EAU SEPTEMBER 2022

PROJECT ID: 7834-03-73
WITH: N/A

23

COUNTY: CLARK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CTH M - STH 73

S FK EAU CLAIRE RIVER BR B-10-0387

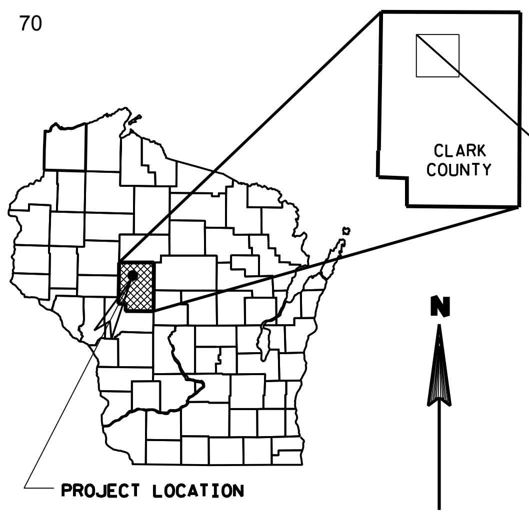
CTH N
CLARK COUNTY

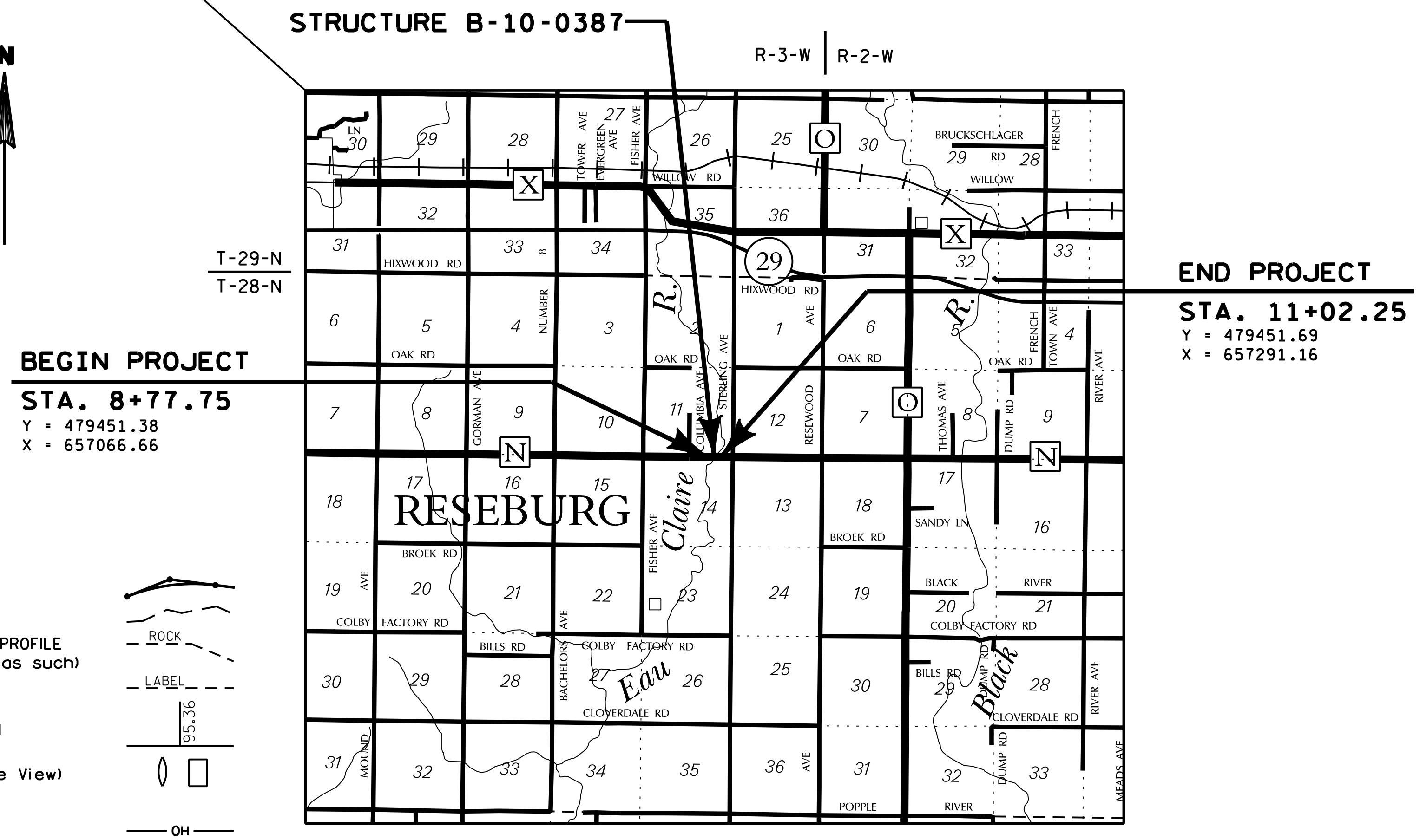
STATE PROJECT NUMBER
7834-03-73

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7834-03-73	WISC 2022530	1

ORDER OF SHEETS

TOTAL SHEETS = 70





LAYOUT
SCALE 0 1 MI.

DESIGN DESIGNATION

A.A.D.T. (2022)	=	580
A.A.D.T. (2042)	=	640
D.H.V.	=	60
D.	=	50/50
T.	=	5%
DESIGN SPEED	=	55 MPH
ESALS	=	52,000

CONVENTIONAL SYMBOLS
PLAN

CORPORATE LIMITS
PROPERTY LINE (PL + 58.1)
LOT LINE
LIMITED HIGHWAY EASEMENT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE
SLOPE INTERCEPT
REFERENCE LINE
EXISTING CULVERT
PROPOSED CULVERT (Box or Pipe)
COMBUSTIBLE FLUIDS (CAUTION)
HIGH VOLTAGE (CAUTION)
MARSH AREA
WOODED OR SHRUB AREA

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

UTILITIES
OVERHEAD — OH —
ELECTRIC — E —
FIBER OPTIC — FO —
GAS — G —
SANITARY SEWER — SAN —
STORM SEWER — SS —
TELEPHONE — T —
WATER — W —
UTILITY PEDESTAL
POWER POLE
TELEPHONE POLE

TOTAL NET LENGTH OF CENTERLINE = 0.043 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CLARK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ACCEPTED FOR
County of Clark
10/08/2021
Date
Highway Commissioner

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

WISCONSIN PROFESSIONAL ENGINEER
DANIEL N. SYDOW
E-38363
WI
10/12/2021
DATE

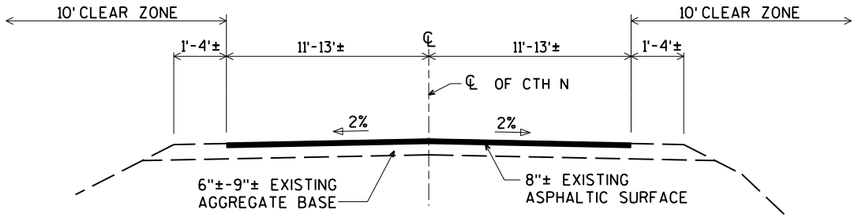
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

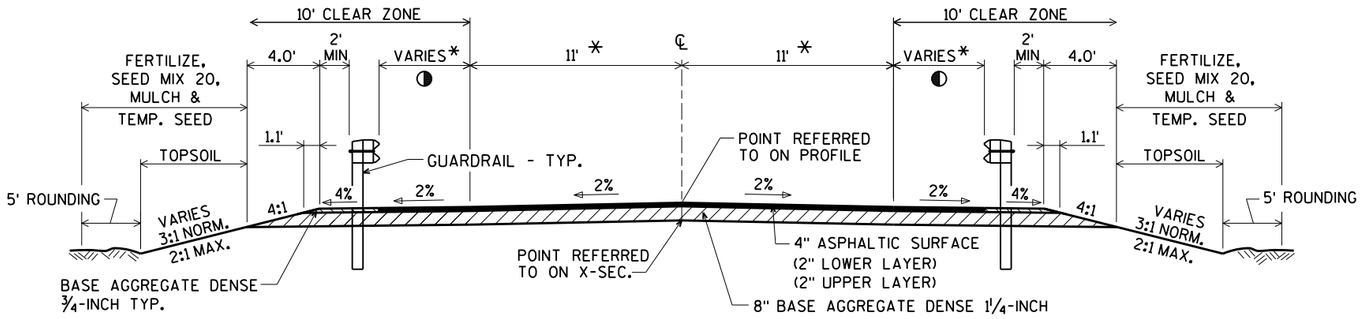
Surveyor	AYRES ASSOCIATES INC
Designer	AYRES ASSOCIATES INC
Project Manager	MATTHEW THORNSEN, PE
Regional Examiner	TOU YANG, PE
Regional Supervisor	TYLER RONGSTAD, PE

APPROVED FOR THE DEPARTMENT
DATE: 10/29/2021
(Signature)

E



EXISTING TYPICAL SECTION

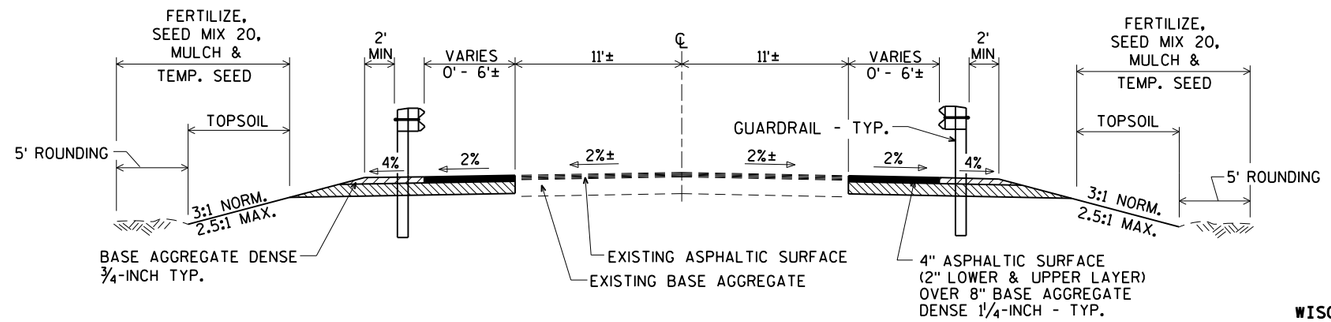


TYPICAL FINISHED SECTION

STA. 8+77.75 - STA. 9+27.75
STA. 10+52.25 - STA. 11+02.25

* THE ASPHALTIC SURFACE SHALL BE PLACED 30 FEET WIDE AT THE ENDS OF THE BRIDGE AND FOLLOW THE FACE OF GUARDRAIL, AND TAPER TO MATCH EXISTING AT THE ENDS OF THE PROJECT.

◑ 4' NORMAL
4' MIN. (AT END OF BRIDGE)
6' MAX. (AT END TERMINAL)



TYPICAL FINISHED SECTION - SHOULDER WIDENING

STA. 7+07.56 - STA. 8+77.75, RT
STA. 7+21.81 - STA. 8+77.75, LT
STA. 11+02.25 - STA. 12+95.69, LT
STA. 11+02.25 - STA. 12+39.44, RT

GENERAL NOTES

EROSION CONTROL ITEMS TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

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

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.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCLUSIVE OF THE ROADBED, SHALL BE FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.

ASPHALTIC REMOVAL IS INCLUDED IN THE ITEM EXCAVATION COMMON.

THE DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH A MONUMENT TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD 88).

ASPHALT SURFACE SHALL USE ½" NOMINAL AGGREGATE SIZE.

WETLANDS EXIST IN THE PROJECT AREA. NO DISTURBANCE IS ALLOWED OUTSIDE THE SLOPE INTERCEPTS.

UTILITIES

DAIRYLAND POWER COOPERATIVE
P.O. BOX 817
LA CROSSE, WI 54602
ATTN: MIKE LYDON
608-787-1381
Michael.Lydon@DairylandPower.com

LUMEN TECHNOLOGIES
425 ELLINGSON AVENUE
HAWKINS, WI 54530
ATTN: BRIAN HUHN
608-615-7347
715-563-8294 (CELL)
Brian.huhn@lumen.com

CLARK ELECTRIC COOPERATIVE
124 NORTH MAIN STREET
P.O. BOX 190
GREENWOOD, WI 54437
ATTN: KENT WEIGEL
715-267-7955
715-207-8883 (CELL)
kweigel@cecoop.com

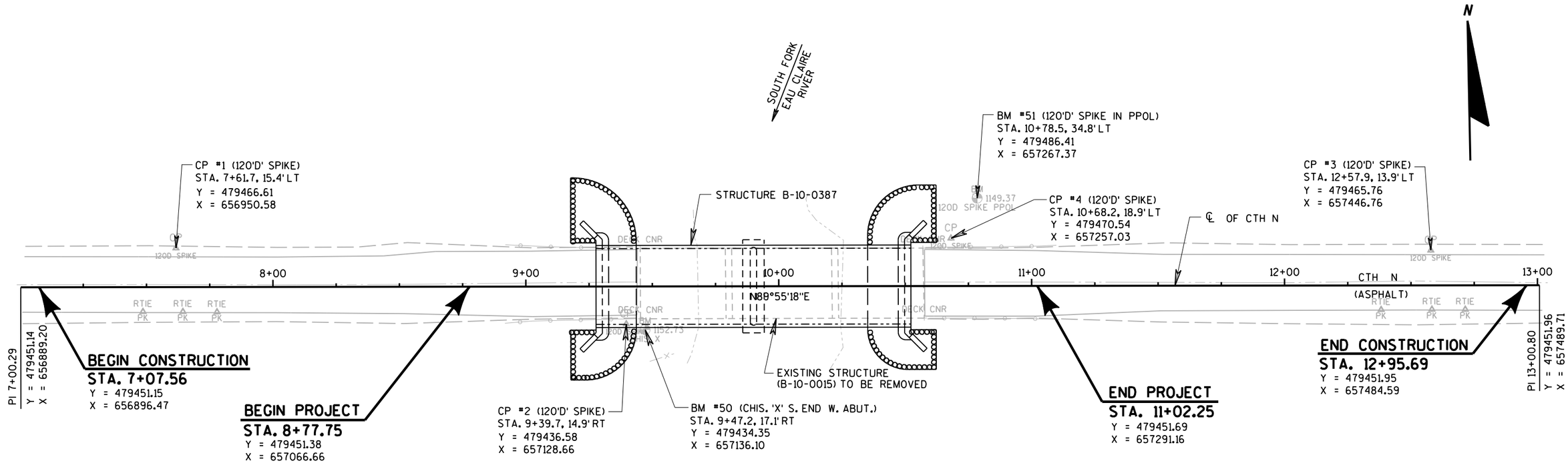
** DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

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

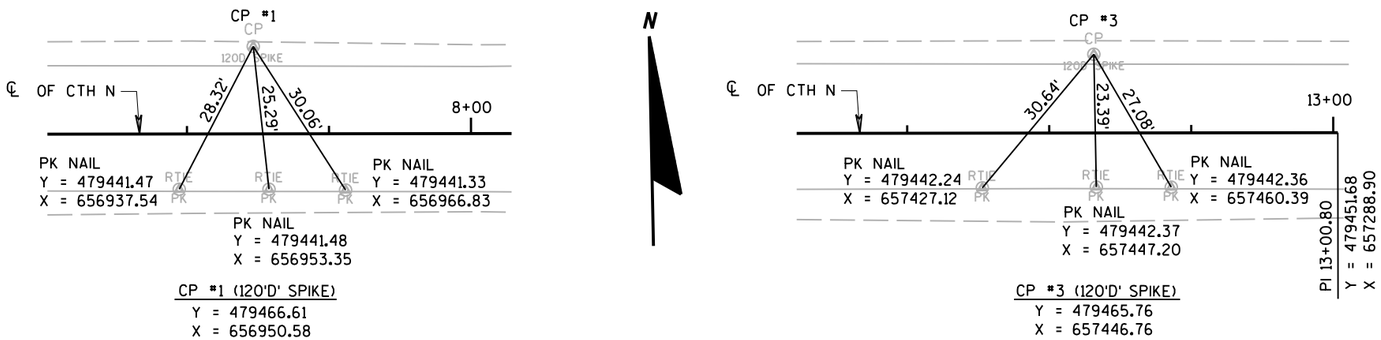
WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONTACT:
BRAD BETTHAUSER
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
715-421-7851
Bradley.Betthauser@Wisconsin.gov

COUNTY CONTACT
CLARK COUNTY HIGHWAY DEPT.
801 CLAY STREET
NEILLSVILLE, WI 54456
ATTN: BRIAN DUELL, COMMISSIONER
715-743-3680
brian.duell@co.clark.wi.us

DESIGNER
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: DANIEL SYDOW, PE
715-834-3161
sydowd@ayresassociates.com



ALIGNMENT CONTROLS



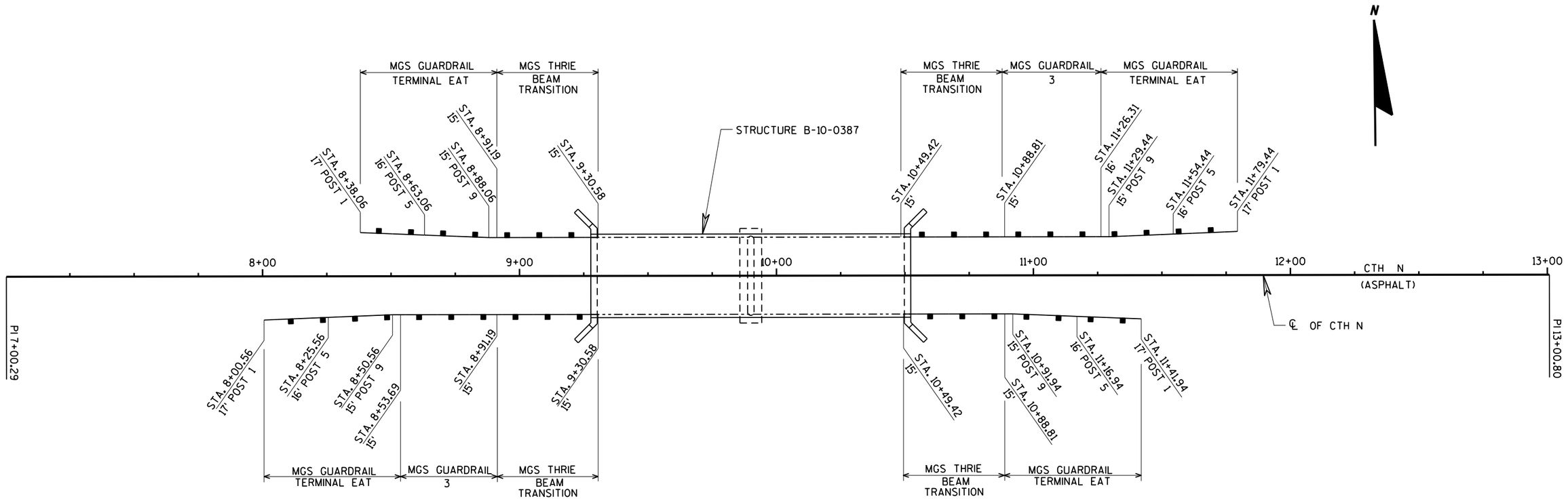
CP #1 (120'D' SPIKE)
Y = 479466.61
X = 656950.58

CP #3 (120'D' SPIKE)
Y = 479465.76
X = 657446.76

ALIGNMENT TIES

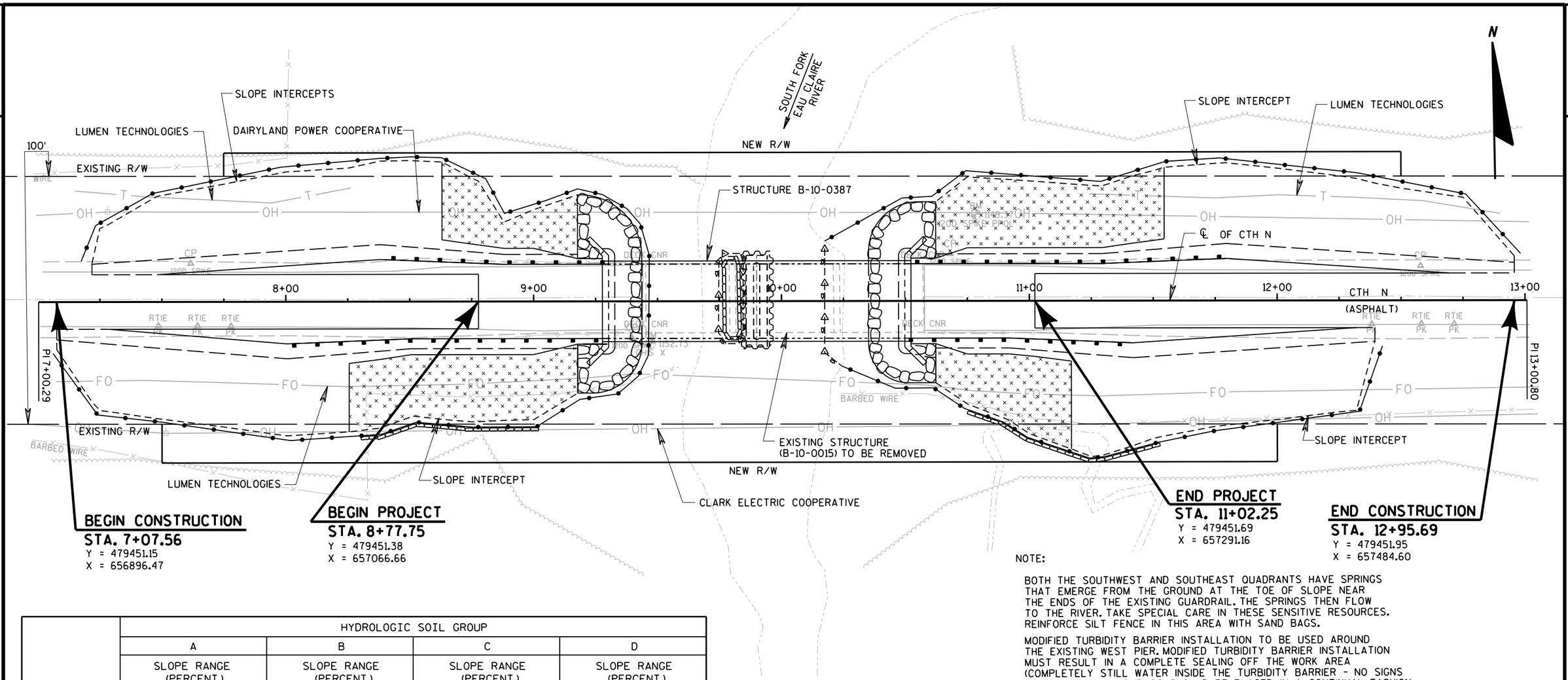
PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	ALIGNMENT CONTROLS & TIES	SHEET 3	E

2



GUARDRAIL LAYOUT

PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CONSTRUCTION DETAILS	SHEET 4	E



BEGIN CONSTRUCTION
STA. 7+07.56
Y = 479451.15
X = 656896.47

BEGIN PROJECT
STA. 8+77.75
Y = 479451.38
X = 657066.66

END PROJECT
STA. 11+02.25
Y = 479451.69
X = 657291.16

END CONSTRUCTION
STA. 12+95.69
Y = 479451.95
X = 657484.60

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

TOTAL PROJECT AREA = 1.317 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.885 ACRES

HIGH WATER$_2$ EL. 1145.54

NOTE:

BOTH THE SOUTHWEST AND SOUTHEAST QUADRANTS HAVE SPRINGS THAT EMERGE FROM THE GROUND AT THE TOE OF SLOPE NEAR THE ENDS OF THE EXISTING GUARDRAIL. THE SPRINGS THEN FLOW TO THE RIVER. TAKE SPECIAL CARE IN THESE SENSITIVE RESOURCES. REINFORCE SILT FENCE IN THIS AREA WITH SAND BAGS.

MODIFIED TURBIDITY BARRIER INSTALLATION TO BE USED AROUND THE EXISTING WEST PIER. MODIFIED TURBIDITY BARRIER INSTALLATION MUST RESULT IN A COMPLETE SEALING OFF THE WORK AREA (COMPLETELY STILL WATER INSIDE THE TURBIDITY BARRIER - NO SIGNS OF FLOW) AND SAND BAGS SHOULD BE PLACED IN A CONTINUAL FASHION, END TO END, ALONG THE BOTTOM FLAP AND THE ENDS SHOULD BE SECURED TIGHTLY AND ALSO SEALED WITH SANDBAGS.

CONVENTIONIAL TURBIDITY BARRIER INSTALLATION TO BE USED ALONG THE WEST SIDE OF THE EXISTING EAST PIER.

LEGEND

- EROSION MAT CLASS II TYPE C
- SILT FENCE
- TURBIDITY BARRIER
- RIPRAP HEAVY
- SAND BAGS
- COFFERDAM

PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 5	E

Estimate Of Quantities

7834-03-73

Line	Item	Item Description	Unit	Total	Qty
0002	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-10-0015	EACH	1.000	1.000
0004	204.0165	Removing Guardrail	LF	250.000	250.000
0006	205.0100	Excavation Common	CY	239.000	239.000
0008	206.1000	Excavation for Structures Bridges (structure) 01. B-10-0387	LS	1.000	1.000
0010	206.5000	Cofferdams (structure) 01. B-10-0387	LS	1.000	1.000
0012	208.0100	Borrow	CY	1,617.000	1,617.000
0014	210.1500	Backfill Structure Type A	TON	460.000	460.000
0016	213.0100	Finishing Roadway (project) 01. 7834-03-73	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	115.000	115.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	535.000	535.000
0022	455.0605	Tack Coat	GAL	81.000	81.000
0024	465.0105	Asphaltic Surface	TON	130.000	130.000
0026	502.0100	Concrete Masonry Bridges	CY	230.000	230.000
0028	502.3200	Protective Surface Treatment	SY	500.000	500.000
0030	502.9000.S	Underwater Substructure Inspection (structure) 01. B-10-0387	EACH	1.000	1.000
0032	503.0128	Prestressed Girder Type I 28-Inch	LF	614.000	614.000
0034	505.0400	Bar Steel Reinforcement HS Structures	LB	7,040.000	7,040.000
0036	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	29,950.000	29,950.000
0038	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	20.000	20.000
0040	506.4000	Steel Diaphragms (structure) 01. B-10-0387	EACH	8.000	8.000
0042	513.4061	Railing Tubular Type M	LF	253.000	253.000
0044	516.0500	Rubberized Membrane Waterproofing	SY	16.000	16.000
0046	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	1,400.000	1,400.000
0048	606.0300	Riprap Heavy	CY	295.000	295.000
0050	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0052	614.2300	MGS Guardrail 3	LF	75.000	75.000
0054	614.2500	MGS Thrie Beam Transition	LF	160.000	160.000
0056	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0058	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7834-03-73	EACH	1.000	1.000
0060	619.1000	Mobilization	EACH	1.000	1.000
0062	623.0200	Dust Control Surface Treatment	SY	1,060.000	1,060.000
0064	624.0100	Water	MGAL	6.000	6.000
0066	625.0100	Topsoil	SY	2,280.000	2,280.000
0068	627.0200	Mulching	SY	2,455.000	2,455.000
0070	628.1504	Silt Fence	LF	1,420.000	1,420.000
0072	628.1520	Silt Fence Maintenance	LF	4,260.000	4,260.000
0074	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0076	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0078	628.2027	Erosion Mat Class II Type C	SY	1,065.000	1,065.000
0080	628.6005	Turbidity Barriers	SY	240.000	240.000
0082	629.0210	Fertilizer Type B	CWT	2.100	2.100
0084	630.0120	Seeding Mixture No. 20	LB	98.000	98.000
0086	630.0200	Seeding Temporary	LB	98.000	98.000
0088	630.0300	Seeding Borrow Pit	LB	9.000	9.000
0090	630.0500	Seed Water	MGAL	80.000	80.000
0092	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0094	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0096	638.2602	Removing Signs Type II	EACH	4.000	4.000
0098	638.3000	Removing Small Sign Supports	EACH	4.000	4.000

7834-03-73

Line	Item	Item Description	Unit	Total	Qty
0100	642.5001	Field Office Type B	EACH	1.000	1.000
0102	643.0420	Traffic Control Barricades Type III	DAY	1,800.000	1,800.000
0104	643.0705	Traffic Control Warning Lights Type A	DAY	2,800.000	2,800.000
0106	643.0900	Traffic Control Signs	DAY	1,400.000	1,400.000
0108	643.5000	Traffic Control	EACH	1.000	1.000
0110	645.0111	Geotextile Type DF Schedule A	SY	110.000	110.000
0112	645.0120	Geotextile Type HR	SY	525.000	525.000
0114	646.1020	Marking Line Epoxy 4-Inch	LF	505.000	505.000
0116	650.4500	Construction Staking Subgrade	LF	464.000	464.000
0118	650.5000	Construction Staking Base	LF	464.000	464.000
0120	650.6500	Construction Staking Structure Layout (structure) 01. B-10-0387	LS	1.000	1.000
0122	650.9910	Construction Staking Supplemental Control (project) 01. 7834-03-73	LS	1.000	1.000
0124	650.9920	Construction Staking Slope Stakes	LF	464.000	464.000
0126	690.0150	Sawing Asphalt	LF	703.000	703.000
0128	715.0502	Incentive Strength Concrete Structures	DOL	1,380.000	1,380.000
0130	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
0132	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0134	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0136	SPV.0090	Special 01. Flashing Stainless Steel	LF	239.000	239.000

REMOVING GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
0010	8+91	-	9+44	LT	62.5
0010	8+90	-	9+44	RT	62.5
0010	10+56	-	11+09	LT	62.5
0010	10+56	-	11+10	RT	62.5
				TOTAL 0010	250

CTH N EARTHWORK SUMMARY

From/To Station	Location	Common Excavation (1) (Item 205.0100) Cut	Unexpanded Fill	Expanded Fill (2) Factor 1.30	Mass Ordinate +/- (3)	Waste	Borrow (Item 208.0100)	Comment:
7+07.56 - 9+27.75	MAINLINE	119	661	859	-740	-740	740	
10+52.25 - 12+95.69	MAINLINE	120	767	997	-877	-877	877	
		239					**1,617**	

1) Common Excavation is the Cut. Item number 205.0100.

2) Expanded Fill. Factor = 1.30; Expanded Fill = Unexpanded Fill * Fill Factor

3) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material on the project.

4) All quantities shown in CY.

BASE AGGREGATE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
0010	7+07.56	-	9+27.75	LT/RT	55	265	3	WEST APPROACH
0010	10+52.25	-	12+95.69	LT/RT	60	270	3	EAST APPROACH
				TOTAL 0010	115	535	6	

ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	* 455.0605 TACK COAT GAL	** 465.0105 ASPHALTIC SURFACE TON	REMARKS
0010	7+29	-	9+28	MAINLINE	40	65	50' SOUTH APPROACH
0010	10+52	-	12+69	MAINLINE	41	65	50' NORTH APPROACH
				TOTAL 0010	81	130	

NOTES:

*** TACK COAT APPLICATION RATE = 0.07 GAL/SY**

**** ASSUMED HMA AT 112 LBS/SY/IN**

GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
0010	8+38.06	-	9+30.58	LT	-	40	1
0010	8+00.56	-	9+30.58	RT	37.5	40	1
0010	10+49.42	-	11+79.44	LT	37.5	40	1
0010	10+49.42	-	11+41.94	RT	-	40	1
				TOTAL 0010	75	160	4

3

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2027 EROSION MAT CLASS II TYPE C SY	628.6005 TURBIDITY BARRIERS SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB	630.0500 SEED WATER MGAL
0010	7+08	-	9+18	LT	520	520	290	870	130	115	0.40	18	18	-	15
0010	7+08	-	9+18	RT	580	440	290	870	275		0.40	20	20	3	16
0010	10+62	-	12+96	LT	650	515	305	915	280	75	0.50	22	22	-	18
0010	10+62	-	12+96	RT	530	490	250	750	165		0.40	18	18	4	15
0010		UNDISTRIBUTED			-	490	285	855	215	50	0.40	20	20	2	16
				TOTAL 0010	2,280	2,455	1,420	4,260	1,065	240	2.1	98	98	9	80

SIGNS

CATEGORY	STATION	LOCATION	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	9+26	LT	1	3	1	1	W5-52L
0010	9+26	RT	1	3	1	1	W5-52R
0010	10+53	LT	1	3	1	1	W5-52R
0010	10+53	RT	1	3	1	1	W5-52L
		TOTAL 0010	4	12	4	4	

TRAFFIC CONTROL

CATEGORY	LOCATION	DURATION DAYS	NO.	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	NO.	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	NO.	643.0900 TRAFFIC CONTROL SIGNS DAY	643.5000 TRAFFIC CONTROL EACH
0010	PER SDD 15C2	100	18	1,800	28	2,800	14	1,400	-
0010	CTH N	-	-	-	-	-	-	-	1
	TOTAL 0010			1,800		2,800		1,400	1

NOTES:
NO SIGNED DETOUR. ROAD CLOSED SIGNS TO BE PLACED AT ADJACENT INTERSECTIONS. (SDD 15C2 DETAILS C,D, & E)

MARKING LINE

CATEGORY	STATION	TO	STATION	LOCATION	646.1020 4-INCH MARKING LINE EPOXY YELLOW LF	646.1020 4-INCH MARKING LINE EPOXY WHITE LF	REMARKS
0010	8+77.75	-	11+02.25	C/L	56	-	YELLOW DASHED CENTERLINE
0010	8+77.75	-	11+02.25	LT	-	225	WHITE EDGELINE
0010	8+77.75	-	11+02.25	RT	-	225	WHITE EDGELINE
SUBTOTALS					56	449	
				TOTAL 0010	505		

3

STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6500.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-10-0387) LS	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 7834-03-73) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010		-		MAINLINE	464	464	-	-	464
0010		-		PROJECT 7834-03-73	-	-	-	1	-
				TOTAL 0010	464	464	0	1	464
0020		-		B-10-0387	-	-	1	-	-
				TOTAL 0020	0	0	1	0	0
				PROJECT TOTAL	464	464	1	1	464

SAWING ASHALT

CATEGORY	STATION	-	STATION	LOCATION	690.0150 SAWING ASPHALT LF
0010	7+07.56	-	8+77.75	RT	171
0010	7+21.81	-	8+77.75	LT	156
0010	8+77.75			MAINLINE	22
0010	11+02.25	-	12+39.44	RT	138
0010	11+02.25	-	12+95.69	LT	194
0010	11+02.25			MAINLINE	22
				TOTAL 0010	703

INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM

CATEGORY	STATION	999.2000.S INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM EACH
0010	10+00	1
	TOTAL 0010	1

CONVENTIONAL SYMBOLS

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

PARCEL NUMBER
PRW POINT NUMBER
SECTION CORNER
NOTATION FOR COMBUSTABLE FLUIDS
NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES
ACCESS CONTROLLED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
NATIONAL GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
PARALLEL OFFSETS

UTILITY NUMBER
TLE POINT NUMBER
R/W MONUMENT
NON-MONUMENTED R/W POINT
FOUND IRON PIN
VALVE (GAS, WATER, ETC.)
SIGN
OFF-PREMISE SIGN

CONVENTIONAL ABBREVIATIONS

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

CONVENTIONAL UTILITY SYMBOLS

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

CURVE DATA ABBREVIATIONS

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

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NO.	OWNER(S)	INTEREST REQUIRED	R/W (ACRES) NEW	EXISTING	TOTAL
1	J. ELMER SAUDER AND ANNA L. SAUDER	FEE	0.105	0.574	0.679
2	PALMER FAMILY TRUST	FEE	0.159	0.574	0.733
50	CLARK ELECTRIC COOPERATIVE	RELEASE OF RIGHTS			
51	LUMEN TECHNOLOGIES	RELEASE OF RIGHTS			
52	DAIRYLAND POWER COOPERATIVE	RELEASE OF RIGHTS			

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

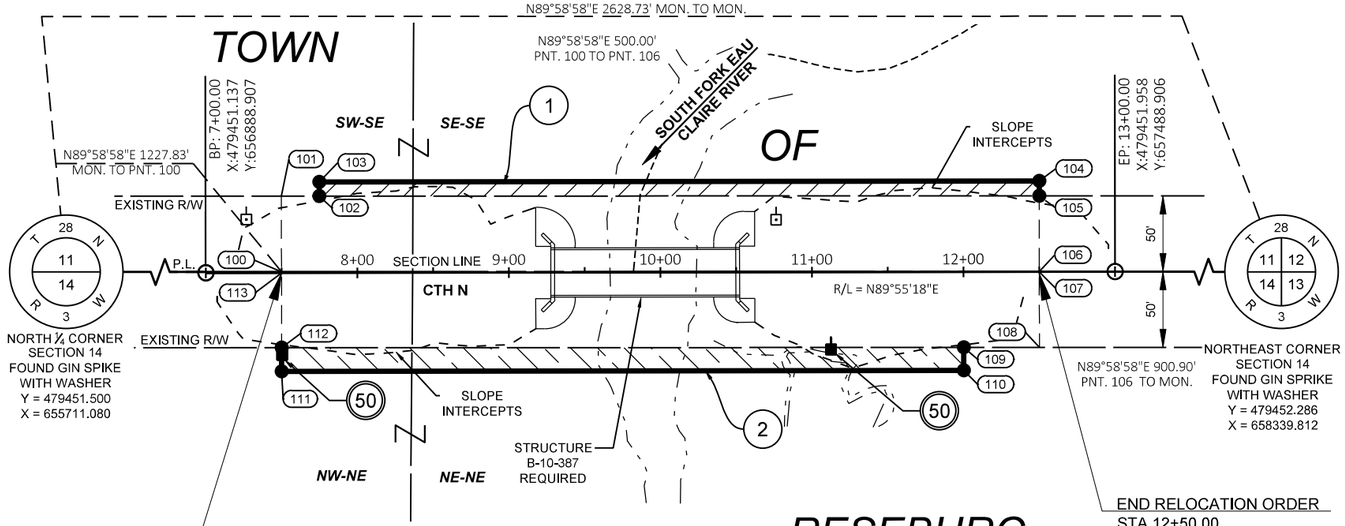
R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
7834-03-03		
CONSTRUCTION PROJECT NUMBER 7834-03-73	4.01	1

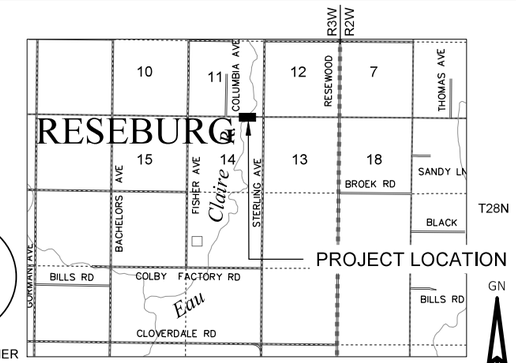
PLAT OF RIGHT OF WAY REQUIRED FOR

CTH M - STH 73

S FORK EAU CLAIRE RIVER BRIDGE B-10-0387

CTH N — CLARK COUNTY





LOCATION SKETCH
SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.094 MI.

BEGIN RELOCATION ORDER
STA 7+50.00
Y = 479451.869
X = 656938.906
LOCATED 0.37 FEET NORTH AND 1227.83 FEET EAST OF THE NORTH 1/4 CORNER OF SECTION 14, TOWNSHIP 28 NORTH, RANGE 3 WEST.

END RELOCATION ORDER
STA 12+50.00
Y = 479452.019
X = 657438.904
LOCATED 0.52 FEET NORTH AND 1727.83 FEET EAST OF THE NORTH 1/4 CORNER OF SECTION 14, TOWNSHIP 28 NORTH, RANGE 3 WEST.

50 CLARK ELECTRIC COOPERATIVE
V. 166, PG. 534, DOC. NO. 261610 - PARCEL 1
NO EASEMENTS OF RECORD - PARCEL 2

51 LUMEN TECHNOLOGIES
V. 349, PG. 355, DOC. NO. 369159 - PARCEL 1
V. 349, PG. 510, DOC. NO. 369243 - PARCEL 2

52 DAIRYLAND POWER COOPERATIVE
V. 325, PG. 619, DOC. NO. 358813 - PARCEL 1

R/W COURSE TABLE

COURSE	BEARING	DISTANCE
100-101	N00°04'42"W	50.00'
101-102	N89°58'58"E	25.00'
102-103	N00°04'42"W	9.36'
103-104	N89°55'18"E	475.00'
104-105	S00°04'42"E	9.87'
105-106	S00°04'42"E	50.00'
106-107	S00°04'42"E	0.13'
107-108	S00°04'42"E	49.87'
108-109	S89°58'58"W	50.00'
109-110	S00°04'42"E	15.18'
110-111	S89°55'18"W	450.00'
111-112	N00°04'42"W	15.66'
112-113	N00°04'42"W	49.34'
113-100	N00°04'42"W	0.66'

R/W STATION & OFFSET TABLE

POINT	STATION	OFFSET
100	7+50.00	0.66'
101	7+50.00	50.66'
102	7+75.00	50.64'
103	7+75.00	60.00'
104	12+50.00	60.00'
105	12+50.00	50.13'
106	12+50.00	0.13'
107	12+50.00	0.00'
108	12+50.00	49.87'
109	12+00.00	49.82'
110	12+00.00	65.00'
111	7+50.00	65.00'
112	7+50.00	49.34'
113	7+50.00	0.00'

N

0 50 100
SCALE, FEET

REVISION DATE

APPROVED
FOR
CLARK COUNTY

09/28/2021
DATE

Brian Duell
Digitally signed by Brian Duell
Date: 2021.09.28 18:26:26 -05'00'
HIGHWAY COMMISSIONER

PLAT PREPARED BY
AYRES

THE SURVEY IS PREPARED AT THE REQUEST OF CLARK COUNTY.

