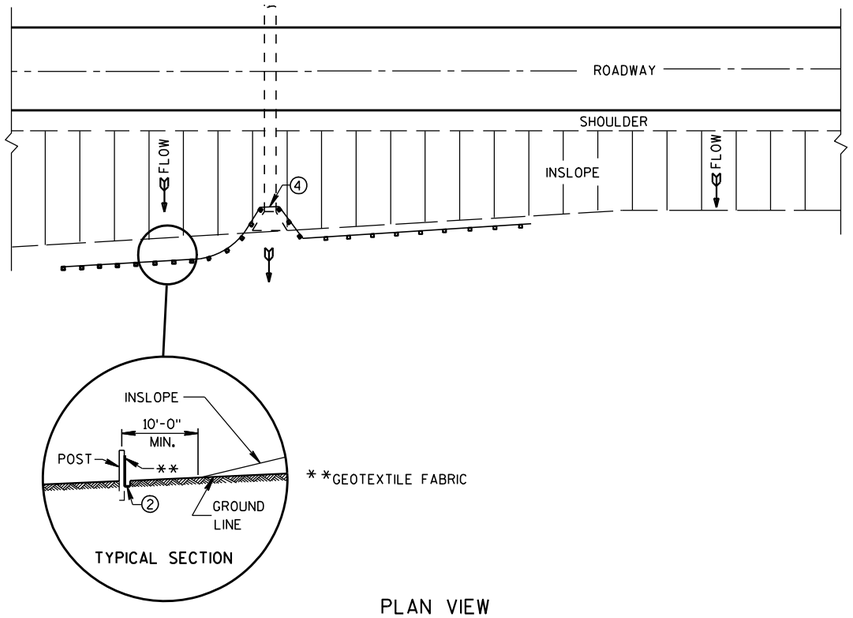
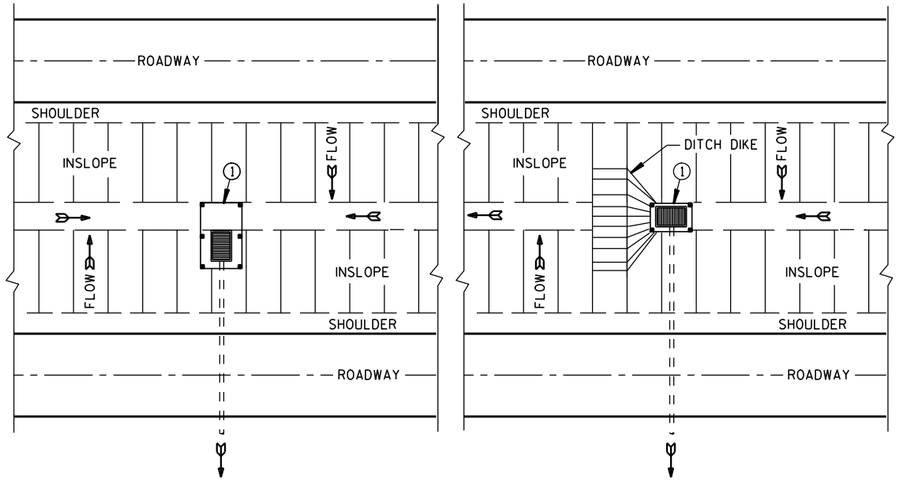
S.D.D. 8 D 4-5



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



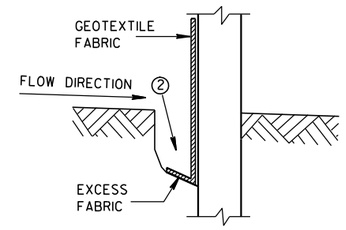
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

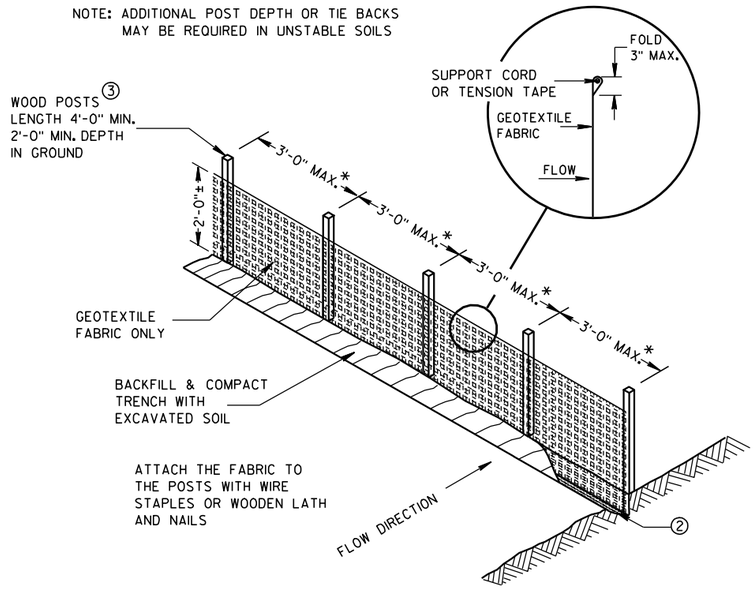
GENERAL NOTES

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

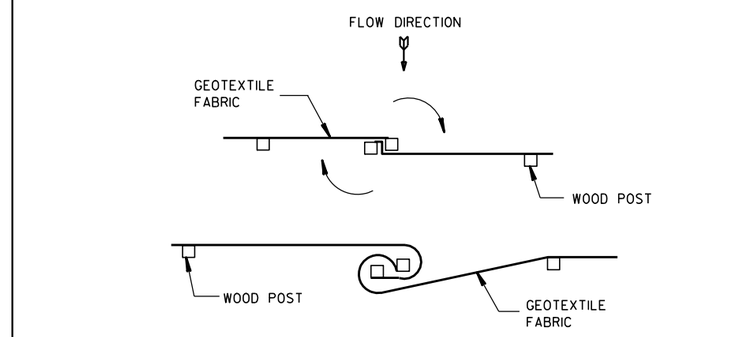
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



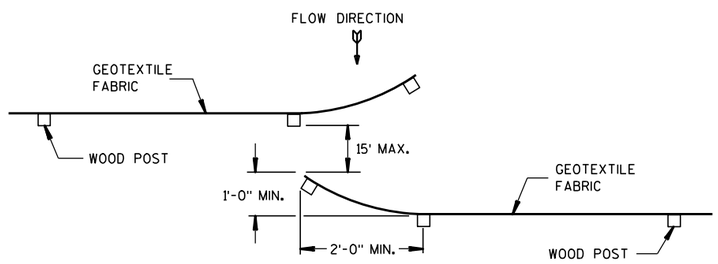
TRENCH DETAIL



SILT FENCE

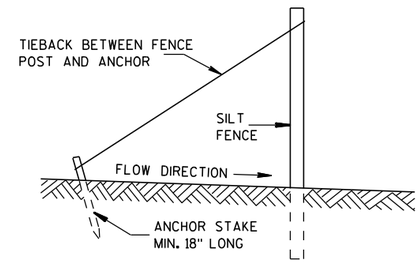


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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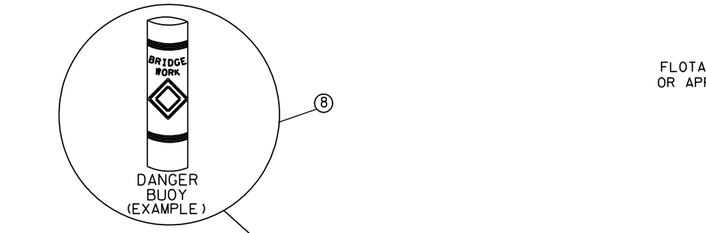
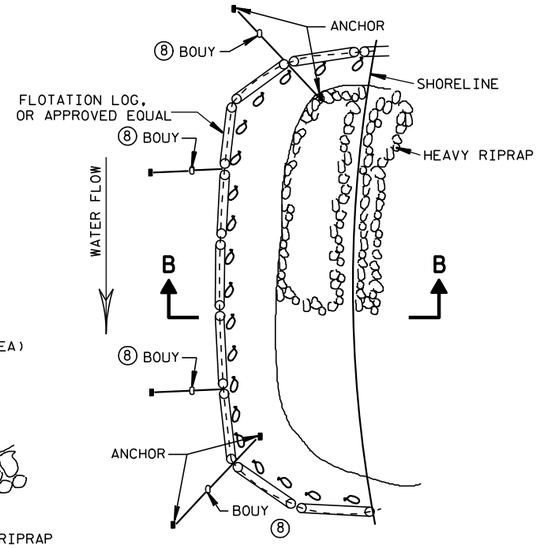
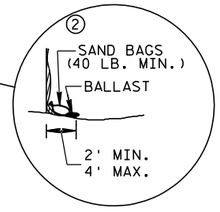
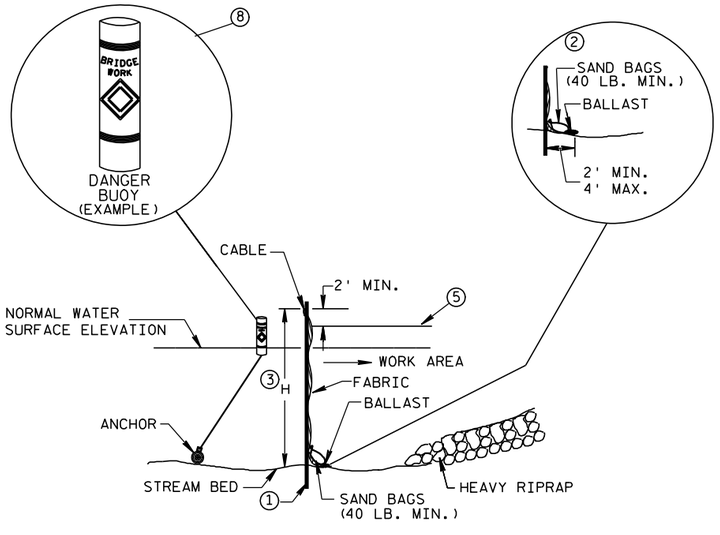


SECTION B-B

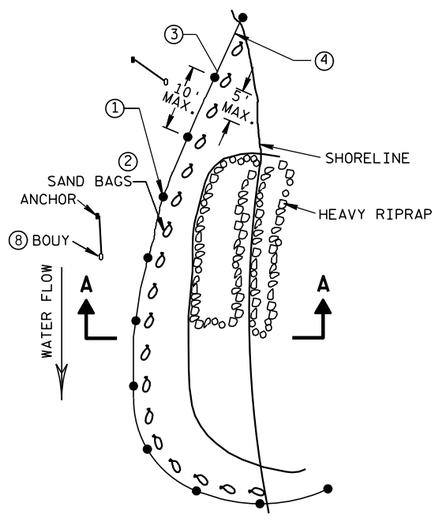




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

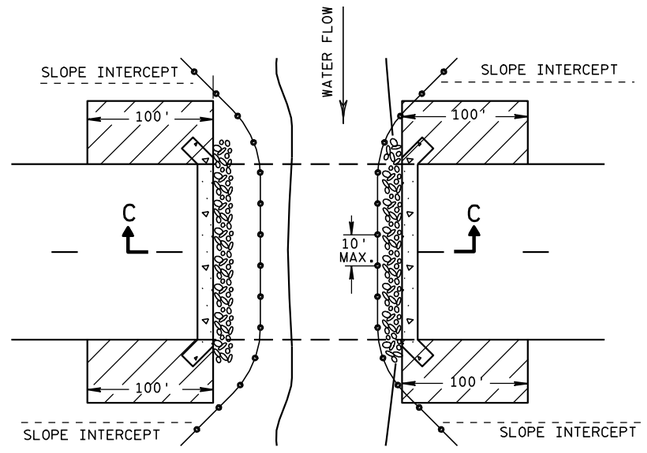
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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.

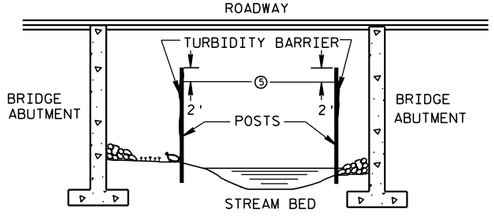
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

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S.D.D. 8 E 11-2

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S.D.D. 8 E 11-2

METAL APRON ENDWALLS

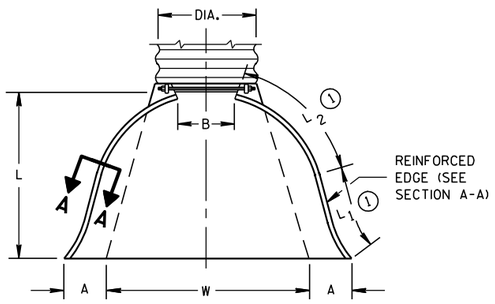
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

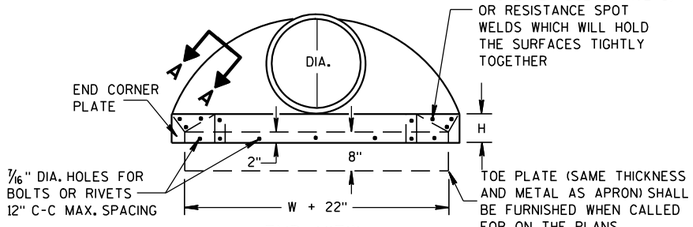
REINFORCED CONCRETE APRON ENDWALLS

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

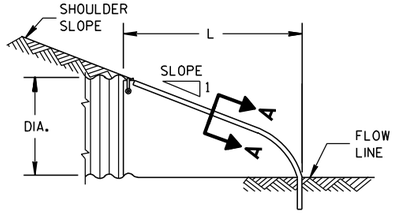
*MINIMUM
**MAXIMUM



PLAN VIEW

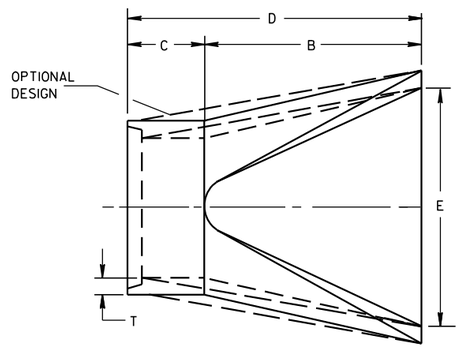


END VIEW

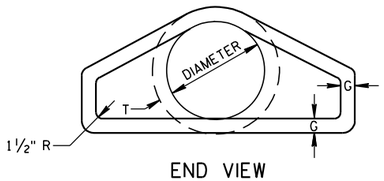


SIDE ELEVATION

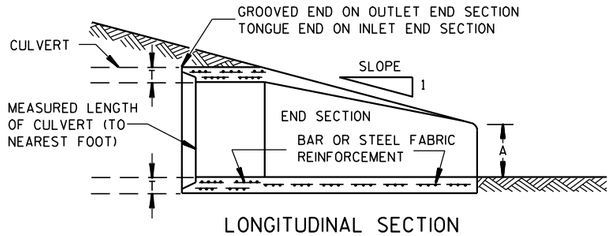
METAL ENDWALLS



PLAN

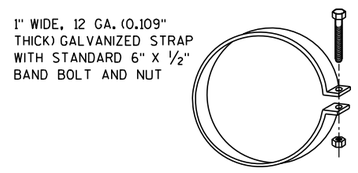


END VIEW



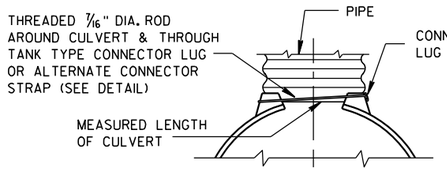
LONGITUDINAL SECTION

CONCRETE ENDWALLS

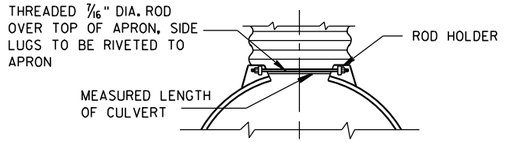


ALTERNATE FOR TYPE 1 CONNECTION

END SECTION CONNECTOR STRAP

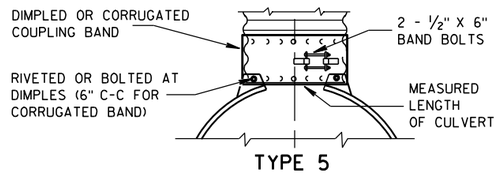


TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE

TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

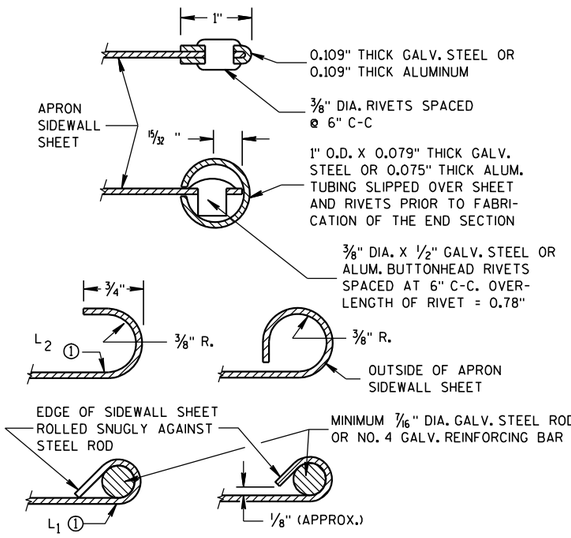
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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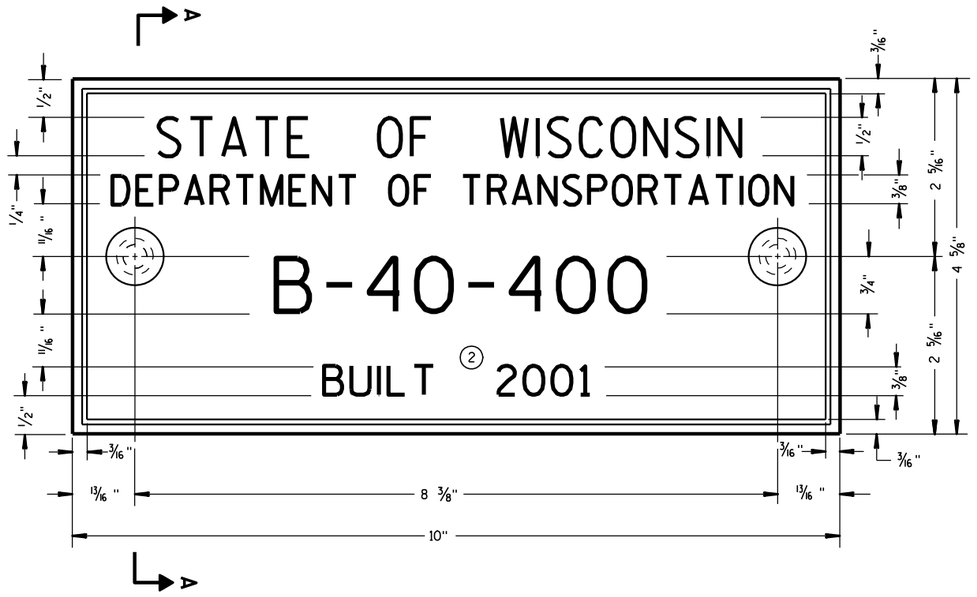
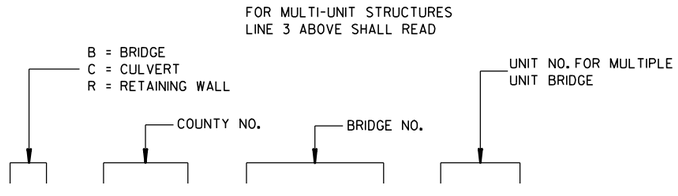
S.D.D. 8 F 1-11



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

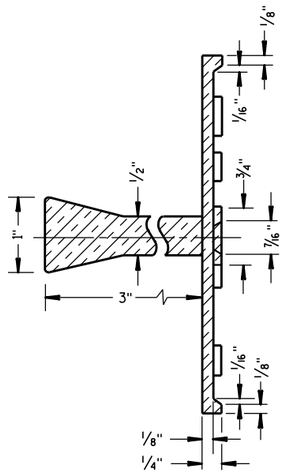
GENERAL NOTES

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

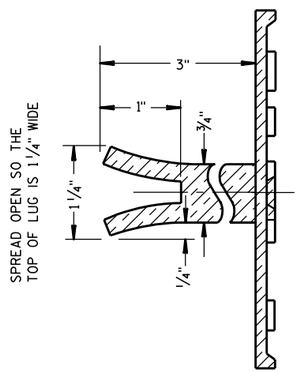
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

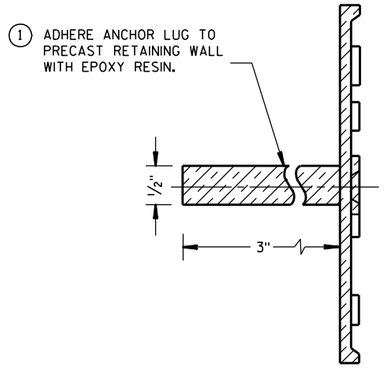
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

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

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S.D.D. 12 A 3-10

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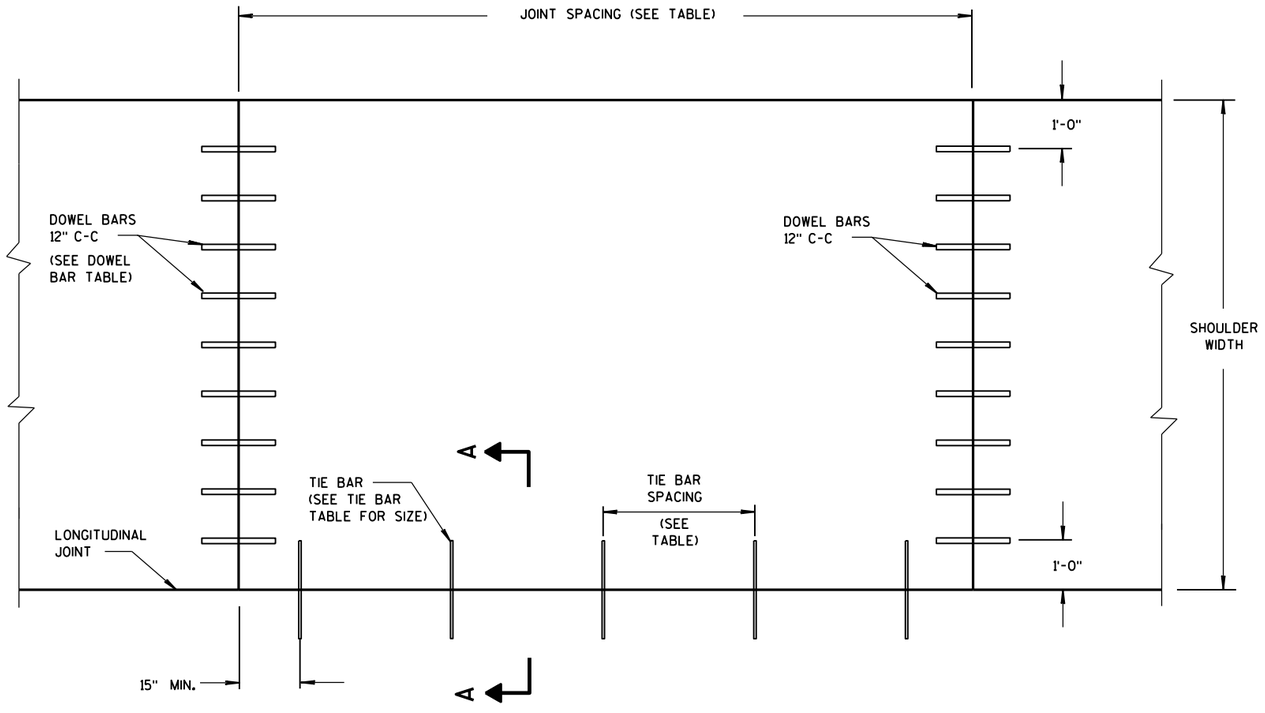
S.D.D. 12 A 3-10



PLAN VIEW

CONCRETE PAVEMENT SHOULDER

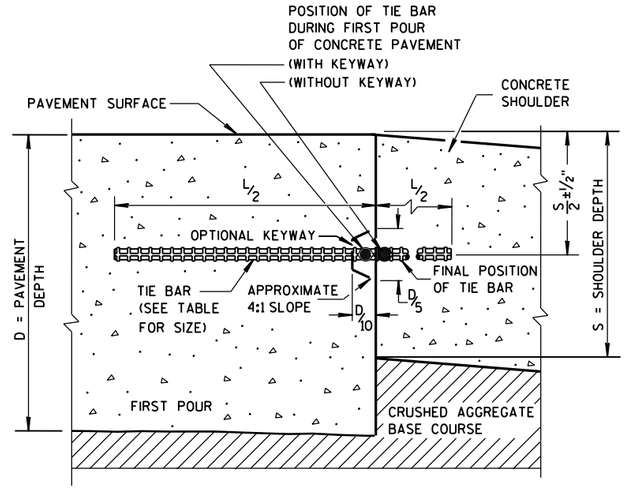
GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPERV
FHWA

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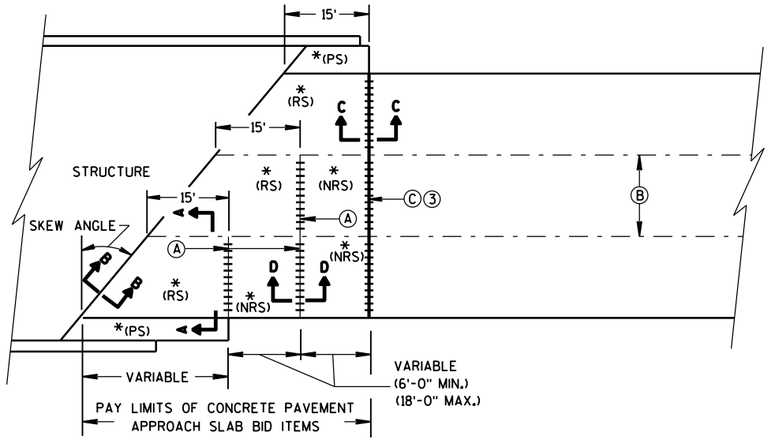
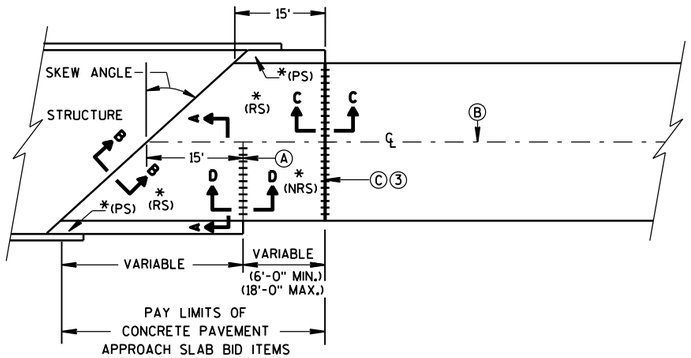
S.D.D. 13 A 3-6

6

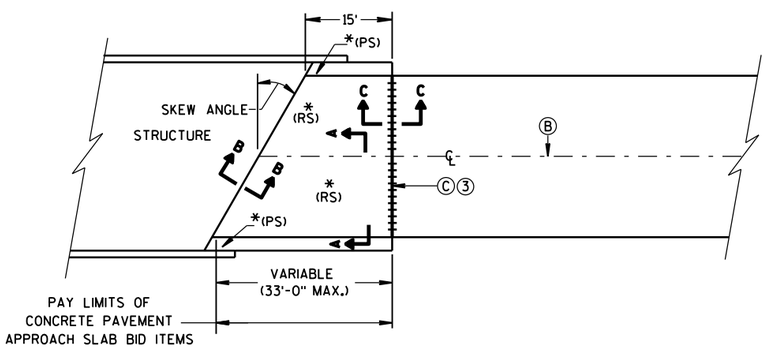
S.D.D. 13 A 3-6



SKEWED APPROACH
(PAVEMENT MORE THAN 2 LANES)



SKEWS >20°
(PAVEMENT WIDTH ≤30')



SKEWS ≤20°
(PAVEMENT WIDTH ≤30')

APPROACH SLAB AND ADJACENT PAVEMENT

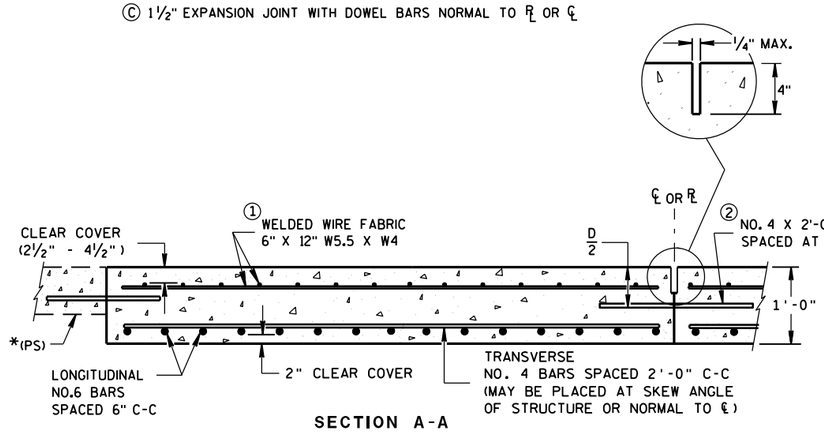
*(RS) = REINFORCED CONCRETE SLAB
*(PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
(SEE DETAILS ELSEWHERE IN THE PLAN)
*(NRS) = NON-REINFORCED CONCRETE SLAB

***STANDARD DOWEL BAR DIAMETER
(SEE SDD 13C11, & SDD 13C13)

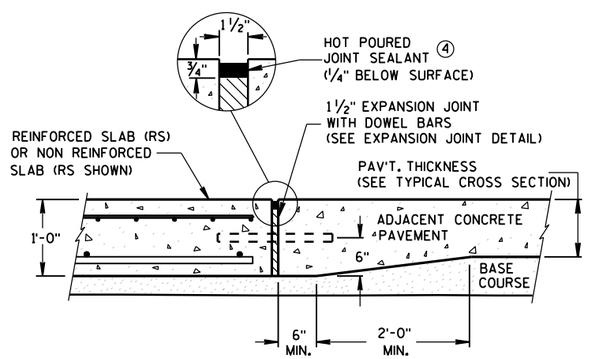
Ⓐ STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℄

Ⓑ STANDARD LONGITUDINAL JOINT WITH TIE BARS.

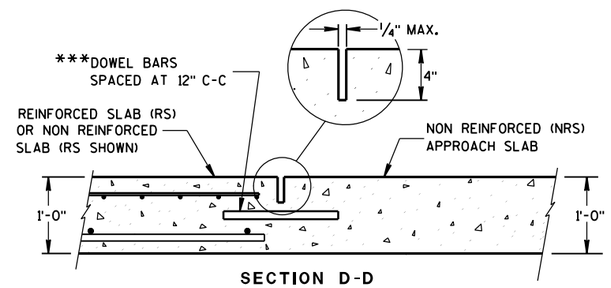
Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄



SECTION A-A
REINFORCEMENT POSITIONING DETAIL



SECTION C-C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT



SECTION D-D
CONTRACTION JOINT

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

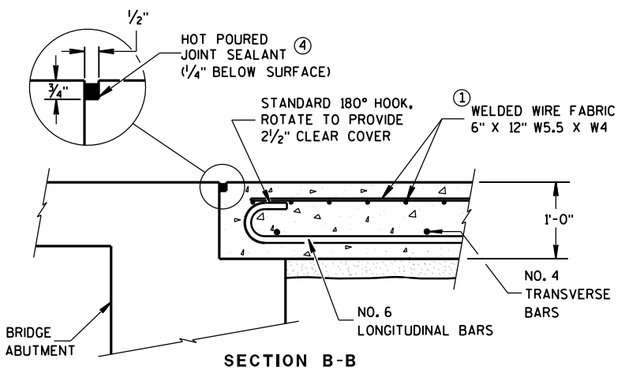
① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2'-0" C-C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

② THE CONTRACTOR MAY OMIT TIE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

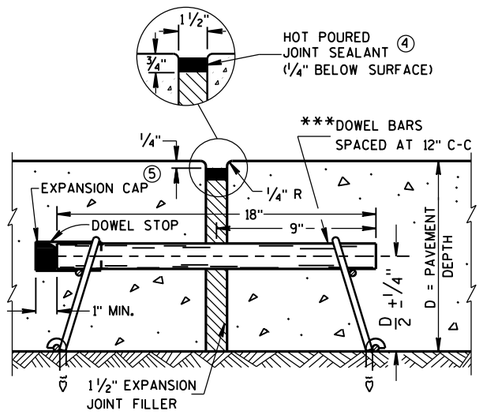
③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

④ USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.



SECTION B-B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

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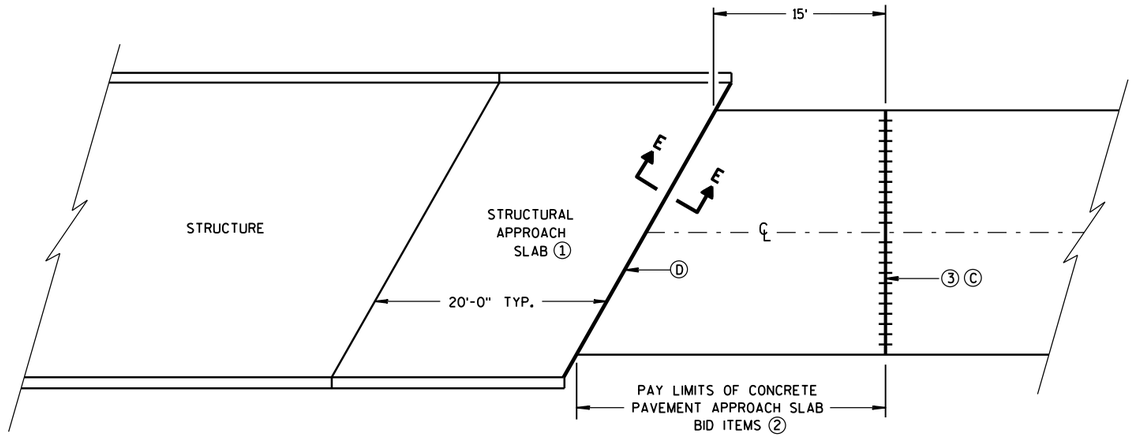
S.D.D. 13 B 2-8a



GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

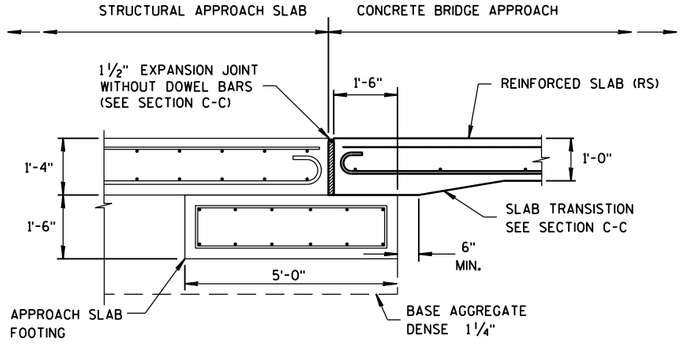
① SEE BRIDGE PLAN.

② CONFORM TO SHEET 13 B 2(A) FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS.

③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℄

Ⓓ 1½" EXPANSION JOINT (NO DOWELS)



SECTION E-E

FOOTING DETAIL

STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH

STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015
DATE

/S/ Peter Kemp, P.E.
PAVEMENT SUPERV

FHWA

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S.D.D. 13 B 2-8b

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.

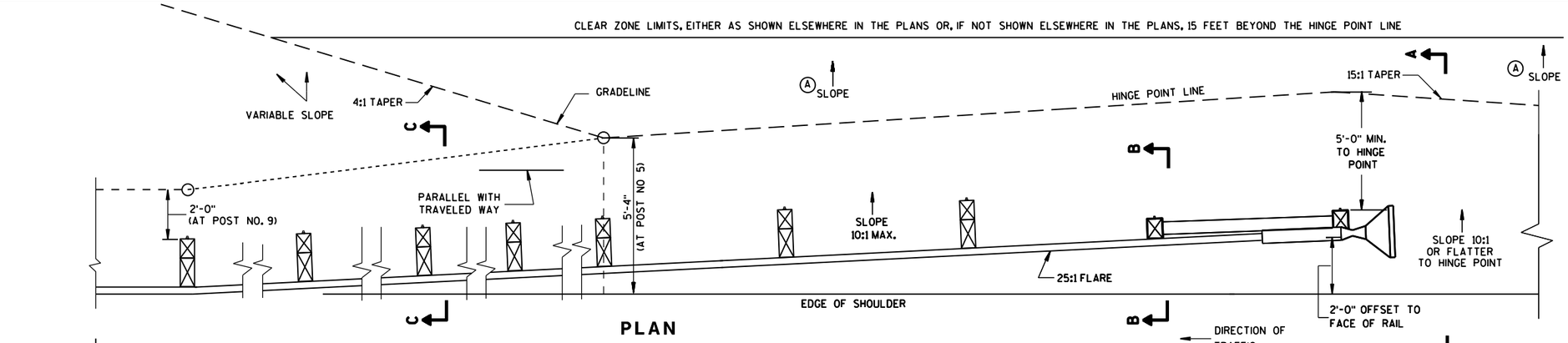
SEE SDD 14B42 FOR MORE INFORMATION.

