SUP

JANUARY 2023

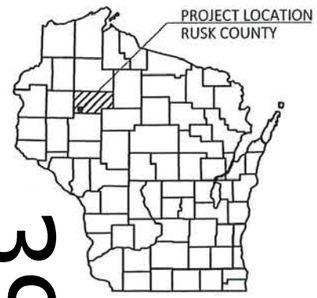
PROJECT ID: 8436-00-70

WITH: N/A

COUNTY: RUSK

ORDER OF SHEETS

TOTAL SHEETS = 38



N

39

DESIGN DESIGNATION

A.A.D.T.	(2023)	=	50
A.A.D.T.	(2043)	=	60
D.H.V.		=	12
D.D.		=	62/38
T.		=	9.1%
DESIGN SPEED		=	25 MPH
ESALS		=	15,418

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 (300'ER)
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T RUSK, HORSESHOE LAKE ROAD

MCDERMOTT CREEK BRIDGE B-54-0139

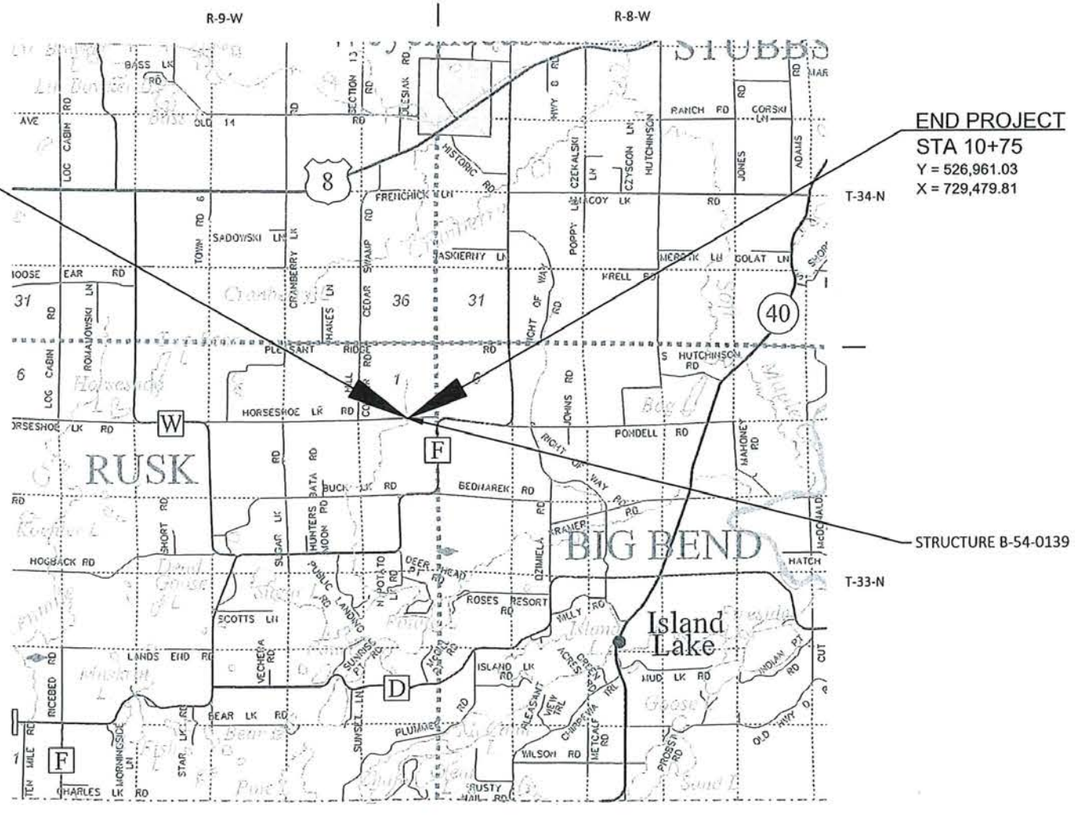
LOC STR
RUSK COUNTY

STATE PROJECT NUMBER
8436-00-70

BEGIN PROJECT
STA 9+25
Y = 526,956.44
X = 729,329.88

END PROJECT
STA 10+75
Y = 526,961.03
X = 729,479.81

STRUCTURE B-54-0139



LAYOUT

SCALE 0 2 MI

TOTAL NET LENGTH OF CENTERLINE = 0.028 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), RUSK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8436-00-70	WISC 2023173	1

ACCEPTED FOR
TOWN of RUSK

7-13-22 (Date) Lisa S. Dobrowolski CHAIRMAN

ACCEPTED FOR
COUNTY of RUSK

7/13/22 (Date) HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY

MSA
146 North Central Ave, Marshfield WI 54449
(715) 384-2133 www.msa-ps.com

WISCONSIN SEAN M. SPROMBERG E-37771-008 SCHOFIELD, WI PROFESSIONAL ENGINEER

7/13/2022
DATE: (Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA PROFESSIONAL SERVICES, INC.
Designer	MSA PROFESSIONAL SERVICES, INC.
Project Manager	PAULA GROOM
Regional Examiner	TOU YANG
Regional Supervisor	TYLER RONGSTAD

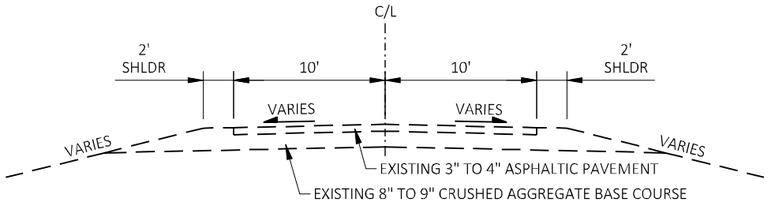
APPROVED FOR THE DEPARTMENT

DATE: 07/14/2022 Paula Groom (Signature)

E

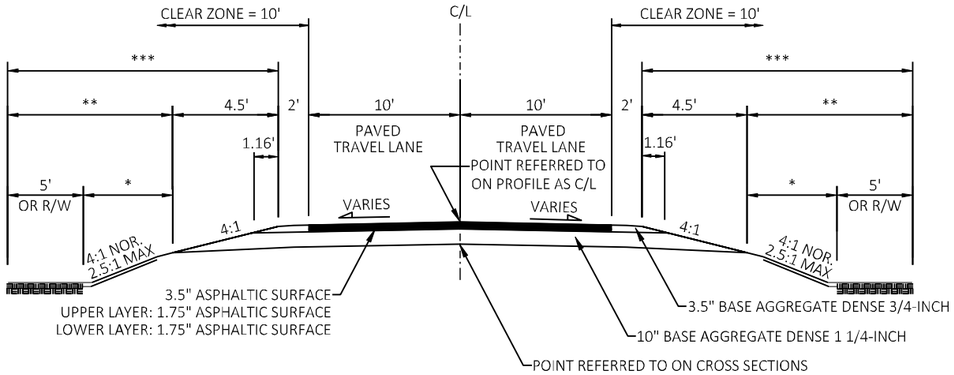
FILE NAME : G:\06\06747\06747029\CADD\SHEETSPLAN\010101-TI.DWG

PLOT DATE : 7/12/2022 1:53 PM PLOT BY : SHAWN DOLENS PLOT NAME :



EXISTING TYPICAL SECTION

STA 9+25 - STA 10+75



FINISHED TYPICAL SECTION

STA 9+25 - STA 10+75

* LIMITS OF SALVAGED TOPSOIL
** LIMITS OF EROSION MAT URBAN CLASS I TYPE B
*** LIMITS OF SEEDING MIXTURE NO. 20, SEEDING TEMPORARY & FERTILIZER TYPE B

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		2-6	6 & OVER	0-2	2-6	6 & OVER
MEDIAN STRIP TURF	0.19	0.20	0.24	0.19	0.22	0.26	0.20	0.23	0.30	0.20	0.25 0.32	0.30 0.40
SIDE SLOPE TURF			0.25			0.27			0.28			0.30 0.38
PAVEMENT:	0.40 - 0.60											
ASPHALT:	0.70 - 0.95											
CONCRETE:	0.80 - 0.95											
BRICK:	0.70 - 0.80											
DRIVES, WALKS:	0.75 - 0.85											
ROOFS:	0.75 - 0.95											
GRAVEL ROADS, SHOULDERS	0.40 - 0.60											

TOTAL PROJECT AREA = 0.22 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.16 ACRES

EROSION CONTROL NOTES

RUNOFF COEFFICIENTS FOR THIS PROJECT: EXISTING SIDE SLOPES 0.30, PROPOSED SIDE SLOPES 0.30, EXISTING PAVEMENT 0.95, PROPOSED PAVEMENT 0.95.

GENERAL NOTES

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

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

RIGHT OF WAY LOCATIONS ARE BASED ON AVAILABLE ASBUILTS AND GIS.

THE 3.5" ASPHALTIC SURFACE SHALL CONSIST OF A 1.75" UPPER LAYER WITH NO.4 (12.5 MM) NOMINAL SIZE AGGREGATE AND A 1.75" LOWER LAYER WITH NO. 4 (12.5 MM) NOMINAL SIZE AGGREGATE.

MSA DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
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146 NORTH CENTRAL AVE
MARSHFIELD, WI 54449
715-304-0451
SSPROMBERG@MSA-PS.COM

DNR LIAISON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
LEAH NICOL
DNR WEST CENTRAL REGION HEADQUARTERS
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
715-934-9014
LEAH.NICOL@WISCONSIN.GOV

COUNTY CONTACT

RUSK COUNTY HIGHWAY DEPARTMENT
SCOTT R. EMCH
N4711 HIGHWAY 27
LADYSMITH, WI 54848
715-532-2634
SEMCH@RUSKCOUNTYWI.US

WISDOT CONTACT

WISCONSIN DEPARTMENT OF TRANSPORTATION
PAULA GROOM
718 W CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
715-579-6776
PAULA.GROOM@DOT.WI.GOV

UTILITY CONTACTS

COMMUNICATIONS

BEVCOMM
RANDY MONNIER
N3767 4TH ST
WEYERHAUSER, WI 54895
715-353-2434 (OFFICE)
715-492-5029 (MOBILE)
RMONNIER@BEVCOMM.COM

ELECTRIC

BARRON ELECTRIC COOPERATIVE
JEFF NELSON
1434 STH 25 N
BARRON, WI 54812
715-537-3171 (OFFICE)
715-418-1167 (MOBILE)
JNELSON@BARRONELECTRIC.COM

* NOT A DIGGERS HOTLINE MEMBER

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

STANDARD ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
ASPH	ASPHALTIC
AC	ASPHALT CEMENT
ADT	AVERAGE DAILY TRAFFIC
B & B	BALLED AND BURLAPPED
BM	BENCH MARK
CB	CATCH BASIN
` OR C/L	CENTER LINE
C-C	CENTER TO CENTER
CONC	CONCRETE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
CY	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
C & G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA OR |	DIAMETER
DIST	DISTRICT
DWY	DRIVEWAY
E	EAST
X	EAST GRID COORDINATE
EB	EASTBOUND
ELEC	ELECTRIC
EL OR ELEV	ELEVATION
EMB	EMBANKMENT
EW	ENDWALL
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
EXP	EXPANSION
F-F	FACE TO FACE
FERT	FERTILIZER
FE	FIELD ENTRANCE
F/L	FLOW LINE
FT	FOOT
GN	GRID NORTH
HR	HANDICAP RAMP
HT	HEIGHT
CWT	HUNDREDWEIGHT
HYD	HYDRANT
IN DIA	INCH DIAMETER
INL	INLET
ID	INSIDE DIAMETER
I	INTERSECTION ANGLE
IE	INVERT ELEVATION
IP	IRON PIPE OR PIN
JCT	JUNCTION
L	LENGTH OF CURVE
LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LCB	LONG CHORD BEARING
LS	LUMP SUM
MH	MANHOLE
N	NORTH
Y	NORTH GRID COORDINATE
OE	OUTLET ELEVATION
OL	OUT LOT
OD	OUTSIDE DIAMETER
OH	OVERHEAD LINES
PAVT	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
PCC	PORTLAND CEMENT CONCRETE
LB	POUND
PE	PRIVATE ENTRANCE
R OR RAD	RADIUS
RR	RAILROAD
R	RANGE
~ OR R/L	REFERENCE LINE
REQD	REQUIRED
RT	RIGHT
R / W	RIGHT-OF-WAY
RD	ROAD
SALV	SALVAGED
SAN	SANITARY SEWER
SECT	SECTION
SHLDR	SHOULDER
SW	SIDEWALK
S	SOUTH
SB	SOUTHBOUND
SPECS	SPECIFICATIONS
SQ	SQUARE
SF OR SQ FT	SQUARE FEET
SY	SQUARE YARD
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAYS
STA	STATION
SS	STORM SEWER
T	TANGENT
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
T	TON
TC	TOP OF CURB
TN	TOWN
TRANS	TRANSITION
T	TRUCKS (percent of)
TYP	TYPICAL
UNCL	UNCLASSIFIED
USH	UNITED STATES HIGHWAY
VAR	VARIABLE
VERT	VERTICAL
VC	VERTICAL CURVE
VOL	VOLUME
WM	WATER MAIN
WV	WATER VALVE
W	WEST
WB	WESTBOUND
YD	YARD

Estimate Of Quantities

8436-00-70

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-54-116	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	101.000	101.000
0010	206.1001	Excavation for Structures Bridges (structure) 01. B-54-139	EACH	1.000	1.000
0012	208.0100	Borrow	CY	5.000	5.000
0014	210.1500	Backfill Structure Type A	TON	250.000	250.000
0016	213.0100	Finishing Roadway (project) 01. 8436-00-70	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	20.000	20.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	220.000	220.000
0022	455.0605	Tack Coat	GAL	22.000	22.000
0024	465.0105	Asphaltic Surface	TON	60.000	60.000
0026	502.0100	Concrete Masonry Bridges	CY	135.000	135.000
0028	502.3200	Protective Surface Treatment	SY	153.000	153.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	3,240.000	3,240.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	14,420.000	14,420.000
0034	513.4061	Railing Tubular Type M	LF	126.000	126.000
0036	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0038	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	480.000	480.000
0040	606.0300	Riprap Heavy	CY	231.000	231.000
0042	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0044	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8436-00-70	EACH	1.000	1.000
0046	619.1000	Mobilization	EACH	1.000	1.000
0048	624.0100	Water	MGAL	4.800	4.800
0050	625.0100	Topsoil	SY	325.000	325.000
0052	628.1504	Silt Fence	LF	240.000	240.000
0054	628.1520	Silt Fence Maintenance	LF	240.000	240.000
0056	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0058	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0060	628.2008	Erosion Mat Urban Class I Type B	SY	325.000	325.000
0062	628.6005	Turbidity Barriers	SY	128.000	128.000
0064	628.7504	Temporary Ditch Checks	LF	20.000	20.000
0066	628.7570	Rock Bags	EACH	60.000	60.000
0068	629.0210	Fertilizer Type B	CWT	0.210	0.210
0070	630.0120	Seeding Mixture No. 20	LB	13.000	13.000
0072	630.0200	Seeding Temporary	LB	13.000	13.000
0074	630.0500	Seed Water	MGAL	10.000	10.000
0076	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0078	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0080	638.2602	Removing Signs Type II	EACH	4.000	4.000
0082	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0420	Traffic Control Barricades Type III	DAY	1,260.000	1,260.000
0088	643.0705	Traffic Control Warning Lights Type A	DAY	1,960.000	1,960.000
0090	643.0900	Traffic Control Signs	DAY	980.000	980.000
0092	643.5000	Traffic Control	EACH	1.000	1.000
0094	645.0111	Geotextile Type DF Schedule A	SY	52.000	52.000
0096	645.0120	Geotextile Type HR	SY	409.000	409.000
0098	650.4500	Construction Staking Subgrade	LF	116.000	116.000

Estimate Of Quantities

8436-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	650.5000	Construction Staking Base	LF	116.000	116.000
0102	650.6501	Construction Staking Structure Layout (structure) 01. B-54-139	EACH	1.000	1.000
0104	650.9911	Construction Staking Supplemental Control (project) 01. 8436-00-70	EACH	1.000	1.000
0106	650.9920	Construction Staking Slope Stakes	LF	116.000	116.000
0108	690.0150	Sawing Asphalt	LF	44.000	44.000
0110	715.0502	Incentive Strength Concrete Structures	DOL	810.000	810.000
0112	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
0114	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	300.000	300.000
0116	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

3

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
10+00	-	10+75	PROJECT	1	1
			TOTAL 0010	1	1

STATION	TO	STATION	LOCATION	205.0100 EXCAVATION COMMON CY	UNEXPANDED FILL CY	EXPANDED FILL (1) CY	MASS ORDINATE +/- (2) CY	208.0100 BORROW CY
9+25	-	9+82	MAINLINE	55	46	60	-5	5
10+18	-	10+75	MAINLINE	46	14	18	28	-28
			UNUSABLE PAVEMENT (3)	--	--	--	-28	28
			TOTAL 0010	101			-5	5

(1) EXPANDED FILL FACTOR = 1.30

(2) THE MASS ORDINATE + OR - QUANTITY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(3) EXISTING PAVEMENT BASED ON AVERAGE THICKNESS OF 3.5"

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
9+25	-	9+82	PROJECT	10	110	2.4
10+18	-	10+75	PROJECT	10	110	2.4
			TOTAL 0010	20	220	4.8

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
9+25	-	9+82	MAINLINE	11	30
10+18	-	10+75	MAINLINE	11	30
			TOTAL 0010	22	60

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7570 ROCK BAGS EACH	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
9+25	-	9+70	RT	95	95	--	15	0.05	3	3	2
9+25	-	9+67	LT	100	100	--	15	0.02	1	1	1
10+31	-	10+75	LT	30	30	--	15	0.06	3	3	2
10+30	-	10+75	RT	80	80	--	15	0.06	3	3	2
			UNDISTRIBUTED	20	20	20	--	0.02	3	3	3
			TOTAL 0010	325	325	20	60	0.21	13	13	10

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
9+25	-	9+68	RT	60	60	--	--
9+25	-	9+71	LT	60	60	--	--
10+29	-	10+75	LT	60	60	--	--
10+29	-	10+75	RT	60	60	--	--
			PROJECT	--	--	4	2
			TOTAL 0010	240	240	4	2

LOCATION	628.6005 TURBIDITY BARRIERS SY
PROJECT	128
TOTAL 0010	128

STATION	LOCATION	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
9+69	RT	1	3	1	1	W5-52R 12"X36"
9+71	LT	1	3	1	1	W5-52L 12"X36"
10+29	RT	1	3	1	1	W5-52L 12"X36"
10+31	LT	1	3	1	1	W5-52R 12"X36"
	TOTAL 0010	4	12	4	4	

LOCATION	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS DAY
PROJECT	1,260	1,960	980
TOTAL 0010	1,260	1,960	980

STATION	TO	STATION	LOCATION	606.0300 RIPRAP HEAVY CY	645.0120 GEOTEXTILE TYPE HR SY
10+31	-	10+75	LT	45	92
			TOTAL 0010	45	92

STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF	650.6501 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-54-0139) EA	650.9911 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 8436-00-70) EA
			MAINLINE				--	--
9+25	-	9+82	MAINLINE	58	58	58	--	--
10+18	-	10+75	MAINLINE	58	58	58	--	--
			PROJECT	--	--	--	1	1
			TOTAL 0010	116	116	116	1	1

STATION	LOCATION	690.0150 SAWING ASPHALT LF
9+25	BEGIN PROJECT	22
10+75	END PROJECT	22
	TOTAL 0010	44

3

LEGEND

EROSION MAT URBAN CLASS I, TYPE B

SILT FENCE

RIPRAP HEAVY

TURBIDITY BARRIERS

SAWING ASPHALT

PAUL J RUH

KRISTIAN PEARSON

KRISTIAN PEARSON

N

P/L

BURIED TELEPHONE BEVCOMM

WETLAND BOUNDARY TYPE RPE (TYP.)

SLOPE INTERCEPT (TYP.)

REMOVE EXISTING STRUCTURE P-54-116

BURIED FIBER OPTIC BEVCOMM

APPROX. R/W

BP 7+50.00

PI 9+25.00

PI 10+75.00

EP: 12+50.00

W5-52L 12"X36"

W5-52R 12"X36"

BM 2

EXISTING EDGE OF PAVEMENT (TYP.)

