GRE

NOVEMBER 2019

PROJECT ID: 9108-02-71

WITH: N/A

COUNTY: OCONTO

ORDER OF SHEETS

TOTAL SHEETS = 52

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T UNDERHILL, CTH H

OCONTO RIVER BRIDGE B-42-0132

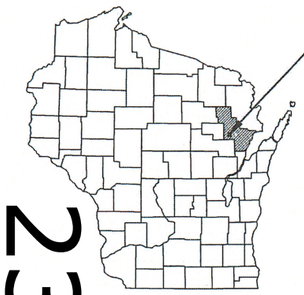
CTH H

OCONTO COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9108-02-71		

STATE PROJECT NUMBER
9108-02-71

PROJECT LOCATION



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N

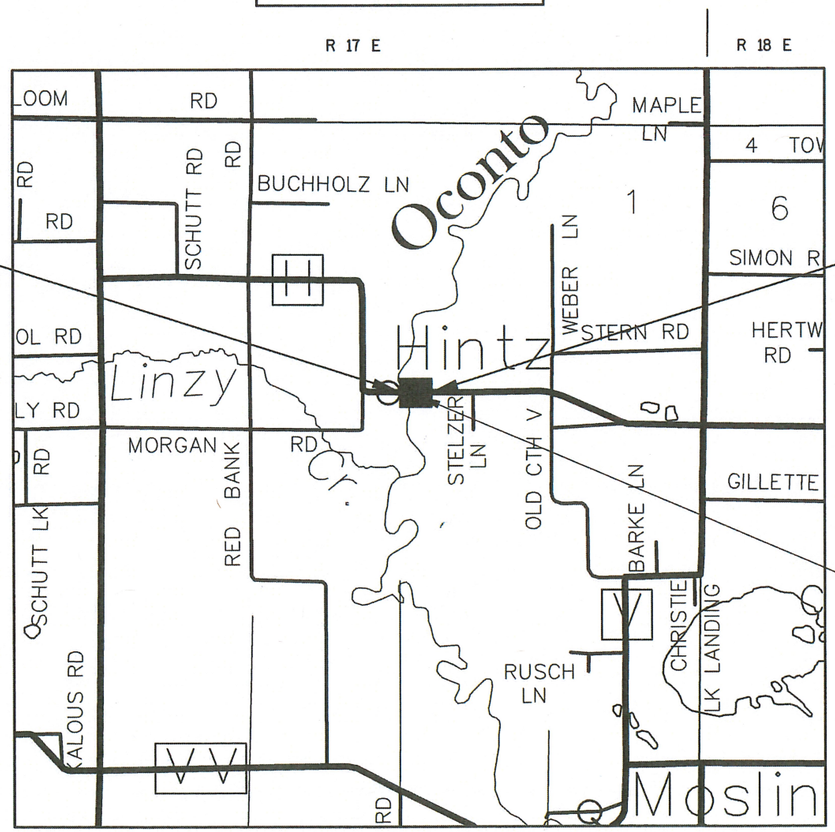
DESIGN DESIGNATION

A.A.D.T.	2020	=	360
A.A.D.T.	2040	=	390
D.H.V.		=	59
D.D.		=	60/40
T.		=	4.4%
DESIGN SPEED		=	30 MPH
ESALS		=	37,000

BEGIN PROJECT
STA. 8+25
Y=189499.190
X=470259.986

END PROJECT
STA. 11+50

STRUCTURE B-42-132



LAYOUT
SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.062

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, OCONTO COUNTY, NAD83, (2011) IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

CONVENTIONAL SYMBOLS

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

ACCEPTED FOR
OCONTO COUNTY

4-11-2019 Patrick Scanlan
DATE COUNTY HIGHWAY COMMISSIONER

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES

WISCONSIN
PHILLIP J. VERVILLE III
E36336
GREEN BAY, WI
PROFESSIONAL ENGINEER
4/10/19
(Date)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AYRES ASSOCIATES
Designer	AYRES ASSOCIATES
Regional Examiner	BRIAN EDWARDS
Regional Supervisor	

APPROVED FOR THE DEPARTMENT
DATE: 4/19/19 B.A.S.

E

FILE NAME : V:\TRANS-GB\450439 OCONTO CTH H\C3D\SHEETSPLAN\010101_TI.DWG
LAYOUT NAME - 010101 TI

PLOT DATE : 4/10/2019 1:34 PM PLOT BY : VERVILLE, PHILLIP PLOT NAME :

WISDOT/CADDS SHEET 10

GENERAL NOTES

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

FILL EXPANSION FACTOR IS 30%.

PROPERTY LINES AS SHOWN ARE APPROXIMATE.

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

BEARING SHOWN ON THIS PLAN ARE TRUE BEARINGS TO THE NEAREST SECOND.

ALL TIES ON THIS PLAN ARE HORIZONTAL UNLESS DESCRIBED OTHERWISE.

PLACE EROSION CONTROL MEASURES AS SHOWN ON THE EROSION CONTROL PLAN. THE EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

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

ELEVATIONS SHOWN ON THE ROADWAY CROSS SECTIONS ARE SUBGRADE ELEVATIONS AT THE CENTERLINE OF THE ROADWAY.

ALL ELEVATIONS ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 88 (2012).

WISDOT WILL FURNISH A BENCHMARK MONUMENT TO BE SET BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER IN THE FIELD

SAW CUT LOCATIONS SHOWN ON THE PLAN ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD. THE LINE OF SUCH SAW CUTS WILL BE NEATLY DELINEATED THROUGH THE ASPHALT WITHOUT ANY DAMAGE TO THE REMAINING PORTION OF THE EXISTING PAVEMENT.

UTILITIES

*OCONTO ELECTRIC COOPERATIVE — TELEPHONE 920-846-2816
7179 REA ROAD
OCONTO FALLS, WI 54154
ATTENTION: JACK PARDY
E-MAIL: jpardy@ocontoelectric.com

*CENTURYLINK — TELEPHONE 920-837-2344
212 CHURCH AVENUE
CASCO, WISCONSIN 54205
ATTENTION: MATT GUNDERSON
E-MAIL: matt.gunderson@centurylink.com

*-MEMBER OF DIGGERS HOTLINE

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

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 STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

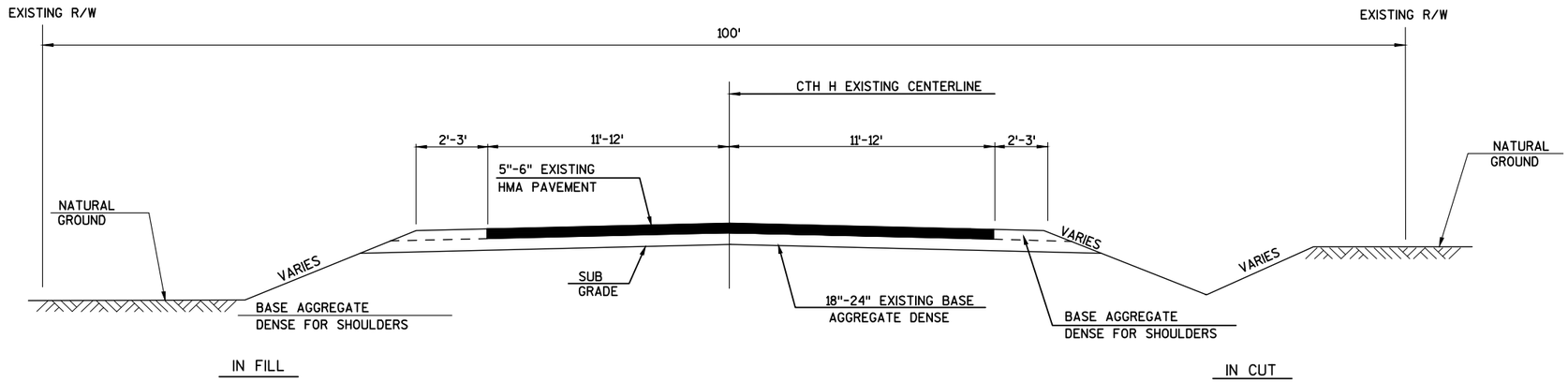
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.12 ACRES
SOIL GROUP C

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	NC	NORMAL CROWN
AC	ASPHALT CEMENT	PT	POINT OF TANGENCY
AGG	AGGREGATE	PC	POINT OF CURVATURE
ASPH	ASPHALT	PI	POINT OF INTERSECTION
BM	BENCH MARK	PE	PRIVATE ENTRANCE
C/L	CENTERLINE	R	RADIUS
CONC	CONCRETE	REM	REMOVE
CMP	CORRUGATED METAL PIPE	R/L OR RL	REFERENCE LINE
CR.	CREEK	RCCP	REINFORCED CONCRETE CULVERT PIPE
D	DEGREE OF CURVE	RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
DHV	DESIGN HOUR VOLUME	R.O.	RUNOUT
ESALS	EQUIVALENT SINGLE AXIS LOADS	R/W	RIGHT-OF-WAY
EXIST	EXISTING	STA	STATION
FE	FIELD ENTRANCE	SE	SUPER ELEVATION
HYD	HYDRANT	SS	STORM SEWER
IP	IRON PIPE OR PIN	T	TANGENT
L	LENGTH OF CURVE	TEL	TELEPHONE
LC	LONG CHORD OF CURVE	TLE	TEMPORARY LIMITED EASEMENT
LR	LENGTH OF RUNOFF	T	TRUCKS
MH	MANHOLE	VC	VERTICAL CURVE
		W	WELL

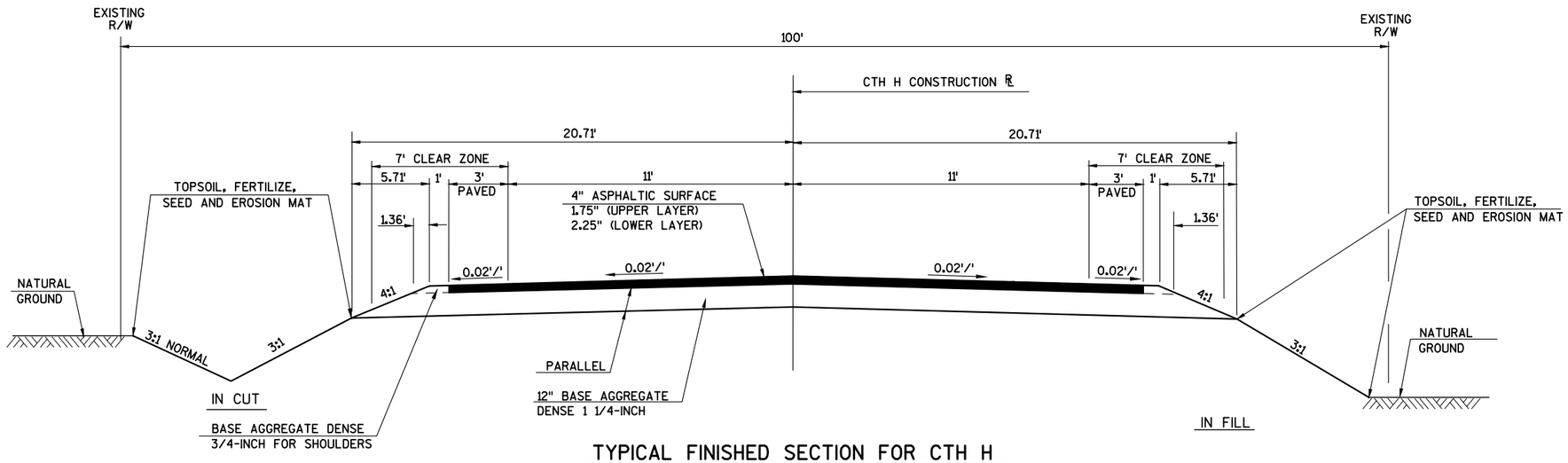
DEPARTMENT OF NATURAL RESOURCES

WDNR — TELEPHONE 920-662-5119
P.O. BOX 10448
GREEN BAY, WISCONSIN 54307
ATTENTION: JIM DOPERALSKI
E-MAIL: JAMES.DOPERALSKI@WISCONSIN.GOV



EXISTING TYPICAL SECTION FOR CTH H

STA. 8+25 - STA. 11+50

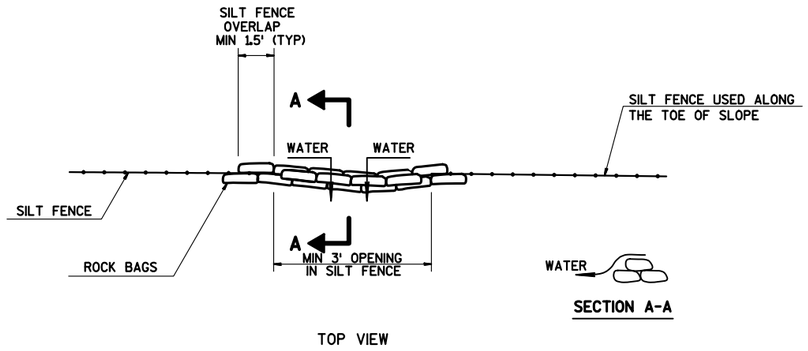


TYPICAL FINISHED SECTION FOR CTH H

STA. 8+25-STA. 11+50

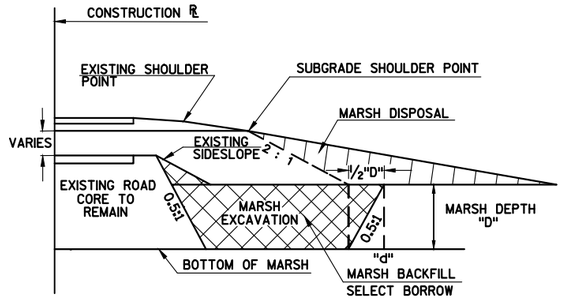
PROJECT NO: 9108-02-71	HWY: CTH H	COUNTY: OCONTO	TYPICAL SECTIONS	SHEET 3	E

2



ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

PAID AS ROCK BAGS
(SEE MISCELLANEOUS QUANTITIES FOR LOCATIONS)



NOTE: BACKFILL QUANTITIES COMPUTED FROM POINT "d" TO COMPENSATE FOR PROBABLE DISPLACED MARSH AREA.

TYPICAL SECTION-MARSH EXCAVATION

LEGEND

EROSION MAT URBAN CLASS I, TYPE B

SILT FENCE

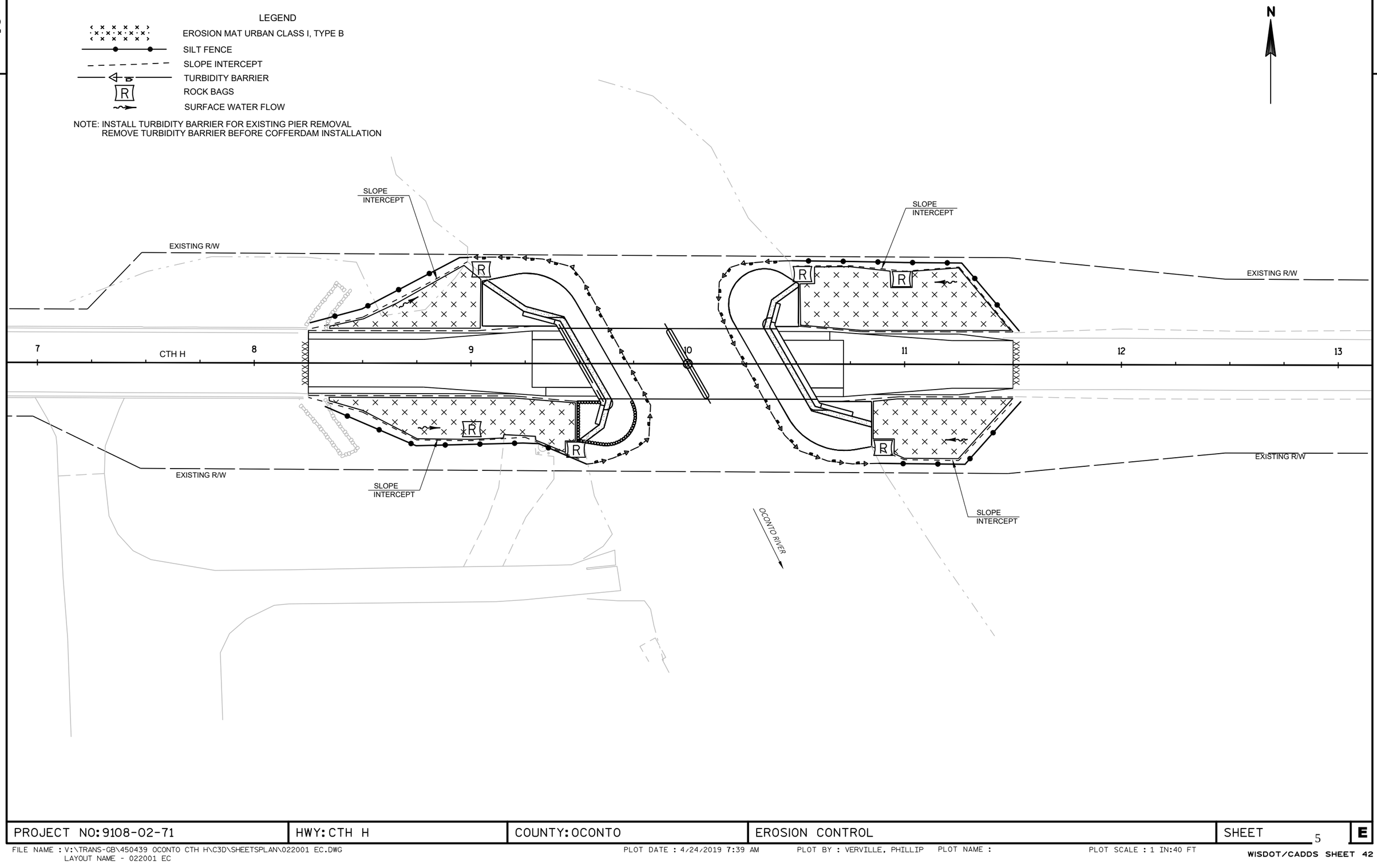
SLOPE INTERCEPT

TURBIDITY BARRIER

ROCK BAGS

SURFACE WATER FLOW

NOTE: INSTALL TURBIDITY BARRIER FOR EXISTING PIER REMOVAL
REMOVE TURBIDITY BARRIER BEFORE COFFERDAM INSTALLATION



PROJECT NO: 9108-02-71	HWY: CTH H	COUNTY: OCONTO	EROSION CONTROL	SHEET 5	E

FILE NAME : V:\TRANS-GB\450439 OCONTO CTH H\C3D\SHEETSPLAN\022001 EC.DWG
LAYOUT NAME - 022001 EC

PLOT DATE : 4/24/2019 7:39 AM PLOT BY : VERVILLE, PHILLIP PLOT NAME : PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

NOTES
A WATERWAY MARKER APPLICATION AND PERMIT HAS BEEN OBTAINED. COORDINATE WITH WDNR FOR ANY VARIANCE FROM THE PERMIT.

MAINTAIN NAVIGATIONAL CHANNEL EXCEPT DURING ALLOWABLE CLOSURE FOR DEMOLITION.

LEGEND
WORK AREA
BUOY

N

REPLACE "HAZARD WARNING" BUOY WITH "INFORMATIONAL" BUOY DURING CLEARANCE REDUCTION

STRUCTURE B-42-0132

NAVIGATION CHANNEL

WOODS

SLOPE INTERCEPT

EXISTING R/W

EXISTING STRUCTURE (B-42-0329) TO BE REMOVED

MAINTAIN 10' SPACING

CABC

CTH H CONSTRUCTION ℄

7 8 9 10 11 12 13

CTH H

POST

OH

POSTS

PROPOSED PIER

25' SPACING TYP.

OCONTO RIVER

FLASHING LIGHT

WHITE BUOY WITH ORANGE MARKING

REDUCED CLEARANCE

36" MIN. ABOVE WATER

11"

14"

2" BAND

TYPICAL INFORMATIONAL BUOY DETAIL

ALL BUOYS SHALL BE 7" DIAMETER WITH RED FLASHING LIGHTS AT 30 FLASHES/MIN. IF NECESSARY

FLASHING LIGHT

WHITE BUOY WITH ORANGE MARKING

BRIDGE WORK

36" MIN. ABOVE WATER

11"

14"

2" BAND

TYPICAL HAZARD WARNING BUOY DETAIL

ALL BUOYS SHALL BE 7" DIAMETER WITH RED FLASHING LIGHTS AT 30 FLASHES/MIN. IF NECESSARY

PROJECT NO: 9108-02-71	HWY: CTH H	COUNTY: OCONTO	BOATING TRAFFIC CONTROL	SHEET 6	E

9108-02-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	4.000	4.000
0004	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0006	205.0100	Excavation Common	CY	254.000	254.000
0008	205.0400	Excavation Marsh	CY	603.000	603.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-42-132	LS	1.000	1.000
0012	206.5000	Cofferdams (structure) 01. B-42-132	LS	1.000	1.000
0014	208.0100	Borrow	CY	854.000	854.000
0016	208.1100	Select Borrow	CY	905.000	905.000
0018	210.1500	Backfill Structure Type A	TON	740.000	740.000
0020	213.0100	Finishing Roadway (project) 01. 9108-02-71	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	40.000	40.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	700.000	700.000
0026	415.0080	Concrete Pavement 8-Inch	SY	40.000	40.000
0028	415.0410	Concrete Pavement Approach Slab	SY	110.000	110.000
0030	455.0605	Tack Coat	GAL	40.000	40.000
0032	465.0105	Asphaltic Surface	TON	140.000	140.000
0034	502.0100	Concrete Masonry Bridges	CY	395.000	395.000
0036	502.3200	Protective Surface Treatment	SY	420.000	420.000
0038	505.0400	Bar Steel Reinforcement HS Structures	LB	8,880.000	8,880.000
0040	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	51,410.000	51,410.000
0042	513.4061	Railing Tubular Type M	LF	204.000	204.000
0044	516.0500	Rubberized Membrane Waterproofing	SY	16.000	16.000
0046	550.2126	Piling CIP Concrete 12 3/4 X 0.375-Inch	LF	2,060.000	2,060.000
0048	606.0300	Riprap Heavy	CY	350.000	350.000
0050	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	180.000	180.000
0052	619.1000	Mobilization	EACH	1.000	1.000
0054	624.0100	Water	MGAL	7.000	7.000
0056	625.0100	Topsoil	SY	1,250.000	1,250.000
0058	628.1504	Silt Fence	LF	525.000	525.000
0060	628.1520	Silt Fence Maintenance	LF	1,050.000	1,050.000
0062	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0064	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0066	628.2008	Erosion Mat Urban Class I Type B	SY	1,250.000	1,250.000
0068	628.6005	Turbidity Barriers	SY	560.000	560.000
0070	628.7570	Rock Bags	EACH	75.000	75.000
0072	629.0210	Fertilizer Type B	CWT	1.000	1.000
0074	630.0120	Seeding Mixture No. 20	LB	35.000	35.000
0076	630.0200	Seeding Temporary	LB	35.000	35.000

9108-02-71

Line	Item	Item Description	Unit	Total	Qty
0078	634.0612	Posts Wood 4x6-Inch X 12-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	6.000	6.000
0084	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0086	642.5001	Field Office Type B	EACH	1.000	1.000
0088	643.0420	Traffic Control Barricades Type III	DAY	1,870.000	1,870.000
0090	643.0705	Traffic Control Warning Lights Type A	DAY	3,060.000	3,060.000
0092	643.0900	Traffic Control Signs	DAY	1,445.000	1,445.000
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	130.000	130.000
0100	645.0120	Geotextile Type HR	SY	640.000	640.000
0102	646.1020	Marking Line Epoxy 4-Inch	LF	1,300.000	1,300.000
0104	650.4500	Construction Staking Subgrade	LF	225.000	225.000
0106	650.5000	Construction Staking Base	LF	225.000	225.000
0108	650.6500	Construction Staking Structure Layout (structure) 01. B-42-132	LS	1.000	1.000
0110	650.9910	Construction Staking Supplemental Control (project) 01. 9108-02-71	LS	1.000	1.000
0112	650.9920	Construction Staking Slope Stakes	LF	225.000	225.000
0114	690.0150	Sawing Asphalt	LF	52.000	52.000
0116	715.0415	Incentive Strength Concrete Pavement	DOL	500.000	500.000
0118	715.0502	Incentive Strength Concrete Structures	DOL	2,370.000	2,370.000
0120	SPV.0060	Special 01. Underwater Substructure Inspection B-42-132	EACH	1.000	1.000

3

GRUBBING

STATION	TO	STATION	LOCATION	201.0205 GRUBBING STA
8+25	-	11+50	CTH H	4
TOTAL				4

BASE AGGREGATE DENSE AND WATER

STATION	TO	STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL
8+25	-	9+49.55	CTH H	20	390	4
10+50.45	-	11+50	CTH H	20	310	3
TOTALS				40	700	7

CONCRETE PAVEMENT

STATION	TO	STATION	LOCATION	415.0080 8-INCH SY	415.0410 APPROACH SLAB SY
9+28	-	9+49.55	CTH H	20	55
10+50.45	-	10+72	CTH H	20	55
TOTALS				40	110

3

EARTHWORK SUMMARY

Division	From/To Station	Location	Common Excavation (item #205.0100) Cut (2)	Unusable Pavement Material (4)	Available Material (5)	Excavation Marsh (6) (item #205.0400)	Expanded Marsh Backfill (10) (item #208.1100) Factor 1.50	Unexpanded Fill	Expanded Fill (13) Factor 1.30	Mass Ordinate +/- (14)	Borrow (item #208.0100)	Comment:
1	8+25 - 11+50	CTH H	254	100	154	603	905	775	1,008	-854	854	
Division 1 Total			254	100	154	603	905	775	1,008	-854	854	

2) Unsuable Pavement Material is included in Cut
4) Unusable Pavement Material = Existing Asphaltic Pavement
5) Available Material = Cut - Unusuable Pavement Material
6) Marsh Excavation - to be backfilled with Select Borrow Material.
10) Expanded Marsh Backfill - This is to be filled with Select Borrow material. Marsh Backfill Factor = 1.5. Item Number 208.1100.
13) Expanded Fill. Factor = 1.3 Expanded Fill = (Unexpanded Fill - Reduced EBS) * Fill Factor
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.