THE FIELD SURVEY WAS PERFORMED IN MARCH 2020.

THIS SURVEY IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
CHRISTOPHER R. BADTKE
S-3150
EAU CLAIRE
WI
LAND SURVEYOR

08/04/2021
CHRISTOPHER R. BADTKE, P.L.S. — DATE
S-3150

NOTES:

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

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

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (¾"x24" CAPPED IRON REBAR WEIGHING 1.50 LBS.LIN. FT.) AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

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

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

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

EXISTING ROAD RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINT OF REFERENCE:

EXISTING RIGHT OF WAY OF COUNTY HIGHWAY N WAS DETERMINED FROM PREVIOUS PROJECT NUMBER DS 063(6).

FILE NAME : I:\74\EC\421210.00 CLARK CTH N\CADD\C3D\RW\78340303_0401.DWG PLOT DATE : 8/4/2021 3:57 PM PLOT BY : BADTKE, CHRISTOPHER PLOT NAME :

NOTES:
FOR ALIGNMENT CONTROL POINTS, BEARINGS, AND COORDINATES, SEE "ALIGNMENT CONTROLS & TIES" SHEET.

FOR GUARDRAIL LAYOUT & APPROACH SLAB DETAIL, SEE "GUARDRAIL LAYOUT & APPROACH SLAB DETAIL" SHEET.

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
50	9+47.2	CHIS.'X' S. END W ABUT., 17.1' RT	1152.73
51	10+78.5	120'D' SPK IN PPOL, 34.8' LT	1149.37

N

SOUTH FORK EAU CLAIRE RIVER

LUMEN TECHNOLOGIES

DAIRYLAND POWER COOPERATIVE

SLOPE INTERCEPT

100'

NEW R/W

EXISTING R/W

BARBED WIRE

STRUCTURE B-10-387

BM #51

BM #50

CP #1

CP #2

CP #3

CP #4

℄ OF CTH N

CTH N (ASPHALT)

N88°55'18"E

PI 7+00.29

PI 13+00.80

EXISTING STRUCTURE (B-10-15) TO BE REMOVED

EXISTING FENCE TO BE REMOVED PRIOR TO CONSTRUCTION BY PRIVATE LANDOWNER

CLARK ELECTRIC COOPERATIVE

BEGIN CONSTRUCTION
STA. 7+07.56
Y = 479451.15
X = 656896.47

BEGIN PROJECT
STA. 8+77.75
Y = 479451.38
X = 657066.66

END PROJECT
STA. 11+02.25
Y = 479451.69
X = 657291.16

END CONSTRUCTION
STA. 12+95.69
Y = 479451.95
X = 657484.60

EARTHWORK SUMMARY
STA. 7+07.56 TO STA. 9+27.75
EXC. COMMON 119 C.Y.
FILL 661 C.Y.
SHR. = 30%
BORROW 740 C.Y.

EARTHWORK SUMMARY
STA. 10+52.25 TO STA. 12+95.69
EXC. COMMON 120 C.Y.
FILL 767 C.Y.
SHR. = 30%
BORROW 877 C.Y.

215' VC
K = 381.90

PC STA 8+82.50
PC EL 1155.41

PI STA 8+77.75
PI EL 1155.36

PI STA 9+90.00
PI EL 1156.42

PT STA 10+97.50
PT EL 1156.83

PI STA 11+02.25
PI EL 1156.84

HIGH WATER $_{100}$ EL. 1149.26

FINISHED ℄ PROFILE

WATER EL. 1141.6
(3-17-2020)

+0.94%

+0.38%

EXISTING ℄ PROFILE

REMOVING STRUCTURE OVER WATERWAY
MINIMAL DEBRIS STRUCTURE B-10-15
THREE-SPAN STEEL DECK GIRDER BRIDGE
26.4' CLEAR ROADWAY x 115.3' O.A.L.
0° SKEW

STA 9+90
STRUCTURE B-10-387 REQ'D.
TWO-SPAN 28" PRESTRESSED CONCRETE GIRDER BRIDGE
30'-0" CLEAR ROADWAY x 124'-6" O.A.L.
0° SKEW

EXISTING ELEVATION

PROPOSED ELEVATION

STREAM BED EL. 1137.4±

7+50	8+00	8+50	9+00	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00
1153.44	1154.39	1155.05	1155.61 / 1155.57	1148.45 / 1155.98	1137.11 / 1156.33	1149.14 / 1156.62	1156.83 / 1156.84	1157.08	1157.51	1157.92	1158.26

1170 1160 1150 1140 1130

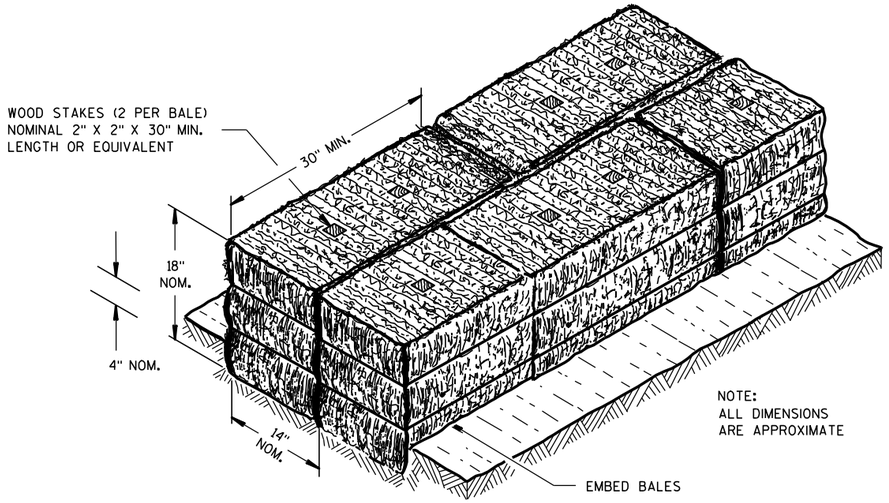
PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	PLAN AND PROFILE	SCALE, FEET 0 25 50	SHEET 12	E

I:\42\42-1210.00 - Clark Co, CTH N over S Fk Eau Claire River\Roadway\421210 pp.dgn 10/7/2021 PENTABLE:Wisdot_shd.tbl walderak 1:50

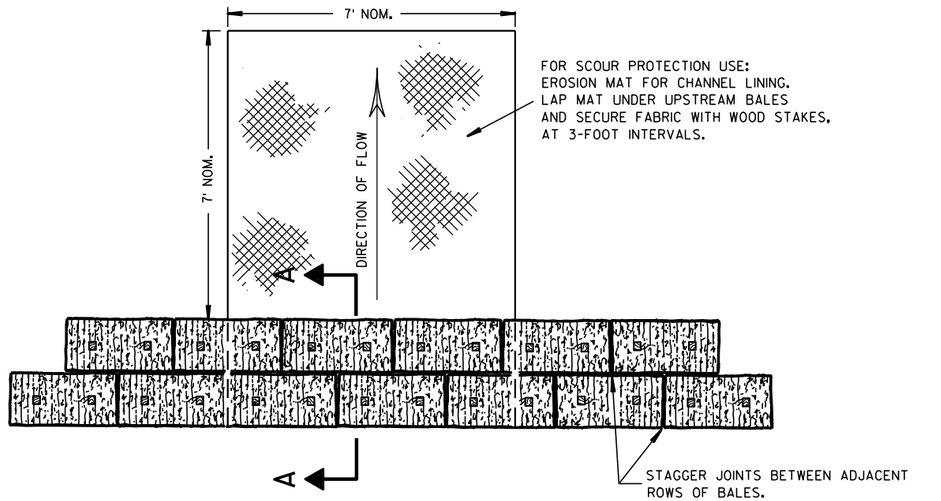
WISDOT/CADDS SHEET 40

Standard Detail Drawing List

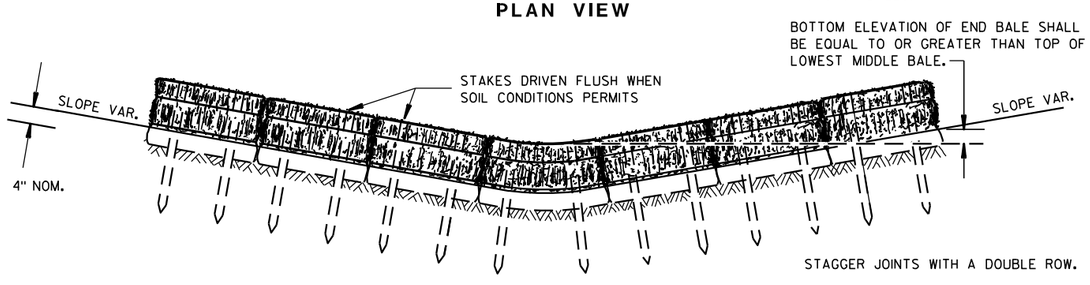
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-20A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



SECTION A-A



PLAN VIEW



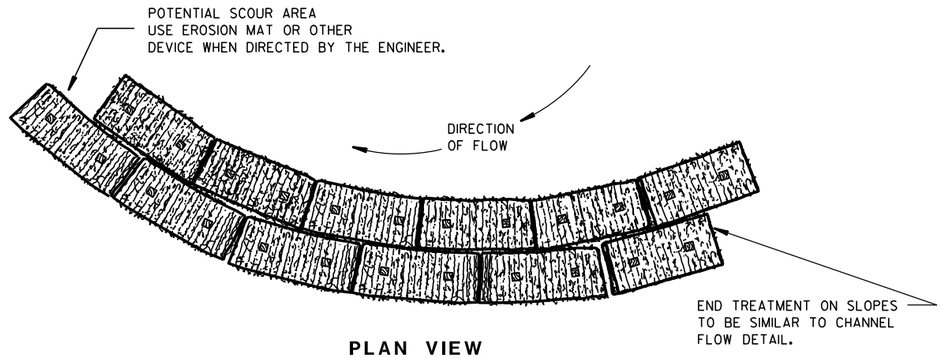
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

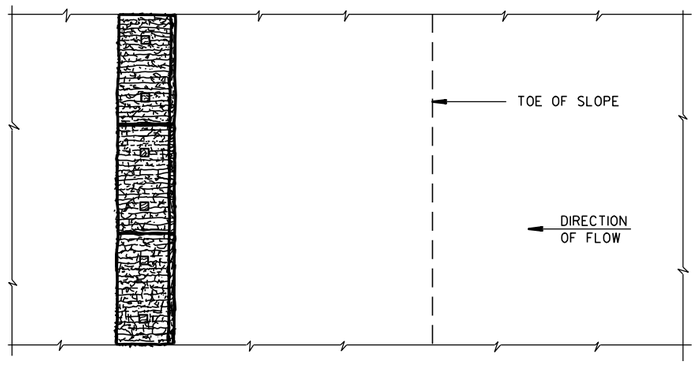
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

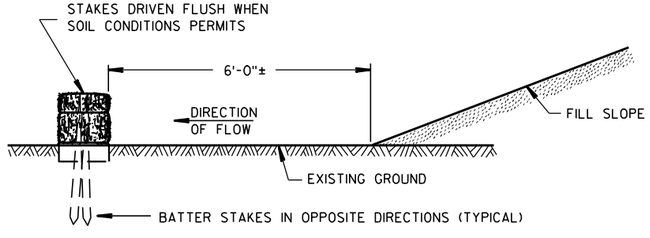


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

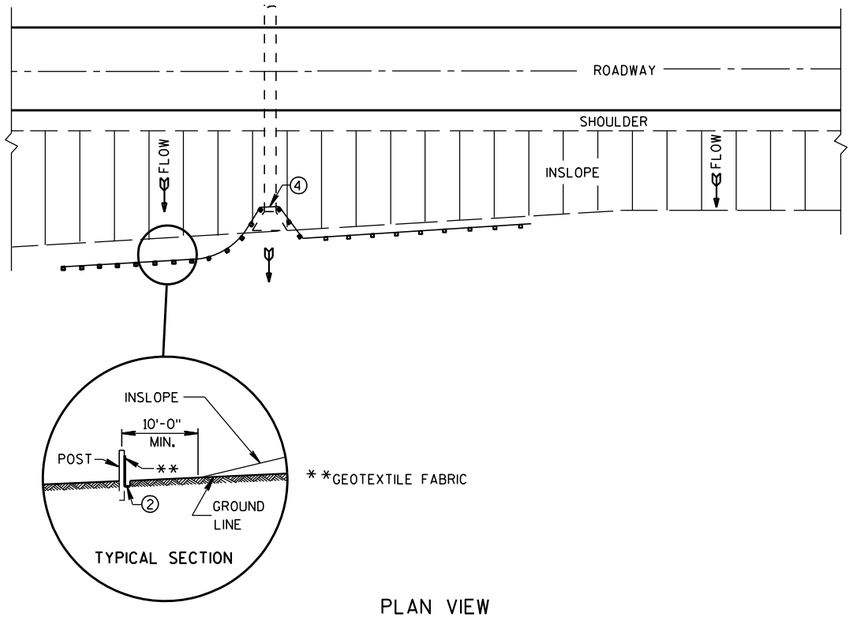
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 DATE

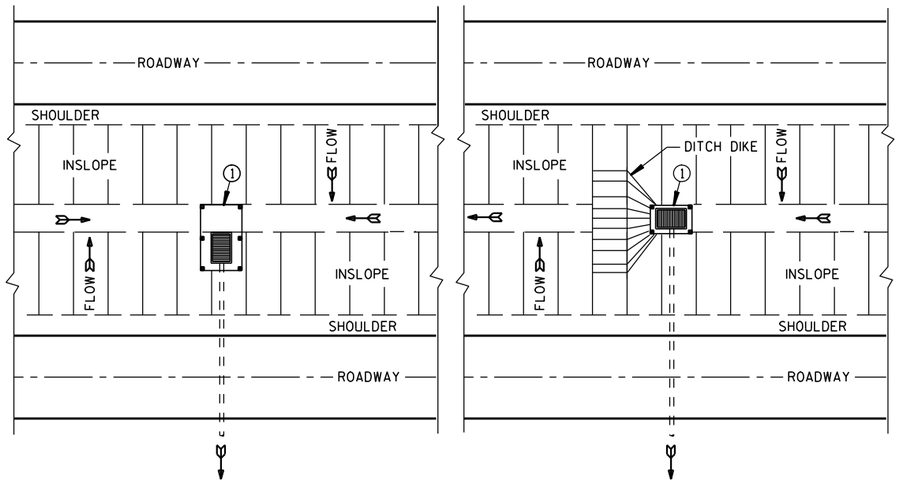
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



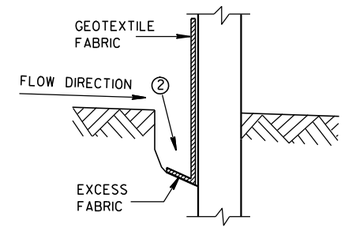
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

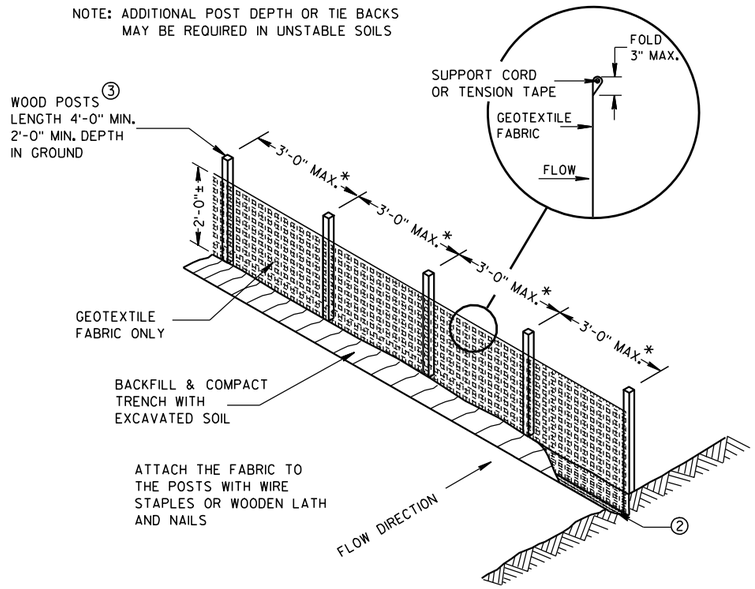
GENERAL NOTES

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

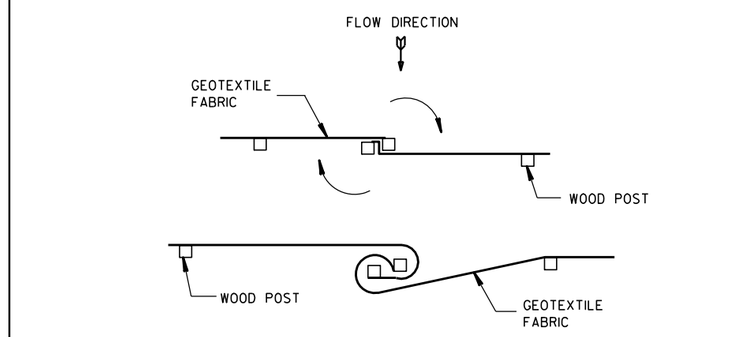
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



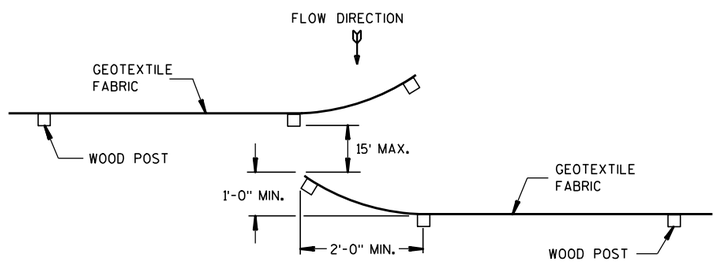
TRENCH DETAIL



SILT FENCE

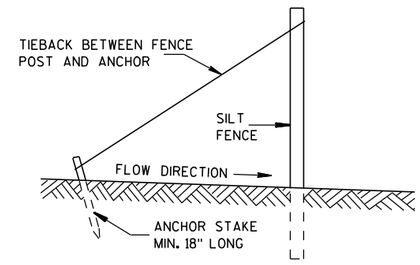


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

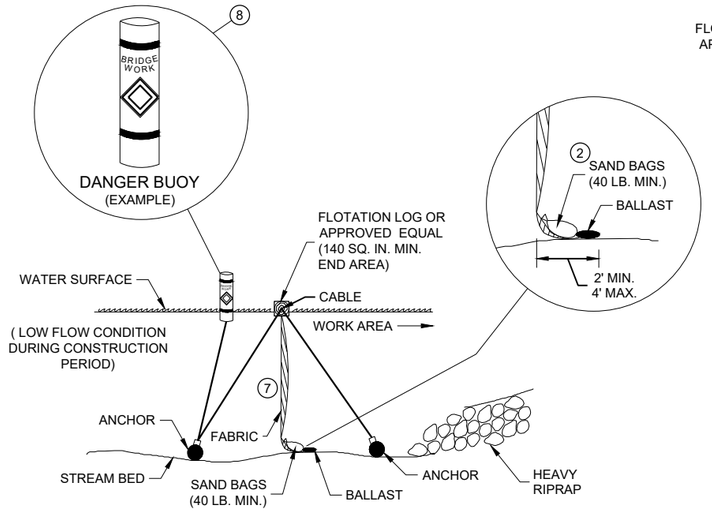
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

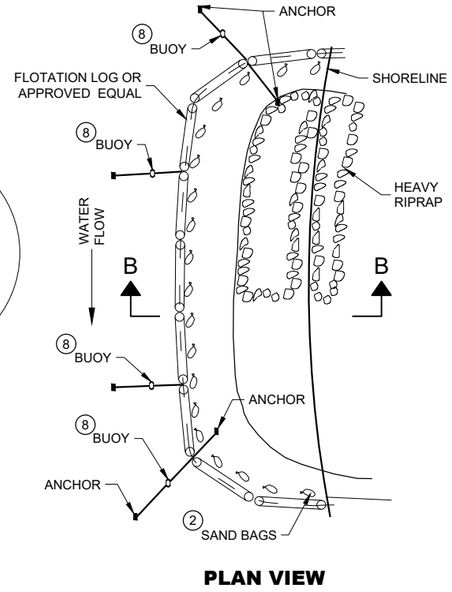
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

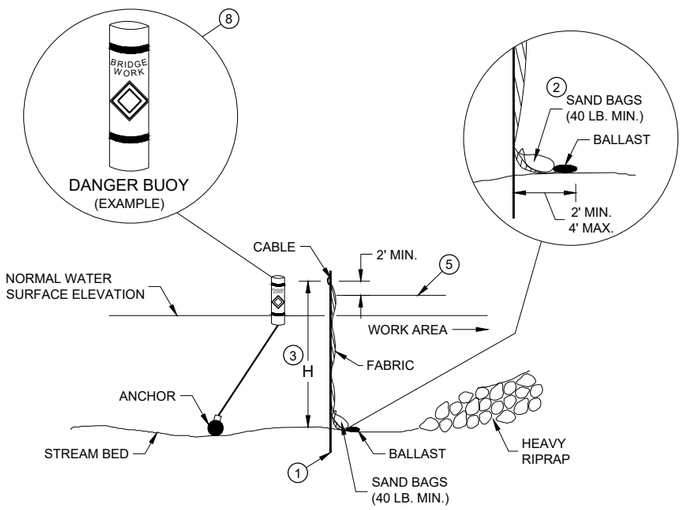


SECTION B - B

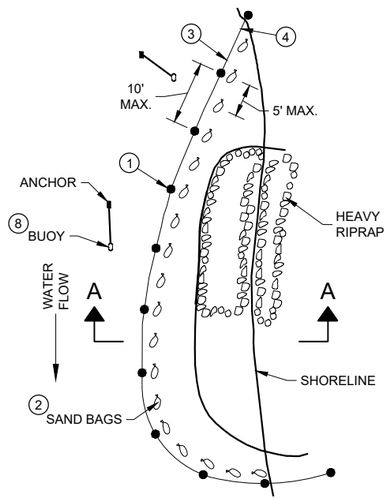


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

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

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

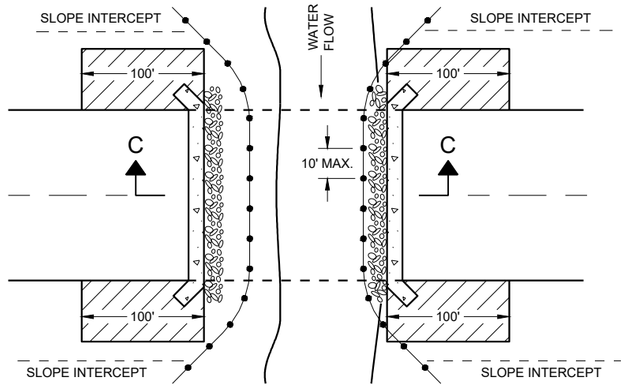
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

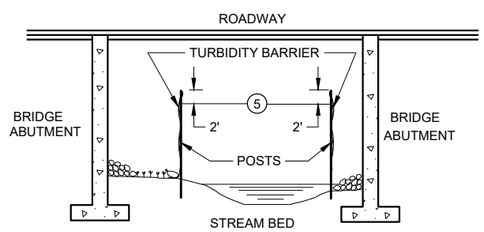
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

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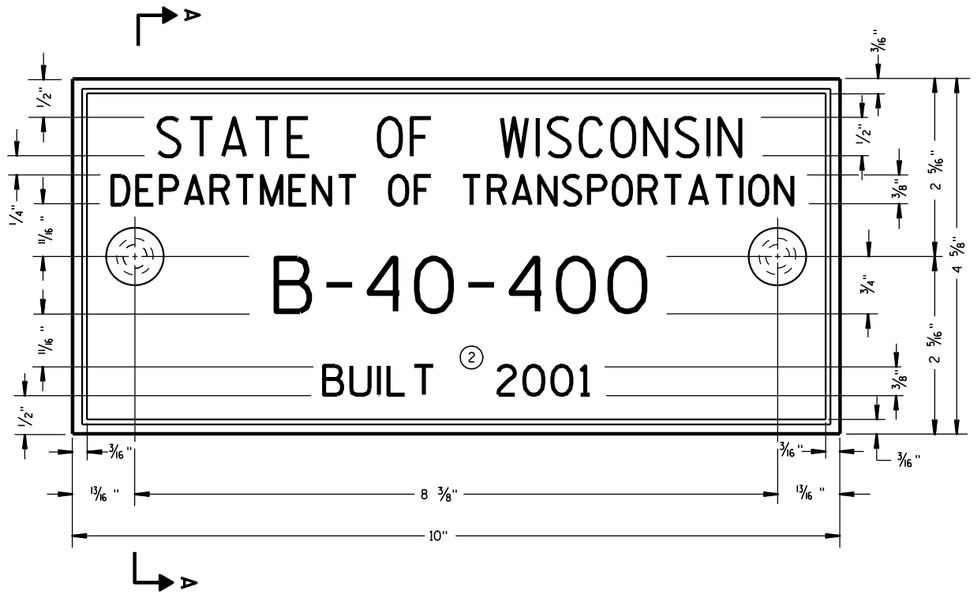
SDD 08E11 - 02



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

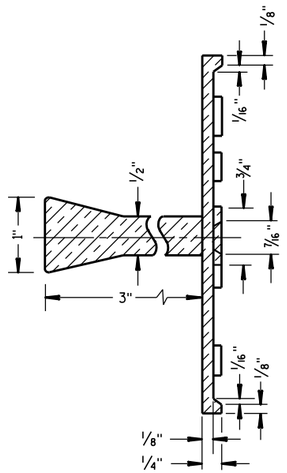
GENERAL NOTES

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

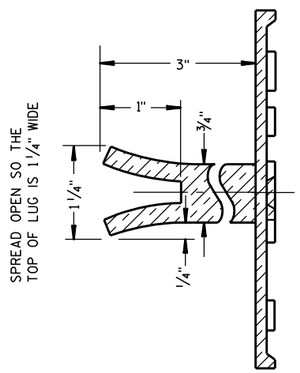
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

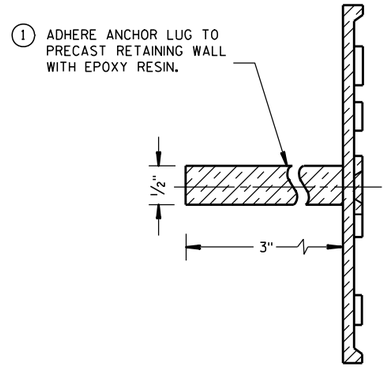
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

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S.D.D. 12 A 3-10

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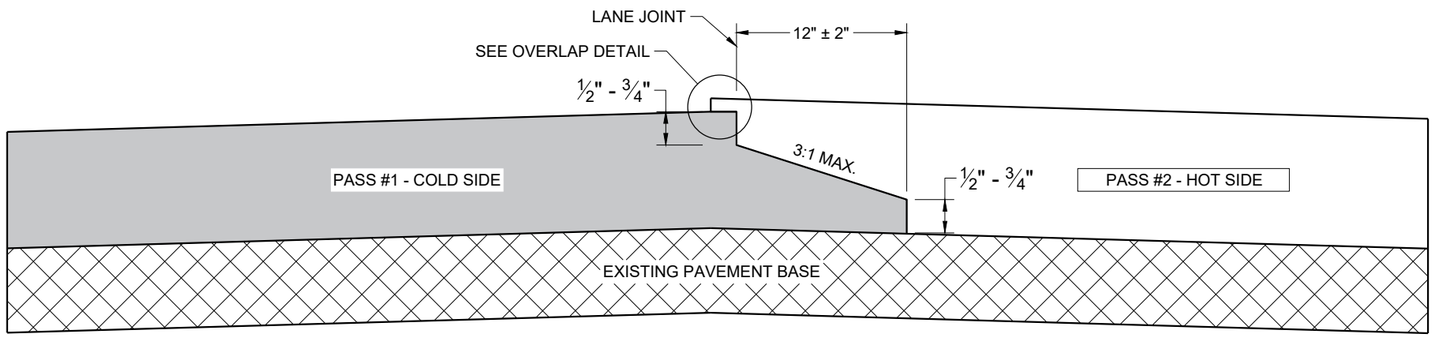
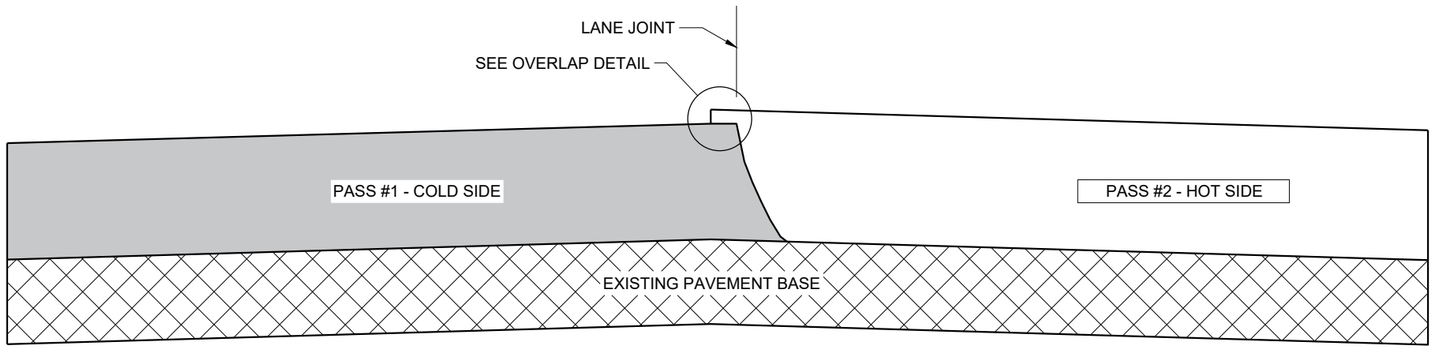
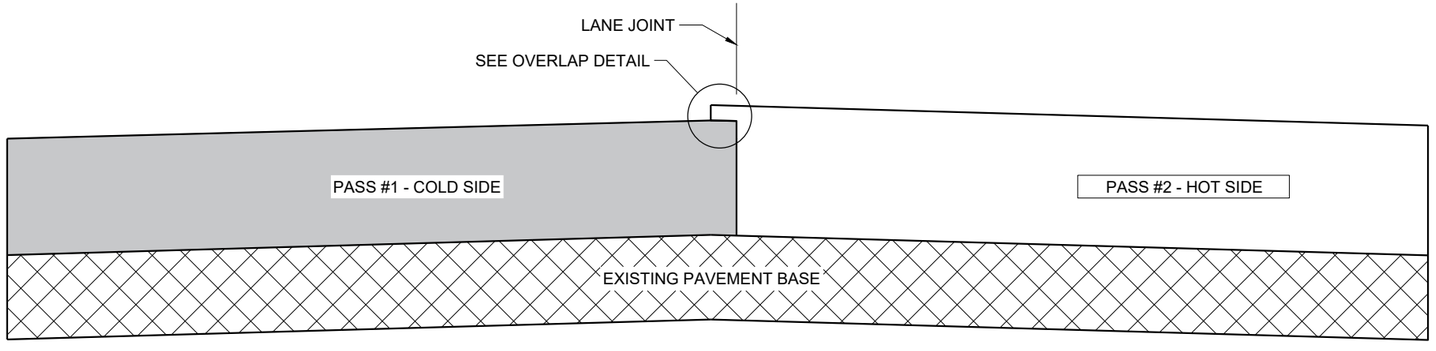
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

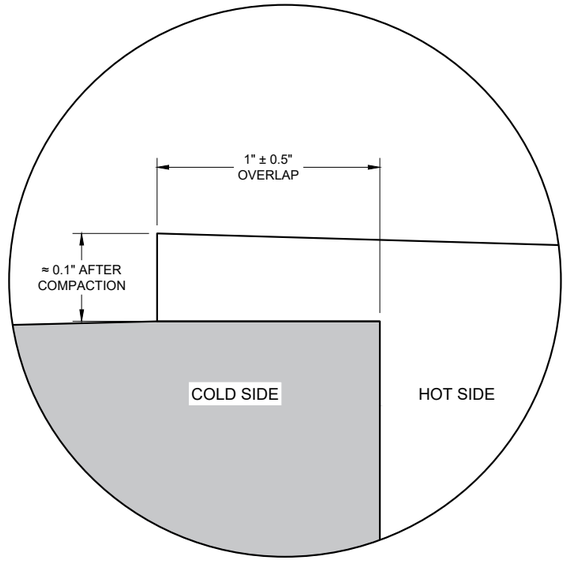
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

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SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

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

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

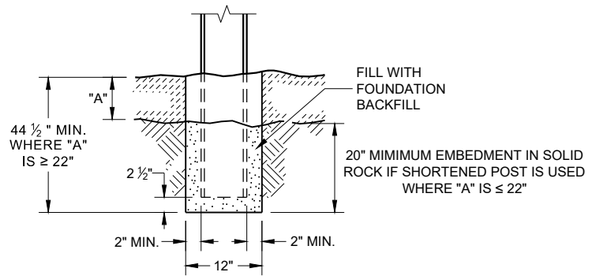
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL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

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

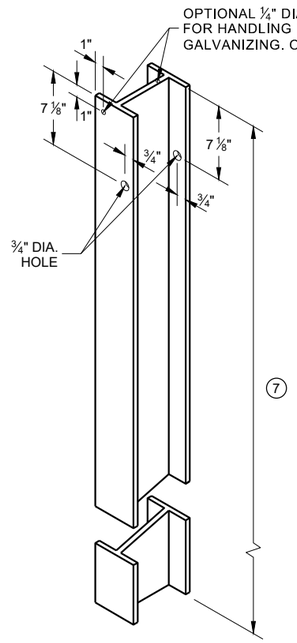
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

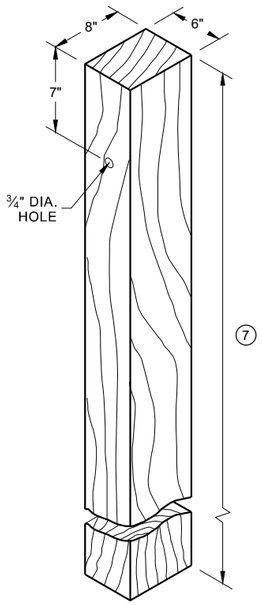
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



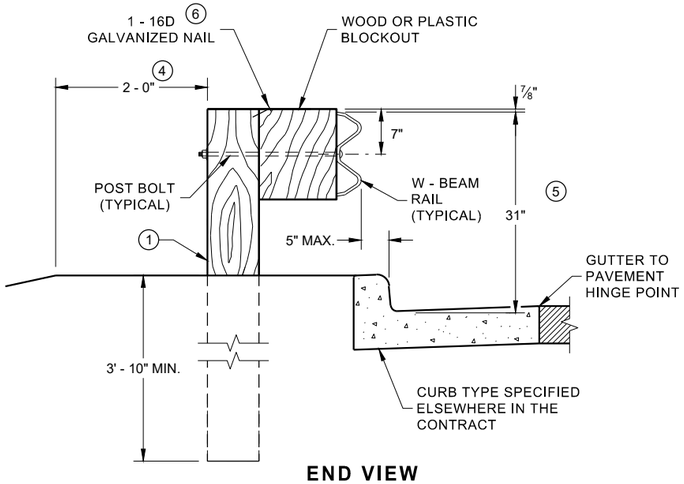
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



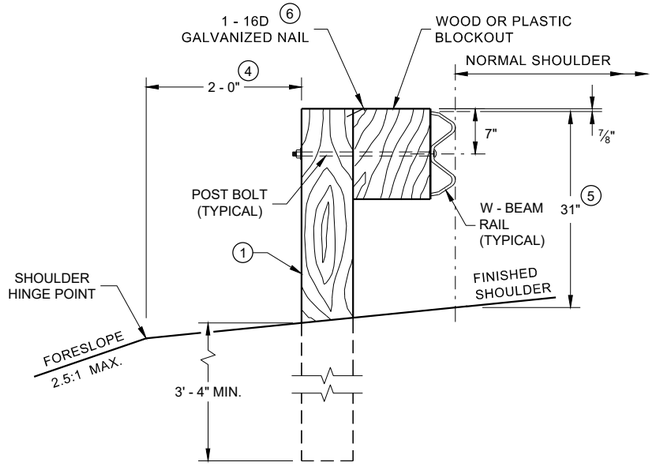
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



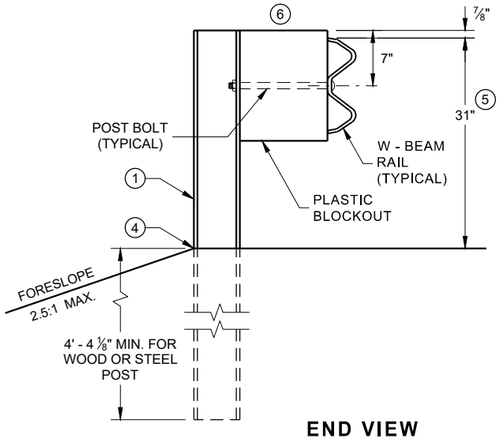
WOOD POST (6" X 8") NOMINAL (1)



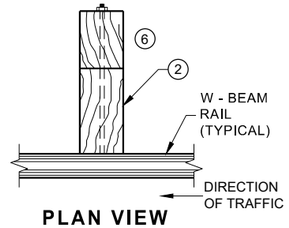
END VIEW
LOCATED ALONG A CURBED ROADWAY



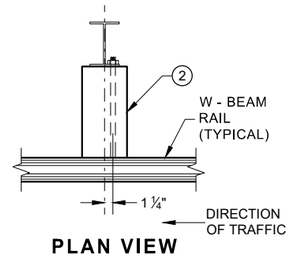
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



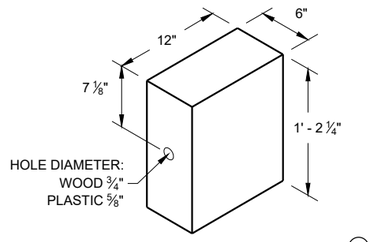
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 07a

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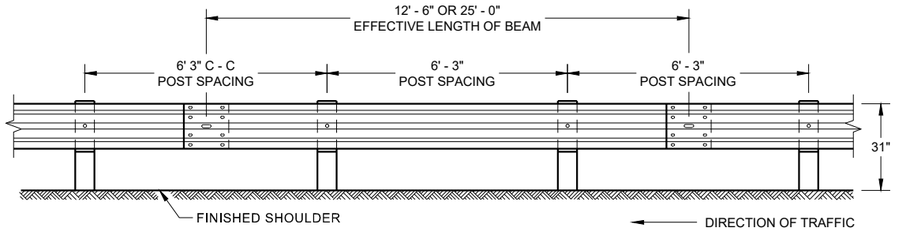
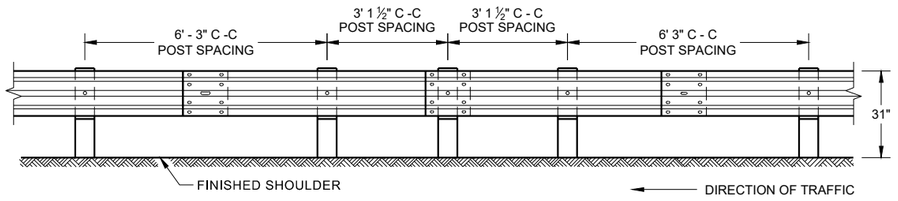
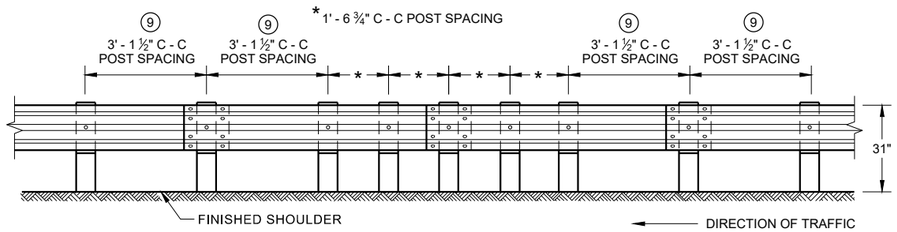
SDD 14B42 - 07a



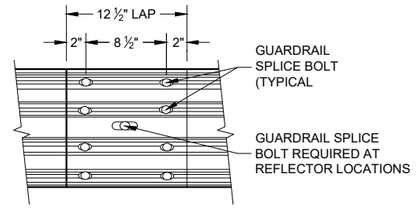
FRONT VIEW
POST SPACING STANDARD INSTALLATION



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



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

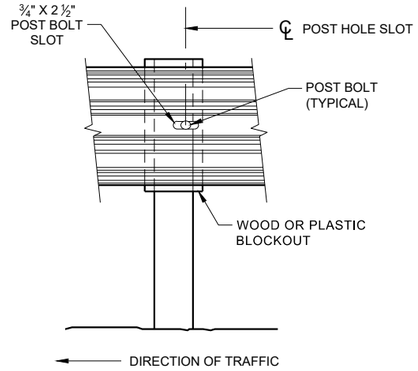
GENERAL NOTES

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

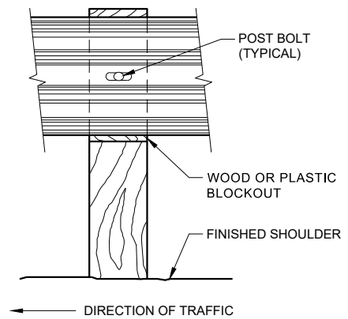
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

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

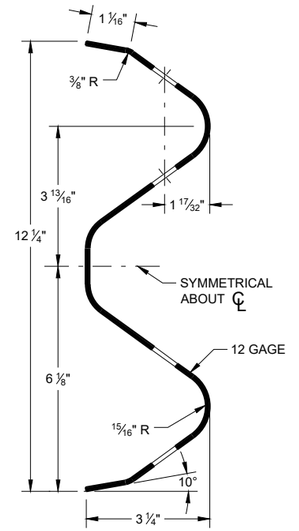
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



