WKE

DECEMBER 2026

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
~~Section No.~~	~~4~~	~~Right of Way Plat~~
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 48

PROJECT ID: 4823-05-70

WITH: N/A

COUNTY: WASHINGTON

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4823-05-70	WISC 2027098	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

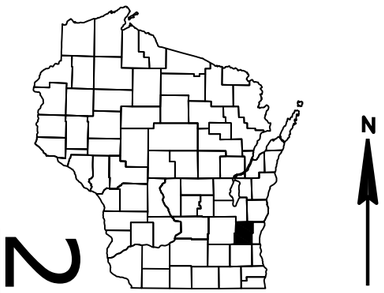
T WAYNE , MIDLAND DR

OVER KOHLSVILLE RIVER P66-0054

LOC STR

WASHINGTON COUNTY

STATE PROJECT NUMBER
4823-05-70



27

DESIGN DESIGNATION

A.A.D.T.	(2027)	=	365
A.A.D.T.	(2047)	=	400
D.H.V.		=	40
D.D.		=	50/50
T.		=	5%
DESIGN SPEED		=	40 MPH
ESALS		=	36,500

CONVENTIONAL SYMBOLS

PLAN

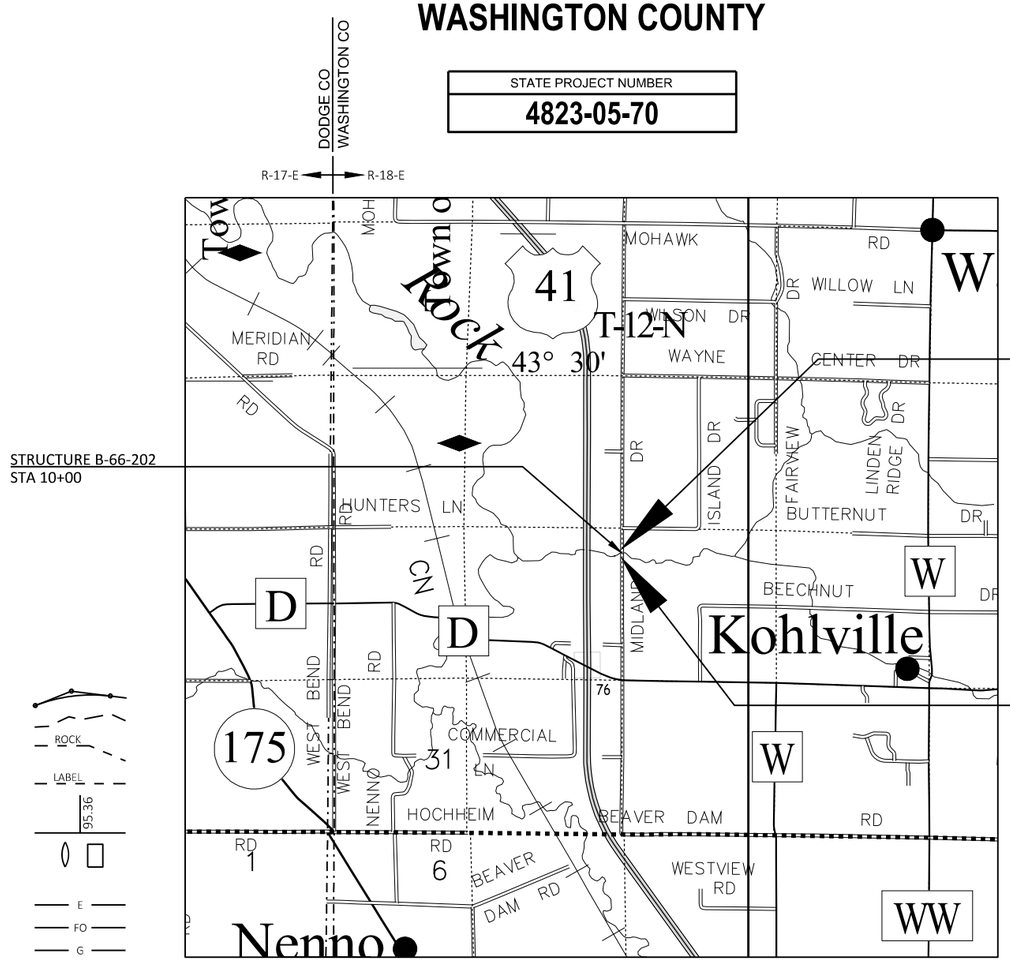
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

- ELECTRIC
- FIBER OPTIC
- GAS
- SANITARY SEWER
- STORM SEWER
- TELEPHONE
- WATER
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE



STRUCTURE B-66-202
STA 10+00

END PROJECT 4823-05-70
STA 10+74.25
Y = 206,181.31
X = 314,819.57

BEGIN PROJECT 4823-05-70
STA 9+25.75
Y = 206,032.81
X = 314,819.26

T-12-N
T-11-N

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.028 MI

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

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

ACCEPTED FOR

Town of Wayne

7/30/26 (Date) (Town Chairman)

ORIGINAL PLANS PREPARED BY

AYRES

WISCONSIN JOSEPH L. BLUMA E-48464-6 EAU CLAIRE, WI PROFESSIONAL ENGINEER

07/31/2026

(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AYRES ASSOCIATES INC
Designer	AYRES ASSOCIATES INC
Project Manager	JOSEPH JELACIC, PE
Regional Examiner	SE REGION
Regional Supervisor	AMY TAETSCH, PE

APPROVED FOR THE DEPARTMENT

DATE: 7/31/26 Joseph C Jelacic (Signature)

Digitally signed by Joseph C Jelacic
DN: C=US, E=Jelacic@dot.wi.gov, O=WI DOT, OU=DTSD UPPM, CN=Joseph C Jelacic
Date: 2026.07.31 20:48:31-05'00'

E

UTILITIES CONTACTS

CHARTER SPECTRUM
COMMUNICATIONS
NICK FRASE
1515 W WASHINGTON STREET
WEST BEND, WI 53095
PHONE: 920-304-6797
EMAIL: NICK.FRASE@CHARTER.COM

FRONTIER COMMUNICATIONS
COMMUNICATIONS
CHRIS BLUMER
451 BROADWAY
SUN PRAIRIE, WI 53590
PHONE: 608-622-3807
EMAIL: CHRISTOPHER.BLUMER@FTR.COM

WE ENERGIES
ELECTRIC
JOE FELLENZ
W140 N91000 LILLY ROAD
MENOMONEE, WI 53051
PHONE: 262-483-2101 CELL: 414-322-8928
EMAIL: JOESPH.FELLENZ@WE-ENERGIES.COM

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

WISCONSIN DNR LIAISON

RYAN PAPPAS
WDNR
1027 W. ST. PAUL AVENUE
MILWAUKEE, WI 53233-2641
PHONE: 414-750-7495
EMAIL: RYAN.PAPPAS@WISCONSIN.GOV

DESIGN PROJECT MANAGER

JOE JELACIC
WISDOT SE REGION
141 NW BARSTOW ROOM 180
WAUKESHA, WI 53188
PHONE: 262.548.6762
EMAIL: JOESPH.JELACIC@DOT.WI.GOV

TOWN OF CONTACT

TONY BALISTRERI
TOWN CHAIRMAN
W6030 MOHAWK ROAD
CAMPBELLSPORT, WI 53010
PHONE: 262-339-1148
EMAIL: CLERK@TOWNOFWAYNE.WASHCO.WI.GOV

DESIGN PROJECT LEADER

JOESPH BLUMA, PE, CBI
AYRES ASSOCIATES
20975 SWENSON DRIVE, SUITE 200
WAUKESHA, WI 53186
PHONE: 715-834-3161
EMAIL: BLUMAJ@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.

RIGHT OF WAY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE.

SEED MIXTURE NO. 30 AND SEEDING TEMPORARY SHALL BE USED IN THE PROJECT AND SHALL BE PLACED AS SHOWN IN THE PLANS AND/OR DIRECTED BY THE ENGINEER.

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.

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

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

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

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.

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

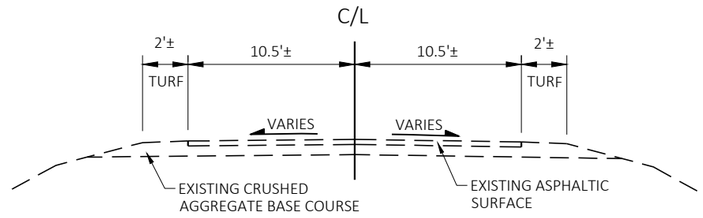
2

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											

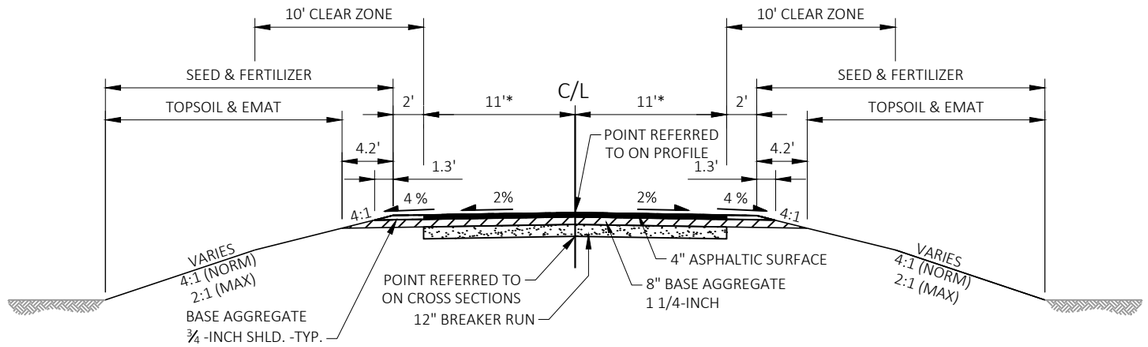
TOTAL PROJECT AREA = 0.227 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.163 ACRES

2



EXISTING TYPICAL SECTION

MIDLAND DRIVE
STA 9+25.75 TO STA 9+63.75
STA 10+34.25 TO STA 10+74.25



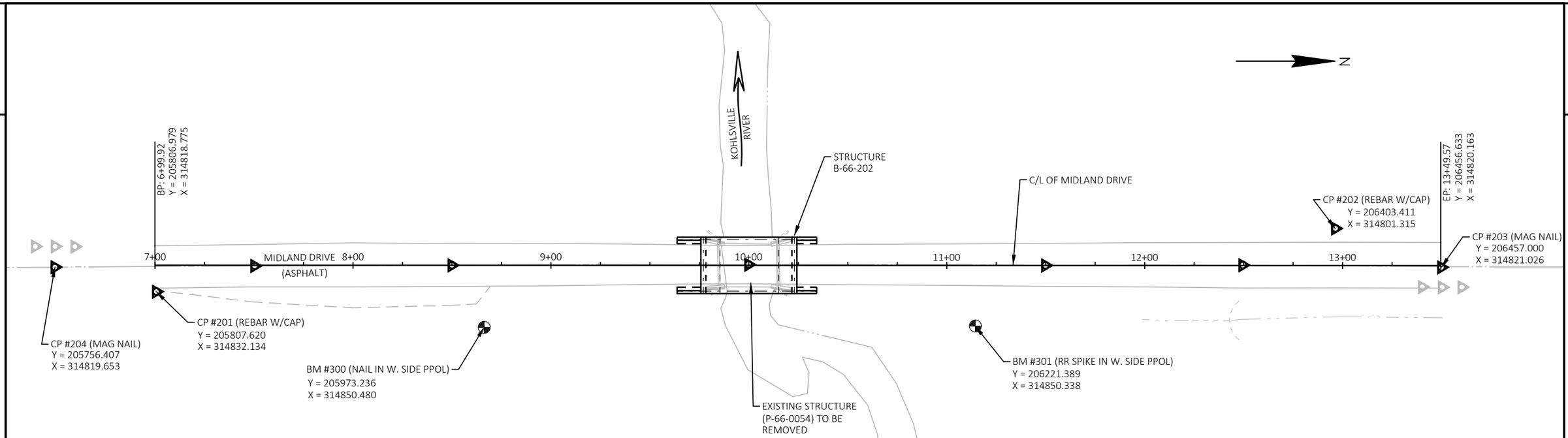
FINISHED TYPICAL SECTION

MIDLAND DRIVE
STA 9+25.75 TO STA 9+63.75
STA 10+34.25 TO STA 10+74.25

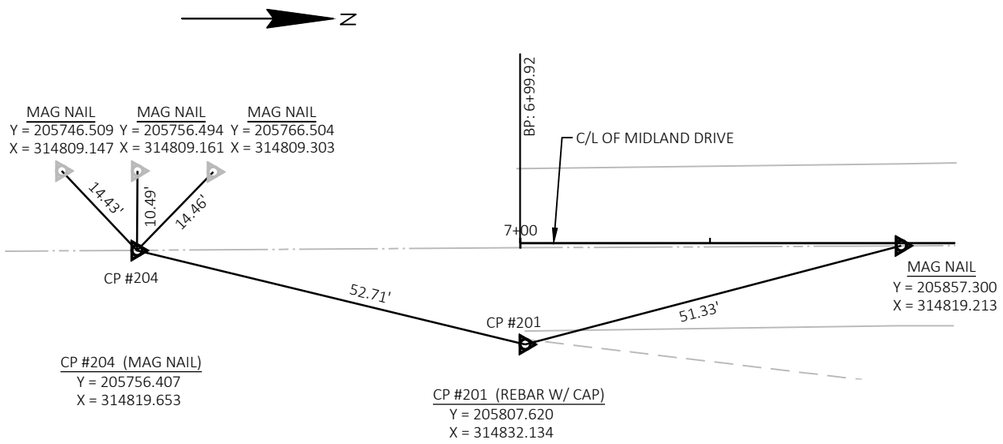
*THE ASPHALT SURFACE LANE SHALL TAPER FROM 14.25' WIDE AT THE ENDS OF THE WINGS TO 11' WIDE AND MATCH EXISTING AT THE ENDS OF THE PROJECT.

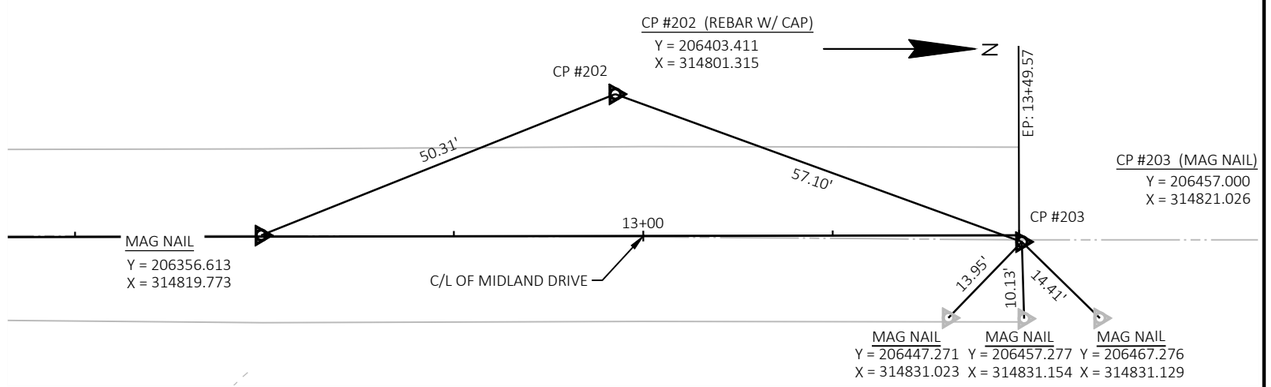
PROJECT NO: 4823-05-70	HWY: MIDLAND DRIVE	COUNTY: WASHINGTON	TYPICAL SECTIONS	SHEET 3	E

2



ALIGNMENT CONTROLS

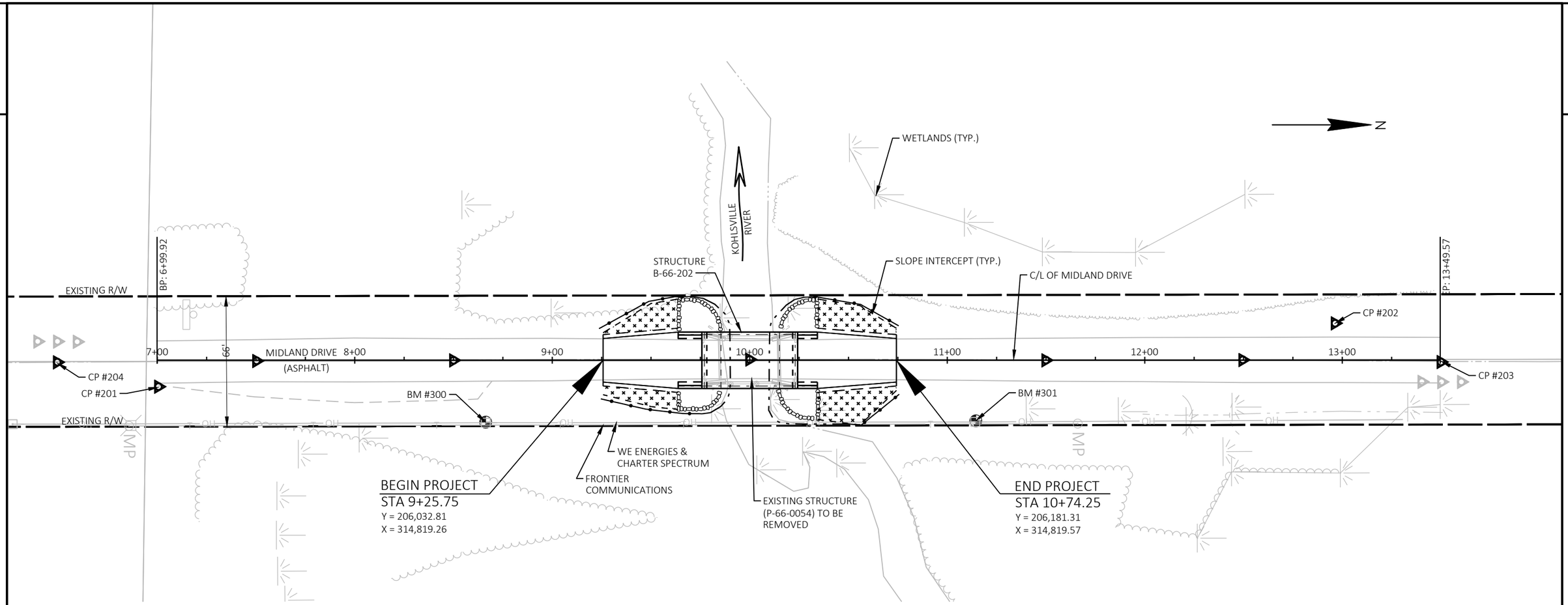




ALIGNMENT TIES

PROJECT NO: 4823-05-70	HWY: MIDLAND DRIVE	COUNTY: WASHINGTON	ALIGNMENT CONTROLS	SHEET 4	E

2



LEGEND

- EROSION MAT CLASS II (TYPE C)
- SILT FENCE
- RIPRAP HEAVY
- SLOPE INTERCEPT
- COFFERDAM (SEE STRUCTURE PLANS)
- TEMPORARY DITCH CHECK (UNDISTRIBUTED)

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

WETLANDS EXIST IN THE PROJECT AREA.

NO IN-STREAM WORK BETWEEN MARCH 1 TO AUGUST 15, WITH BOTH DATES INCLUSIVE OF THE TIMEOUT PERIOD.

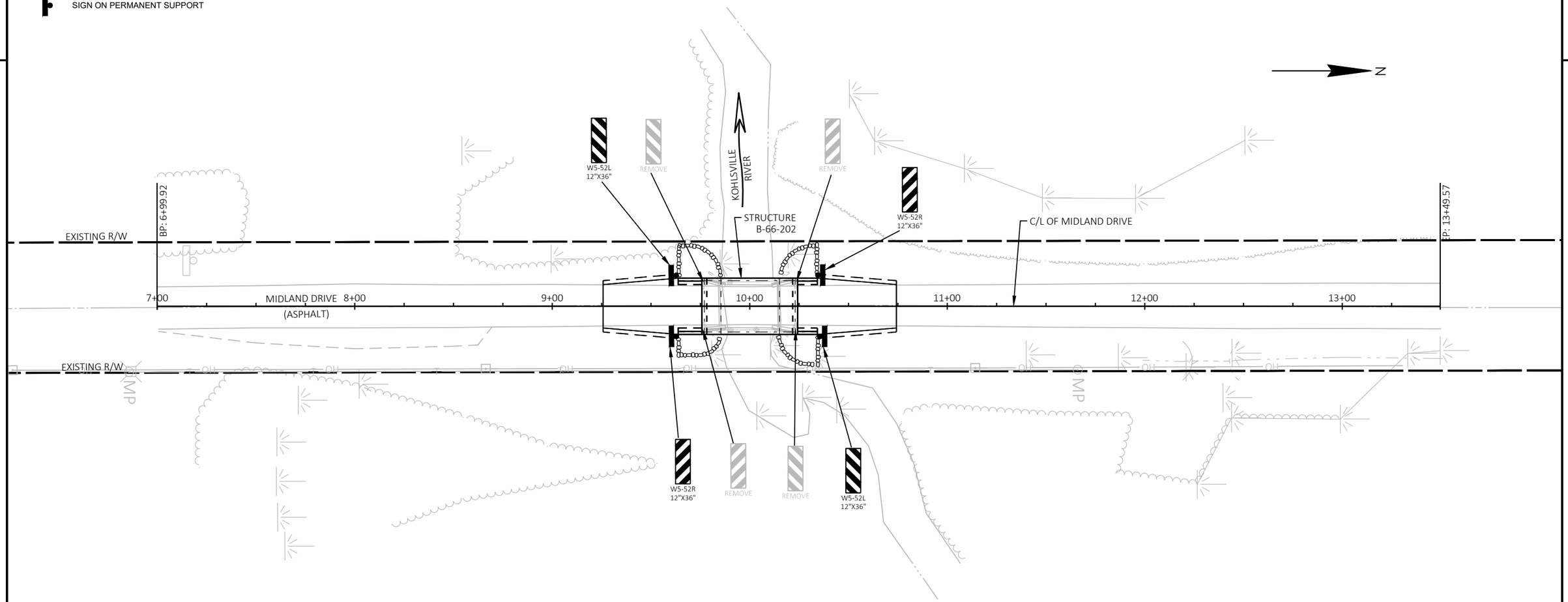
HIGHWATER $_2$ EL. 938.57

PROJECT NO: 4823-05-70	HWY: MIDLAND DRIVE	COUNTY: WASHINGTON	EROSION CONTROL	SHEET 5	E

FILE NAME : I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\022001-EC.DWG
LAYOUT NAME - EROSION
PLOT DATE : 7/29/2026 3:52 PM PLOT BY : JOHNSON, ZACHARY PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 42

LEGEND

SIGN ON PERMANENT SUPPORT



PROJECT NO: 4823-05-70	HWY: MIDLAND DRIVE	COUNTY: WASHINGTON	SIGNING	SHEET 6	E

FILE NAME : I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\025101-TC.DWG
LAYOUT NAME - PSPM

PLOT DATE : 7/30/2026 3:09 PM PLOT BY : JOHNSON, ZACHARY PLOT NAME : PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42

Estimate Of Quantities

4823-05-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-66-0054	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	150.000	150.000
0010	206.1001	Excavation for Structures Bridges (structure) 01. B-66-0202	EACH	1.000	1.000
0012	206.5001	Cofferdams (structure) 01. B-66-0202	EACH	1.000	1.000
0014	210.1500	Backfill Structure Type A	TON	190.000	190.000
0016	213.0100	Finishing Roadway (project) 01. 4823-05-70	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	30.000	30.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	160.000	160.000
0022	311.0110	Breaker Run	TON	190.000	190.000
0024	455.0605	Tack Coat	GAL	20.000	20.000
0026	465.0105	Asphaltic Surface	TON	65.000	65.000
0028	502.0100	Concrete Masonry Bridges	CY	170.000	170.000
0030	502.3200	Protective Surface Treatment	SY	208.000	208.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	3,520.000	3,520.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	24,220.000	24,220.000
0036	513.4061	Railing Tubular Type M	LF	146.000	146.000
0038	516.0500	Rubberized Membrane Waterproofing	SY	19.000	19.000
0040	550.0010	Pre-Boring Unconsolidated Materials	LF	216.000	216.000
0042	550.0500	Pile Points	EACH	12.000	12.000
0044	550.2106	Piling CIP Concrete 10 3/4 x 0.365-Inch	LF	360.000	360.000
0046	606.0300	Riprap Heavy	CY	140.000	140.000
0048	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	185.000	185.000
0050	618.0100	Maintenance and Repair of Haul Roads (project) 01. 4823-05-70	EACH	1.000	1.000
0052	619.1000	Mobilization	EACH	1.000	1.000
0054	624.0100	Water	MGAL	4.000	4.000
0056	625.0100	Topsoil	SY	310.000	310.000
0058	628.1504	Silt Fence	LF	250.000	250.000
0060	628.1520	Silt Fence Maintenance	LF	250.000	250.000
0062	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0064	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0066	628.2027	Erosion Mat Class II Type C	SY	310.000	310.000
0068	628.7504	Temporary Ditch Checks	LF	100.000	100.000
0070	629.0210	Fertilizer Type B	CWT	0.300	0.300
0072	630.0130	Seeding Mixture No. 30	LB	13.000	13.000
0074	630.0200	Seeding Temporary	LB	8.000	8.000
0076	630.0500	Seed Water	MGAL	7.000	7.000
0078	634.0614	Posts Wood 4x6-Inch x 14-FT	EACH	4.000	4.000
0080	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0082	638.2602	Removing Signs Type II	EACH	4.000	4.000
0084	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0086	642.5001	Field Office Type B	EACH	1.000	1.000
0088	643.0420	Traffic Control Barricades Type III	DAY	1,476.000	1,476.000
0090	643.0705	Traffic Control Warning Lights Type A	DAY	1,968.000	1,968.000
0092	643.0900	Traffic Control Signs	DAY	1,148.000	1,148.000
0094	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0096	643.5000	Traffic Control	EACH	1.000	1.000
0098	645.0111	Geotextile Type DF Schedule A	SY	85.000	85.000

Estimate Of Quantities

4823-05-70

Line	Item	Item Description	Unit	Total	Qty
0100	645.0120	Geotextile Type HR	SY	280.000	280.000
0102	650.4500	Construction Staking Subgrade	LF	150.000	150.000
0104	650.5000	Construction Staking Base	LF	150.000	150.000
0106	650.6501	Construction Staking Structure Layout (structure) 01. B-66-0202	EACH	1.000	1.000
0108	650.9911	Construction Staking Supplemental Control (project) 01. 4823-05-70	EACH	1.000	1.000
0110	650.9920	Construction Staking Slope Stakes	LF	150.000	150.000
0112	690.0150	Sawing Asphalt	LF	42.000	42.000
0114	715.0502	Incentive Strength Concrete Structures	DOL	1,020.000	1,020.000
0116	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
0118	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	250.000	250.000
0120	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	900.000	900.000
0122	SPV.0060	Special 01. Fisheries Consultant	EACH	1.000	1.000
0124	SPV.0195	Special 01. Infill Riprap B-66-0202	TON	10.000	10.000

3

CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
0010	9+00	-	10+00	MIDLAND DRIVE, LT	1	1
				TOTAL 0010	**1**	**1**

NOTE: TREE CUTTING TO BE DONE PRIOR TO CONSTRUCTION BY OTHERS. CLEAR DOWN TREES.