ASPHALTIC SURFACE & TACK COAT

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
8+25	-	9+28	CTH H	23	80
10+72	-	11+50	CTH H	17	60
TOTALS				40	140

TOPSOIL, FERTILIZER, AND SEED

STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB
8+25	-	9+49.55	CTH H	500	0.4	15	15
10+50.45	-	11+50	CTH H	520	0.4	15	15
			UNDISTRIBUTED	230	0.2	5	5
TOTALS				1,250	1	35	35

3

SILT FENCE

STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 MAINTENANCE LF
8+25	-	9+00	CTH H, LT	90	180
8+25	-	9+53	CTH H, RT	145	290
10+45	-	11+50	CTH H, LT	115	230
10+88	-	11+50	CTH H, RT	75	150
			UNDISTRIBUTED	100	200
TOTALS				525	1,050

EROSION MAT

STATION	TO	STATION	LOCATION	URBAN CLASS I TYPE B 628.2008 SY
8+25	-	9+49.55	CTH H	500
10+50.45	-	11+50	CTH H	520
UNDISTRIBUTED				230
TOTAL				1,250

TURBIDITY BARRIERS

STATION	LOCATION	628.6005 SY	REMARKS
WEST ABUTMENT	CTH H	260	ABUTMENT CONSTRUCTION
PIER	CTH H	120	DURING PIER REMOVAL
EAST ABUTMENT	CTH H	180	ABUTMENT CONSTRUCTION
TOTAL		560	

3

ROCK BAGS

STATION	LOCATION	628.7570 EACH
9+00	CTH H, LT & RT	20
9+53	CTH H, RT	10
10+45	CTH H, RT	10
10+88	CTH H, LT	10
11+00	CTH H, RT	10
	UNDISTRIBUTED	15
TOTAL		75

REMOVING SIGNS & SUPPORTS

STATION	LOCATION	638.2602 SIGNS TYPE II EACH	638.3000 SMALL SIGN SUPPORTS EACH
9+20	CTH H, RT	1	1
9+52	CTH H, LT & RT	2	2
10+48	CTH H, LT & RT	2	2
11+12	CTH H, LT	1	1
TOTALS		6	6

SIGNS REFLECTIVE TYPE II AND WOOD POSTS

STATION	LOCATION	634.0612 WOOD POSTS 4"x6"x12' EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	SIGN CODE
NE QUADRANT	CTH H	1	3	W5-52R
NW QUADRANT	CTH H	1	3	W5-52L
SE QUADRANT	CTH H	1	3	W5-52L
SW QUADRANT	CTH H	1	3	W5-52R
TOTALS		4	12	

TRAFFIC CONTROL SUMMARY

LOCATION	APPROXIMATE SERVICE DAYS	643.0420 BARRICADES TYPE III NO. IN SERVICE	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A NO. IN SERVICE	643.0705 WARNING LIGHTS TYPE A DAYS	643.0900 SIGNS NO. IN SERVICE	643.0900 SIGNS DAYS	643.1050 SIGNS PCMS NO. IN SERVICE	643.1050 SIGNS PCMS DAYS	DESCRIPTION
CTH H/CTH R	85	2	170	4	340	2	170	-	-	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL A
CTH H/MORGAN ROAD	85	2	170	4	340	3	255	-	-	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
WEST WORK ZONE LIMITS	85	7	595	10	850	3	255	1	7	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
EAST WORK ZONE LIMITS	85	7	595	10	850	4	340	1	7	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
CTH H/WEBER LANE	85	2	170	4	340	3	255	-	-	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL C
CTH H/CTH V	85	2	170	4	340	2	170	-	-	SEE BARRICADES AND SIGNS FOR MAINLINE CLOSURES DETAIL A
TOTALS			1,870		3,060		1,445		14	

3

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6500 STRUCTURE LAYOUT LS	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF	CATEGORY
8+25	-	9+49.55	CTH H	125	125	-	1	125	0010
10+50.45	-	11+50	CTH H	100	100	-	-	100	0010
SUBTOTALS				225	225	0	1	225	0010
10+00			CTH H	-	-	1	-	-	0020
SUBTOTALS				0	0	1	0	0	0020
TOTALS				225	225	1	1	225	

MARKING LINE EPOXY

STATION	TO	STATION	LOCATION	646.1020 4-INCH (WHITE) LF	4-INCH (YELLOW) LF
8+25	-	11+50	CTH H	650	650
TOTAL				1,300	

SAWING ASPHALT

STATION	LOCATION	690.0150 LF
8+25	CTH H	28
11+00	CTH H	24
TOTAL		52

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
200	6+66	SPIKE IN PP-33' RT.	794.96
201	9+52	CHIS. SQ. SW WINGWALL-11.3' RT.	797.73
202	13+23	SPIKE IN PP-33.6' RT.	781.40

ROBERT M. AND MARTHA R. FISCHER

FRANK L. SCHUETTPELZ TRUST

LEGEND

LIMITS OF HMA PAVEMENT

XXXX XXXX SAW CUT

STUMP (TO BE REMOVED)

N

STRUCTURE B-42-132 REQ'D.

CONCRETE PAVEMENT APPROACH SLAB WITH 8-INCH CONCRETE PAVED SHOULDER

CONCRETE PAVEMENT APPROACH SLAB WITH 8-INCH CONCRETE PAVED SHOULDER

SLOPE INTERCEPT

SLOPE INTERCEPT

SLOPE INTERCEPT

SLOPE INTERCEPT

BP: 6+38.44
Y=189502.847
X=470073.461

EP: 13+75.00
Y=189488.192
X=470809.872

EXISTING R/W

EXISTING R/W

EXISTING R/W

CTH H

CP 100

CP 103

BM

BM

BM

BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)

BURIED TELEPHONE CABLE (APPROXIMATE LOCATION)

DRY HYDRANT DO NOT DISTURB

OCONTO RIVER

BUILDING

WELL

WOODS

ASPHALT

CABC

WOOD PILING

DRY HYD.

ASPHALT PARKING

TOP MIDDLE TELEPHONE PED.

1" IP

46.22'

106.78'

CTH H

PK NAIL

20.62'

SPK. IN PP

CP#100
STA. 6+61.91-13.30' RT.
Y=189489.086
X=470096.666

1" IP

31.92'

CTH H

PK NAIL

47.64'

110.28'

SPK. IN PP

1" IP

CP#103
STA. 13+38.12-11.67' LT.
Y=189492.818
X=470584.924

BEGIN PROJECT
STA. 8+25
Y=189499.190
X=470259.986

STATE OF WISCONSIN
DEPT. OF NATURAL RESOURCES

END PROJECT
STA. 11+50

MARTY AND MONIKA HATTON

VCL = 90.00
K = 95.84

VCL = 90.00
K = 70.85

STA 8+25.00
EL 788.42

VPC STA 8+25.00
VPC EL 788.42

VPI STA 8+70.00
VPI EL 787.83

VPT STA 9+15.00
VPT EL 787.67

VPC STA 10+30.00
VPC EL 787.26

VPI STA 10+75.00
VPI EL 787.10

VPT STA 11+20.00
VPT EL 786.37

STA 11+50.00
EL 785.88

FINISHED GRADE

EXISTING PROFILE

-0.36%

1.63%

HIGH WATER$_{100}$ EL. 782.8

HIGH WATER$_{2}$ EL. 779.2

WATER EL. 775.6 (1-20-17)

STA. 10+00
REMOVE STRUCTURE B-42-329
2 SPAN CONCRETE DECK GIRDER BRIDGE
28 FEET WIDE
93 FOOT OVERALL LENGTH

STA. 10+00
STRUCTURE B-42-132 REQUIRED
2 SPAN CONCRETE HAUNCHED SLAB
30' CLEAR ROADWAY
100.9 FOOT OVERALL LENGTH
SKEW 30° RHF

800 795 790 785 780 775 770 765

791.55 789.96 788.89 788.20 788.12 787.71 787.74 787.53 787.55 772.18 787.37 787.12 787.16 786.59 786.66 785.88 785.88 785.39 785.04 784.87 784.88

4+00 5+00 6+00 7+00 8+00 9+00 10+00 11+00 12+00 13+00 14+00 15+00 16+00 17+00

PROJECT NO: 9108-02-71	HWY: CTH H	COUNTY: OCONTO	PLAN AND PROFILE:	SHEET 12	E

FILE NAME : V:\TRANS-GB\450439 OCONTO CTH H\C3D\SHEETSPLAN\050101 PP.DWG
LAYOUT NAME - 050101 pp

PLOT DATE : 4/24/2019 7:40 AM PLOT BY : VERVILLE, PHILLIP PLOT NAME : PLOT SCALE : ##########

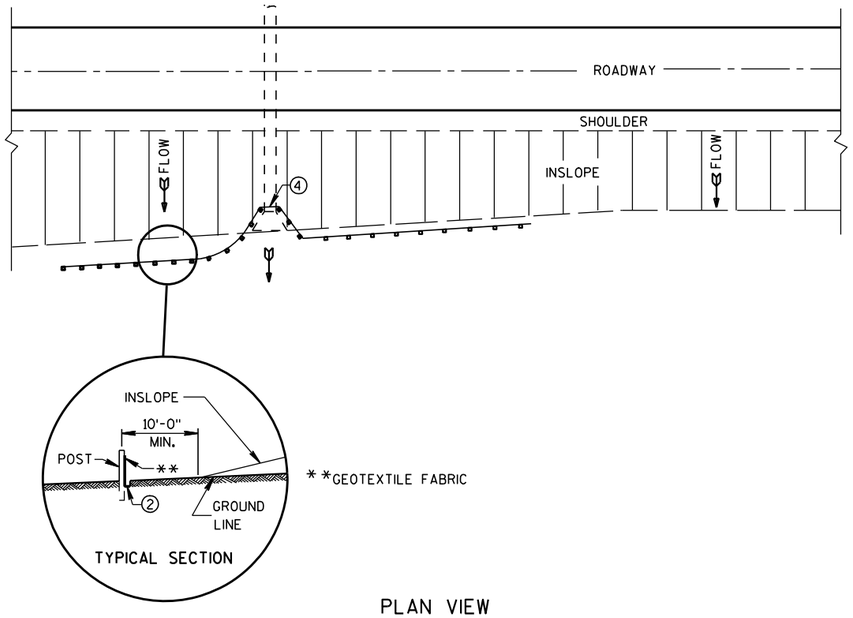
WISDOT/CADDS SHEET 44

Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

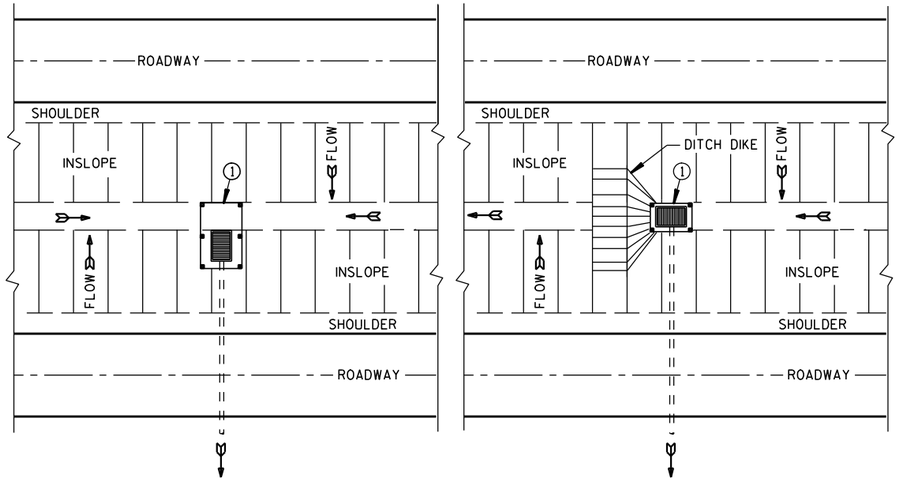
6

6



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

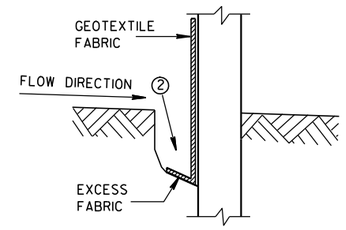
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

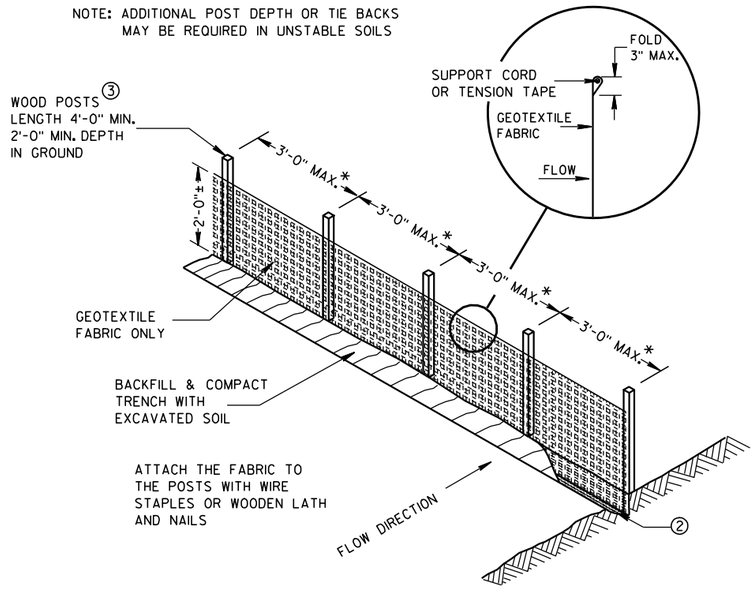
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

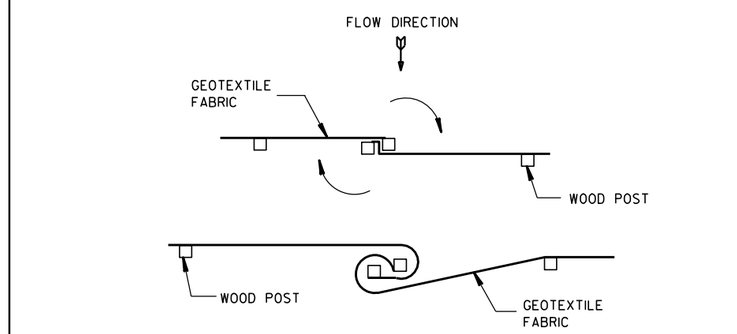
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



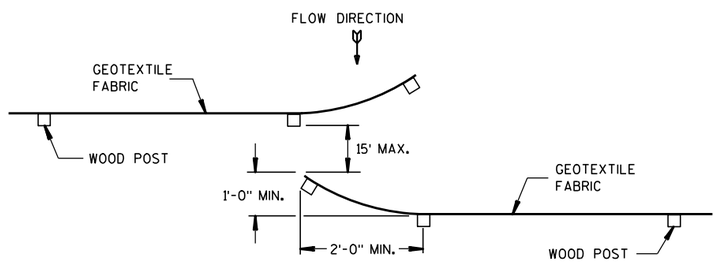
TRENCH DETAIL



SILT FENCE

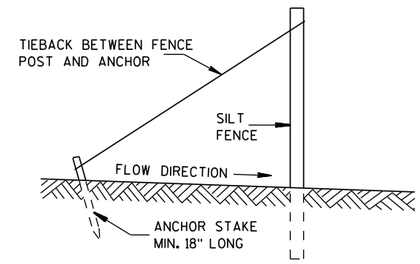


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

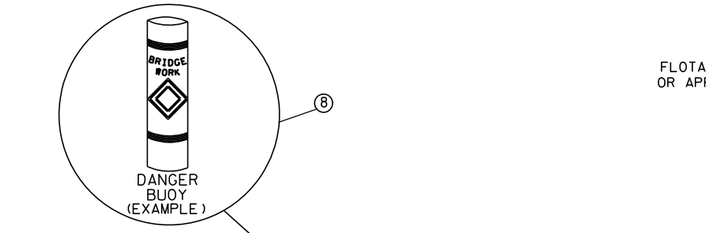
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

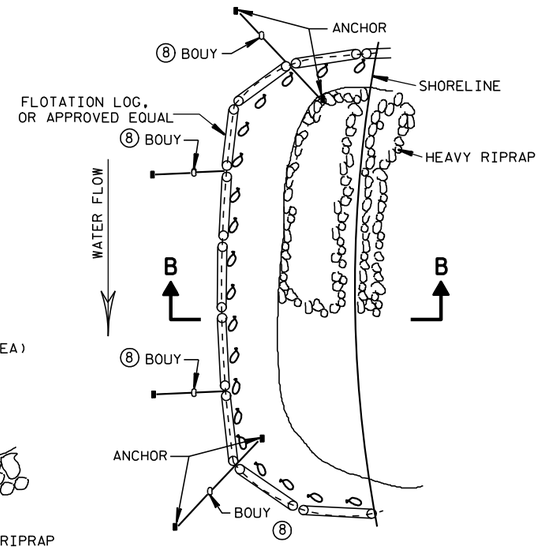
S.D.D. 8 E 9-6

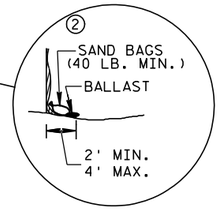
6

S.D.D. 8 E 9-6

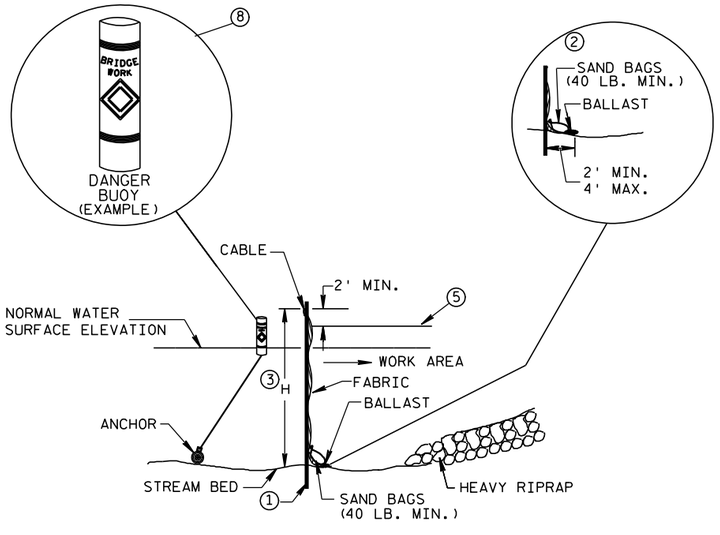


SECTION B-B

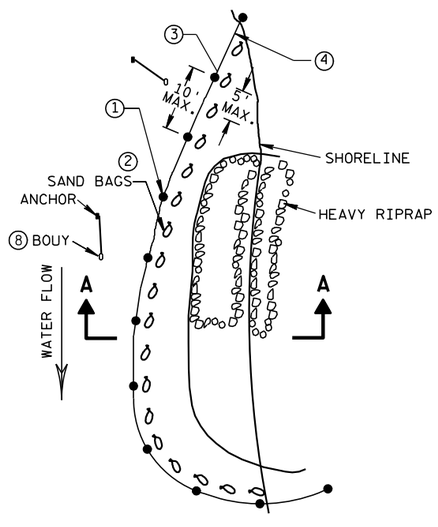




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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 SANDBAGS 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 FT., POST SPACING MAY NEED TO BE DECREASED.

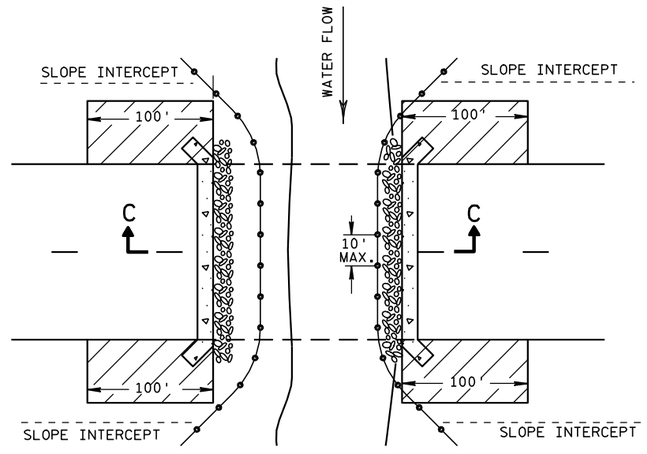
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

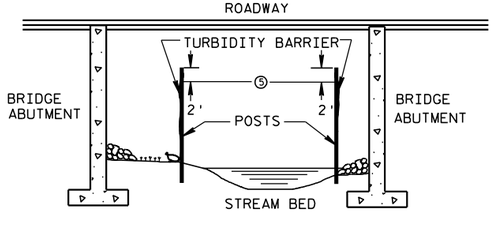
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

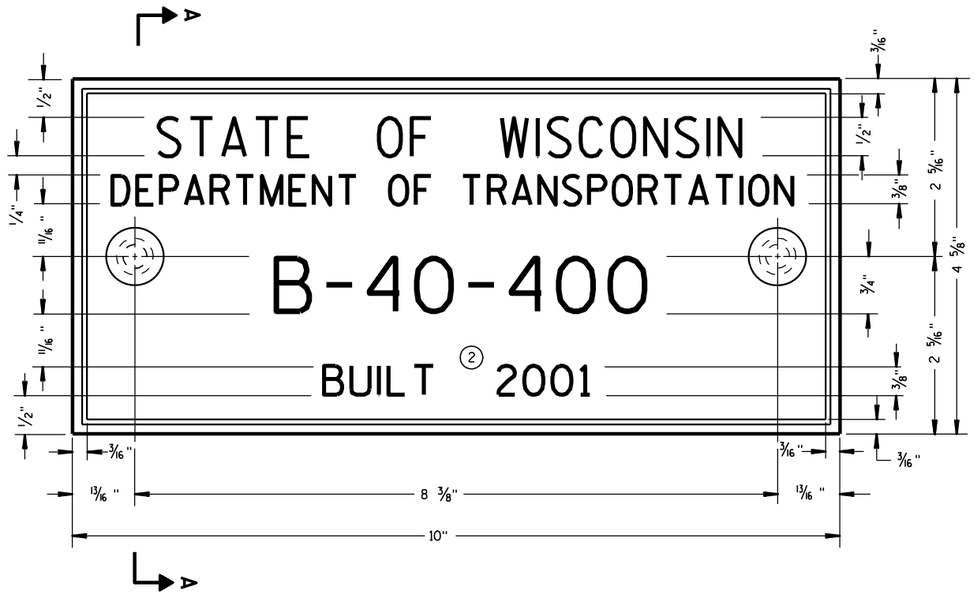
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

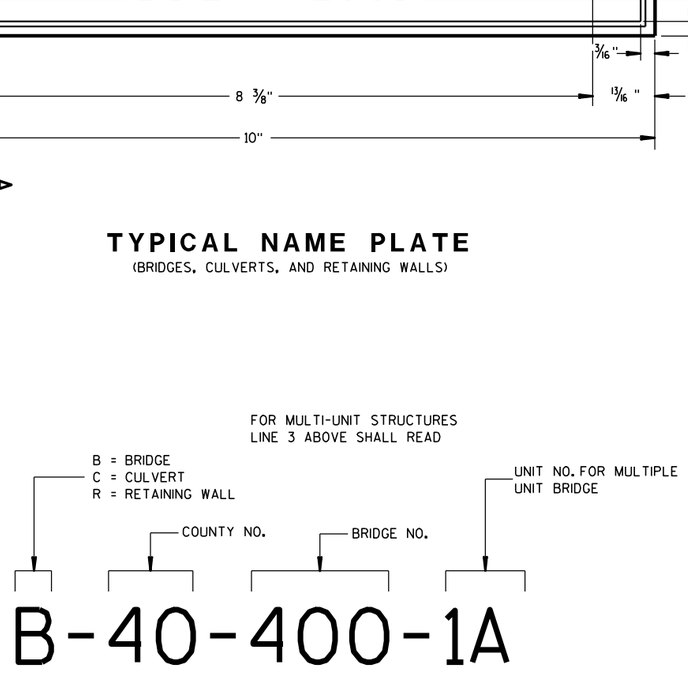
6

S.D.D. 8 E 11-2

S.D.D. 8 E 11-2



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

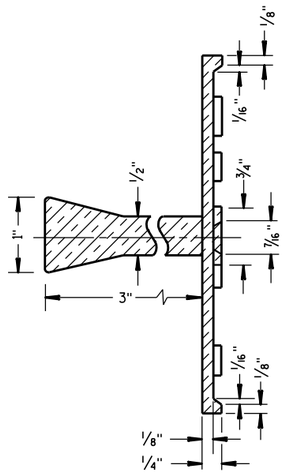
GENERAL NOTES

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

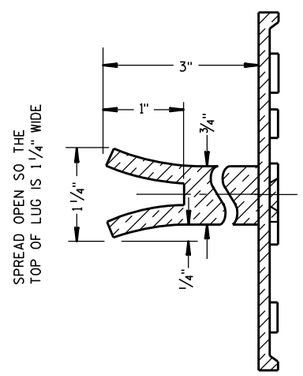
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

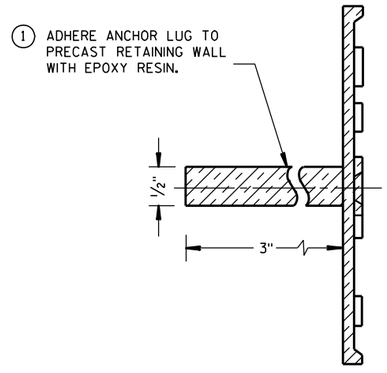
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

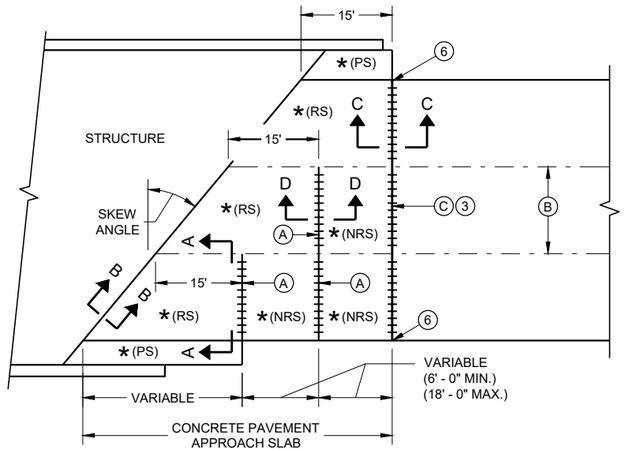
FHWA

6

S.D.D. 12 A 3-10

6

S.D.D. 12 A 3-10



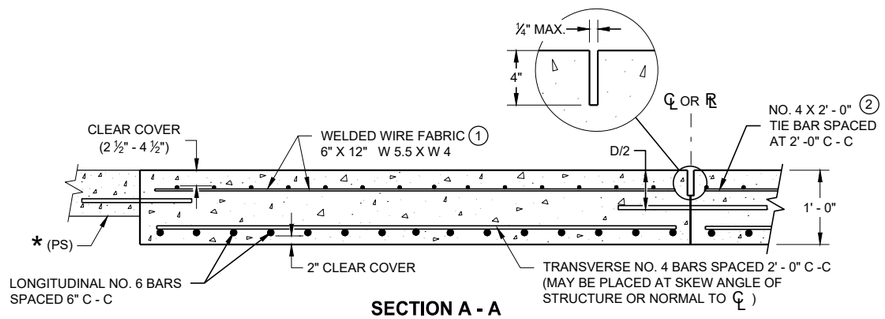
SKEWED APPROACH
(PAVEMENT MORE THAN TWO LANES)

* (RS) = REINFORCED CONCRETE SLAB

* (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB

* (NRS) - NON - REINFORCED CONCRETE SLAB

*** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



SECTION A - A
REINFORCEMENT POSITIONING DETAIL

GENERAL NOTES

THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.

TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.

(1) THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0 " C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.

(2) THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.

(3) DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.

(4) USE A JOINT SEALANT MEETING THE REQUIREMENTS OF ASTM D6690.

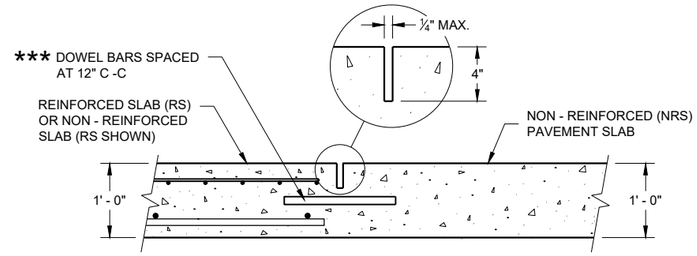
(5) PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.

(6) EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.

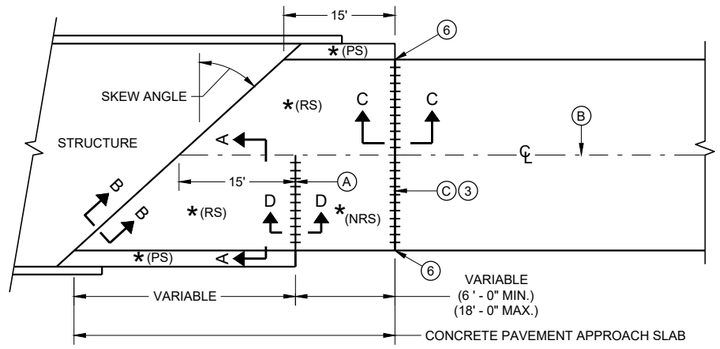
(A) STANDARD CONTRACTION JOINT NORMAL TO ℄ OR ℞.

(B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.