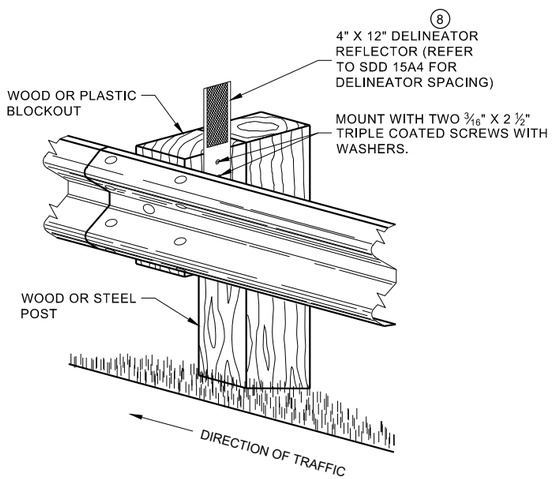
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL

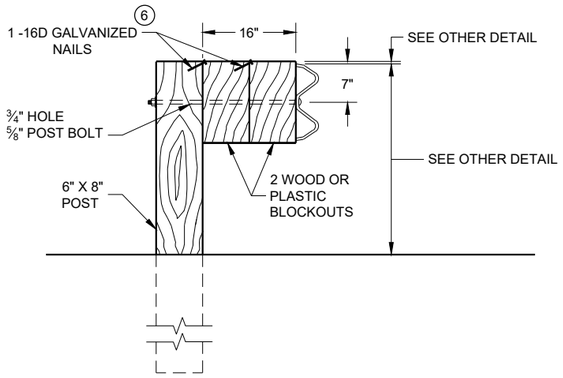


ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 07b

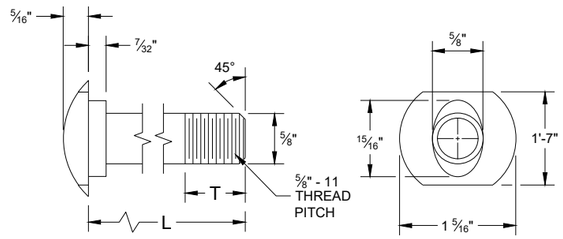


DETAIL FOR 16" BLOCKOUT DEPTH

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

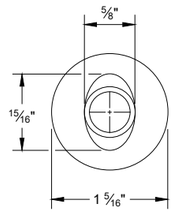
NOTE:

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

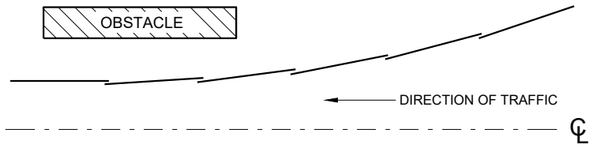


POST BOLT TABLE

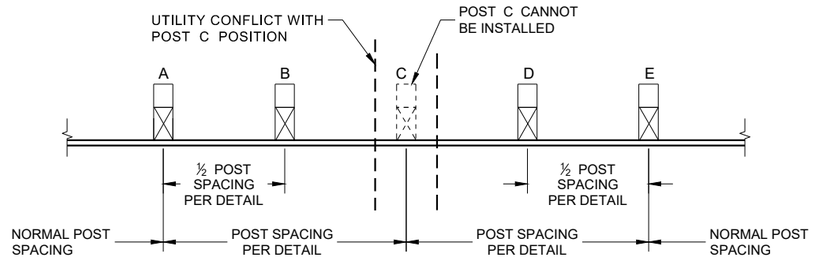
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1⁄16"
18"	4"
21"	4 1⁄16"
25"	4"



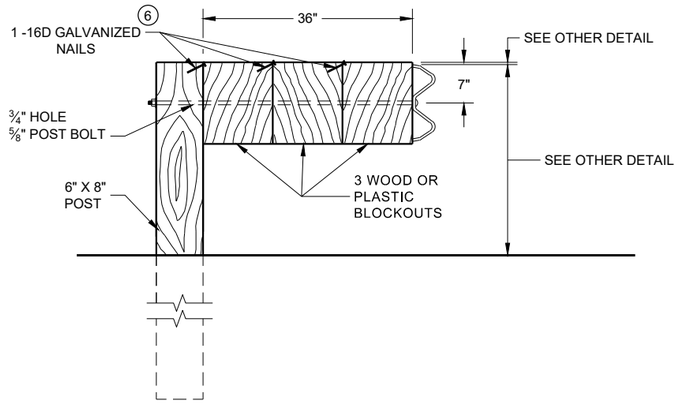
ALTERNATE BOLT HEAD



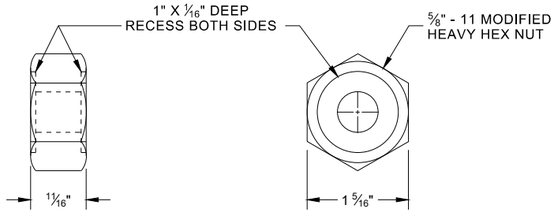
PLAN VIEW
BEAM LAPPING DETAIL



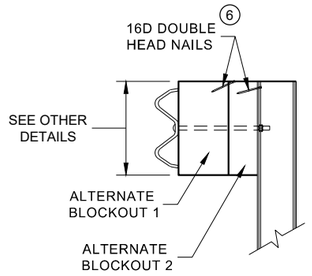
POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



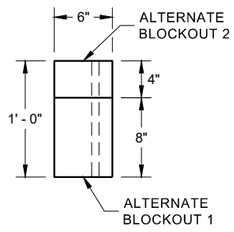
DETAIL FOR 36" BLOCKOUT DEPTH



POST BOLT, SPLICE BOLT AND RECESS NUT



SIDE VIEW



PLAN VIEW

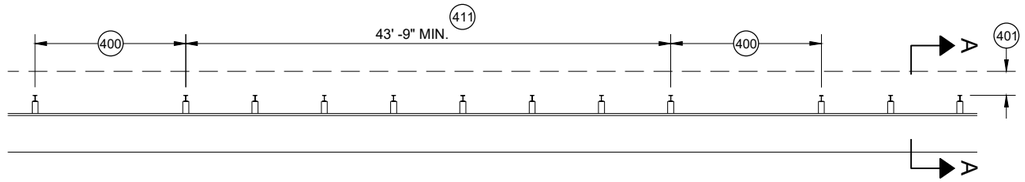
ALTERNATE WOOD BLOCKOUT DETAIL

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

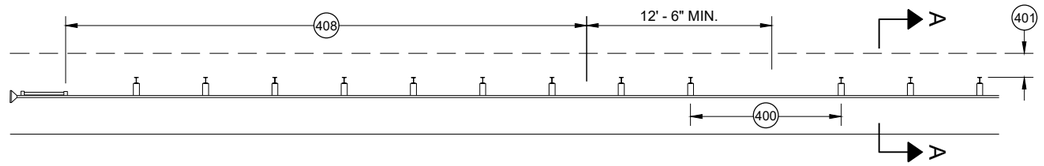
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

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

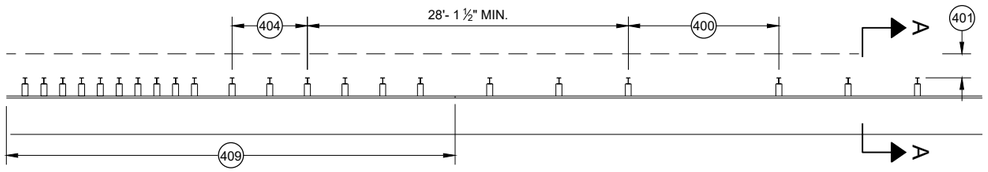
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



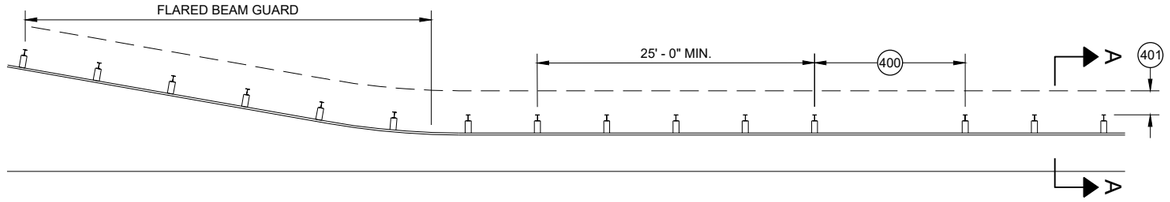
MISSING POST IN MGS GUARDRAIL



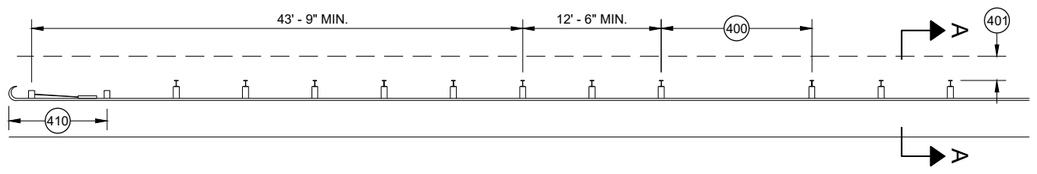
MISSING POST IN MGS GUARDRAIL NEAR EAT



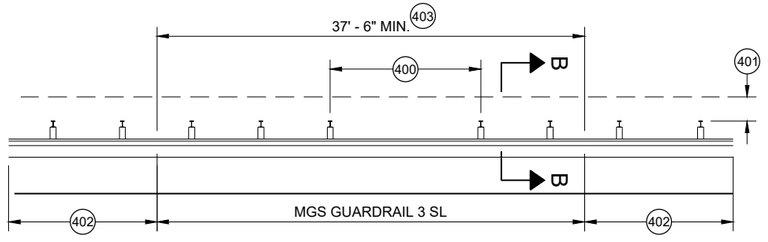
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

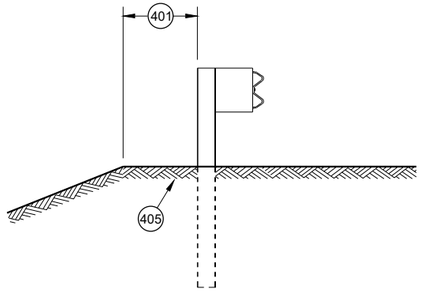


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

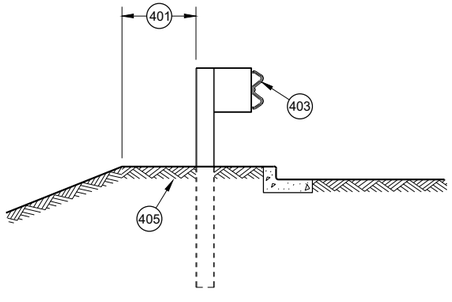


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

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



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B42 - 07d

SDD 14B42 - 07d

GENERAL NOTES

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

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

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

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

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

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

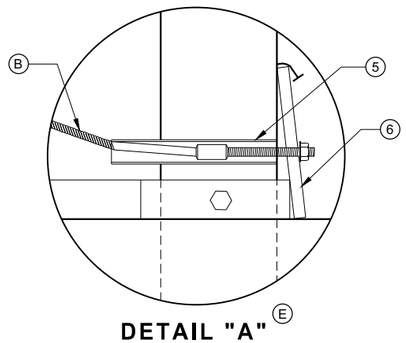
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

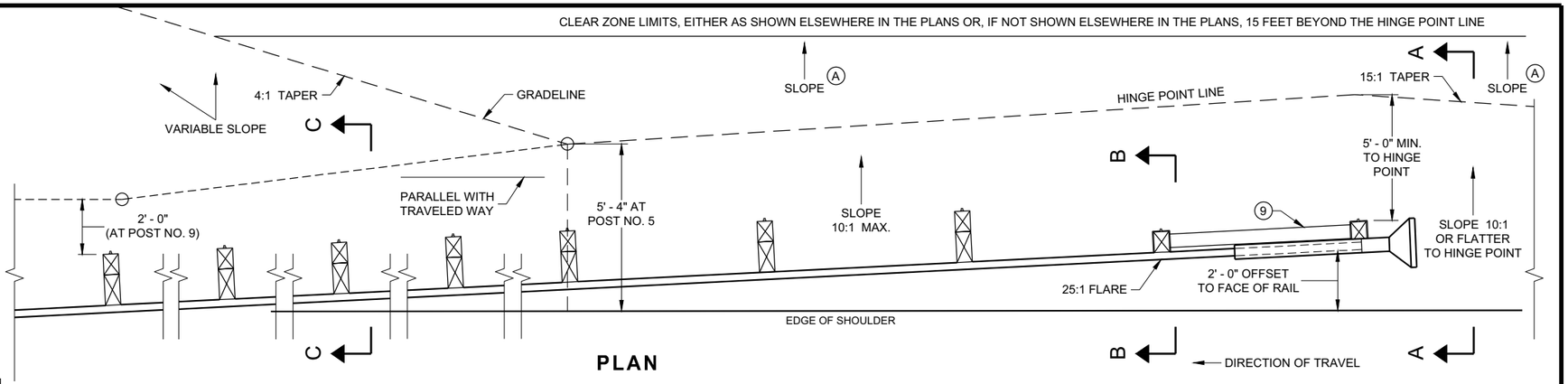
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

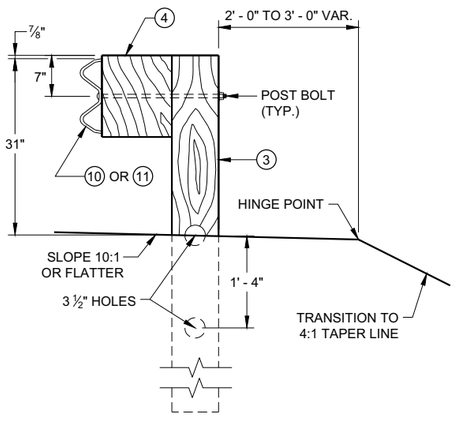
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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

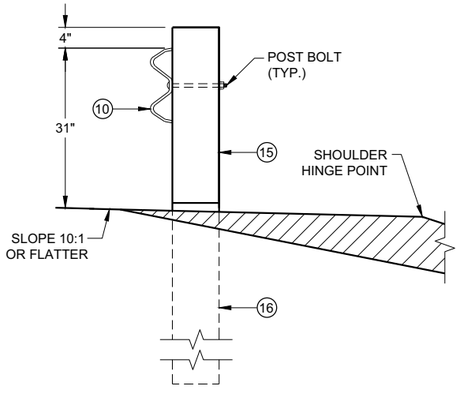


DETAIL "A" (E)

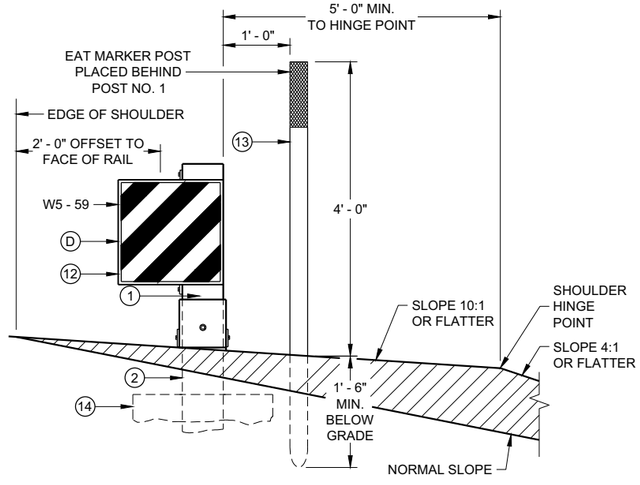




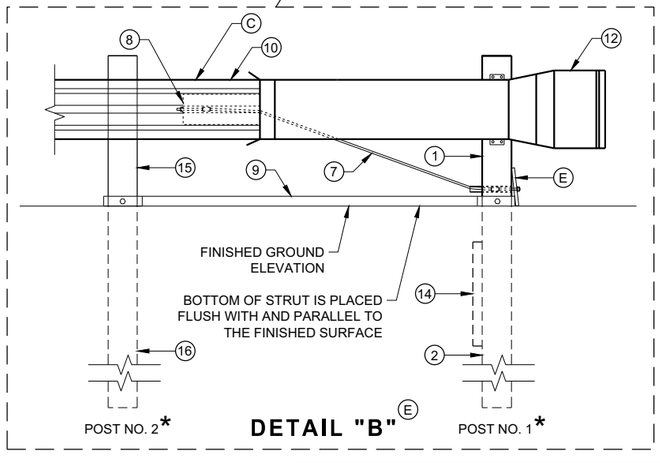
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



DETAIL "B" (E)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

SDD 14B44 - 04a

6

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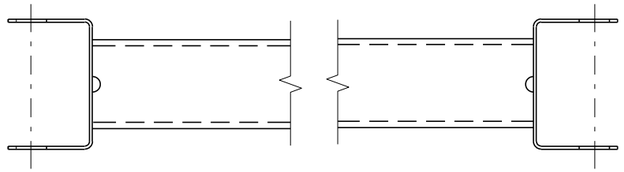
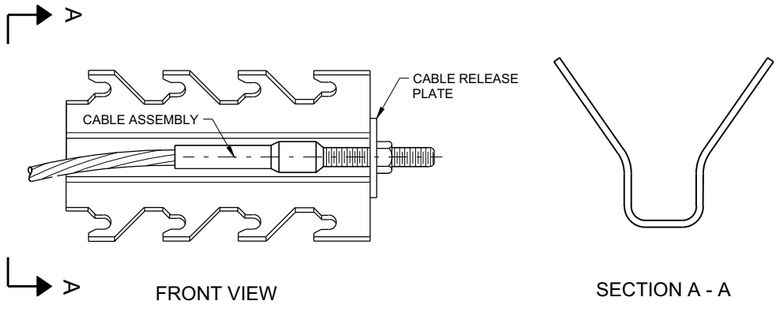


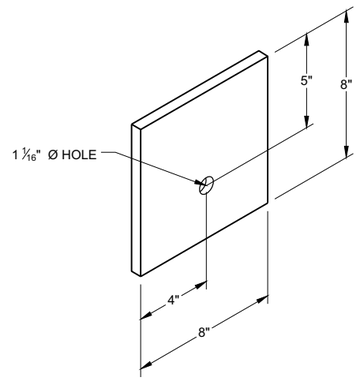
GENERIC GROUND STRUT ⑨ Ⓔ

BILL OF MATERIALS

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



GENERIC ANCHOR CABLE BOX ⑨ Ⓔ



BEARING PLATE ⑥ Ⓔ

6

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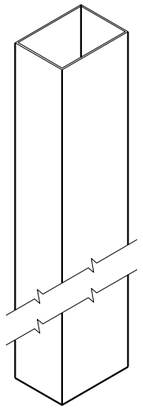
SDD 14B44 - 04b

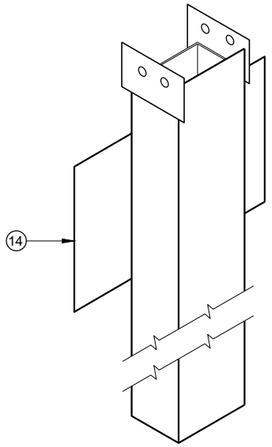
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

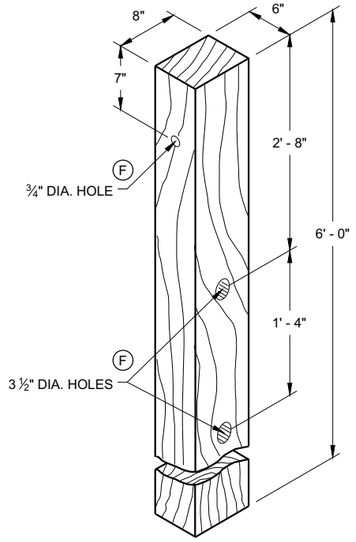
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



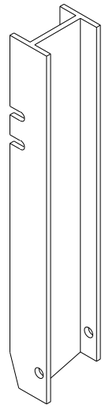
UPPER POST NO. 1 (1) (E)



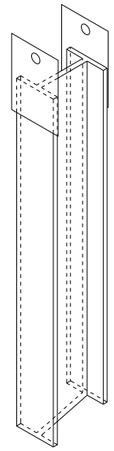
LOWER POST NO. 1 (2) (E)



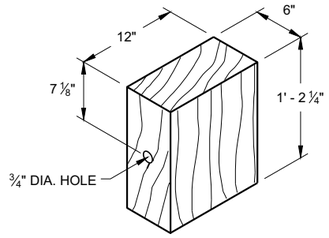
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



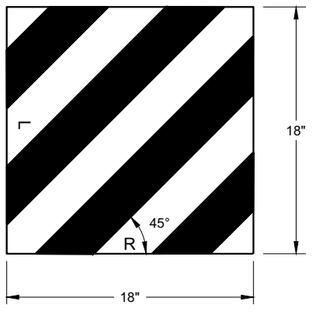
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

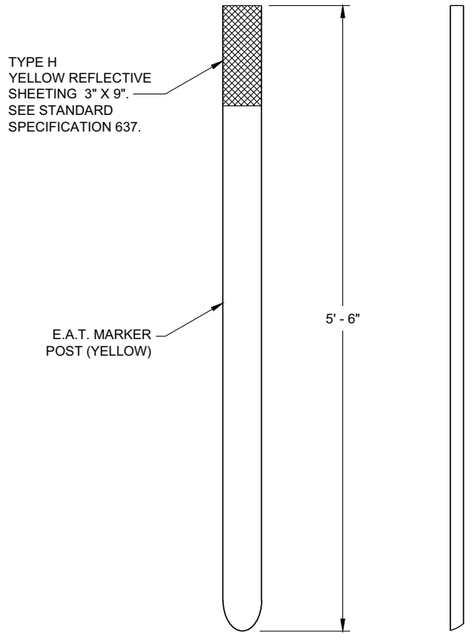


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



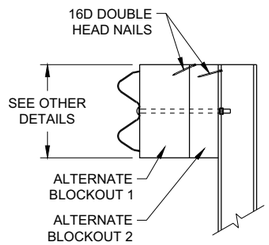
W5 - 59

REFLECTIVE SHEETING DETAIL (E)

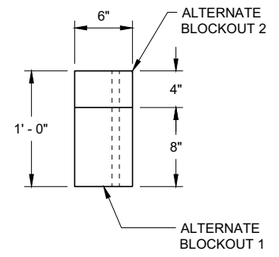


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

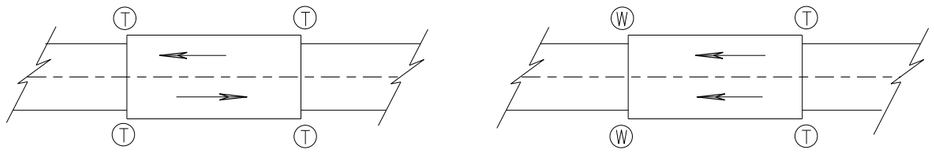
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6

SDD 14B44 - 04c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

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

TRANSITION USES STEEL POSTS ONLY.

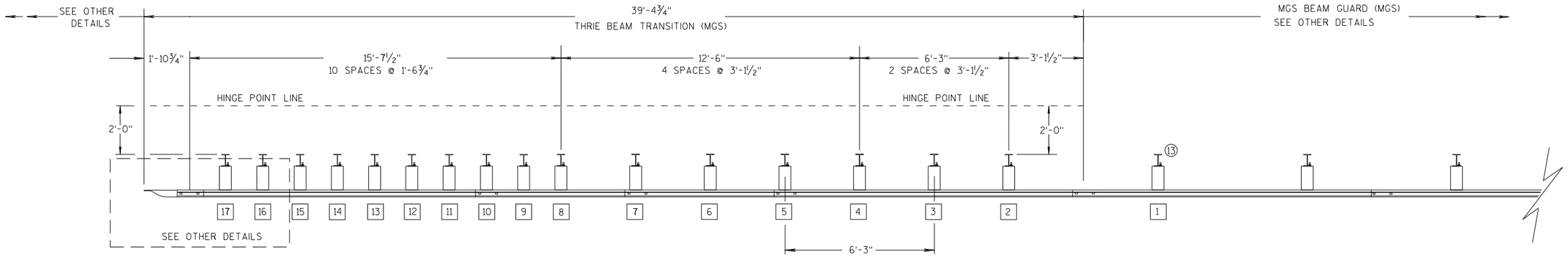
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

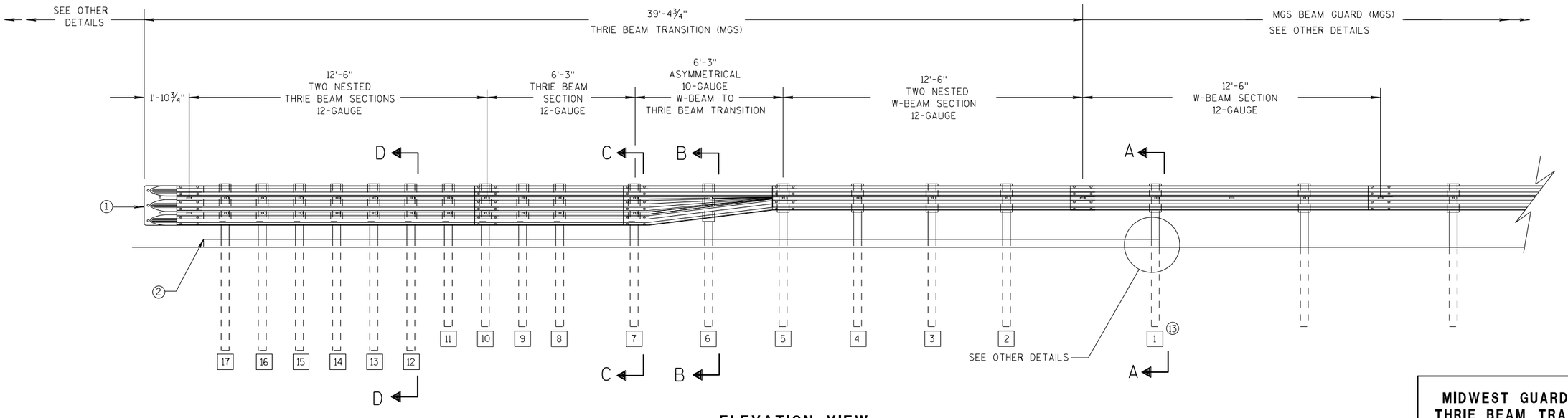
(1) BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 45-5a

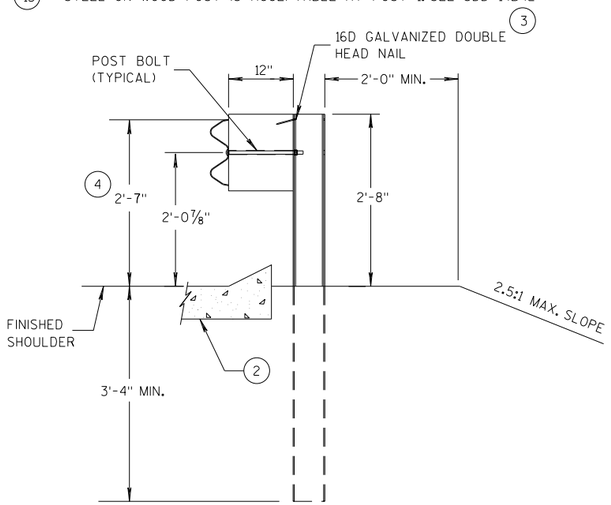
GENERAL NOTES

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

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

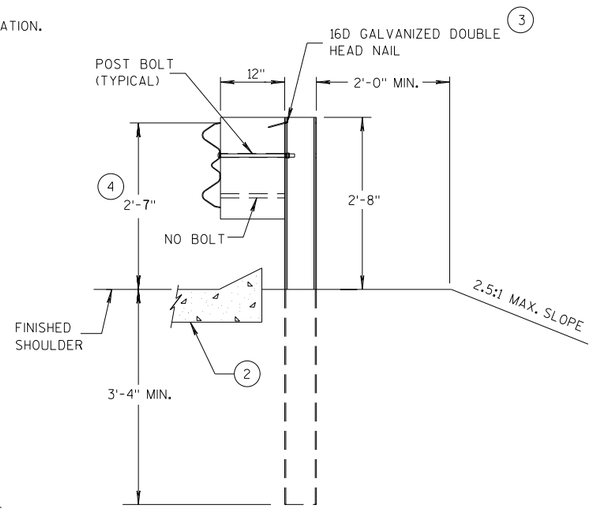
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".

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



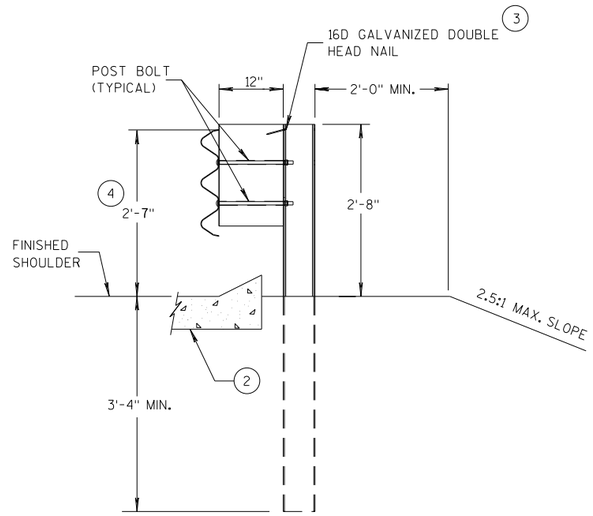
SECTION A-A (13)

POSTS 1-5



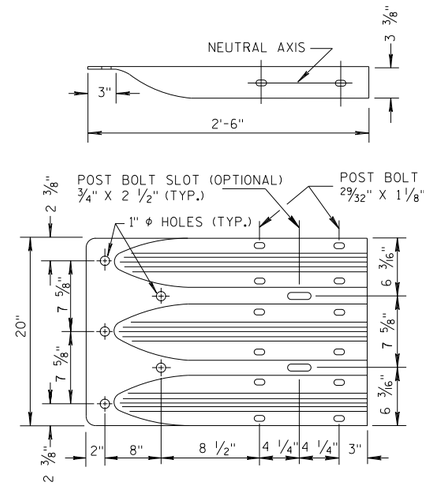
SECTION B-B

POST 6

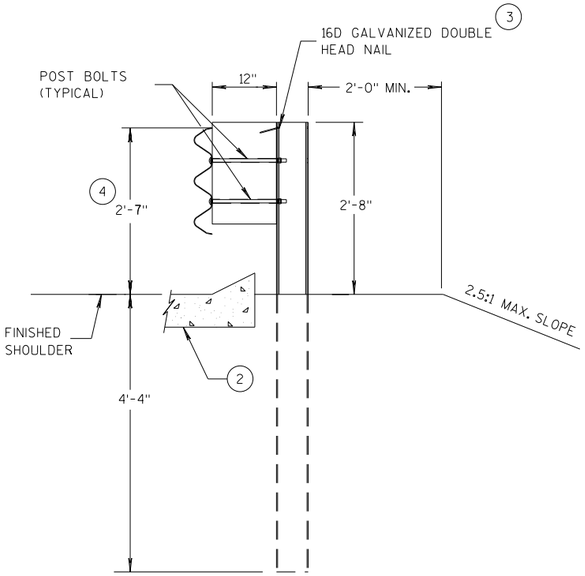


SECTION C-C

POSTS 7-11

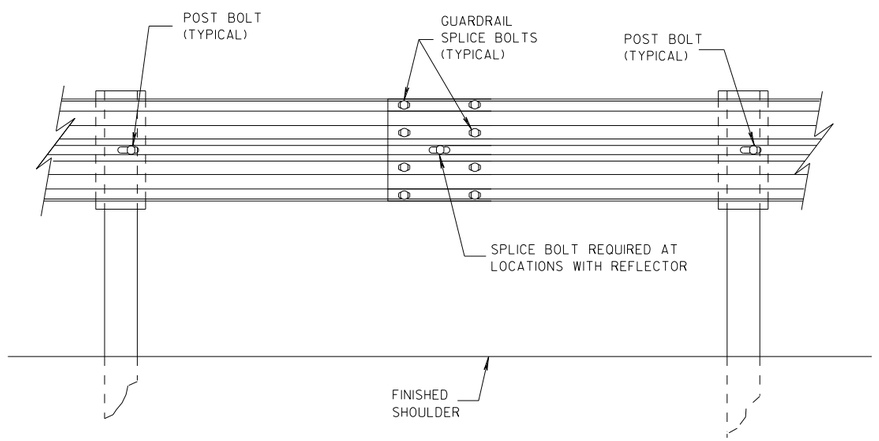


THRIE BEAM TERMINAL CONNECTOR



SECTION D-D

POSTS 12-17



SPLICE DETAIL

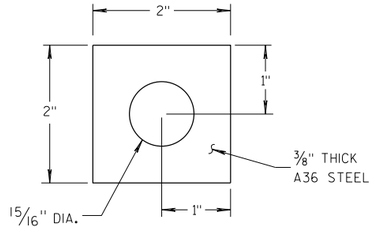
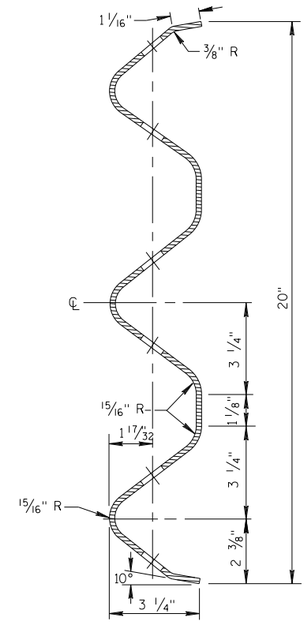


PLATE WASHER DETAIL



SECTION THRU THRIE BEAM RAIL ELEMENT

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

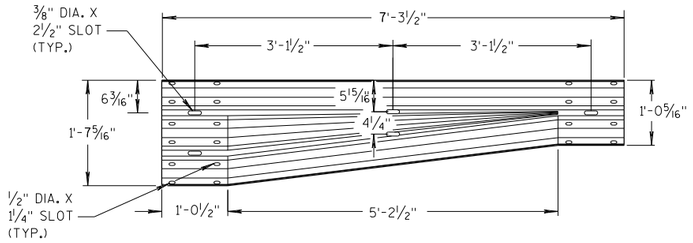
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR 27

6

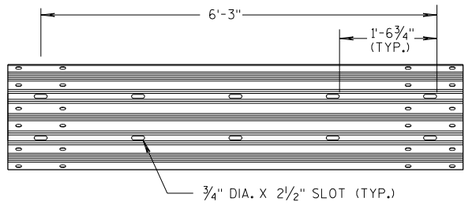
S.D.D. 14 B 45-5b

6

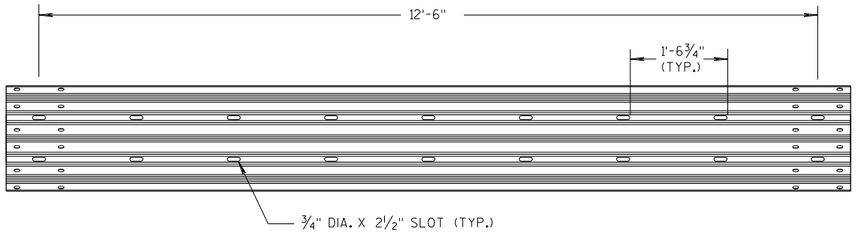
S.D.D. 14 B 45-5b



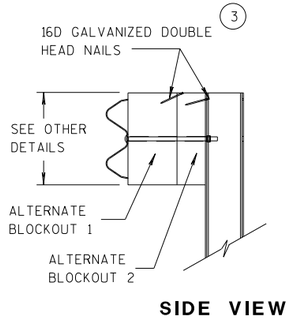
W-BEAM TO THRIE BEAM TRANSITION SECTION



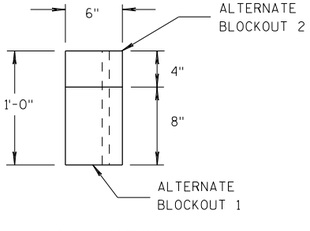
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

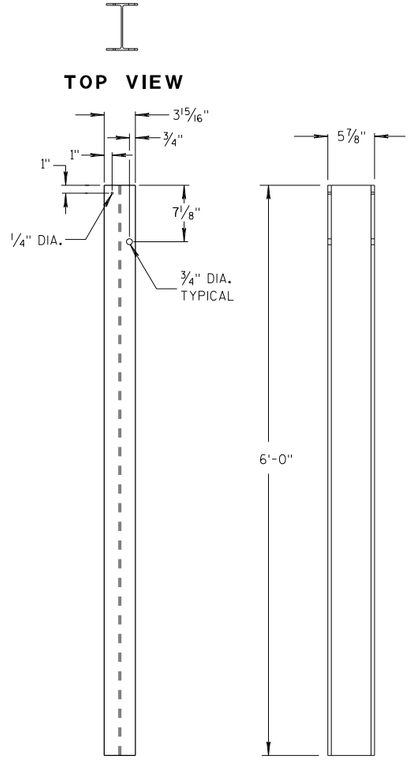


SIDE VIEW



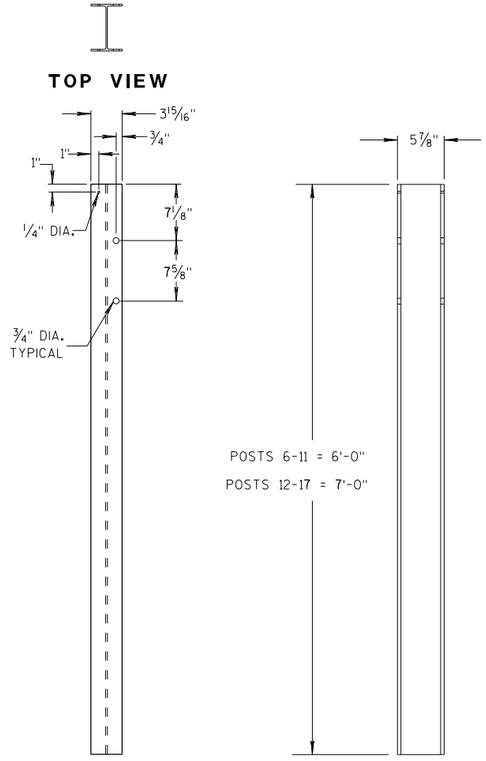
TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL



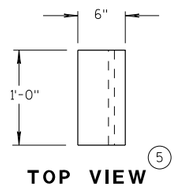
FRONT VIEW SIDE VIEW

STEEL POSTS 1-5 (13)

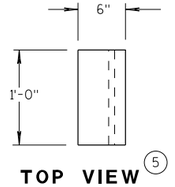


FRONT VIEW SIDE VIEW

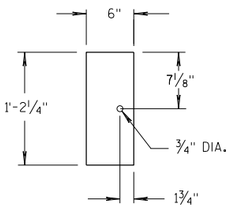
STEEL POSTS 6-17



TOP VIEW (5)

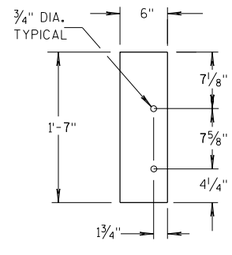


TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 1-5



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

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

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

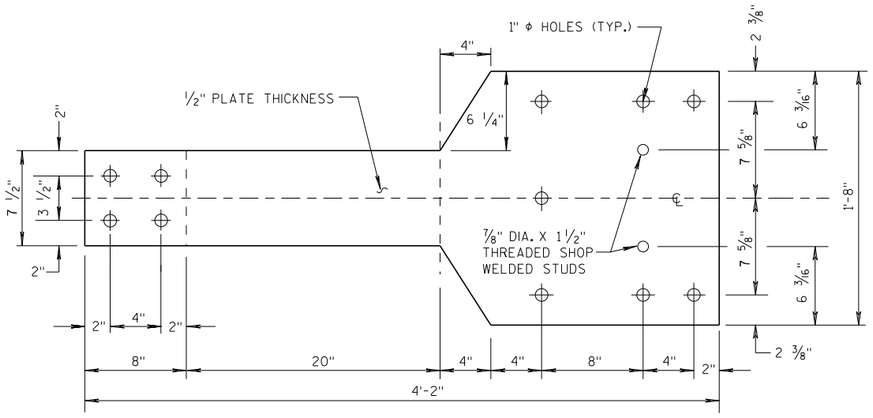
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

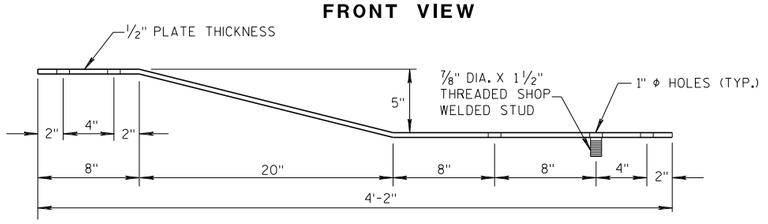
S.D.D. 14 B 45-5c

GENERAL NOTES

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

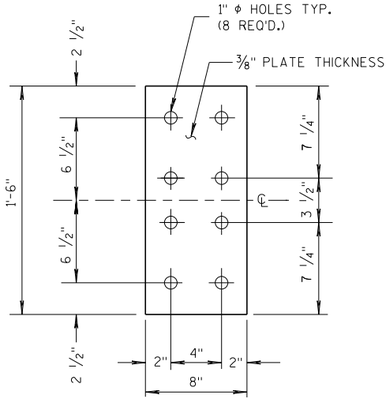


FRONT VIEW



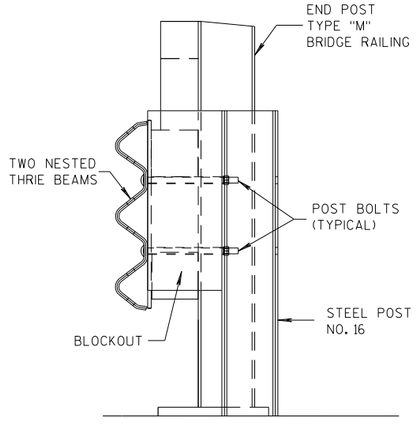
PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