PROJECT WIDE

CATEGORY	LOCATION	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 4823-05-71) EACH	619.1000 MOBILIZATION EACH	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	642.5001 FIELD OFFICE TYPE B EACH
0010	MIDLAND DRIVE	1	1	4	4	1
	TOTAL 0010	**1**	**1**	**4**	**4**	**1**

BASE AGGREGATE DENSE

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
0010	9+25.75	-	9+75.75	MIDLAND DRIVE	15	80	2
	10+24.25	-	10+74.25	MIDLAND DRIVE	15	80	2
				TOTAL 0010	**30**	**160**	**4**

3

DIVISION	FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CUT (2)	205.0100 EXCAVATION COMMON (1) EBS EXCAVATION (3)	SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13) FACTOR 1.30	MASS ORDINATE +/- (14)	WASTE	COMMENT
DIVISION 1											
MIDLAND DRIVE - EW	9+25.75/10+74.25	MIDLAND DRIVE	150	0	33	117	32	42	75		
DIVISION 1 SUBTOTAL			150	0	33	117	32	42	75	75	
GRAND TOTAL			150	0	33	117	32	42	75	75	
TOTAL COMMON EXC			150								

NOTES:
(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
(2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL
(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
(13) EXPANDED FILL FACTOR = 1.30
(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

BREAKER RUN

CATEGORY	STATION	TO	STATION	LOCATION	311.0110 BREAKER RUN TON
0010	9+25.75	-	9+75.75	MIDLAND DRIVE	95
	10+24.25	-	10+74.25	MIDLAND DRIVE	95
				TOTAL 0010	**190**

ASPHALTIC SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
0010	9+25.75	-	9+75.75	MIDLAND DRIVE	10	32
	10+24.25	-	10+74.25	MIDLAND DRIVE	10	33
				TOTAL 0010	**20**	**65**

HAUL ROADS

CATEGORY	LOCATION	618.0100.01 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) (01. 4823-05-70) EACH
0030	PROJECT WIDE	1
	TOTAL 0030	**1**

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2027 EROSION MAT CLASS II TYPE C SY	628.7504 TEMPORARY DITCH CHECKS LF
0010	9+25.75	-	9+75.75	LT/RT	113	113	134	-
	10+24.25	-	10+74.25	LT/RT	86	86	112	-
	UNDISTRIBUTED				51	51	64	100
				TOTAL 0010	250	250	310	100

* UNDISTRIBUTED IS APPROXIMATELY 25%

FINISHING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
0010	9+25.75	-	9+75.75	LT/RT	134	0.1	4	2	2
	10+24.25	-	10+74.25	LT/RT	112	0.1	6	4	3
	UNDISTRIBUTED				64	0.1	3	2	2
				TOTAL 0010	310	0.3	13	8	7

* UNDISTRIBUTED IS APPROXIMATELY 25%

SIGNING ITEMS

CATEGORY	STATION	LOCATION	SIGN CODE	SIZE WIDTH (IN)	SIZE HEIGHT (IN)	MESSAGE	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
0010	9+65	RT	W5-52R	12	36	BRIDGE HASH MARKS RT	1	3	-	-
	9+65	LT	W5-52L	12	36	BRIDGE HASH MARKS LT	1	3	-	-
	9+77	RT	W5-52R	-	-	BRIDGE HASH MARKS RT	-	-	1	1
	9+78	LT	W5-52L	-	-	BRIDGE HASH MARKS LT	-	-	1	1
	10+22	RT	W5-52L	-	-	BRIDGE HASH MARKS LT	-	-	1	1
	10+22	LT	W5-52R	-	-	BRIDGE HASH MARKS RT	-	-	1	1
	10+27	RT	W5-52L	12	36	BRIDGE HASH MARKS LT	1	3	-	-
	10+31	LT	W5-52R	12	36	BRIDGE HASH MARKS RT	1	3	-	-
						TOTAL 0010	4	12	4	4

TRAFFIC CONTROL

CATEGORY	LOCATION	DURATION DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO.	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO.	643.0705 DAY	643.0900 TRAFFIC CONTROL SIGNS NO.	643.0900 DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS NO.	643.1050 DAY	643.5000 TRAFFIC CONTROL EACH
0010	ADVANCE WARNING	7	-	-	-	-	-	-	2	14	-
	MIDLAND DRIVE	-	-	-	-	-	-	-	-	-	1
	SDD 15C2	82	18	1,476	24	1,968	14	1,148	-	-	-
		TOTAL 0010	1,476		1,968		1,148		14		1

STAKING STRUCTURE

CATEGORY	LOCATION	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-66-0202) EACH
0020	STRUCTURE	1
	TOTAL 0020	1

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

3

STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 4823-05-70) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	9+25.75	-	10+74.25	ROADWAY	150	150	1	150
				TOTAL 0010	**150**	**150**	**1**	**150**

SAWCUT

CATEGORY	STATION	690.0150 SAWING ASPHALT LF
0010	9+25.75	21
	10+74.25	21
	TOTAL 0010	**42**

FISHERIES CONSULTANT

CATEGORY	LOCATION	SPV.0060.01 SPECIAL (01. FISHERIES CONSULTANT) EACH
0010	MIDLAND DRIVE	1
	TOTAL 0010	**1**

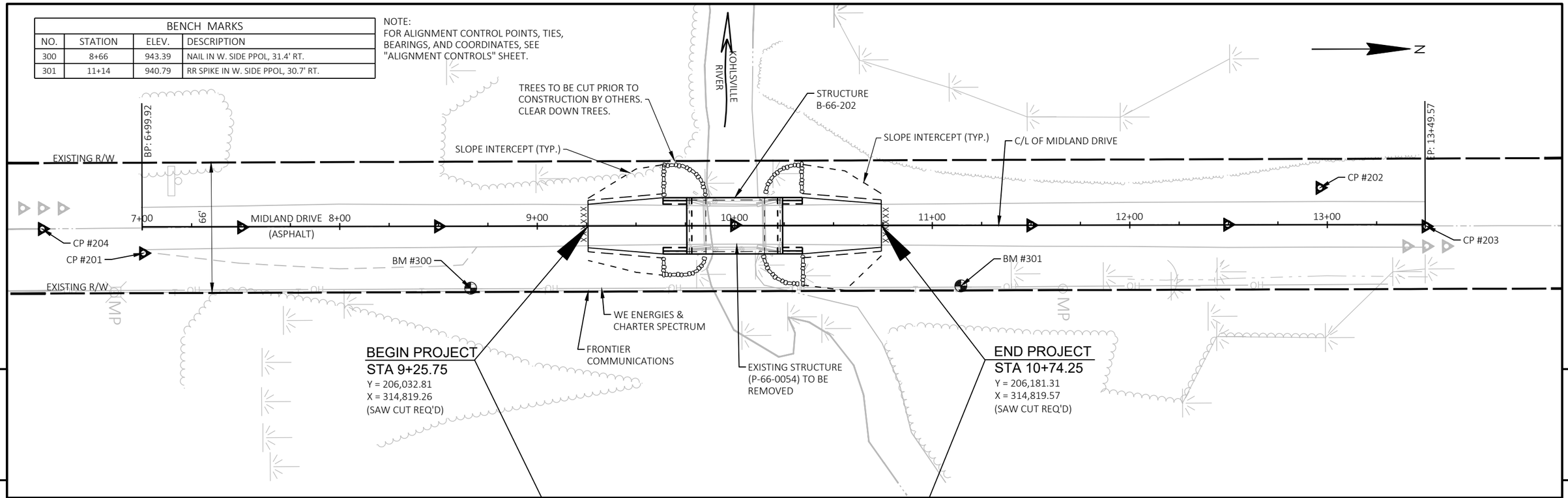
BIRD DETERRENT

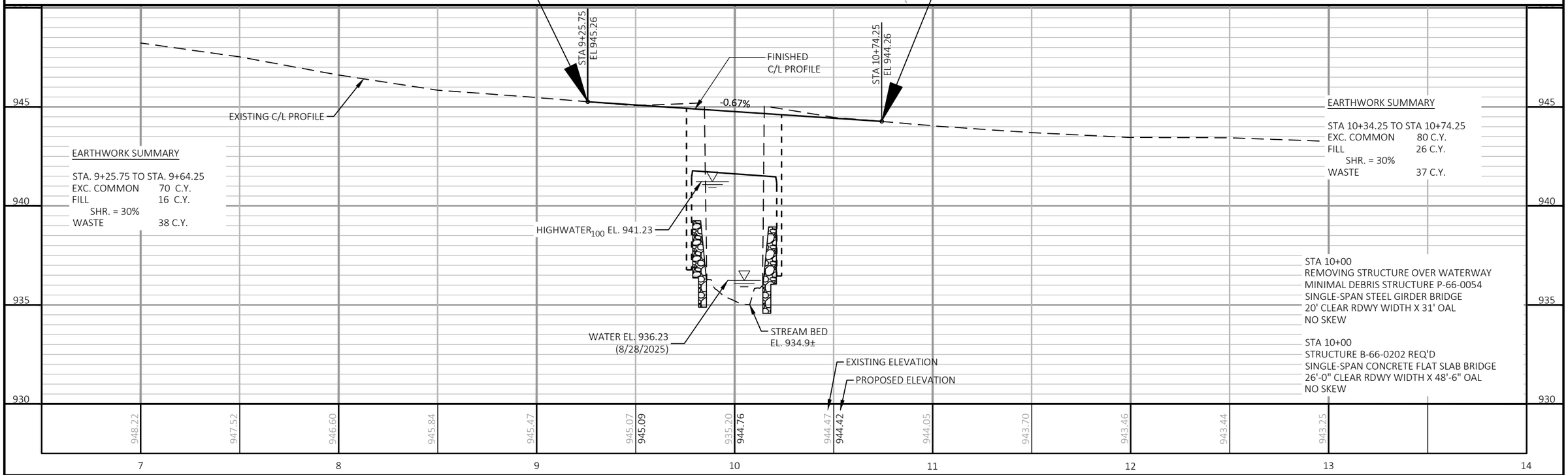
CATEGORY	LOCATION	999.2000.S.01 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (STATION) (01. STA 10+00) EACH
0020	STRUCTURE	1
	TOTAL 0020	**1**

ALL QUANTITIES CATEGORY 0010 UNLESS OTHERWISE NOTED

BENCH MARKS			
NO.	STATION	ELEV.	DESCRIPTION
300	8+66	943.39	NAIL IN W. SIDE PPOL, 31.4' RT.
301	11+14	940.79	RR SPIKE IN W. SIDE PPOL, 30.7' RT.

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





EARTHWORK SUMMARY

STA. 9+25.75 TO STA. 9+64.25
EXC. COMMON 70 C.Y.
FILL 16 C.Y.
SHR. = 30%
WASTE 38 C.Y.

EARTHWORK SUMMARY

STA 10+34.25 TO STA 10+74.25
EXC. COMMON 80 C.Y.
FILL 26 C.Y.
SHR. = 30%
WASTE 37 C.Y.

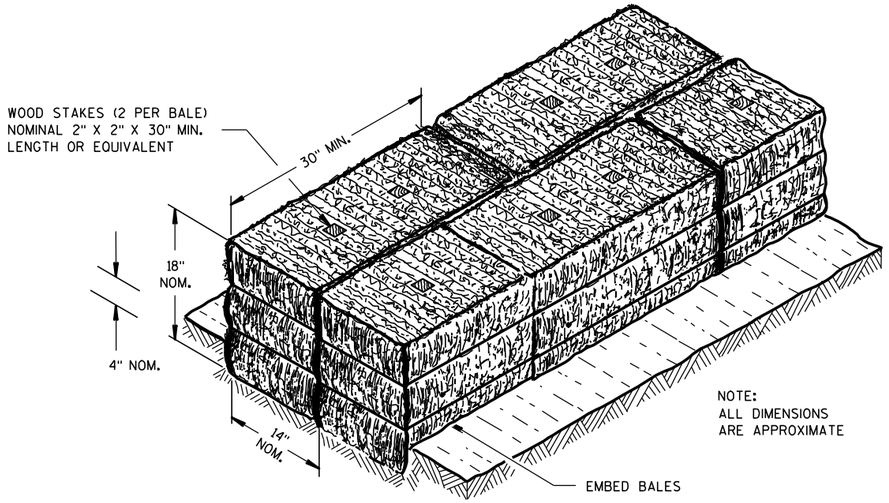
STA 10+00
REMOVING STRUCTURE OVER WATERWAY
MINIMAL DEBRIS STRUCTURE P-66-0054
SINGLE-SPAN STEEL GIRDER BRIDGE
20' CLEAR RDWY WIDTH X 31' OAL
NO SKEW

STA 10+00
STRUCTURE B-66-0202 REQ'D
SINGLE-SPAN CONCRETE FLAT SLAB BRIDGE
26'-0" CLEAR RDWY WIDTH X 48'-6" OAL
NO SKEW

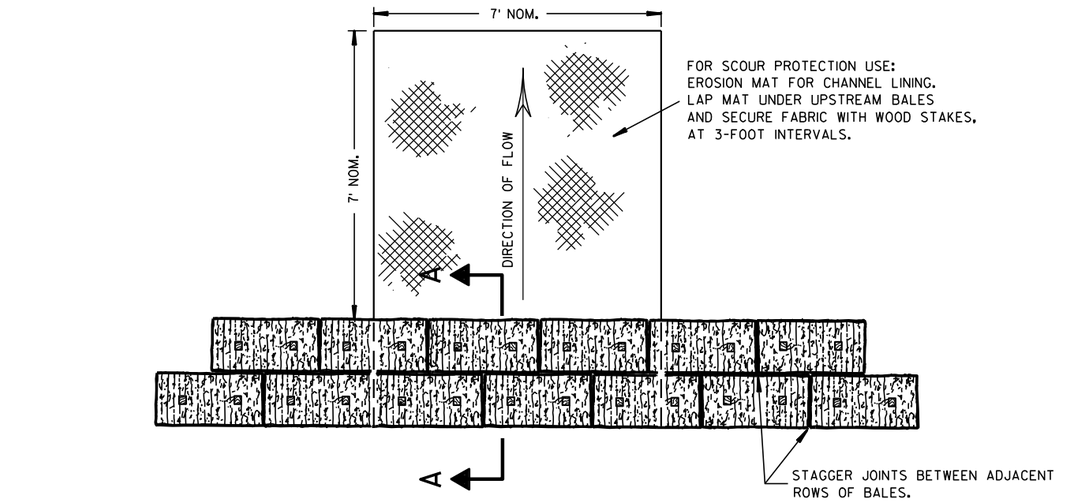
PROJECT NO: 4823-05-70	HWY: MIDLAND DRIVE	COUNTY: WASHINGTON	PLAN AND PROFILE: MIDLAND DRIVE	SHEET 12	E

Standard Detail Drawing List

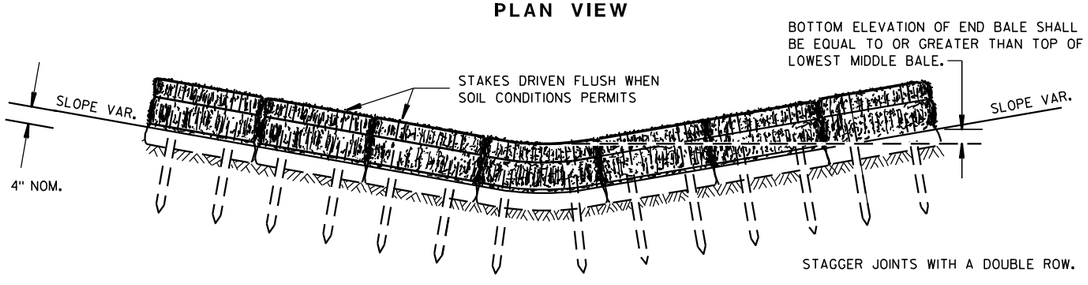
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
14B29-01	SAFETY EDGE
15C02-10A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-10B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-12	SIGNING AND MARKING FOR TWO LANE BRIDGES
15C11-11B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



SECTION A-A



PLAN VIEW



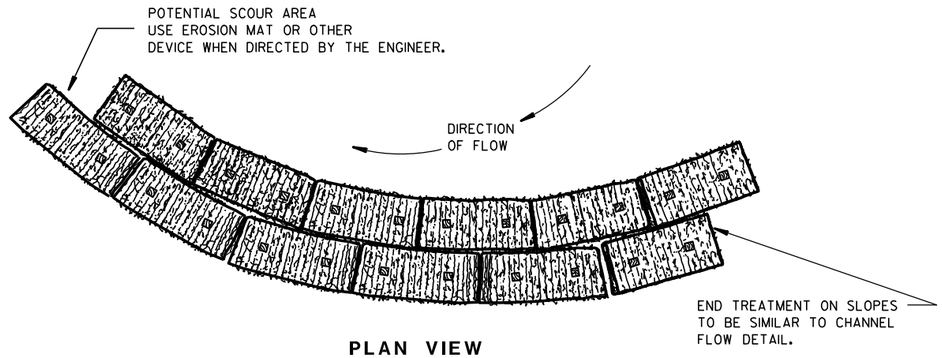
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

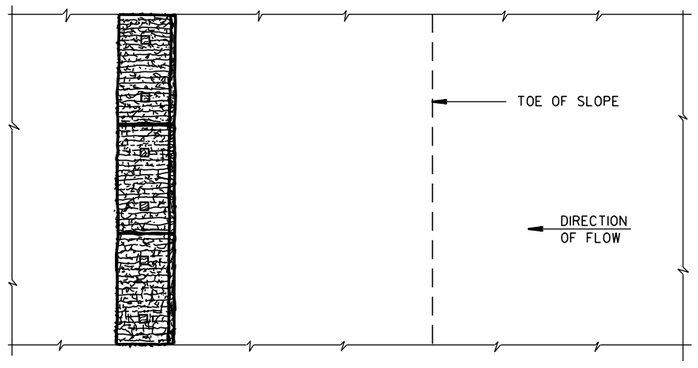
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

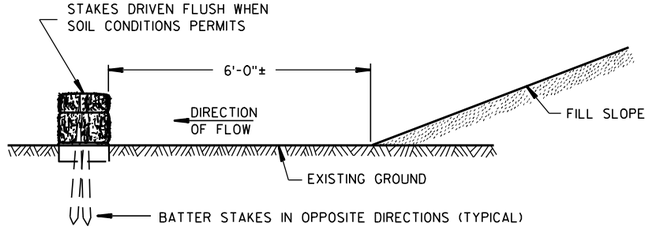


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

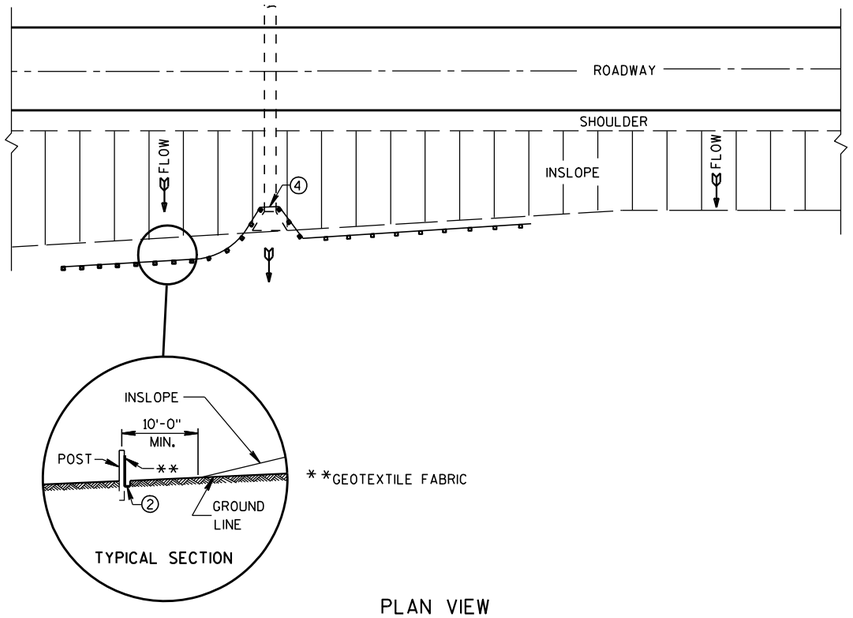
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

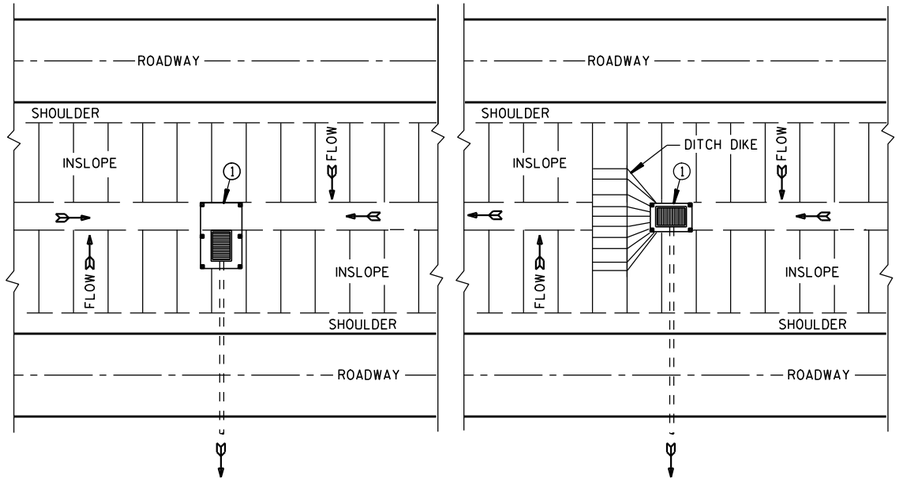
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



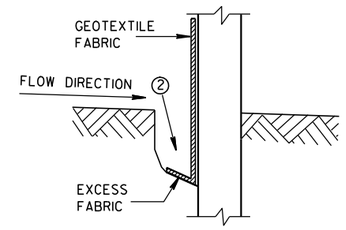
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

