EAU

JANUARY 2025

ORDER OF SHEETS

TOTAL SHEETS = 48

PROJECT ID: 7895-00-70

WITH: N/A

COUNTY: PIERCE

34

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T HARTLAND, 490TH STREET

DRY RUN BRIDGE B-47-0231

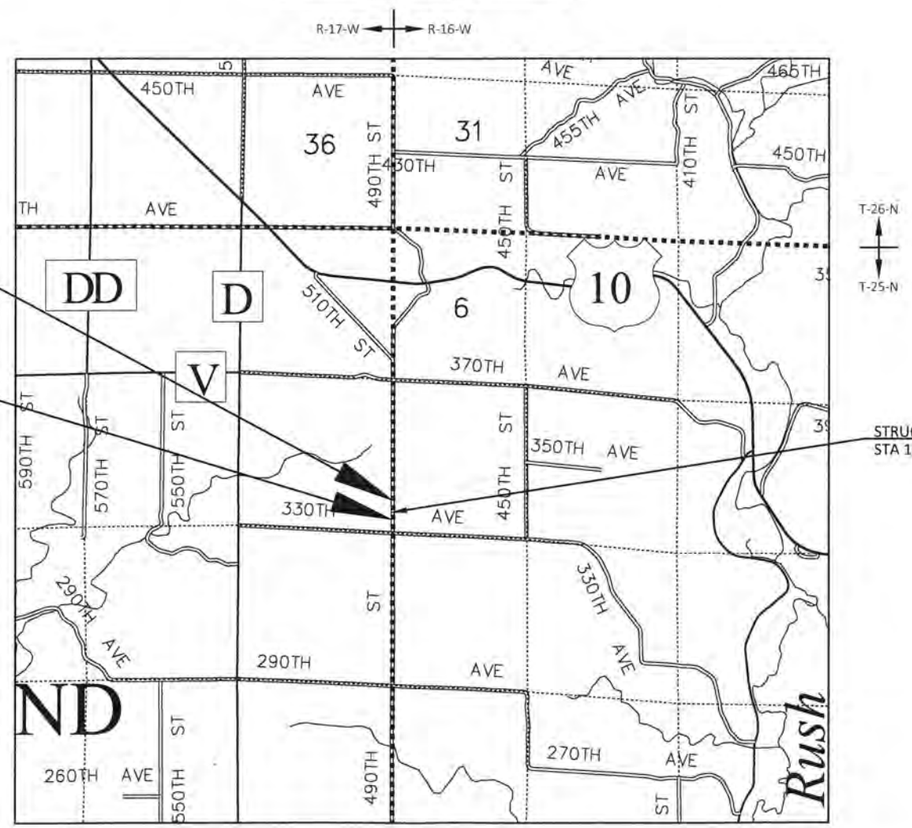
LOC STR

PIERCE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7895-00-70	WISC 2025170	1

STATE PROJECT NUMBER

7895-00-70



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.026 MI.

DESIGN DESIGNATION

A.A.D.T.	(2025)	=	<100
A.A.D.T.	(2045)	=	<100
D.H.V.		=	10
D.D.		=	50/50
T.		=	5%
DESIGN SPEED		=	40 MPH
ESALS		=	36,500

CONVENTIONAL SYMBOLS

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

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), PIERCE 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 (2018). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

ACCEPTED FOR

TOWN of HARTLAND

7/22/24 (Date) (Town Chairman)

ORIGINAL PLANS PREPARED BY

AYRES

WISCONSIN DANIEL N. SYDOW E-38363 WI PROFESSIONAL ENGINEER

7/29/2024 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AYRES ASSOCIATES INC
Designer	AYRES ASSOCIATES INC
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

FILE NAME : I:\42\42-1377.00 - PIERCE CO, TN HARTLAND, 490TH\C3D\SHEETS\010101-TI.DWG PLOT DATE : 6/3/2024 1:03 PM PLOT BY : WALDERA, KAREN PLOT NAME :

UTILITIES CONTACTS

BEVCOMM
CHAD WHITCOMB
W8108 165TH AVE
PO BOX 125
HAGER CITY, WI 54014-0125
PHONE: 715-792-2105
CELL: 651-380-2379
EMAIL: cwhitcomb@bevcomm.com

PIERCE PEPIN COOPERATIVE
BRAD RISTOW
W7725 US HWY 10
ELLSWORTH, WI 54011
PHONE: 715-273-2473
CELL: 715-307-1904
EMAIL: bristow@piercepepin.coop

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

WISCONSIN DNR LIAISON

AMY LESIK
WDNR
1300 CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 715-836-6571
CELL: 715-495-1903
EMAIL: AmyL.lesik@wisconsin.gov

TOWN OF CONTACT

KURT NELSON
TOWN OF HARTLAND, CHAIRMAN
W5137 290TH AVENUE
BAY CITY, WI 54723
PHONE: 715-597-3805
EMAIL: netnels@bevcomm.net

DESIGN PROJECT MANAGER

MATTHEW BERG, PE
WISDOT NW REGION LPPM
718 CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
PHONE: 920-366-4750
EMAIL: Matthew.Berg@dot.wi.gov

DESIGN PROJECT LEADER

DANIEL SYDOW, PE
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
PHONE: 715-834-3161
EMAIL: sydowd@AyresAssociates.com

GENERAL NOTES

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

FILL EXPANSION FACTOR IS 30%

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

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SUBGRADE SHOULDER POINTS ARE TO BE SEEDED AND EROSION MAT AS DIRECTED BY THE ENGINEER.

SEED MIXTURE NO. 20 AND SEEDING TEMPORARY SHALL BE USED IN THE PROJECT AND SHALL BE PLACED AS SHOWN IN THE PLANS AND/OR DIRECTED BY THE ENGINEER.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.

ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 2" UPPER LAYER AND A 2" LOWER LAYER. ASPHALTIC SURFACE SHALL USE 12.5 mm NOMINAL AGGREGATE SIZE.

THE PROPOSED SHOULDER WIDTH SHOWN IN THE TYPICAL SECTIONS ARE MINIMUM WIDTH. PERPETUATE EXISTING SHOULDERS THAT ARE WIDER THAN WHAT IS SHOWN IN THE TYPICAL SECTIONS.

SAWCUTS, AS SHOWN ON THE PLANS, ARE SUGGESTED LOCATIONS AND MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER TO BETTER SUIT FIELD CONDITIONS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

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

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

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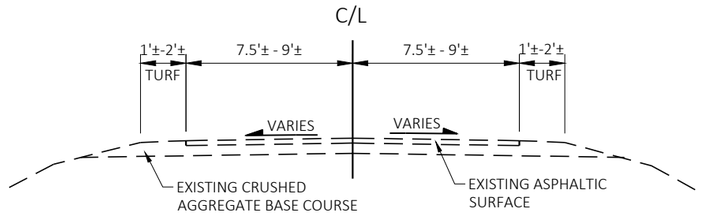
RUNOFF COEFFICIENT TABLE

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

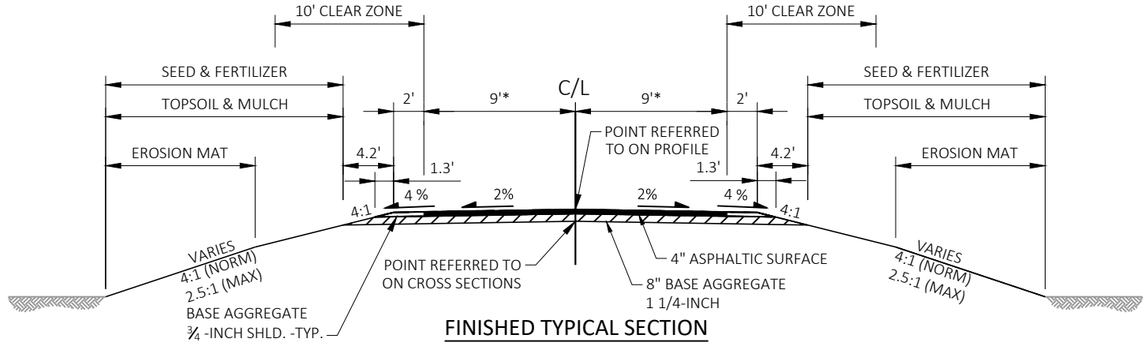
TOTAL PROJECT AREA = 0.207 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.119 ACRES

2



EXISTING TYPICAL SECTION

490TH STREET



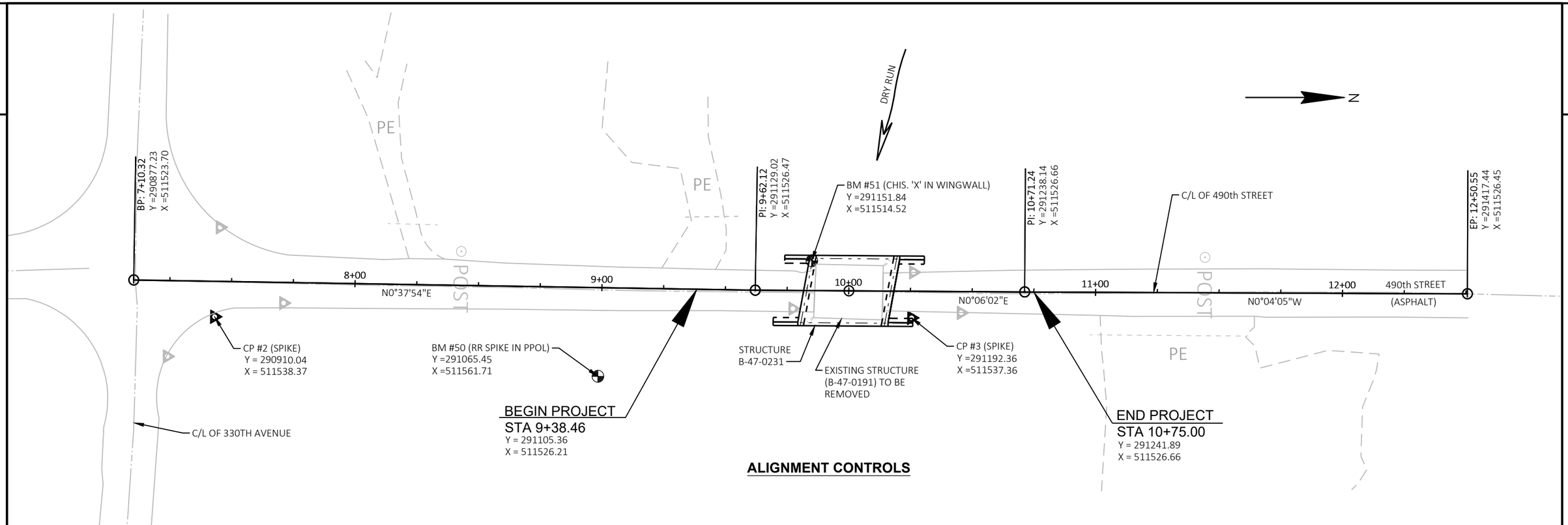
FINISHED TYPICAL SECTION

490TH STREET

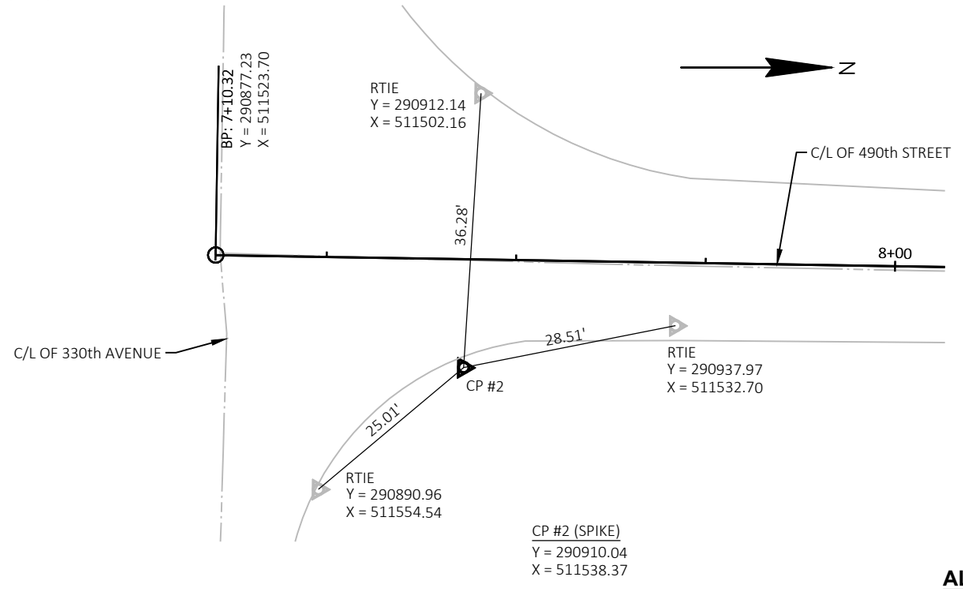
STA. 9+38.46 TO STA. 9+81.73
STA. 10+18.27 TO STA. 10+75.00

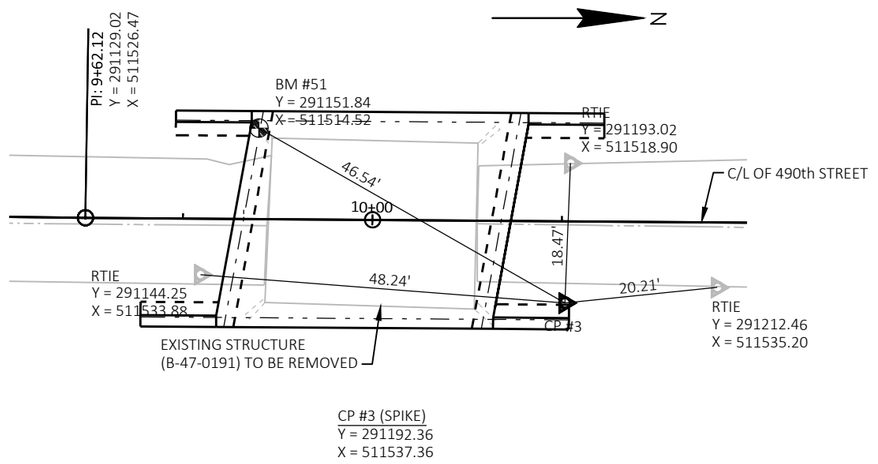
*THE ASPHALT SURFACE LANE SHALL TAPER FROM 14.25' WIDE AT THE ENDS OF THE WINGS TO 9' WIDE AT 50' FROM THE END OF THE BRIDGE AND MATCH EXISTING AT THE ENDS OF THE PROJECT.

2



ALIGNMENT CONTROLS



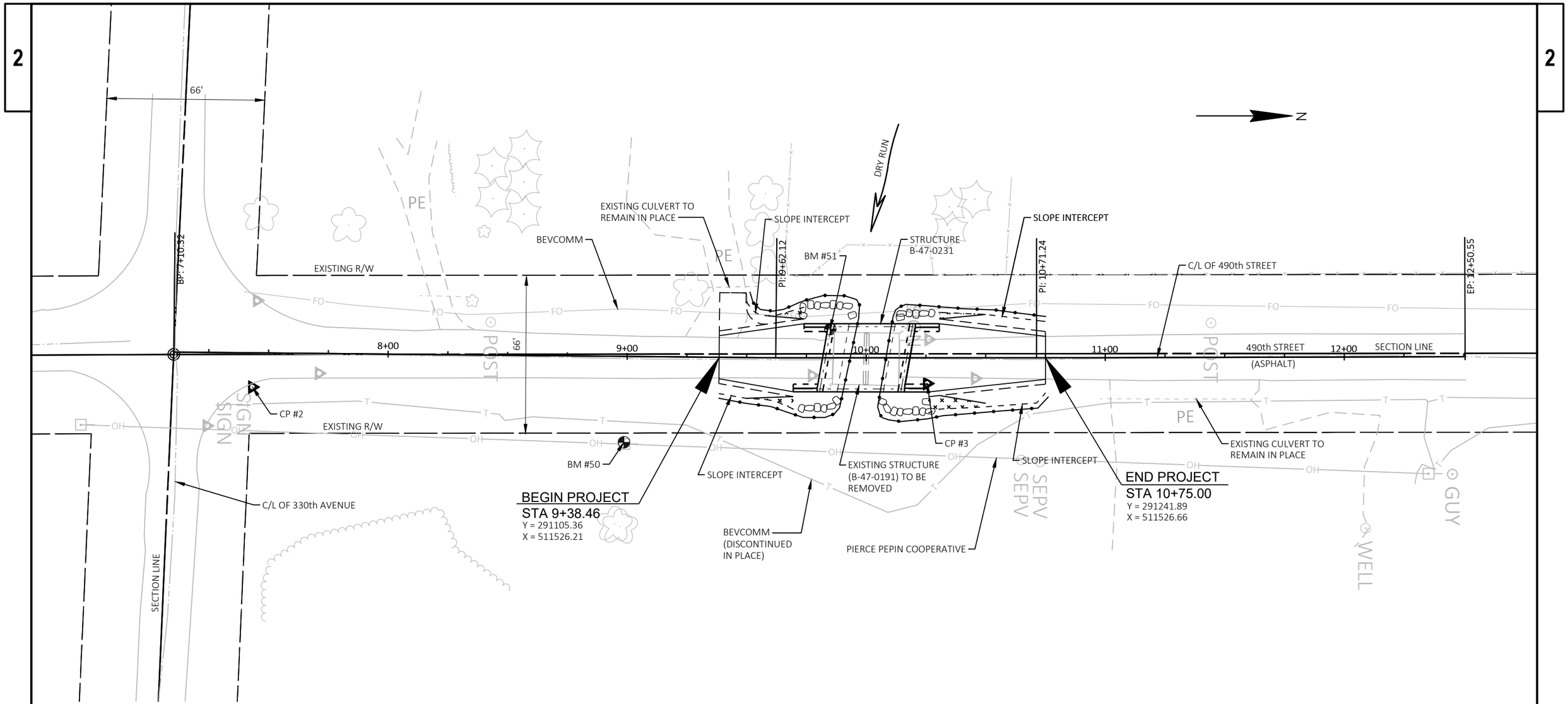


ALIGNMENT TIES

PROJECT NO: 7895-00-70	HWY: 490TH STREET	COUNTY: PIERCE	ALIGNMENT CONTROLS	SHEET 4	E

FILE NAME : I:\42\42-1377.00 - PIERCE CO, TN HARTLAND, 490TH\C3D\SHEETS\020401-AC.DWG
LAYOUT NAME - ALIGNMENT CONTROLS
PLOT DATE : 2/6/2024 1:57 PM
PLOT BY : PEDERSON, CARMEN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2



NOTES:
NO DISTURBANCE OR TOPSOIL STOCKPILING IS ALLOWED OUTSIDE OF THE SLOPE INTERCEPTS.

WETLANDS EXIST IN THE PROJECT AREA.

NO IN-STREAM WORK BETWEEN SEPTEMBER 15 TO MAY 15, WITH BOTH DATES INCLUSIVE OF THE TIMEOUT PERIOD.

MULCH TO BE PLACED ON SIDE SLOPES NOT PROTECTED BY EROSION MAT.

HIGHWATER $_2$ EL. 1014.12

LEGEND

- EROSION MAT CLASS II (TYPE C)
- SILT FENCE
- RIP RAP
- SLOPE INTERCEPT
- TEMPORARY DITCH CHECK (UNDISTRIBUTED)

PROJECT NO: 7895-00-70	HWY: 490TH STREET	COUNTY: PIERCE	EROSION CONTROL	SHEET 5	E

Estimate Of Quantities

7895-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. B-47-0191	EACH	1.000	1.000
0004	205.0100	Excavation Common	CY	103.000	103.000
0006	206.1001	Excavation for Structures Bridges (structure) 01. B-47-0231	EACH	1.000	1.000
0008	210.1500	Backfill Structure Type A	TON	240.000	240.000
0010	213.0100	Finishing Roadway (project) 01. 7895-00-70	EACH	1.000	1.000
0012	305.0110	Base Aggregate Dense 3/4-Inch	TON	15.000	15.000
0014	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	155.000	155.000
0016	455.0605	Tack Coat	GAL	38.000	38.000
0018	465.0105	Asphaltic Surface	TON	65.000	65.000
0020	502.0100	Concrete Masonry Bridges	CY	127.000	127.000
0022	502.3200	Protective Surface Treatment	SY	154.000	154.000
0024	505.0400	Bar Steel Reinforcement HS Structures	LB	3,420.000	3,420.000
0026	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	14,520.000	14,520.000
0028	513.4061	Railing Tubular Type M	LF	119.000	119.000
0030	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0032	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	250.000	250.000
0034	606.0300	Riprap Heavy	CY	70.000	70.000
0036	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0038	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7895-00-70	EACH	1.000	1.000
0040	619.1000	Mobilization	EACH	1.000	1.000
0042	623.0200	Dust Control Surface Treatment	SY	320.000	320.000
0044	624.0100	Water	MGAL	2.000	2.000
0046	625.0100	Topsoil	SY	85.000	85.000
0048	627.0200	Mulching	SY	180.000	180.000
0050	628.1504	Silt Fence	LF	420.000	420.000
0052	628.1520	Silt Fence Maintenance	LF	1,260.000	1,260.000
0054	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0056	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0058	628.2027	Erosion Mat Class II Type C	SY	30.000	30.000
0060	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0062	629.0210	Fertilizer Type B	CWT	0.140	0.140
0064	630.0120	Seeding Mixture No. 20	LB	14.000	14.000
0066	630.0200	Seeding Temporary	LB	8.000	8.000
0068	630.0500	Seed Water	MGAL	6.000	6.000
0070	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0072	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0074	638.2602	Removing Signs Type II	EACH	6.000	6.000
0076	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0078	642.5001	Field Office Type B	EACH	1.000	1.000
0080	643.0420	Traffic Control Barricades Type III	DAY	1,350.000	1,350.000
0082	643.0705	Traffic Control Warning Lights Type A	DAY	2,100.000	2,100.000
0084	643.0900	Traffic Control Signs	DAY	1,050.000	1,050.000
0086	643.5000	Traffic Control	EACH	1.000	1.000
0088	645.0111	Geotextile Type DF Schedule A	SY	60.000	60.000
0090	645.0120	Geotextile Type HR	SY	160.000	160.000
0092	650.4500	Construction Staking Subgrade	LF	100.000	100.000
0094	650.5000	Construction Staking Base	LF	100.000	100.000
0096	650.6501	Construction Staking Structure Layout (structure) 01. B-47-0231	EACH	1.000	1.000
0098	650.9911	Construction Staking Supplemental Control (project) 01. 7895-00-70	EACH	1.000	1.000

Estimate Of Quantities

7895-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	650.9920	Construction Staking Slope Stakes	LF	100.000	100.000
0102	690.0150	Sawing Asphalt	LF	35.000	35.000
0104	715.0502	Incentive Strength Concrete Structures	DOL	762.000	762.000
0106	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
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

3

490TH STREET EARTHWORK SUMMARY

From/To Station	Location	Common Excavation (1) (Item 205.0100) Cut	Unexpanded Fill	Expanded Fill (2) Factor 1.30	Mass Ordinate +/- (3)	Waste
9+38.46 - 9+81.73	MAINLINE	48	1	1	47	47
10+18.27 - 10+75	MAINLINE	55	2	3	52	52
		103				

1) Common Excavation is the Cut. Item number 205.0100.
2) Expanded Fill. Factor = 1.30; Expanded Fill = Unexpanded Fill * Fill Factor
3) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material on the project.
4) All quantities shown in CY.