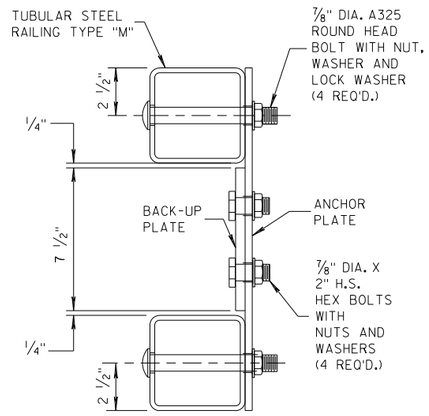


FRONT VIEW

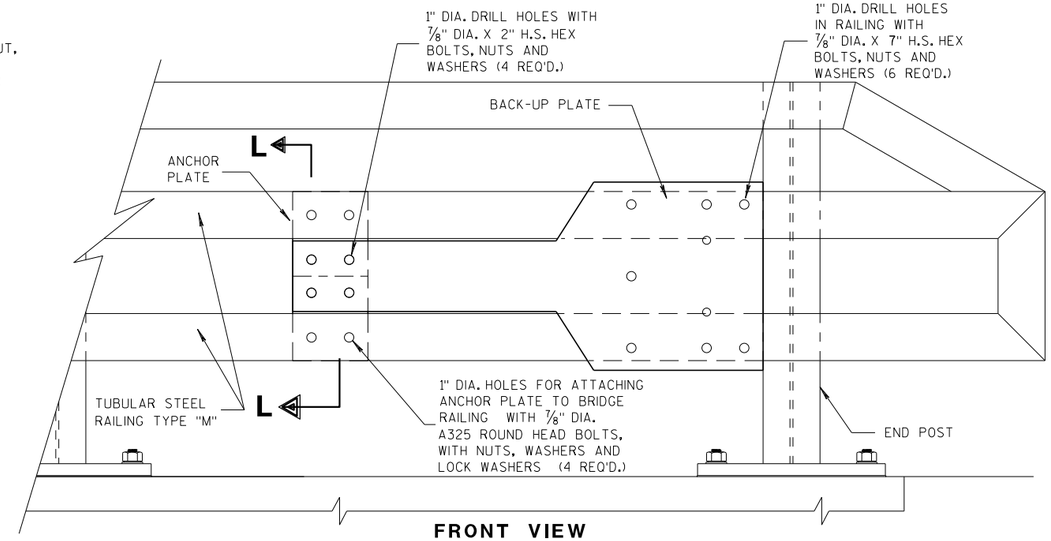
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M

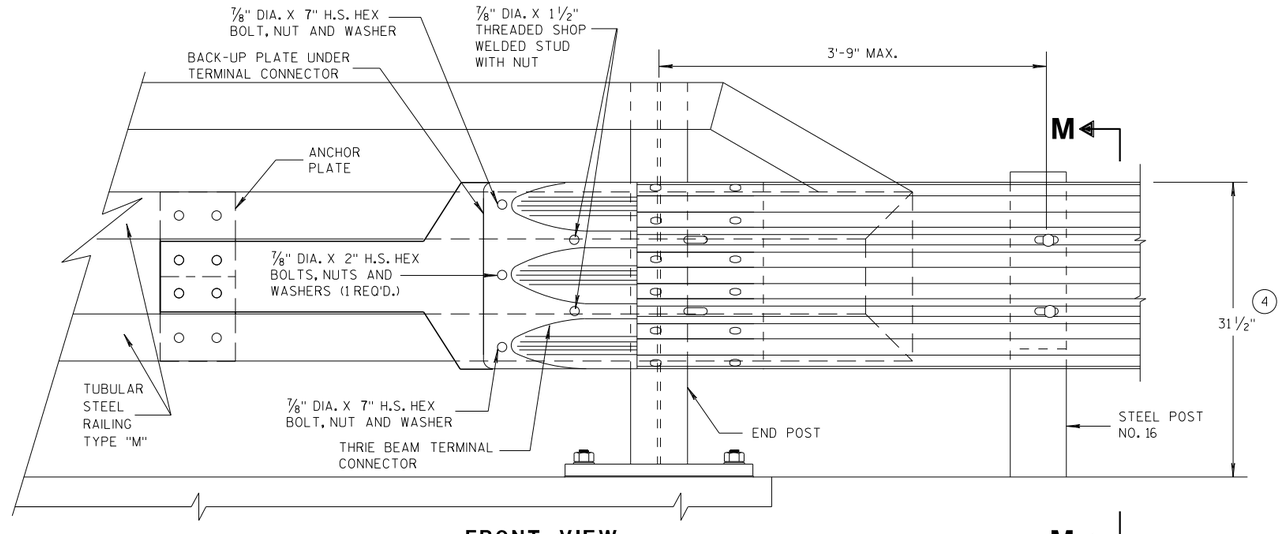


SECTION L-L

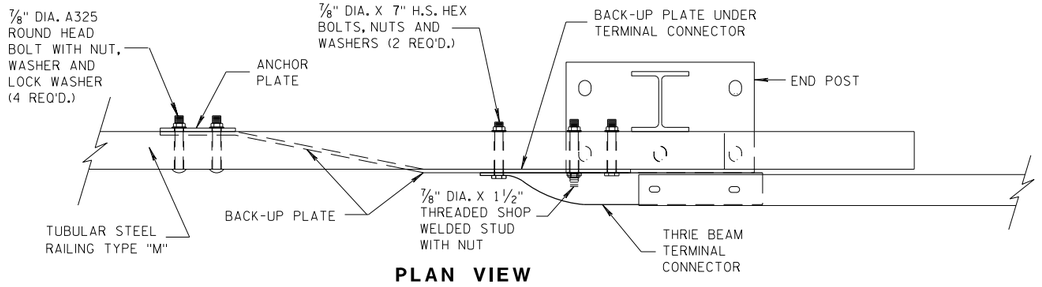


FRONT VIEW

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



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

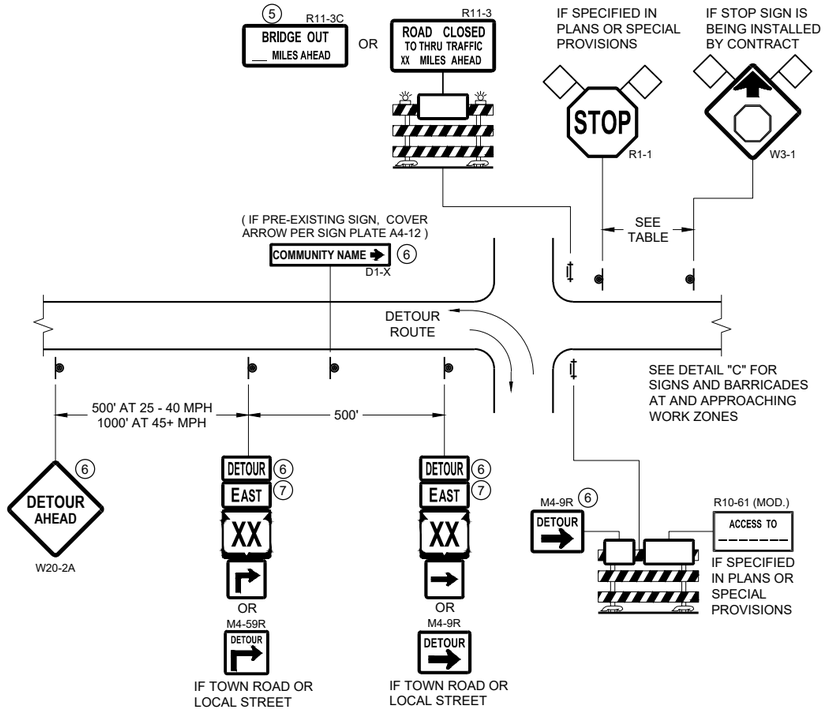
APPROVED
07/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
FHWA

6

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

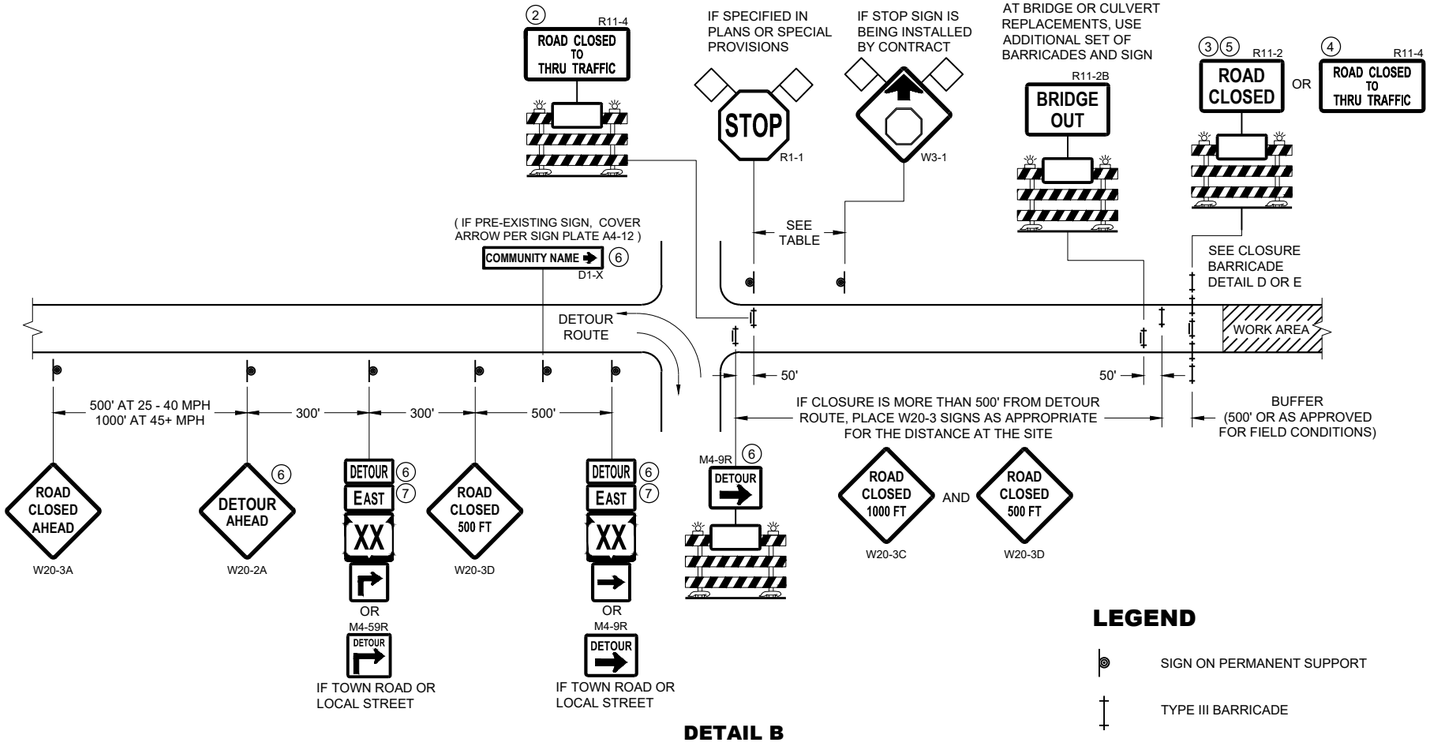
6

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



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



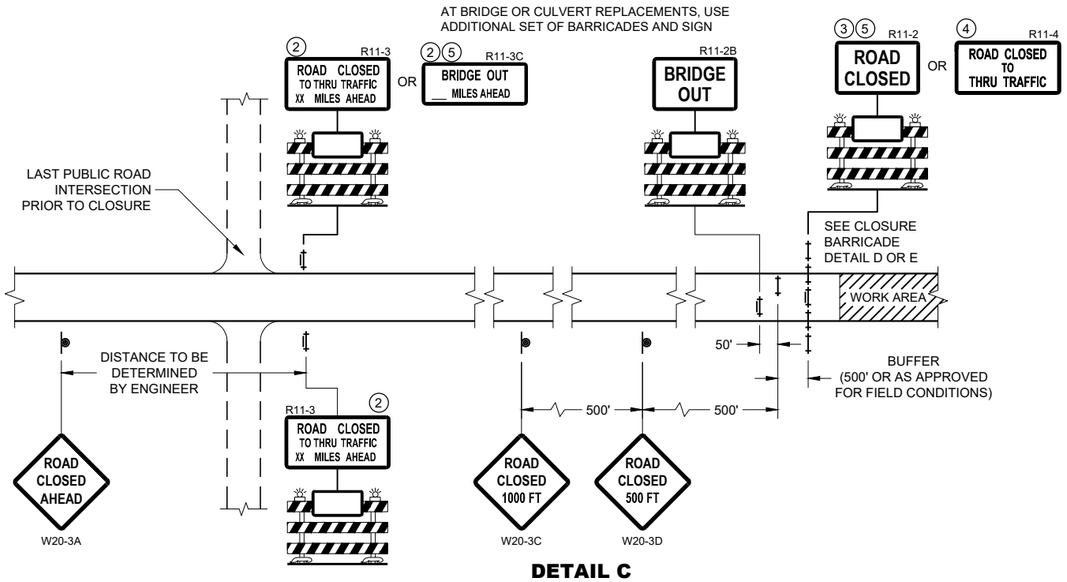
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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

LEGEND

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

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



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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

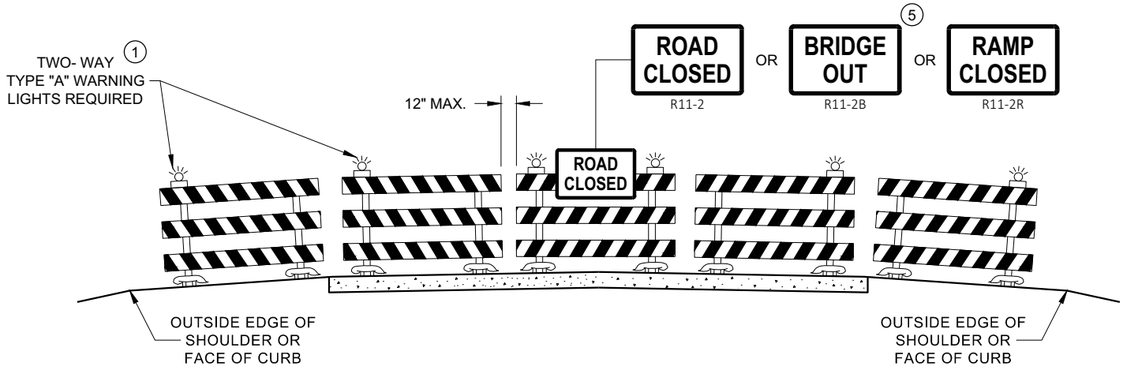
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

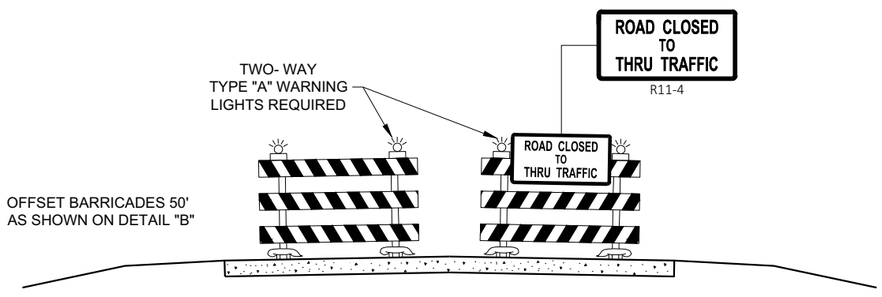
FHWA

SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

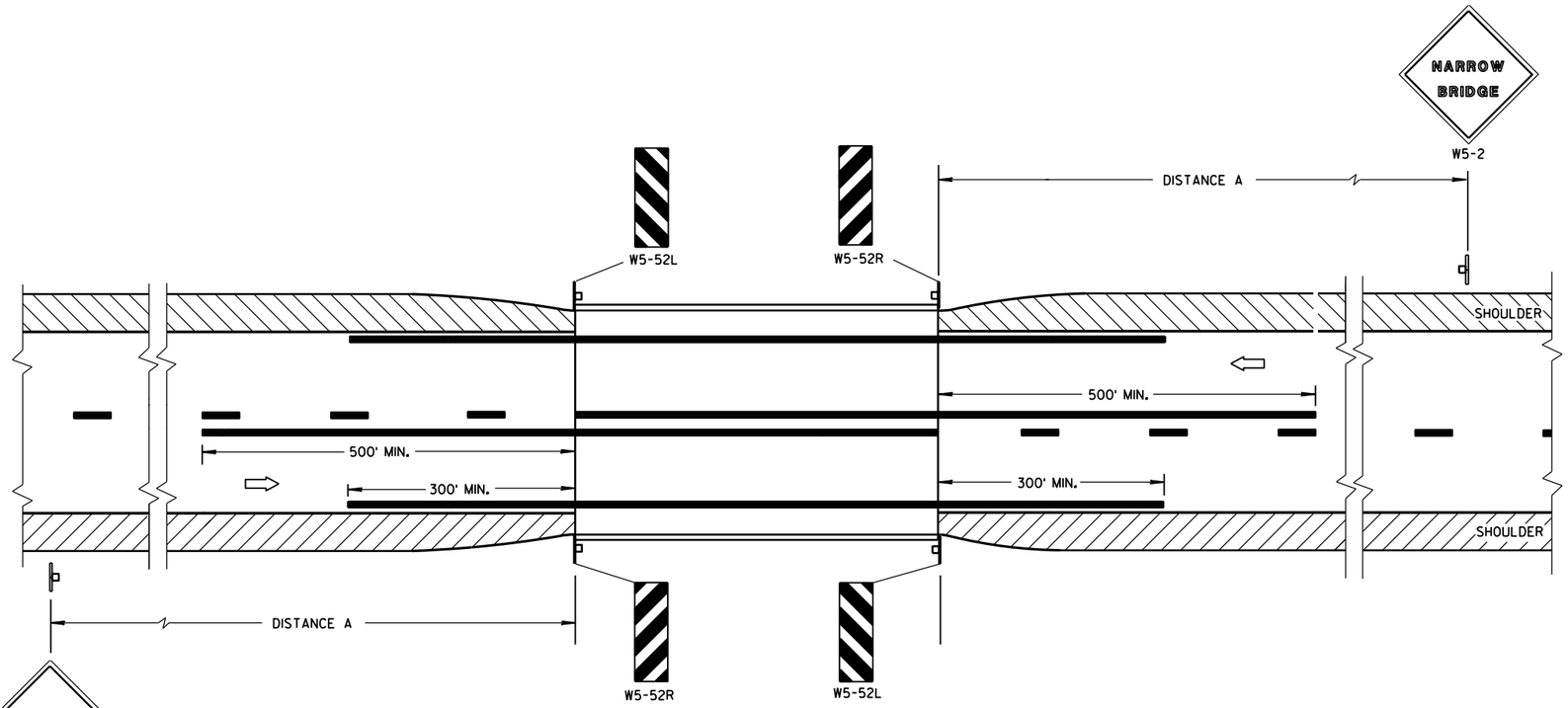
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 08b

6

SDD 15C02 - 08b



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

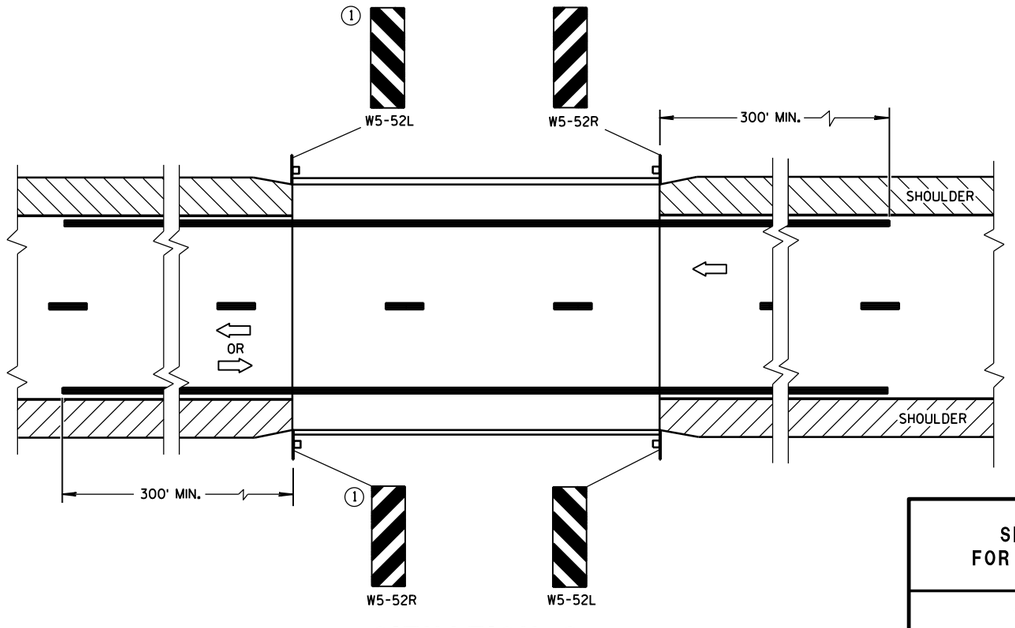
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

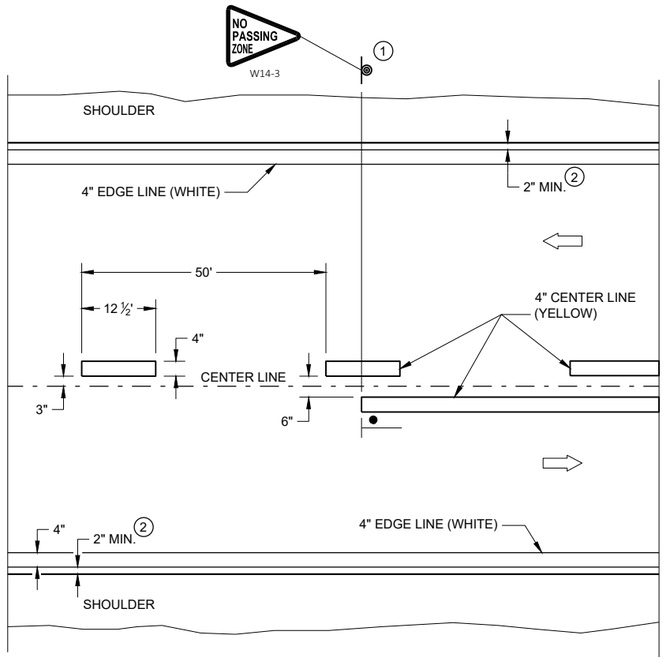
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

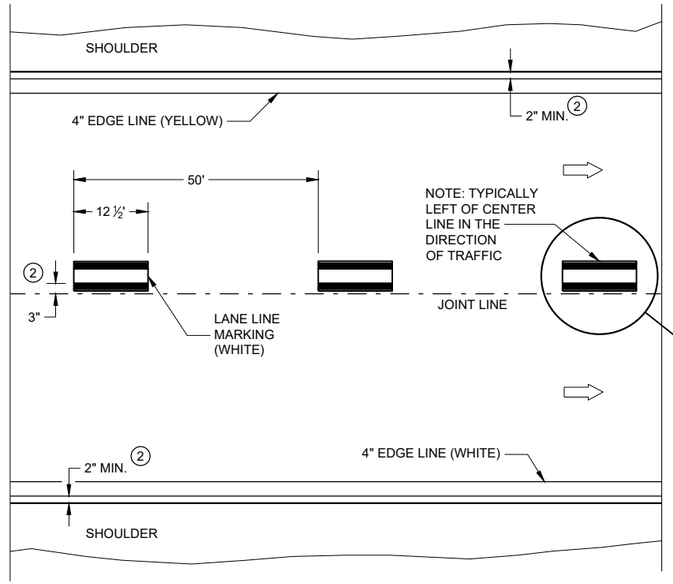
S.D.D. 15 C 6-9

6

S.D.D. 15 C 6-9

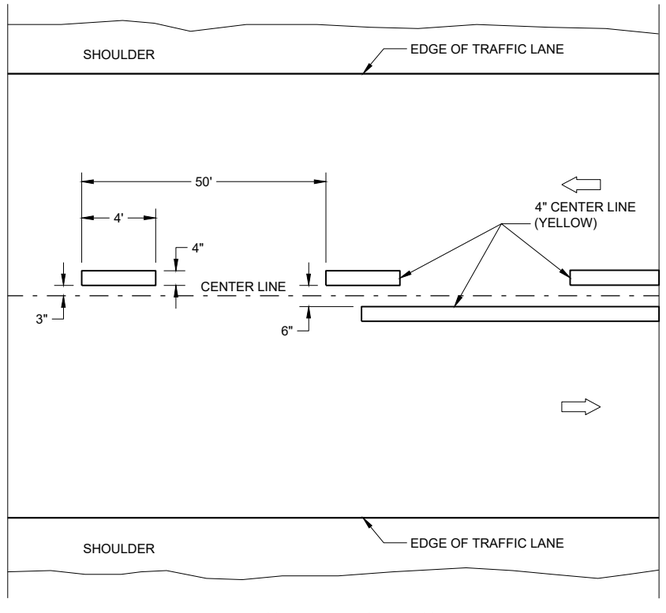


TWO WAY TRAFFIC

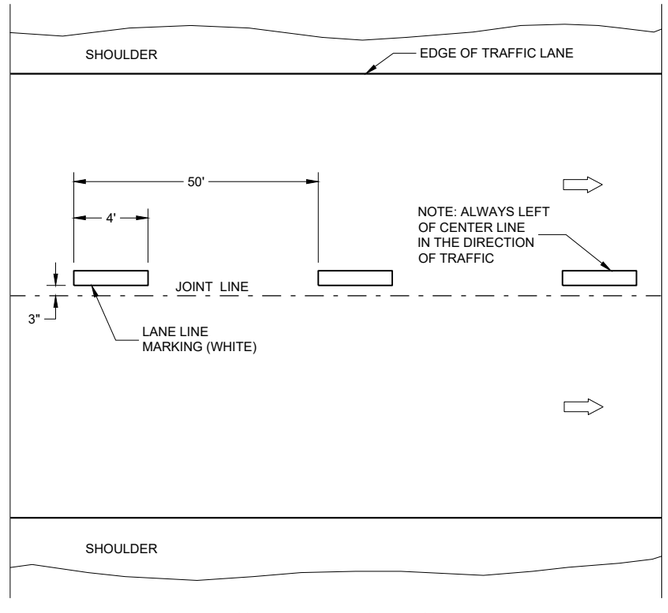


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

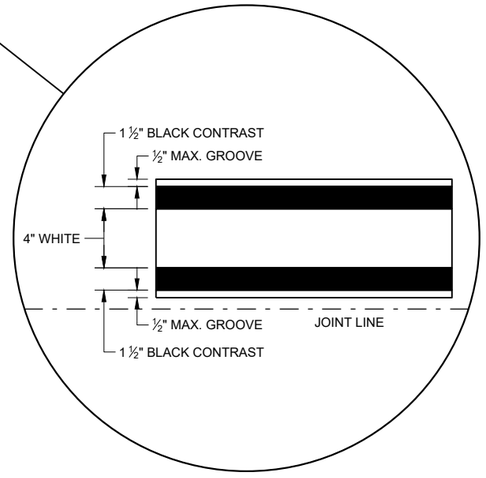
1. LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
2. MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

"T" MARKING

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC



LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

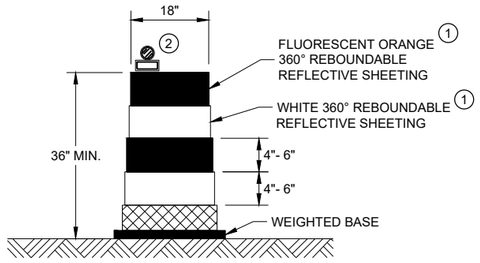
FHWA

SDD 15C08 - 20a

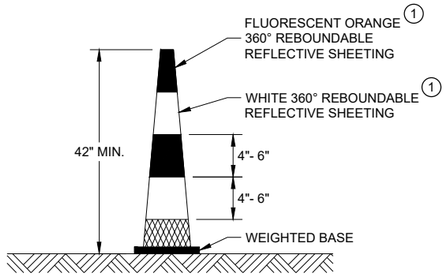
SDD 15C08 - 20a

GENERAL NOTES

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

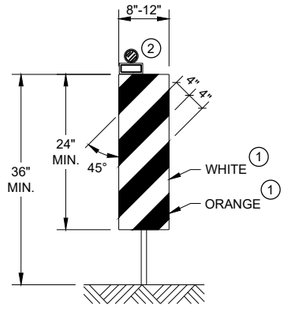


DRUM



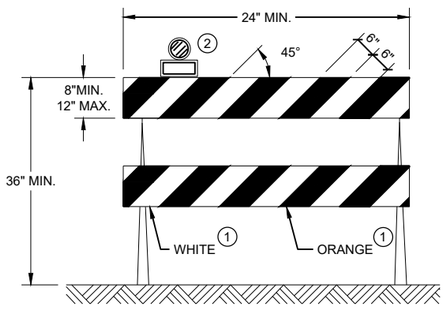
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



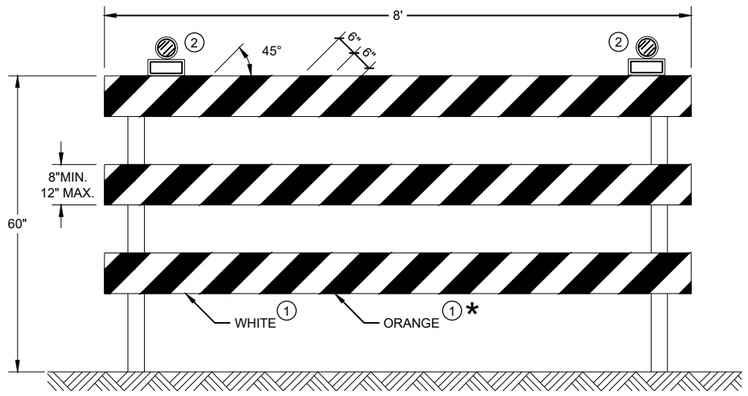
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

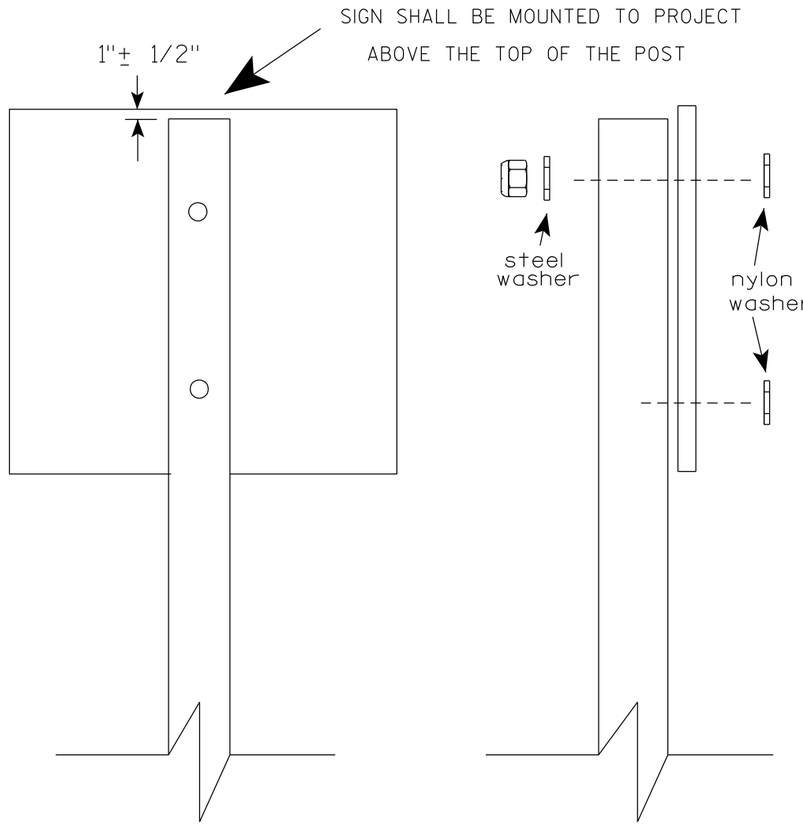
APPROVED
May 2021
DATE

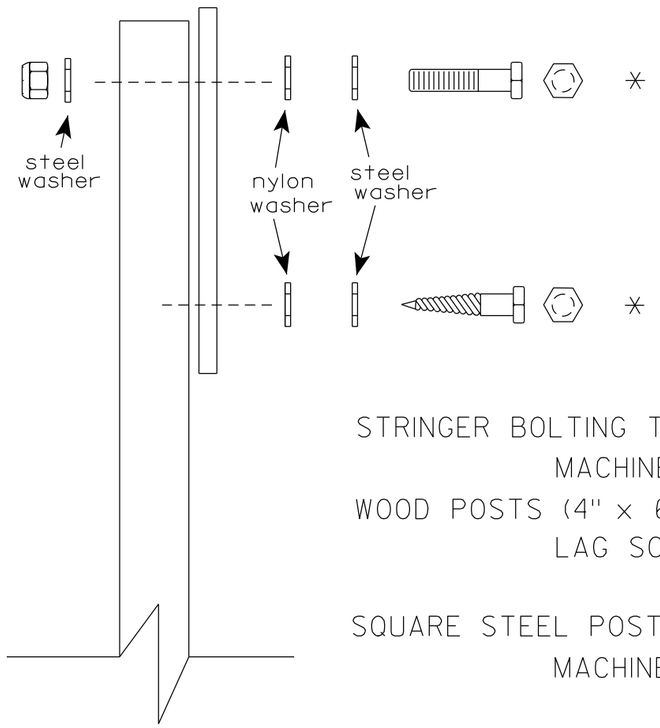
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 09b
SDD 15C11 - 09b





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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK		SHEET NO: 35	E

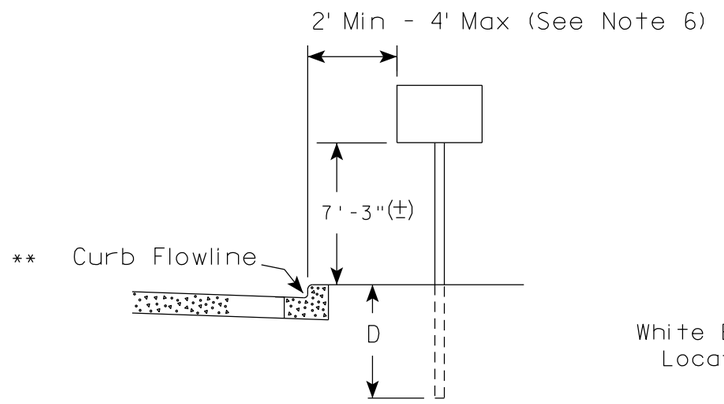
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 01-APRIL-2020 PLOT BY : dotc4c

WISDOT/CADDS SHEET 42

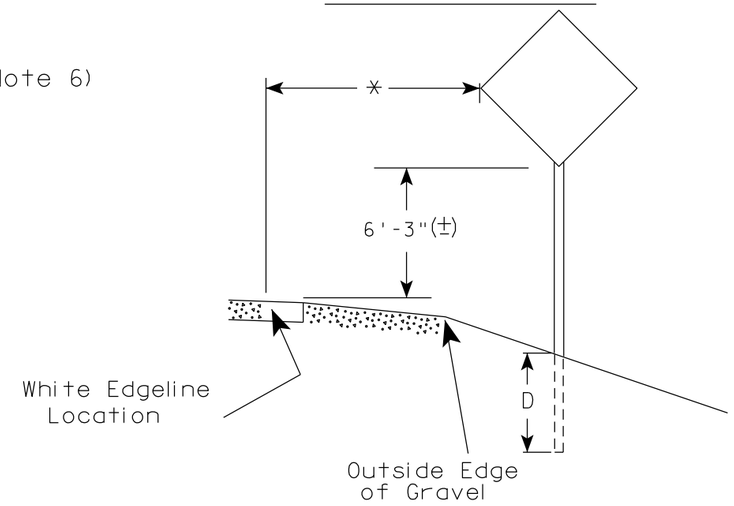
7

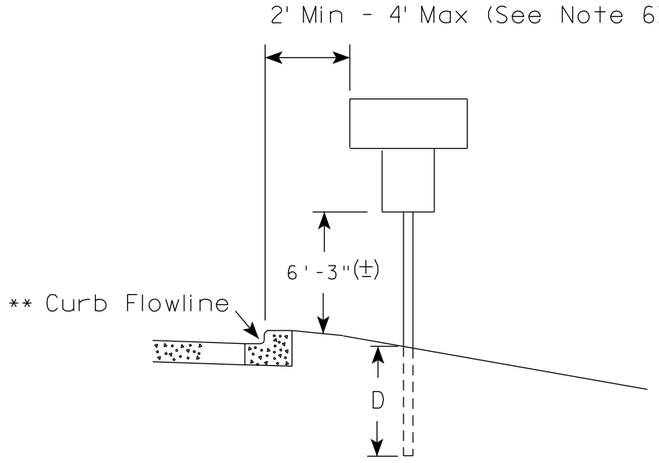
7

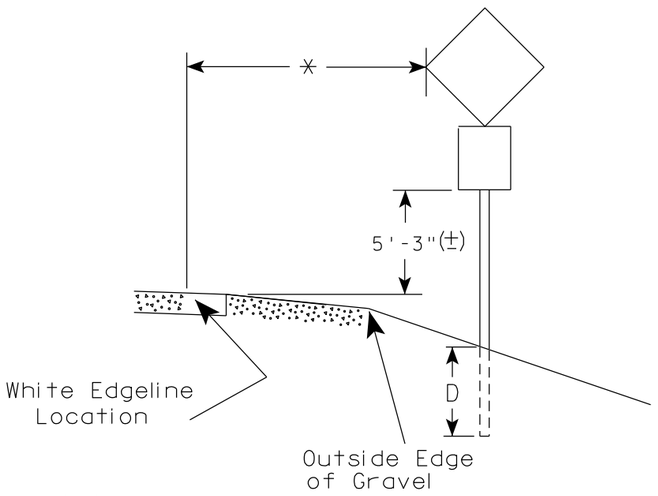
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

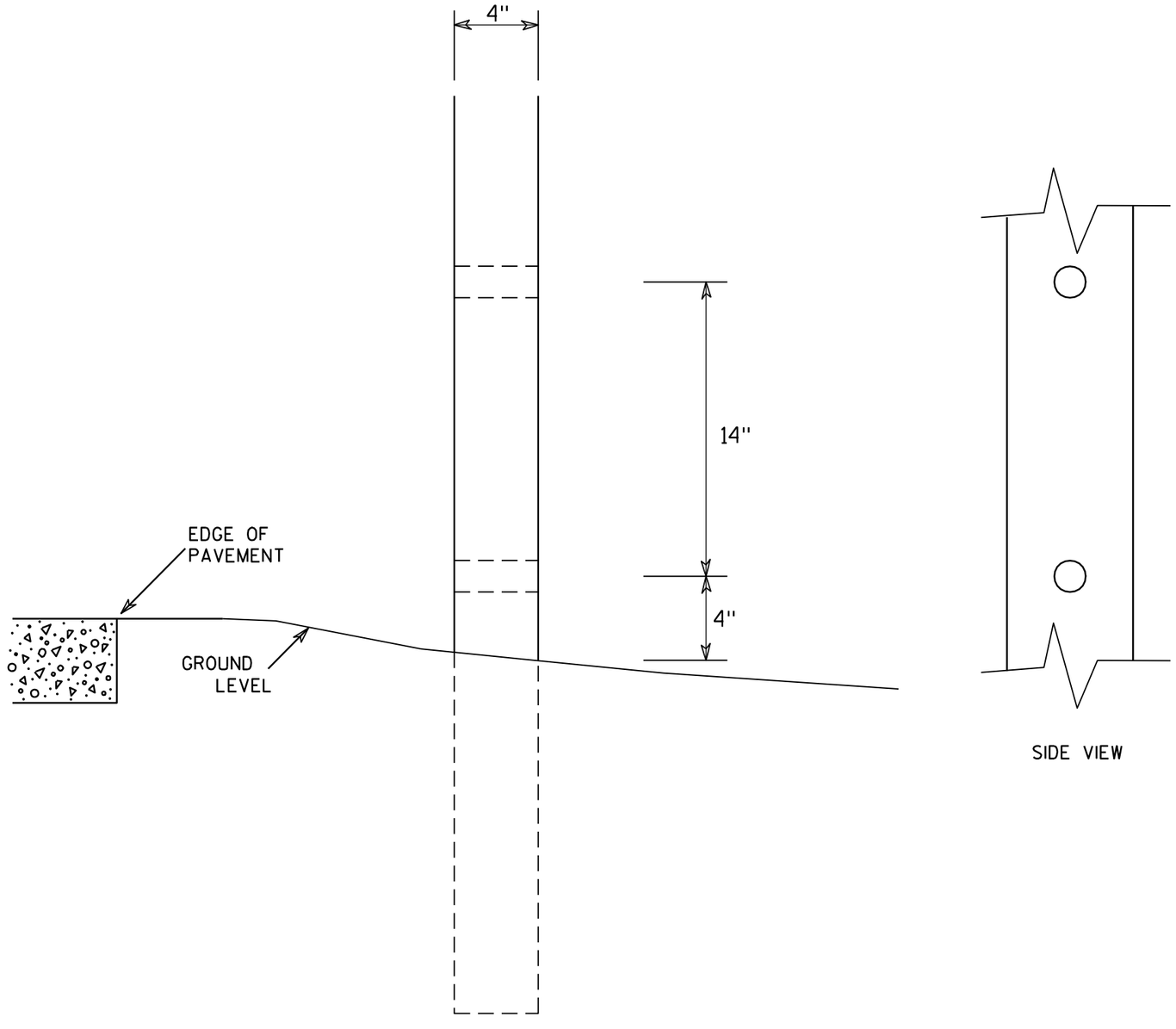
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK		SHEET NO: 36	E