CP 2

F.E. (GRAVEL)

CP 6

N88°17'32"E

175.00'

8+00

HORSESHOE LAKE ROAD

(ASPHALT)

9+00

10+00

N88°14'43"E

150.00'

11+00

N87°49'07"E

175.00'

12+00

99

CP 5

CP 1

BM 1

CP 3

BURIED TELEPHONE BEVCOMM

F.E. (GRAVEL)

CP 4

APPROX. R/W

BEGIN PROJECT
STA 9+25
Y = 526,956.44
X = 729,329.88

END PROJECT
STA 10+75
Y = 526,961.03
X = 729,479.81

BM 3

MCDERMOTT CREEK

PROPOSED STRUCTURE B-54-0139

PAUL RUH

PAUL RUH

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
2	8+37.03	SPIKE IN 12" TREE, 26.83' LT	1112.46
1	9+88.24	CHISELED +, 13.82' RT	1109.10
3	10+47.90	SPIKE IN TREE, 42.25' RT	1105.08

CONTROL POINTS

NO.	STATION	DESCRIPTION	ELEV.
6	7+50.85	PK NAIL IN PAVEMENT, 0' RT	1115.68
1	8+41.86	3/4" IRON ROD W/CAP, 12.91' RT	1112.70
2	9+56.58	3/4" IRON ROD W/CAP, 14.31' LT	1109.64
3	10+31.46	3/4" IRON ROD W/CAP, 14.26' RT	1109.26
4	11+91.66	3/4" IRON ROD W/CAP, 16.01' RT	1115.56
5	12+49.26	PK NAIL IN PAVEMENT, 0' RT	1117.36

VCL = 220.95

K = 26.00

VPC STA 9+00.95
VPC EL 1111.47

LP STA 9+86.28
LP EL 1110.07

VPT STA 11+21.90
VPT EL 1113.61

-3.28%

5.22%

PROPOSED STRUCTURE
STA. 10+00
SINGLE-SPAN CONCRETE FLAT SLAB
24.0 FT CLEAR ROADWAY WIDTH
36.5 FT OVERALL LENGTH
5° LHF

REMOVE STRUCTURE OVER WATERWAY MINIMAL DEBRIS
STA. 10+00
SINGLE-SPAN TIMBER FLAT SLAB
24.6 FT CLEAR ROADWAY WIDTH
21.6 FT OVERALL LENGTH
NO SKEW

EXISTING LOW CHORD

EXISTING PROFILE

STA 11+49.63
EL 1115.06

STA 8+72.92
EL 1112.39

Q100 ELEV. = 1106.07

PROPOSED PROFILE

VPI STA 10+11.43
EL 1107.85

Q2 ELEV. = 1103.32

OBSERVED WATER ELEV. = 1100.84± (5-27-2021)

EXISTING PROFILE
1111.53
1111.50

PROPOSED PROFILE
1114.61
1113.13
1110.02
1110.33
1109.70
1110.11
1110.53
1110.85
1112.52
1112.56
1115.07
1116.78

1115
1110
1105
1100
1099

7+00 7+50 8+00 8+50 9+00 9+50 10+00 10+50 11+00 11+50 12+00 12+50 13+00

PROJECT NO: 8436-00-70	HWY: HORSESHOE LAKE ROAD	COUNTY: RUSK	PLAN AND PROFILE: HORSESHOE LAKE ROAD	SHEET 8	E

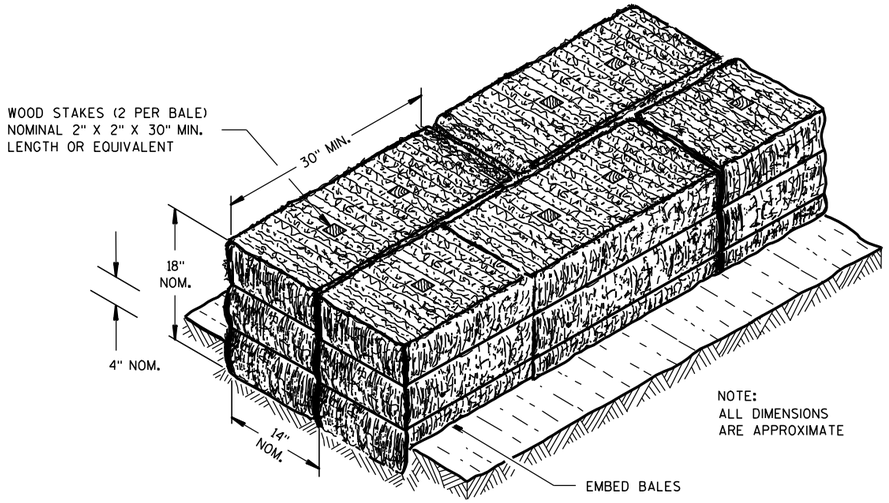
FILE NAME : G:\06\06747\06747029\CADD\SHEETSPLAN\050101-PP.DWG
LAYOUT NAME - 050101-pp

PLOT DATE : 7/17/2022 2:25 PM PLOT BY : SHAWN DOLENS PLOT NAME : PLOT SCALE : 1 IN:40 FT

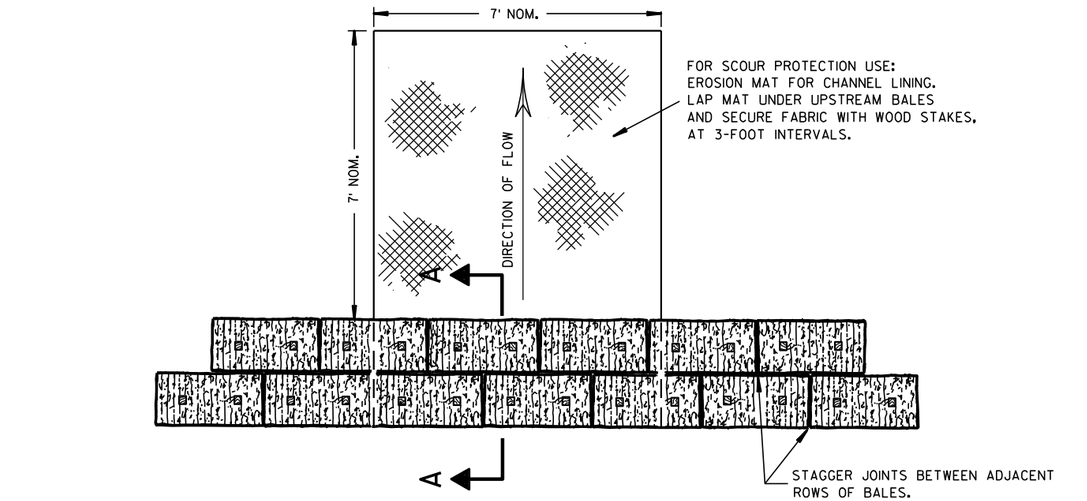
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

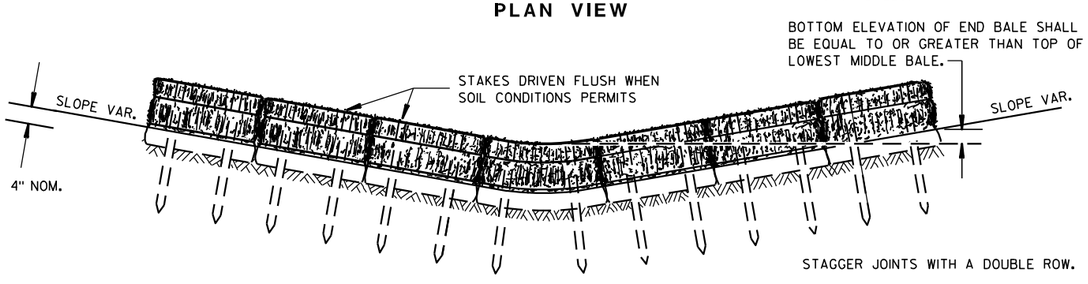
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-10	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



SECTION A-A



PLAN VIEW



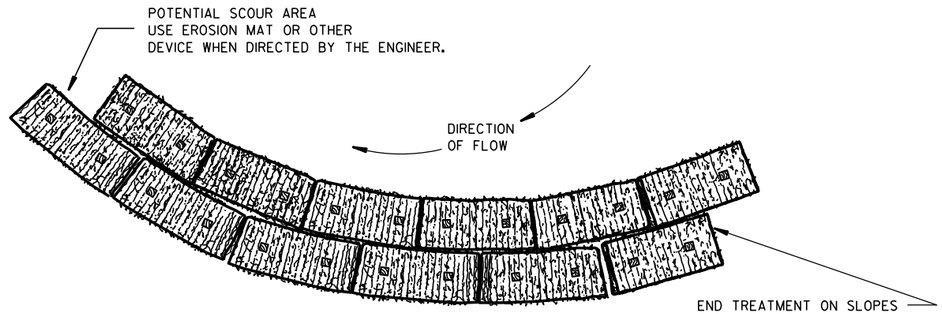
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

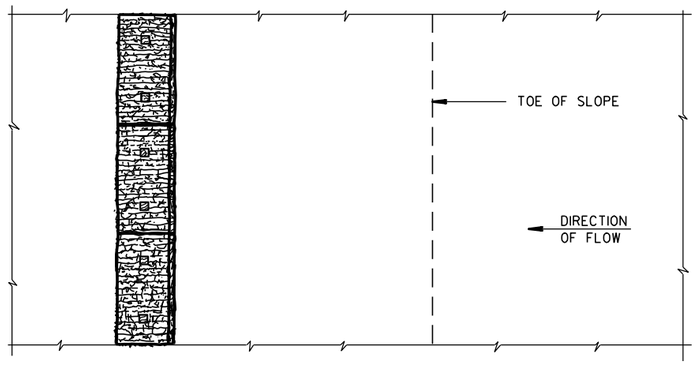
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

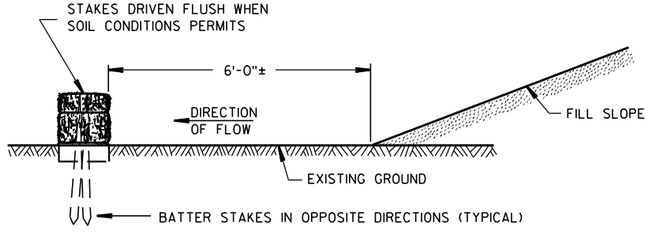


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

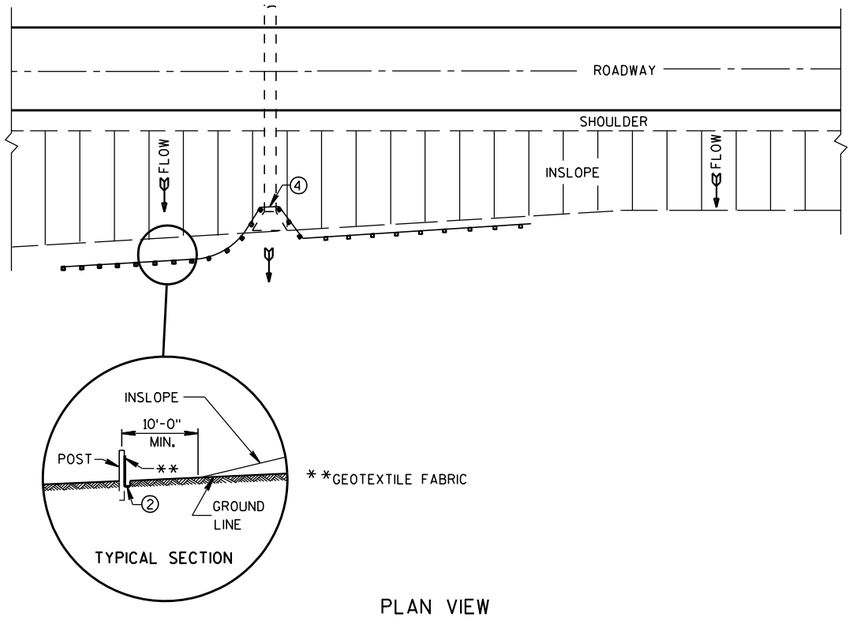
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

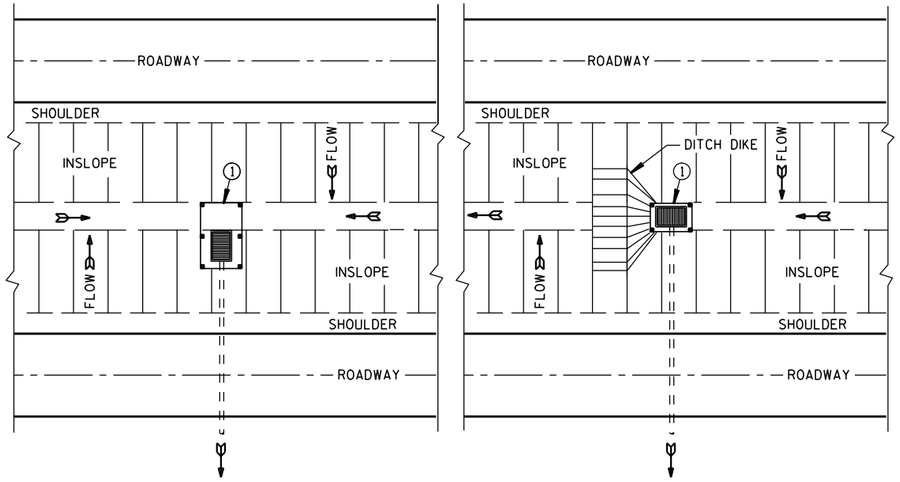
6

S.D.D. 8 E 8-3



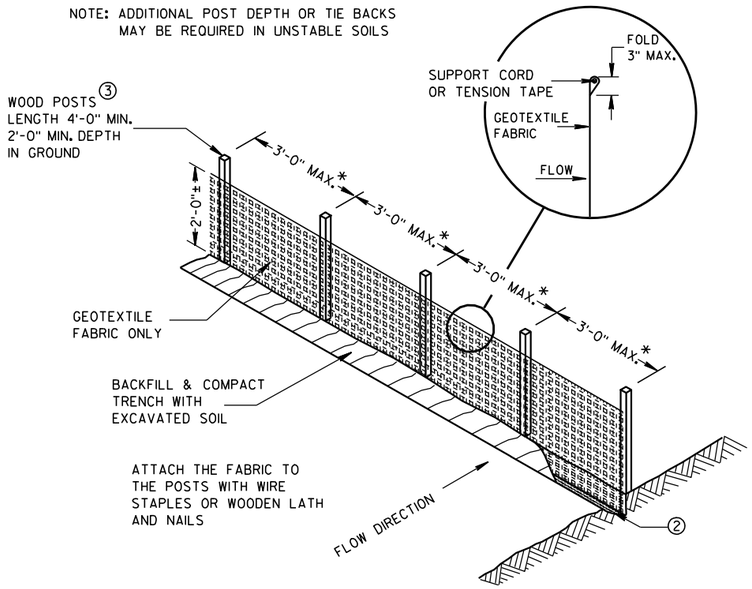
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



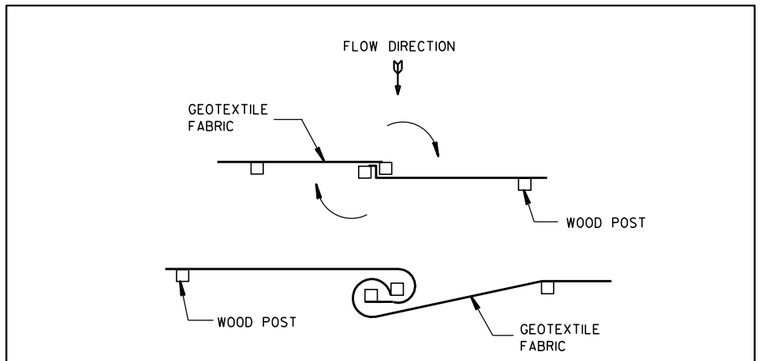
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

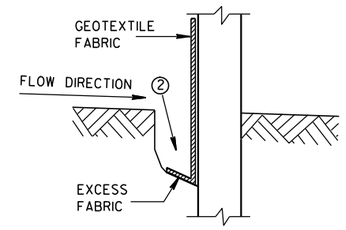


JOINING TWO LENGTHS OF SILT FENCE 5

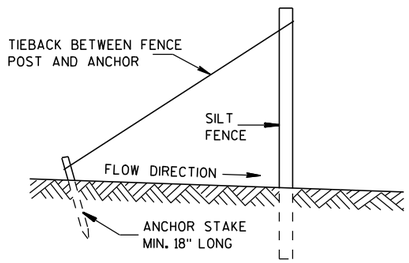
GENERAL NOTES

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 TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

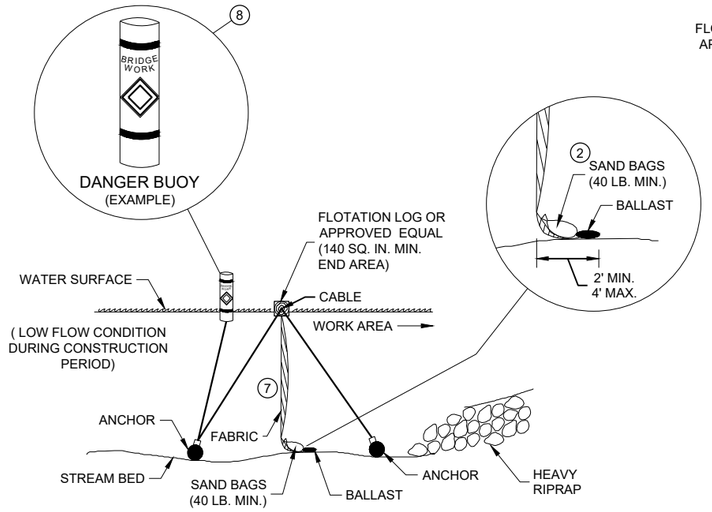
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

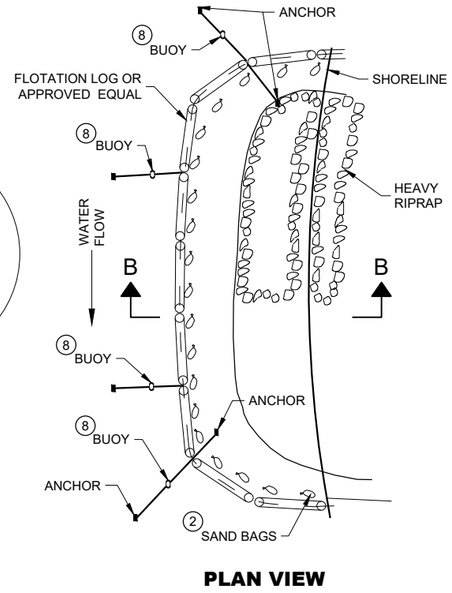
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

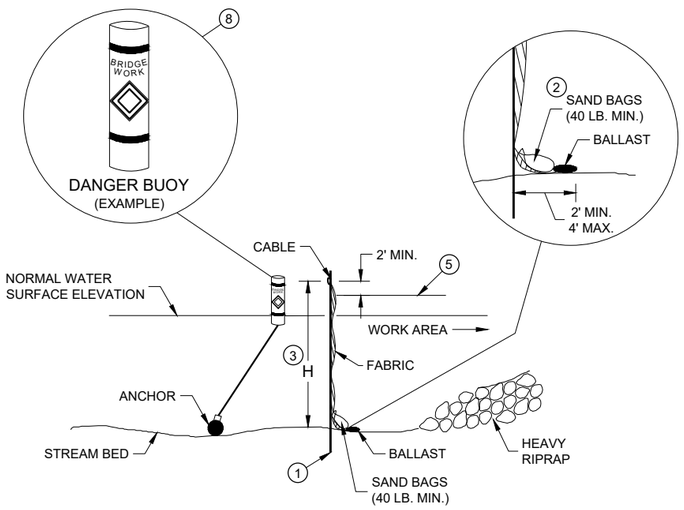


SECTION B - B

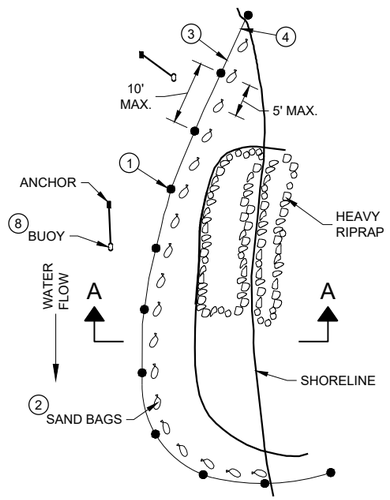


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

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

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

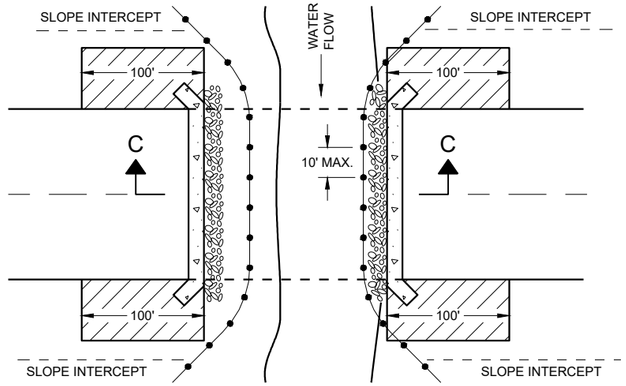
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

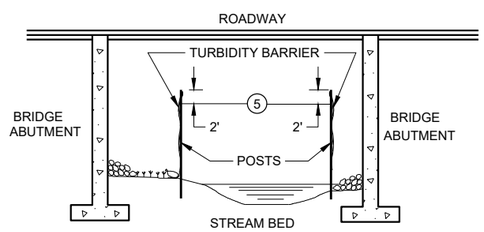
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

