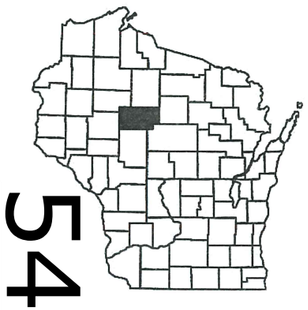
EAU | NOVEMBER 2024

PROJECT ID: 8890-00-72

COUNTY: TAYLOR

ORDER OF SHEETS

TOTAL SHEETS = 42



54

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DESIGN DESIGNATION

A.A.D.T.	2025	=	340
A.A.D.T.	2045	=	370
D.H.V.		=	N/A
D.D.		=	50/50
T.		=	10% MAX
DESIGN SPEED		=	45 MPH
ESALS		=	59,000

CONVENTIONAL SYMBOLS

PLAN		PROFILE	
CORPORATE LIMITS		GRADE LINE	
PROPERTY LINE		ORIGINAL GROUND	
LOT LINE		MARSH OR ROCK PROFILE (To be noted as such)	ROCK
LIMITED HIGHWAY EASEMENT		SPECIAL DITCH	LABEL
EXISTING RIGHT OF WAY		GRADE ELEVATION	953.36
PROPOSED OR NEW R/W LINE		CULVERT (Profile View)	
SLOPE INTERCEPT		UTILITIES	
REFERENCE LINE	300 E9	ELECTRIC	E
EXISTING CULVERT		FIBER OPTIC	FO
PROPOSED CULVERT (Box or Pipe)		GAS	G
COMBUSTIBLE FLUIDS	CAUTION	SANITARY SEWER	SAN
MARSH AREA		STORM SEWER	SS
		TELEPHONE	T
WOODED OR SHRUB AREA		WATER	W
		UTILITY PEDESTAL	
		POWER POLE	
		TELEPHONE POLE	

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

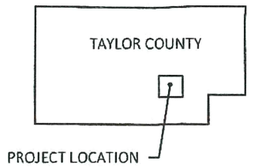
T MEDFORD, CENTER AVENUE

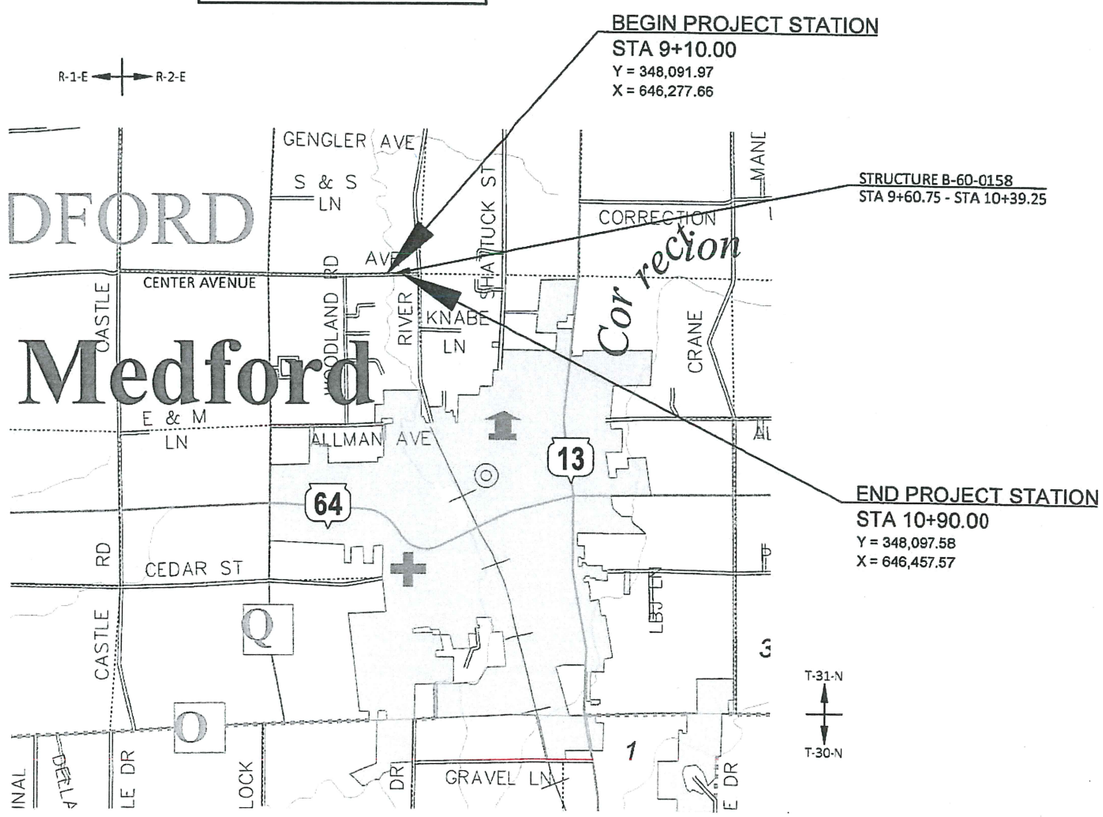
BLACK RIVER BRIDGE B-60-0158

LOCAL STR
TAYLOR COUNTY

STATE PROJECT NUMBER
8890-00-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8890-00-72	WISC 2025050	1





LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.034 MILES

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

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ACCEPTED FOR

Town Of Medford

Date 7/24/2024 Bradley R Holander

(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY

WISCONSIN PROFESSIONAL ENGINEER
JACOB A. FRIBERG
E-43328
RICE LAKE
WI

DATE: 7/24/24

(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	COOPER ENGINEERING
Designer	COOPER ENGINEERING
Project Manager	MATTHEW BERG, PE
Regional Examiner	TOU YANG, PE
Regional Supervisor	TOU YANG, PE

APPROVED FOR THE DEPARTMENT

DATE: 7/30/2024

(Signature)

E

LIST OF STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRES
AGG	AGGREGATE
AH	AHEAD
ADT	AVERAGE DAILY TRAFFIC
AVG.	AVERAGE
ASPH	ASPHALTIC
BK.	BACK
BM	BENCHMARK
△	CENTRAL ANGLE OR DELTA
℄ , C/L	CENTERLINE
C & G	CURB AND GUTTER
CABC	CRUSHED AGGREGATE BASE COURSE
CONC.	CONCRETE
COR	CORNER
CORR	CORRUGATED
CSCP	CORRUGATED STEEL CULVERT PIPE
CSPA	CORRUGATED STEEL PIPE ARCH
CTH	COUNTY TRUNK HIGHWAY
CP.	CULVERT PIPE
CY	CUBIC YARD
CWT.	HUNDREDWEIGHT
DIA	DIAMETER
D	DEGREE OF CURVE
DHV	DESIGN HOURLY VOLUME
DWY	DRIVEWAY
EBS	EXC. BELOW SUB GRADE
ELEV., EL	ELEVATION
ELEC.	ELECTRIC
EXC	EXCAVATION
EXIST	EXISTING
E	EAST
FE	FIELD ENTRANCE
FF.	FACE TO FACE
FL, F/L	FLOW LINE
FS	FULL SUPERELEVATION
G	GARAGE
GN	GRID NORTH
H	HOUSE
HYD	HYDRANT
I	INTERSECTION ANGLE
INTERS	INTERSECTION
INV.	INVERT
IP	IRON PIN OR PIPE
LC	LONG CHORD OF CURVE
LF	LINEAR FOOT
LHF	LEFT HAND FORWARD
L	LENGTH OF CURVE
LT.	LEFT
LS	LUMP SUM
MH	MANHOLE
N	NORTH
NC	NORMAL CROWN
PAVT	PAVEMENT
PC	POINT OF CURVATURE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PL	PROPERTY LINE
PP	POWER POLE
PT	POINT OF TANGENCY
R	RANGE , RADIUS
RCCP	REINFORCED CONCRETE CULVERT PIPE
RD	ROAD
REBAR	REINFORCEMENT BAR
REQD	REQUIRED
RDWY	ROADWAY
RHF	RIGHT HAND FORWARD
RL, R/L	REFERENCE LINE
RR	RAILROAD
RT.	RIGHT
R/W	RIGHT-OF-WAY
S	SOUTH
SAN S	SANITARY SEWER
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SF.	SQUARE FEET
SHLDR	SHOULDER
SPECS	SPECIFICATIONS
SQ.	SQUARE
SS.	STORM SEWER
SY.	SQUARE YARD
STH	STATE TRUNK HIGHWAY
ST.	STREET
STA.	STATION
SW	SIDEWALK
T	TANGENT
TC	TOP OF CURB
℡ , T/L	TRANSIT LINE
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
TYP	TYPICAL
USH	UNITED STATES HIGHWAY
UG	UNDERGROUND
V	DESIGN SPEED
VAR.	VARIABLE
VERT	VERTICAL
YD	YARD

UTILITY CONTACTS

COMMUNICATIONS

CHARTER
JESSE GRUNY
503 E IVES ST, STE 316
MARSHFIELD, WI 54449
PHONE: (715) 651-5605
EMAIL: Jesse.Gruny@charter.com

ELECTRIC

TAYLOR ELECTRIC COOPERATIVE
WADE MATYKA
N1831 STATE HIGHWAY 13
MEDFORD, WI 54451
PHONE: (715) 678-2411
EMAIL: wade@taylorelectric.org

COMMUNICATIONS

TDS TELECOM
JEFF OLSON
202 OGDEN ST
MEDFORD, WI 54451
PHONE: (608) 845-2219
EMAIL: jeffrey.olson@tdstelecom.com

ELECTRIC

XCEL ENERGY
DAWN SCHULTZ
1414 W HAMILTON AVE, P.O. BOX 8
EAU CLAIRE, WI 54701
PHONE: (715) 737-2482
EMAIL: dawn.schultz@xcelenergy.com

ALL UTILITIES LISTED ARE MEMBERS OF DIGGERS HOTLINE

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

OTHER CONTACTS

DESIGN CONSULTANT

COOPER ENGINEERING
JACOB FRIBERG
2600 COLLEGE DRIVE
RICE LAKE, WI 54868
PHONE: (715) 234-7008
EMAIL: jfriberg@cooperengineering.net

TOWN OF MEDFORD

CHAIRMAN
STANLEY SCHMIDT
W6462 CENTER AVENUE
MEDFORD, WI 54451
PHONE: (715) 560-2811
EMAIL: srs3839@hotmail.com

WDNR REGIONAL CONTACT

WDNR/WISDOT LIAISON
WENDY HENNIGES
107 SUTLIFF AVENUE
RHINELANDER, WI 54501
PHONE: (715) 499-1608
EMAIL: Wendy.Henniges@wisconsin.gov

GENERAL NOTES:

NO TREES OR SHRUBS SHALL BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE BEEN DESIGNATED FOR REMOVAL BY THE ENGINEER.

ACCESS TO ALL RESIDENCES & SIDE ROADS SHALL BE MAINTAINED DURING CONSTRUCTION.

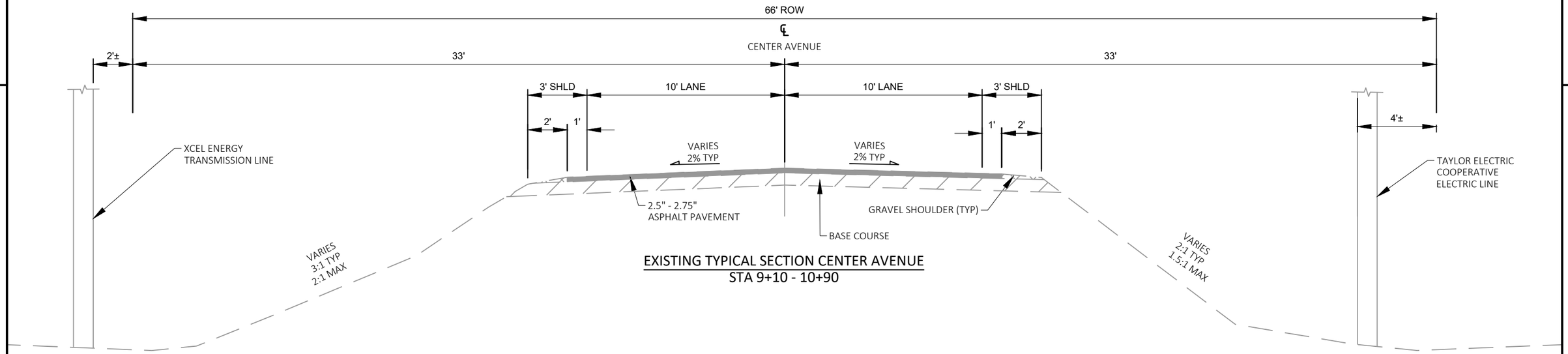
THE LOCATION OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

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

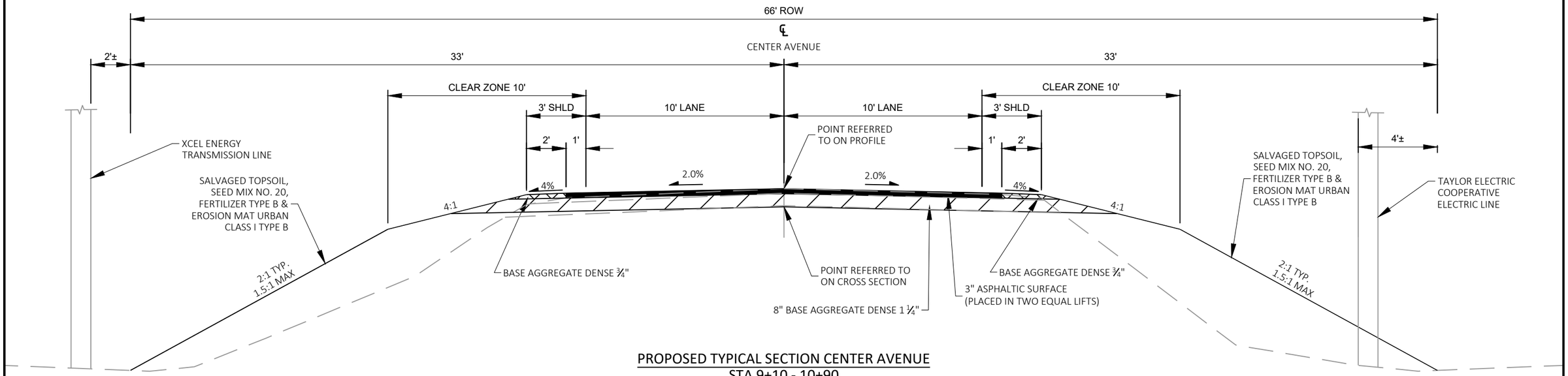
RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP								
	A			B			C		
	SLOPE RANGE (%)			SLOPE RANGE (%)			SLOPE RANGE (%)		
LAND USE:	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
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36
PAVEMENT:									
ASPHALT	.70 - .95								
CONCRETE	.80 - .95								
BRICK	.70 - .80								
DRIVES, WALKS	.75 - .85								
ROOFS	.75 - .95								
GRAVEL ROADS, SHOULDERS	.40 - .60								

TOTAL PROJECT AREA = 0.27 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.23 ACRES



EXISTING TYPICAL SECTION CENTER AVENUE
STA 9+10 - 10+90



PROPOSED TYPICAL SECTION CENTER AVENUE
STA 9+10 - 10+90

PROJECT NO: 8890-00-72	HWY: CENTER AVENUE	COUNTY: TAYLOR	TYPICAL SECTION	SHEET 3	E

FILE NAME : G:\2023-PROJ\23258044\C3D\SHEETS\020301_TS.DWG
LAYOUT NAME - CENTER AVE TS

PLOT DATE : 7/11/2024 8:48 AM PLOT BY : JACOB FRIBERG PLOT NAME : PLOT SCALE : 1 IN:5 FT

WISDOT/CADDS SHEET 42

2

EXISTING STRUCTURE P-60-0118
TRIPLE 16'-3" X 10'-10"
MULTI-PLATE PIPE ARCH BRIDGE
STA 9+75.88 - 10+28.68

APPROXIMATE PROPERTY LINE
PER TAYLOR COUNTY GIS

N

EXISTING RAPIDS/ROCKS

DRIVEWAY

PINE LINE RAIL TRAIL

PI: 8+73.40

66' ROW

EDGE OF ASPHALT

EDGE OF GRAVEL

9+00

10+00

11+00

CENTER AVENUE

EXISTING BEAMGUARD

40.5' BARREL LENGTH

EXISTING 52.8' TOTAL LENGTH

TOP OF
BANK (TYP)

3:1

1.5:1

2:1

6:1

3:1

2:1

2:1

1.25:1

2.5:1

1.5:1

2.5:1

2:1

1.5:1

MAIN CHANNEL (8/25/23)

GRASS OUTCROPPING

TOE OF SLOPE (TYP)

EDGE OF WATER (TYP)

EDGE OF CHANNEL (TYP)

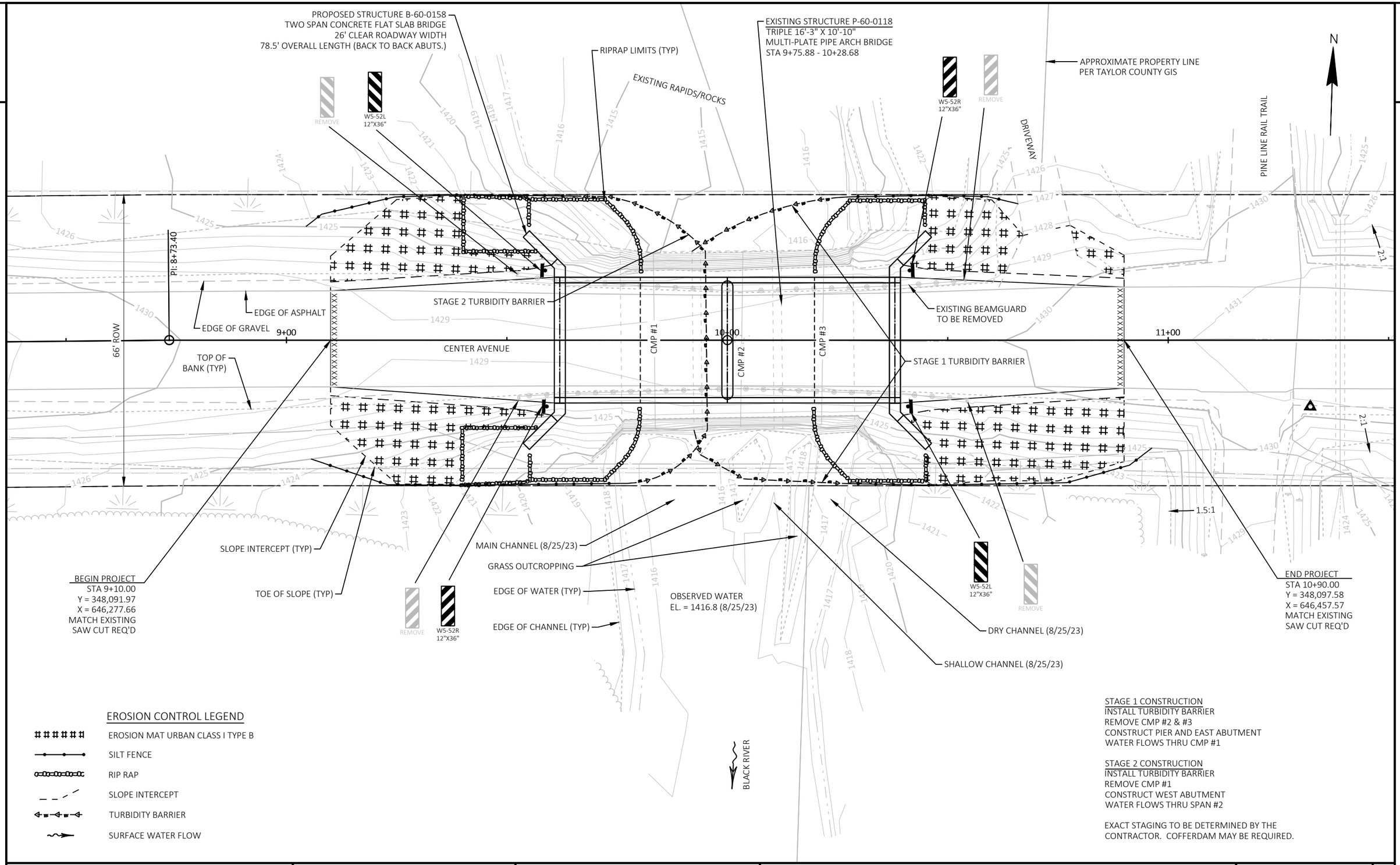
OBSERVED WATER
EL. = 1416.8 (8/25/23)

DRY CHANNEL (8/25/23)

SHALLOW CHANNEL (8/25/23)

BLACK RIVER

PROJECT NO: 8890-00-72	HWY: CENTER AVENUE	COUNTY: TAYLOR	EXISTING CONTOUR MAP	SHEET 4	E



PROJECT NO: 8890-00-72	HWY: CENTER AVENUE	COUNTY: TAYLOR	PERMANENT SIGNING & EROSION CONTROL PLAN	SHEET 5	E

FILE NAME : G:\2023-PROJ\23258044\C3D\SHEETS\021601_CM.DWG
LAYOUT NAME - PS & EC PLAN

PLOT DATE : 7/11/2024 8:55 AM PLOT BY : JACOB FRIBERG PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

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REFER TO STANDARD DETAIL DRAWING "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" & "BARRICADES AND SIGNS FOR VARIOUS CLOSURES" FOR MORE DETAIL

PLACE BARRICADES IN SUCH A WAY AS TO PROVIDE ACCESS TO DRIVEWAY AT ALL TIMES.

SEE CLOSURE BARRICADE DETAIL E

BRIDGE OUT
R11-2-B
48"X30"

PROPOSED BRIDGE WORK ZONE

ROAD CLOSED 500 FT
W20-3-D

BRIDGE OUT
0.2 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3-B

CENTER AVE.

DWY

DWY

PINE LINE RAIL TRAIL

BRIDGE OUT
0.8 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3-B

ROAD CLOSED AHEAD
W20-3A

BRIDGE OUT
0.3 MILES AHEAD
LOCAL TRAFFIC ONLY
R11-3-B

SEE CLOSURE BARRICADE DETAIL E

BRIDGE OUT
R11-2-B
48"X30"

SEE CLOSURE BARRICADE DETAIL D

BRIDGE OUT
R11-2-B
48"X30"

PINE LINE RAIL TRAIL TO REMAIN OPEN AT ALL TIMES DURING CONSTRUCTION.

CTH O/ANDERSON RD.

STH 64 (MEDFORD) 1.5 MILES

WOODLAND RD.

SUGAR BUSH LN.

BUEHLER LN.

BLACK RIVER

PINE LINE RAIL TRAIL

RIVER DR.

ALLMAN ST (MEDFORD) 1 MILE

KNABE LN.