SIDE VIEW

GENERAL NOTES

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

7

7

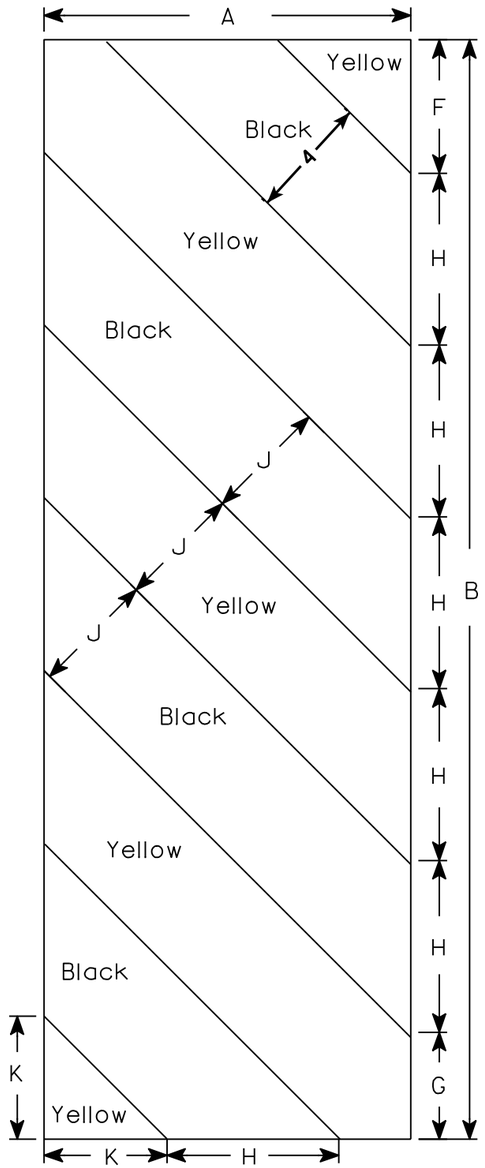
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

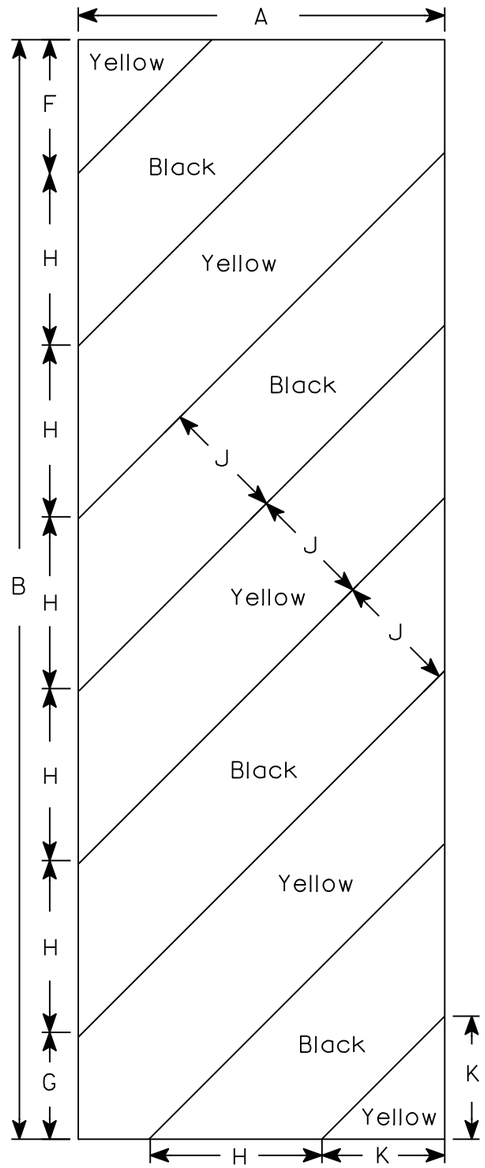
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK		SHEET NO: 37	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

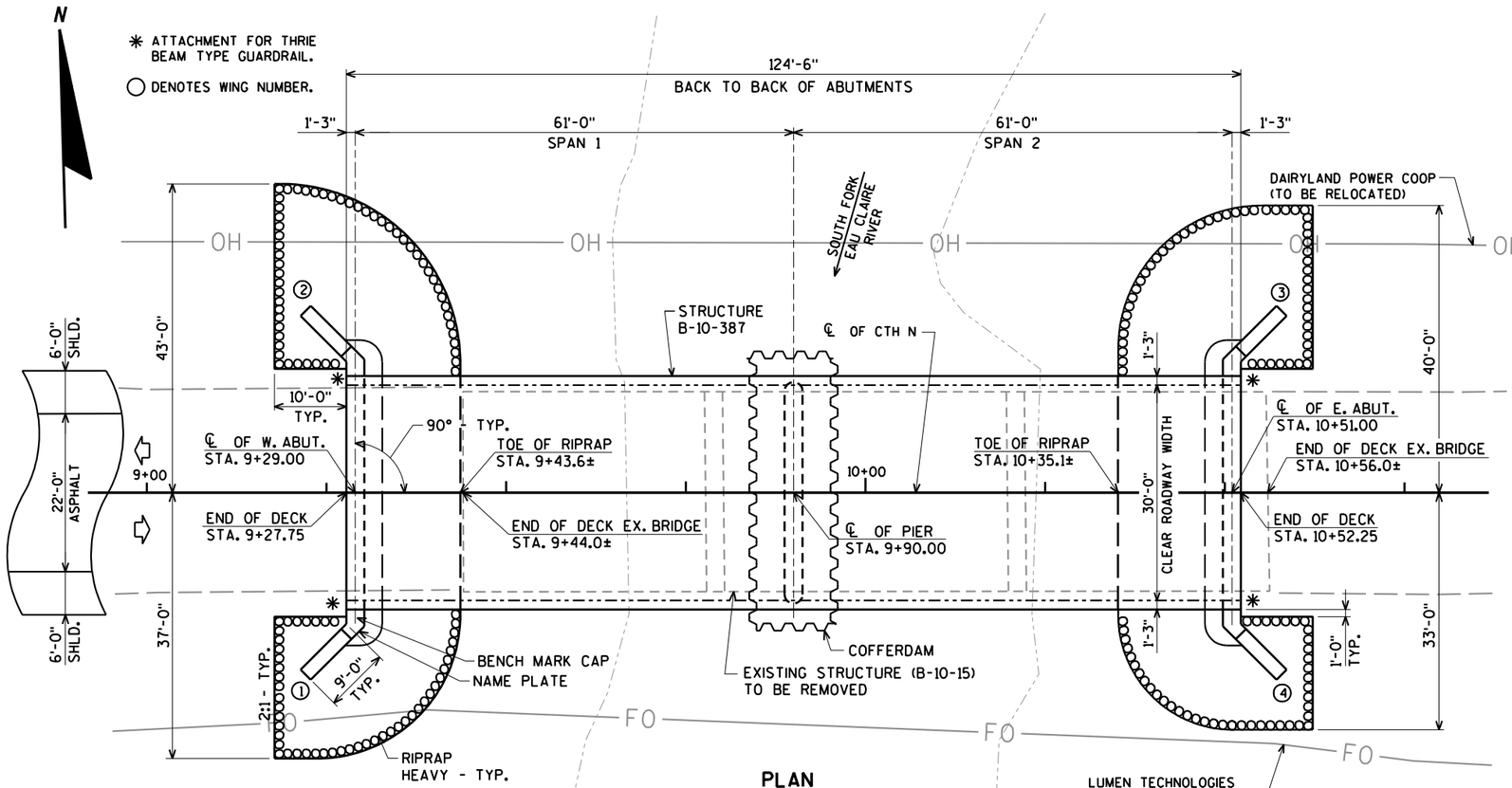
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: 7834-03-73 | HWY: CTH N | COUNTY: CLARK | SHEET NO: 38 | E

STATE PROJECT NUMBER

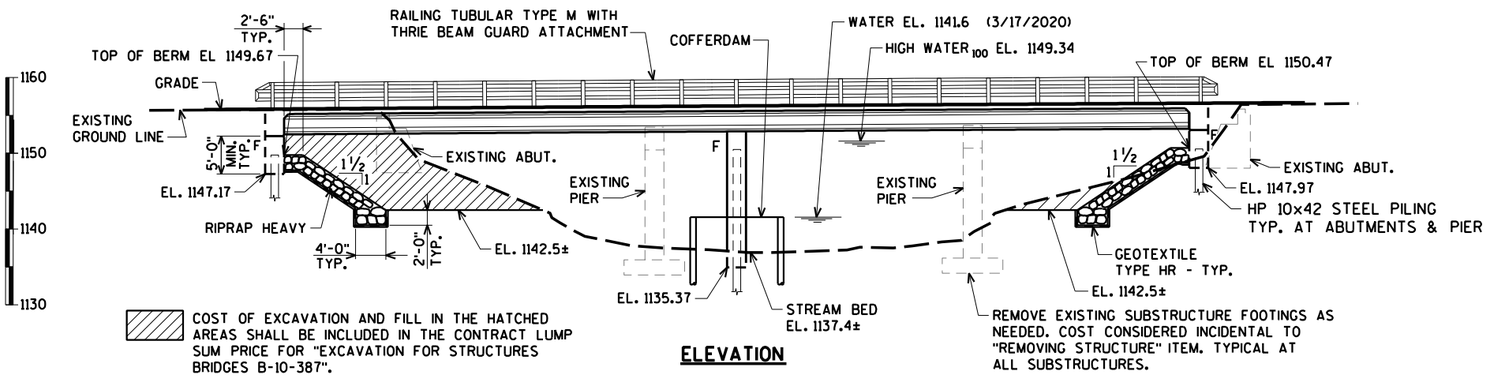
7834-03-73



PLAN

TWO-SPAN 28" PRESTRESSED CONCRETE GIRDER BRIDGE

CLARK ELECTRIC COOP
(TO REMAIN IN PLACE)



ELEVATION

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.20
OPERATING RATING FACTOR: 1.55
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 230 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 #/S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY { SUPERSTRUCTURE ____ f'_c = 4,000 p.s.i.
CONCRETE MASONRY { ALL OTHER ____ f'_c = 3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60) ____ f_y = 60,000 p.s.i.

28" PRESTRESSED GIRDER
CONCRETE MASONRY ____ f'_c = 8,000 p.s.i.
STRANDS - 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF = 270,000 p.s.i.

HYDRAULIC DATA:

100 YEAR FREQUENCY	2 YEAR FREQUENCY
Q_{100} = 4,970 c.f.s.	Q_2 = 1,300 c.f.s.
VEL. = 6.5 f.p.s.	VEL. = 2.8 f.p.s.
HW_{100} = EL. 1149.34	HW_2 = EL. 1145.56

WATERWAY AREA = 768 sq. ft.
DRAINAGE AREA = 28.5 sq. mi.
SCOUR CRITICAL CODE = 5
DATUM = NAVD88 (2012)

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 55'-0".

PIER TO BE SUPPORTED ON HP 10 x 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 70'-0".

*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.

TRAFFIC DATA:

A.A.D.T. = 580 (2022)
A.A.D.T. = 640 (2042)
R.D.S. = 55 M.P.H.

FOR TYPICAL SECTION & PROFILE GRADE LINE SEE SHEET 2

LIST OF DRAWINGS

08/31/2021

BRIDGE OFFICE CONTACT:
AARON BONK
(608)261-0261

CONSULTANT CONTACT:
DAN SYDOW
(715)834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 11/15/21
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-10-387

CTH N OVER S FK EAU CLAIRE RIVER

COUNTY	TOWN/~~CITY/VILLAGE~~
CLARK	RESEBURG

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CJM	JLB	JLB/CLP	DNS

GENERAL PLAN

SHEET 1 OF 17
39

8/31/2021
PENTABLE:BReau_shd_util.tbl

DATE:
DATE:
DATE:

CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8

8

I:±42±42-1210.00 - Clark Co, CTH N over S Fk Eau Claire River±CADD±Final±421210 gp.dgn

I.D.

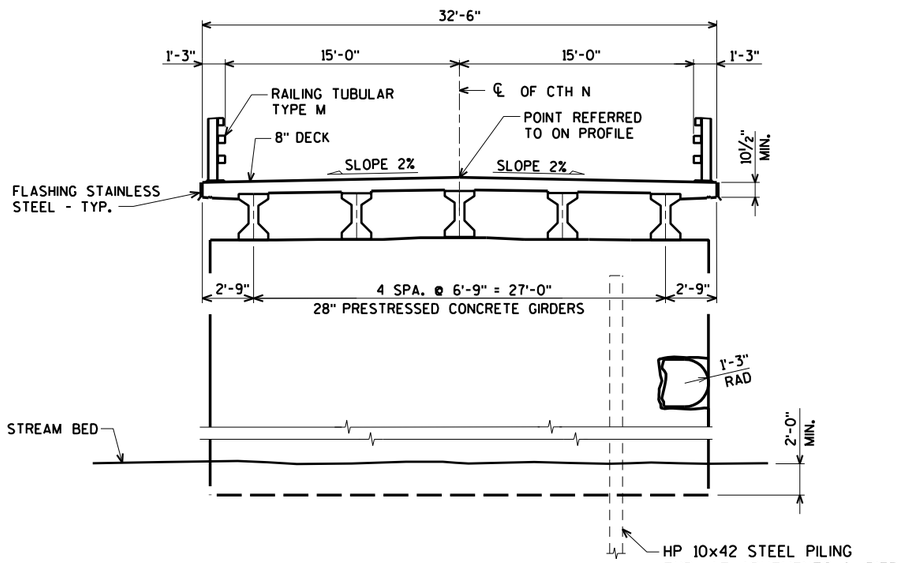
DATE:

8/31/2021
PENTABLE:BReau_shd_util.tbl

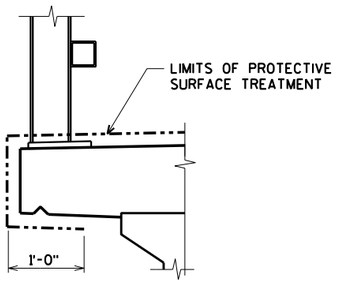
STATE PROJECT NUMBER
7834-03-73

TOTAL ESTIMATED QUANTITIES

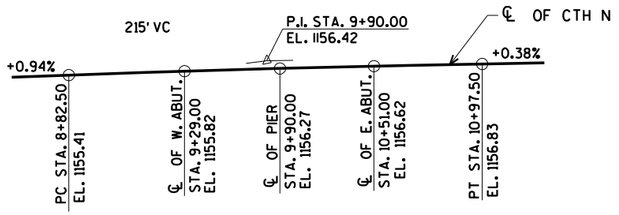
BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	PIER	E. ABUT.	SUPER.	TOTAL
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-10-15	EACH	-----	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-10-387	LS	-----	-----	-----	-----	1
206.5000	COFFERDAMS B-10-387	LS	-----	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	230	-----	230	-----	460
502.0100	CONCRETE MASONRY BRIDGES	CY	29.1	47.1	29.1	124.3	230
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	-----	500	500
502.9000.S	UNDERWATER SUBSTRUCTURE INSPECTION B-10-387	EACH	-----	1	-----	-----	1
503.0128	PRESTRESSED GIRDER TYPE I 28-INCH	LF	-----	-----	-----	614	614
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,350	2,340	2,350	-----	7,040
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,440	40	1,440	27,030	29,950
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	-----	-----	-----	20	20
506.4000	STEEL DIAPHRAGMS B-10-387	EACH	-----	-----	-----	8	8
513.4061	RAILING TUBULAR TYPE M	LF	-----	-----	-----	253	253
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8	-----	8	-----	16
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	385	630	385	-----	1,400
606.0300	RIPRAP HEAVY	CY	160	-----	135	-----	295
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80	-----	80	-----	160
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	55	-----	55	-----	110
645.0120	GEOTEXTILE TYPE HR	SY	285	-----	240	-----	525
SPV.0090.01	FLASHING STAINLESS STEEL	LF	-----	-----	-----	239	239
	NON-BID ITEMS						
	FILLER	SIZE	-----	-----	-----	-----	1/2" & 3/4"



TYPICAL SECTION THRU BRIDGE



PROTECTIVE SURFACE TREATMENT DETAIL



PROFILE GRADE LINE
(CTH N)

BENCH MARK:
120'D' SPIKE IN PPOL
STA. 10+78, 34.8' LT.
EL. 1149.37

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF 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 THE GENERAL PLAN SHEET AND IN THE ABUTMENT DETAILS.

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-10-387" SHALL BE THE EXISTING GROUNDLINE.

THE EXISTING STRUCTURE, B-10-15, TO BE REMOVED, IS A 115.3-FT. LONG THREE-SPAN STEEL DECK GIRDER BRIDGE ON CONCRETE SILL-TYPE ABUTMENTS AND CONCRETE MULTI-COLUMN PIERS WITH A 26.4-FT. CLEAR ROADWAY WIDTH.

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

PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.

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

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

THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE PRESTRESSED GIRDER DETAILS SHEET, WHICH IS THE MAXIMUM HAUNCH QUANTITY FOR WHICH THE CONTRACTOR WILL BE PAID.

BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS NOTED OTHERWISE.

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

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

EXISTING SUBSTRUCTURE LOCATIONS ARE BASED ON SURVEY AND ASBUILTS. REMOVE EXISTING SUSTRUCTURES AS NEEDED TO BUILD NEW SUBSTRUCTURES. COST OF REMOVAL IS CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE" BID ITEM.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

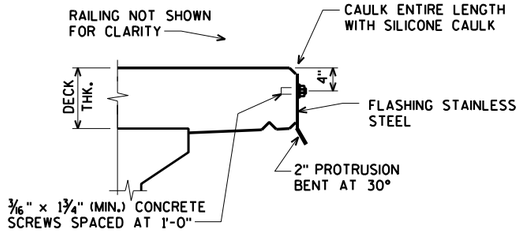
DRAWN BY JLB/CLP | PLANS CK'D. JCK

TYPICAL SECTION, QUANTITIES AND NOTES

SHEET 2 OF 17
40

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

I:±42±42-1210.00 - Clark Co, CTH N over S Fk Eau Claire River±CADD±Final±421210 gp.dgn



FLASHING DETAIL FOR NEW BRIDGES WITH OPEN RAILING

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

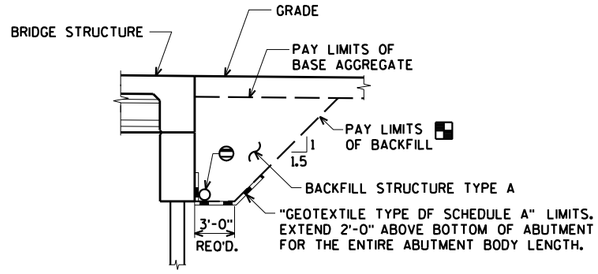
FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

EXTEND FLASHING TO FRONT FACE OF ABUTMENT.

TOP OF FLASHING TO BEGIN APPROX. 1-INCH BELOW TOP OF DECK SURFACE.

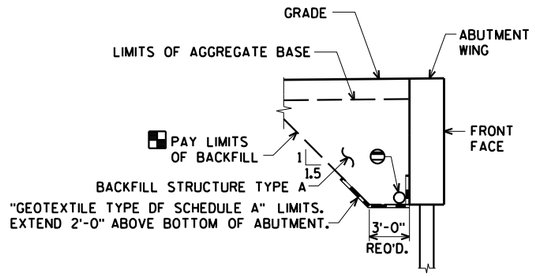
THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST DECK DEPTH OVER THE BRIDGE LENGTH.



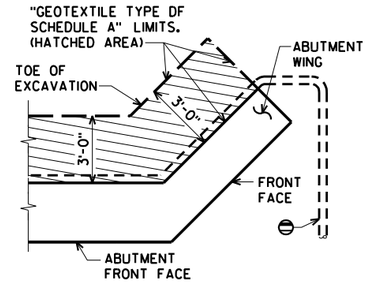
BACKFILL STRUCTURE LIMITS

■ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCLUDED WITH EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

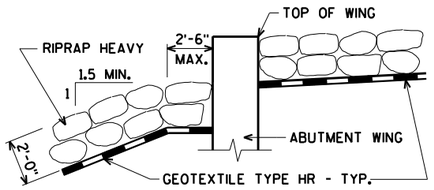
⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 6.



BACKFILL STRUCTURE LIMITS THRU WING

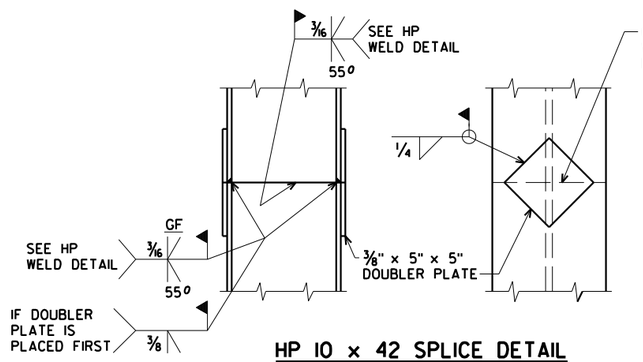


BACKFILL STRUCTURE LIMITS ABUTMENT PLAN WITH WING

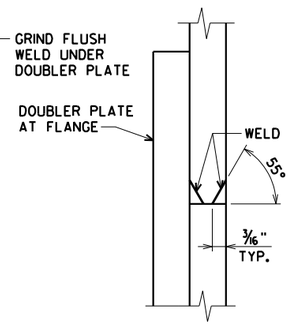


TYPICAL FILL SECTION AT WING

NOTE: PLACE RIPRAP HEAVY AS SHOWN ON GENERAL PLAN SHEET



HP 10 x 42 SPLICE DETAIL



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

DRAWN BY JLB/CLP | PLANS CK'D. JCK

STRUCTURE DETAILS

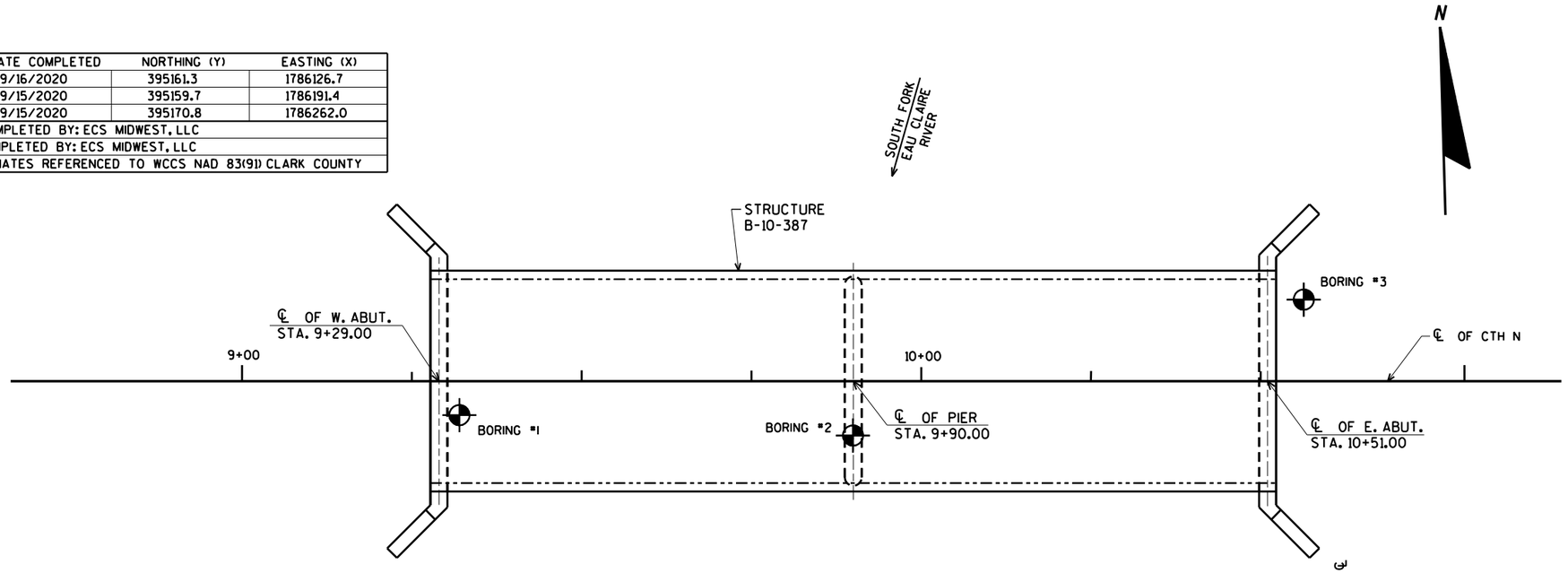
SHEET 3 OF 17
41

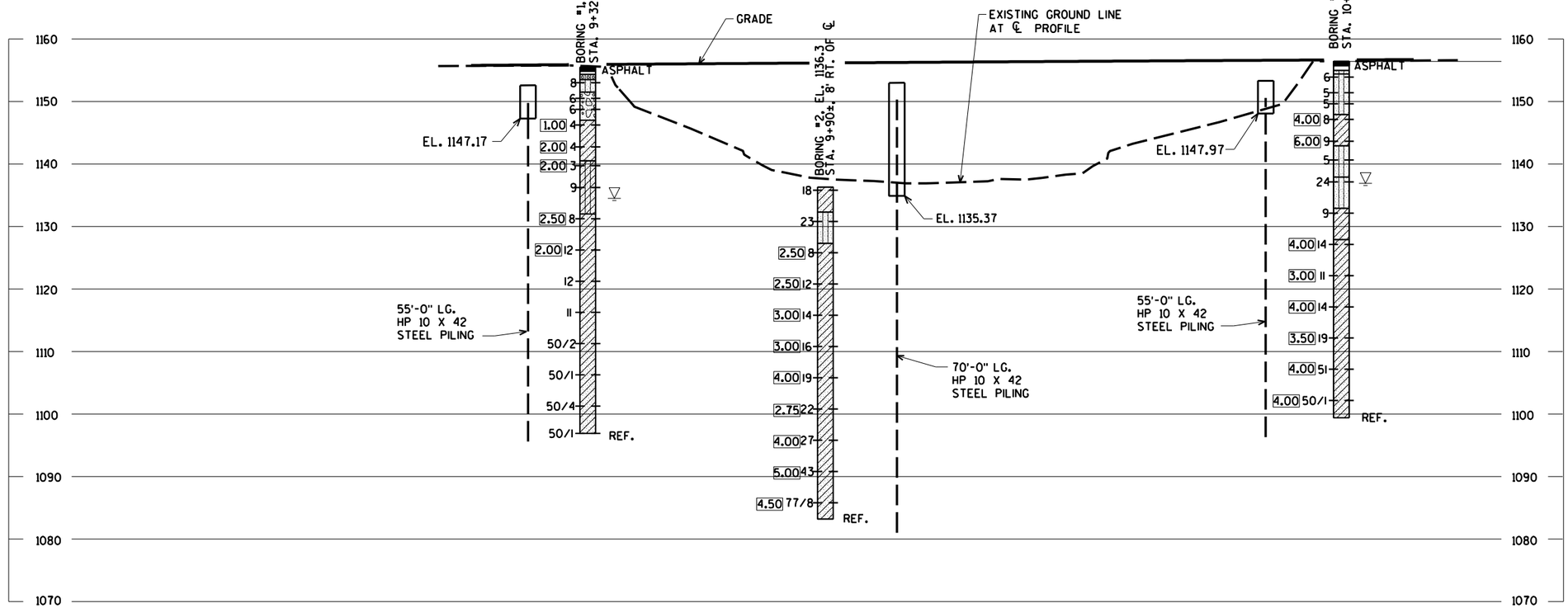
ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	9/16/2020	395161.3	1786126.7
2	9/15/2020	395159.7	1786191.4
3	9/15/2020	395170.8	1786262.0
BORINGS COMPLETED BY: ECS MIDWEST, LLC			
REPORT COMPLETED BY: ECS MIDWEST, LLC			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CLARK COUNTY			





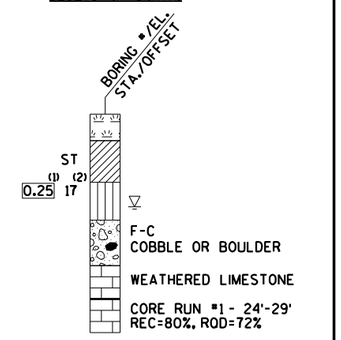
STATE PROJECT NUMBER

7834-03-73

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-10-387

DRAWN BY JLB | PLANS CK'D. JCK

SUBSURFACE EXPLORATION

SHEET 4 OF 17
42

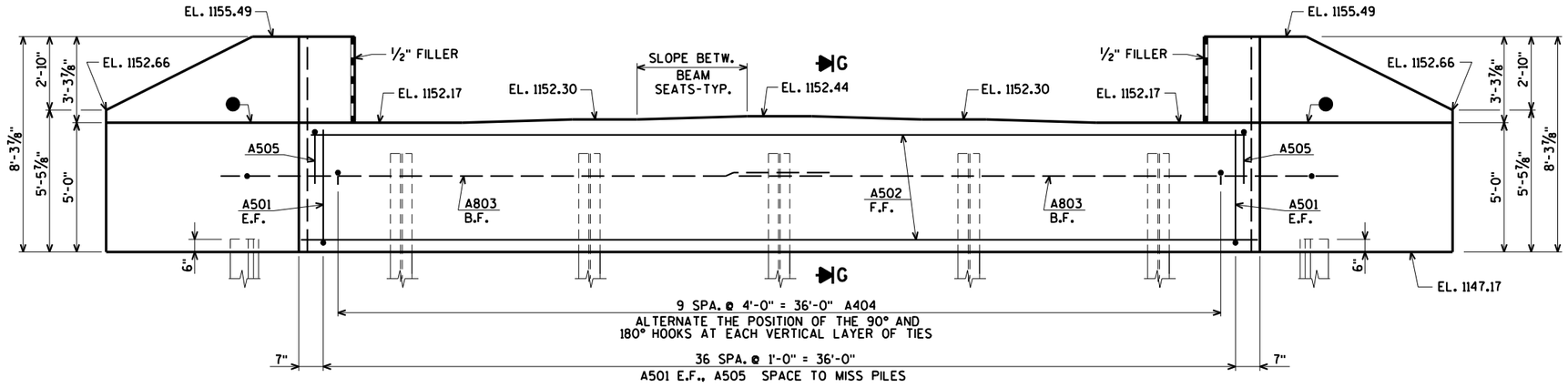
8/24/2021
PENTABLE:BReau_shd_util.tbl

I:±42±42-1210.00 - Clark Co, CTH N over S Fk Eau Claire River±CADD±Final±421210 soils.dgn

STATE PROJECT NUMBER

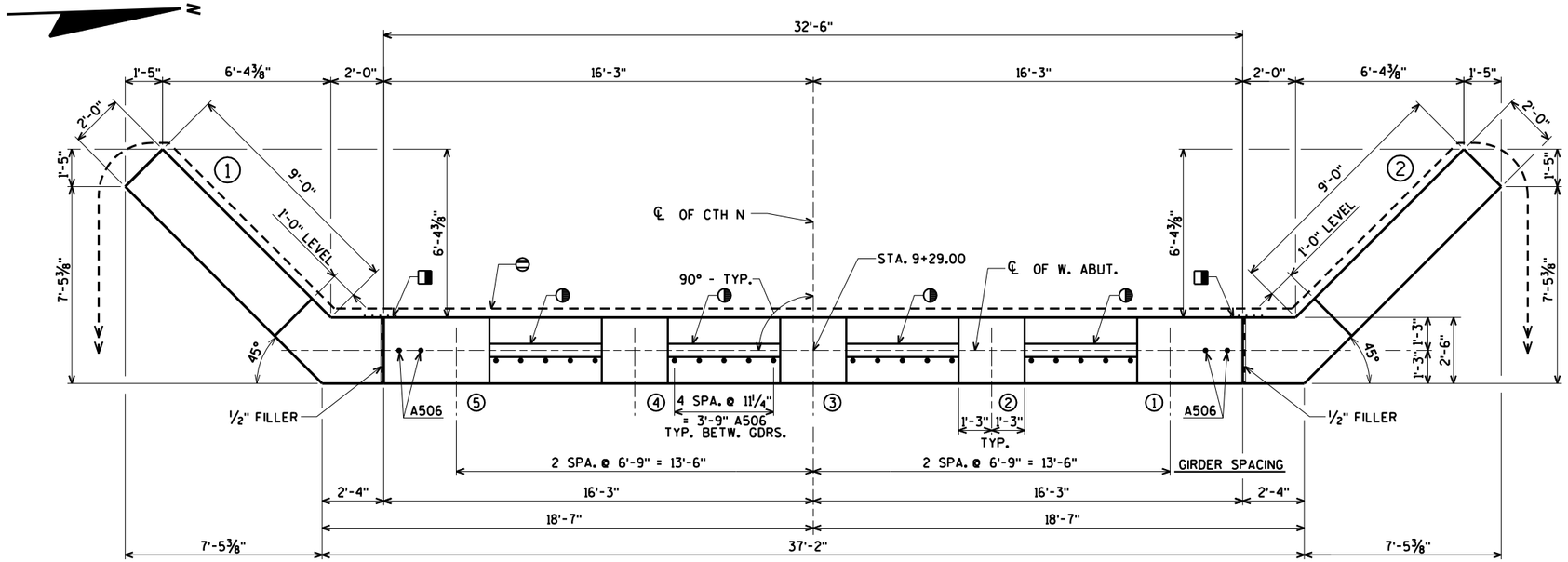
7834-03-73

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



ELEVATION
(LOOKING WEST)

FOR SECTION G SEE SHEET 7



PLAN

● OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F. (RUBBERIZED MEMBRANE WATERPROOFING INCIDENTAL TO BID ITEM "CONCRETE MANSONRY BRIDGES" IF CONST. JOINT IS USED).

◨ 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 6. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

DRAWN BY CLP | PLANS CK'D. JCK

WEST ABUTMENT

SHEET 5 OF 17
43

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/17/2021
PENTABLE:BReau_shd_util.tbl

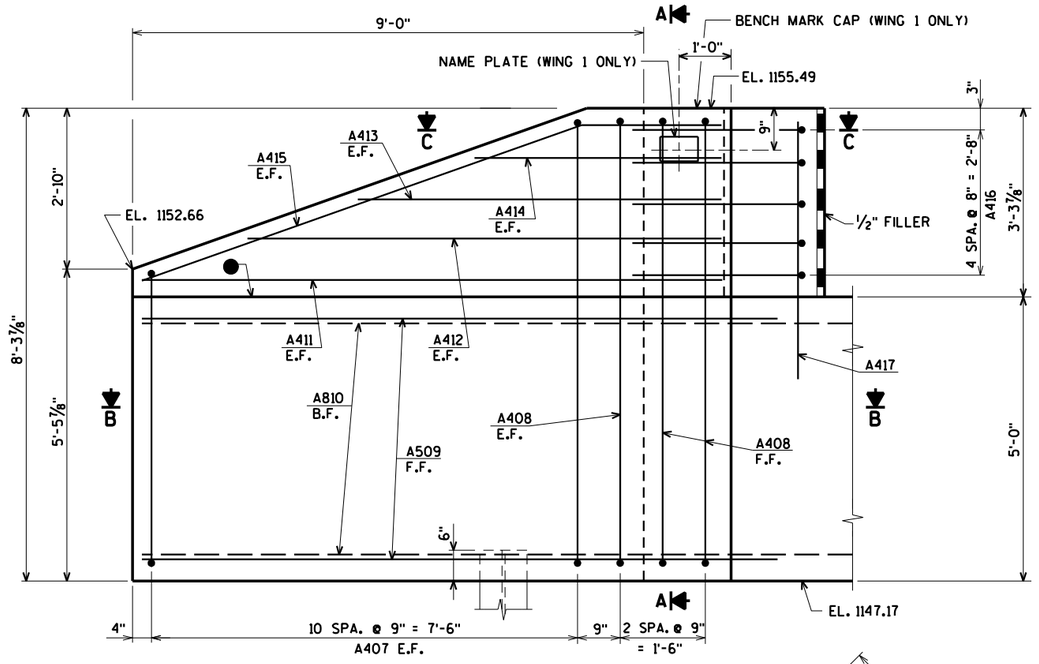
8

8

I:±42±42-1210.00 - Clark Co, CTH N over S Fk Eau Claire River±CADD±Final±421210 wa.dgn

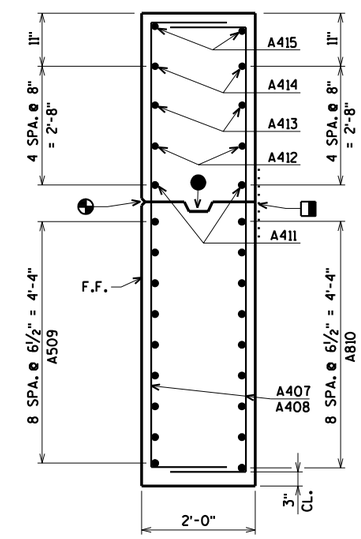
STATE PROJECT NUMBER

7834-03-73

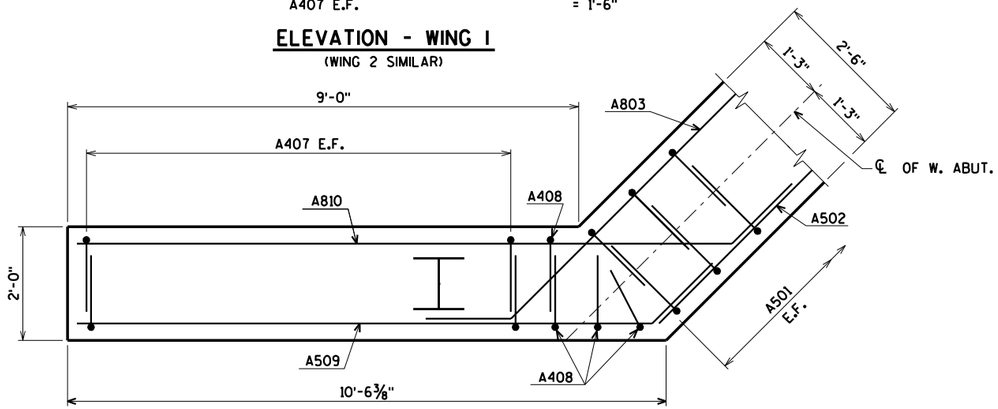


ELEVATION - WING 1

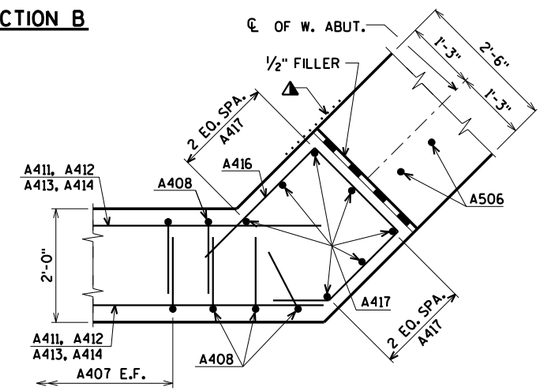
(WING 2 SIMILAR)



SECTION A



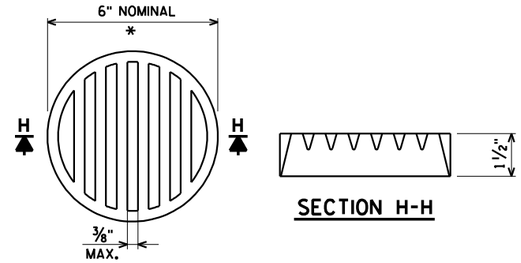
SECTION B



SECTION C

- RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MANSONRY BRIDGES")
- OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F. (RUBBERIZED MEMBRANE WATERPROOFING INCIDENTAL TO BID ITEM "CONCRETE MANSONRY BRIDGES" IF CONST. JOINT IS USED).
- ¾" 'V' GROOVE ON F.F. OF WING WALL NOT REQUIRED IF CONST. JT. IS NOT USED.
- 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

FOR PILE SPLICE DETAIL SEE SHEET 3.