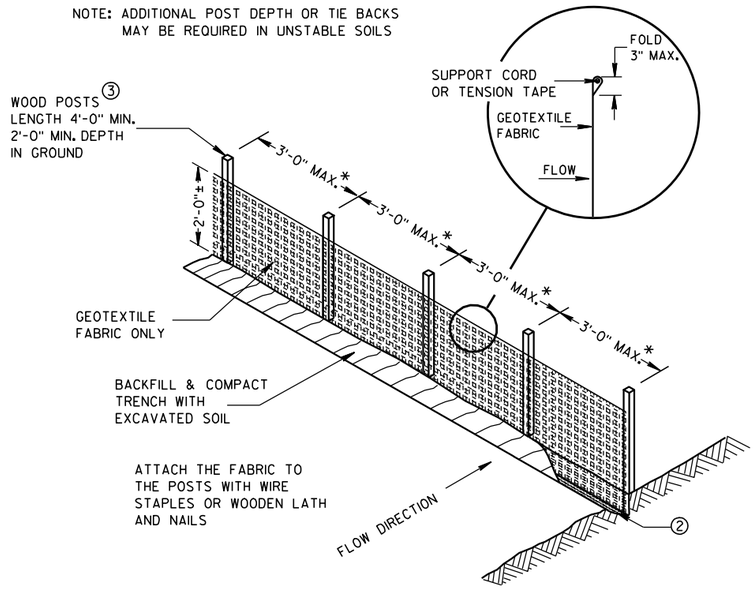
GENERAL NOTES

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

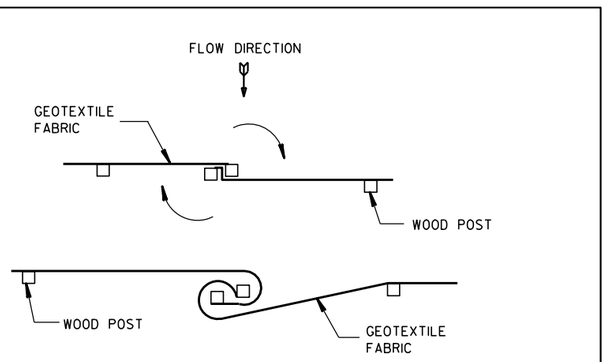
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



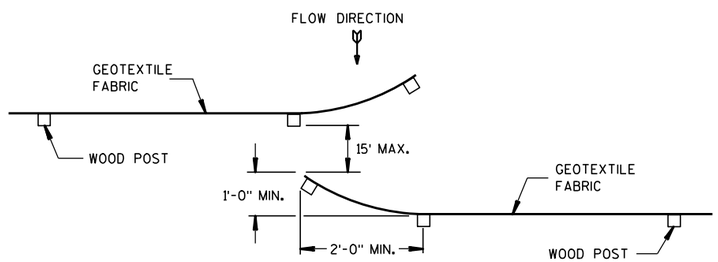
TRENCH DETAIL



SILT FENCE

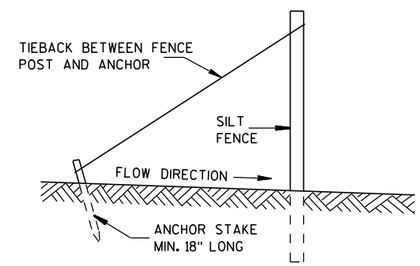


TWIST METHOD



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

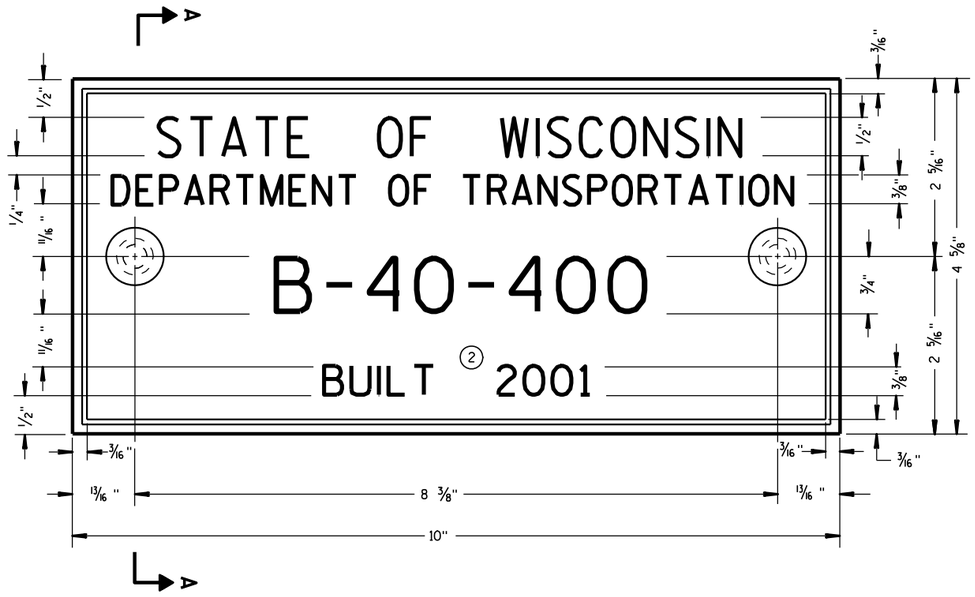
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



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

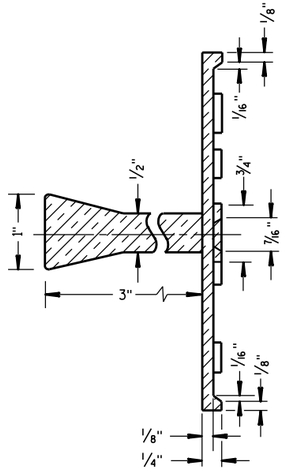
GENERAL NOTES

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.

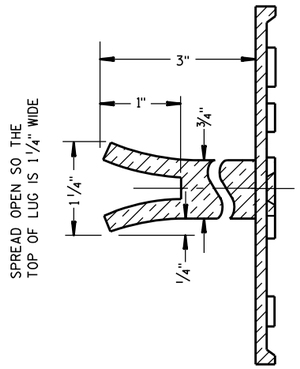
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

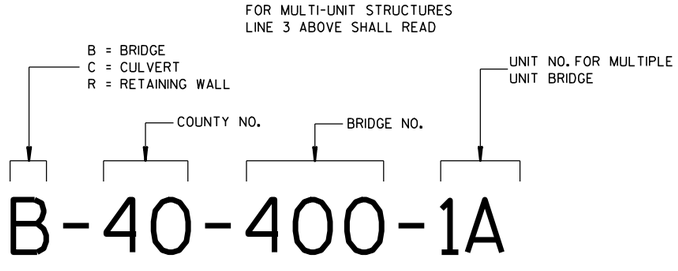
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



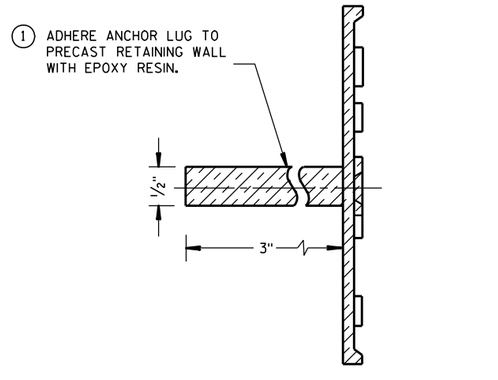
SECTION A-A



ALTERNATE LUG



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

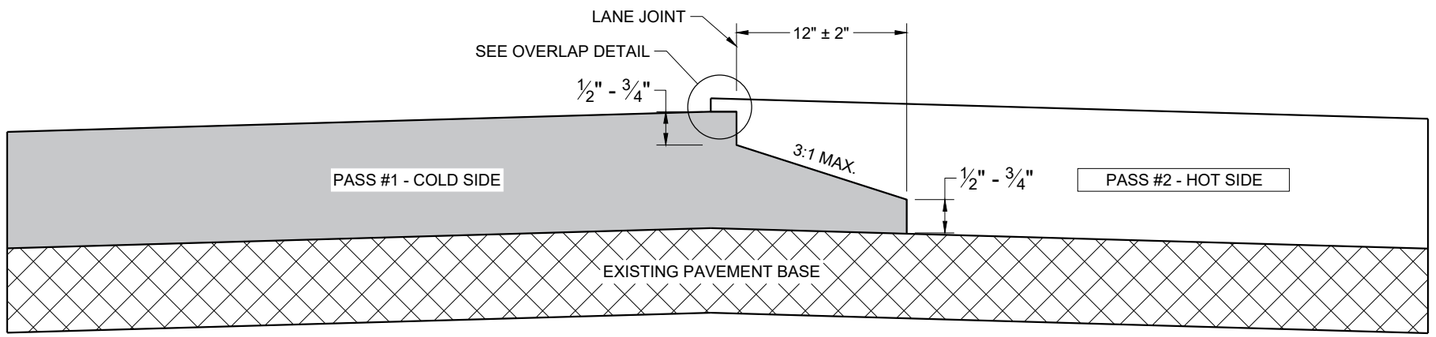
3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

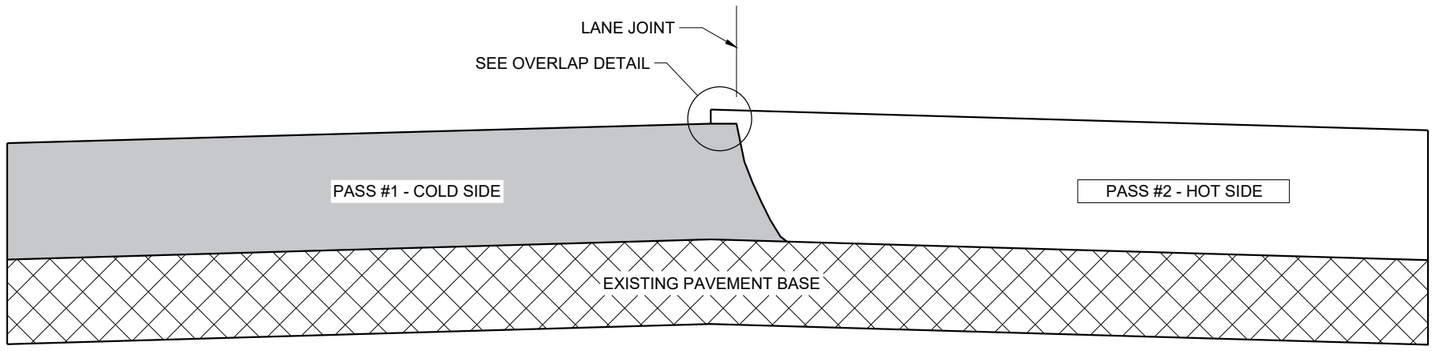
FHWA

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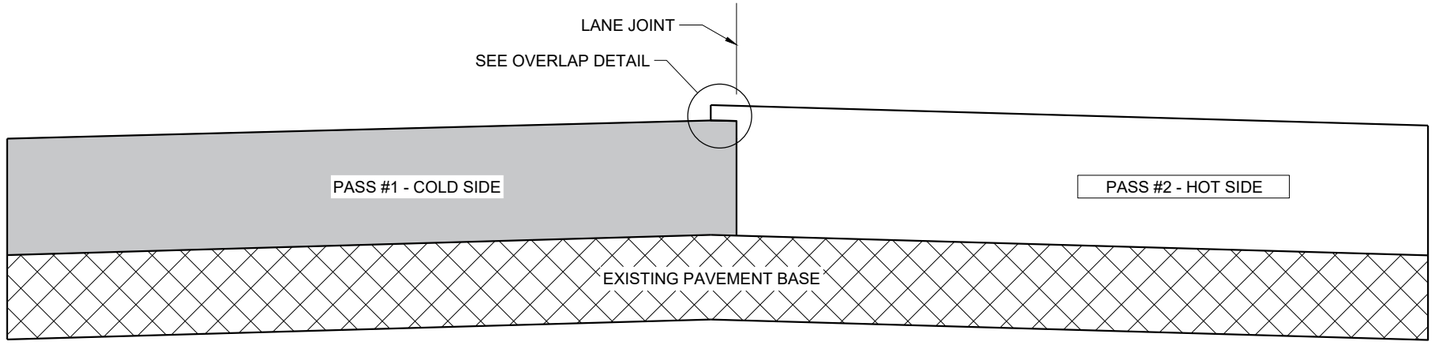
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

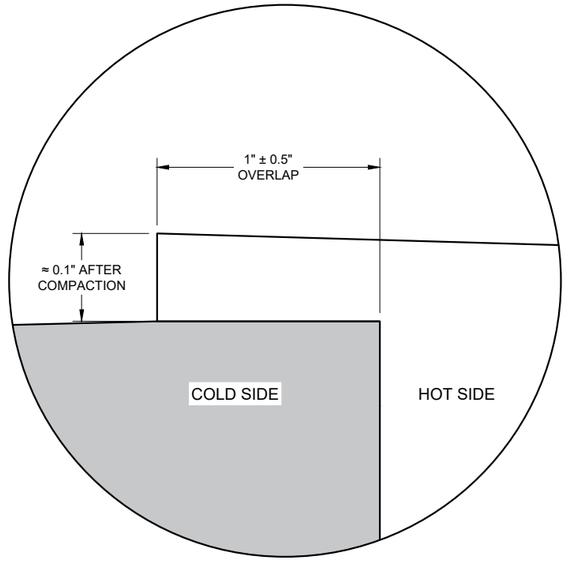
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

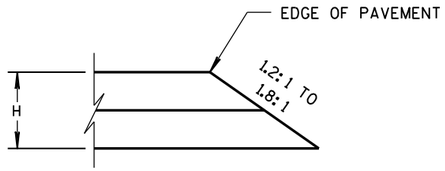
FHWA

6

SDD 13C19 - 03

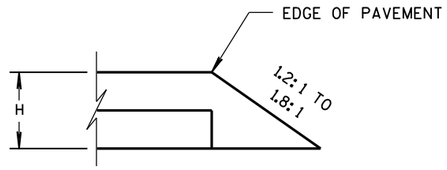
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SDD 13C19 - 03



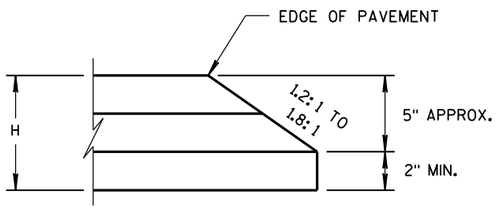
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



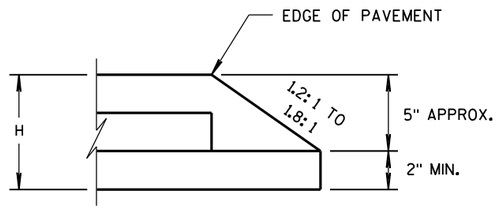
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

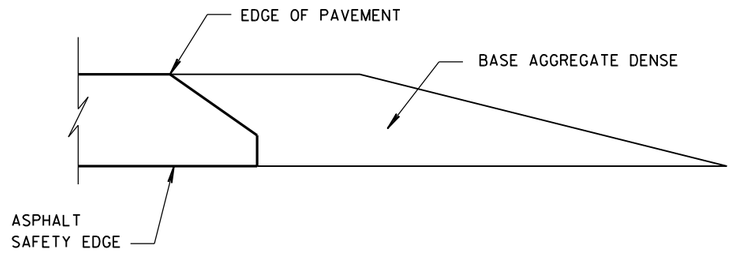
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

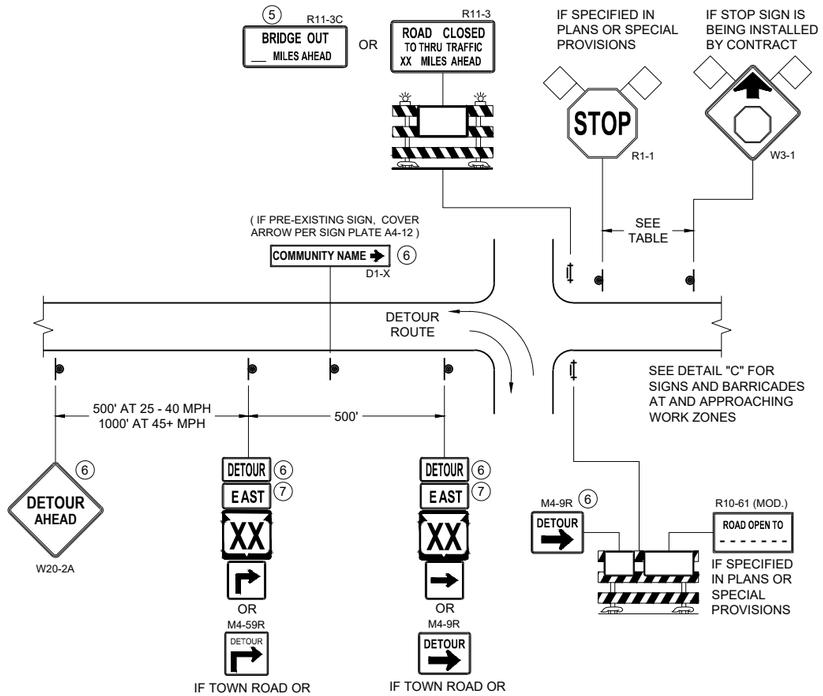
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

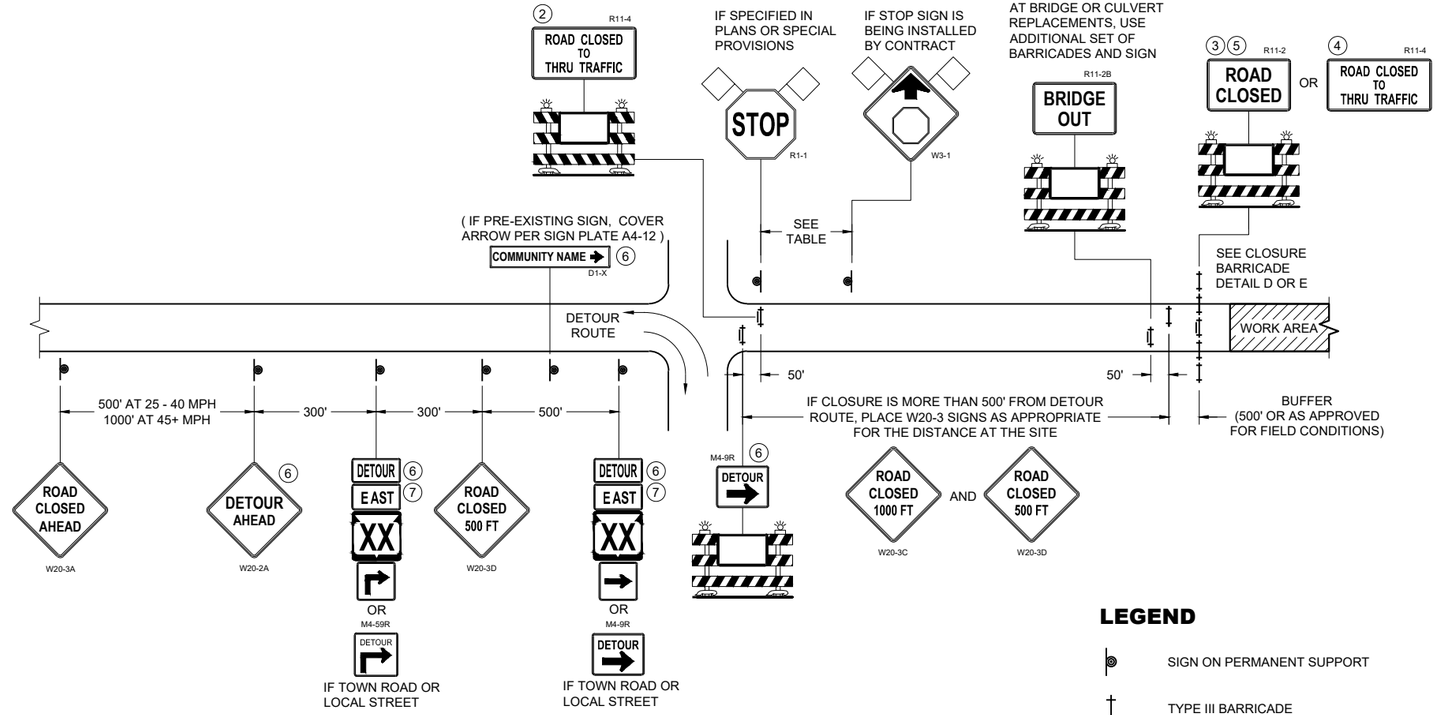
/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



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)

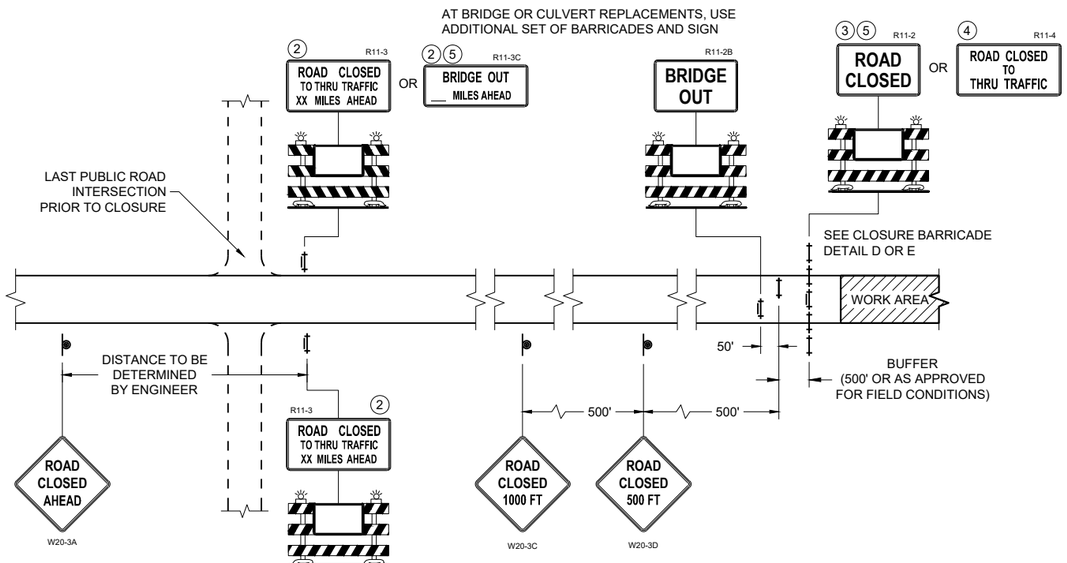
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

LEGEND

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

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

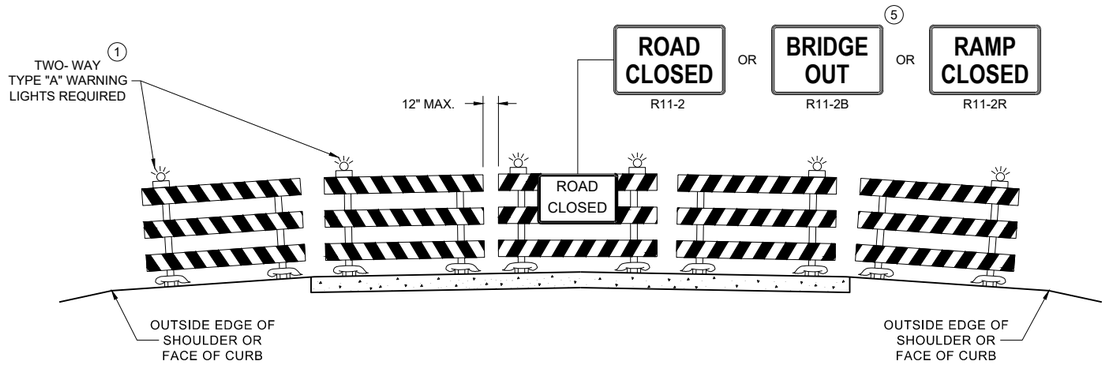
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

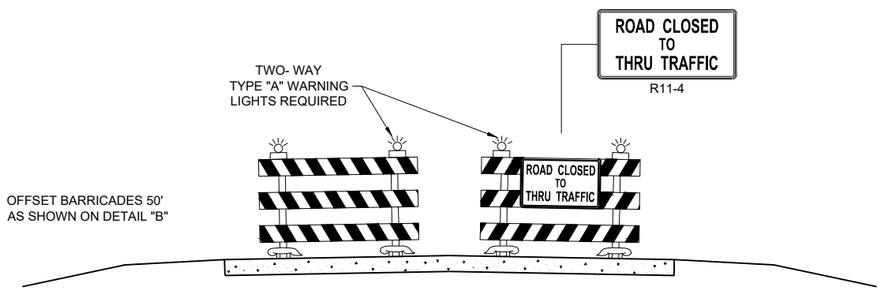
6
SDD 15C02-10a



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.