PROJECT NO: 8890-00-72	HWY: CENTER AVENUE	COUNTY: TAYLOR	TRAFFIC CONTROL OVERVIEW	SHEET 6	E

FILE NAME : G:\2023-PROJ\23258044\C3D\SHEETS\025001_TC.DWG
LAYOUT NAME - TC ADVANCE WARNING

PLOT DATE : 7/11/2024 10:25 AM PLOT BY : JACOB FRIBERG PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

Estimate Of Quantities

8890-00-72

Line	Item	Item Description	Unit	Total	Qty
0002	203.0220	Removing Structure (structure) 01. P-60-0118	EACH	1.000	1.000
0004	204.0165	Removing Guardrail	LF	204.000	204.000
0006	205.0100	Excavation Common	CY	80.000	80.000
0008	206.1001	Excavation for Structures Bridges (structure) 01. B-60-0158	EACH	1.000	1.000
0010	208.0100	Borrow	CY	120.000	120.000
0012	210.1500	Backfill Structure Type A	TON	300.000	300.000
0014	213.0100	Finishing Roadway (project) 01. 8890-00-72	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	35.000	35.000
0018	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	175.000	175.000
0020	455.0605	Tack Coat	GAL	20.000	20.000
0022	465.0105	Asphaltic Surface	TON	50.000	50.000
0024	502.0100	Concrete Masonry Bridges	CY	227.000	227.000
0026	502.3200	Protective Surface Treatment	SY	321.000	321.000
0028	505.0400	Bar Steel Reinforcement HS Structures	LB	6,120.000	6,120.000
0030	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	31,440.000	31,440.000
0032	513.4061	Railing Tubular Type M	LF	162.000	162.000
0034	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0036	550.0020	Pre-Boring Rock or Consolidated Materials	LF	78.000	78.000
0038	550.0500	Pile Points	EACH	14.000	14.000
0040	550.1120	Piling Steel HP 12-Inch X 53 Lb	LF	500.000	500.000
0042	606.0300	Riprap Heavy	CY	210.000	210.000
0044	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	200.000	200.000
0046	618.0100	Maintenance and Repair of Haul Roads (project) 01. 8890-00-72	EACH	1.000	1.000
0048	619.1000	Mobilization	EACH	1.000	1.000
0050	624.0100	Water	MGAL	2.000	2.000
0052	625.0500	Salvaged Topsoil	SY	275.000	275.000
0054	628.1504	Silt Fence	LF	260.000	260.000
0056	628.1520	Silt Fence Maintenance	LF	260.000	260.000
0058	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0060	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0062	628.2008	Erosion Mat Urban Class I Type B	SY	275.000	275.000
0064	628.6005	Turbidity Barriers	SY	150.000	150.000
0066	629.0210	Fertilizer Type B	CWT	0.200	0.200
0068	630.0120	Seeding Mixture No. 20	LB	10.000	10.000
0070	630.0500	Seed Water	MGAL	10.000	10.000
0072	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0074	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0076	638.2602	Removing Signs Type II	EACH	4.000	4.000
0078	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0080	642.5001	Field Office Type B	EACH	1.000	1.000
0082	643.0420	Traffic Control Barricades Type III	DAY	1,360.000	1,360.000
0084	643.0705	Traffic Control Warning Lights Type A	DAY	2,380.000	2,380.000
0086	643.0900	Traffic Control Signs	DAY	935.000	935.000
0088	643.5000	Traffic Control	EACH	1.000	1.000
0090	645.0111	Geotextile Type DF Schedule A	SY	60.000	60.000
0092	645.0120	Geotextile Type HR	SY	320.000	320.000
0094	650.4500	Construction Staking Subgrade	LF	87.000	87.000
0096	650.5000	Construction Staking Base	LF	87.000	87.000
0098	650.6501	Construction Staking Structure Layout (structure) 01. B-60-0158	EACH	1.000	1.000

Estimate Of Quantities

8890-00-72

Line	Item	Item Description	Unit	Total	Qty
0100	650.9911	Construction Staking Supplemental Control (project) 01. 8890-00-72	EACH	1.000	1.000
0102	650.9920	Construction Staking Slope Stakes	LF	87.000	87.000
0104	690.0150	Sawing Asphalt	LF	45.000	45.000
0106	715.0502	Incentive Strength Concrete Structures	DOL	2,270.000	2,270.000
0108	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0110	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000
0112	SPV.0090	Special 01. Flashing Stainless Steel	LF	147.000	147.000

3

BEAMGUARD SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	REMOVING GUARDRAIL 204.0165 LF
0010	9+52	-	10+54	LT	102
0010	9+53	-	10+55	RT	102
				TOTAL 0010	204

EARTHWORK SUMMARY

CATEGORY	STATION	TO	STATION	SIDE	EXCAVATION COMMON 205.0100 CY	SALVAGED/ UNUSEABLE PAVEMENT MATERIAL CY	AVAILABLE MATERIAL CY	UNEXPANDED FILL CY	EXPANDED FILL (FACTOR = 1.25) CY	MASS ORDINATE +/- CY	BORROW 208.0100
0010	9+10	-	9+61	LT/RT	40	10	30	80	100	-70	70
0010	10+39	-	10+90	LT/RT	40	10	30	65	80	-50	50
				TOTAL 0010	80	20	60	145	180	-120	120

3

BASE AGGREGATE DENSE & ASPHALT SUMMARY

CATEGORY	STATION	TO	STATION	SIDE	ASPHALT THICKNESS (IN)	LAYERS	BASE AGGREGATE DENSE 3/4-INCH 305.0110 TON	BASE AGGREGATE DENSE 1 1/4-INCH 305.0120 TON	TACK COAT 455.0605 GAL	ASPHALTIC SURFACE 465.0105 TON	WATER 624.0100 MGAL	SAWING ASPHALT 690.0150 LF
0010	9+10	-	9+61	LT/RT	3	2	15	85	10	25	1.0	22
0010	10+39	-	10+90	LT/RT	3	2	20	90	10	25	1.0	23
						TOTAL 0010	35	175	20	50	2	45

RIPRAP SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	RIPRAP HEAVY 606.0300 CY	GEOTEXTILE TYPE HR 645.0120 SY
0010	9+40	-	9+55	LT	15	25
0010	9+40	-	9+55	RT	15	25
				TOTAL 0010	30	50

**SEE BRIDGE PLAN FOR ADDITIONAL QUANTITIES

RESTORATION SUMMARY

CATEGORY	LOCATION	SALVAGED TOPSOIL 625.0500 SY	EROSION MAT URBAN CLASS I TYPE B 628.2008 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIX NO. 20 630.0120 LB	SEED WATER 630.0500 MGAL
0010	B-60-0158 NW	60	60	0.04	2	2
0010	B-60-0158 SW	60	60	0.04	2	2
0010	B-60-0158 NE	45	45	0.03	2	2
0010	B-60-0158 SE	85	85	0.06	3	2
0010	UNDISTRIBUTED	25	25	0.03	1	2
	TOTAL 0010	275	275	0.2	10	10

SILT FENCE

CATEGORY	LOCATION	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF
0010	B-60-0158 NW	60	60
0010	B-60-0158 SW	70	70
0010	B-60-0158 NE	40	40
0010	B-60-0158 SE	70	70
0010	UNDISTRIBUTED	20	20
	TOTAL 0010	260	260

PROJECT NO: 8890-00-72	HWY: CENTER AVENUE	COUNTY: TAYLOR	MISCELLANEOUS QUANTITIES	SHEET 9	E

3

EROSION CONTROL MOBILIZATION

CATEGORY	LOCATION	MOBILIZATIONS EROSION CONTROL 628.1905 EA	MOBILIZATIONS EMERGENCY EROSION CONTROL 628.1910 EA	REMARKS
0010	PROJECT	1	-	EROSION CONTROL WEST SIDE
0010	PROJECT	1	-	EROSION CONTROL EAST SIDE
0010	PROJECT	1	-	RESTORATION WEST SIDE
0010	PROJECT	1	-	RESTORATION EAST SIDE
0010	PROJECT	-	2	UNDISTRIBUTED
	TOTAL 0010	4	2	

TURBIDITY BARRIER

CATEGORY	LOCATION	TURBIDITY BARRIER 628.6005 SY	REMARKS
0010	B-60-0158 WEST	85	100' LONG X 7.5' HIGH
0010	B-60-0158 EAST	65	(2) 40' LONG X 7.5' HIGH
	TOTAL 0010	150	

3

SIGNING

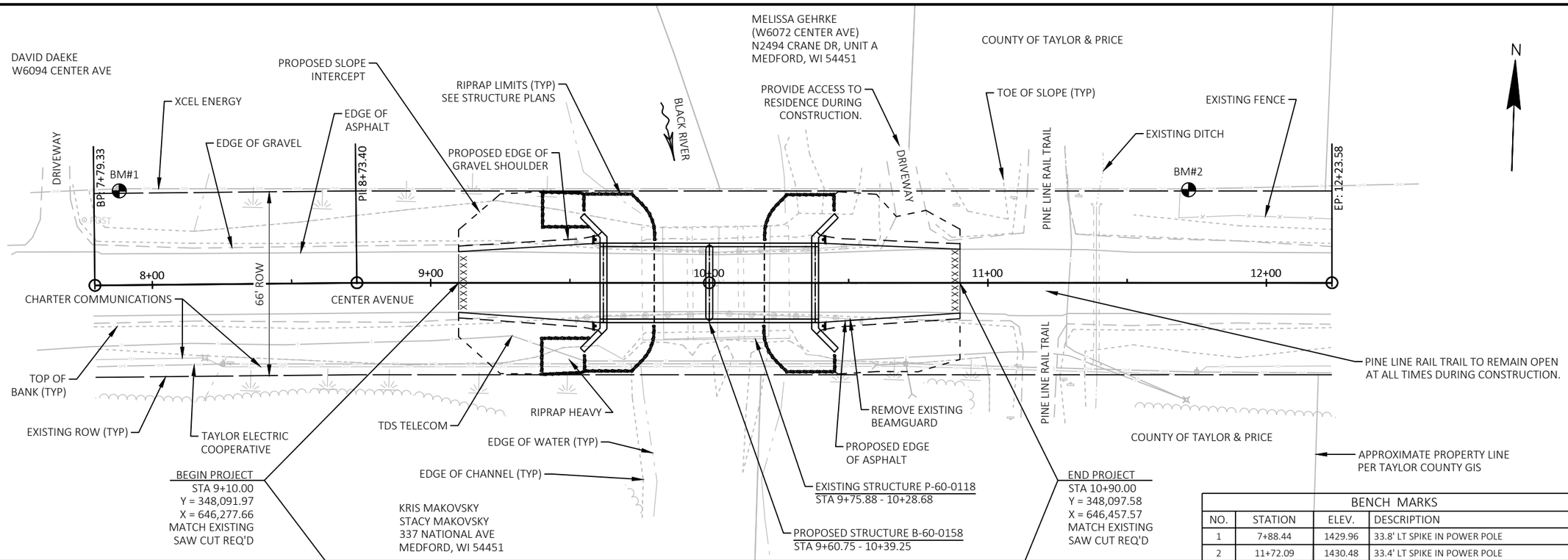
CATEGORY	LOCATION	POSTS WOOD 4x6-INCH x 12 FT 634.0612 EA	SIGNS TYPE II REFLECTIVE F 637.2230 SF	REMOVING SIGNS TYPE II 638.2602 EA	REMOVING SMALL SIGN SUPPORTS 638.3000 EA	REMARKS
0010	B-60-0158 NW	1	3	1	1	W5-52L
0010	B-60-0158 SW	1	3	1	1	W5-52R
0010	B-60-0158 NE	1	3	1	1	W5-52R
0010	B-60-0158 SE	1	3	1	1	W5-52L
	TOTAL 0010	4	12	4	4	

TRAFFIC CONTROL ITEMS

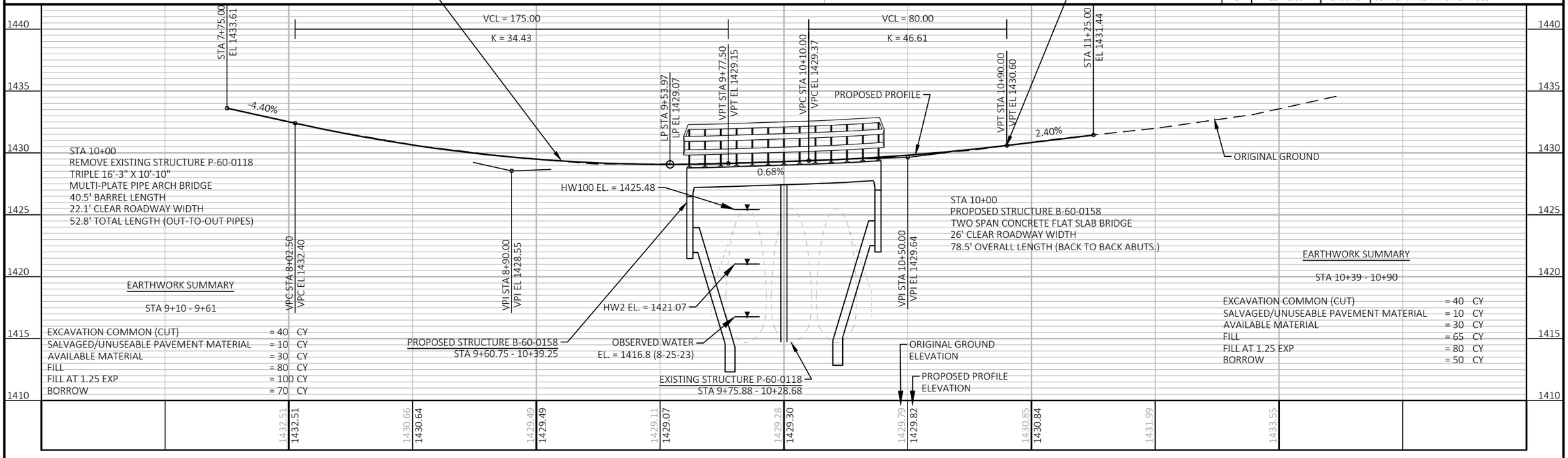
CATEGORY	DAYS	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 #	DAYS	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 #	DAYS	TRAFFIC CONTROL SIGNS 643.0900 #	DAYS	REMARKS
0010	85	3	255	4	340	1	85	ROAD CLOSED DETAIL D WEST SIDE
0010	85	3	255	4	340	1	85	ROAD CLOSED DETAIL D EAST SIDE
0010	85	6	510	12	1,020	6	510	ADVANCED ROAD CLOSED WEST SIDE
0010	85	4	340	8	680	3	255	ADVANCED ROAD CLOSED EAST SIDE
	TOTAL 0010		1,360		2,380		935	

CONSTRUCTION STAKING SUMMARY

CATEGORY	STATION	TO	STATION	CONSTRUCTION STAKING SUBGRADE 650.4500 LF	CONSTRUCTION STAKING BASE 650.5000 LF	CONSTRUCTION STAKING SLOPE STAKES 650.9920 LF
0010	9+10	-	9+54	44	44	44
0010	10+46	-	10+90	43	43	43
			TOTAL 0010	87	87	87



BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
1	7+88.44	1429.96	33.8' LT SPIKE IN POWER POLE
2	11+72.09	1430.48	33.4' LT SPIKE IN POWER POLE



EARTHWORK SUMMARY

STA 9+10 - 9+61

EXCAVATION COMMON (CUT)	= 40 CY
SALVAGED/UNUSEABLE PAVEMENT MATERIAL	= 10 CY
AVAILABLE MATERIAL	= 30 CY
FILL	= 80 CY
FILL AT 1.25 EXP	= 100 CY
BORROW	= 70 CY

EARTHWORK SUMMARY

STA 10+39 - 10+90

EXCAVATION COMMON (CUT)	= 40 CY
SALVAGED/UNUSEABLE PAVEMENT MATERIAL	= 10 CY
AVAILABLE MATERIAL	= 30 CY
FILL	= 65 CY
FILL AT 1.25 EXP	= 80 CY
BORROW	= 50 CY

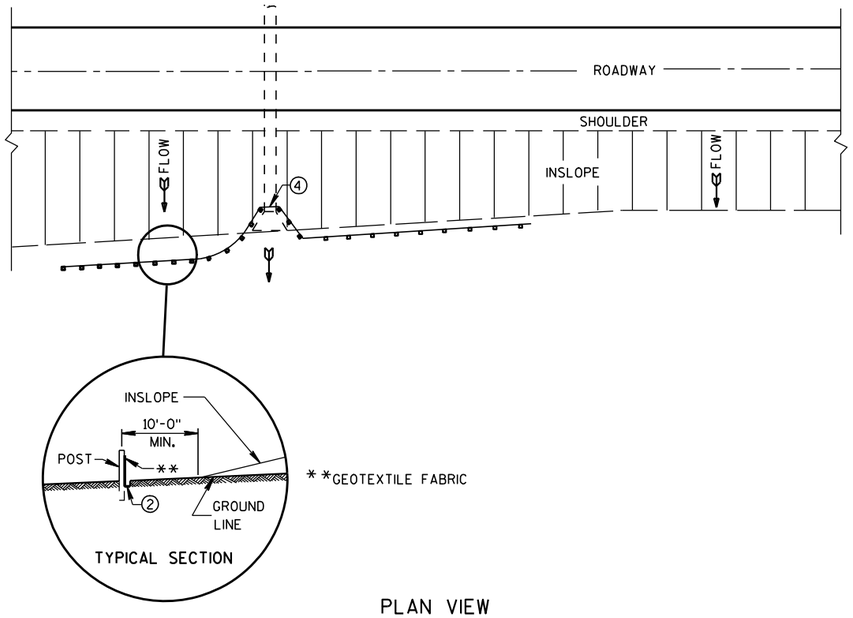
PROJECT NO: 8890-00-72	HWY: CENTER AVENUE	COUNTY: TAYLOR	PLAN AND PROFILE: CENTER AVENUE	SHEET 11	E

Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

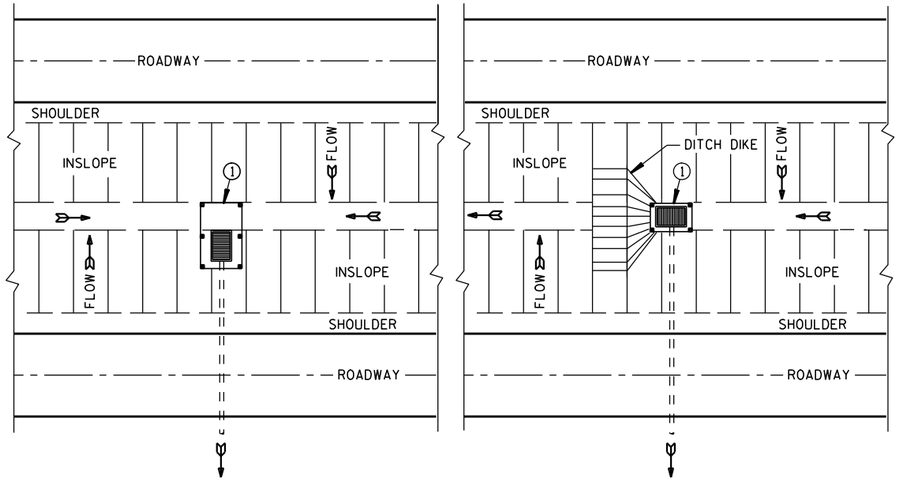
6

6



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



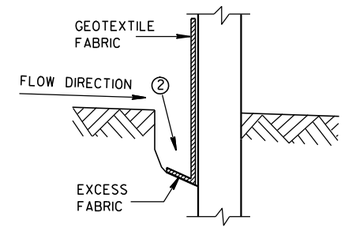
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

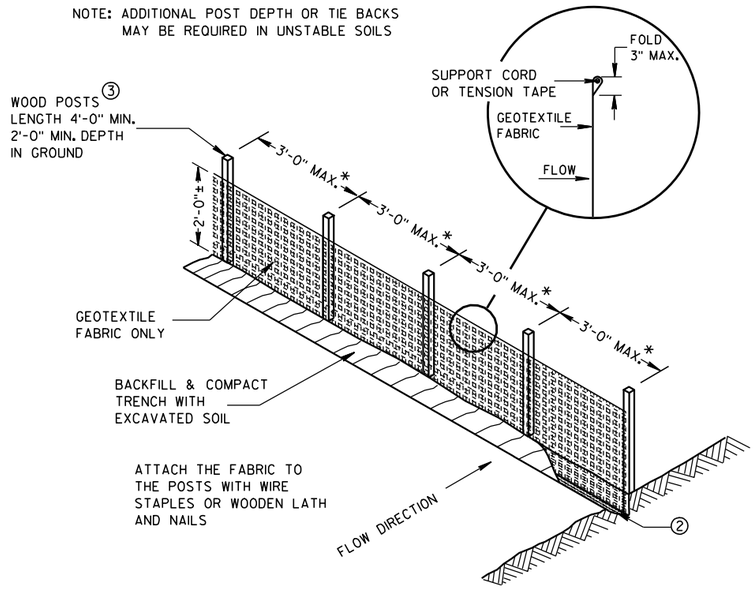
GENERAL NOTES

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

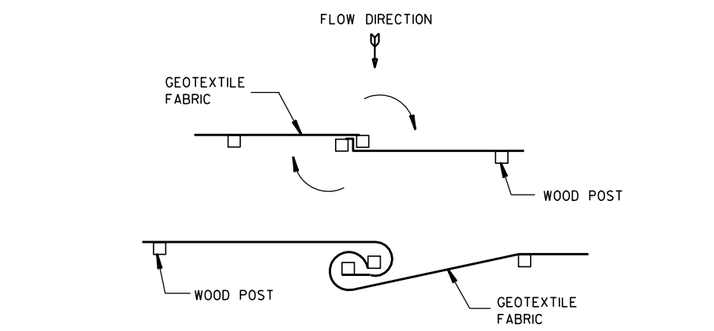
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



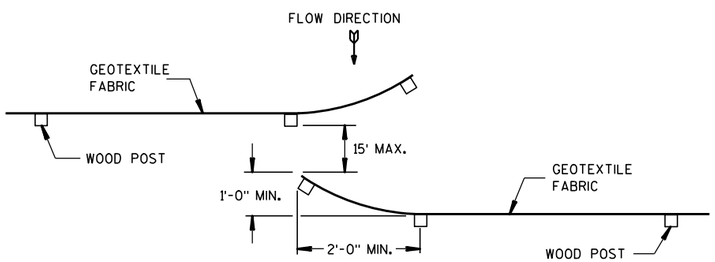
TRENCH DETAIL



SILT FENCE

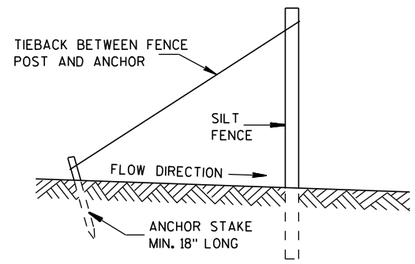


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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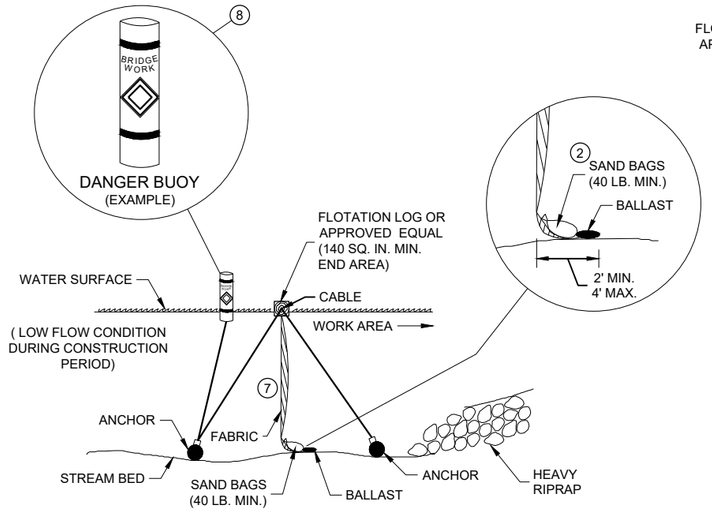
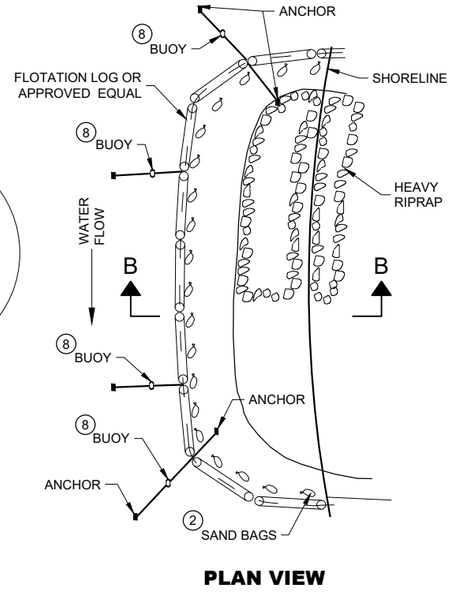
S.D.D. 8 E 9-6

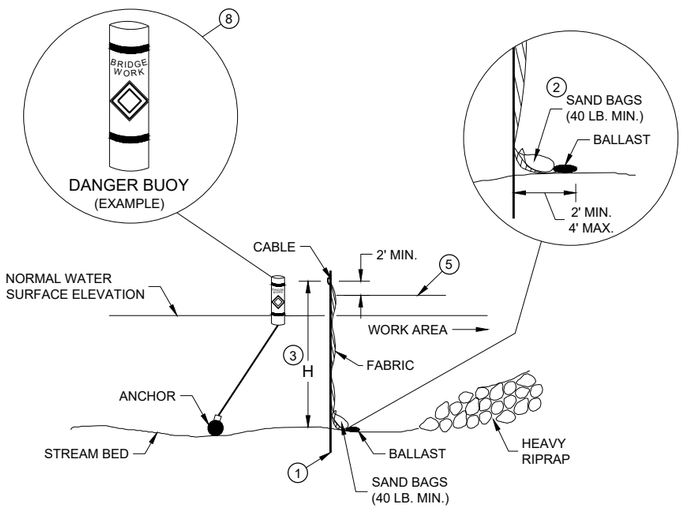


SECTION B - B

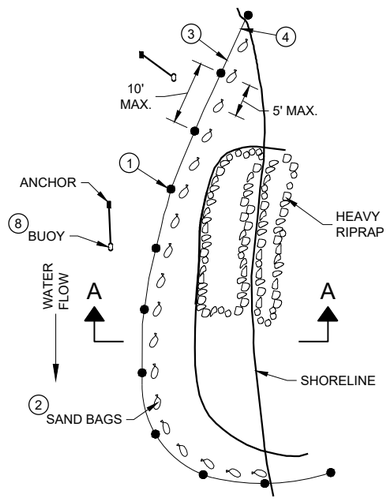


PLAN VIEW

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.