BASE AGGREGATE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL	REMARKS
0010	9+38.46	-	9+81.73	LT/RT	10	70	1	SOUTH APPROACH
0010	10+18.27	-	10+75	LT/RT	5	85	1	NORTH APPROACH
				TOTAL 0010	15	155	2	

ASPHALT

CATEGORY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	REMARKS
0010	9+38.46	-	9+81.73	MAINLINE	17	30	SOUTH APPROACH
0010	10+18.27	-	10+75	MAINLINE	21	35	NORTH APPROACH
				TOTAL 0010	38	65	

NOTES:
* TACK COAT APPLICATION RATE = 0.07 GAL/SY
** ASSUMED HMA AT 112 LBS/SY/IN

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	LOCATION	618.0100.01 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) (01. 7895-00-70) EACH
0030	490TH STREET	1
	TOTAL 0030	1

MISCELLANEOUS ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	623.0200 DUST CONTROL SURFACE TREATMENT SY	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7504 TEMPORARY DITCH CHECKS LF
0010	9+38.46	-	10+75	PROJECT-WIDE	320	4	4	50
				TOTAL 0010	320	4	4	50

3

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2027 EROSION MAT CLASS II TYPE C SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
0010	9+38.46	-	9+81.73	LT	10	20	75	225	5	0.02	2	1	1
0010	9+38.46	-	9+81.73	RT	15	30	75	225	5	0.02	2	1	1
0010	10+18.27	-	10+75	LT	20	40	85	255	5	0.03	3	2	1
0010	10+18.27	-	10+75	RT	40	55	100	300	10	0.04	4	2	2
0010			UNDISTRIBUTED		-	35	85	255	5	0.03	3	2	1
				TOTAL 0010	85	180	420	1,260	30	0.14	14	8	6

SIGNS

CATEGORY	STATION	LOCATION	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	9+73	LT	1	3	--	--	W5-52L (OBJECT MARKER)
0010	9+68	RT	1	3	--	--	W5-52R (OBJECT MARKER)
0010	9+82	RT	--	--	1	1	R12-1 (WEIGHT LIMIT 25 TON)
0010	9+86	LT	--	--	1	1	W5-52L (OBJECT MARKER)
0010	9+85	RT	--	--	1	1	W5-52R (OBJECT MARKER)
0010	10+15	LT	--	--	1	1	W5-52R (OBJECT MARKER)
0010	10+14	RT	--	--	1	1	W5-52L (OBJECT MARKER)
0010	10+18	LT	--	--	1	1	R12-1 (WEIGHT LIMIT 25 TON)
0010	10+32	LT	1	3	--	--	W5-52R (OBJECT MARKER)
0010	10+27	RT	1	3	--	--	W5-52L (OBJECT MARKER)
		TOTAL 0010	4	12	6	6	

TRAFFIC CONTROL

CATEGORY	LOCATION	DURATION DAYS	NO.	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	NO.	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	NO.	643.0900 TRAFFIC CONTROL SIGNS DAY
0010	PER SDD 15C2	75	18	1,350	28	2,100	14	1,050
	TOTAL 0010			1,350		2,100		1,050

3

STAKING

CATEGORY	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-47-0231) EACH	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 7895-00-70) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	MAINLINE	100	100	-	-	100
0010	PROJECT 7895-00-70	-	-	-	1	-
	TOTAL 0010	100	100	0	1	100
0020	B-47-0231	-	-	1	-	-
	TOTAL 0020	0	0	1	0	0
	PROJECT TOTAL	100	100	1	1	100

SAWING ASPHALT

CATEGORY	STATION	LOCATION	690.0150 SAWING ASPHALT LF
0010	9+38.46	MAINLINE	17
0010	10+75	MAINLINE	18
		TOTAL 0010	35

INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM

CATEGORY	STATION	999.2000.S.01 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (STATION) (01. 10+00) EACH
0010	10+00	1
	TOTAL 0010	1

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
50	8+99	1012.27	RR SPIKE IN PPOL, 36' RT.
51	9+85	1014.03	CHIS 'X' IN WINGWALL, 12' LT.

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

66'
BP: 7+10.32
EXISTING R/W
EXISTING CULVERT TO REMAIN IN PLACE
SLOPE INTERCEPT
PI: 9+62.12
DRY RUN
BEVCOMM
BM #51
STRUCTURE B-47-0231
SLOPE INTERCEPT
PI: 10+71.24
C/L OF 490th STREET
EP: 12+50.55
8+00
9+00
10+00
11+00
490th STREET (ASPHALT)
12+00
SECTION LINE
CP #2
EXISTING R/W
BM #50
SLOPE INTERCEPT
CP #3
SLOPE INTERCEPT
EXISTING CULVERT TO REMAIN IN PLACE
C/L OF 330th AVENUE
SECTION LINE
BEVCOMM (DISCONTINUED IN PLACE)
EXISTING STRUCTURE (B-47-0191) TO BE REMOVED
PIERCE PEPIN COOPERATIVE

BEGIN PROJECT
STA 9+38.46
Y = 291105.36
X = 511526.21
(SAWCUT REQ'D.)

END PROJECT
STA 10+75.00
Y = 291241.89
X = 511526.66
(SAWCUT REQ'D.)

EARTHWORK SUMMARY

STA. 9+38.46 TO STA. 9+81.73
EXC. COMMON 48 C.Y.
FILL 1 C.Y.
SHR. = 30%
WASTE 47 C.Y.

EARTHWORK SUMMARY

STA. 10+18.27 TO STA. 10+75.00
EXC. COMMON 55 C.Y.
FILL 2 C.Y.
SHR. = 30%
WASTE 52 C.Y.

VCL = 120.00
K = 67.16
HIGHWATER$_{100}$ EL. 1015.35
STA 9+38.46 EL 1014.94
VPI STA 10+15.00 VPI EL 1015.25
FINISHED C/L PROFILE
STA 10+75.00 1016.56
0.40%
EXISTING C/L PROFILE
VPC STA 9+55.00 VPC EL 1015.01
VPT STA 10+75.00 VPT EL 1016.56
STREAM BED EL. 1009.26±
EXISTING ELEVATION
PROPOSED ELEVATION

STA 10+00
REMOVING STRUCTURE OVER WATERWAY
REMOVE DEBRIS STRUCTURE B-47-0191
TWO-SPAN STEEL GIRDER BRIDGE
22' CLEAR RDWY WIDTH X 27' O.A.L.
NO SKEW

STA 10+00
STRUCTURE B-47-0231 REQ'D
SINGLE-SPAN CONCRETE FLAT SLAB BRIDGE
26'-0" CLEAR RDWY WIDTH X 36'-6 ½ " O.A.L.
10° SKEW

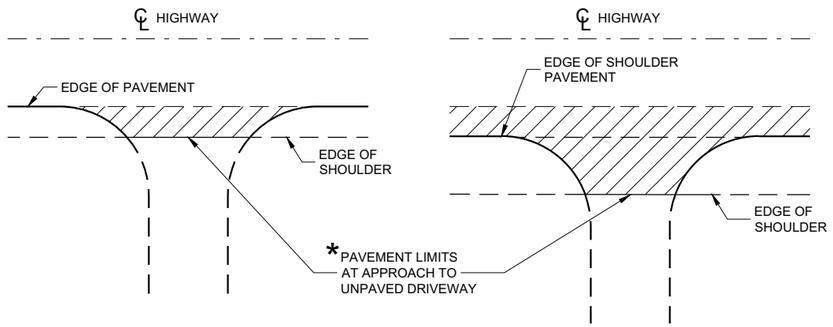
		1016.20	1015.45	1015.05	1014.86	1014.99	1014.99	1009.51	1015.34	1016.08	1016.06	1017.18	1018.85	1020.90	1023.16	
6	7			8		9		10		11		12		13		

PROJECT NO: 7895-00-70	HWY: 490TH STREET	COUNTY: PIERCE	PLAN AND PROFILE:	SHEET 11	E

FILE NAME : I:\42\42-1377.00 - PIERCE CO, TN HARTLAND, 490TH\C3D\SHEETS\050101-PP.DWG
LAYOUT NAME - PLAN AND PROFILE
PLOT DATE : 6/3/2024 11:43 AM PLOT BY : RESHESKE, CARRIE PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

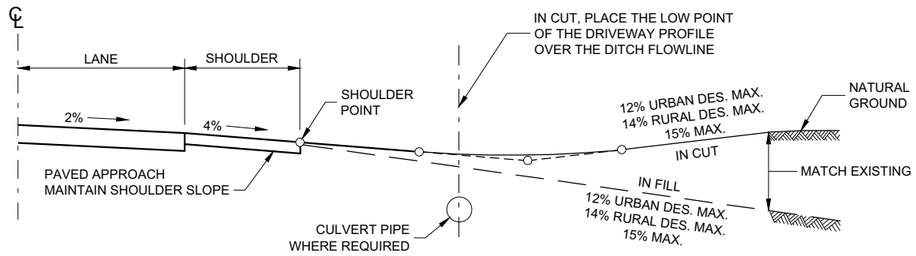
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES



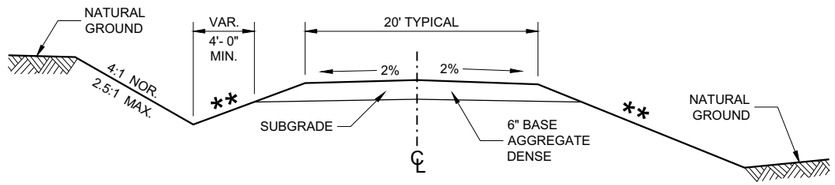
PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)



TYPICAL DRIVEWAY PROFILES

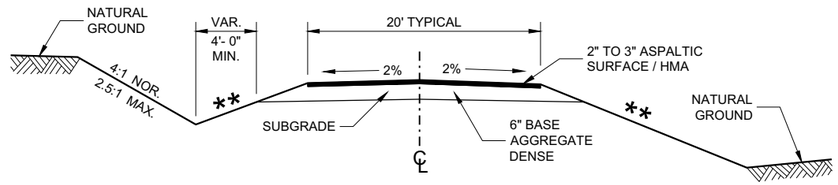


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

6

6

SDD 08D21 - 01

SDD 08D21 - 01

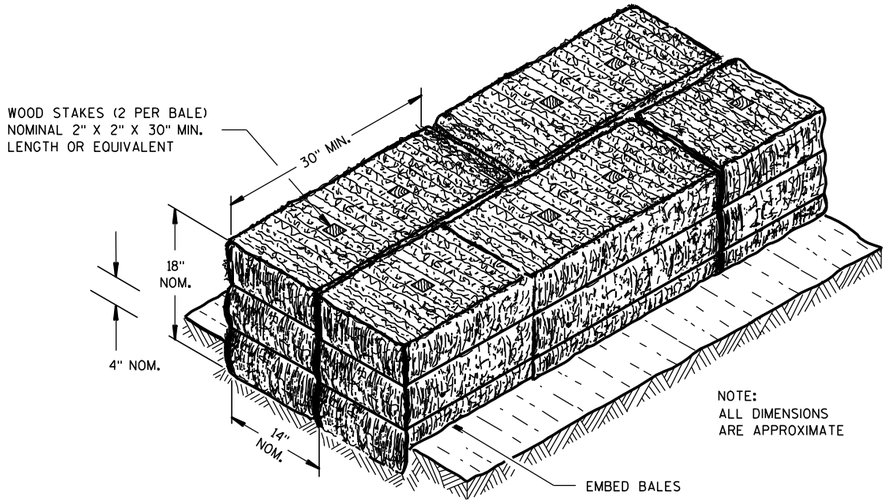
DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

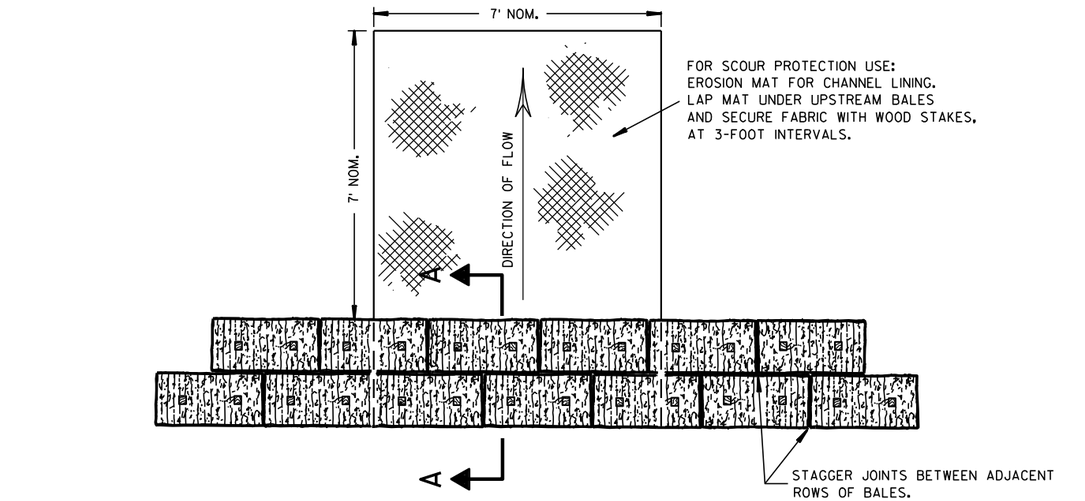
APPROVED
December 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

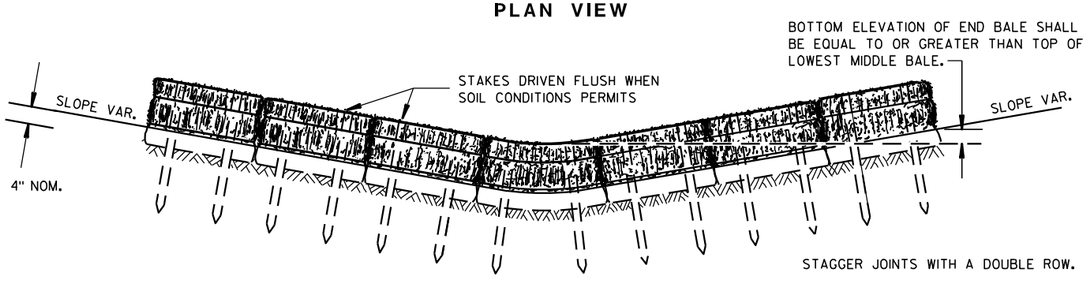
FHWA



SECTION A-A



PLAN VIEW



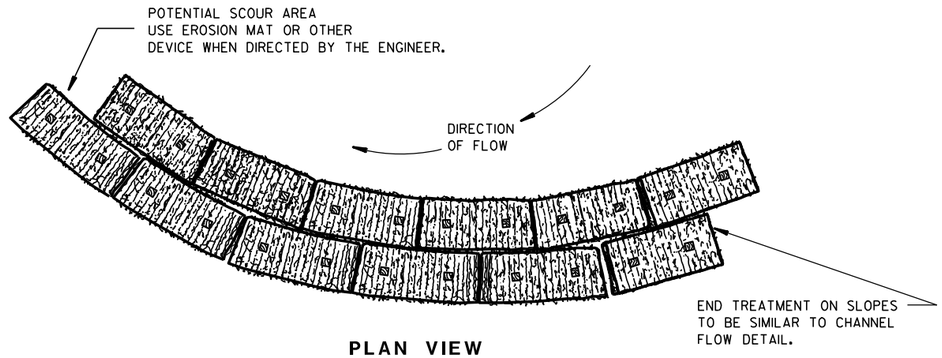
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

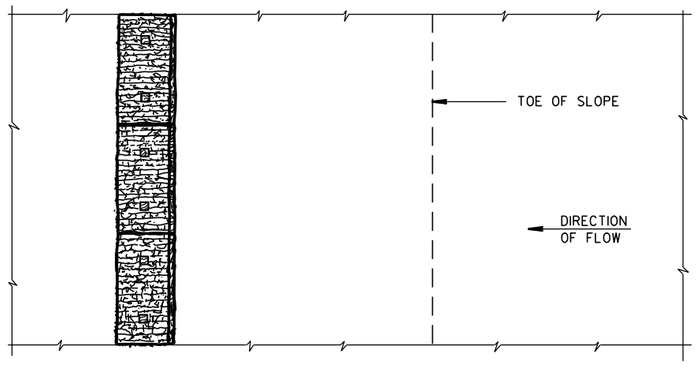
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

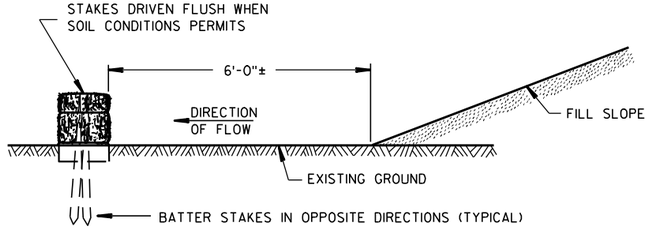


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

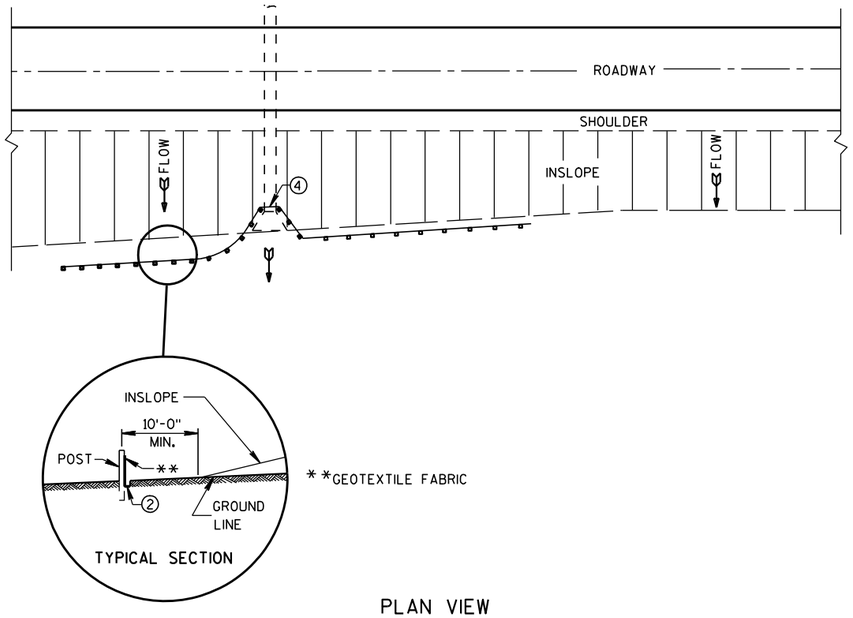
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

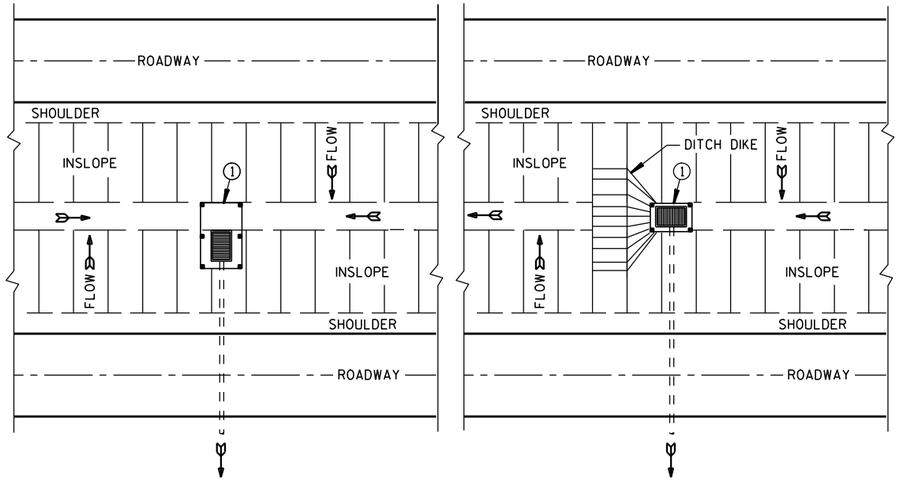
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



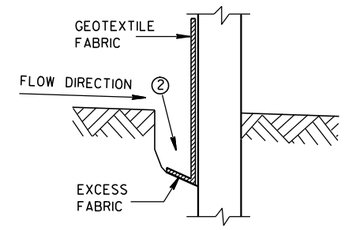
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

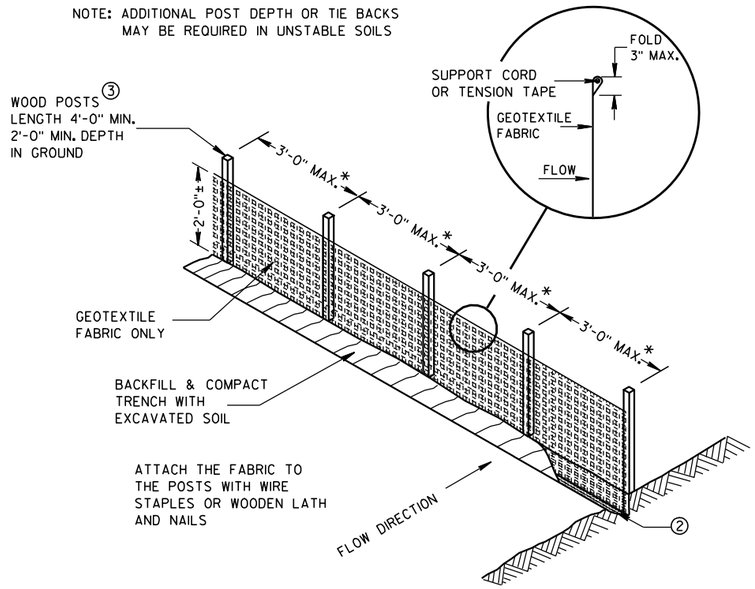
GENERAL NOTES

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

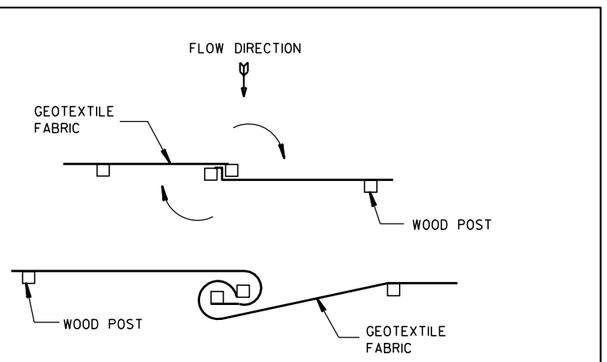
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



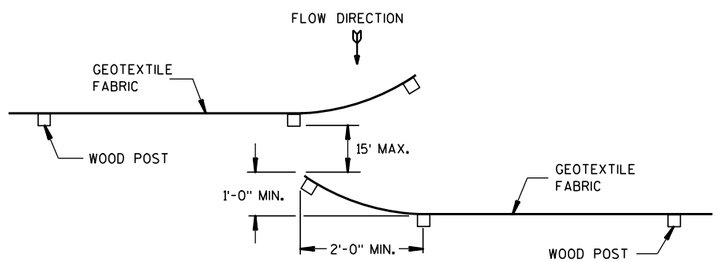
TRENCH DETAIL



SILT FENCE

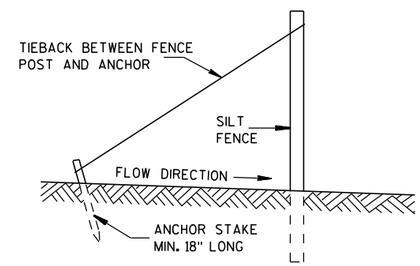


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

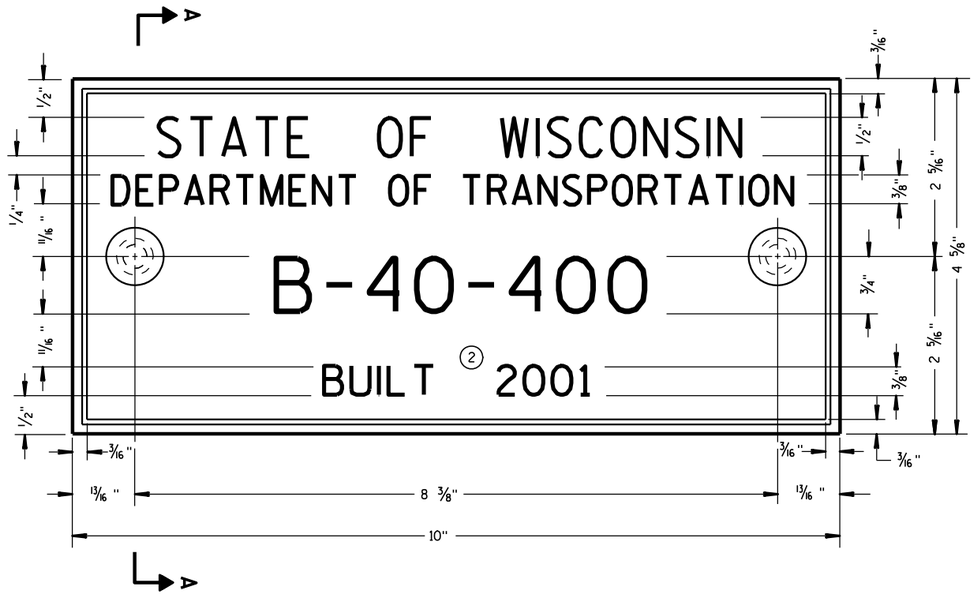
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