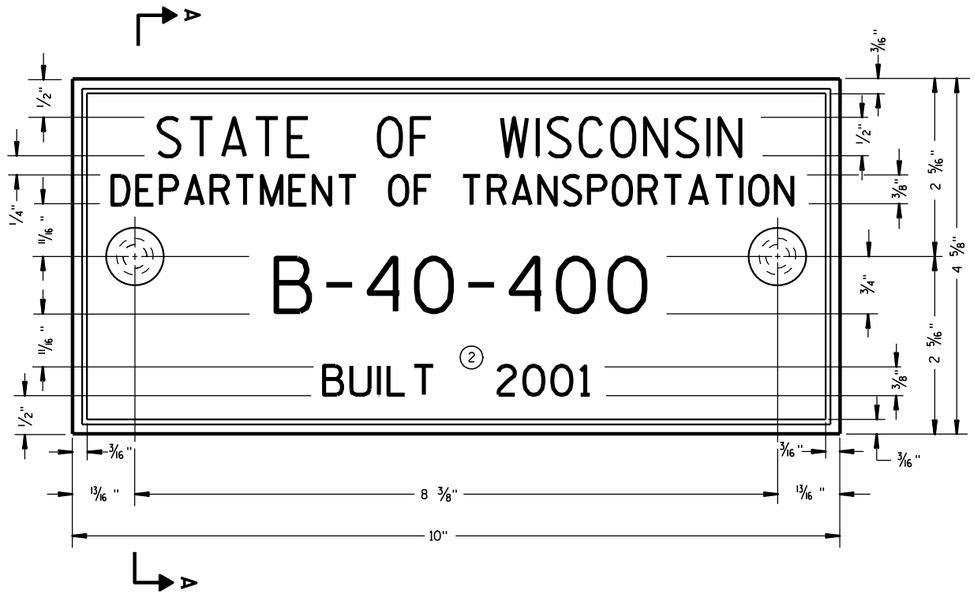
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6
SDD 08E11 - 02



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

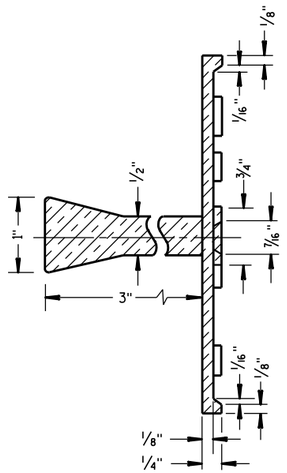
GENERAL NOTES

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

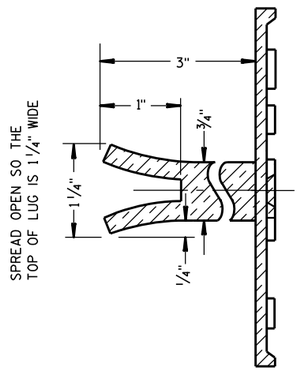
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

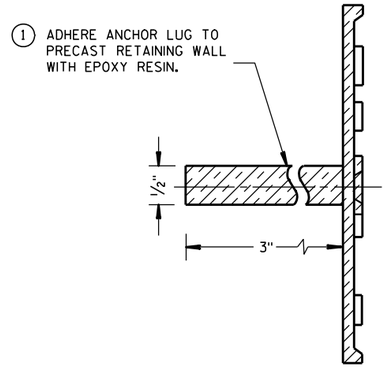
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

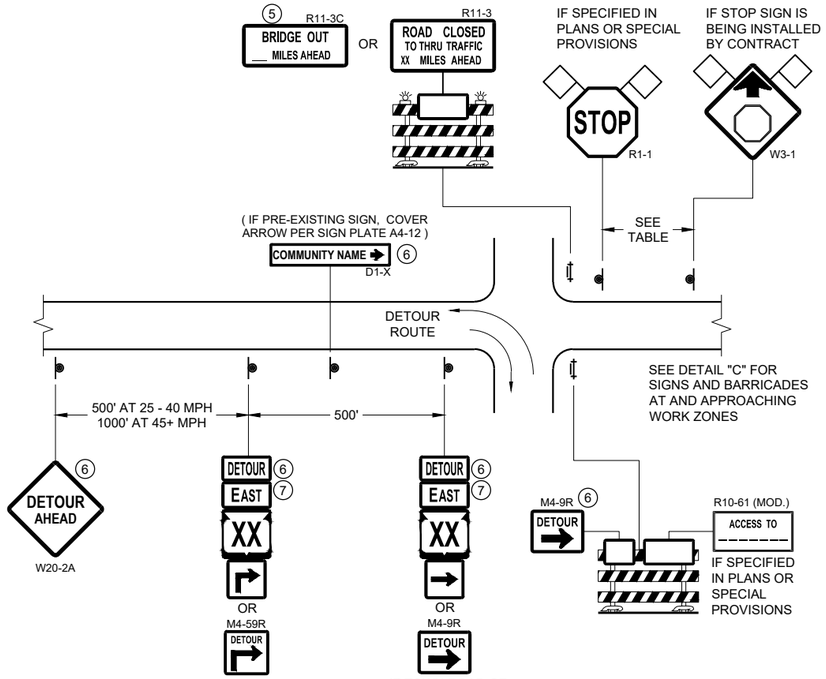
FHWA

6

S.D.D. 12 A 3-10

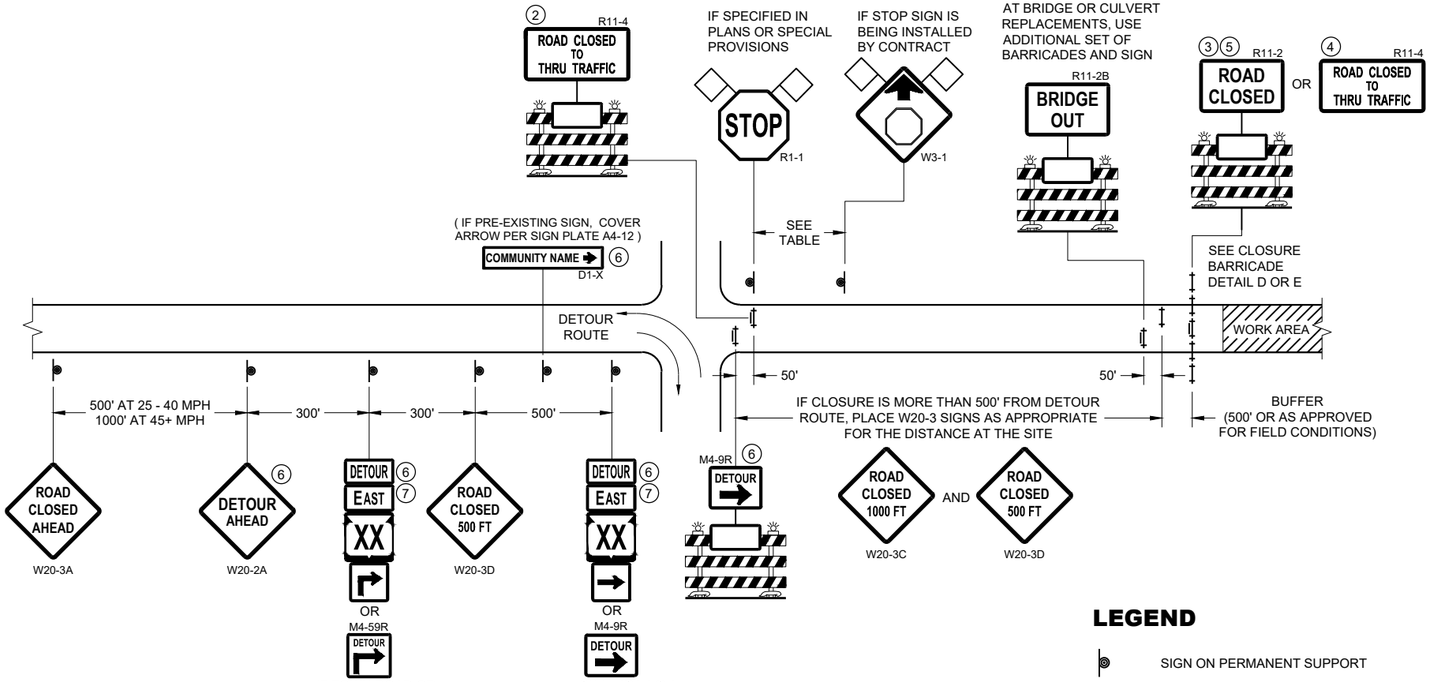
6

S.D.D. 12 A 3-10



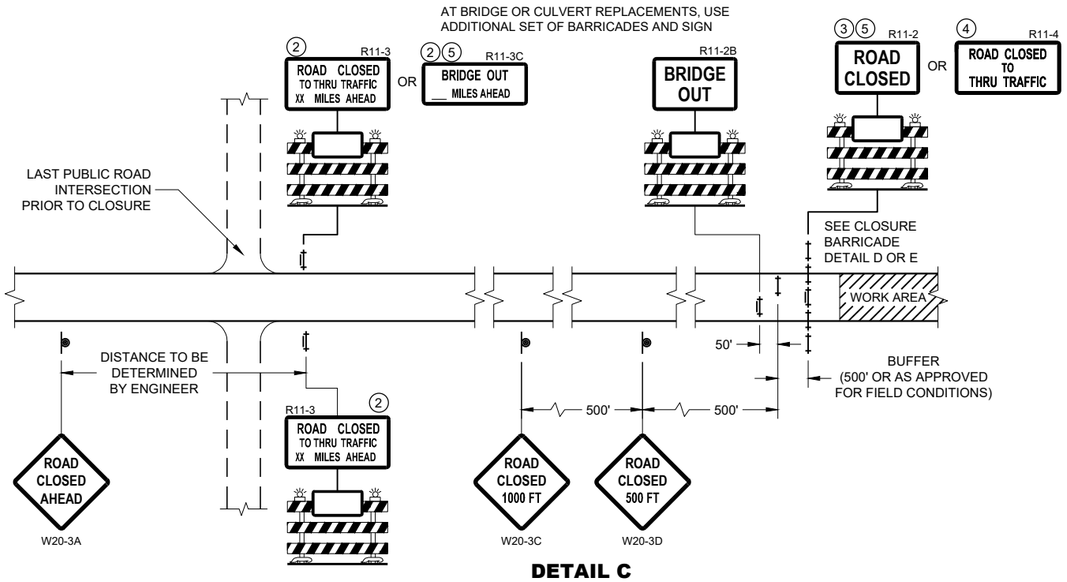
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

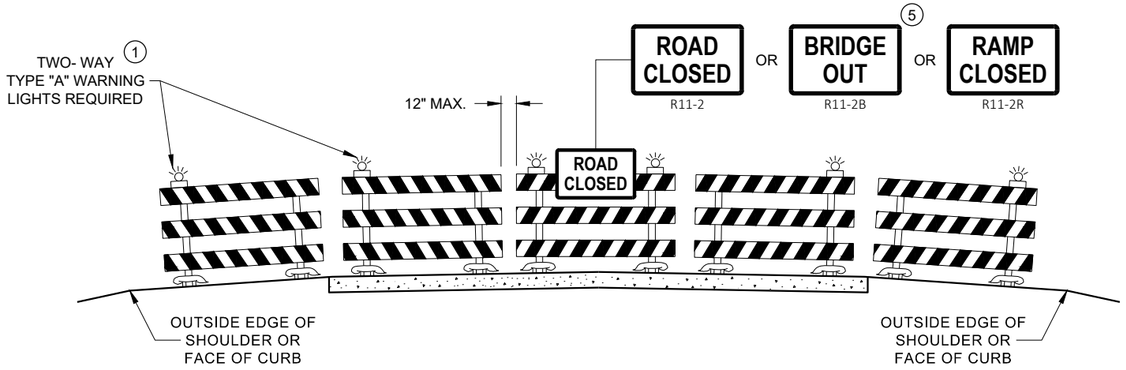
FHWA

6

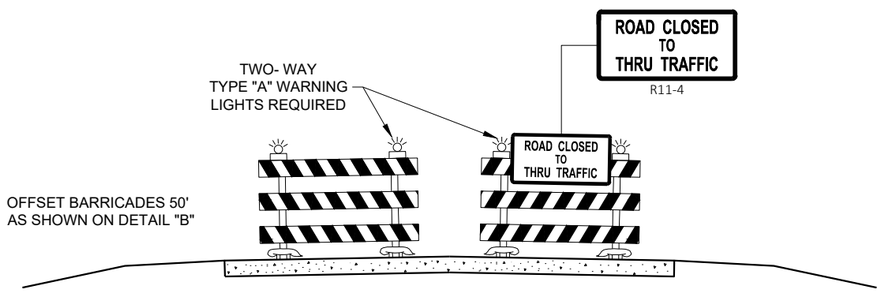
SDD 15C02 - 08a

6

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

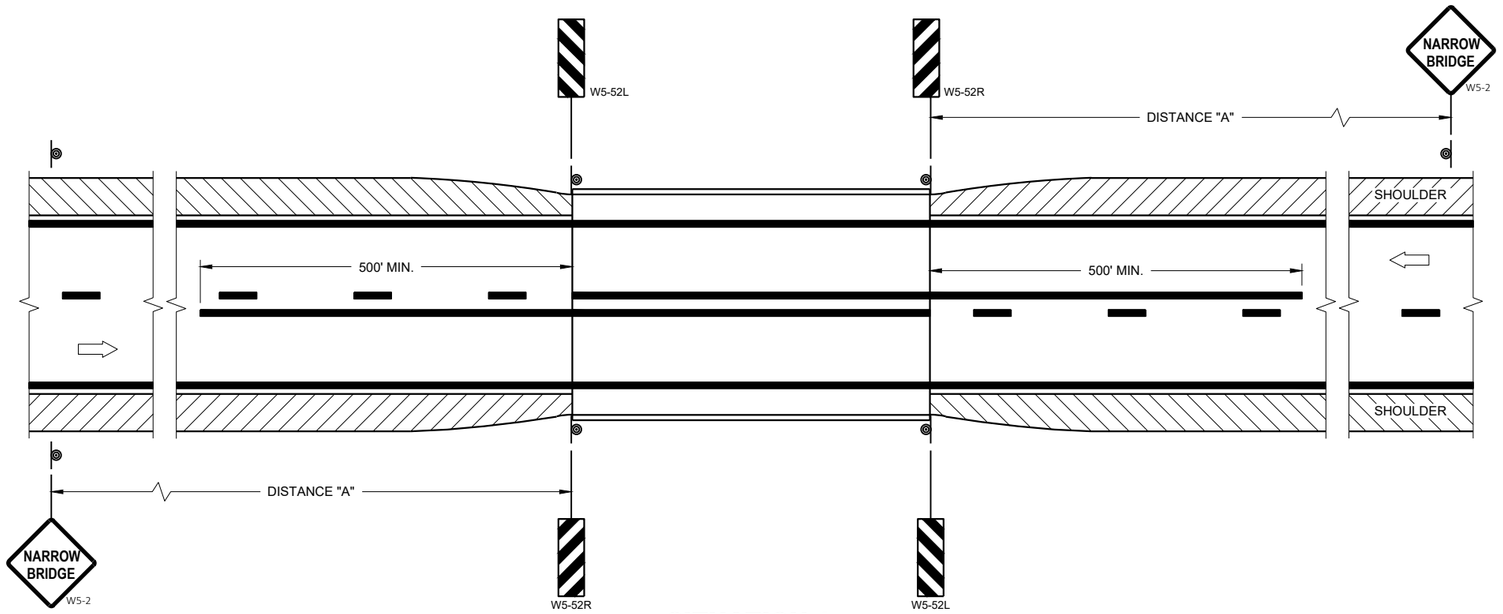
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 08b

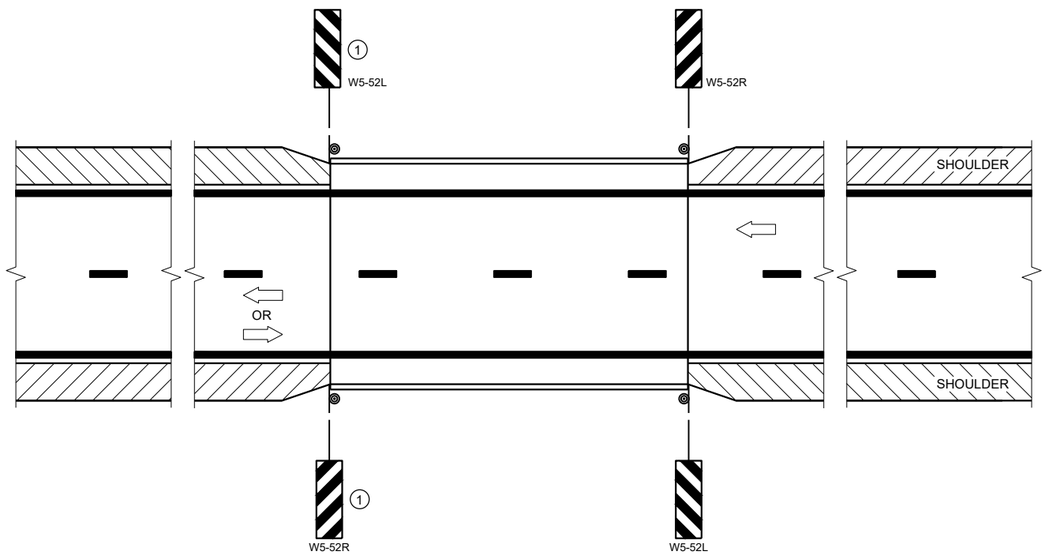
6

SDD 15C02 - 08b



SITUATION 1

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



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 2022
DATE

/S/ Jeannie Silver
STATE SIGNING AND MAF ENGINEER

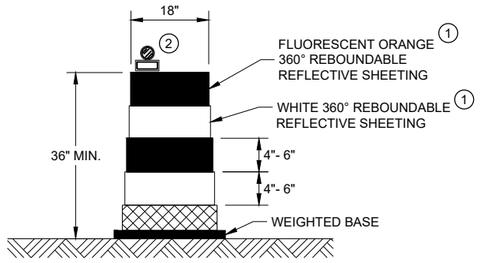
FHWA

6

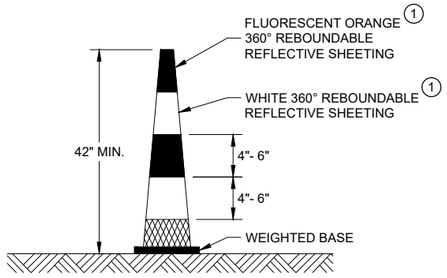
SDD 15C06 - 10

GENERAL NOTES

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

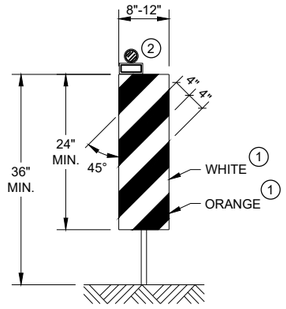


DRUM



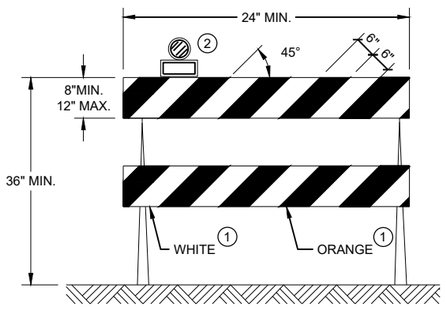
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



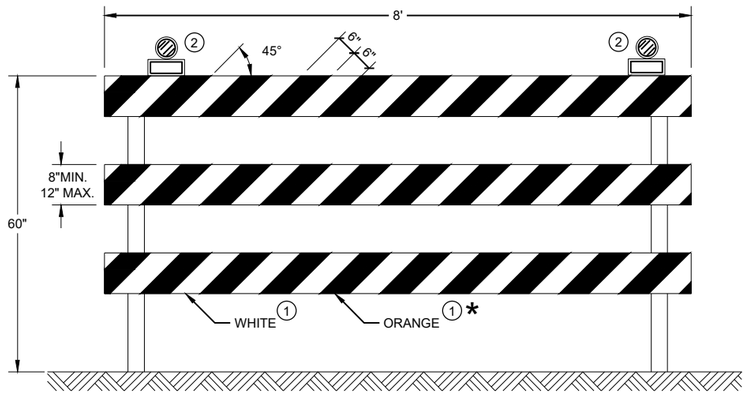
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