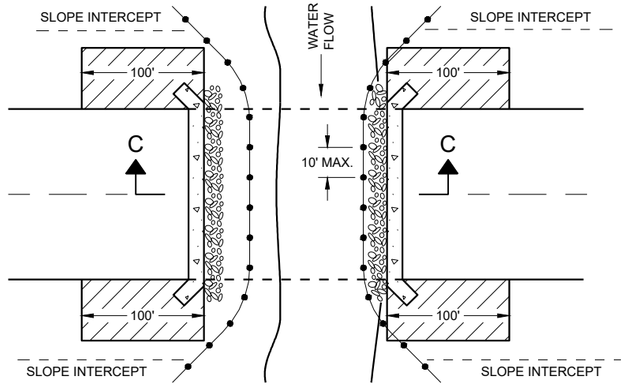
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(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.

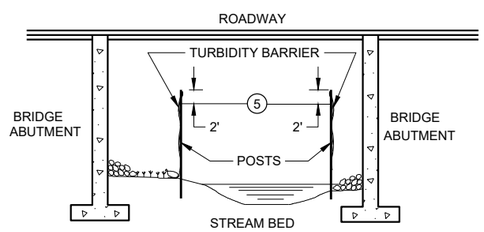
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(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

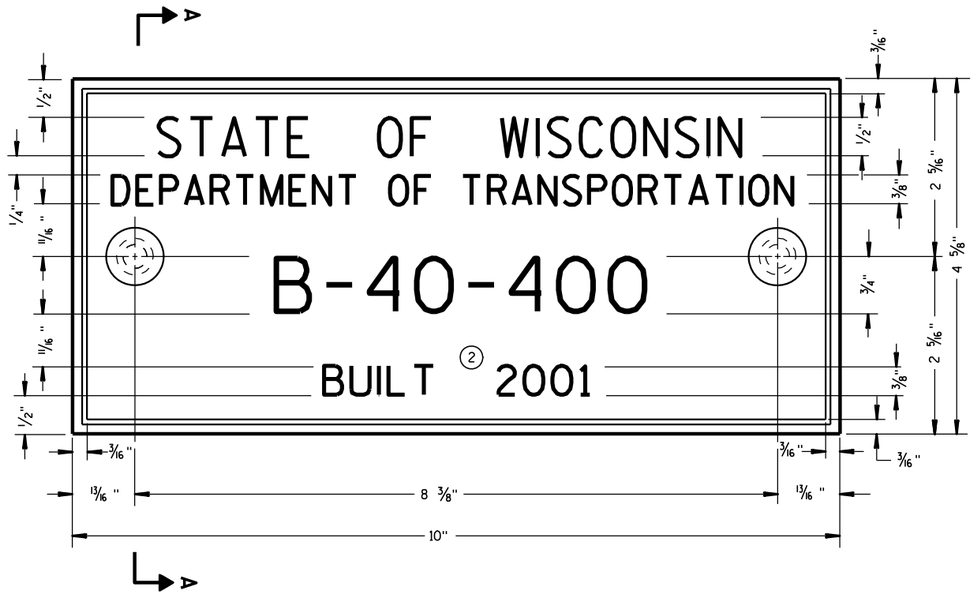
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

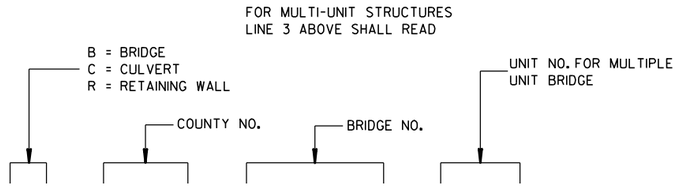
FHWA

6
SDD 08E11 - 02



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

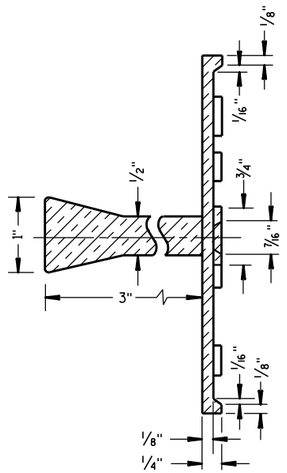
GENERAL NOTES

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

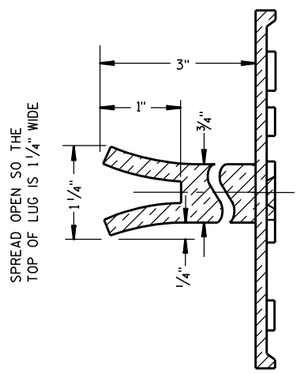
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

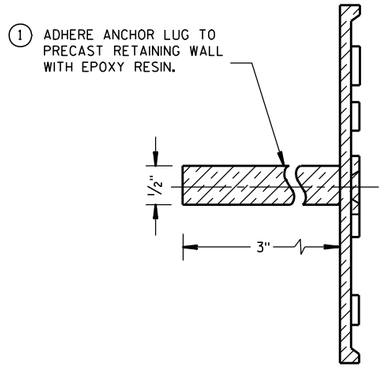
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

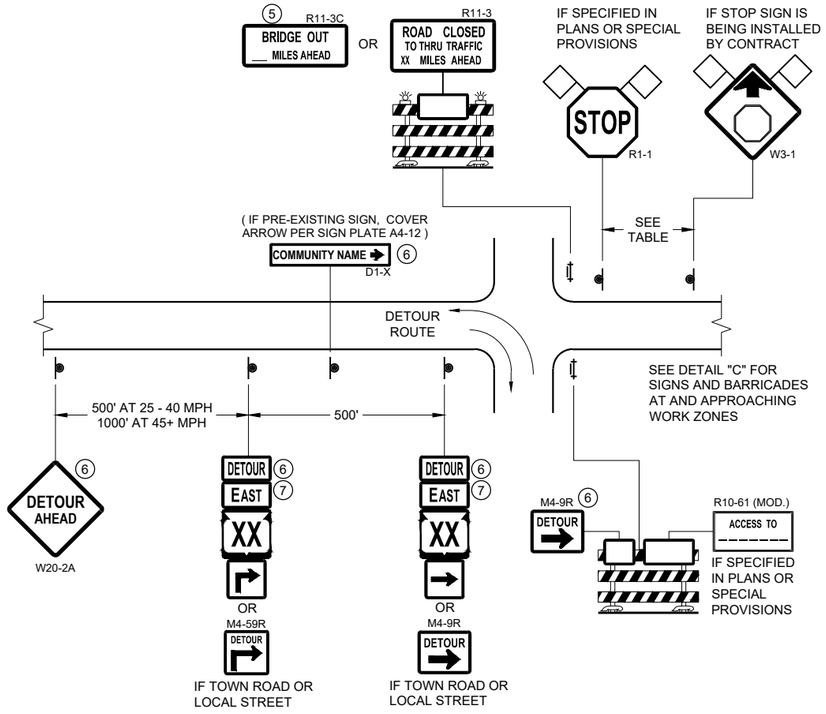
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

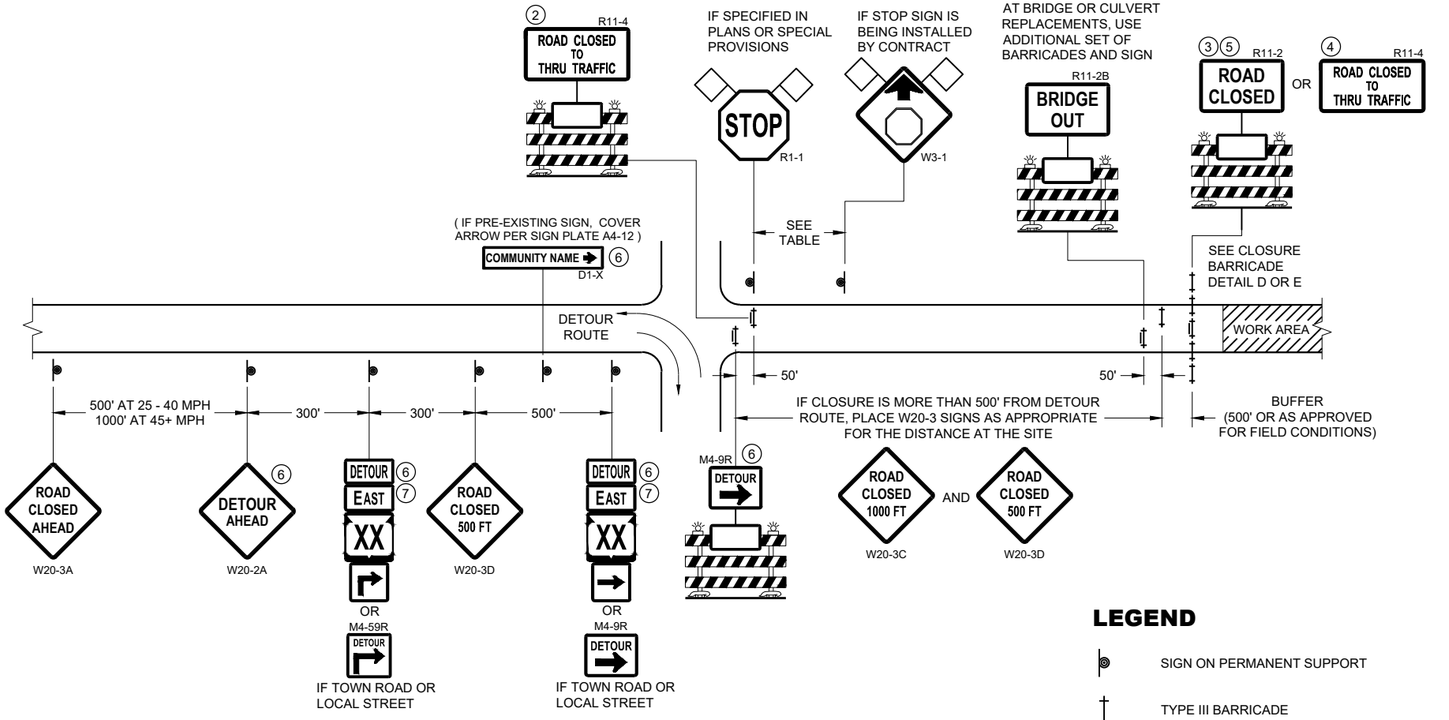
6

S.D.D. 12 A 3-10



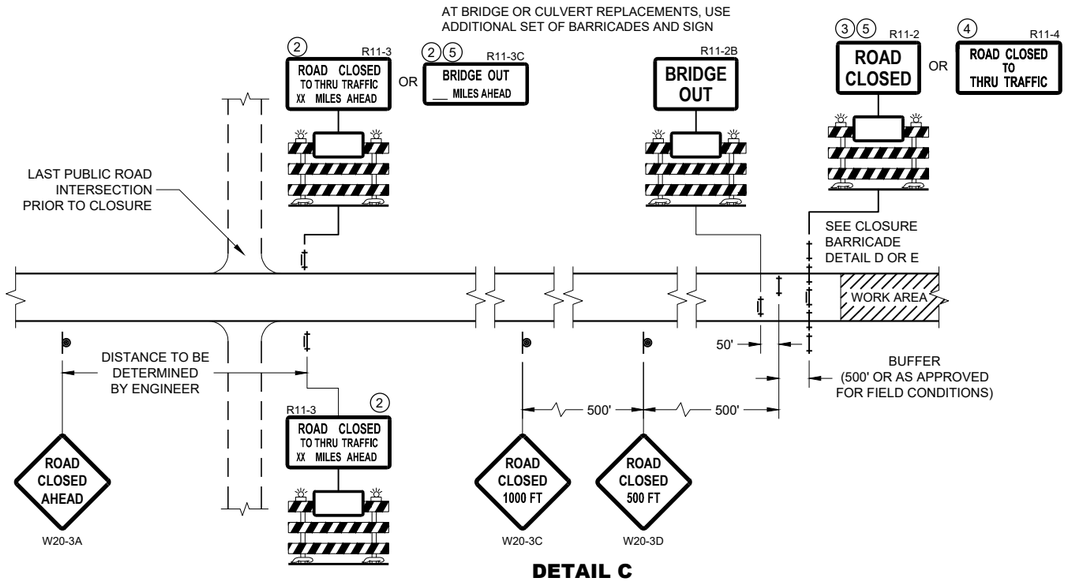
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

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

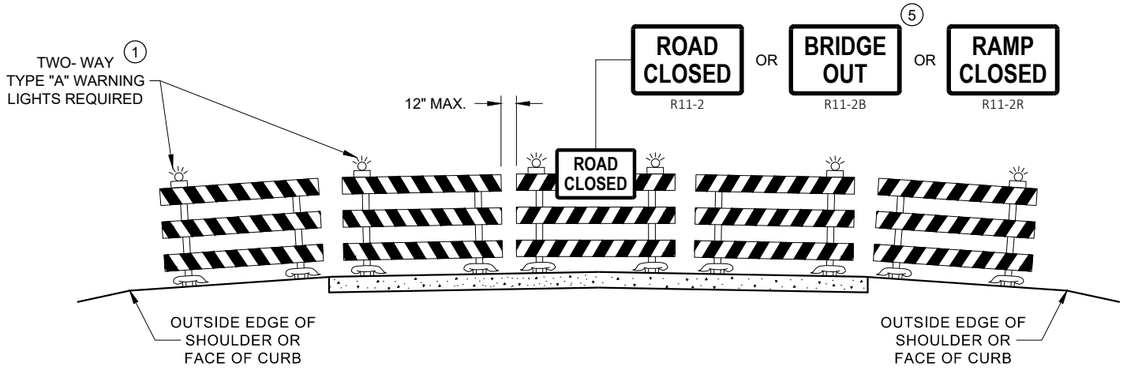
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

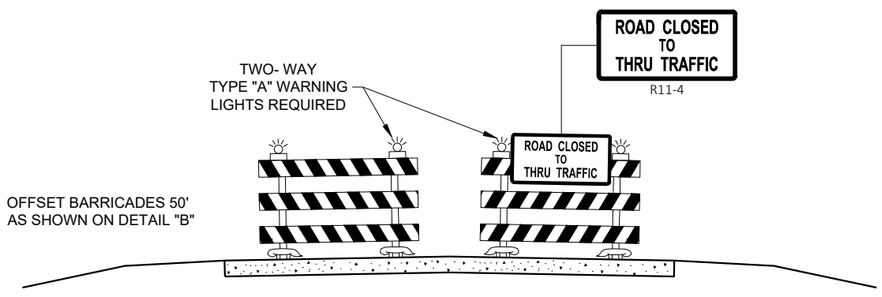
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 09a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

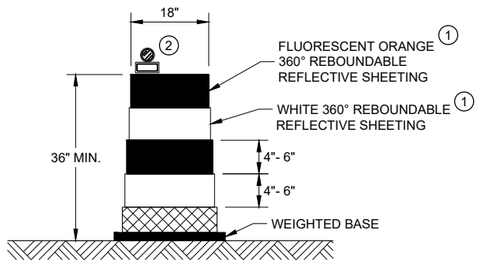
SDD 15C02 - 09b

6

SDD 15C02 - 09b

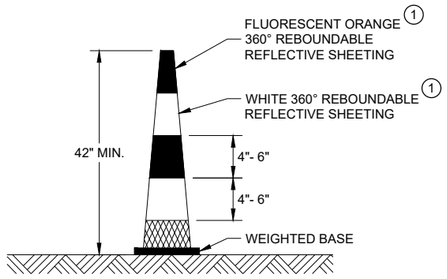
GENERAL NOTES

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



DRUM

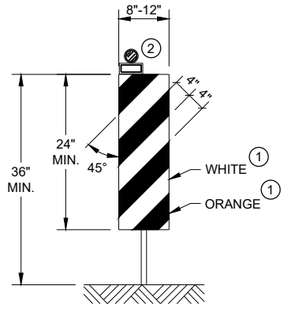
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

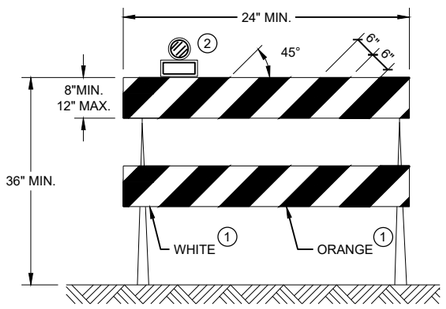
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



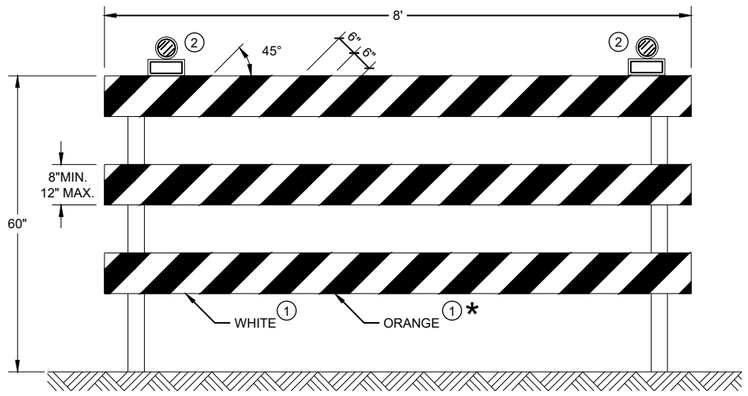
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

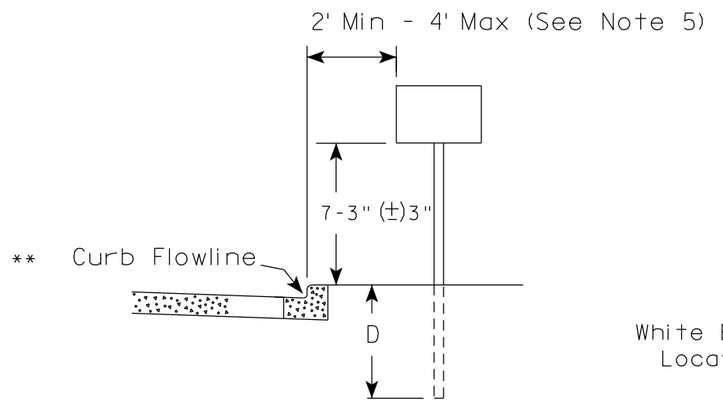
6

SDD 15C11 - 10b

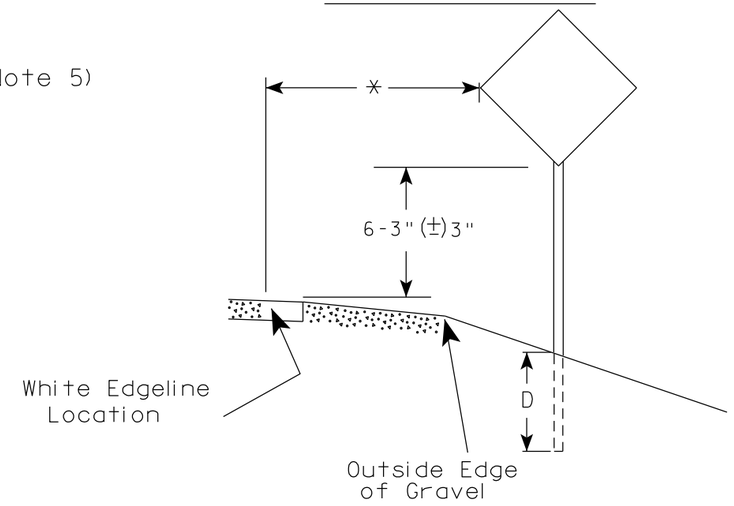
6

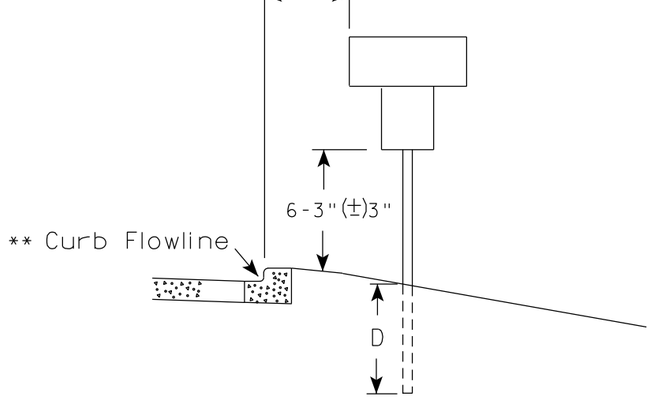
SDD 15C11 - 10b

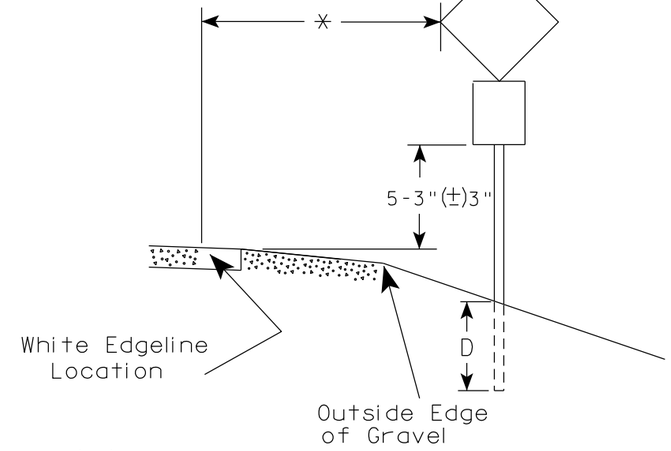
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