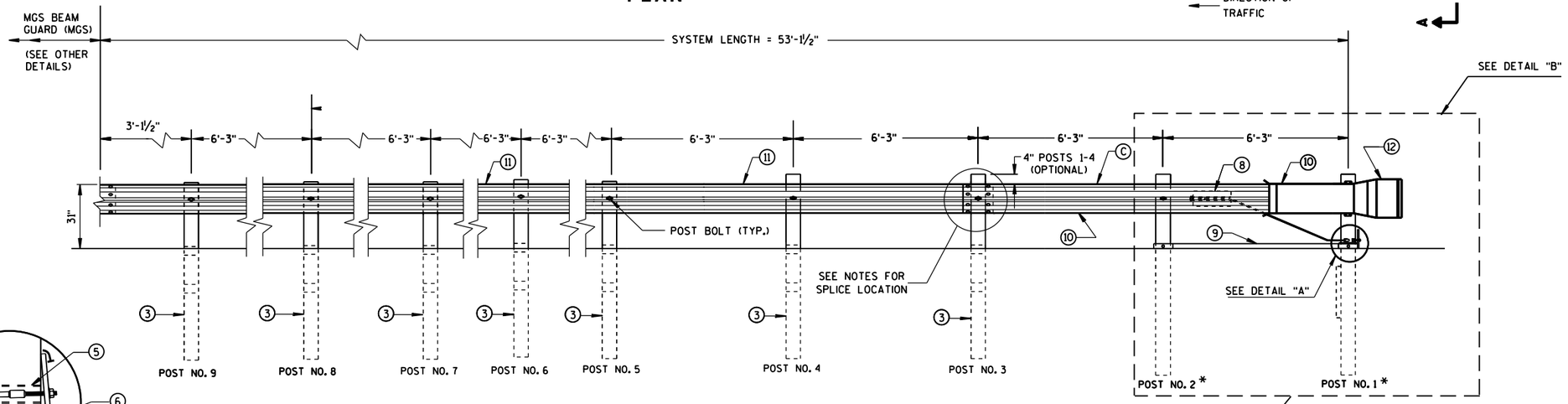
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

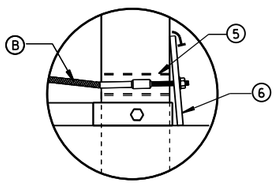
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

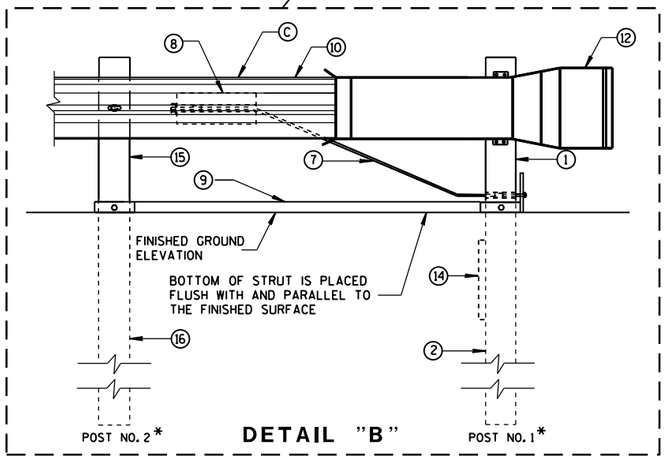
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

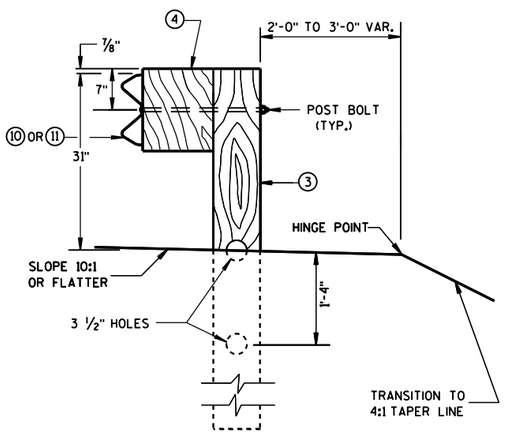
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.



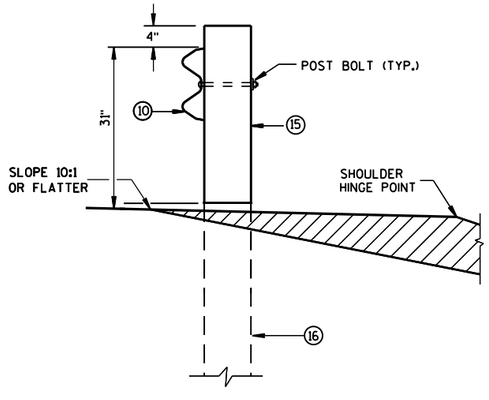




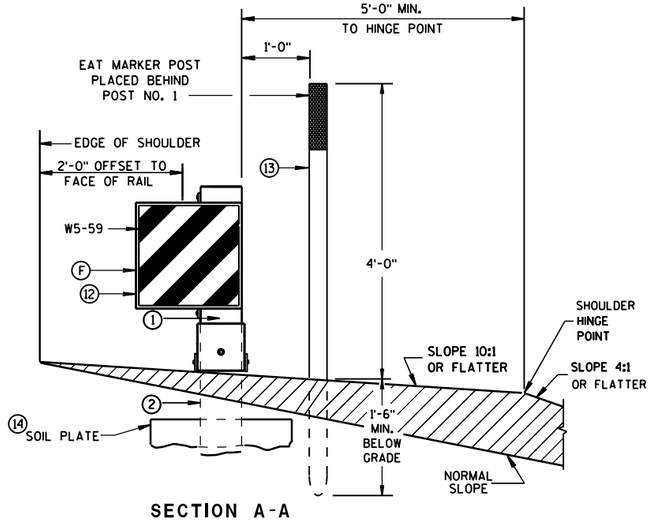




SECTION C-C
TYPICAL AT POST NOS. 3-9



SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

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

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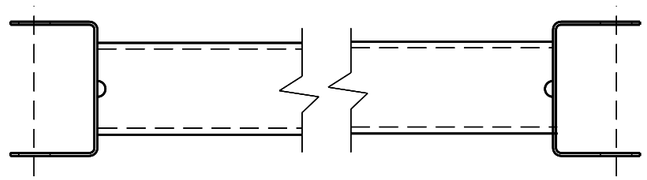
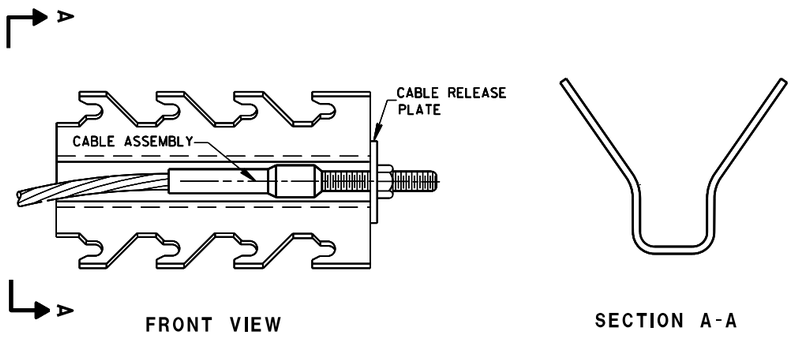
S.D.D. 14 B 44-3a



(9) (H)

GENERIC GROUND STRUT



FRONT VIEW

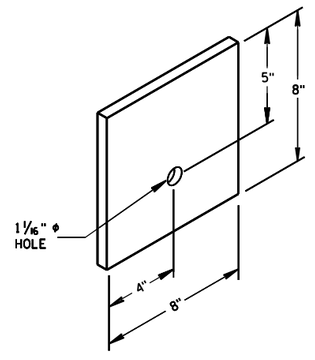
SECTION A-A

(8) (H)

GENERIC ANCHOR CABLE BOX

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



(6)

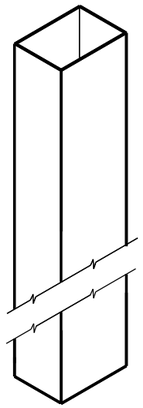
BEARING PLATE

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

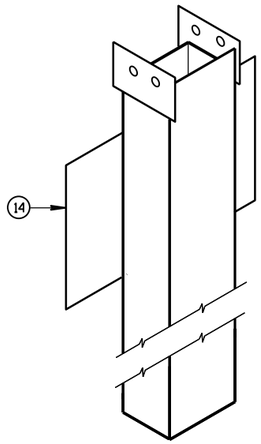
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

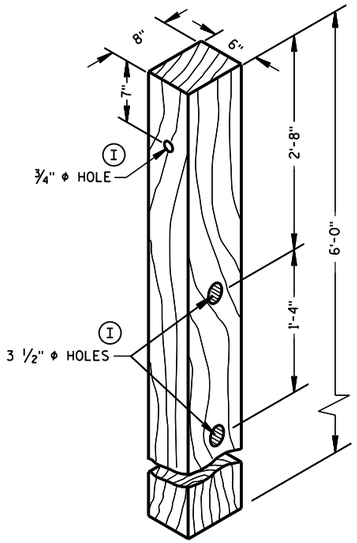
S.D.D. 14 B 44-3b



UPPER POST NO. 1 (1)

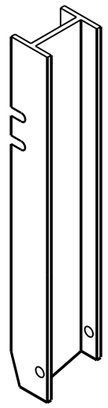


LOWER POST NO. 1 (2)

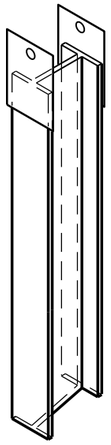


POSTS NUMBER 3-9

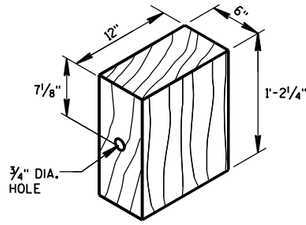
WOOD CRT POST (3)



UPPER POST NO. 2 (15)

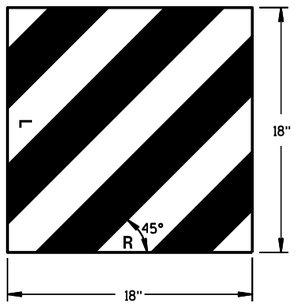


LOWER POST NO. 2 (16)



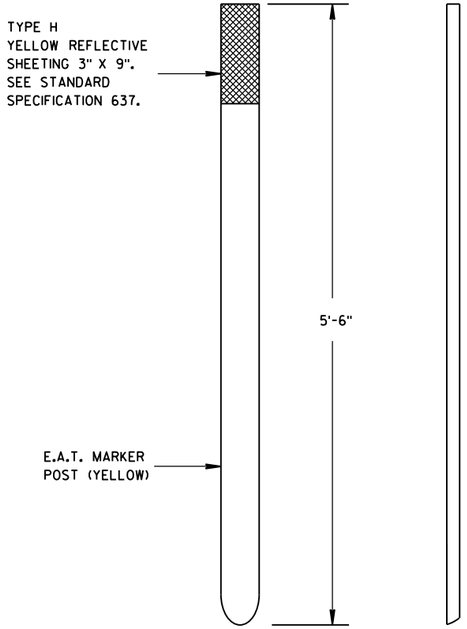
WOOD BLOCKOUT (4)

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



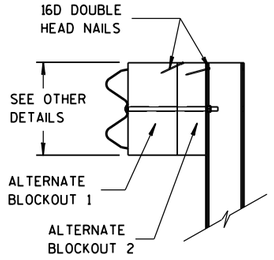
W5-59

REFLECTIVE SHEETING DETAIL (H)

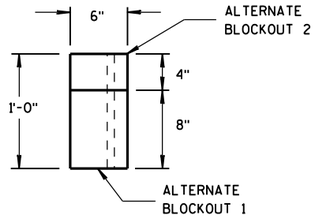


FRONT VIEW SIDE VIEW

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

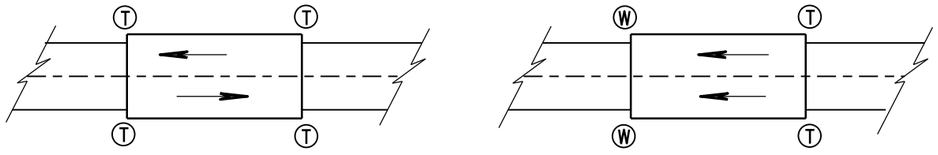
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERVISOR

FHWA

6

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



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

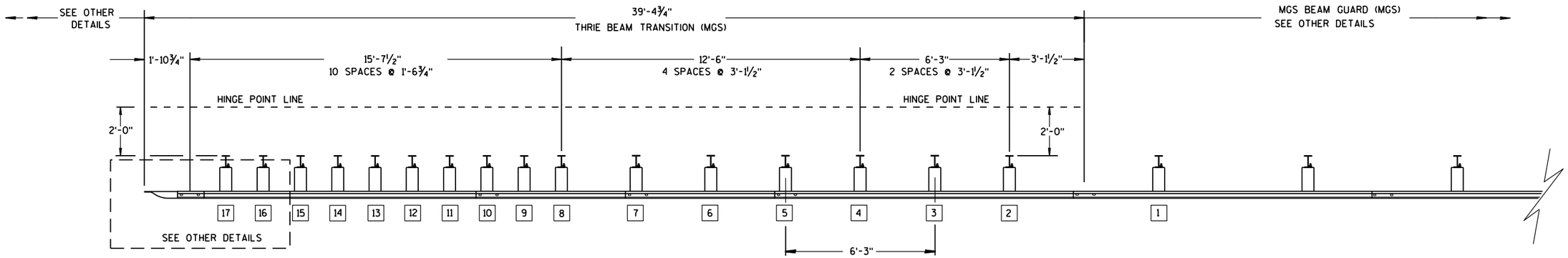
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

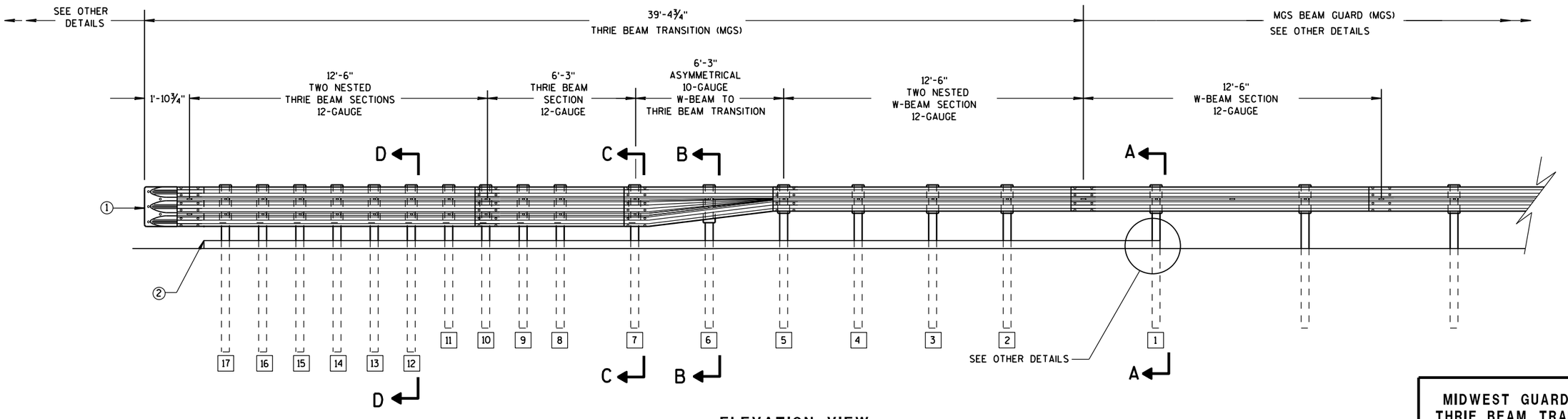
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

(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

6

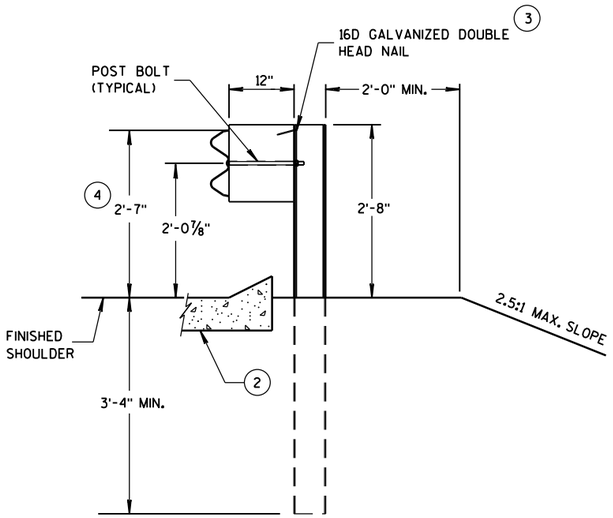
S.D.D. 14 B 45-4a

GENERAL NOTES

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

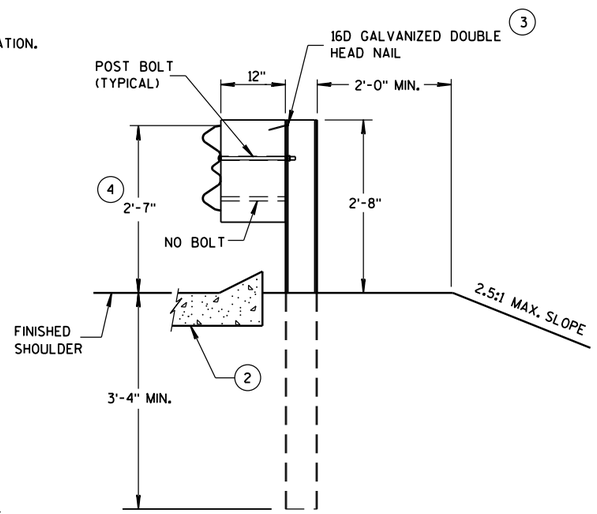
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



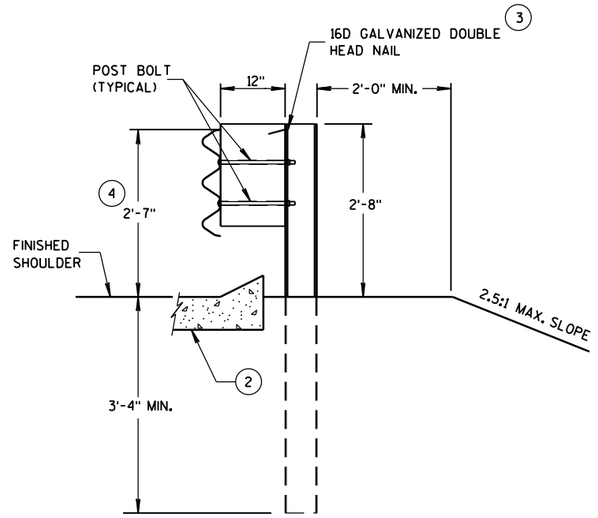
SECTION A-A

POSTS 1-5



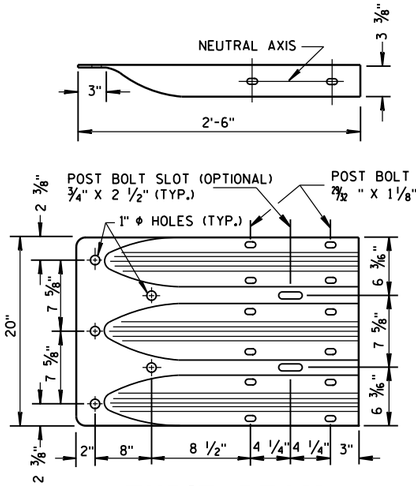
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

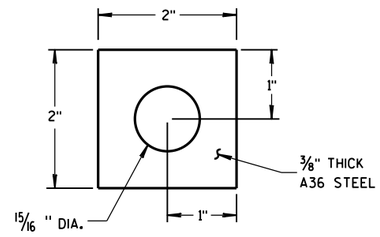
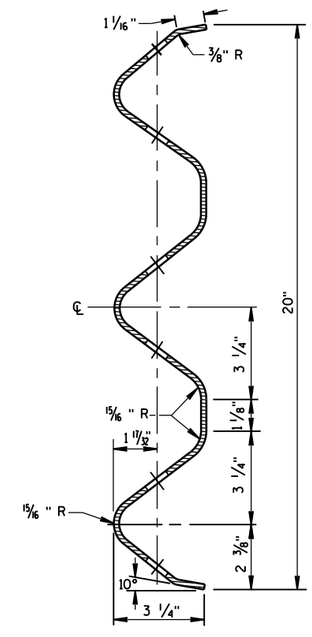
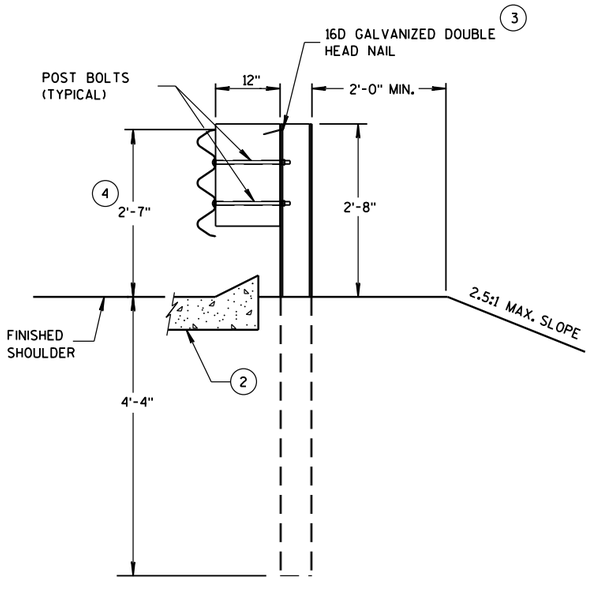


PLATE WASHER DETAIL

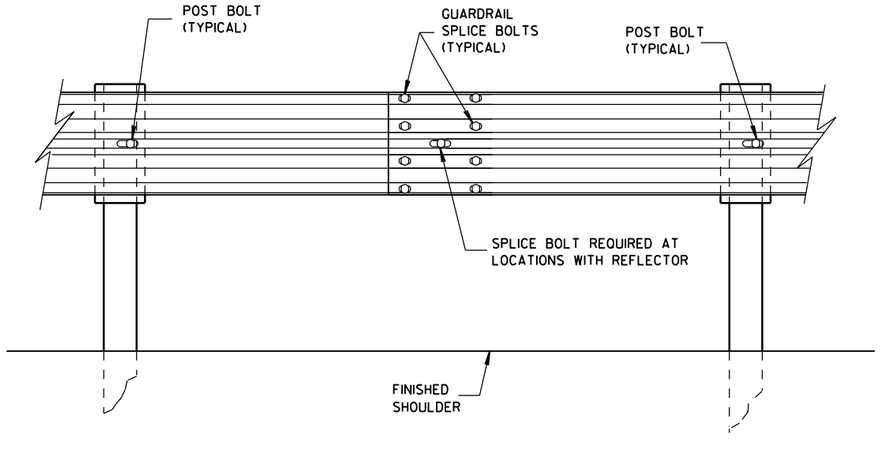


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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

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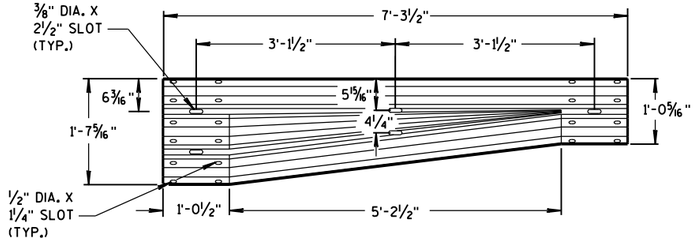
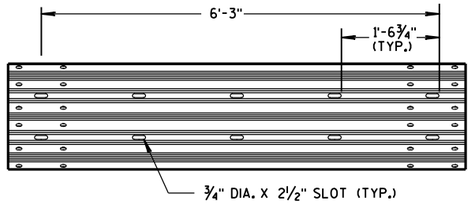
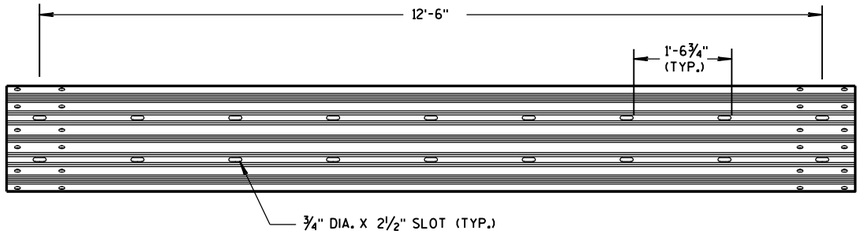
S.D.D. 14 B 45-4b



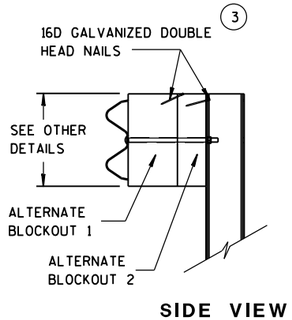
W-BEAM TO THRIE BEAM TRANSITION SECTION



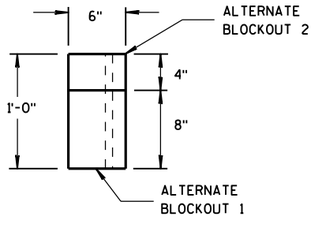
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

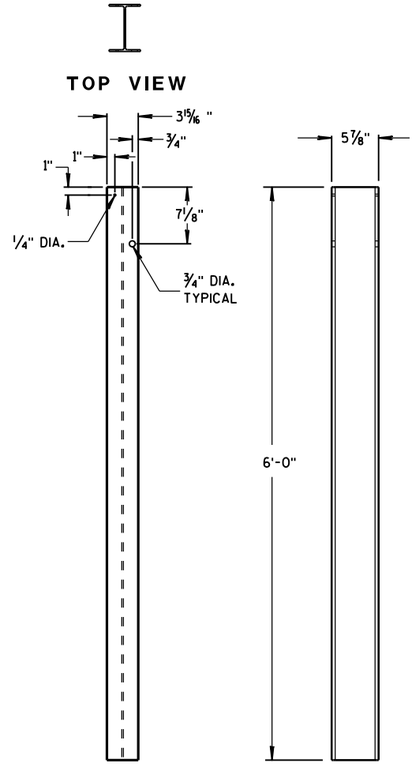


SIDE VIEW



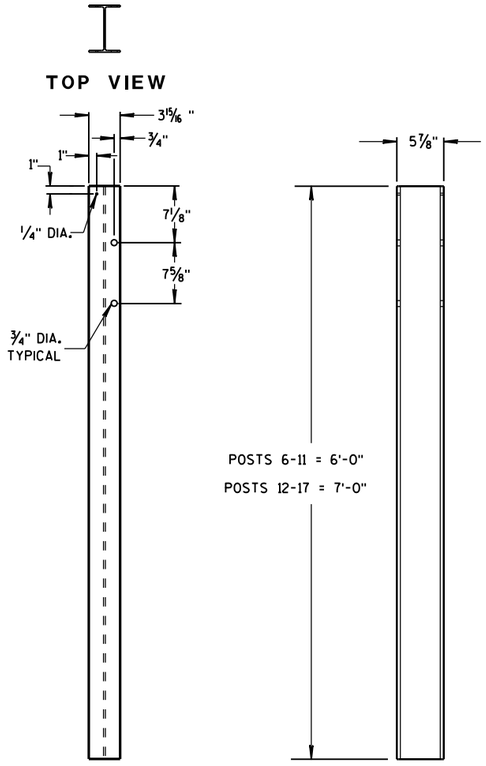
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



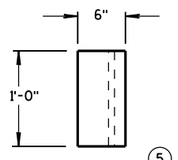
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5

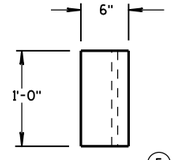


FRONT VIEW SIDE VIEW

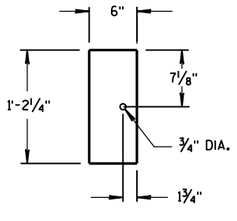
STEEL POSTS 6-17



TOP VIEW (5)

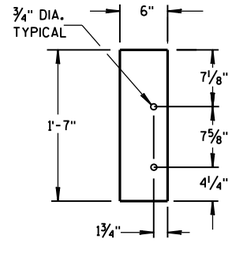


TOP VIEW (5)



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.

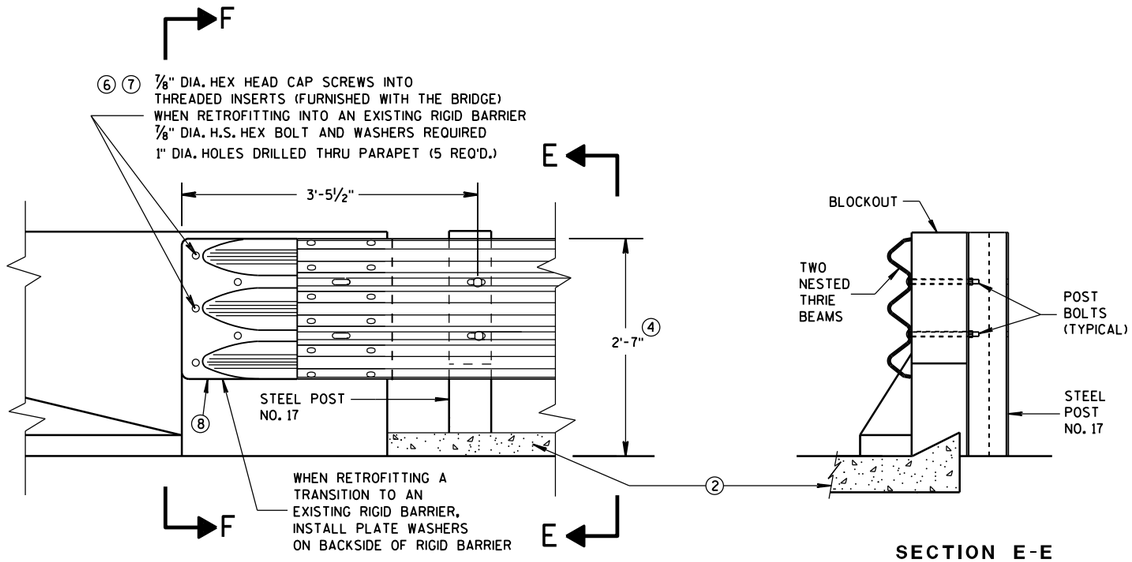
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

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



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

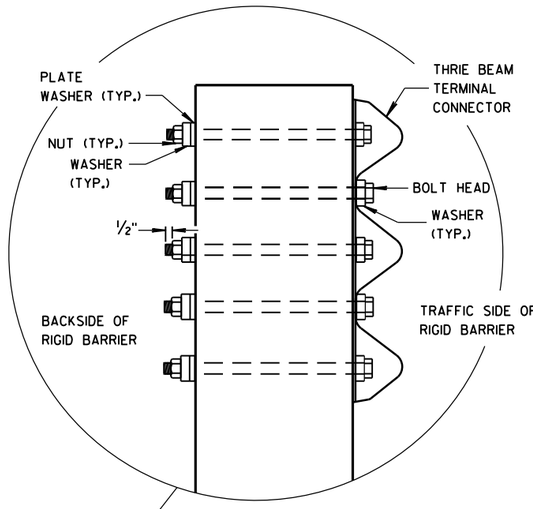
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

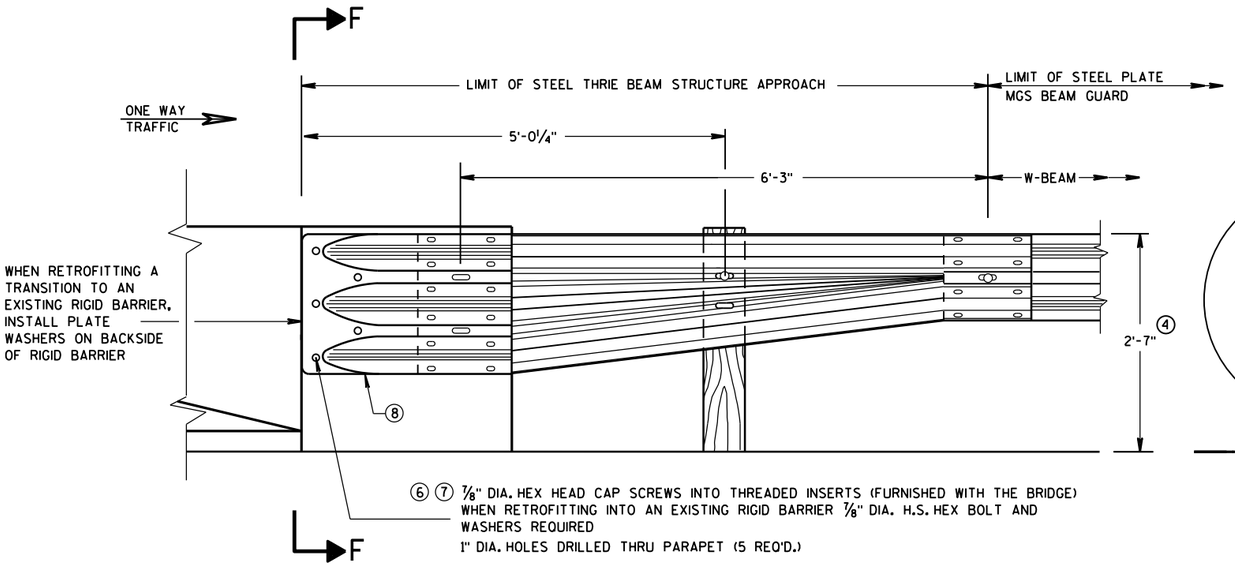
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

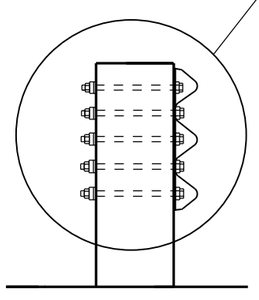
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

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

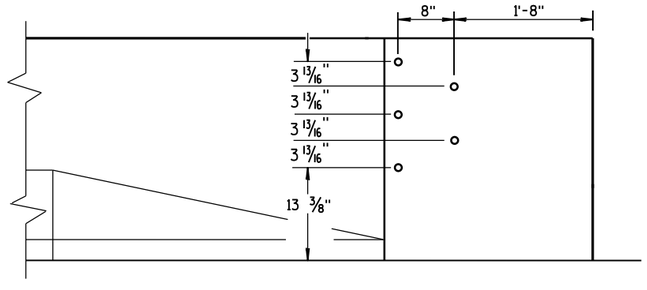




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

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

6

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

GENERAL NOTES

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

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

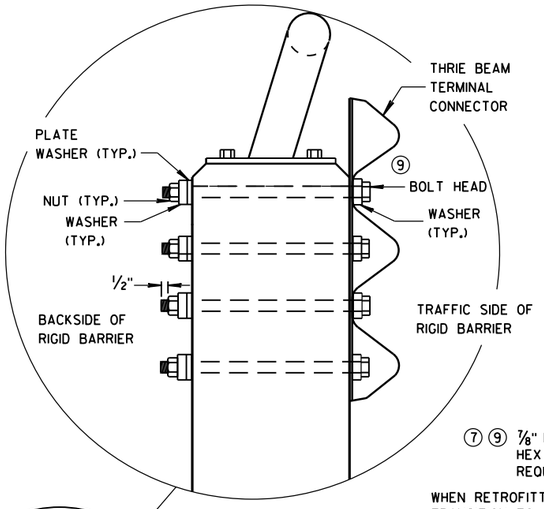
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

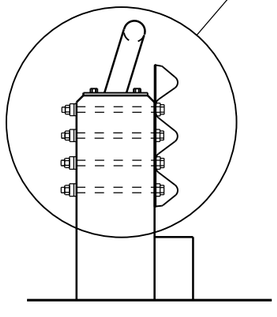
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

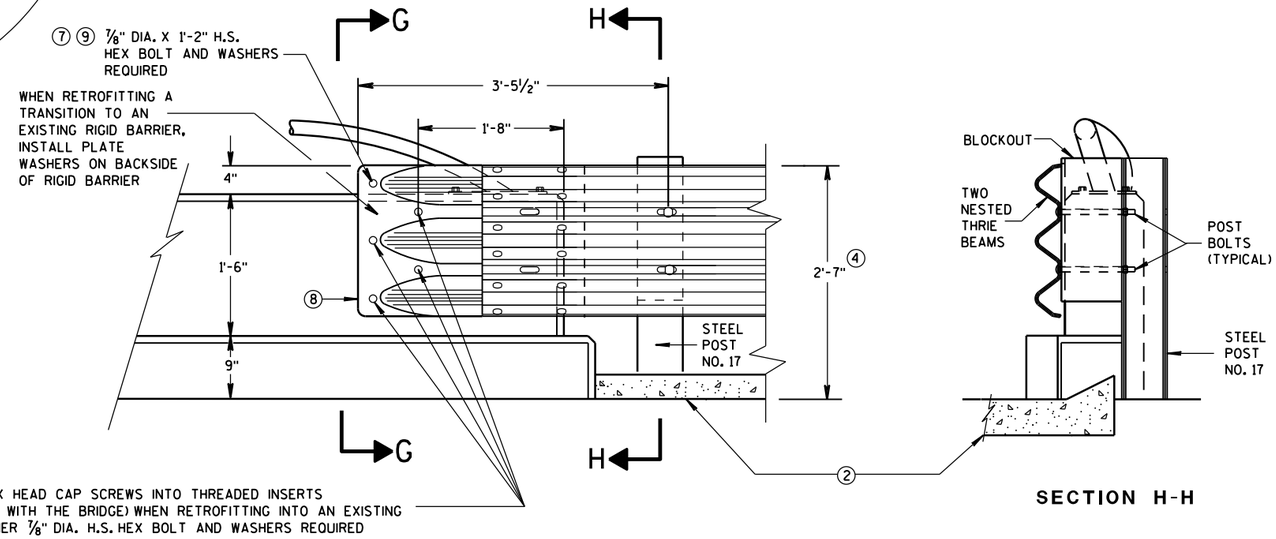
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