SECTION H-H

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

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

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

RODENT SHIELD DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

DRAWN BY CLP | PLANS CK'D. JCK

WEST ABUTMENT WINGS 1 & 2 DETAILS

SHEET 6 OF 17
44

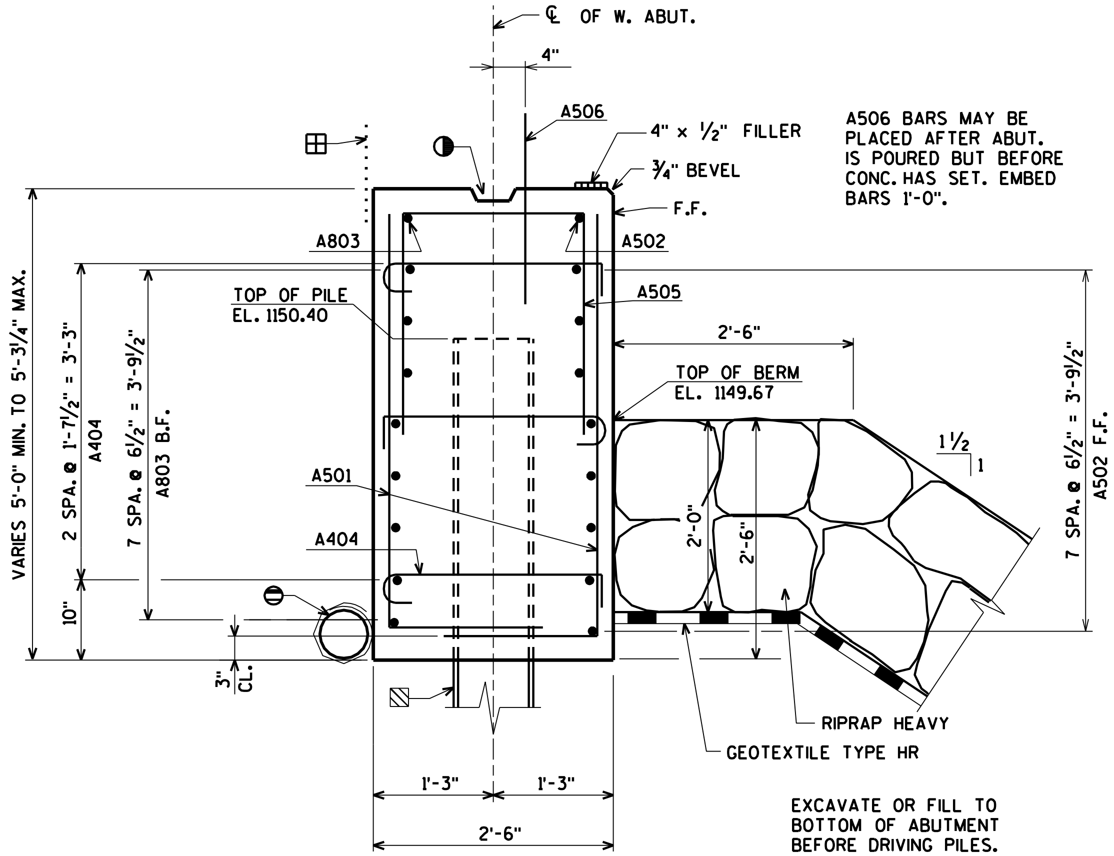
ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/17/2021
PENTABLE:tBReau_shd_util.tbl

I:±42±42-1210.00 - Clark Co, CTH N over S Fk Eau Claire River±CADD±Final±421210 wa.dgn

8

8

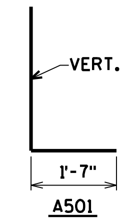


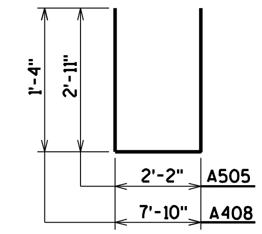
A506 BARS MAY BE PLACED AFTER ABUT. IS POURED BUT BEFORE CONC. HAS SET. EMBED BARS 1'-0".

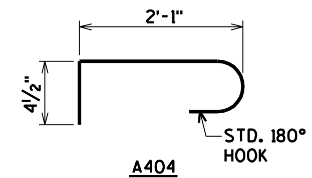
EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

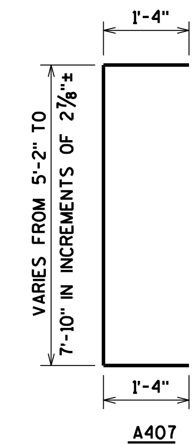
SECTION G

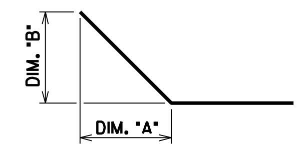
▧ ABUTMENT TO BE SUPPORTED ON HP 10 × 42 STEEL PILING DRIVEN TO A REQ'D. DRIVING RESISTANCE OF 140 TONS PER PILE ESTIMATED LENGTH 55'-0".



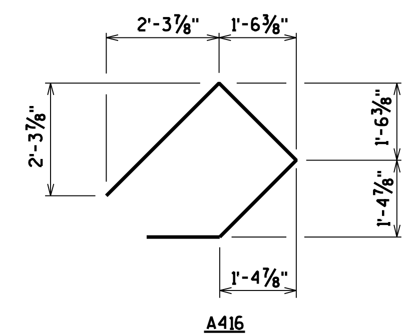








BAR NO.	DIM. "A"	DIM. "B"
A803	1'-0¾"	1'-0¾"
A509	1'-0¾"	1'-0¾"
A810	1'-0¾"	1'-0¾"
A415	7-10"	2'-10"



BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A407	4 SERIES OF 11	7'-8" TO 10'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	1,440# COATED 2,350# UNCOATED LOCATION
A501		74	5-11	X			BODY VERT. E.F.
A502		9	36-11				BODY HORIZ. F.F.
A803		18	24-8	X			BODY HORIZ. B.F.
A404		30	2-10	X			BODY TIES
A505		37	7-9	X			BODY VERT. TOP
A506	X	24	2-0				BODY DOWELS
A407	X	44	9-0	X		⊗	WINGS 1 & 2 VERT. E.F.
A408	X	8	10-4	X			WINGS 1 & 2 VERT. E.F.
A509	X	18	11-7	X			WINGS 1 & 2 HORIZ. F.F.
A810	X	18	13-5	X			WINGS 1 & 2 HORIZ. B.F.
A411	X	4	10-1				WINGS 1 & 2 HORIZ. E.F.
A412	X	4	8-3				WINGS 1 & 2 HORIZ. E.F.
A413	X	4	6-5				WINGS 1 & 2 HORIZ. E.F.
A414	X	4	4-7				WINGS 1 & 2 HORIZ. E.F.
A415	X	4	10-8	X			WINGS 1 & 2 DIAG. E.F.
A416	X	10	8-8	X			WINGS 1 & 2 HORIZ.
A417	X	14	4-10				WINGS 1 & 2 VERT.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

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

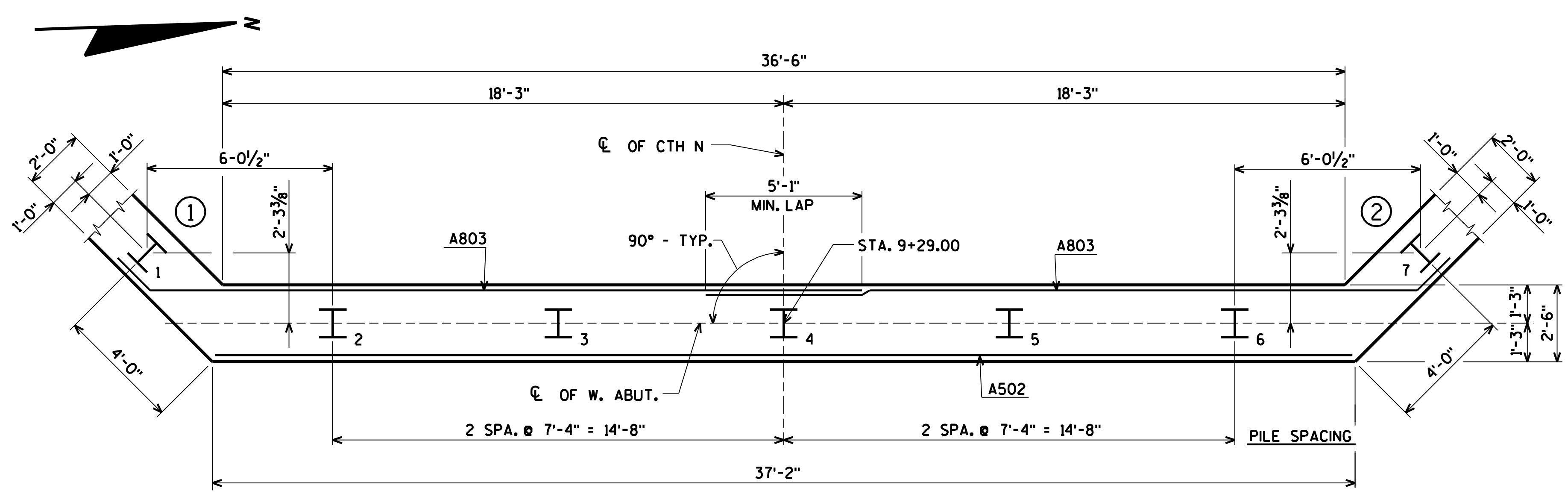
⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 6. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" × 6".

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING BETWEEN WINGS.

FOR PILE SPLICE DETAIL SEE SHEET 3.

FOR LOCATION OF SECTION G SEE SHEET 5.



PILE LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

DRAWN BY CLP | PLANS CK'D. JCK

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

WEST ABUTMENT DETAILS AND BILL OF BARS

8

8

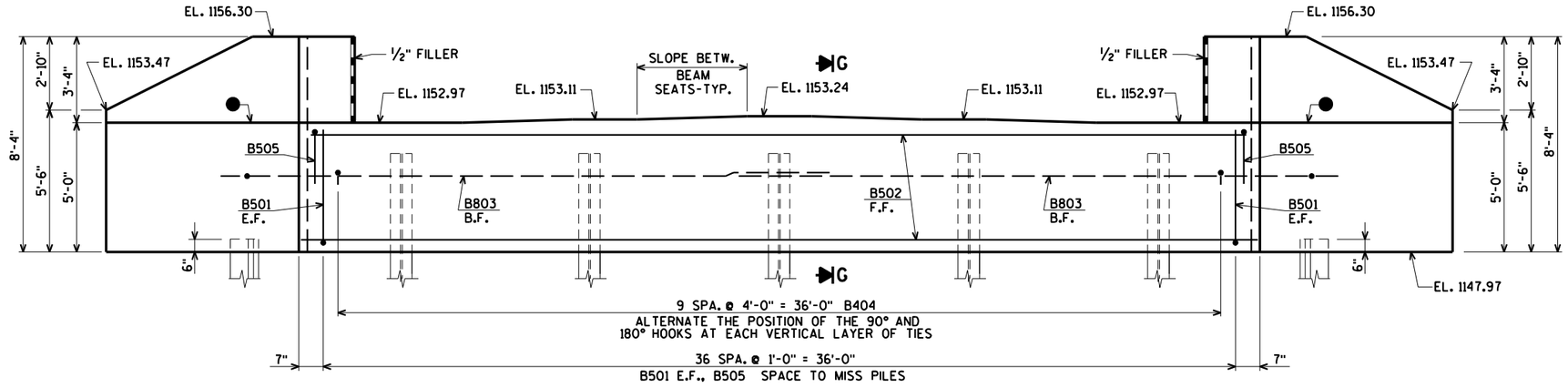
8/17/2021
PENTABLE:BReau_shd_util.tbl

I:±42±42-1210.00 - Clark Co. CTH N over S Fk Eau Claire River±CADD±Final±421210 wa.dgn

STATE PROJECT NUMBER

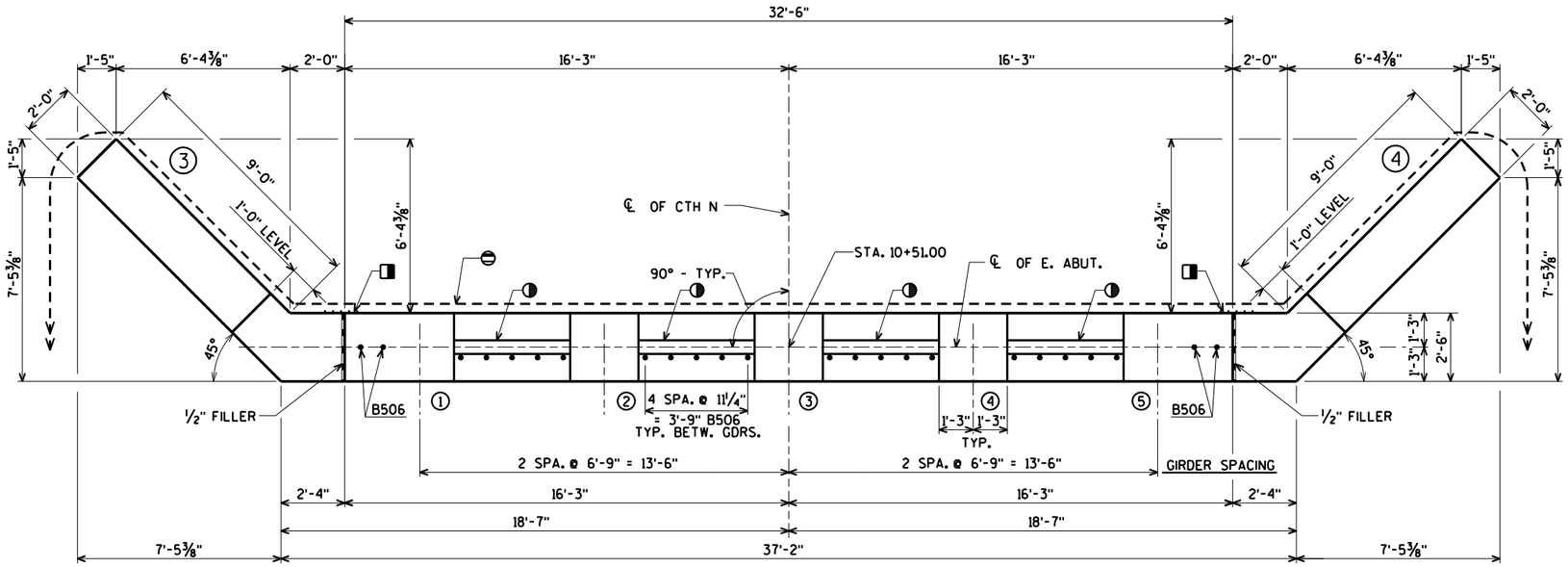
7834-03-73

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



ELEVATION
(LOOKING EAST)

FOR SECTION G SEE SHEET 10



PLAN

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◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

DRAWN BY CLP | PLANS CK'D. JCK

EAST ABUTMENT

SHEET 8 OF 17
46

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8

8

8/17/2021
PENTABLE:BReau_shd_util.tbl

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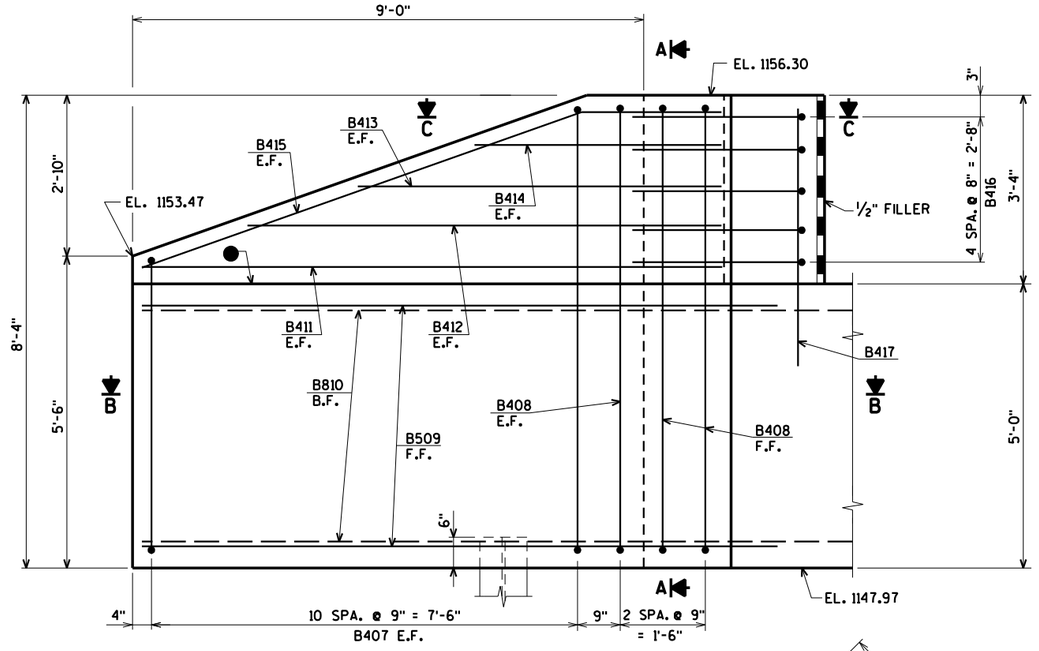
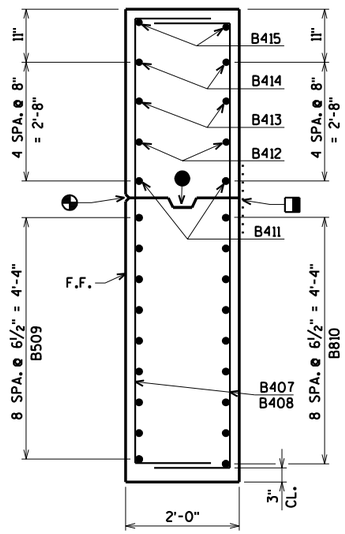
STATE PROJECT NUMBER

7834-03-73

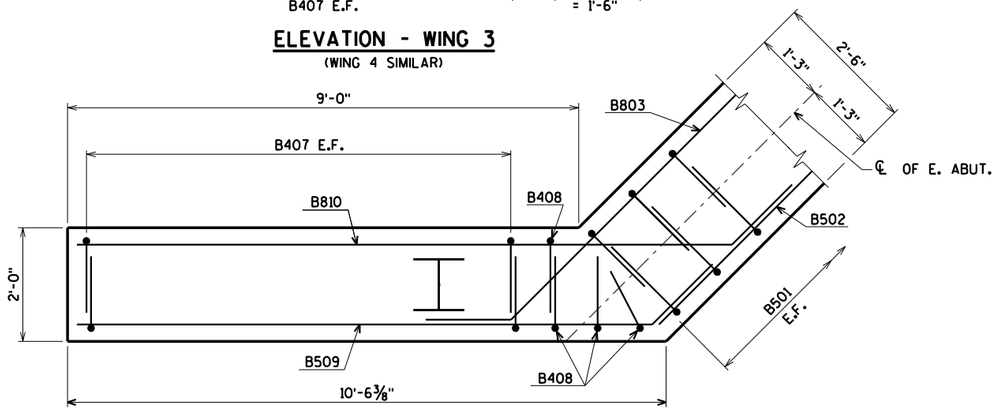


ELEVATION - WING 3

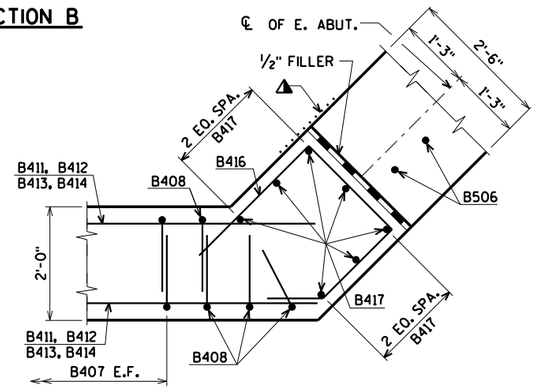
(WING 4 SIMILAR)



SECTION A



SECTION B



SECTION C

- RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MANSONRY BRIDGES")
- OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" x 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F. (RUBBERIZED MEMBRANE WATERPROOFING INCIDENTAL TO BID ITEM "CONCRETE MANSONRY BRIDGES" IF CONST. JOINT IS USED).
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FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

DRAWN BY CLP | PLANS CK'D. JCK

EAST ABUTMENT WINGS 3 & 4 DETAILS

SHEET 9 OF 17
47

ORIGINAL PLANS PREPARED BY
AYRES 3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/17/2021
PENTABLE:BReau_shd_util.tbl

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STATE PROJECT NUMBER

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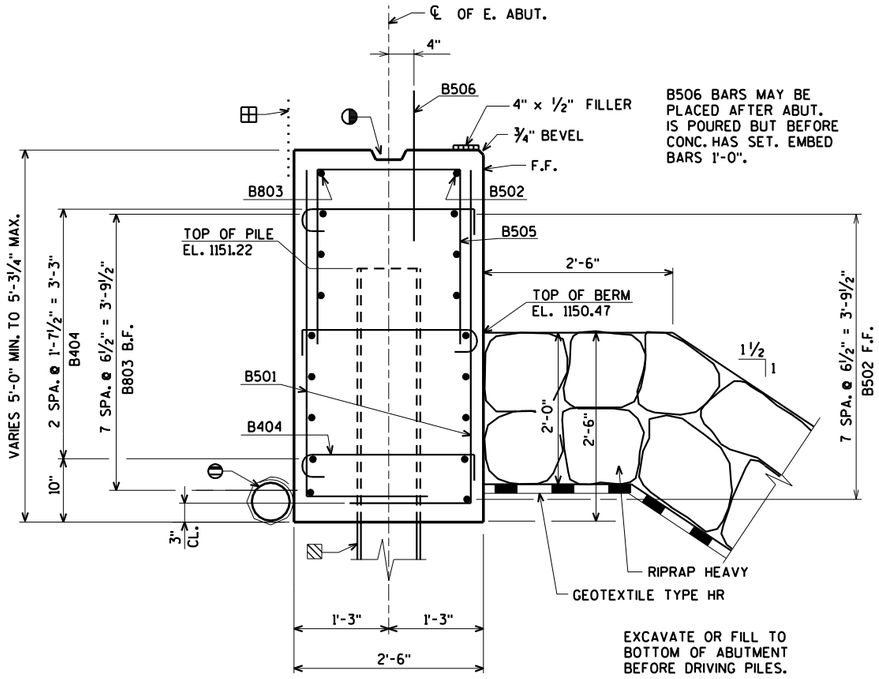

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EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

SECTION G

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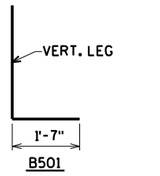
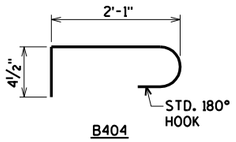
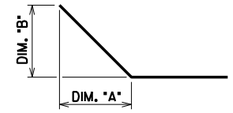


B501



B404



BAR NO.	DIM. "A"	DIM. "B"
B803	1'-0¾"	1'-0¾"
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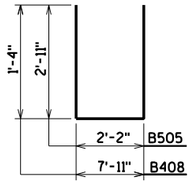

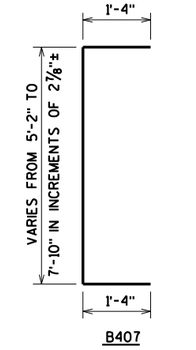

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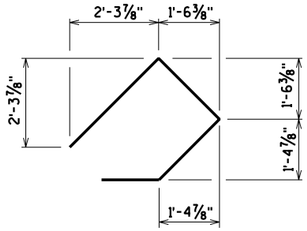


B416

BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
B407	4 SERIES OF 11	7'-8" TO 10'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1.440# COATED 2.350# UNCOATED LOCATION
B501		74	5-11	X		BODY VERT. E.F.
B502		9	36-11			BODY HORIZ. F.F.
B803		18	24-8	X		BODY HORIZ. B.F.
B404		30	2-10	X		BODY TIES
B505		37	7-9	X		BODY VERT. TOP
B506	X	24	2-0			BODY DOWELS
B407	X	44	9-0	X	⊗	WINGS 3 & 4 VERT. E.F.
B408	X	8	10-5	X		WINGS 3 & 4 VERT. E.F.
B509	X	18	11-7	X		WINGS 3 & 4 HORIZ. F.F.
B810	X	18	13-5	X		WINGS 3 & 4 HORIZ. B.F.
B411	X	4	10-1			WINGS 3 & 4 HORIZ. E.F.
B412	X	4	8-3			WINGS 3 & 4 HORIZ. E.F.
B413	X	4	6-5			WINGS 3 & 4 HORIZ. E.F.
B414	X	4	4-7			WINGS 3 & 4 HORIZ. E.F.
B415	X	4	10-8	X		WINGS 3 & 4 DIAG. E.F.
B416	X	10	8-8	X		WINGS 3 & 4 HORIZ.
B417	X	14	4-10			WINGS 3 & 4 VERT.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

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

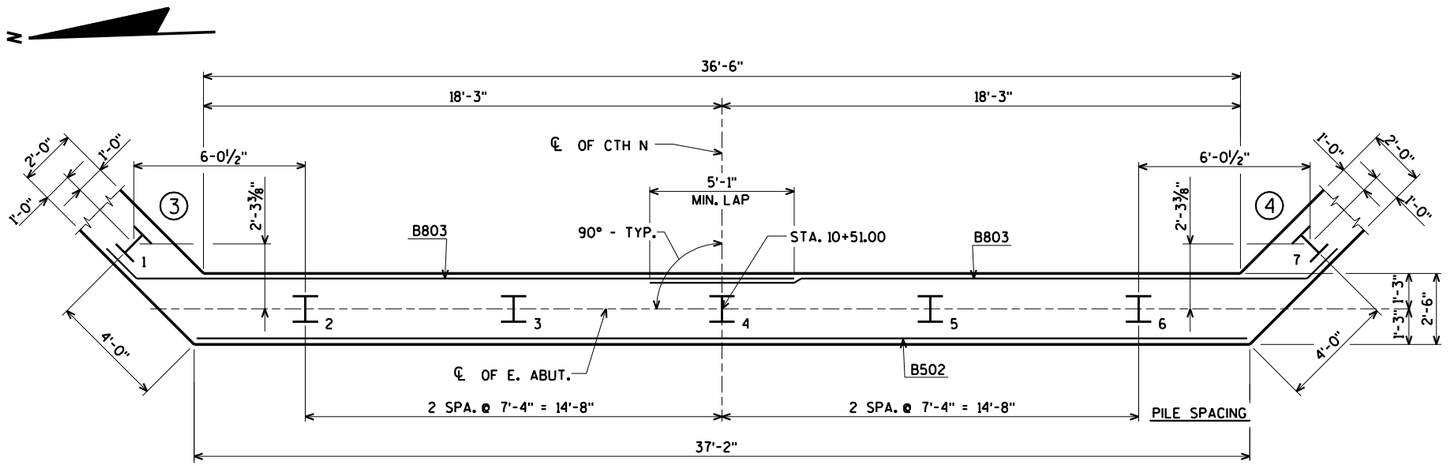
⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 6. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING BETWEEN WINGS.

FOR PILE SPLICE DETAIL SEE SHEET 3.

FOR LOCATION OF SECTION G SEE SHEET 8.



PILE LAYOUT

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

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EAST ABUTMENT DETAILS AND BILL OF BARS

SHEET 10 OF 17
48

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I:±42±42-1210.00 - Clark Co, CTH N over S Fk Eau Claire River±CADD±Final±421210 ea.dgn

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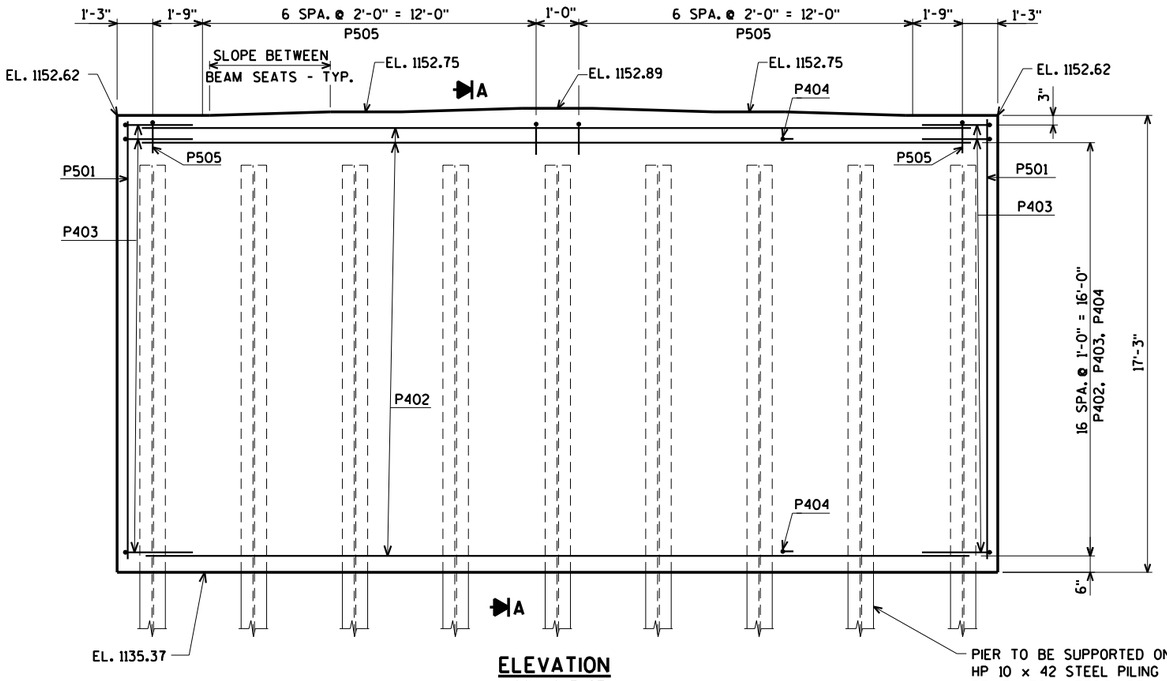
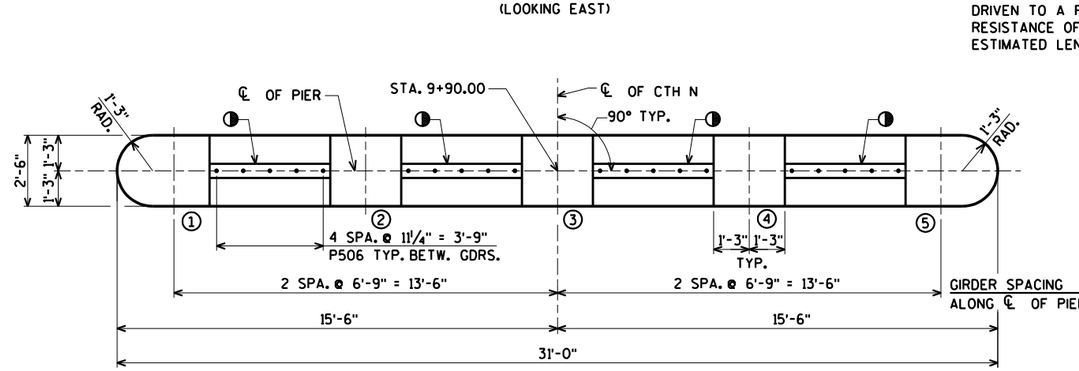


ELEVATION
(LOOKING EAST)

BILL OF BARS

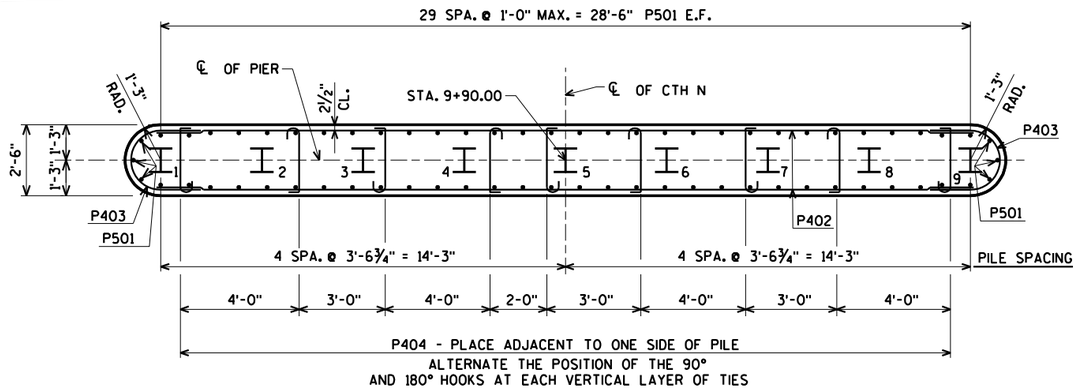
BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	40" COATED 2,380" UNCOATED LOCATION
P501		66	16-7				COLUMN VERT. E.F.
P402		36	28-6				COLUMN HORIZ.
P403		36	6-1	X			COLUMN HORIZ. @ ENDS
P404		153	2-10	X			COLUMN TIES
P505		16	4-7	X			COLUMN VERT. @ TOP
P506	X	20	2-0				COLUMN DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

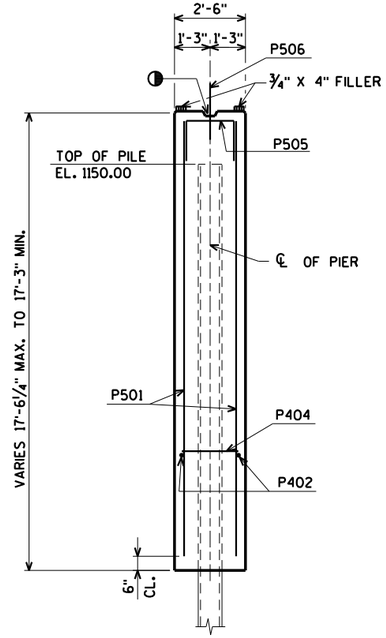


PLAN

N

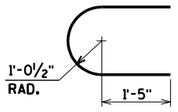


PILE LAYOUT

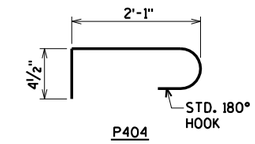


SECTION A

P506 BARS MAY BE PLACED AFTER PIER IS POURED BUT BEFORE CONC. HAS SET. EMBED BARS 1'-0".



P403



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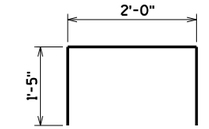

P505

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

FOR PILE SPLICE DETAIL SEE SHEET 3.

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STRUCTURE B-10-387

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PIER

SHEET 11 OF 17
49

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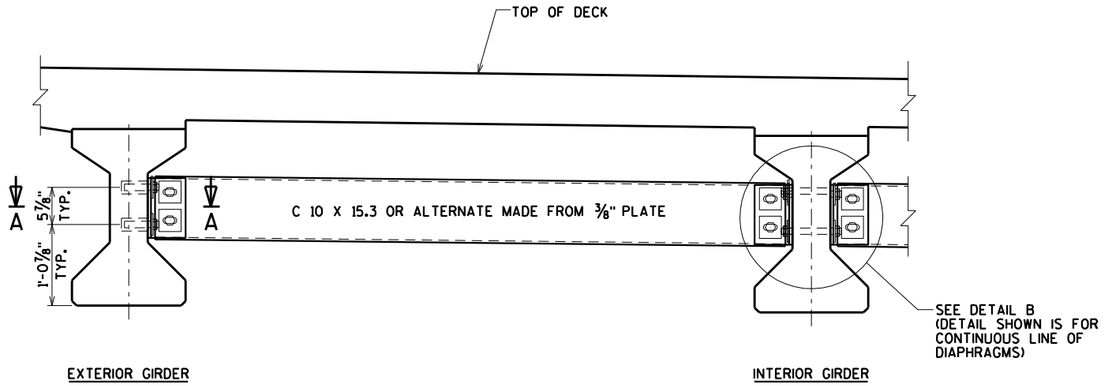
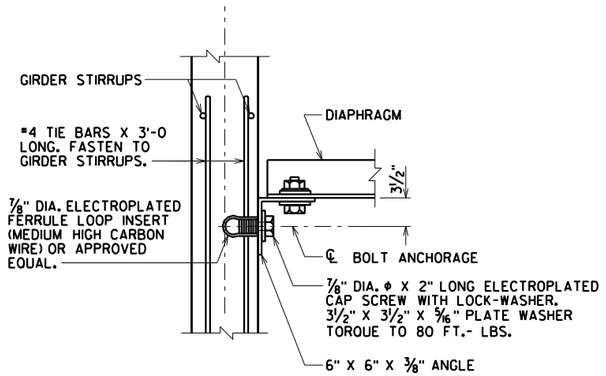
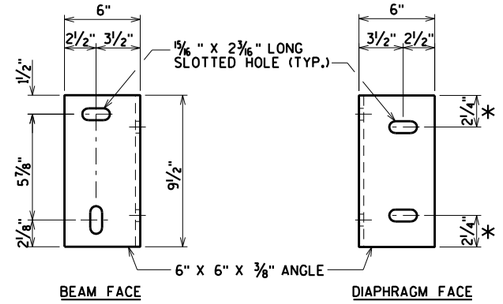


PART TRANSVERSE SECTION AT DIAPHRAGM



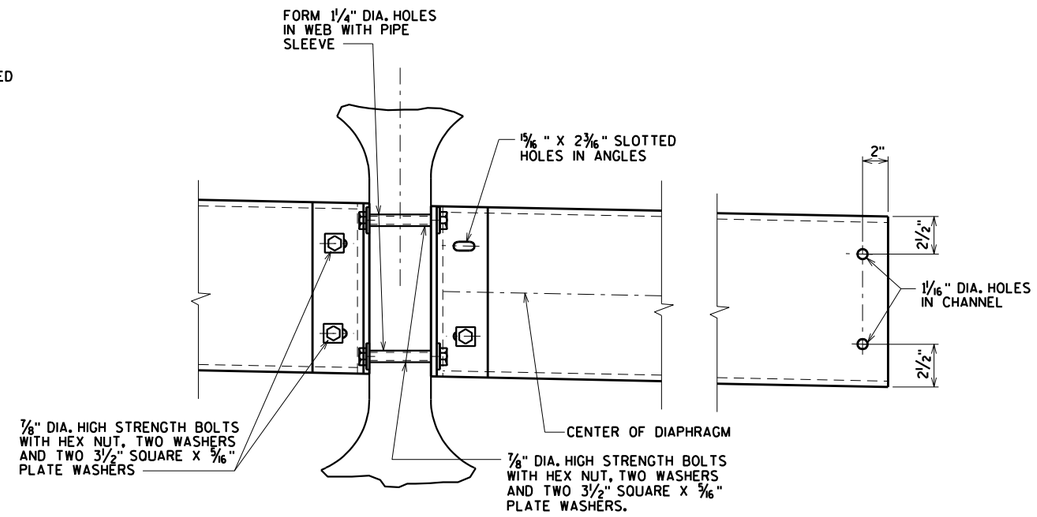
SECTION A-A

(FOR EXTERIOR ATTACHMENT)



DIAPHRAGM SUPPORT

* 2½" FOR ALTERNATE PLATE DIAPHRAGM



(FOR CONTINUOUS LINE OF DIAPHRAGMS)

DETAIL B

NOTES

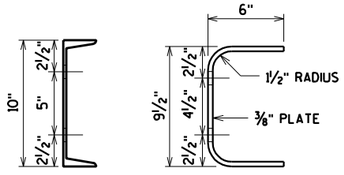
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-10-387", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

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

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



SECTION THRU DIAPHRAGM

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

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STEEL DIAPHRAGM

SHEET 12 OF 17
50

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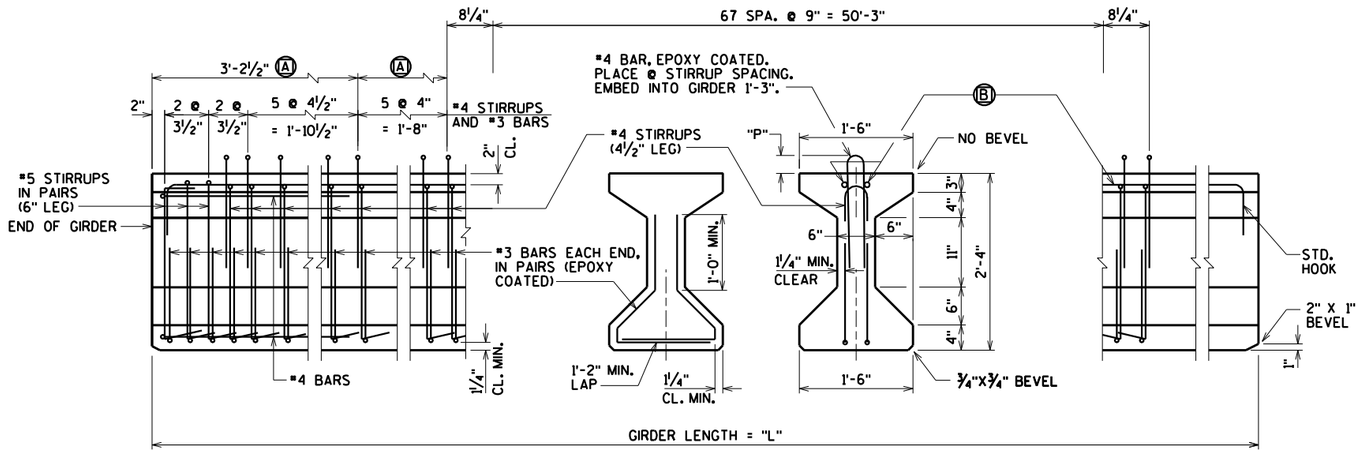
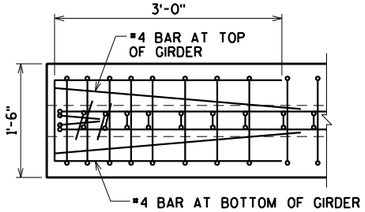


SIDE VIEW & TYPICAL SECTION IN SPAN

Ⓐ DETAIL TYP. AT EACH END

Ⓑ 2 #6 BARS, FULL LENGTH, MIN. LAP = 2'-11", STD. HOOK AT ENDS



TOP VIEW OF GIRDER ENDS

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.

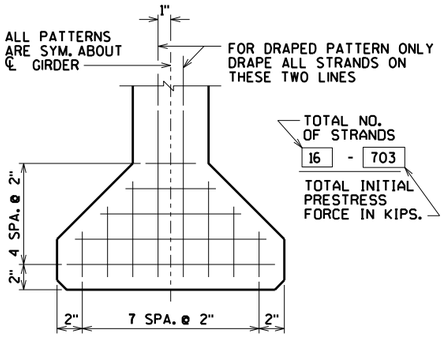
SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

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.