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

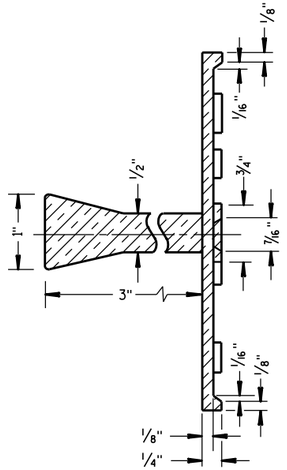
GENERAL NOTES

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

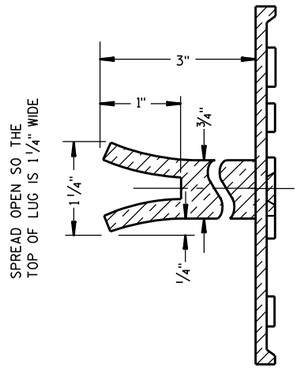
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

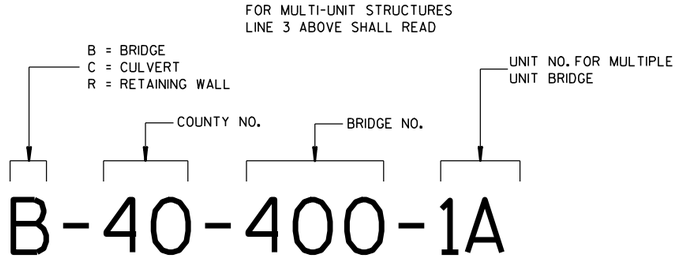
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



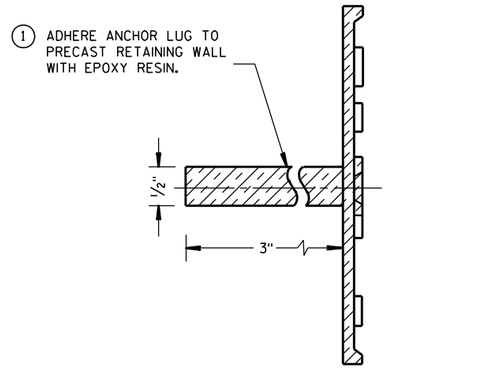
SECTION A-A



ALTERNATE LUG



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

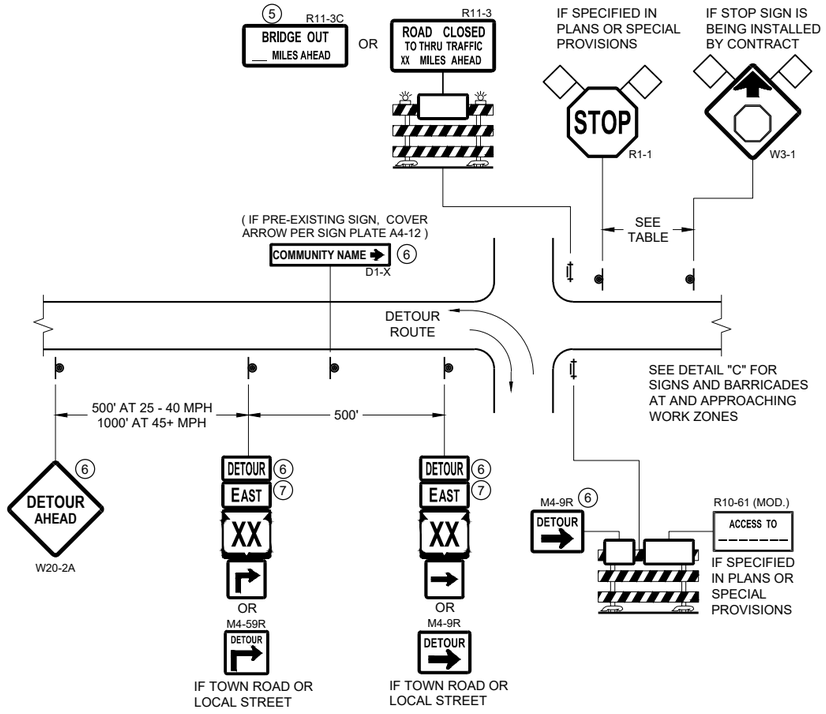
3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

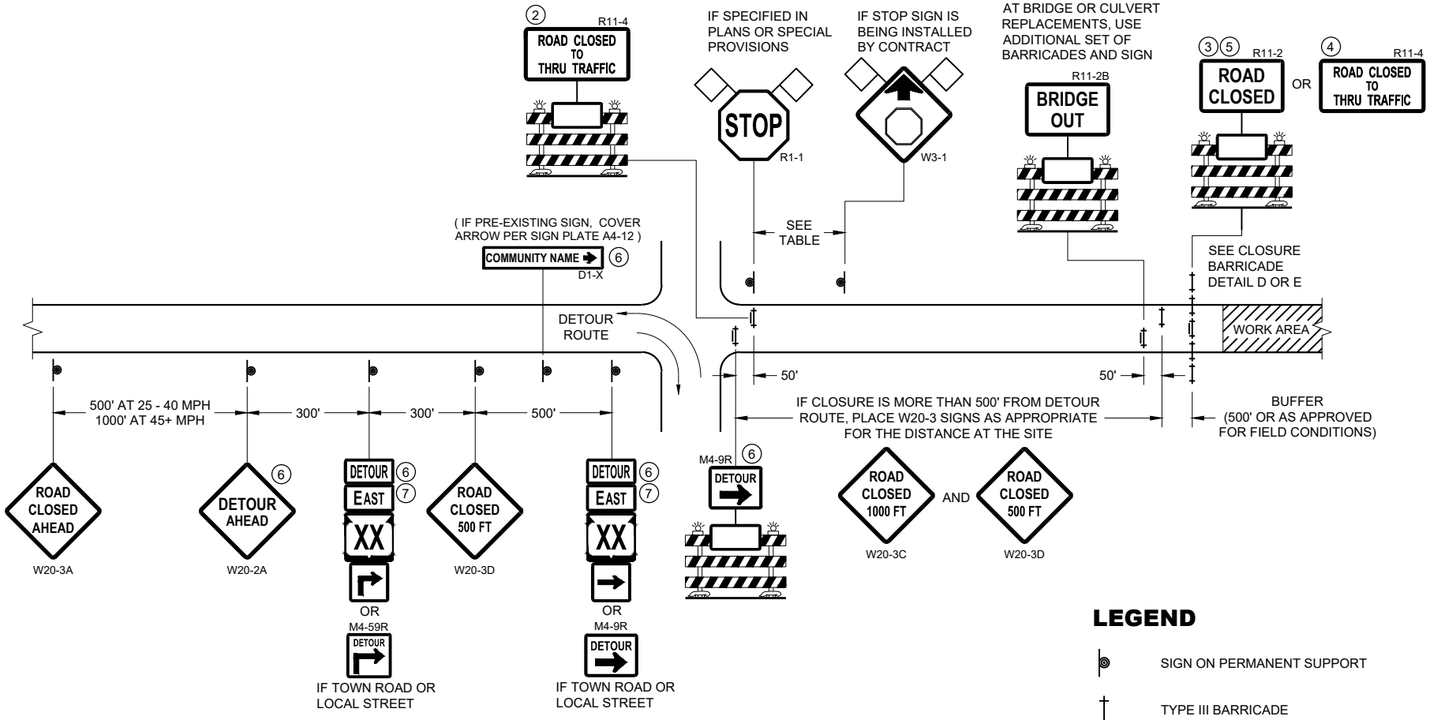
6

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)

LEGEND

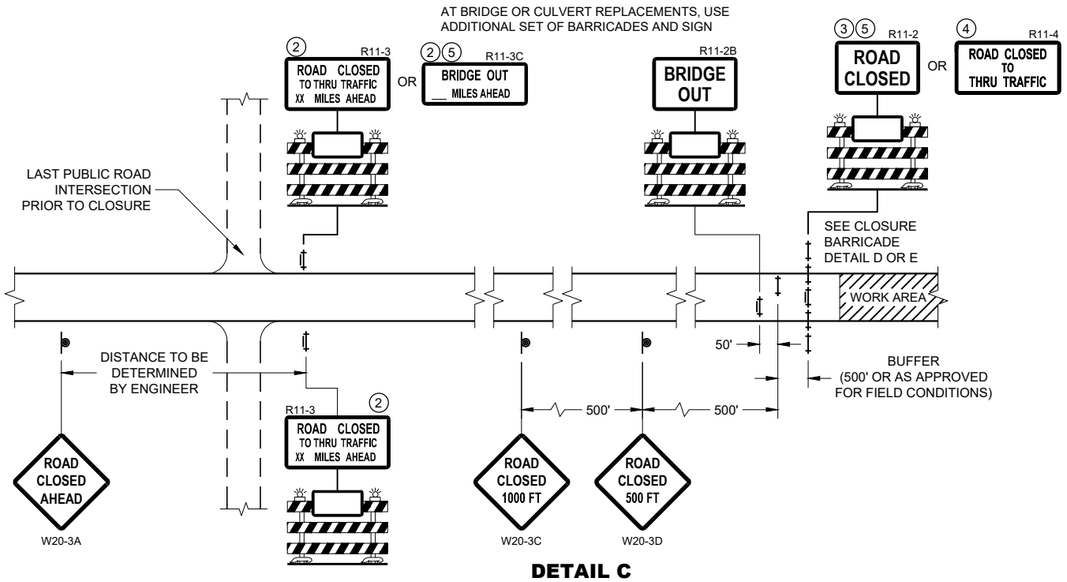
- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8

EAST M3 - X

XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A

M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

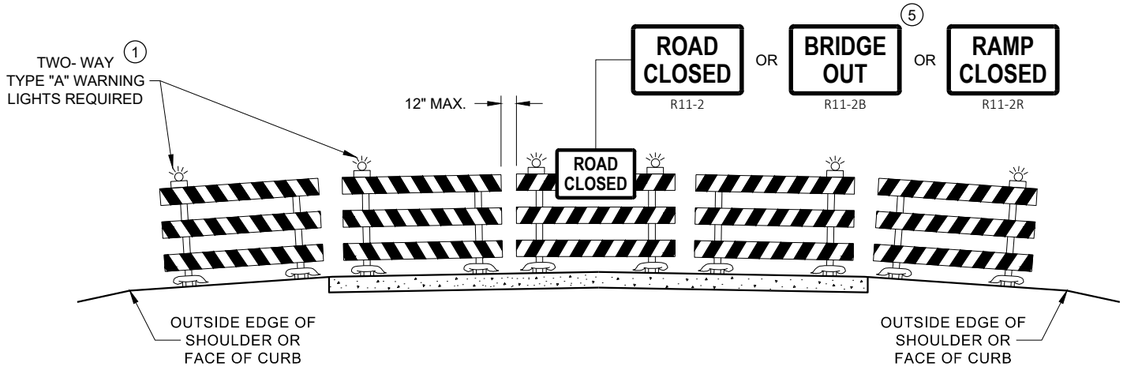
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

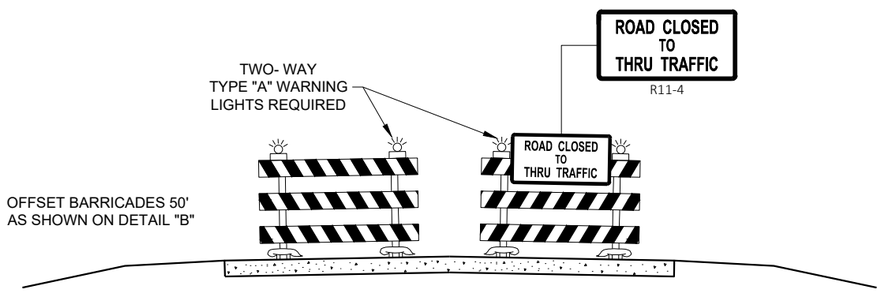
6

SDD 15C02 - 09a

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

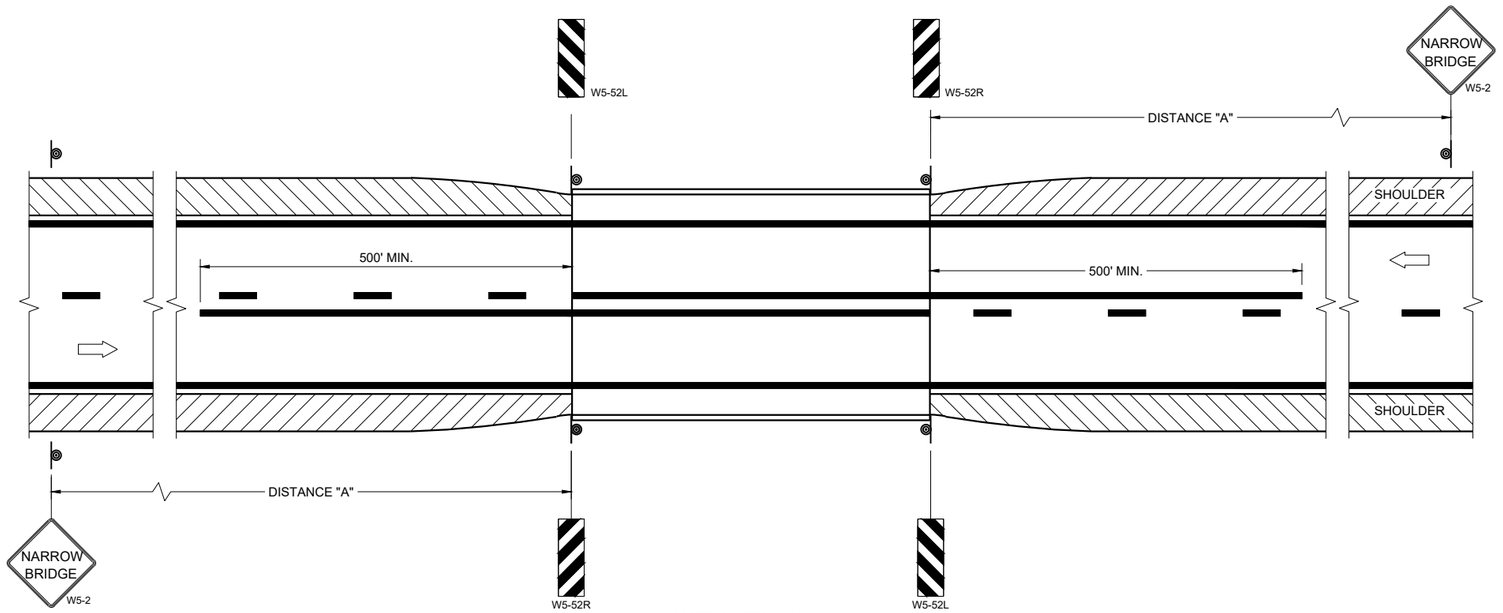
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 09b

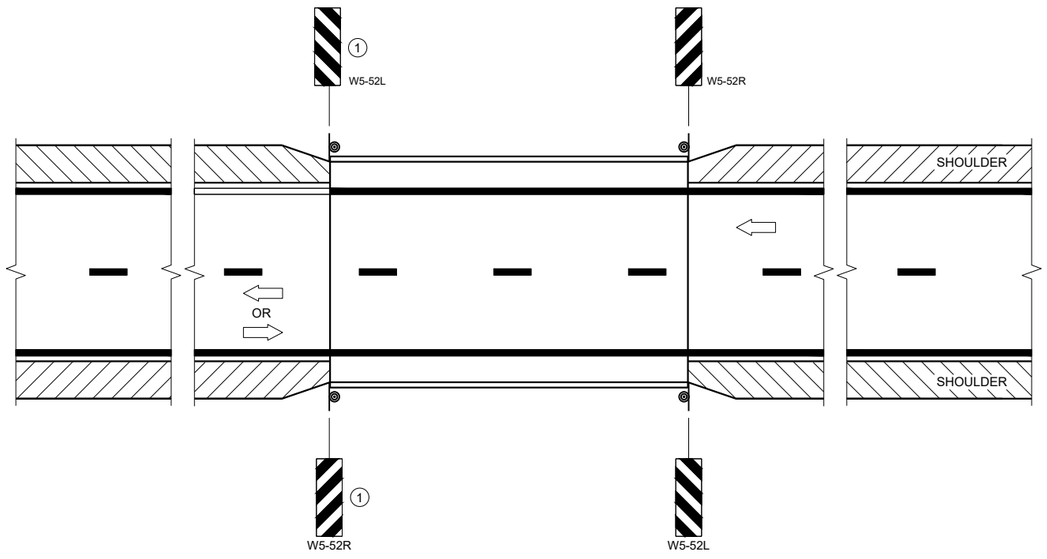
6

SDD 15C02 - 09b



SITUATION 1

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



SITUATION 2

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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

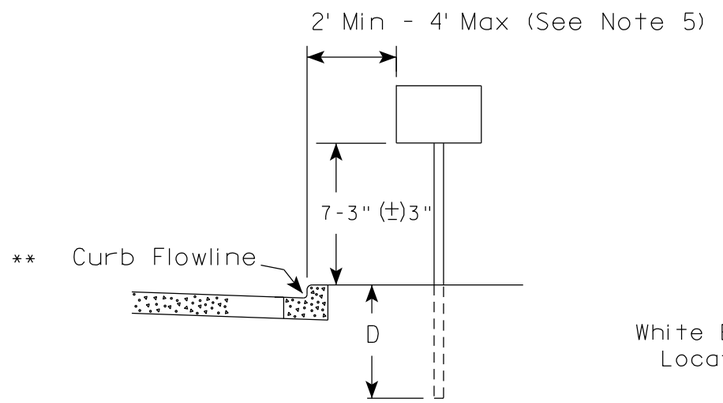
SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

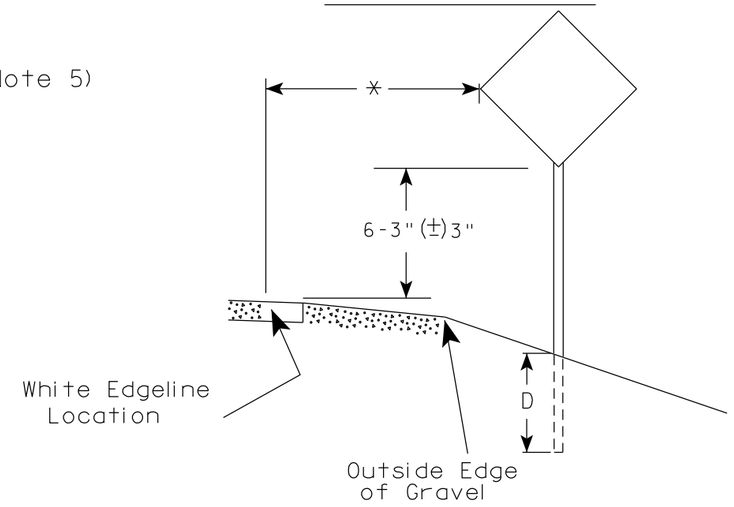
APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA

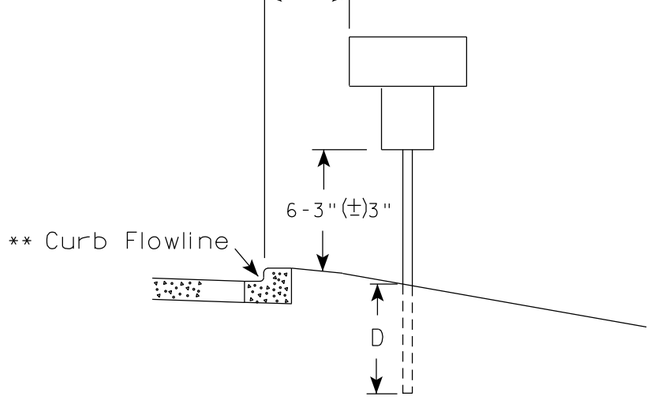
6
SDD 15C06-12

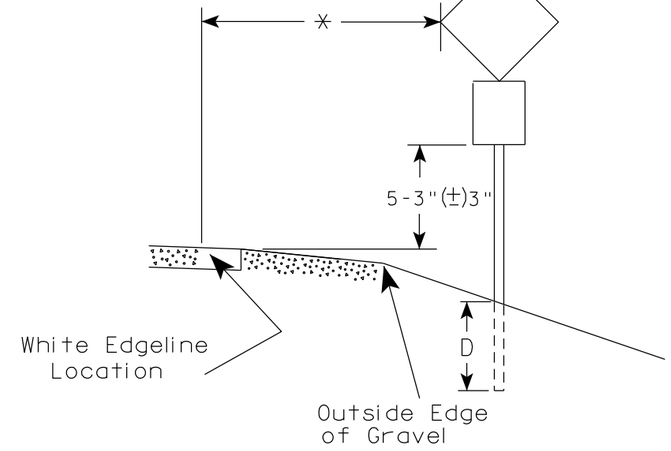
URBAN AREA



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'

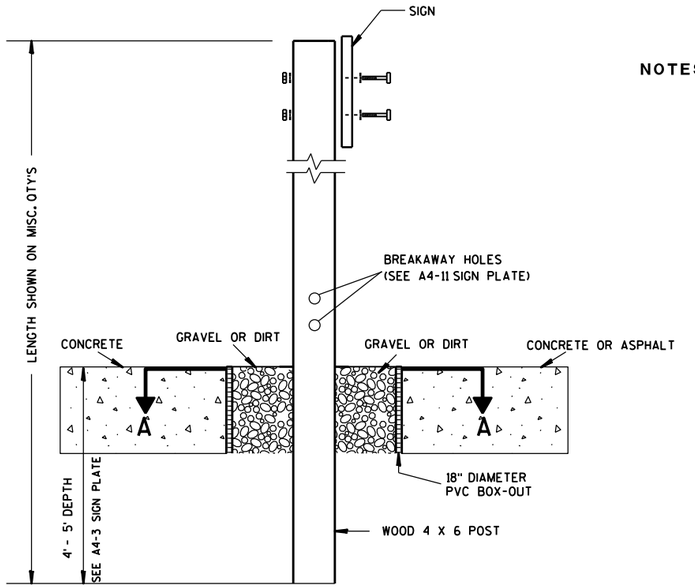
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

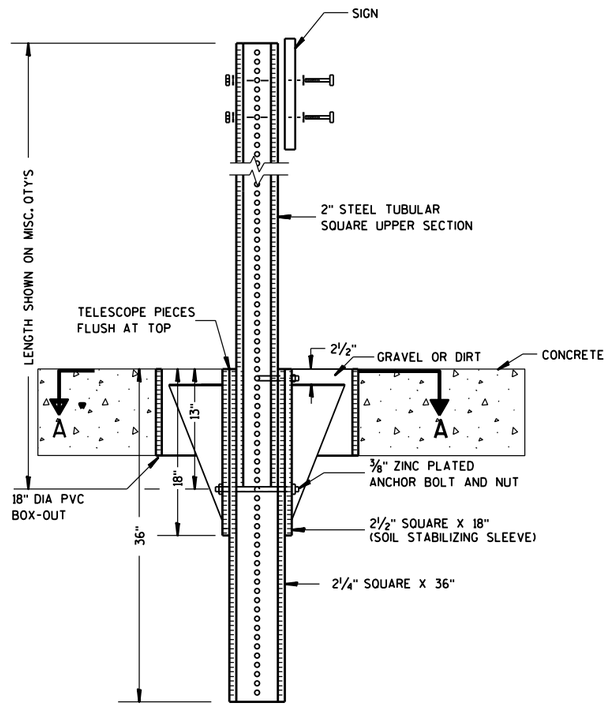
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 20	E



ELEVATION VIEW

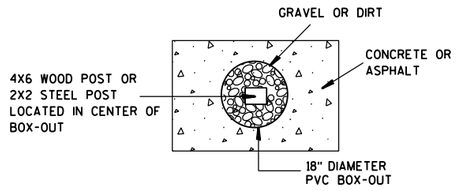
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

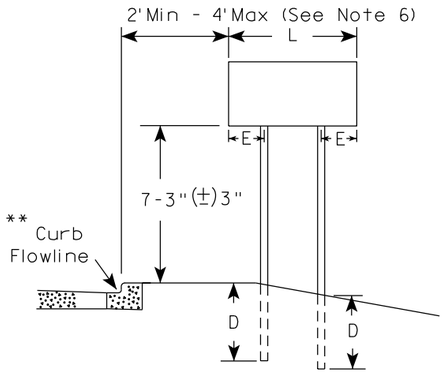
WISCONSIN DEPT OF TRANSPORTATION

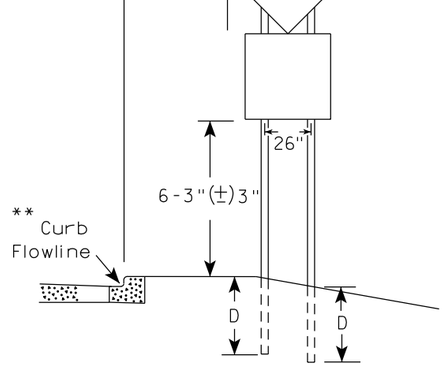
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

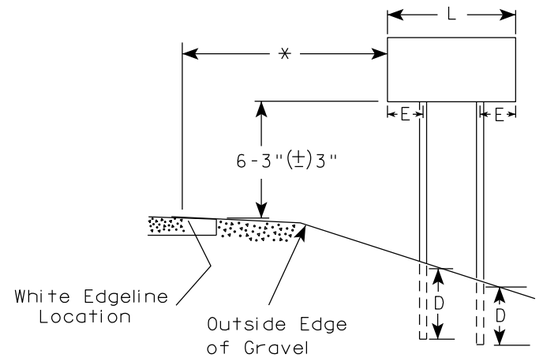
URBAN AREA

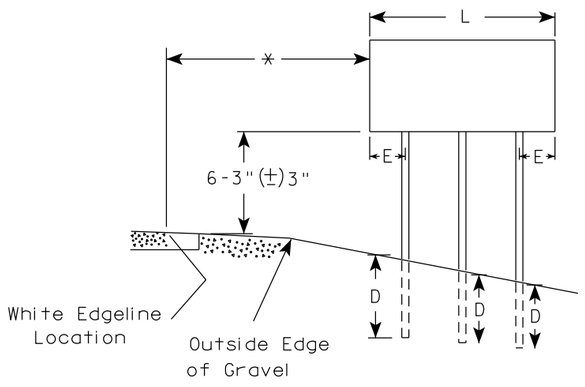


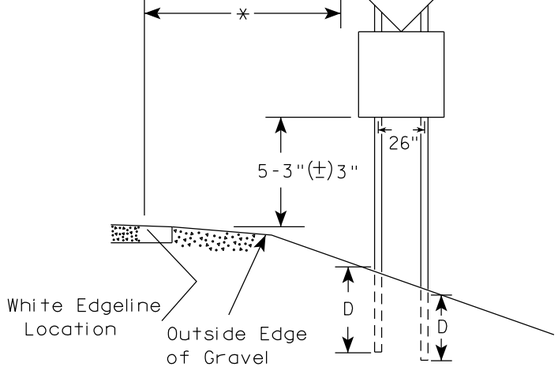


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 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.