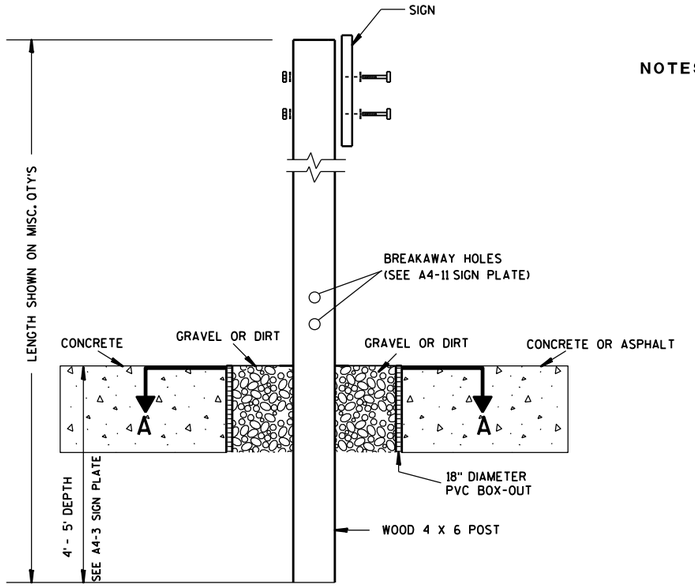
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

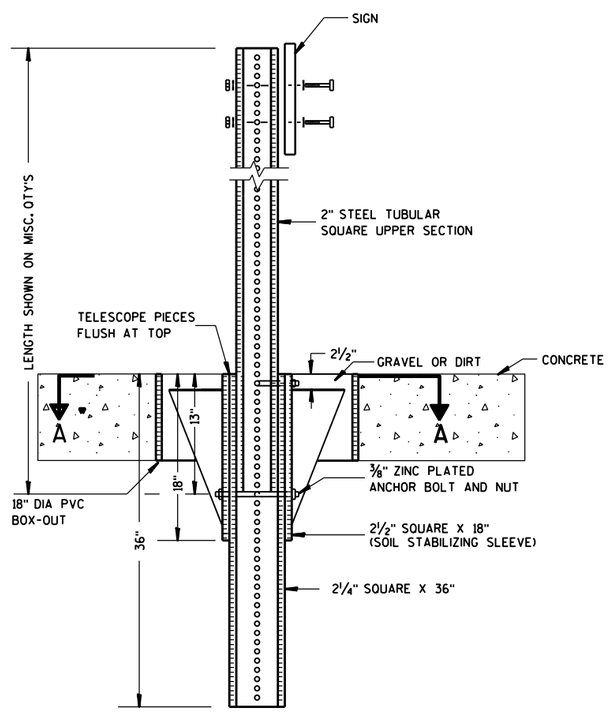
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 19	E



ELEVATION VIEW

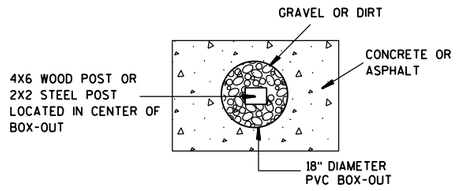
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

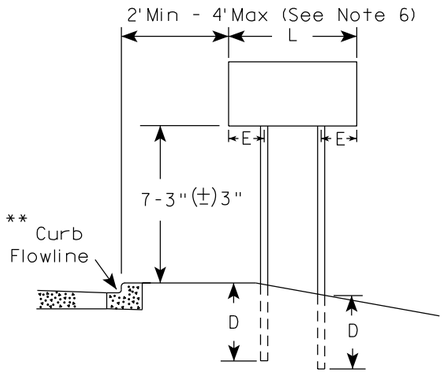
APPROVED Matthew R Rauch
for State Traffic Engineer

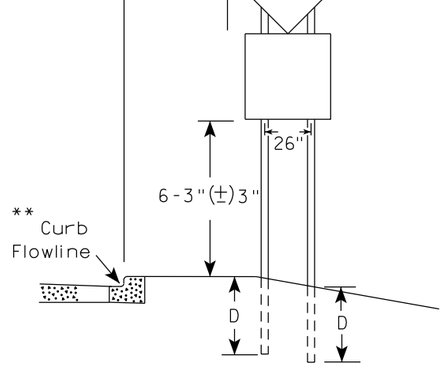
DATE 1/27/14 PLATE NO. A4-3B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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

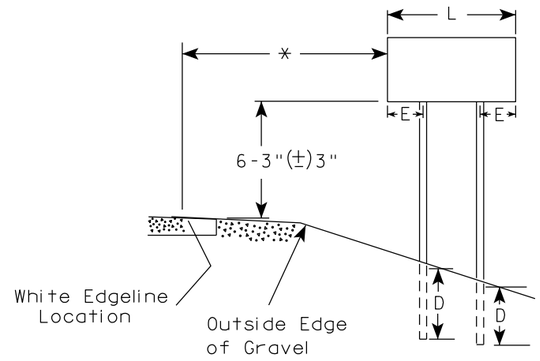
URBAN AREA

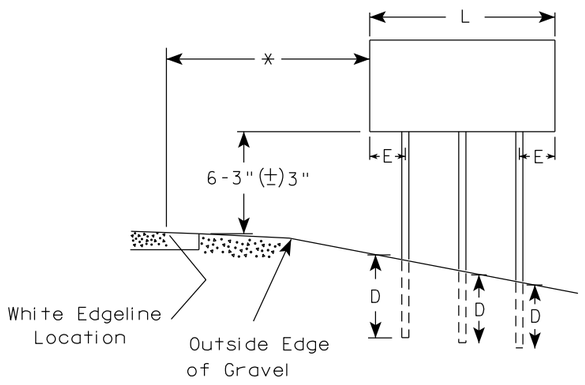


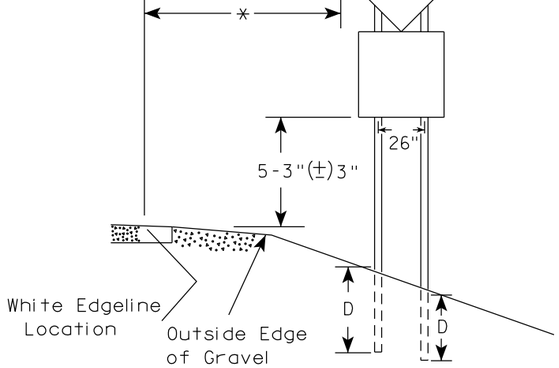


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

GENERAL NOTES

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

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

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

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

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

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

POST EMBEDMENT DEPTH

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

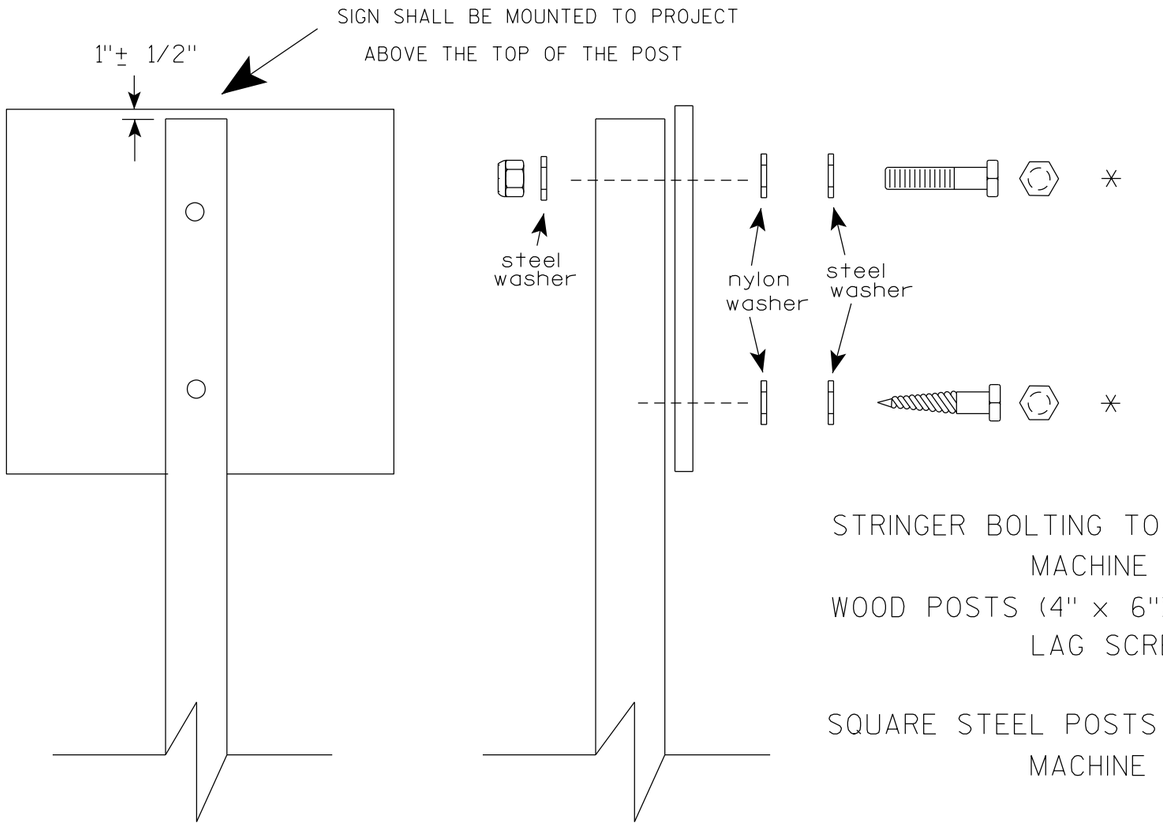
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 21	E



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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

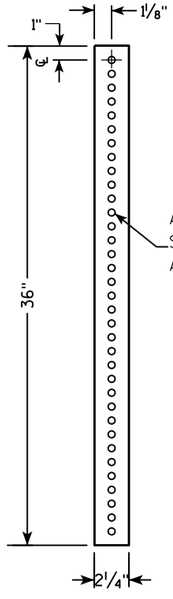
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

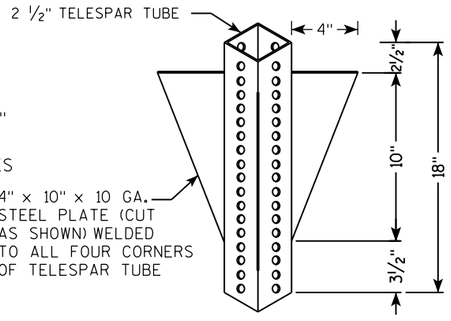
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

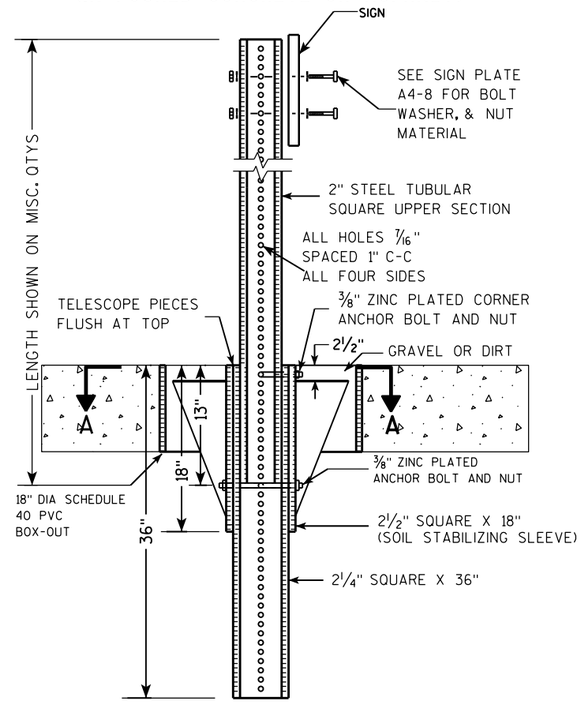
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



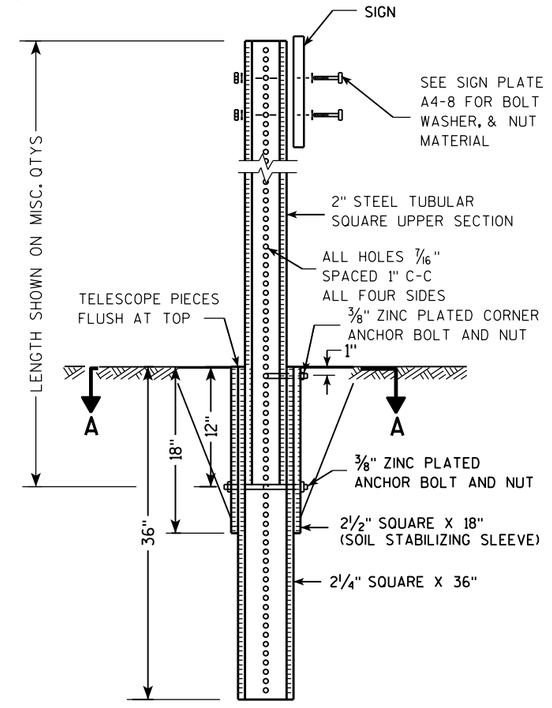
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

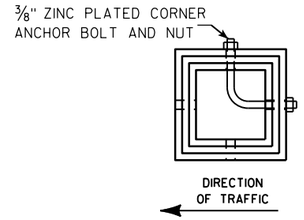


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

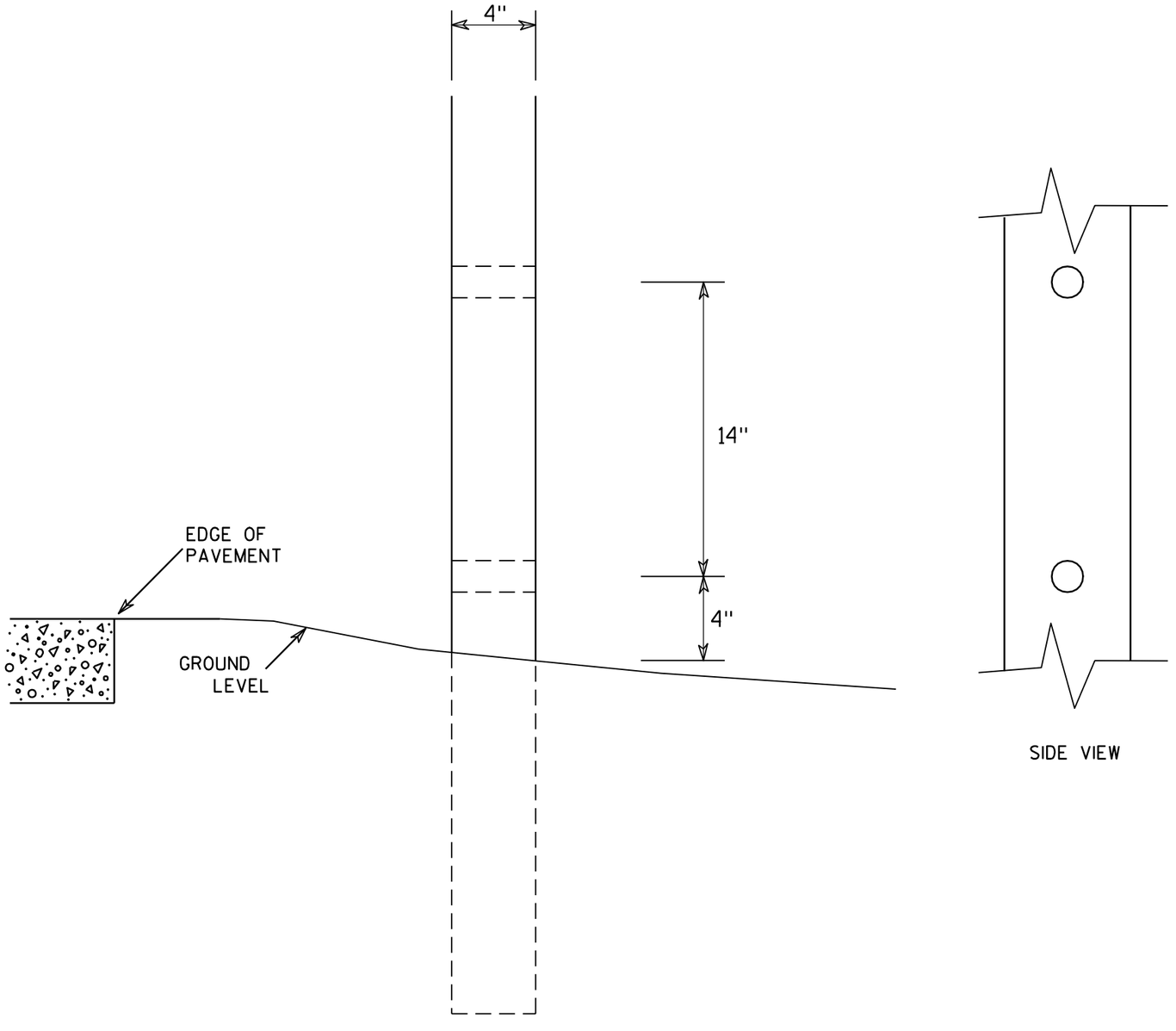
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

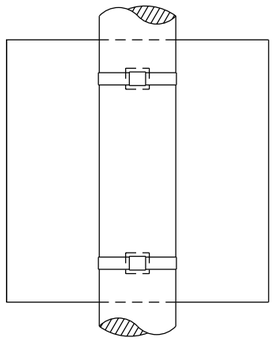
APPROVED Chester J Spang for State Traffic Engineer

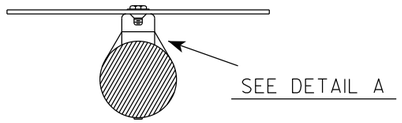
DATE 3/27/97 PLATE NO. A4-11.2

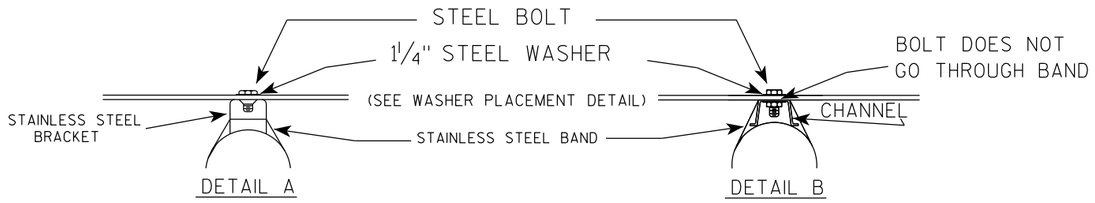
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 24	E

BANDING

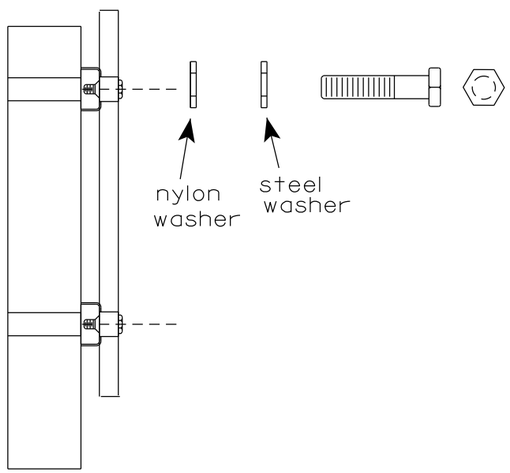
SINGLE SIGN







WASHER PLACEMENT

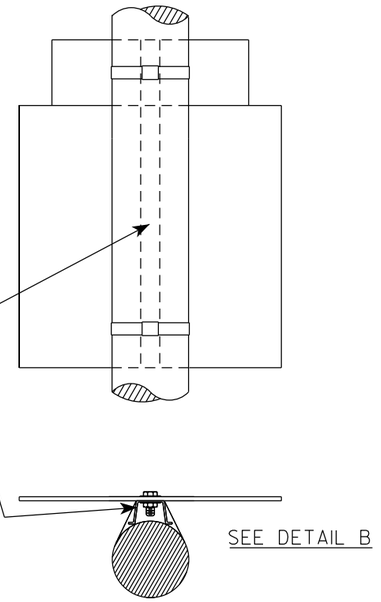


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

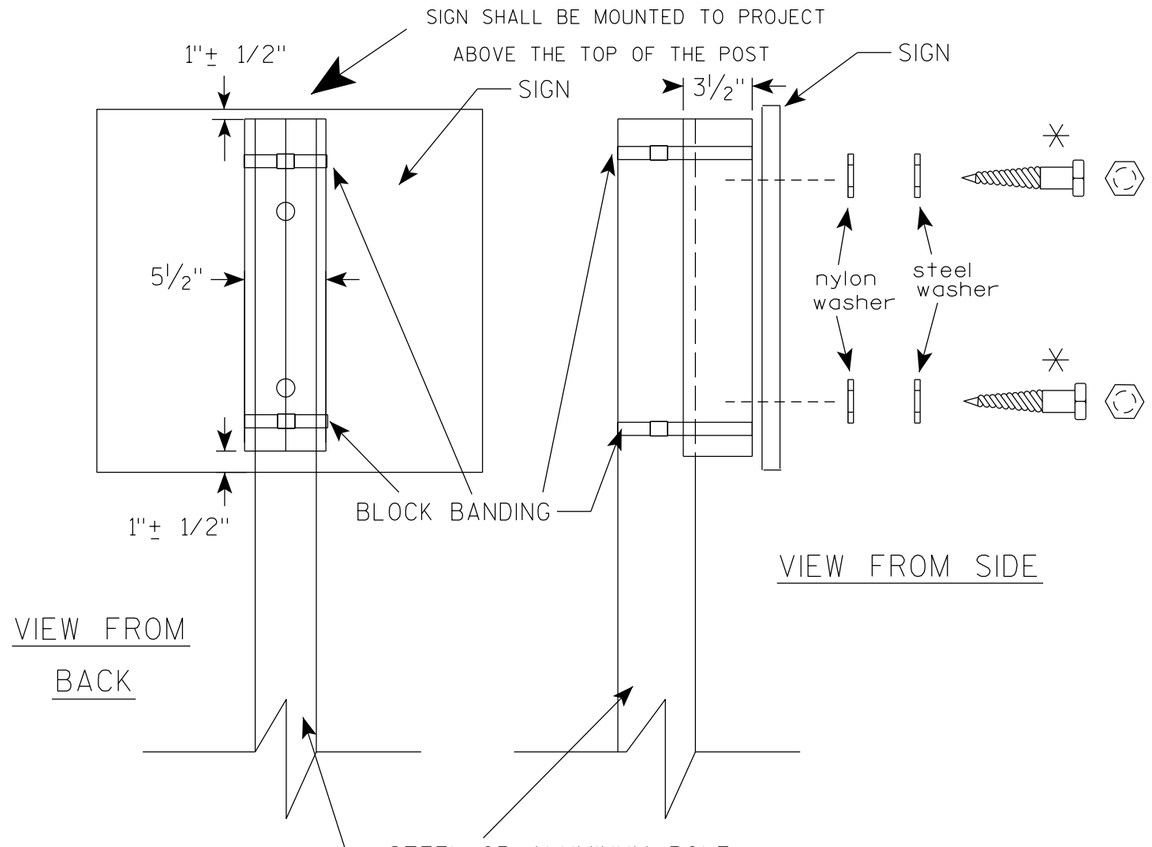
WISCONSIN DEPT OF TRANSPORTATION

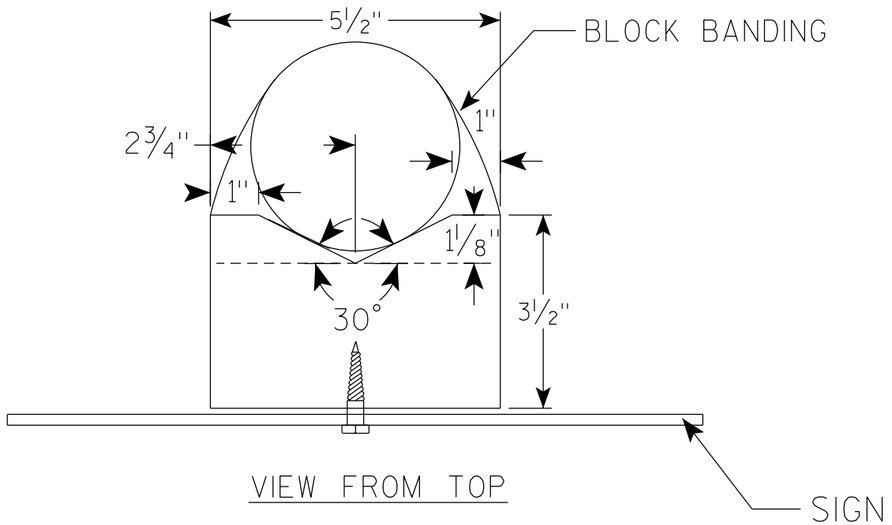
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 25	E