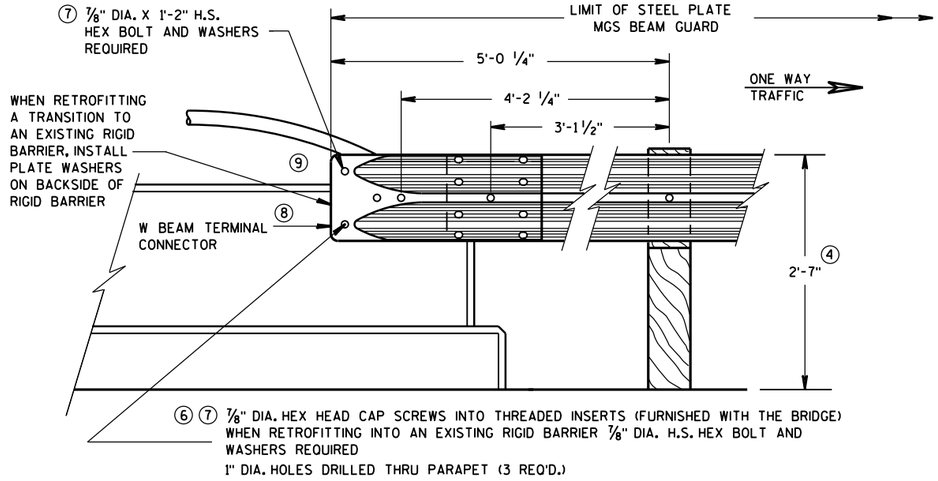
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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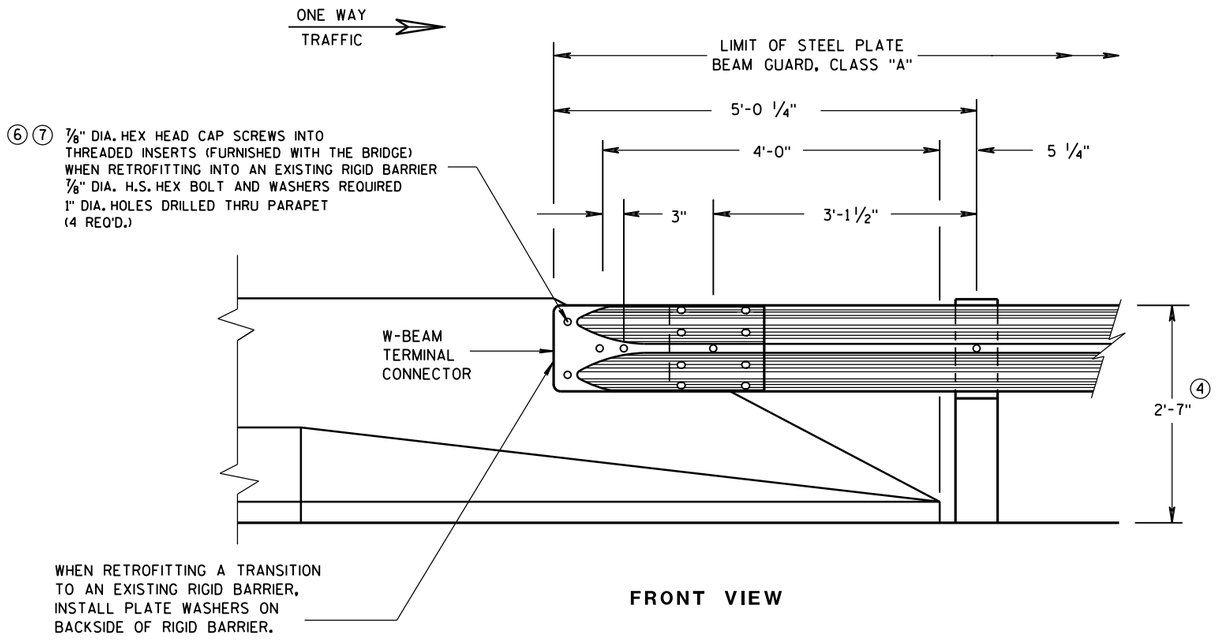


FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

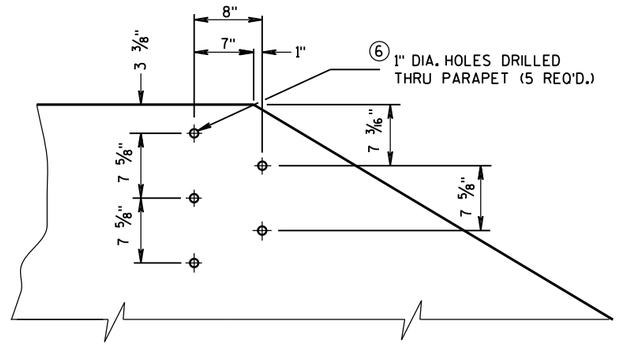
GENERAL NOTES

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

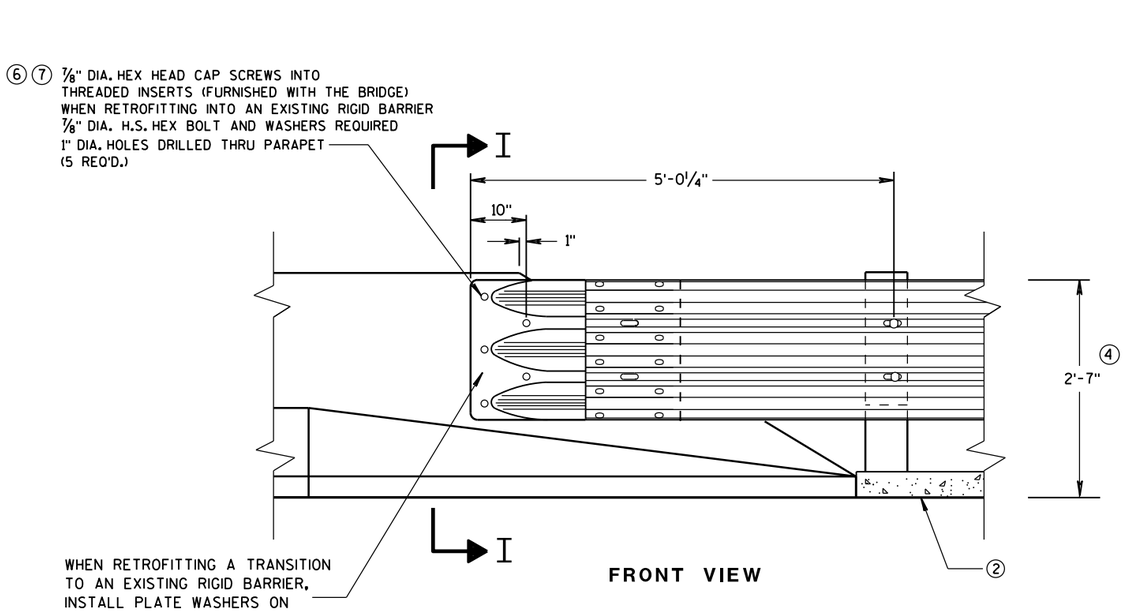
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

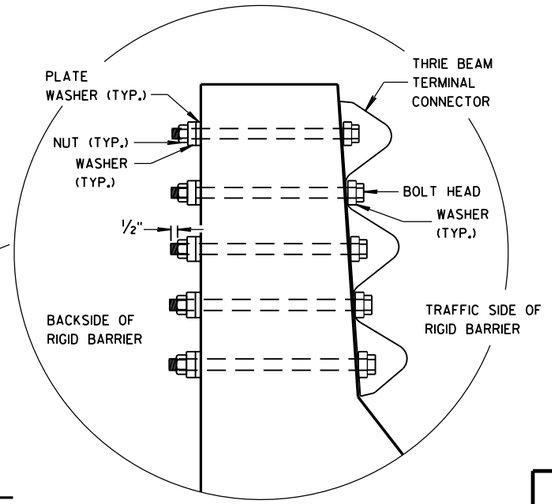


DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW

SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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

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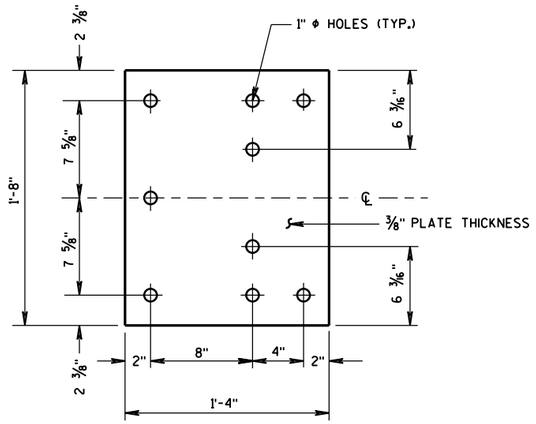
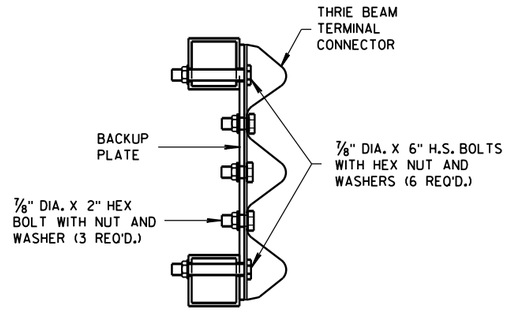
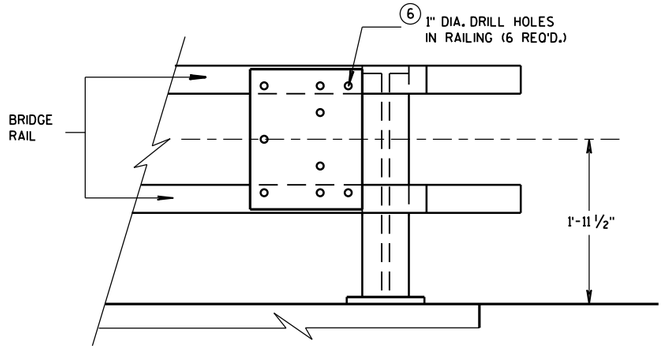
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

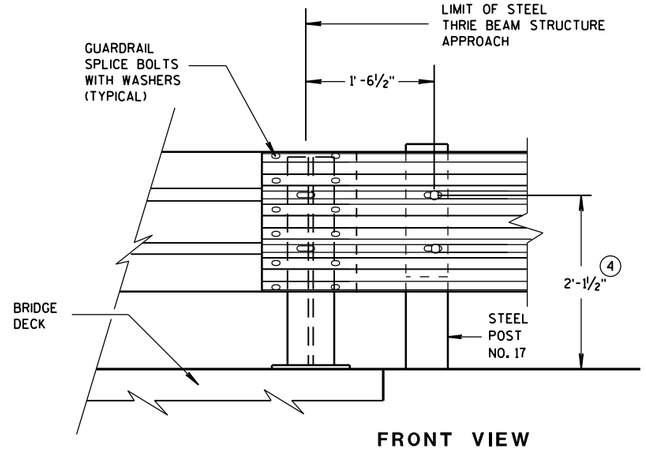


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

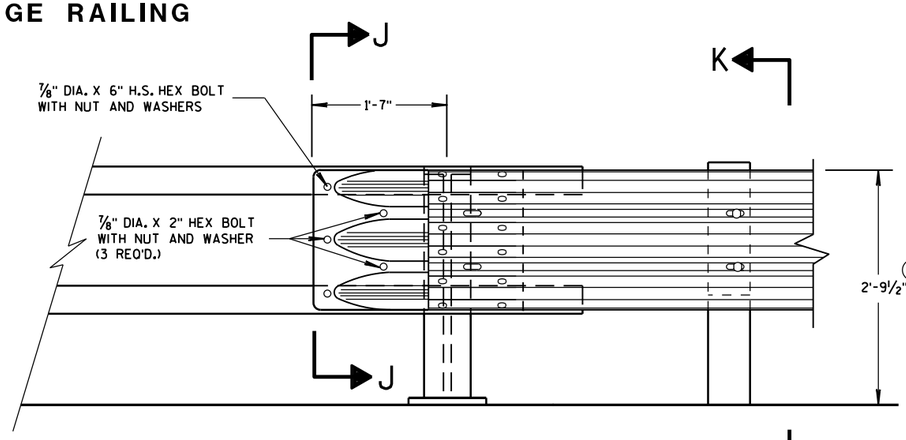
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

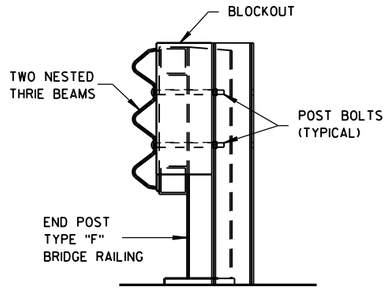


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

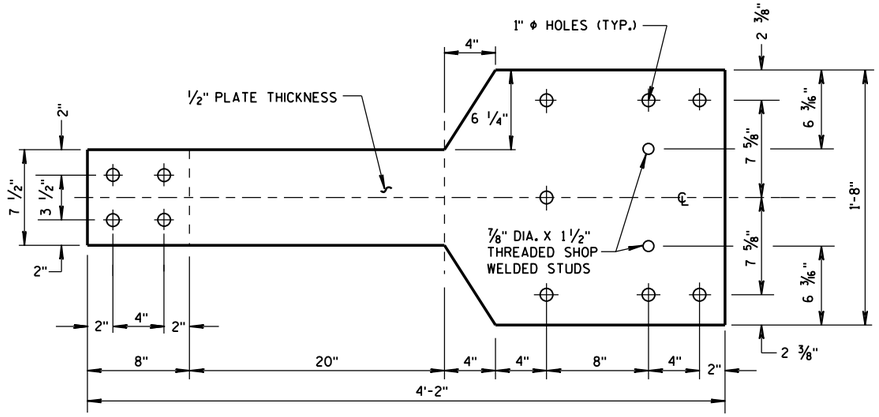
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA — NT

6 S.D.D. 14 B 45-4g

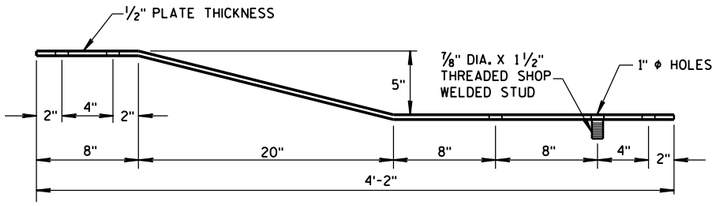
6 S.D.D. 14 B 45-4g

GENERAL NOTES

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

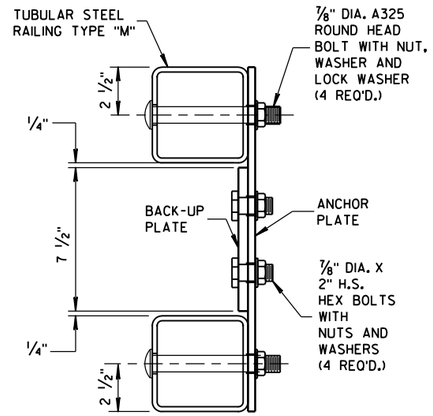


FRONT VIEW

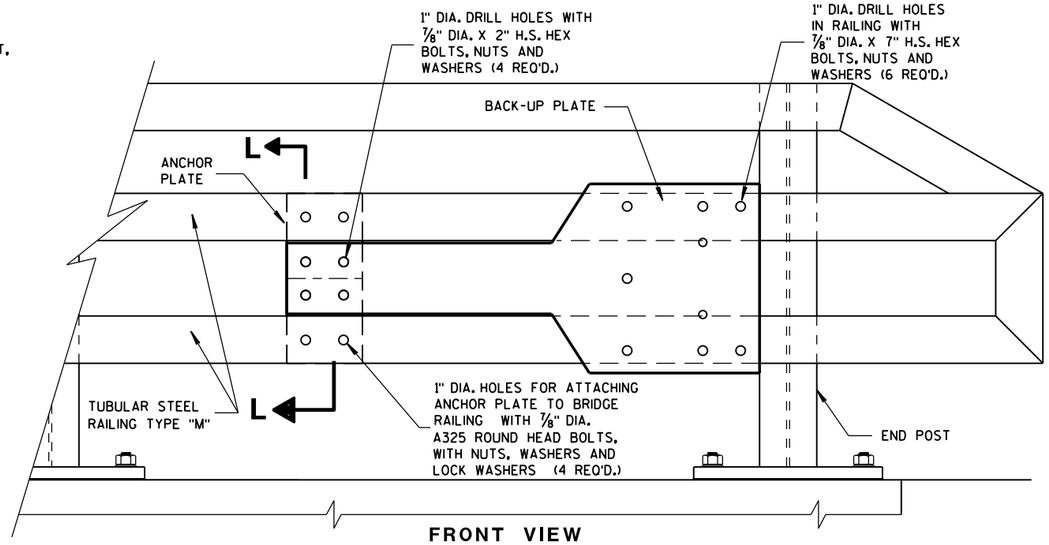


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

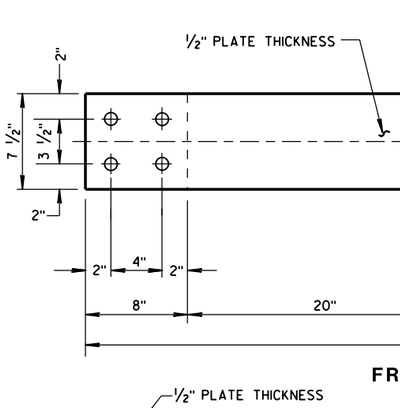


SECTION L-L



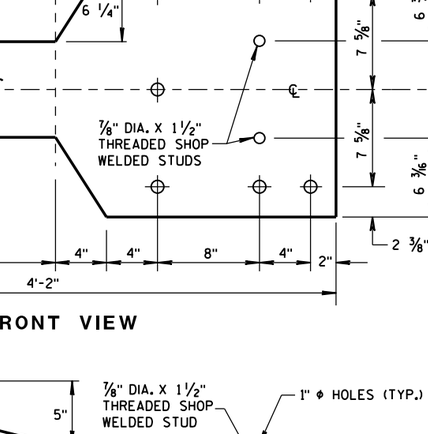
FRONT VIEW

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

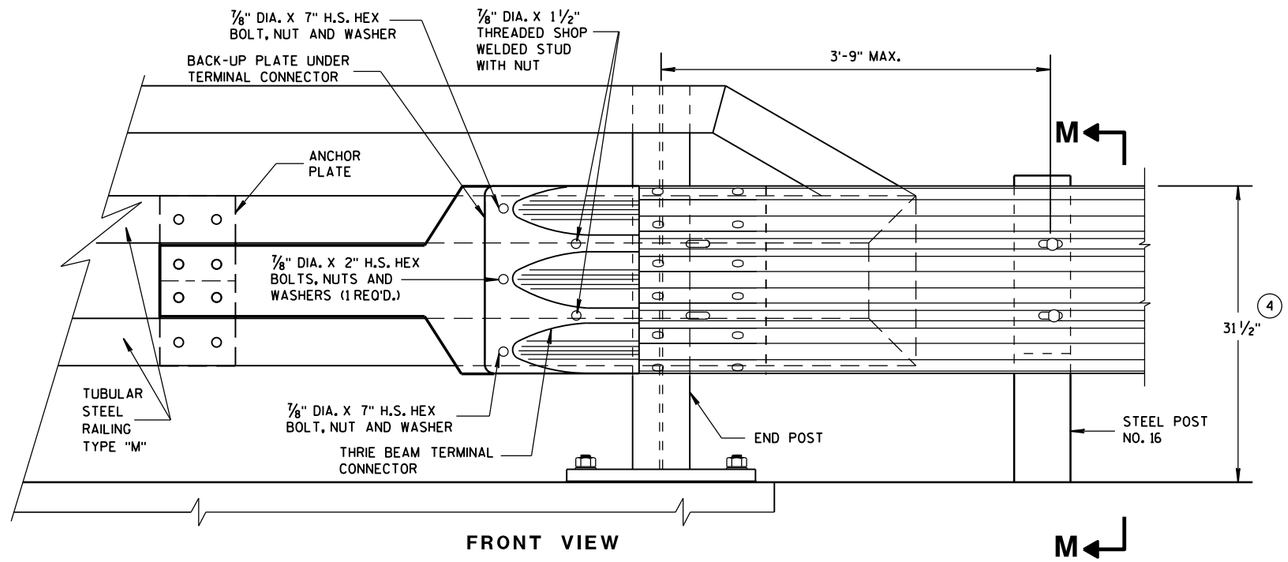


FRONT VIEW

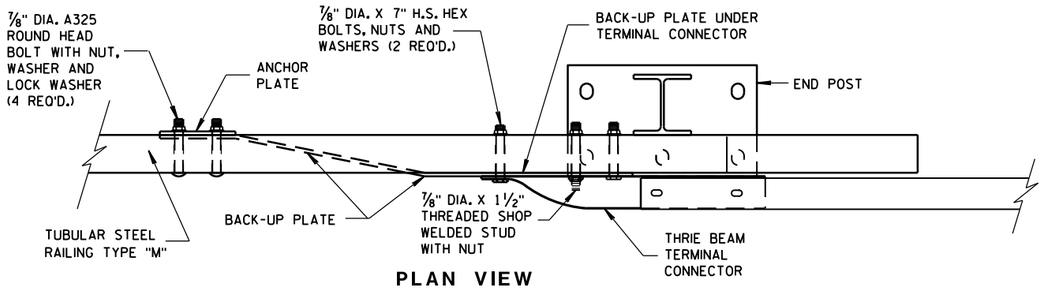
ANCHOR PLATE DETAIL, TYPE "M"



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

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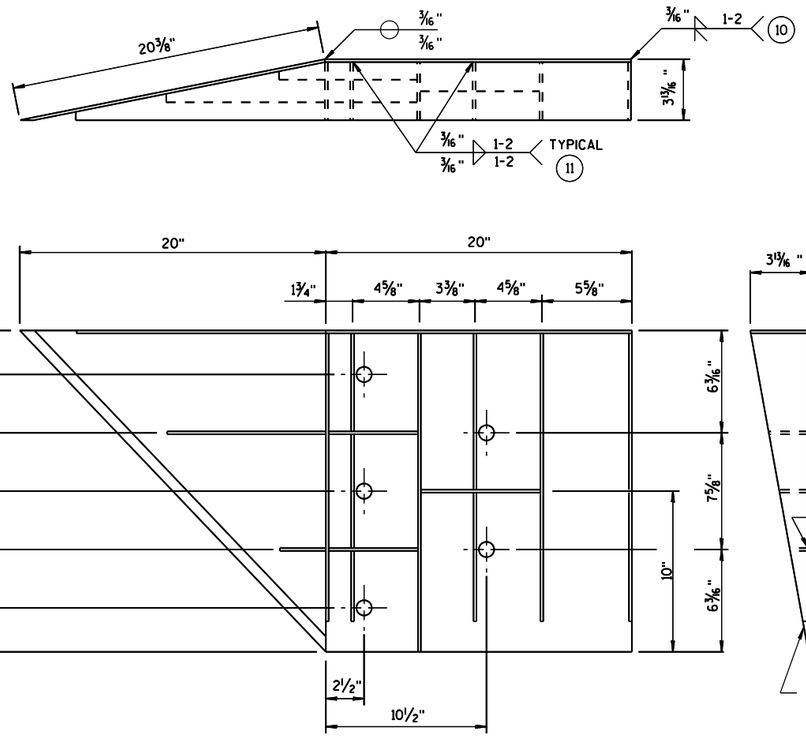

WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

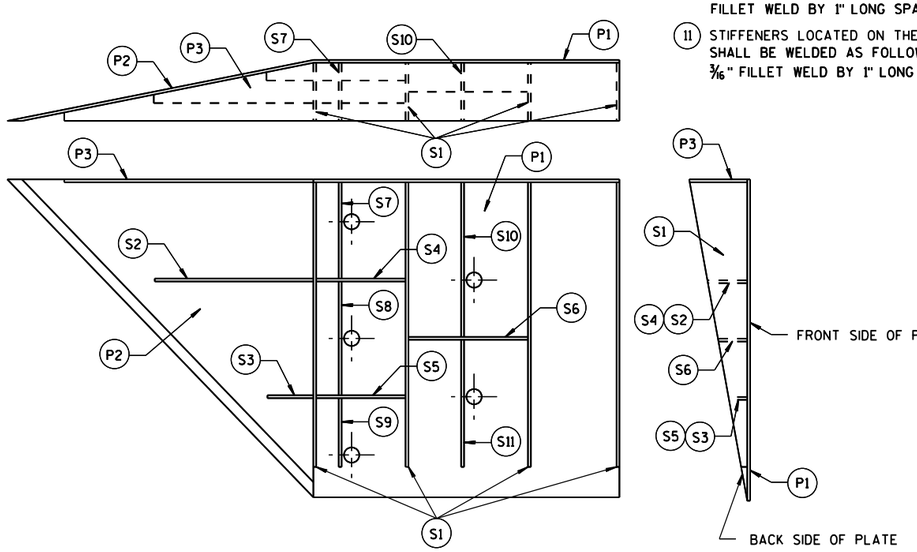

PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 9/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 3/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 7/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 1/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 9/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 1/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 5/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 13/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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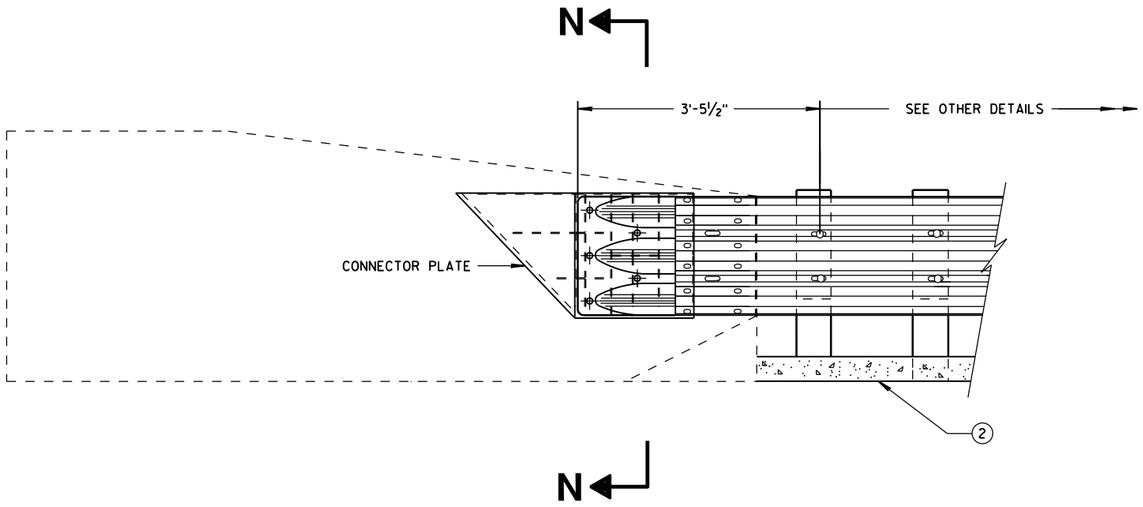
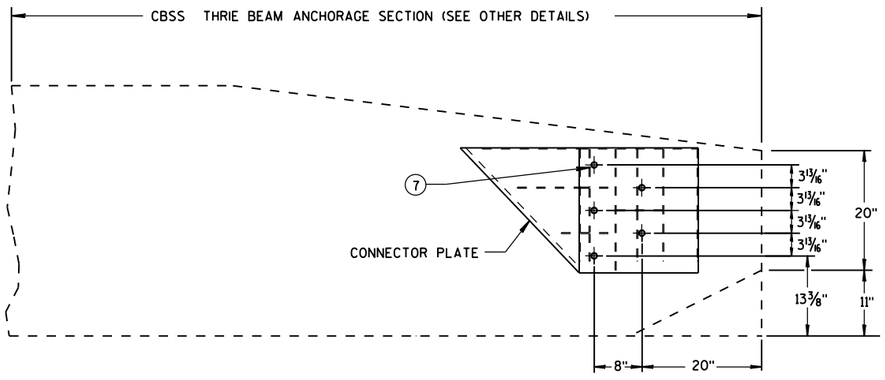


THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



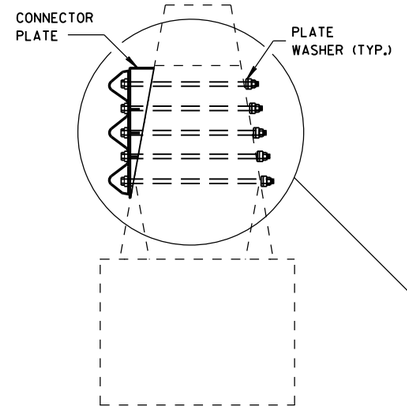
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

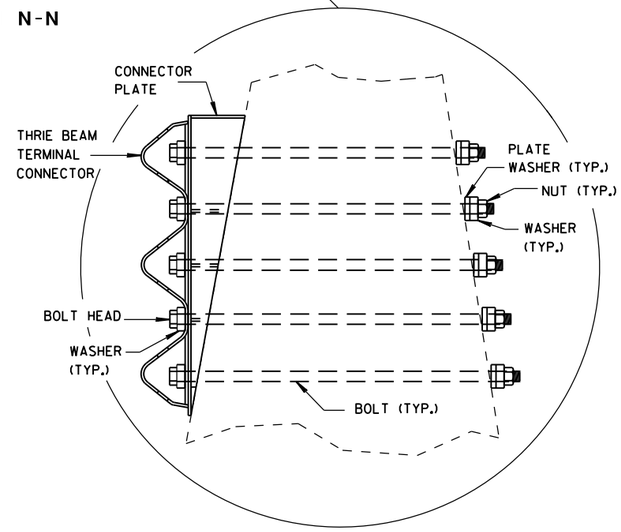
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS DEVELOPMENT ENGINEER
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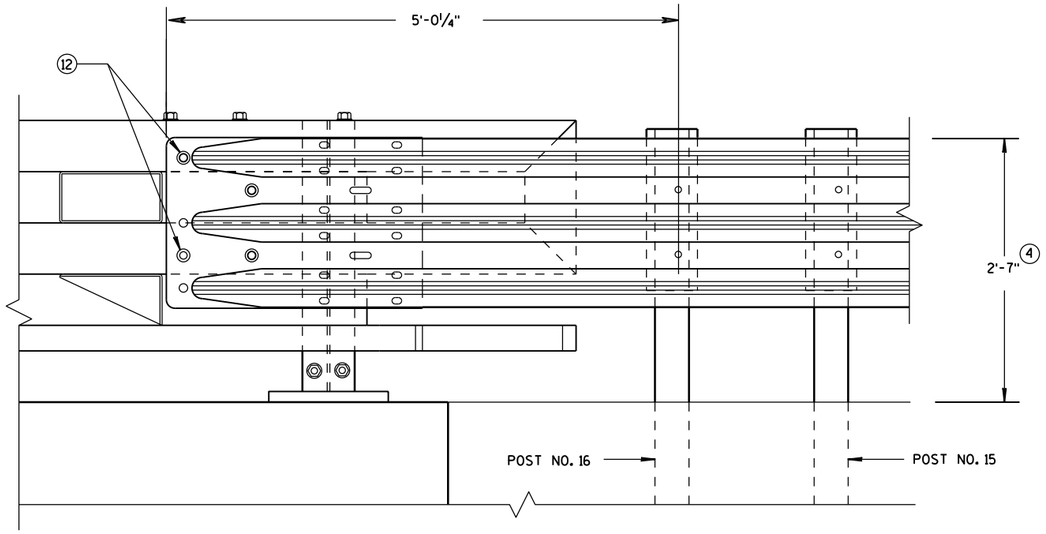
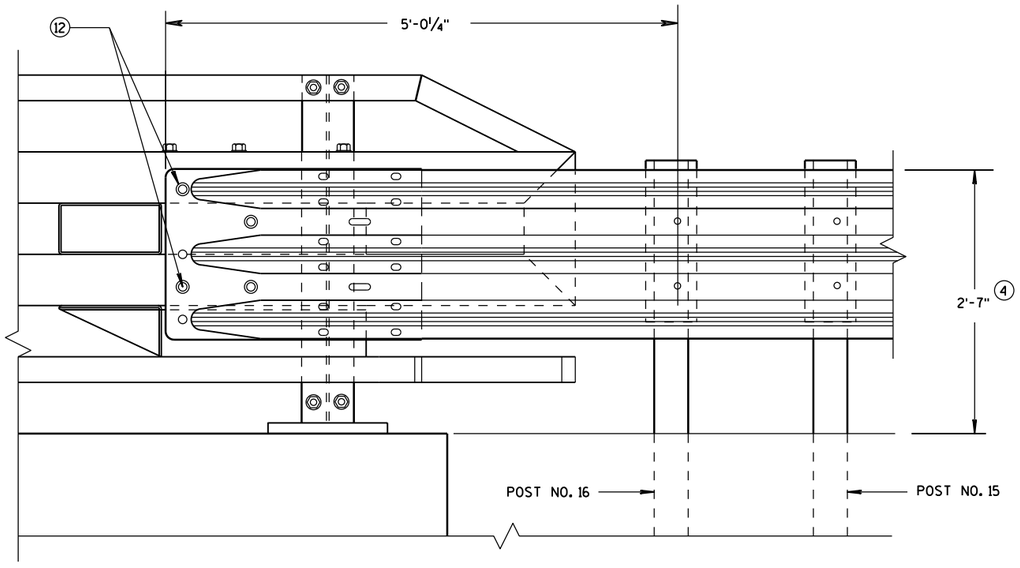


ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS D 42 NT
ENGINEER

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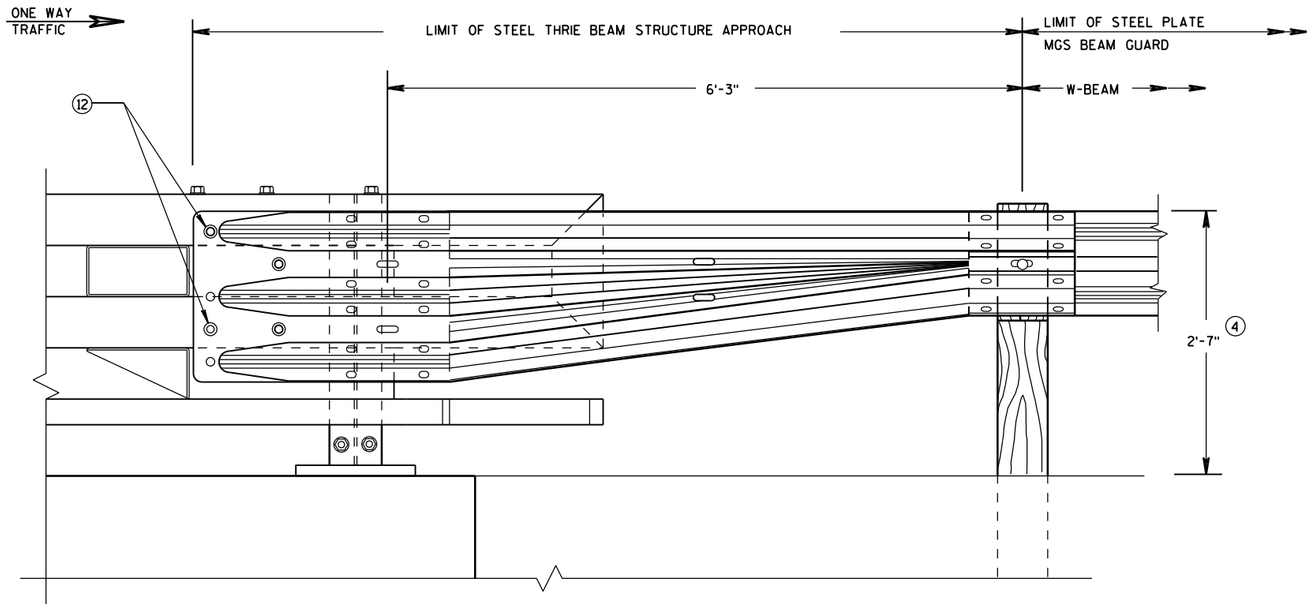


FRONT VIEW

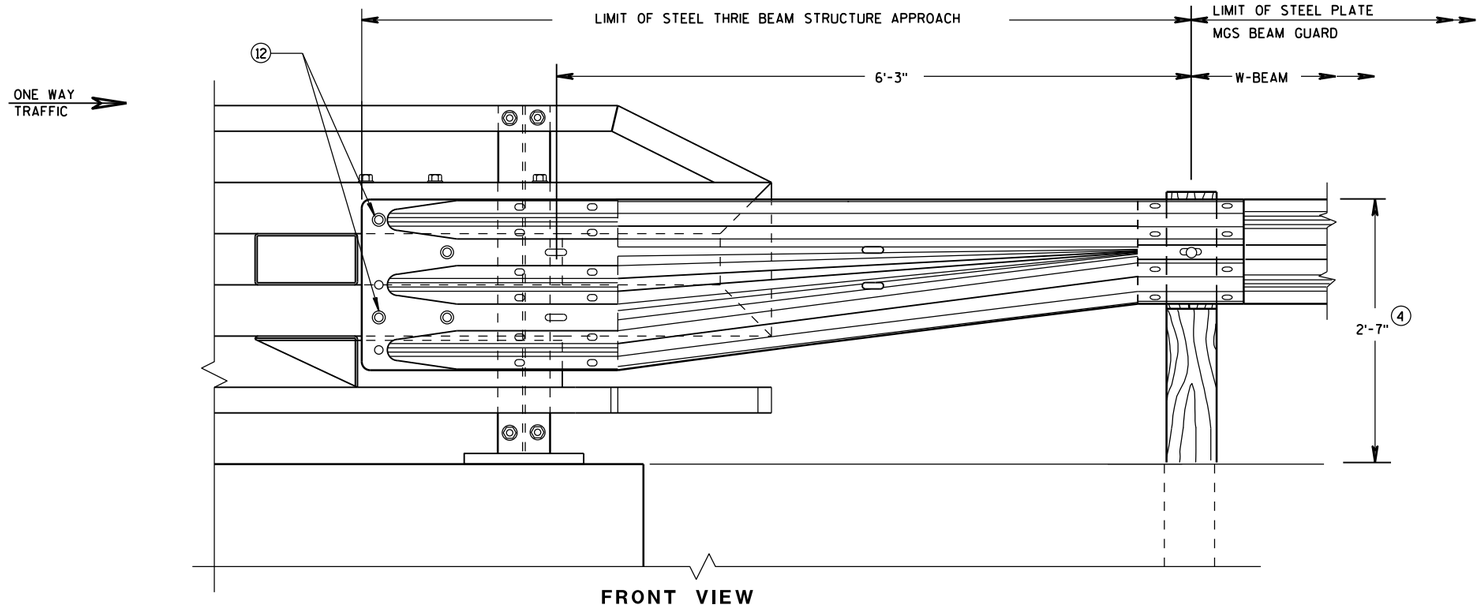
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.