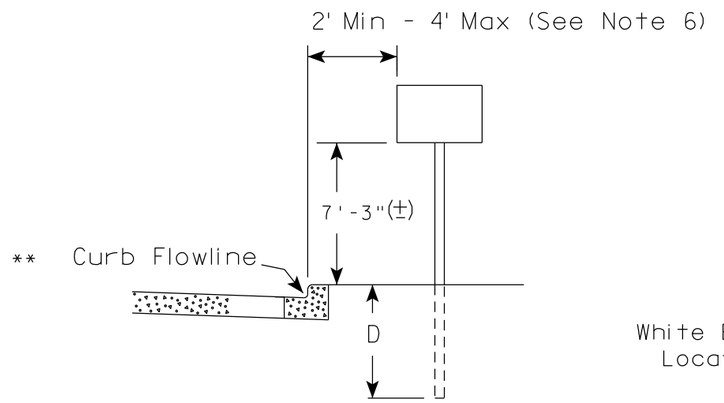
6

SDD 15C11 - 09b

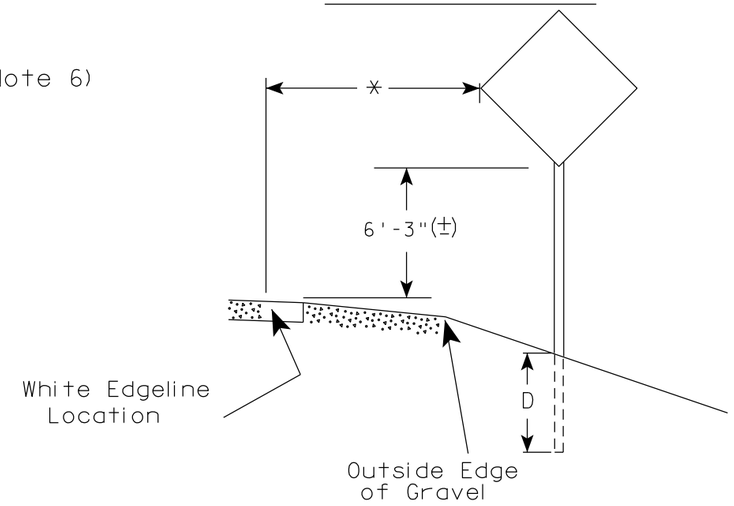
6

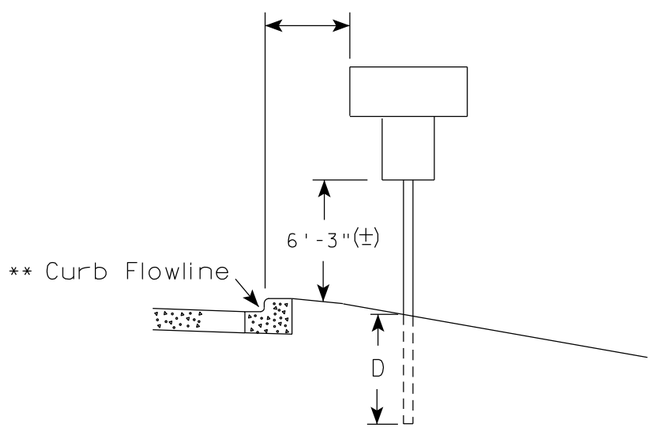
SDD 15C11 - 09b

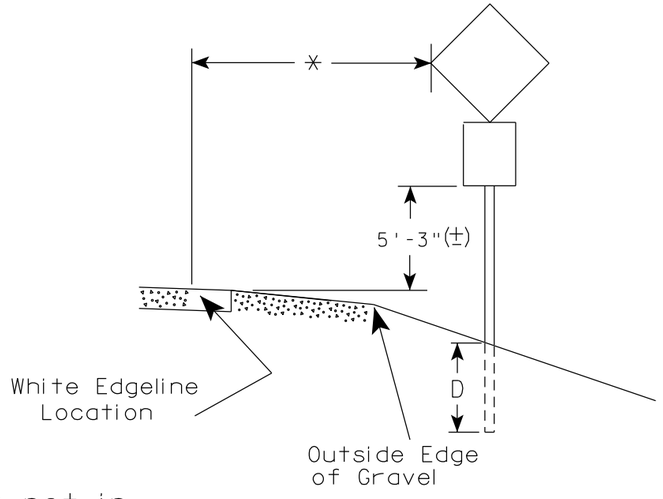
URBAN AREA



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" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

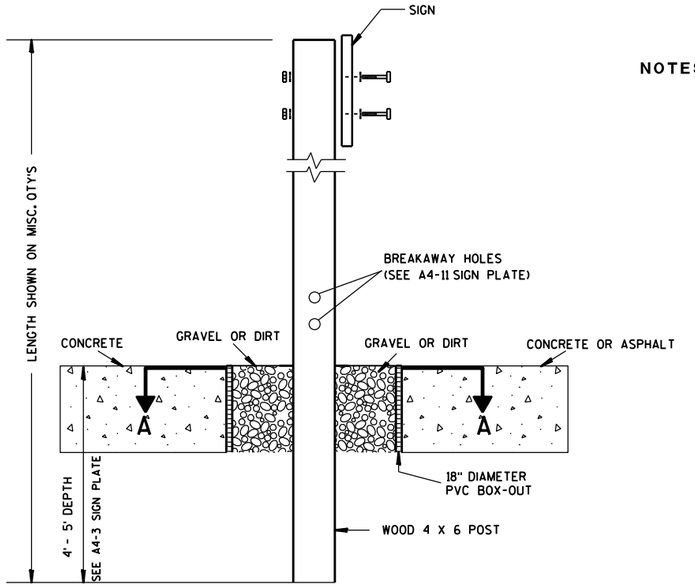
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

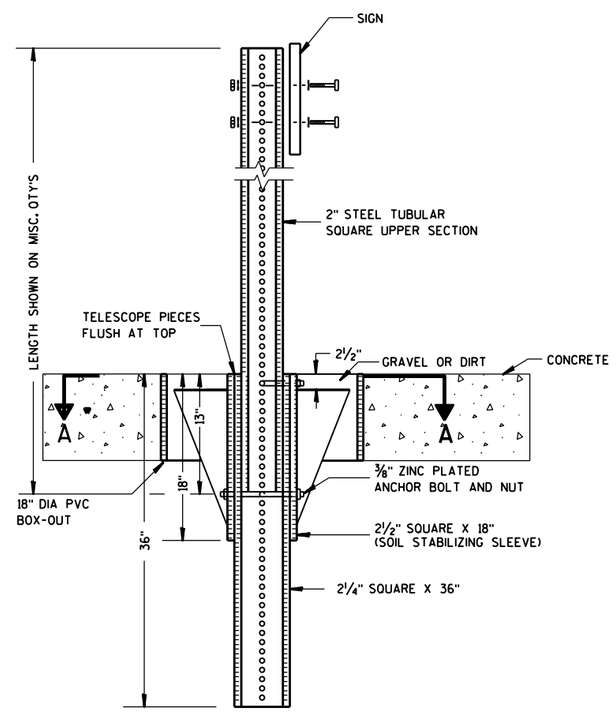
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 18	E



ELEVATION VIEW

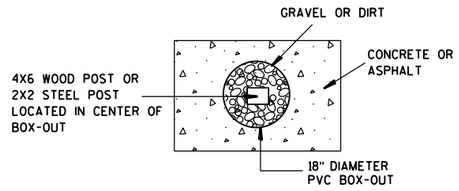
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

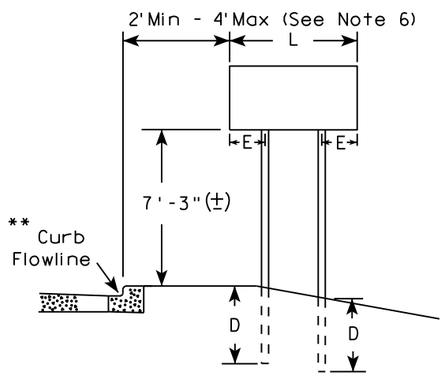
APPROVED Matthew R Rauch
for State Traffic Engineer

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

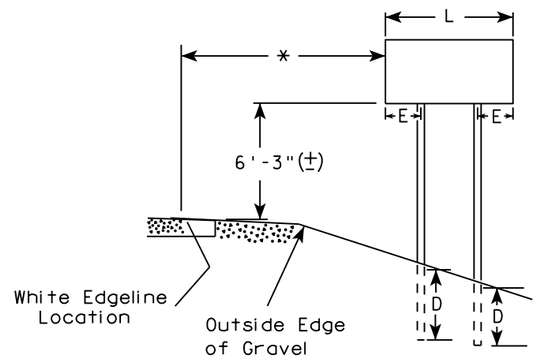
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

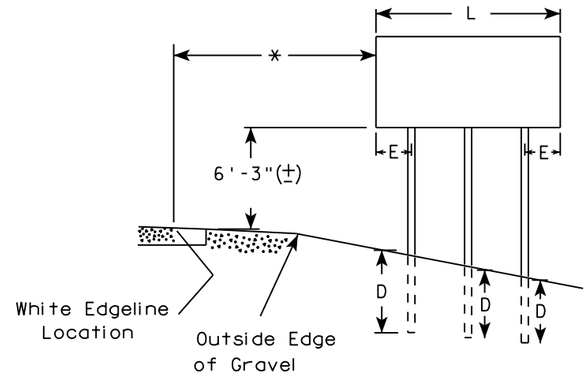
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

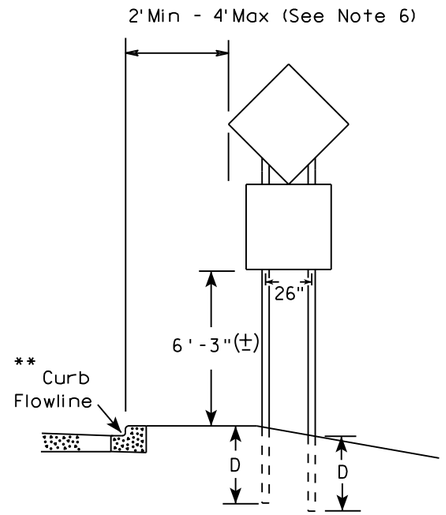
URBAN AREA



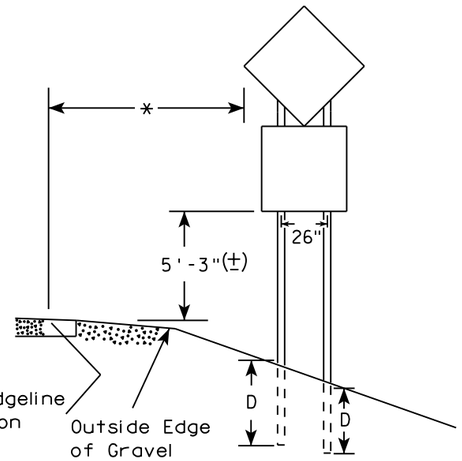
RURAL AREA (See Note 3)







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" (±) or 6'-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" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), 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" (±).

* 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'

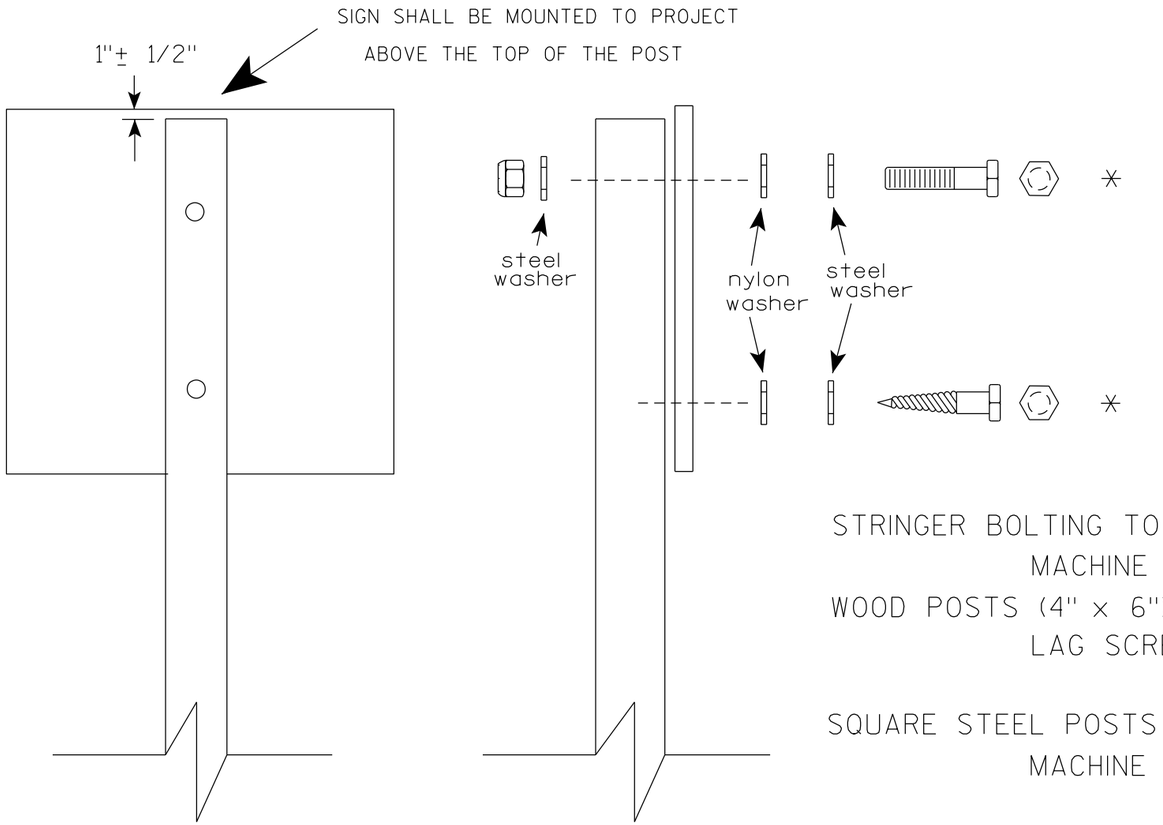
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-4.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 20	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

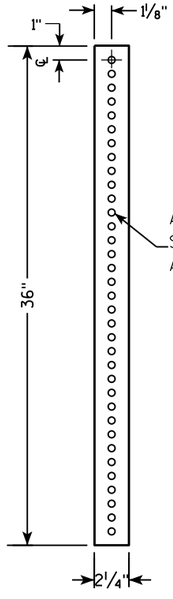
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

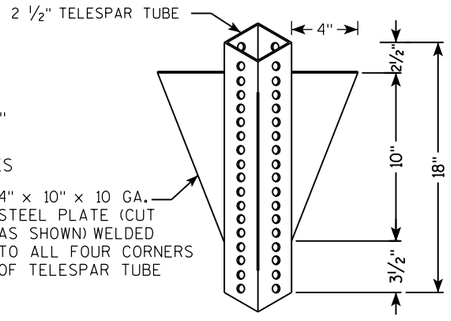
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

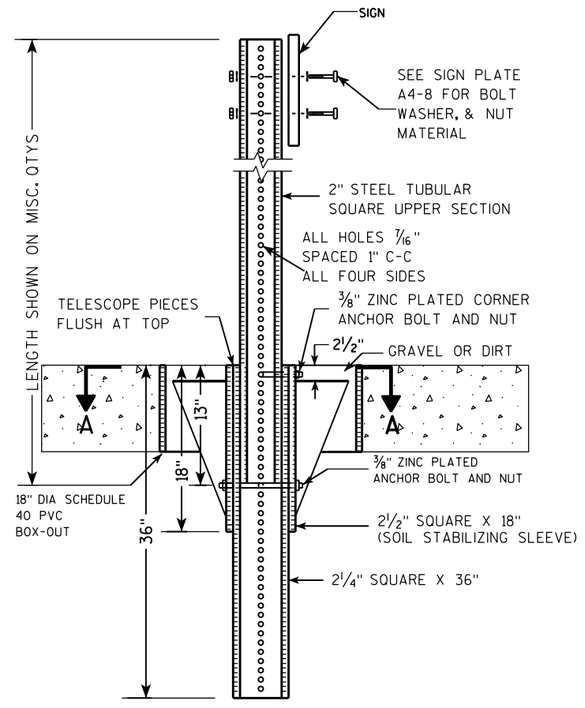
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



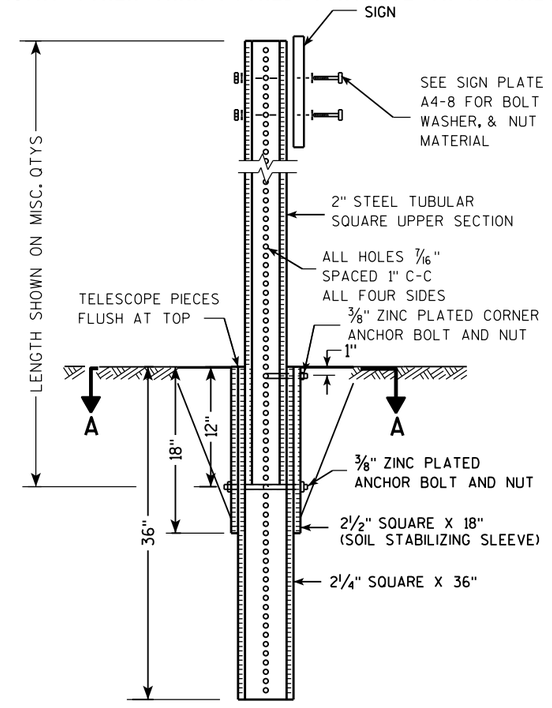
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

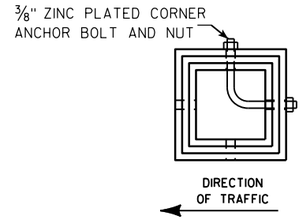


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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).

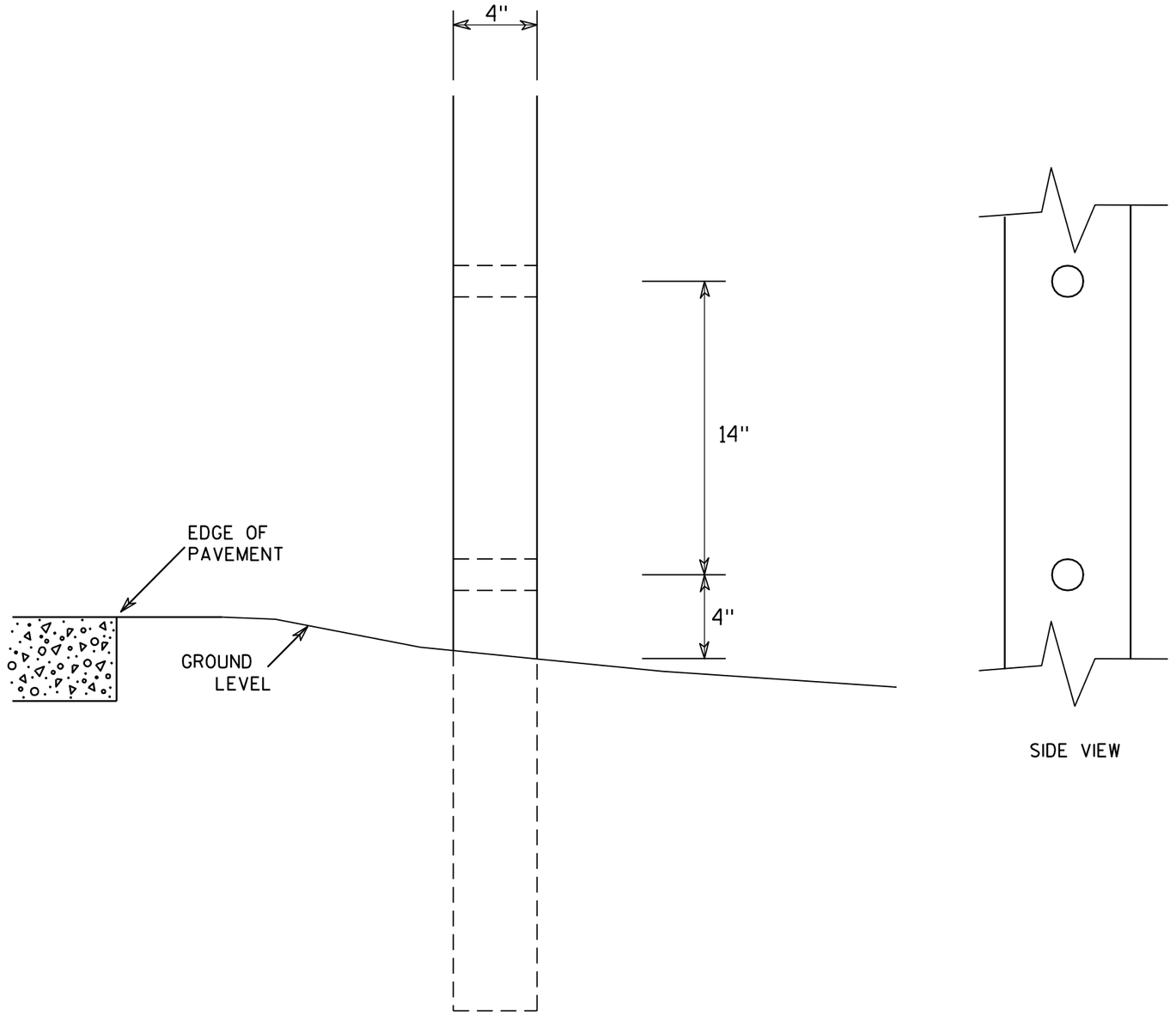
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 22 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

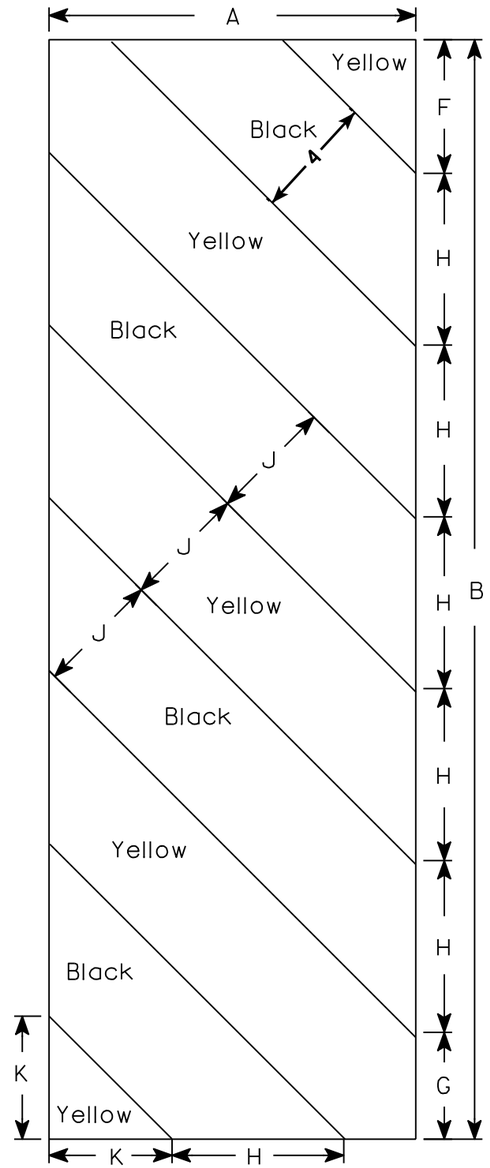
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