POST EMBEDMENT DEPTH

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

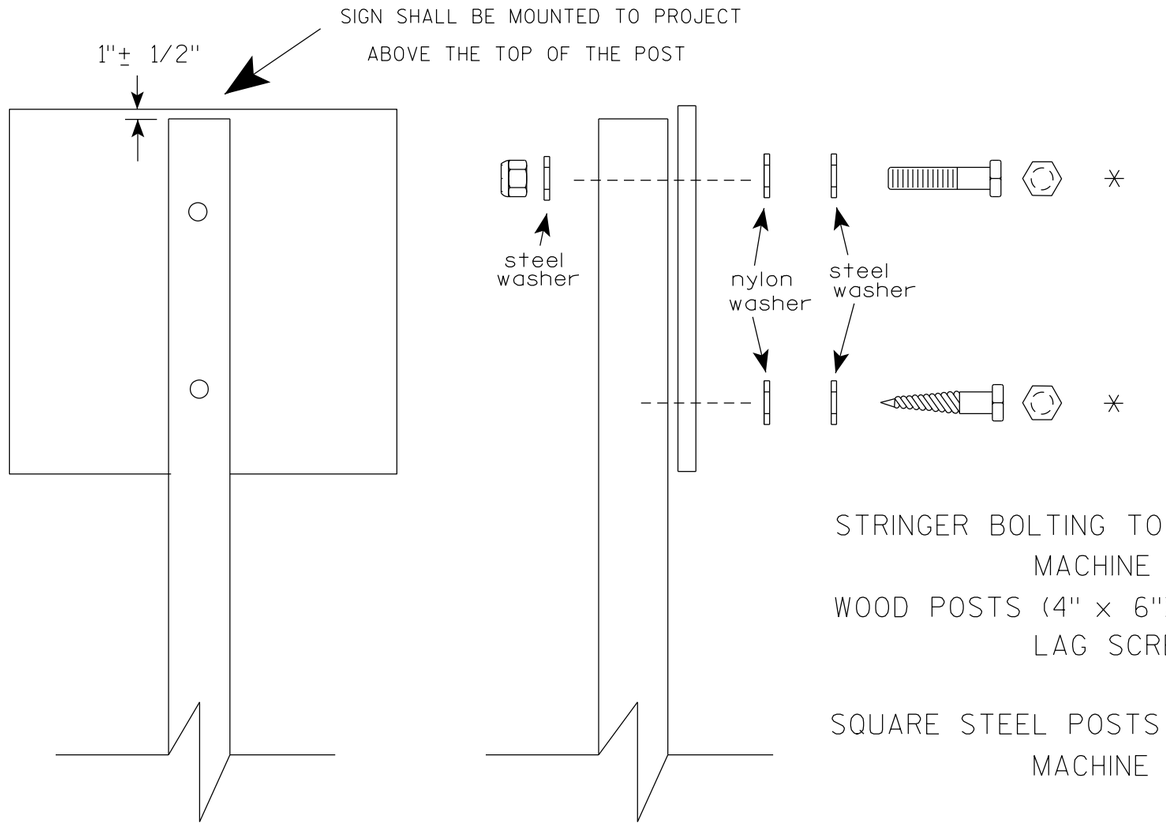
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

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: 22	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

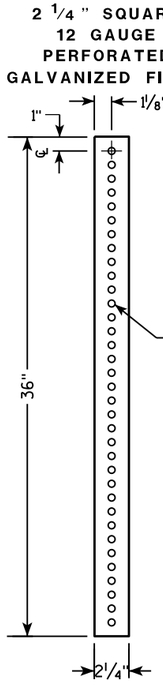
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

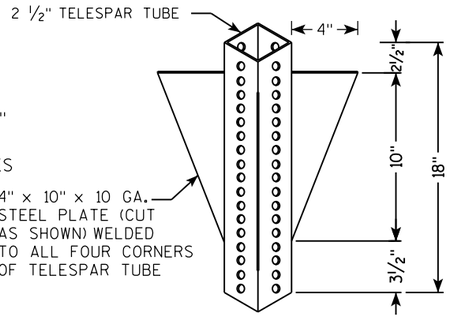
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

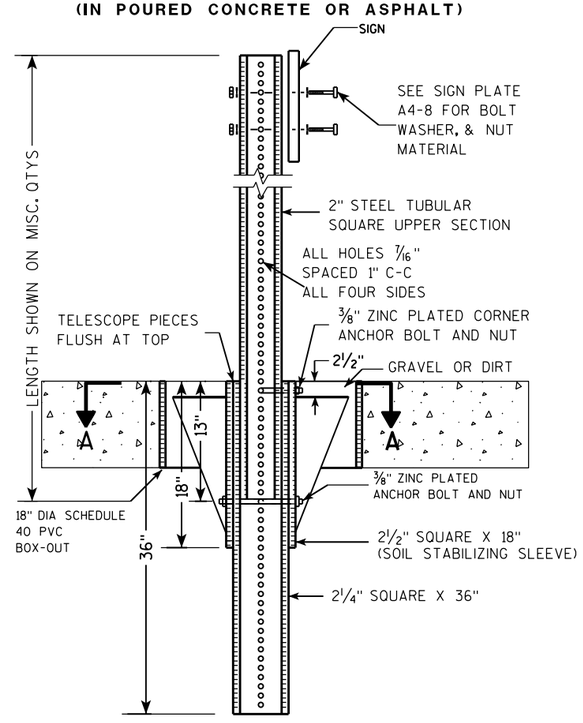
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



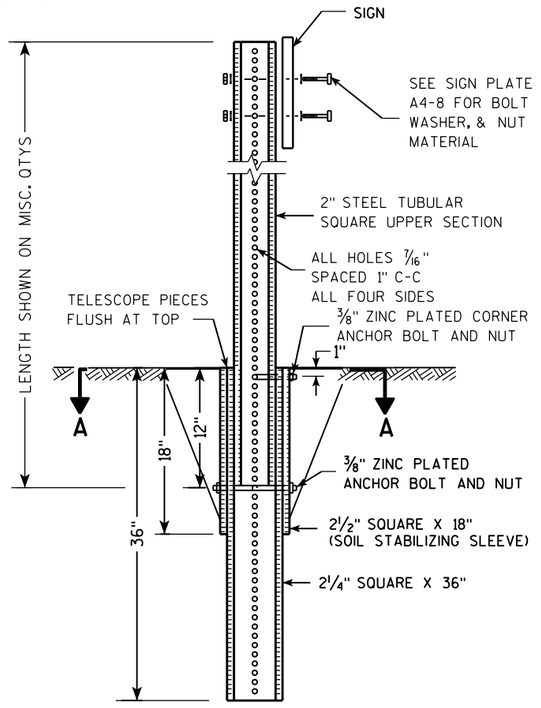
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

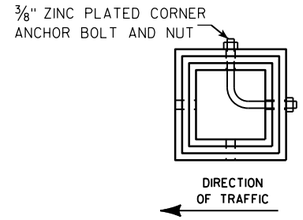


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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

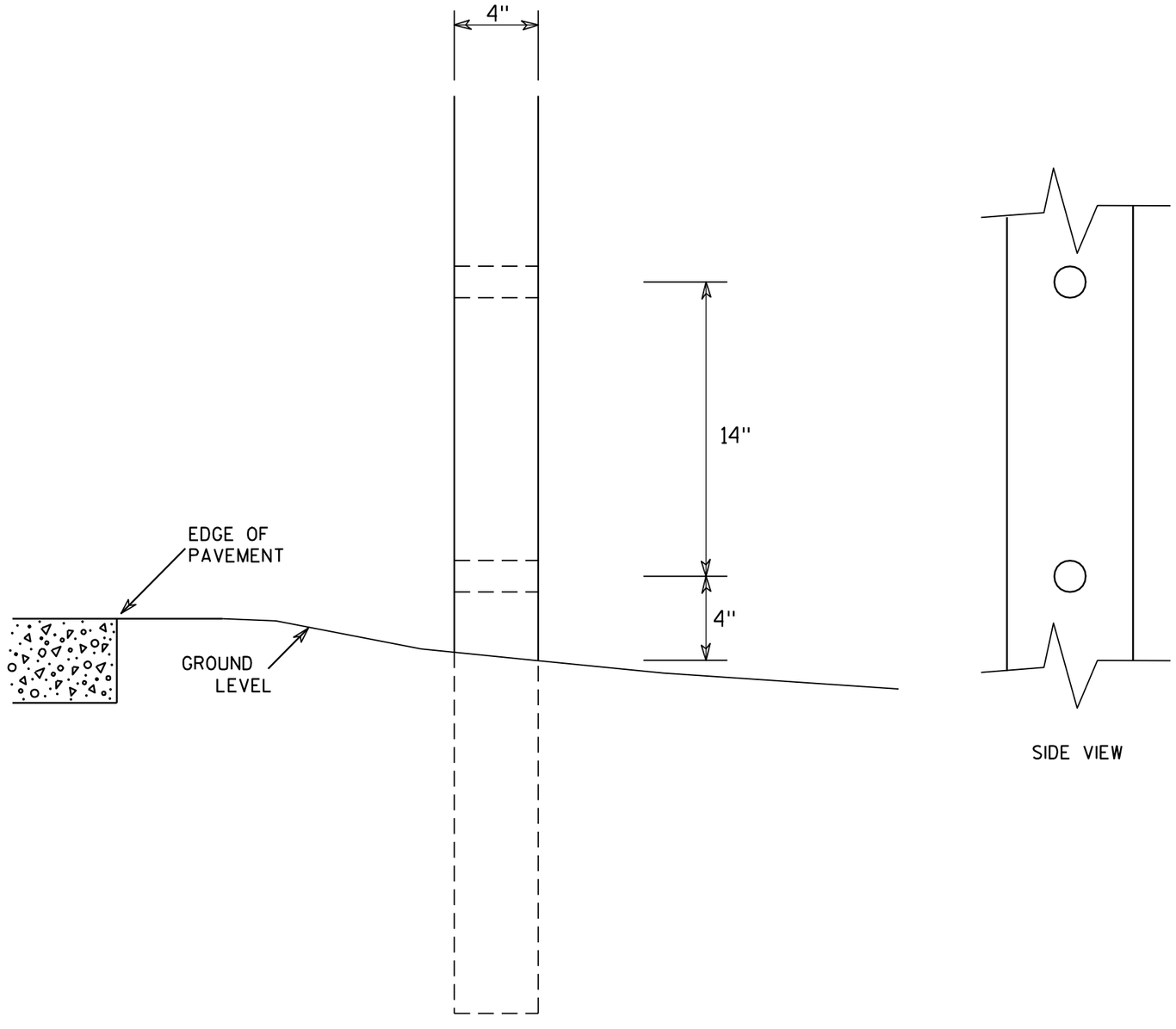
WISCONSIN DEPT OF TRANSPORTATION

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.

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

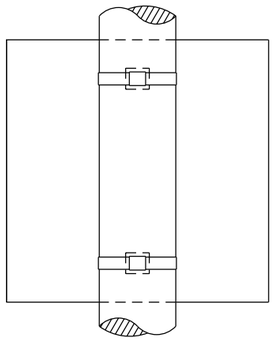
APPROVED Chester J Spang
for State Traffic Engineer

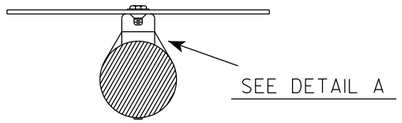
DATE 3/27/97 PLATE NO. A4-11.2

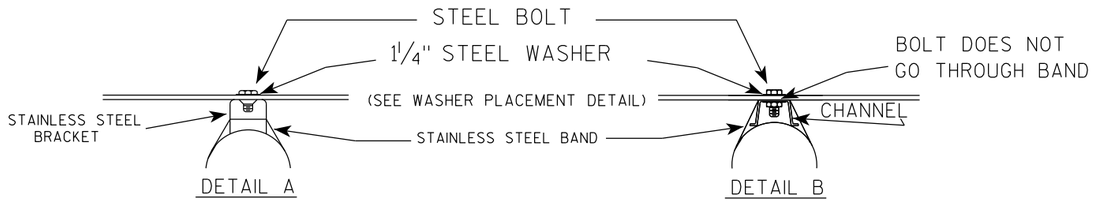
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 25	E

BANDING

SINGLE SIGN



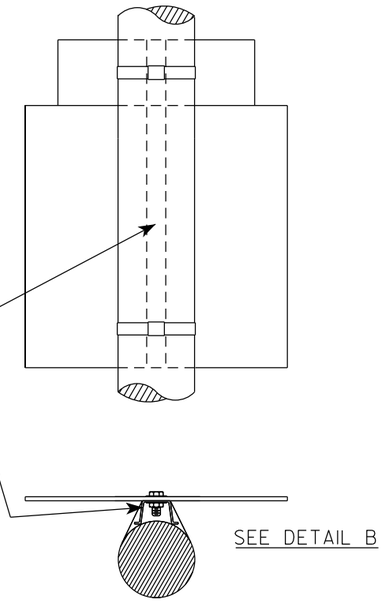




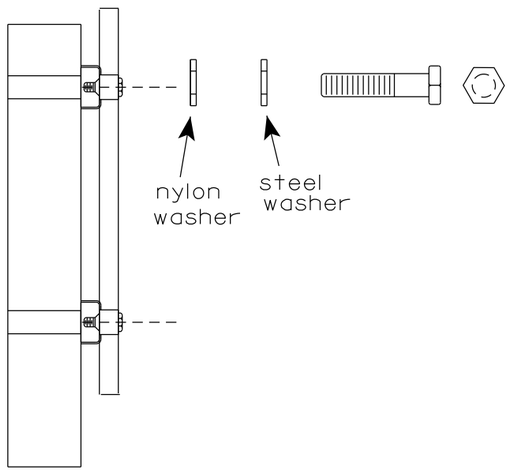
GENERAL NOTES

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



WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X ⅜" I.D. X 1/16" STEEL
1-1/4" O.D. X ⅜" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

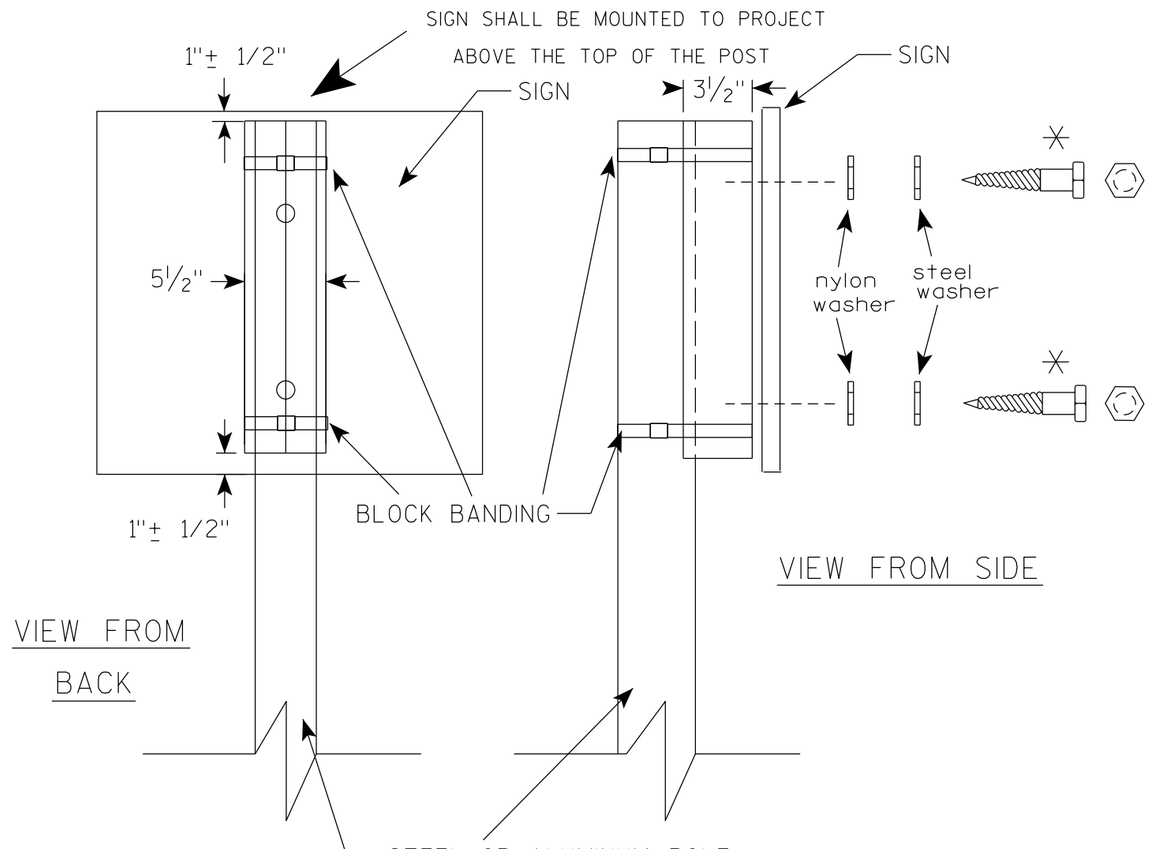
DATE 6/10/19 PLATE NO. A5-9.4

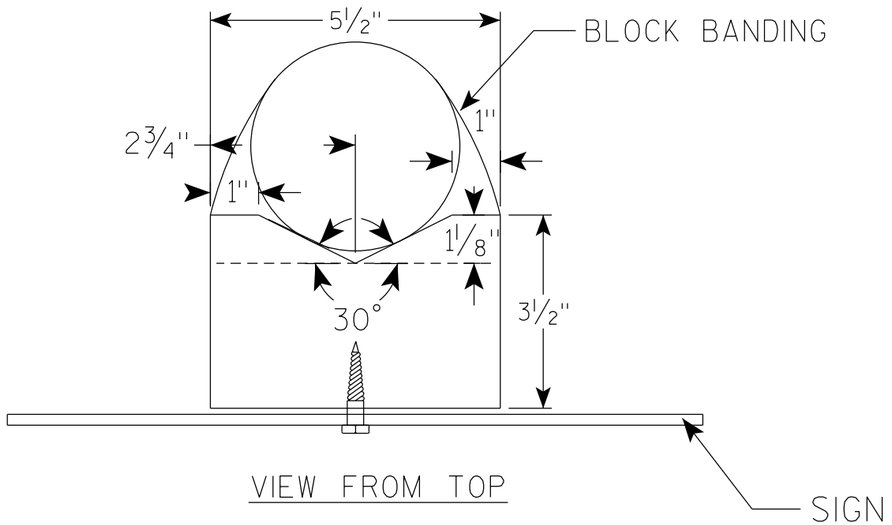
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 26	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





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)

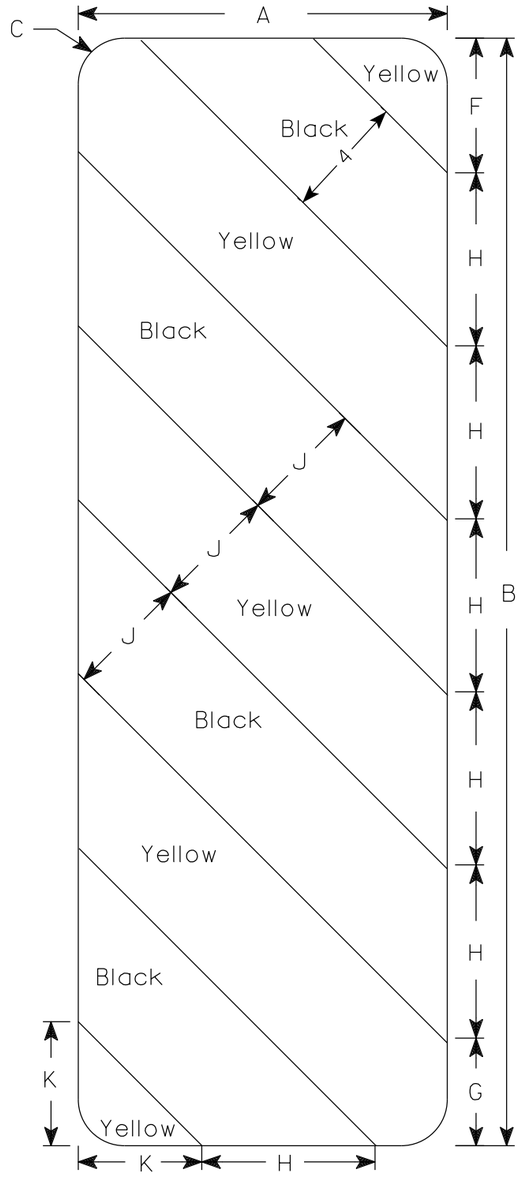
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

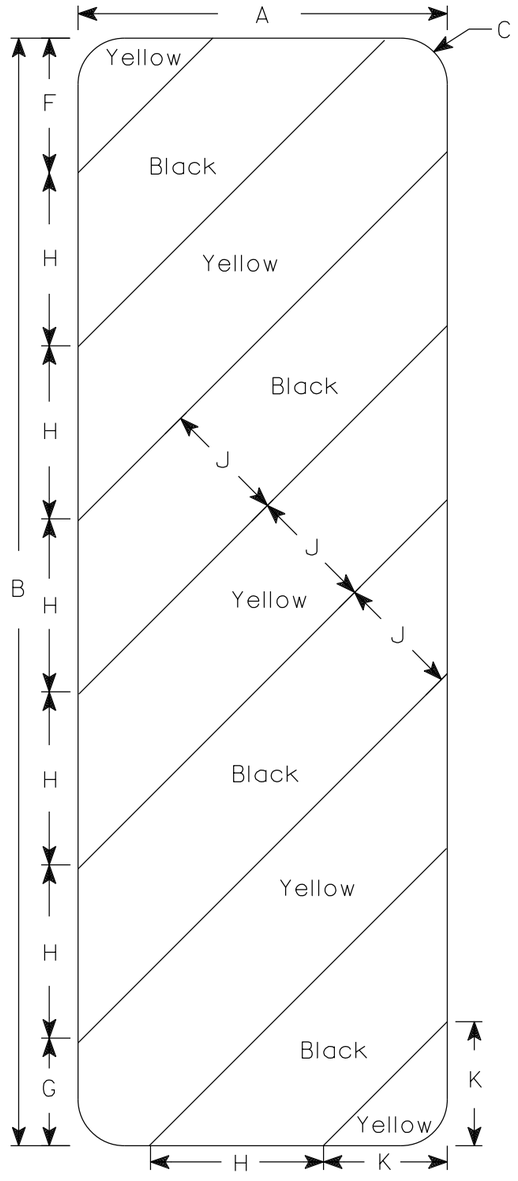
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 27 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