FRONT VIEW

W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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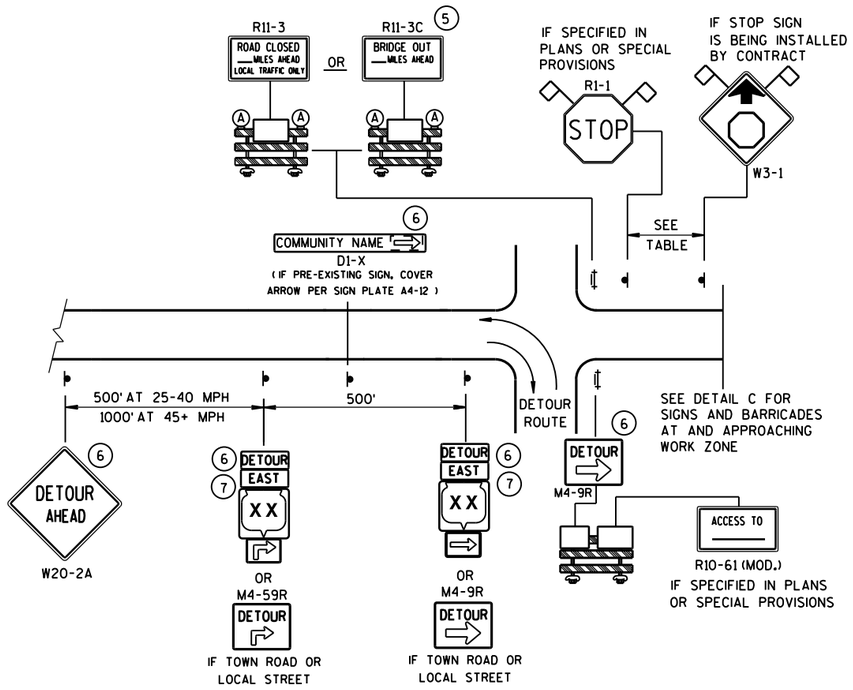
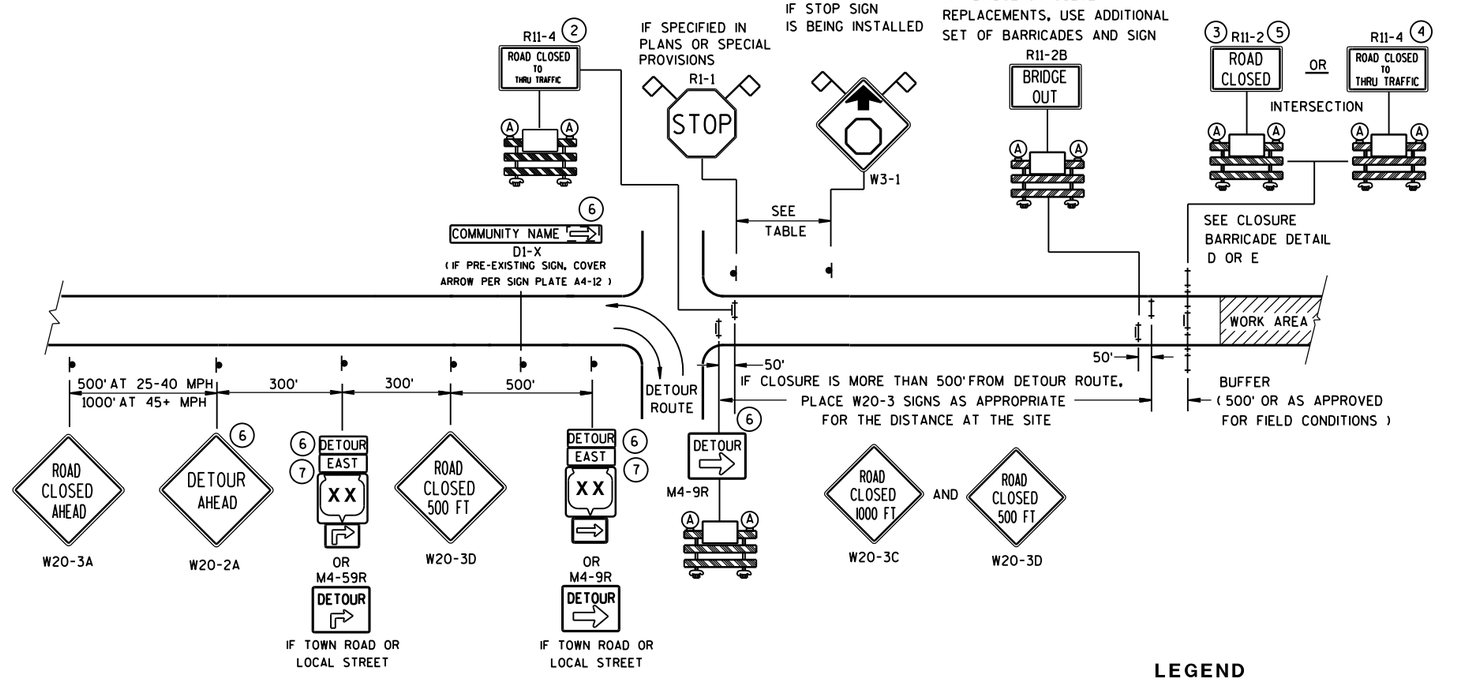


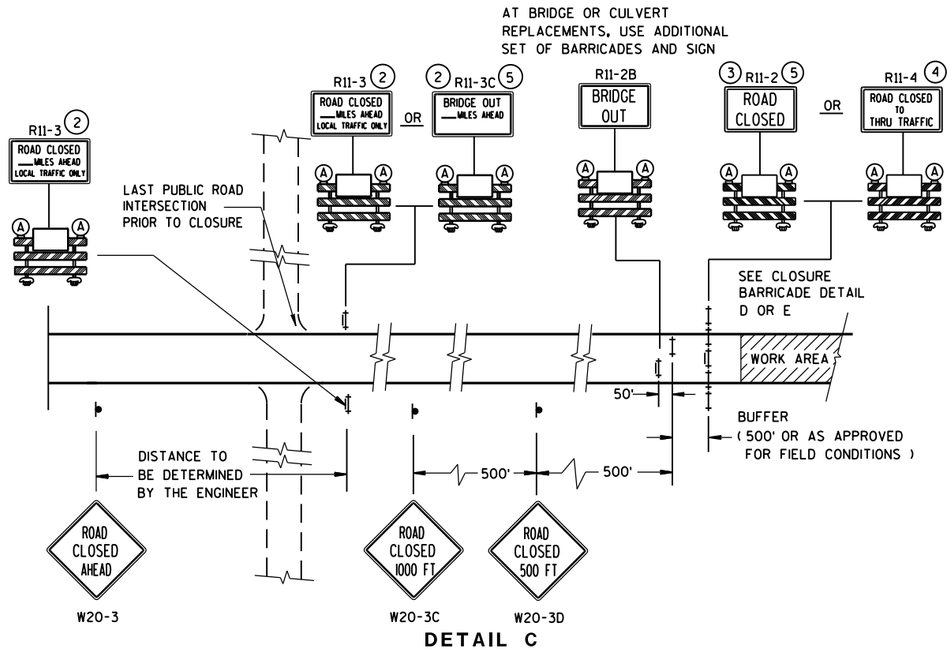
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

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

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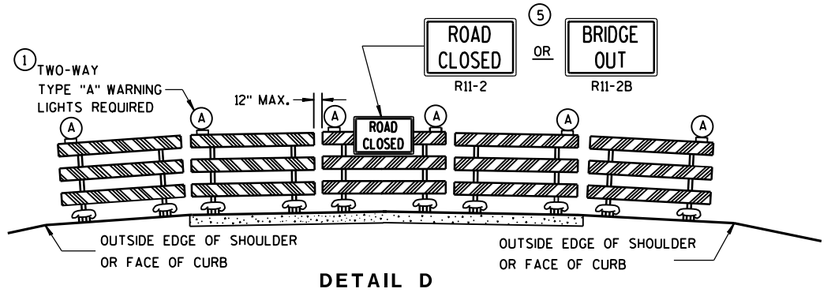
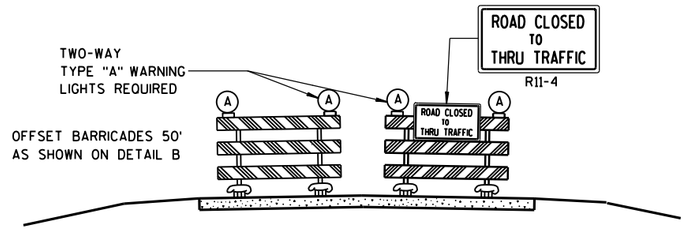
S.D.D. 15 C 2-6a



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 — FHWA — FIC

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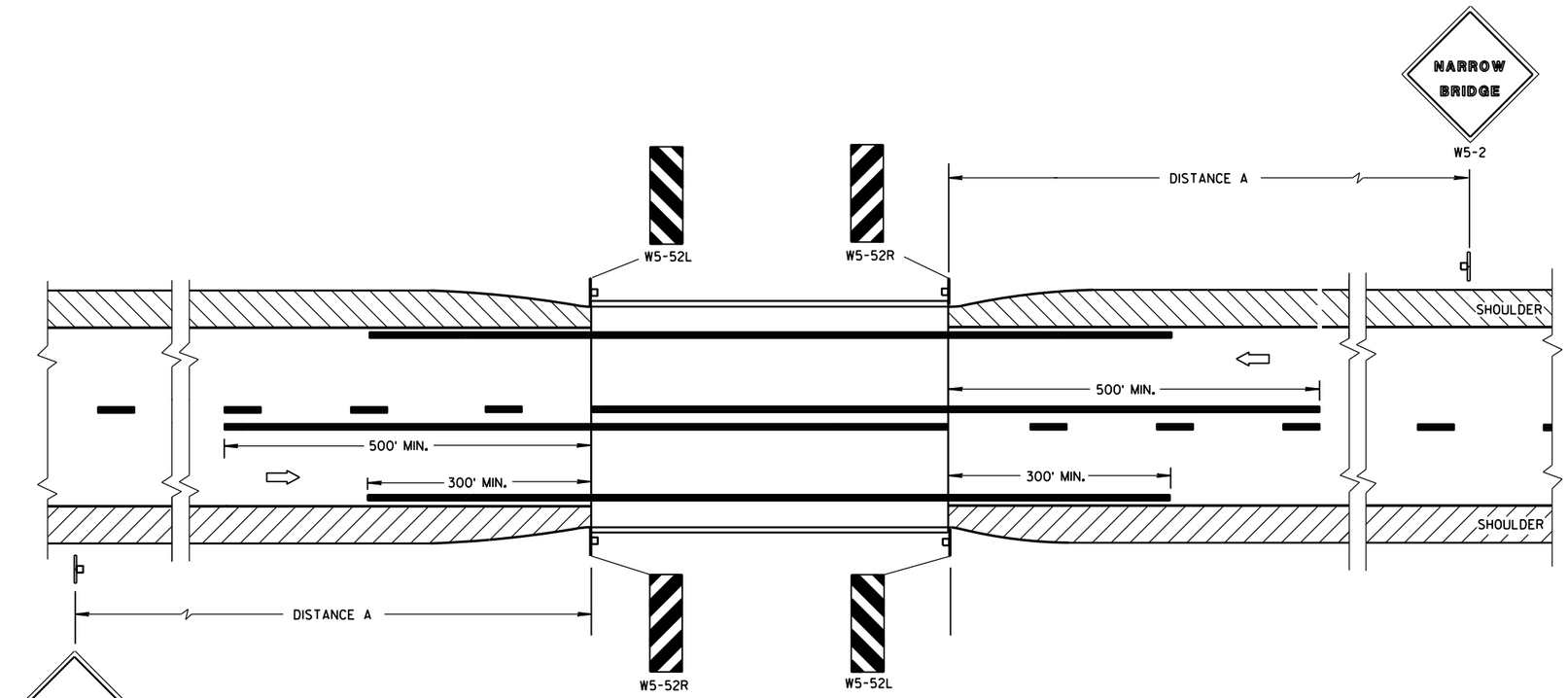


SITUATION 1

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

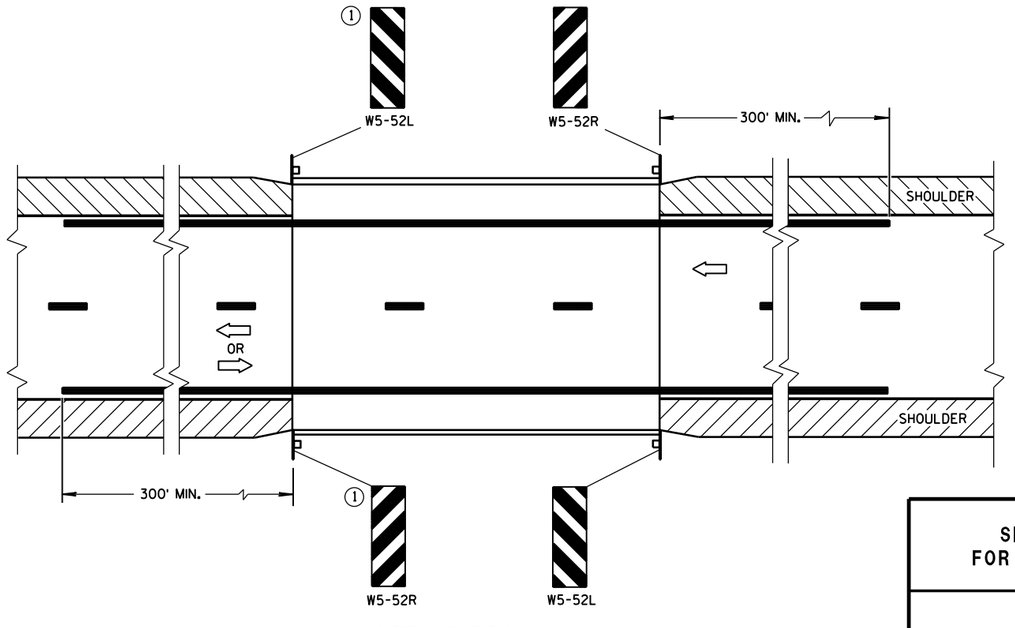
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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
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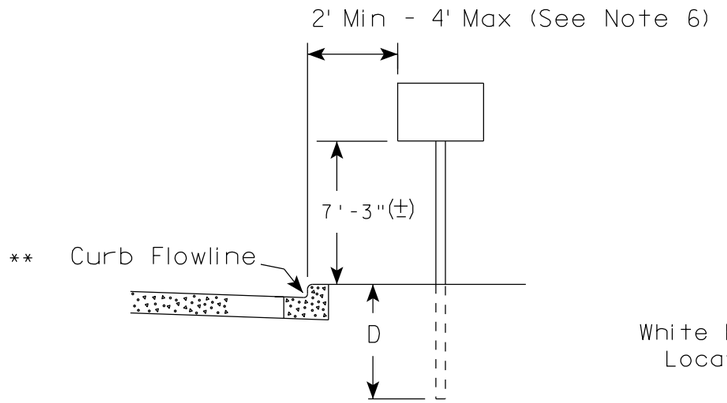
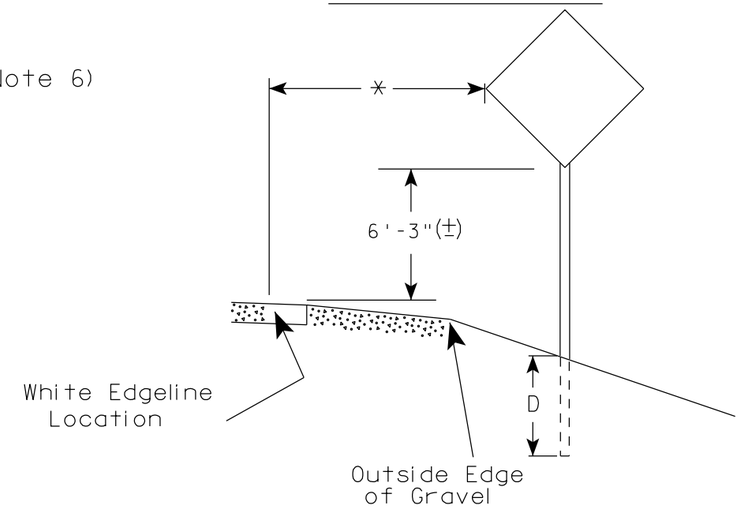
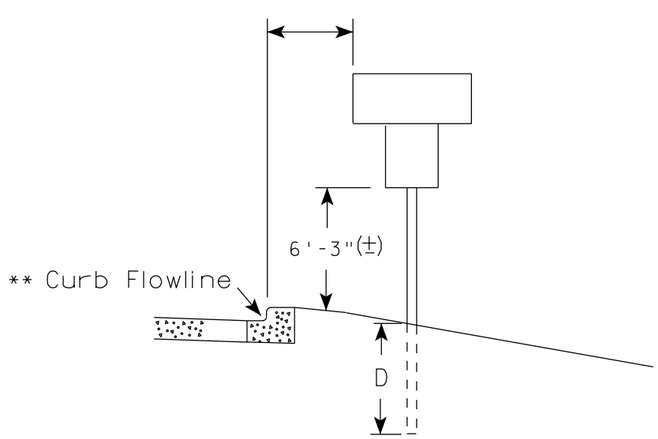
S.D.D. 15 C 6-9

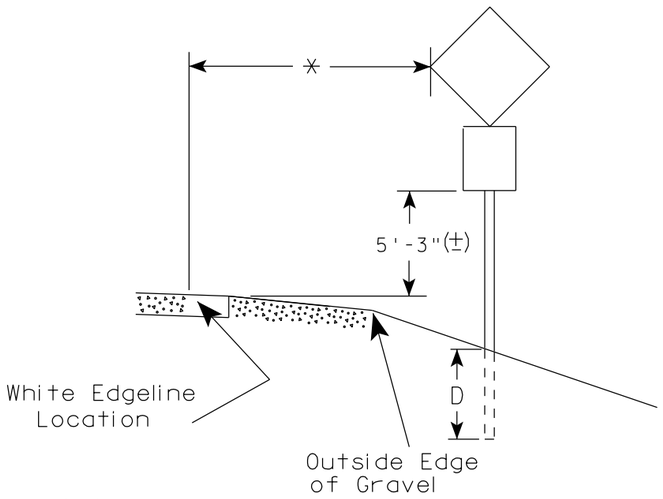
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet, 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.

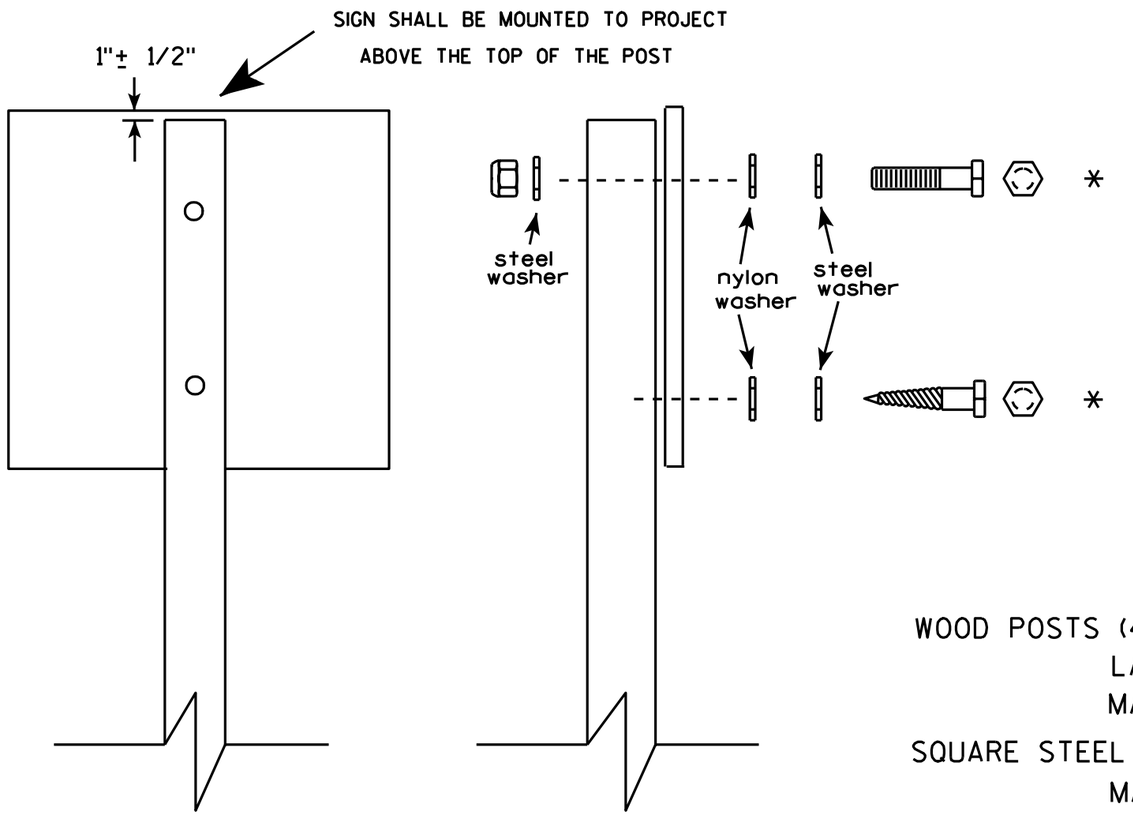
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

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

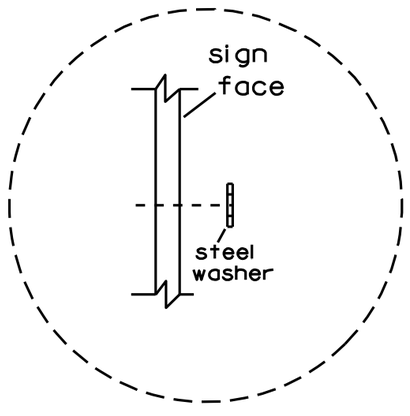
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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.

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.



Washer Placement when Sign Has Other Than Type H or Type F Face

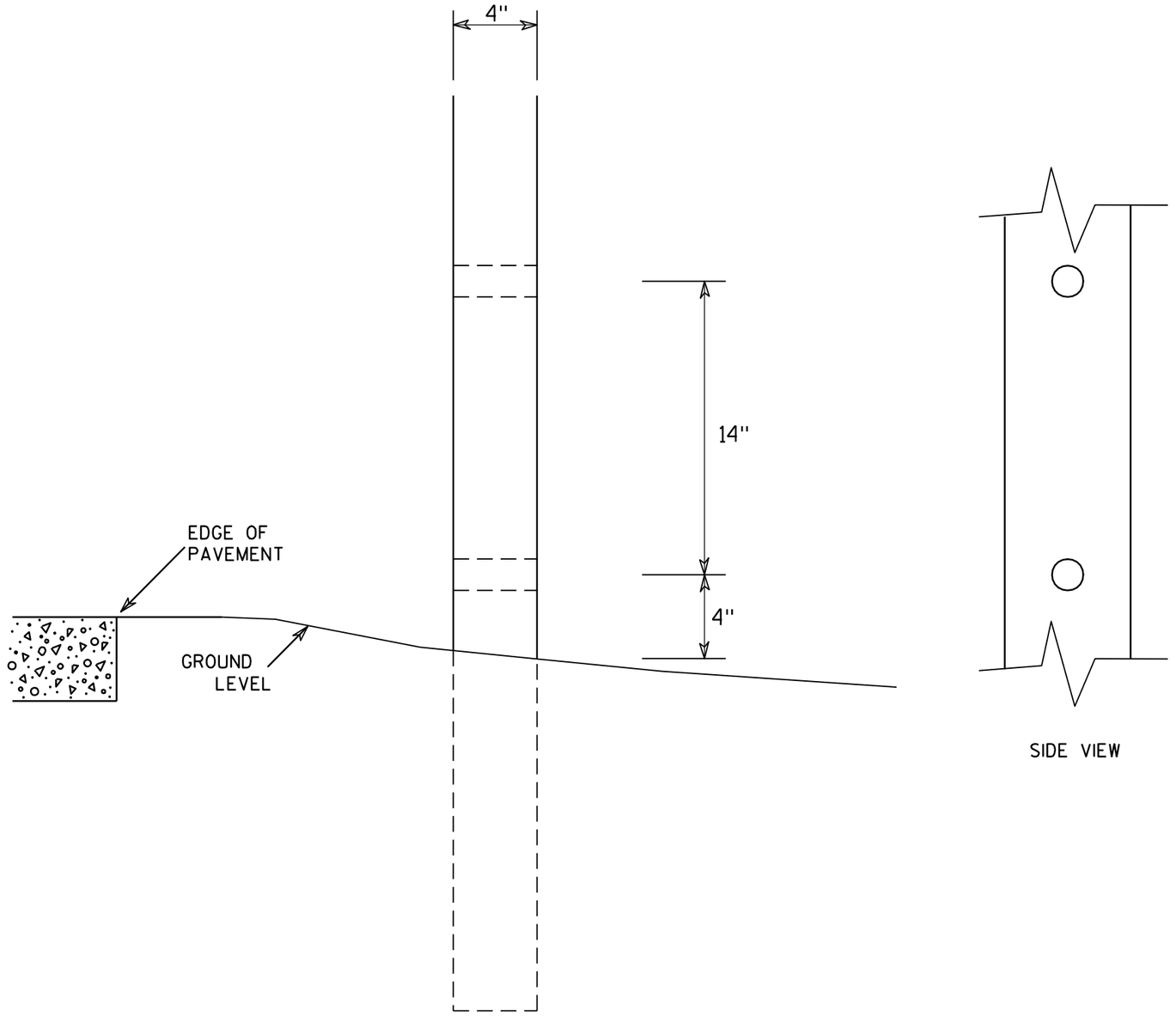
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/23/10 PLATE NO. A4-8.7



SIDE VIEW

GENERAL NOTES

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

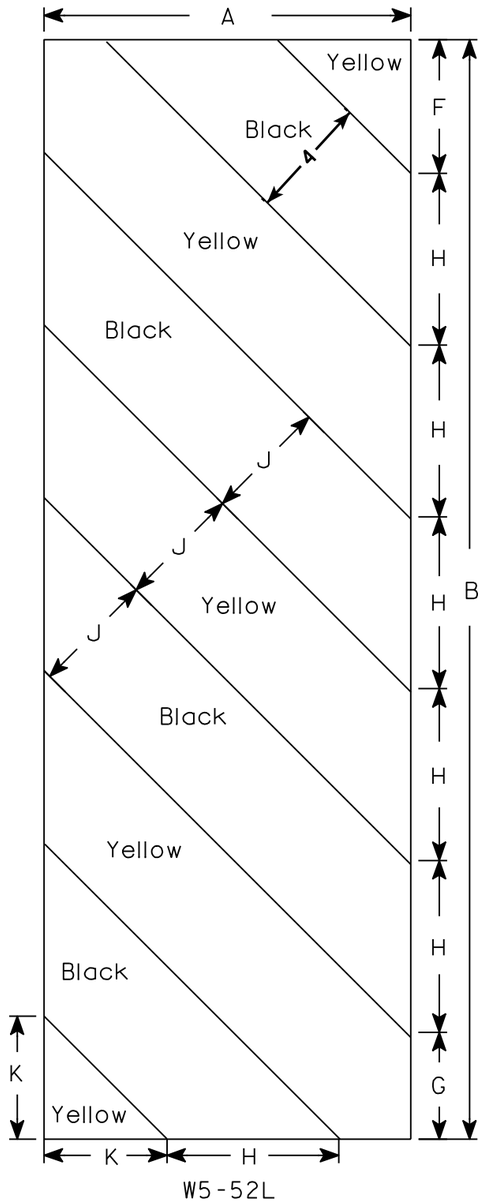
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

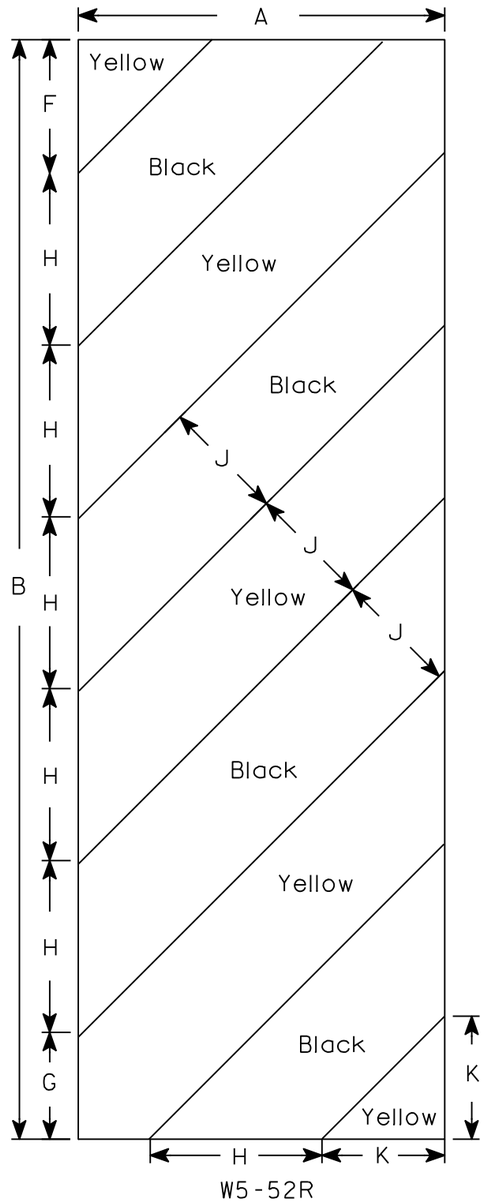
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 49	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

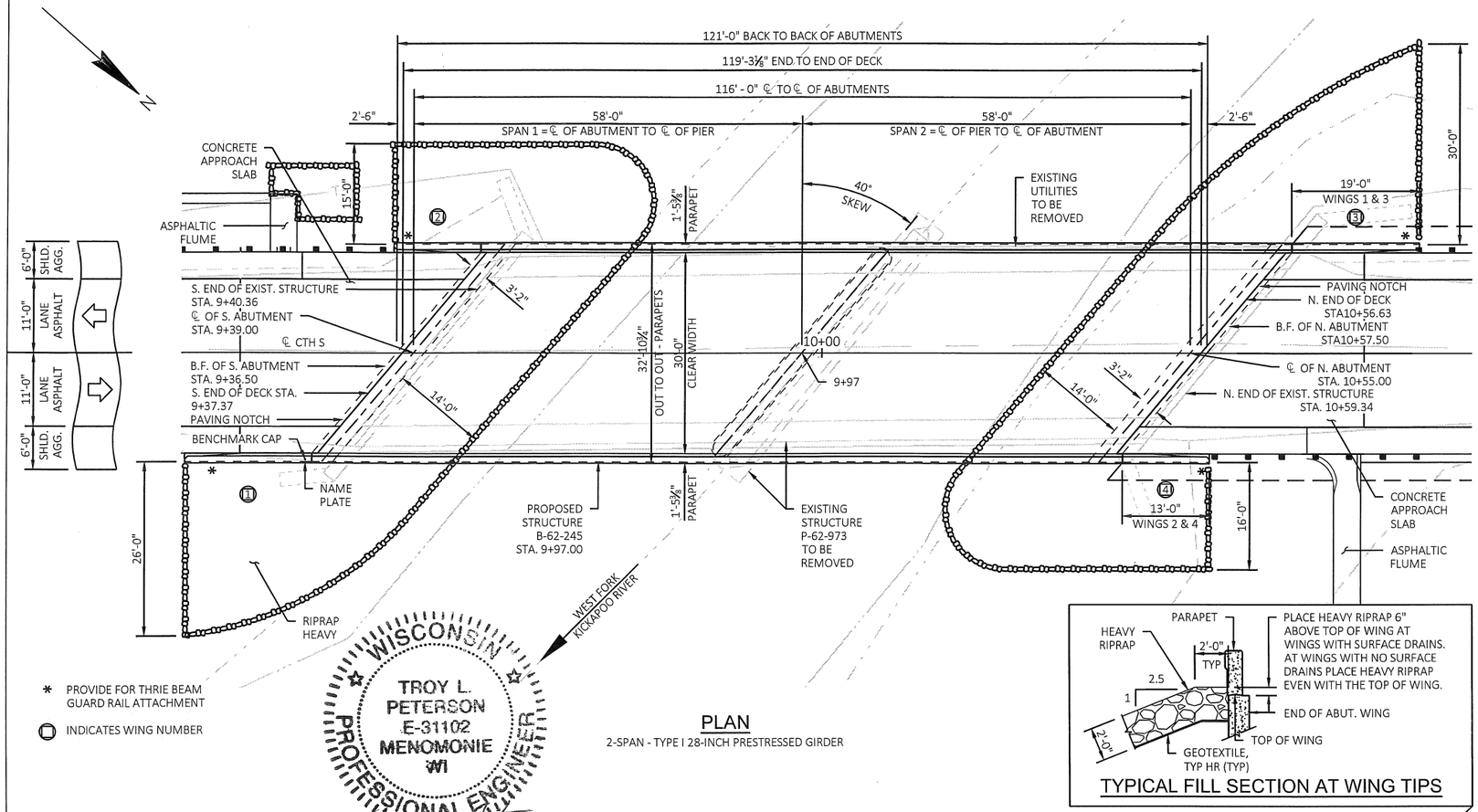
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 50	E

STATE PROJECT NUMBER
5289-00-71



* PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT

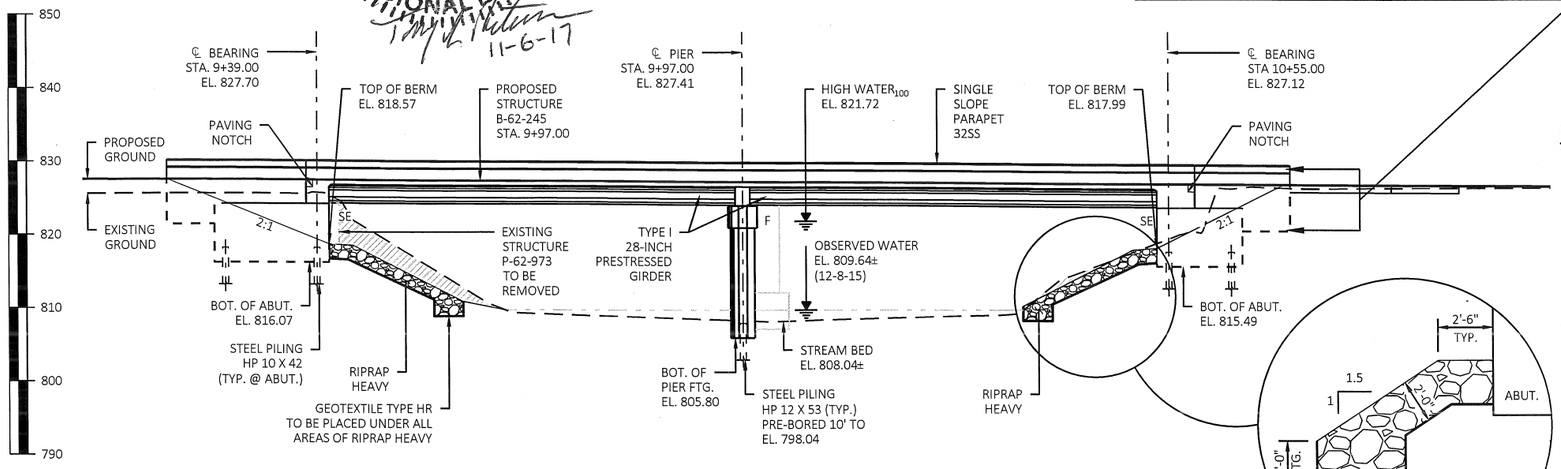
⓪ INDICATES WING NUMBER

TROY L. PETERSON E-31102 MENOMONIE WI — WISCONSIN PROFESSIONAL ENGINEER — 11-6-17

PLAN

2-SPAN - TYPE I 28-INCH PRESTRESSED GIRDER

TYPICAL FILL SECTION AT WING TIPS



EXCAVATION IN THESE AREAS SHALL BE INCLUDED IN EXCAVATION FOR STRUCTURE (TYP)

ELEVATION

NORMAL TO WEST FORK KICKAPOO RIVER (LOOKING UPSTREAM)

DESIGN DATA

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

LIVE LOAD:

DESIGN LOADING	HL - 93
INVENTORY RATING FACTOR	RF = 1.02
OPERATING RATING FACTOR	RF = 1.32
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV)	250 KIPS

MATERIAL PROPERTIES:

CONCRETE MASONRY	
SUPERSTRUCTURE	f'c = 4,000 PSI
ALL OTHER	f'c = 3,500 PSI
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 PSI
TYPE I 28-INCH PRESTRESSED GIRDER	
CONCRETE MANSONRY	f'c = 8,000 PSI
STRANDS - 0.5" DIA WITH ULTIMATE TENSILE STRENGTH OF	f's = 270,000 PSI

HYDRAULIC DATA

100 YEAR FREQUENCY

DRAINAGE AREA	60.7 SQ. MI.
Q_{100} TOTAL	7,700 C.F.S.
THRU STRUCTURE	7,700 C.F.S.
VELOCITY - THRU STRUCTURE	9.40 F.P.S.
WATERWAY AREA - THRU STRUCTURE	819.15 SQ. FT.
HIGH $WATER_{100}$ ELEVATION	821.72 FT.
SCOUR CRITICAL CODE	8

2 YEAR FREQUENCY

Q_2 TOTAL	1,130 C.F.S.
VELOCITY - THRU STRUCTURE	3.80 F.P.S.
HIGH $WATER_2$ ELEVATION	814.05 FT.