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





GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

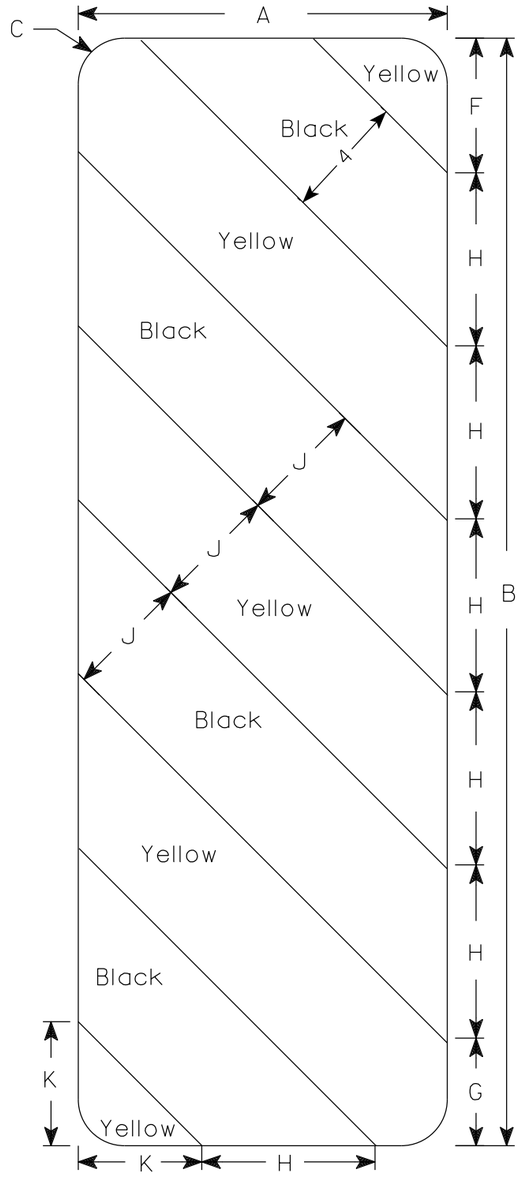
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

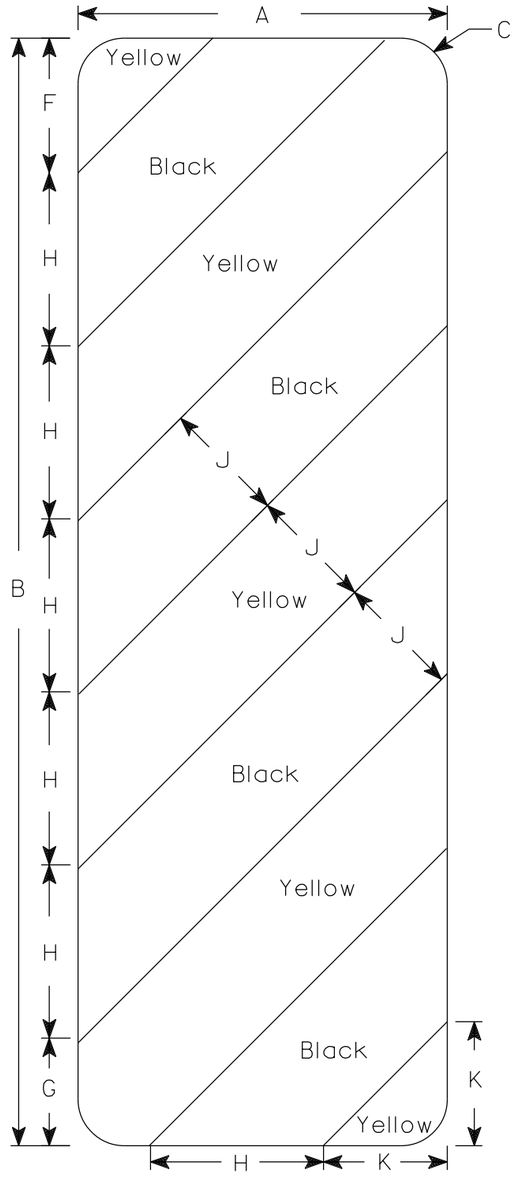
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 26 E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

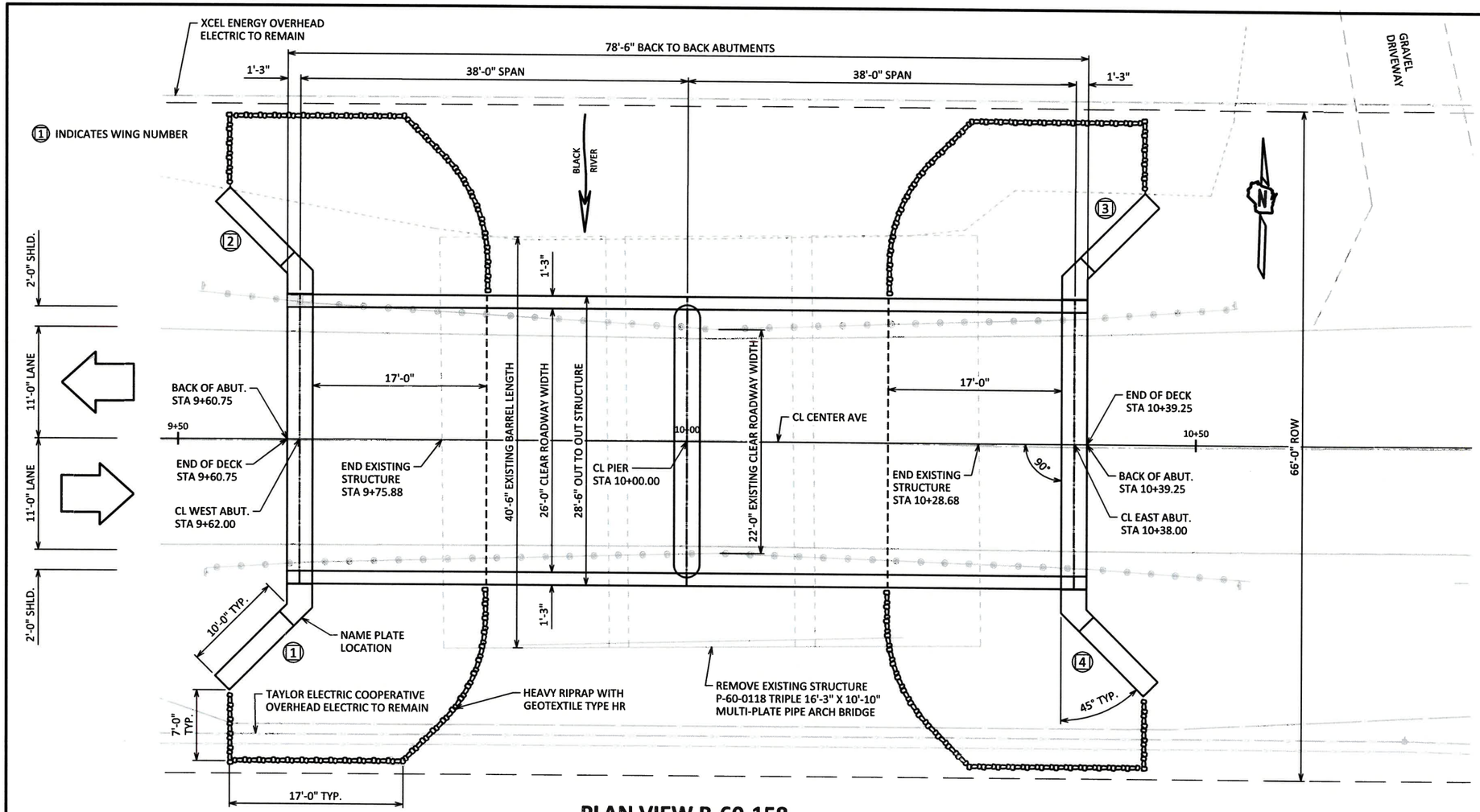
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

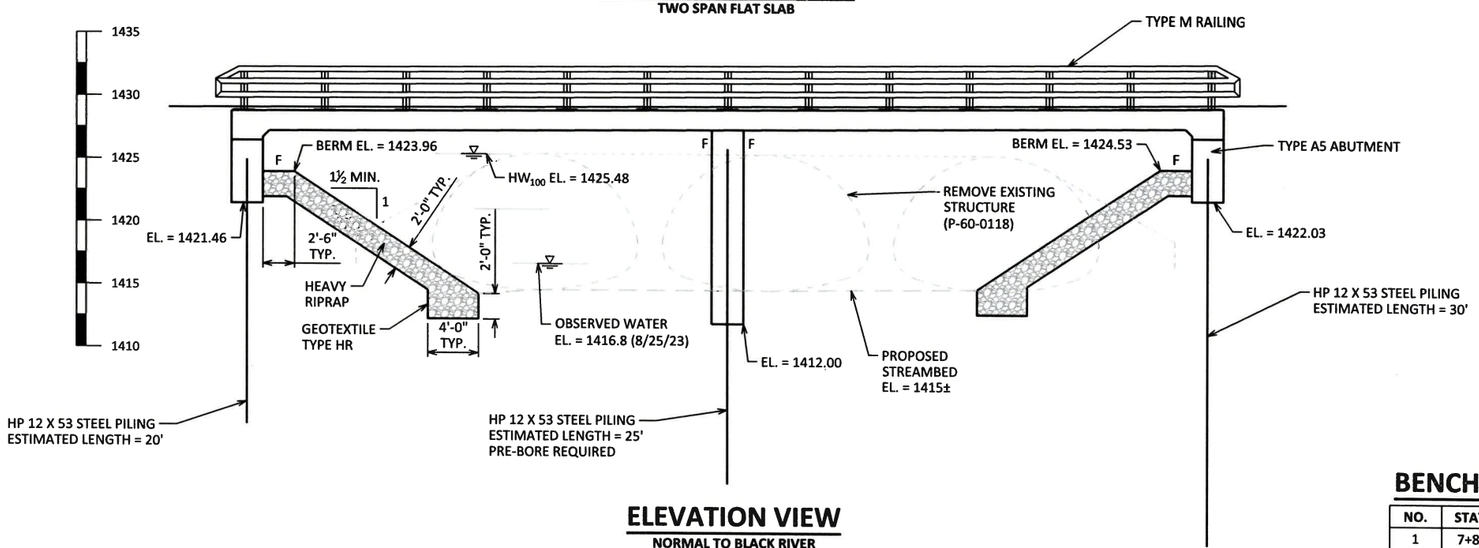
DATE 3/4/2024 PLATE NO. W5-52.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 27 E



PLAN VIEW B-60-158

TWO SPAN FLAT SLAB



ELEVATION VIEW

NORMAL TO BLACK RIVER

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.20
OPERATING RATING: RF = 1.56
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 215 (KIPS)

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

MATERIAL PROPERTIES:

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

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

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 12 X 53 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 100 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 20'-0" LONG FOR THE WEST ABUTMENT.
ESTIMATED 30'-0" LONG FOR THE EAST ABUTMENT.

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

PIER TO BE SUPPORTED ON HP 12 X 53 PILING SEATED IN PRE-BORED HOLES CORED 3 FEET MINIMUM INTO ROCK.
PILE DRIVING IS NOT REQUIRED.
ESTIMATED 25'-0" LONG FOR PIER.

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 3100 C.F.S.
V_{100}= 6.8 F.P.S.
HW_{100}= EL. 1425.48
WATERWAY AREA = 456 SQ. FT.
DRAINAGE AREA = 43.5 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

Q_2= 850 C.F.S.
V_2= 3.82 F.P.S.
HW_2= EL. 1421.07

TRAFFIC DATA

FEATURE ON:

ADT = 370 (2045)
R.D.S. = 45 MPH

STATE PROJECT NUMBER
8890-00-72

WISCONSIN PROFESSIONAL ENGINEER
JACOB A. FRIBERG
E-43328
RICE LAKE
WI
7/16/24

STRUCTURE DESIGN CONTACTS:

JACOB FRIBERG	715-234-7008
AARON BONK	608-261-0261

LIST OF DRAWINGS:

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
1	7+88.44	33.8' LT SPIKE IN POWER POLE	1429.96
2	11+72.09	33.4' LT SPIKE IN POWER POLE	1430.48

NO.	DATE	REVISION	BY

COOPER ENGINEERING
2600 COLLEGE DRIVE, P.O. BOX 230
RICE LAKE, WISCONSIN 54868-0230
TELEPHONE (715) 234-7008
FAX (715) 234-1025

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 07/30/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-60-158

CENTER AVE OVER BLACK RIVER

COUNTY	TOWN
TAYLOR	MEDFORD

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
JAF	SKP	TAG	JAF

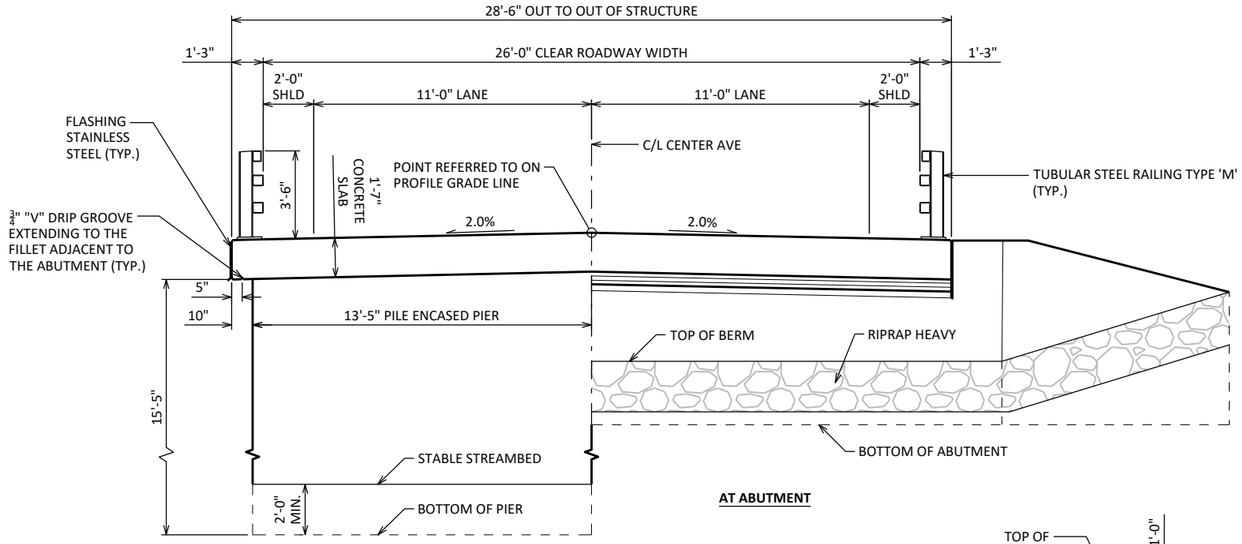
GENERAL PLAN

SHEET 1 OF 11
28

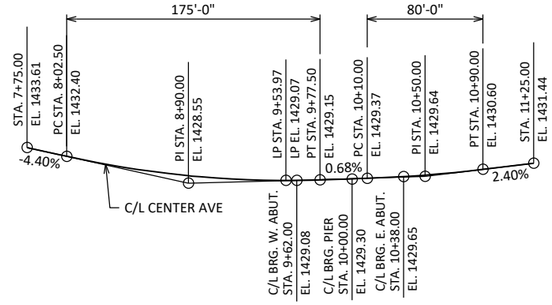
I.D. 8890-00-02 DATE: JAN 2024

8

8

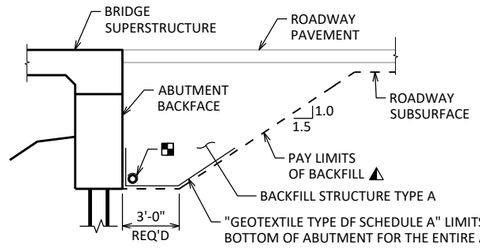


CROSS SECTION THRU ROADWAY



PROFILE GRADE LINE

LOOKING UPSTATION
(PILING NOT SHOWN FOR CLARITY)



"GEOTEXTILE TYPE DF SCHEDULE A" LIMITS. EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT FOR THE ENTIRE ABUTMENT BODY LENGTH.

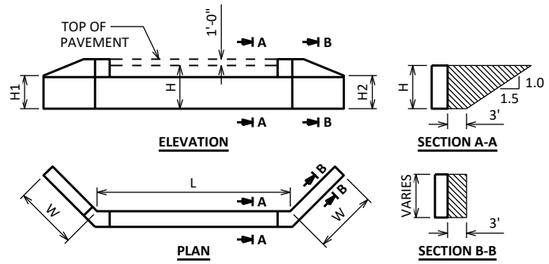
TYPICAL SECTION THRU ABUTMENT

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

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

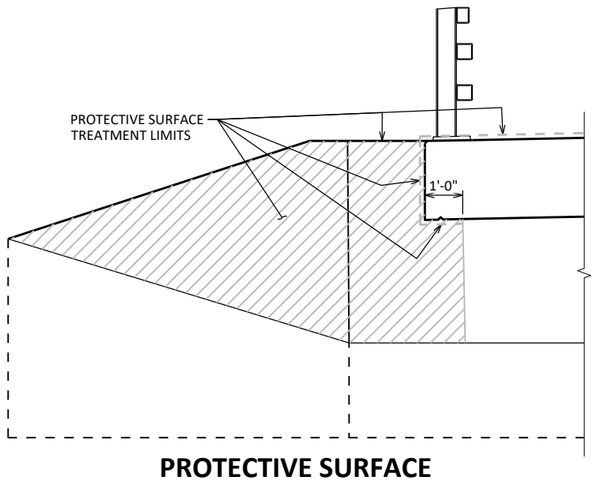
TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	W. ABUT.	PIER	E ABUT.	TOTALS
203.0220	REMOVING STRUCTURE (P-60-0118)	EACH	---	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-60-0158	EACH	---	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	150	---	150	300
502.0100	CONCRETE MASONRY BRIDGES	CY	135.6	26.9	37.8	26.9	227
502.3200	PROTECTIVE SURFACE TREATMENT	SY	291	15	---	15	321
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	2,165	1,790	2,165	6,120
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	28,145	1,620	55	1,620	31,440
513.4061	RAILING TUBULAR TYPE M	LF	162	---	---	---	162
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	6	---	6	12
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	---	---	78	---	78
550.0500	PILE POINTS	EACH	---	7	---	7	14
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	---	140	150	210	500
606.0300	RIPRAP HEAVY	CY	---	90	---	90	180
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	100	---	100	200
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	30	---	30	60
645.0120	GEOTEXTILE TYPE HR	SY	---	135	---	135	270
SPV.0090.01	FLASHING STAINLESS STEEL	LF	147	---	---	---	147
	NON-BID ITEMS						
	FILLER	SIZE	---	---	---	---	½", ¾"

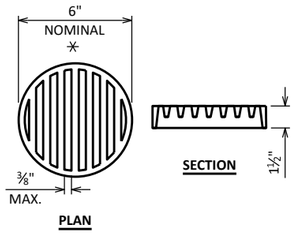


ABUTMENT BACKFILL DIAGRAM

L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING 1 HEIGHT AT TIP (FT)
H2 = WING 2 HEIGHT AT TIP (FT)
W = WING LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (3')(0.5)(H1+H2+H+H)(W)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)



PROTECTIVE SURFACE TREATMENT DETAILS



RODENT SHIELD DETAIL

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

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

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

STATE PROJECT NUMBER
8890-00-72

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-60-0158" SHALL BE THE EXISTING GROUNDLINE.

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

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

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

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

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

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

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO ENTIRE EXPOSED TOP OF SLAB, INCLUDING THE SLAB EDGE AND 1'-0" UNDER THE SLAB, THE TOP AND EXTERIOR EXPOSED FACE OF WINGS AND FRONT FACE OF ABUTMENT TO 1'-0" PAST THE EDGE OF SLAB.

ALL STATIONS AND ELEVATIONS ARE IN FEET.

ELEVATIONS SHOWN ON THE PLANS ARE REFERENCES TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).