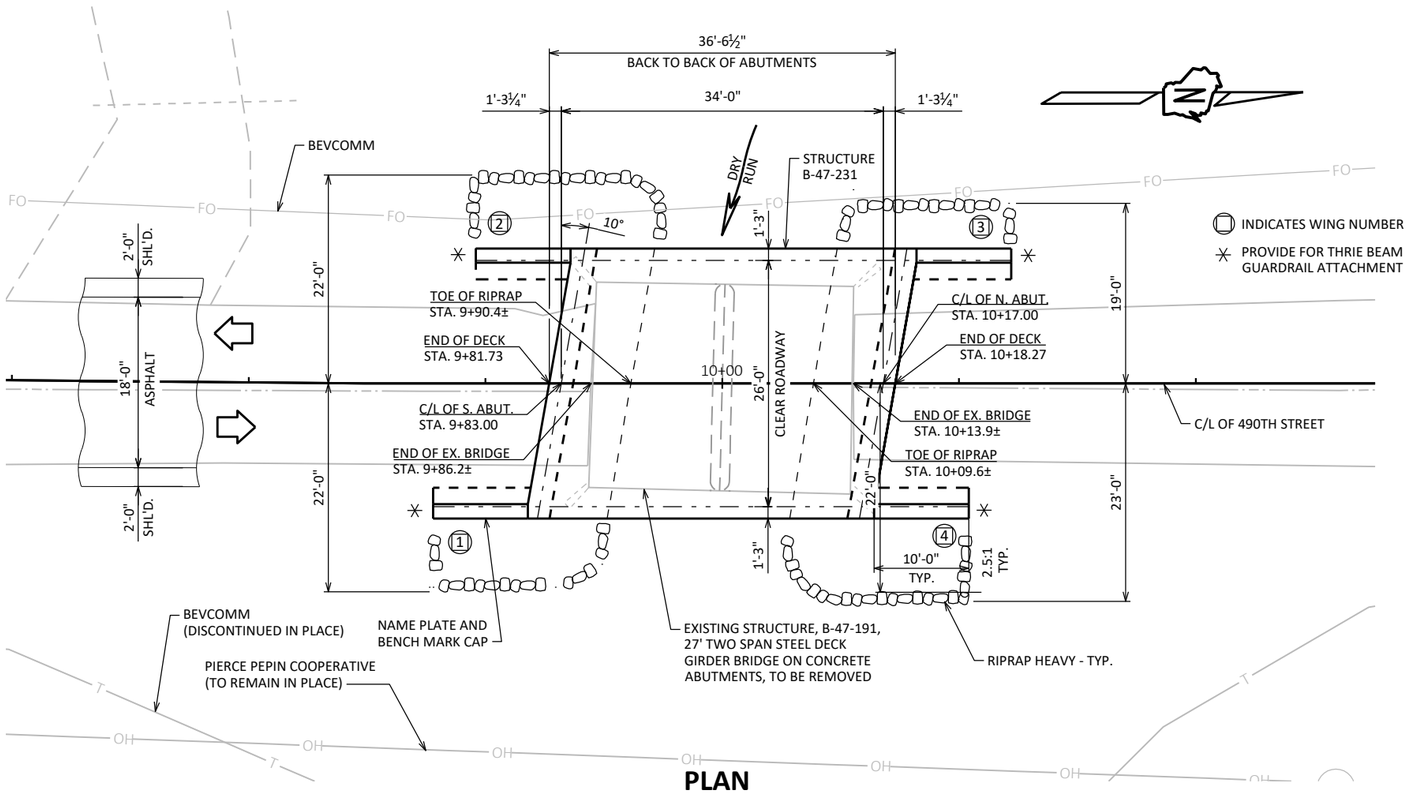
DATE 3/4/2024 PLATE NO. W5-52.10

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate_W552.dgn PLOT DATE : 4-MARCH 2024 11:57 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

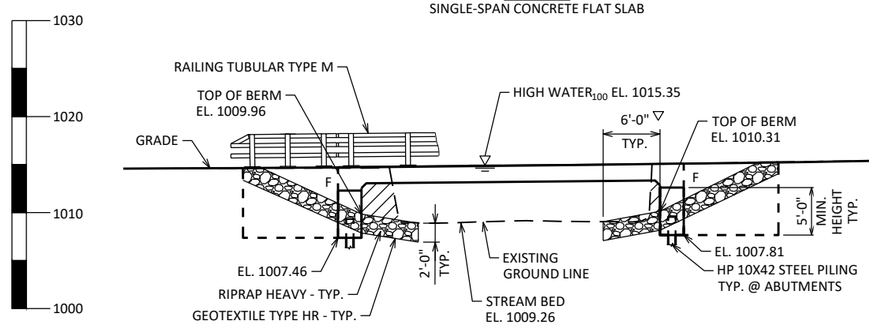
STATE PROJECT NUMBER

7895-00-70



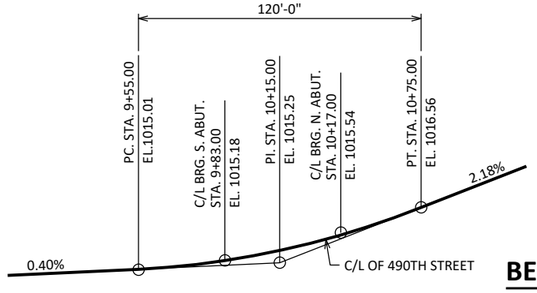
PLAN

SINGLE-SPAN CONCRETE FLAT SLAB



ELEVATION

(NORMAL TO C/L OF ROADWAY)



PROFILE GRADE LINE

(490TH STREET)

COST OF EXCAVATION IN THE HATCHED AREAS SHALL BE INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-47-231".

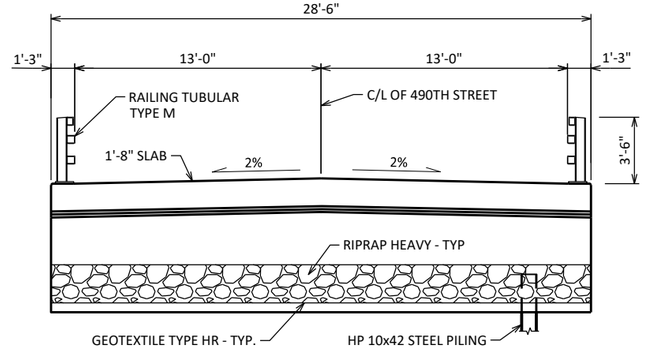
REMOVE EXISTING SUBSTRUCTURE AS NEEDED. COST CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE" ITEM. TYPICAL AT ALL SUBSTRUCTURES.

▽ NORMAL TO C/L OF SUBSTRUCTURE

BENCH MARK

NO.	STATION	DESCRIPTION	ELEV.
50	8+99	RR SPIKE IN PPOL, 36' RT	1012.27
51	9+85	CHIS 'X' IN WINGWALL, 12' LT	1014.03

LIST OF DRAWINGS:



TYPICAL SECTION THRU ROADWAY

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.07
OPERATING RATING: RF = 1.39
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (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 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 120 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 25-'0" LONG AT SOUTH ABUTMENT.
ESTIMATED 25-'0" LONG AT NORTH 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.

HYDRAULIC DATA

100-YEAR FREQUENCY:
Q_{100}= 661 C.F.S.
V_{100}= 6.4 F.P.S.
HW_{100}= EL. 1015.35
WATERWAY AREA = 103 SQ. FT.
DRAINAGE AREA = 0.44 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:
Q_2= 54 C.F.S.
V_2= 3.9 F.P.S.
HW_2= EL. 1014.12

TRAFFIC DATA

FEATURE ON:
ADT = <100 (2025)
ADT = <100 (2045)
R.D.S. = 40 MPH

05/30/2024

STRUCTURE DESIGN CONTACTS:

AARON BONK	608-261-0261
DANIEL SYDOW	715-834-3161

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 08/23/24
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-47-231

490TH STREET OVER DRY RUN

COUNTY	TOWN
PIERCE	HARTLAND/SALEM

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
NBE	JLB	CLP	DNS

GENERAL PLAN

SHEET 1 OF 14
29

I.D. 7895-00-70 DATE:

8

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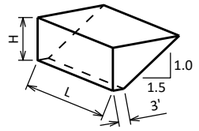
STATE PROJECT NUMBER

7895-00-70

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	S. ABUT.	N. ABUT.	TOTALS
203.0250	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS (B-47-191)	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-47-231	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	120	120	240
502.0100	CONCRETE MASONRY BRIDGES	CY	68.8	28.7	28.9	127
502.3200	PROTECTIVE SURFACE TREATMENT	SY	136.9	8.3	8.3	154
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	1,710	1,710	3,420
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	11,800	1,360	1,360	14,520
513.4061	RAILING TUBULAR TYPE M	LF	73	23	23	119
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	9	9	18
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	125	125	250
606.0300	RIPRAP HEAVY	CY	---	35	35	70
612.0406	PIPE UNDERDRAIN WRAPPED 6 - INCH	LF	---	90	90	180
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	30	30	60
645.0120	GEOTEXTILE TYPE HR	SY	---	80	80	160
	NON-BID ITEMS					
	FILLER	SIZE	---	---	---	½", ¾"



ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR COVER 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.

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

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

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

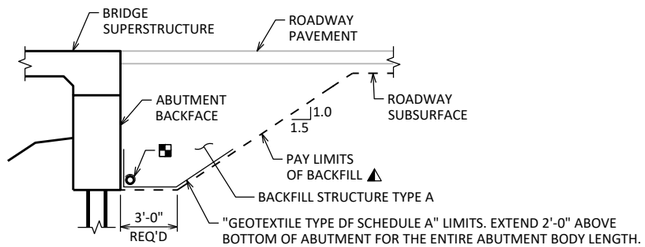
THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-47-231" SHALL BE THE EXISTING GROUNDLINE.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET AND APPLY TO THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENTS.

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 ABUTMENTS.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

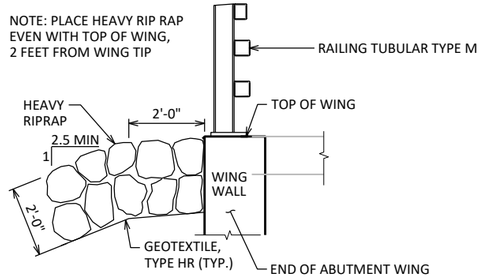
EXISTING SUBSTRUCTURE LOCATIONS ARE BASED ON SURVEY. EXTENT OF BELOW GRADE SUBSTRUCTURE ARE NOT KNOWN. REMOVE EXISTING SUBSTRUCTURE AS NEEDED TO BUILD NEW SUBSTRUCTURE. COST OF SUBSTRUCTURE REMOVAL IS CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS" BID ITEM.



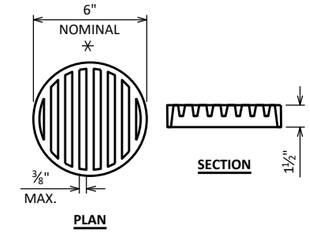
TYPICAL SECTION THRU ABUTMENT

⚠ 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.



TYPICAL FILL SECTION AT WING TIPS

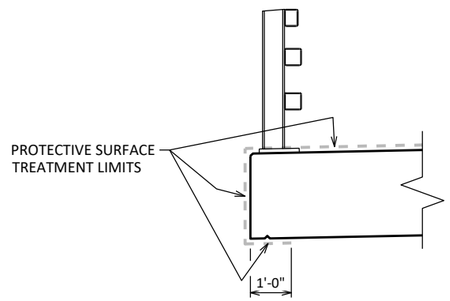


RODENT SHIELD DETAIL

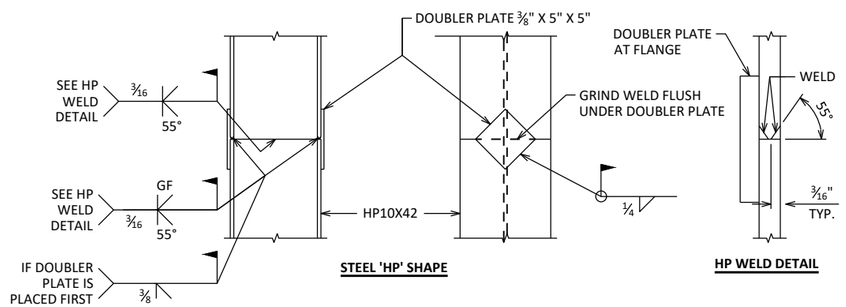
✳ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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.



PROTECTIVE SURFACE TREATMENT DETAIL



'HP' PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-231

DRAWN BY CLP | PLANS CK'D NBE

QUANTITIES AND NOTES

SHEET 2 OF 14

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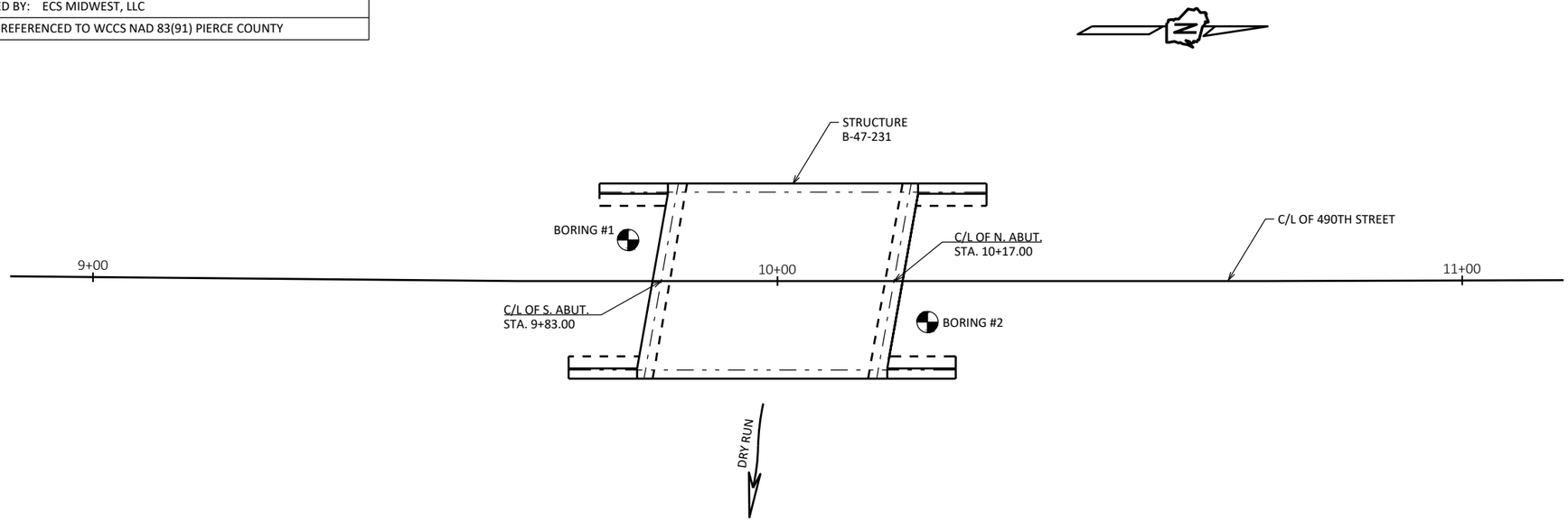
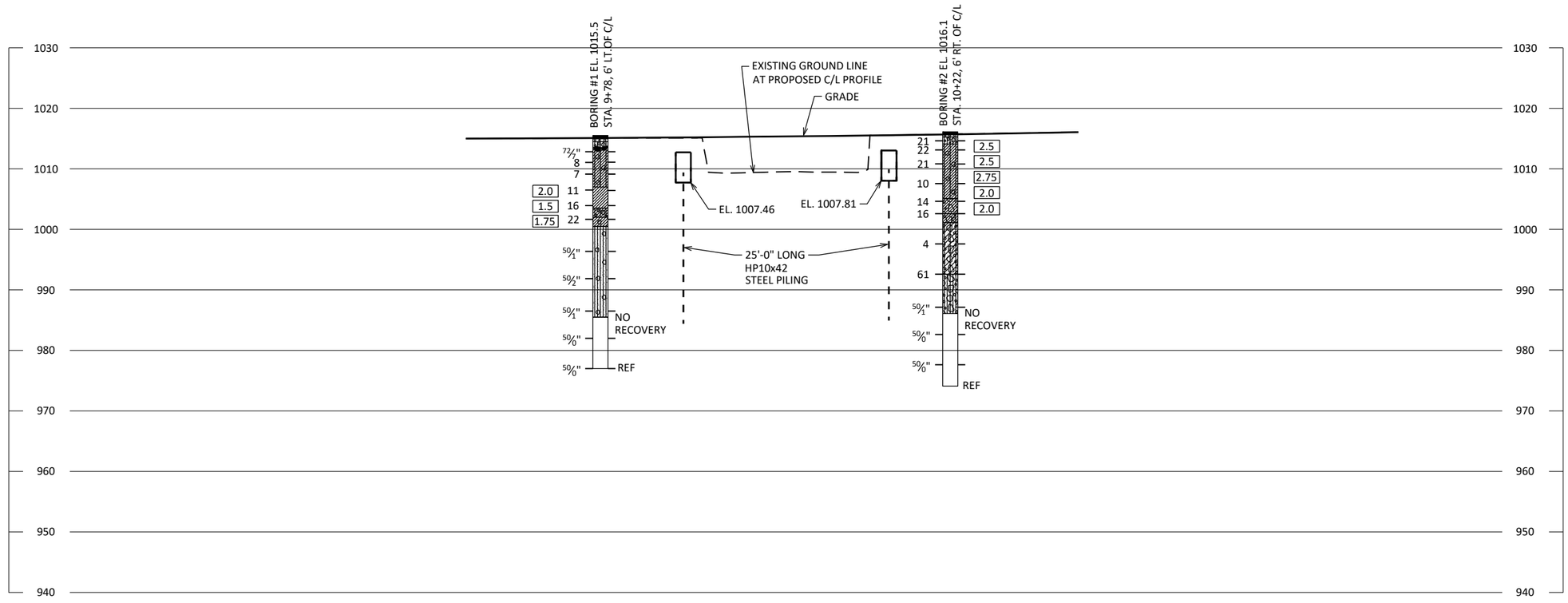
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	DECEMBER 5, 2023	291145.05	511520.50
2	DECEMBER 5, 2023	291188.74	511532.58
BORINGS COMPLETED BY: ECS MIDWEST, LLC			
REPORT COMPLETED BY: ECS MIDWEST, LLC			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) PIERCE COUNTY			





STATE PROJECT NUMBER

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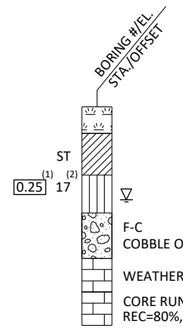
MATERIAL SYMBOLS

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-47-231

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SUBSURFACE EXPLORATION

SHEET 3 OF 14

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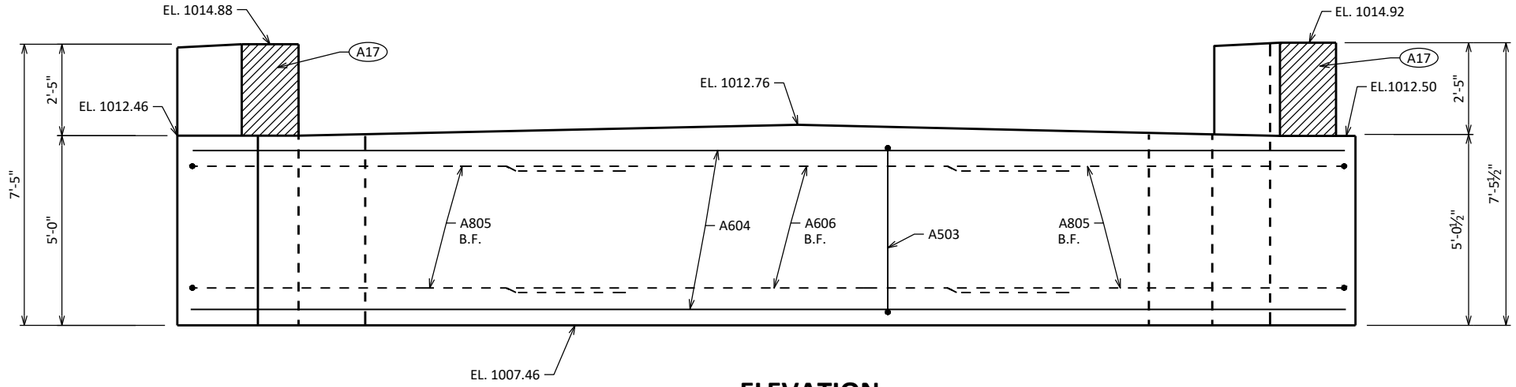
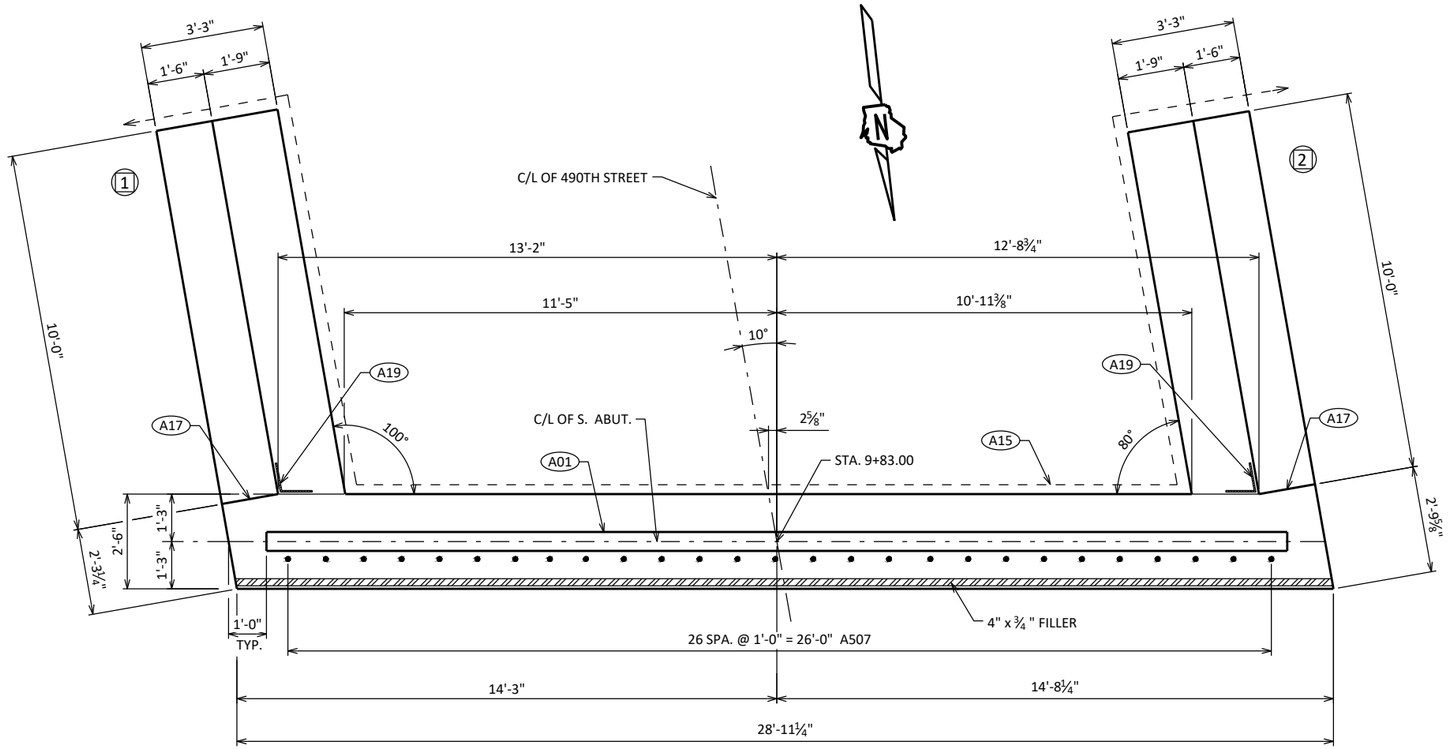
STATE PROJECT NUMBER
7895-00-70

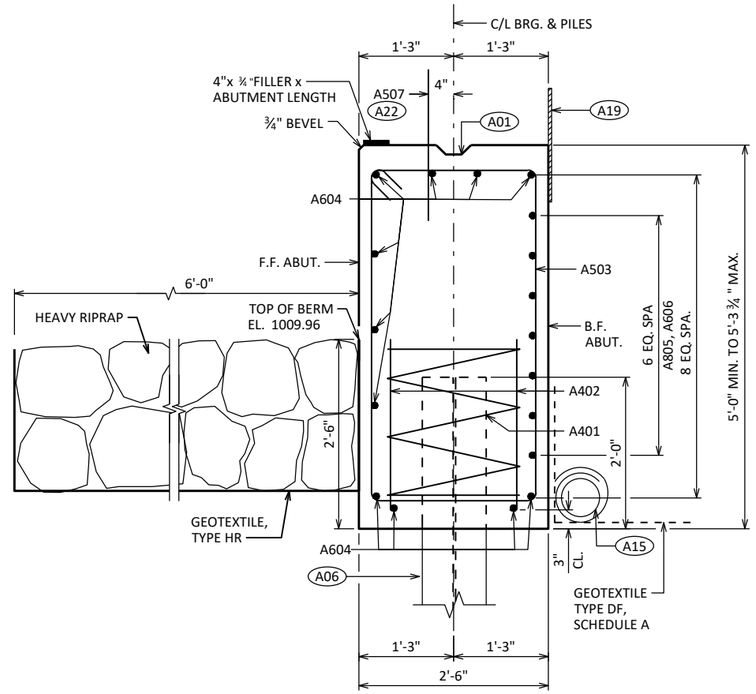


ELEVATION

(LOOKING SOUTH)



PLAN



SECTION THRU BODY

A01 CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

A06 SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE.