TRAFFIC DATA

AADT (2018)	520
AADT (2038)	630
DESIGN SPEED	55 M.P.H.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10 X 42, WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. PILING POINTS ARE REQUIRED.

ESTIMATED LENGTH 15' SOUTH ABUTMENT
ESTIMATED LENGTH 15' NORTH ABUTMENT

PIER TO BE SUPPORTED ON PILING STEEL HP 12 X 53, PLACE PILES INTO PRE-BORED HOLES. PILES PLACED IN PRE-BORED HOLES BORED INTO ROCK DO NOT REQUIRE DRIVING.

ESTIMATED LENGTH 18' PIER

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.

LIST OF DRAWINGS

BRIDGE OFFICE CONTACT
WILLIAM DREHER
(608) 266-8489

CONSULTANT CONTACT
TROY L. PETERSON
(715) 235-9081

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
Cedar corporation
www.cedarcorp.com 800-472-7372

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

STRUCTURE B-62-245

CTH S OVER WEST FORK KICKAPOO RIVER

COUNTY	TOWN/~~CITY/VILLAGE~~
VERNON	WEBSTER

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ATA	TLP	NJT	TLP

GENERAL PLAN

SHEET 1 OF 14

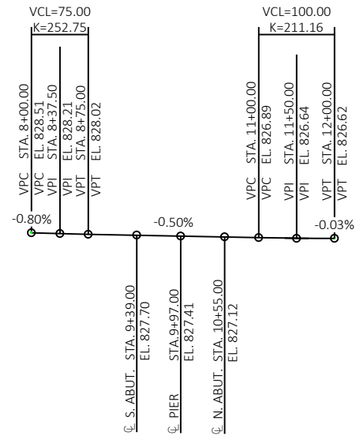
I.D. 5289-00-71

DATE: OC 51

SCALE = 1"=10'

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	SOUTH ABUT	NORTH ABUT	PIER	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA 10+00	LS	-	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-62-245	LS	-	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	320	320	-	-	640
502.0100	CONCRETE MASONRY BRIDGES	CY	68.8	68.8	67.9	165.5	371.0
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	-	400	400
502.3210	PIGMENTED SURFACE SEALER	SY	-	-	-	130	130
503.0128	PRESTRESSED GIRDER TYPE I 28-INCH	LF	-	-	-	700.5	700.5
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	3360	3360	-	-	6720
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	2170	2170	3390	32200	39930
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	6	6	12	-	24
506.4000	STEEL DIAPHRAGMS B-62-245	EACH	-	-	-	10	10
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	11	11	-	-	22
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	-	-	60	-	60
550.0500	PILE POINTS	EACH	8	8	-	-	16
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	80	80	-	-	160
550.1120	PILING STEEL HP 12-INCH x 53 LB	LF	-	-	150	-	150
606.0300	RIPRAP HEAVY	CY	155	160	-	-	315
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100	100	-	-	200
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EA	2	2	-	-	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	25	25	-	-	50
645.0120	GEOTEXTILE TYPE HR	SY	285	285	-	-	570
	NON BID ITEMS						
	FILLER	SIZE	-	-	-	-	½" X ¾"



PROPOSED GRADE ON CTH S

STATE PROJECT NUMBER

5289-00-71

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

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 SHEET 1 AND IN THE ABUTMENT DETAILS.

STEEL 'HP' PILE MATERIAL MATERIAL SHALL BE A.S.T.M. DESIGNATION A572.

THE EXISTING STRUCTURE (P-62-973) IS A 120.0' LONG BY 28.0' CLEAR WIDTH TWO SPAN STEEL DECK GIRDER BRIDGE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE TOP OF DECK SURFACE. PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE, AND THE TOP OF THE PARAPET, INCLUDING PARAPETS ON ABUTMENT.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-62-245" SHALL BE THE EXISTING GROUNDLINE.

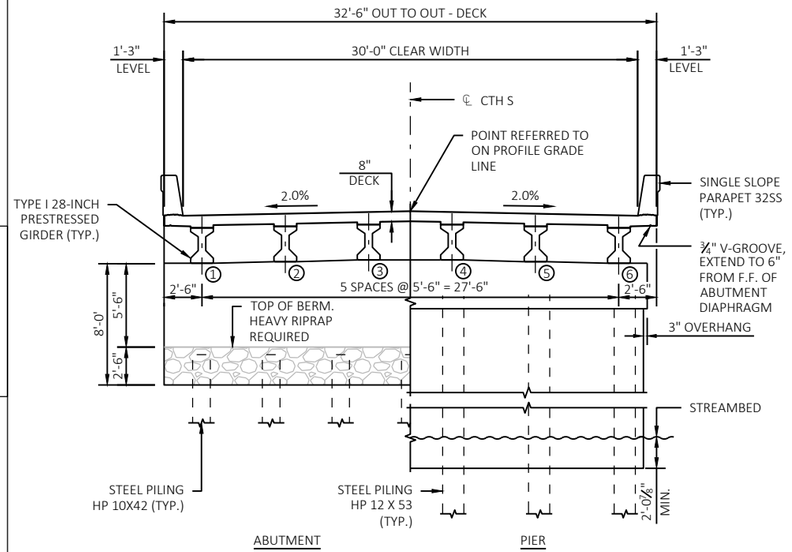
AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

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

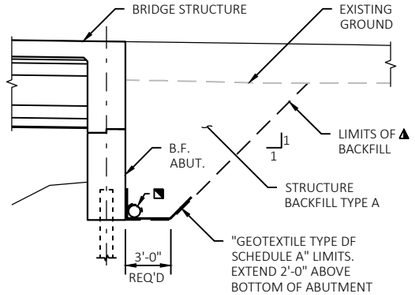
◣ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

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

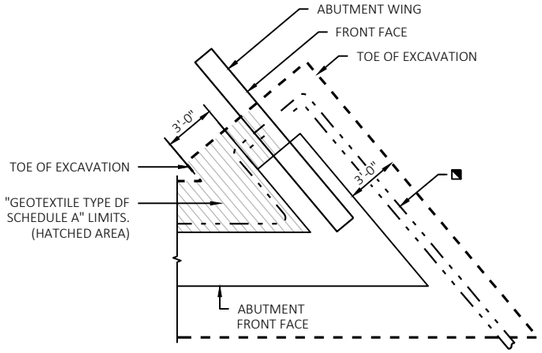
THE MINIMUM CONCRETE HAUNCH SHALL BE 2" FOR DESIGN CALCULATIONS AND THE HAUNCH CONCRETE QUANTITY IS BASED ON AN AVERAGE HAUNCH DEPTH OF 3¼" WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.



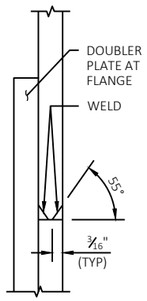
CROSS SECTION THRU STRUCTURE



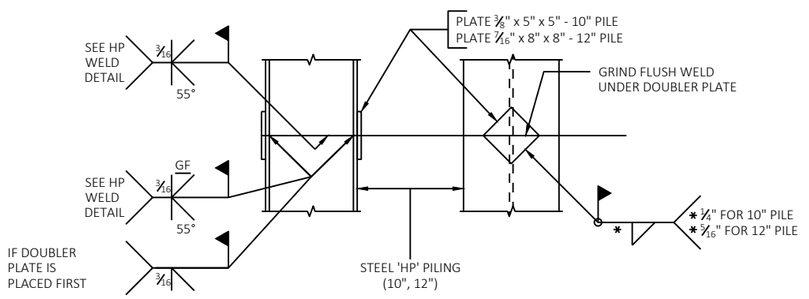
STRUCTURE BACKFILL & LIMITS



ABUTMENT PLAN WITH WING



HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR



PILE SPLICE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-245

DRAWN BY NJT | PLANS CK'D. TLP

QUANTITIES & NOTES

SHEET 2 OF 14

52

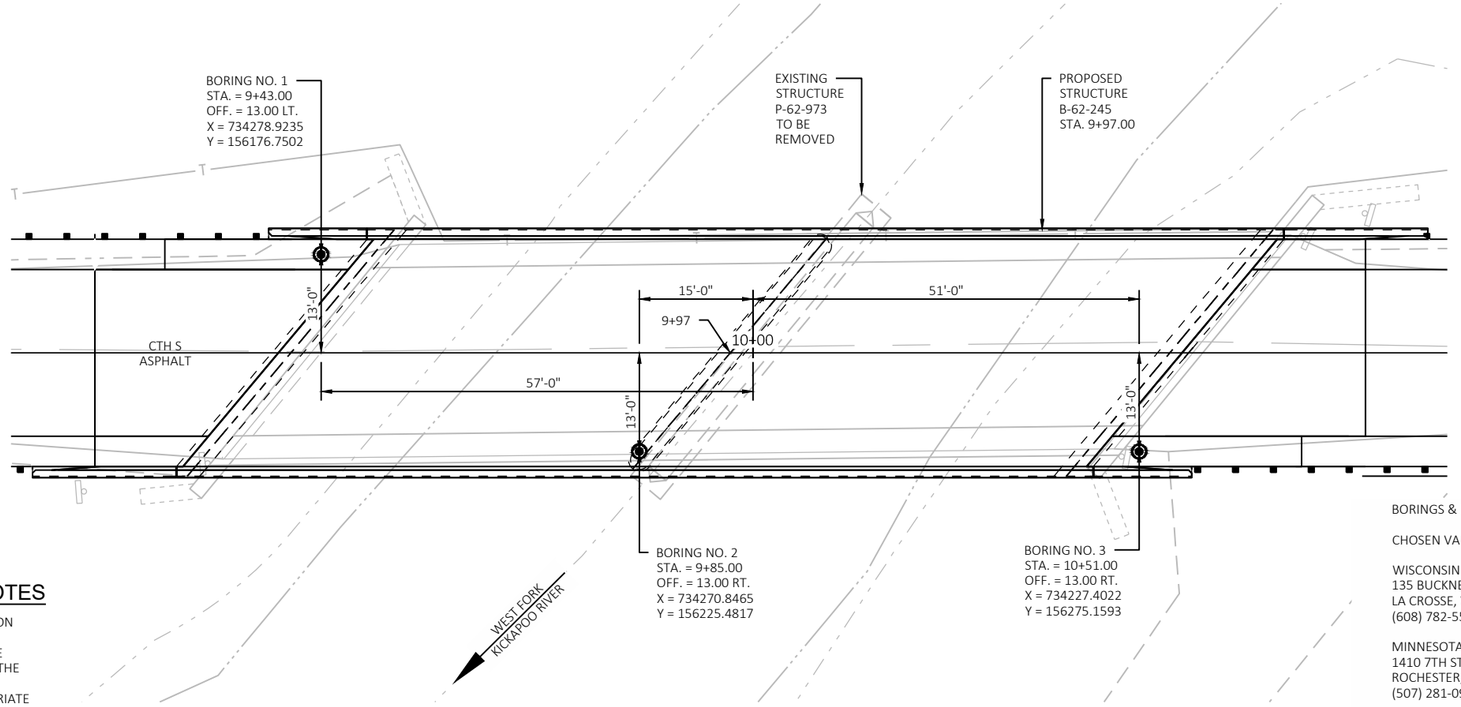
SCALE = 1:1

8

8

STATE PROJECT NUMBER

5289-00-71



SUBSURFACE NOTES

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

BORINGS & REPORT COMPLETED BY:

CHOSEN VALLEY TESTING, INC.

WISCONSIN OFFICE
135 BUCKNER PLACE
LA CROSSE, WI 54603
(608) 782-5505

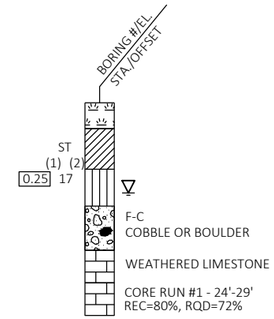
MINNESOTA OFFICE
1410 7TH STREET NW
ROCHESTER, MN 55901
(507) 281-0968

BORINGS 1, 2, & 3
PERFORMED ON 10/27/2016

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

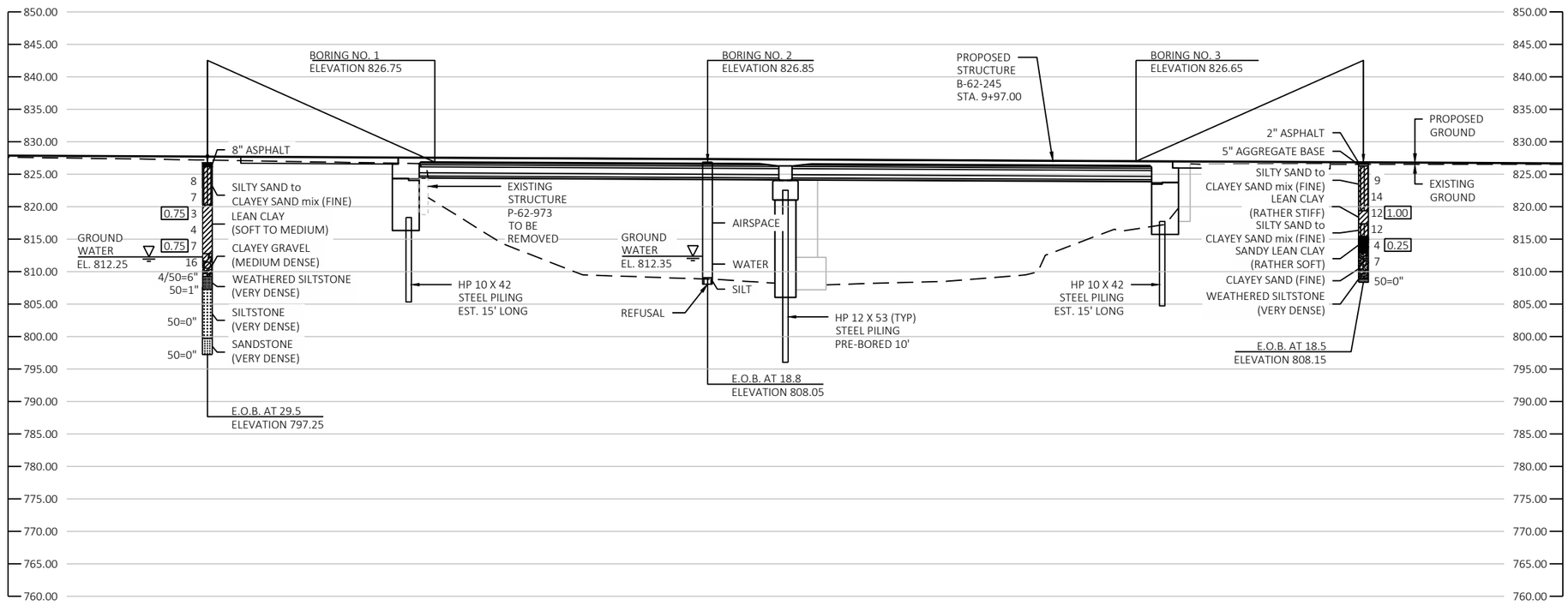
- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

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-62-245

DRAWN BY NJT | PLANS CK'D. TLP

SUBSURFACE EXPLORATION

SHEET 3 OF 14

53

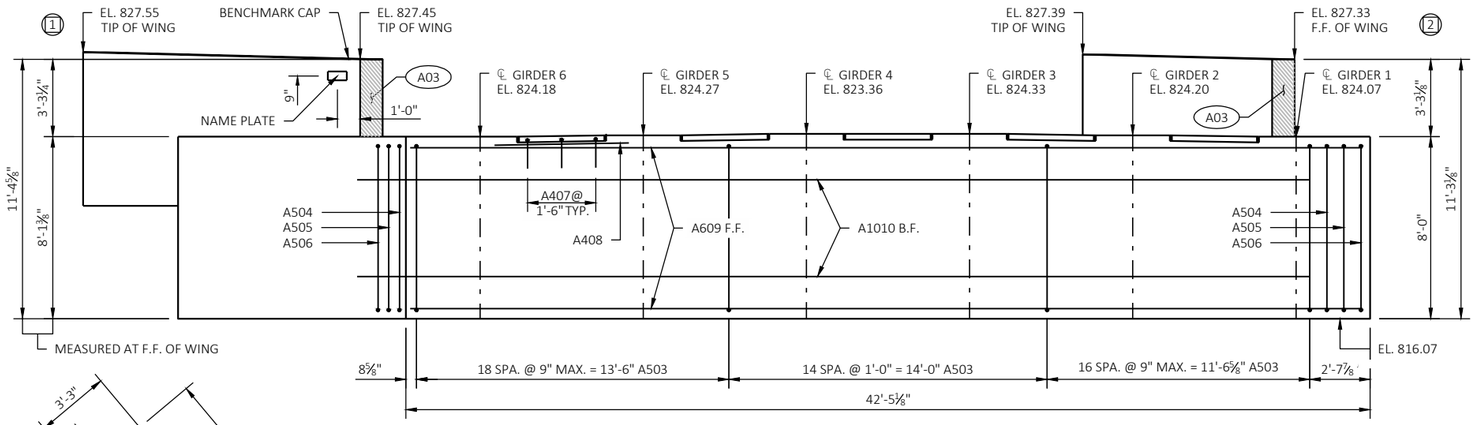
SCALE = 1:1

8

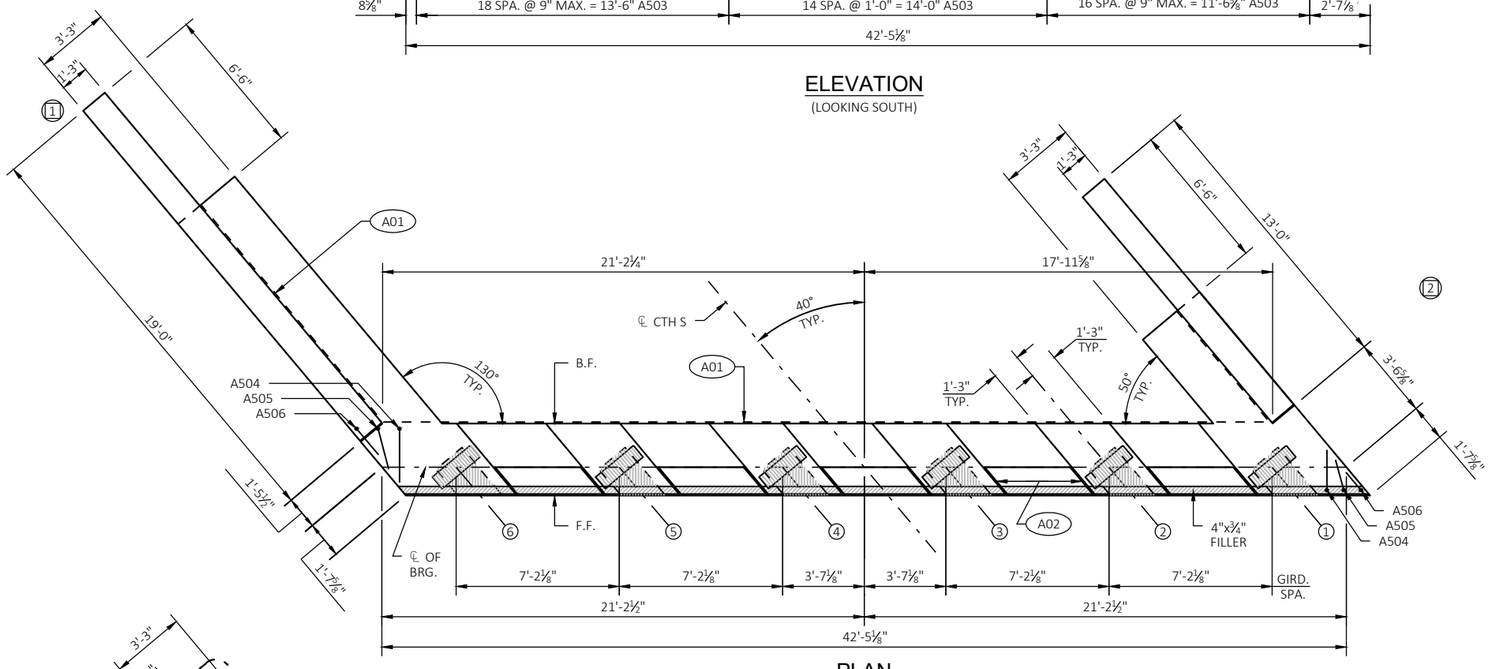
8

STATE PROJECT NUMBER

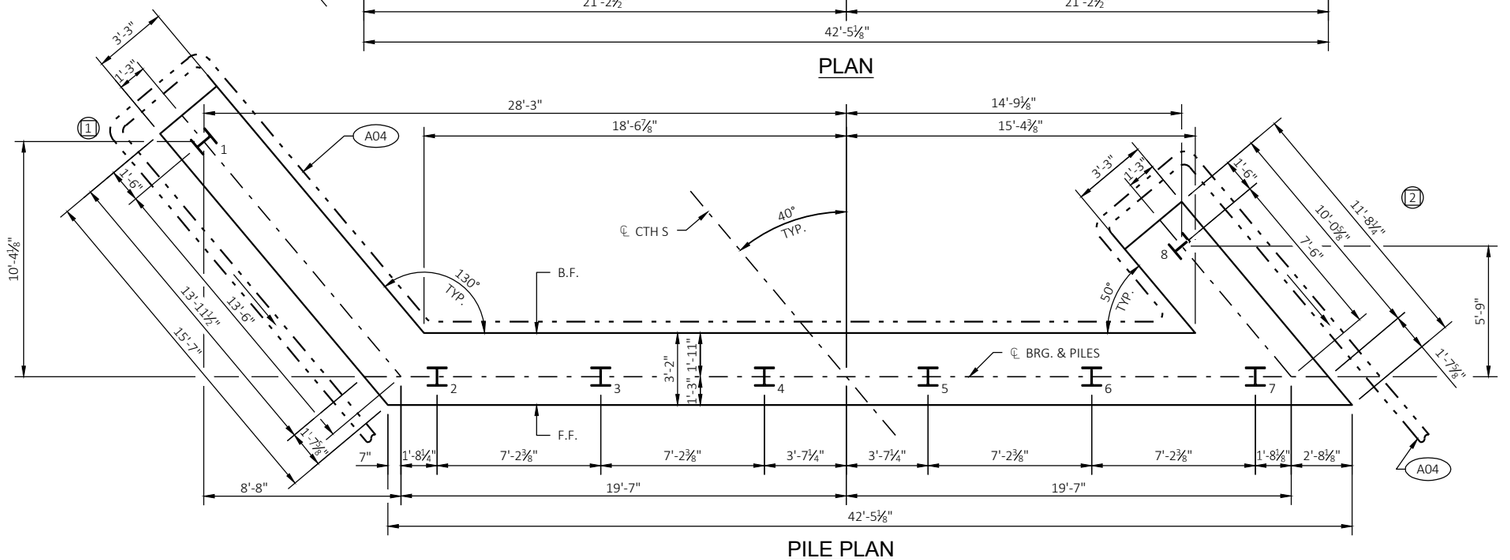
5289-00-71



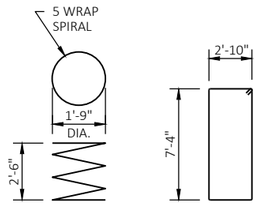
ELEVATION
(LOOKING SOUTH)



PLAN

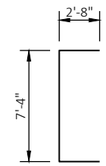


PILE PLAN



A401

A503



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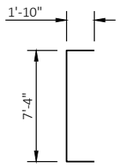

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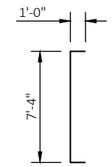

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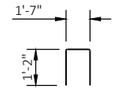

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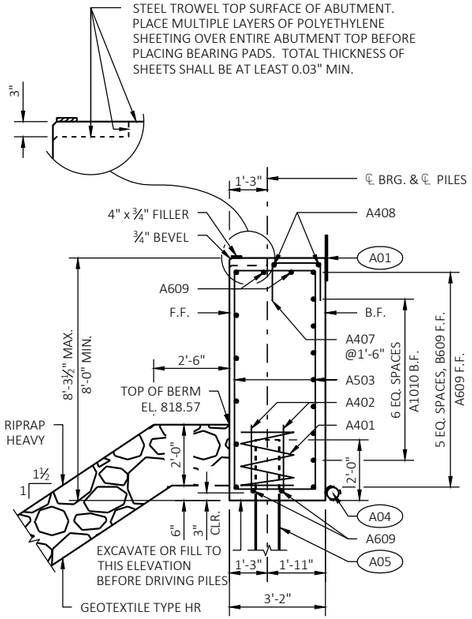
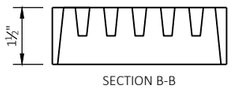
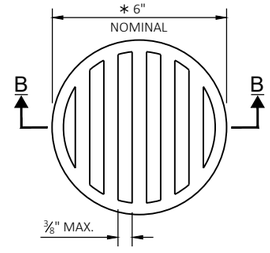


SECTION THRU BODY





RODENT SHIELD DETAIL

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

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

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

LEGEND

⬡	INDICATES WING NUMBER
A01	18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL & VERTICAL JOINTS ON BACK FACE.
A02	¾" CORK FILLER ON VERTICAL BEAM SEAT FACES THAT RUN PARALLEL WITH GIRDER.
A03	SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONC.).
A04	PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
A05	PILING STEEL HP 10 X 42 WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA ESTIMATED LENGTH 15'-0". PILING POINTS ARE REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-245

DRAWN BY NJT | PLANS CK'D. TLP

SOUTH ABUTMENT

SHEET 4 OF 14

54

SCALE = 1:1

8

8

STATE PROJECT NUMBER

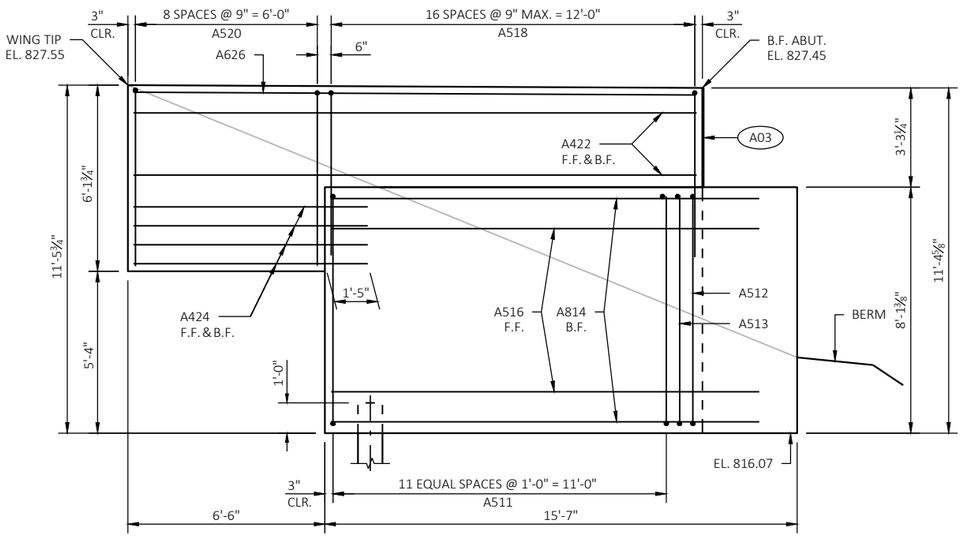
5289-00-71

BILL OF BARS

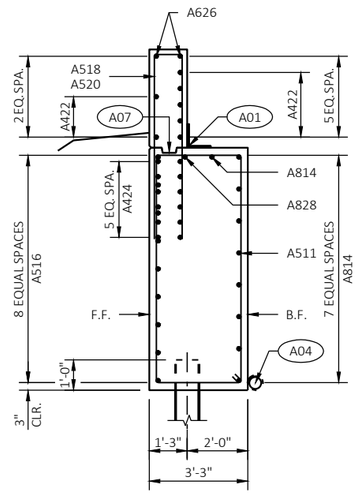
3360# UNCOATED 2170# COATED

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
A401		6	28'-0"			BODY - ONE PER PILE
A402		12	2'-3"			BODY - TWO PER PILE
A503		49	20'-10"	X		BODY - STIRRUPS
A504		2	12'-3"	X		BODY - STIRRUPS @ ABUT. ENDS
A505		2	10'-7"	X		BODY - STIRRUPS @ ABUT. ENDS
A506		2	8'-11"	X		BODY - STIRRUPS @ ABUT. ENDS
A407		15	3'-9"	X		BODY - VERT. TOP - BTWN. GIRDERS
A408		10	5'-11"			BODY - HORIZ. TOP - BTWN. GIRDERS
A609		12	42'-1"			BODY - HORIZ.
A1010		7	42'-1"			BODY - HORIZ. B.F.
A511	X	18	21'-3"	X		WING 1 & 2 - STIRRUPS
A512	X	2	13'-10"	X		WING 1 & 2 - STIRRUPS @ ABUT END
A513	X	2	10'-6"	X		WING 1 & 2 - STIRRUPS @ ABUT END
A814	X	9	17'-8"			WING 1 - BASE HORIZ. B.F. & TOP
A715	X	8	8'-4"			WING 2 - BASE HORIZ. B.F. & TOP
A516	X	9	14'-1"			WING 1 - BASE HORIZ. F.F.
A517	X	9	8'-11"			WING 2 - BASE HORIZ. F.F.
A518	X	17	10'-10"	X		WING 1 - VERT
A519	X	9	10'-10"	X		WING 2 - VERT
A520	X	9	12'-0"	X		WING 1 - VERT
A521	X	9	13'-0"	X		WING 2 - VERT
A422	X	7	18'-8"			WING 1 - HORIZ. F.F. & B.F.
A423	X	7	12'-8"			WING 2 - HORIZ. F.F. & B.F.
A424	X	12	7'-9"			WING 1 - HORIZ. F.F. & B.F.
A425	X	12	7'-9"			WING 2 - HORIZ. F.F. & B.F.
A626	X	2	18'-8"			WING 1 - HORIZ. TOP
A627	X	2	12'-8"			WING 2 - HORIZ. TOP
A828	X	1	10'-11"			WING 1 - HORIZ. TOP
A729	X	1	9'-2"			WING 2 - HORIZ. TOP

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



WING 1 ELEVATION



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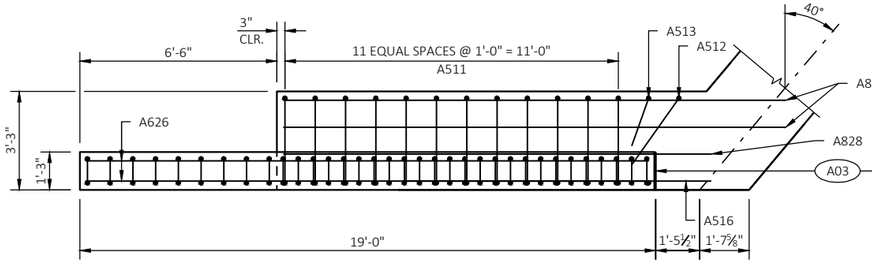
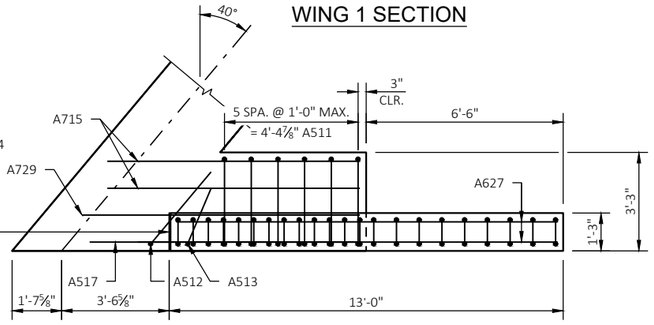


WING 1 PLAN



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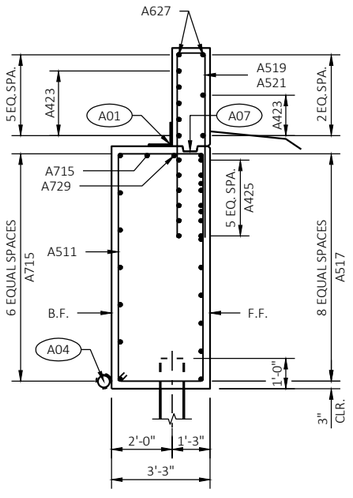

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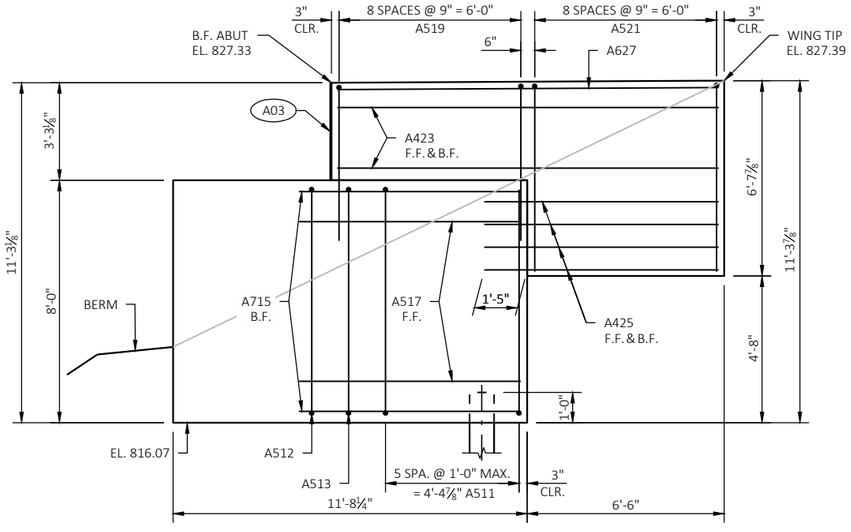

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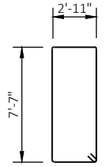

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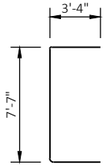

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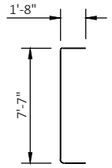

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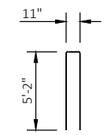
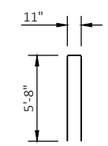


A518
A519



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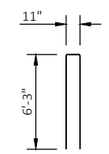


A521

LEGEND

- (A03) INDICATES WING NUMBER
- (A01) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL & VERTICAL JOINTS ON BACK FACE.
- (A03) SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONC.).
- (A04) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
- (A07) OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. & ¾" V-GROOVE @ F.F. IF JOINT IS USED).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-245