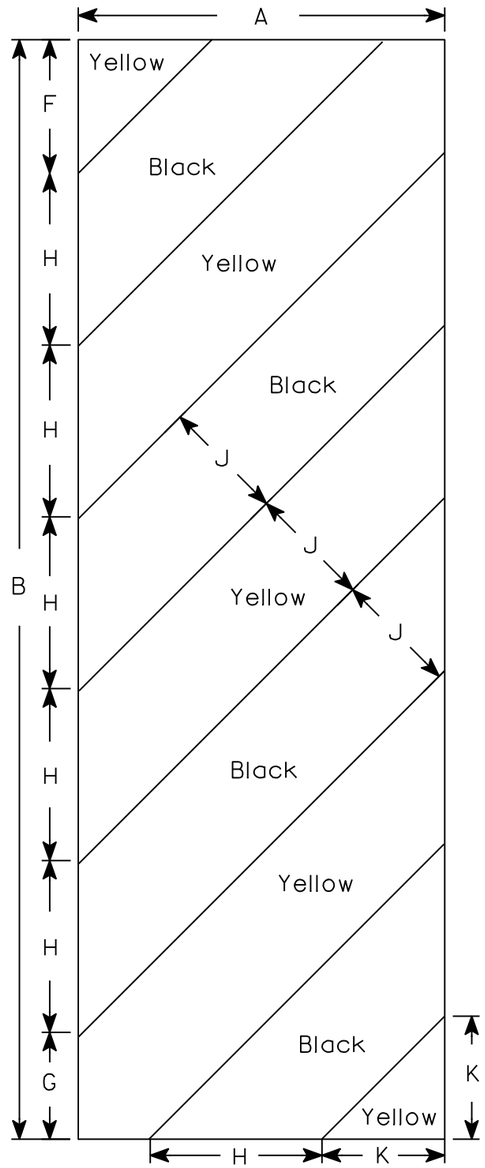
APPROVED Chester J Spang
for State Traffic Engineer

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

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



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

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

STANDARD SIGN

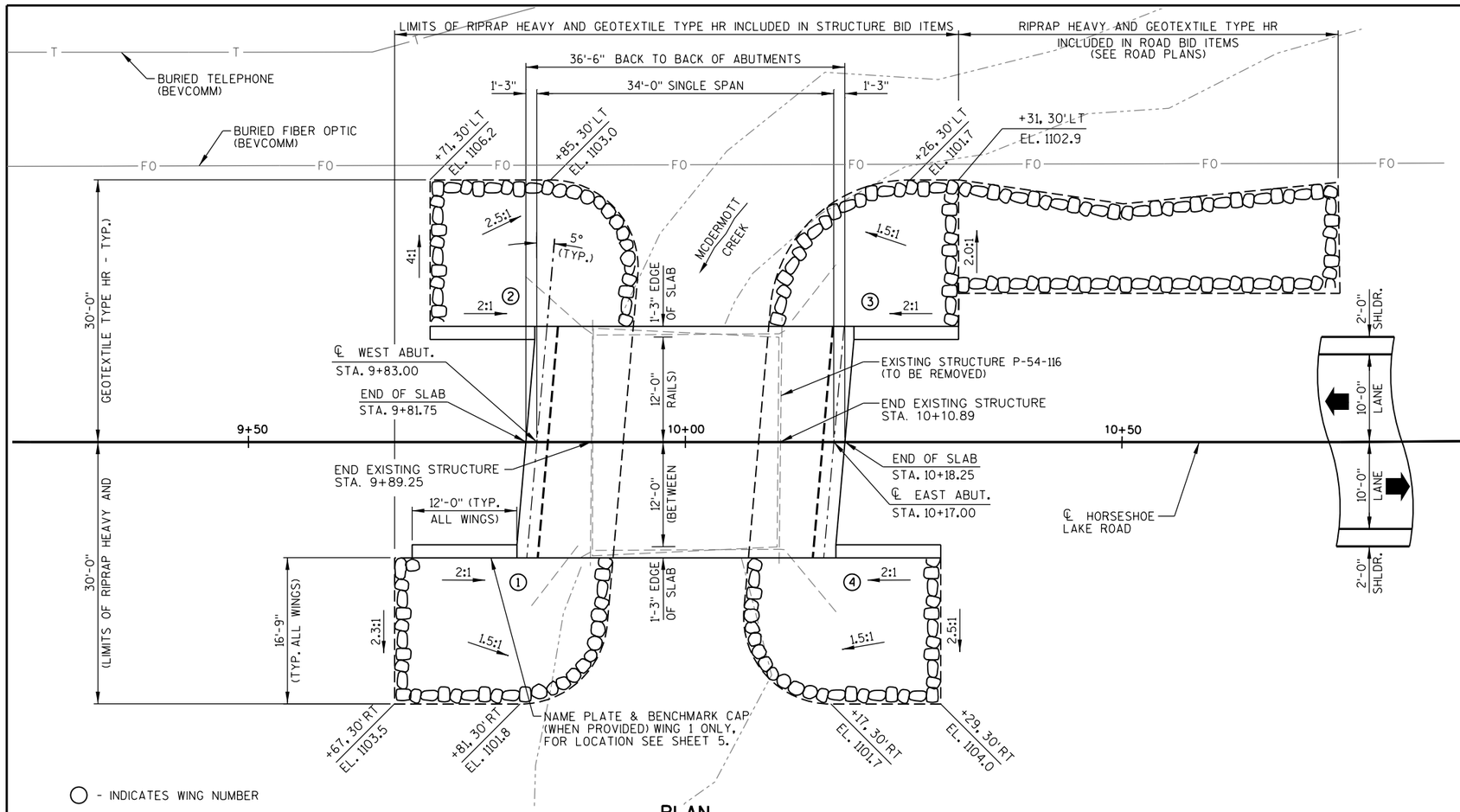
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

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

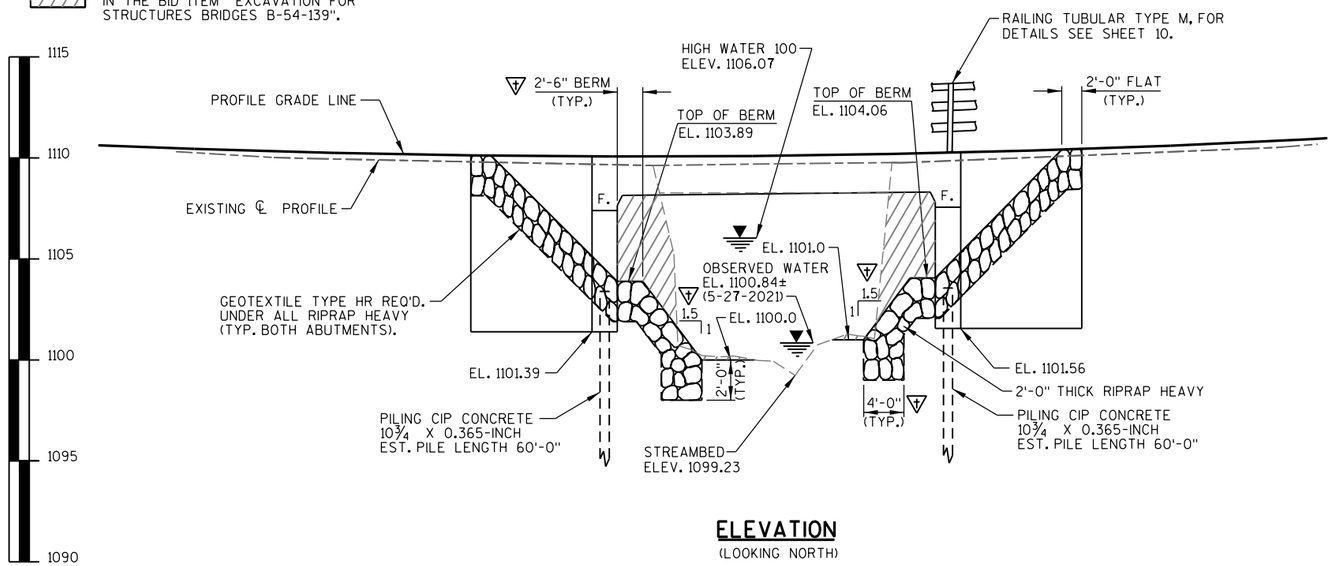


○ - INDICATES WING NUMBER

▽ - NORMAL TO ℄ OF SUBSTRUCTURE.

▨ - REMOVAL OF THIS MATERIAL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-54-139".

PLAN
(SINGLE SPAN FLAT CONCRETE SLAB)



ELEVATION
(LOOKING NORTH)

DESIGN DATA

LIVE LOAD:
- DESIGN LOADING : HL-93
- INVENTORY RATING FACTOR : 1.17
- OPERATIONAL RATING FACTOR : 1.52

TRAFFIC DATA:
- A.A.D.T. (2023) = 50
- A.A.D.T. (2043) = 60
- R.D.S. = 25 MPH

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, SLAB ——— $f'c$ = 4,000 P.S.I.
- ALL OTHER ——— $f'c$ = 3,500 P.S.I.
- HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 ——— fy = 60,000 P.S.I.
- PILING CIP CONCRETE 10¾ × 0.365-INCH ——— fy = 45,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10¾ X 0.365-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ✳ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 60'-0 AT BOTH ABUTMENTS.

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

HYDRAULIC DATA:

100 YEAR FREQUENCY
- DRAINAGE AREA ——— 3.47 SQ. MI.
- Q_{100} ——— 750 C.F.S.
- VELOCITY ——— 7.73 FT./SEC.
- WATERWAY AREA ——— 97 SQ. FT.
- SCOUR CRITICAL CODE ——— 5
- HIGH WATER $_{100}$ ELEVATION ——— 1106.07
- Q_2 ——— 190 C.F.S.
- Q_2 VELOCITY ——— 3.74 FT./SEC.
- Q_2 ELEVATION ——— 1103.32

ROADWAY OVERFLOW DESIGN FREQUENCY
- OVERTOPPING FREQUENCY ——— > 100 YEARS

LIST OF DRAWINGS

WISCONSIN JOSHUA R. SWENO E-44384 WAUNAKEE WI PROFESSIONAL ENGINEER

7/13/2022

CONSULTANT DESIGN CONTACT:
JOSH SWENO
(608) 355-8852

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

STATE PROJECT NUMBER

8436-00-70

NO.	DATE	REVISION	BY

MSA ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
1702 PANKRATZ STREET, MADISON WI 53704
(608) 242-7779 www.msa-ps.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 09/14/22
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-54-139

HORSESHOE LAKE ROAD OVER MCDERMOTT CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
RUSK	RUSK

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JZ	JRS	RLR	JZ

GENERAL PLAN

SHEET 1 OF 10
25

8

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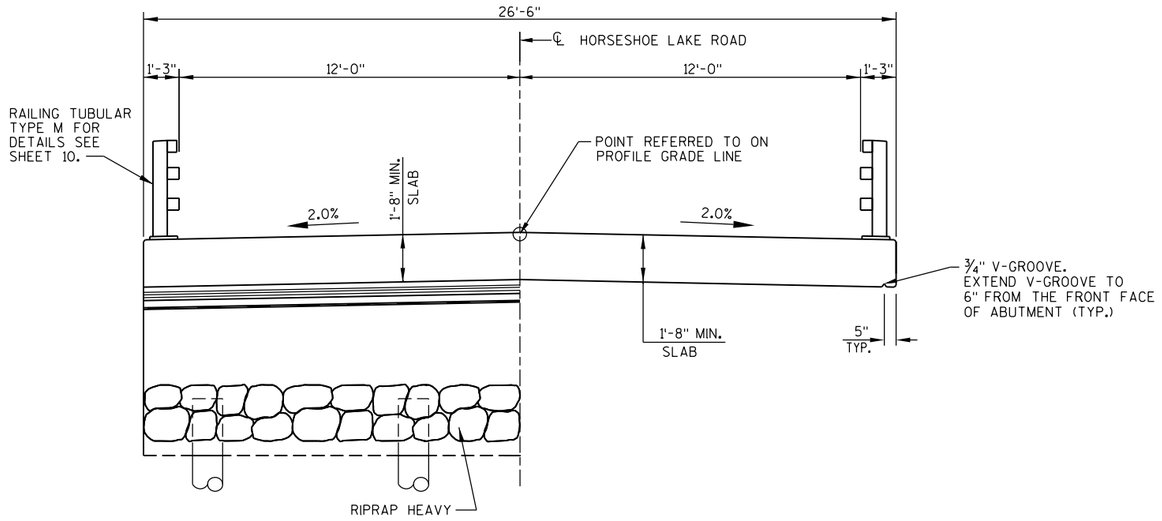
STATE PROJECT NUMBER

8436-00-70



AT ABUTMENTS IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING EAST)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE LIMITS SHOWN ON SHEET 1 AND ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-54-139" FOR THE ABUTMENTS.

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

THIS STRUCTURE WILL REPLACE EXISTING STRUCTURE P-54-116, A 24.6 FT. WIDE BY 21.6 FT. LONG TIMBER SLAB BRIDGE SUPPORTED ON FULL RETAINING TIMBER BACKED ABUTMENTS WITH TIMBER PILING.

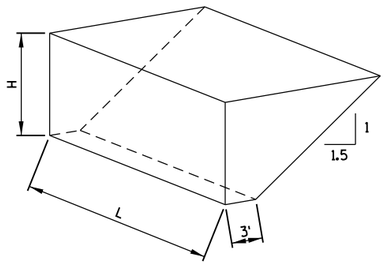
Ⓑ - BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

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

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.

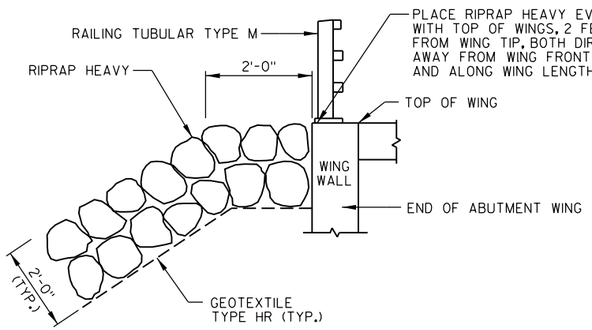
PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND EDGES OF SLAB, TO THE OUTSIDE 1'-0" OF THE UNDERSIDE OF SLAB, TO THE TOPS OF WINGS, TO THE EXPOSED FRONT FACES OF WINGS, AND TO THE END 1'-0" OF THE ABUTMENT BODY FRONT FACES.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.

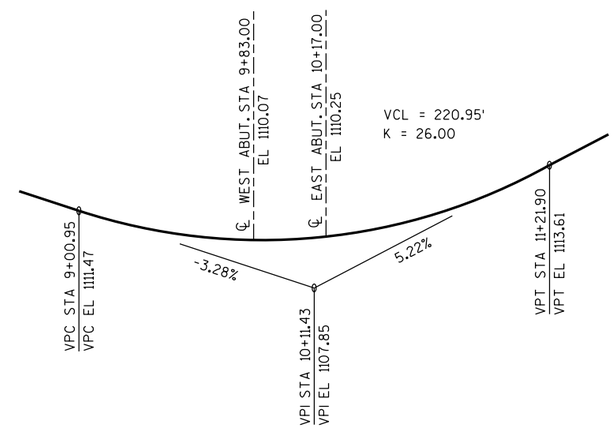


ABUTMENT BACKFILL DIAGRAM

L = OUT-TO-OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
$V_{CF} = (L)(3.0')(H)+(L)(0.5)(1.5H)(H)$
$V_{TON} = V_{CF}(2.0)/27$



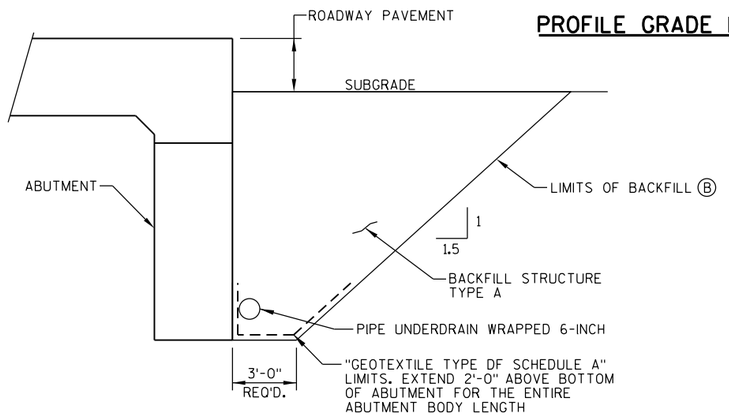
TYPICAL FILL SECTION AT WING TIPS



PROFILE GRADE LINE - HORSESHOE LAKE RD.

TOTAL ESTIMATED QUANTITIES

	ITEM NUMBER	BID ITEM	UNIT	WEST ABUT.	EAST ABUT.	SUPER	TOTAL
	203.0260.01	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-54-116	EACH	-	-	-	1
	206.1001.01	EXCAVATION FOR STRUCTURES BRIDGES B-54-139	EACH	-	-	-	1
Ⓑ	210.1500	BACKFILL STRUCTURE TYPE A	TON	125	125	-	250
	502.0100	CONCRETE MASONRY BRIDGES	CY	35.5	35.7	63.9	135
	502.3200	PROTECTIVE SURFACE TREATMENT	SY	12	12	129	153
	505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,620	1,620	-	3,240
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,720	1,730	10,970	14,420
	513.4061	RAILING TUBULAR TYPE M	LF	-	-	126	126
	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-	18
	550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	240	240	-	480
	606.0300	RIPRAP HEAVY	CY	98	88	-	186
	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90	90	-	180
	645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	26	26	-	52
	645.0120	GEOTEXTILE TYPE HR	SY	165	152	-	317
		NON-BID ITEMS					
		PREFORMED FILLER	SIZE				½" & ¾"