PARTIAL NUMBERS ON SIGNS SHALL BE DISPLAYED AS A WHOLE NUMBER(AS NEEDED) FOLLOWED BY A FRACTION. SIGNS SHALL NOT DISPLAY NUMBERS IN DECIMAL FORM.

"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"

SIGNS PLACED ON TYPE III BARRICADES THAT ARE SIZES OTHER THAN 48"X30" SHALL HAVE A CORRUGATED POLYPROPYLENE OR POLYETHYLENE PLASTIC SIGN BASE.

(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

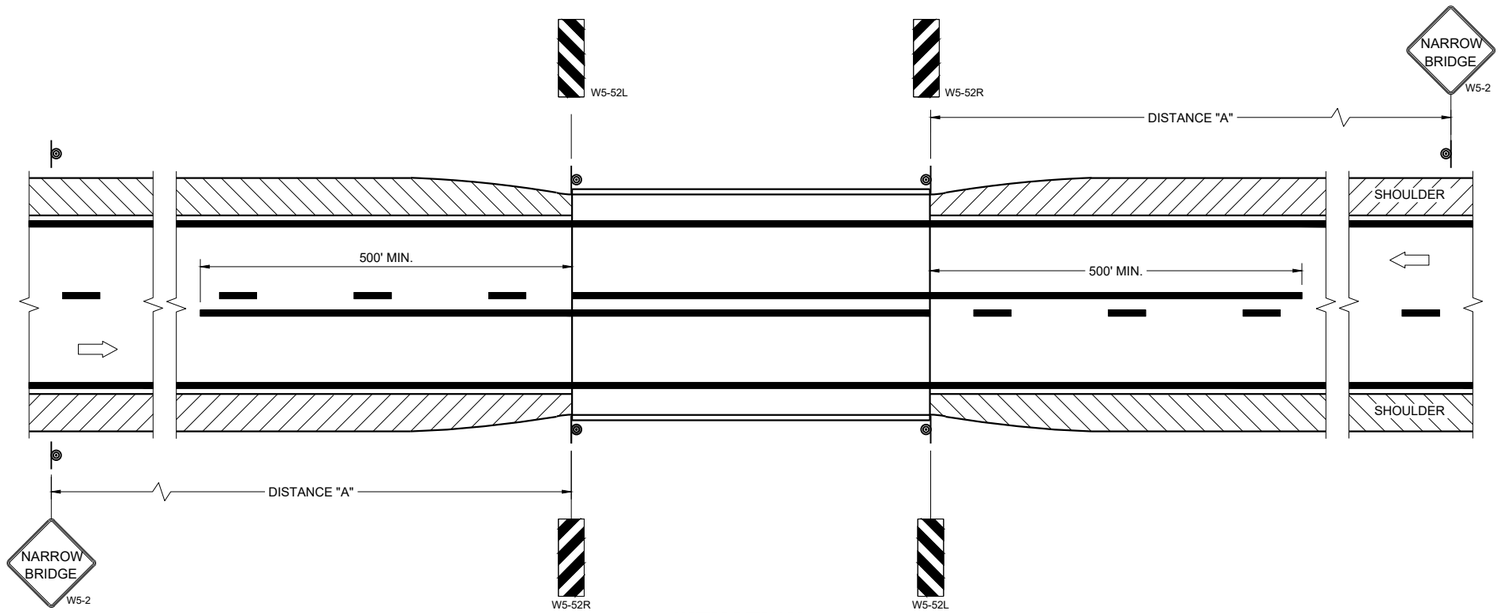
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2025 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

FHWA

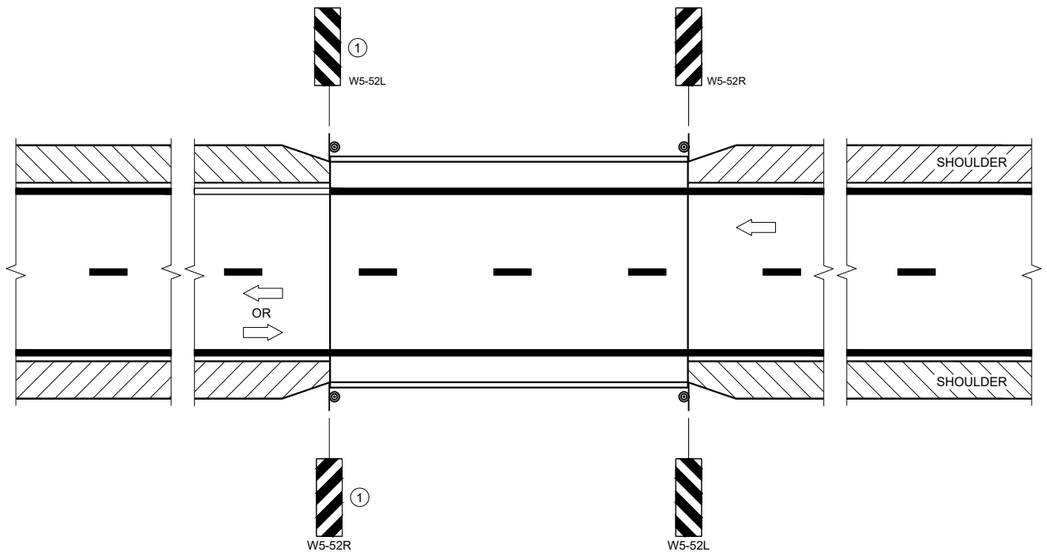
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SDD 15C02-10b



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

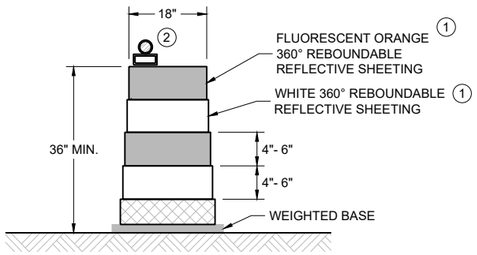
APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA

6
SDD 15C06-12

GENERAL NOTES

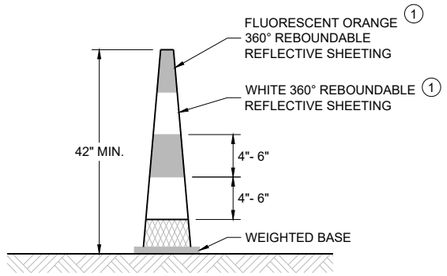
(1) REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

(2) LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.



DRUM

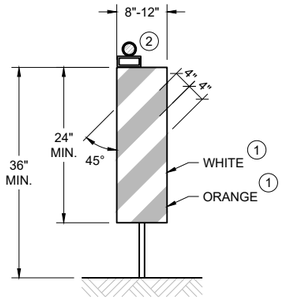
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

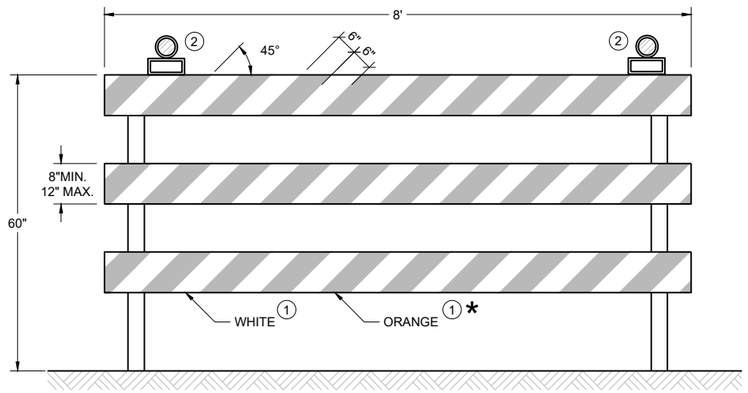
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



VERTICAL PANEL

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

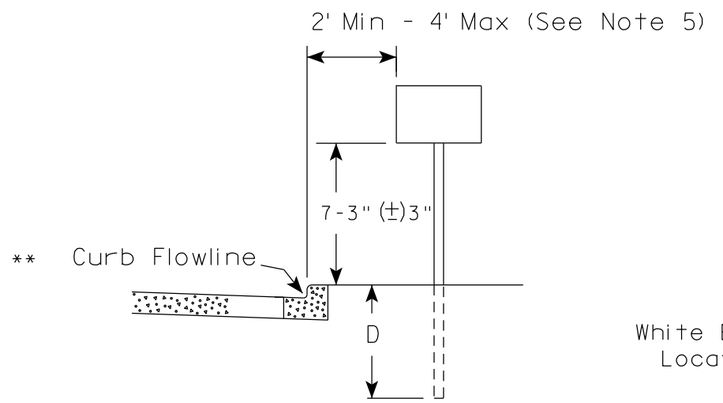
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2026 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER

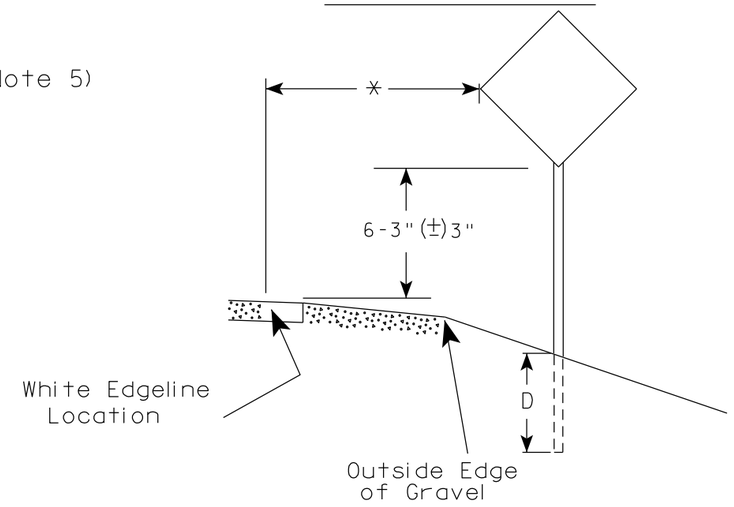
FHWA

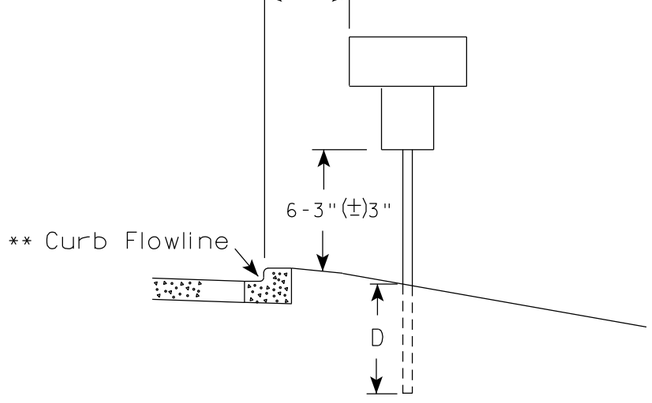
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SDD 15C11-11b

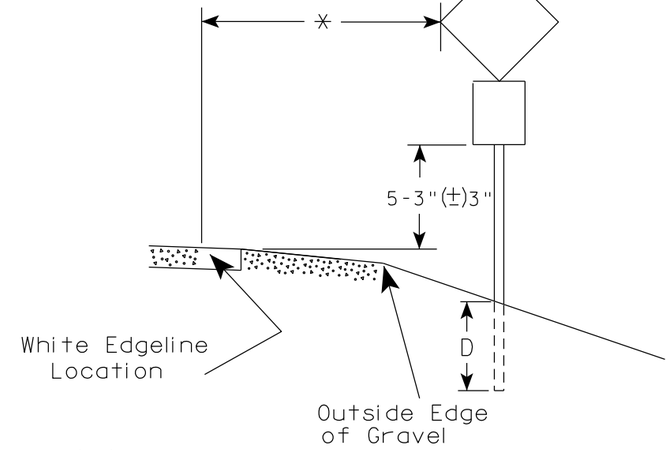
URBAN AREA



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.

POST EMBEDMENT DEPTH

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

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.

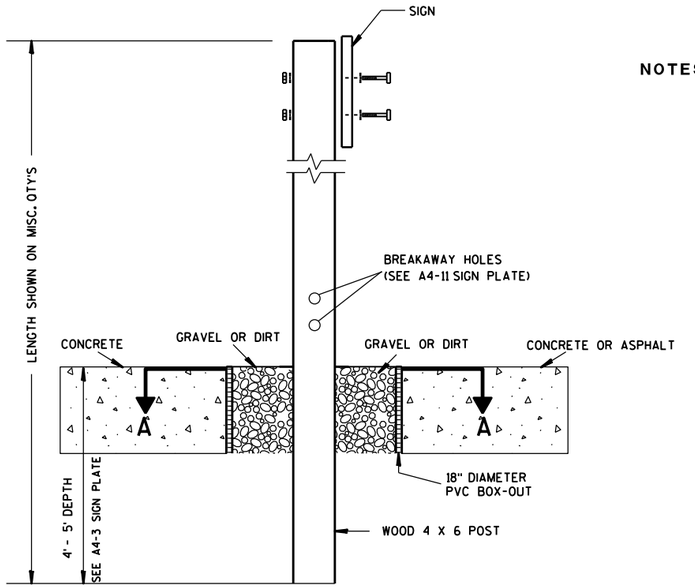
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

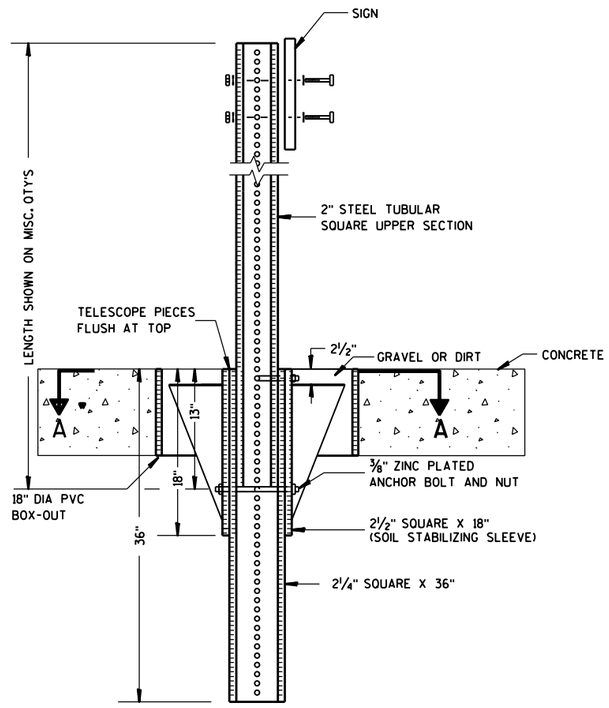
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 23	E



ELEVATION VIEW

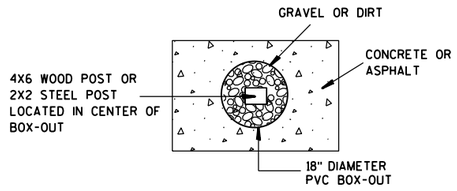
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

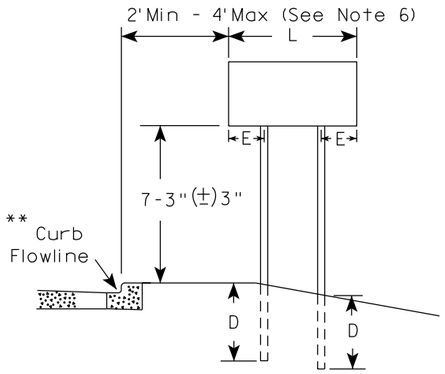
APPROVED Matthew R Rauch
for State Traffic Engineer

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

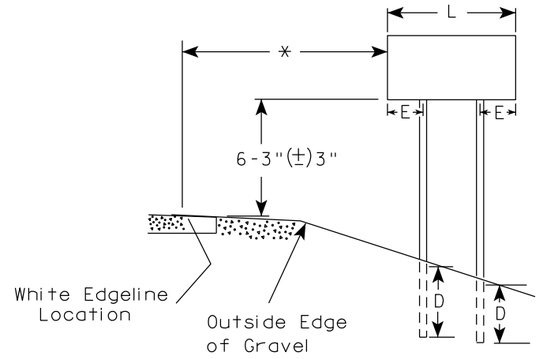
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

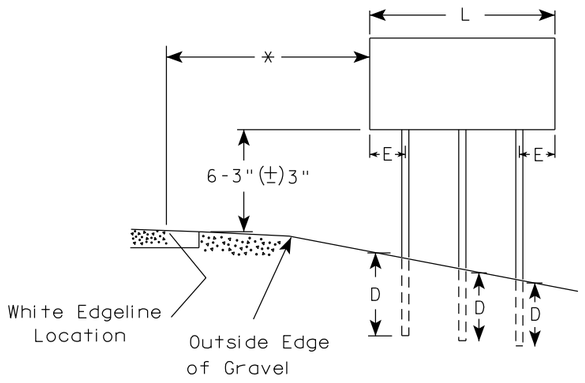
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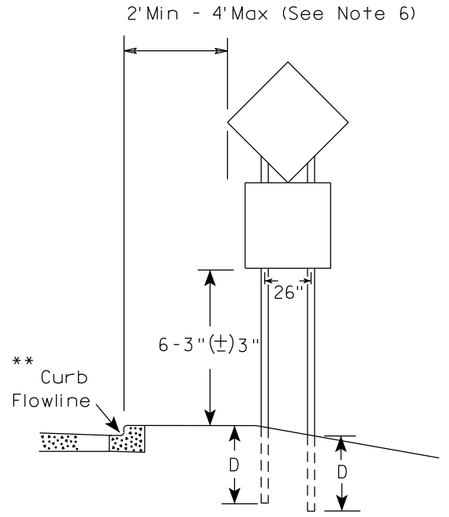
URBAN AREA



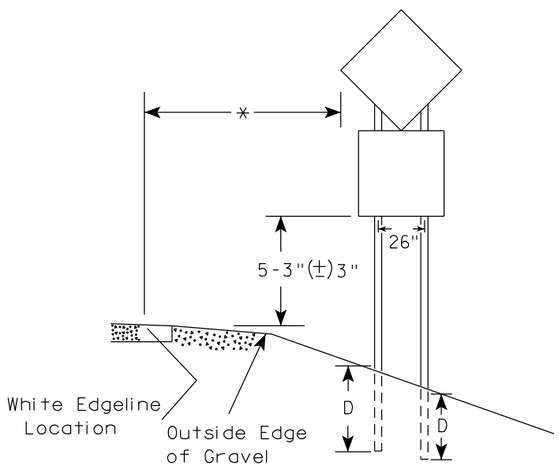
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



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'

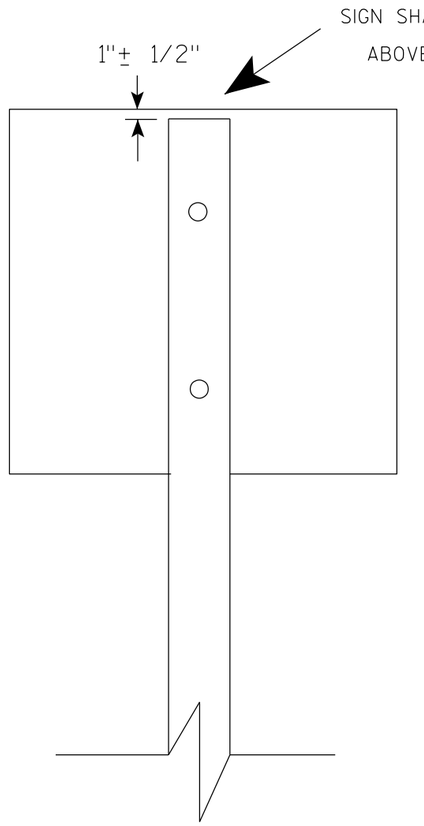
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

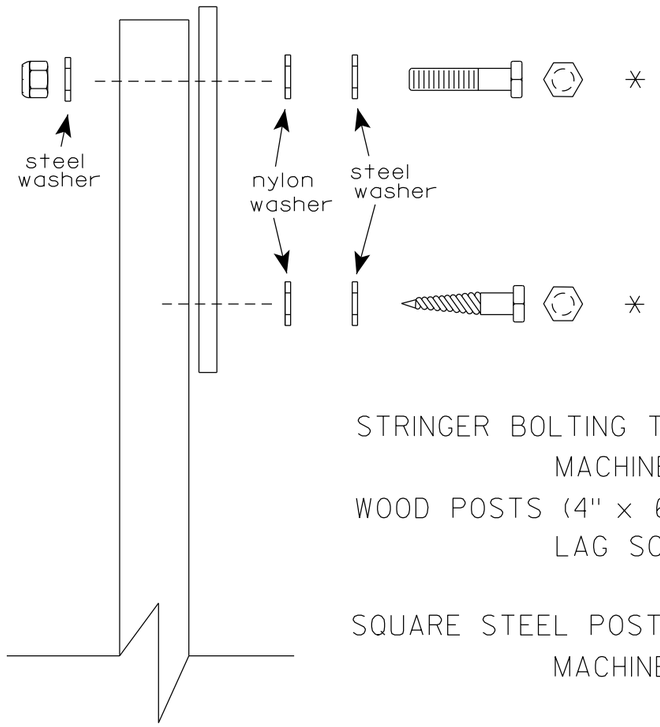
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

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





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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

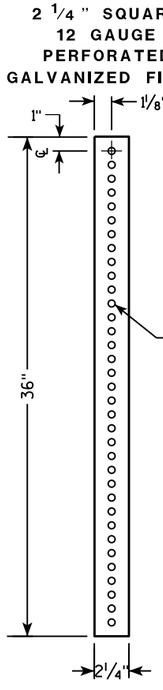
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

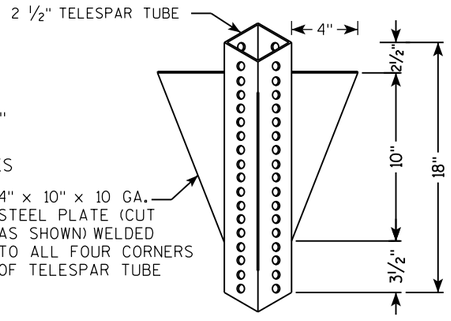
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

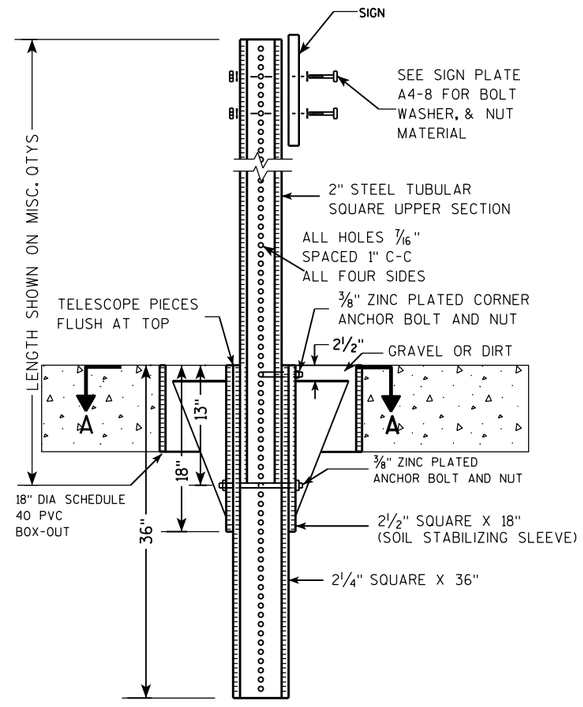
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



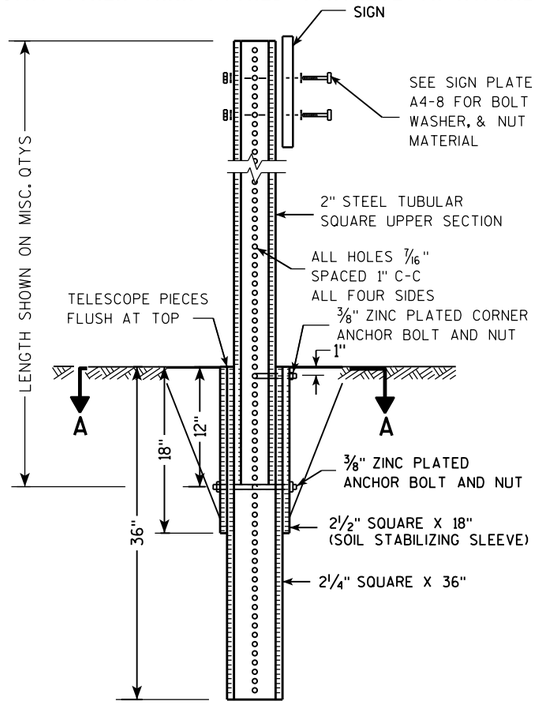
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