(C) 1 ½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO ℄ OR ℞

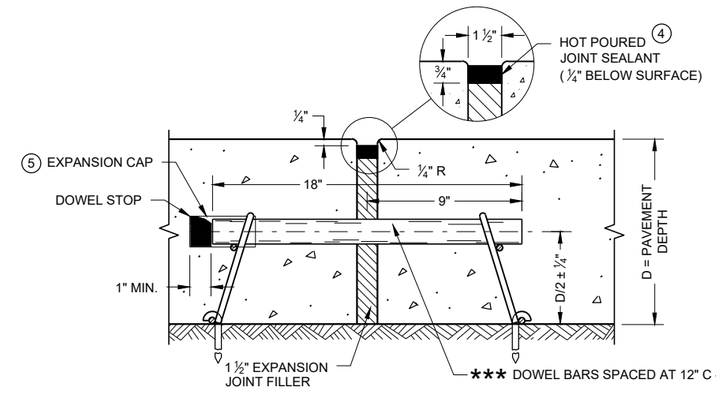


SECTION D - D
CONTRACTION JOINT



SKEWS > 20°
(PAVEMENT WIDTH ≤ 30')

SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT



EXPANSION JOINT DETAIL

SKEWS ≤ 20°
(PAVEMENT WIDTH ≤ 30')

APPROACH SLAB AND ADJACENT PAVEMENT

SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT

CONCRETE PAVEMENT APPROACH SLAB

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

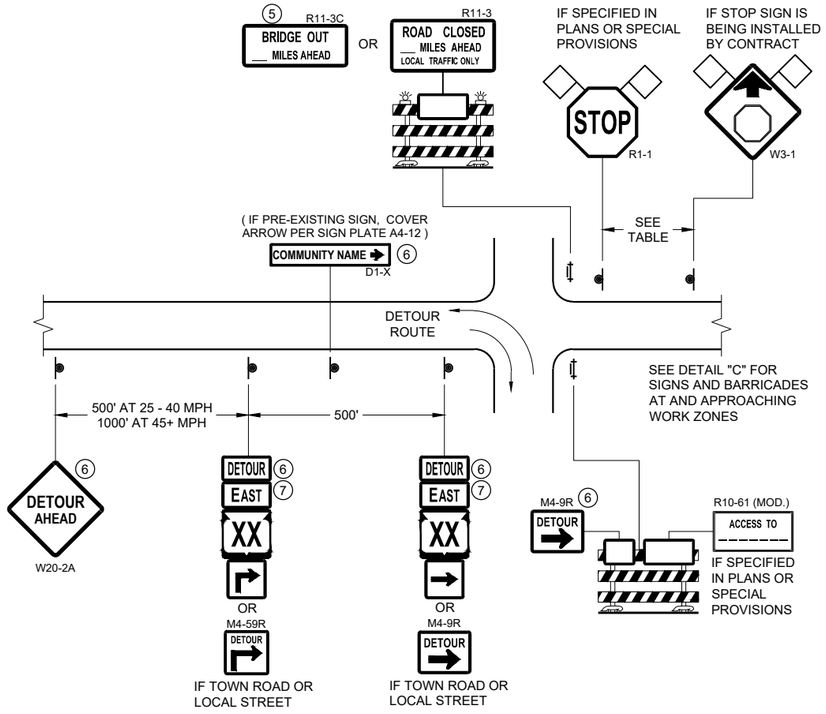
/S/ Peter Kemp P.E.
PAVEMENT SUPERVISOR

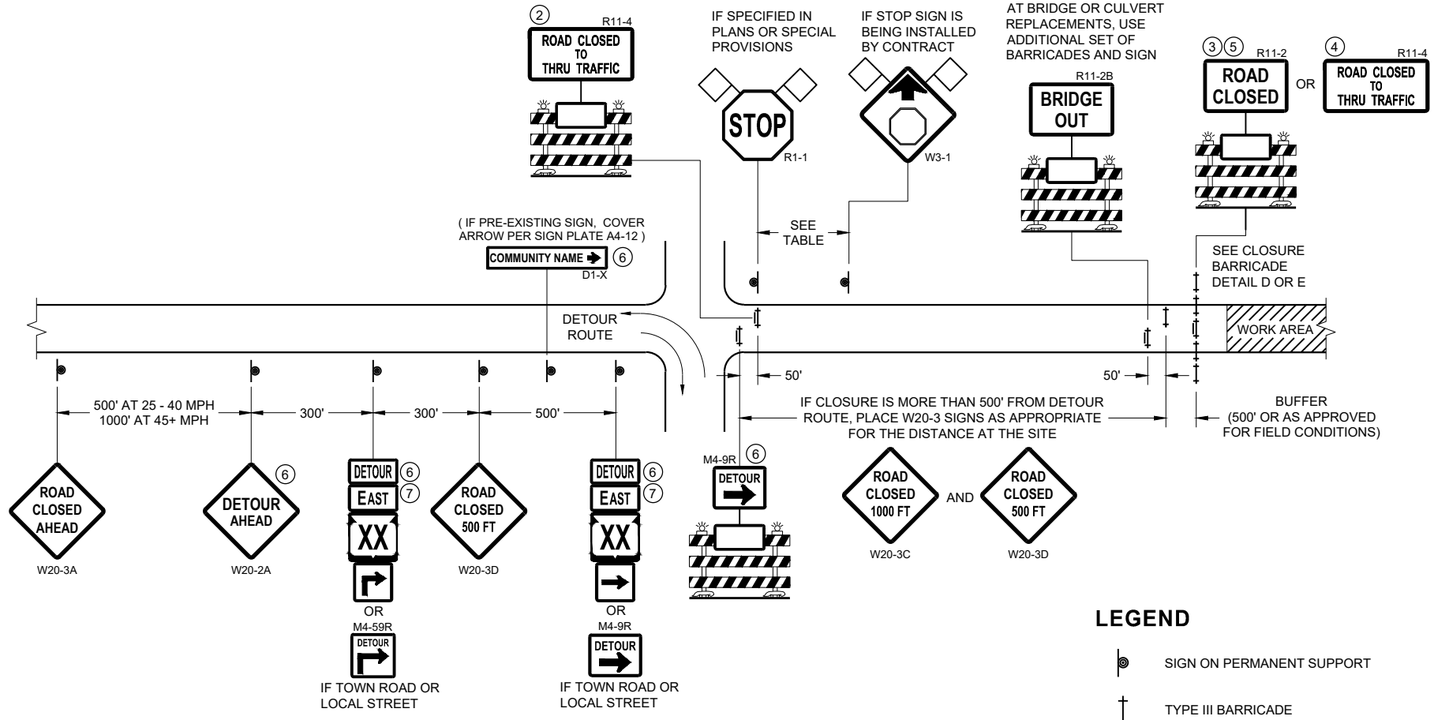
FHWA

6

SDD 13B02 - 09a

SDD 13B02 - 09a



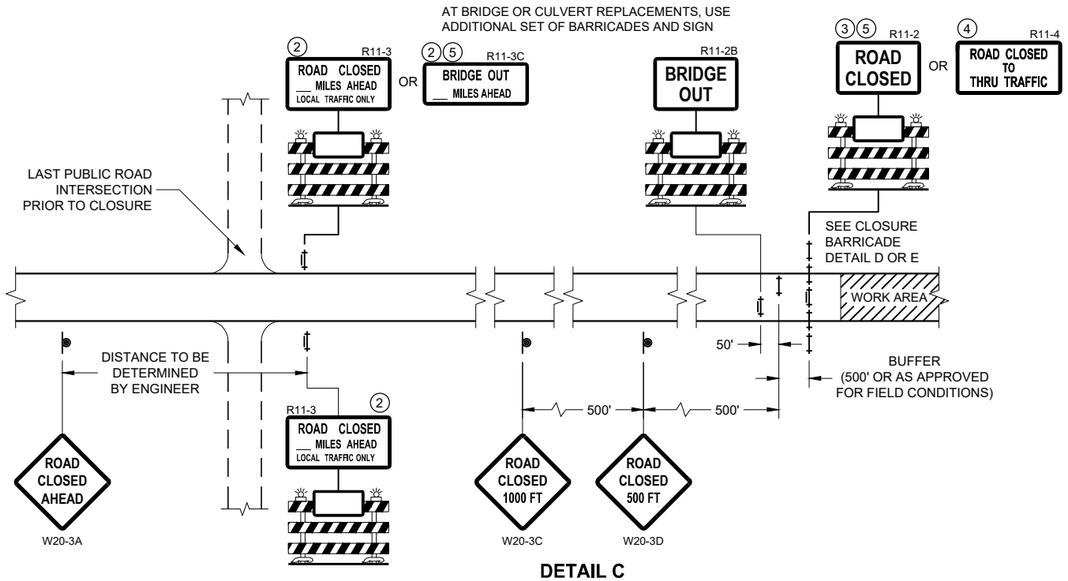


DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

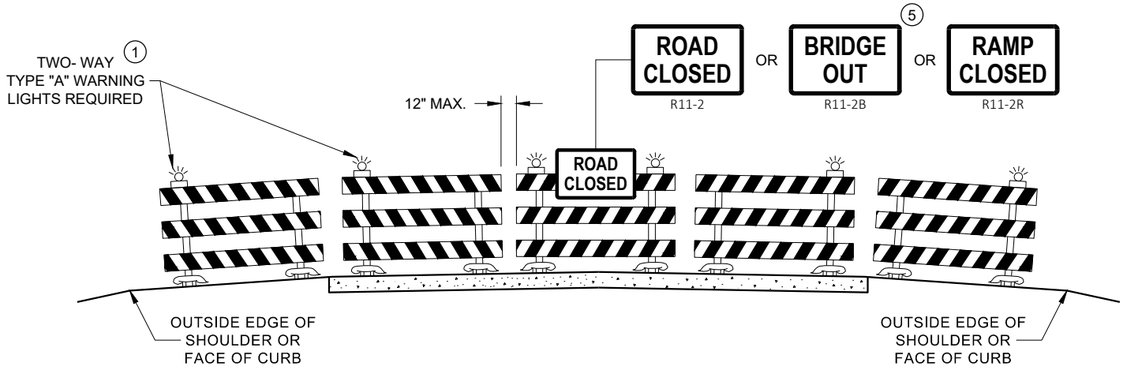
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE

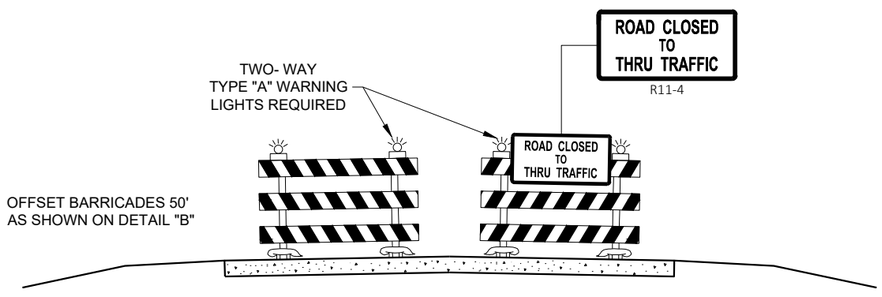
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15C02 - 07a



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
November 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C02 - 07b

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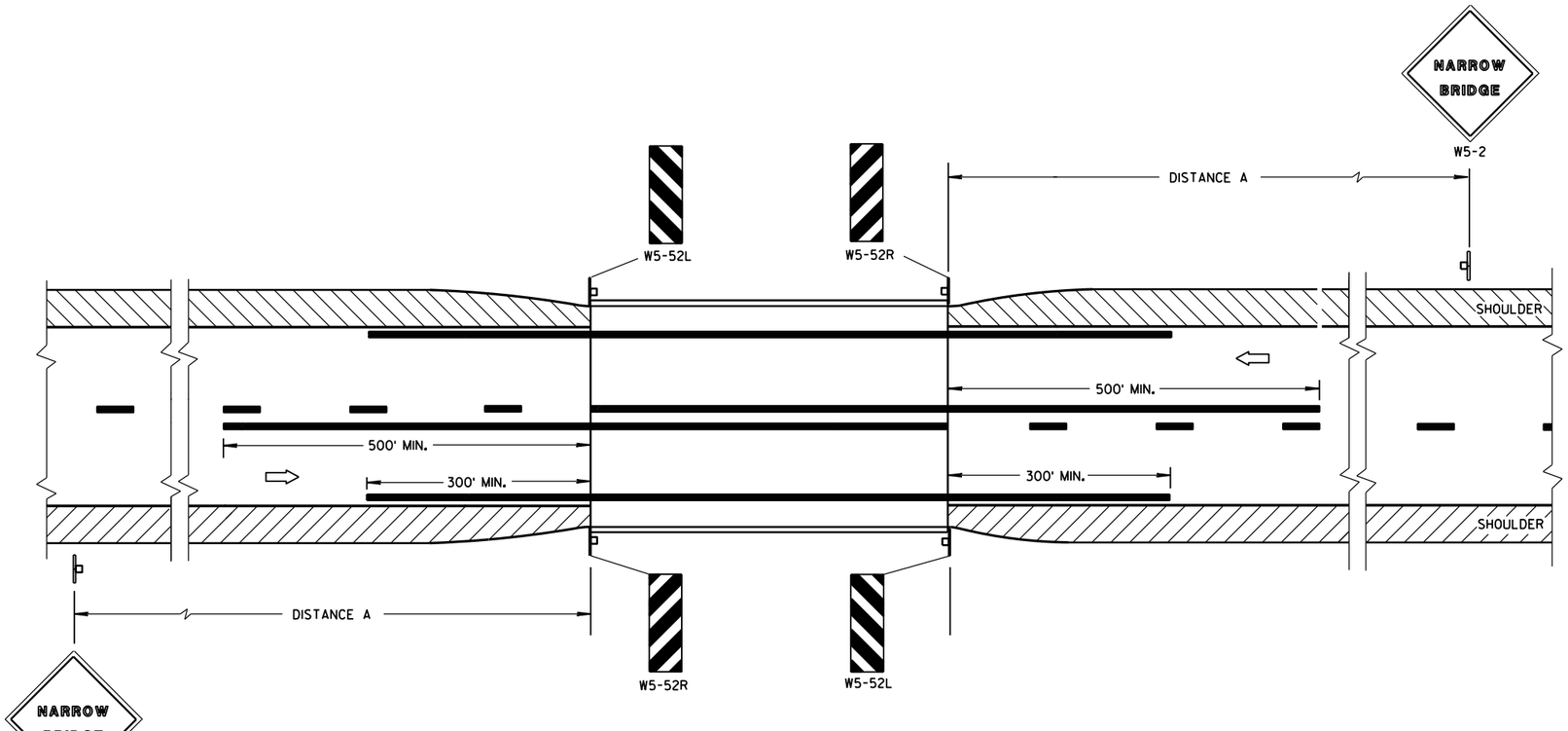
SDD 15C02 - 07b



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

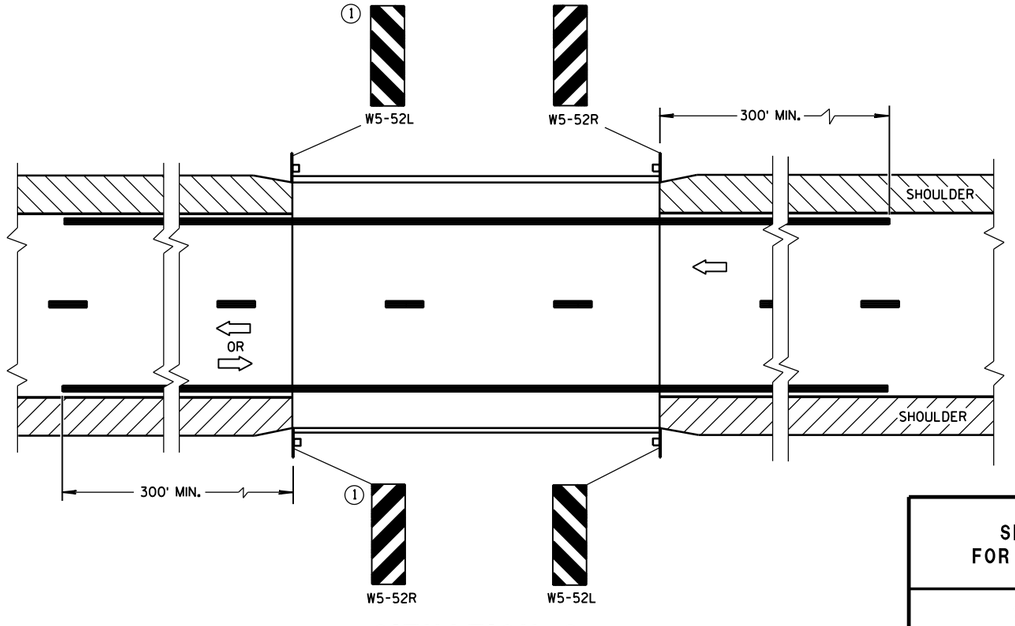
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

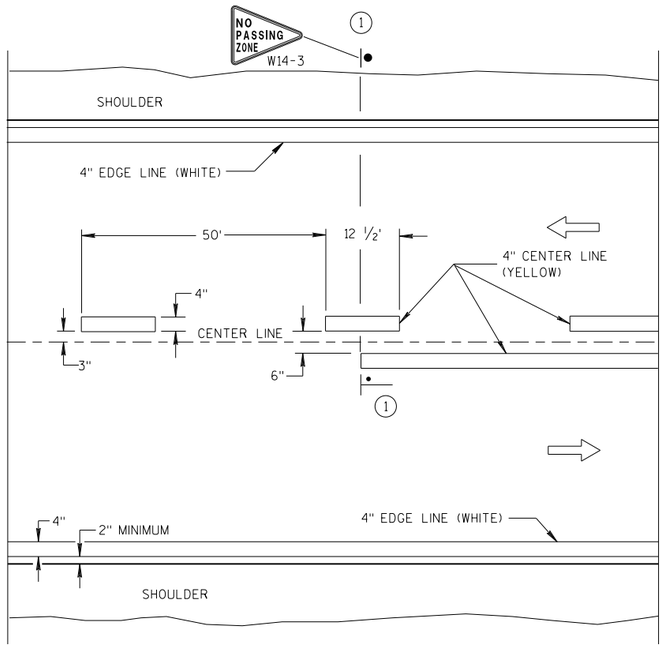
WARRANTING CRITERIA:

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

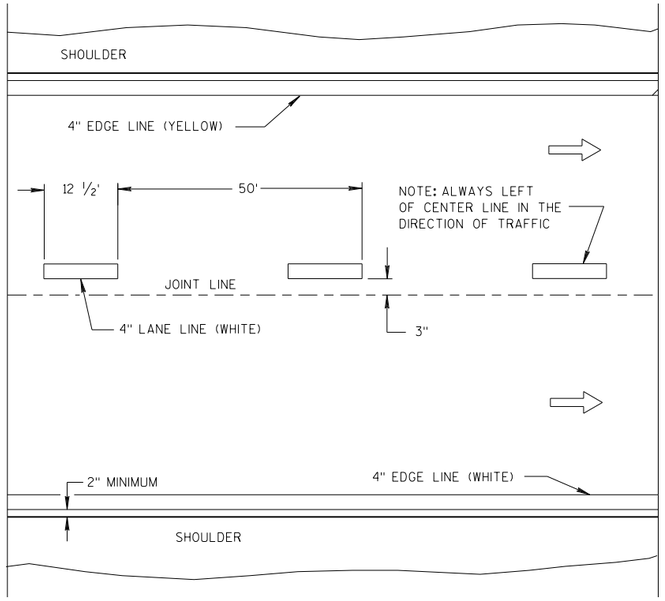
SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR 20 ...EER
FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

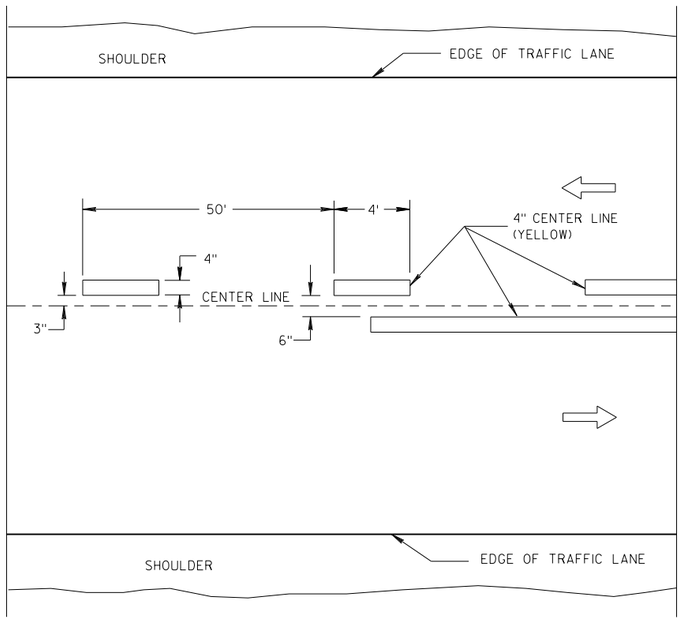
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

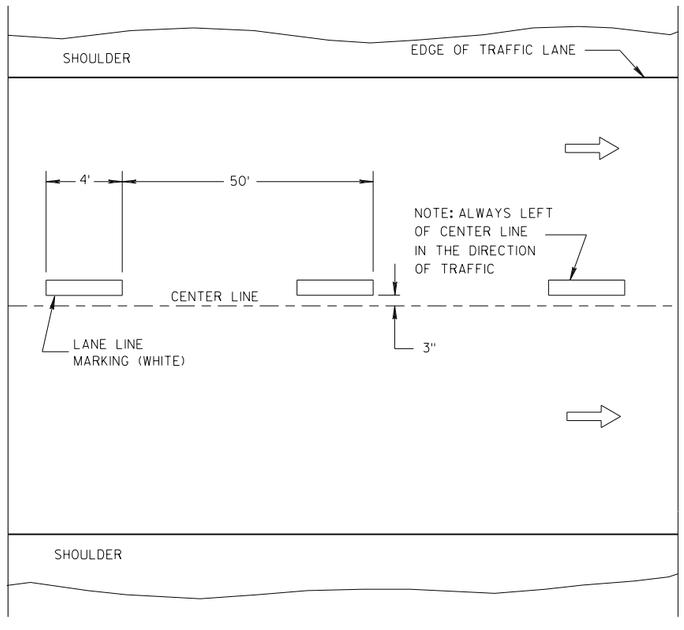
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

7/2018 — DATE

/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER

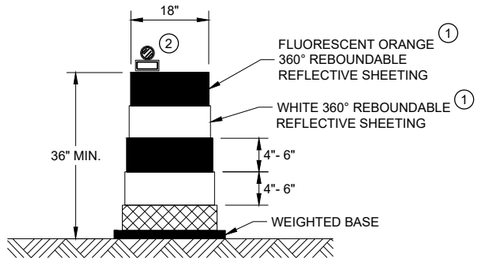
FHWA

6

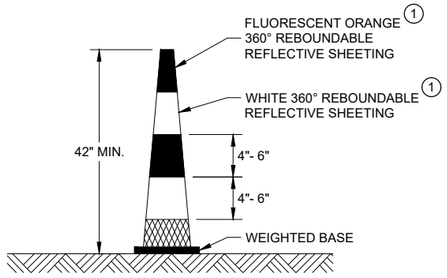
S.D.D. 15 C 8-19a

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.

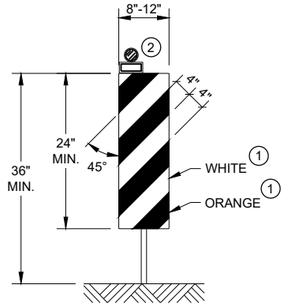


DRUM



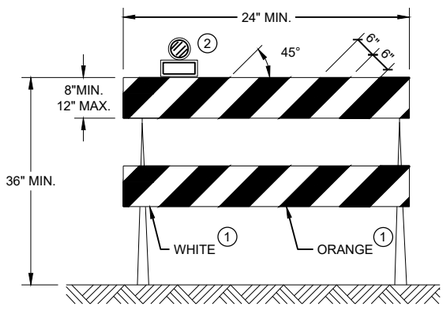
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



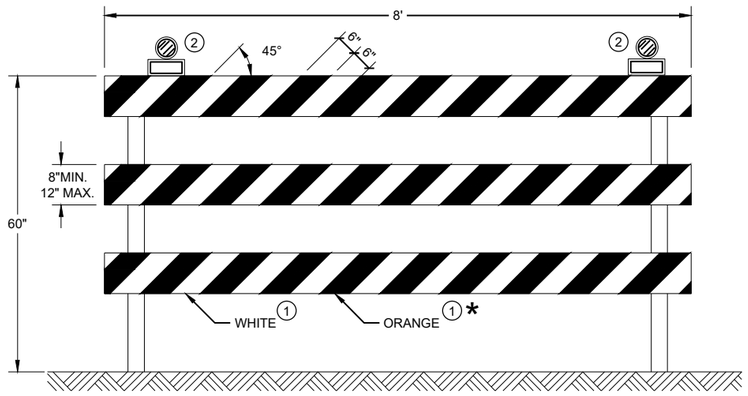
VERTICAL PANEL

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
June 2017 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

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SDD 15C11 - 07b

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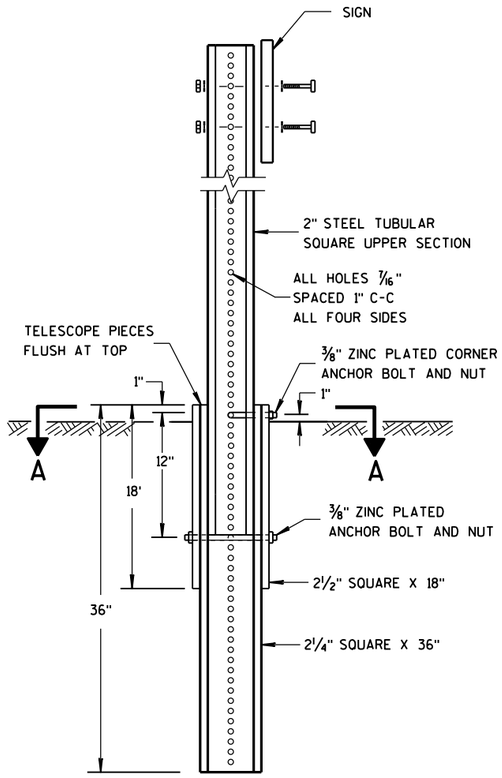
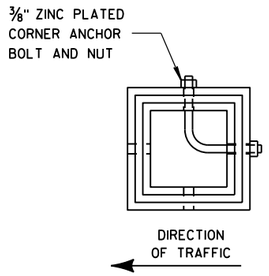
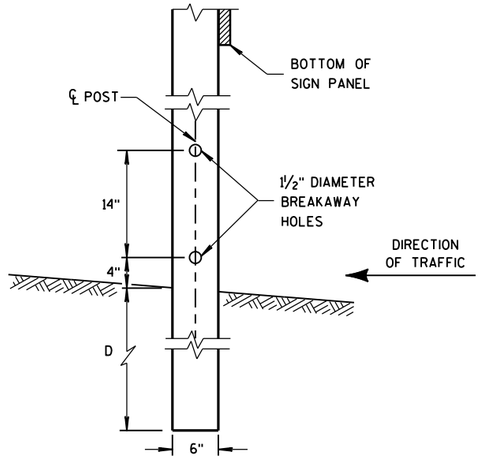
SDD 15C11 - 07b



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



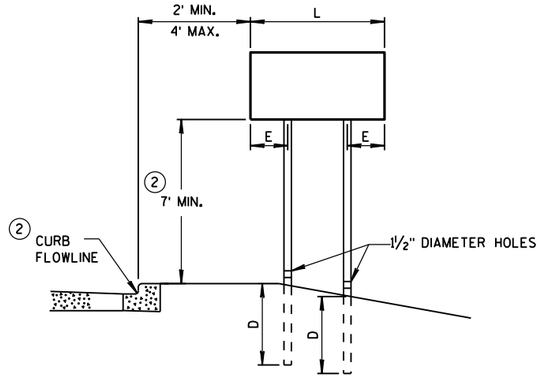
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

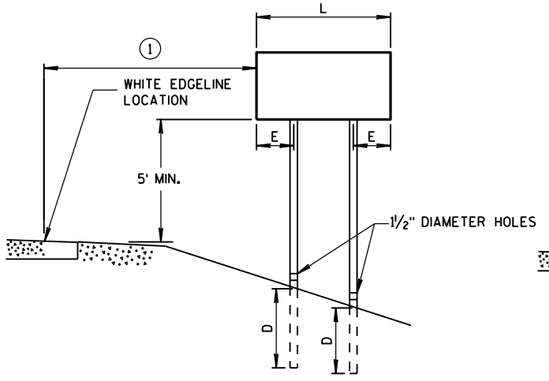
1. 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

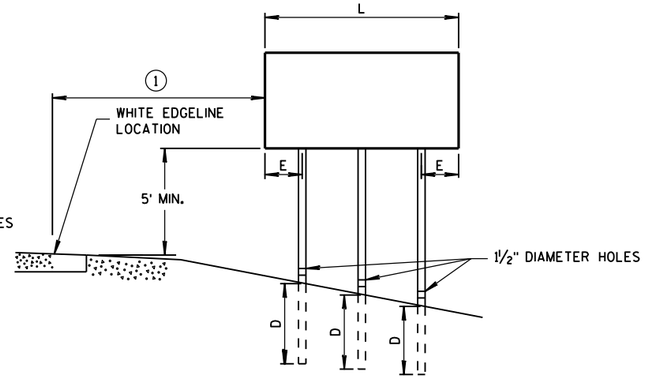
2. THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.

3. FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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).

SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

WOOD POST EMBEDMENT DEPTH

AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'

4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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S.D.D. 15 D 38-2a

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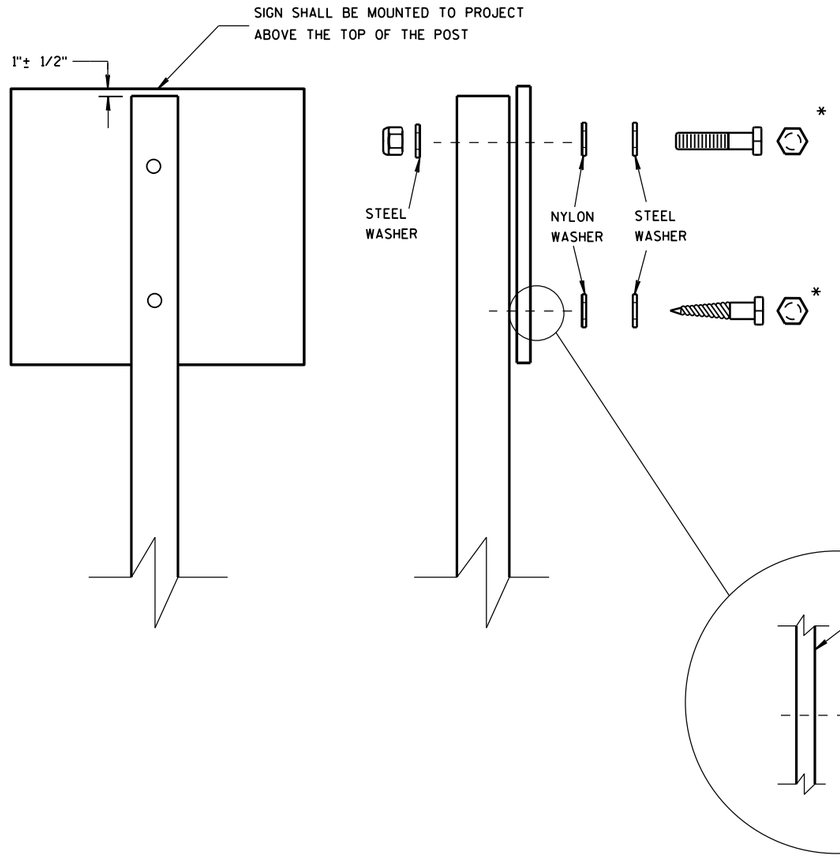
S.D.D. 15 D 38-2a



WASHER PLACEMENT WHEN SIGN HAS OTHER THAN TYPE H OR TYPE F FACE

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.

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3"

MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS

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 FOR ALL TYPE H SIGNS

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

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S.D.D. 15 D 38-2b

S.D.D. 15 D 38-2b

ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

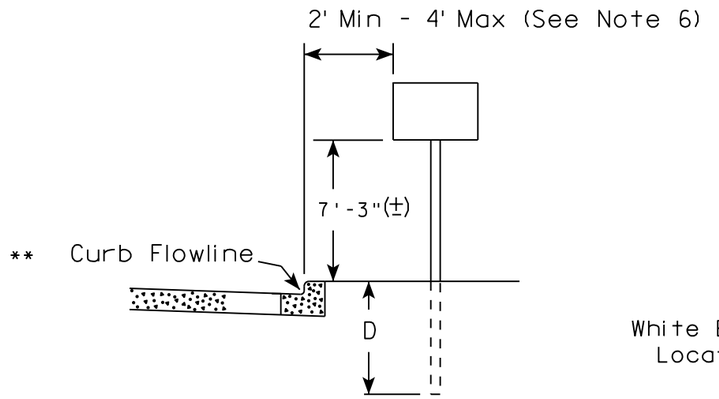
APPROVED

June 2017
DATE

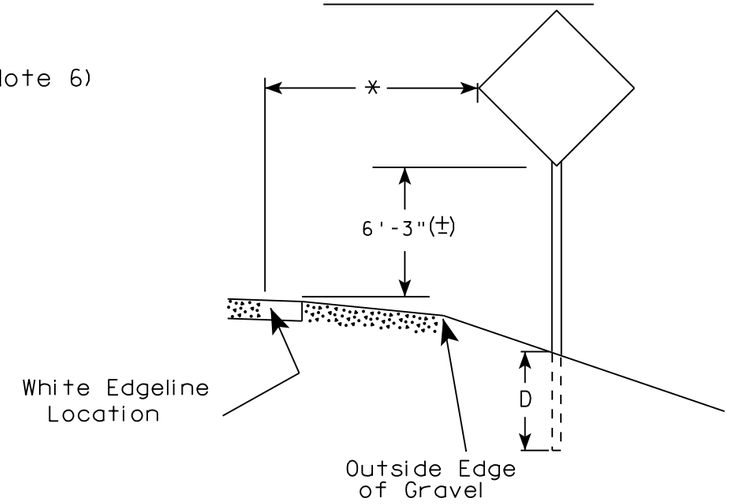
/S/ Andrew Heldtke
WORK ZONE ENG

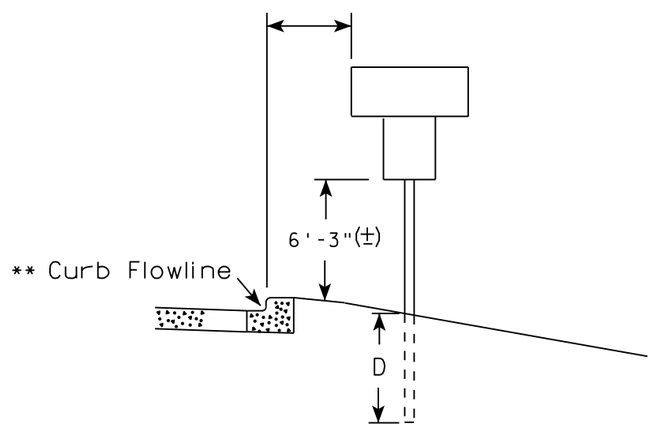
FHWA

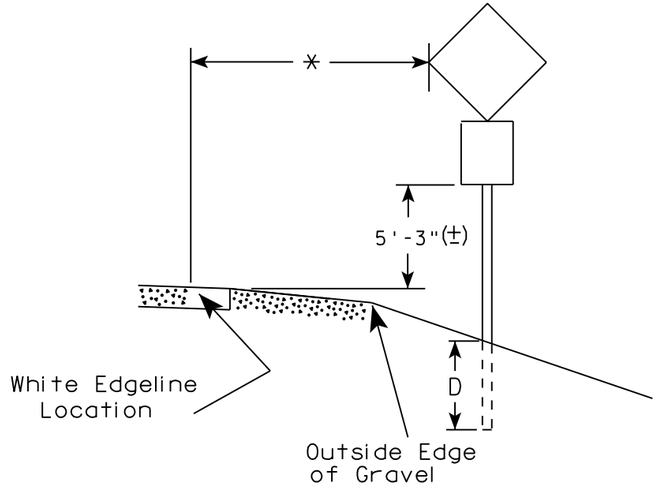
URBAN AREA



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

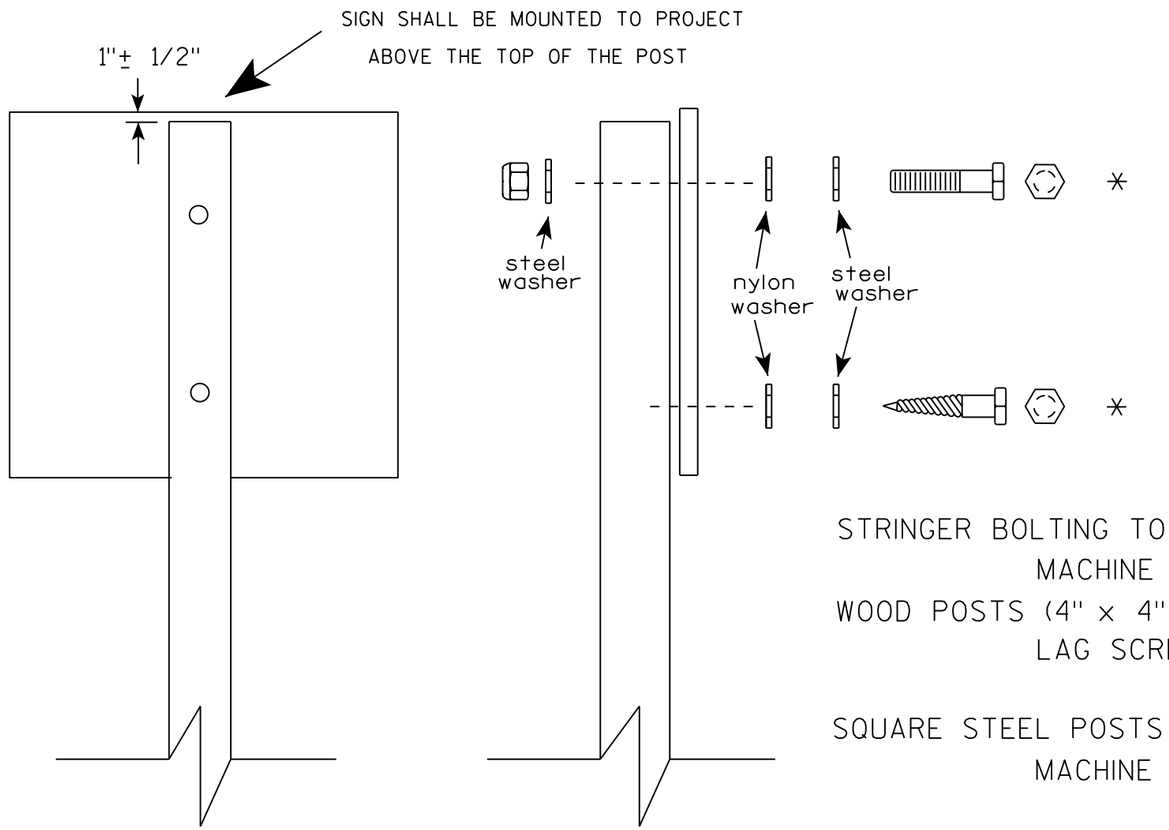
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. 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), 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" (±).

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21



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 4" or 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.

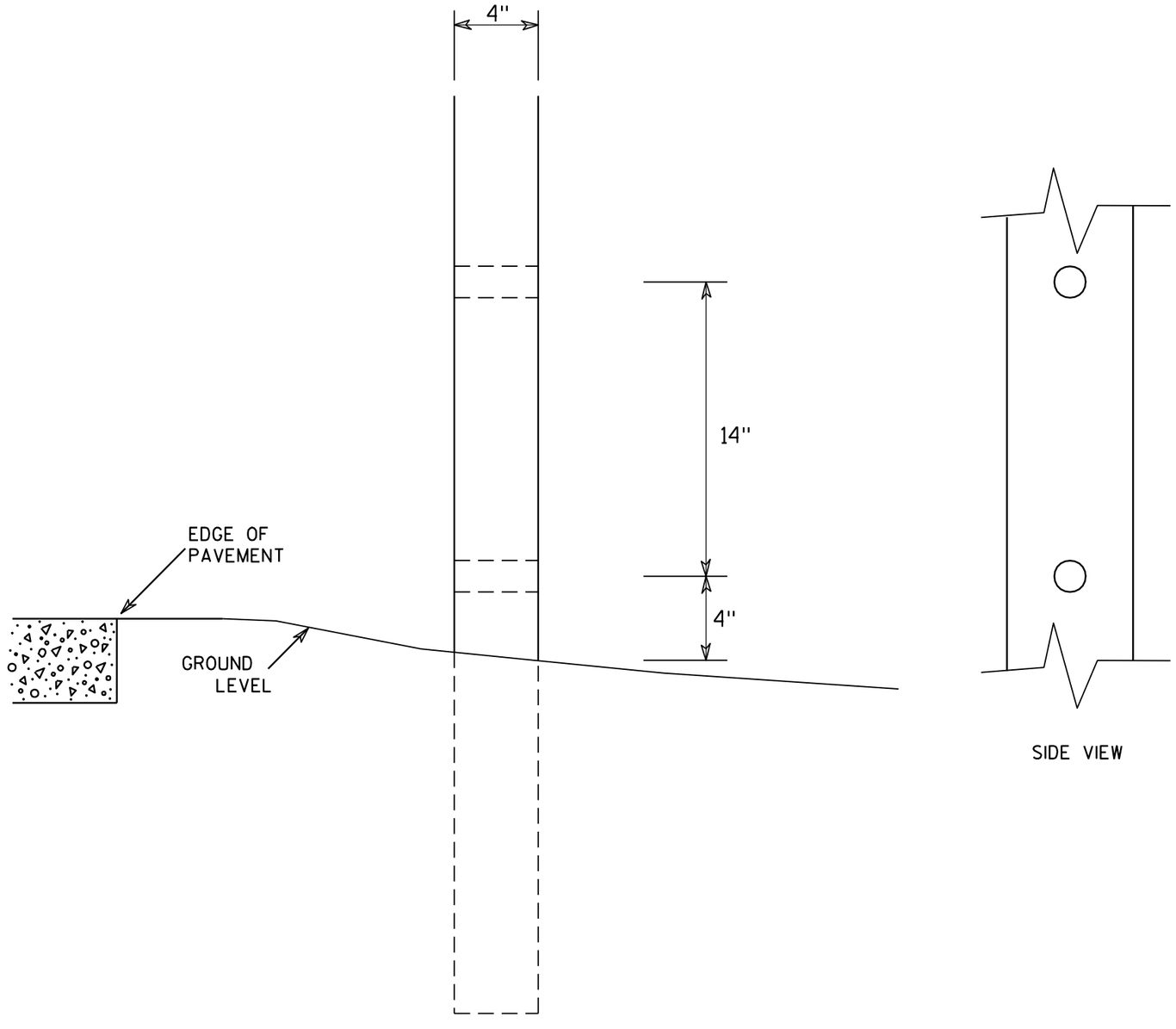
ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: 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.

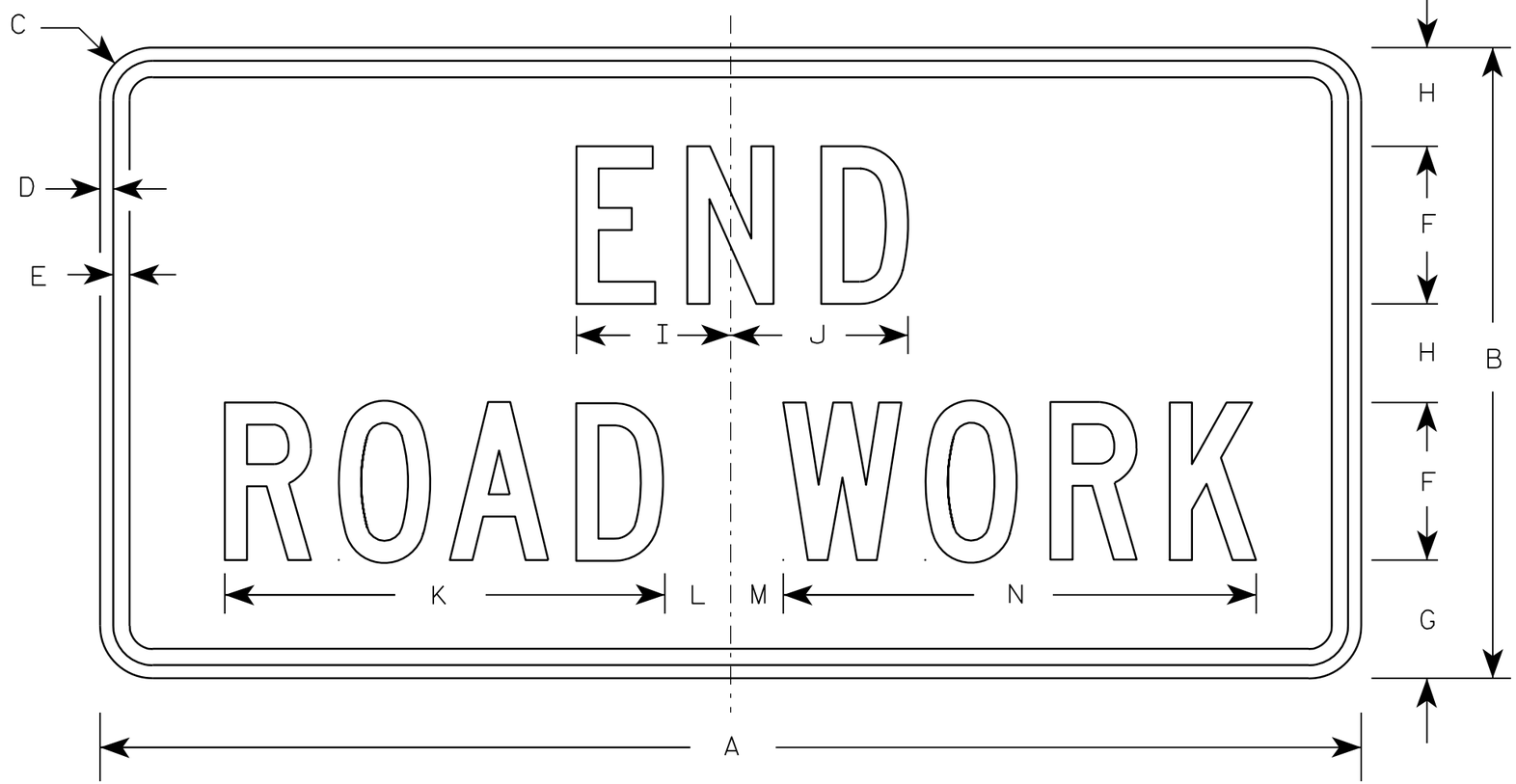
4 X 6 WOOD POST MODIFICATIONS

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: 27	E



G20-2A

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. 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.

Metric equivalent for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

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.	Area m2
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

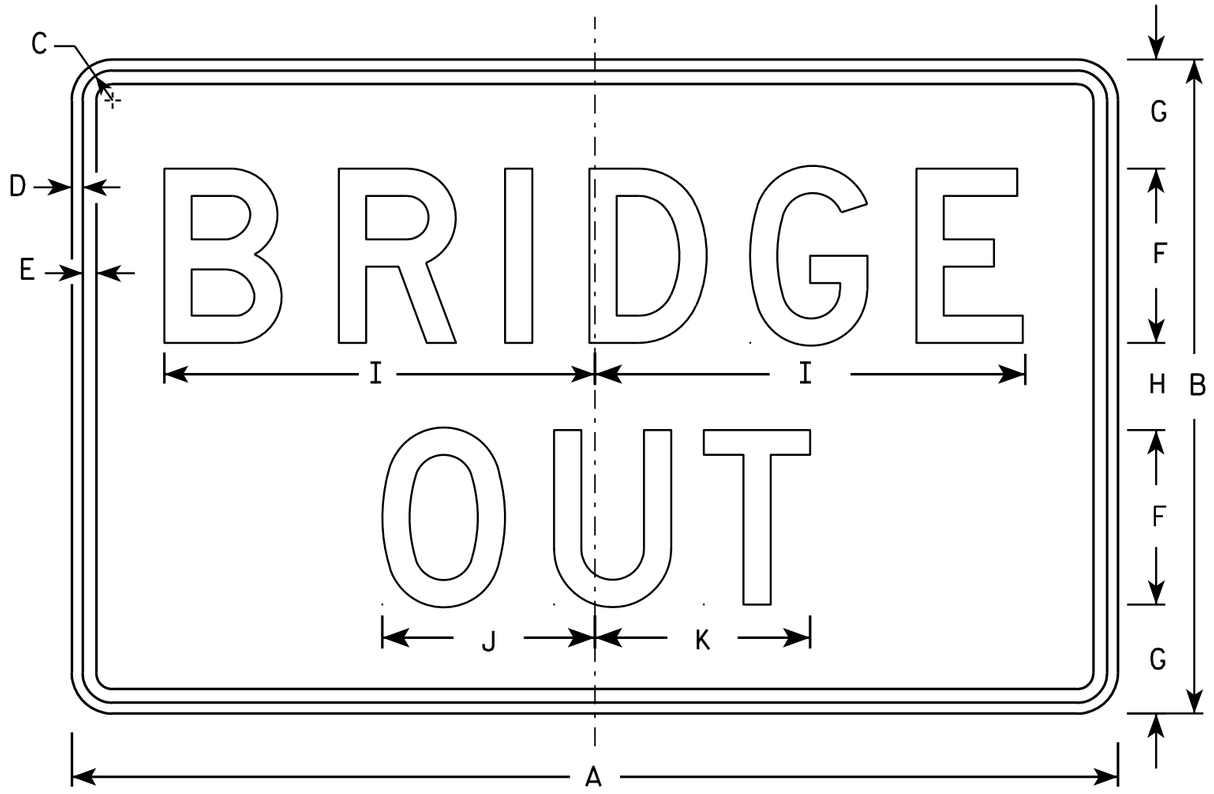
STANDARD SIGN
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/30/09 PLATE NO. G20-2A.8

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



R11-2B

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. 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.

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	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

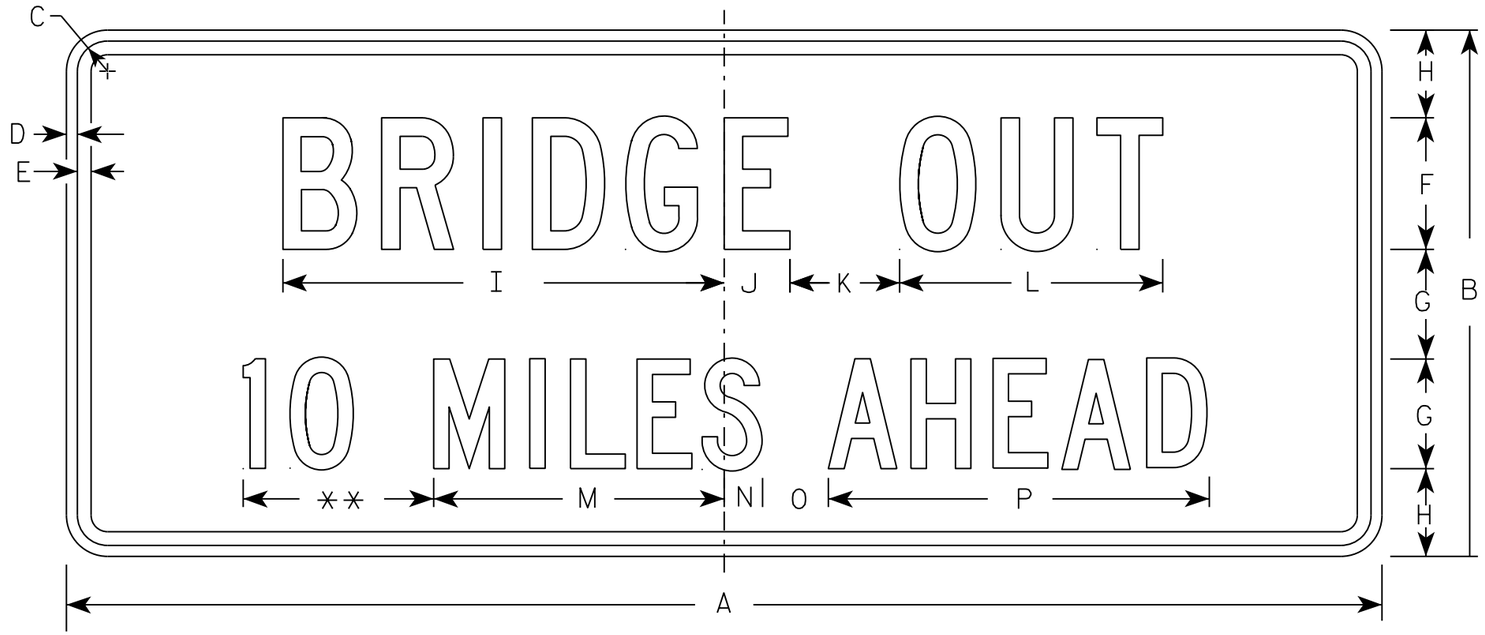
DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO:

SHEET NO: 29 E

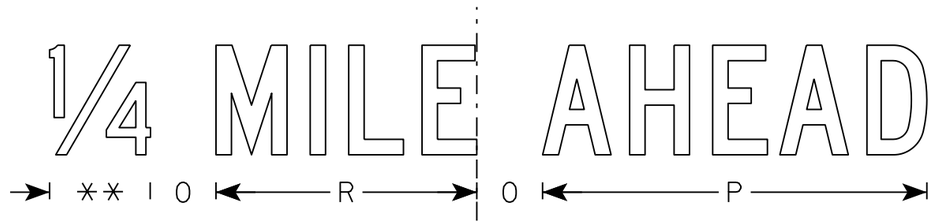
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. 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.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3C

** See Note 5



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	36	15	1 3/8	1/2	5/8	4	3	2 1/2	13 1/4	2 1/4	3	8	8	1 1/2	2	10 3/4		7 1/8									3.75
2S	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
2M	60	24	1 3/8	1/2	5/8	6	5	4	20 1/8	3	5	12	13 1/4	1 3/4	3	17 3/8		11 7/8									10.0
3																											
4																											
5																											

STANDARD SIGN
R11-3C

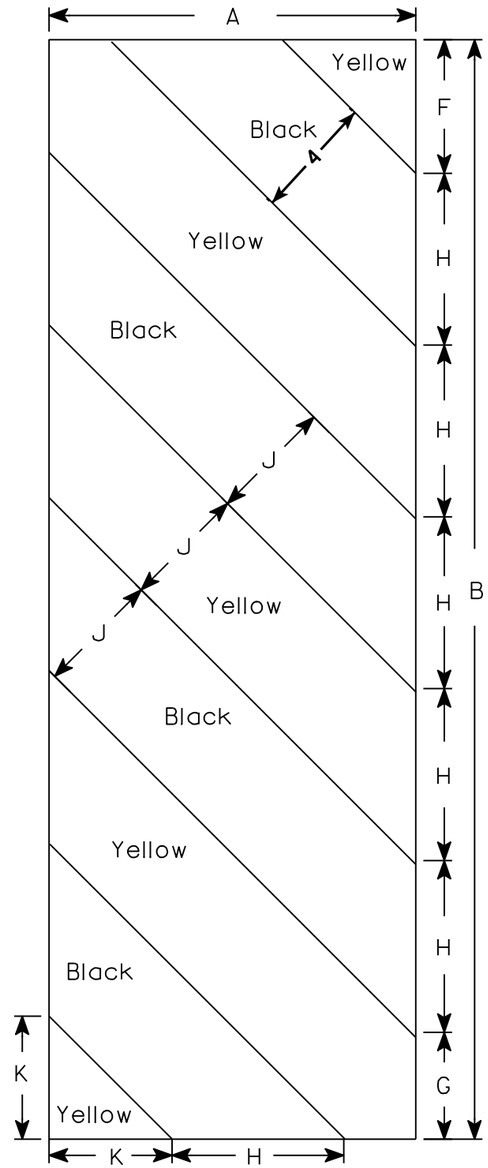
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

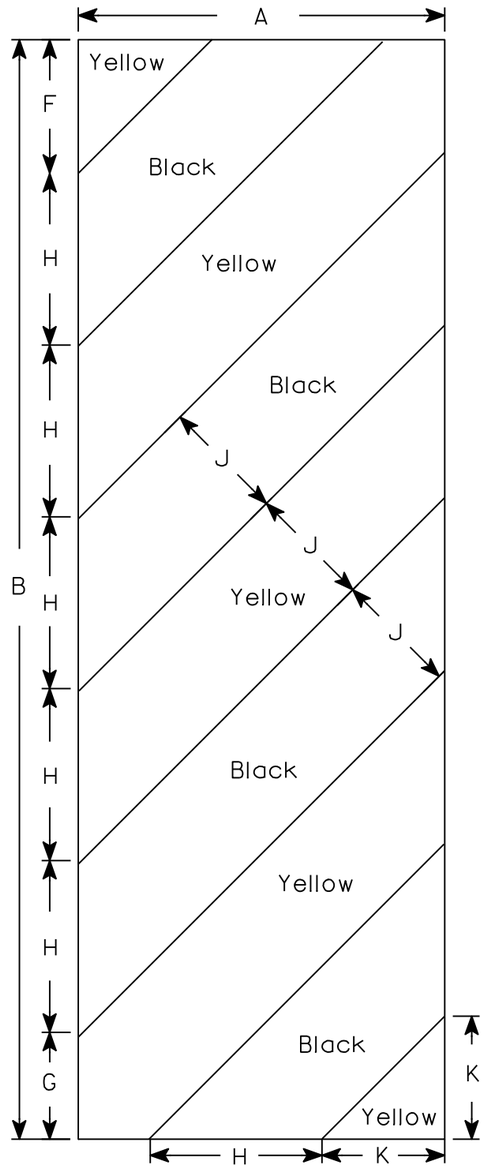
DATE 7/28/16 PLATE NO. R11-3C.3

PROJECT NO:

SHEET NO: 30 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

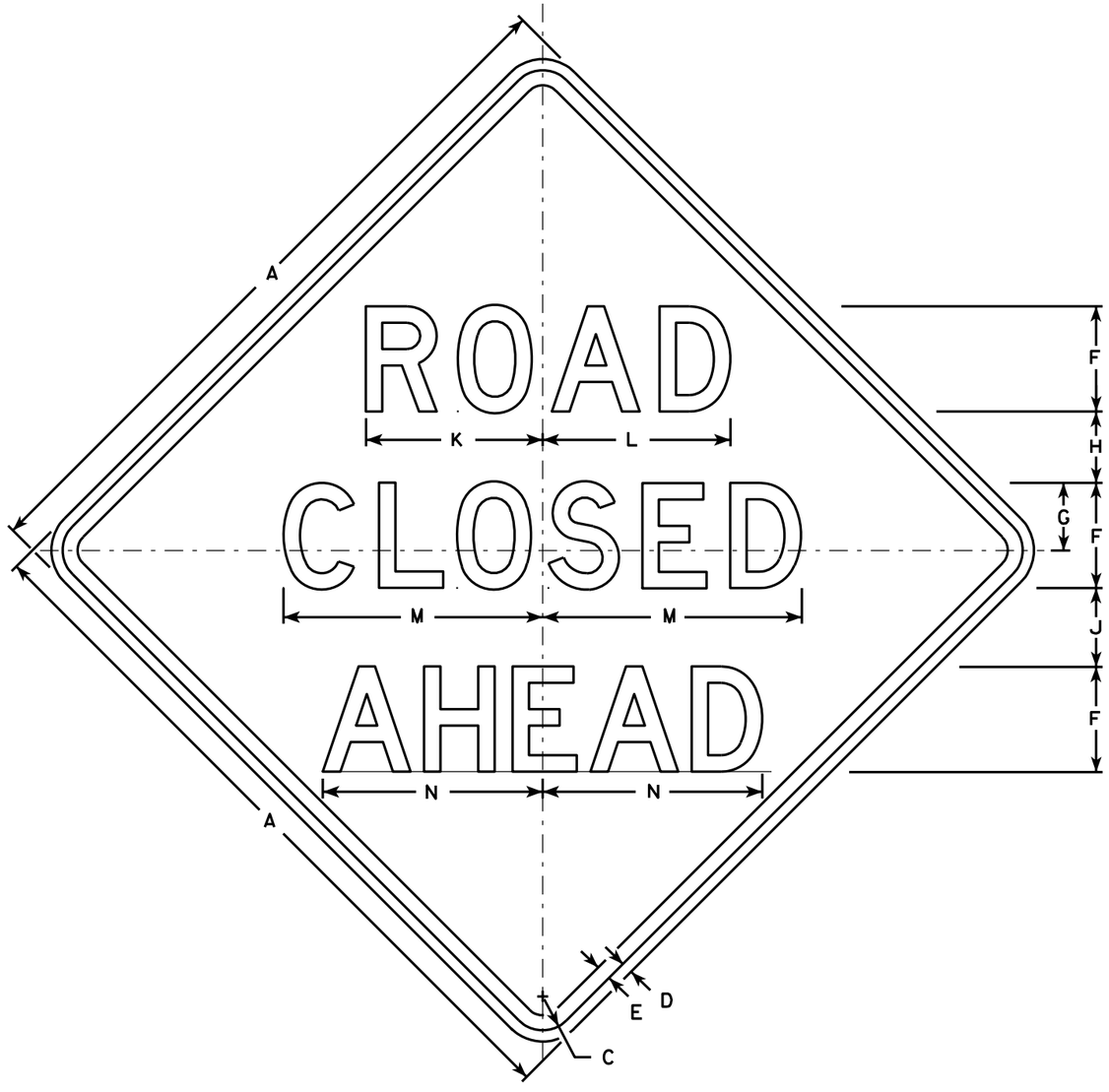
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

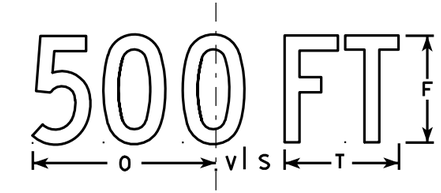
APPROVED Matthew R Rauch
for State Traffic Engineer

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

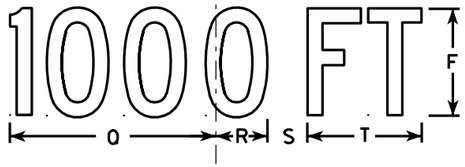
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 31	E



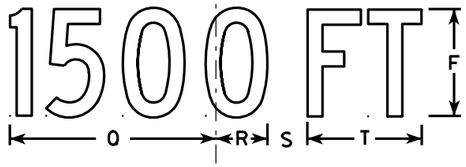
W20-3A



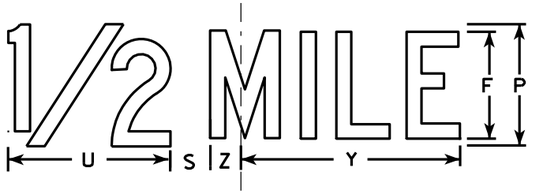
W20-3D



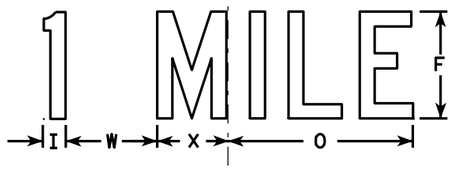
W20-3C



W20-3B



W20-3G



W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - see note 5
4. 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.
5. Lines 1 and 2 are Series D.
   Line 3 is Series D for AHEAD and Series C for all other distances.

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	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 32 | E

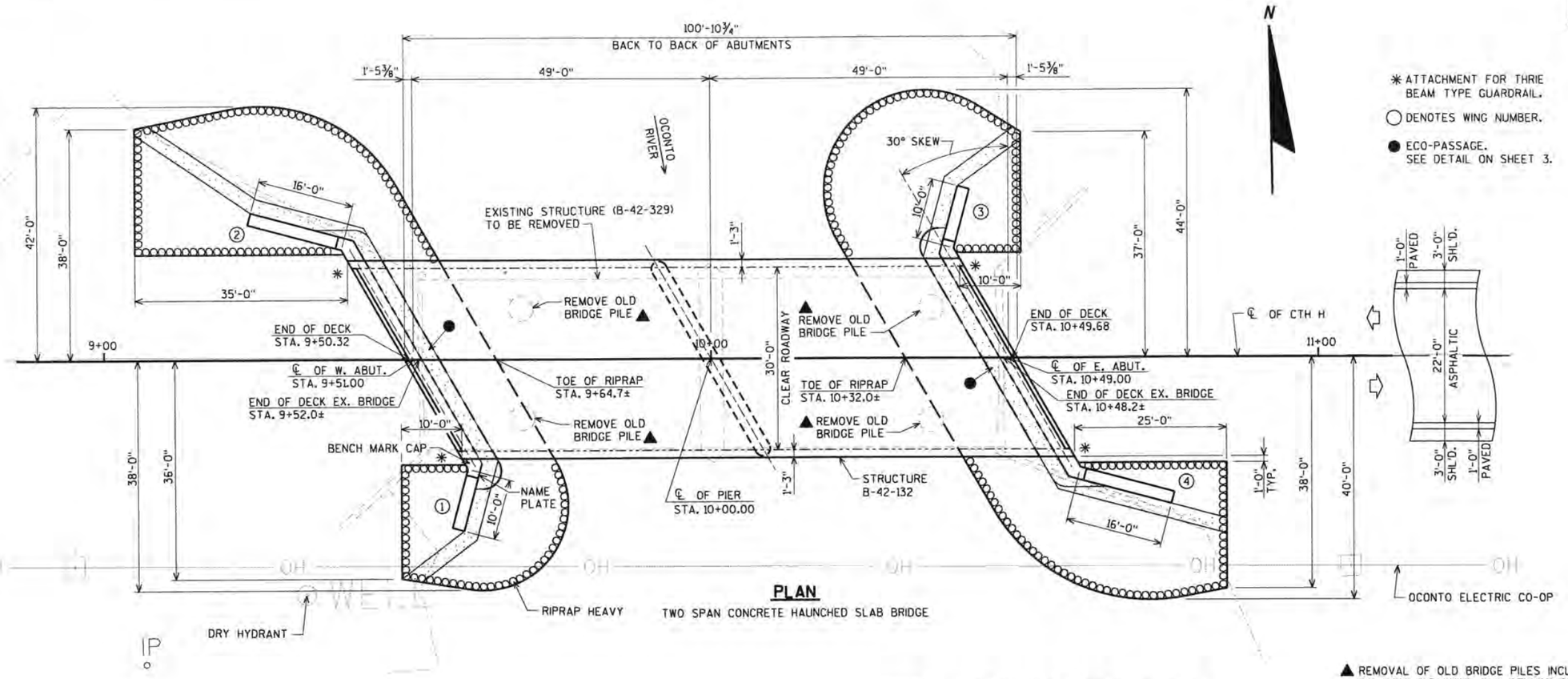
STATE PROJECT NUMBER

9108-02-71

$PRFNAME$
U:\45-0439.00 - Oconto Co. CTH H over the Oconto River\Structures\Final\450439 gp.dgn

DATE:
CHECKED BY: DATE:
BACK CHECKED BY: DATE:
CORRECTED BY: DATE:

8



✱ ATTACHMENT FOR THRIE BEAM TYPE GUARDRAIL.

◯ DENOTES WING NUMBER.

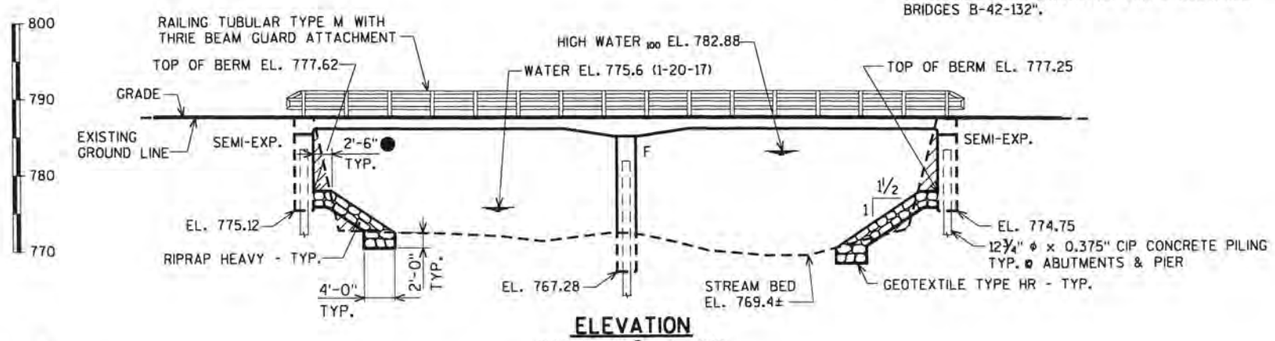
● ECO-PASSAGE. SEE DETAIL ON SHEET 3.

PLAN

TWO SPAN CONCRETE HAUNCHED SLAB BRIDGE

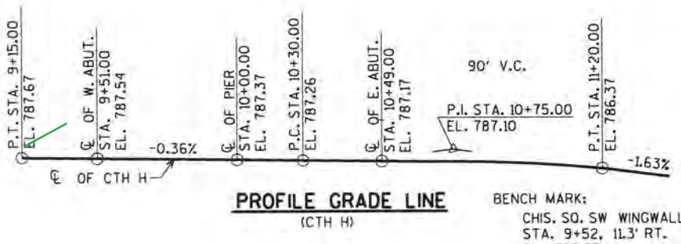
▲ REMOVAL OF OLD BRIDGE PILES INCLUDED IN BID ITEM "REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00".

COST OF EXCAVATION IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-42-132".



ELEVATION

(NORMAL TO ℄ OF RIVER)



PROFILE GRADE LINE

(CTH H)

BENCH MARK:
CHIS. SO. SW WINGWALL
STA. 9+52, 11.3' RT.
EL. 797.73

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES AND NOTES
3. TYPICAL SECTION AND DETAILS
4. SUBSURFACE EXPLORATION
5. WEST ABUTMENT
6. WEST ABUTMENT WING 1 DETAILS
7. WEST ABUTMENT WING 2 DETAILS
8. EAST ABUTMENT
9. EAST ABUTMENT WING 3 DETAILS
10. EAST ABUTMENT WING 4 DETAILS
11. PIER
12. SUPERSTRUCTURE
13. SUPERSTRUCTURE PLAN
14. RAILING TUBULAR TYPE M

FOR DESIGN DATA SEE SHEET 2
FOR TYPICAL SECTION SEE SHEET 3

WISCONSIN
CHRISTOPHER B. McMAHON
E-29454
EAU CLAIRE WI
PROFESSIONAL ENGINEER
4/22/19

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608)-266-8489

CONSULTANT CONTACT:
CHRIS MCMAHON
(715)-834-3161

NO.	DATE	REVISION	BY

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 05/06/19
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-42-132

CTH H OVER THE OCONTO RIVER

COUNTY	TOWN/~~CITY/VILLAGE~~
OCONTO	UNDERHILL

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
JLB	CJM	CLS/CJM	CBM

GENERAL PLAN

SHEET 1 OF 14

33

8

4/22/2019

PENTABLE:BRequ_shd_util.tbl

I.D.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	PIER	E. ABUT.	SUPER.	TOTAL
▲ ◨ 203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-42-132	LS	-----	-----	-----	-----	1
206.5000	COFFERDAMS B-42-132	LS	-----	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	370	-----	370	-----	740
502.0100	CONCRETE MASONRY BRIDGES	CY	61	52	61	221	395
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	-----	420	420
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	3,160	2,550	3,170	-----	8,880
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,930	70	1,930	47,480	51,410
513.4061	RAILING TUBULAR TYPE M	LF	-----	-----	-----	204	204
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8	-----	8	-----	16
550.2126	PILING CIP CONCRETE 12¾ x 0.375-INCH	LF	630	800	630	-----	2,060
606.0300	RIPRAP HEAVY	CY	175	-----	175	-----	350
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	90	-----	90	-----	180
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	65	-----	65	-----	130
645.0120	GEOTEXTILE TYPE HR	SY	320	-----	320	-----	640
SPV.0060.01	UNDERWATER SUBSTRUCTURE INSPECTION B-42-132	EACH	-----	1	-----	-----	1
	NON-BID ITEMS						
	FILLER	SIZE	-----	-----	-----	-----	½" & ¾"

◨ DURING REMOVAL OF THE STRUCTURE, THE CONTRACTOR MUST MAKE A GOOD FAITH EFFORT TO SALVAGE ONE OF THE BRIDGE'S CORNER POSTS BEARING THE "WPA/1938" DATE STAMP. SAWCUT AT BOTTOM OF THE BASE TO REMOVE. SEE SPECIAL PROVISIONS.

▲ REMOVAL OF OLD BRIDGE PILES INCLUDED IN BID ITEM "REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00".

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

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

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-42-132" SHALL BE THE EXISTING GROUNDLINE.

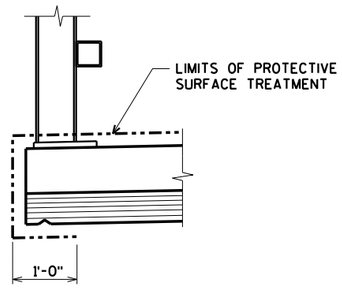
THE EXISTING STRUCTURE, B-42-329, TO BE REMOVED, IS A TWO SPAN CONCRETE DECK GIRDER BRIDGE, 96.5 FT. LONG WITH A 24 FT. CLEAR ROADWAY WIDTH ON VERTICAL CONCRETE ABUTMENTS AND A CONCRETE PIER.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

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 DETAIL

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.21
OPERATING RATING FACTOR: 1.56
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

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

MATERIAL PROPERTIES:

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

HYDRAULIC DATA:

100 YEAR FREQUENCY	2 YEAR FREQUENCY
Q_{100} = 6,110 c.f.s.	Q_2 = 3,550 c.f.s.
VEL.= 9.12 f.p.s.	VEL.= 6.25 f.p.s.
HW_{100} = EL. 782.88	HW_2 = EL. 780.96

WATERWAY AREA = 670 sq. ft.
DRAINAGE AREA = 614 sq. mi.
ROADWAY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 5
DATUM = NAVD 88 (2012)

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON 12¾" ϕ x 0.375" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 150 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 80'-0".

PIER TO BE SUPPORTED ON 12¾" ϕ x 0.375" CIP CONCRETE PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 210 TONS ǂ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 100'-0".

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

TRAFFIC DATA:

A.A.D.T. = 360 (2020)
A.A.D.T. = 390 (2040)
R.D.S. = 30 M.P.H.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-42-132

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QUANTITIES AND NOTES

SHEET 2 OF 14
34

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
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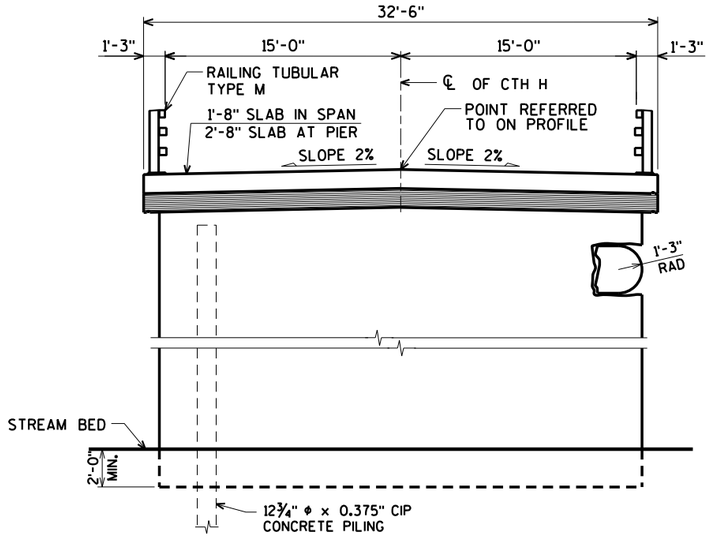
8

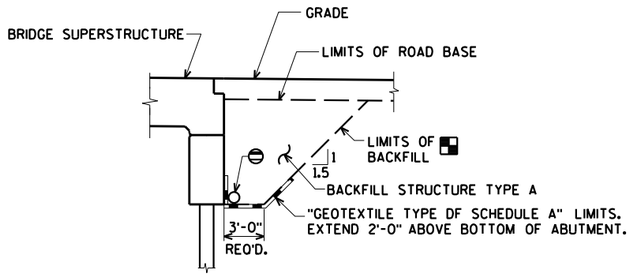
8

STATE PROJECT NUMBER

9108-02-71



TYPICAL SECTION THRU BRIDGE

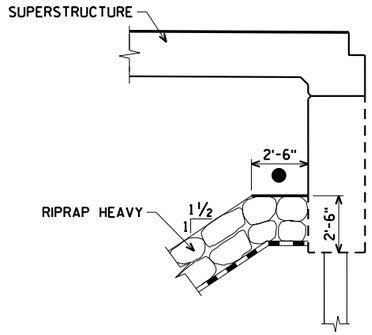


BACKFILL STRUCTURE LIMITS

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

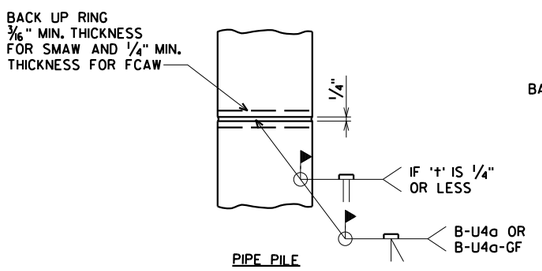
⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 6.

END PLATE DETAIL FOR CIP PILING



ECO-PASSAGE DETAIL

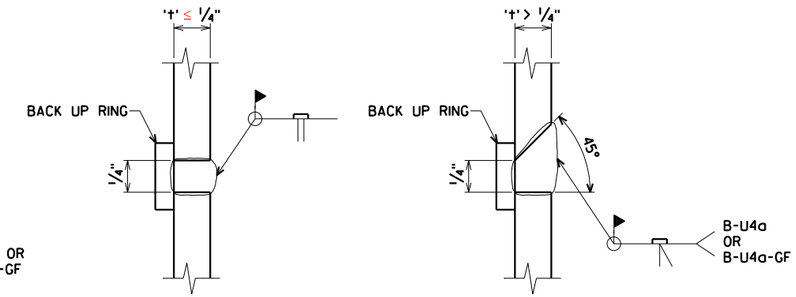
● ECO-PASSAGE.
FILL VOIDS IN RIPRAP HEAVY WITH TRAFFIC BOND LIMESTONE SCREENINGS ⅜-INCH TO FULLY FILL ALL VOIDS AND LEAVE, ON AVERAGE, TWO INCHES ABOVE THE LOWEST ROCK POINTS WHERE THEY ABUT EACH OTHER. PROVIDE LEVEL SURFACE OF THE ECO-PASSAGE. TRAFFIC BOND LIMESTONE TO BE INCIDENTAL IN THE WORK ITEM "RIPRAP HEAVY".



PILE SPLICE DETAIL

CAST-IN-PLACE PILE SHELL MATERIAL SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

GRINDING MAY BE USED IN LIEU OF BACKGOUGING.



CIP PILE WELD DETAIL

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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-42-132

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TYPICAL SECTION AND DETAILS

SHEET 3 OF 14
35

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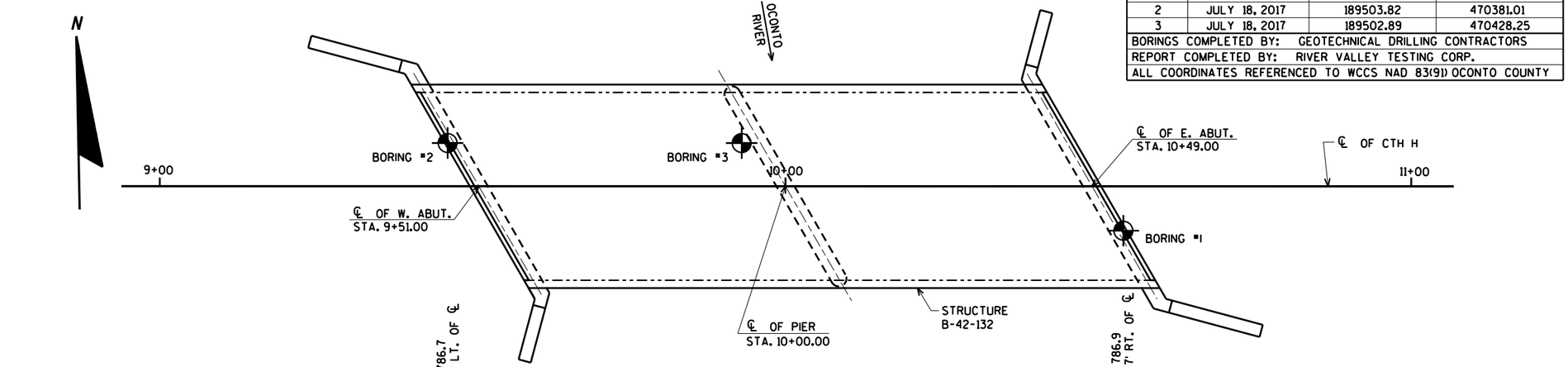
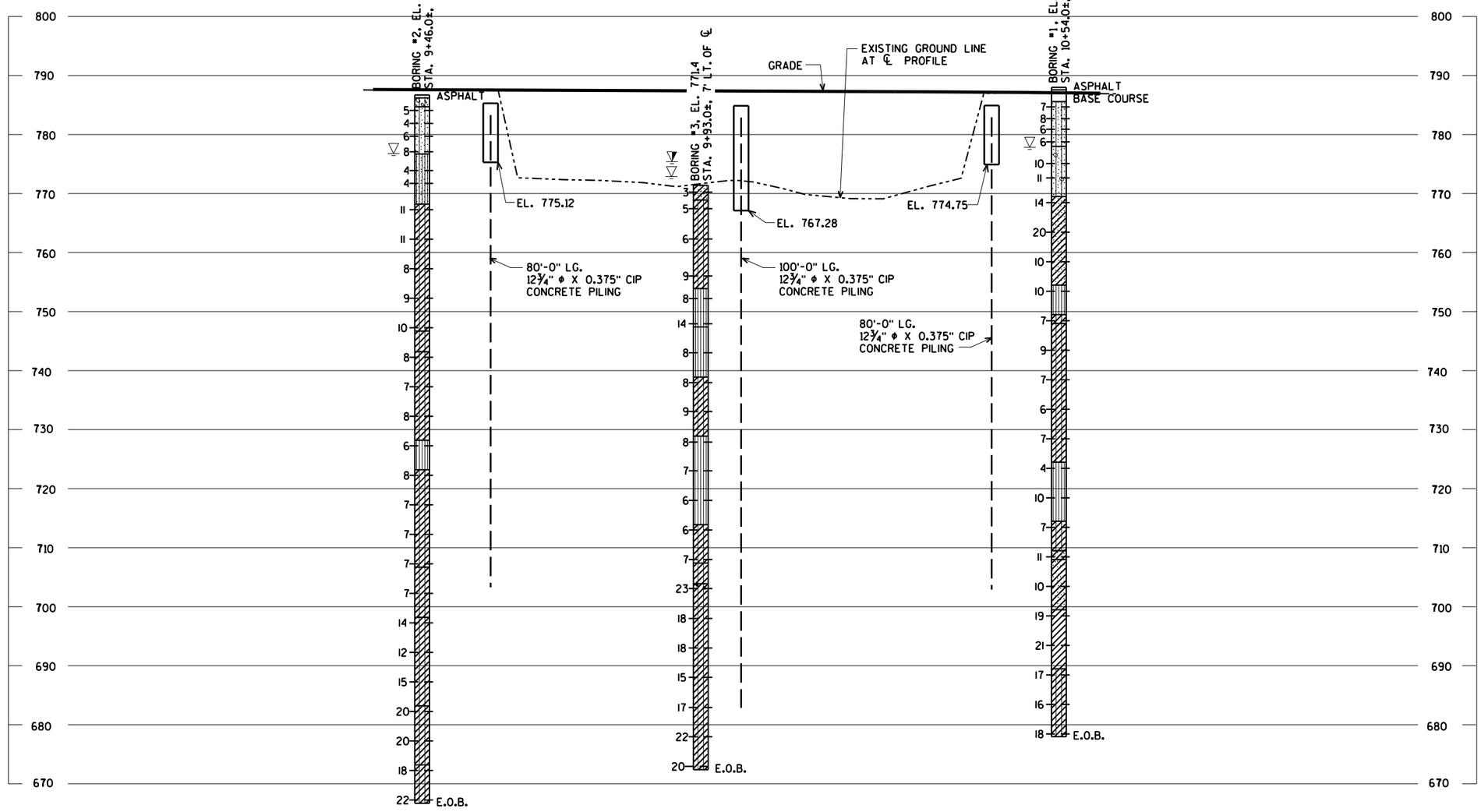
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	JULY 17, 2017	189487.70	470489.00
2	JULY 18, 2017	189503.82	470381.01
3	JULY 18, 2017	189502.89	470428.25
BORINGS COMPLETED BY:	GEOTECHNICAL DRILLING CONTRACTORS		
REPORT COMPLETED BY:	RIVER VALLEY TESTING CORP.		
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) OCONTO COUNTY			