STRUCTURE BACKFILL DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-139

DRAWN BY RLR | PLANS CK'D. JZ

CROSS SECTION, QUANTITIES & NOTES

SHEET 2 OF 10
26

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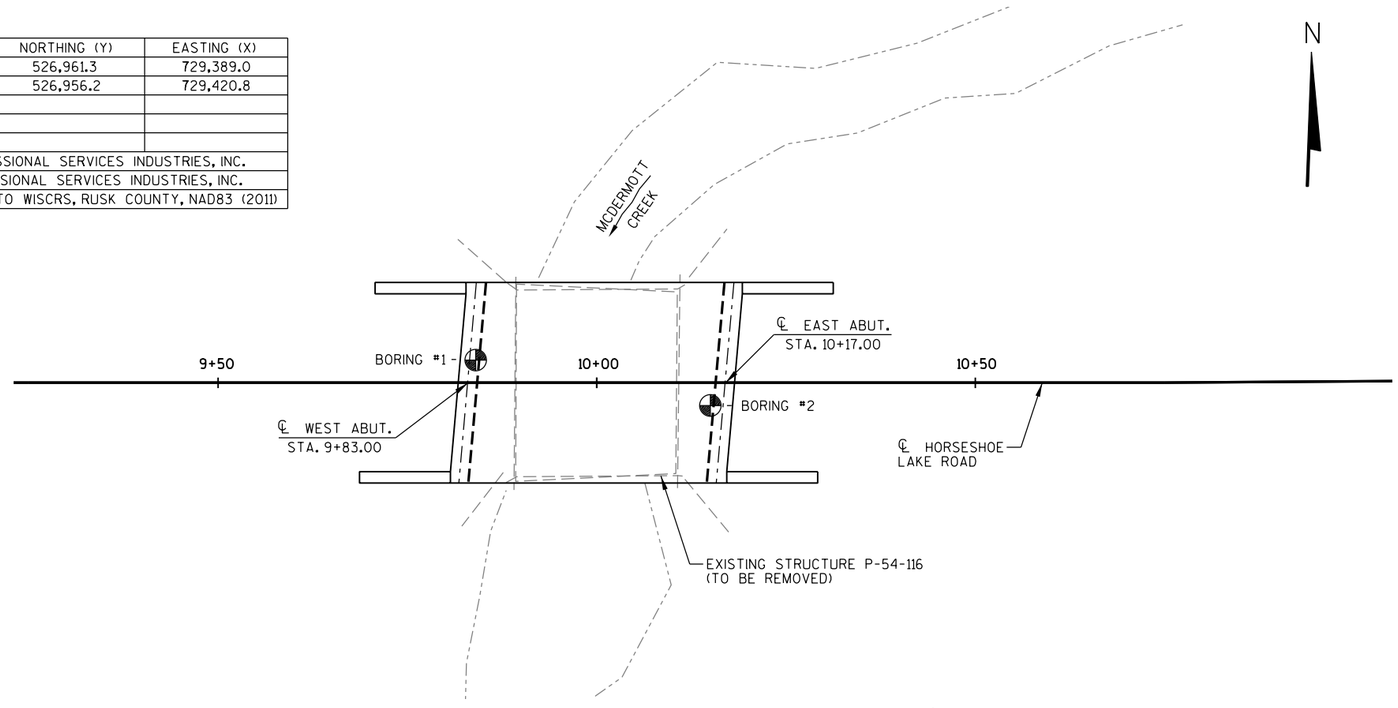
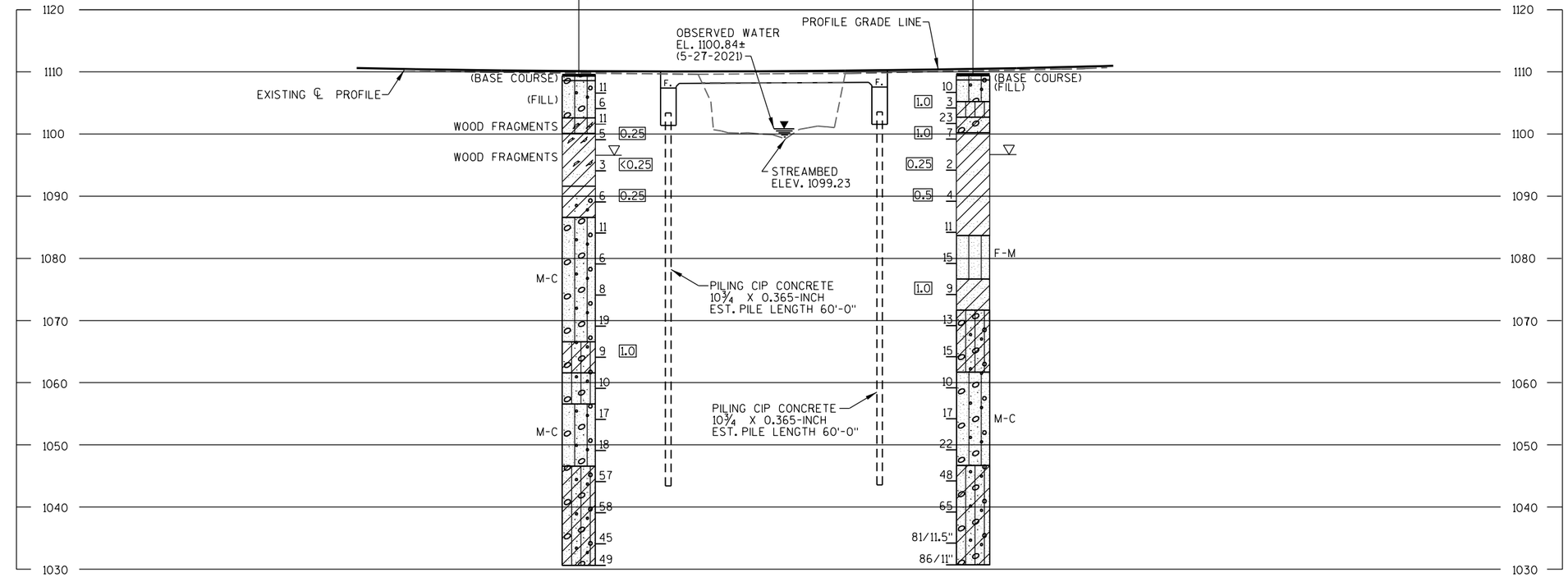
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	6-23-2021	526,961.3	729,389.0
2	6-24-2021	526,956.2	729,420.8
BORINGS COMPLETED BY: PROFESSIONAL SERVICES INDUSTRIES, INC.			
REPORT COMPLETED BY: PROFESSIONAL SERVICES INDUSTRIES, INC.			
ALL COORDINATES REFERENCED TO WISCRS, RUSK COUNTY, NAD83 (2011)			





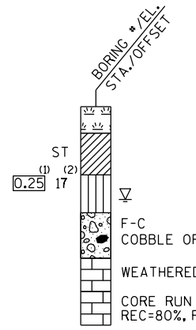
STATE PROJECT NUMBER

8436-00-70

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-54-139

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SUBSURFACE EXPLORATION

SHEET 3 OF 10
27

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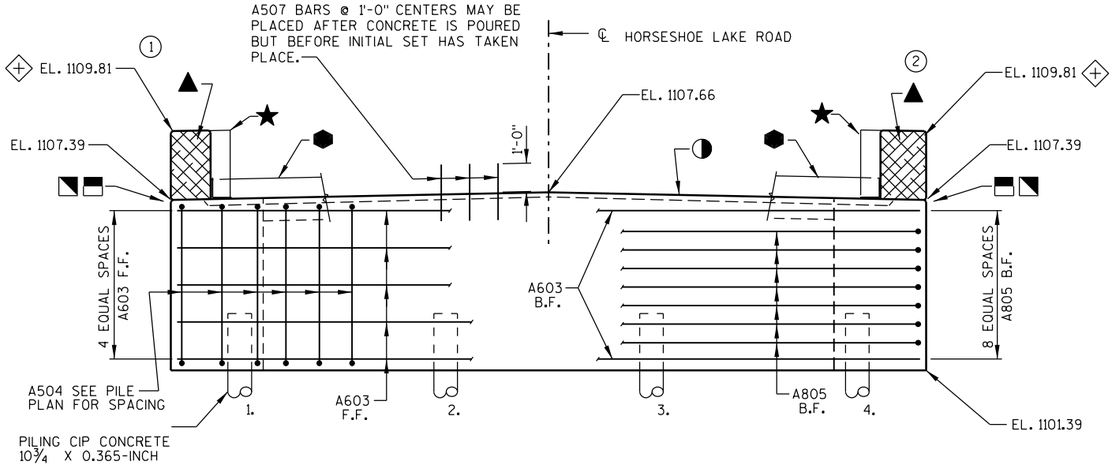
STATE PROJECT NUMBER

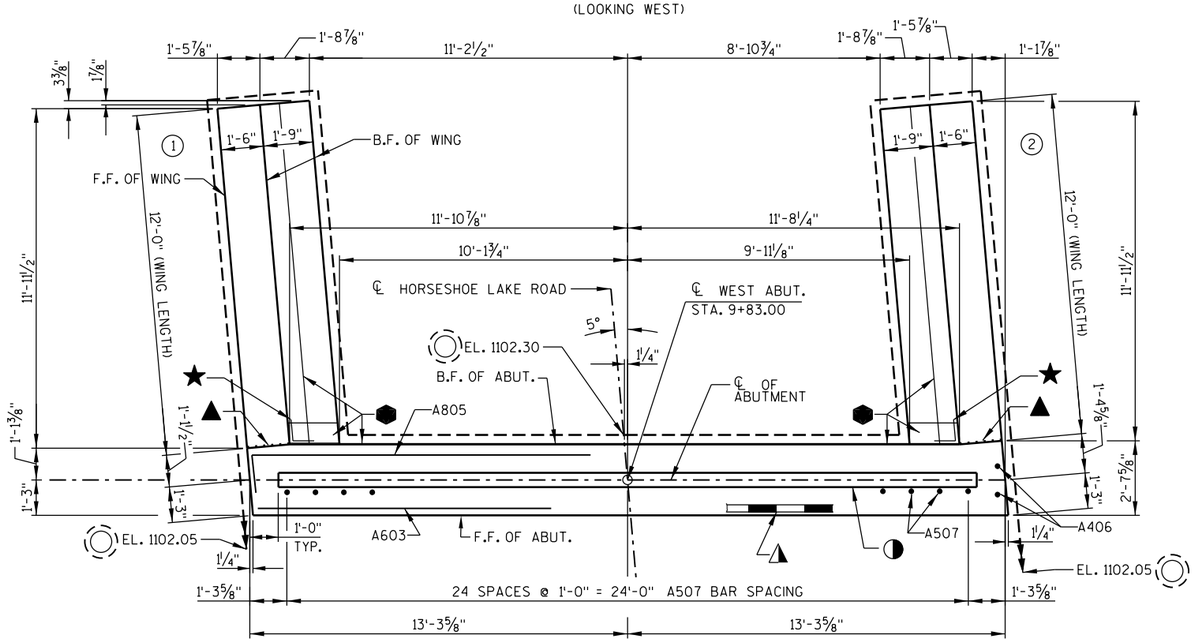
8436-00-70



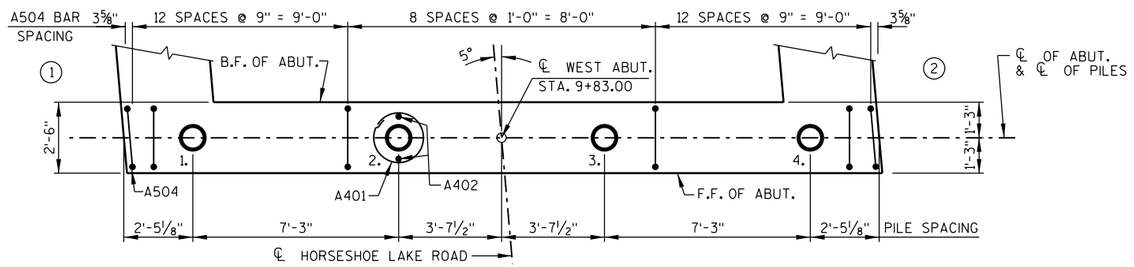
FRONT FACE BAR STEEL REINF.

ELEVATION
(LOOKING WEST)

BACK FACE BAR STEEL REINF.

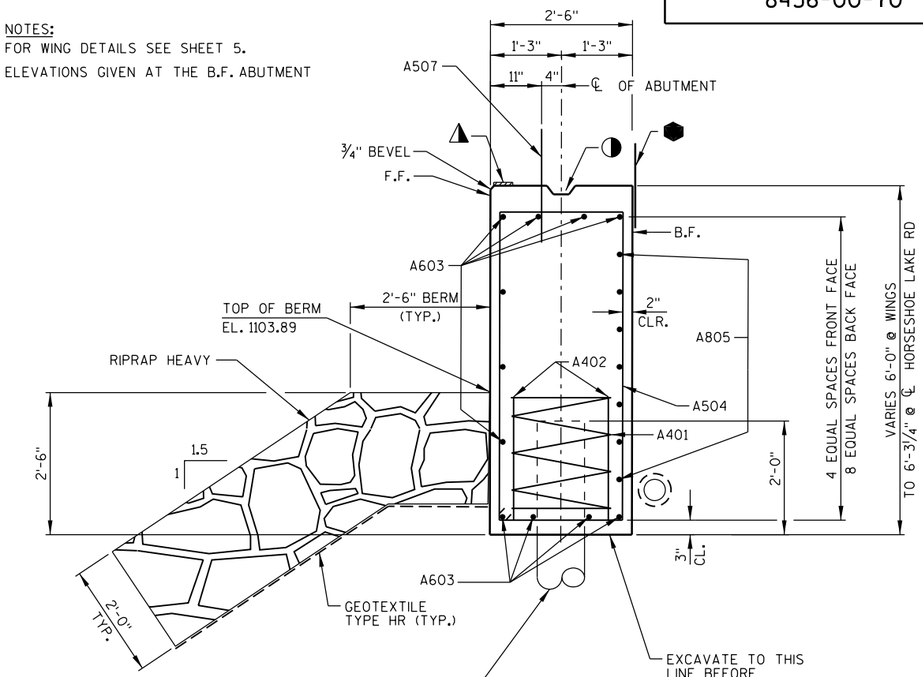


PLAN



PILE PLAN

NOTES:
FOR WING DETAILS SEE SHEET 5.
◈ ELEVATIONS GIVEN AT THE B.F. ABUTMENT



ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10¾ X 0.365-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 60'-0". FOR PILE SPLICE DETAILS SEE SHEET 5.

TYPICAL SECTION THRU ABUTMENT

LEGEND

- ⬒ – OPTIONAL KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ⬢ ON B.F. OF WING.
- ◹ – ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
- ◑ – KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ▲ – ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◭ – 4"× ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ – VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
- ⬢ – HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
- ◎ – PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS SEE SHEET 7.
- ◯ – INDICATES WING NUMBER

F.F. - FRONT FACE

B.F. - BACK FACE

CL. - CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-139

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WEST ABUTMENT

SHEET 4 OF 10
28

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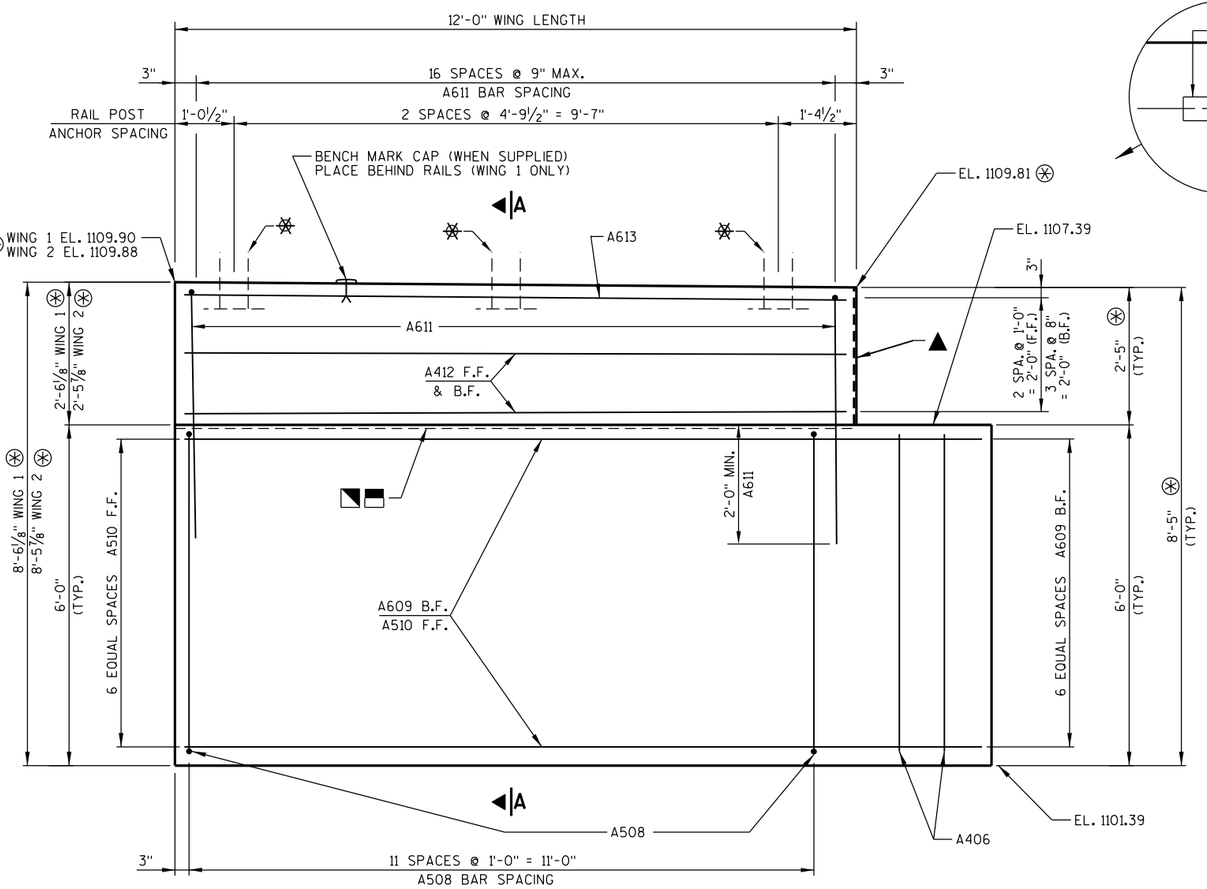
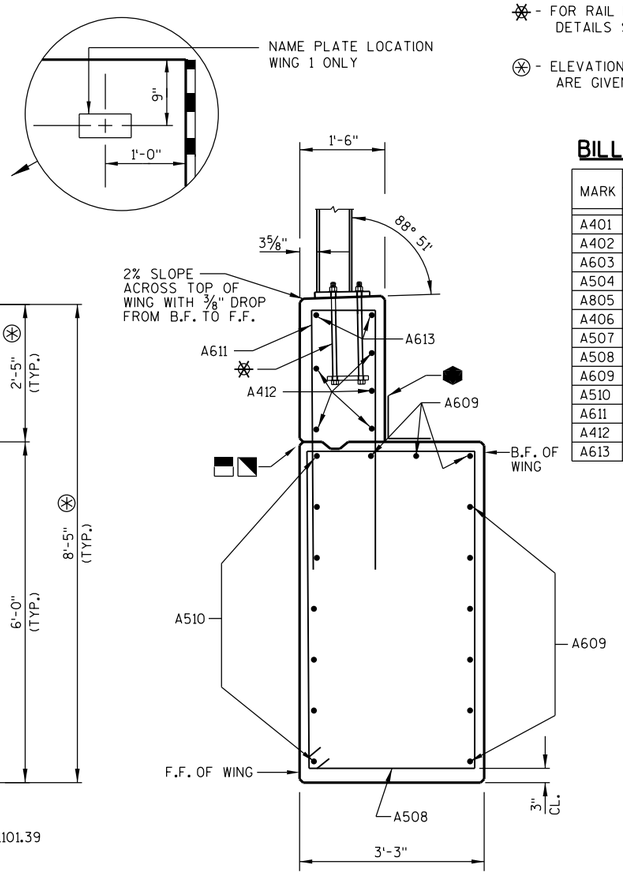
8436-00-70



ELEVATION - WING



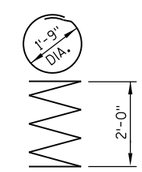
SECTION A-A THRU WING

BILL OF BARS (WEST ABUT.)

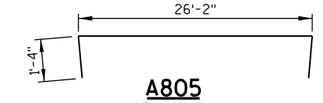
(COATED) 1720 LBS.
(UNCOATED) 1620 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
A401	-	4	28'-0"	X	ABUTMENT BODY - 1 SPIRAL WRAP @ EACH PILING
A402	-	8	2'-3"		ABUTMENT BODY - 2 @ EACH PILING - VERT.
A603	-	11	26'-2"		ABUTMENT BODY - F.F., TOP & BOTTOM - HORIZ.
A504	-	33	16'-2"	X	ABUTMENT BODY - STIRRUP - VERT.
A805	-	7	28'-4"	X	ABUTMENT BODY - B.F. - HORIZ.
A406	-	4	5'-7"		ABUTMENT BODY - ENDS - VERT.
A507	25	-	2'-0"		ABUTMENT BODY - TOP - DOWELS - VERT.
A508	24	-	17'-8"	X	WINGS 1 & 2 - BASE - STIRRUP - VERT.
A609	18	-	14'-1"		WINGS 1 & 2 - BASE - B.F. & CENTER - HORIZ.
A510	14	-	14'-0"		WINGS 1 & 2 - BASE - F.F. - HORIZ.
A611	34	-	9'-8"	X	WINGS 1 & 2 - TOP - STIRRUP - VERT.
A412	10	-	11'-7"		WINGS 1 & 2 - TOP - F.F. & B.F. - HORIZ.
A613	4	-	11'-7"		WINGS 1 & 2 - TOP - F.F. & B.F. - HORIZ.