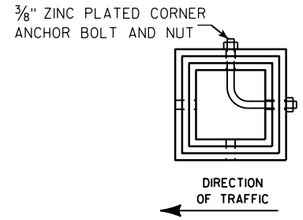


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

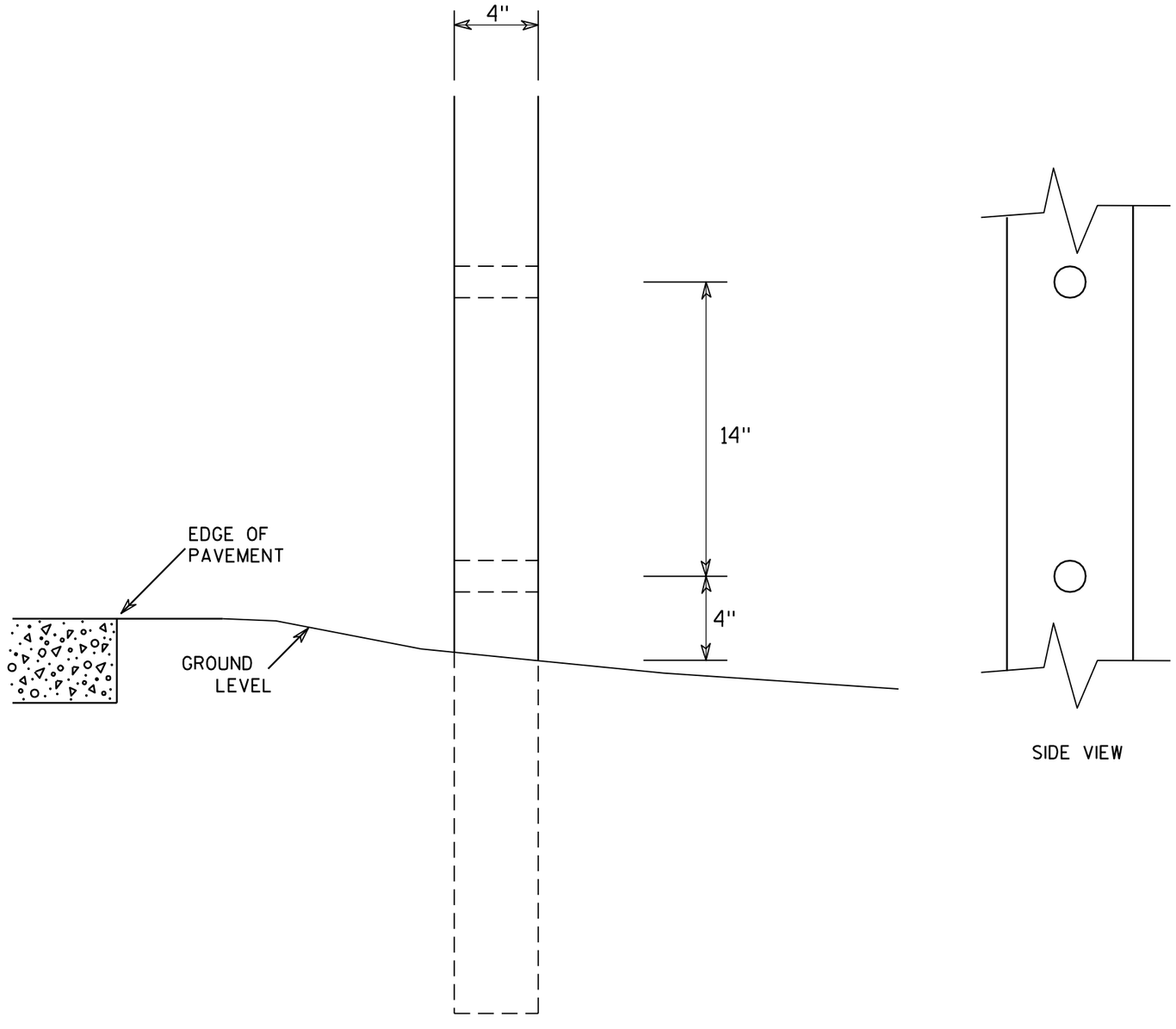
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 27 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

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4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

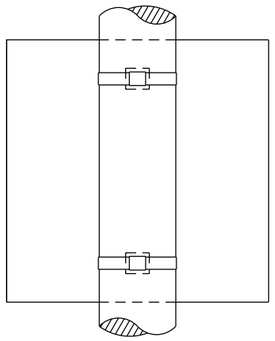
APPROVED Chester J Spang
for State Traffic Engineer

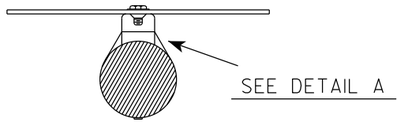
DATE 3/27/97 PLATE NO. A4-11.2

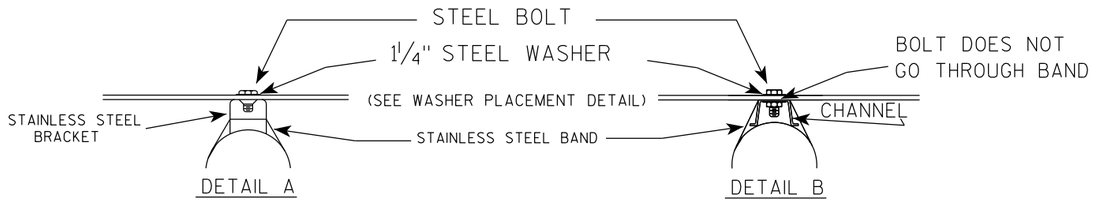
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 28	E

BANDING

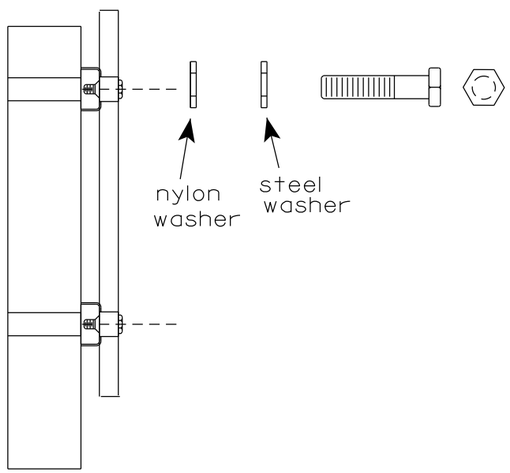
SINGLE SIGN







WASHER PLACEMENT

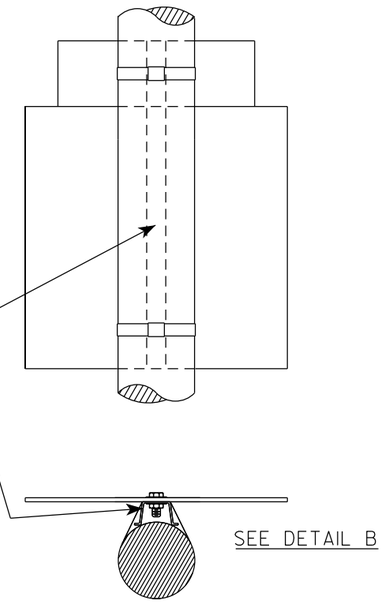


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

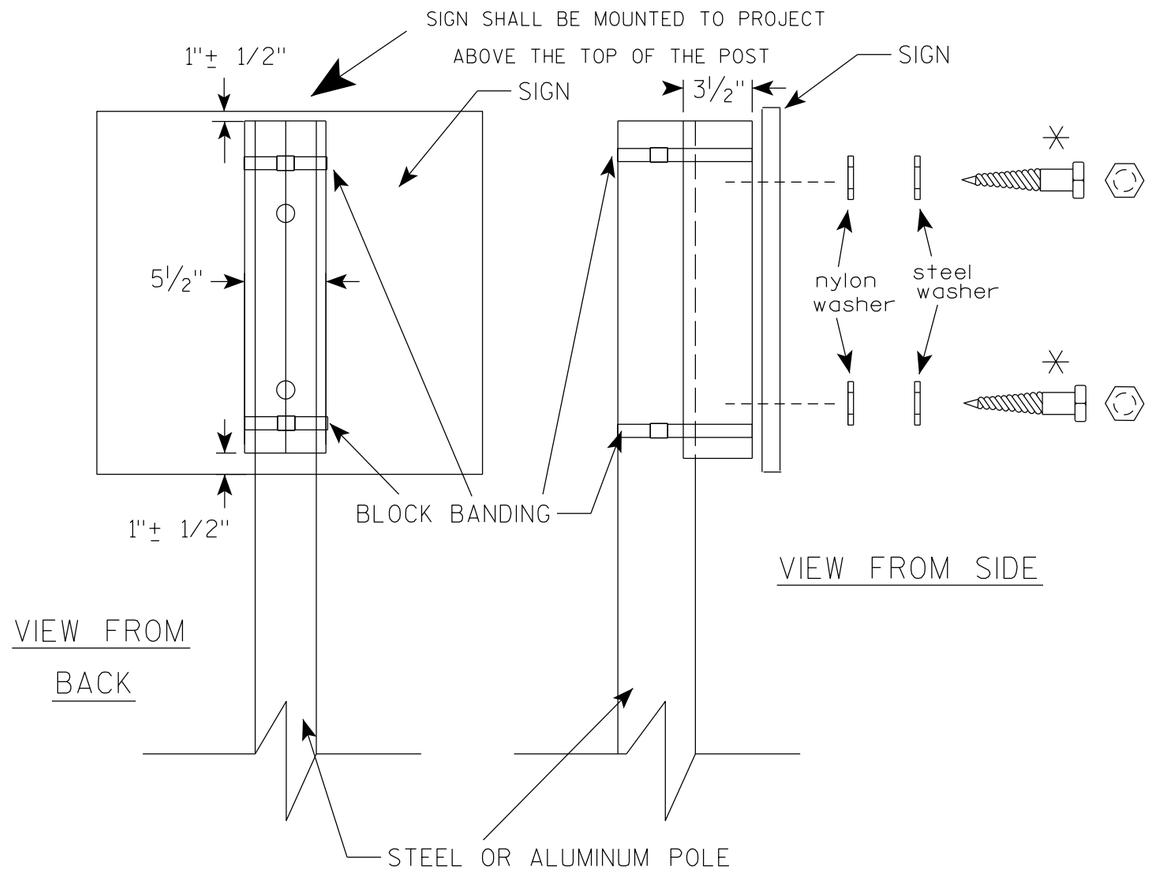
DATE 6/10/19 PLATE NO. A5-9.4

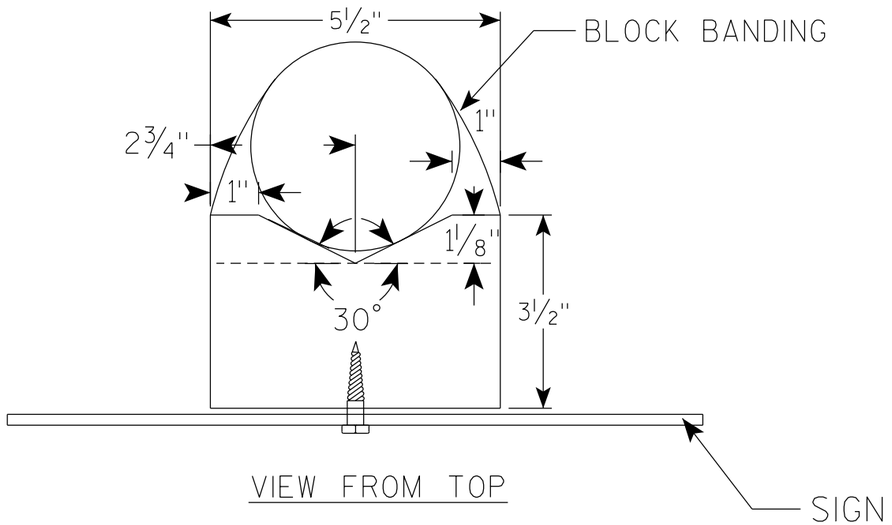
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 29	E

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

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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)

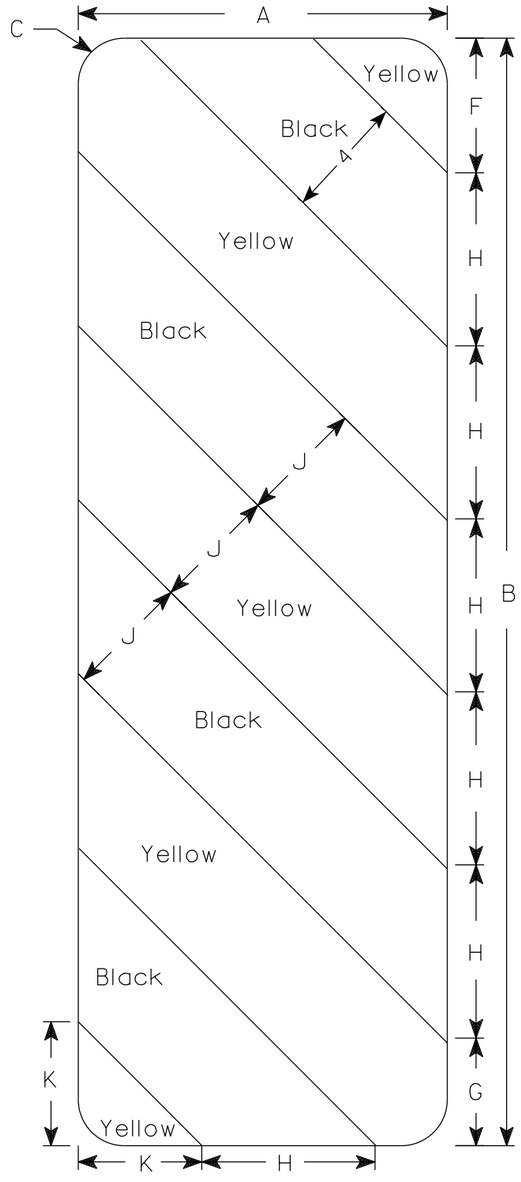
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

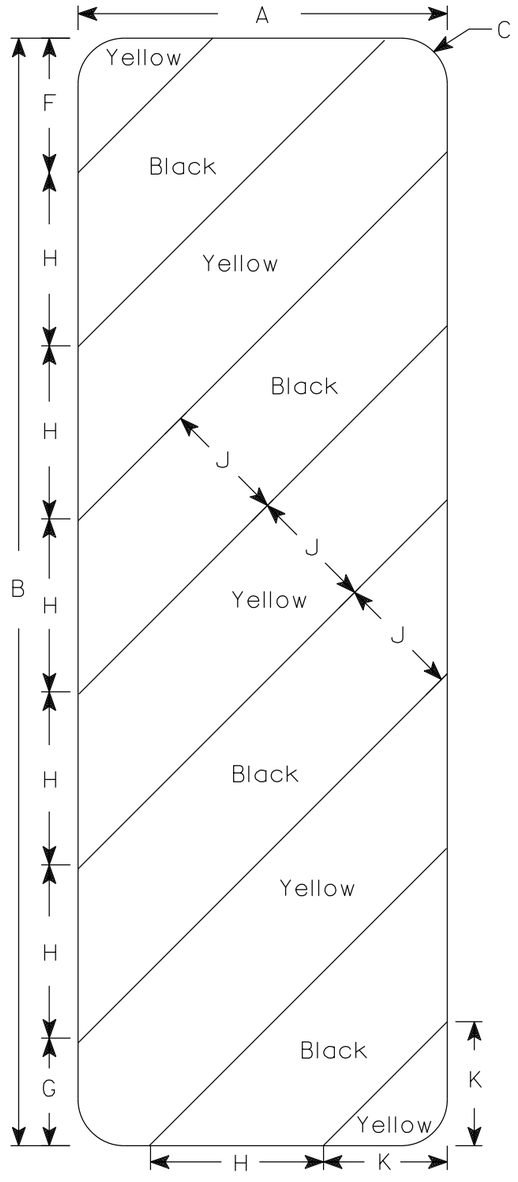
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 30 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

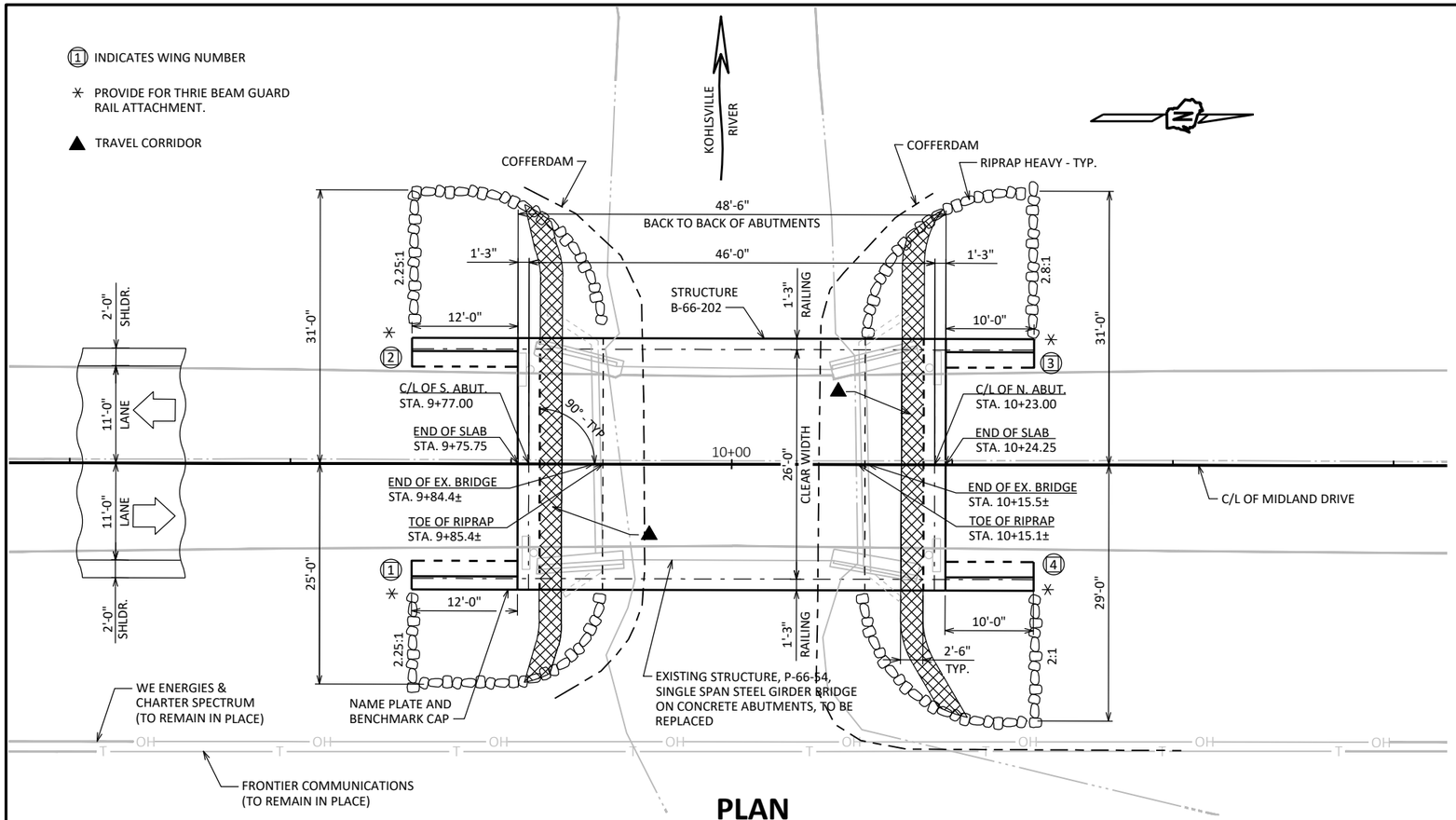
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

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

(1) INDICATES WING NUMBER

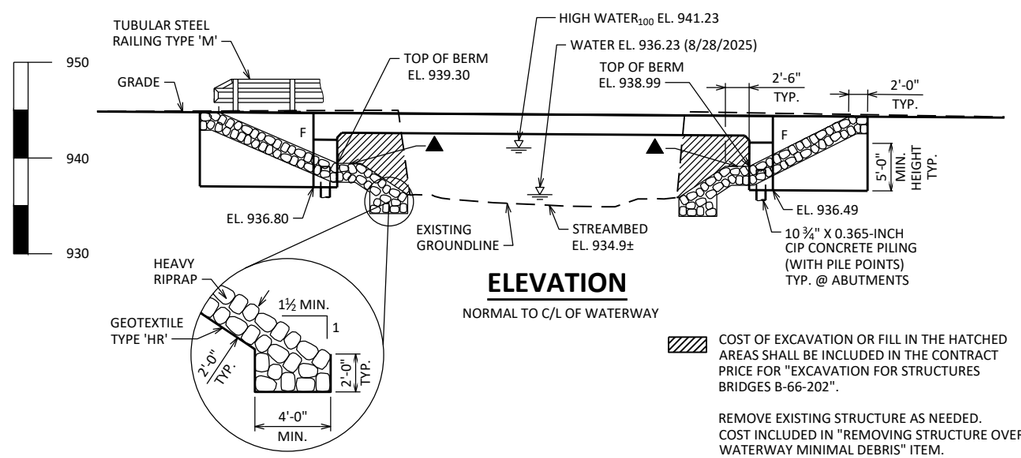
✳ PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT.

▲ TRAVEL CORRIDOR



PLAN

SINGLE-SPAN CONCRETE FLAT SLAB BRIDGE



ELEVATION

NORMAL TO C/L OF WATERWAY

COST OF EXCAVATION OR FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-66-202".

REMOVE EXISTING STRUCTURE AS NEEDED. COST INCLUDED IN "REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS" ITEM. TYPICAL AT ALL SUBSTRUCTURES.

STATE PROJECT NUMBER

4823-05-70

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 ¾" x 0.365" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 130 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
- ESTIMATED 25-'0" LONG (WITH PILE POINTS) AT S. ABUTMENT. PILES TO BE PRE-BORED 18'-0" PRIOR TO DRIVING AT S. ABUTMENT
- ESTIMATED 35'-0" LONG (WITH PILE POINTS) AT N. ABUTMENT. PILES TO BE PRE-BORED 18'-0" PRIOR TO DRIVING AT N. 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.

CONTACT ENGINEER IF APPROACHING ARTESIAN LAYER DURING DRIVING OPERATIONS.

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}= 1,100 C.F.S.
V_{100}= 6.3 F.P.S.
HW_{100}= EL. 941.23
WATERWAY AREA = 176 SQ. FT.
DRAINAGE AREA = 21.4 SQ. MI.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

Q_2= 290 C.F.S.
V_2= 3.1 F.P.S.
HW_2= EL. 938.33

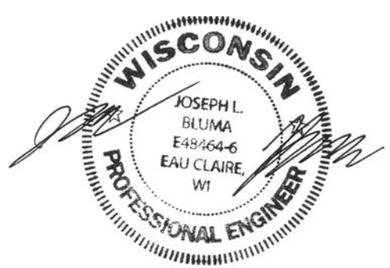
TRAFFIC DATA

FEATURE ON: MIDLAND DRIVE

ADT = 365 (2027)
ADT = 400 (2047)
R.D.S. = 40 MPH

LIST OF DRAWINGS

1. GENERAL PLAN
2. TYPICAL SECTION, QUANTITIES & NOTES
3. STRUCTURE DETAILS
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT WINGS 1 & 2 DETAILS
7. SOUTH ABUTMENT PILE LAYOUT AND BILL OF BARS
8. NORTH ABUTMENT
9. NORTH ABUTMENT WINGS 3 & 4 DETAILS
10. NORTH ABUTMENT PILE LAYOUT AND BILL OF BARS
11. SUPERSTRUCTURE AND BILL OF BARS
12. SUPERSTRUCTURE PLAN
13. TUBULAR STEEL RAILING TYPE M



07/15/2026

STRUCTURE DESIGN CONTACTS:

JOSEPH BLUMA	715-834-3161
AARON BONK	608-261-0261

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
AYRES
20975 Swenson Dr., Suite 200
Waukesha, WI 53186
www.AyresAssociates.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 08/25/26
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-66-202

MIDLAND DRIVE OVER KOHLSVILLE RIVER

COUNTY	TOWN
WASHINGTON	WAYNE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
ERS	LMP	CLP/LMP	JLB

GENERAL PLAN

SHEET 1 OF 13
32

I.D.