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

A17 ½" FILLER (INCLUDED IN WING LENGTH): 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" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-231

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SOUTH ABUTMENT

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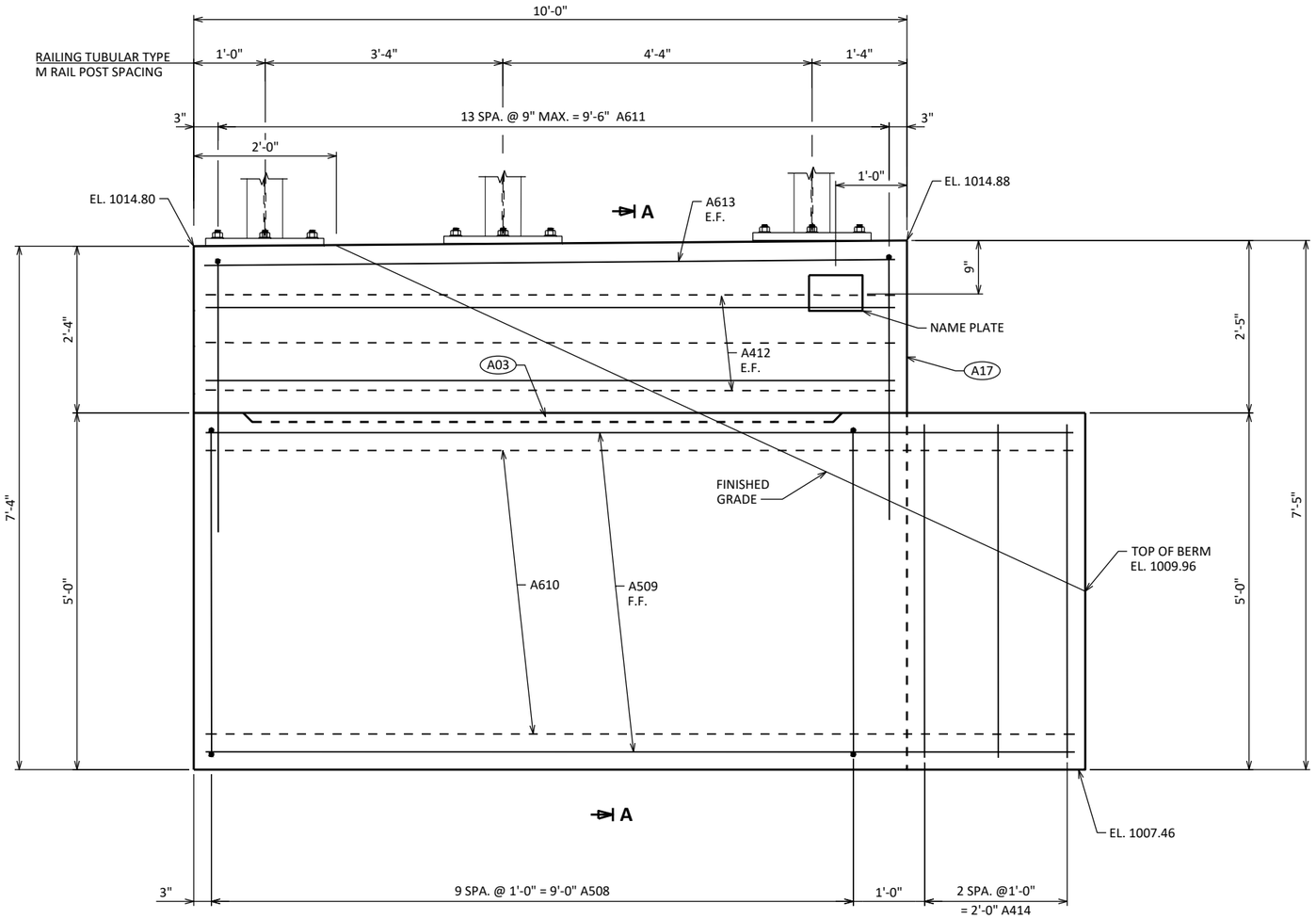
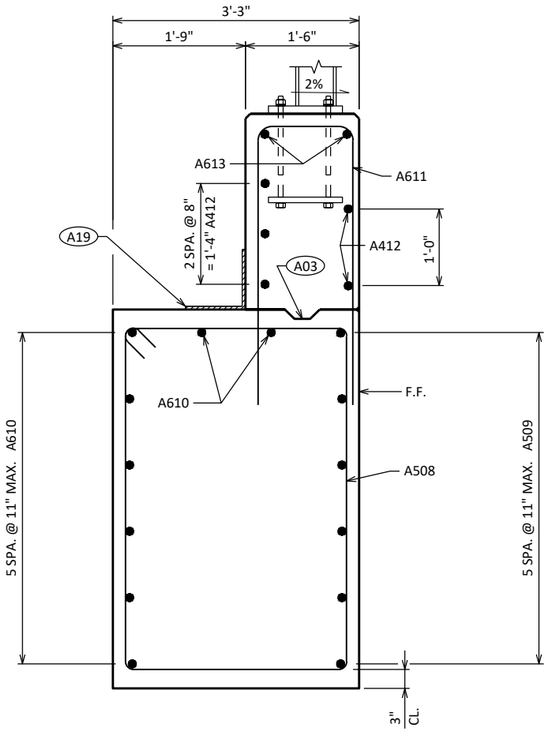
STATE PROJECT NUMBER

7895-00-70



ELEVATION - WING 1



SECTION A

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

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-231

DRAWN BY CLP | PLANS CK'D NBE

SOUTH ABUTMENT WING 1 DETAILS

SHEET 5 OF 14

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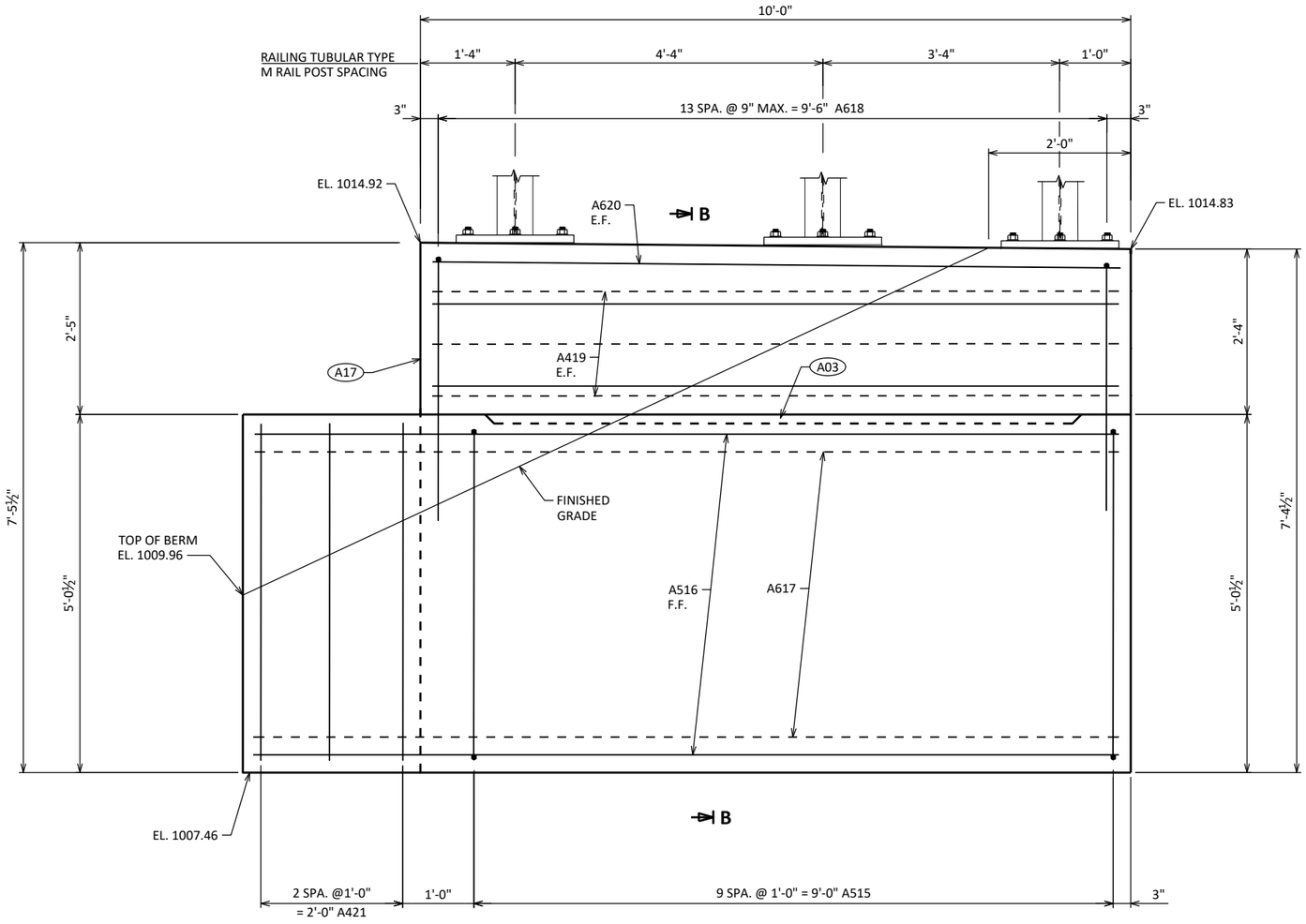
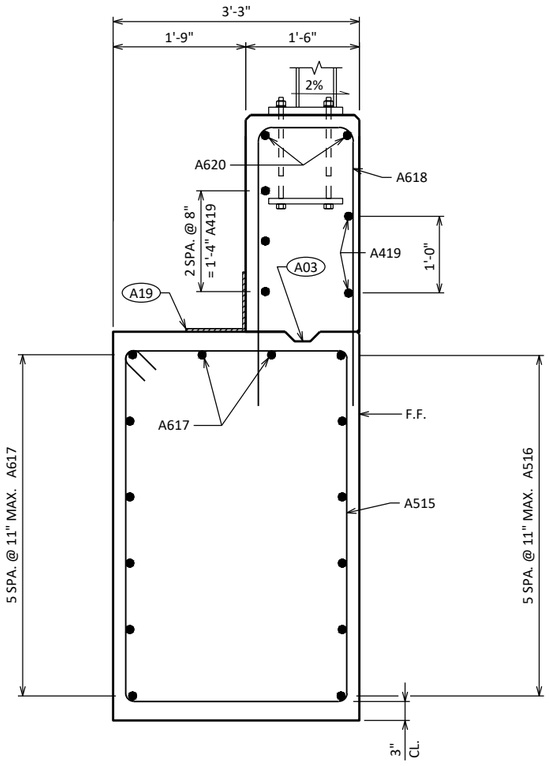


ELEVATION - WING 2



SECTION B

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

A17 ½" FILLER (INCLUDED IN WING LENGTH): 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" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-231

DRAWN BY CLP | PLANS CK'D NBE

SOUTH ABUTMENT WING 2 DETAILS

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STATE PROJECT NUMBER

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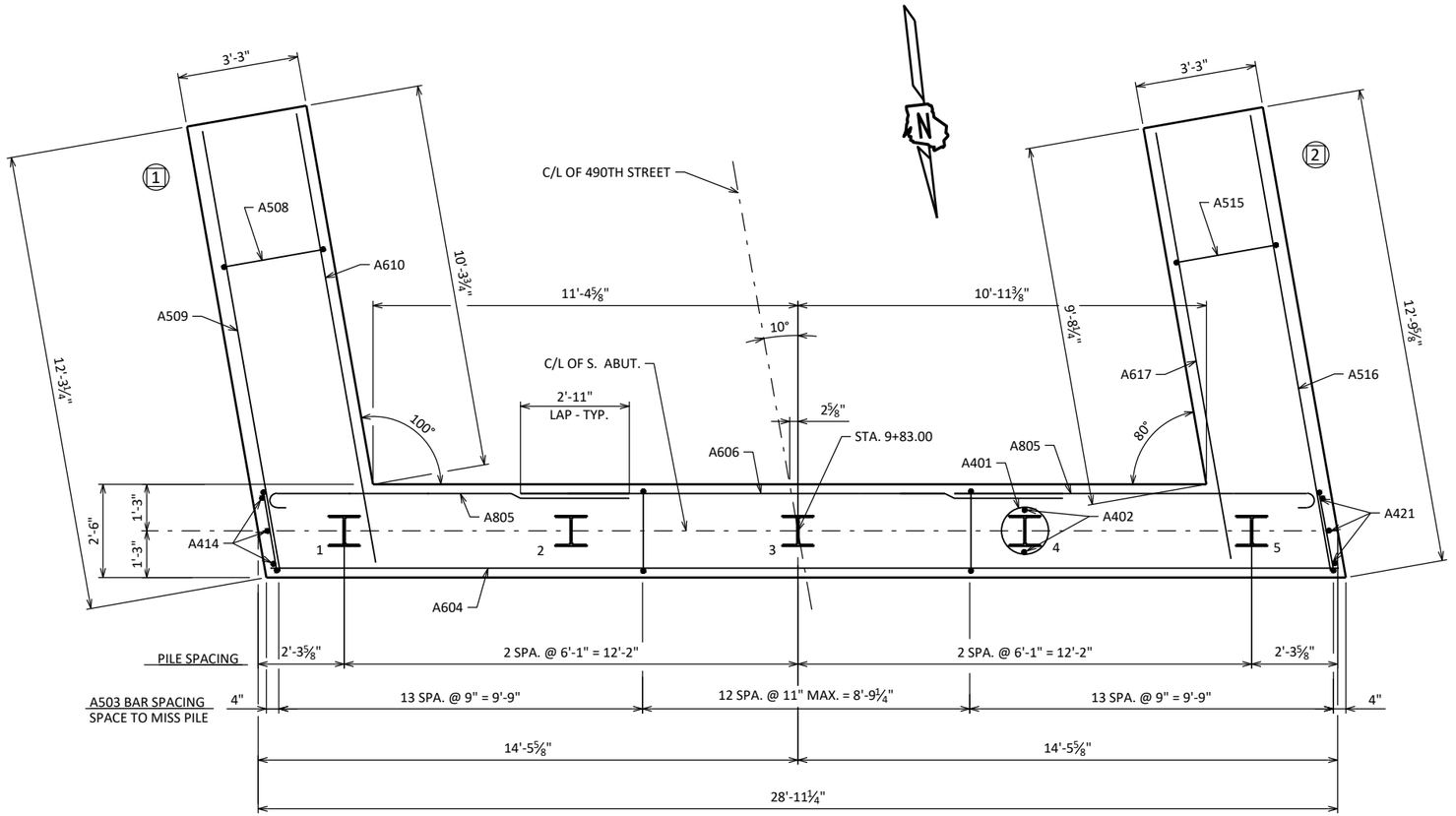


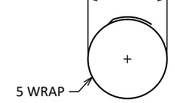
PILE LAYOUT

BILL OF BARS

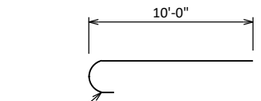
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		5	28'-0"	X		BODY @ PILES
A402		10	2'-3"			BODY @ PILES
A503		39	14'-0"	X		BODY VERT.
A604		11	28'-8"			BODY HORIZ.
A805		14	10'-11"	X		BODY HORIZ. @ WINGS 1 & 2 B.F.
A606		7	14'-5"			BODY HORIZ. BETWEEN WINGS 1 & 2 B.F.
A507	X	27	2'-0"			BODY DOWELS
A508	X	10	15'-8"	X		WING 1 VERT.
A509	X	6	11'-11"			WING 1 HORIZ. F.F.
A610	X	8	12'-2"			WING 1 HORIZ. B.F. & TOP
A611	X	14	9'-6"	X		WING 1 VERT.
A412	X	5	9'-8"			WING 1 HORIZ. E.F.
A613	X	2	9'-8"			WING 1 HORIZ. E.F. TOP
A414	X	3	4'-7"			BODY VERT. END @ WING 1
A515	X	10	15'-8"	X		WING 2 VERT.
A516	X	6	12'-5"			WING 2 HORIZ. F.F.
A617	X	8	11'-7"			WING 2 HORIZ. B.F. & TOP
A618	X	14	9'-6"	X		WING 2 VERT.
A419	X	5	9'-8"			WING 2 HORIZ. E.F.
A620	X	2	9'-8"			WING 2 HORIZ. E.F. TOP
A421	X	3	4'-7"			BODY VERT. END @ WING 2

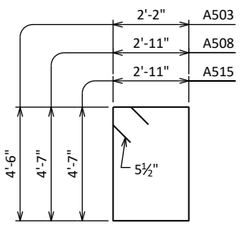
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



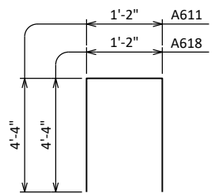
A401



A805



A503, A508, A515



A611, A618

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-231

DRAWN BY CLP | PLANS CK'D NBE

SOUTH ABUTMENT PILE LAYOUT AND BILL OF BARS

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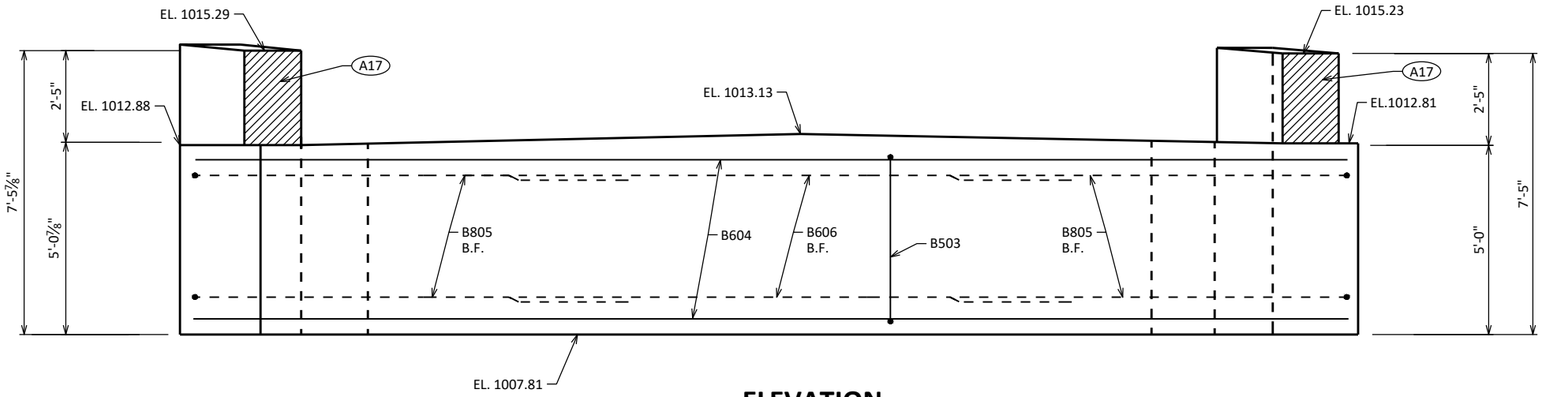
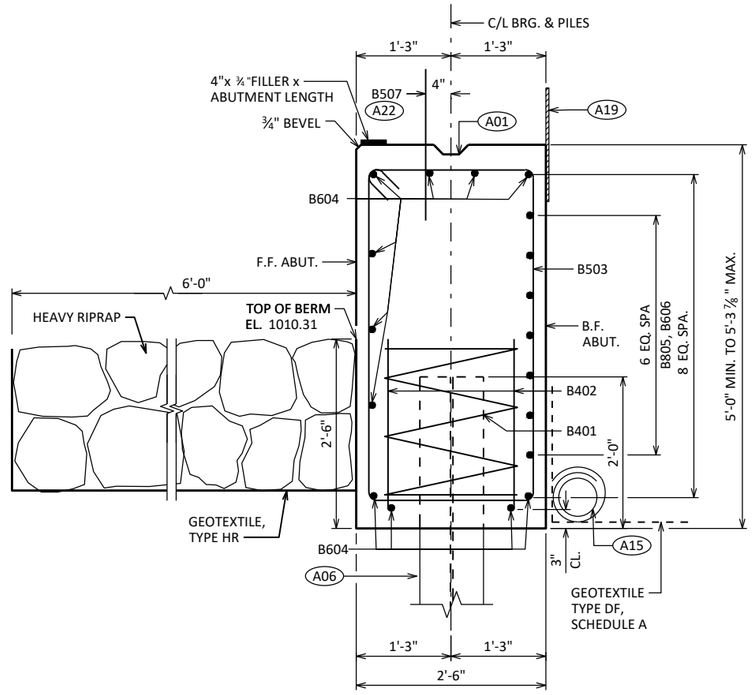
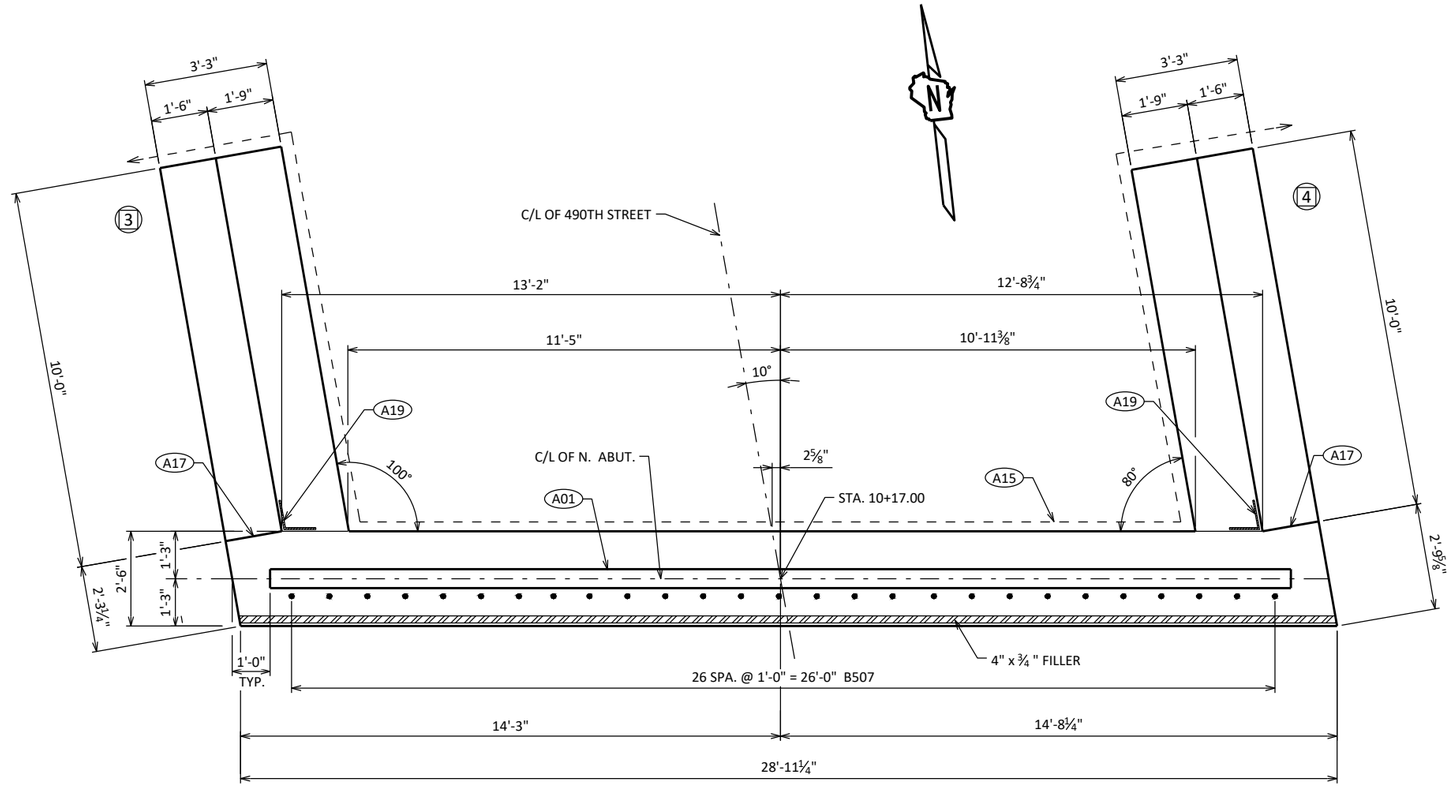


ELEVATION

(LOOKING NORTH)



SECTION THRU BODY



PLAN

A01 CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.