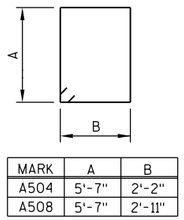
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



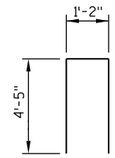
A401



A805
85° HOOKS



MARK	A	B
A504	5'-7"	2'-2"
A508	5'-7"	2'-11"



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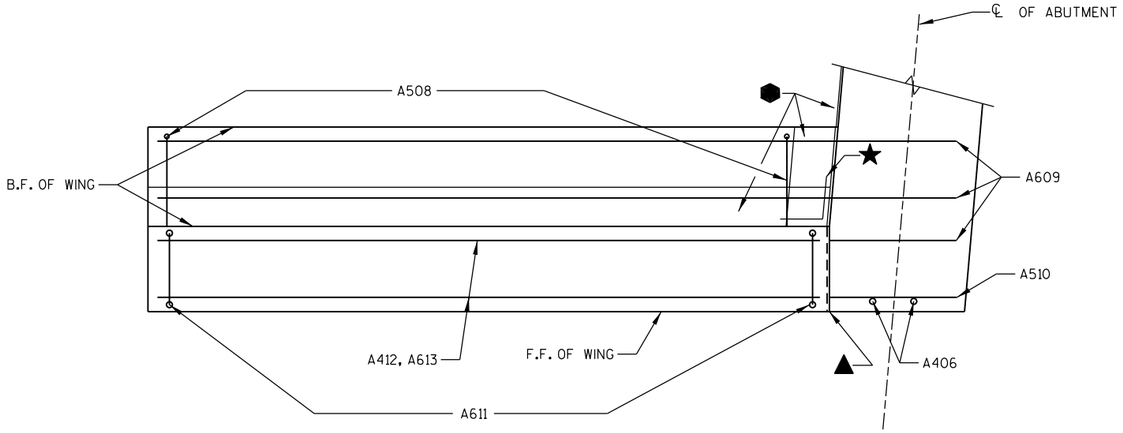
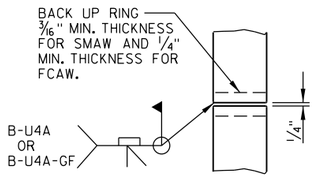
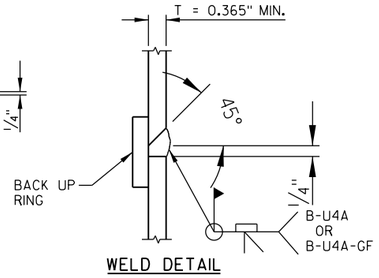


PLAN - WING

WING 1 SHOWN
WING 2 SIMILAR WITH REVERSE SKEW



PILE SPLICE DETAILS



WELD DETAIL

SEE SHEET 4 LEGEND FOR DESCRIPTION OF

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-139

DRAWN BY CAR | PLANS CK'D. JZ

WEST ABUTMENT DETAILS

SHEET 5 OF 10
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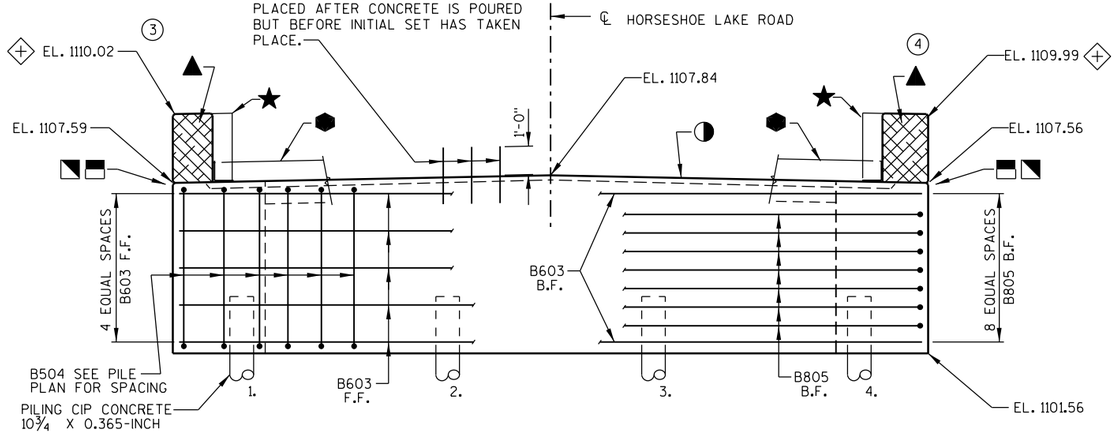
STATE PROJECT NUMBER

8436-00-70

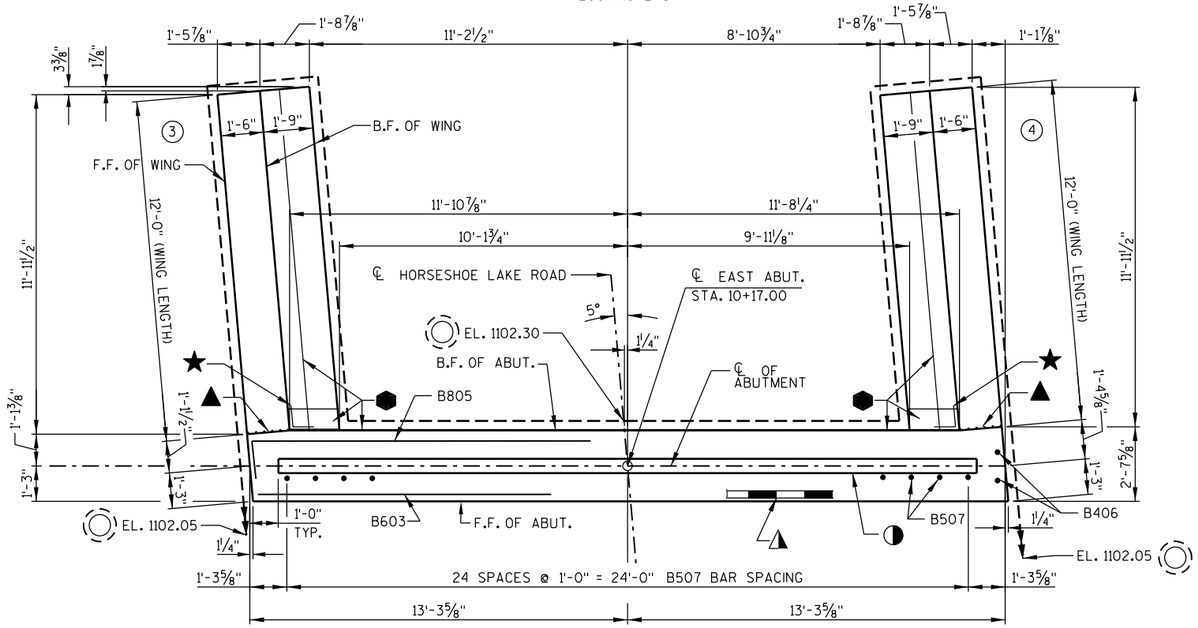
B507 BARS @ 1'-0" CENTERS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.



ELEVATION
(LOOKING EAST)

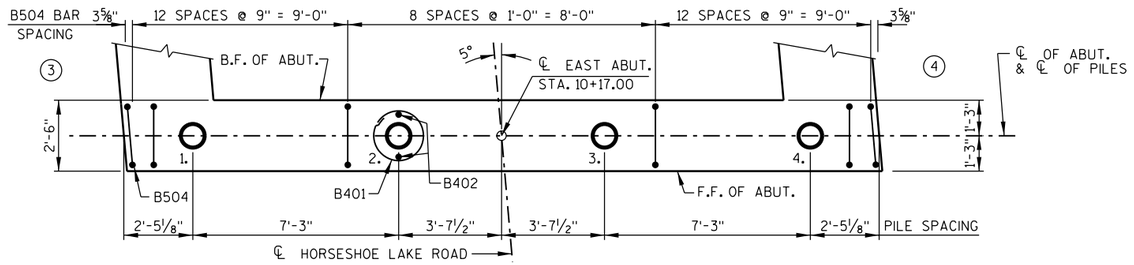
FRONT FACE BAR STEEL REINF.

BACK FACE BAR STEEL REINF.



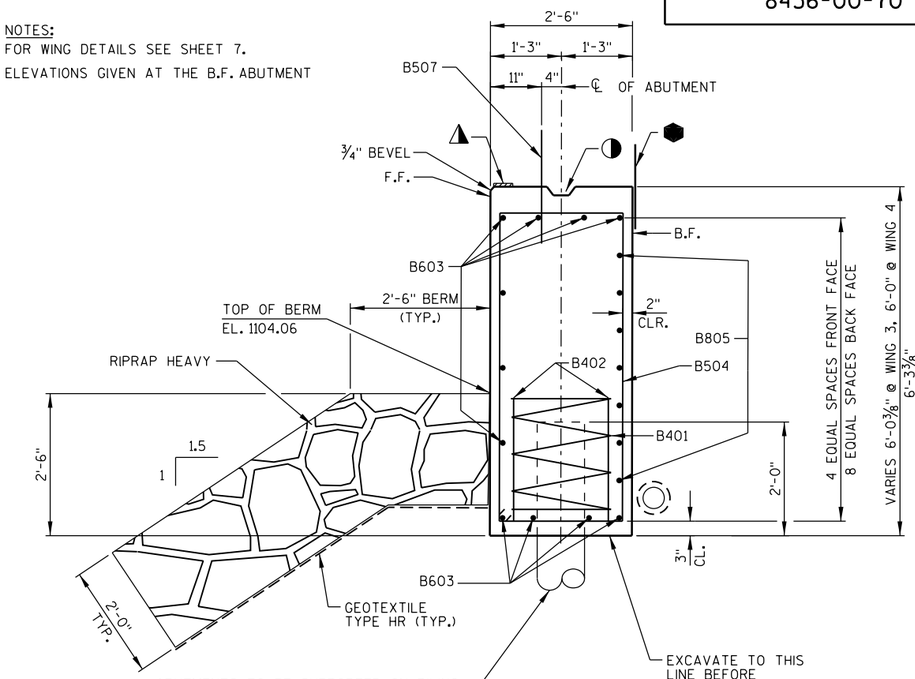
PLAN

N



PILE PLAN

NOTES:
FOR WING DETAILS SEE SHEET 7.
◈ ELEVATIONS GIVEN AT THE B.F. ABUTMENT



ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10¾ X 0.365-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 60'-0". FOR PILE SPLICE DETAILS SEE SHEET 5.

TYPICAL SECTION THRU ABUTMENT

LEGEND

- – OPTIONAL KEYED CONSTRUCTION JOINT ON WING FORMED BY BEVELED 2x6. IF JOINT IS USED PLACE ⬢ ON B.F. OF WING.
- – ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQ'D. ONLY WHERE CONST. JOINT IS USED.
- – KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- – ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- – 4"x ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ – VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM BRIDGE SEAT TO TOP OF WINGS.
- ⬢ – HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS. PLACE BOTTOM HALF HORIZONTAL AT HAUNCHED AREA OF WINGS AT CONSTRUCTION JOINT.
- ◎ – PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE TYPE HR AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT PROTECTION AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS SEE SHEET 7.
- ◯ – INDICATES WING NUMBER

F.F. - FRONT FACE

B.F. - BACK FACE

CL. - CLEAR

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EAST ABUTMENT

SHEET 6 OF 10
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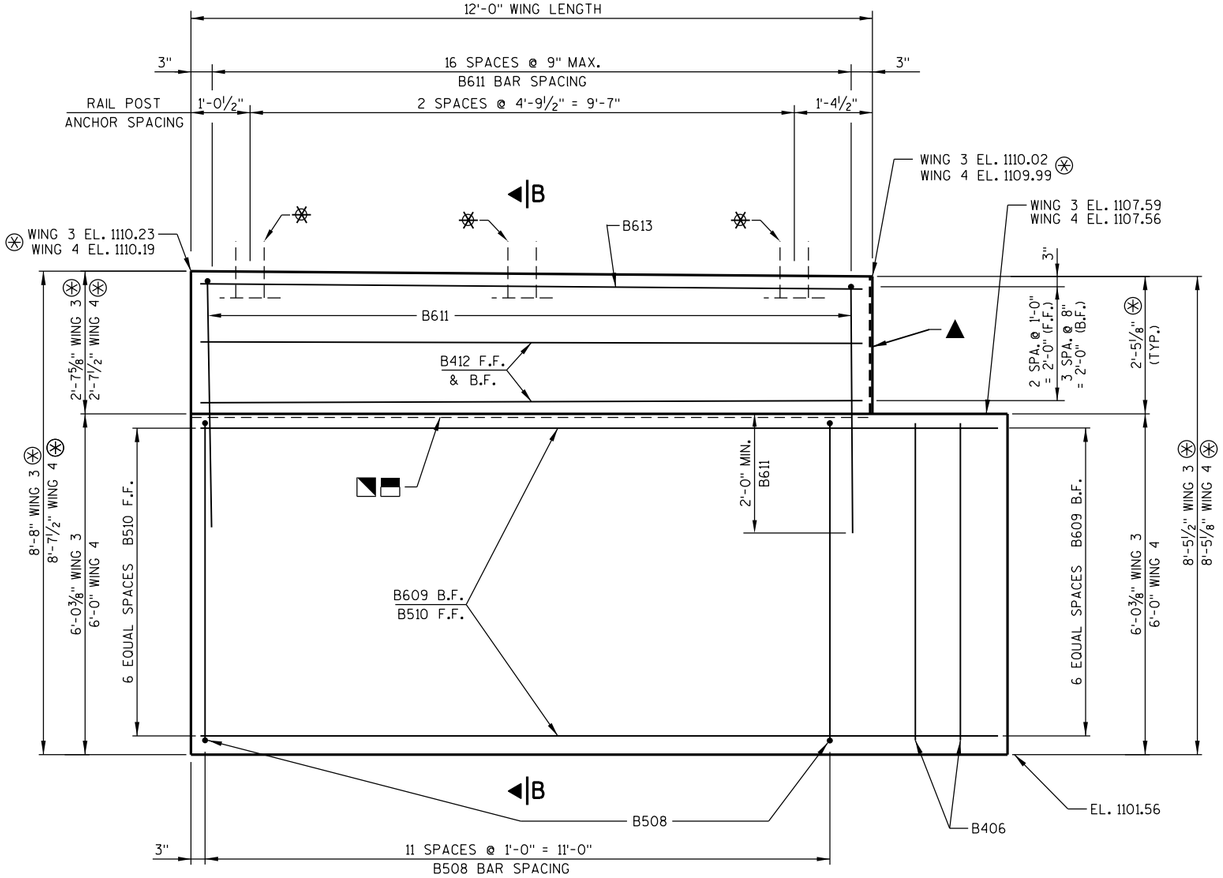
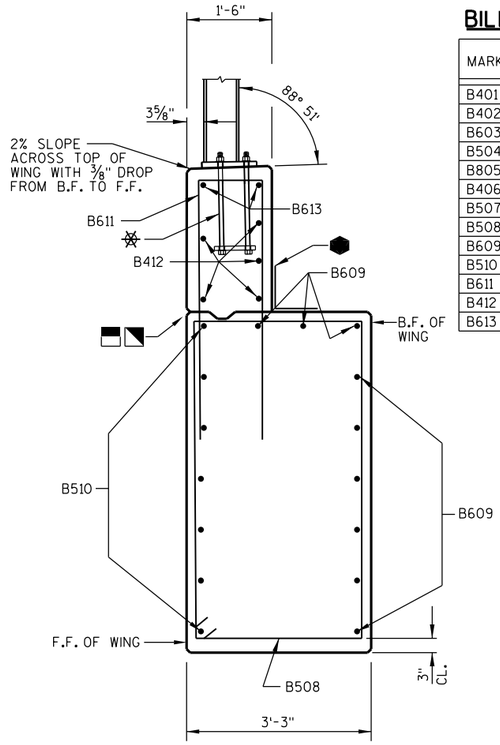
- FOR RAIL POST ANCHOR DETAILS SEE SHEET 10.

- ELEVATIONS AND DIMENSIONS ARE GIVEN AT THE F.F. OF WING.



ELEVATION - WING



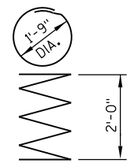
SECTION B-B THRU WING

(COATED) 1730 LBS. (UNCOATED) 1620 LBS.

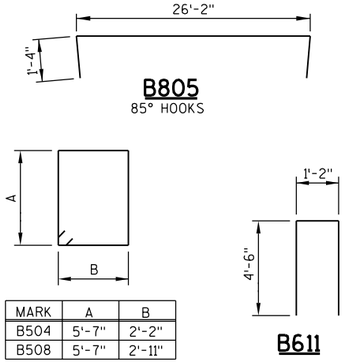
BILL OF BARS (EAST ABUT.)

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	LOCATION
B401	-	4	28'-0"	X	ABUTMENT BODY - 1 SPIRAL WRAP @ EACH PILING
B402	-	8	2'-3"		ABUTMENT BODY - 2 @ EACH PILING - VERT.
B603	-	11	26'-2"		ABUTMENT BODY - F.F., TOP & BOTTOM - HORIZ.
B504	-	33	16'-2"	X	ABUTMENT BODY - STIRRUP - VERT.
B805	-	7	28'-4"	X	ABUTMENT BODY - B.F. - HORIZ.
B406	-	4	5'-7"		ABUTMENT BODY - ENDS - VERT.
B507	25	-	2'-0"		ABUTMENT BODY - TOP - DOWELS - VERT.
B508	24	-	17'-8"	X	WINGS 3 & 4 - BASE - STIRRUP - VERT.
B609	18	-	14'-1"		WINGS 3 & 4 - BASE - B.F. & CENTER - HORIZ.
B510	14	-	14'-0"		WINGS 3 & 4 - BASE - F.F. - HORIZ.
B611	34	-	9'-10"	X	WINGS 3 & 4 - TOP - STIRRUP - VERT.
B412	10	-	11'-7"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.
B613	4	-	11'-7"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



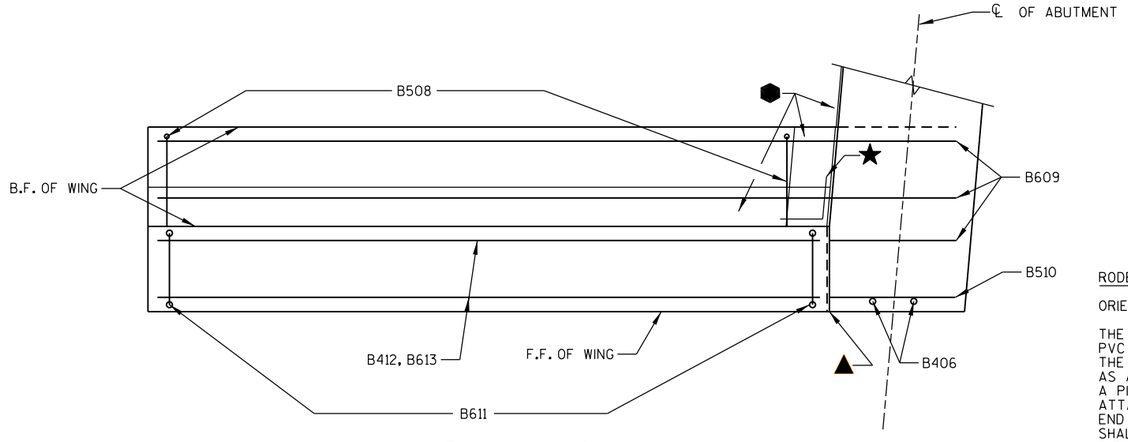
B401



B805
85° HOOKS

MARK	A	B
B504	5'-7"	2'-2"
B508	5'-7"	2'-11"

B611



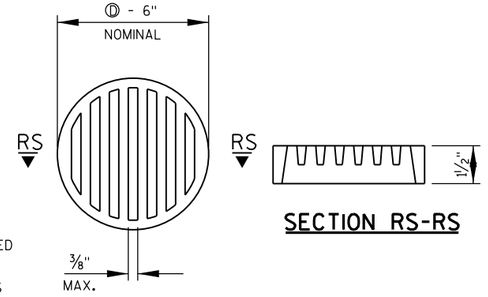
PLAN - WING

WING 3 SHOWN
WING 4 SIMILAR WITH REVERSE SKEW

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

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 ATTACHEMENT 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. THE RODENT SHIELD, PIPE COUPLING AND SCREWS, SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



RODENT SHIELD

SECTION RS-RS

Ⓓ - DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

SEE SHEET 6 LEGEND FOR DESCRIPTION OF ⬢ ⬓ ◥ ★ ▲

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EAST ABUTMENT DETAILS

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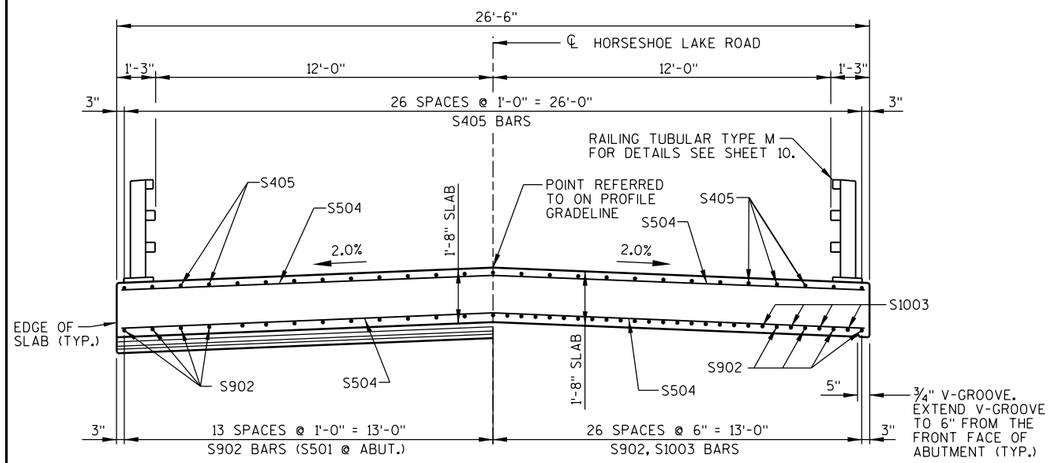


AT ABUTMENTS IN SPAN

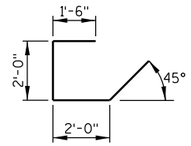
CROSS SECTION THRU BRIDGE

(LOOKING EAST)

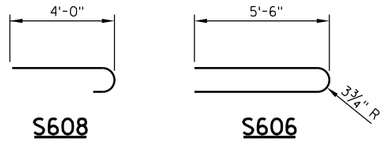
BILL OF BARS (COATED) 10,970 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	54	7'-9"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S902	27	36'-2"		SLAB BOTTOM - LONGIT.
S1003	26	28'-2"		SLAB BOTTOM - LONGIT.
S504	90	26'-2"		SLAB TOP & BOTTOM - TRANS.
S405	27	36'-2"		SLAB TOP - LONGIT.
S606	28	11'-4"	X	SLAB TOP @ RAIL POST, 2 PER POST
S607	40	6'-0"		SLAB TOP @ RAIL POST, 4 PER POST
S608	16	4'-8"	X	SLAB TOP @ RAIL END POST AS NOTED

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT.