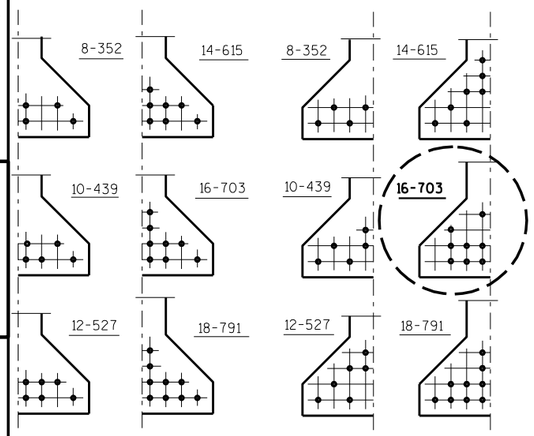
PRESTRESSING STRANDS SHALL BE 0.6" DIA. - 7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

BEND EACH END OF #4 STIRRUPS 4½" AND #5 STIRRUPS 6".

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



TYP. STRAND PATTERN

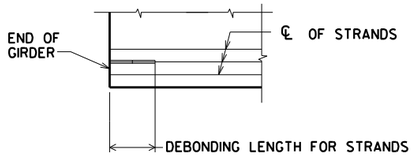


DRAPED PATTERN

0.6" DIA. STRANDS

UNDRAPED PATTERN

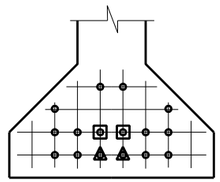
0.6" DIA. STRANDS



BOND BREAKER DETAIL

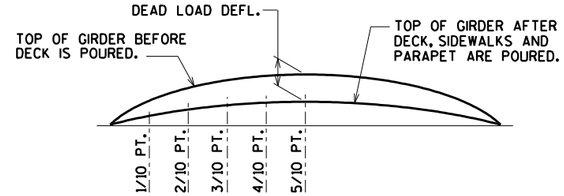
SHOWING LENGTHS OF DEBONDING FROM END OF GIRDER.

SYM.	HEIGHT	NO. OF STRANDS	DEBOND LENGTH
□	4"	2	10'
△	2"	2	2'



DEBONDING DETAIL INTERIOR GIRDERS

■▲ INDICATES STRAND TO BE DEBONDED. SEE "BOND BREAKER DETAIL"



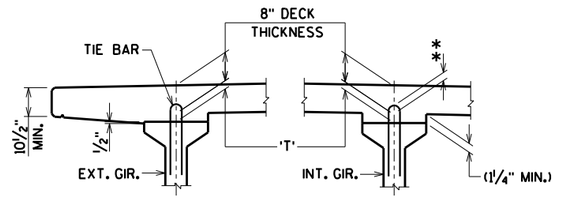
DEAD LOAD DEFLECTION DIAGRAM

*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.) *
BOTH	2.9

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

THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.



DECK HAUNCH DETAIL

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

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

TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT ℄ 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 2¾" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".

* 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" IST 1/3 OF GIRDER	"P" MID 1/3 OF GIRDER	"P" END 1/3 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.) *
BOTH	1 & 5	61'-4½"	0.4	0.7	1.0	1.2	1.3	1.2	1.0	0.7	0.4	8000	7¾"	6"	7¾"	0.60							16	6600
BOTH	2-4	61'-4½"	0.4	0.7	1.0	1.2	1.2	1.2	1.0	0.7	0.4	8000	7¾"	6"	7¾"	0.60								

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

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28" PRESTRESSED GIRDER DETAILS

SHEET 13 OF 17
51

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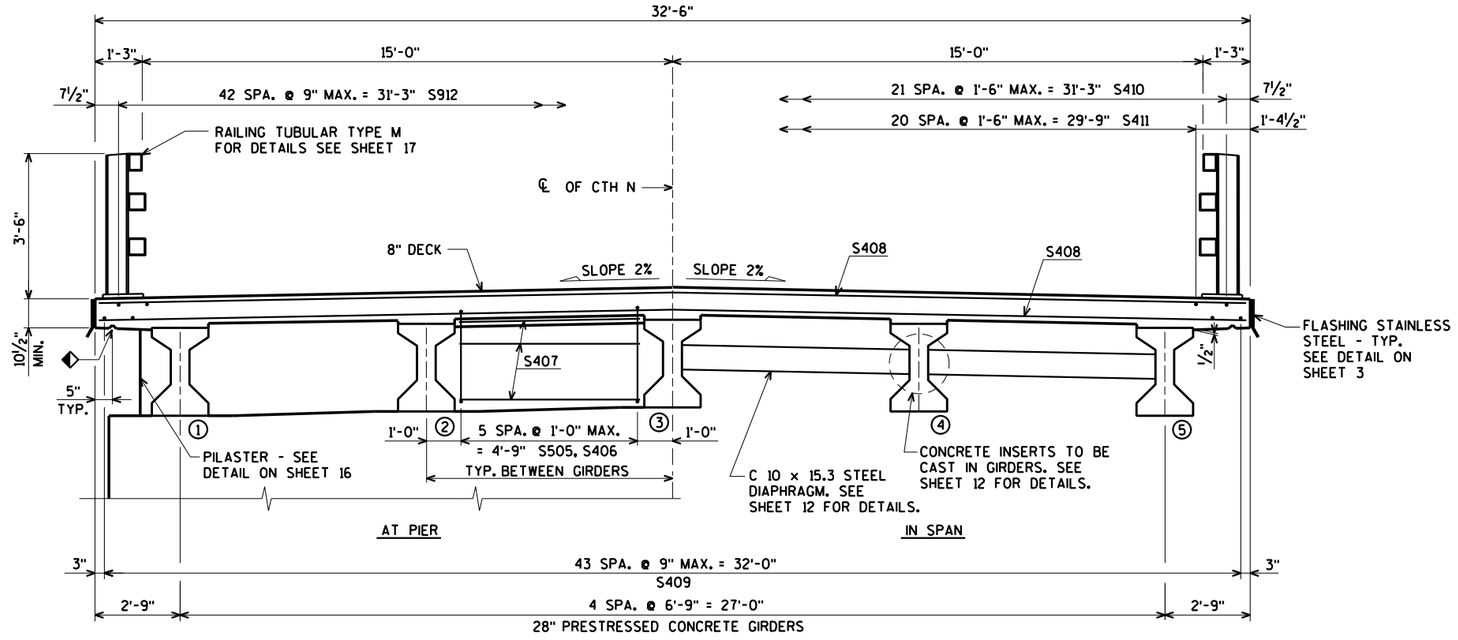
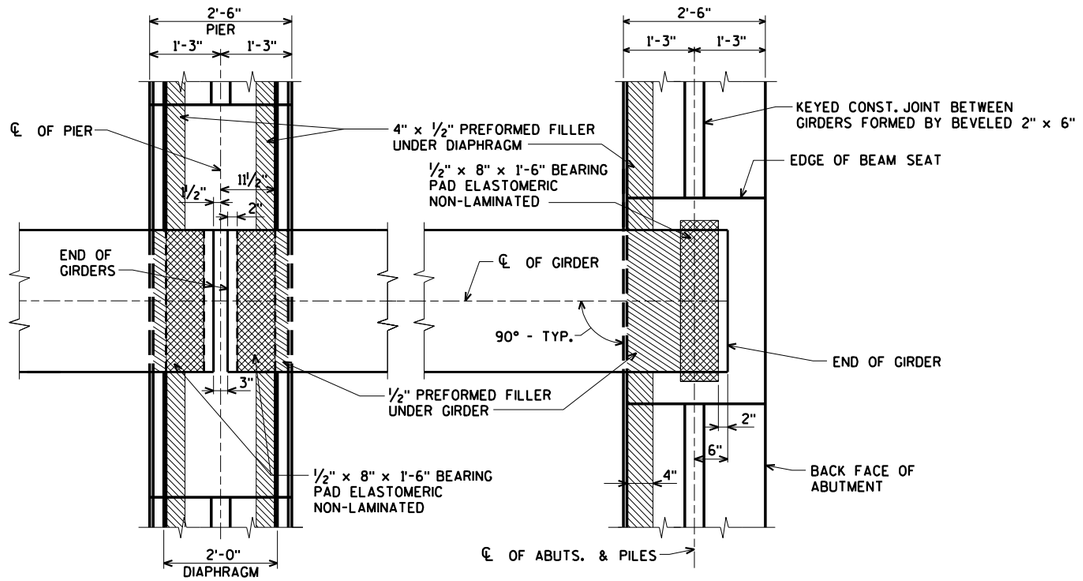


CROSS SECTION THRU BRIDGE

(LOOKING EAST)

◆ ¾" V - GROOVE. EXTEND V - GROOVE TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGMS - TYP.

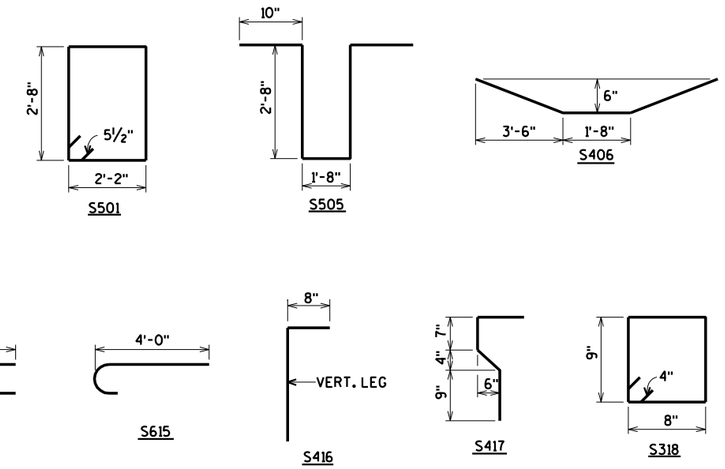


BEARING PAD DETAILS

BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	27,030# COATED LOCATION
S501	X	76	10-3	X			DIAPH. @ ABUT. VERT.
S602	X	10	32-2				DIAPH. @ ABUT. HORIZ.
S603	X	12	1-8				DIAPH. @ ABUT. HORIZ. @ EXT. GDRS.
S604	X	24	4-11				DIAPH. @ ABUT. HORIZ. BETW. GDRS.
S505	X	24	8-2	X			DIAPH. @ PIER VERT.
S406	X	24	8-7	X			DIAPH. @ PIER VERT.
S407	X	40	4-11				DIAPH. @ PIER HORIZ.
A408	X	459	32-2				DECK TRANS. TOP & BOT.
S409	X	132	42-6				DECK LONG. BOT.
S410	X	44	32-2				DECK LONG. TOP
S411	X	84	27-11				DECK LONG. TOP
S912	X	43	41-2				DECK LONG. TOP @ PIER
S613	X	80	12-0	X			DECK @ RAIL POSTS
S614	X	144	6-0				DECK @ INT. RAIL POSTS
S615	X	16	6-0	X			DECK @ END RAIL POSTS
S416	X	4	3-3	X			PILASTER
S417	X	4	2-5	X			PILASTER
S318	X	4	3-3	X			PILASTER

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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STRUCTURE B-10-387

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SUPERSTRUCTURE

SHEET 14 OF 17
52

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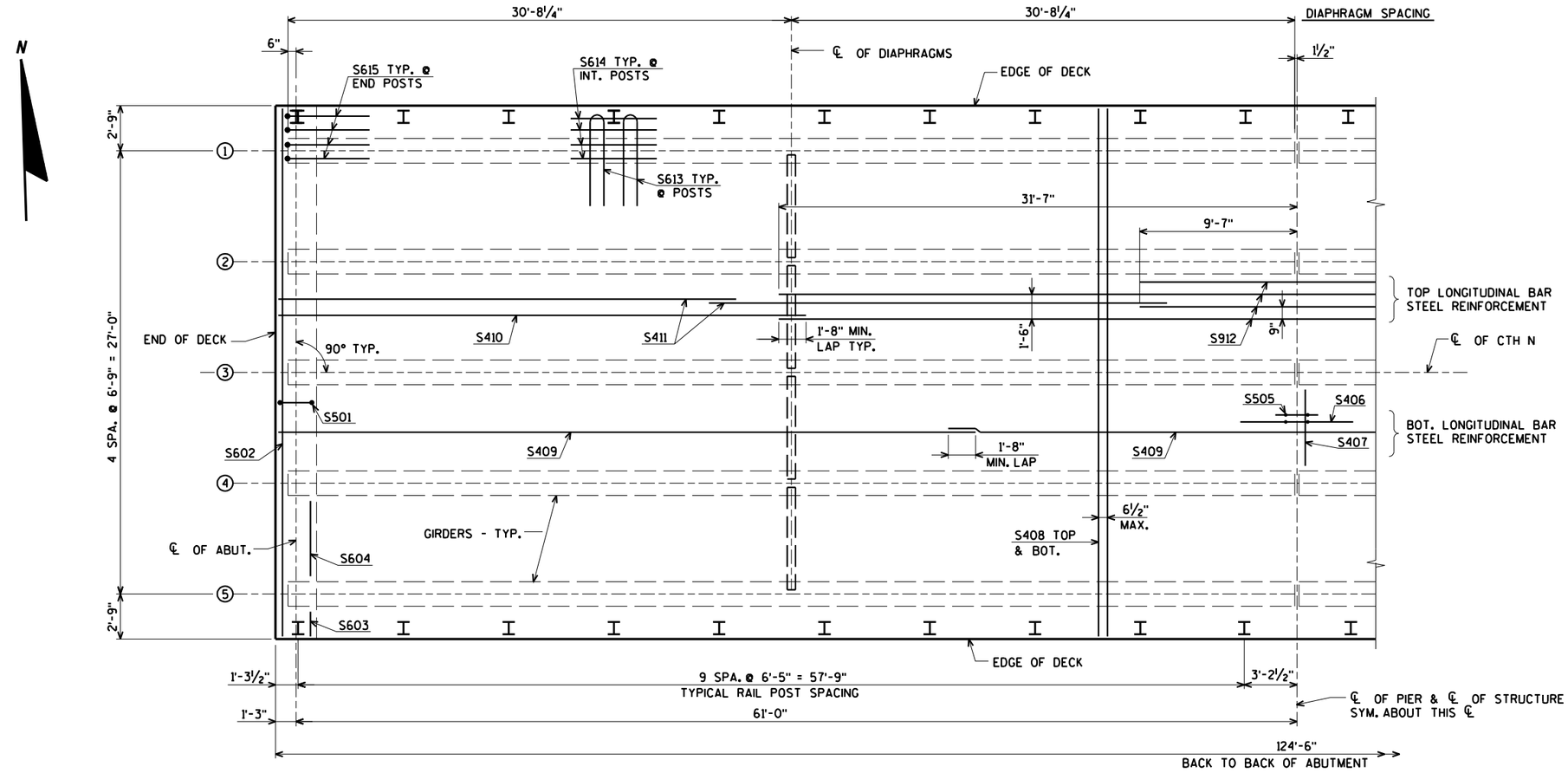


PART PLAN

TOP OF DECK ELEVATIONS

	℄ OF W. ABUT.	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	℄ OF PIER
N. EDGE OF DECK	1155.49	1155.54	1155.59	1155.64	1155.69	1155.73	1155.78	1155.82	1155.86	1155.90	1155.95
GIRDER 1	1155.55	1155.60	1155.65	1155.69	1155.74	1155.79	1155.83	1155.87	1155.92	1155.96	1156.00
GIRDER 2	1155.68	1155.73	1155.78	1155.83	1155.88	1155.92	1155.97	1156.01	1156.05	1156.09	1156.14
℄ OF CTH N & GIRDER 3	1155.82	1155.87	1155.92	1155.96	1156.01	1156.06	1156.10	1156.14	1156.19	1156.23	1156.27
GIRDER 4	1155.68	1155.73	1155.78	1155.83	1155.88	1155.92	1155.97	1156.01	1156.05	1156.09	1156.14
GIRDER 5	1155.55	1155.60	1155.65	1155.69	1155.74	1155.79	1155.83	1155.87	1155.92	1155.96	1156.00
S. EDGE OF DECK	1155.49	1155.54	1155.59	1155.64	1155.69	1155.73	1155.78	1155.82	1155.86	1155.90	1155.95

	℄ OF PIER	0.1 PT.	0.2 PT.	0.3 PT.	0.4 PT.	0.5 PT.	0.6 PT.	0.7 PT.	0.8 PT.	0.9 PT.	℄ OF E. ABUT.
N. EDGE OF DECK	1155.95	1155.98	1156.02	1156.06	1156.10	1156.13	1156.17	1156.20	1156.24	1156.27	1156.30
GIRDER 1	1156.00	1156.04	1156.08	1156.12	1156.15	1156.19	1156.22	1156.26	1156.29	1156.32	1156.35
GIRDER 2	1156.14	1156.17	1156.21	1156.25	1156.29	1156.32	1156.36	1156.39	1156.43	1156.46	1156.49
℄ OF CTH N & GIRDER 3	1156.27	1156.31	1156.35	1156.39	1156.42	1156.46	1156.49	1156.53	1156.56	1156.59	1156.62
GIRDER 4	1156.14	1156.17	1156.21	1156.25	1156.29	1156.32	1156.36	1156.39	1156.43	1156.46	1156.49
GIRDER 5	1156.00	1156.04	1156.08	1156.12	1156.15	1156.19	1156.22	1156.26	1156.29	1156.32	1156.35
S. EDGE OF DECK	1155.95	1155.98	1156.02	1156.06	1156.10	1156.13	1156.17	1156.20	1156.24	1156.27	1156.30

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

DRAWN BY CLP | PLANS CK'D. JCK

SUPERSTRUCTURE PLAN

SHEET 15 OF 17
53

ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/18/2021
PENTABLE:BReau_shd_util.tbl

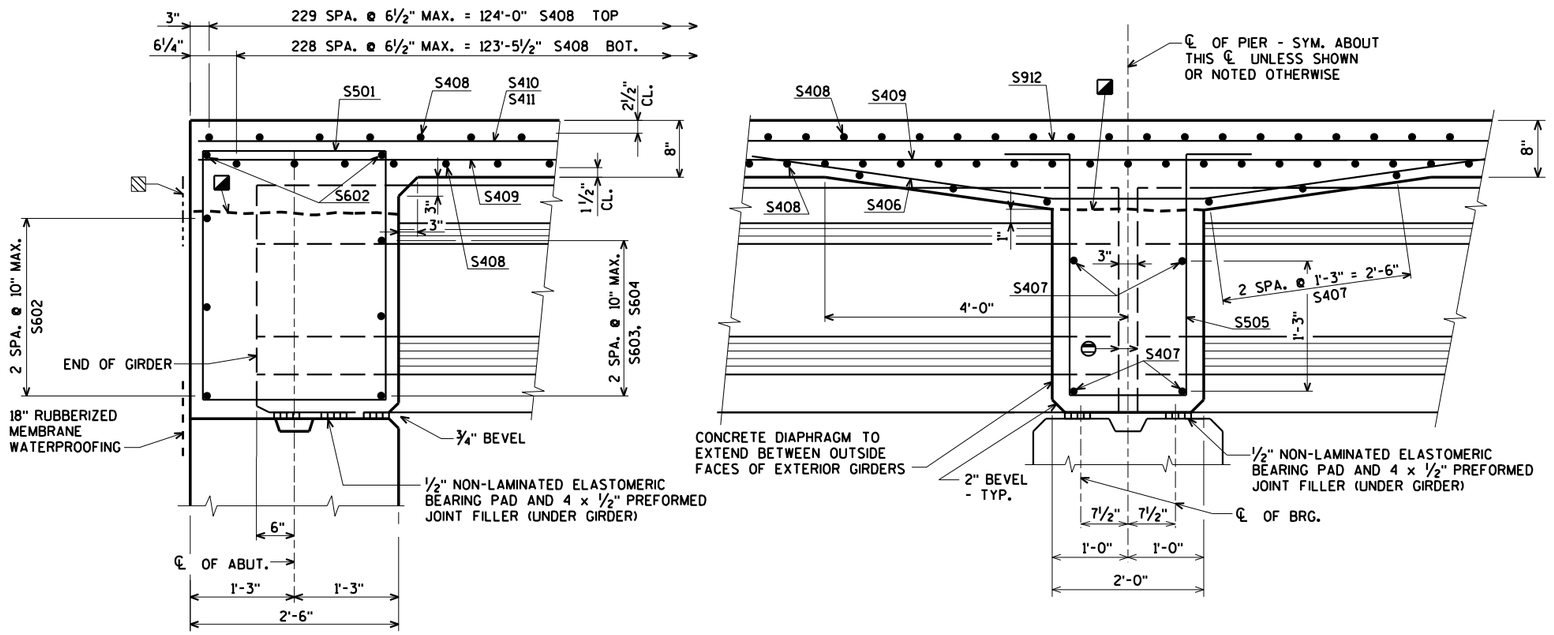
I:±42±42-1210.00 - Clark Co, CTH N over S Fk Eau Claire River±CADD±Final±421210 sup.dgn

8

8

STATE PROJECT NUMBER

7834-03-73

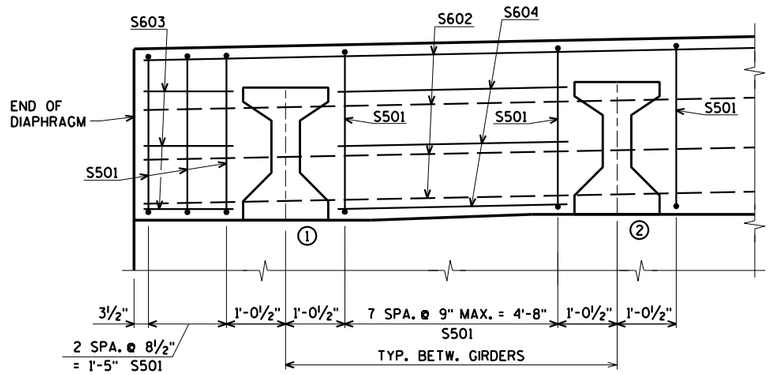


PART LONGITUDINAL SECTION

END OF GIRDER

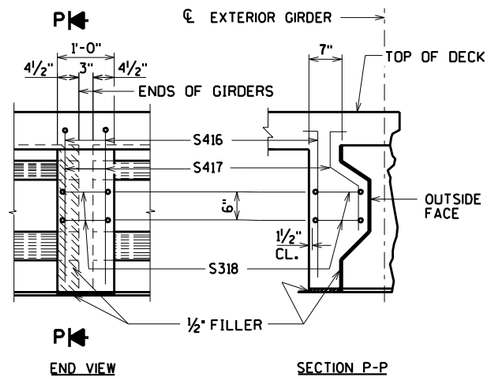
OPTIONAL CONSTRUCTION JOINT. IF USED, DECK POUR MUST BE WITHIN 2 WEEKS FROM THE TIME OF THE DIAPHRAGM POUR.

18" RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JT. IS USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES"



PART SECTION AT ABUTMENT

(GIRDERS 1 AND 2 SHOWN, REST ARE SIMILAR)



PILASTER DETAILS AT PIERS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

DRAWN BY CLP | PLANS CK'D. JCK

SUPERSTRUCTURE DETAILS

SHEET 16 OF 17
54

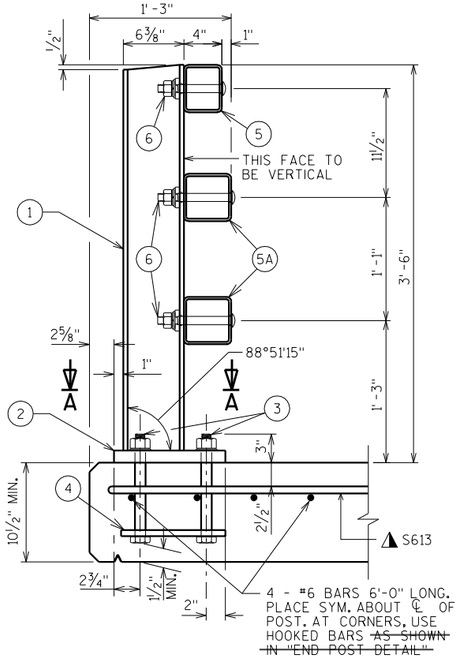
ORIGINAL PLANS PREPARED BY
AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

8/17/2021
PENTABLE:BReau_shd_util.tbl

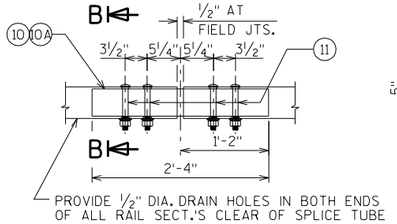
I:±42±42-1210.00 - Clark Co, CTH N over S Fk Eau Claire River±CADD±Final±421210 sup.dgn

STATE PROJECT NUMBER

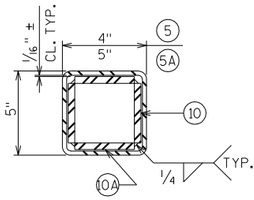
7834-03-73



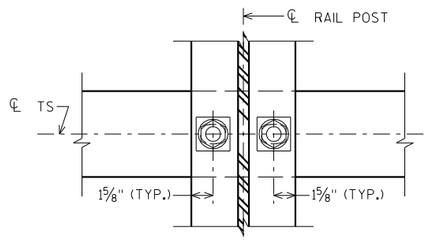
SECTION THRU RAILING ON DECK



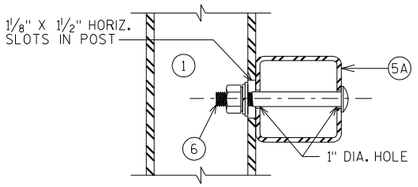
FIELD ERECTION JOINT DETAIL



SECTION B-B



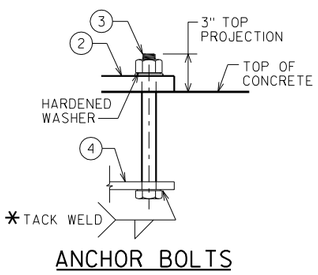
SECTION THRU POST WEB



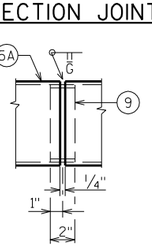
SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS

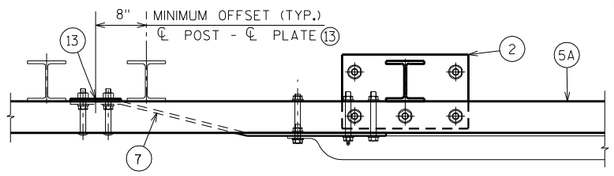


ANCHOR BOLTS



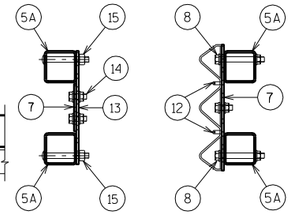
SHOP RAIL SPLICE DETAIL

LOCATION MUST BE SHOWN ON SHOP DRAWINGS



TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT



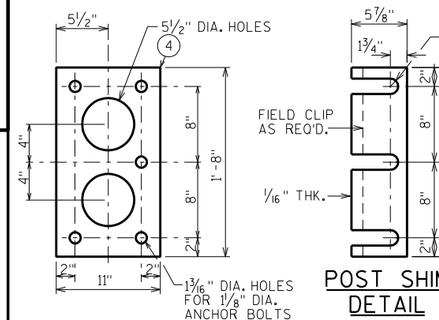
SECTION C-C SECTION D-D

LEGEND

1. W6 x 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" x 11¾" x 1'-8" WITH 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. ~~USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG.~~ USE 10¾" LONG AT ALL OTHER LOCATIONS. ~~AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.~~
4. ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1⅝" X 1⅝" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. ½" THK. BACK-UP PLATE WITH 2 - ⅞" X 1½" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 1/16" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS ~~AND 1 1/16" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS~~ IN PLATE NO. 10A.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
14. ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1" DIA. HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

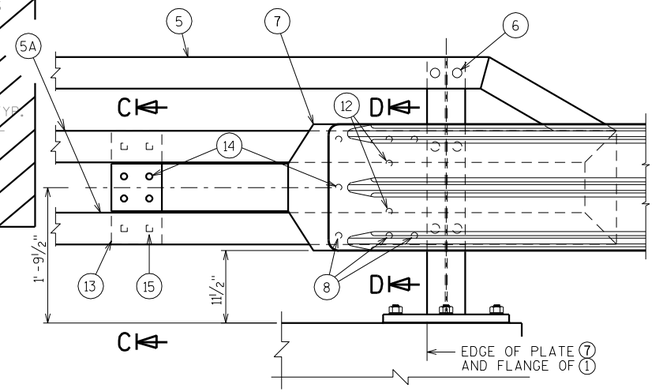
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES,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



SECTION A-A

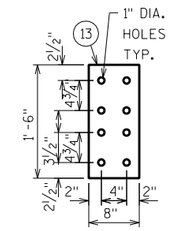
END POST DETAIL

REINFORCEMENT AT CORNERS



DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT

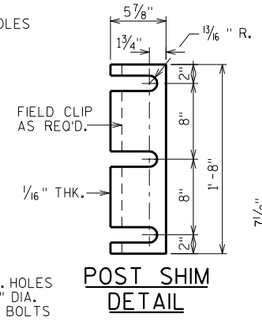


ANCHOR PLATE

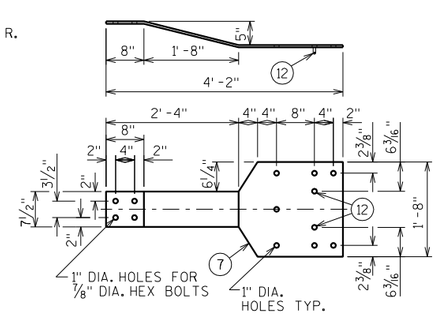
AT BEAM GUARD ATTACHMENT

ANCHOR PLATE

AT RAIL TO DECK CONNECTION

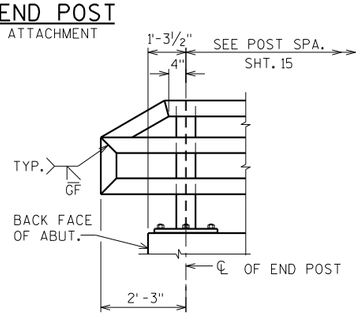


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

⚠ TIE TO TOP MAT OF STEEL.

✱ ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-387

DRAWN BY CLP | PLANS CK'D. JCK

TUBULAR STEEL RAILING TYPE 'M'

SHEET 17 OF 17
55

ORIGINAL PLANS PREPARED BY

AYRES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com

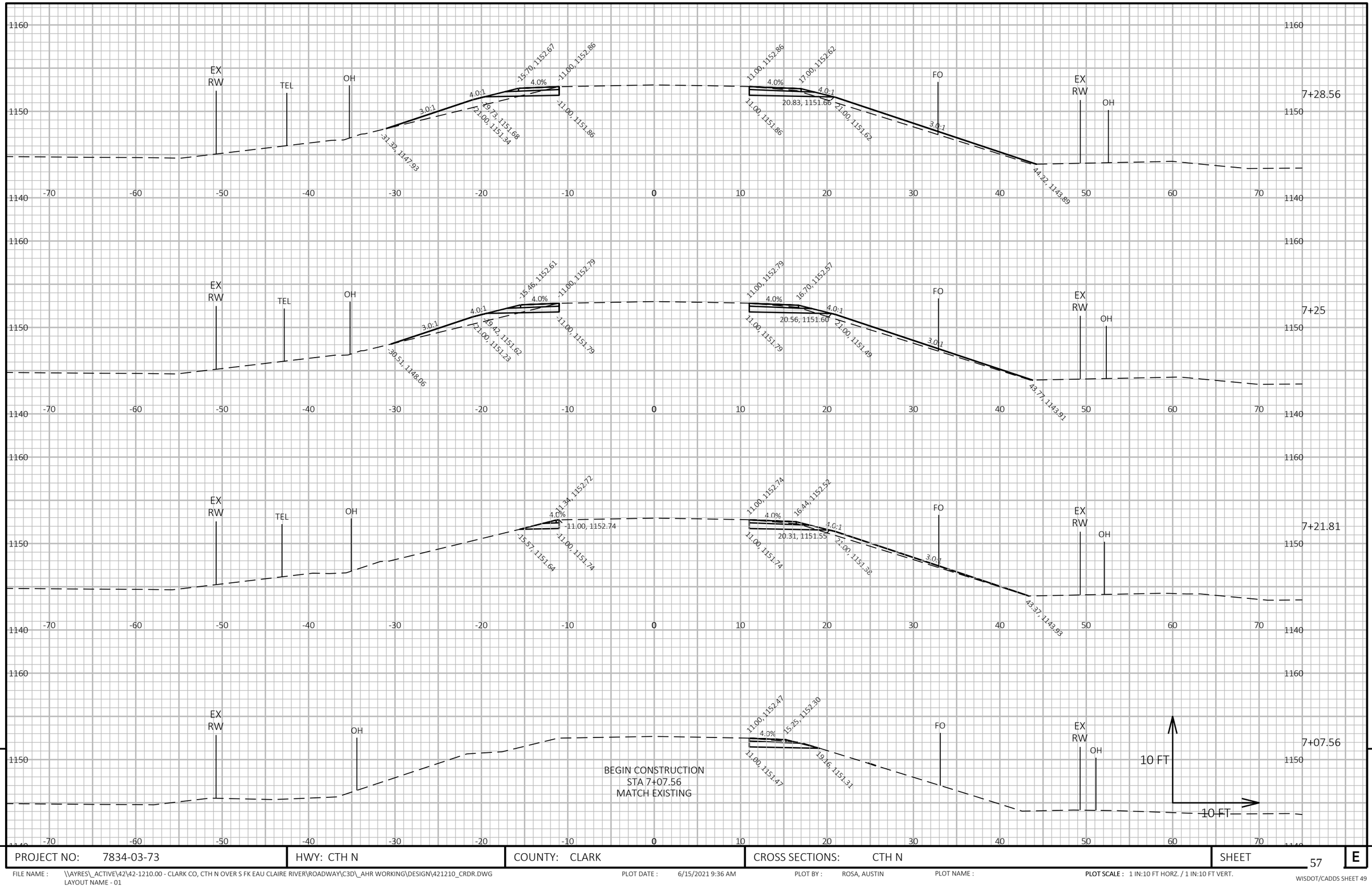
8

8

COMPUTER EARTHWORK

Station	Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut	Expanded Fill	
						1.00	1.30	
				Note 1	Note 2	Note 1		Note 3
7+07.56	--	5.6	0.0					
7+21.81	14	7.7	5.4	4	1	4	2	2
7+25	3	7.7	14.4	1	1	4	3	1
7+28.56	4	7.6	17.1	1	2	5	6	-1
7+48.06	20	9.2	39.2	6	20	11	33	-21
7+50	2	10.6	42.7	1	3	12	36	-24
7+75	25	7.2	110.2	8	71	20	128	-108
8+00	25	10.0	151.4	8	121	28	286	-257
8+00.56	1	10.0	152.7	0	3	29	290	-261
8+25	24	11.4	163.4	10	143	38	476	-438
8+25.56	1	11.4	163.5	0	3	38	480	-442
8+38.06	13	12.2	153.6	5	73	44	576	-532
8+50	12	12.8	119.6	6	60	49	654	-605
8+50.56	1	12.8	117.9	0	2	50	657	-608
8+63.06	13	12.1	111.0	6	53	56	726	-671
8+75	12	11.3	72.0	5	40	61	779	-718
8+77.75	3	11.1	64.8	1	7	62	788	-726
8+77.75	--	33.2	64.8					
8+88.06	10	34.0	39.2	13	20	75	814	-739
9+00	12	34.0	46.8	15	19	90	839	-749
9+17.75	18	25.8	0.4	20	16	109	859	-749
9+27.75	10	25.8	0.4	10	0	119	859	-740
BRIDGE	--	--	--	--	--	--	--	--
10+52.25	--	25.9	1.0	--	--	--	--	--
10+62.25	10	25.9	1.0	10	0	128	859	-731
10+75	13	27.5	68.5	13	16	141	881	-740
10+91.94	17	30.2	55.9	18	39	159	932	-772
11+00	8	31.0	82.4	9	21	168	958	-790
11+02.25	2	31.2	84.8	3	7	171	967	-797
11+02.25	--	9.1	84.8					
11+17	15	10.3	137.1	5	61	176	1046	-870
11+25	8	10.8	154.6	3	43	179	1102	-923
11+29.44	4	11.2	149.5	2	25	181	1135	-954
11+41.94	13	12.0	158.5	5	71	186	1228	-1041
11+50	8	12.6	154.8	4	47	190	1288	-1098
11+54.44	4	12.7	155.6	2	26	192	1322	-1129
11+75	21	12.9	144.0	10	114	202	1470	-1268
11+79.44	4	12.9	142.6	2	24	204	1500	-1296
12+00	21	13.1	107.4	10	95	214	1624	-1410
12+25	25	8.7	87.0	10	90	224	1741	-1517
12+31.94	7	7.3	75.3	2	21	226	1768	-1542
12+39.44	8	8.1	47.7	2	17	228	1791	-1562
12+50	11	4.9	38.5	3	17	231	1812	-1582
12+69.44	19	4.2	22.1	3	22	234	1841	-1607
12+75	6	4.4	19.0	1	4	235	1846	-1611
12+95.69	21	4.9	0.0	4	7	239	1856	-1617
				239	1428			

Note 1 - Cut	Cut includes existing asphalt pavement.
Note 2 - Fill	Volume needed to be filled.
Note 3 - Mass Ordinate	(Cut) - (Fill * 1.30)



9

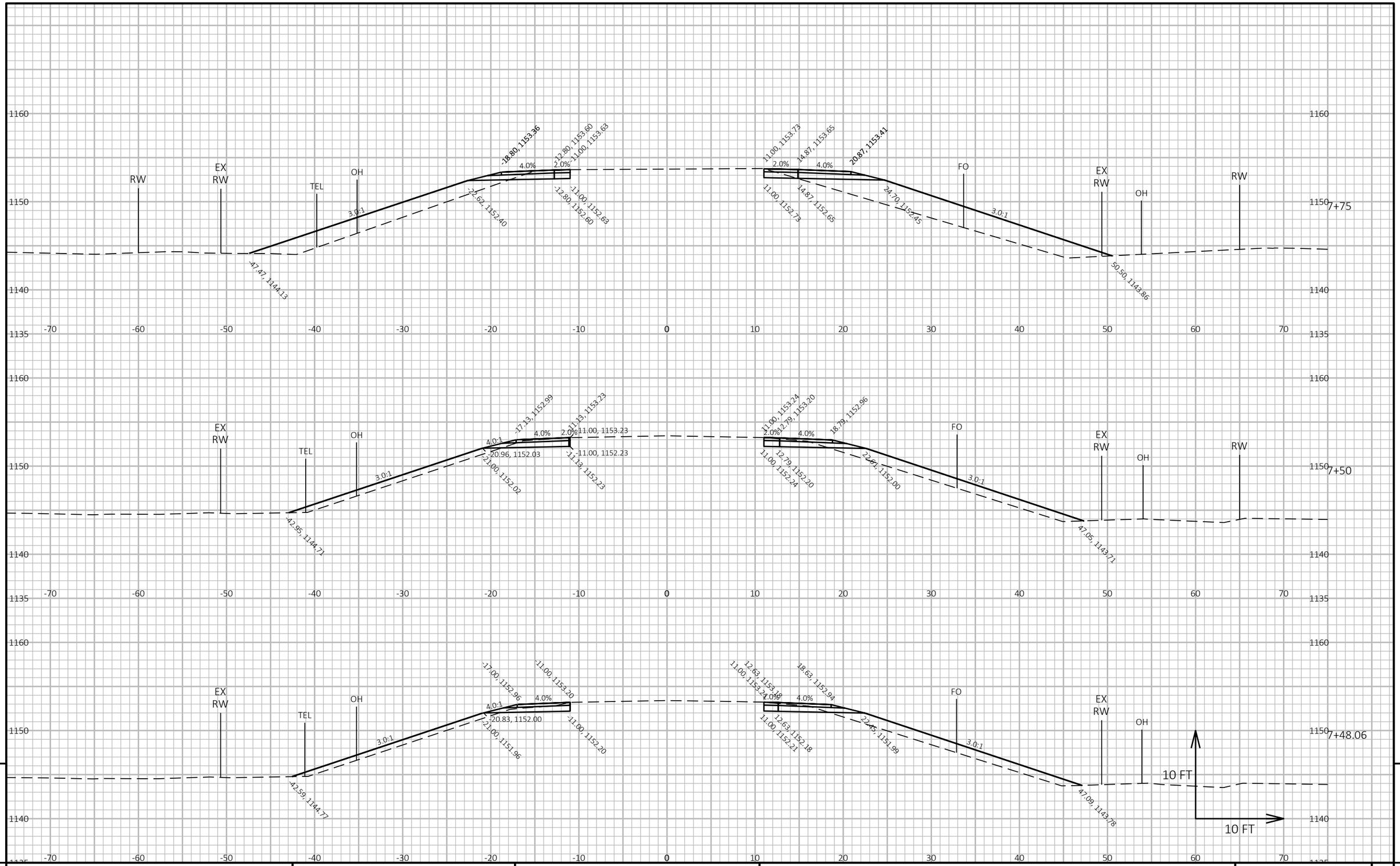
9

PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 57	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 01

PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

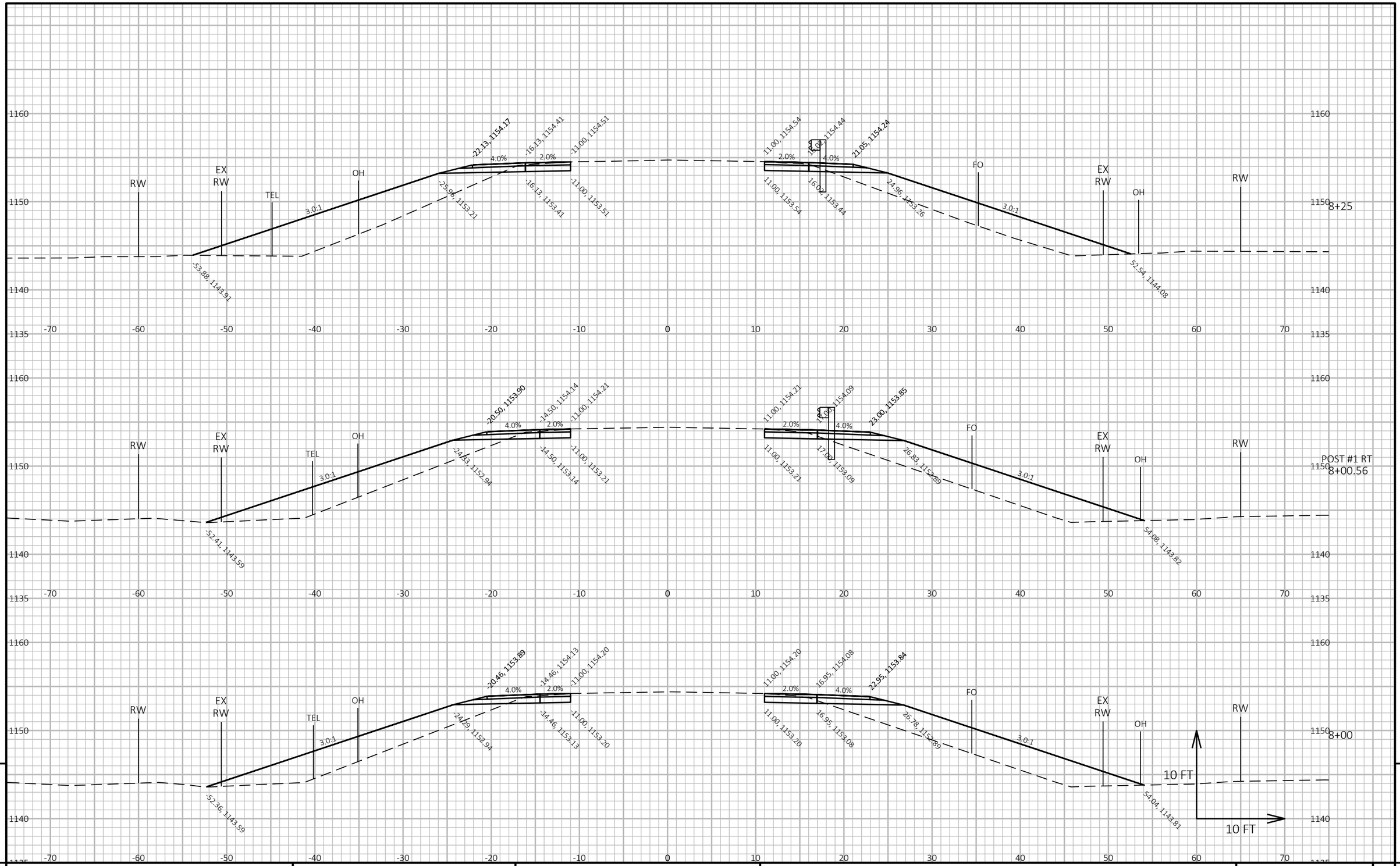


PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 58

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 02

PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

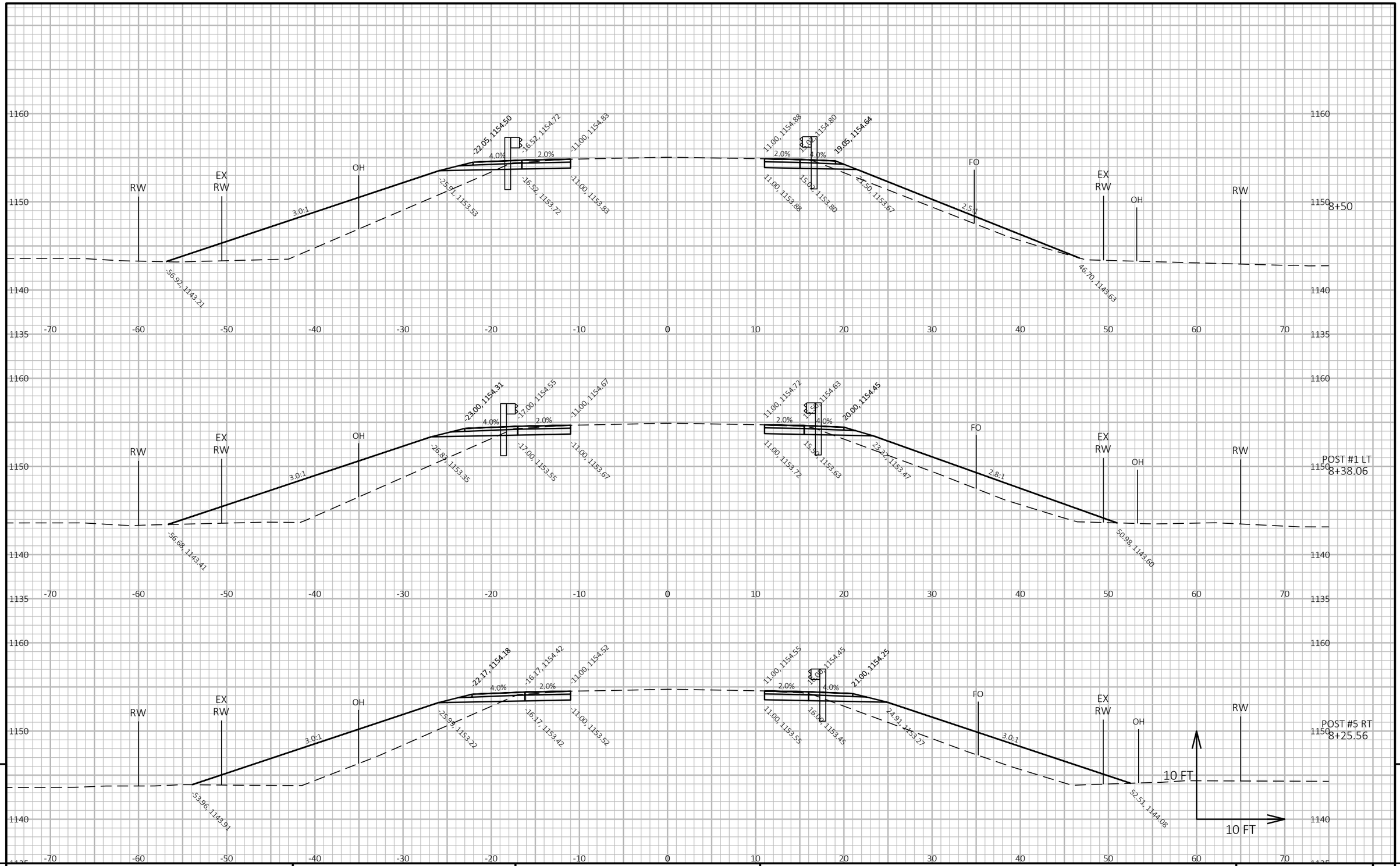


PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 59	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 03

PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



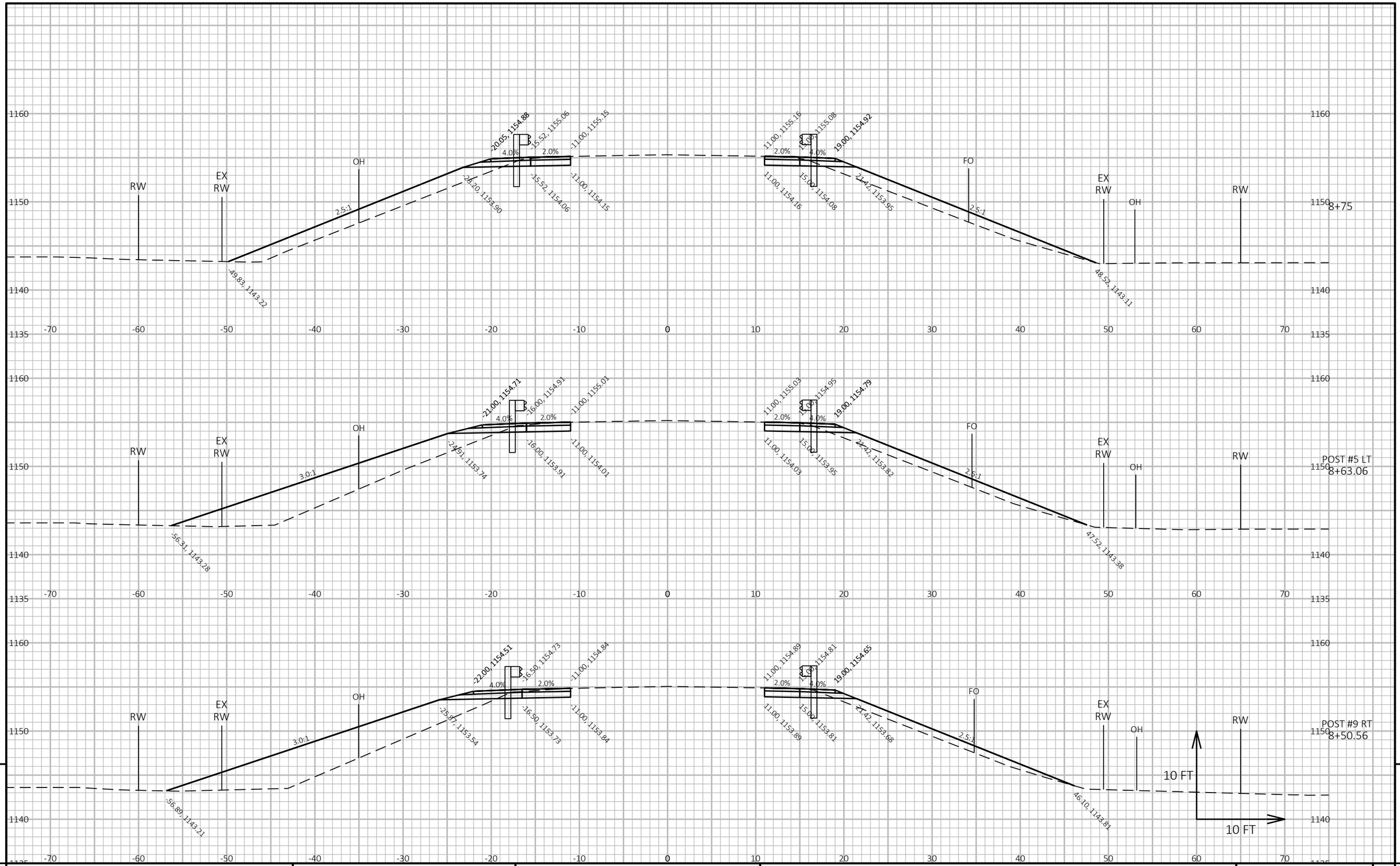
9

9

PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 60	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 04

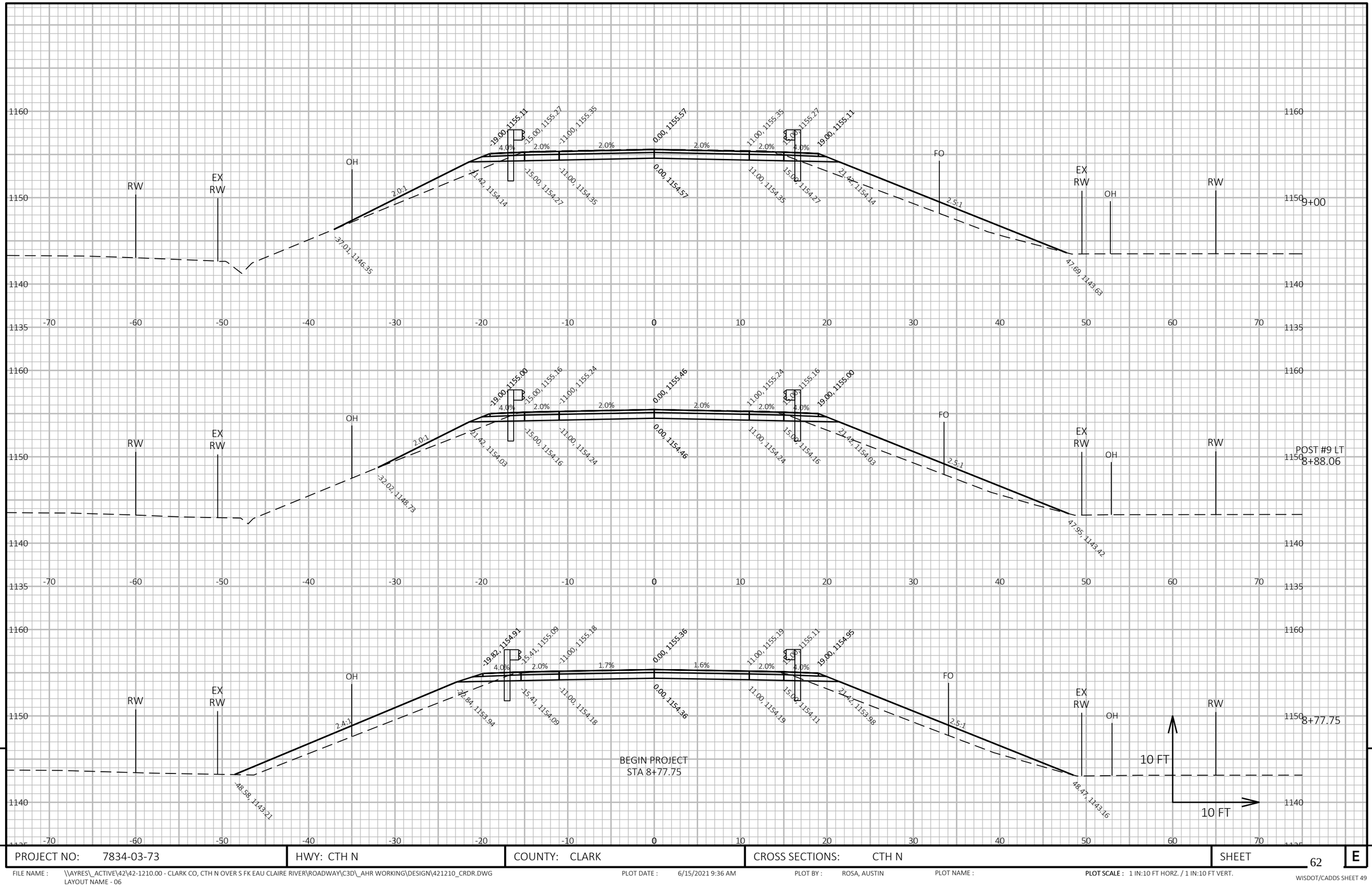
PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 61	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 05

PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



9

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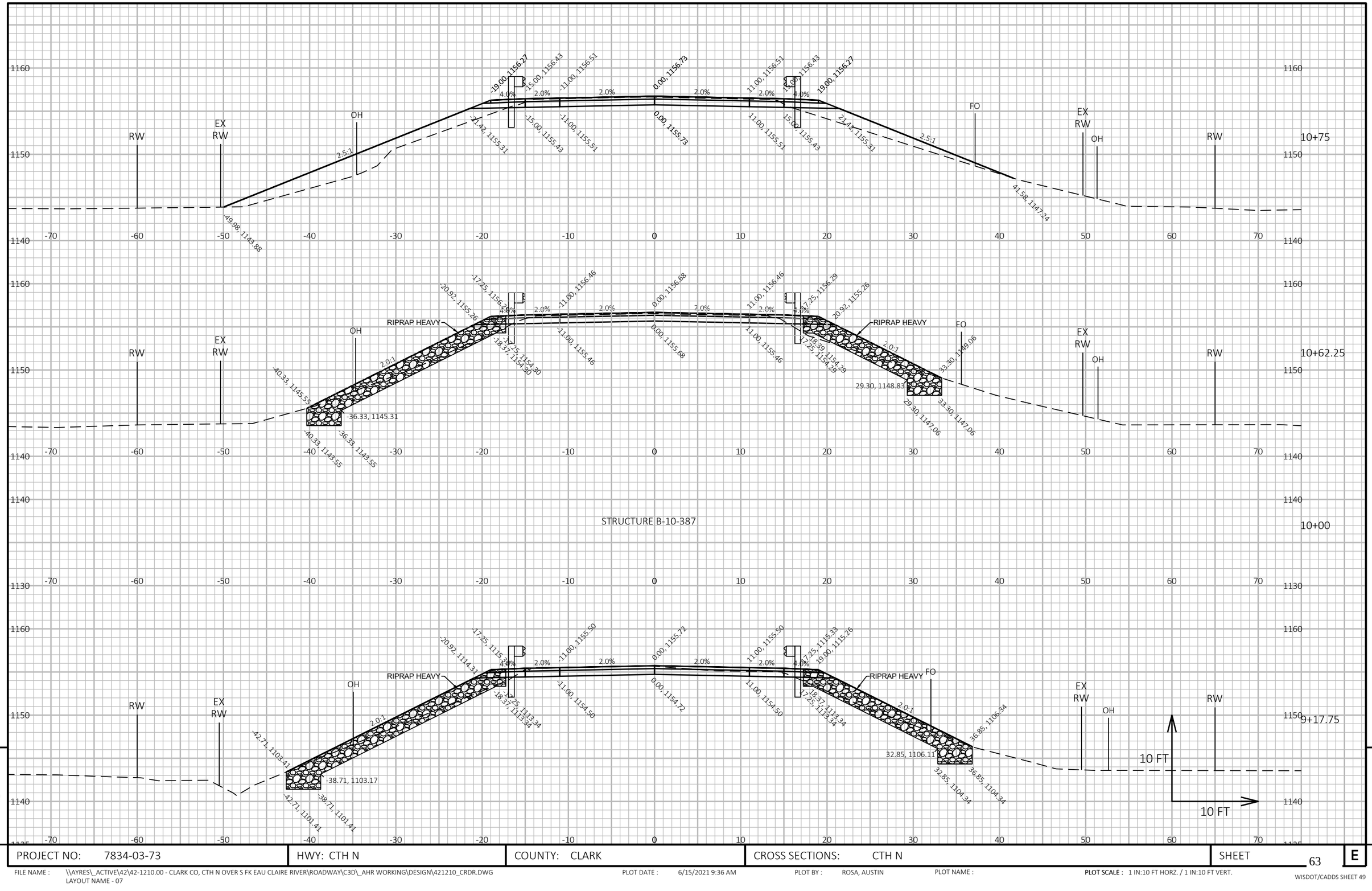
PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 62	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 06

PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

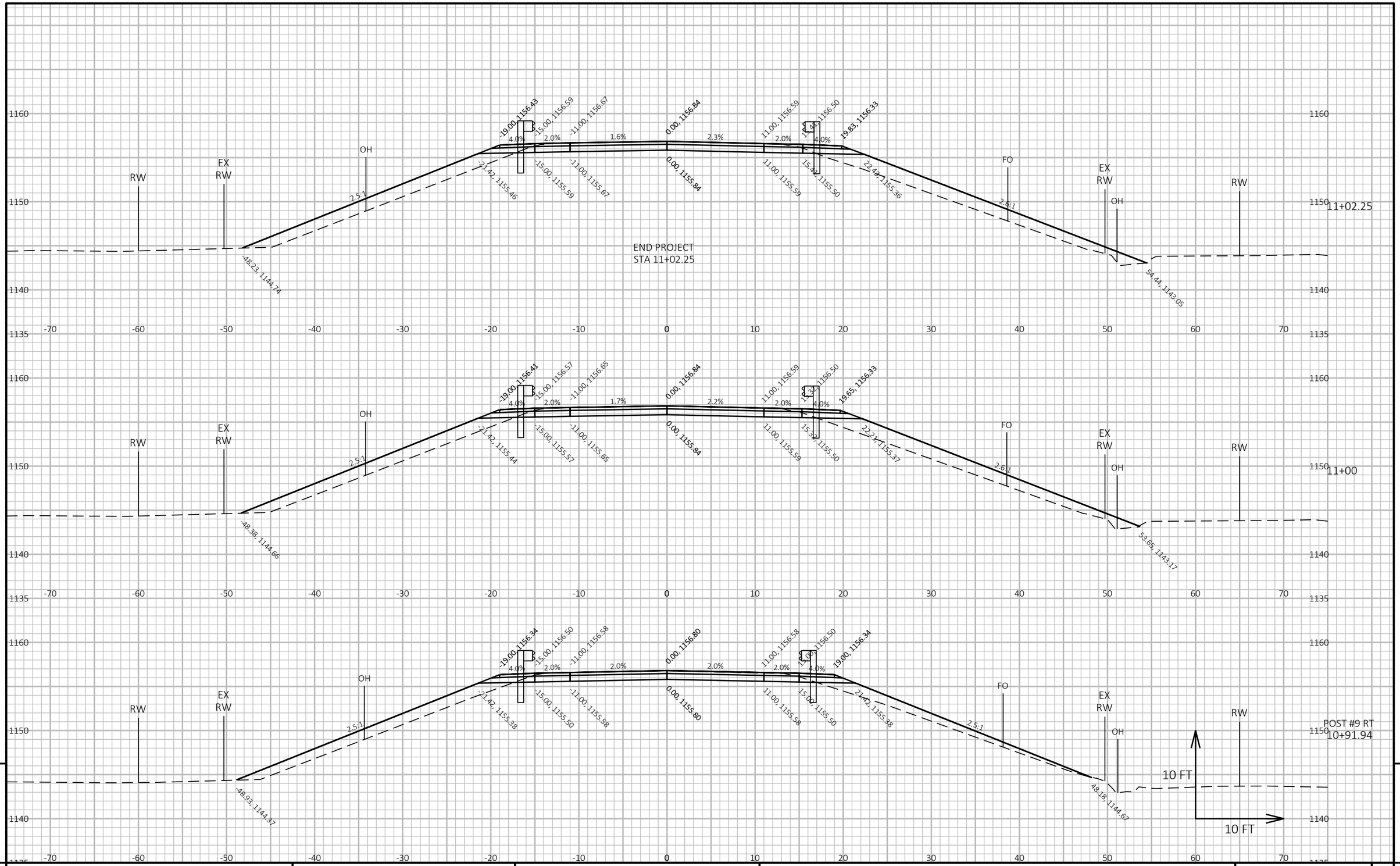


PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 63 E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 07

PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

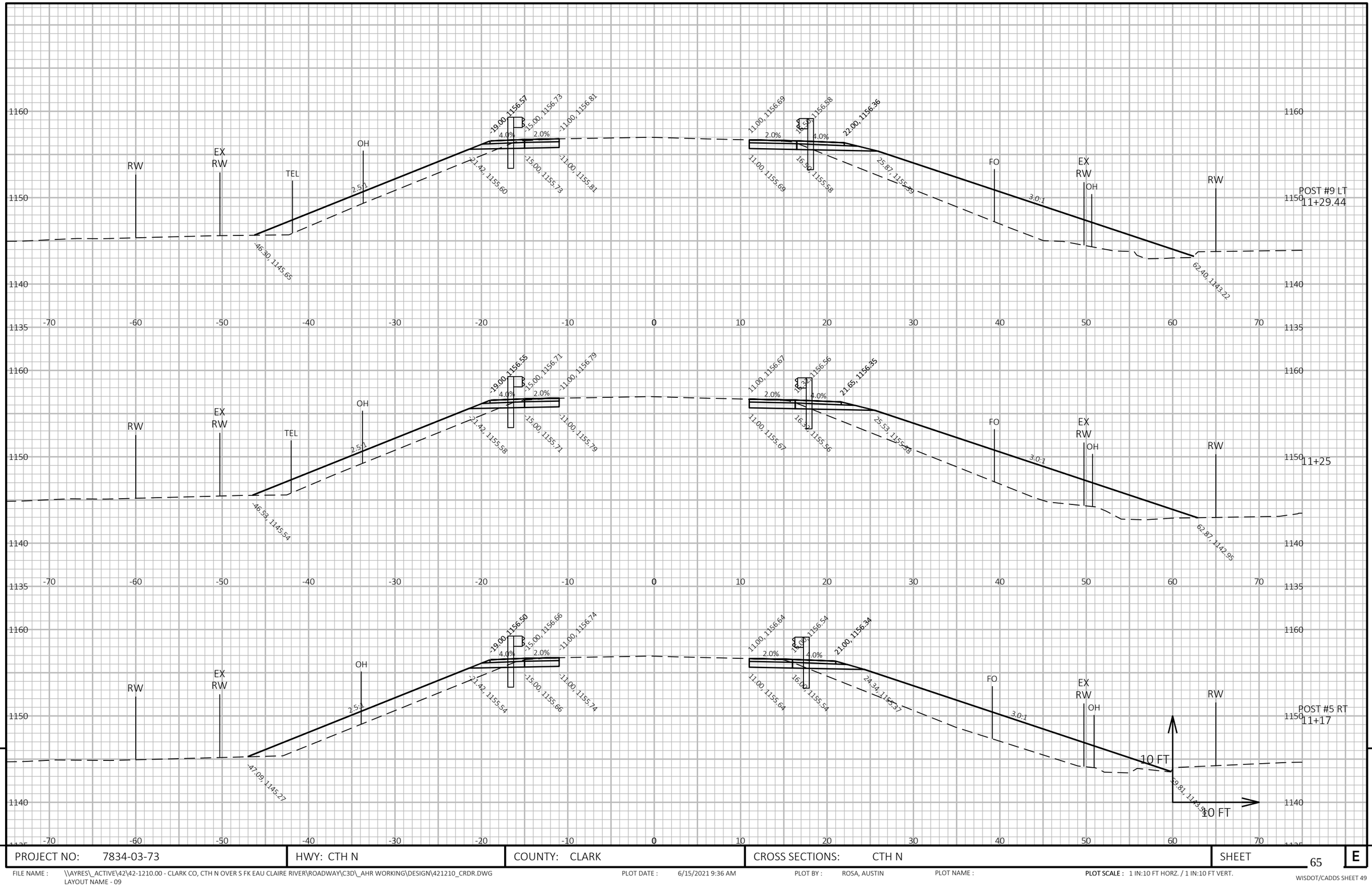


PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 64	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 08

PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 65	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 09

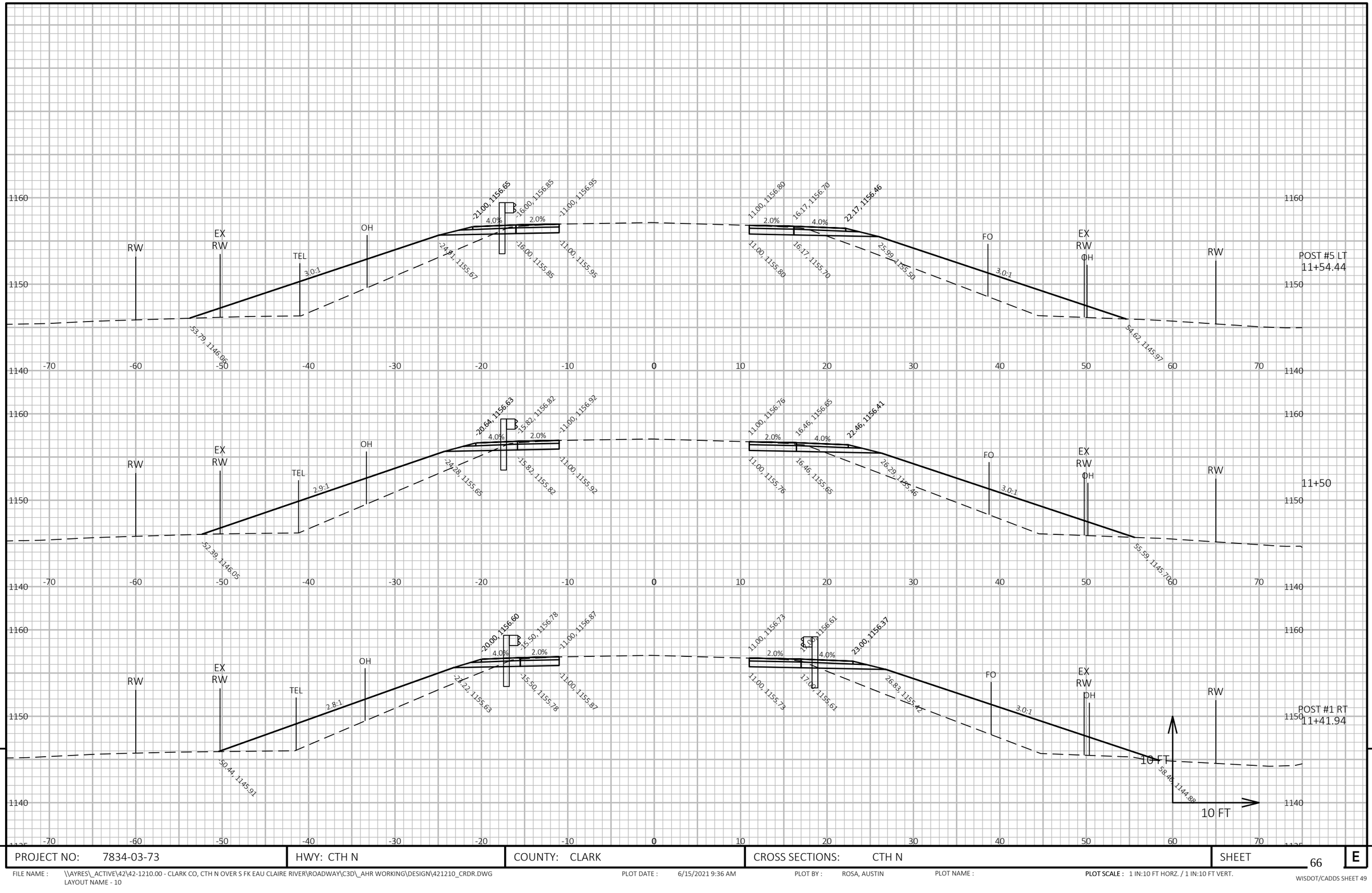
PLOT DATE : 6/15/2021 9:36 AM

PLOT BY : ROSA, AUSTIN

PLOT NAME :

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

WISDOT/CADDS SHEET 49



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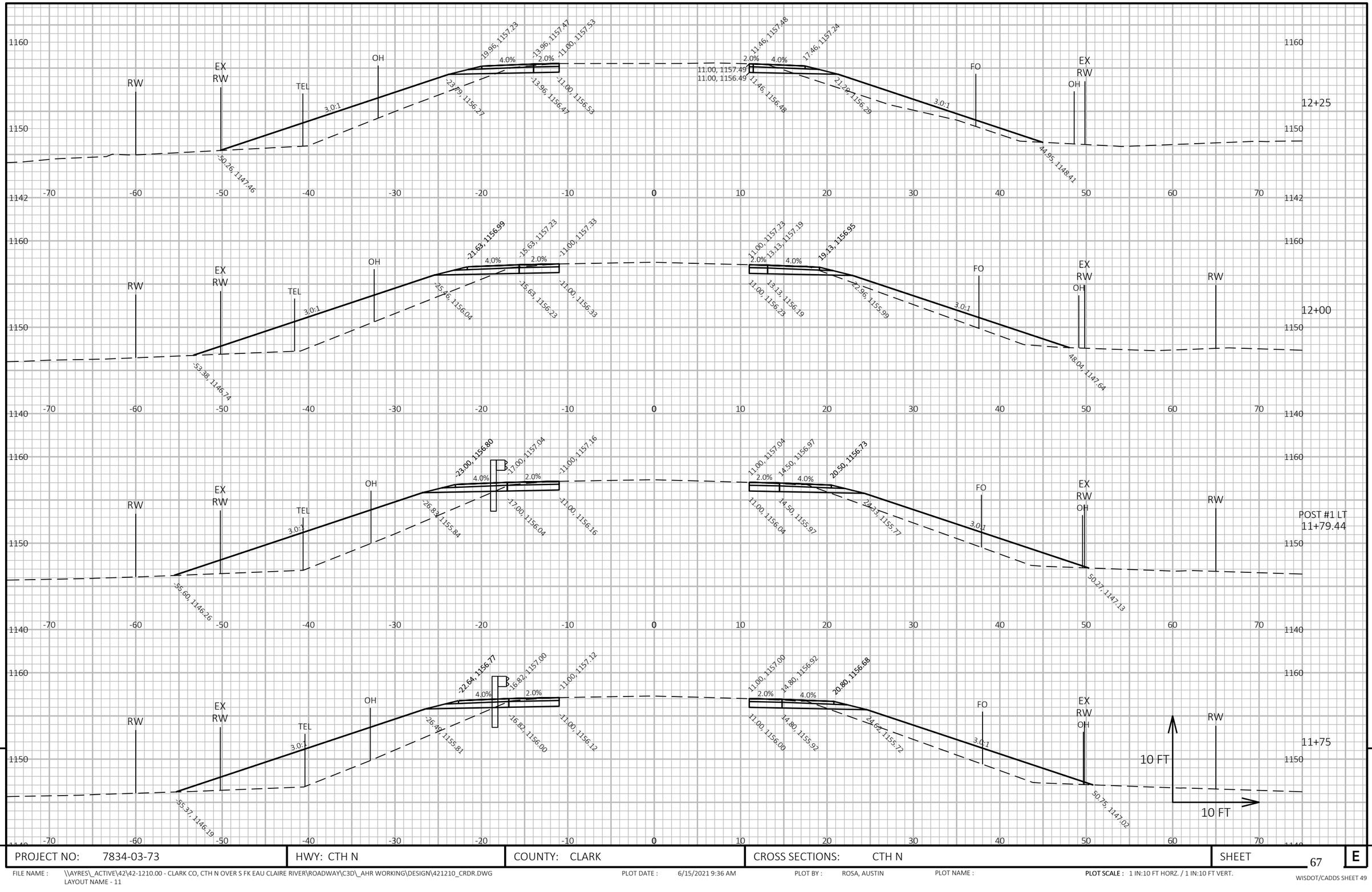
PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 66	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 10

PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 67	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 11

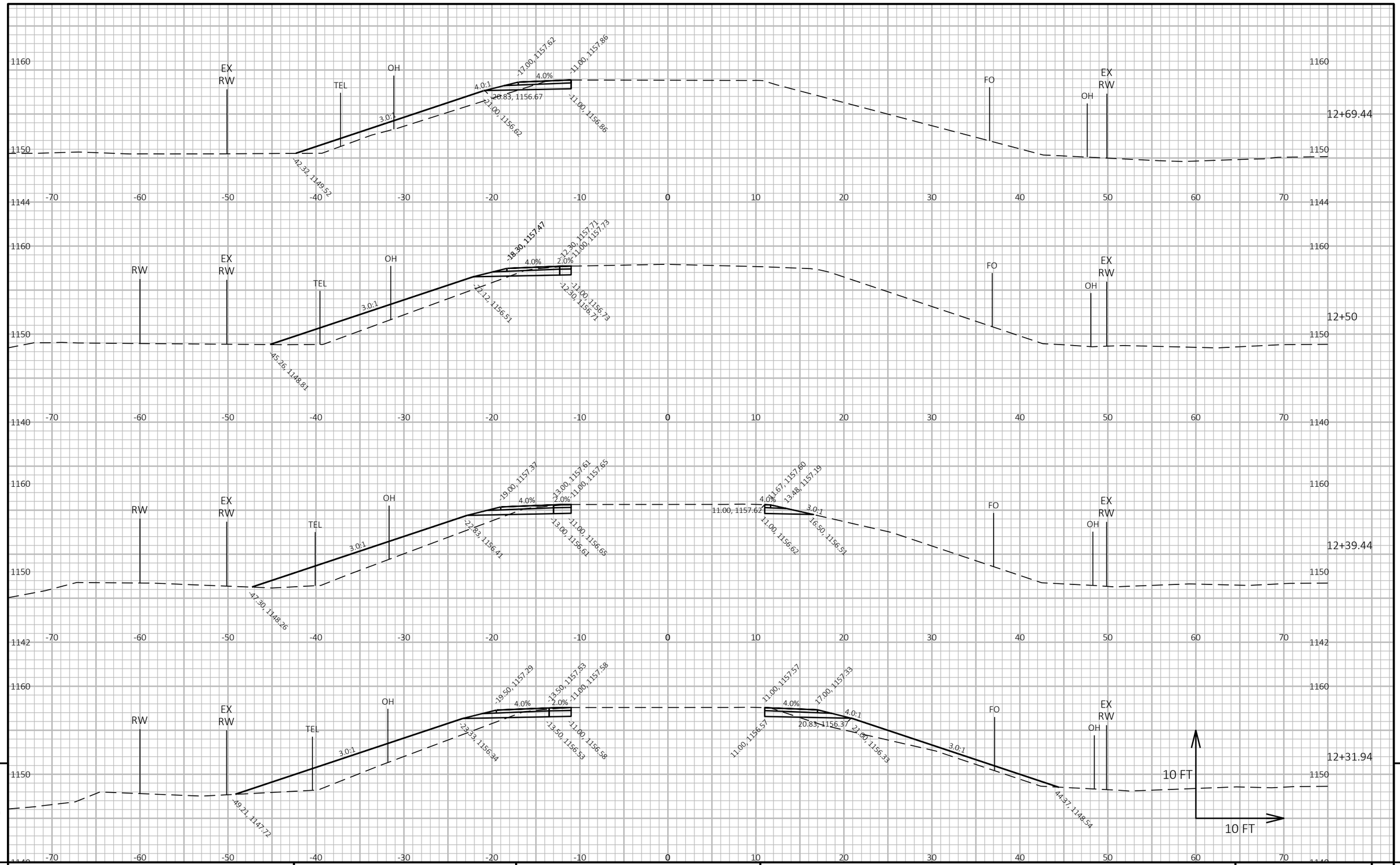
PLOT DATE : 6/15/2021 9:36 AM

PLOT BY : ROSA, AUSTIN

PLOT NAME :

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

WISDOT/CADDS SHEET 49

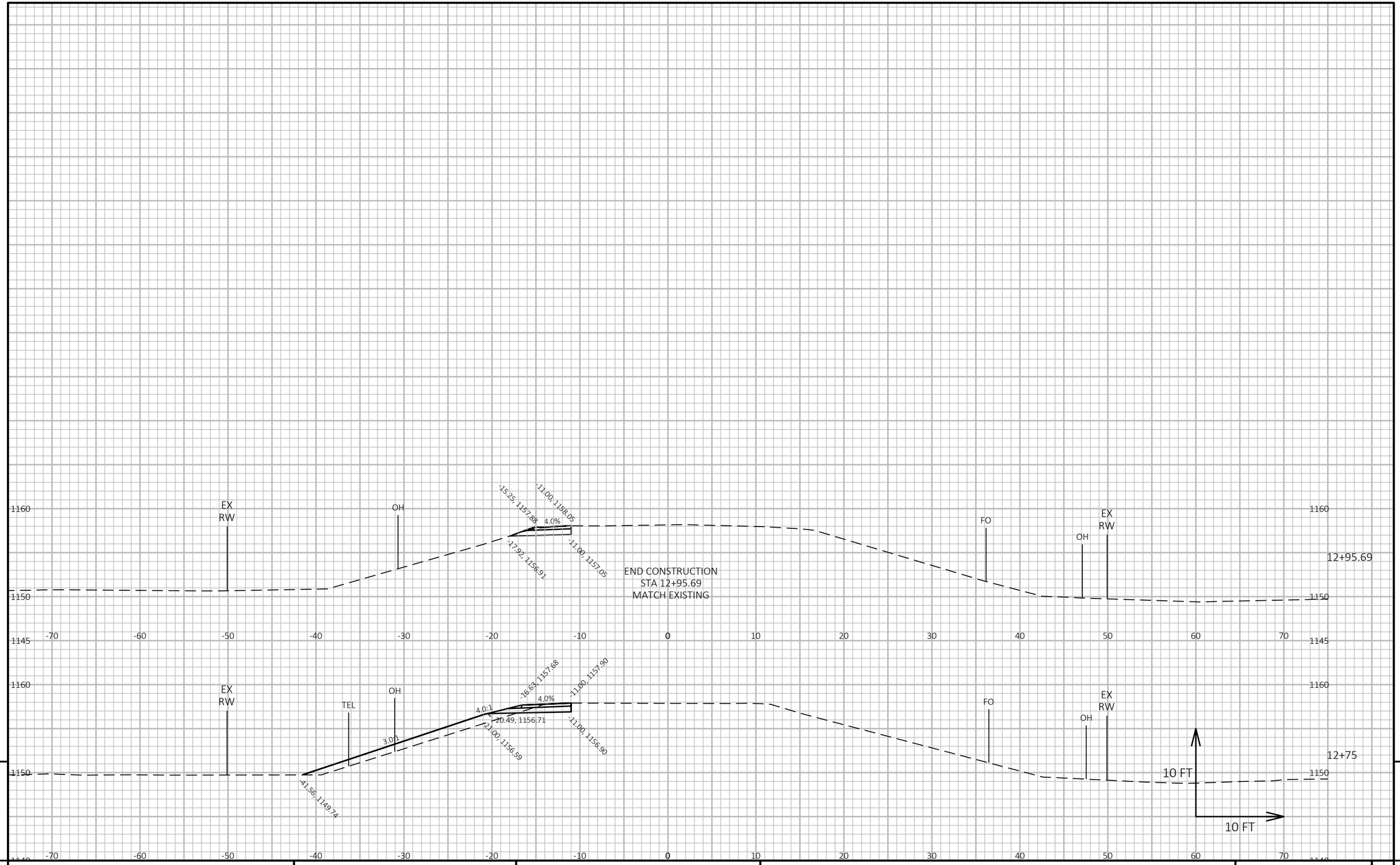


PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 68	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 12

PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 7834-03-73	HWY: CTH N	COUNTY: CLARK	CROSS SECTIONS: CTH N	SHEET 69	E

FILE NAME : \\AYRES_ACTIVE\42\42-1210.00 - CLARK CO, CTH N OVER S FK EAU CLAIRE RIVER\ROADWAY\C3D_AHR WORKING\DESIGN\421210_CRDR.DWG
LAYOUT NAME - 13

PLOT DATE : 6/15/2021 9:36 AM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Wisconsin Department of Transportation

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