DATE: 6/30/2026

FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_GP.DWG

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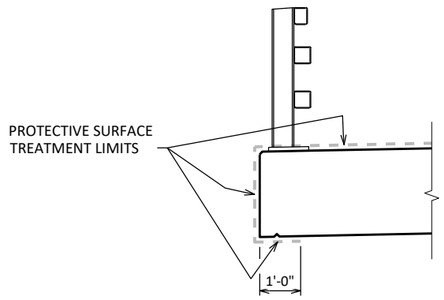
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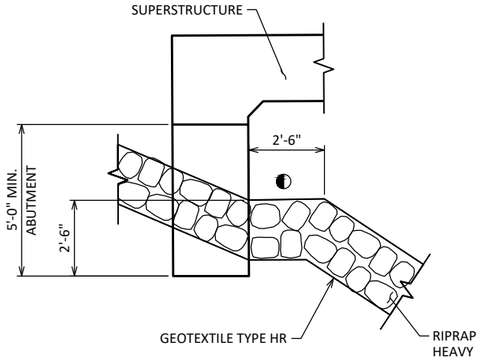
4823-05-70

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	S ABUT.	N ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-66-54	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-66-202	EACH	---	---	---	1
206.5001	COFFERDAMS (B-66-202)	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	95	95	190
502.0100	CONCRETE MASONRY BRIDGES	CY	110.9	30.7	27.6	170
502.3200	PROTECTIVE SURFACE TREATMENT	SY	187	12	9	208
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	1,760	1,760	3,520
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	21,120	1,690	1,410	24,220
513.4061	RAILING TUBULAR TYPE M	LF	97.0	26.5	22.5	146
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	10	9	19
550.0010	PRE-BORING UNCONSOLIDATED MATERIALS	LF	---	108	108	216
550.0500	PILE POINTS	EACH	---	6	6	12
550.2106	PILING CIP CONCRETE 10 ¾ X 0.365-INCH	LF	---	150	210	360
606.0300	RIPRAP HEAVY	CY	---	70	70	140
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	95	90	185
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	44	41	85
645.0120	GEOTEXTILE TYPE HR	SY	---	140	140	280
SPV.0195	INFILL RIPRAP B-66-202	TON	---	5	5	10
	NON-BID ITEMS					
	FILLER	SIZE	---	---	---	½", ¾"

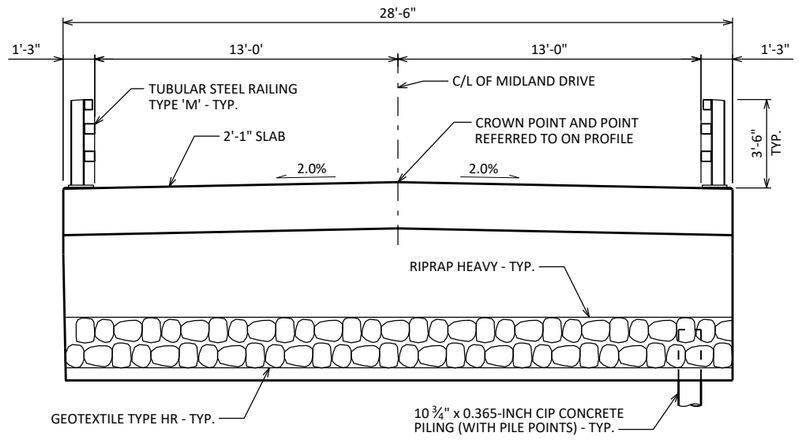


PROTECTIVE SURFACE TREATMENT DETAIL

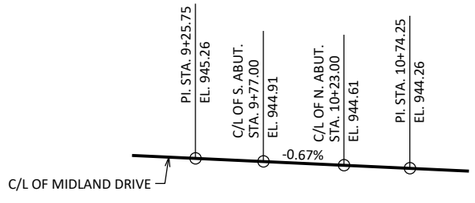


TRAVEL CORRIDOR

◐ INFILL RIPRAP FOR TRAVEL CORRIDOR AFTER RIPRAP IS PLACED



TYPICAL SECTION THRU BRIDGE



PROFILE GRADE LINE

(MIDLAND DRIVE)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-66-202" SHALL BE THE EXISTING GROUNDLINE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

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

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

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

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.

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

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

THE 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 MINIMAL DEBRIS P-66-54" BID ITEM.

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

BENCH MARK

NO.	STATION	ELEV.	DESCRIPTION
300	8+66	943.39	NAIL IN W. SIDE PPOL, 31.4' RT.
301	11+14	940.79	RR SPIKE IN W. SIDE PPOL, 30.7' RT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-66-202

DRAWN BY CLP | PLANS CK'D ERS

TYPICAL SECTION, QUANTITIES & NOTES

SHEET 2 OF 13

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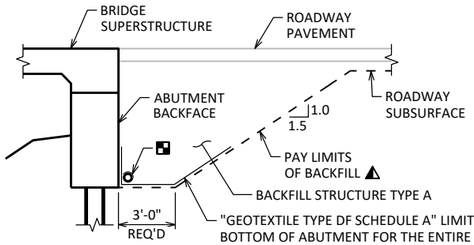
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FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_DETAILS.DWG

STATE PROJECT NUMBER

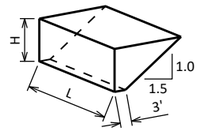
4823-05-70



TYPICAL SECTION THRU ABUTMENT

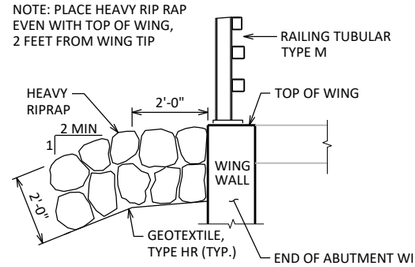
⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

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

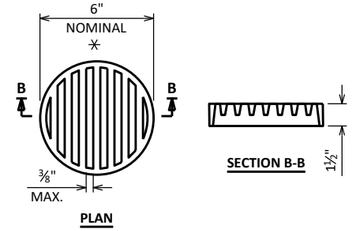


ABUTMENT BACKFILL DIAGRAM

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)



TYPICAL FILL SECTION AT WING TIPS



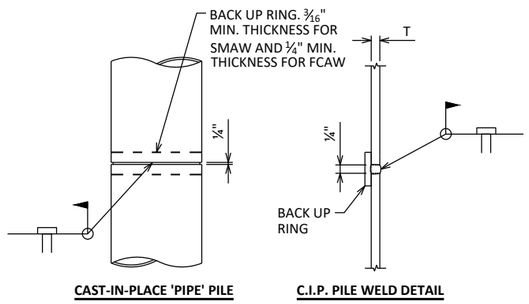
PLAN

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".

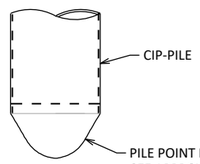
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X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



CAST-IN-PLACE 'PIPE' PILE

C.I.P. PILE WELD DETAIL

CIP PILE DETAILS



PILE POINT FOR CIP PILING

PILE POINT SHALL BE INSTALLED ACCORDING TO THE PILE POINT MANUFACTURE'S INSTRUCTIONS. ENSURE PILE POINT WELDS ARE WATERTIGHT.

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-66-202

DRAWN BY CLP | PLANS CK'D ERS

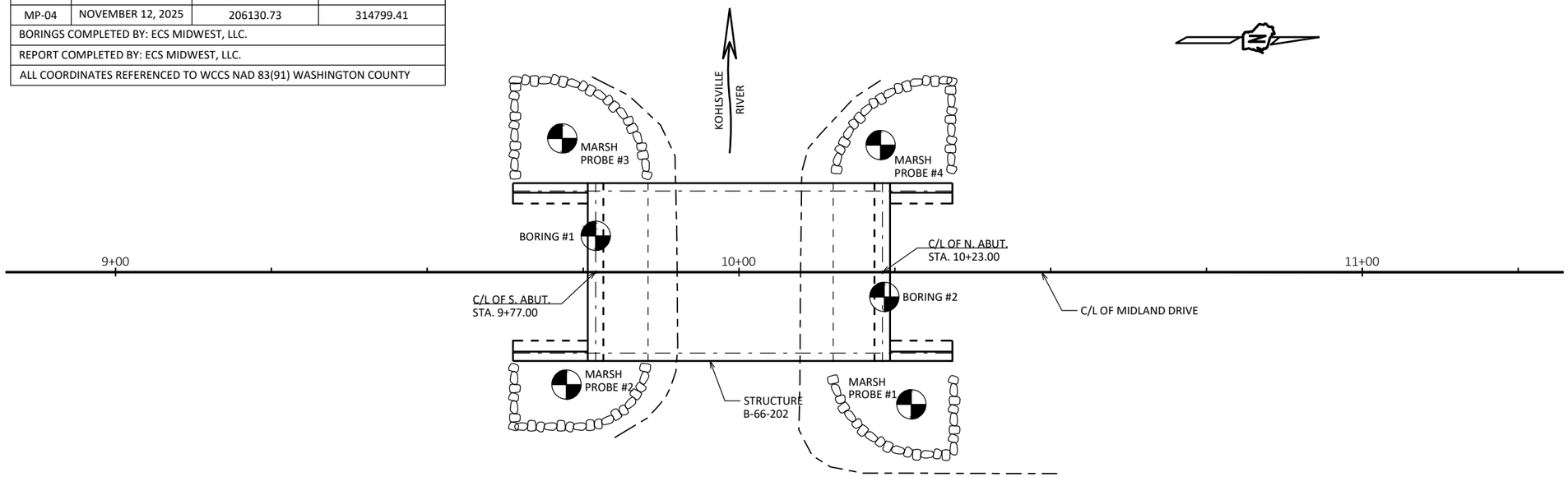
STRUCTURE DETAILS

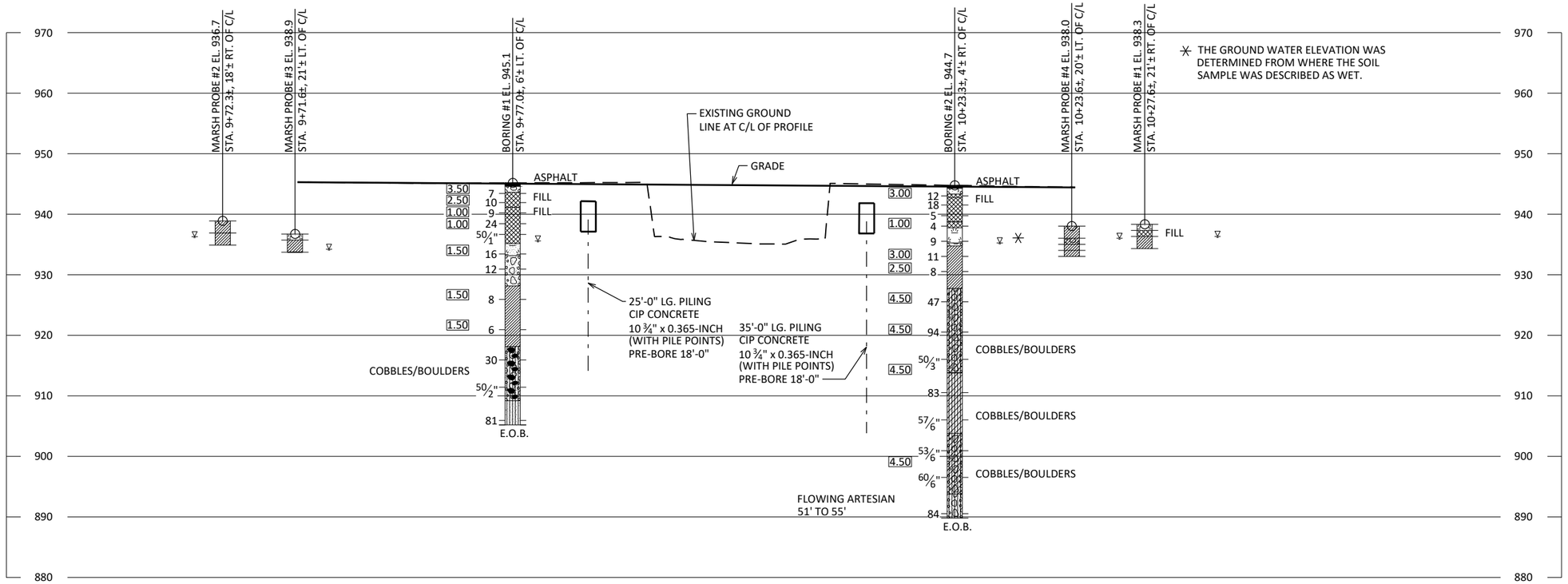
SHEET 3 OF 13

34

FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_DETAILS.DWG

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-01	NOVEMBER 12, 2025	206130.38	314823.46
B-02	NOVEMBER 11, 2025	206084.08	314813.56
MP-01	NOVEMBER 12, 2025	206134.65	314840.73
MP-02	NOVEMBER 12, 2025	206079.34	314837.44
MP-03	NOVEMBER 12, 2025	206078.73	314797.92
MP-04	NOVEMBER 12, 2025	206130.73	314799.41
BORINGS COMPLETED BY: ECS MIDWEST, LLC.			
REPORT COMPLETED BY: ECS MIDWEST, LLC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) WASHINGTON COUNTY			





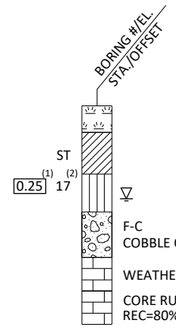
STATE PROJECT NUMBER

4823-05-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-66-202

DRAWN BY LMP | PLANS CK'D ERS

SUBSURFACE EXPLORATION

SHEET 4 OF 13
35

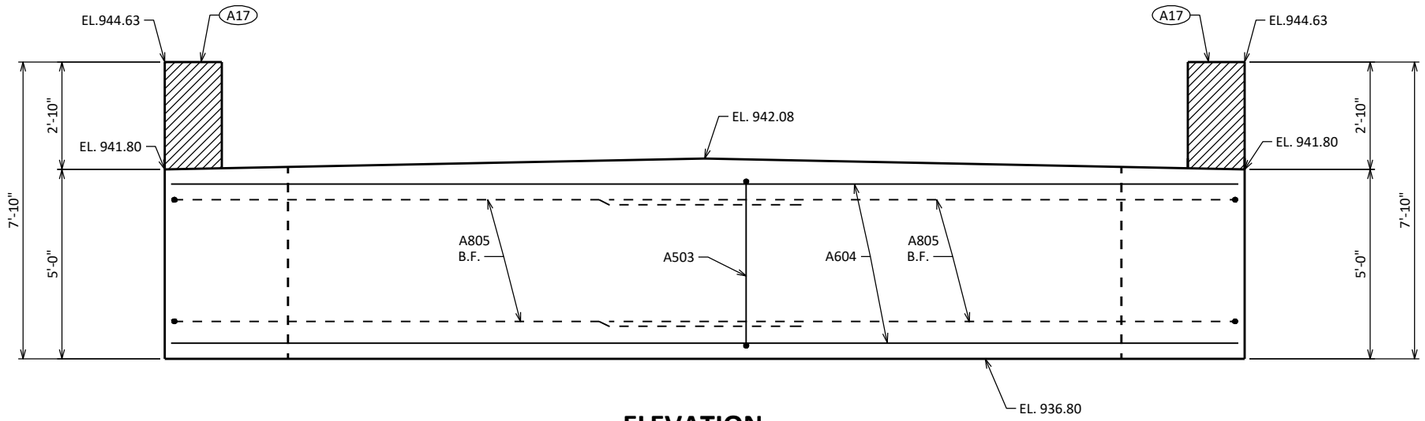
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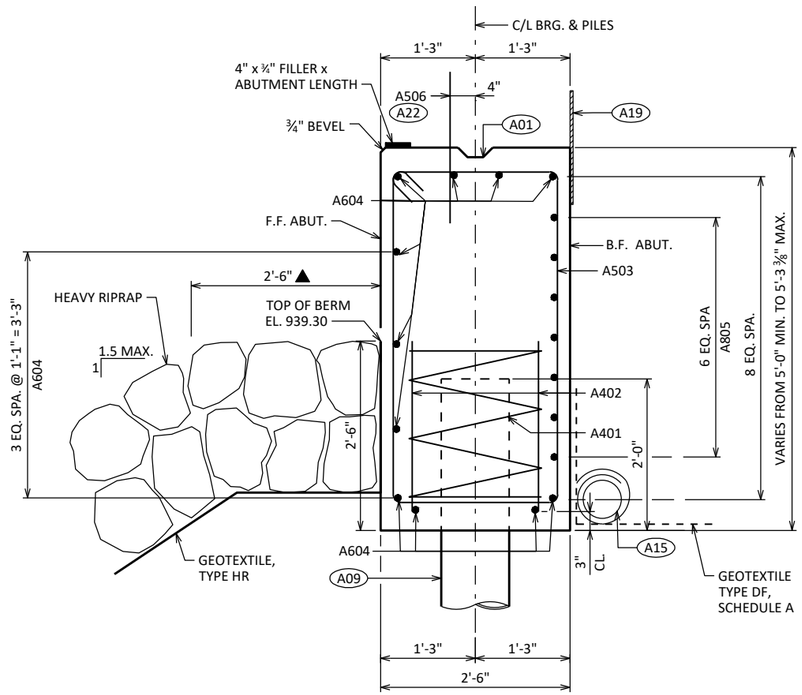
STATE PROJECT NUMBER

4823-05-70



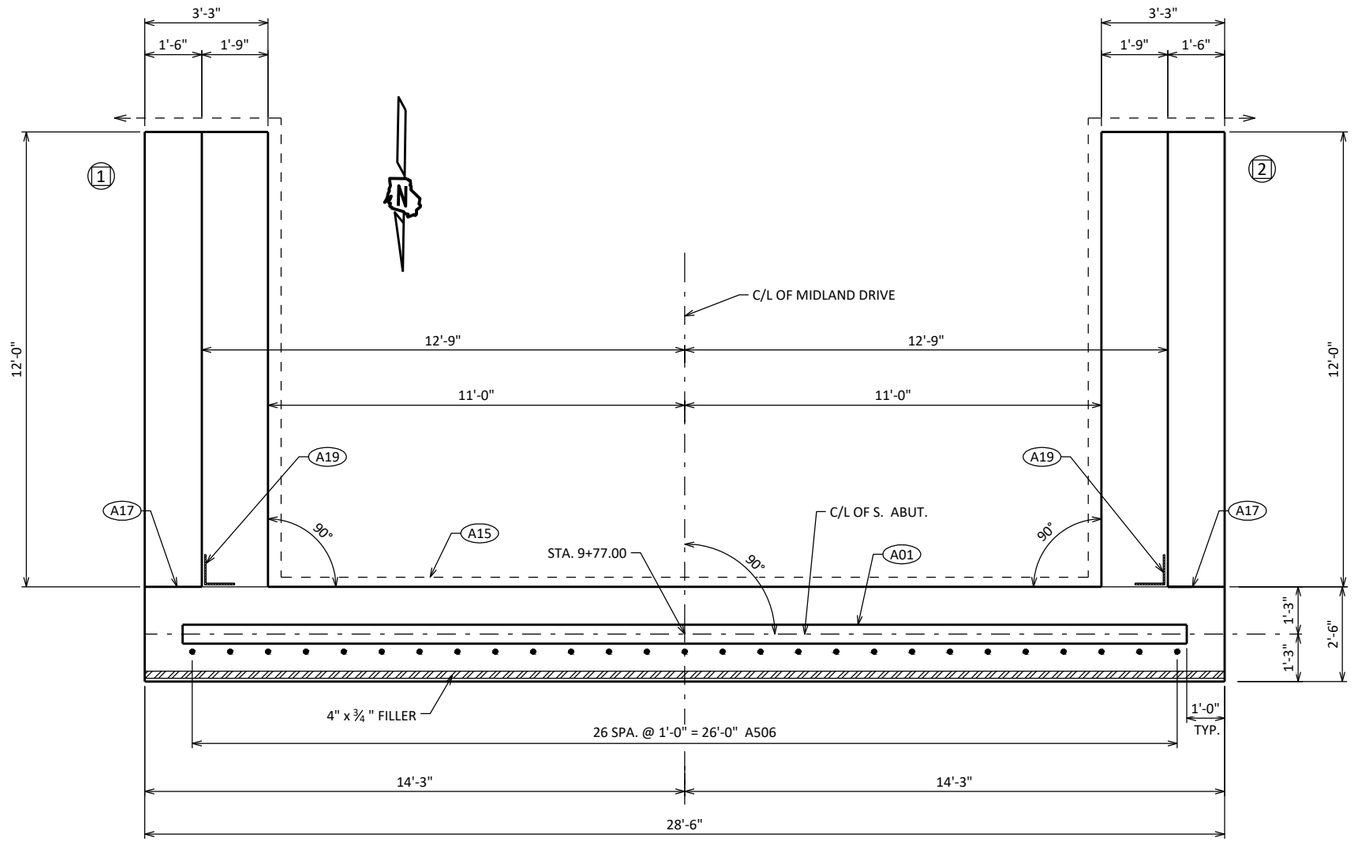
ELEVATION

(LOOKING SOUTH)



SECTION THRU BODY

▲ TRAVEL CORRIDOR



PLAN

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

A09 SUPPORT ABUTMENT ON 10¾" X 0.365" CIP CONCRETE PILING (WITH PILE POINTS), ESTIMATED 25'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 130 TONS PER PILE. PRE-BORE PILES 18'-0".

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-66-202

DRAWN BY CLP/LMP | PLANS CK'D ERS

SOUTH ABUTMENT

SHEET 5 OF 13

36

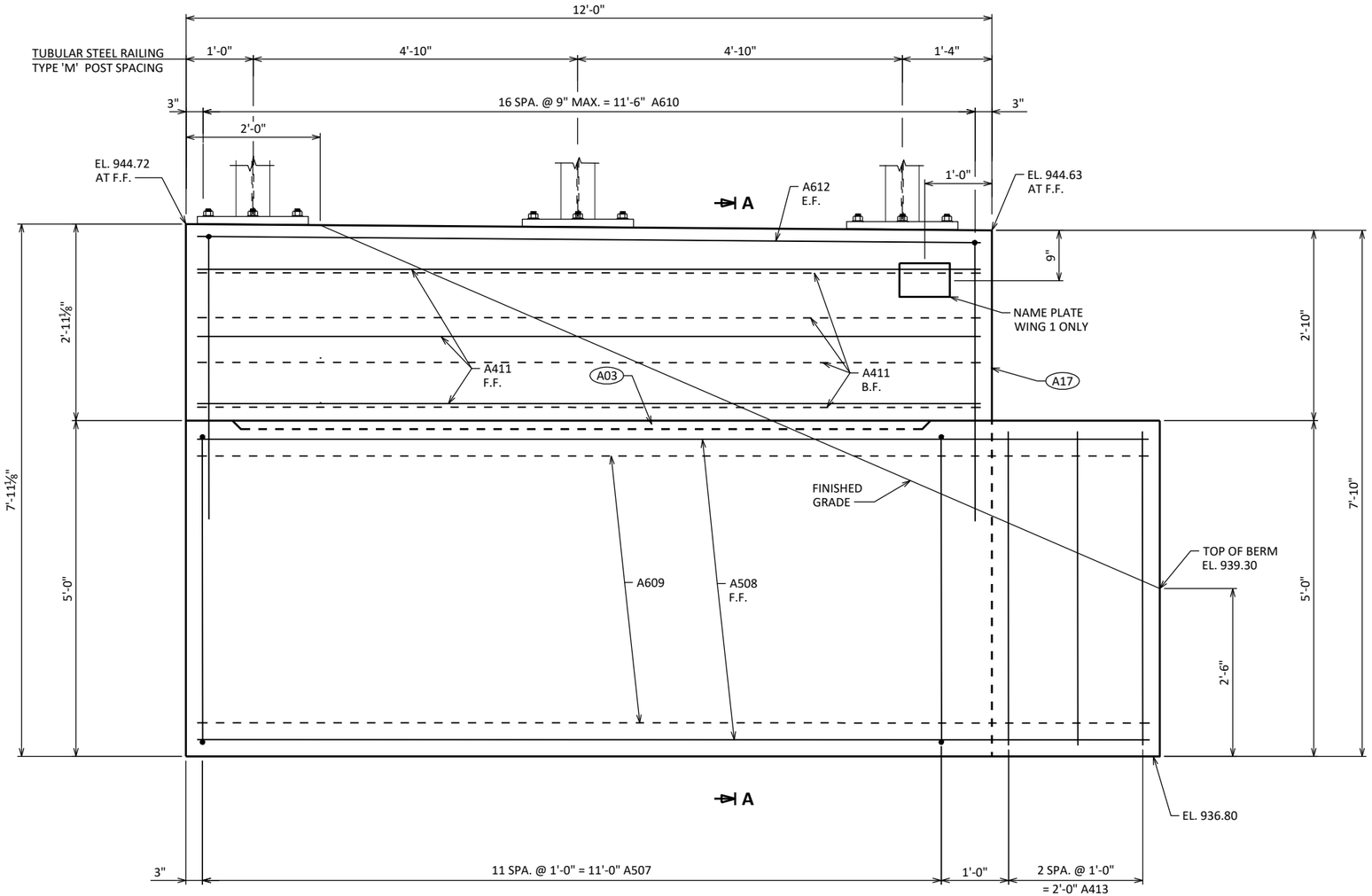
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FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_DETAILS.DWG

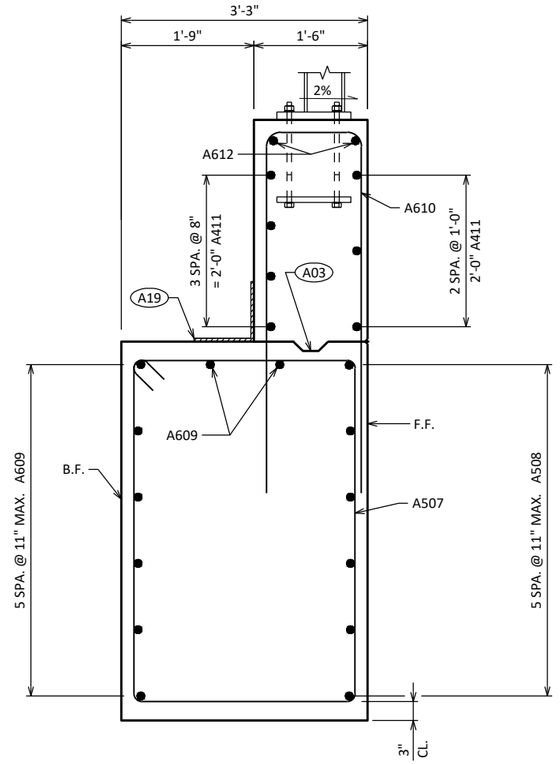
STATE PROJECT NUMBER

4823-05-70



ELEVATION - WING 1

(WING 1 SHOWN - WING 2 SIMILAR)



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).