DRAWN BY NJT | PLANS CK'D. TLP

SOUTH ABUTMENT DETAILS

SHEET 5 OF 14

55

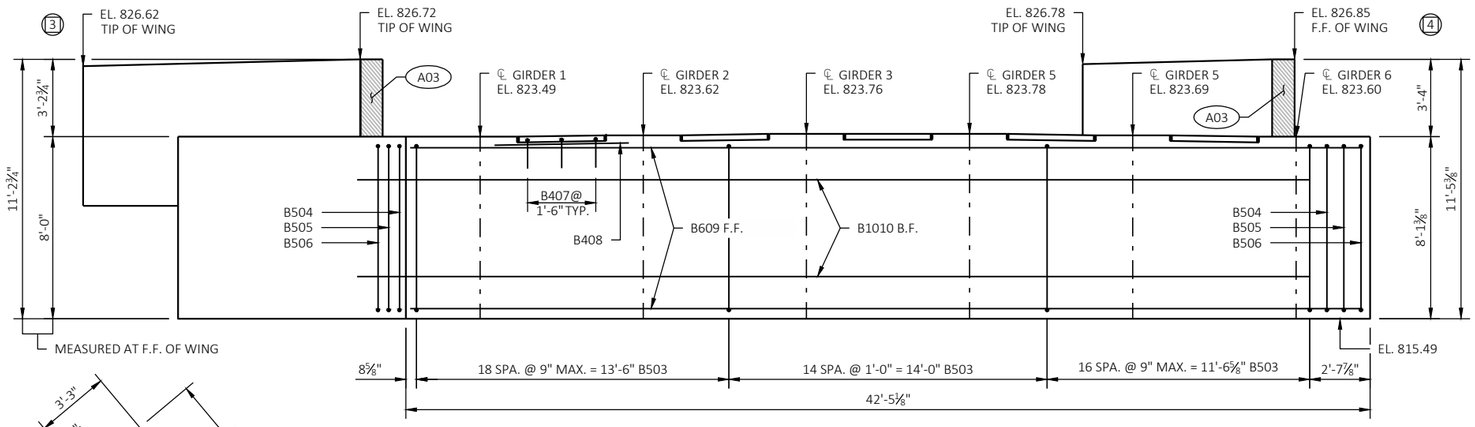
SCALE = 1:1

8

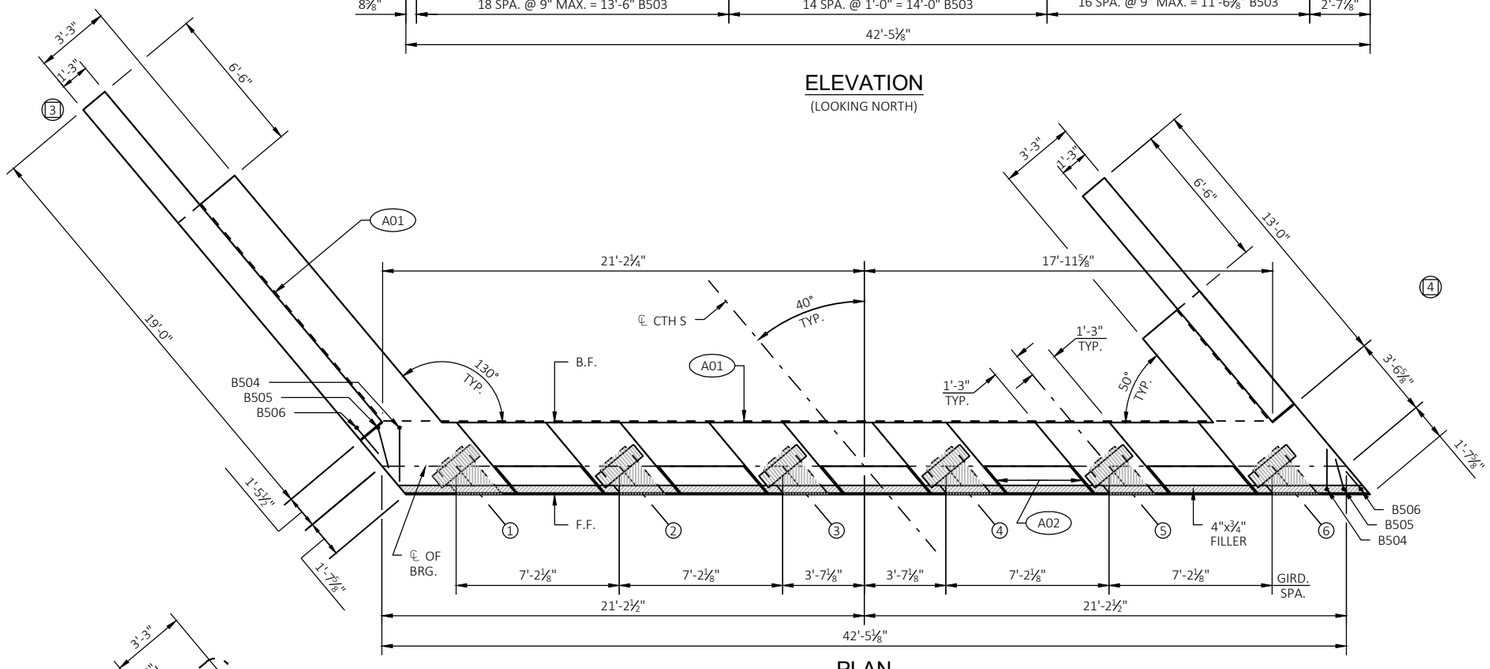
8

STATE PROJECT NUMBER

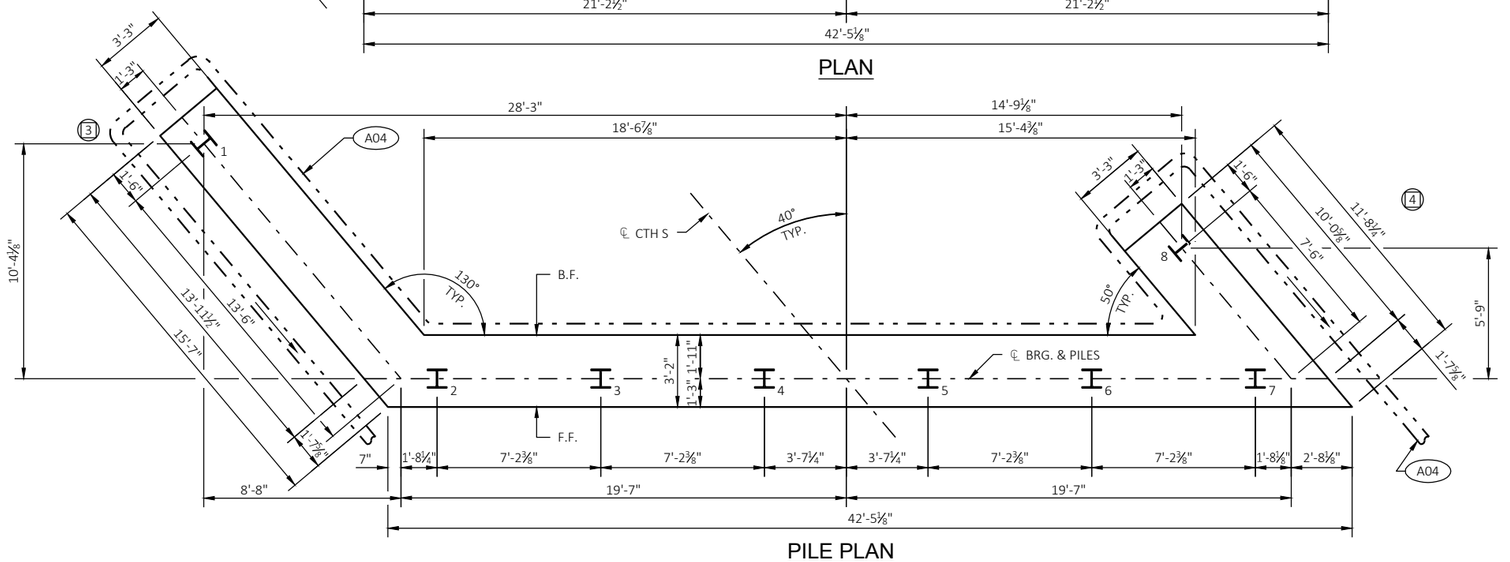
5289-00-71



ELEVATION
(LOOKING NORTH)

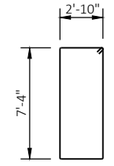


PLAN



PILE PLAN

B401



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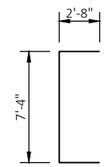

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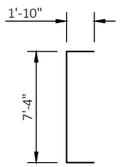

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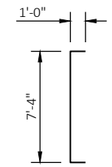

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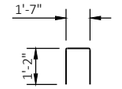

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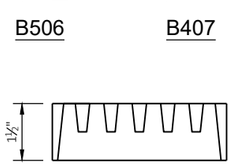
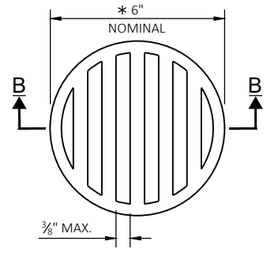




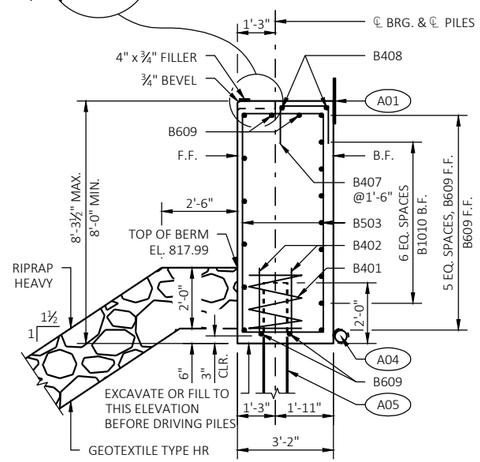
RODENT SHIELD DETAIL

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

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

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

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



SECTION THRU BODY

LEGEND

⬭	INDICATES WING NUMBER
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A05	PILING STEEL HP 10 X 42 WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA ESTIMATED LENGTH 15'-0". PILING POINTS ARE REQUIRED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-245

DRAWN BY NJT | PLANS CK'D. TLP

NORTH ABUTMENT

SHEET 6 OF 14

56

SCALE = 1:1

8

8

STATE PROJECT NUMBER

5289-00-71

BILL OF BARS

3360# UNCOATED 2170# COATED

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
B401		6	28'-0"			BODY - ONE PER PILE
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B503		49	20'-10"	X		BODY - STIRRUPS
B504		2	12'-3"	X		BODY - STIRRUPS @ ABUT. ENDS
B505		2	10'-7"	X		BODY - STIRRUPS @ ABUT. ENDS
B506		2	8'-11"	X		BODY - STIRRUPS @ ABUT. ENDS
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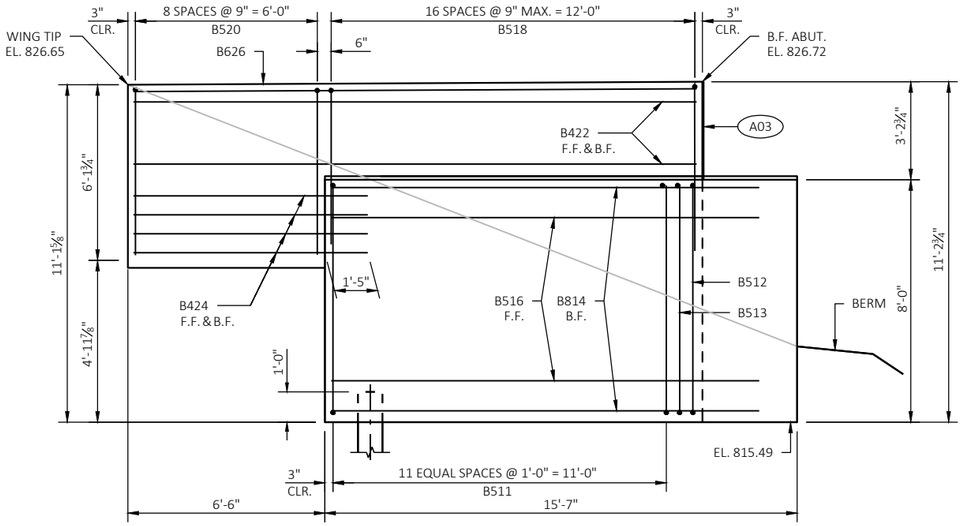
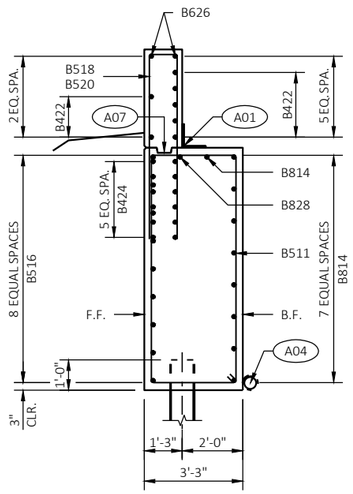
B512	X	2	13'-10"	X		WING 3 & 4 - STIRRUPS @ ABUT END
B513	X	2	10'-6"	X		WING 3 & 4 - STIRRUPS @ ABUT END
B814	X	9	17'-8"			WING 3 - BASE HORIZ. B.F. & TOP
B715	X	8	8'-4"			WING 4 - BASE HORIZ. B.F. & TOP
B516	X	9	14'-1"			WING 3 - BASE HORIZ. F.F.
B517	X	9	8'-11"			WING 4 - BASE HORIZ. F.F.
B518	X	17	10'-10"	X		WING 3 - VERT
B519	X	9	10'-10"	X		WING 4 - VERT
B520	X	9	12'-0"	X		WING 3 - VERT
B521	X	9	13'-0"	X		WING 4 - VERT
B422	X	7	18'-8"			WING 3 - HORIZ. F.F. & B.F.
B423	X	7	12'-8"			WING 4 - HORIZ. F.F. & B.F.
B424	X	12	7'-9"			WING 3 - HORIZ. F.F. & B.F.
B425	X	12	7'-9"			WING 4 - HORIZ. F.F. & B.F.
B626	X	2	18'-8"			WING 3 - HORIZ. TOP
B627	X	2	12'-8"			WING 4 - HORIZ. TOP
B828	X	1	10'-11"			WING 3 - HORIZ. TOP
B729	X	1	9'-2"			WING 4 - HORIZ. TOP

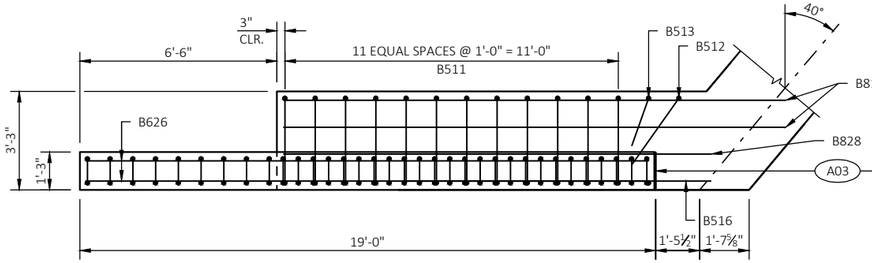
NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.



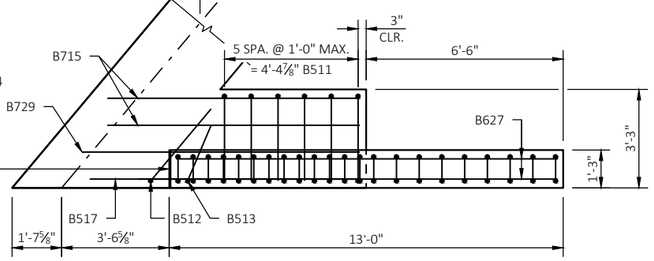
WING 3 ELEVATION



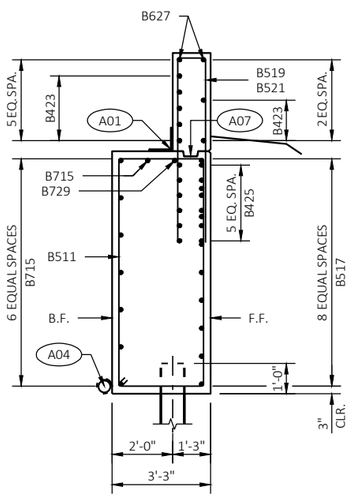
WING 3 SECTION



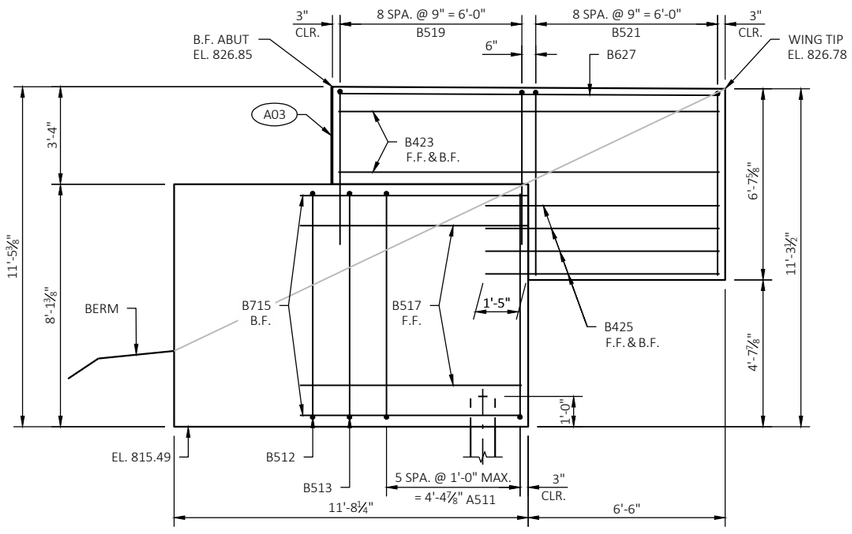
WING 3 PLAN



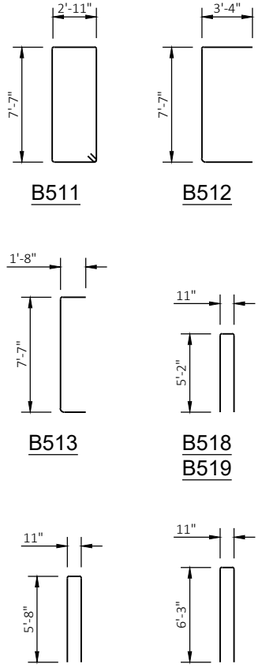
WING 4 PLAN



WING 4 SECTION



WING 4 ELEVATION



LEGEND

- ⬭ INDICATES WING NUMBER
- (A01) 18" RUBBERIZED MEMBRANE WATERPROOFING (R.M.W). SEAL ALL HORIZONTAL & VERTICAL JOINTS ON BACK FACE.
- (A03) SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONC.).
- (A04) PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".
- (A07) OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6". (18" R.M.W. @ B.F. & ¾" V-GROOVE @ F.F. IF JOINT IS USED).

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NORTH ABUTMENT DETAILS

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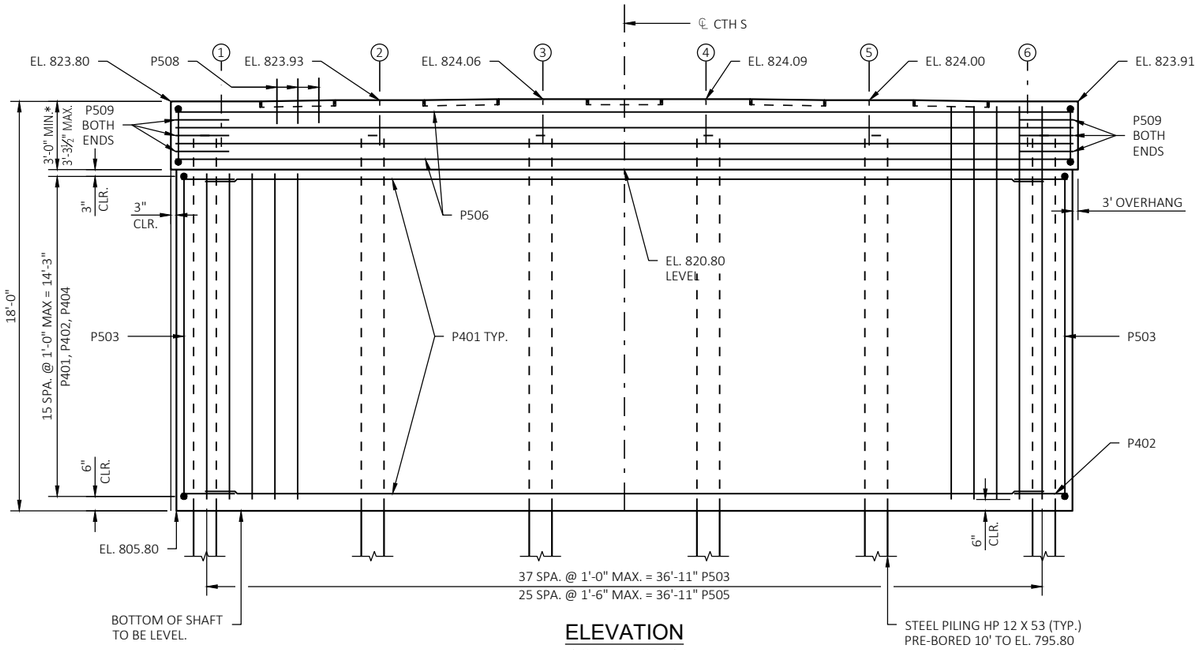
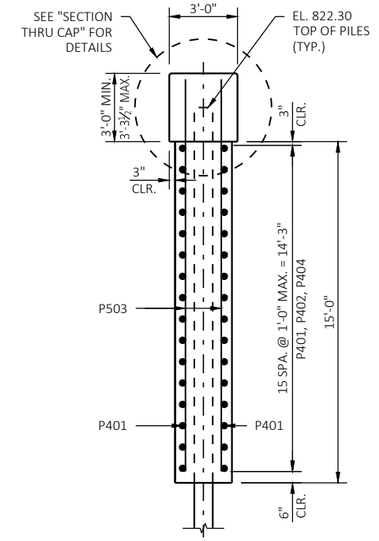


ELEVATION

(LOOKING NORTH)

∗ AT ℄ PIER



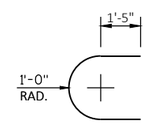
END VIEW

BILL OF BARS

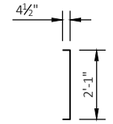
3390# COATED

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

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
P401	X	32	36'-11"			SHAFT - HORIZ.
P402	X	32	5'-11"	X		SHAFT - HORIZ. - ENDS
P503	X	82	17'-3"			SHAFT - VERT.
P404	X	96	2'-7"	X		SHAFT - HORIZ. - TIE BARS AT PILES
P505	X	26	10'-3"	X		CAP - STIRRUP
P506	X	8	36'-11"			CAP - HORIZ. - SIDES
P507	X	4	38'-11"			CAP - HORIZ. - TOP & BOTTOM
P508	X	15	2'-0"			CAP - DOWEL BARS
P509	X	8	6'-11"	X		CAP - HORIZ. - ENDS



P402



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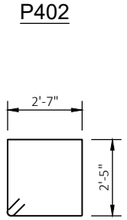

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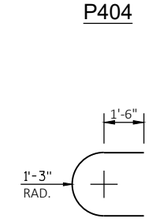
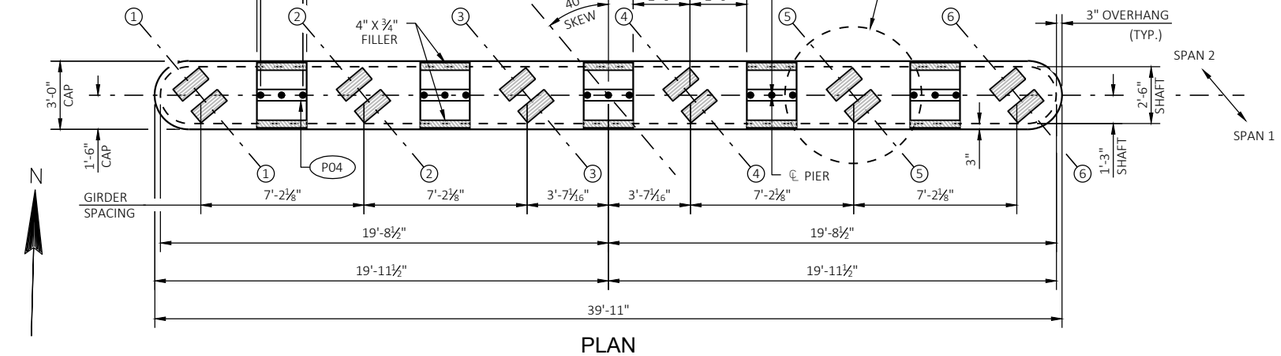
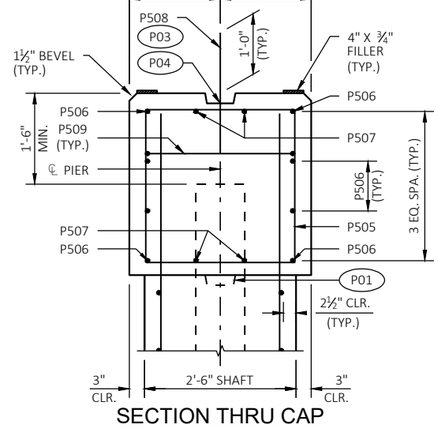


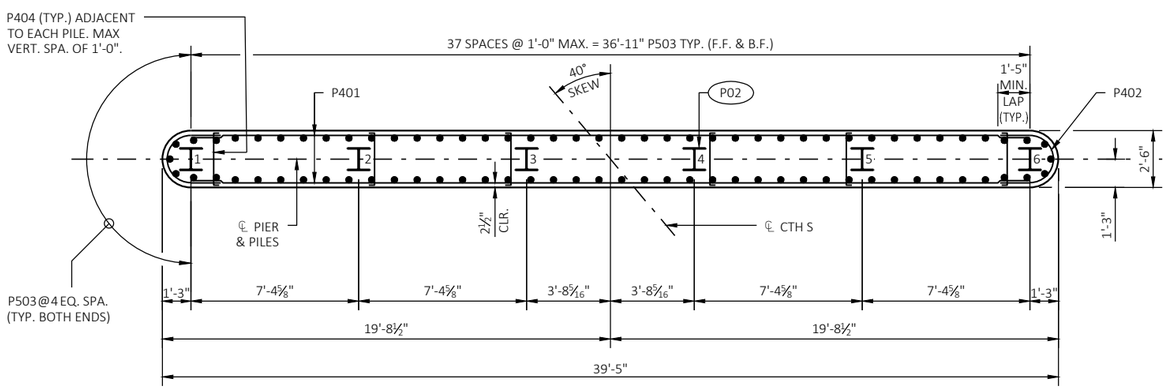
P509



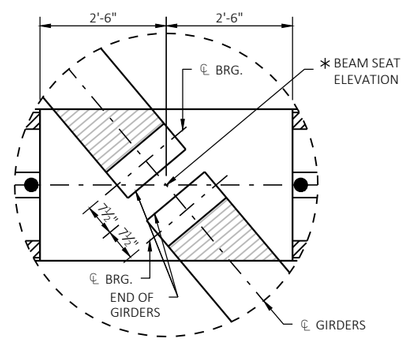
PLAN



SECTION THRU CAP



PILE PLAN



TYPICAL BEAM SEAT

LEGEND

- (P01) OPTIONAL CONSTRUCTION JOINT WITH KEYWAY FORMED BY BEVELED 2" X 6". EXTEND TO 2'-0" FROM PIER EDGE.
- (P02) PIER TO BE SUPPORTED ON PILING STEEL HP 12 X 53, PLACE PILES INTO PRE-BORED HOLES. PILES PLACED IN PRE-BORED HOLES BORED INTO ROCK DO NOT REQUIRE DRIVING.
- (P03) BARS @ 1'-0" CTRS. BETWEEN BEAM SEATS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONCRETE.)
- (P04) KEYED CONSTRUCTION JOINT-FORMED BY BEVELED 2" X 6" BETWEEN BEAM SEATS.

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NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 2" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 2" OF THE TOP FLANGE.

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

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS. SEE SECT. 503.3.3 OF STANDARD SPECIFICATIONS FOR GUIDANCE.

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

ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

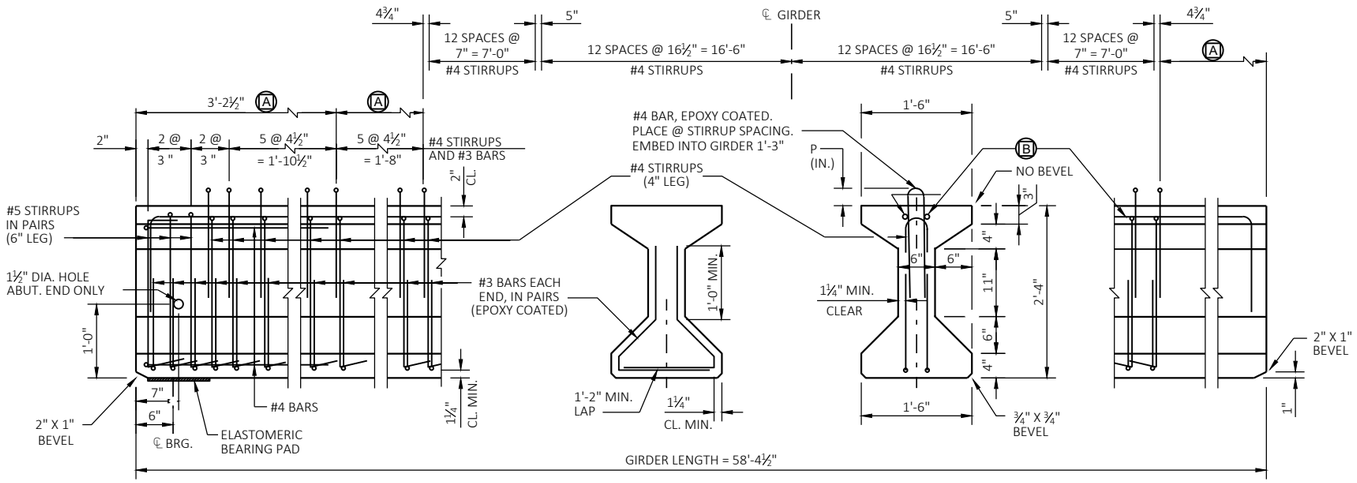
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

AN ALTERNATE EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON APPROVAL OF THE STRUCTURES DEVELOPMENT SECTION.

PRESTRESSING STRANDS SHALL BE 0.5" DIAMETER -7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

BEND EACH END OF #4 STIRRUPS 4" AND #5 STIRRUPS 6".

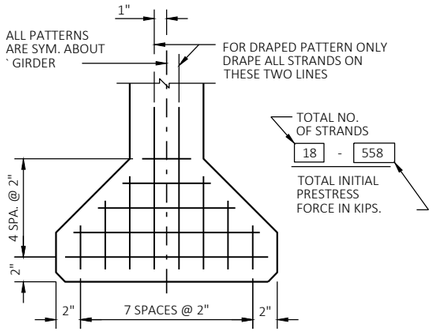
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGM" SHEET.



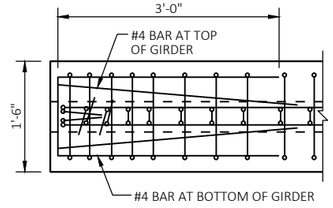
SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

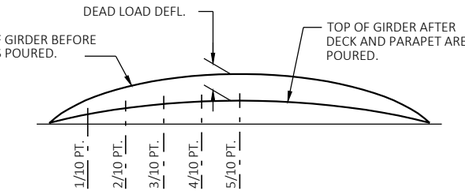
Ⓑ 2-#4 BARS BEND DOWN 16 BAR DIA. AT ENDS



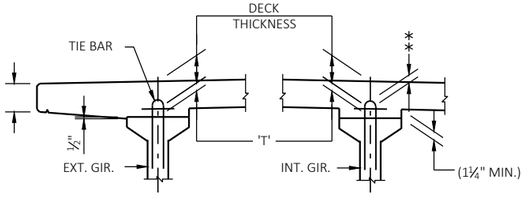
TYP. STRAND PATTERN



PLAN VIEW OF GIRDER ENDS



DEAD LOAD DEFLECTION DIAGRAM



DECK HAUNCH DETAIL

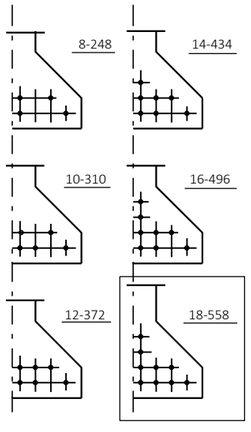
IF 1¼" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN ½" OR,

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

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

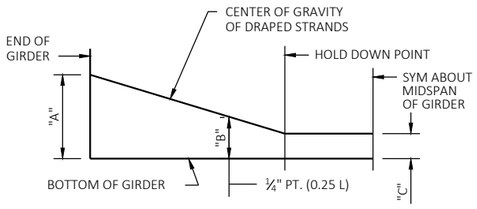
TOP OF DECK ELEV. AT FINAL GRADE
\- TOP OF GIRDER ELEVATION
\+ DEAD LOAD DEFLECTION
\- DECK THICKNESS
= HAUNCH HEIGHT 'T'

NOTE: AN AVERAGE HAUNCH ('T') OF 2½" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



DRAPED PATTERN

0.5"ϕ STRANDS



DRAPED STRAND PROFILE

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

SPAN	CAMBER (IN.) *
1	1.76
2	1.76

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

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

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

GIRDER DATA

SPAN	GIRDER	GIRDER LENGTH "L"	DEAD LOAD DEFL. (IN.) 1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	CONC. STRGTH. f'c (p.s.i.)	"P" 1ST ⅓ OF GIRDER	"P" MID ⅓ OF GIRDER	"P" END ⅓ OF GIRDER	DIA. OF STRAND (IN.)	DRAPED PATTERN TOTAL NO. OF STRANDS	DRAPED PATTERN f'ci (P.S.I.) *	DRAPED PATTERN (IN.) "A"	"B" MIN.	"B" MAX.	"C"	UNDRAPED PATTERN TOTAL NO. OF STRANDS	UNDRAPED PATTERN f'ci (P.S.I.) *
1	1 - 6	58'-4½"	¼"	½"	⅝"	¾"	⅞"	¾"	⅝"	½"	¼"	8000	6	6	6	0.5	18	6800	23	9.5	12.5	5	_	_
2	1 - 6	58'-4½"	¼"	½"	⅝"	¾"	⅞"	¾"	⅝"	½"	¼"	8000	6	6	6	0.5	18	6800	23	9.5	12.5	5	_	_

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28-INCH PRESTRESSED GIRDER DETAILS

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NOTES

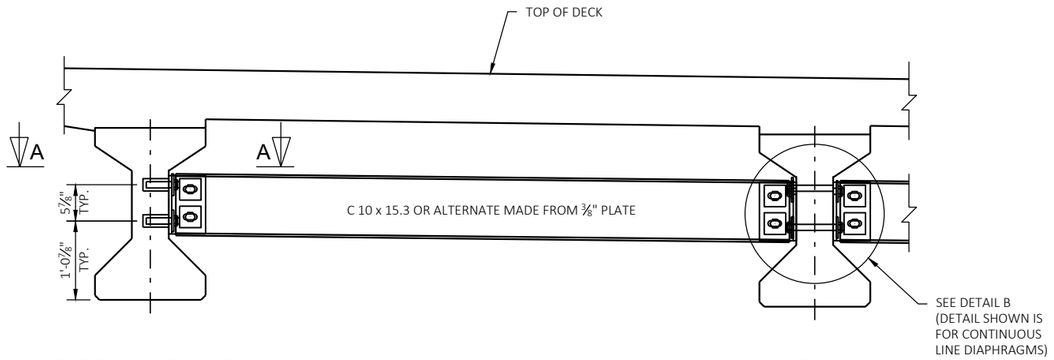
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-62-245", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

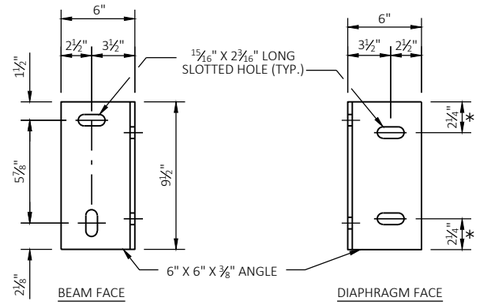
ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

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

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

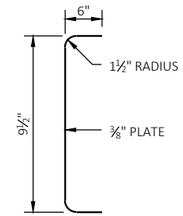


PART TRANSVERSE SECTION AT DIAPHRAGM

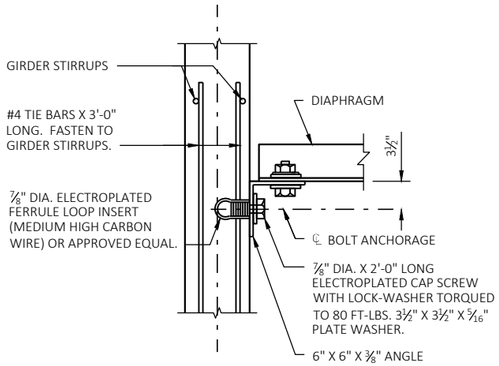


DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM

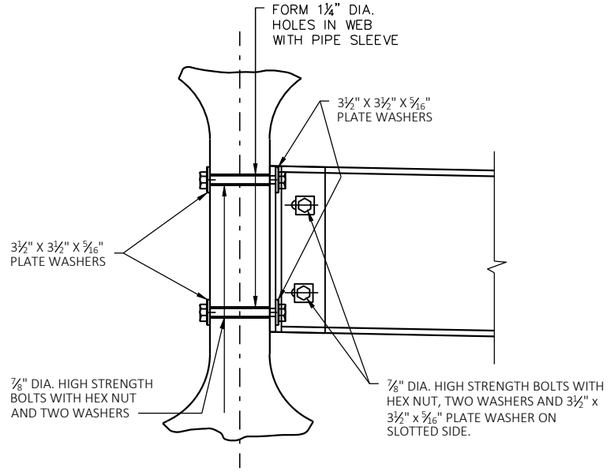


SECTION THRU ALTERNATE DIAPHRAGM



SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DETAIL B

(FOR STAGGERED DIAPHRAGM)