S501

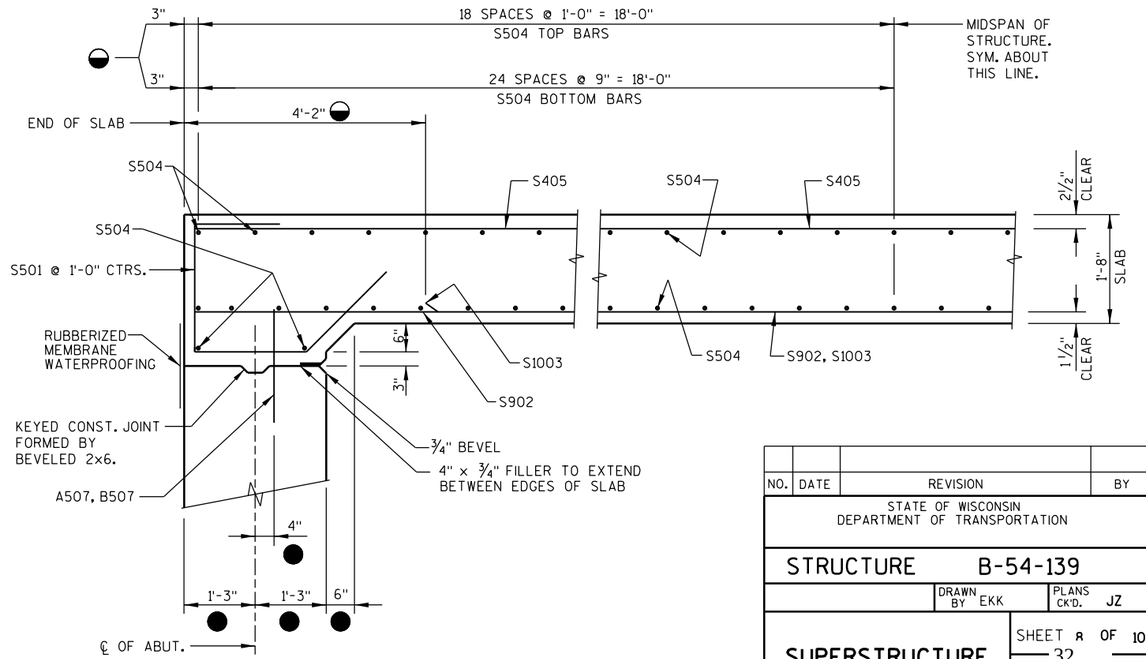


S608 S606

● - DIMENSIONS ARE GIVEN NORMAL TO THE ℄ OF ABUTMENTS.

◒ - DIMENSIONS ARE GIVEN PARALLEL TO THE ℄ OF HORSESHOE LAKE ROAD.

PLAN



PART LONGITUDINAL SECTION

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STRUCTURE B-54-139

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SUPERSTRUCTURE

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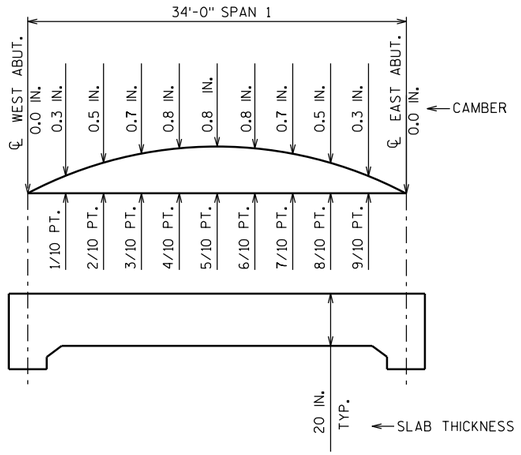

CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

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

	TOP OF SLAB ELEVATION AT FINAL GRADE
MINUS ---	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

SURVEY TOP OF SLAB ELEVATIONS

	WEST ABUTMENT	5/10 PT.	EAST ABUTMENT
SOUTH EDGE OF SLAB			
℄ HORSESHOE LAKE RD			
NORTH EDGE OF SLAB			

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

TOP OF SLAB ELEVATIONS

	C/L BRG. WEST ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	C/L BRG. EAST ABUT.
SOUTH EDGE OF SLAB	1109.81	1109.81	1109.81	1109.81	1109.82	1109.84	1109.86	1109.88	1109.91	1109.94	1109.98
HORSESHOE LAKE RD C/L	1110.07	1110.07	1110.07	1110.08	1110.09	1110.11	1110.13	1110.15	1110.18	1110.22	1110.25
NORTH EDGE OF SLAB	1109.81	1109.81	1109.81	1109.82	1109.83	1109.85	1109.87	1109.90	1109.93	1109.96	1110.00

NOTES

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

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

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

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SUPERSTRUCTURE DETAILS

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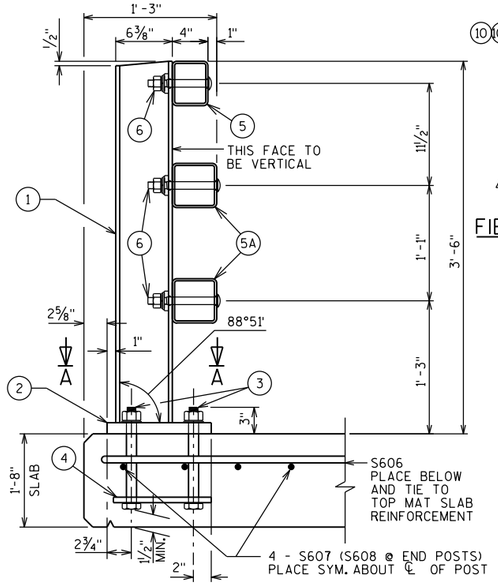
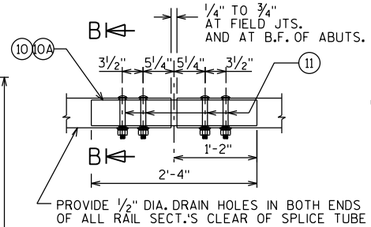
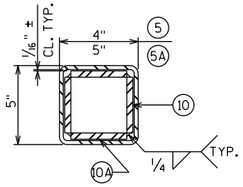


SECTION THRU RAILING ON SLAB

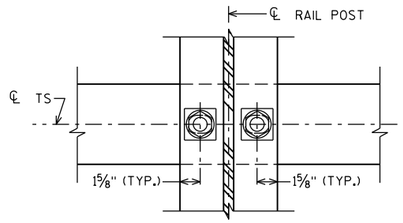
SECTION THRU RAILING ON ABUTMENT WINGS SIMILAR, SEE ABUTMENT DETAIL SHEETS.



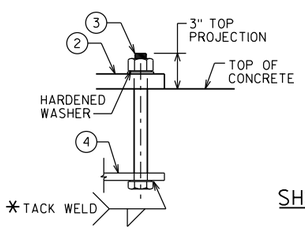
FIELD ERECTION JOINT DETAIL



SECTION B-B

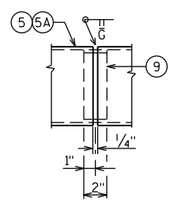


SECTION THRU POST WEB



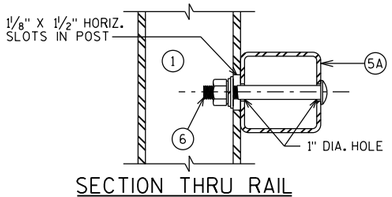
ANCHOR BOLTS

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



SHOP RAIL SPLICE DETAIL

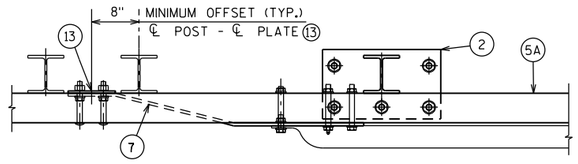
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



SECTION THRU RAIL

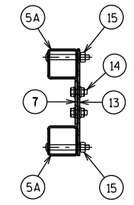
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

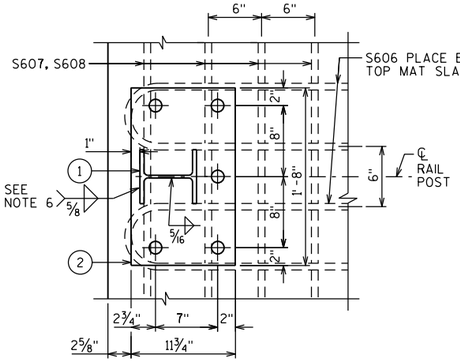


TOP VIEW AT END POST

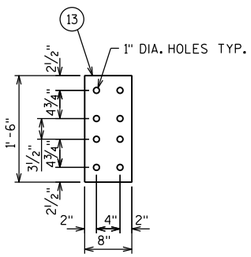
THRIE BEAM RAIL ATTACHMENT



SECTION C-C

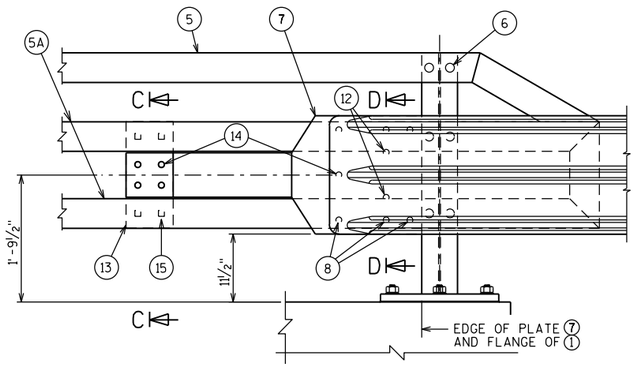


SECTION A-A



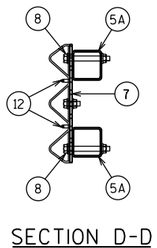
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT



DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT



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'-3" LONG ON CONCRETE SLAB SUPERSTRUCTURE. USE 1'-9" LONG IN ABUTMENT WINGS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY).

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. 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).

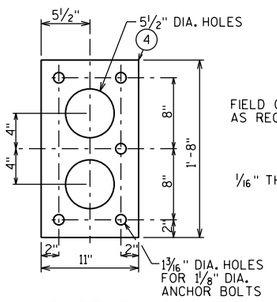
⑬ ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

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.

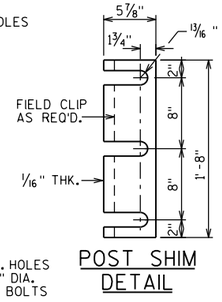
GENERAL NOTES

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.
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.
10. PAINTING IS NOT REQUIRED.
11. THIS RAILING MEETS AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR TEST LEVEL 2 (TL-2).

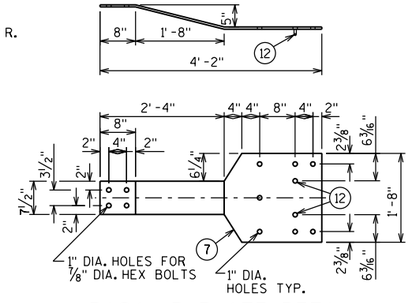


ANCHOR PLATE

AT RAIL TO SLAB CONNECTION

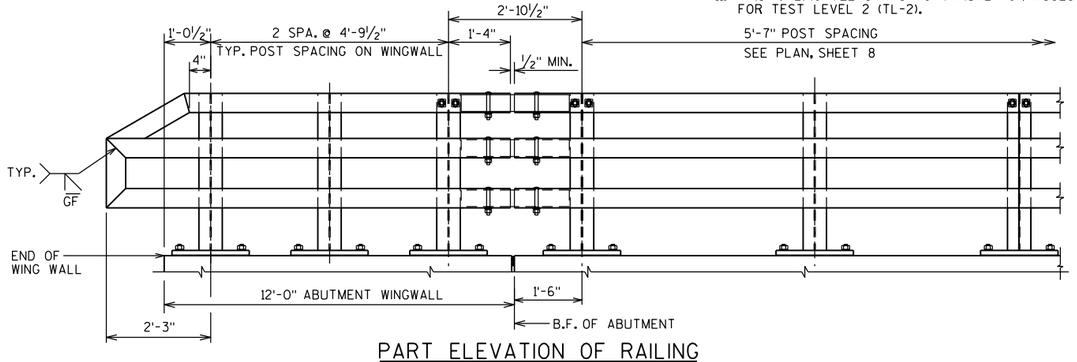


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-54-139

DRAWN BY EKK | PLANS CK'D. JZ

RAILING TUBULAR TYPE M

SHEET 10 OF 10
34

STATE PROJECT NUMBER
8436-00-70

8

8

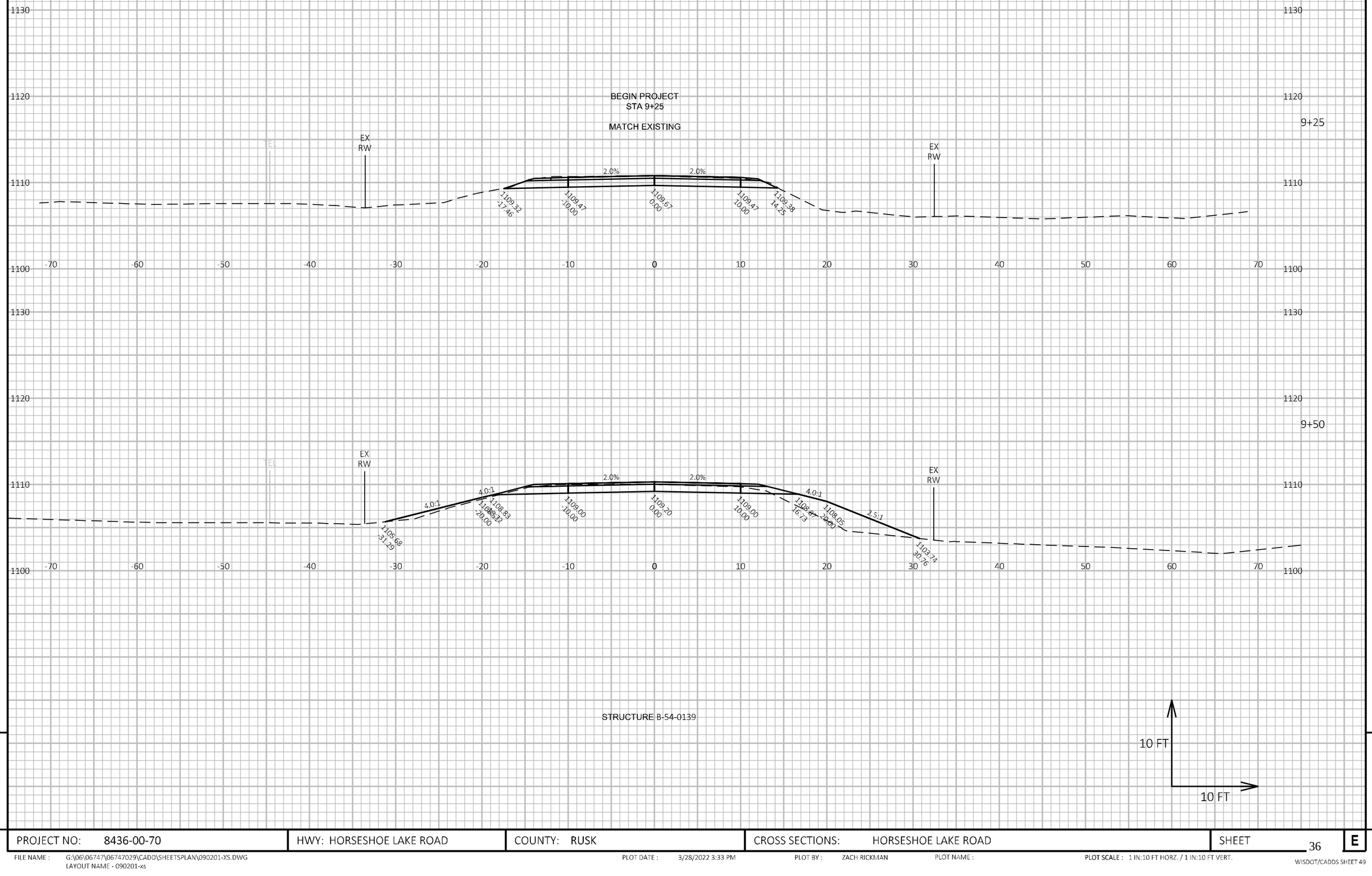
FILE= 07052049_09.DGN

6747029_10.dgn 5/31/2022 1:19:47 PM jsweno

PROJECT I.D. 8436-00-70 EARTHWORK SUMMARY

STA	EXCAVATION COMMON CY	EXCAVATION ROCK CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY	BORROW CY
9+25.00						
	26	0	13	17	9	-9
9+50.00						
	29	0	33	43	-14	14
9+81.75						
STRUCTURE B-54-139						
10+18.25						
	24	0	10	13	11	-11
10+50.00						
	22	0	4	5	17	-17
10+75.00						
SUBTOTALS						
S. APPROACH	55	0	46	60	-5	5
N. APPROACH	46	0	14	18	28	-28
UNUSABLE PAVEMENT (3)						28
TOTALS	**101**	**0**	**60**	**78**	**23**	**5**

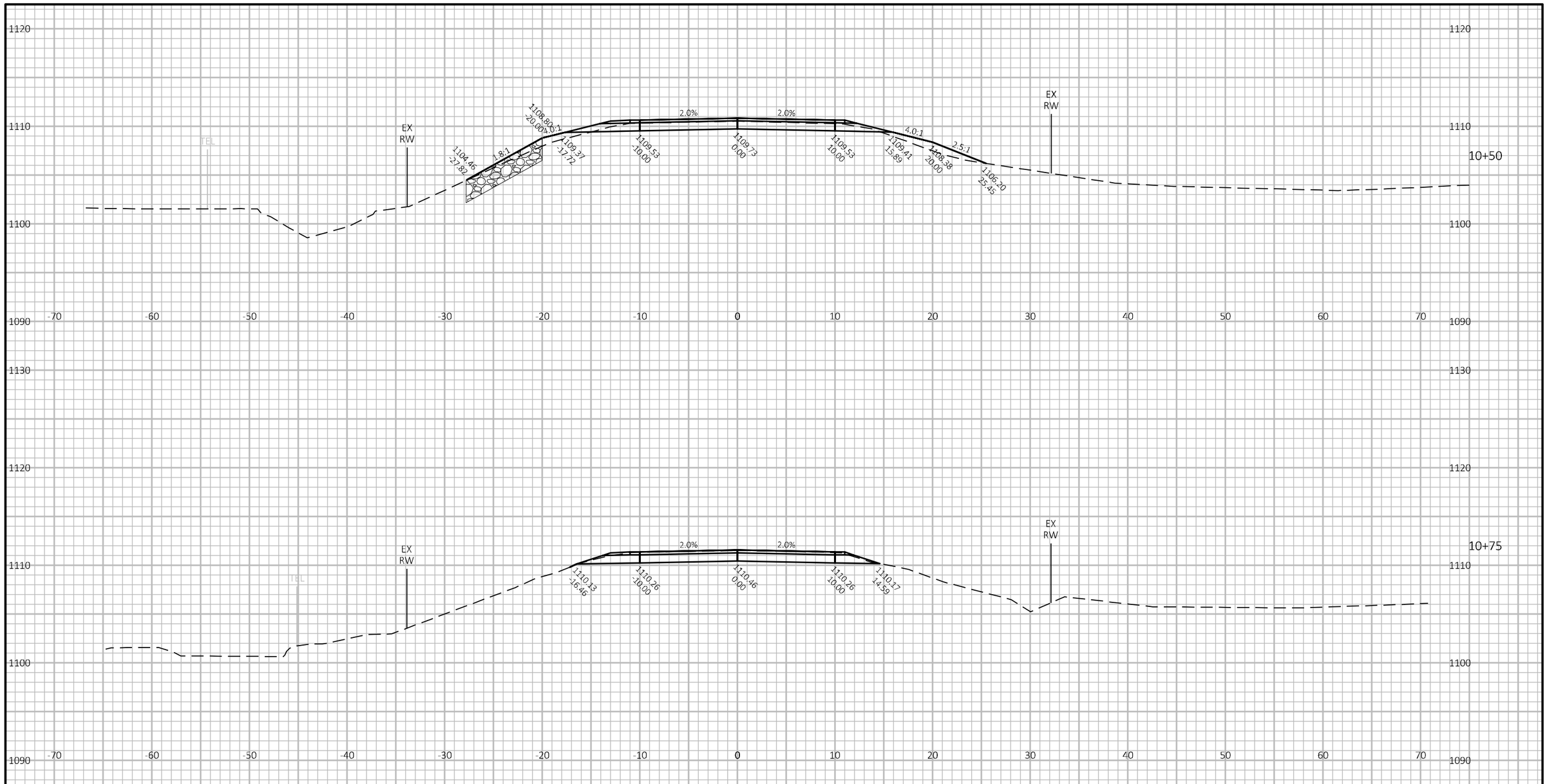
(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - EXISTING PAVEMENT BASED ON AVERAGE THICKNESS OF 3.5"



PROJECT NO: 8436-00-70	HWY: HORSESHOE LAKE ROAD	COUNTY: RUSK	CROSS SECTIONS: HORSESHOE LAKE ROAD	SHEET 36	E

FILE NAME : G:\06\06747\06747029\CADD\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-xs

PLOT DATE : 3/28/2022 3:33 PM PLOT BY : ZACH RICKMAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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PROJECT NO: 8436-00-70	HWY: HORSESHOE LAKE ROAD	COUNTY: RUSK	CROSS SECTIONS: HORSESHOE LAKE ROAD	SHEET 37	E

FILE NAME : G:\06\06747\06747029\CADD\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090202-xs

PLOT DATE : 5/24/2022 9:07 AM PLOT BY : COURTNEY ROOYAKKERS PLOT NAME :

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

Wisconsin Department of Transportation

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