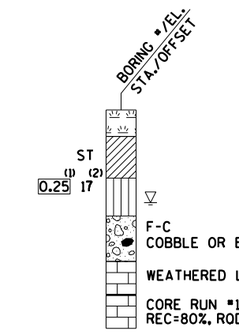
STATE PROJECT NUMBER

9108-02-71

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-42-132

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SUBSURFACE EXPLORATION

SHEET 4 OF 14
36

8

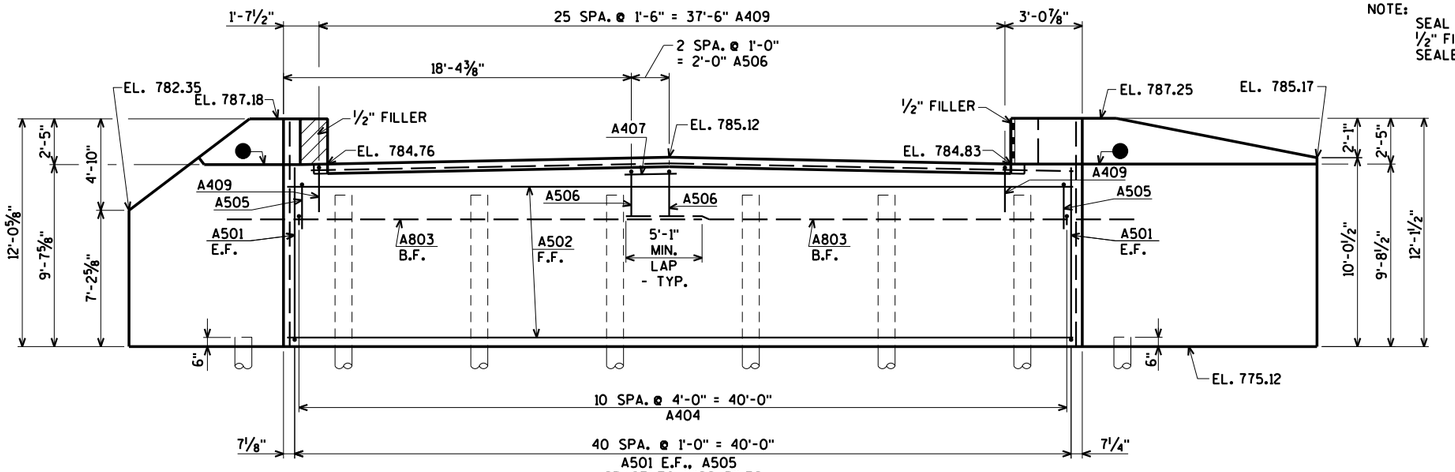
8

$PRFNAME$
U:±45-0439.00 - Oconto Co. CTH H over the Oconto River±Structures±Final±450439 soils.dgn

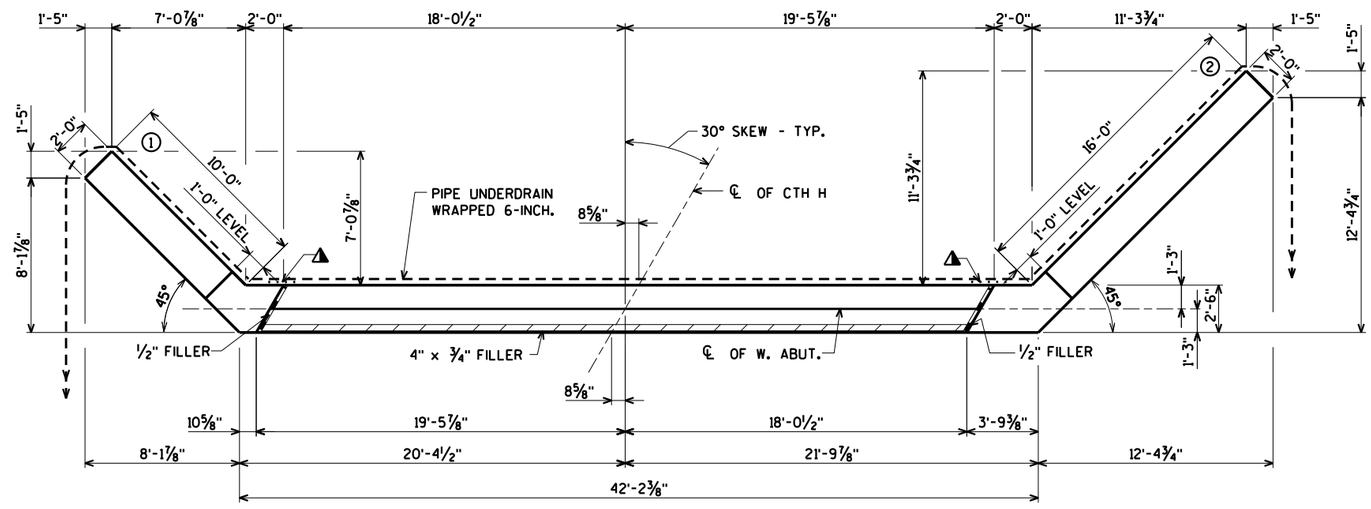
3/6/2019

PENTABLE:BReau_shd_util.tbl

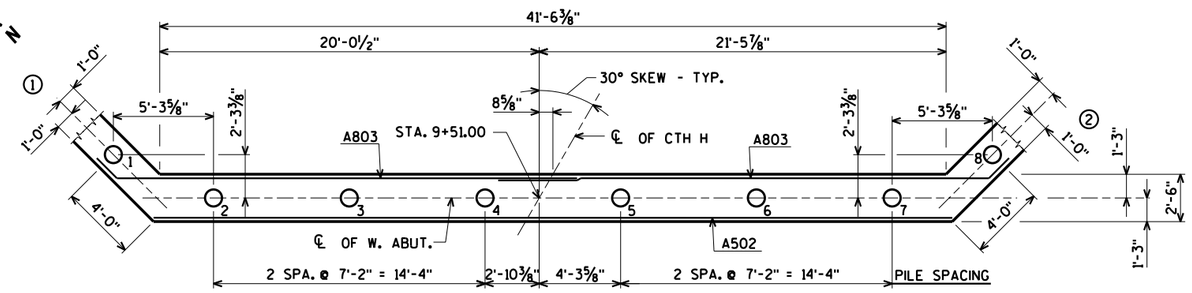
NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)



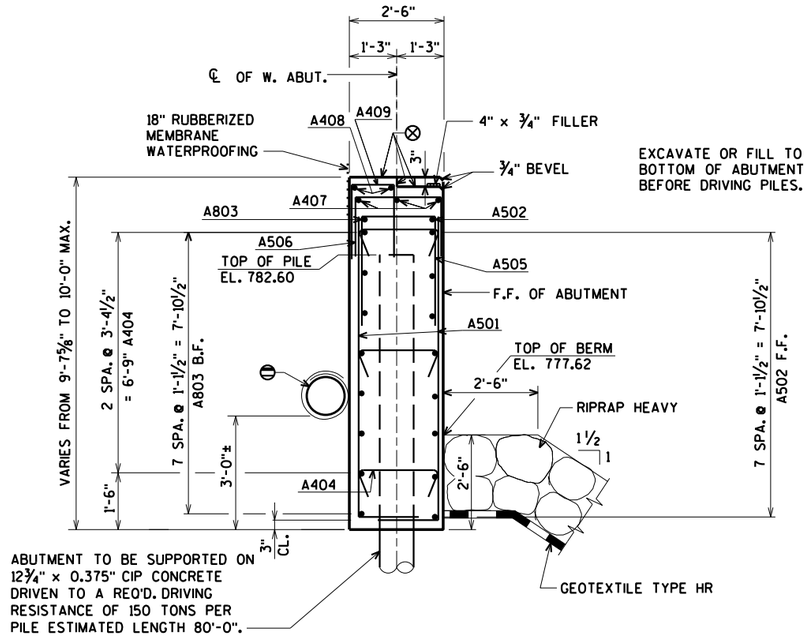
ELEVATION
(LOOKING WEST)



PLAN



PILE LAYOUT



TYPICAL SECTION THRU BODY

⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR RODENT SHIELD DETAIL SEE SHEET 6.

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

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

FOR PILE SPLICE DETAIL SEE SHEET 3.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

NOTES: DO NOT PLACE FILL ABOVE THREE FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-42-132

DRAWN BY CJM | PLANS CK'D. AEB

WEST ABUTMENT

SHEET 5 OF 14
37

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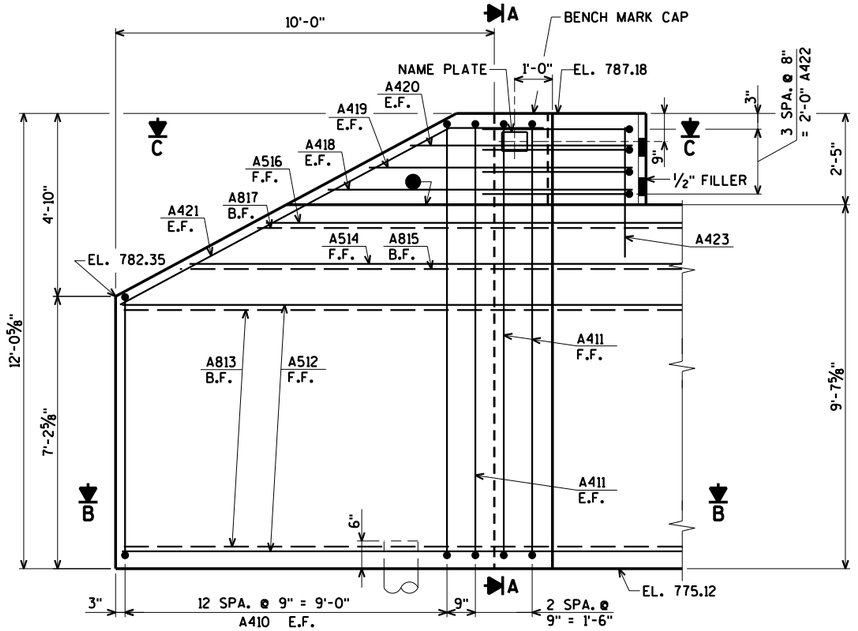
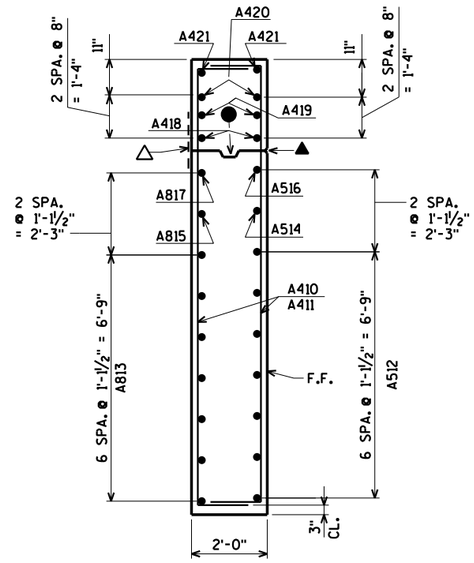
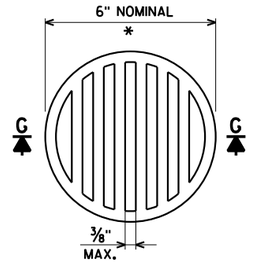
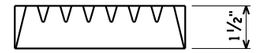


ELEVATION - WING 1



SECTION A





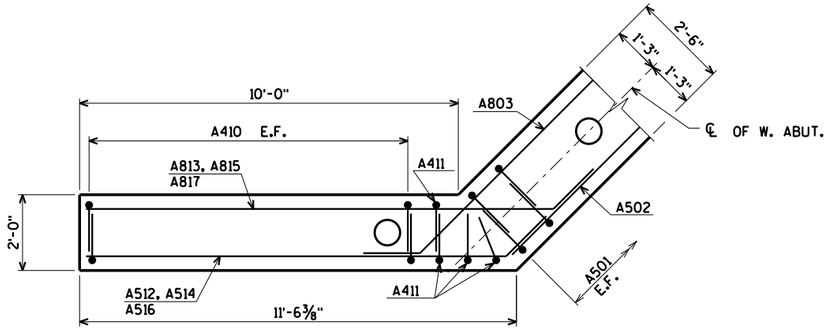
SECTION G-G

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

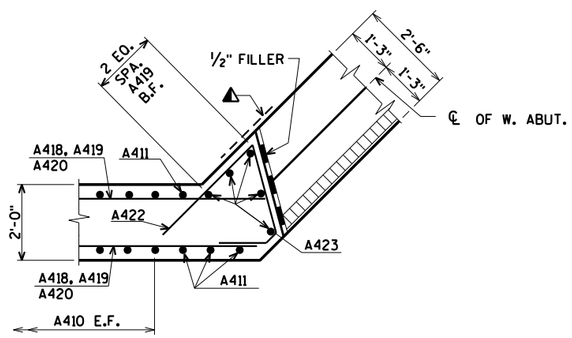
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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

RODENT SHIELD DETAIL



SECTION B



SECTION C

▲ ¾" 'V' GROOVE ON F.F. OF WING - NOT REQUIRED IF CONST. JT. IS NOT USED.

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

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

△ RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MANSONRY BRIDGES")

FOR PILE SPLICE DETAIL SEE SHEET 3.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-42-132

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WEST ABUTMENT WING 1 DETAILS

SHEET 6 OF 14
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ORIGINAL PLANS PREPARED BY
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STATE PROJECT NUMBER

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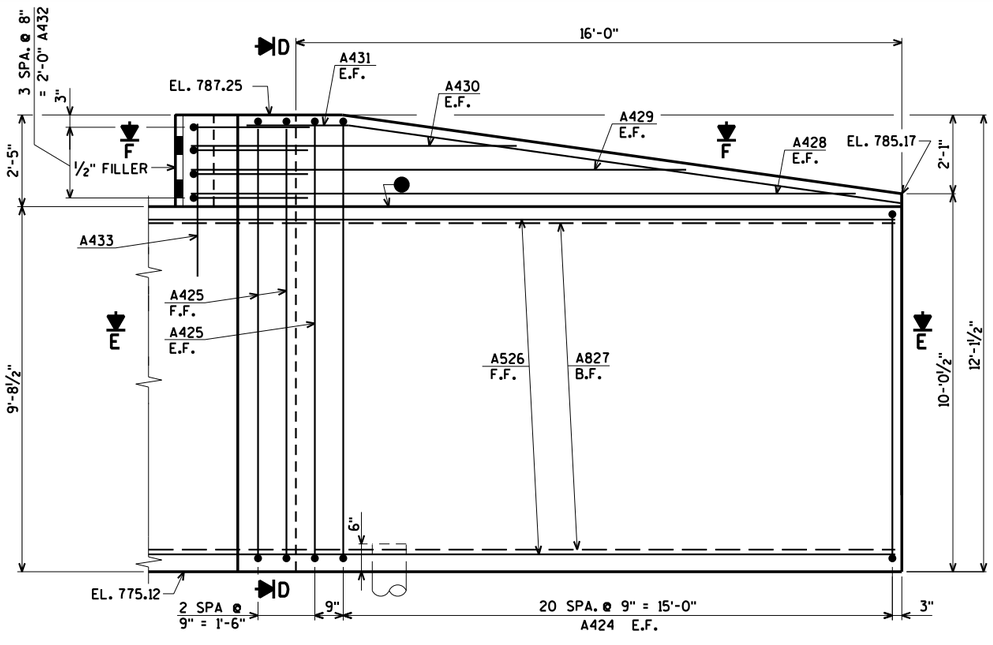
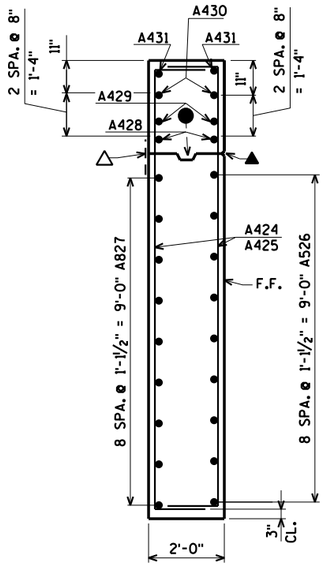
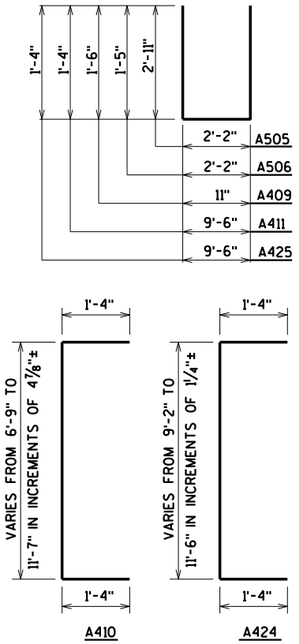
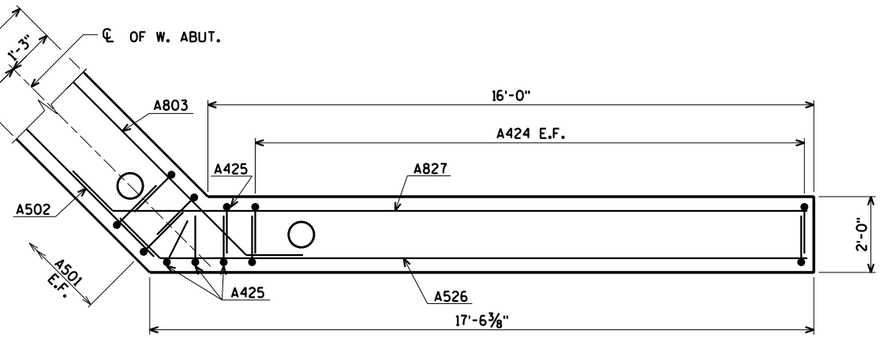


ELEVATION - WING 2

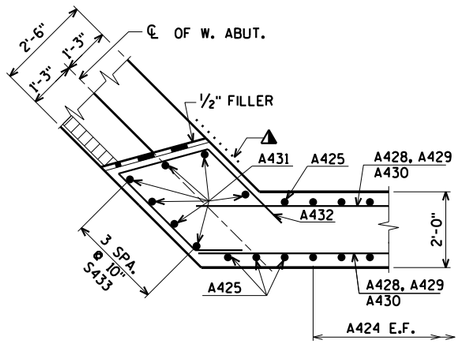


SECTION D





SECTION E



SECTION F

▲ ¾" 'V' GROOVE ON F.F. OF WING - NOT REQUIRED IF CONST. JT. IS NOT USED.

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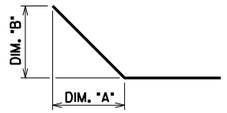
FOR PILE SPLICE DETAIL SEE SHEET 3.

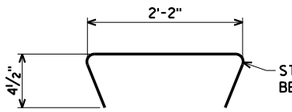
B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.



BAR NO.	DIM. "A"	DIM. "B"
A803	1'-0¾"	1'-0¾"
A512	1'-0¾"	1'-0¾"
A813	1'-0¾"	1'-0¾"
A514	1'-0¾"	1'-0¾"
A815	1'-0¾"	1'-0¾"
A516	1'-0¾"	1'-0¾"
A817	1'-0¾"	1'-0¾"
A421	8'-10"	4'-9"
A526	1'-0¾"	1'-0¾"
A827	1'-0¾"	1'-0¾"
A431	8'-0"	3'-4"



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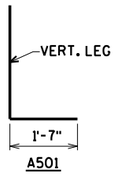

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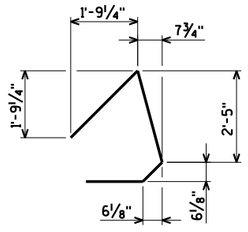

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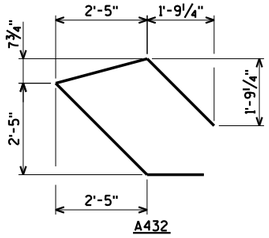


A432

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
A410	2 SERIES OF 13	9'-3" TO 14'-1"
A424	2 SERIES OF 21	11'-8" TO 14'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	3,160# UNCOATED 1,930# COATED LOCATION
A501		82	10-5	X		BODY VERT. E.F.
A502		9	41-11			BODY HORIZ. F.F.
A803		18	27-11	X		BODY HORIZ. B.F.
A404		33	2-9	X		BODY TIES
A505		41	7-10	X		BODY VERT. TOP
A506		3	4-9	X		BODY VERT. TOP
A407		3	2-6			BODY HORIZ. TOP
A408		2	39-0			BODY HORIZ. TOP NOTCH
A409		26	3-9	X		BODY VERT. TOP NOTCH
A410	X	26	11-8	X	⊗	WING 1 VERT. E.F.
A411	X	4	14-1	X		WING 1 VERT. E.F.
A512	X	7	12-9	X		WING 1 HORIZ. F.F.
A813	X	7	14-6	X		WING 1 HORIZ. B.F.
A514	X	1	11-0	X		WING 1 HORIZ. F.F.
A815	X	1	12-4	X		WING 1 HORIZ. B.F.
A516	X	1	8-7	X		WING 1 HORIZ. F.F.
A817	X	1	10-3	X		WING 1 HORIZ. B.F.
A418	X	2	6-11			WING 1 HORIZ. E.F.
A419	X	2	4-11			WING 1 HORIZ. E.F.
A420	X	2	3-8			WING 1 HORIZ. E.F.
A421	X	2	11-5	X		WING 1 DIAG. E.F.
A422	X	4	7-0	X		WING 1 HORIZ.
A423	X	5	3-6			WING 1 VERT.
A424	X	42	12-8	X	⊗	WING 2 VERT. E.F.
A425	X	4	14-1	X		WING 2 VERT. E.F.
A526	X	9	18-9	X		WING 2 HORIZ. F.F.
A827	X	9	20-6	X		WING 2 HORIZ. B.F.
A428	X	2	17-2			WING 2 HORIZ. E.F.
A429	X	2	12-7			WING 2 HORIZ. E.F.
A430	X	2	7-8			WING 2 HORIZ. E.F.
A431	X	2	16-3	X		WING 2 DIAG. E.F.
A432	X	4	9-8	X		WING 2 HORIZ.
A433	X	7	3-9			WING 2 VERT.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-42-132

DRAWN BY CJM | PLANS CK'D. AEB

WEST ABUTMENT WING 2 DETAILS

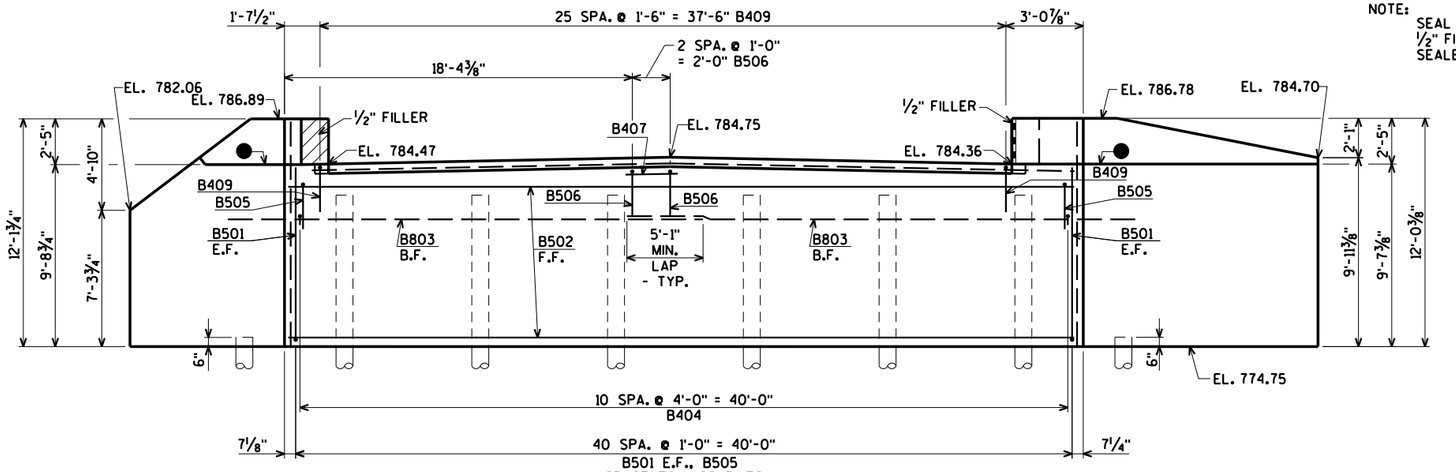
SHEET 7 OF 14
39

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

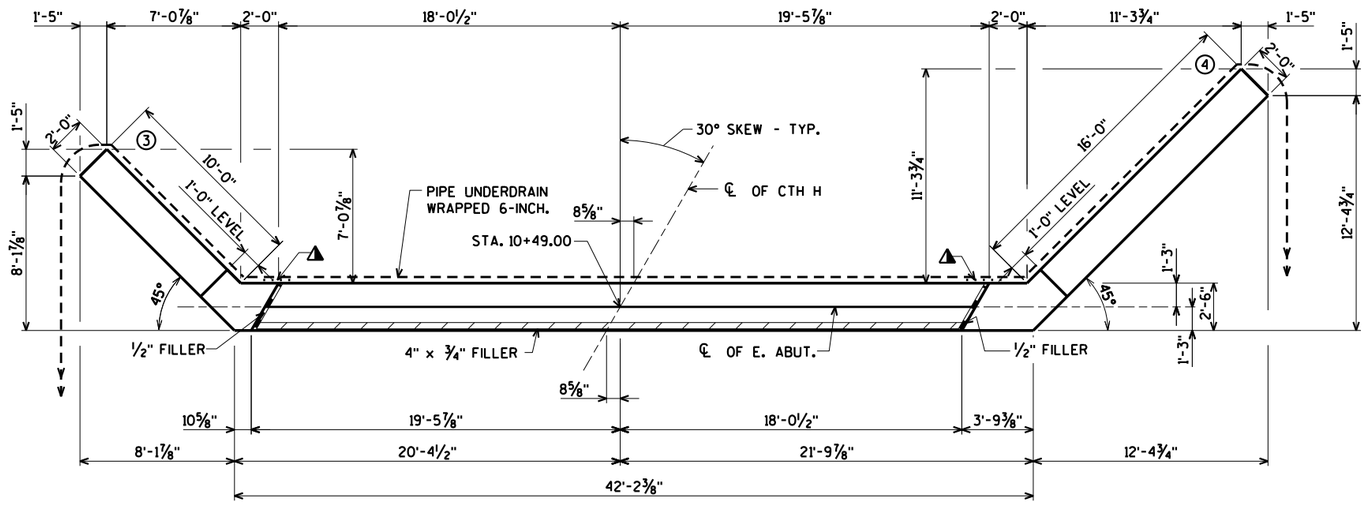
STATE PROJECT NUMBER

9108-02-71

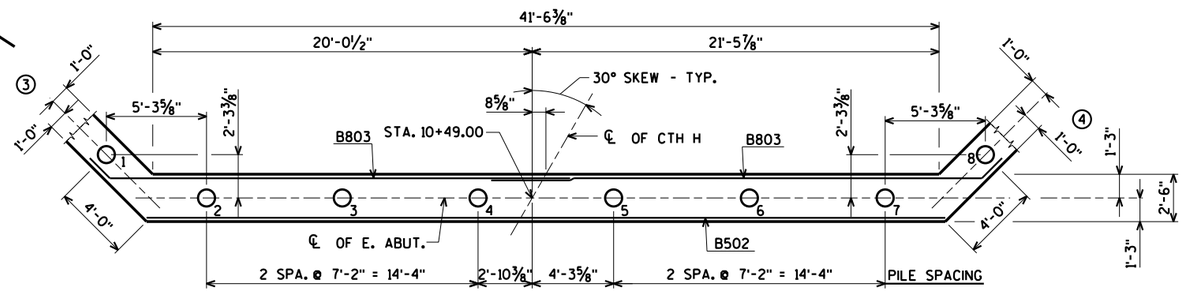
NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)



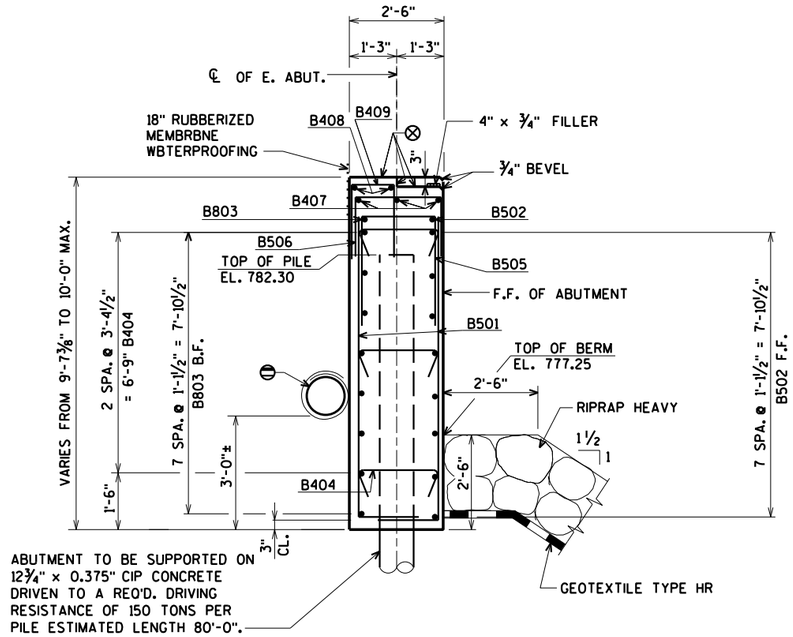
ELEVATION
(LOOKING EAST)



PLAN



PILE LAYOUT



TYPICAL SECTION THRU BODY

⊗ STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING SUPERSTRUCTURE. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. FOR RODENT SHIELD DETAIL SEE SHEET 6.