8

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STEEL DIAPHRAGMS

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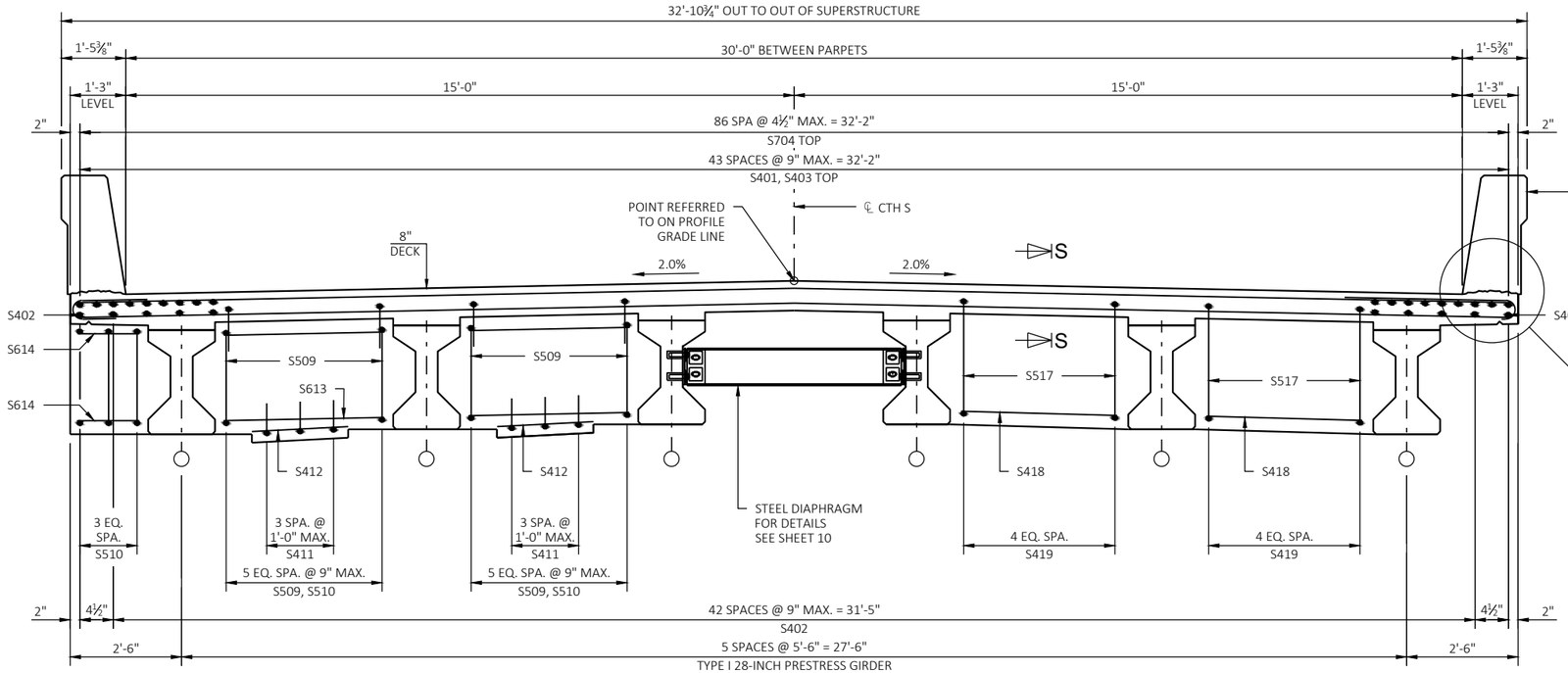
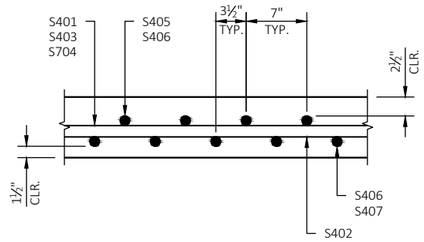


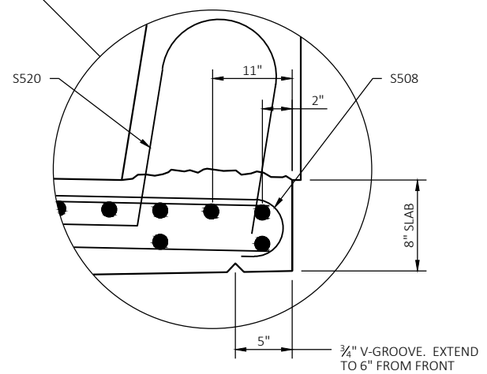
AT ABUTMENT IN SPAN AT PIER

CROSS SECTION THRU ROADWAY

(LOOKING NORTH)



SECTION S-S



TOP OF DECK ELEVATIONS

LOCATIONS	SOUTH ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	PIER	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	NORTH ABUT.
WEST DECK EDGE	827.31	827.28	827.25	827.22	827.19	827.16	827.13	827.10	827.08	827.05	827.02	826.99	826.96	826.93	826.90	826.87	826.84	826.81	826.79	826.76	826.73
GIRDER 1	827.37	827.34	827.31	827.28	827.25	827.23	827.20	827.17	827.14	827.11	827.08	827.05	827.02	826.99	826.96	826.94	826.91	826.88	826.85	826.82	826.79
GIRDER 2	827.50	827.47	827.44	827.41	827.38	827.36	827.33	827.30	827.27	827.24	827.21	827.18	827.15	827.12	827.09	827.07	827.04	827.01	826.98	826.95	826.92
GIRDER 3	827.63	827.60	827.58	827.55	827.52	827.49	827.46	827.43	827.40	827.37	827.34	827.31	827.29	827.26	827.23	827.20	827.17	827.14	827.11	827.08	827.05
GIRDER 4	827.66	827.63	827.60	827.57	827.54	827.51	827.48	827.45	827.43	827.40	827.37	827.34	827.31	827.28	827.25	827.22	827.19	827.16	827.14	827.11	827.08
GIRDER 5	827.57	827.54	827.51	827.48	827.45	827.43	827.40	827.37	827.34	827.31	827.28	827.25	827.22	827.19	827.16	827.14	827.11	827.08	827.05	827.02	826.99
GIRDER 6	827.48	827.45	827.42	827.39	827.36	827.34	827.31	827.28	827.25	827.22	827.19	827.16	827.13	827.10	827.07	827.05	827.02	826.99	826.96	826.93	826.90
EAST DECK EDGE	827.44	827.41	827.39	827.36	827.33	827.30	827.27	827.24	827.21	827.18	827.15	827.12	827.10	827.07	827.04	827.01	826.98	826.95	826.92	826.89	826.86

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

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SUPERSTRUCTURE CROSS SECTION

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STATE PROJECT NUMBER

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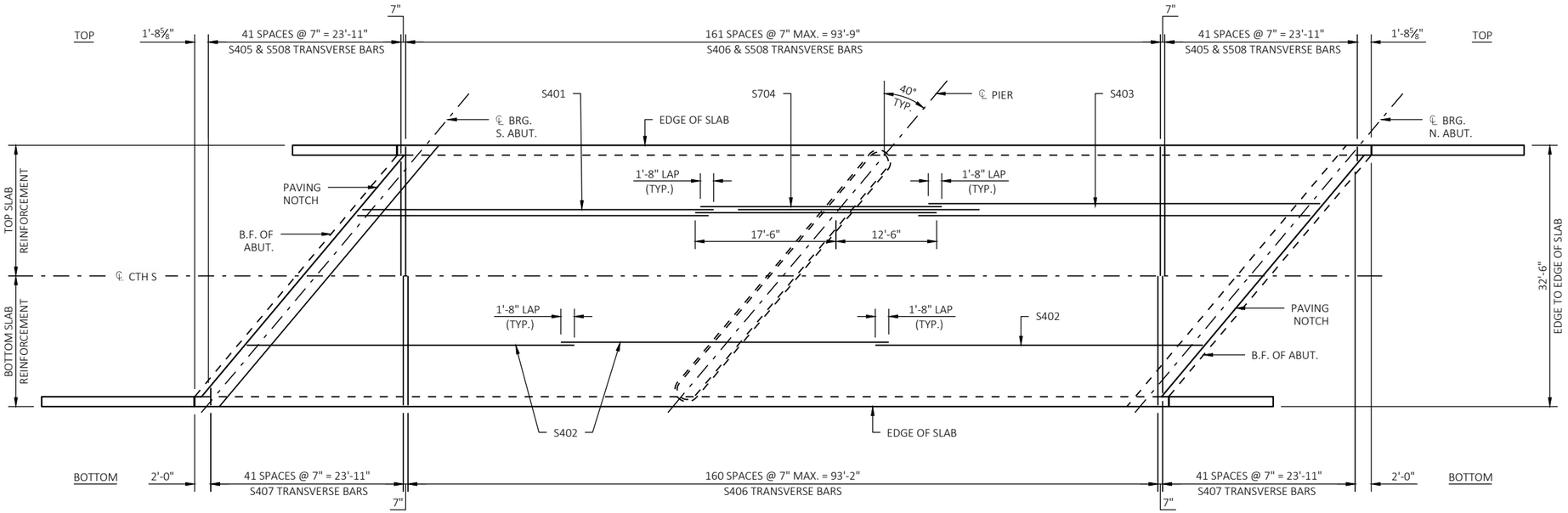
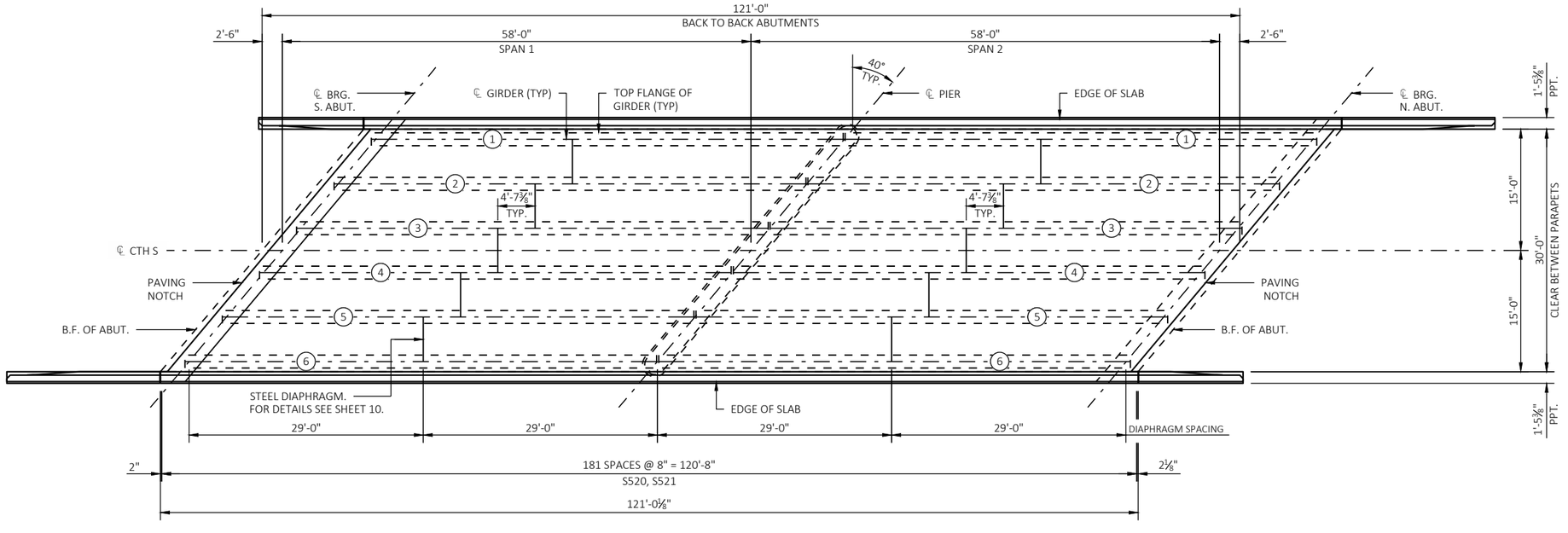


PLAN



PLAN

(SHOWING DIAPHRAGM SPACING)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-245

DRAWN BY NJT | PLANS CK'D. TLP

SUPERSTRUCTURE

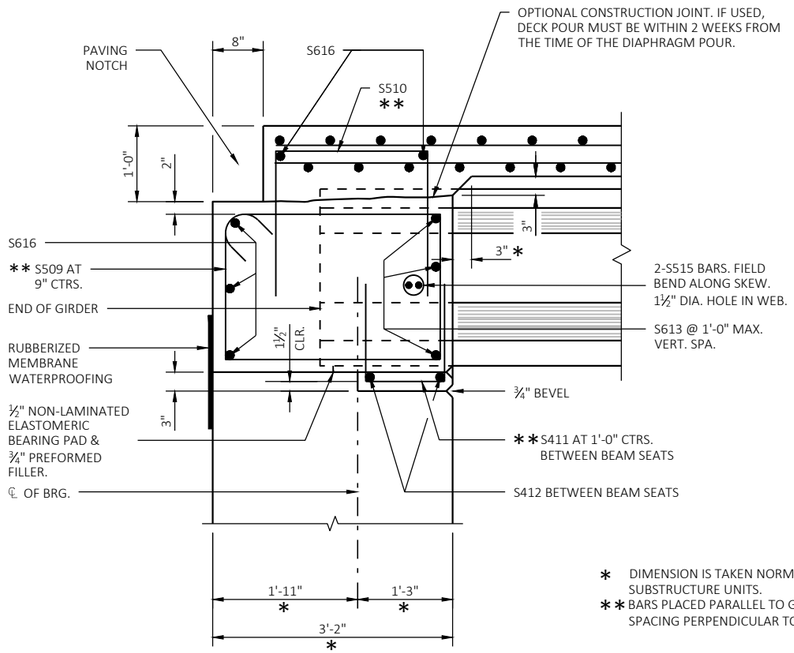
SHEET 12 OF 14

62

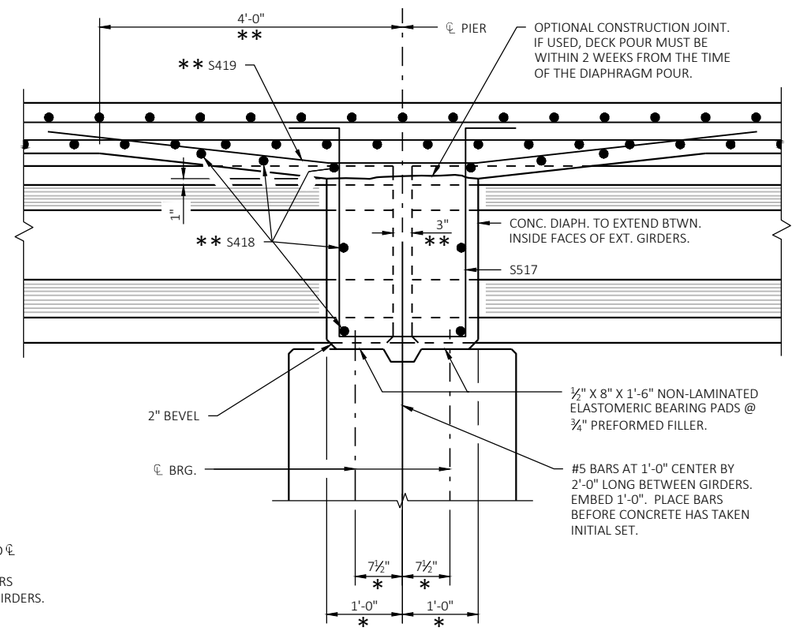
SCALE = 1:1

STATE PROJECT NUMBER

5289-00-71



AT ABUTMENTS



AT PIER DIAPHRAGM

* DIMENSION IS TAKEN NORMAL TO ℄ SUBSTRUCTURE UNITS.
** BARS PLACED PARALLEL TO GIRDERS SPACING PERPENDICULAR TO ℄ GIRDERS.

PARTIAL LONGITUDINAL SECTION

BILL OF BARS

32200# COATED

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
S401	X	44	43'-8"			LONGITUDINAL TOP SPAN 1
S402	X	135	40'-9"			LONGITUDINAL BOTTOM SPAN 1 & 2
S403	X	44	48'-10"			LONGITUDINAL TOP SPAN 2
S704	X	87	30'-0"			LONGITUDINAL TOP OVER PIER
S405	X	84	16'-1"		☒	TRANS. TOP SPAN 1 & 2
S406	X	323	32'-1"			TRANS. TOP & BOT. SPAN 1 & 2
S407	X	84	16'-5"		☒	TRANS. BOTTOM SPAN 1 & 2
S508	X	408	4'-5"	X		TRANS. TOP EDGE DECK
S509	X	76	9'-11"	X		ABUTMENT DIAPHRAGM
S510	X	76	5'-9"	X		ABUTMENT DIAPHRAGM
S411	X	40	3'-3"	X		ABUTMENT DIAPHRAGM
S412	X	20	2'-8"			ABUTMENT DIAPHRAGM
S613	X	30	4'-9"			ABUTMENT DIAPHRAGM HORIZ.
S614	X	12	1'-7"			ABUTMENT DIAPHRAGM HORIZ.
S515	X	24	6'-0"			ABUTMENT DIA. THRU GIRDERS
S616	X	10	41'-11"			ABUTMENT DIAPHRAGM HORIZ.
S517	X	25	7'-5"	X		PIER DIAPHRAGM VERTICAL
S418	X	50	4'-9"			PIER DIAPHRAGM HORIZONTAL
S419	X	25	11'-2"	X		PIER DIAPHRAGM HORIZONTAL
S520	X	364	4'-5"	X		PARAPET VERTICAL
S521	X	364	5'-0"	X		PARAPET VERTICAL
S522	X	36	41'-4"			PARAPET HORIZONTAL

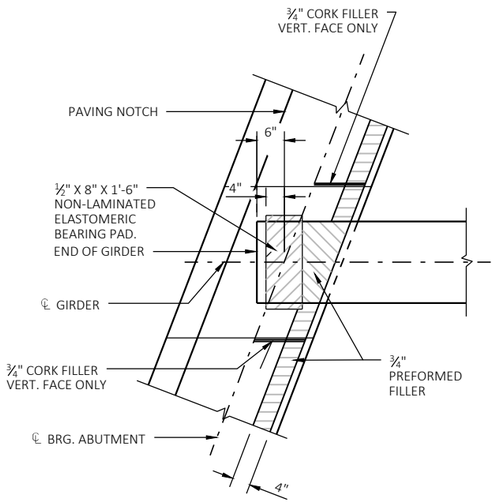
NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

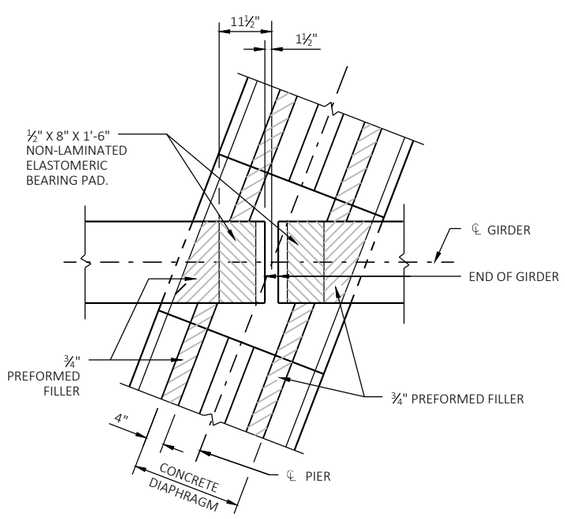
☒ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTH.

BAR SERIES TABLE

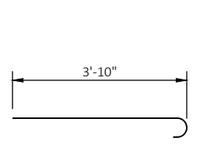
BUNDLE AND TAG EACH SERIES SEPARATELY

MARK	NO. REQUIRED	LENGTH
S405	2 SERIES OF 42	1'-10" TO 30'-4"
S407	2 SERIES OF 42	2'-2" TO 30'-8"

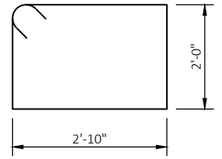




BEARING PAD DETAIL



S508



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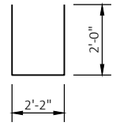

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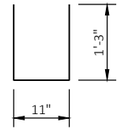
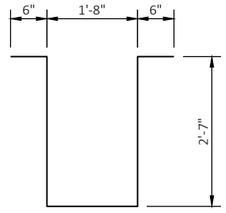
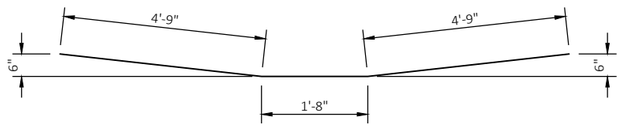


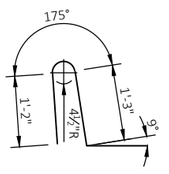
S411



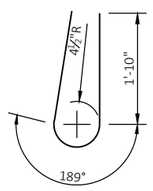
S517



S419



S520



S521

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-245

DRAWN BY NJT | PLANS CK'D. TLP

SUPERSTRUCTURE DETAILS

SHEET 13 OF 14

63

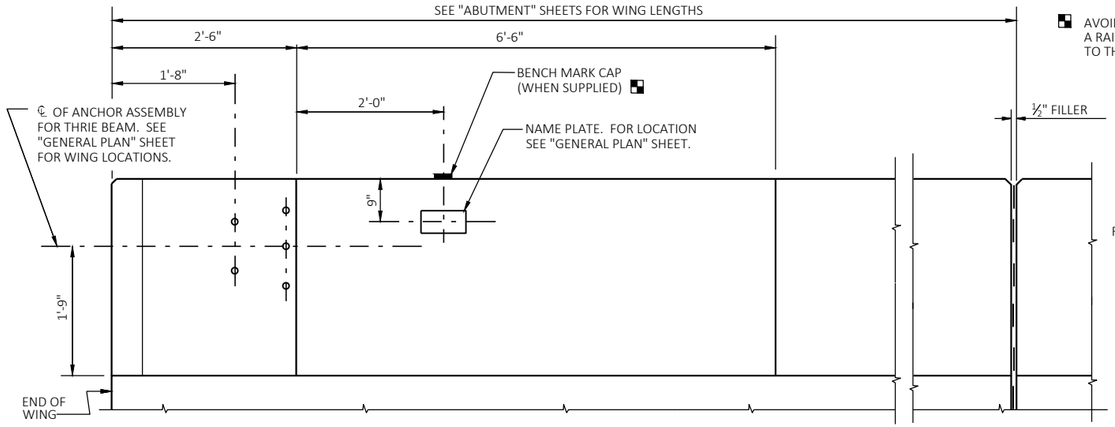
SCALE = 1:1

8

8

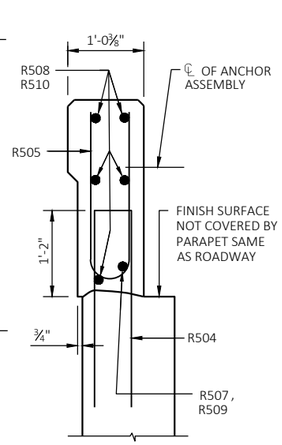
STATE PROJECT NUMBER

5289-00-71

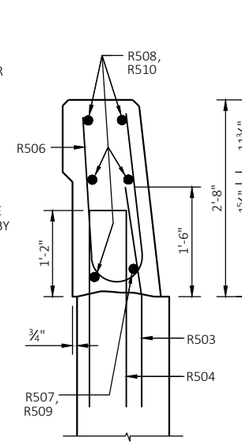


INSIDE ELEVATION

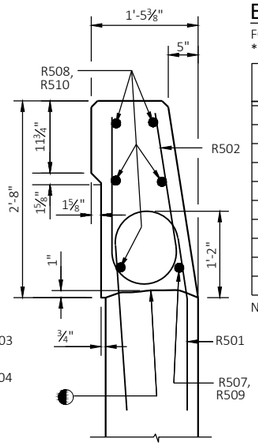
AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



SECTION A



SECTION B



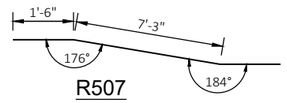
SECTION C

BILL OF BARS

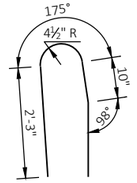
FOR ABUTMENT PARAPETS
* WEIGHT INCLUDED IN SUPERSTRUCTURE TABLE

BAR MARK	COAT	SOUTH ABUT.	NORTH ABUT.	LENGTH	BENT	LOCATION
R501	X	23	23	5'-10"	X	PARAPET VERTICAL
R502	X	23	23	5'-0"	X	PARAPET VERTICAL
R503	X	24	24	3'-0"	X	PARAPET VERTICAL
R504	X	34	34	5'-7"	X	PARAPET VERTICAL
R505	X	22	22	4'-9"	X	PARAPET VERTICAL
R506	X	12	12	4'-10"	X	PARAPET VERTICAL
R507	X	1	1	18'-5"	X	PARAPET HORIZONTAL
R508	X	5	5	18'-5"		PARAPET HORIZONTAL
R509	X	1	1	12'-5"	X	PARAPET HORIZONTAL
R510	X	5	5	12'-5"		PARAPET VERTICAL

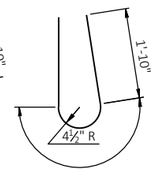
NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.



R507
R509



R501



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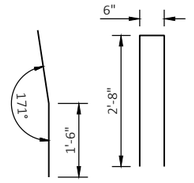
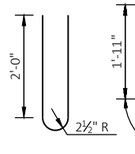


R503

R504



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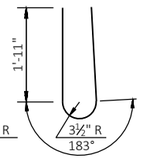

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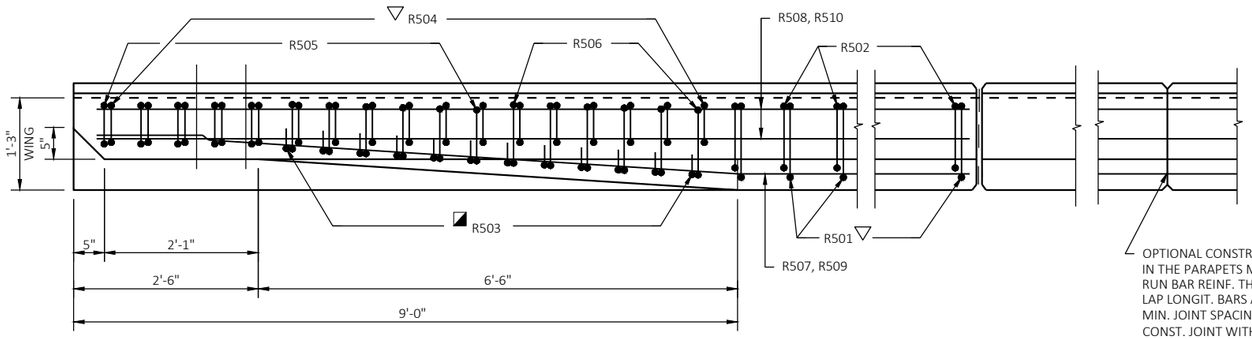
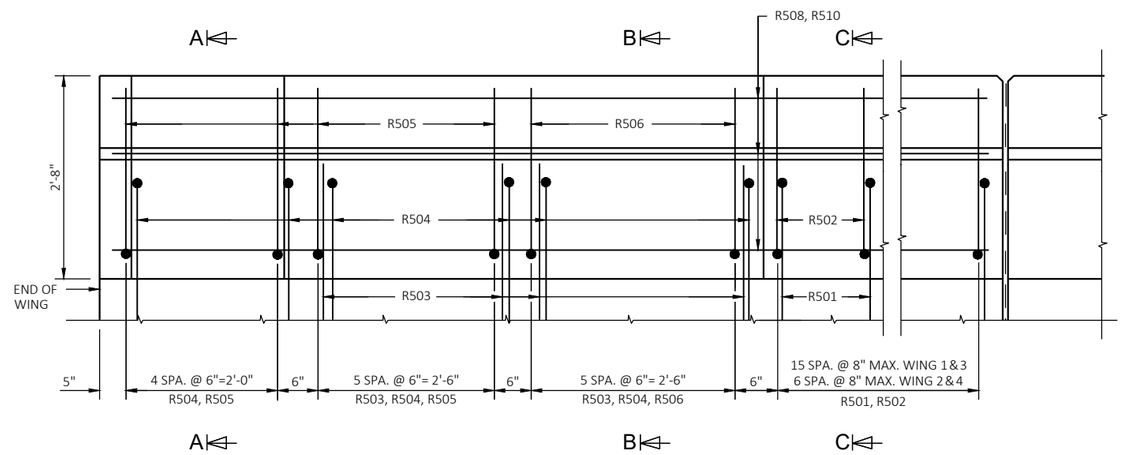
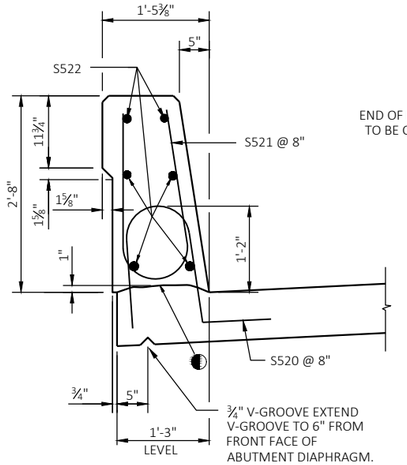


PLAN

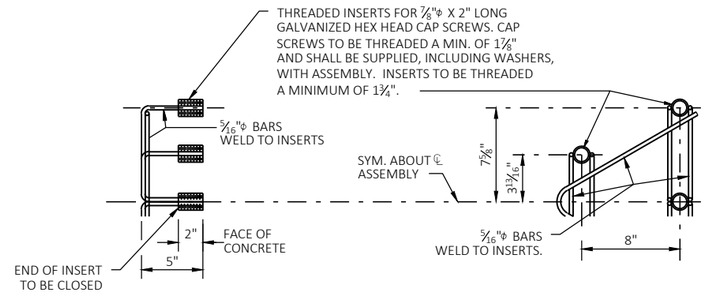
OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" 'V' GROOVE.



OUTSIDE ELEVATION



SECTION THRU PARAPET ON BRIDGE



DETAIL OF ANCHOR ASSEMBLY

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

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

◐ CONST. JOINT - STRIKE OFF AS SHOWN.

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-62-245

DRAWN BY NJT | PLANS CK'D. TLP

SINGLE SLOPED PARAPET 32SS

SHEET 14 OF 14

64

SCALE = 1:1

8

8

CTH S - INCREMENTAL VOLUME

		END AREA		COMMON*		FILL		
					1.0		1.3	MASS
	DISTANCE	COMMON	FILL	RAW	ADJ	RAW	ADJ	HAUL
STATION	FT	SF	SF	CY	CY	CY	CY	CY
7+50	0	5.0	38.6	0.0	0.0	0.0	0.0	0.0
8+00	50	42.0	14.1	43.5	43.5	48.8	63.4	-19.9
8+50	50	39.7	15.2	75.6	75.6	27.2	35.3	40.3
9+00	50	25.0	72.9	59.9	59.9	81.6	106.1	-46.2
9+38	38	24.7	78.0	35.0	35.0	106.2	138.0	-103.1

*SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT, SEE MQ TABLES

CTH S - INCREMENTAL VOLUME

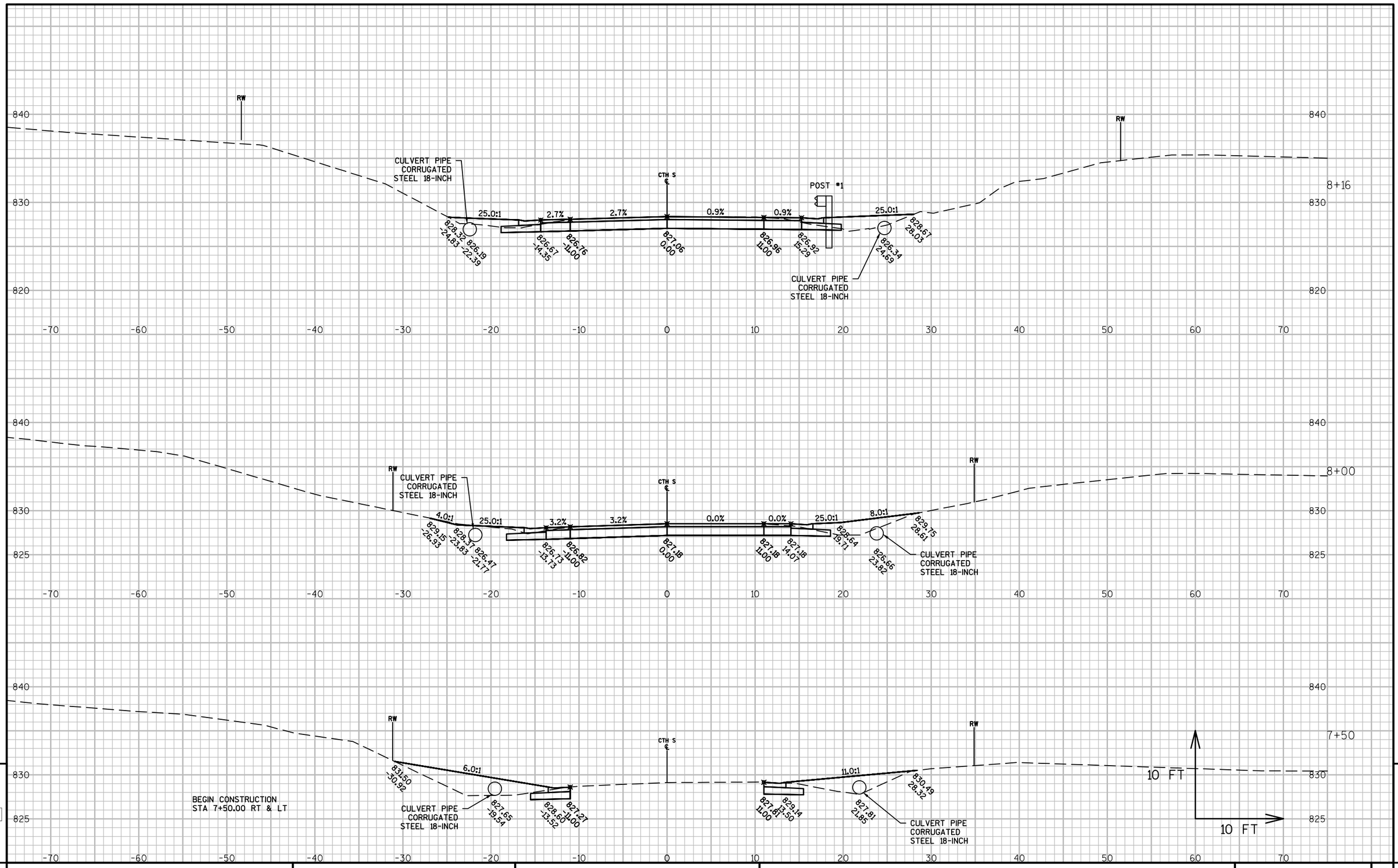
		END AREA		COMMON*		FILL		
					1.0		1.3	MASS
	DISTANCE	COMMON	FILL	RAW	ADJ	RAW	ADJ	HAUL
STATION	FT	SF	SF	CY	CY	CY	CY	CY
10+81	0	57.1	25.3	0.0	0.0	0.0	0.0	0.0
11+00	19	57.1	25.3	40.2	40.2	17.8	23.1	17.0
11+50	50	39.2	90.5	89.2	89.2	107.3	139.4	-50.3
12+00	50	42.8	135.4	75.9	75.9	209.2	272.0	-196.1
12+50	50	20.2	69.6	58.3	58.3	189.9	246.8	-188.5

*SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT, SEE MQ TABLES

DEAVER DR - INCREMENTAL VOLUME

		END AREA		COMMON*		FILL		
					1.0		1.3	MASS
	DISTANCE	COMMON	FILL	RAW	ADJ	RAW	ADJ	HAUL
STATION	FT	SF	SF	CY	CY	CY	CY	CY
50+20	0	0.0	265.2	0.0	0.0	0.0	0.0	0.0
50+50	30	0.0	265.2	0.0	0.0	27.2	383.0	-383.0
51+00	50	0.0	294.5	0.0	0.0	81.6	673.7	-673.7
51+50	50	125.5	165.7	116.2	116.2	106.2	553.9	-437.7
52+00	50	51.4	29.8	163.8	163.8	0.0	235.3	-71.6
52+48	48	10.6	0.0	55.0	55.0	0.0	34.4	20.6

*SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT, SEE MQ TABLES



PROJECT NO: 5289-00-71	HWY: CTH S	COUNTY: VERNON	CROSS SECTIONS: CTH S	SHEET 66	E

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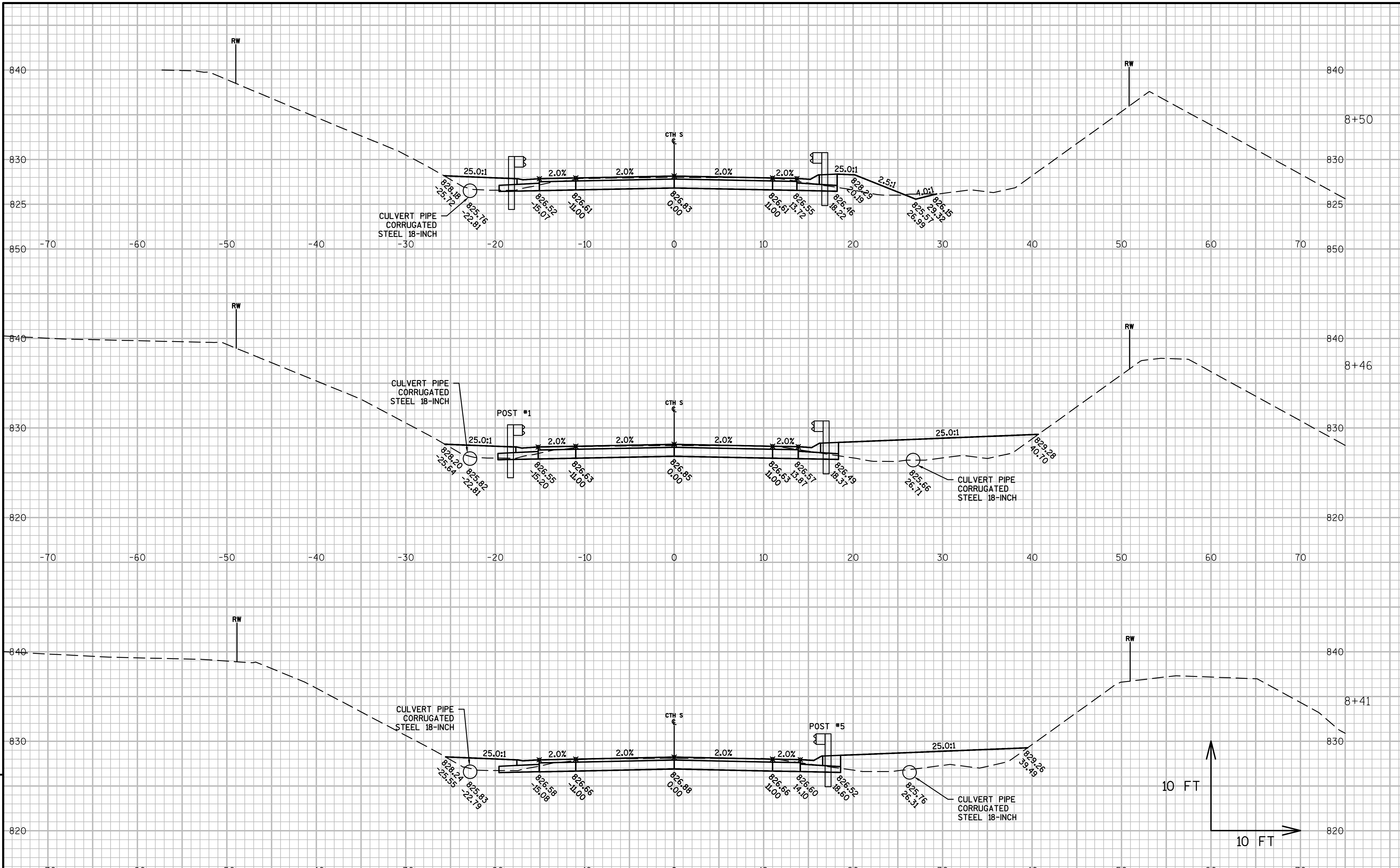
LAYOUT NAME - 01-XS
PLOTTED : 10/20/2017 1:42 PM
PLOT BY : BRIAN GENSKOW
PLOT NAME :
PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49