THE COORDINATE SYSTEM FOR THIS PROJECT IS WISCONSIN COUNTY COORDINATE SYSTEM (WCCS) - TAYLOR COUNTY.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-158

DRAWN BY TAG | PLANS CK'D JAF

CROSS SECTION & QUANTITIES

SHEET 2
29

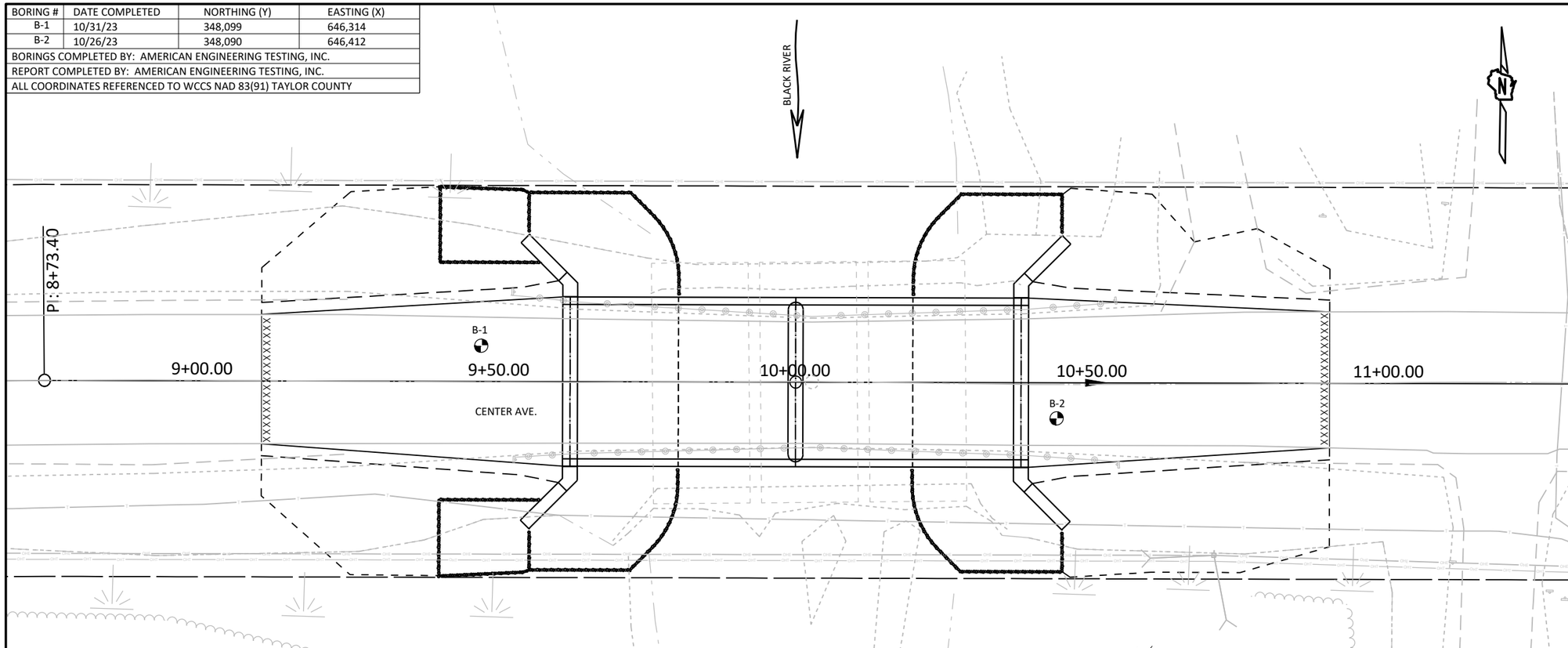
8

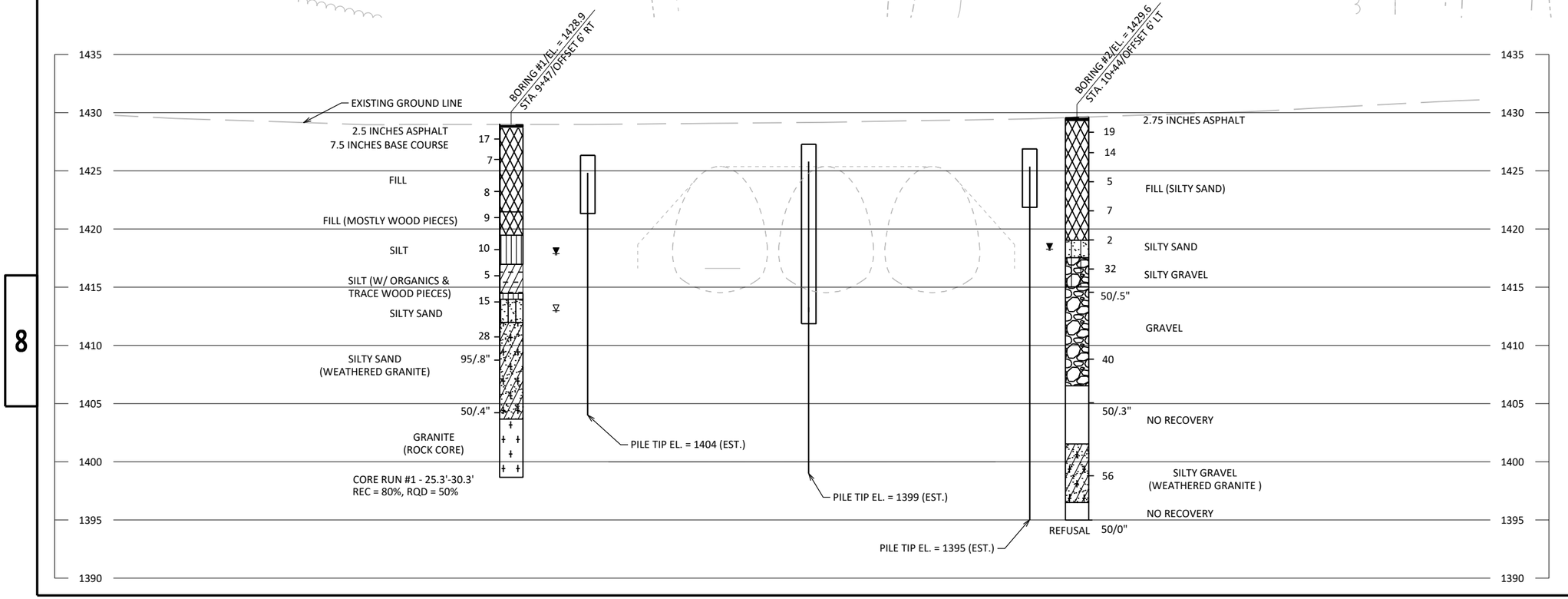
8

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	10/31/23	348,099	646,314
B-2	10/26/23	348,090	646,412
BORINGS COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.			
REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) TAYLOR COUNTY			

STATE PROJECT NUMBER

8890-00-72

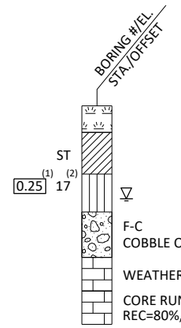




MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-158

DRAWN BY HJO | PLANS CK'D SKP

SUBSURFACE EXPLORATION

SHEET 3
30

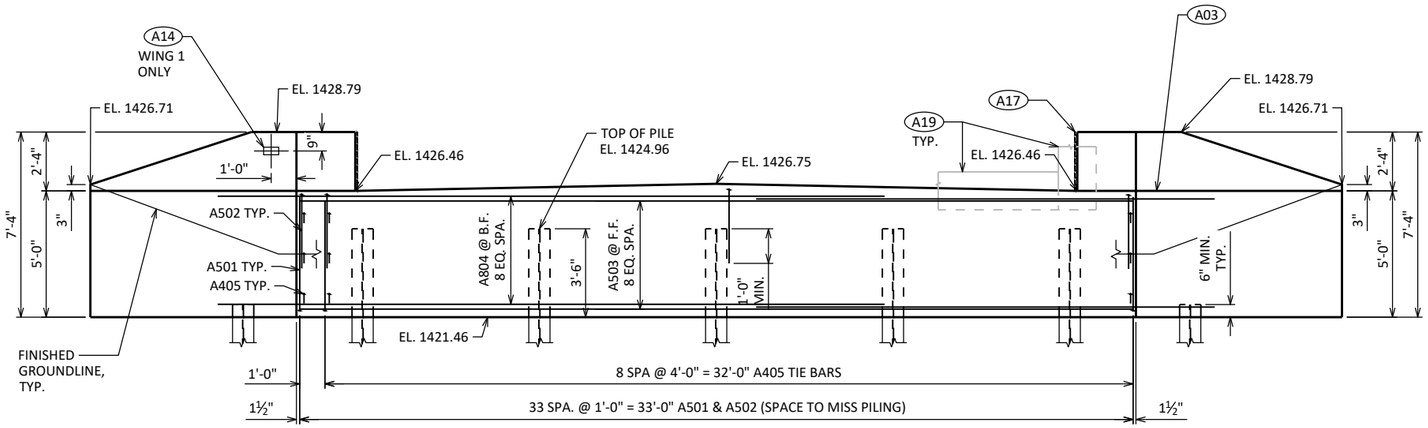
SCALE =

8

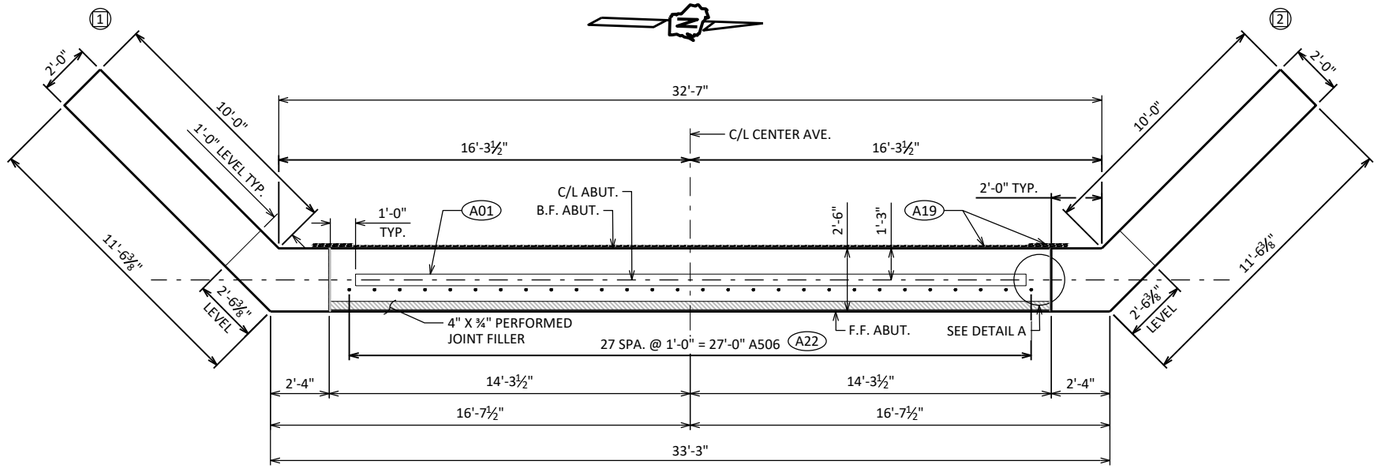
8

STATE PROJECT NUMBER

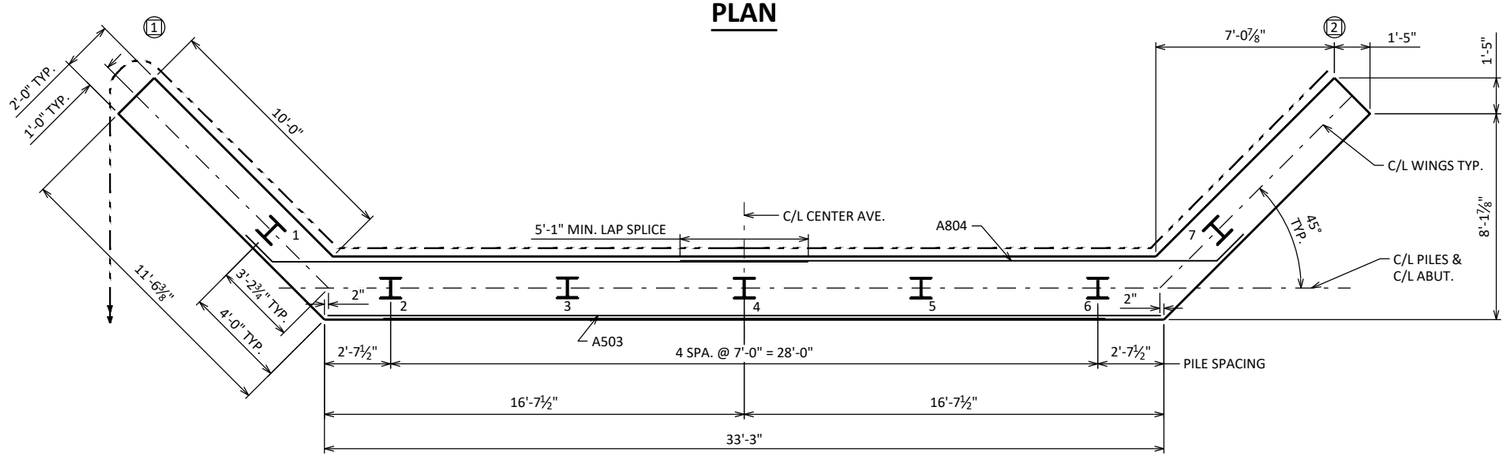
8890-00-72



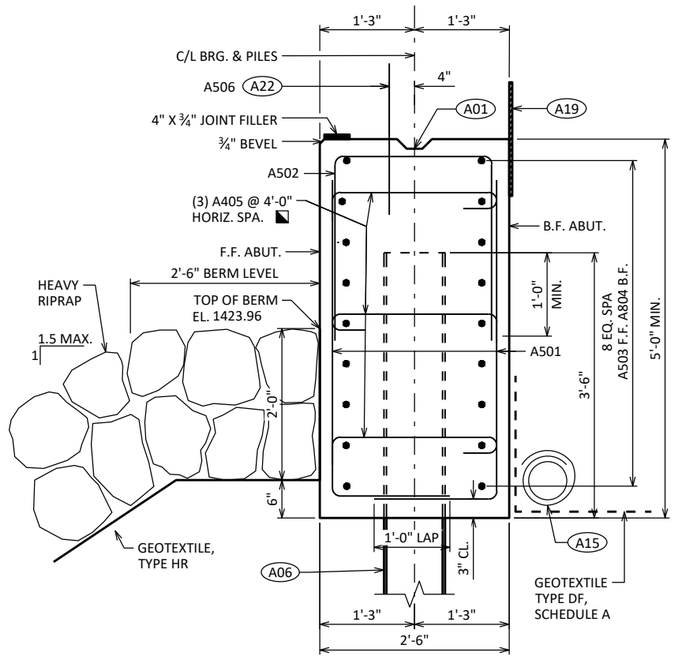
ELEVATION



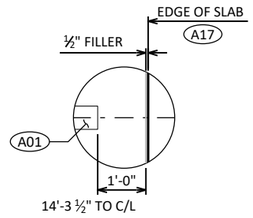
PLAN



PILE LAYOUT



SECTION THRU BODY



DETAIL A

(A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 20'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE

(A14) CONTRACTOR SHALL SUPPLY A NEW NAME PLATE PER 502.3.11 OF STD. SPEC.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A22) A506 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

◥ ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-158

DRAWN BY TAG | PLANS CK'D JAF

WEST ABUTMENT

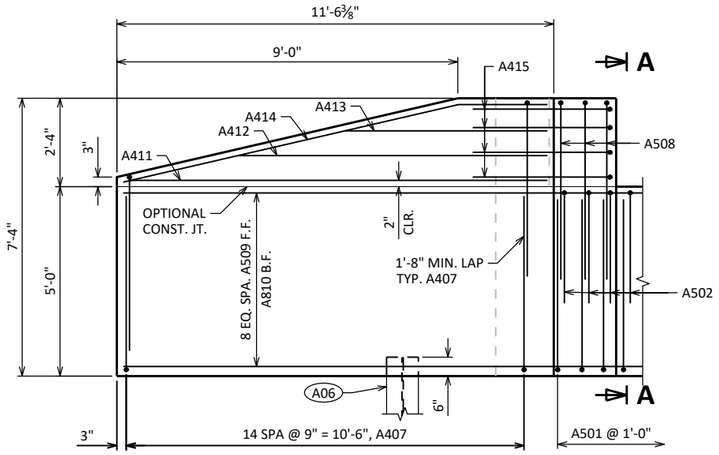
SHEET 4
31

8

8

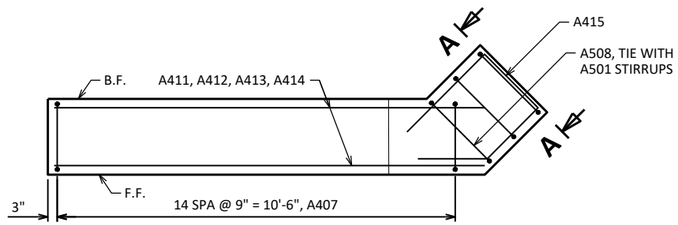
STATE PROJECT NUMBER

8890-00-72



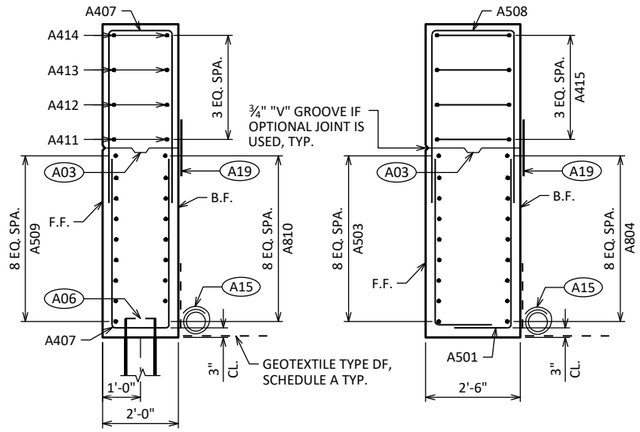
WING 1 ELEVATION

SHOWING F.F. WING
WING 2 SIMILAR



WING 1 PLAN

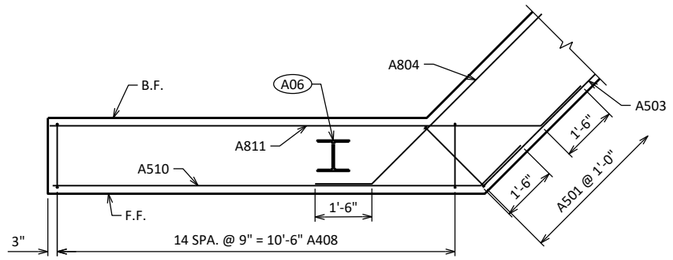
SHOWING UPPER WING REINFORCEMENT
WING 2 SIMILAR



SECTION THRU WING 1

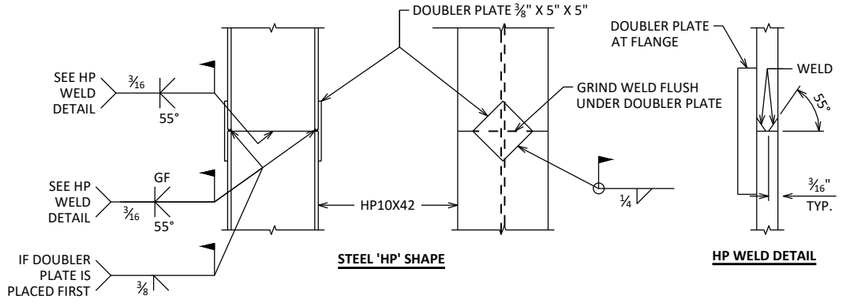
TYPICAL BOTH WINGS

SECTION A-A



WING 1 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 2 SIMILAR

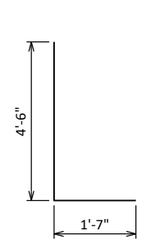


'HP' PILE DETAILS

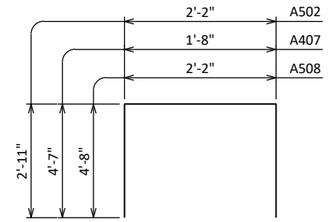
BILL OF BARS

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

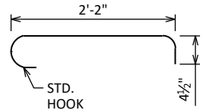
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		68	6'-0"	X		ABUT BODY STIRRUPS
A502		34	7'-9"	X		ABUT BODY STIRRUPS - TOP U-BAR
A503		9	33'-0"			ABUT BODY HORIZ. - F.F.
A804		18	22'-9"	X		ABUT BODY HORIZ. - B.F.
A405		30	3'-0"	X		ABUT BODY TIE BARS
A506	X	28	2'-0"			ABUT BODY DOWEL BARS
A407	X	60	10'-8"	X		WING STIRRUPS
A508	X	6	11'-3"	X		WING CORNER STIRRUPS
A509	X	18	12'-9"	X		WING LOWER HORIZ - F.F.
A810	X	18	14'-3"	X		WING LOWER HORIZ. - B.F.
A411	X	4	11'-1"			WING UPPER HORIZ.
A412	X	4	8'-2"			WING UPPER HORIZ.
A413	X	4	5'-4"			WING UPPER HORIZ.
A414	X	4	10'-8"	X		WING TOP HORIZ.
A415	X	8	8'-5"	X		WING UPPER HORIZ. CORNER



A501



A502, A407, A508



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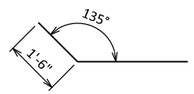
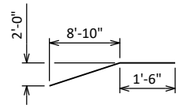


A804, A509, A810



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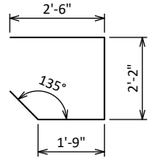

A415

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE ¾" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.

A06 SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 20'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A19 18" RUBBERIZED MEMBRANE WATERPROOFING, ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY STRUCTURES".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-158

DRAWN BY TAG | PLANS CK'D JAF

WEST ABUTMENT WING DETAILS

SHEET 5
32

8

8

STATE PROJECT NUMBER

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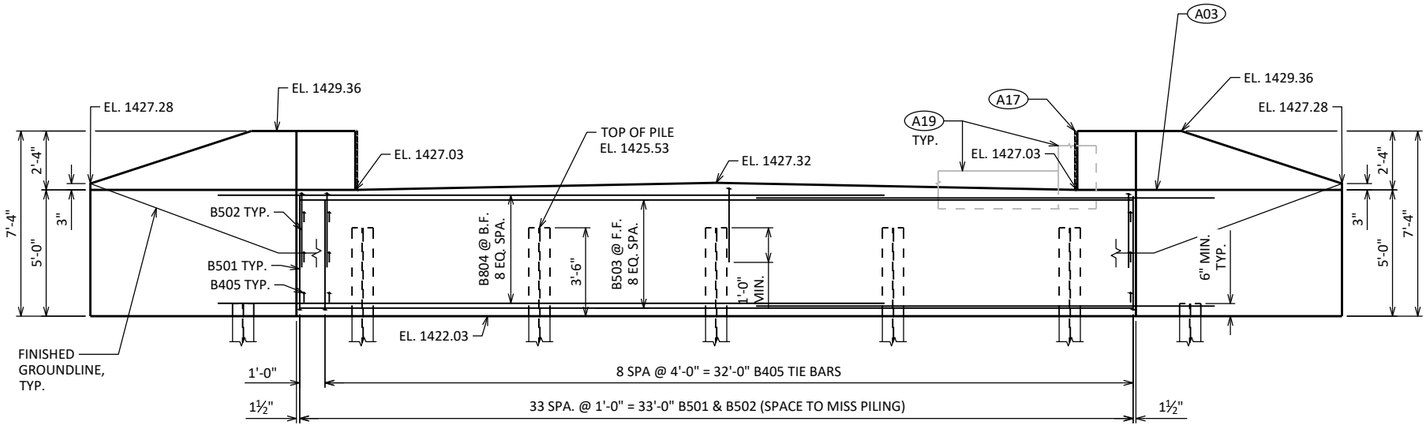
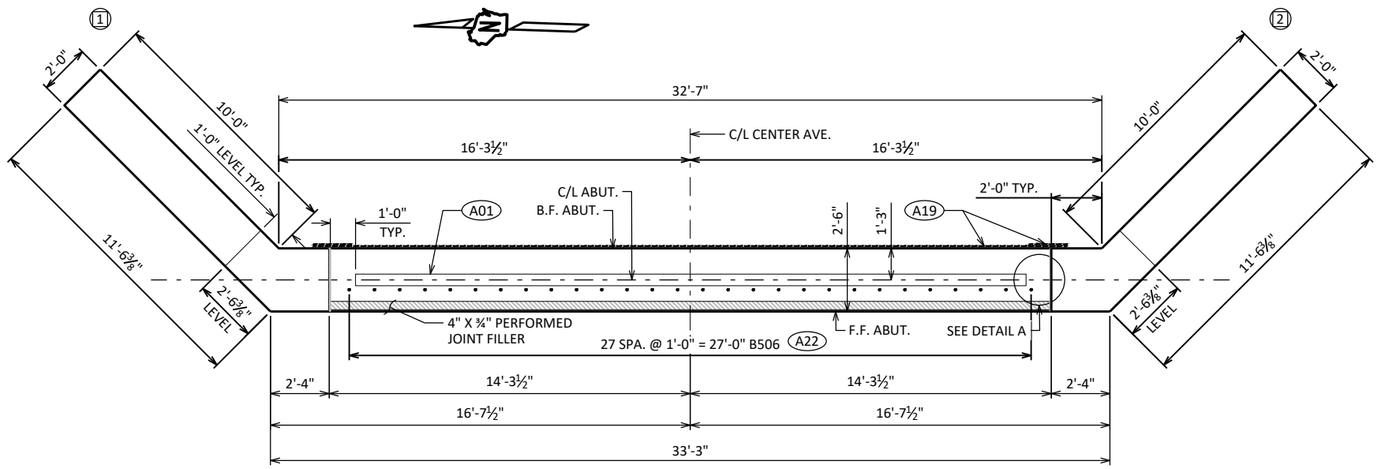
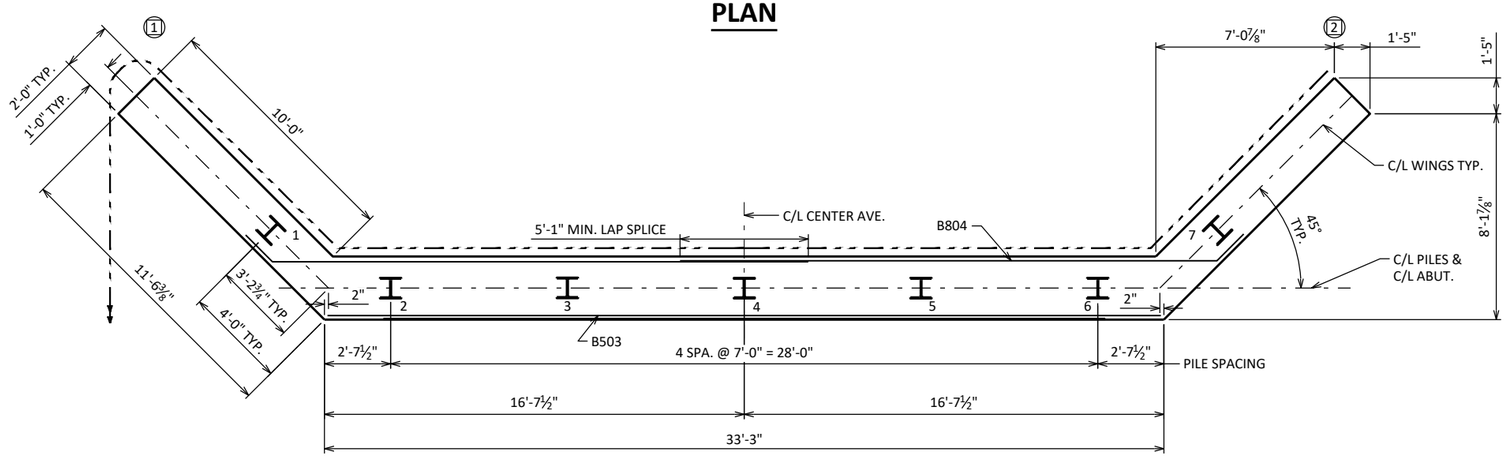