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

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

FOR PILE SPLICE DETAIL SEE SHEET 3.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

NOTES: DO NOT PLACE FILL ABOVE THREE FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

EXCAVATE OR FILL TO BOTTOM OF ABUTMENT BEFORE DRIVING PILES.

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STATE OF WISCONSIN
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STRUCTURE B-42-132

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EAST ABUTMENT

SHEET 8 OF 14
40

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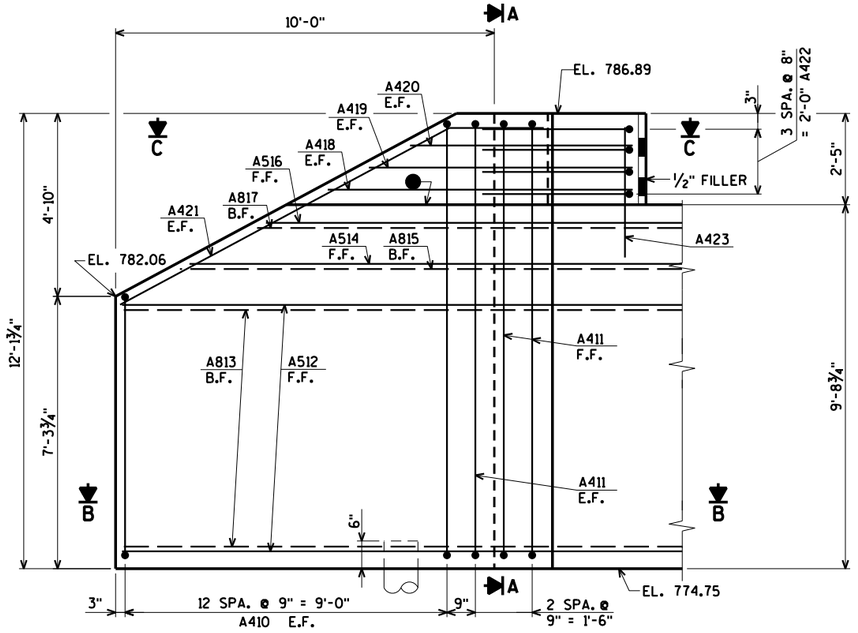
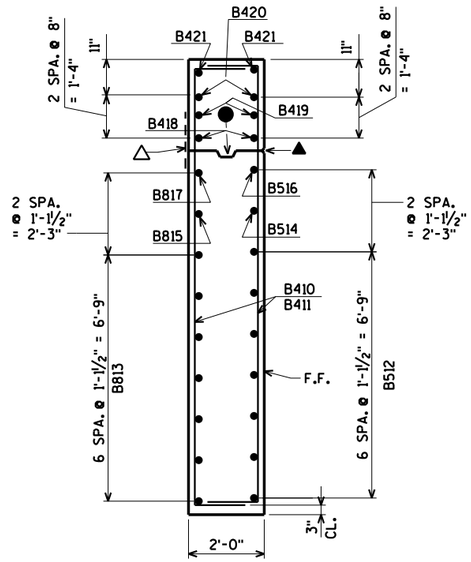
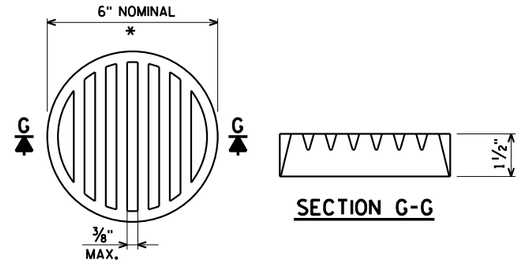


ELEVATION - WING 3



SECTION A



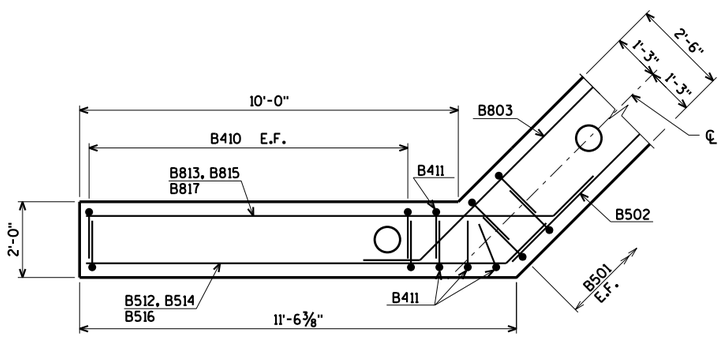
SECTION G-G

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

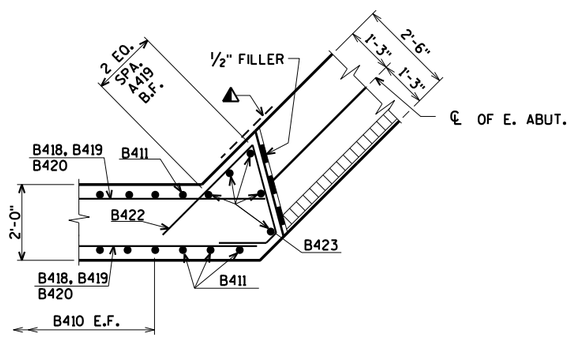
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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

RODENT SHIELD DETAIL



SECTION B



SECTION C

▲ ¾" 'V' GROOVE ON F.F. OF WING - NOT REQUIRED IF CONST. JT. IS NOT USED.

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

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△ RUBBERIZED MEMBRANE WATERPROOFING IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MANSONRY BRIDGES")

FOR PILE SPLICE DETAIL SEE SHEET 3.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-42-132

DRAWN BY CJM | PLANS CK'D. AEB

EAST ABUTMENT WING 3 DETAILS

SHEET 9 OF 14
41

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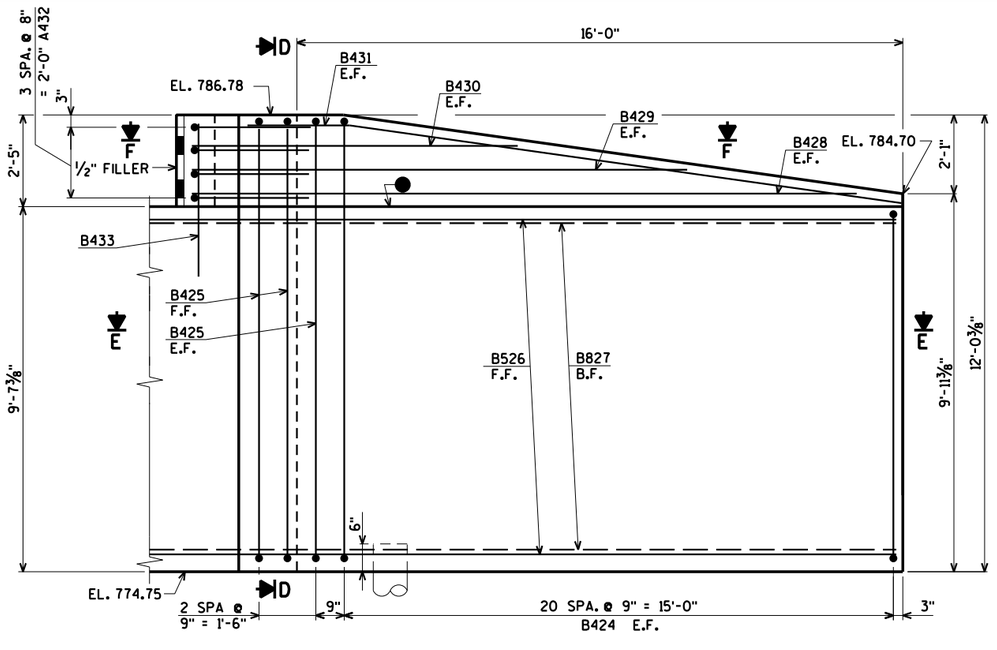
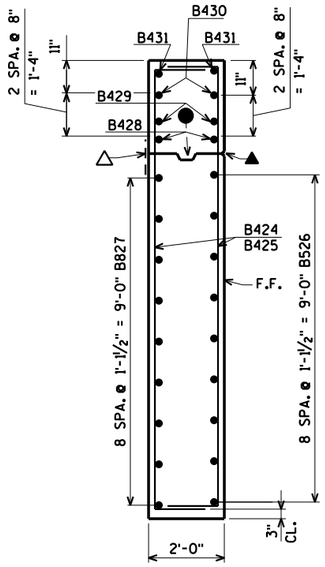
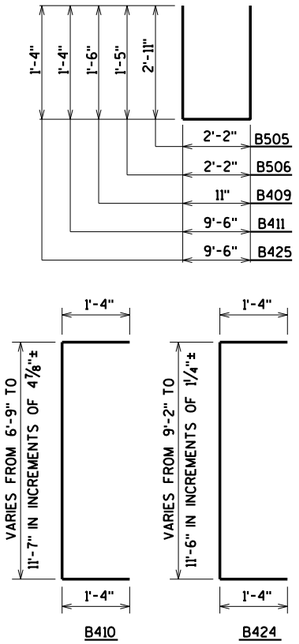
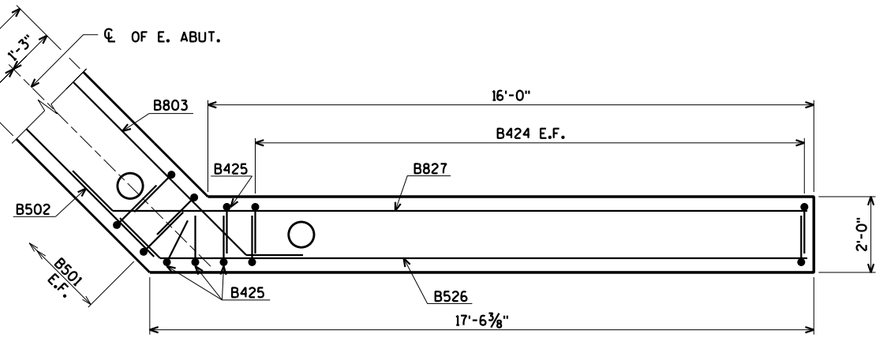


ELEVATION - WING 4

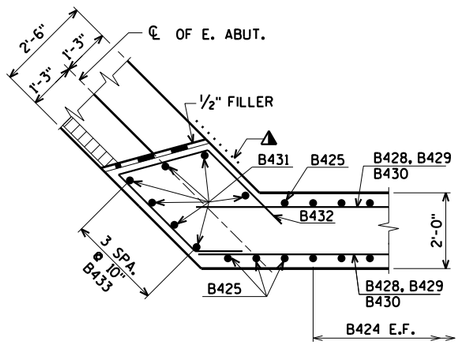


SECTION D



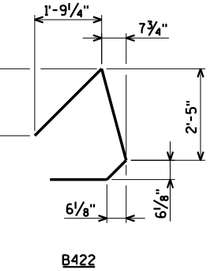


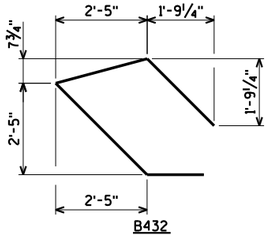
SECTION E

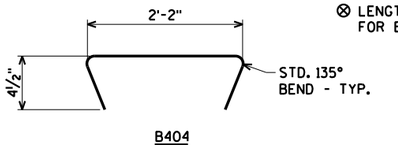


SECTION F

BAR NO.	DIM. "A"	DIM. "B"
B803	1'-0¾"	1'-0¾"
B512	1'-0¾"	1'-0¾"
B813	1'-0¾"	1'-0¾"
B514	1'-0¾"	1'-0¾"
B815	1'-0¾"	1'-0¾"
B516	1'-0¾"	1'-0¾"
B817	1'-0¾"	1'-0¾"
B421	8'-10"	4'-9"
B526	1'-0¾"	1'-0¾"
B827	1'-0¾"	1'-0¾"
B431	8'-0"	3'-4"







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FOR PILE SPLICE DETAIL SEE SHEET 3.

B.F. DENOTES BACK FACE.

F.F. DENOTES FRONT FACE.

E.F. DENOTES EACH FACE.

BAR SERIES TABLE

BAR MARK	NO REQ'D.	LENGTH
B410	2 SERIES OF 13	9'-3" TO 14'-1"
B424	2 SERIES OF 21	11'-8" TO 14'-0"

BUNDLE AND TAG EACH SERIES SEPARATELY.

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	3,170# UNCOATED 1,930# COATED LOCATION
B501		82	10-5	X		BODY VERT. E.F.
B502		9	41-11			BODY HORIZ. F.F.
B803		18	27-11	X		BODY HORIZ. B.F.
B404		33	2-9	X		BODY TIES
B505		41	8-1	X		BODY VERT. TOP
B506		3	4-9	X		BODY VERT. TOP
B407		3	2-6			BODY HORIZ. TOP
B408		2	39-0			BODY HORIZ. TOP NOTCH
B409		26	3-9	X		BODY VERT. TOP NOTCH
B410	X	26	11-8	X	⊗	WING 3 VERT. E.F.
B411	X	4	14-1	X		WING 3 VERT. E.F.
B512	X	7	12-9	X		WING 3 HORIZ. F.F.
B813	X	7	14-6	X		WING 3 HORIZ. B.F.
B514	X	1	11-0	X		WING 3 HORIZ. F.F.
B815	X	1	12-4	X		WING 3 HORIZ. B.F.
B516	X	1	8-7	X		WING 3 HORIZ. F.F.
B817	X	1	10-3	X		WING 3 HORIZ. B.F.
B418	X	2	6-11			WING 3 HORIZ. E.F.
B419	X	2	4-11			WING 3 HORIZ. E.F.
B420	X	2	3-8			WING 3 HORIZ. E.F.
B421	X	2	11-5	X		WING 3 DIAG. E.F.
B422	X	4	7-0	X		WING 3 HORIZ.
B423	X	5	3-6			WING 3 VERT.
B424	X	42	12-8	X	⊗	WING 4 VERT. E.F.
B425	X	4	14-1	X		WING 4 VERT. E.F.
B526	X	9	18-9	X		WING 4 HORIZ. F.F.
B827	X	9	20-6	X		WING 4 HORIZ. B.F.
B428	X	2	17-2			WING 4 HORIZ. E.F.
B429	X	2	12-7			WING 4 HORIZ. E.F.
B430	X	2	7-8			WING 4 HORIZ. E.F.
B431	X	2	16-3	X		WING 4 DIAG. E.F.
B432	X	4	9-8	X		WING 4 HORIZ.
B433	X	7	3-9			WING 4 VERT.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-42-132

DRAWN BY CJM | PLANS CK'D. AEB

EAST ABUTMENT WING 4 DETAILS

SHEET 10 OF 14
42

ORIGINAL PLANS PREPARED BY
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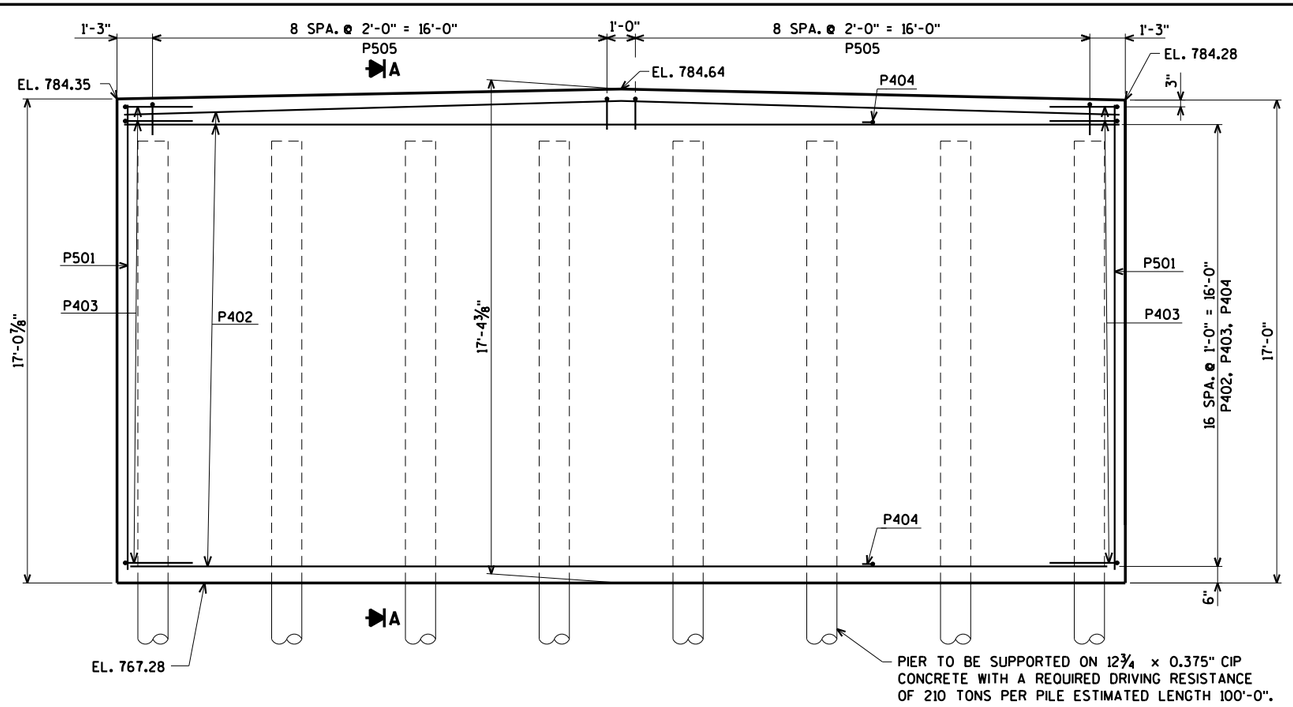
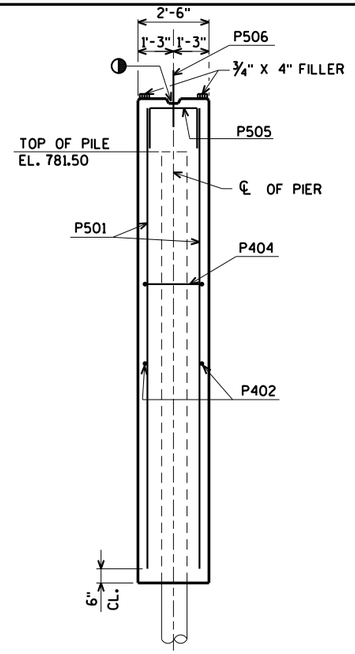


ELEVATION
(LOOKING EAST)



SECTION A

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

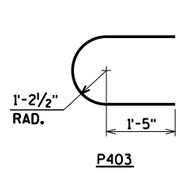
STATE PROJECT NUMBER

9108-02-71

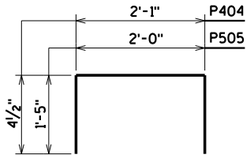
BILL OF BARS

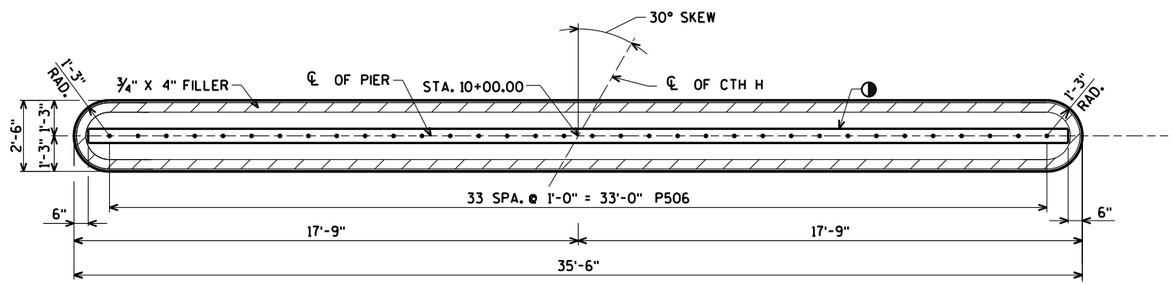
BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	70# COATED 2,550# UNCOATED LOCATION
P501		74	16-4			COLUMN VERT.
P402		36	33-0			COLUMN HORIZ.
P403		36	6-8	X		COLUMN HORIZ. @ ENDS
P404		136	2-9	X		COLUMN TIES
P505		18	4-8	X		COLUMN TOP
P506	X	34	2-0			COLUMN DOWELS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

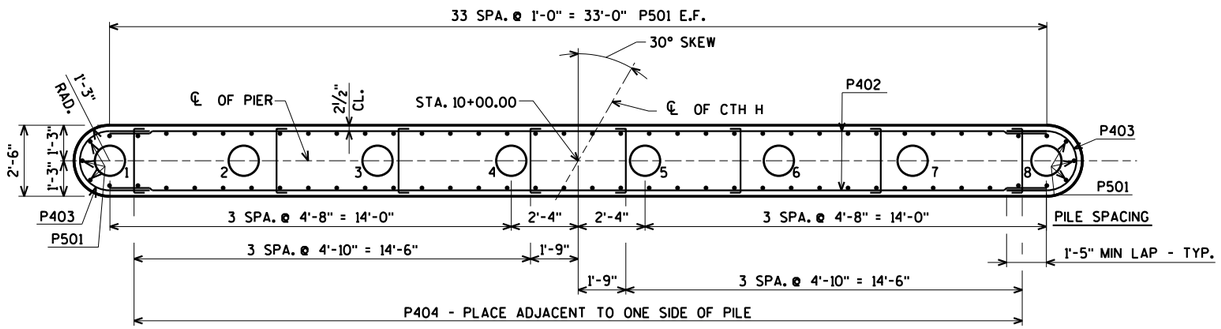


P403





PLAN



PILE LAYOUT

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

FOR PILE SPLICE DETAIL SEE SHEET 3.

E.F. DENOTES EACH FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-42-132

DRAWN BY CJM | PLANS CK'D. AEB

PIER

SHEET 11 OF 14
43

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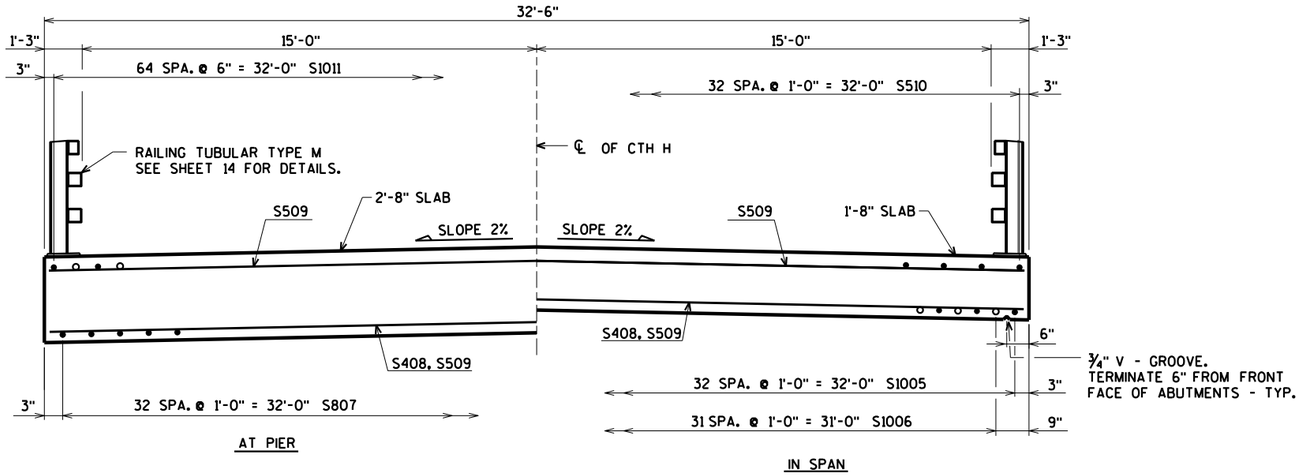
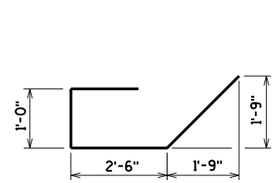


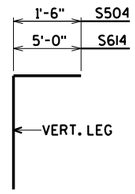
TYPICAL SECTION THRU BRIDGE

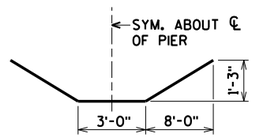
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

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

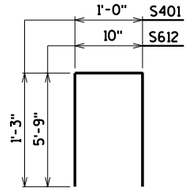


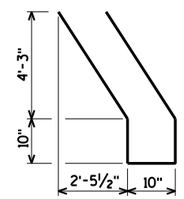
S503





S807



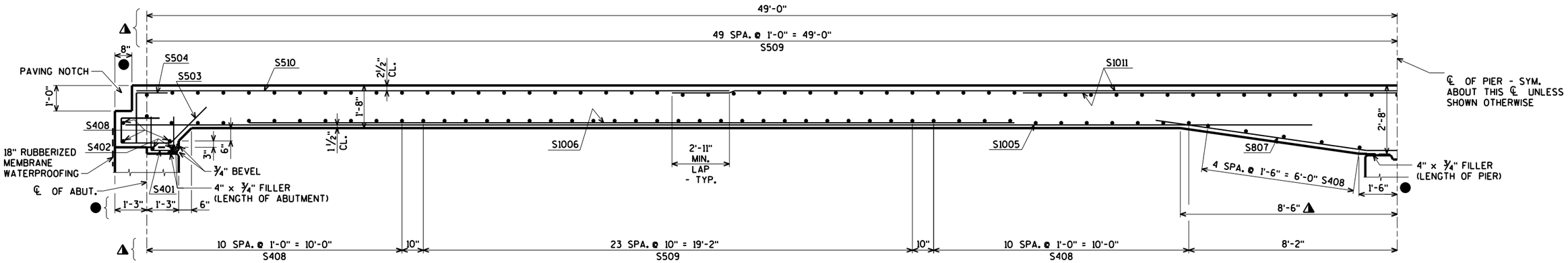


S615

BILL OF BARS

BAR. NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	47,480# COATED LOCATION
S401	X	66	3-4	X		SLAB @ ABUT. NOTCH
S402	X	4	37-1			SLAB @ ABUT. NOTCH
S503	X	66	7-4	X		SLAB @ ABUT.
S504	X	66	3-6	X		SLAB @ ABUT.
S1005	X	66	47-0			SLAB LONG. BOT.
S1006	X	64	30-0			SLAB LONG. BOT.
S807	X	33	19-3	X		SLAB LONG. BOT. @ PIER
S408	X	60	37-1			SLAB TRANS. BOT.
S509	X	147	37-1			SLAB TRANS. BOT. & TOP
S510	X	66	24-0			SLAB LONG. TOP
S1011	X	65	43-1			SLAB LONG. TOP @ PIER
S612	X	60	12-0	X		SLAB @ RAIL POSTS
S613	X	112	6-0			SLAB @ INT. RAIL POSTS
S614	X	16	6-0	X		SLAB @ END RAIL POSTS
S615	X	4	12-0	X		SLAB @ END RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PART LONGITUDINAL SECTION

● DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE.