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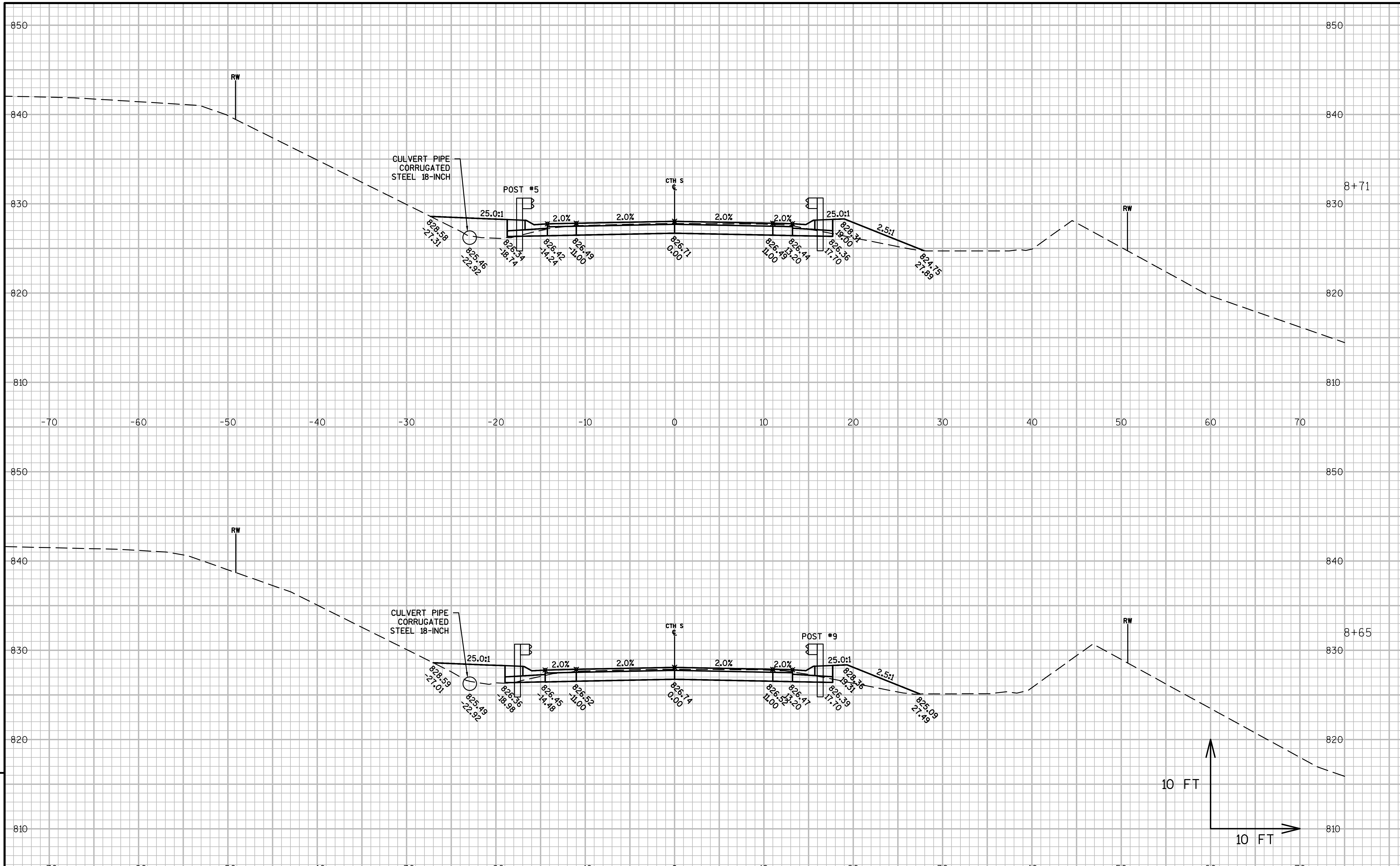

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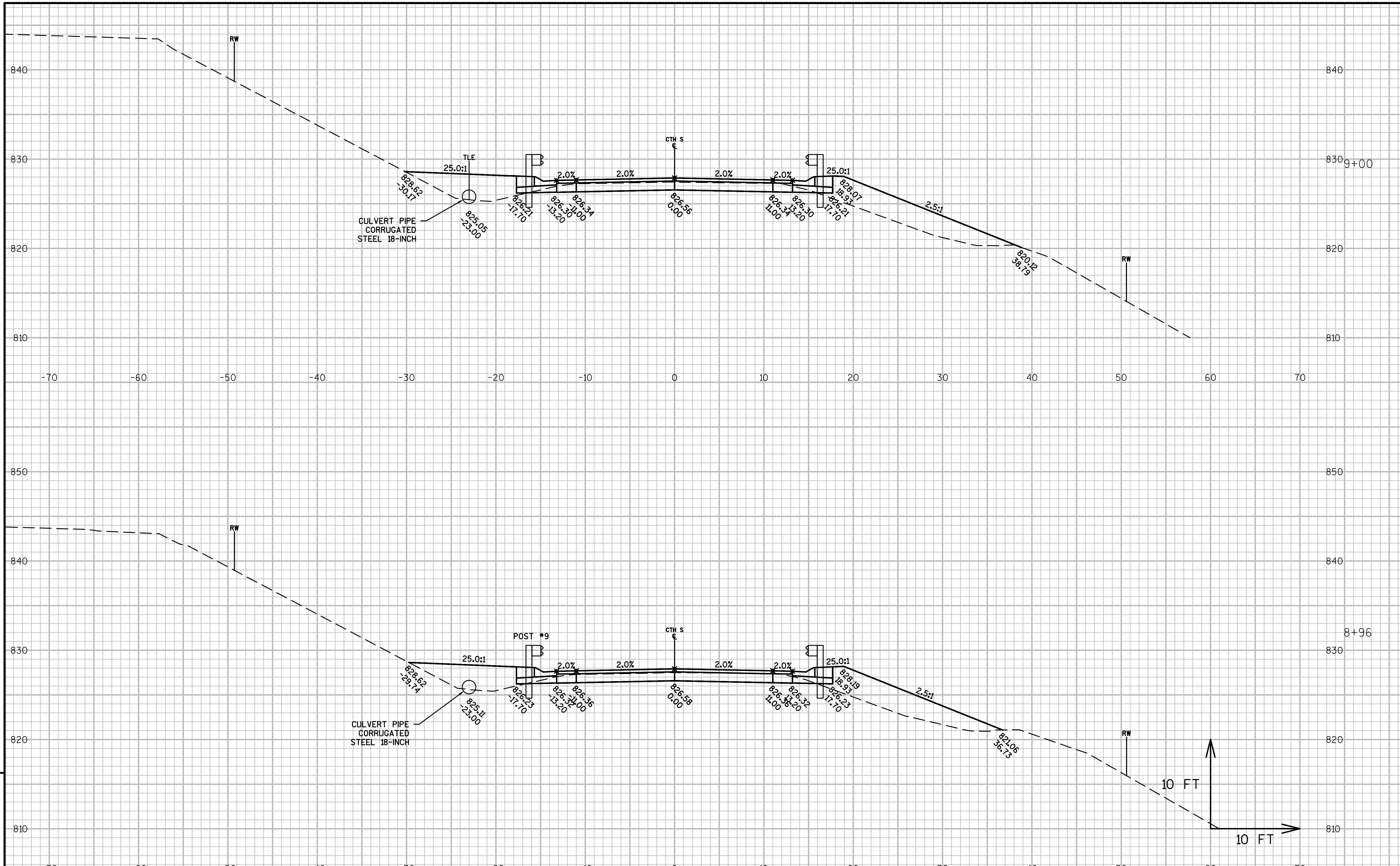
LAYOUT NAME - 03-XS

WISDOT/CADDS SHEET 49



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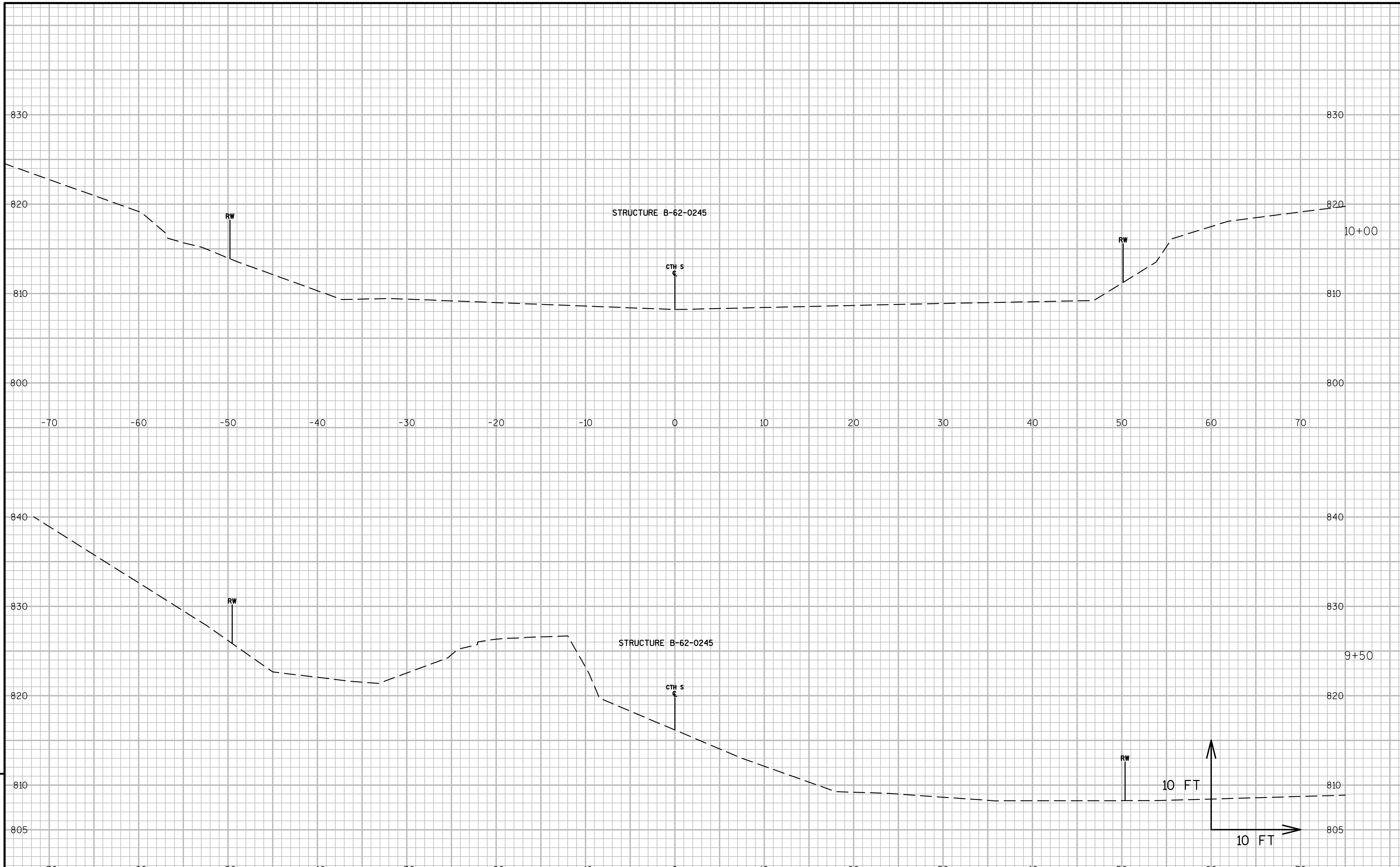
LAYOUT NAME - 04-XS



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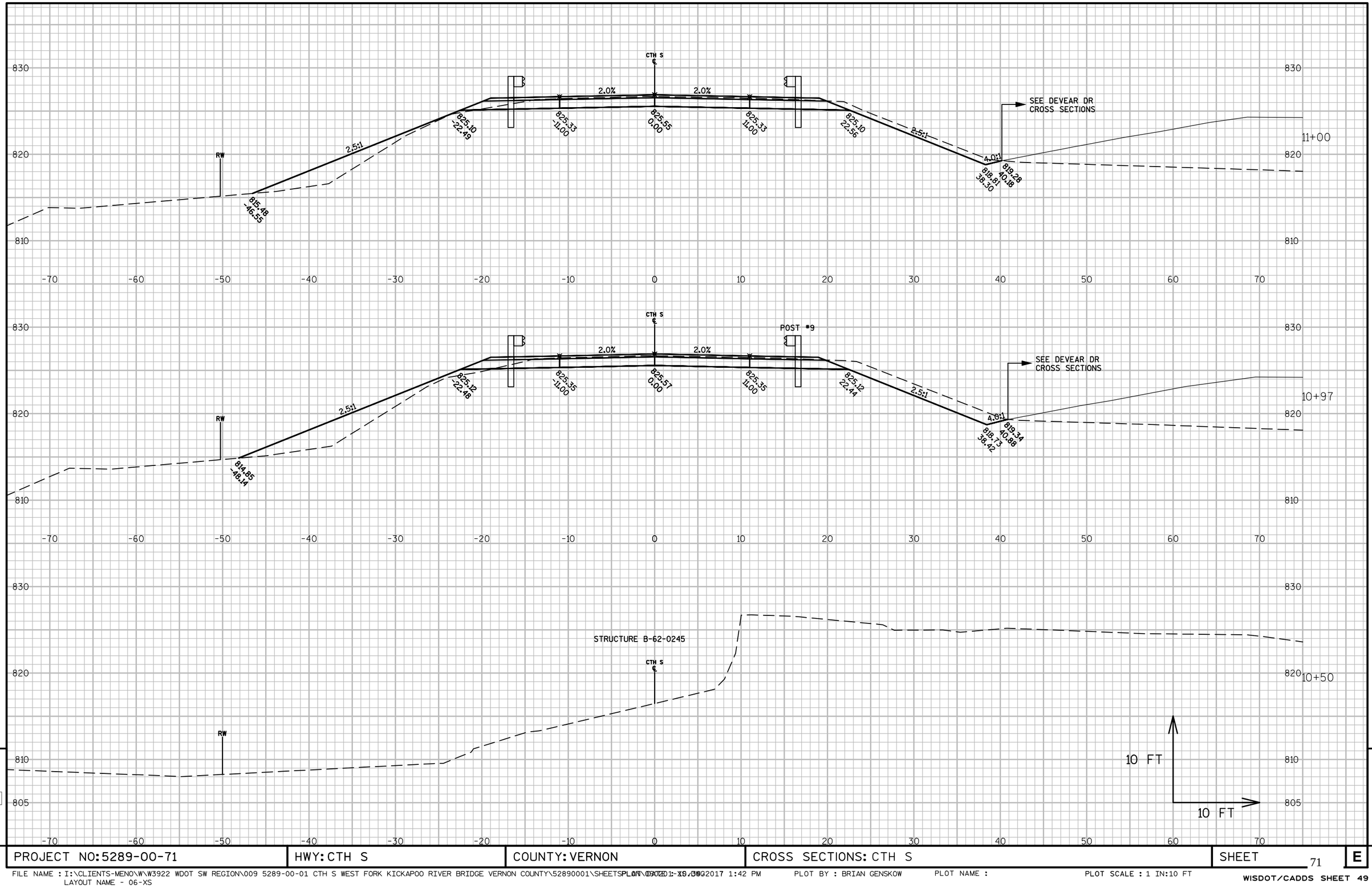

PROJECT NO: 5289-00-71	HWY: CTH S	COUNTY: VERNON	CROSS SECTIONS: CTH S	SHEET 71	E

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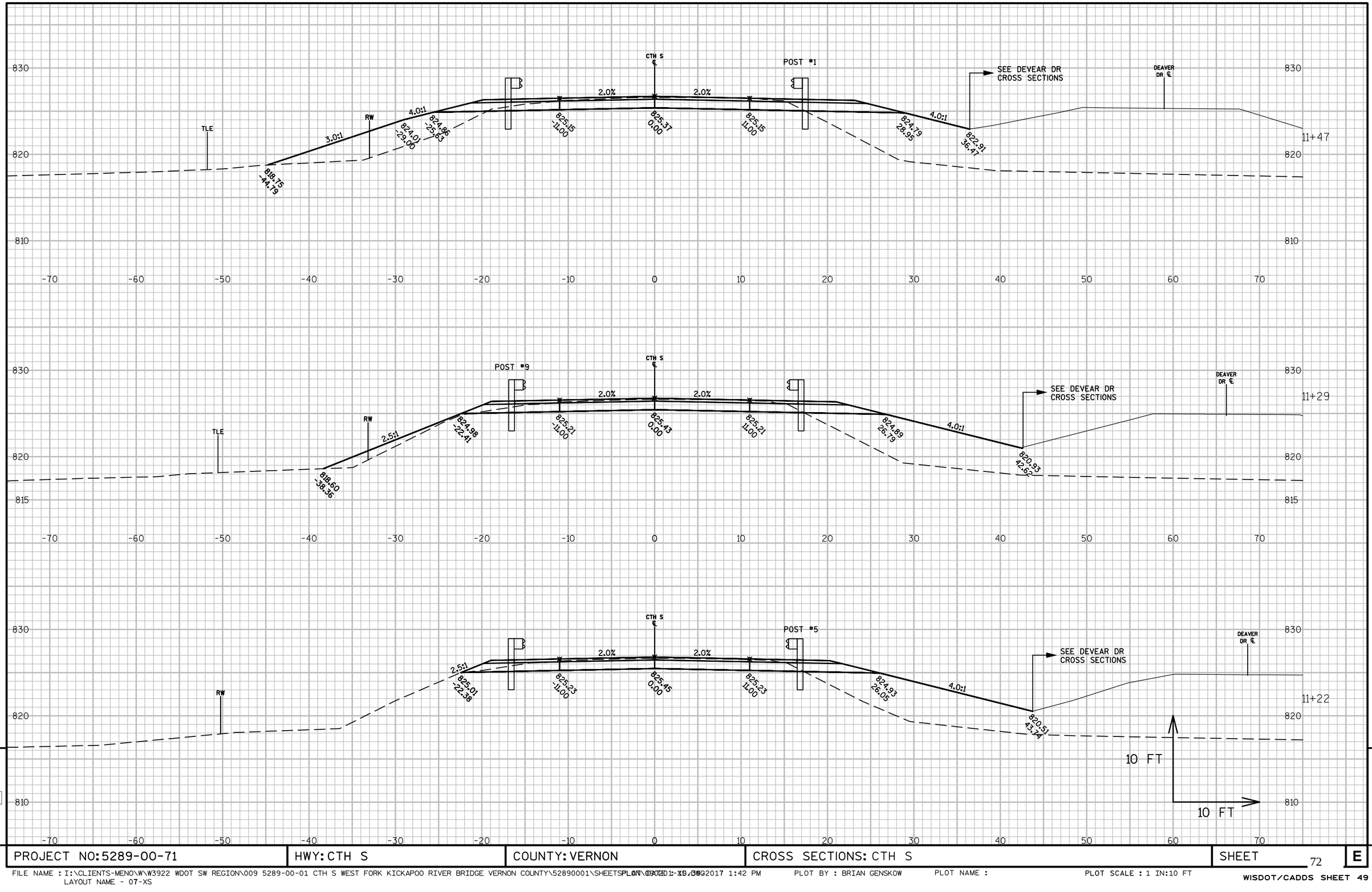
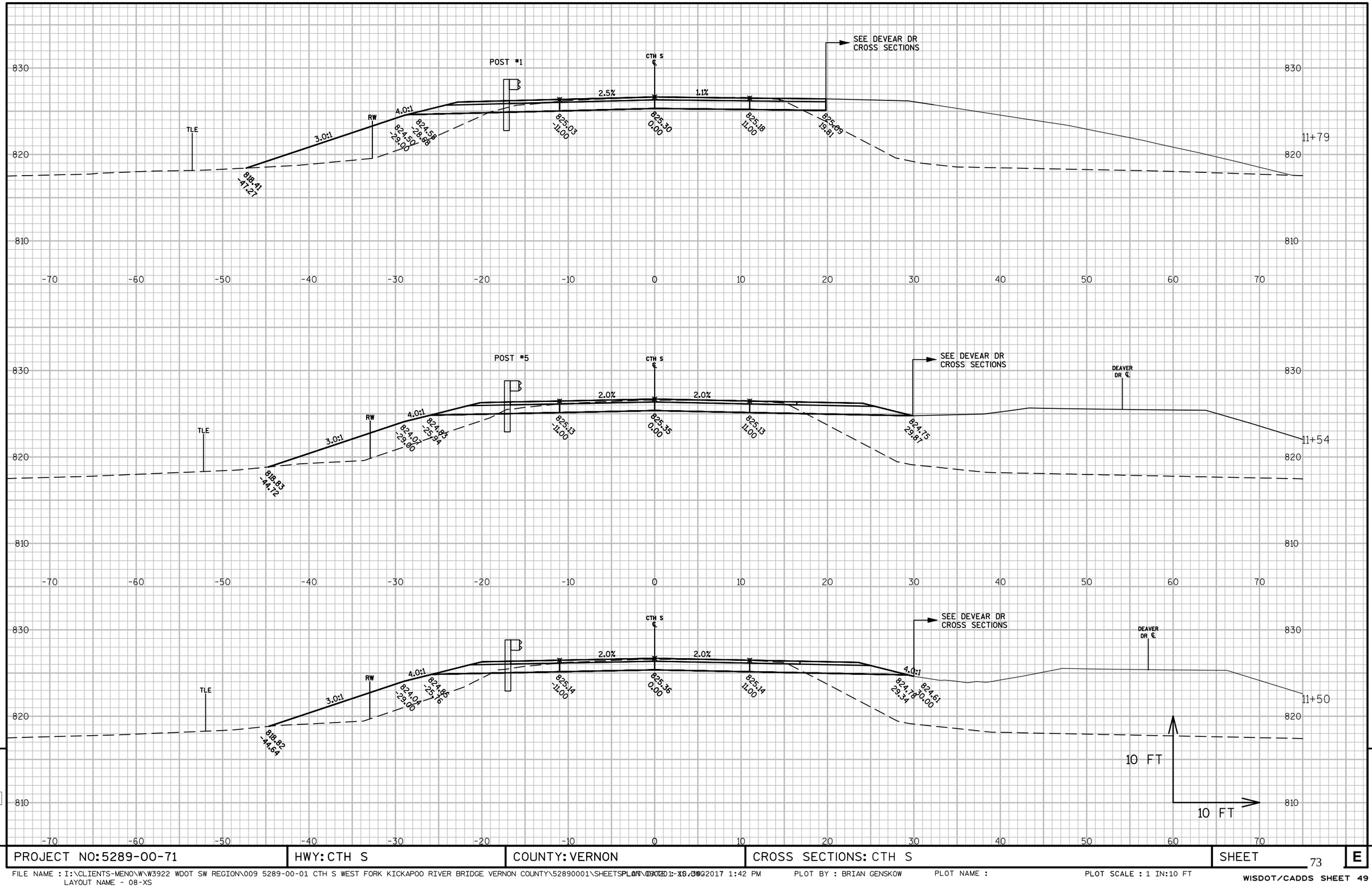
LAYOUT NAME - 06-XS
PLOT DATE : 8/21/2017 1:42 PM
PLOT BY : BRIAN GENSKOW
PLOT NAME :
PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 49

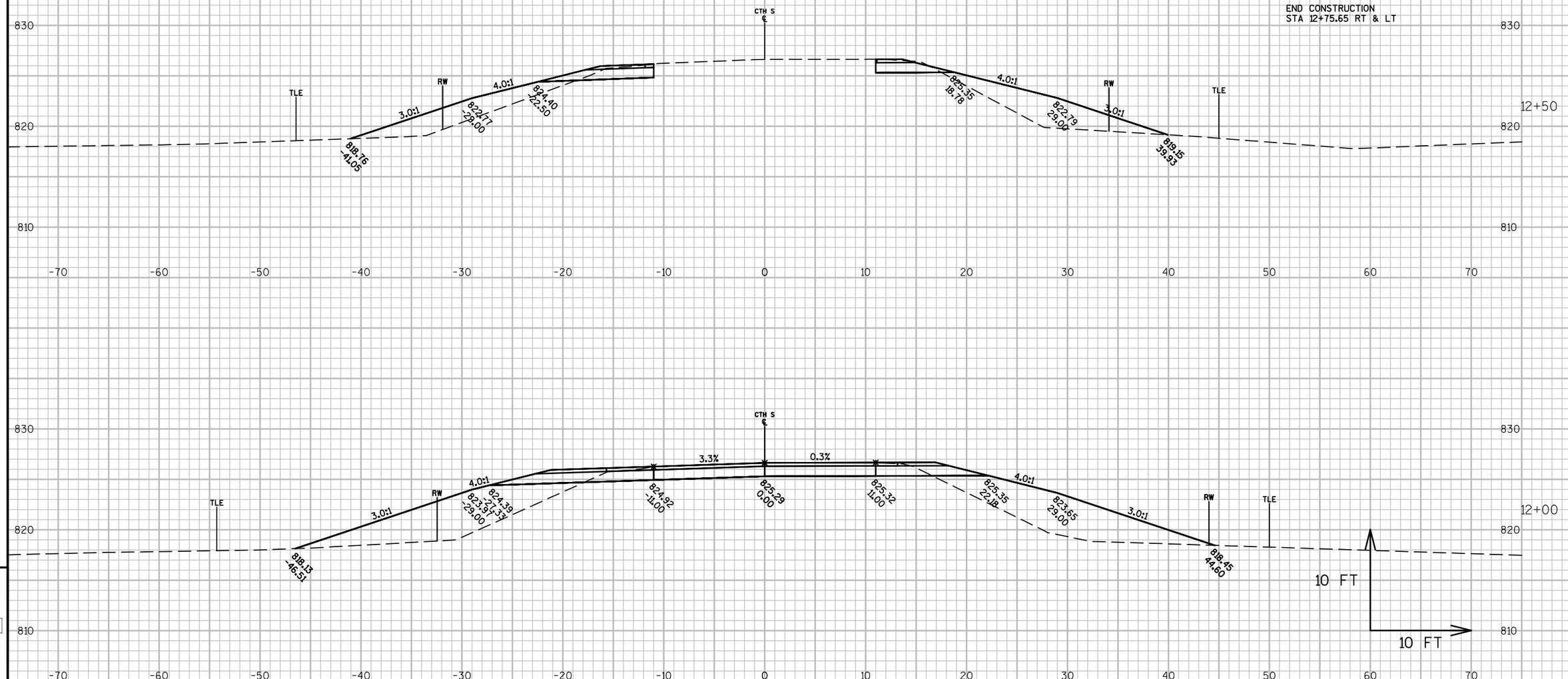


PROJECT NO: 5289-00-71	HWY: CTH S	COUNTY: VERNON	CROSS SECTIONS: CTH S	SHEET 72	E



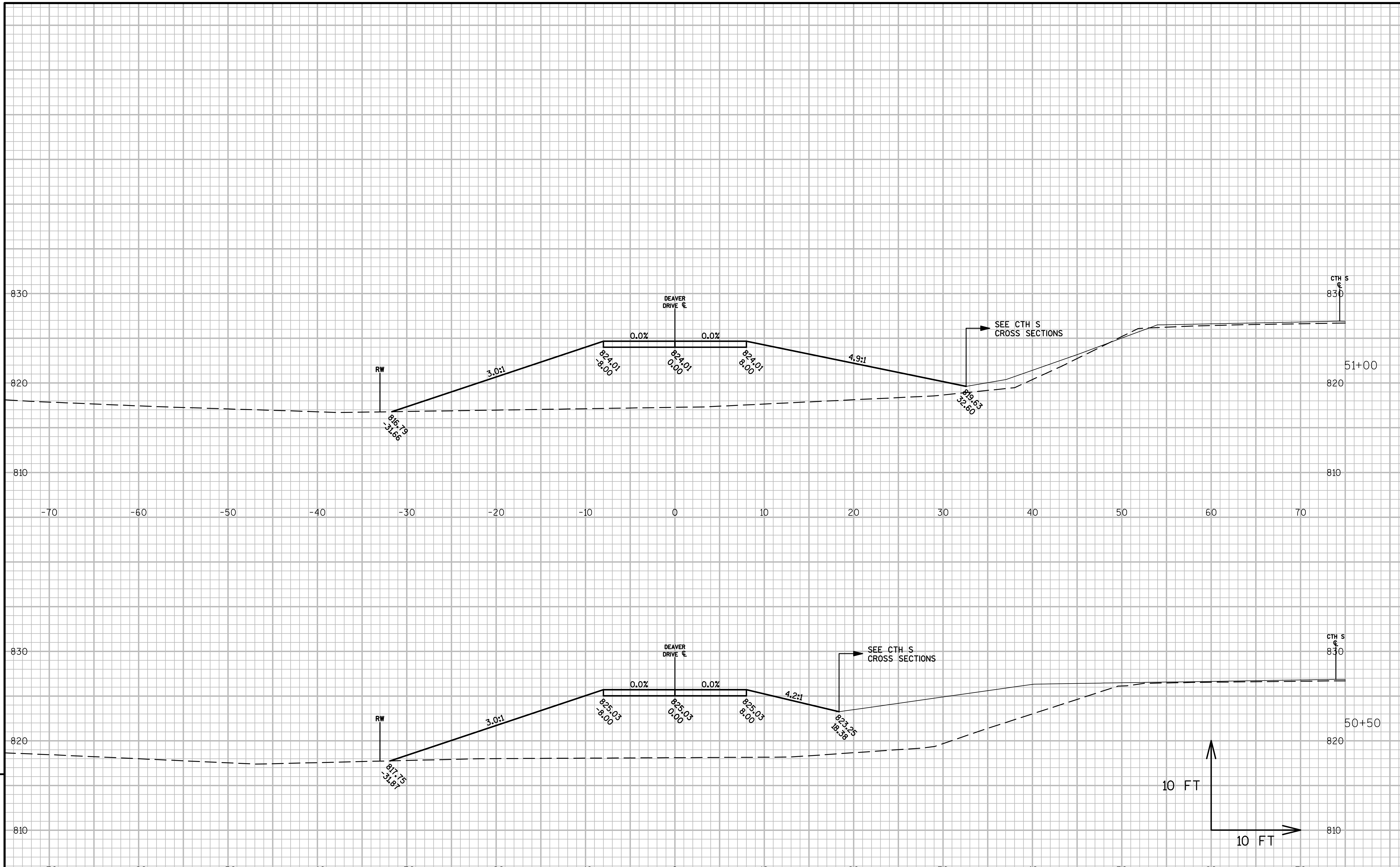
PROJECT NO: 5289-00-71	HWY: CTH S	COUNTY: VERNON	CROSS SECTIONS: CTH S	SHEET 73	E

END CONSTRUCTION
STA 12+75.65 RT & LT



PROJECT NO: 5289-00-71	HWY: CTH S	COUNTY: VERNON	CROSS SECTIONS: CTH S	SHEET 74	E

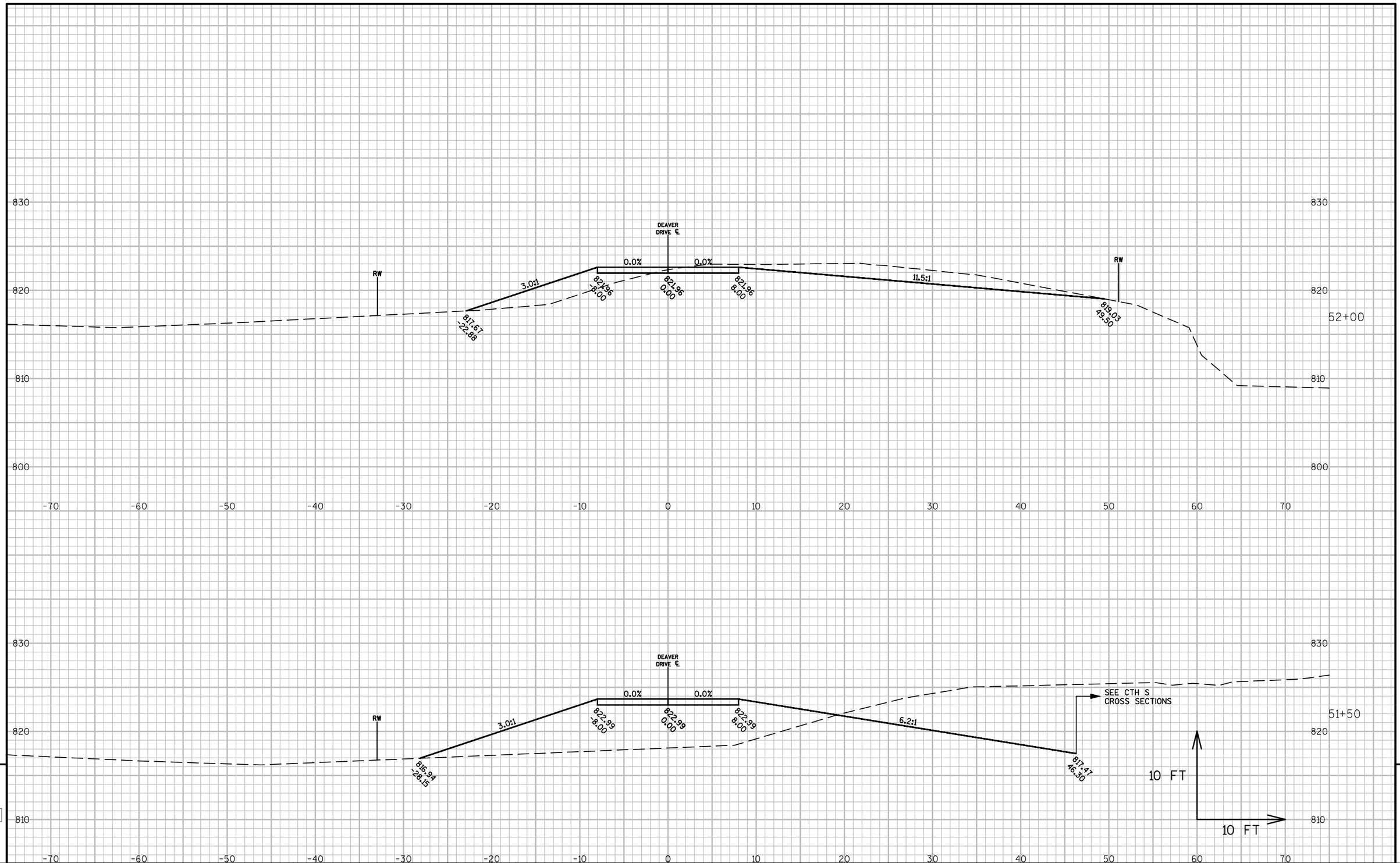
FILE NAME : I:\CLIENTS-MENO\W\W3922 WDOT SW REGION\009 5289-00-01 CTH S WEST FORK KICKAPOO RIVER BRIDGE VERNON COUNTY\52890001\SHEETS\PLAN\DXCD1-XS.DWG
LAYOUT NAME - 09-XS
PLOTTED : 10/30/2017 1:42 PM
PLOT BY : BRIAN GENSKOW
PLOT NAME :
PLOT SCALE : 1 IN:10 FT



PROJECT NO:5289-00-71	HWY:CTH S	COUNTY:VERNON	CROSS SECTIONS:DEAVER DRIVE	SHEET 75	E

FILE NAME : I:\CLIENTS-MENO\W\W3922 WDOT SW REGION\009 5289-00-01 CTH S WEST FORK KICKAPOO RIVER BRIDGE VERNON COUNTY\52890001\SHEETSPLAN\090202-XS.DWG PLOT DATE : 10/30/2017 1:43 PM PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : 1 IN:10 FT
LAYOUT NAME - 06-XS

WISDOT/CADDS SHEET 49



PROJECT NO: 5289-00-71	HWY: CTH S	COUNTY: VERNON	CROSS SECTIONS: DEAVER DRIVE	SHEET 76	E

FILE NAME : I:\CLIENTS-MENO\W\W3922 WDOT SW REGION\009 5289-00-01 CTH S WEST FORK KICKAPOO RIVER BRIDGE VERNON COUNTY\52890001\SHEETS\PLAN\DXCD2-XS.DWG
LAYOUT NAME - 07-XS
PLOT DATE : 12/19/2017 1:43 PM
PLOT BY : BRIAN GENSKOW
PLOT NAME :
PLOT SCALE : 1 IN:10 FT

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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