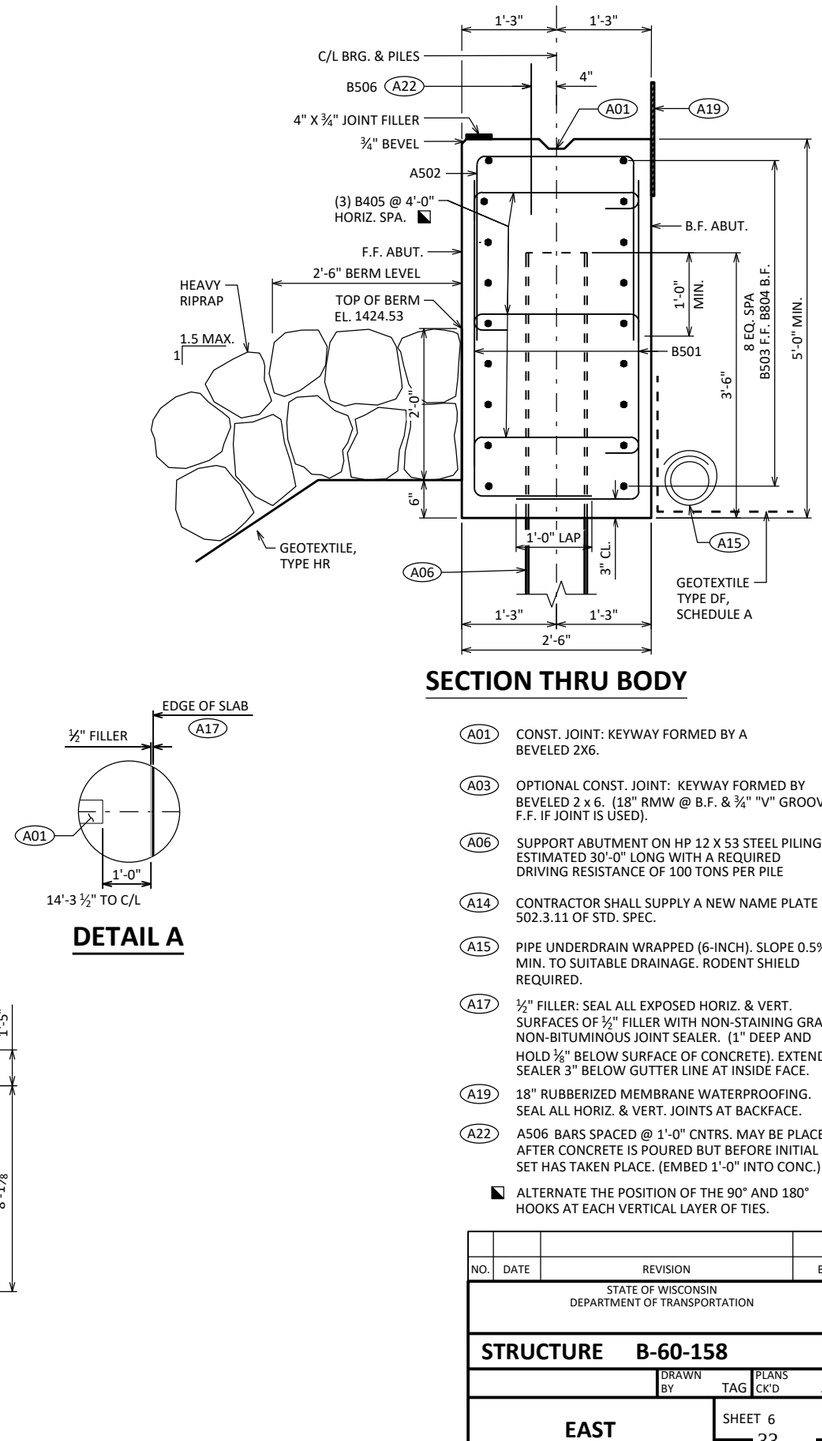
ELEVATION



PLAN



PILE LAYOUT



SECTION THRU BODY

DETAIL A

(A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6.

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A06) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE

(A14) CONTRACTOR SHALL SUPPLY A NEW NAME PLATE PER 502.3.11 OF STD. SPEC.

(A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

(A17) ½" FILLER: SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.

(A19) 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

(A22) A506 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

◥ ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

NO.	DATE	REVISION	BY

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STRUCTURE B-60-158

DRAWN BY TAG | PLANS CK'D JAF

EAST ABUTMENT

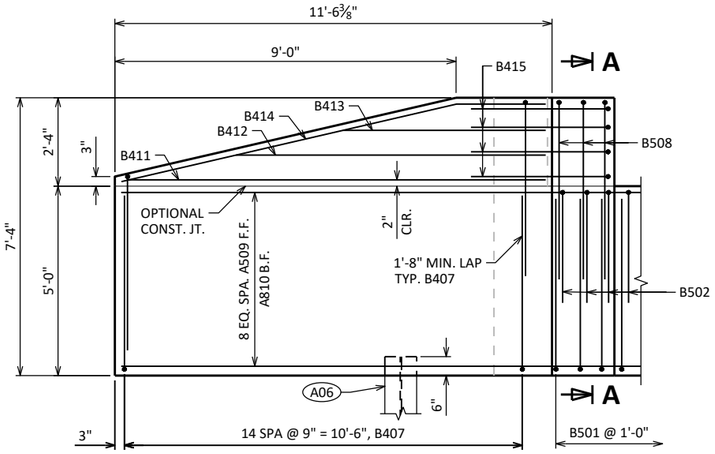
SHEET 6
33

8

8

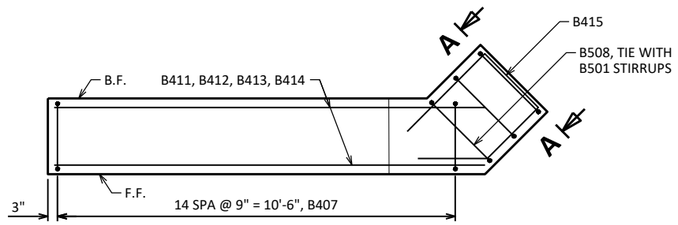
STATE PROJECT NUMBER

8890-00-72



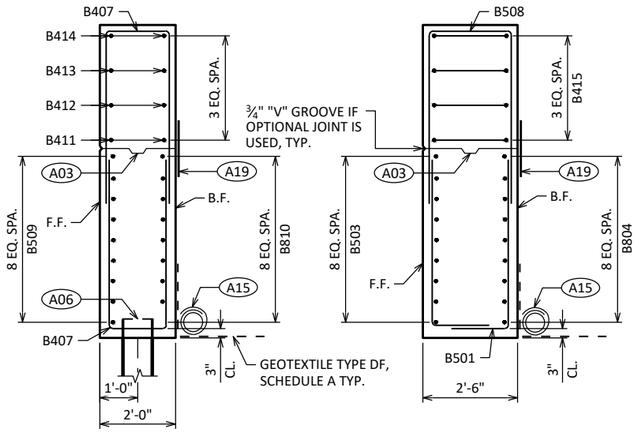
WING 3 ELEVATION

SHOWING F.F. WING
WING 4 SIMILAR



WING 3 PLAN

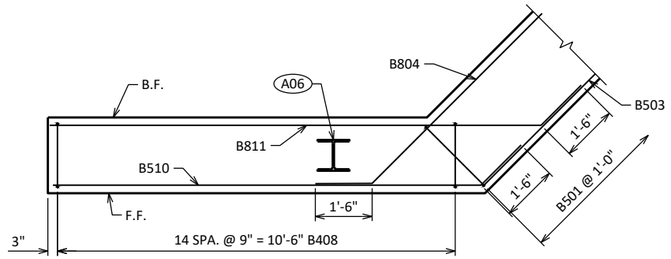
SHOWING UPPER WING REINFORCEMENT
WING 4 SIMILAR



SECTION THRU WING 3

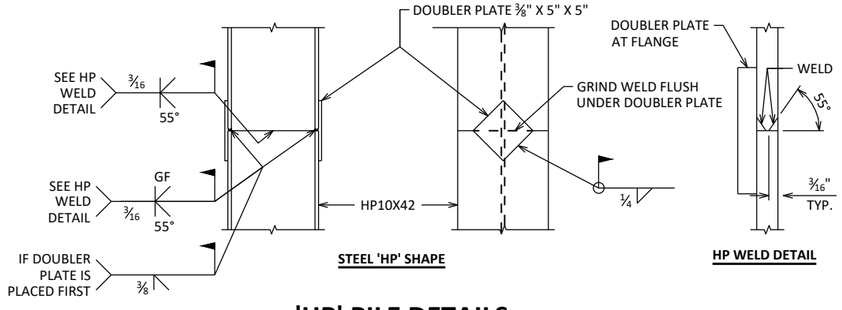
TYPICAL BOTH WINGS

SECTION A-A



WING 3 PLAN

SHOWING LOWER WING REINFORCEMENT
WING 4 SIMILAR

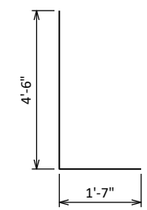


'HP' PILE DETAILS

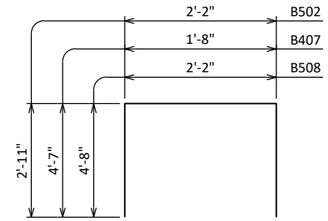
BILL OF BARS

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

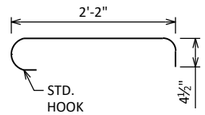
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		68	6'-0"	X		ABUT BODY STIRRUPS
B502		34	7'-9"	X		ABUT BODY STIRRUPS - TOP U-BAR
B503		9	33'-0"			ABUT BODY HORIZ. - F.F.
B804		18	22'-9"	X		ABUT BODY HORIZ. - B.F.
B405		30	3'-0"	X		ABUT BODY TIE BARS
B506	X	28	2'-0"			ABUT BODY DOWEL BARS
B407	X	60	10'-8"	X		WING STIRRUPS
B508	X	6	11'-3"	X		WING CORNER STIRRUPS
B509	X	18	12'-9"	X		WING LOWER HORIZ - F.F.
B810	X	18	14'-3"	X		WING LOWER HORIZ. - B.F.
B411	X	4	11'-1"			WING UPPER HORIZ.
B412	X	4	8'-2"			WING UPPER HORIZ.
B413	X	4	5'-4"			WING UPPER HORIZ.
B414	X	4	10'-8"	X		WING TOP HORIZ.
B415	X	8	8'-5"	X		WING UPPER HORIZ. CORNER



B501



B502, B407, B508



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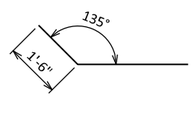
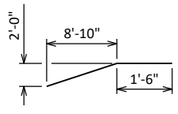


B804, B509, B810



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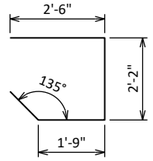


B415

A03 OPTIONAL CONST. JOINT: KEYWAY FORMED BY A BEVELED 2X6. PROVIDE ¾" "V" GROOVE ON F.F. OF WINGWALL IF JOINT IS USED.

A06 SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE

A15 PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.

A19 18" RUBBERIZED MEMBRANE WATERPROOFING, ONLY IF OPTIONAL CONSTRUCTION JOINT IS USED. COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY STRUCTURES".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-158

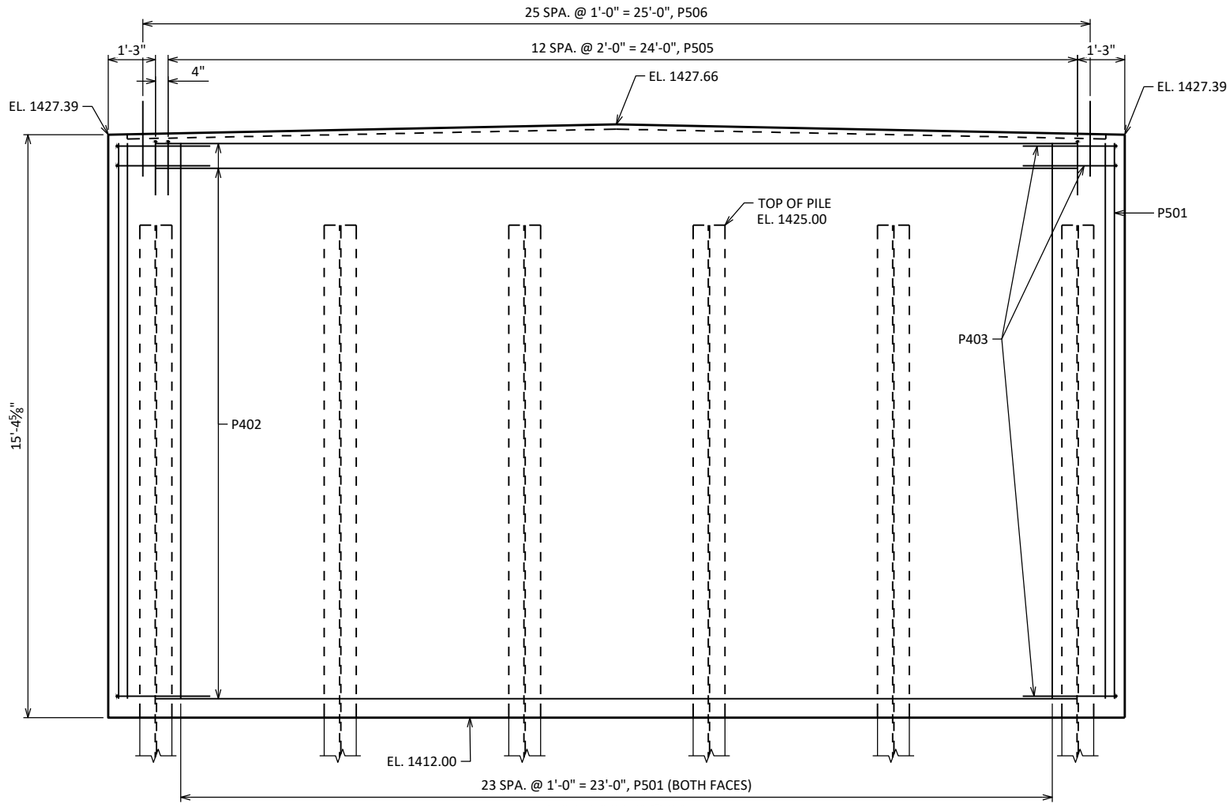
DRAWN BY TAG | PLANS CK'D JAF

EAST ABUTMENT WING DETAILS

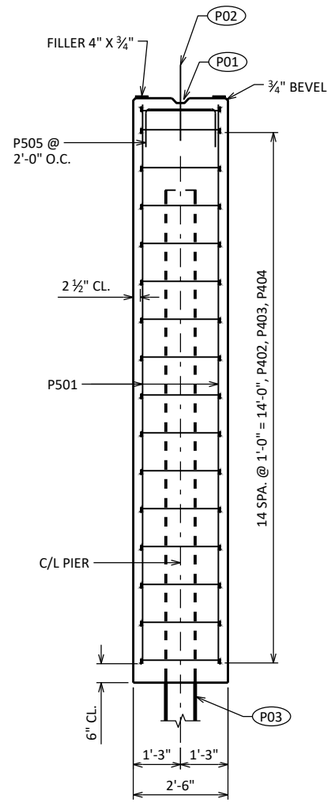
SHEET 7
34

8

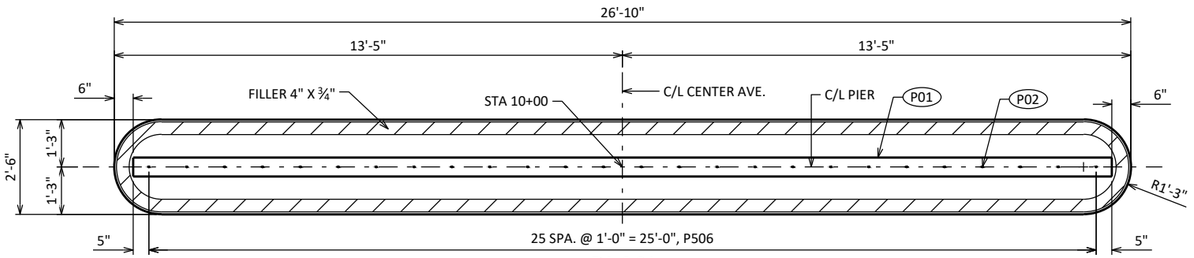
8



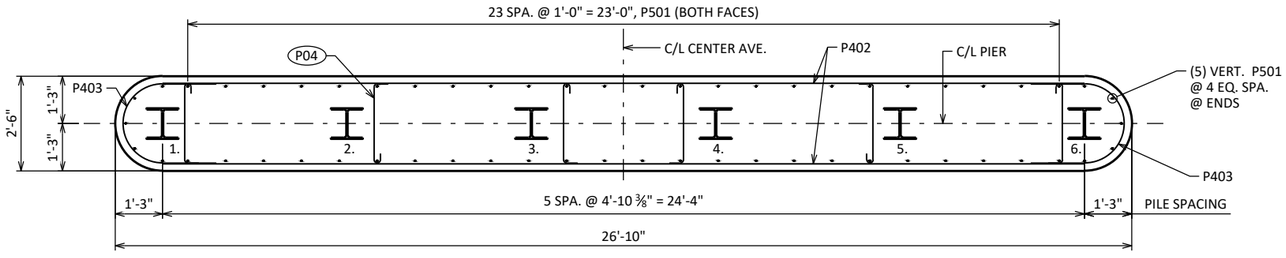
ELEVATION
LOOKING UP STATION



SECTION



PLAN

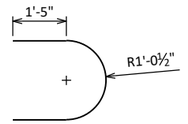


PILE LAYOUT

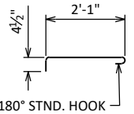
BILL OF BARS

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

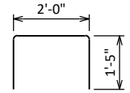
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
P501		58	14'-8"			COLUMN VERTICAL
P402		32	24'-4"			COLUMN HORIZONTAL
P403		32	6'-1"	X		COLUMN HORIZONTAL AT ENDS
P404		96	2'-11"	X		COLUMN HORIZONTAL AT PILING
P505		14	4'-8"	X		COLUMN TOP U BAR
P506	X	26	2'-0"			COLUMN DOWELS



P403



P404



P505

P01 KEYED CONST. JOINT-FORMED BY BEVELED 2 x 6.

P02 P506 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

P03 PIER TO BE SUPPORTED ON HP 12 X 53 PILING SEATED IN PRE-BORED HOLES CORED 3 FEET MINIMUM INTO ROCK. PILE DRIVING IS NOT REQUIRED.
ESTIMATED 25'-0" LONG FOR PIER.