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-66-202

DRAWN BY CLP/LMP | PLANS CK'D ERS

SOUTH ABUTMENT WINGS 1 & 2 DETAILS

SHEET 6 OF 13

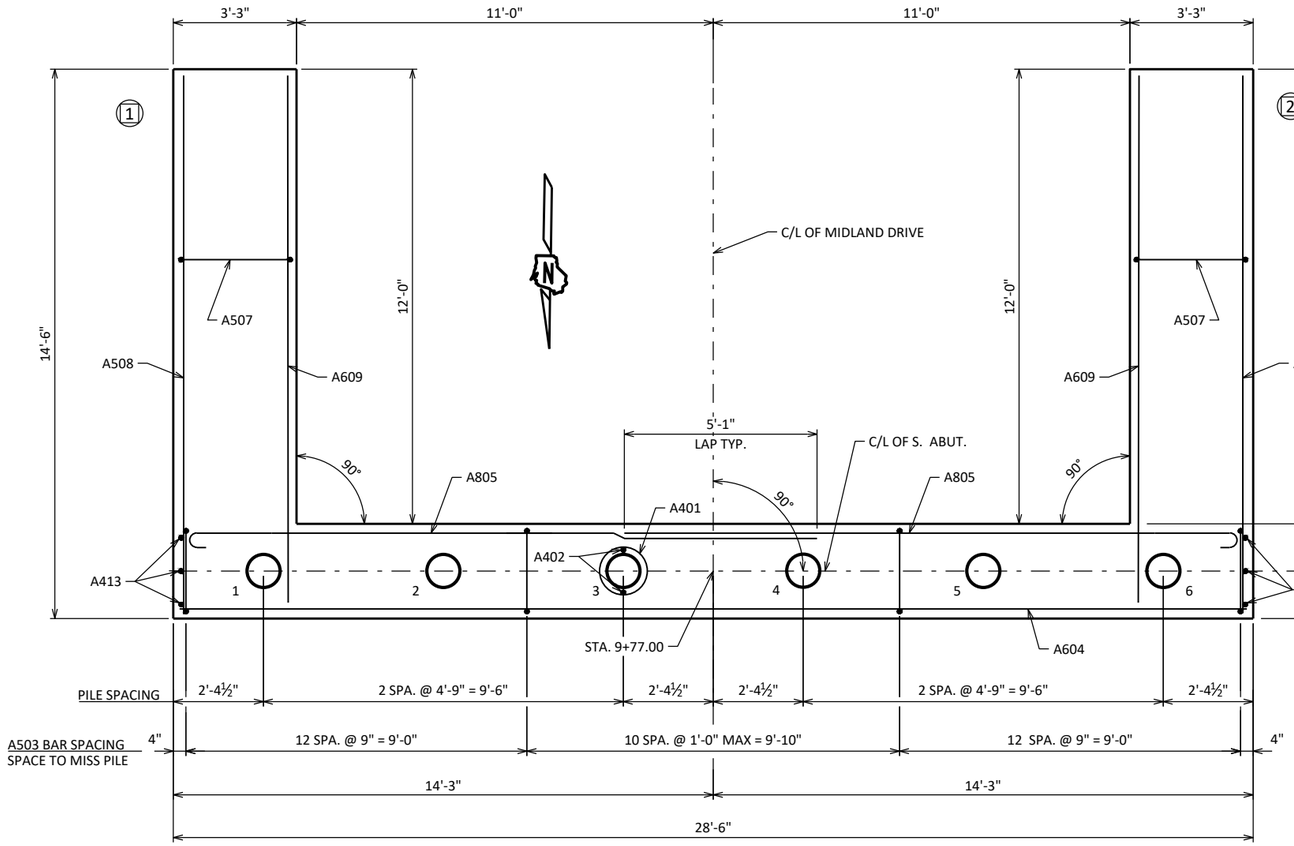
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FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_DETAILS.DWG

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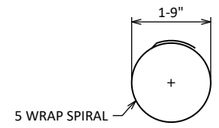
PILE LAYOUT

BILL OF BARS

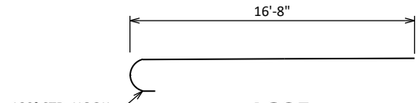
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401		6	28'-0"	X		BODY @ PILES
A402		12	2'-3"			BODY @ PILES
A503		35	14'-0"	X		BODY VERT.
A604		11	28'-2"			BODY HORIZ.
A805		14	17'-7"	X		BODY HORIZ. @ B.F.
A506	X	27	2'-0"			BODY DOWELS
A507	X	24	15'-8"	X		WINGS 1 & 2 VERT.
A508	X	12	14'-2"			WINGS 1 & 2 HORIZ. F.F.
A609	X	16	13'-11"			WINGS 1 & 2 HORIZ. B.F. & TOP
A610	X	34	10'-6"	X		WINGS 1 & 2 VERT.
A411	X	14	11'-7"			WINGS 1 & 2 HORIZ. E.F.
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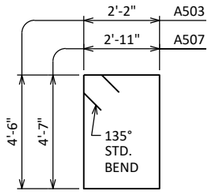
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



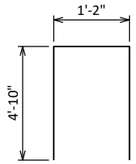
A401



A805



A503, A507



A610

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-66-202

DRAWN BY CLP\LMP | PLANS CK'D ERS

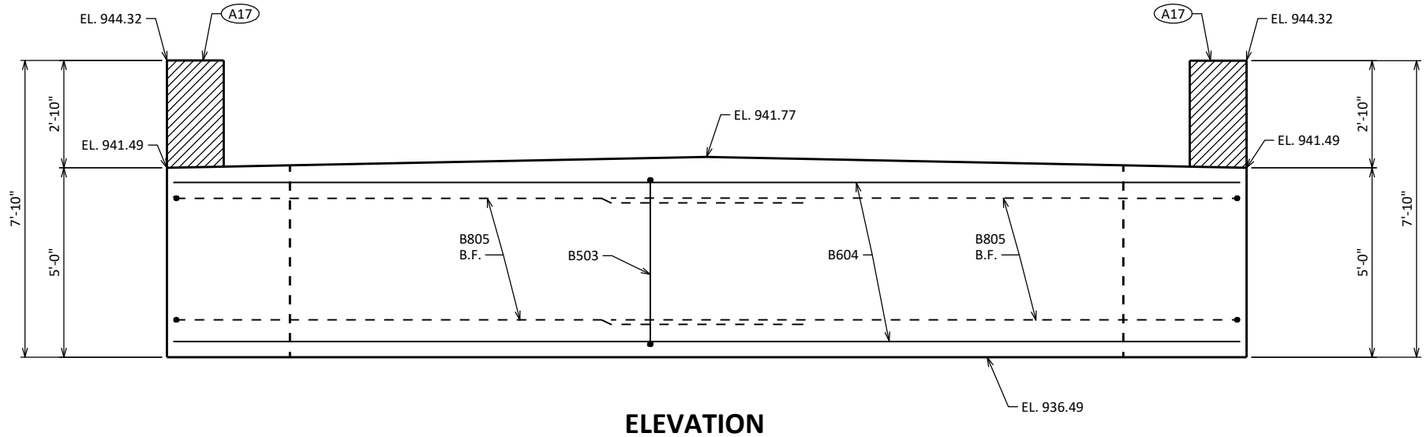
SOUTH ABUTMENT PILE LAYOUT AND BILL OF BARS

SHEET 7 OF 13
38

FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_DETAILS.DWG

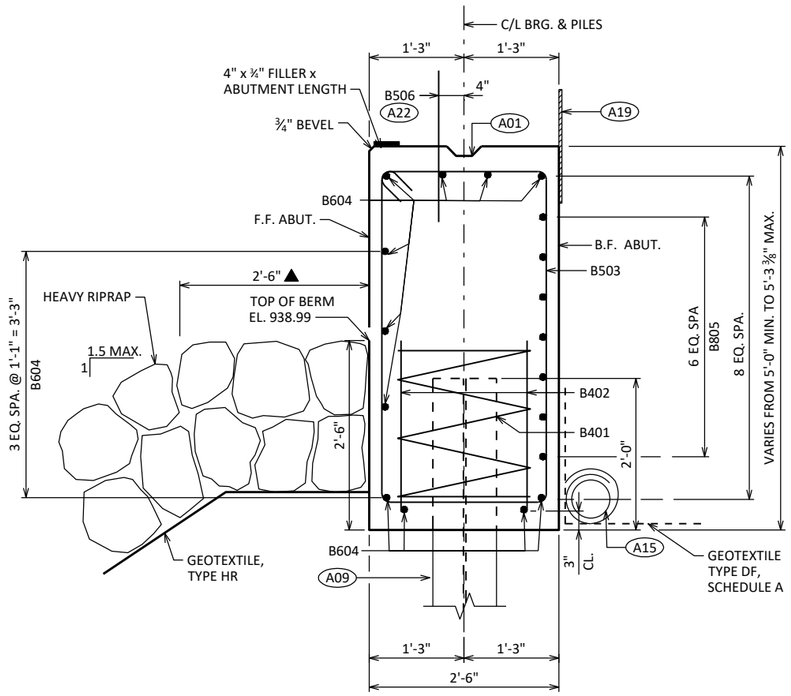
STATE PROJECT NUMBER

4823-05-70



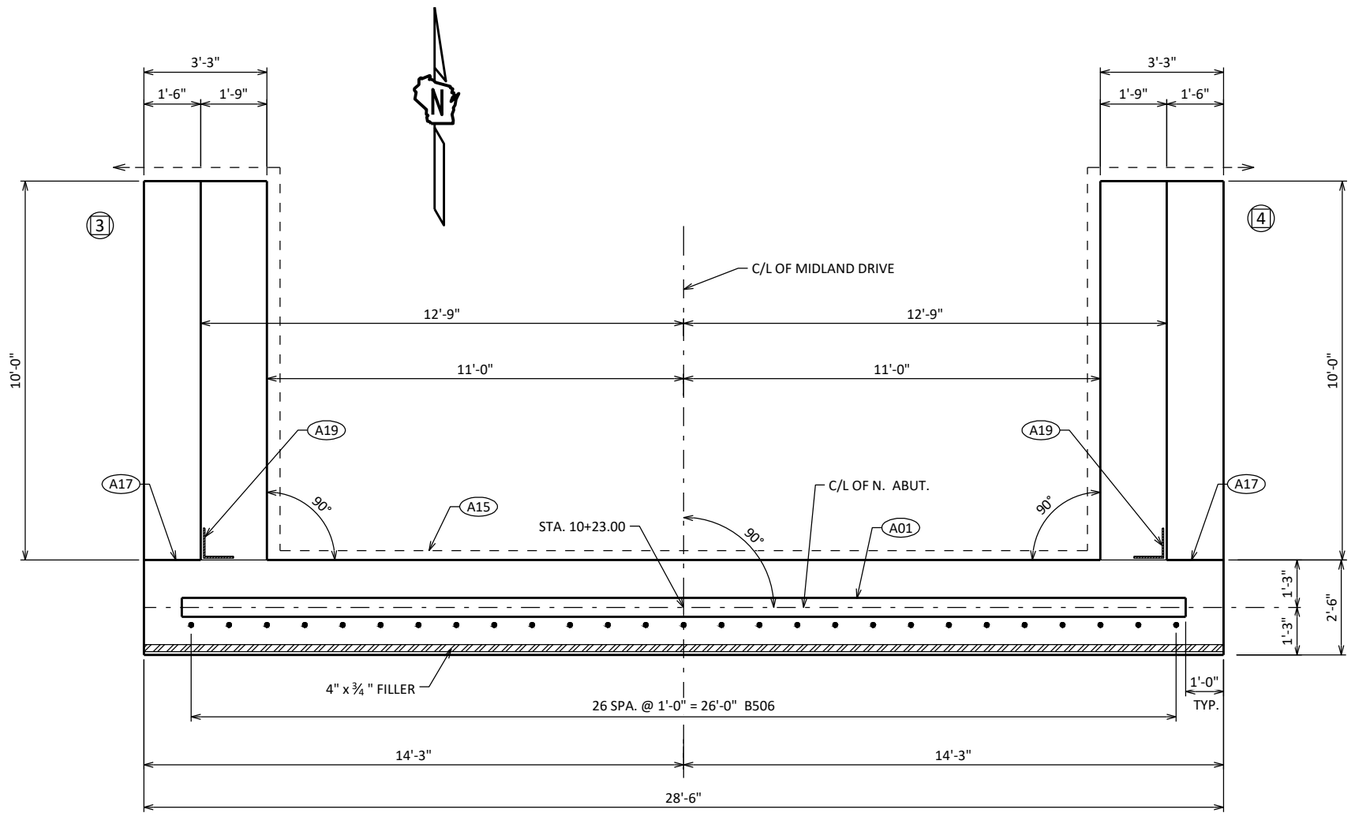
ELEVATION

(LOOKING NORTH)



SECTION THRU BODY

▲ TRAVEL CORRIDOR



PLAN

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

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-66-202

DRAWN BY CLP/LMP | PLANS CK'D ERS

NORTH ABUTMENT

SHEET 8 OF 13

39

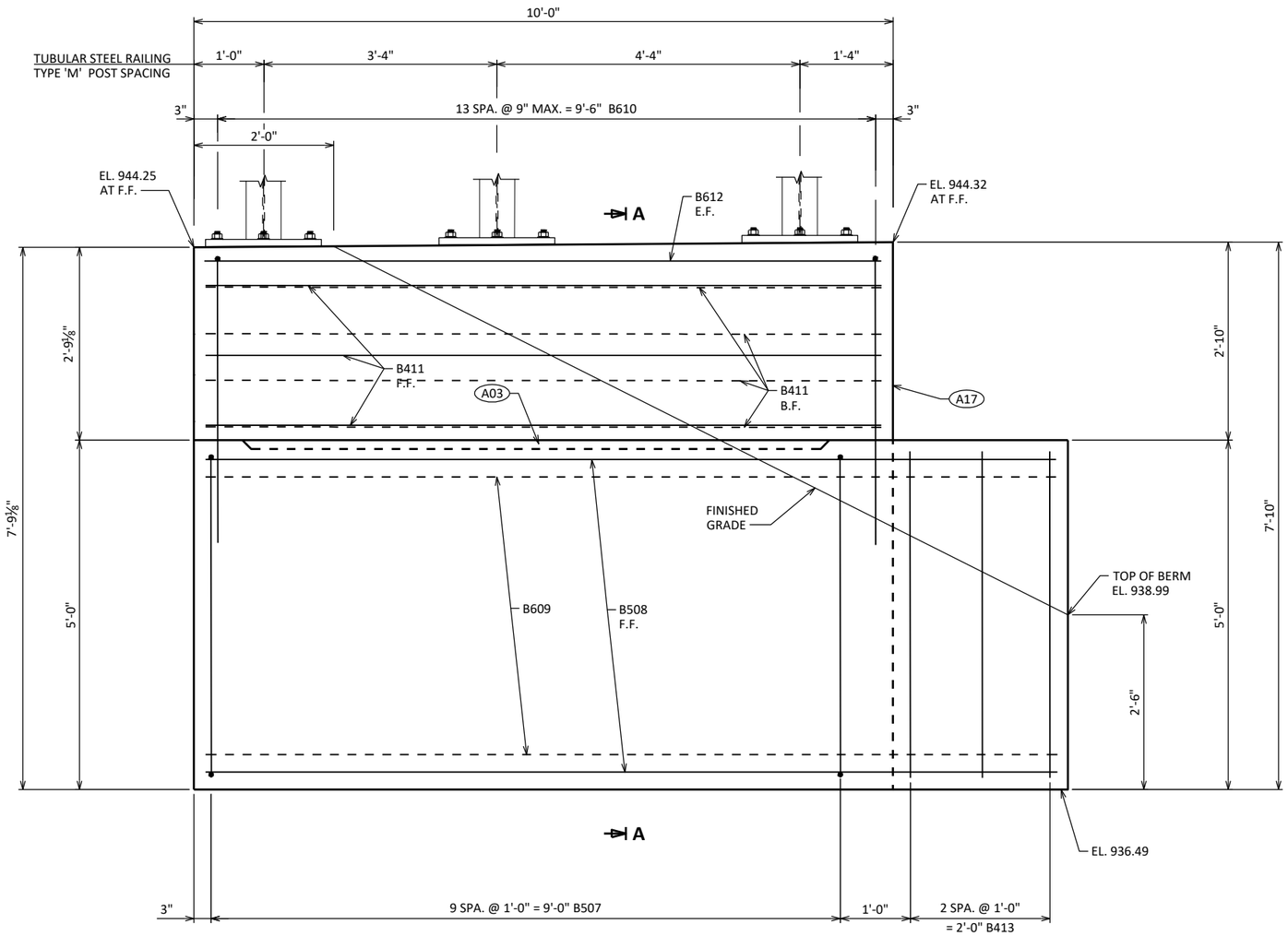
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FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_DETAILS.DWG

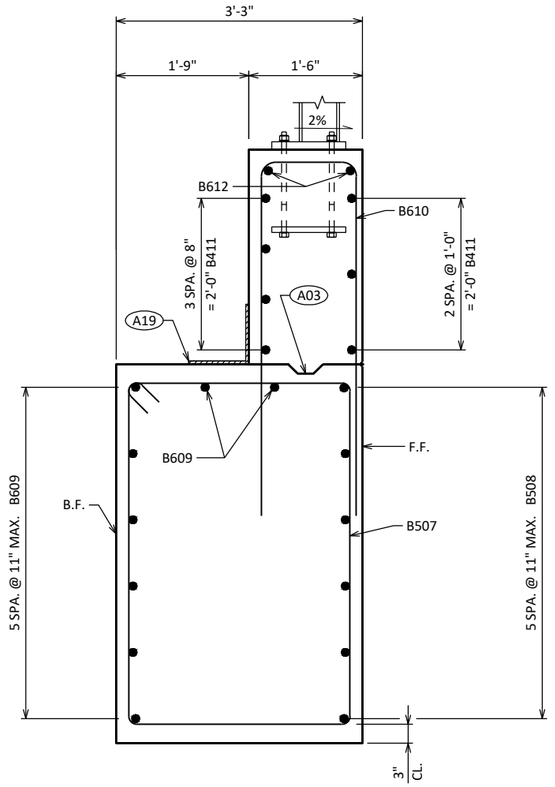
STATE PROJECT NUMBER

4823-05-70



ELEVATION - WING 3

(WING 3 SHOWN - WING 4 SIMILAR)



SECTION A

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STRUCTURE B-66-202

DRAWN BY CLP/LMP | PLANS CK'D ERS

NORTH ABUTMENT WINGS 3 & 4 DETAILS

SHEET 9 OF 13

40

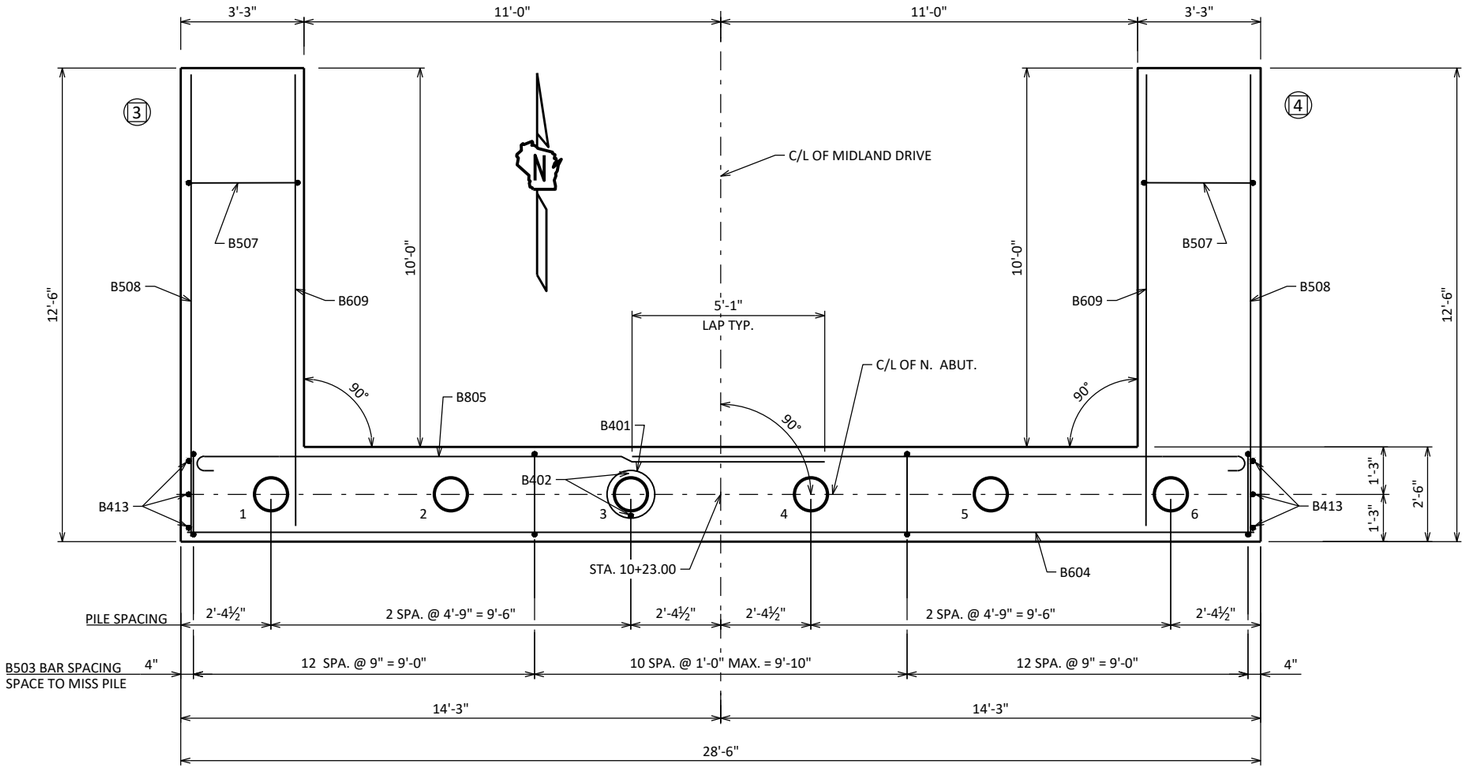
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FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_DETAILS.DWG

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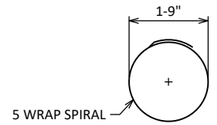
PILE LAYOUT

BILL OF BARS

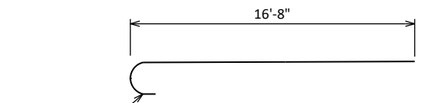
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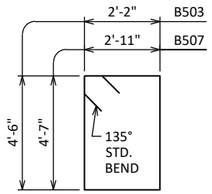
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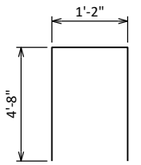
B401



B805



B503, B507



B610

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-66-202

DRAWN BY CLP/LMP | PLANS CK'D ERS

NORTH ABUTMENT PILE LAYOUT AND BILL OF BARS

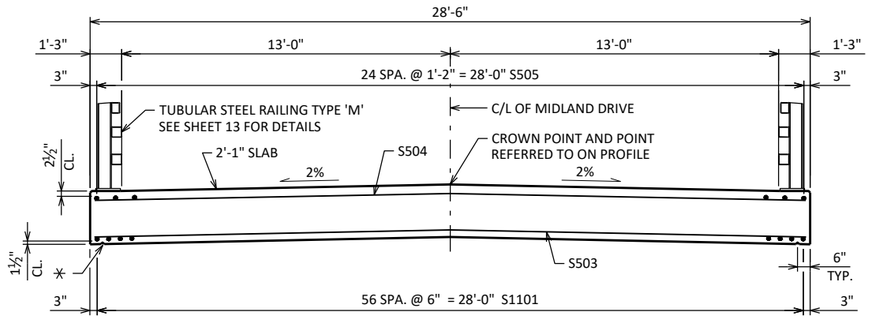
SHEET 10 OF 13

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FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_DETAILS.DWG

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4823-05-70



TYPICAL SECTION THRU BRIDGE

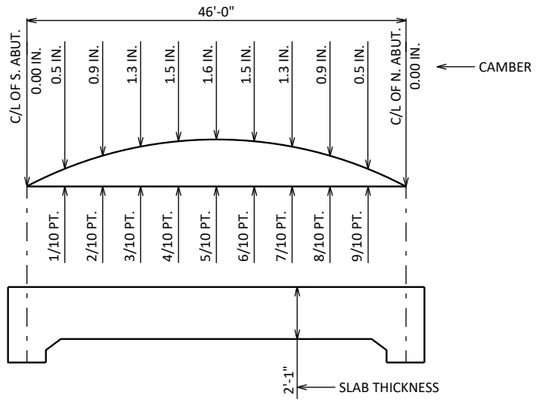
LOOKING NORTH

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.