⚠ DIMENSIONS MEASURED ALONG ℄ OF CTH H

NO.	DATE	REVISION	BY

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STRUCTURE B-42-132

DRAWN BY CJM | PLANS CK'D. AEB

SUPERSTRUCTURE

SHEET 12 OF 14
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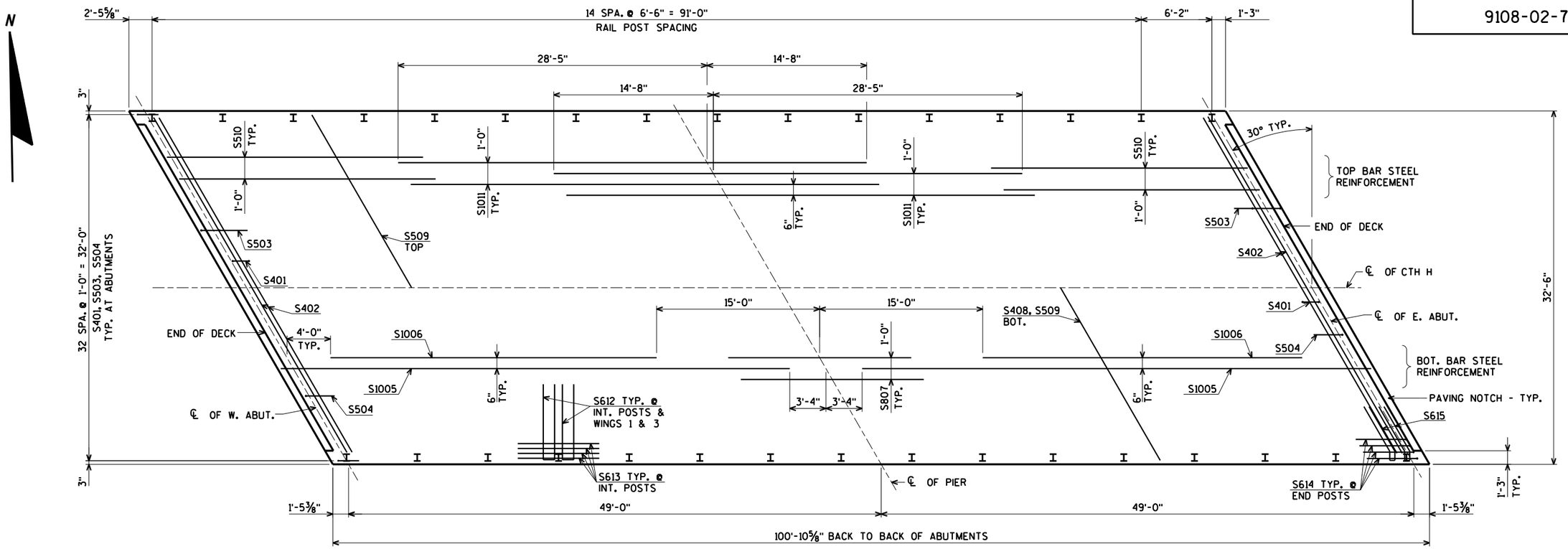
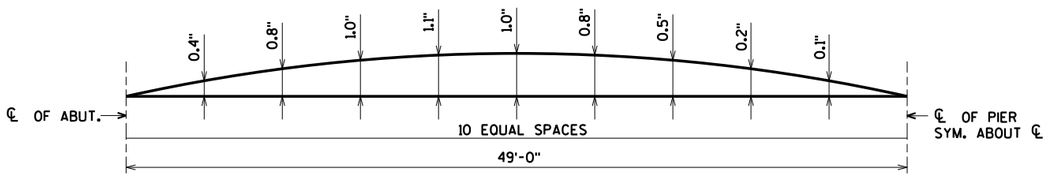


PLAN

TOP OF DECK ELEVATIONS

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

LOCATION	℄ OF W. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ OF PIER	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ OF E. ABUT.
N. EDGE OF SLAB	787.25	787.23	787.21	787.20	787.18	787.16	787.14	787.13	787.11	787.09	787.08	787.06	787.04	787.02	787.00	786.98	786.97	786.95	786.93	786.92	786.89
℄ OF STRUCTURE	787.54	787.52	787.51	787.49	787.47	787.45	787.43	787.42	787.40	787.38	787.37	787.35	787.33	787.31	787.29	787.28	787.26	787.24	787.22	787.20	787.17
S. EDGE OF SLAB	787.18	787.16	787.15	787.13	787.11	787.09	787.08	787.06	787.04	787.02	787.01	786.99	786.97	786.95	786.93	786.92	786.90	786.87	786.84	786.81	786.78



CAMBER DIAGRAM

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

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, ℄ OF PIER, AND 1/2 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-42-132

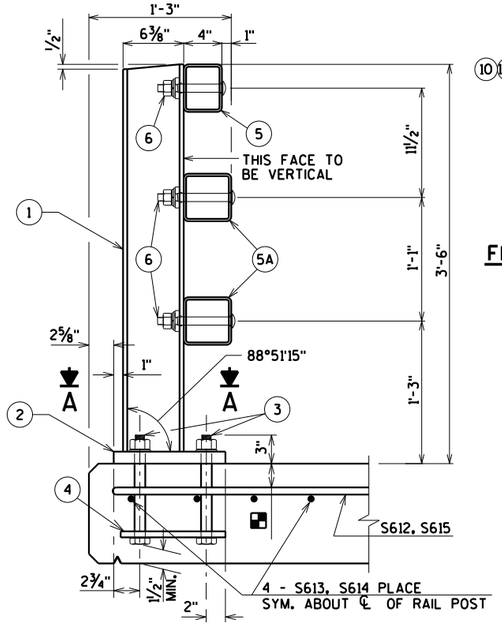
DRAWN BY CJM | PLANS CK'D. AEB

SUPERSTRUCTURE PLAN

SHEET 13 OF 14
45

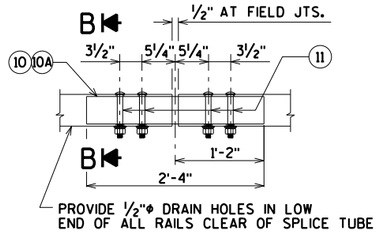
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

STATE PROJECT NUMBER
9108-02-71

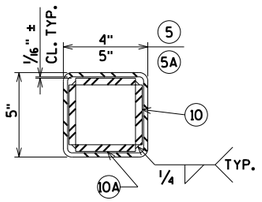


SECTION THRU RAILING ON DECK

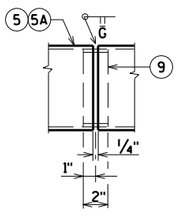
■ PLACE BELOW TOP MAT SLAB REINFORCEMENT.



FIELD ERECTION JOINT DETAIL

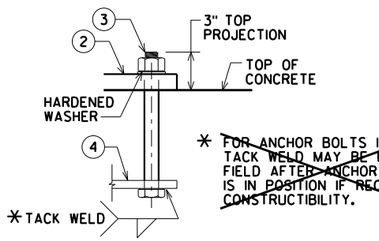


SECTION B

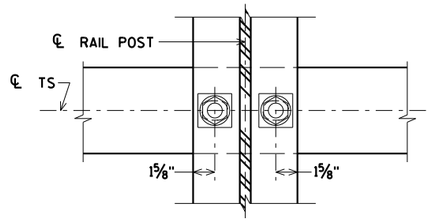


SHOP RAIL SPLICE DETAIL

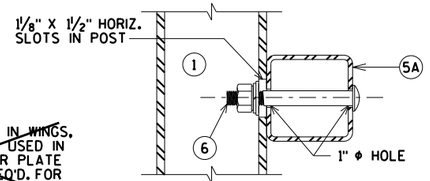
(LOCATION MUST BE SHOWN ON THE SHOP DRAWINGS)



ANCHOR BOLTS



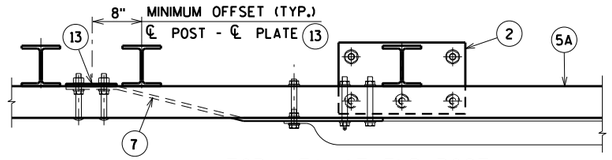
SECTION THRU POST WEB



SECTION THRU RAIL

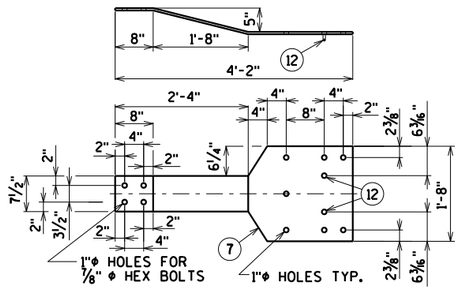
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



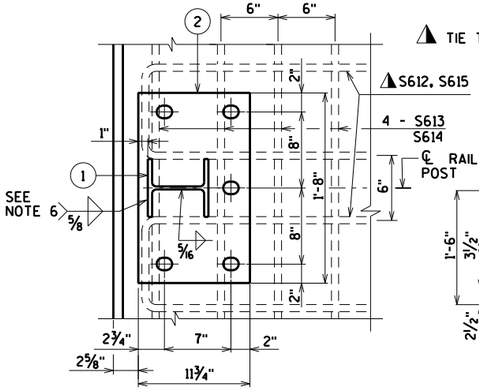
TOP VIEW AT END POST

(THRIE BEAM RAIL ATTACHMENT)

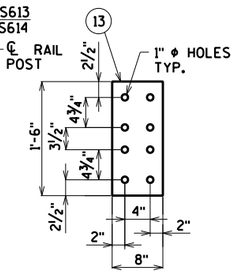


BACK-UP PLATE DETAIL

(AT BEAM GUARD ATTACHMENT)

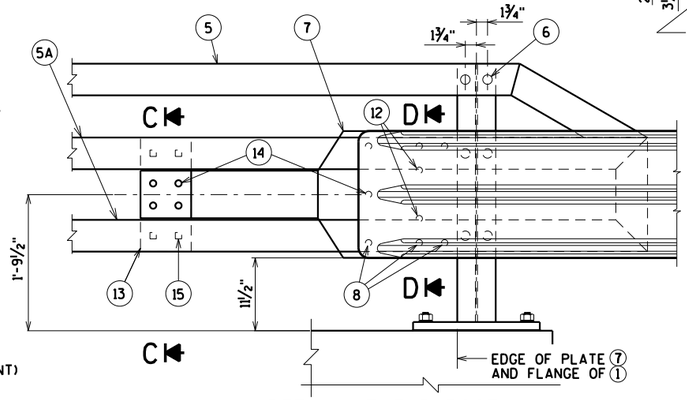


SECTION A



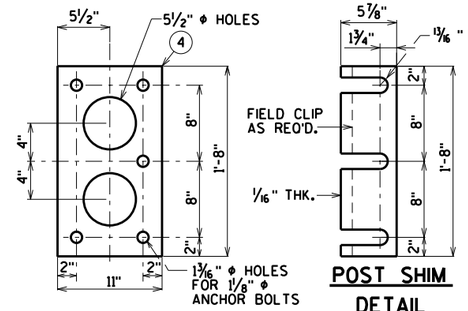
ANCHOR PLATE

(AT BEAM GUARD ATTACHMENT)



DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)



ANCHOR PLATE

(AT RAIL TO DECK CONNECTION)

POST SHIM DETAIL

PART ELEVATION OF RAILING

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 1⅝" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

③ ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. ~~USE 1'-9" LONG IN ABUTMENT WINGS.~~ AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. ~~USE 10¾" LONG AT ALL OTHER LOCATIONS.~~ (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)

④ ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1¾" 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" 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" φ A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16 " X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS ~~AND 15/16 " X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS~~ IN PLATE NO. 10A.

⑫ ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

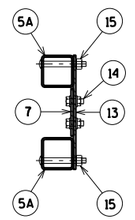
⑬ ⅜" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

⑭ ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).

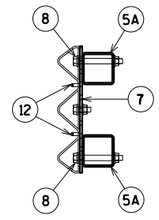
⑮ 1" φ HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-42-132" 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 S.S.P.C. SPECIFICATIONS.
10. ~~WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.~~
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).



SECTION C



SECTION D

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-42-132

DRAWN BY CJM | PLANS CK'D. AEB

RAILING TUBULAR TYPE M

SHEET 14 OF 14
46

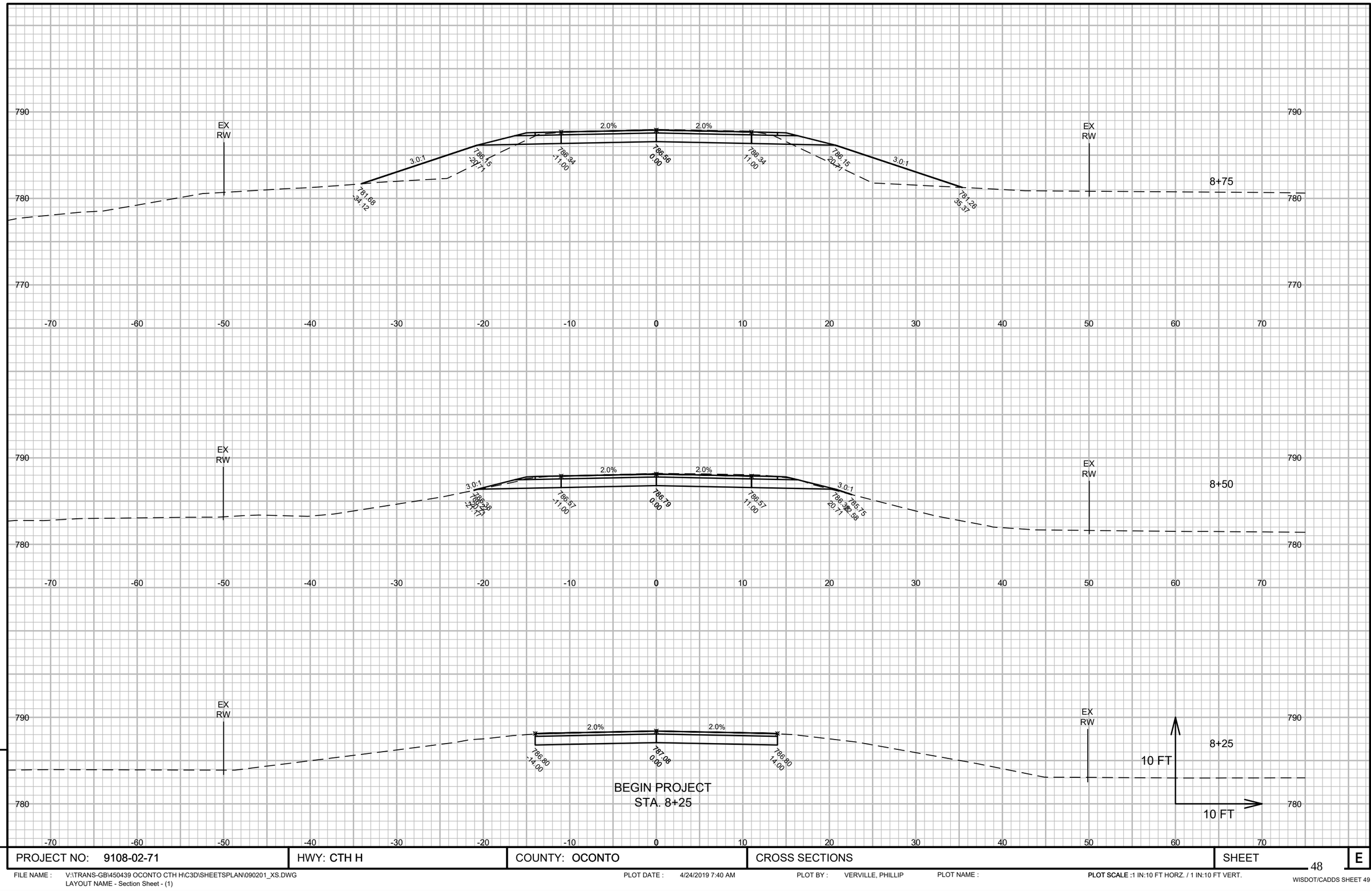
ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

3/5/2019

EARTHWORK - CTH H

STATION	AREA (SF)				Incremental Vol (CY) (Unadjusted)				Cumulative Vol (CY)			
	Cut	Unusable Pavement Material	Fill	Marsh Exc	Cut	Unusable Pavement Material	Fill	Marsh Exc	Cut 1.00	Expanded Fill 1.30	Expanded Marsh Backfill 1.50	Mass Ordinate
					Note 1	Note 2	Note 3		Note 1		Note 4	Note 8
8+25	37	12	0	0	0	0	0	0	0	0	0	0
8+50	48	12	1	0	39	11	0	0	39	1	0	28
8+75	39	12	59	44	40	11	28	20	80	37	31	21
9+00	35	12	116	91	34	11	81	63	114	142	124	-61
9+25	29	12	200	117	30	11	146	96	144	332	269	-233
9+50	21	12	118	90	23	11	147	96	167	524	413	-413
B-42-132												
10+50	20	12	145	60	0	0	0	0	167	524	413	-413
10+75	34	12	200	124	25	11	160	85	192	538	652	-606
11+00	34	12	129	99	31	11	152	103	223	553	881	-784
11+25	0	12	0	101	16	11	60	93	239	567	970	-857
11+50	32	12	0	0	15	11	0	47	254	581	970	-853
					254	100	775	603				

Notes:	
1 - Cut	Cut includes existing asphalt and base material
2 - Unusable Pavement Material	Does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Material Volume
4 - Expanded Marsh Backfill	Will be backfilled with Granular Backfill
8 - Mass Ordinate	Cut - Unusable Pavement Material - (Fill * Fill Factor)



PROJECT NO: 9108-02-71	HWY: CTH H	COUNTY: OCONTO	CROSS SECTIONS	SHEET	
				48	E

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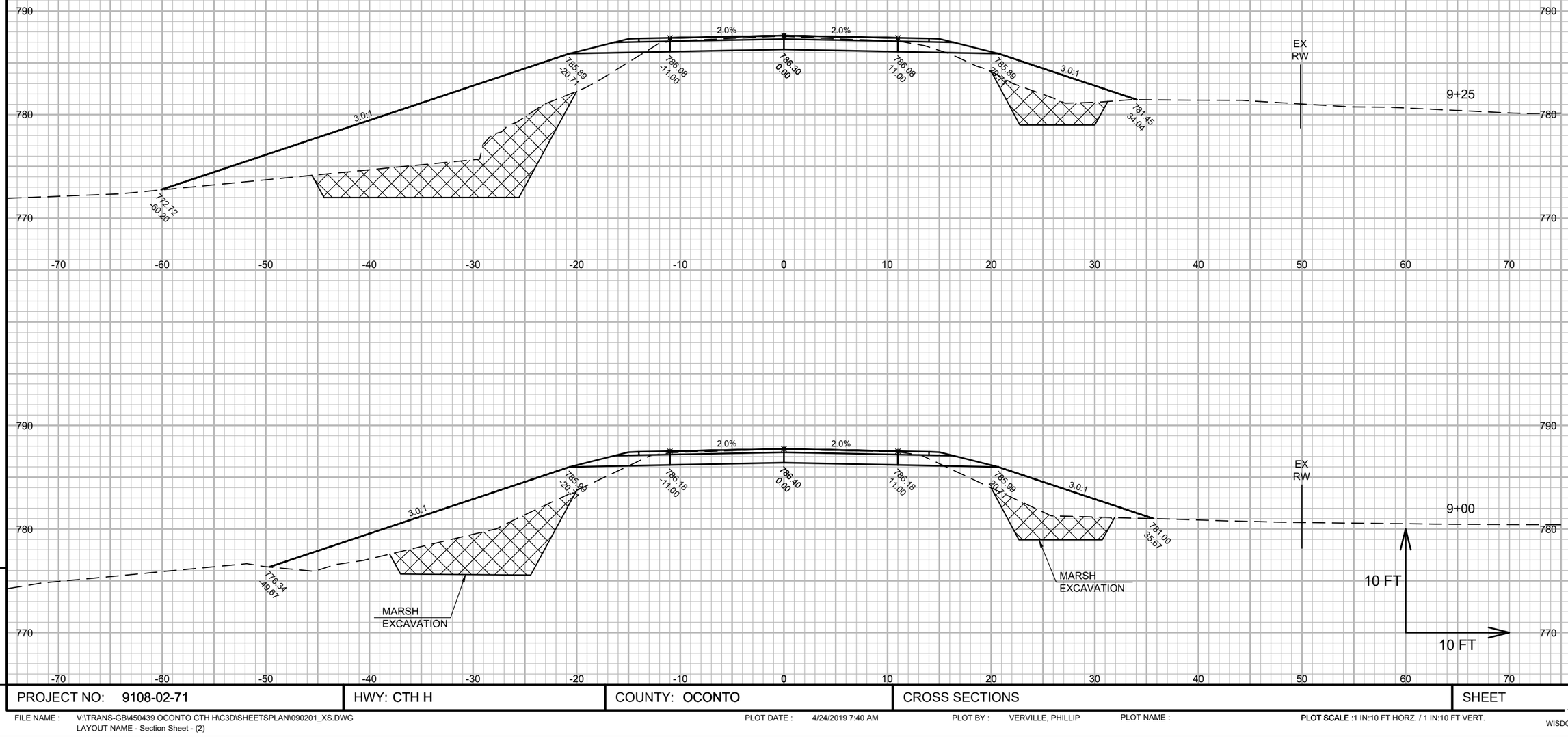
LAYOUT NAME - Section Sheet - (1)

PLOT DATE : 4/24/2019 7:40 AM PLOT BY : VERVILLE, PHILLIP PLOT NAME : PLOT SCALE :1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

STRUCTURE B-42-132 REQUIRED



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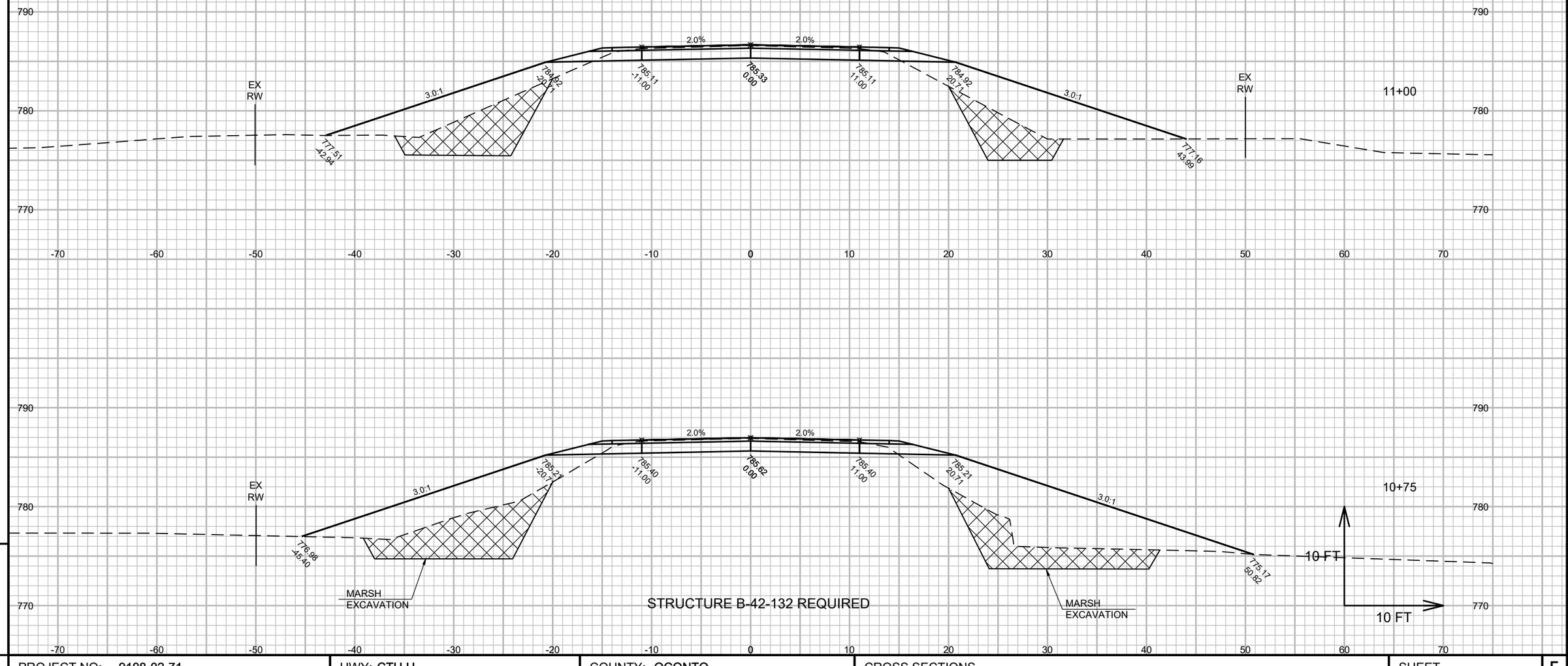

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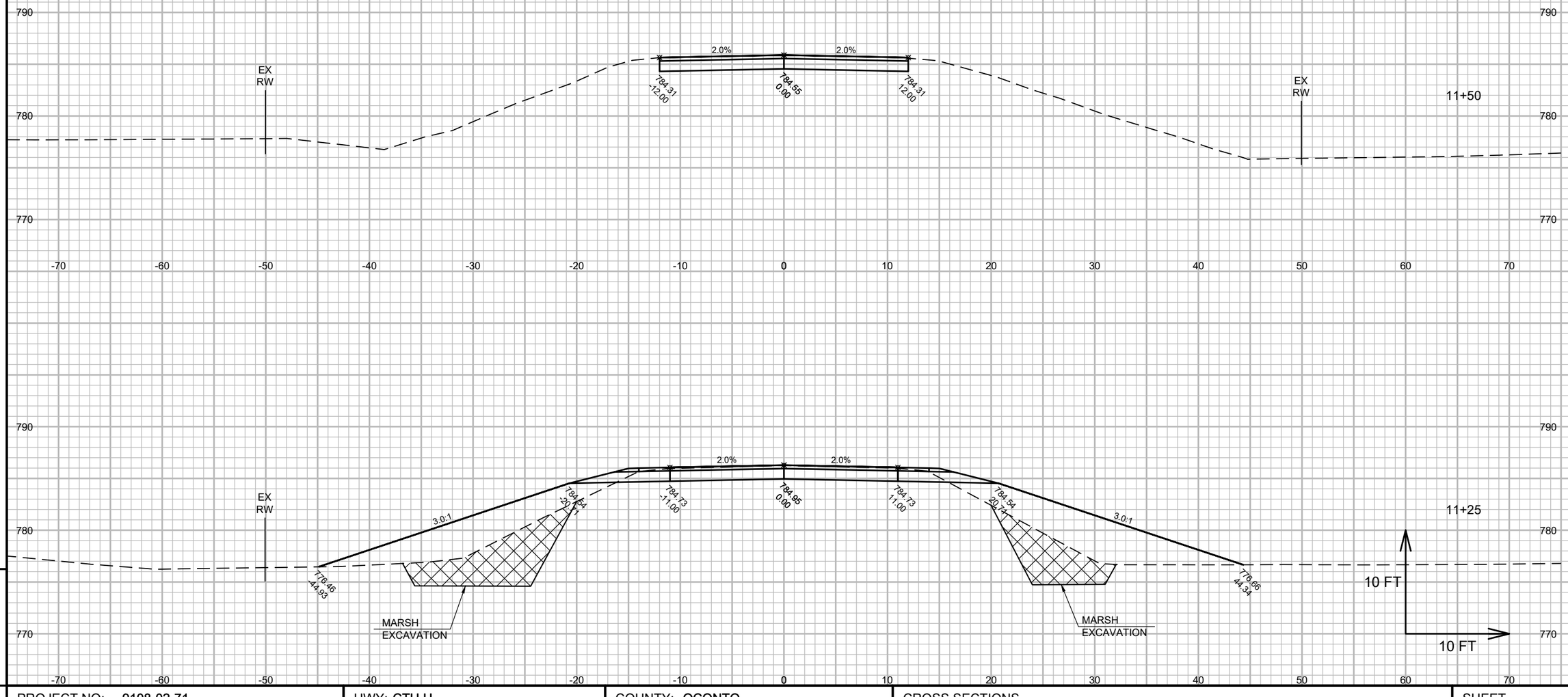
PLOT DATE : 4/24/2019 7:40 AM

PLOT BY : VERVILLE, PHILLIP

PLOT NAME :

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

END PROJECT
STA. 11+50



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PLOT DATE : 4/24/2019 7:40 AM
PLOT BY : VERVILLE, PHILLIP
PLOT NAME :
PLOT SCALE :1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Wisconsin Department of Transportation

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