P04 P404 BARS, PLACE ADJACENT TO EACH PILE ONLY. TIE TO NEAREST VERT. P501 BAR. VERTICAL SPA. @ 1'-0" TO MATCH P402 OUTSIDE BARS. ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER
8890-00-72

STRUCTURE B-60-158

DRAWN BY JAF | PLANS CK'D SKP

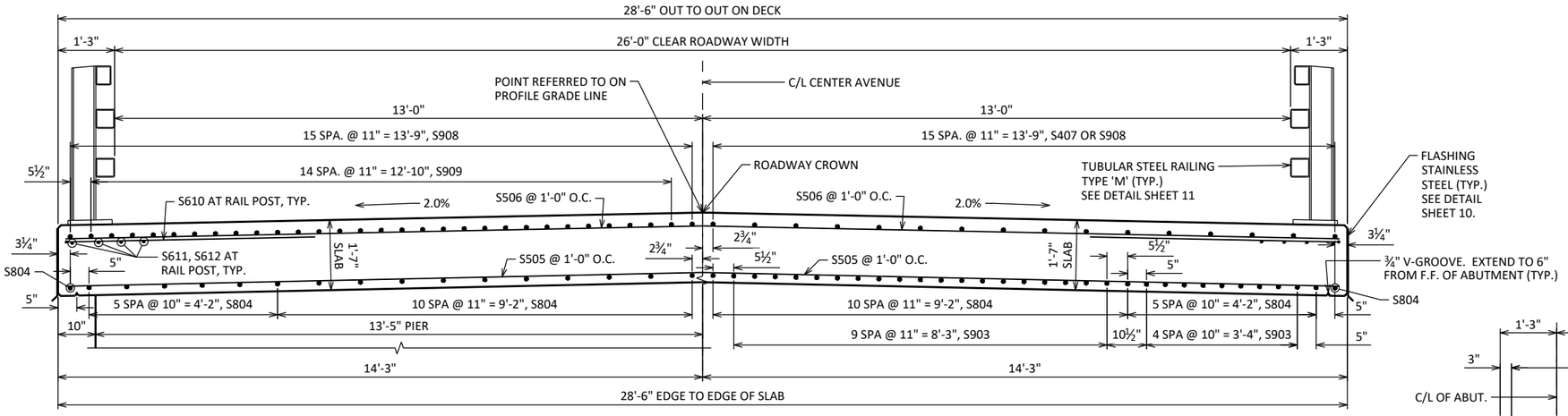
PIER

SHEET 8
35

8

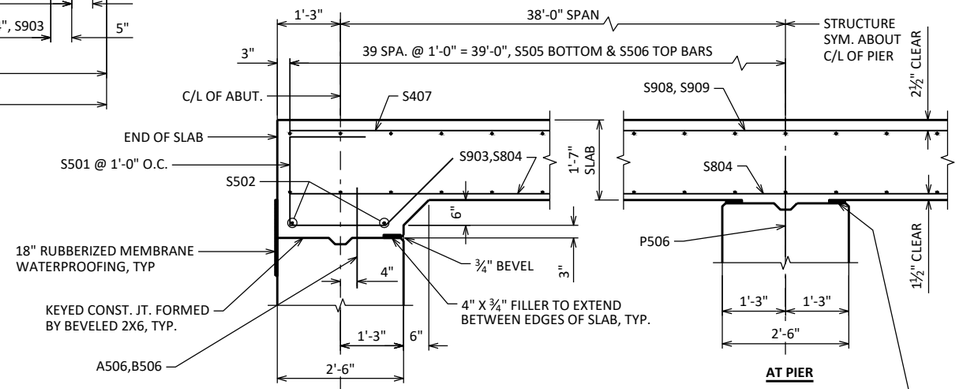
8

STATE PROJECT NUMBER
8890-00-72

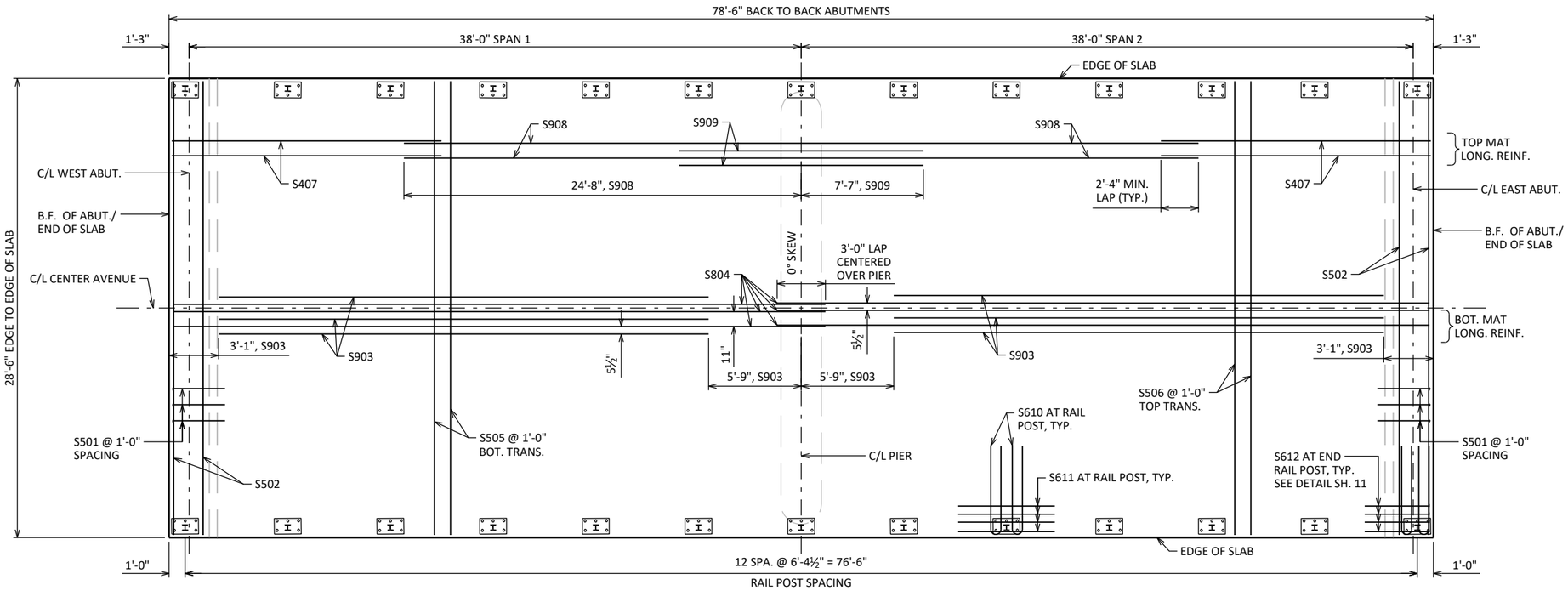


AT PIER **IN SPAN**

CROSS SECTION THRU BRIDGE



PART LONGITUDINAL SECTION



PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-158

DRAWN BY JAF | PLANS CK'D SKP

SUPERSTRUCTURE

SHEET 9
36

8

8

STATE PROJECT NUMBER

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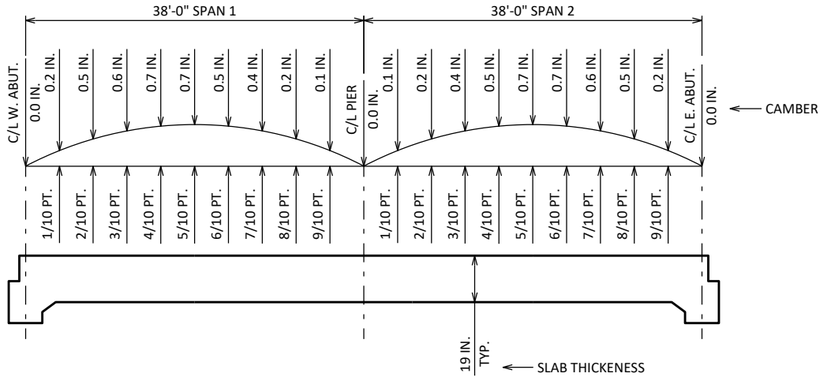
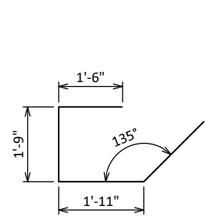


CAMBER AND SLAB THICKNESS DIAGRAM

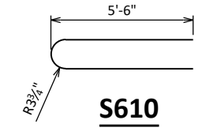
CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.
CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPETS, SIDEWALKS AND MEDIANS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED, EXCEPT FOR STAGED CONSTRUCTION.

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

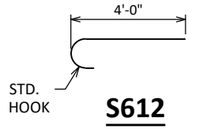
	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION



S501



S610



S612

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	58	7'-0"	X		DIAPHRAGM @ ABUTS. - LONGIT.
S502	X	4	28'-2"			DIAPHRAGM @ ABUTS. - TRANS.
S903	X	60	30'-5"			SLAB BOTTOM LONGIT.
S804	X	68	40'-6"			SLAB BOTTOM LONGIT.
S505	X	79	28'-2"			SLAB BOTTOM TRANSVERSE
S506	X	79	28'-2"			SLAB TOP TRANSVERSE
S407	X	64	16'-9"			SLAB TOP LONGIT. AT ENDS
S908	X	32	49'-4"			SLAB TOP LONGIT.
S909	X	30	15'-2"			SLAB TOP LONGIT. OVER PIER
S610	X	52	11'-2"	X		SLAB, TRANS., 2 PER RAIL POST
S611	X	88	6'-0"			SLAB, LONGIT., 4 PER RAIL POST
S612	X	16	4'-8"	X		SLAB, LONGIT., 4 PER RAIL POST AT ENDS

TOP OF SLAB ELEVATIONS

SPAN	LOCATION	C/L BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L PIER
1	N. EDGE OF DECK	1428.79	1428.80	1428.82	1428.84	1428.86	1428.89	1428.91	1428.94	1428.97	1428.99	1429.02
	CROWN OR R/L	1429.08	1429.09	1429.10	1429.12	1429.15	1429.17	1429.20	1429.23	1429.25	1429.28	1429.30
	S. EDGE OF DECK	1428.79	1428.80	1428.82	1428.84	1428.86	1428.89	1428.91	1428.94	1428.97	1428.99	1429.02

SPAN	LOCATION	C/L PIER	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. E. ABUT.
2	N. EDGE OF DECK	1429.02	1429.04	1429.07	1429.10	1429.12	1429.16	1429.19	1429.23	1429.27	1429.31	1429.36
	CROWN OR R/L	1429.30	1429.33	1429.35	1429.38	1429.40	1429.44	1429.48	1429.51	1429.55	1429.60	1429.65
	S. EDGE OF DECK	1429.02	1429.04	1429.07	1429.10	1429.12	1429.16	1429.19	1429.23	1429.27	1429.31	1429.36

DECK FLASHING NOTES

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK, AND $\frac{3}{16}$" 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.

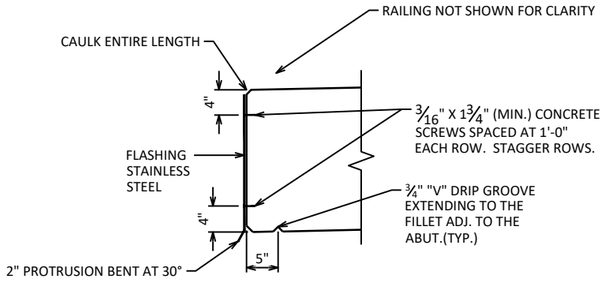
EXTEND FLASHING TO B.F. ABUTMENT DIAPHRAGM.

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

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

PROVIDE 2" MINIMUM FLASHING OVERLAP, FASTEN WITH $\frac{3}{16}$" X 2" (MIN.) CONCRETE SCREWS.

CAULK SHALL BE NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER.



EDGE OF DECK FLASHING DETAIL

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	W. ABUTMENT	5/10 PT.	PIER	5/10 PT.	E. ABUTMENT
N. GUTTER					
CROWN OR R/L					
S. GUTTER					

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

NOTES

FILL IN THE TABLE OF "SURVEY TOP OF SLAB ELEVATIONS" FOR EACH SPAN ON AS BUILT PLANS.

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-60-158

DRAWN BY JAF | PLANS CK'D SKP

SUPERSTRUCTURE DETAILS

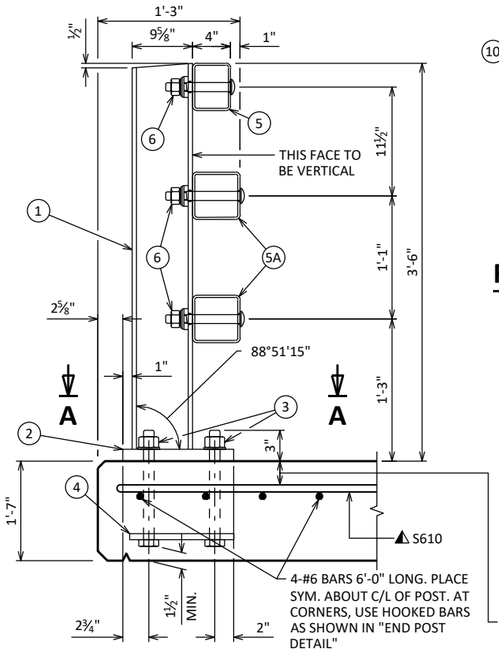
SHEET 10
37

8

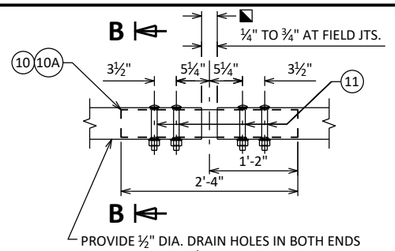
8

STATE PROJECT NUMBER

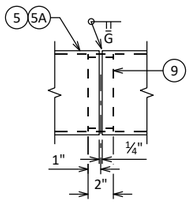
8890-0072



SECTION THRU RAILING ON DECK

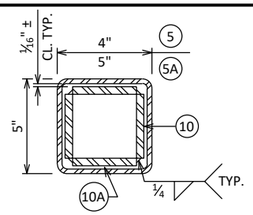


FIELD ERECTION JOINT DETAIL

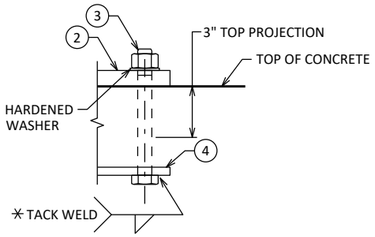


SHOP RAIL SPLICE DETAIL

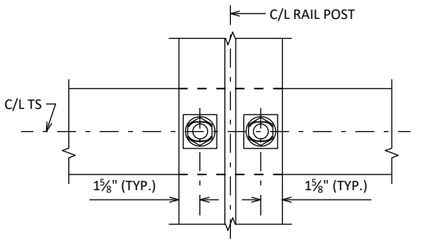
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



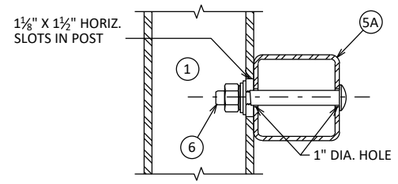
SECTION B-B



ANCHOR BOLTS



SECTION THRU POST WEB



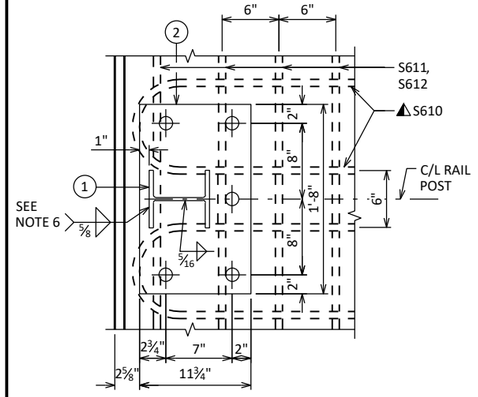
SECTION THRU RAIL

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

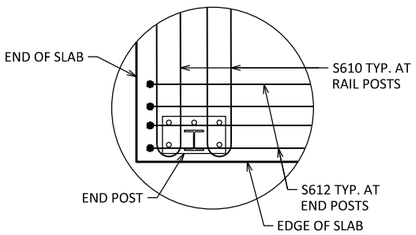
TYPICAL RAIL TO POST CONNECTIONS

LEGEND

1. W6 X 25 WITH 1½" 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 10¼" 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 15/16" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

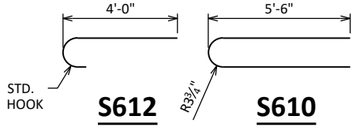


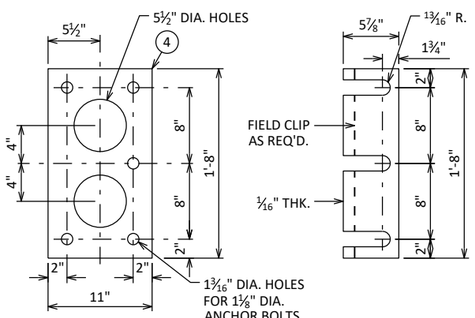
SECTION A-A



END POST DETAILS

REINFORCEMENT AT CORNERS

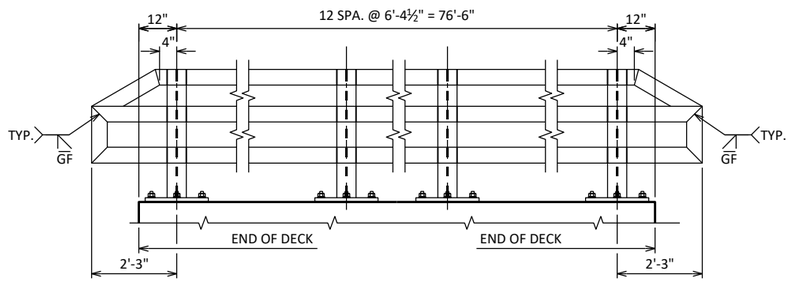




ANCHOR PLATE

AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



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.

◥ RDWY. OPENING OR 2½" MIN. FOR STRIP SEAL EXP. JOINT & (¼" TO ¾") OPENING FOR A1 ABUTMENT.

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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-60-158

DRAWN BY JAF | PLANS CK'D SKP

TUBULAR STEEL RAILING TYPE "M"

SHEET 11
38

SCALE = 2.00

8

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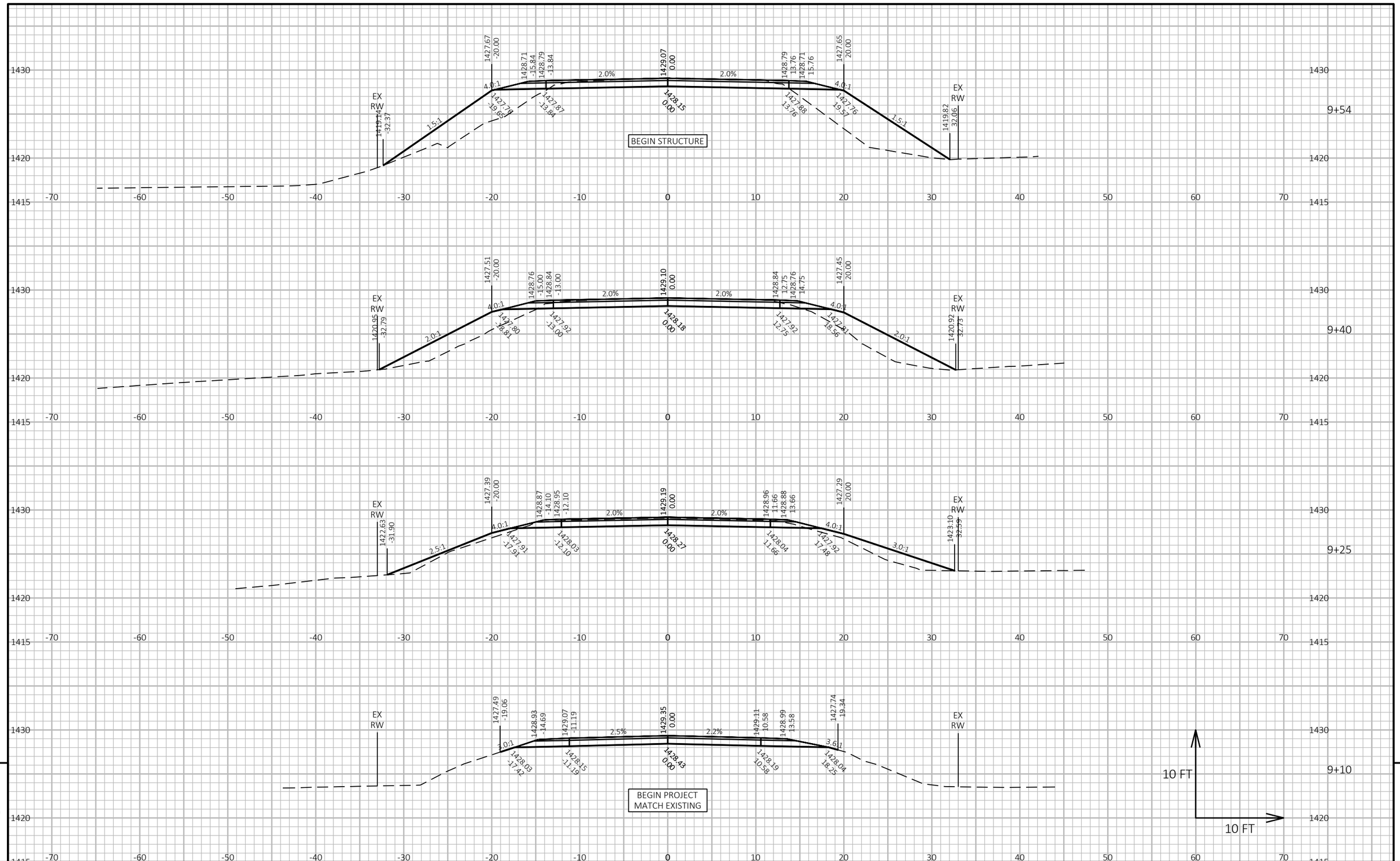

9 9

PROJECT NO: 8890-00-72	HWY: CENTER AVENUE	COUNTY: TAYLOR	CROSS SECTIONS: CENTER AVENUE	SHEET 39	E

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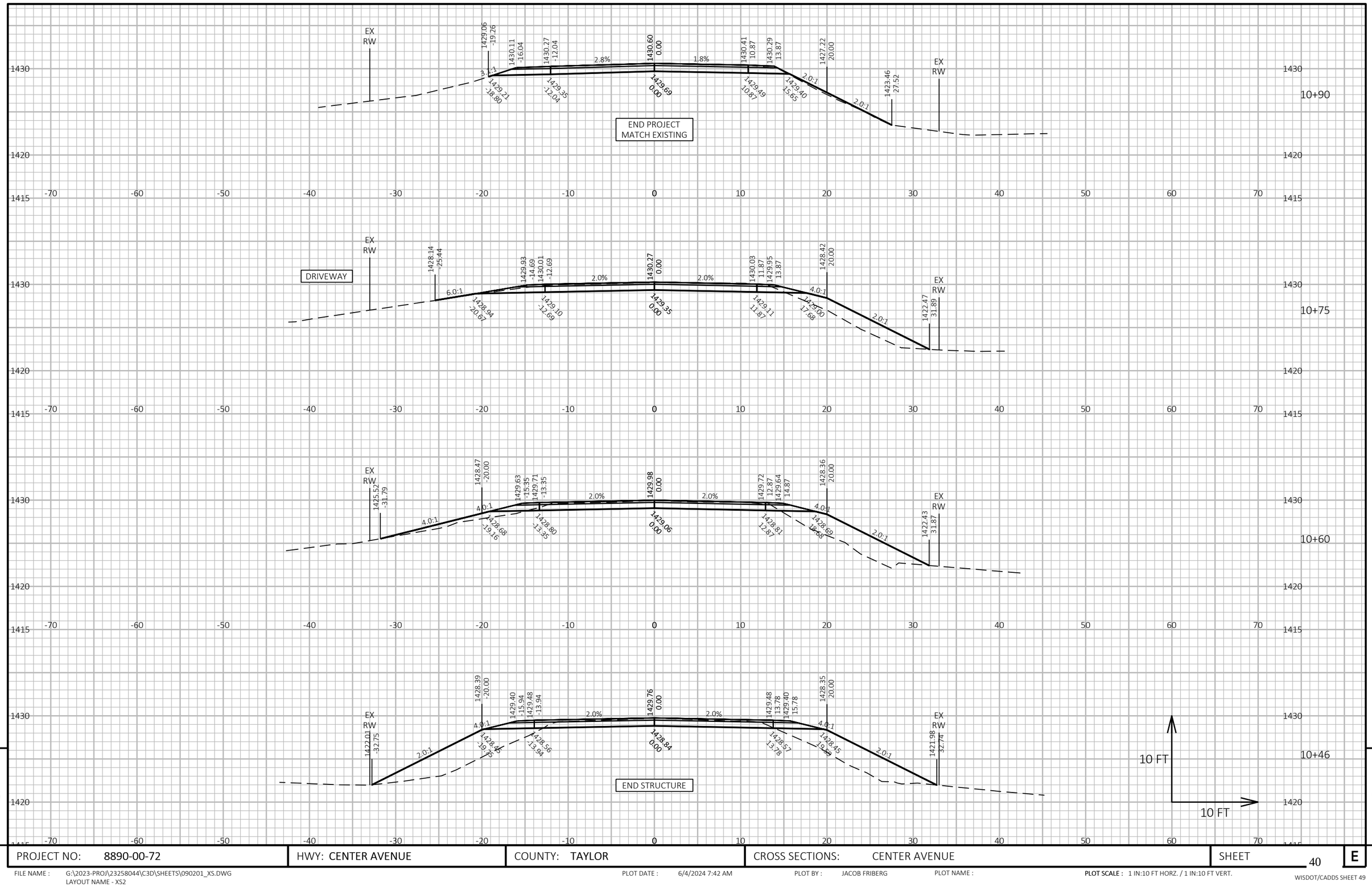
LAYOUT NAME - XS1

PLOT DATE : 6/4/2024 7:41 AM PLOT BY : JACOB FRIBERG PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 8890-00-72	HWY: CENTER AVENUE	COUNTY: TAYLOR	CROSS SECTIONS: CENTER AVENUE	SHEET 40	E

FILE NAME : G:\2023-PROJ\23258044\C3D\SHEETS\090201_XS.DWG
LAYOUT NAME - XS2

PLOT DATE : 6/4/2024 7:42 AM

PLOT BY : JACOB FRIBERG

PLOT NAME :

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

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

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