A06 SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE.

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

A17 ½" FILLER (INCLUDED IN WING LENGTH): 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" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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

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DRAWN BY	CLP	PLANS CK'D	NBE

NORTH ABUTMENT

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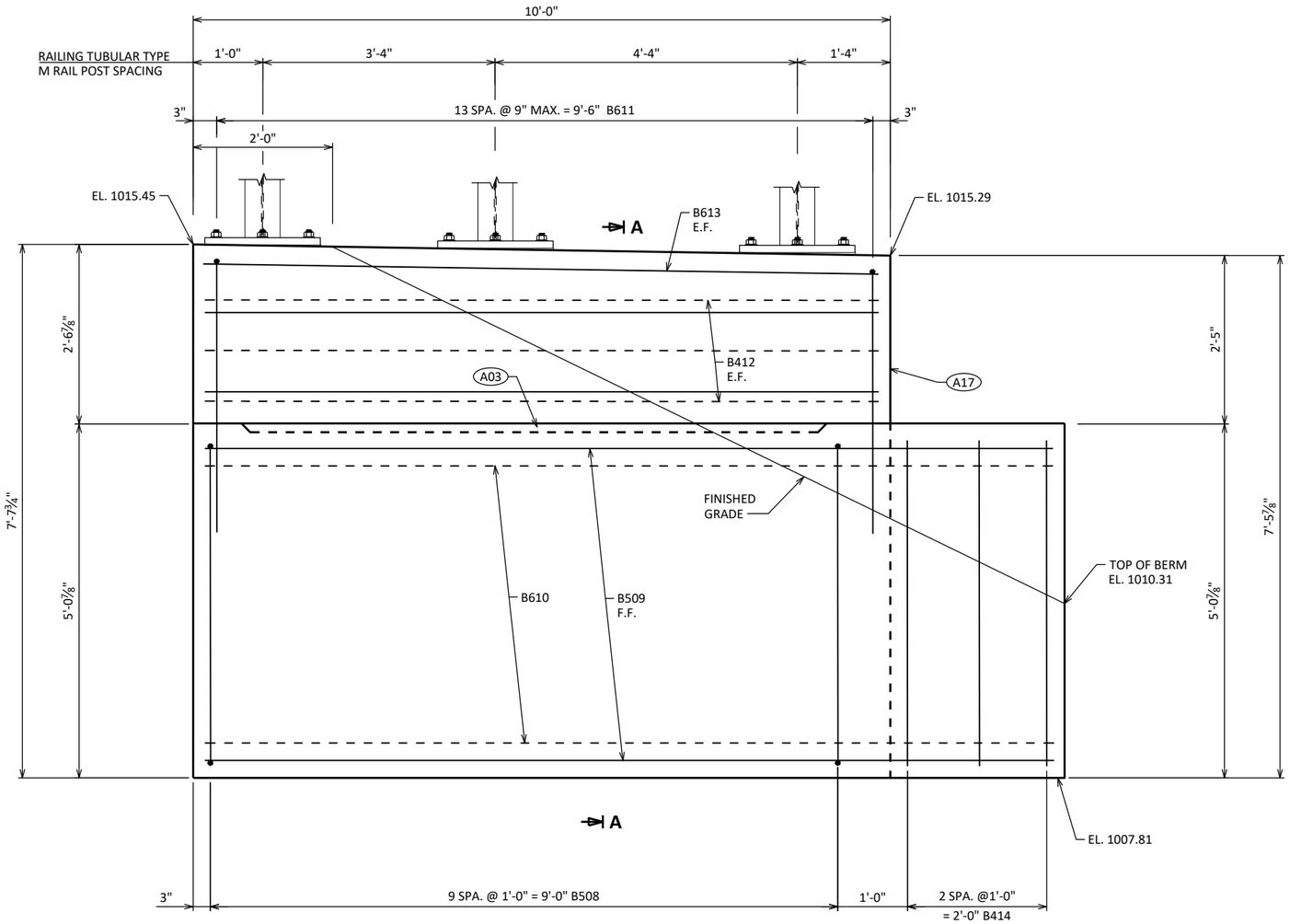
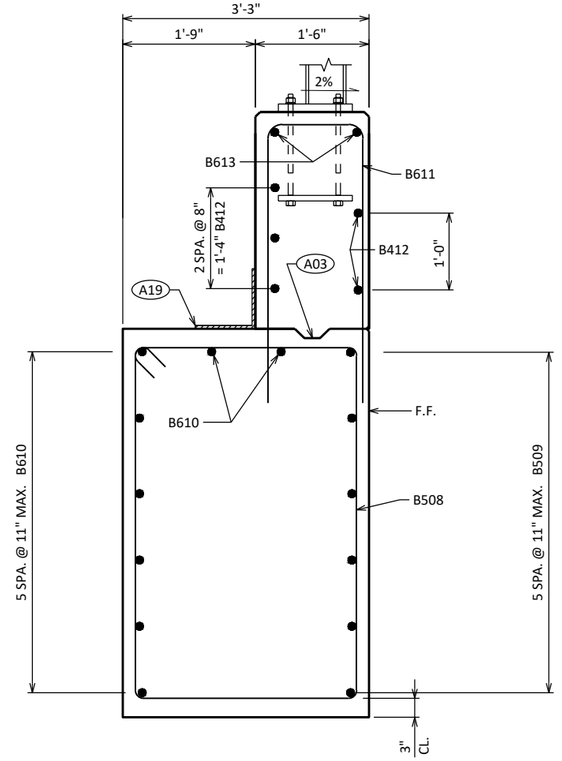


ELEVATION - WING 3



SECTION A

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

A17 ½" FILLER (INCLUDED IN WING LENGTH): 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" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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NORTH ABUTMENT WING 3 DETAILS

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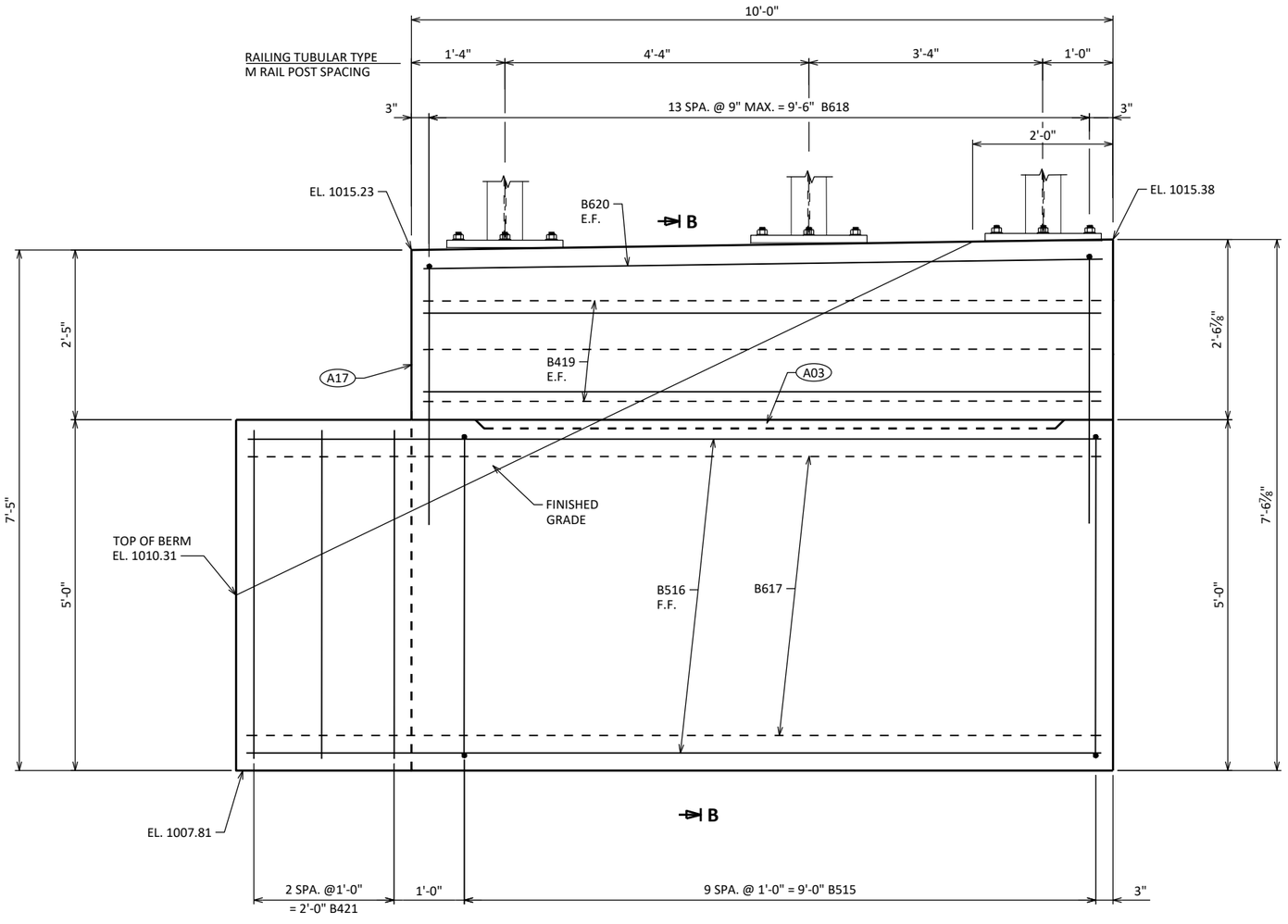
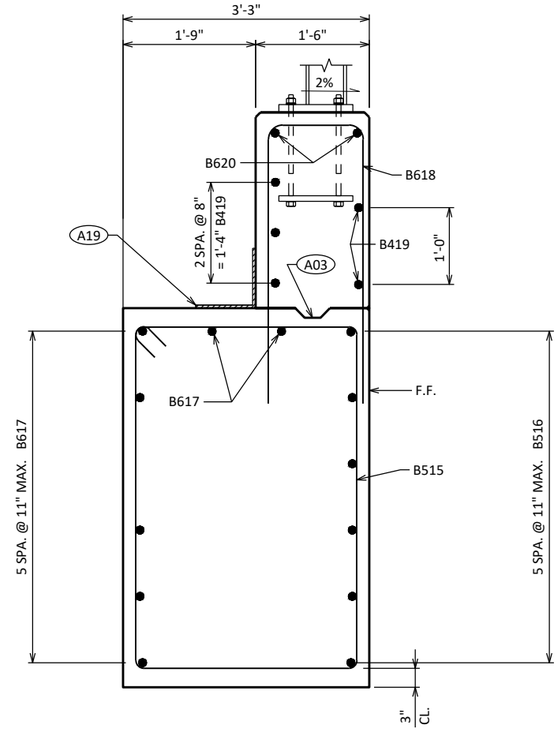


ELEVATION - WING 4



SECTION B

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

A17 ½" FILLER (INCLUDED IN WING LENGTH): 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" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-231

DRAWN BY CLP | PLANS CK'D NBE

NORTH ABUTMENT WING 4 DETAILS

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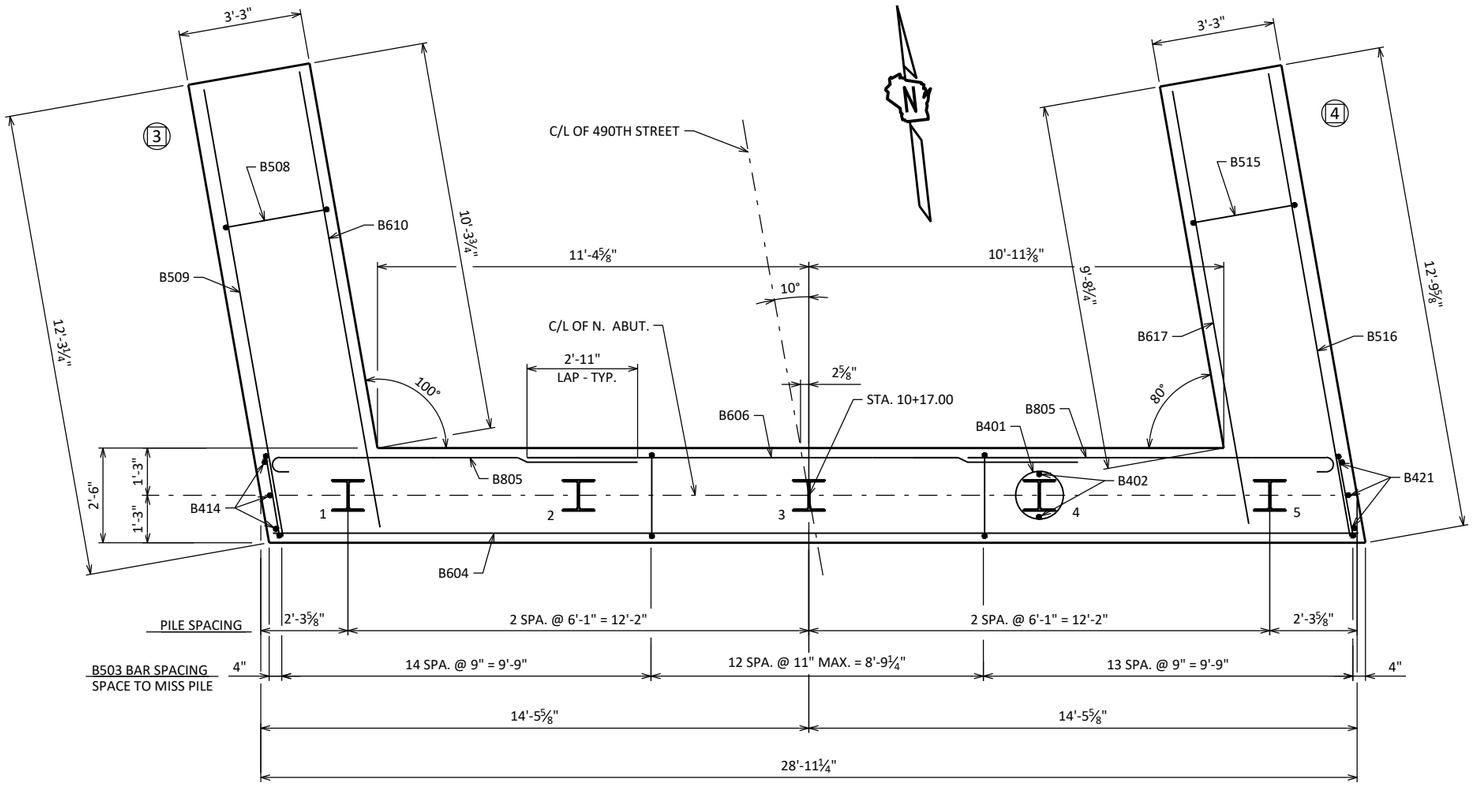


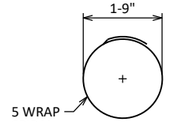
PILE LAYOUT

BILL OF BARS

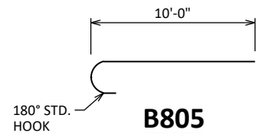
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B401		5	28'-0"	X		BODY @ PILES
B402		10	2'-3"			BODY @ PILES
B503		39	14'-0"	X		BODY VERT.
B604		11	28'-8"			BODY HORIZ.
B805		14	10'-11"	X		BODY HORIZ. @ WINGS 3 & 4 B.F.
B606		7	14'-5"			BODY HORIZ. BETWEEN WINGS 3 & 4 B.F.
B507	X	27	2'-0"			BODY DOWELS
B508	X	10	15'-8"	X		WING 3 VERT.
B509	X	6	11'-11"			WING 3 HORIZ. F.F.
B610	X	8	12'-2"			WING 3 HORIZ. B.F. & TOP
B611	X	14	9'-6"	X		WING 3 VERT.
B412	X	5	9'-8"			WING 3 HORIZ. E.F.
B613	X	2	9'-8"			WING 3 HORIZ. E.F. TOP
B414	X	3	4'-7"			BODY VERT. END @ WING 3
B515	X	10	15'-8"	X		WING 4 VERT.
B516	X	6	12'-5"			WING 4 HORIZ. F.F.
B617	X	8	11'-7"			WING 4 HORIZ. B.F. & TOP
B618	X	14	9'-6"	X		WING 4 VERT.
B419	X	5	9'-8"			WING 4 HORIZ. E.F.
B620	X	2	9'-8"			WING 4 HORIZ. E.F. TOP
B421	X	3	4'-7"			BODY VERT. END @ WING 4

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



B401



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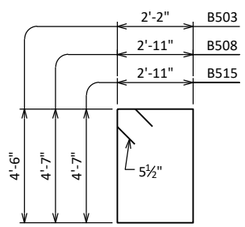
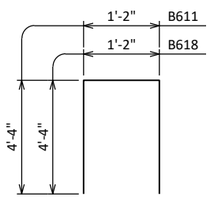


B503, B508, B515



B611, B618

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-47-231

DRAWN BY CLP | PLANS CK'D NBE

NORTH ABUTMENT PILE LAYOUT AND BILL OF BARS

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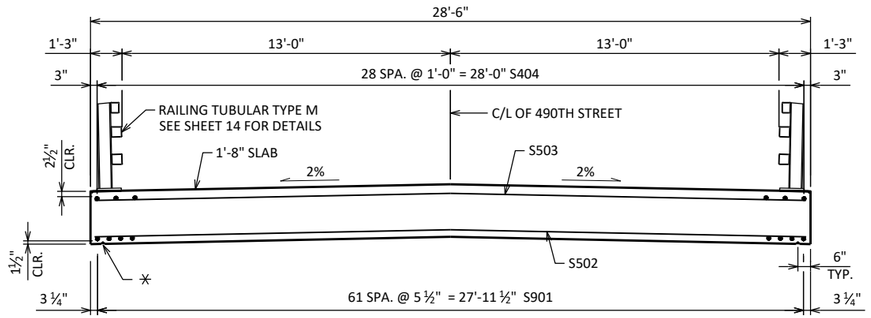


TYPICAL SECTION THRU BRIDGE

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT 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 TOLERANCE NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

* ¾" V-GROOVE. EXTEND V-GROOVE TO 6" FROM F.F. OF ABUT.

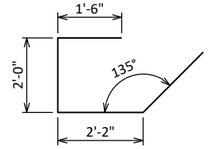
V-GROOVES ARE REQUIRED.

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
S901	x	62	31'-4"			SLAB LONG. BOT.
S502	x	49	28'-7"			SLAB TRANS. BOT.
S503	x	49	28'-7"			SLAB TRANS. TOP
S404	x	29	36'-2"			SLAB LONG. TOP
S505	x	58	7'-5"	X		SLAB @ ABUT. DIAPHRAGM STIRRUPS
S506	x	4	28'-7"			SLAB @ ABUT. DIAPHRAGM TRANS.
S607	x	28	12'-0"	X		SLAB @ RAIL POSTS
S608	x	40	6'-0"			SLAB @ INT. RAIL POSTS
S609	x	16	6'-0"	X		SLAB @ END RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



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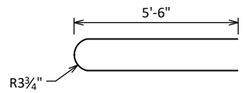
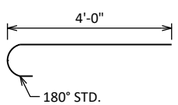
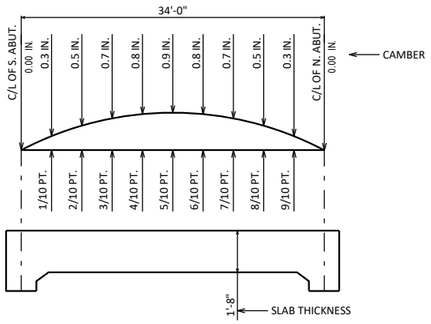


S607



S609



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.

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

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

TOP OF SLAB ELEVATIONS

LOCATION	C/L S. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L N. ABUT.
W. EDGE OF SLAB	1014.92	1014.95	1014.98	1015.01	1015.05	1015.08	1015.12	1015.16	1015.20	1015.25	1015.29
C/L OF 490TH STREET	1015.18	1015.21	1015.24	1015.27	1015.30	1015.34	1015.38	1015.42	1015.46	1015.50	1015.54
E. EDGE OF SLAB	1014.88	1014.90	1014.93	1014.96	1014.99	1015.03	1015.07	1015.10	1015.14	1015.18	1015.23

SURVEY TOP OF SLAB ELEVATIONS

	ABUTMENT	5/10 PT.	ABUTMENT
W. EDGE OF SLAB			
C/L OF 490TH STR			
E. EDGE OF SLAB			

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

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STRUCTURE B-47-231

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SUPERSTRUCTURE

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STATE PROJECT NUMBER

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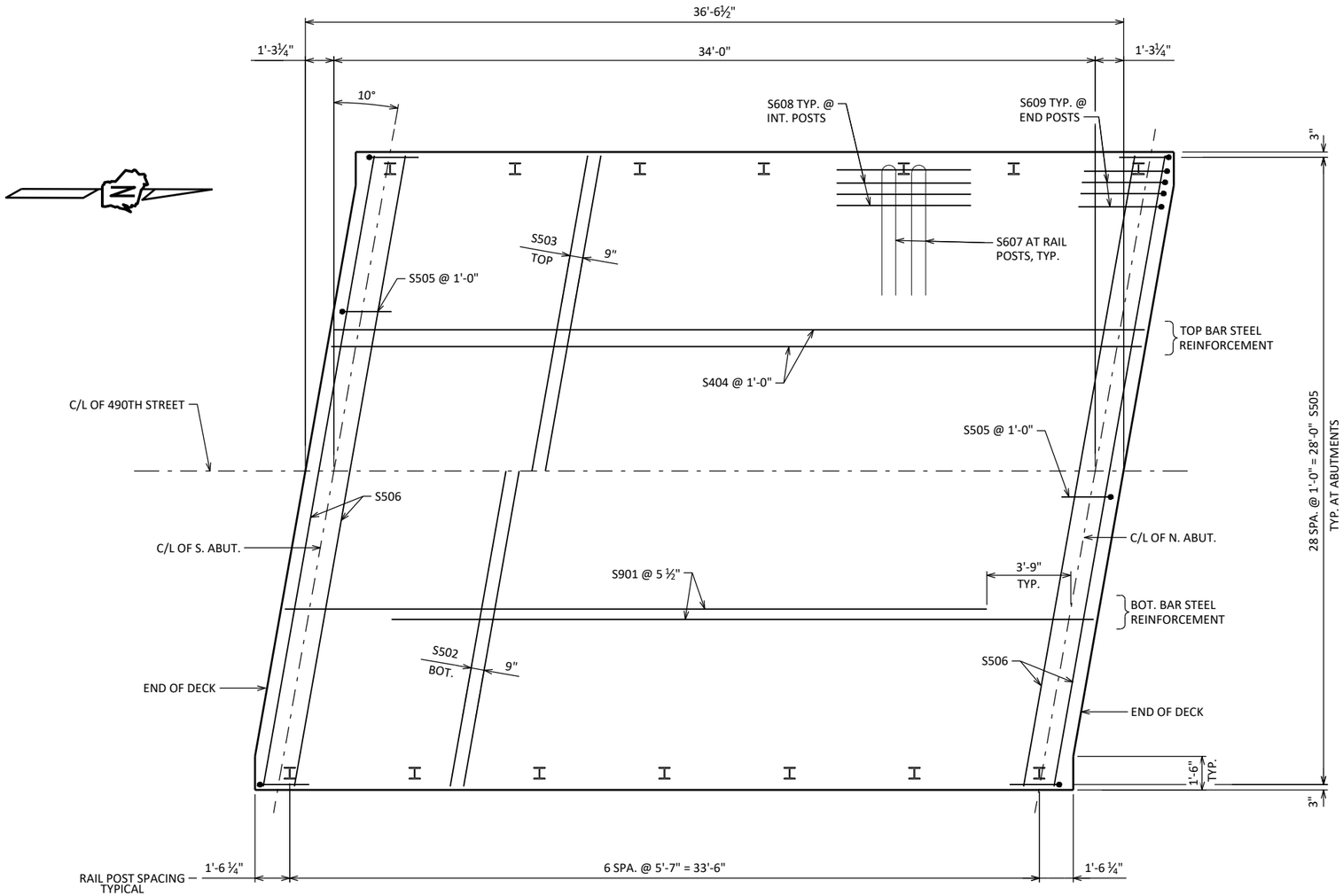
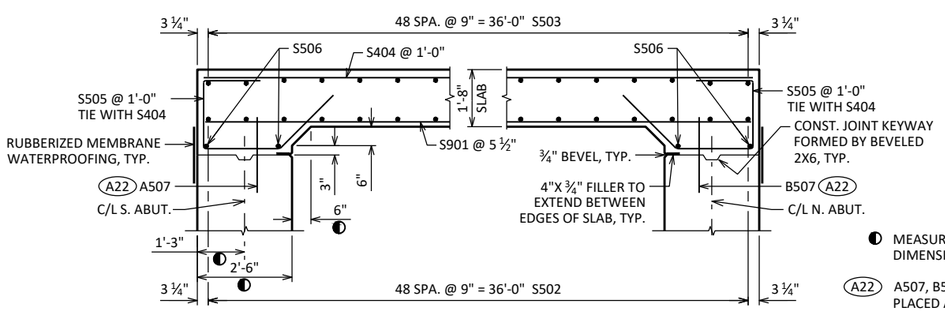


PLAN



LONGITUDINAL SECTION

DIMENSIONS ARE GIVEN PARALLEL TO C/L ROADWAY UNLESS OTHERWISE NOTED.