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	944.63	944.60	944.57	944.54	944.51	944.48	944.44	944.41	944.38	944.35	944.32
C/L OF MIDLAND DRIVE	944.91	944.88	944.85	944.82	944.79	944.76	944.73	944.70	944.67	944.64	944.61
E. EDGE OF SLAB	944.63	944.60	944.57	944.54	944.51	944.48	944.44	944.41	944.38	944.35	944.32

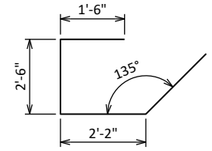
BILL OF BARS

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

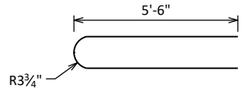
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S1101	x	57	48'-2"			SLAB LONG. BOT.
S503	x	73	28'-2"			SLAB TRANS. BOT.
S504	x	49	28'-2"			SLAB TRANS. TOP
S505	x	25	48'-2"			SLAB LONG. TOP
S506	x	58	8'-1"	X		SLAB @ ABUT. DIAPHRAGM STIRRUPS
S507	x	4	28'-2"			SLAB @ ABUT. DIAPHRAGM TRANS.
S608	x	32	11'-3"	X		SLAB @ RAIL POSTS
S609	x	48	6'-0"			SLAB @ INT. RAIL POSTS
S610	x	16	4'-8"	X		SLAB @ END RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

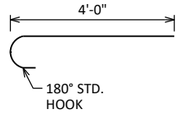
BAR MARK 2 PURPOSEFULLY OMITTED.



S506



S608



S610

SURVEY TOP OF SLAB ELEVATIONS

	S. ABUTMENT	5/10 PT.	N. ABUTMENT
W. EDGE OF SLAB			
C/L OF MIDLAND DRIVE			
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.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-66-202

DRAWN BY CLP/LMP | PLANS CK'D ERS

SUPERSTRUCTURE AND BILL OF BARS

SHEET 11 OF 13

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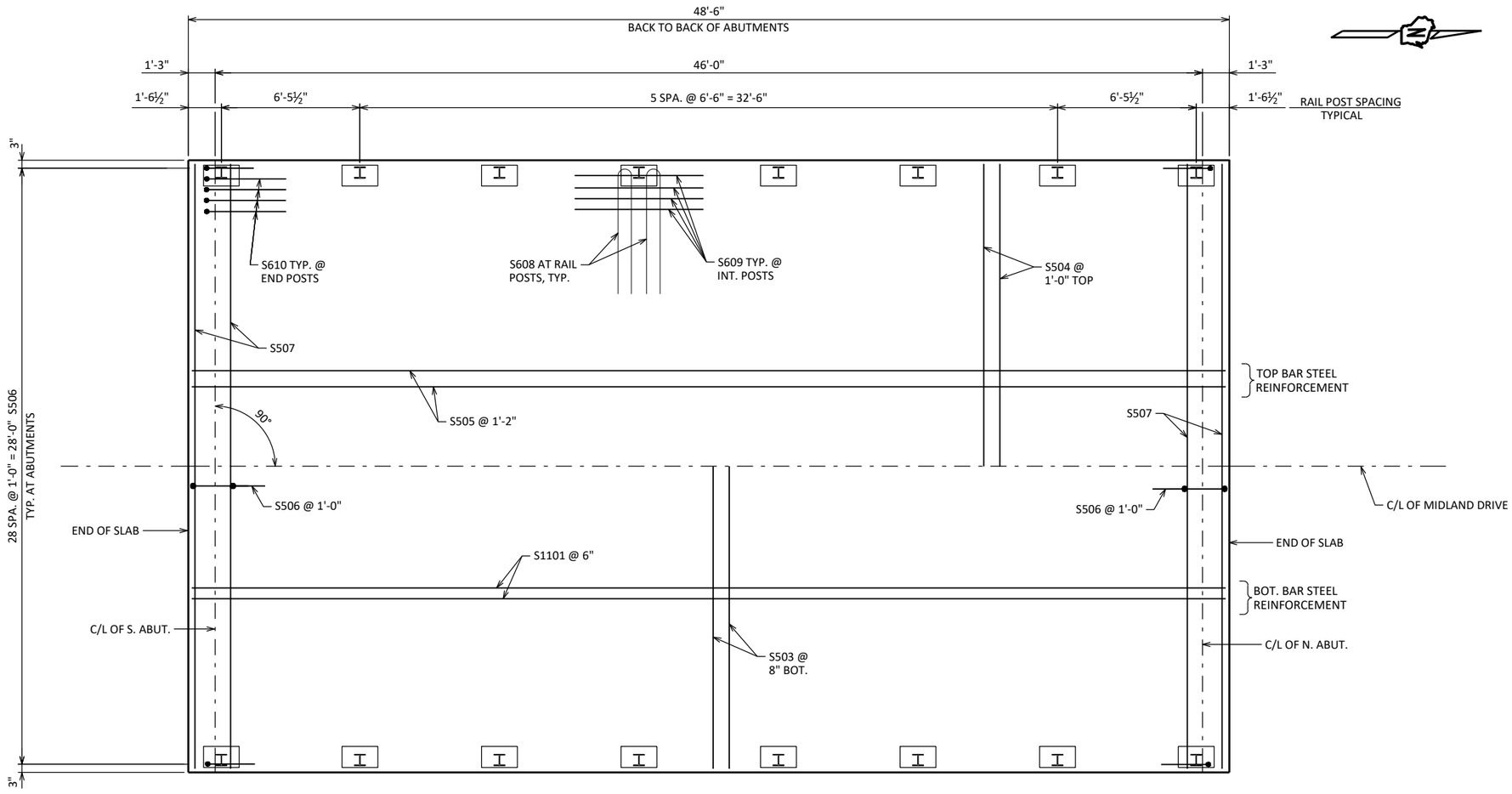
8

8

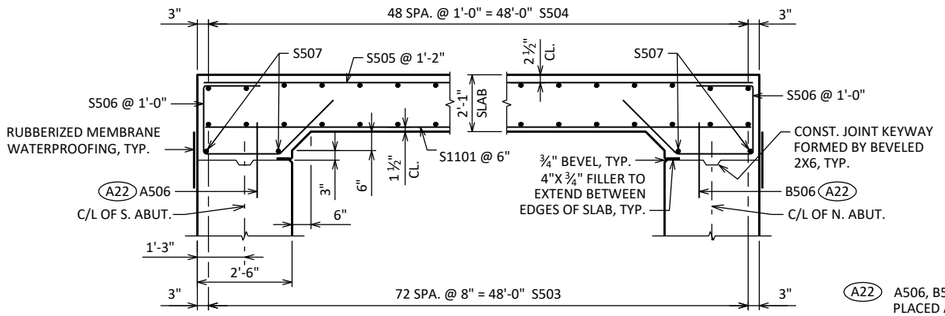
FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_DETAILS.DWG

STATE PROJECT NUMBER

4823-05-70



PLAN



LONGITUDINAL SECTION

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

A22 A506, B506 BARS SPACED @ 1'-0" CNTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-66-202

DRAWN BY CLP\LMP | PLANS CK'D ERS

SUPERSTRUCTURE PLAN

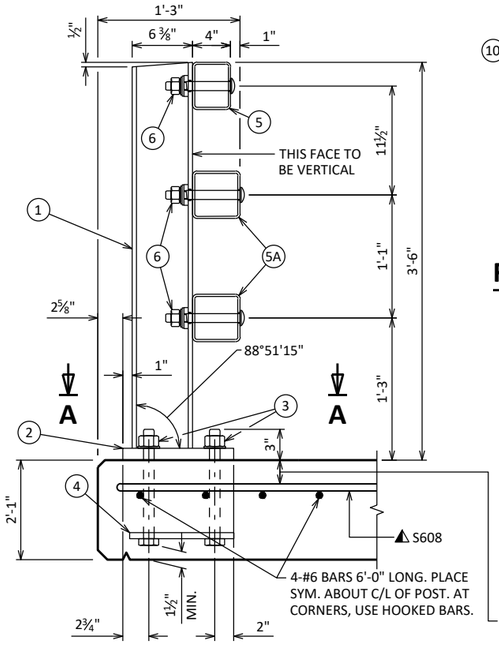
SHEET 12 OF 13

43

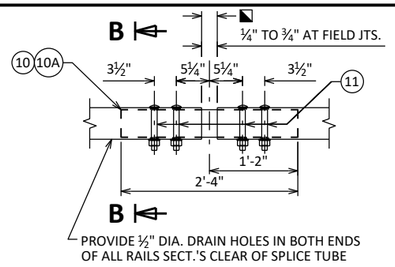
FILE NAME: I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\STRUCTURES\B-66-0202_DETAILS.DWG

STATE PROJECT NUMBER

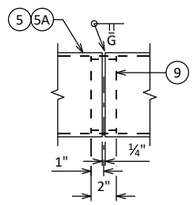
4823-05-70



SECTION THRU RAILING ON SLAB

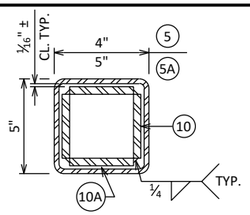


FIELD ERECTION JOINT DETAIL

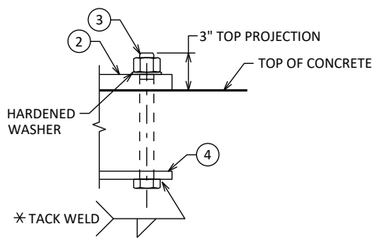


SHOP RAIL SPLICE DETAIL

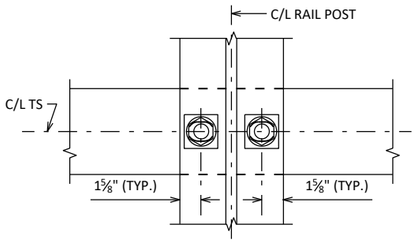
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



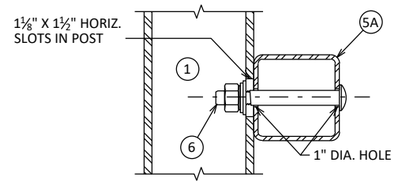
SECTION B-B



ANCHOR BOLTS



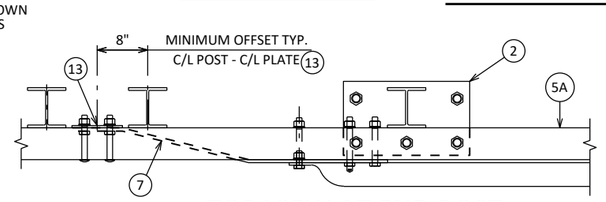
SECTION THRU POST WEB



SECTION THRU RAIL

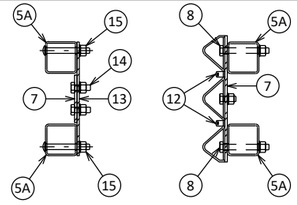
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT



SECTION C-C

SECTION D-D

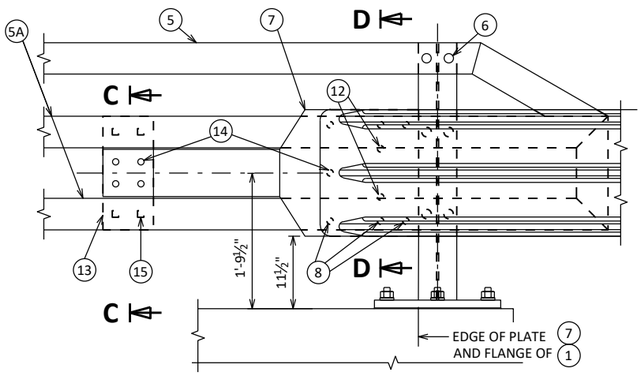
LEGEND

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. (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 IN PLATE NO. 10A. AT FIELD JOINTS AND 15/16" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 15/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.
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

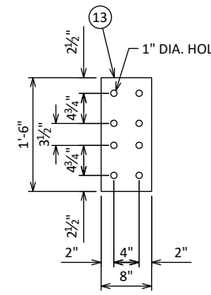
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, 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



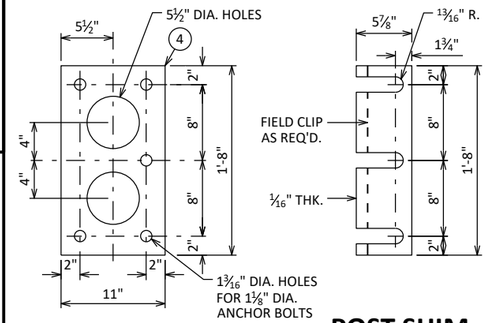
DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT



ANCHOR PLATE

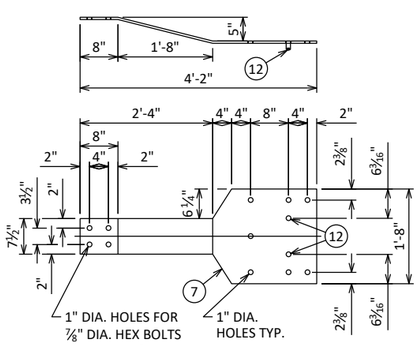
AT BEAM GUARD ATTACHMENT



ANCHOR PLATE

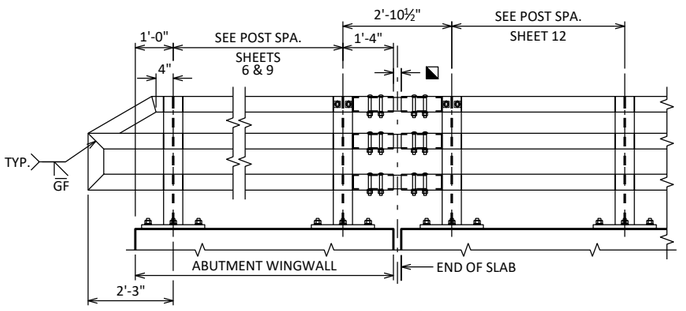
AT RAIL TO DECK CONNECTION

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-66-202

DRAWN BY CLP/LMP | PLANS CK'D ERS

TUBULAR STEEL RAILING TYPE "M"

SHEET 13 OF 13

44

8

8

MIDLAND DRIVE COMPUTER EARTHWORK

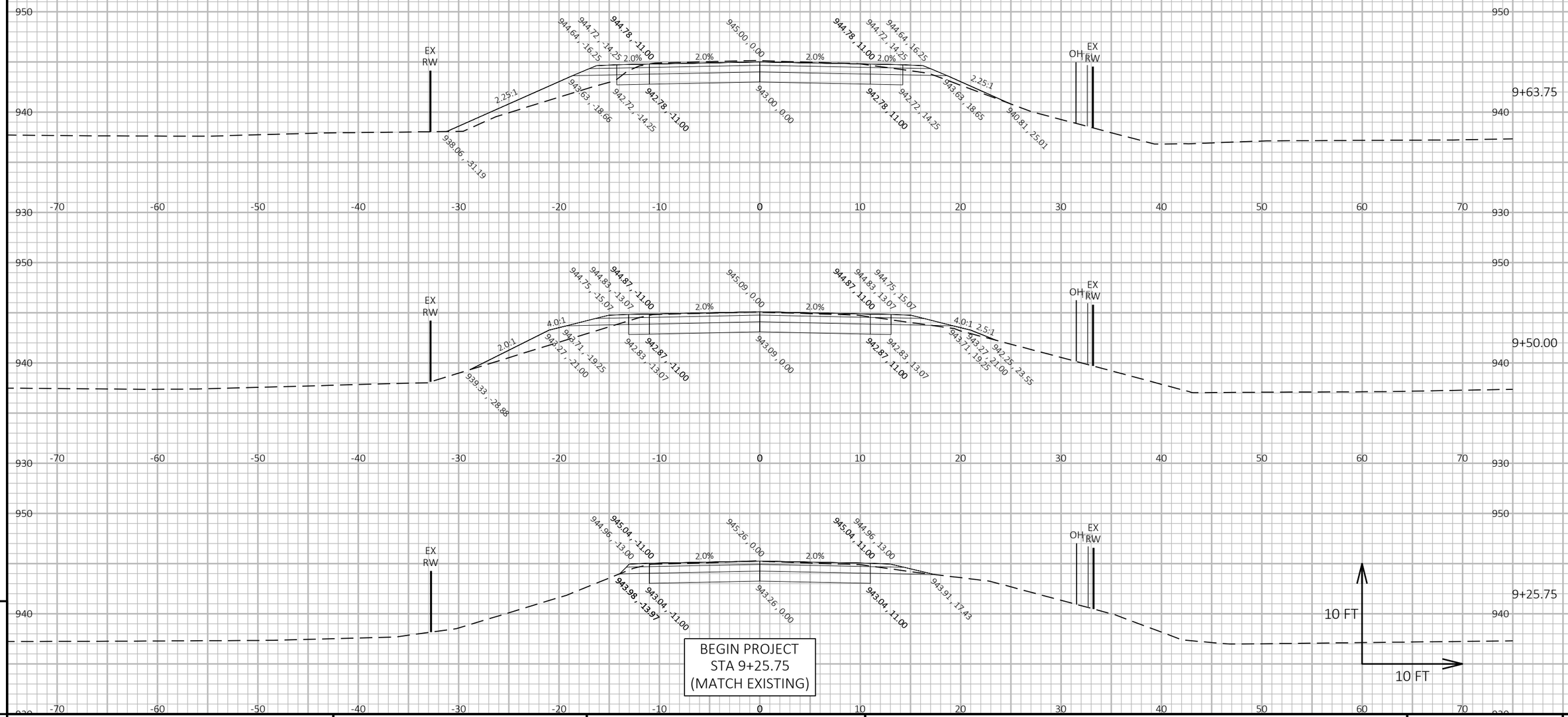
STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	SALVAGED / UNUSABLE	MASS ORDINATE
					NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.30 NOTE 3	NOTE 2	NOTE 8
9+25.75	0.00	45.95	11.38	0.00	0	0	0	0	0	0	0
9+50.00	24.25	50.47	11.38	13.40	43	10	6	43	8	10	25
9+63.75	13.75	54.95	11.38	10.75	27	6	6	70	16	16	38
NEW BRIDGE	-	-	-	-	-	-	-	-	-	-	-
10+34.25	0.00	63.93	11.38	11.69	-	-	-	70	16	16	38
10+50.00	15.75	52.81	11.38	22.80	34	7	10	104	29	23	52
10+74.25	24.25	48.81	11.38	0.00	46	10	10	150	42	33	75
					150	33	32				

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	EXISTING CONCRETE AND ASPHALT PAVEMENT. NOT TO BE USED OUTSIDE THE 1:1 ROAD CORE.
3 - EXPANDED FILL	VOLUME NEEDED TO BE FILLED = FILL *1.30
8 - MASS ORDINATE	(CUT) - (EXPANDED FILL)

9

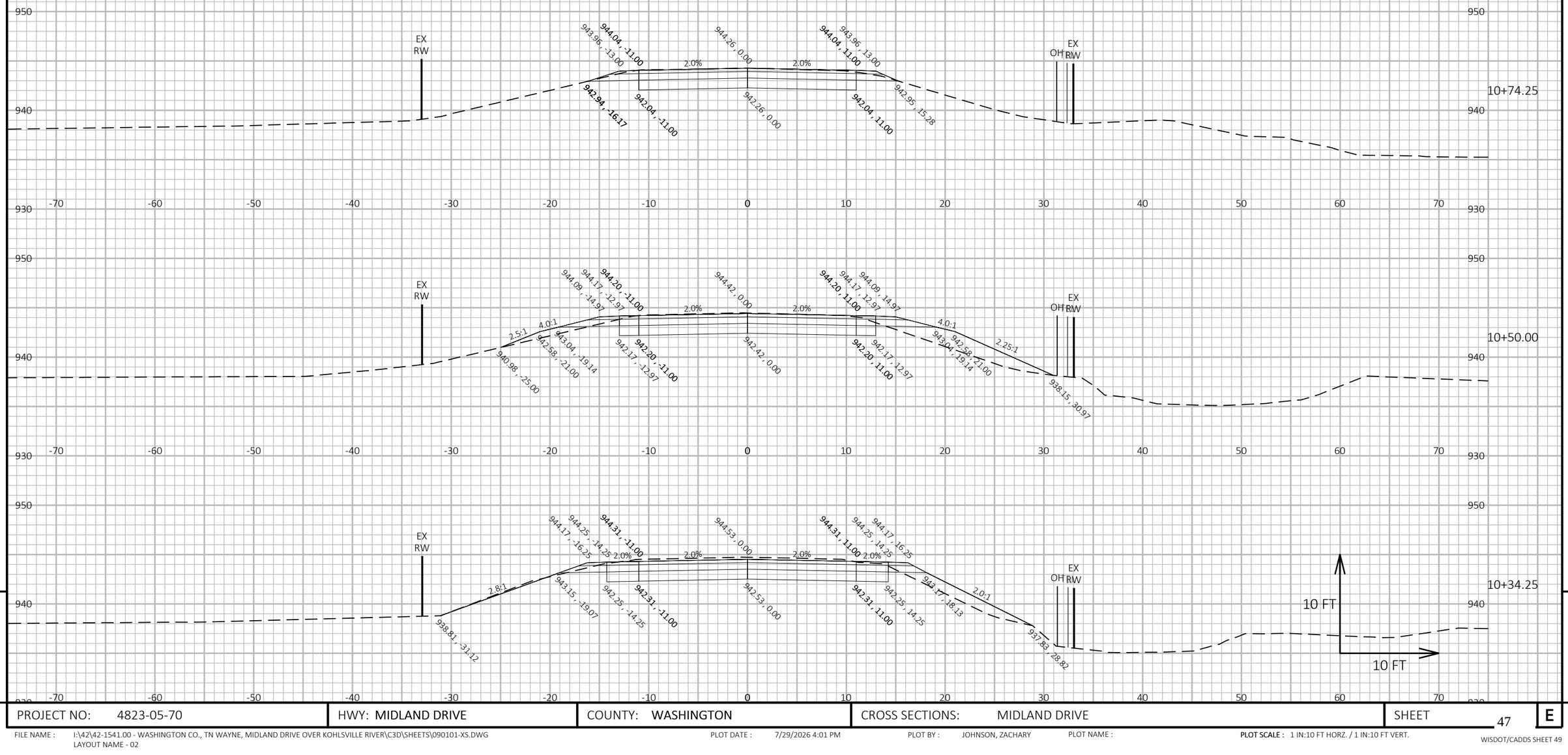
9

STRUCTURE
B-66-202



PROJECT NO: 4823-05-70	HWY: MIDLAND DRIVE	COUNTY: WASHINGTON	CROSS SECTIONS: MIDLAND DRIVE	SHEET 46	E

END PROJECT
STA 10+74.25
(MATCH EXISTING)



PROJECT NO: 4823-05-70	HWY: MIDLAND DRIVE	COUNTY: WASHINGTON	CROSS SECTIONS: MIDLAND DRIVE	SHEET 47	E

FILE NAME : I:\42\42-1541.00 - WASHINGTON CO., TN WAYNE, MIDLAND DRIVE OVER KOHLSVILLE RIVER\C3D\SHEETS\090101-XS.DWG
LAYOUT NAME - 02

PLOT DATE : 7/29/2026 4:01 PM PLOT BY : JOHNSON, ZACHARY PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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