◐ MEASURED NORMAL TO THE C/L OF ABUTMENT. DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS.

(A22) A507, B507 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

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DRAWN BY CLP | PLANS CK'D NBE

SUPERSTRUCTURE PLAN

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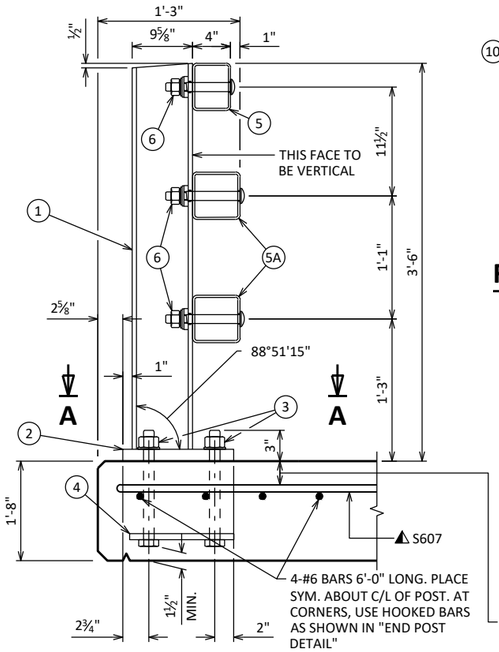
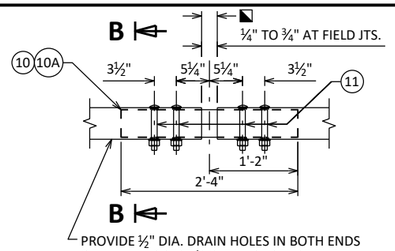
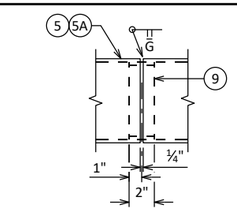


SECTION THRU RAILING ON DECK

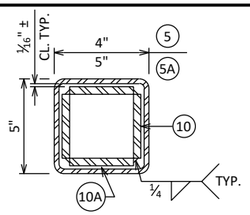


FIELD ERECTION JOINT DETAIL

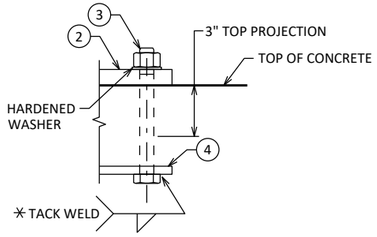


SHOP RAIL SPLICE DETAIL

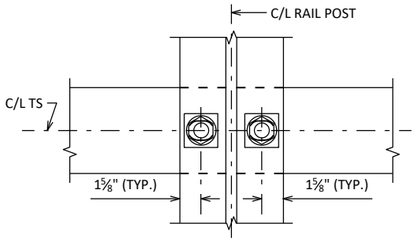
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



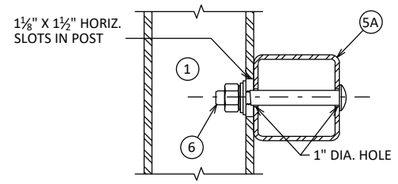
SECTION B-B



ANCHOR BOLTS



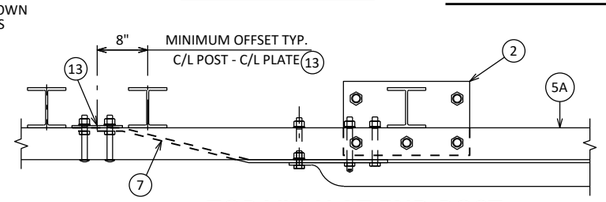
SECTION THRU POST WEB



SECTION THRU RAIL

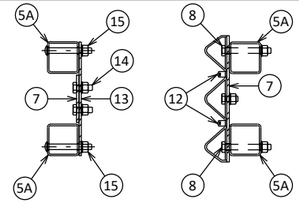
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT



SECTION C-C

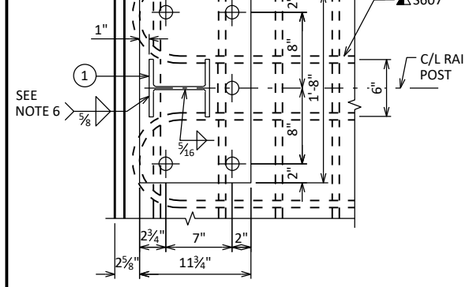
SECTION D-D

LEGEND

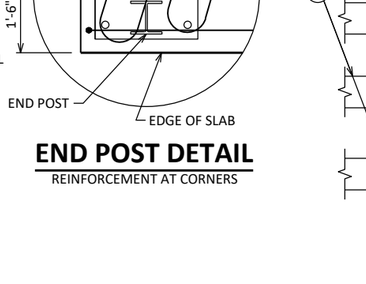
1. W6 X 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" X 11¾" X 1'-8" WITH 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 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.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
14. ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1" DIA. HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

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

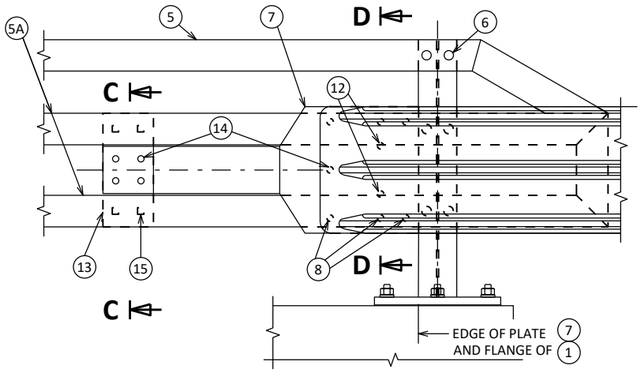


SECTION A-A



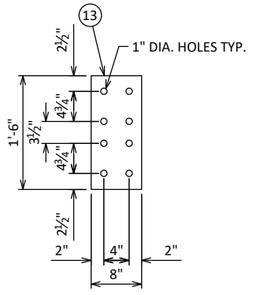
END POST DETAIL

REINFORCEMENT AT CORNERS



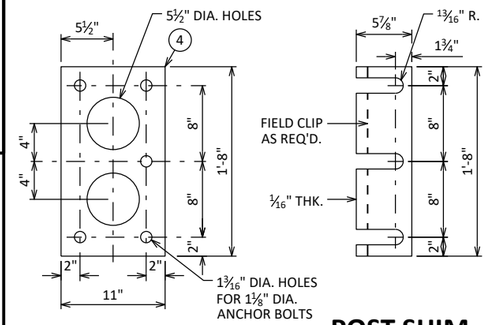
DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT



ANCHOR PLATE

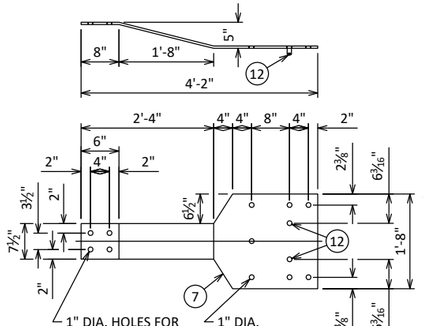
AT BEAM GUARD ATTACHMENT



ANCHOR PLATE

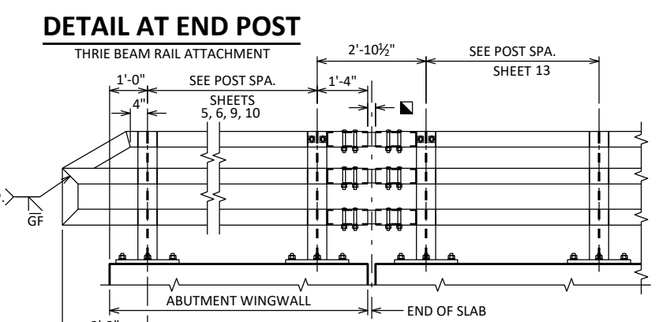
AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

▲ TIE TO TOP MAT OF STEEL.

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

◥ ¼" TO ¾" OPENING FOR A1 ABUTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-47-231

DRAWN BY CLP | PLANS CK'D NBE

TUBULAR STEEL RAILING TYPE "M"

SHEET 14 OF 14

42

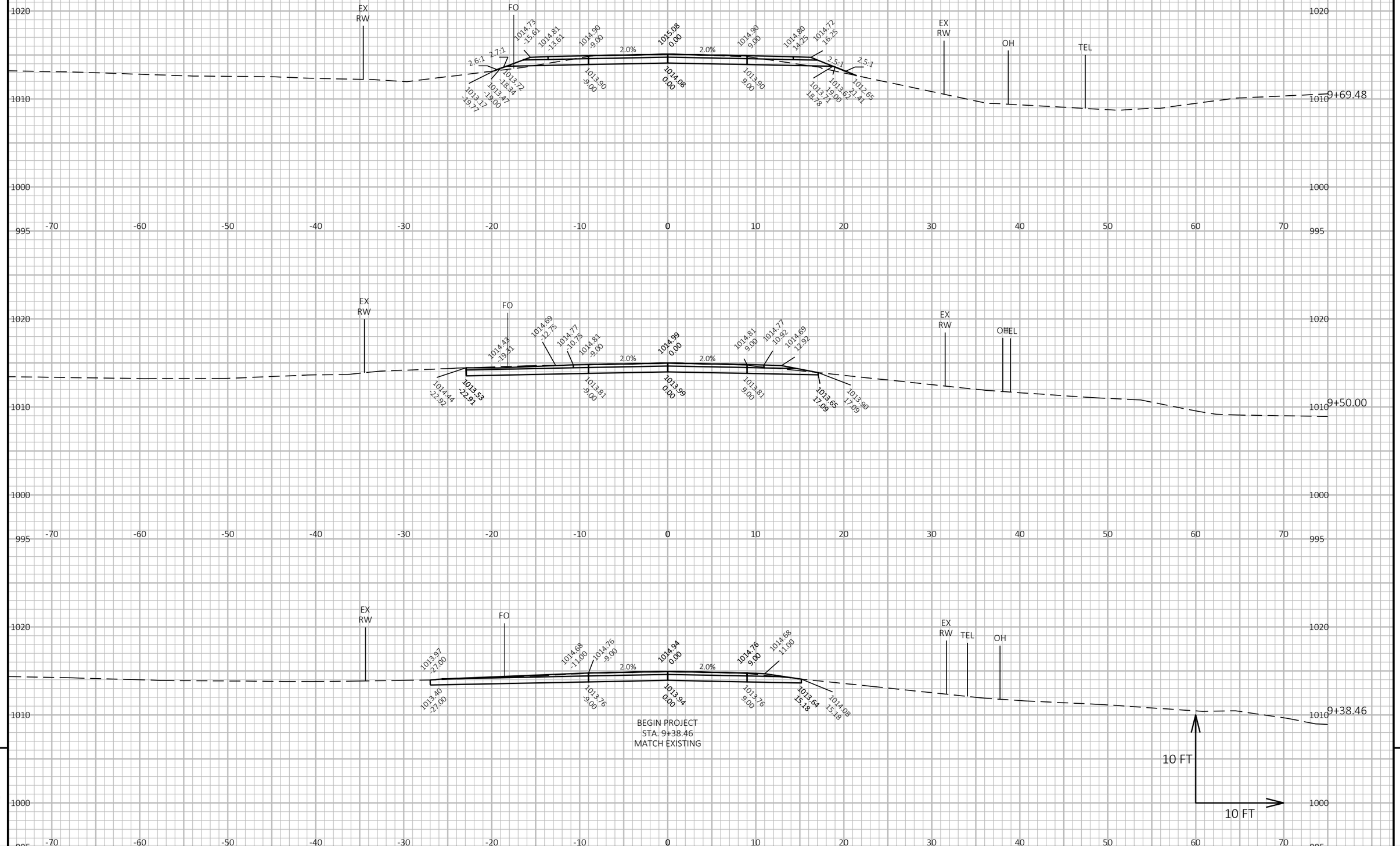
8

8

490TH STREET COMPUTER EARTHWORK

Station	Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut	Expanded Fill	
						1.00	1.30	
				Note 1	Note 2	Note 1		Note 3
9+38.46	--	36.0	0.0					
9+50	12	36.5	0.0	15	0	15	0	15
9+69.48	19	23.4	2.2	22	1	37	1	36
9+73.98	5	23.0	1.8	4	0	41	1	40
9+81.73	8	23.0	0.0	7	0	48	2	46
BRIDGE	--	--	--	--	--	--	--	--
10+18.27	--	24.6	0.0	--	--	--	--	--
10+26.02	8	24.6	2.5	7	0	55	2	52
10+30.52	5	24.9	2.1	4	0	59	3	56
10+50	19	27.7	0.8	19	1	78	4	74
10+75	25	26.3	0.0	25	0	103	5	99
				103	4			

Note 1 - Cut	Volume need to be cut.
Note 2 - Fill	Volume needed to be filled.
Note 3 - Mass Ordinate	(Cut) - (Fill * 1.30)



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9

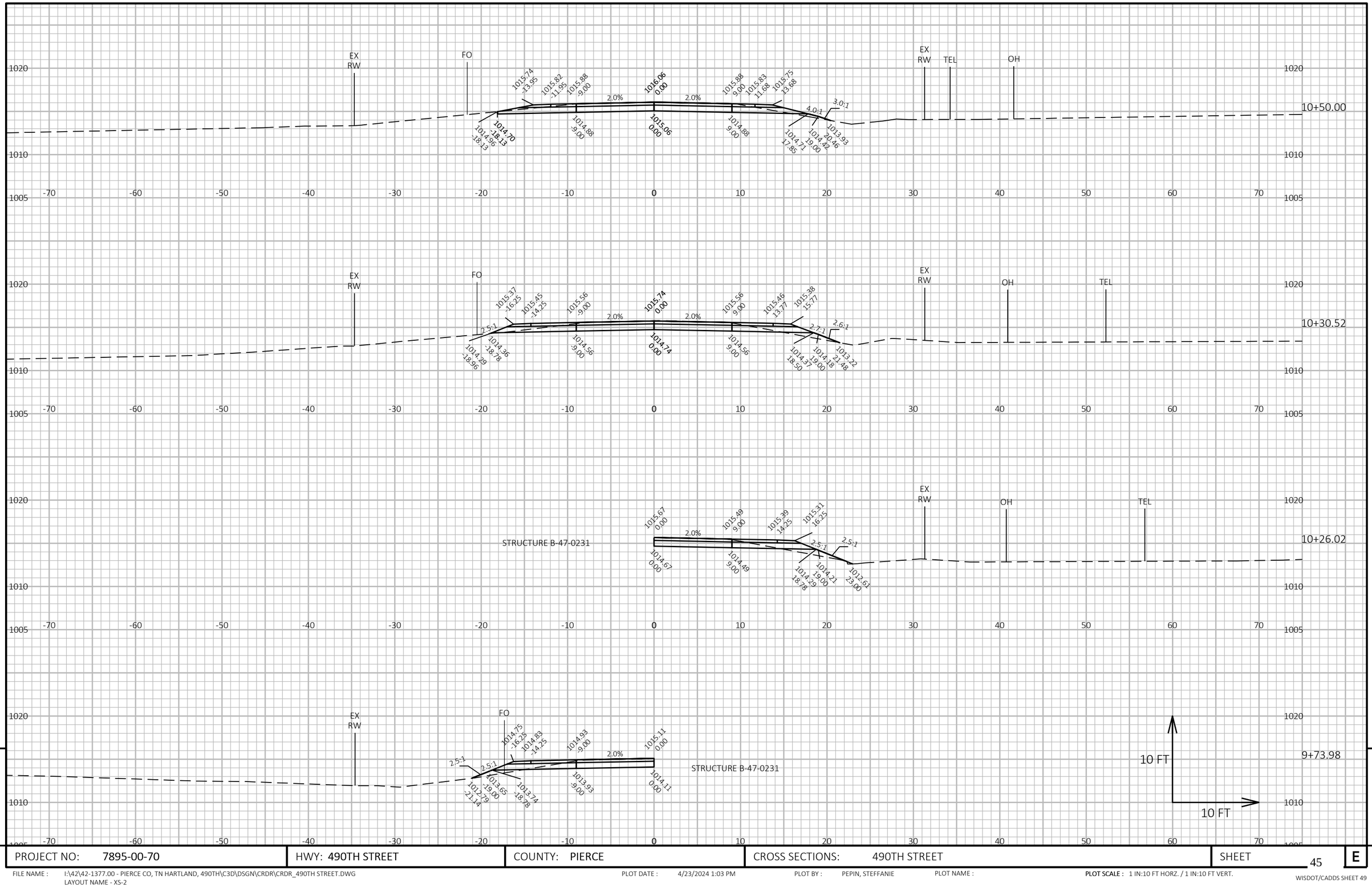
PROJECT NO: 7895-00-70	HWY: 490TH STREET	COUNTY: PIERCE	CROSS SECTIONS: 490TH STREET	SHEET 44	E

FILE NAME : I:\42\42-1377.00 - PIERCE CO, TN HARTLAND, 490TH\C3D\DSGN\CRDR\CRDR_490TH STREET.DWG
LAYOUT NAME - XS-1

PLOT DATE : 4/23/2024 1:03 PM PLOT BY : PEPIN, STEFFANIE PLOT NAME :

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

WISDOT/CADDS SHEET 49

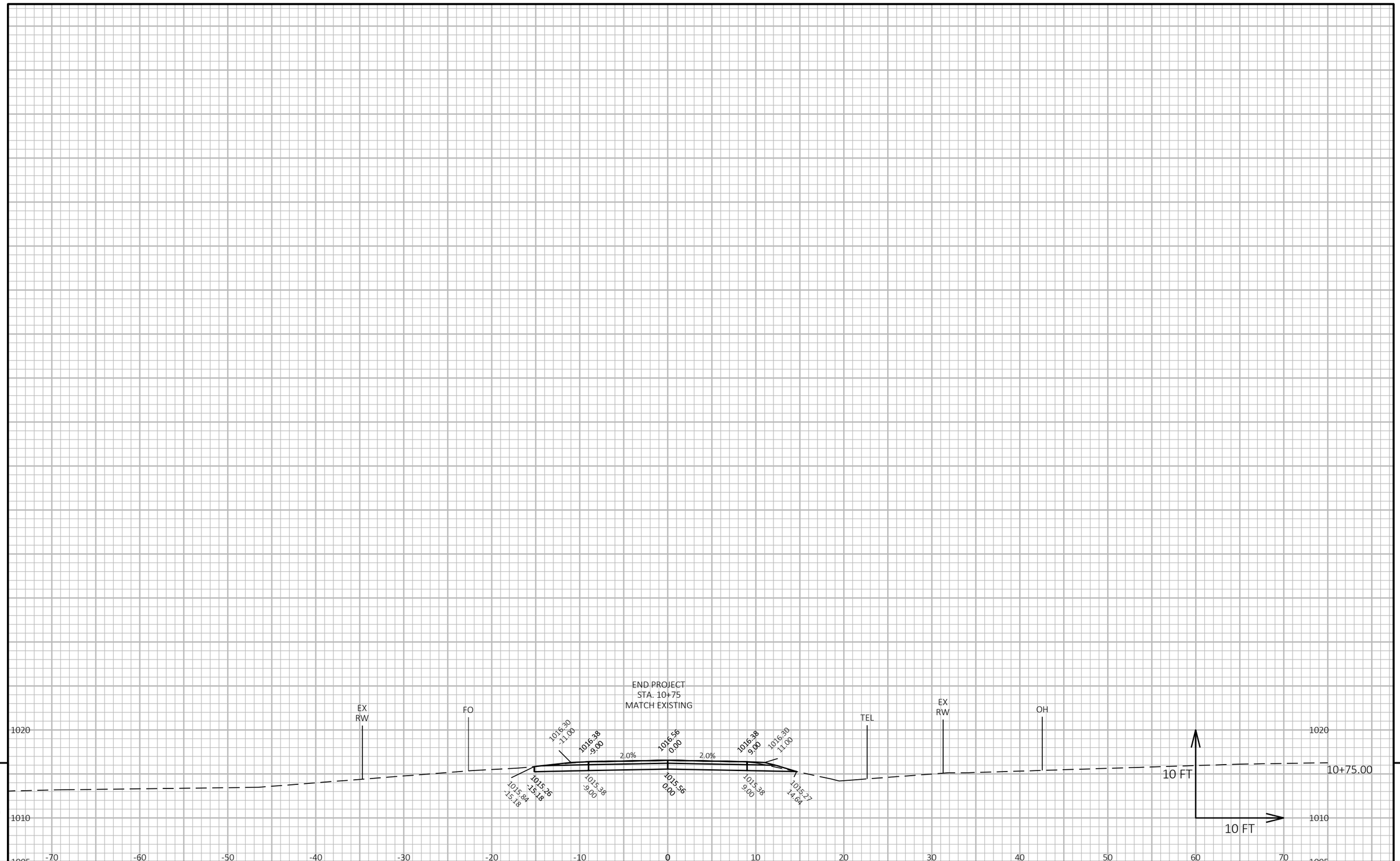


9 9

PROJECT NO: 7895-00-70	HWY: 490TH STREET	COUNTY: PIERCE	CROSS SECTIONS: 490TH STREET	SHEET 45	E

FILE NAME : I:\42\42-1377.00 - PIERCE CO, TN HARTLAND, 490TH\C3D\DSGN\CRDR\CRDR_490TH STREET.DWG
LAYOUT NAME - XS-2

PLOT DATE : 4/23/2024 1:03 PM PLOT BY : PEPIN, STEFFANIE PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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9

PROJECT NO: 7895-00-70	HWY: 490TH STREET	COUNTY: PIERCE	CROSS SECTIONS: 490TH STREET	SHEET 46	E

FILE NAME : I:\42\42-1377.00 - PIERCE CO, TN HARTLAND, 490TH\C3D\DSGN\CRDR\CRDR_490TH STREET.DWG
LAYOUT NAME - XS-3

PLOT DATE : 4/23/2024 1:03 PM

PLOT BY : PEPIN, STEFFANIE

PLOT NAME :

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

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov