LAX

DECEMBER 2018

ORDER OF SHEETS

TOTAL SHEETS = 36

Sheets Revised: 3, 5, 7, 24, 26, and 28

PROJECT ID: 7102-00-70

WITH: N/A

COUNTY: MONROE

13

Project Location

N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF LA GRANGE, DOLPHIN ROAD

(MILL CREEK BRIDGE B-41-0312)

LOCAL STREET

MONROE COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7102-00-70	———	—

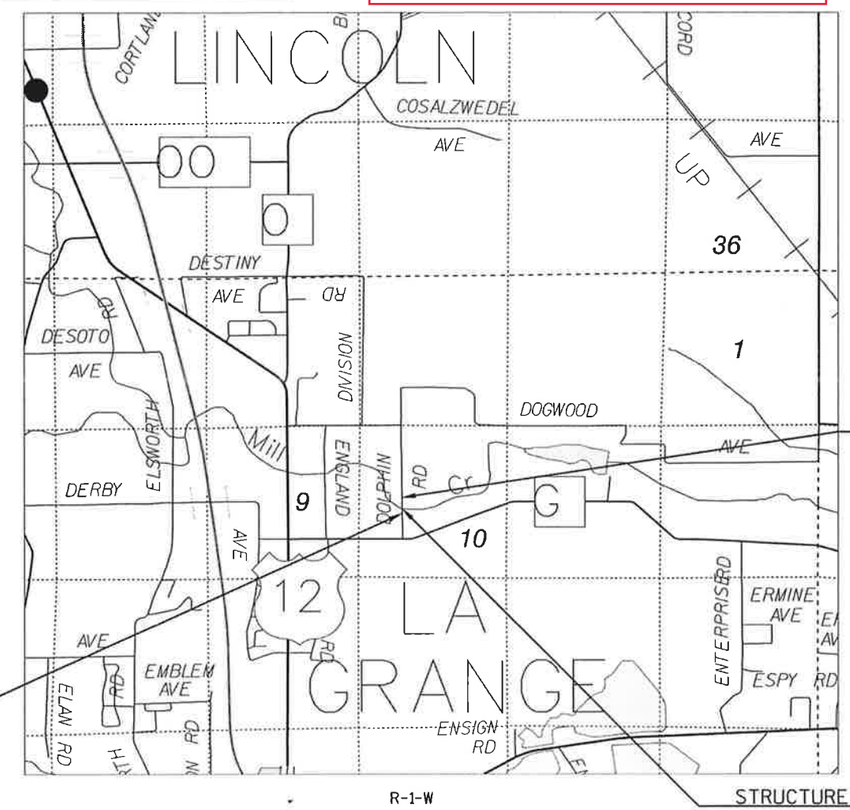
STATE PROJECT NUMBER
7102-00-70

AS-BUILT PLAN

SUPERVISOR: Jim Savoldelli
PROJECT MANAGER: Brian Meyer
PROJECT LEADER: Matt Palkowski
CONTRACTOR: Radtke Contractors Inc.
CONSTRUCTION STARTED: 04/29/2019
SUBSTANTIALLY COMPLETE: 07/03/2019

Subcontractor List

Gerke Excavating Inc.
Hard Rock Sawing & Drilling Specialist CO.
Jewell Associates Engineers, Inc.
Mathy Construction Company
Mattison Contractors, Inc.
Safemark, LLC



LAYOUT
SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.052 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MONROE 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.

DESIGN DESIGNATION

A.A.D.T.	2019	=	125
A.A.D.T.	2039	=	150
D.H.V.		=	<15 (EST.)
D.D.		=	60/40 (EST.)
T.		=	10% (EST.)
DESIGN SPEED		=	35 MPH
ESALS		=	37,000

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

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

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

ACCEPTED FOR
TOWN OF LA GRANGE

5/22/18 (Date) (Signature)

ACCEPTED FOR
COUNTY OF MONROE

05/18/2018 (Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL
DEVELOPMENT • ENVIRONMENTAL
1230 South Boulevard Baraboo, WI 53913
608-356-2771 1-800-552-4362 Fax 608-356-2770

WISCONSIN
JOLIE A. SNYDER
E-45364
LODI
WI
PROFESSIONAL ENGINEER

DATE: 5/15/18 Jolie A. Snyder (Professional Engineer)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA PROFESSIONAL SERVICES, INC.
Designer	MSA PROFESSIONAL SERVICES, INC.
Management Consultant	KL ENGINEERING, INC.

APPROVED FOR THE DEPARTMENT

DATE: 7/23/18 Jeff Melville (Management Consultant Signature)

E

FILE NAME : P:\5800S\5840S\5848\05848028\CADD\SHEETSPLAN\010101_TI.DWG
LAYOUT NAME - 010101_TI

PLOT DATE : 5/15/2018 10:44 AM PLOT BY : JOLIE SNYDER PLOT NAME :

WISDOT/CADDS SHEET 10

STANDARD ABBREVIATIONS

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

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 PROJECT AREA = 0.42 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.32 ACRES

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN: JOLIE SNYDER
1230 SOUTH BOULEVARD
BARABOO, WI 53913
608-355-8912
JSNYDER@MSA-PS.COM

COUNTY CONTACT

MONROE COUNTY
ATTN: DAVID OHNSTAD, HIGHWAY COMMISSIONER
803 WASHINGTON STREET
SPARTA, WI 54656
608-269-8740
DAVID.OHNSTAD@CO.MONROE.WI.US

TOWN CONTACT

TOWN OF LA GRANGE
ATTN: JOHN GUTHRIE, TOWN CHAIR
27645 ENTITY AVENUE
TOMAH, WI 54660
608-343-0775
TOWNOFLAGRANGEBOARDCHAIR@GMAIL.COM

DNR LIAISON

WISCONSIN DEPARTMENT OF
NATURAL RESOURCES
ATTN: KAREN KALVELAGE
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
608-785-9115
KAREN.KALVELAGE@WISCONSIN.GOV

UTILITIES

COMMUNICATION:
CENTURYLINK
ATTN: BRET CLARK
311 SOUTH COURT STREET
SPARTA, WI 54656
608-269-0819
BRET.CLARK@CENTURYLINK.COM

ELECTRIC:
OAKDALE ELECTRIC COOPERATIVE
ATTN: TRAVIS CHAMPLIN
489 N. OAKWOOD STREET
OAKDALE, WI 54649
608-372-8848
TRAVISC@OAKDALEREC.COM

* NOT A MEMBER OF DIGGERS HOTLINE

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

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER. OVERSOW PERMANENT SEEDING AREAS WITH TEMPORARY SEED.

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

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

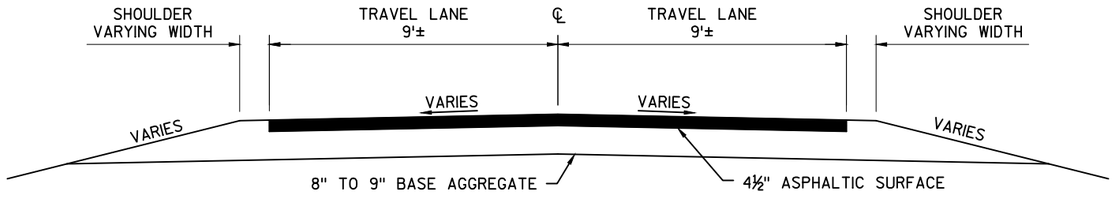
ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMARKS WERE LOCATED IN THE FIELD USING GPS TECHNOLOGY.

THE 3½" ASPHALTIC SURFACE SHALL CONSIST OF A 1¾" UPPER LAYER WITH 12.5MM NOMINAL SIZE AGGREGATE AND A 1¾" LOWER LAYER 12.5MM NOMINAL SIZE AGGREGATE.

SILT FENCE AND TURBIDITY BARRIER TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO CONSTRUCTION OR BRIDGE REMOVAL.

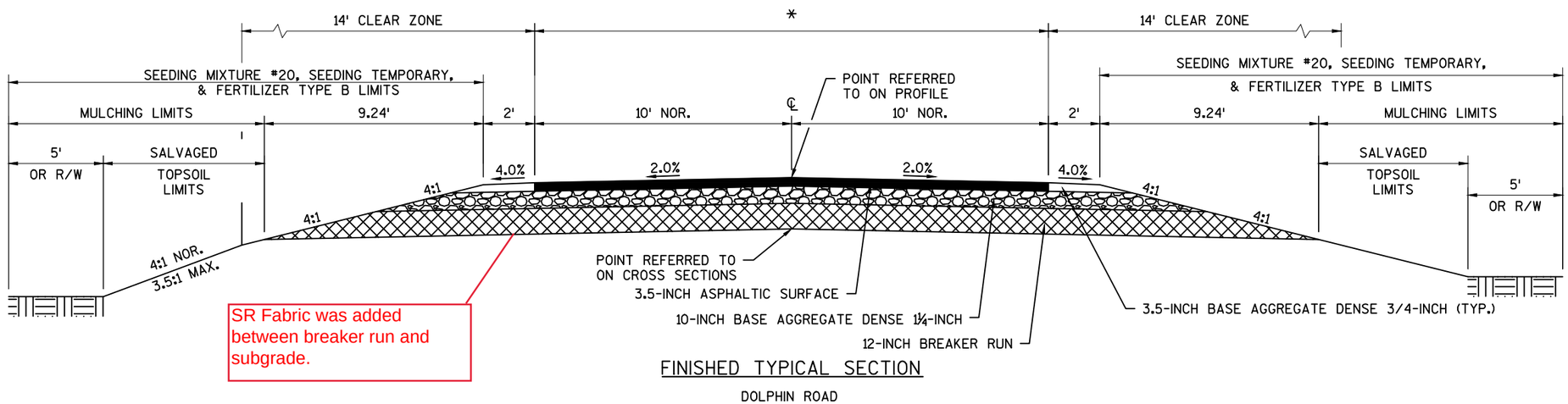
WETLANDS ARE PRESENT OUTSIDE THE EXISTING SLOPE INTERCEPTS. AREAS OUTSIDE THE SLOPE INTERCEPTS SHALL NOT BE DISTURBED.

2



EXISTING TYPICAL SECTION

DOLPHIN ROAD



FINISHED TYPICAL SECTION

DOLPHIN ROAD

* - TAPER PAVEMENT WIDTH FROM 24.0' AT THE ENDS OF THE BRIDGE TO 20.0' AT STA. 9+50 AND STA. 10+50.

2

N

BP: 7+00.00

BM#2
PK NAIL ON TOP OF 24" CMP
STA. 8+44.05, 23.40' LT
Y = 418,610.78
X = 710,840.67

98.45'

8+00

98.02'

CP#1
10" NAIL
STA. 7+52.63, 13.16' RT.
Y = 418,520.00
X = 710,878.77

9+00

℄ DOLPHIN ROAD

91.32'

PK NAIL
STA. 8+49.76, 0.02' LT.
Y = 418,616.89
X = 710,863.90

115.49'

41.71'

CP#2
10" NAIL
STA. 9+40.22, 12.44' RT.
Y = 418,707.56
X = 710,874.79

10+00

74.20'

BM#1
CHIS. SQUARE
SE WINGWALL
STA. 9+81.76, 8.71' RT.
Y = 418,749.03
X = 710,870.31

MILL CREEK

CP#3
10" NAIL
STA. 10+53.38, 10.70' LT.
Y = 418,820.28
X = 710,849.70

97.52'

11+00

137.97'

PK NAIL
STA. 11+50.29, 0.03' RT.
Y = 418,917.37
X = 710,858.75

EP: 12+00.00

63.41'

44.13'

28.34'

CP#4
10" NAIL
Y = 418,979.64
X = 710,870.81

BM#3
2 POLE NAILS
12" DIA. ELM
STA. 11+86.61, 25.10' RT.
Y = 418,954.13
X = 710,883.17

GUY

PROJECT NO: 7102-00-70	HWY: TOWN ROAD	COUNTY: MONROE	CONROL POINT TIES & COORDINATES	SHEET 4	E

FILE NAME : P:\5800S\5840S\5848\05848028\CADD\SHEETSPLAN\021001_CD.DWG
LAYOUT NAME - 021001_cd

PLOT DATE : 5/15/2018 10:45 AM PLOT BY : JOLIE SNYDER PLOT NAME : PLOT SCALE : 1 IN:40 FT

7102-00-70

Line	Item	Item Description	Unit	Total	Qty	
0002	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000	
0004	204.0165	Removing Guardrail	LF	112.000	112.000	
0006	205.0100	Excavation Common **P**	CY	569.000	569.000	Addendum No. 1, Remove Pay Plan Quantity
0008	206.1000	Excavation for Structures Bridges (structure) 01. B-41-312	LS	1.000	1.000	
0010	210.1500	Backfill Structure Type A	TON	270.000	270.000	
0012	213.0100	Finishing Roadway (project) 01. 7102-00-70	EACH	1.000	1.000	
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	24.000	24.000	
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	440.000	440.000	
0018	311.0110	Breaker Run	TON	585.000	585.000	
0020	455.0605	Tack Coat	GAL	27.000	27.000	
0022	465.0105	Asphaltic Surface	TON	104.000	104.000	
0024	502.0100	Concrete Masonry Bridges	CY	130.000	130.000	
0026	502.3200	Protective Surface Treatment	SY	171.000	171.000	
0028	505.0400	Bar Steel Reinforcement HS Structures	LB	5,770.000	5,770.000	
0030	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	14,750.000	14,750.000	
0032	513.4061	Railing Tubular Type M 01. B-41-312	LF	81.000	81.000	
0034	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000	
0036	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	245.000	245.000	
0038	606.0300	Riprap Heavy	CY	80.000	80.000	
0040	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000	
0042	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7102-00-70	EACH	1.000	1.000	
0044	619.1000	Mobilization	EACH	1.000	1.000	
0046	624.0100	Water	MGAL	46.000	46.000	
0048	625.0500	Salvaged Topsoil	SY	480.000	480.000	
0050	627.0200	Mulching	SY	790.000	790.000	
0052	628.1504	Silt Fence	LF	615.000	615.000	
0054	628.1520	Silt Fence Maintenance	LF	615.000	615.000	
0056	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000	
0058	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000	
0060	628.6005	Turbidity Barriers	SY	190.000	190.000	
0062	629.0210	Fertilizer Type B	CWT	0.700	0.700	
0064	630.0120	Seeding Mixture No. 20	LB	30.000	30.000	
0066	630.0200	Seeding Temporary	LB	30.000	30.000	
0068	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000	
0070	637.2230	Signs Type II Reflective F	SF	12.000	12.000	
0072	638.2602	Removing Signs Type II	EACH	4.000	4.000	
0074	638.3000	Removing Small Sign Supports	EACH	4.000	4.000	

7102-00-70

Line	Item	Item Description	Unit	Total	Qty
0076	642.5001	Field Office Type B	EACH	1.000	1.000
0078	643.0420	Traffic Control Barricades Type III	DAY	1,420.000	1,420.000
0080	643.0705	Traffic Control Warning Lights Type A	DAY	2,130.000	2,130.000
0082	643.0900	Traffic Control Signs	DAY	1,136.000	1,136.000
0084	643.5000	Traffic Control	EACH	1.000	1.000
0086	645.0111	Geotextile Type DF Schedule A	SY	60.000	60.000
0088	645.0120	Geotextile Type HR	SY	150.000	150.000
0090	650.4500	Construction Staking Subgrade	LF	237.000	237.000
0092	650.5000	Construction Staking Base	LF	237.000	237.000
0094	650.6500	Construction Staking Structure Layout (structure) 01. B-41-312	LS	1.000	1.000
0096	650.9910	Construction Staking Supplemental Control (project) 01. 7102-00-70	LS	1.000	1.000
0098	650.9920	Construction Staking Slope Stakes	LF	237.000	237.000
0100	690.0150	Sawing Asphalt	LF	36.000	36.000
0102	715.0502	Incentive Strength Concrete Structures	DOL	780.000	780.000

3

204.0165 REMOVING GUARDRAIL

STATION - STATION	LOCATION	204.0165 REMOVING GUARDRAIL LF
9+54 - 9+82	LT	28
9+54 - 9+82	RT	28
10+18 - 10+46	LT	28
10+18 - 10+46	RT	28
	TOTALS:	112

455.0605 TACK COAT
465.0105 ASPHALTIC SURFACE

STATION	-	STATION	TACK COAT GAL	ASPHALTIC SURFACE TON
8+75	-	9+78.71	12	46
10+17.29	-	11+50.00	15	58
		TOTALS:	27	104

205.0100 EXCAVATION COMMON **P**

Addendum No. 1, Remove Pay Plan Quantity

LOCATION	EXC. COMMON CY (3)	FILL CY (1)	EXPANDED FILL CY (2)	WASTE CY
STA 8+75 - STA. 9+78.71	240	67	87	153
STA 10+17.29 - STA 11+50	329	39	50	279
TOTALS:	569	106	137	432

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - EXISTING ASPHALTIC PAVEMENT IS INCLUDED IN COMMON EXCAVATION TOTALS. SEE EARTHWORK TABLE.

305.0110 BASE AGGREGATE DENSE 3/4-INCH
305.0120 BASE AGGREGATE DENSE 1 1/4-INCH
311.0110 BREAKER RUN
624.0100 WATER

STATION	-	STATION	BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	BREAKER RUN TON	WATER* MGAL
8+75.00	-	9+78.71	10	195	260	9
10+17.29	-	11+50.00	14	245	325	12
		TOTALS:	24	440	585	21

*ADDITIONAL QUANTITY INCLUDED WITH EROSION CONTROL ITEMS

*618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS

DESCRIPTION	*MAINTENANCE AND REPAIR OF HAUL ROADS EACH
PROJECT 7102-00-70	1
TOTAL:	1

* CATEGORY 0030 ITEM

625.0500 SALVAGED TOPSOIL
627.0200 MULCHING
629.0210 FERTILIZER TYPE B
630.0120 SEEDING MIXTURE NO. 20
630.0200 SEEDING TEMPORARY
624.0100 WATER

STATION	-	STATION	LOCATION	SALVAGED TOPSOIL SY	MULCHING SY	FERTILIZER CWT	SEEDING #20 LB	SEEDING TEMPORARY LB	WATER* MGAL
8+75	-	9+80	RT	75	130	0.10	5	5	4
8+75	-	9+80	LT	105	155	0.15	6	6	5
10+16	-	11+50	RT	90	165	0.15	6	6	5
10+16	-	11+50	LT	115	180	0.15	7	7	6
UNDISTRIBUTED				95	160	0.15	6	6	5
TOTALS:				480	790	0.70	30	30	25

*ADDITIONAL QUANTITY INCLUDED WITH BASE AGGREGATE ITEMS.

628.1504 SILT FENCE
628.1520 SILT FENCE MAINTENANCE

STATION	-	STATION	LOCATION	FENCE LF	MAINT. LF
8+75	-	9+93	LT	120	120
8+75	-	9+82	RT	105	105
10+27	-	11+50	LT	125	125
10+04	-	11+50	RT	140	140
UNDISTRIBUTED			-	125	125
			TOTALS:	615	615

628.6005 TURBIDITY BARRIERS

LOCATION	SY
SOUTH ABUT	83
NORTH ABUT	72
UNDISTRIBUTED	35
TOTAL:	190

634.0612 POSTS WOOD 4x6-INCH x 12-FT
637.2230 SIGNS TYPE II REFLECTIVE F
638.2602 REMOVING SIGNS TYPE II
638.3000 REMOVING SMALL SIGN SUPPORTS

STATION	LOCATION	SIGN CODE	SIZE	SIGNS TYPE II REFLECTIVE F SF	WOOD POSTS EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
9+75	RT	W5-52R	12"x36"	3	1	-	-	OBJECT MARKER
9+81	RT	-	-	-	-	1	1	EXISTING OBJECT MARKER
9+82	LT	W5-52L	12"x36"	3	1	-	-	OBJECT MARKER
9+81	LT	-	-	-	-	1	1	EXISTING OBJECT MARKER
10+45	RT	W5-52L	12"x36"	3	1	-	-	OBJECT MARKER
10+19	RT	-	-	-	-	1	1	EXISTING OBJECT MARKER
10+21	LT	W5-52R	12"x36"	3	1	-	-	OBJECT MARKER
10+19	LT	-	-	-	-	1	1	EXISTING OBJECT MARKER
		TOTALS:		12	4	4	4	

643.0420 TRAFFIC CONTROL BARRICADES TYPE III
643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A
643.0900 TRAFFIC CONTROL SIGNS

LOCATION	DAYS	TRAFFIC CONTROL BARRICADES TYPE III EACH	TRAFFIC CONTROL BARRICADES TYPE III DAYS	TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	TRAFFIC CONTROL WARNING LIGHTS TYPE A DAYS	TRAFFIC CONTROL SIGNS EACH	TRAFFIC CONTROL SIGNS DAYS
CTH G INTERSECTION	71	2	142	4	284	4	284
BEGINNING OF PROJECT	71	7	497	10	710	3	213
END OF PROJECT	71	7	497	10	710	4	284
DOGWOOD AVE INTERSECTION	71	2	142	4	284	3	213
UNDISTRIBUTED	71	2	142	2	142	2	142
TOTALS:			1,420		2,130		1,136

690.0150 SAWING ASPHALT

STATION	LF
8+75	18
11+50	18
TOTAL:	36

650.4500 CONSTRUCTION STAKING SUBGRADE
650.5000 CONSTRUCTION STAKING BASE
650.9920 CONSTRUCTION STAKING SLOPE STAKES
650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 7102-00-70

STATION	-	STATION	SUBGRADE LF	BASE LF	SLOPE STAKES LF	SUPPLEMENTAL CONTROL LS
8+75	-	9+78.71	104	104	104	-
10+17.29	-	11+50	133	133	133	-
		TOTALS:	237	237	237	1

P - PAY PLAN QUANTITY

NOTE: ALL ITEMS ARE CATEGORY 0010 UNLESS NOTED OTHERWISE.

BENCH MARKS			
NO.	STATION	DESCRIPTION	ELEV.
1	9+81.76, 8.7' RT	CHIS SQ ON SE WINGWALL	958.73
2	8+44.05, 23.4' LT	PK IN TOP OF 24" CMP	958.86
3	11+86.61, 25.1' RT	2 POLE NAILS IN 12" ELM	956.38

N

(GRASS)

CONNIE L NOTH

EXISTING FENCE

WETLAND EDGE

SLOPE INTERCEPT (TYP.)

RIPRAP HEAVY (TYP.)

STRUCTURE B-41-312

BURIED TELEPHONE (CENTURYLINK) (TO REMAIN IN PLACE)

BP: 7+00.00

EXISTING R/W

66'

BM-2

END TAPER STA. 9+00

START TAPER STA. 11+50

WETLAND EDGE

EP: 12+00.00

8+00

9+00

10+00

℄ DOLPHIN ROAD (ASPHALT)

11+00 N0° 59' 43"W

BM-1

SAWING ASPHALT

END TAPER STA. 9+00

START TAPER STA. 11+50

BM-3

WETLAND EDGE

OVERHEAD ELECTRIC (OAKDALE ELECTRIC COOPERATIVE) (TO BE RELOCATED)

MILL CREEK

EXISTING STRUCTURE P-41-161 (TO BE REMOVED)

WETLAND EDGE

EXISTING FENCE (TYP.) (REMOVED BY OTHERS PRIOR TO CONSTRUCTION, ALL QUADRANTS)

BURIED ELECTRIC (OAKDALE ELECTRIC) TO REMAIN IN PLACE

PL

END PROJECT
STA 11+50
Y = 418,917.09
X = 710,858.70

JOHN P KOMISKEY REVOCABLE TRUST
CATHY L KOMISKEY REVOCABLE TRUST

LEGEND

SILT FENCE
RIPRAP HEAVY
TURBIDITY BARRIER

BEGIN PROJECT
STA 8+75
Y = 418,642.13
X = 710,863.48

MARLYN WAGNER

(GRASS)

STA. 9+98, STRUCTURE B-41-312
SINGLE SPAN FLAT CONCRETE SLAB REQ'D
24.0' CLEAR ROADWAY WIDTH
38.6' OVERALL LENGTH
15° LHF SKEW

VCL = 105.00

K = 131.19

STA 8+75.00
EL 958.89

VPT STA 9+80.00
VPT EL 958.47

STA 11+50.00
EL 958.47

FINISHED ℄ PROFILE

EXISTING ℄ PROFILE

HIGH WATER 100
ELEV. 958.06

-0.80%

-0.00%

HIGH WATER 2
ELEV. 955.30

VPC STA 8+75.00
VPC EL 958.89

VPI STA 9+27.50
VPI EL 958.47

OBSERVED WATER
ELEV. 952.17±
(12-7-16)

STREAM BED
ELEV. 948.64±

REMOVE EXISTING BRIDGE P-41-161
STA 10+00
SINGLE SPAN STEEL DECK GIRDER
15.6 FT CLEAR ROADWAY WIDTH
36.2 FT OVERALL LENGTH
0° SKEW

EARTHWORK SUMMARY
STA 8+75 - STA 11+50

EXC COMMON	569 CY
FILL	106 CY
FILL EXPANSION	30%
WASTE	432 CY

962.03 961.04 960.02 959.18 958.77 958.71 958.96 958.50 950.16 958.47 959.00 958.47 958.63 958.47 958.47 958.47 958.47

962 960 958 956 954 952 950 948

6+50 7+00 8+00 9+00 10+00 11+00 12+00 12+50

PROJECT NO: 7102-00-70	HWY: TOWN ROAD	COUNTY: MONROE	PLAN AND PROFILE: DOLPHIN ROAD	SHEET 8	E

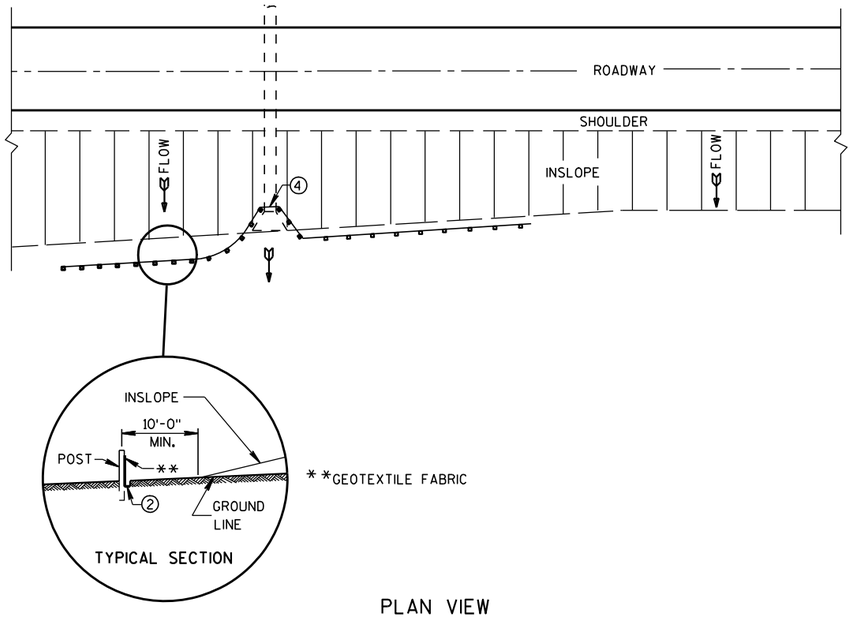
FILE NAME : P:\5800S\5840S\5848\05848028\CADD\DESIGN\ALIPROFS\05848028_ALIPROF_DOLPHIN.DWG
LAYOUT NAME - 050101_pp

PLOT DATE : 7/18/2018 1:50 PM PLOT BY : JOLIE SNYDER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 44

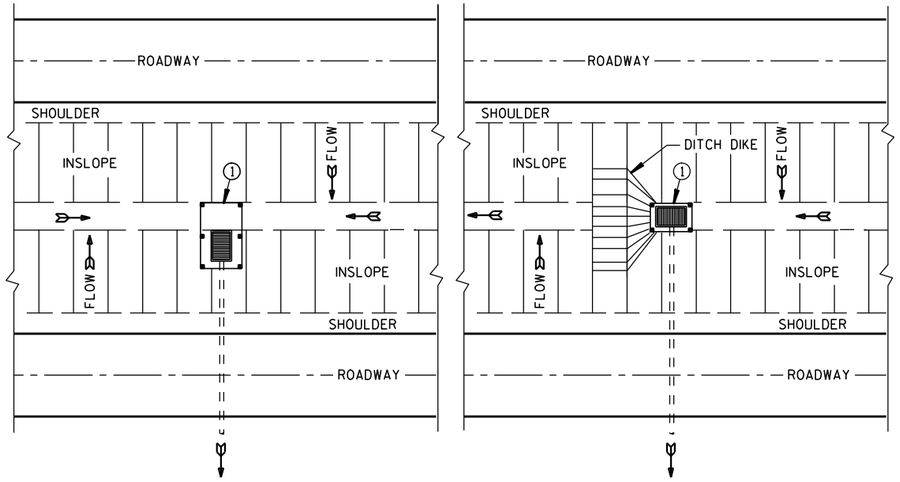
Standard Detail Drawing List

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



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



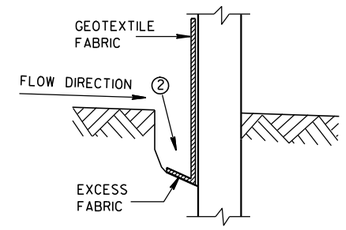
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

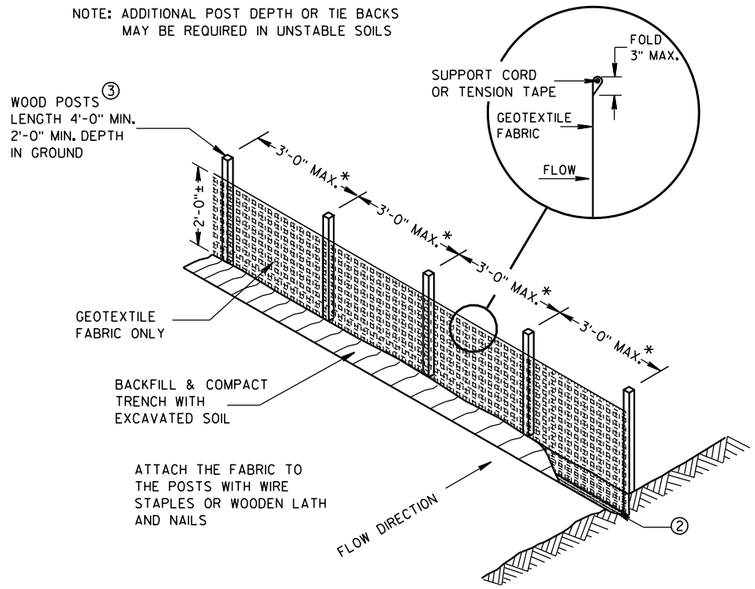
GENERAL NOTES

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.

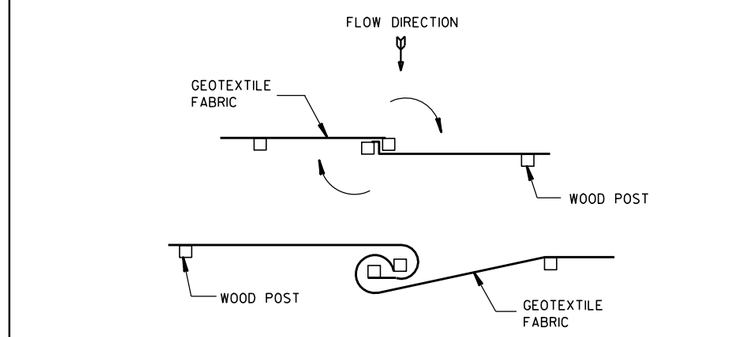


TRENCH DETAIL

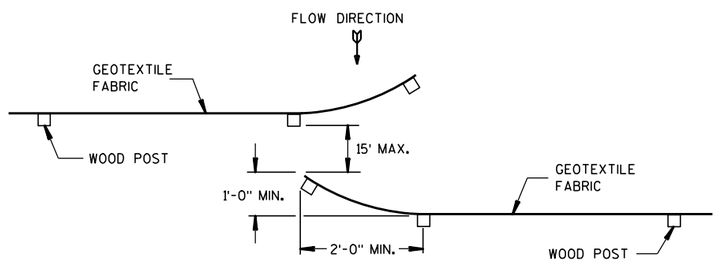


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

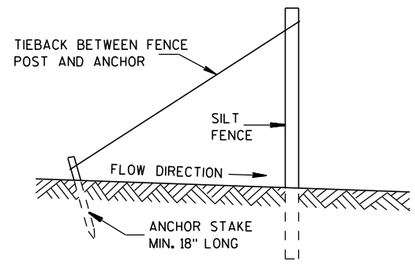


TWIST METHOD



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

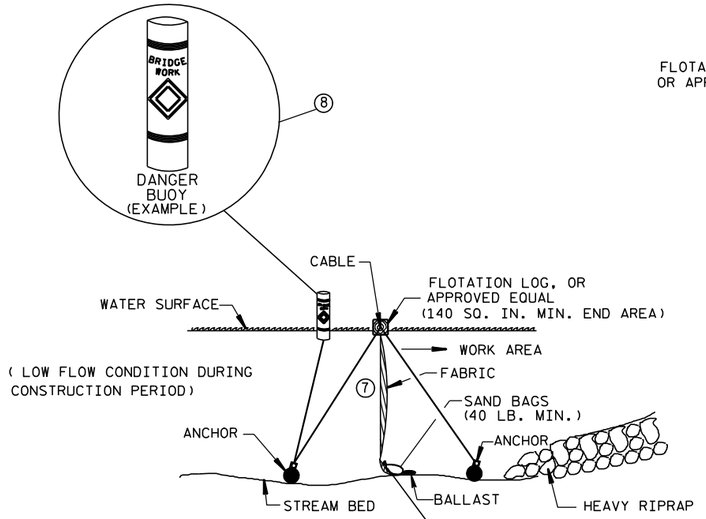
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

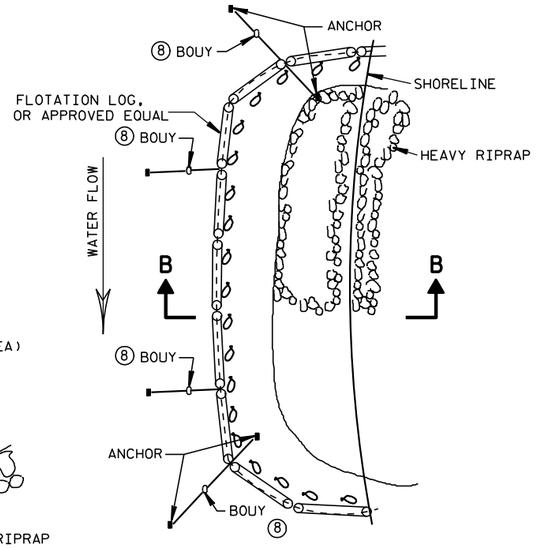
S.D.D. 8 E 9-6

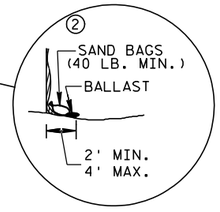
6

S.D.D. 8 E 9-6

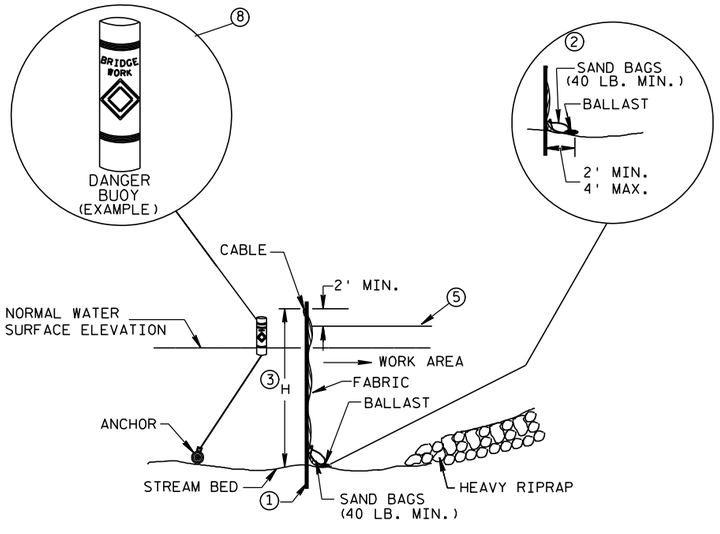


SECTION B-B

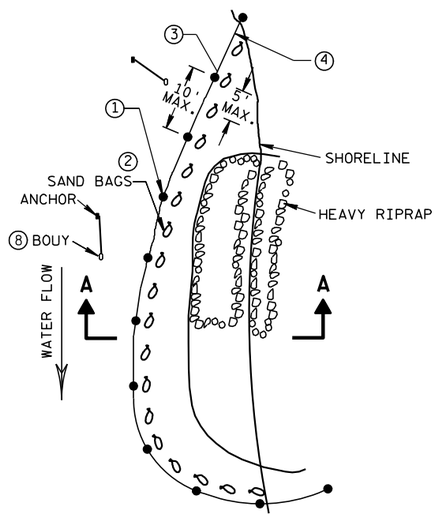




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

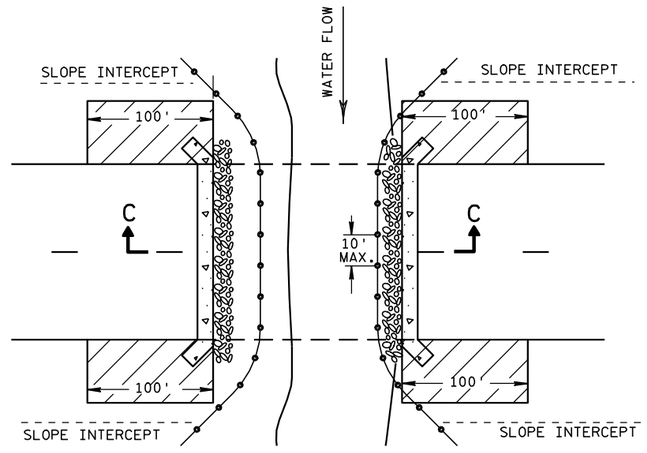
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

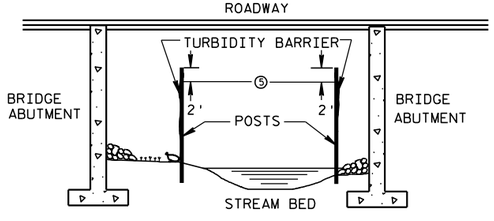
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

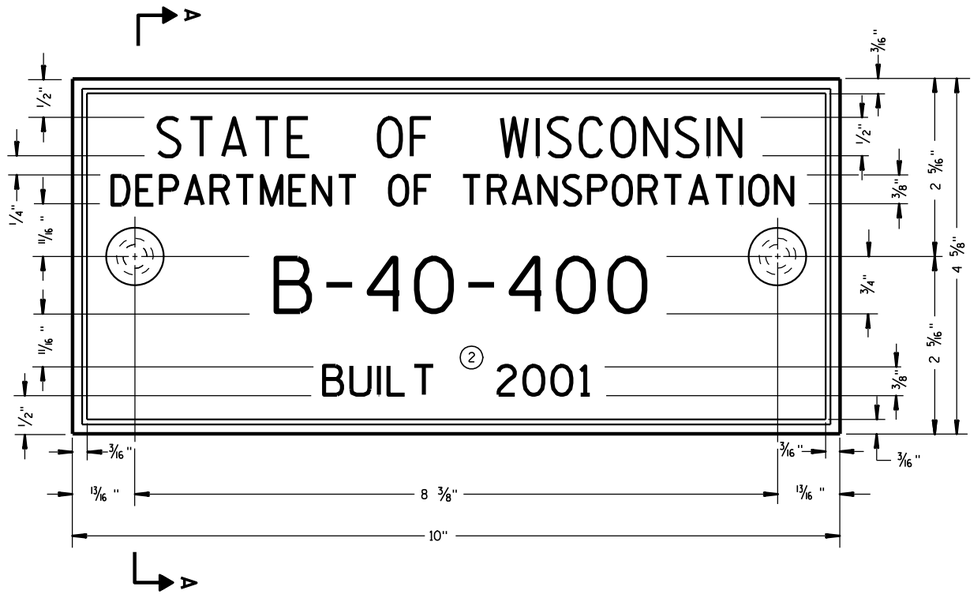
TURBIDITY BARRIER

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



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

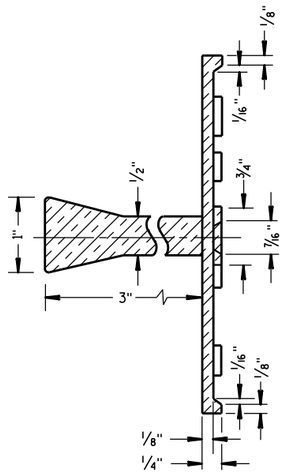
GENERAL NOTES

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

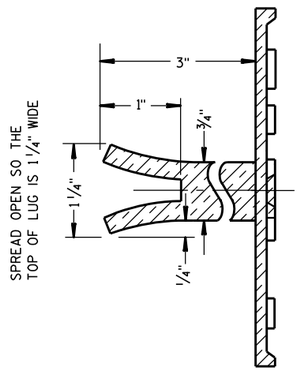
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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



SECTION A-A



ALTERNATE LUG

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

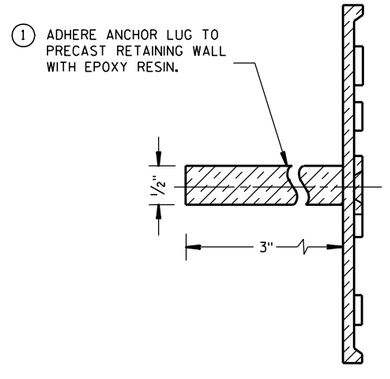
COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

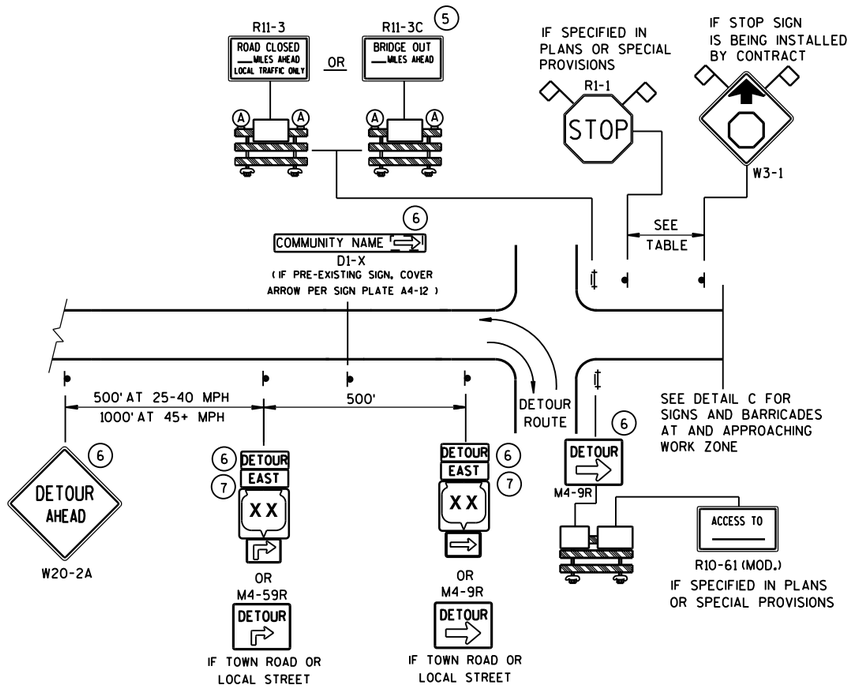
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

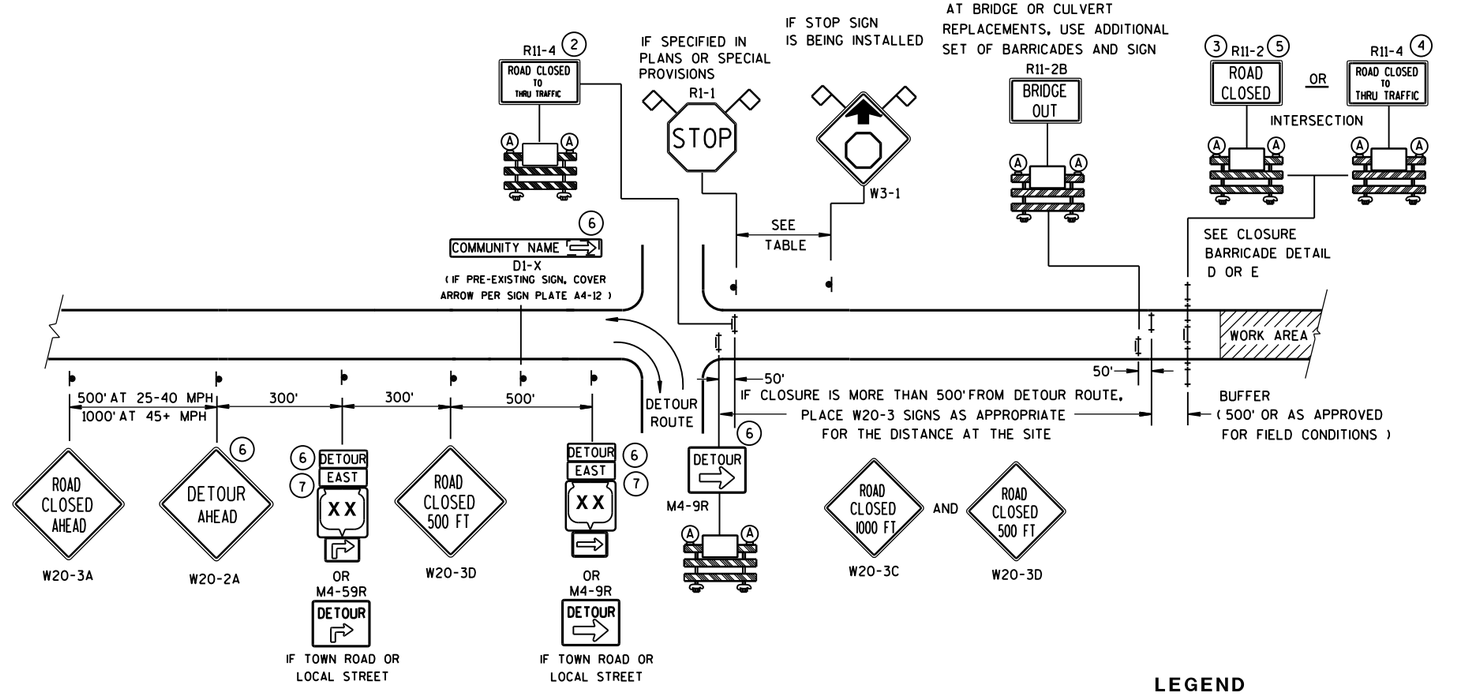
6

S.D.D. 12 A 3-10



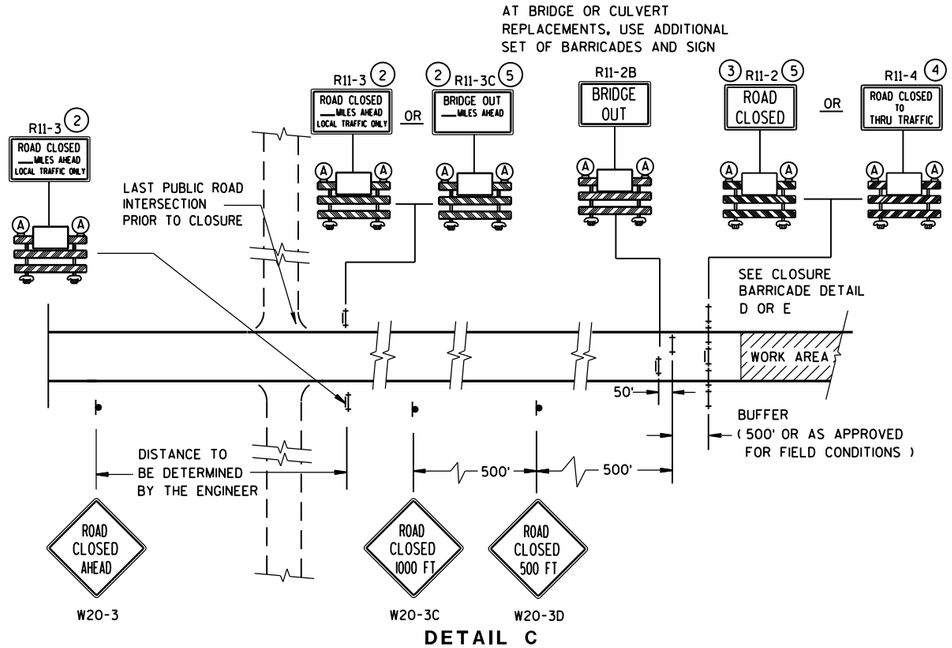
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 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
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

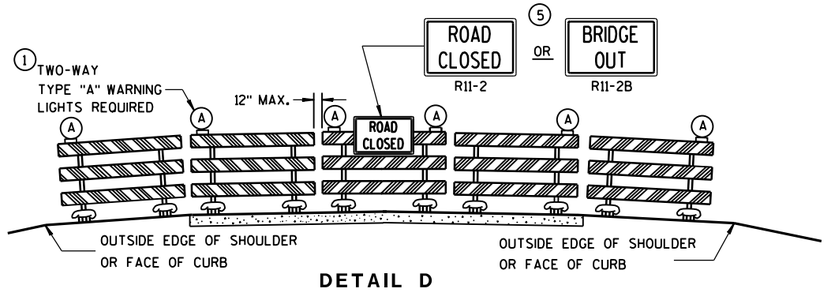
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

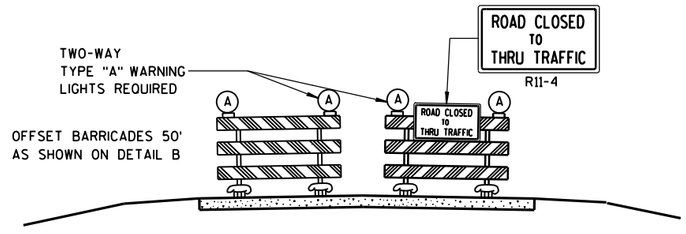
S.D.D. 15 C 2-6a



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)
- M05-1 AND M06-1 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 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 LANE 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 MAINLINE CLOSURES

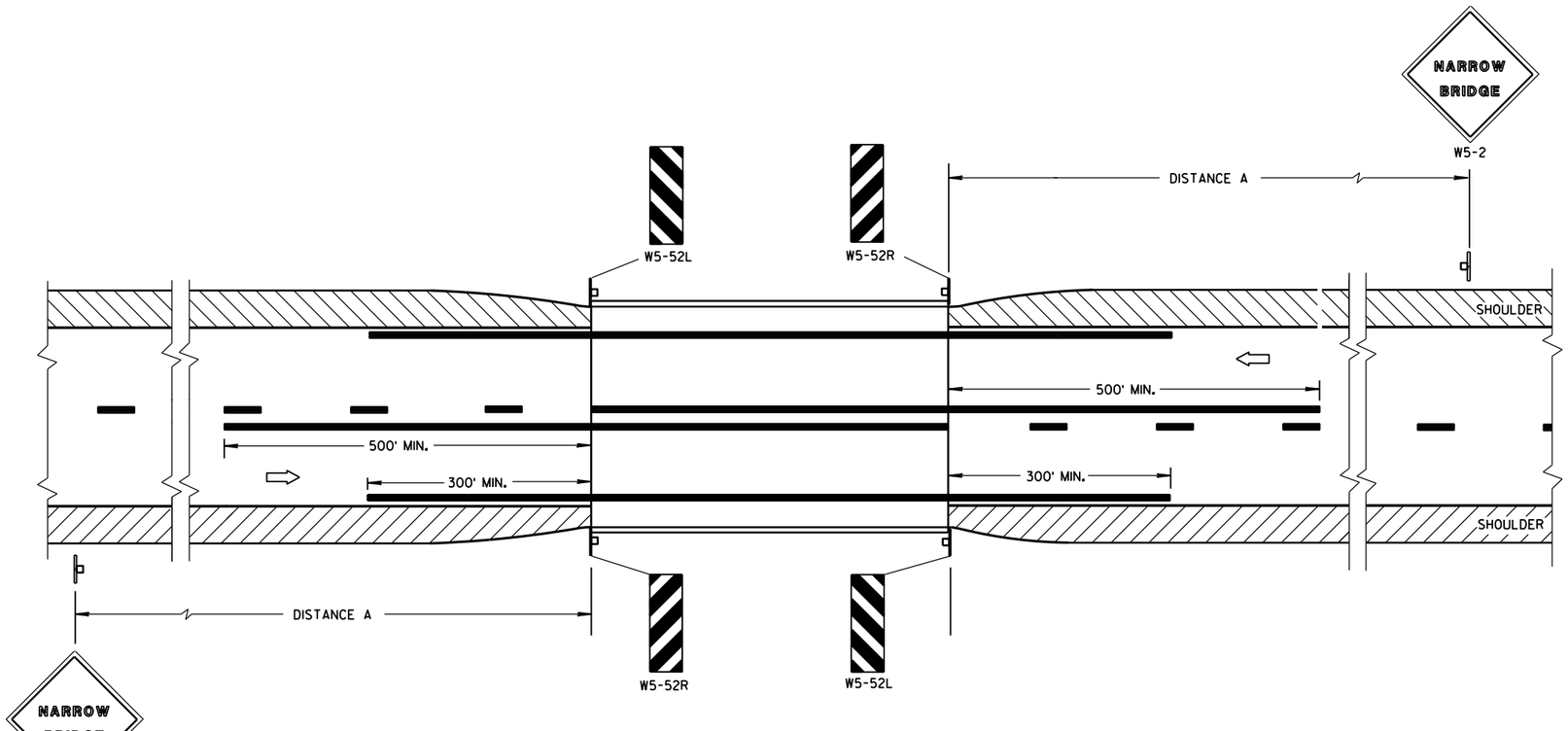
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO FIC
SAFETY ENGI
FHWA

6

S.D.D. 15 C 2-6b



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

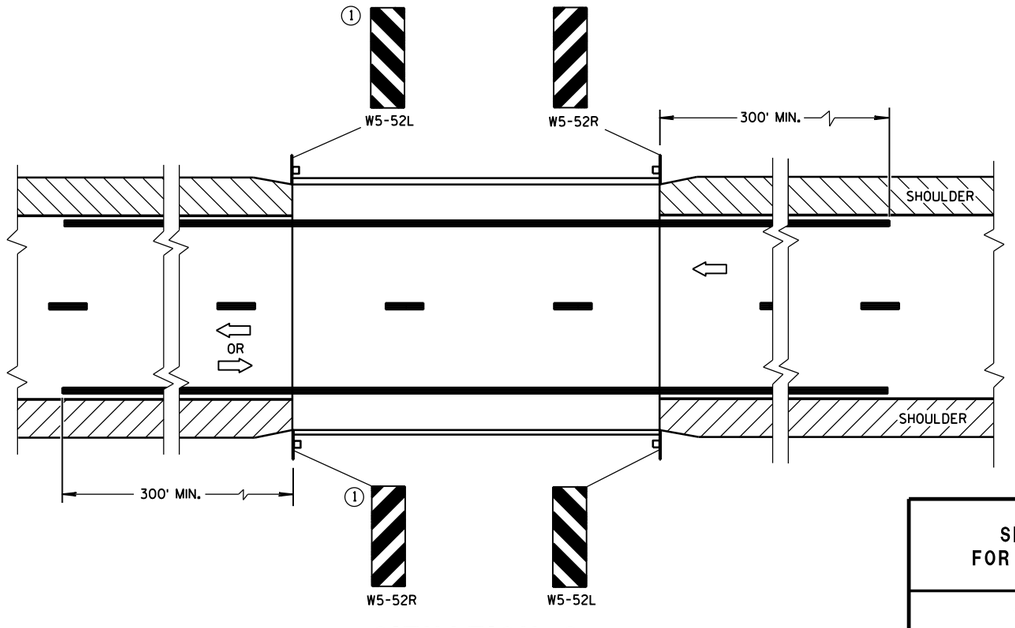
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

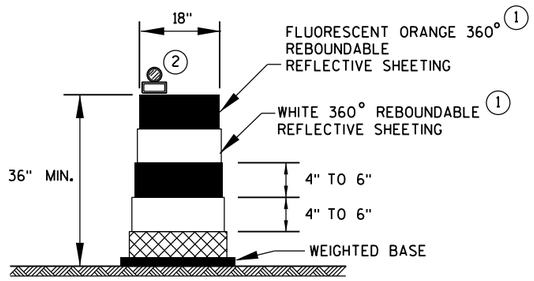
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

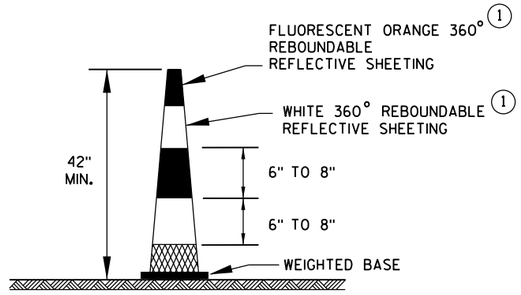
S.D.D. 15 C 6-9

6

S.D.D. 15 C 6-9



DRUM

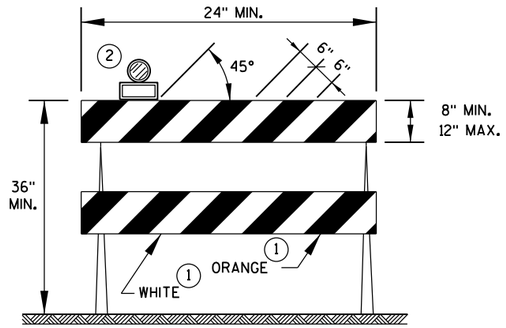


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

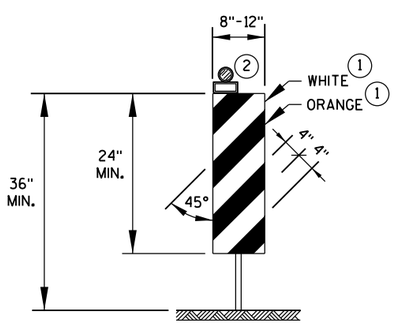
GENERAL NOTES

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.



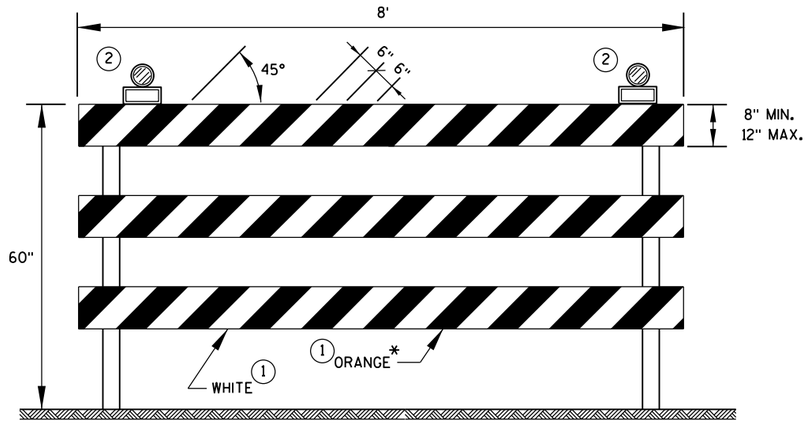
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 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 ENG
FHWA	

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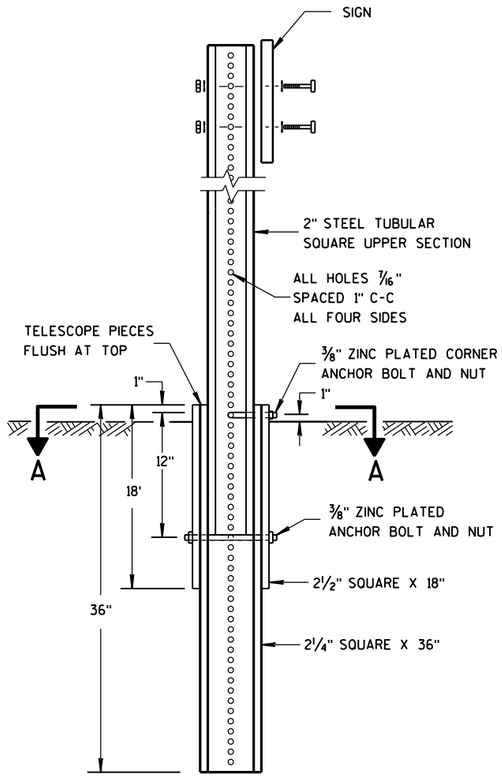
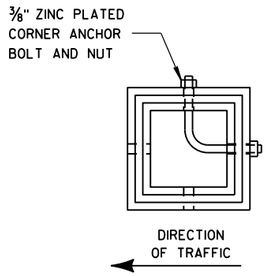
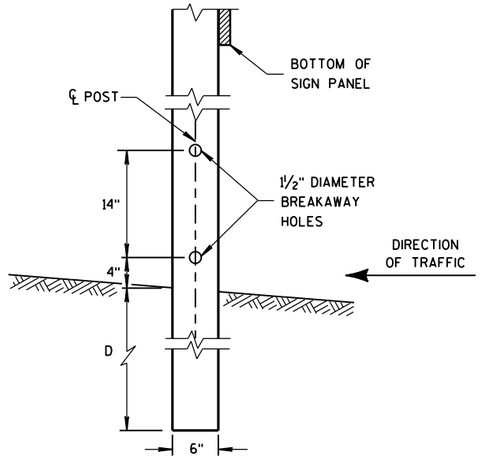
S.D.D. 15 C 11-7b



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



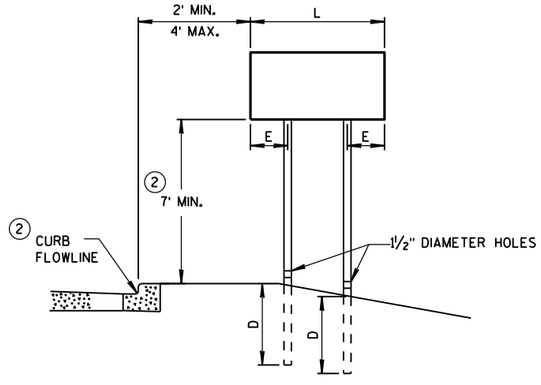
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

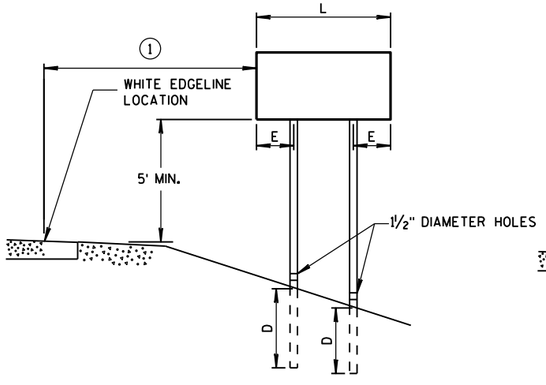
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

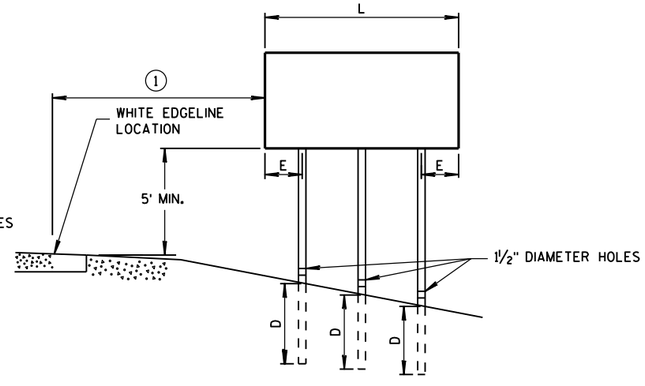
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK 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

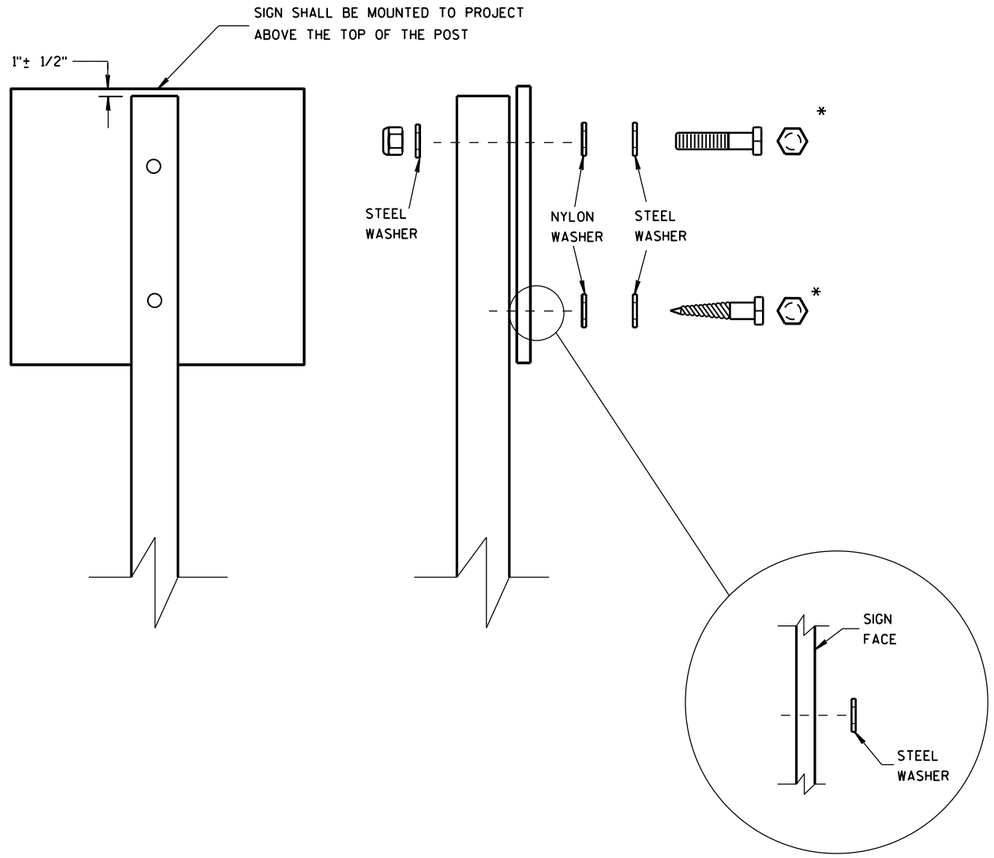
POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
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

6

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

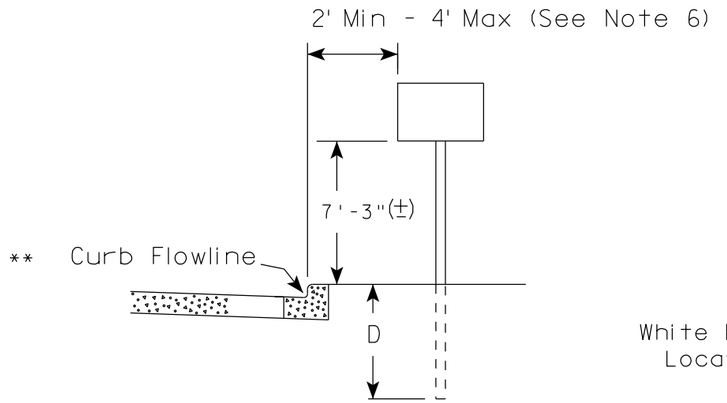
APPROVED

June 2017
DATE

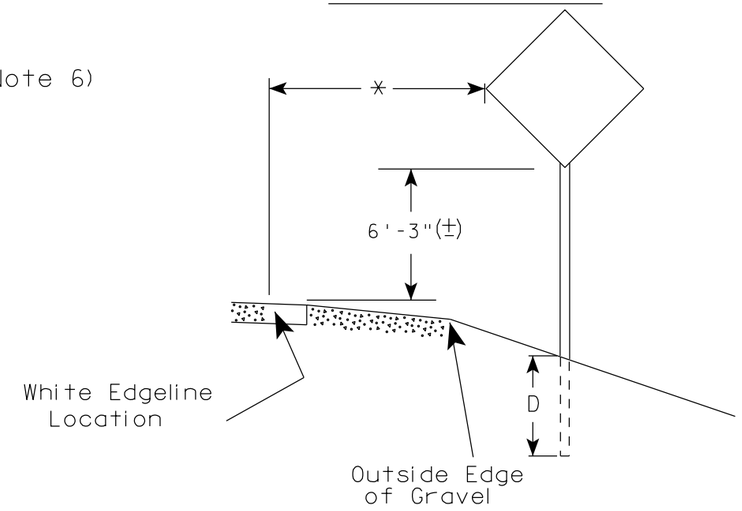
/S/ Andrew Heldtke
WORK ZONE ENG

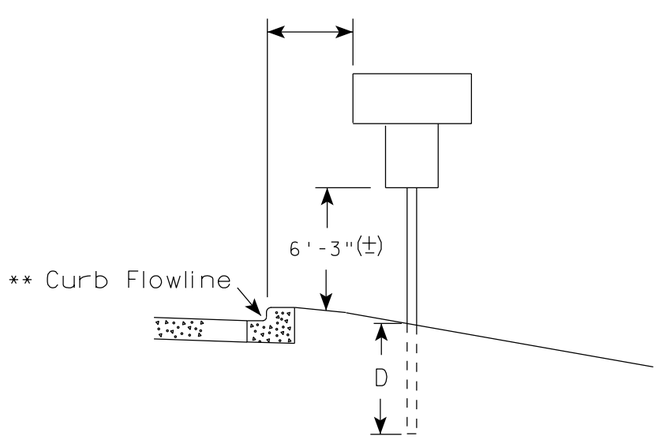
FHWA

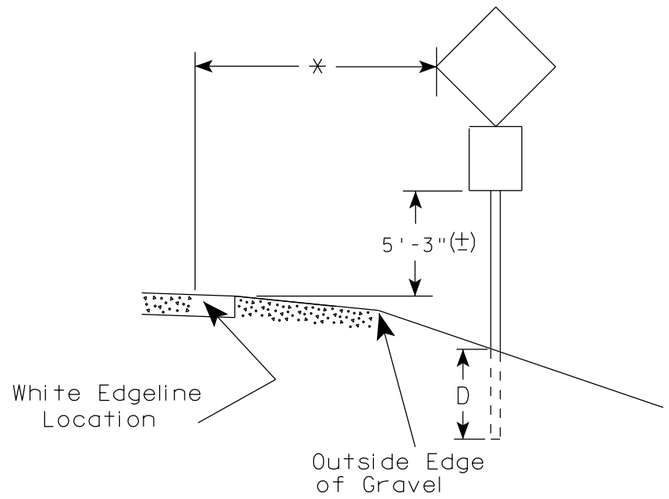
URBAN AREA



RURAL AREA (See Note 2)







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. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
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" (±).

POST EMBEDMENT DEPTH

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

** 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.

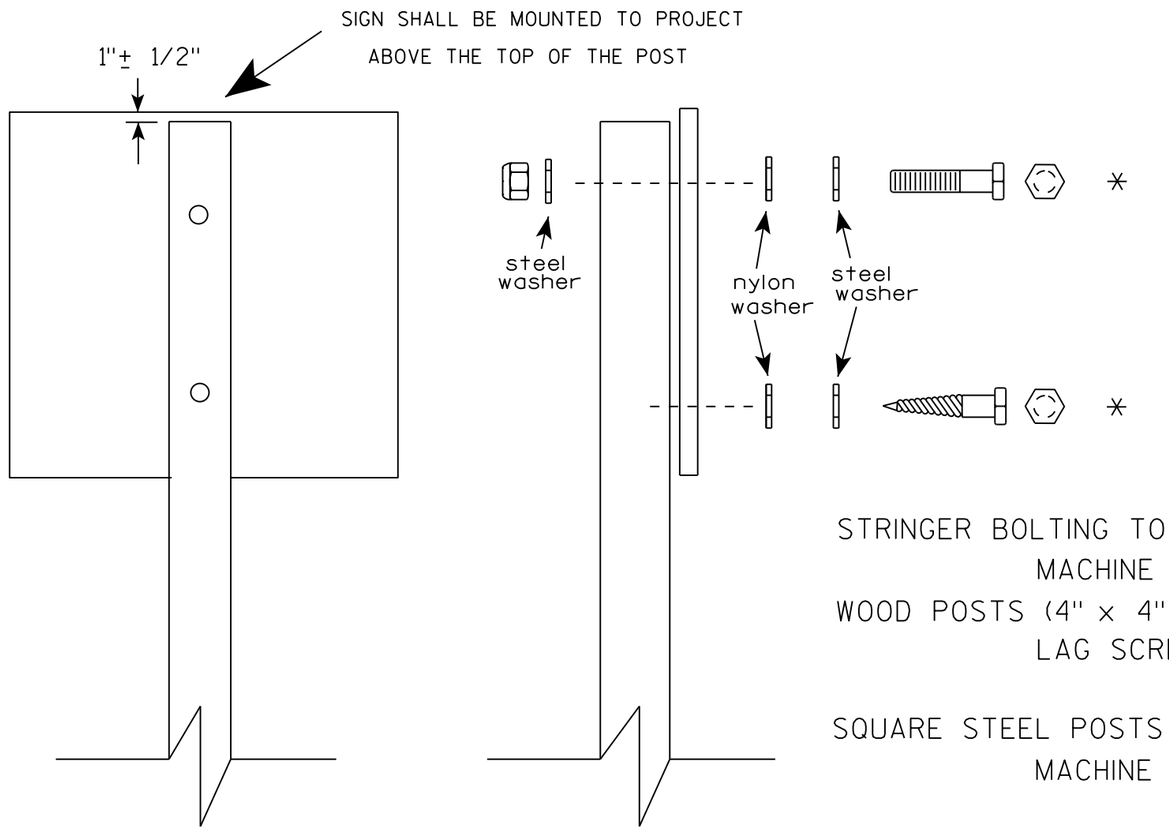
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



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

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

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

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

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

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

WOOD POSTS (4" x 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.

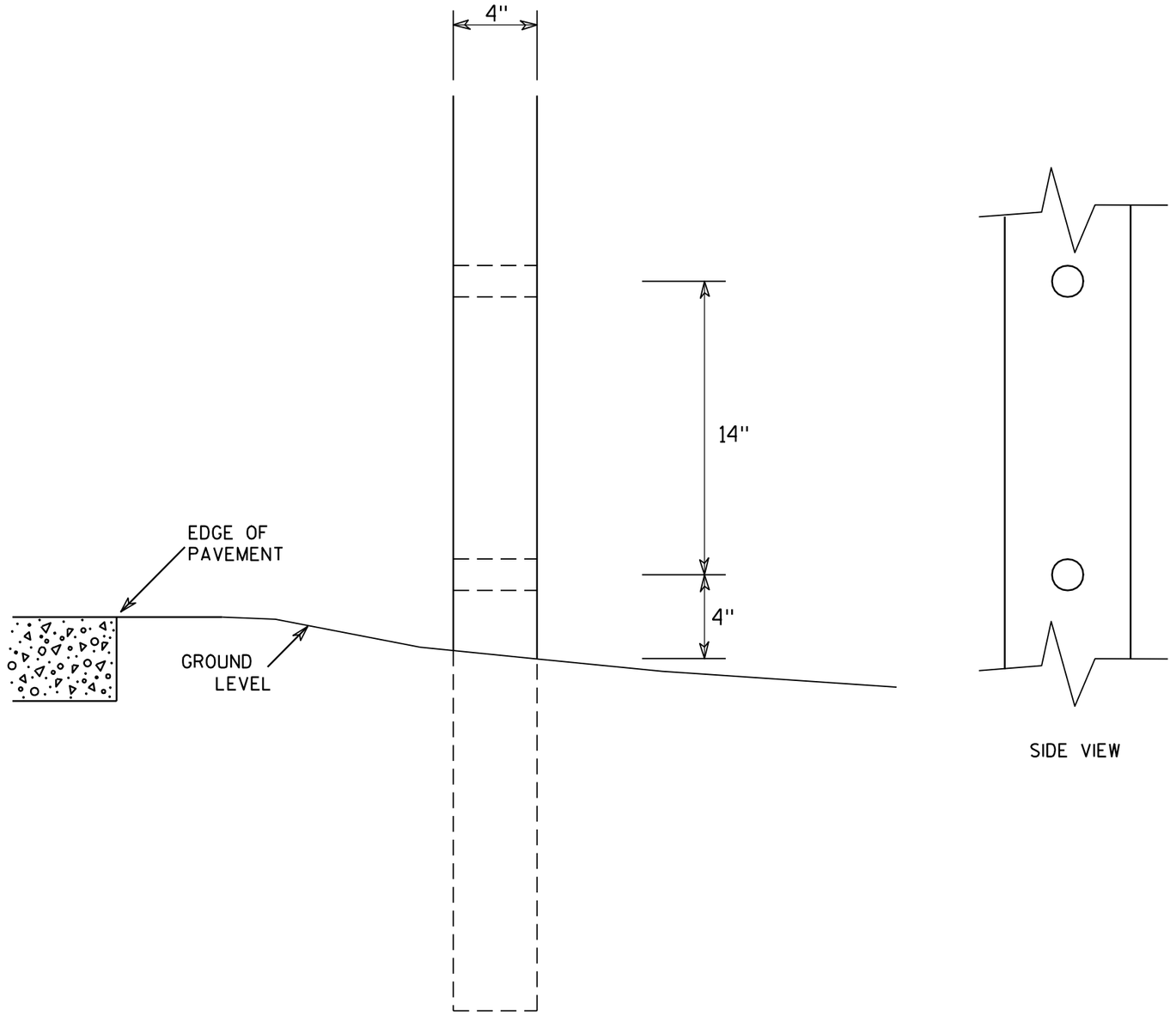
ATTACHMENT OF SIGNS TO POSTS

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.

7

7

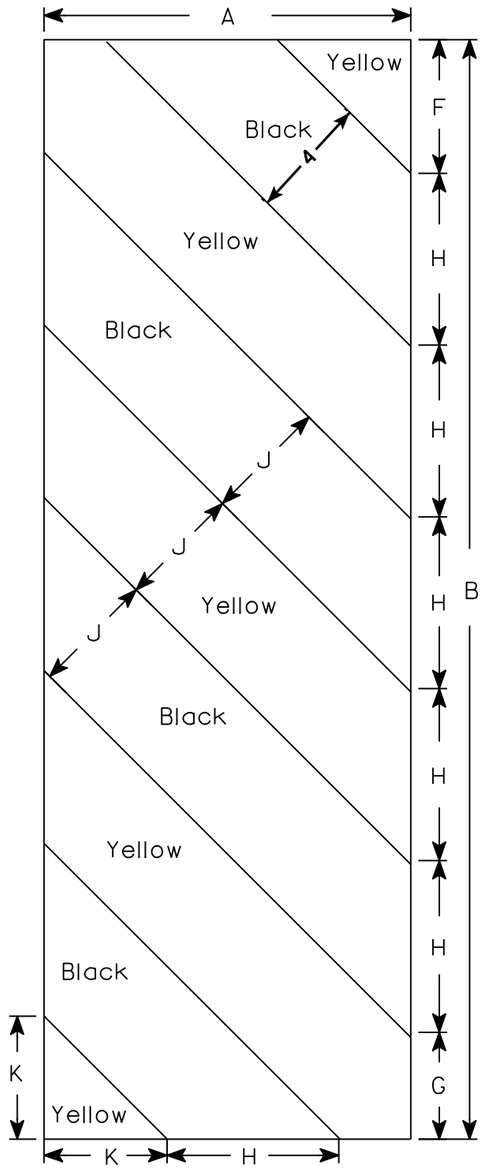
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

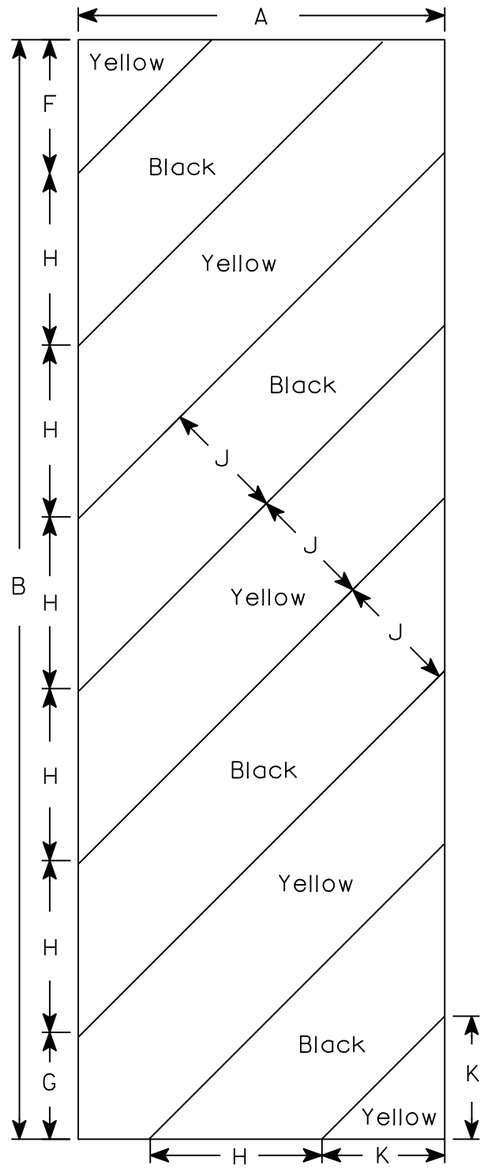
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 21	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

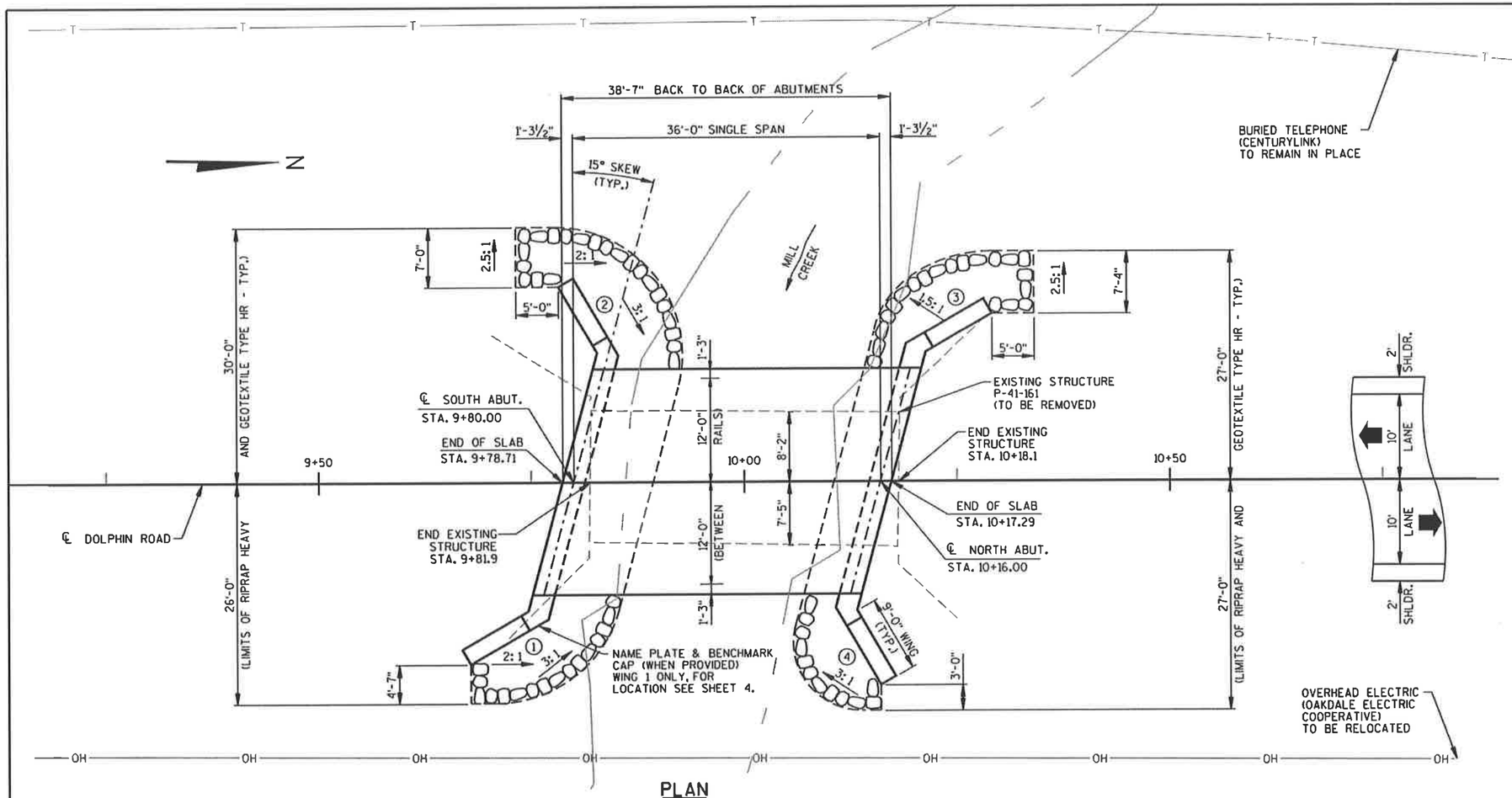
W5-52L & W5-52R

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: 22	E

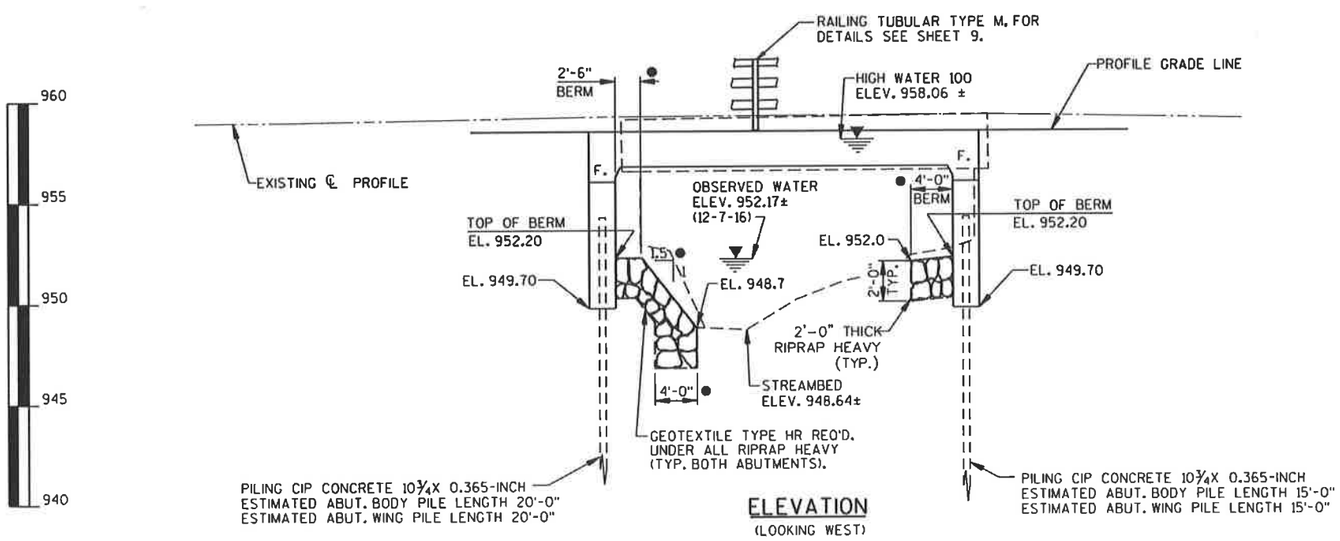


PLAN

(SINGLE SPAN FLAT CONCRETE SLAB)

◯ - INDICATES WING NUMBER

● - NORMAL TO ℄ OF SUBSTRUCTURE



ELEVATION

(LOOKING WEST)

STATE PROJECT NUMBER

7102-00-70

BENCHMARKS ⊕ NAVD 88

NO.	STA./OFFSET	DESCRIPTION	ELEV.
1	9+81.76, 8.7' RT	CHIS SQ ON SE WING WALL	958.73
2	8+44.05, 23.4' LT	PK NAIL IN TOP OF 24" CMP	958.86
3	11+86.61, 25.1' RT	2 POLE NAILS IN 12" ELM	956.38

DESIGN DATA

LIVE LOAD:

DESIGN LOADING : HL-93
INVENTORY RATING FACTOR : 1.12
OPERATIONAL RATING FACTOR : 1.45

TRAFFIC DATA:

A.A.D.T. (2019) = 125
A.A.D.T. (2039) = 150
R.D.S. = 35 MPH

WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.

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

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB — f'c = 4,000 P.S.I.
ALL OTHER — f'c = 3,500 P.S.I.

HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 — fy = 60,000 P.S.I.

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE 10¾X 0.365-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 100 TONS ✳ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 20'-0" AT THE SOUTH ABUTMENT BODY AND WINGS, AND 15'-0" AT THE NORTH ABUTMENT BODY AND WINGS.

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

HYDRAULIC DATA:

100 YEAR FREQUENCY

DRAINAGE AREA	19.7 SQ. MI.
Q_{100}	1,270 C.F.S.
VELOCITY	7.4 FT./SEC.
WATERWAY AREA	172 SQ. FT.
SCOUR CRITICAL CODE	8
HIGH WATER $_{100}$ ELEVATION	958.06
Q_2 ELEVATION (380 C.F.S.)	955.30
VELOCITY $_2$	2.9 FT./SEC.

ROADWAY OVERFLOW DESIGN FREQUENCY

OVERTOPPING FREQUENCY — > 100 YEARS

LIST OF DRAWINGS

CONSULTANT DESIGN CONTACT:
JOLIE SNYDER
(608) 355-8912

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

WISCONSIN
JOLIE A. SNYDER
E-45364
LODI
WI
PROFESSIONAL ENGINEER

Jolie A. Snyder
5/9/18

NO.	DATE	REVISION	BY

MSA PROFESSIONAL SERVICES
TRANSPORTATION • MUNICIPAL DEVELOPMENT • ENVIRONMENTAL
1230 South Boulevard Baraboo, WI 53913
608-356-2771 1-800-362-4505 Fax: 608-356-2770

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SOR — 08/03/18
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-41-312

DOLPHIN ROAD OVER MILL CREEK

COUNTY: MONROE	TOWN/~~CITY/VILLAGE~~: LA GRANGE
DESIGN SPEC.: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS	
DESIGNED BY: JAS	DESIGN CK'D.: DHW
DRAWN BY: RLR	PLANS CK'D.: JAS

GENERAL PLAN

SHEET 1 OF 9
23

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DATE= 4.12.2018

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STATE PROJECT NUMBER

7102-00-70

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

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

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES" FOR THE ABUTMENTS.

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

THIS STRUCTURE WILL REPLACE THE EXISTING STRUCTURE, P-41-161, A 36.2 FT. LONG, SINGLE SPAN STEEL DECK GIRDER ON FULL RETAINING CONCRETE ABUTMENTS WITH 15.6 FT. CLEAR ROADWAY WIDTH.

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.

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

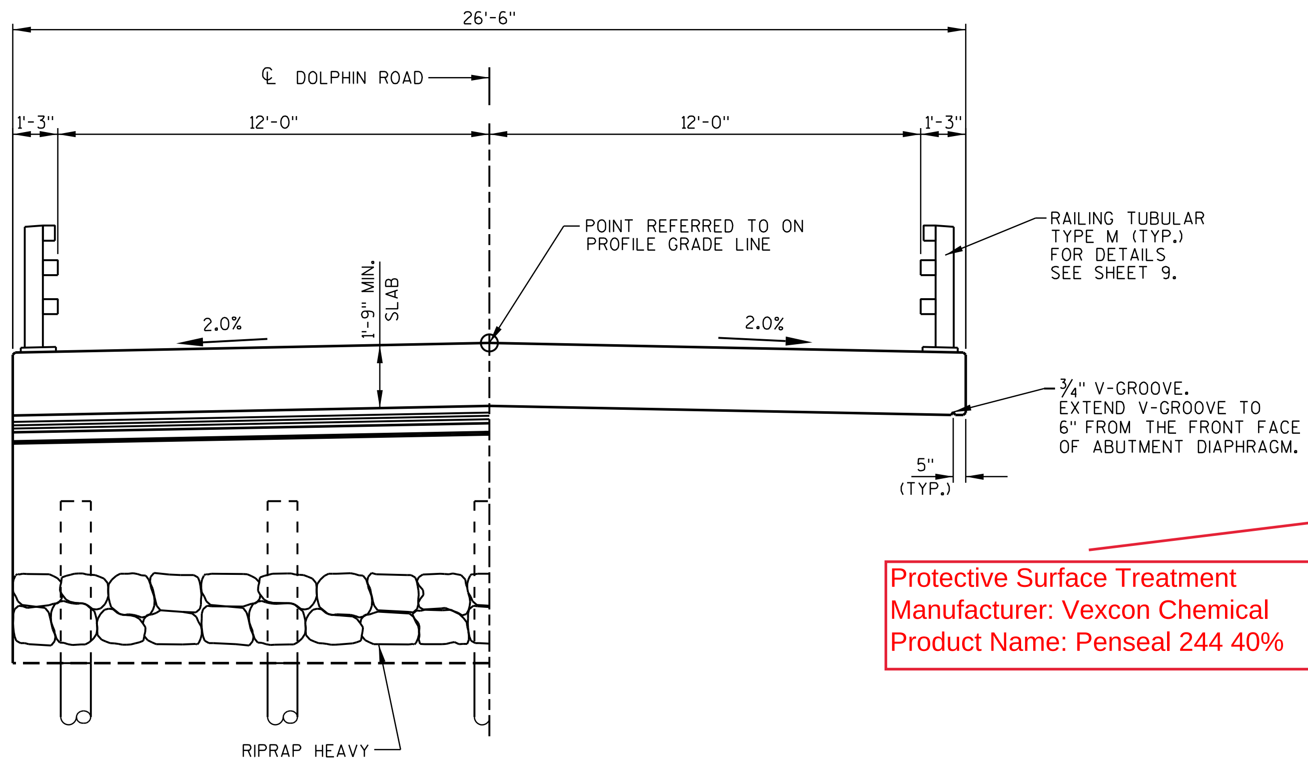
THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION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

DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF THE ABUTMENT UNTIL THE SUPERSTRUCTURE IS IN PLACE.

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

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

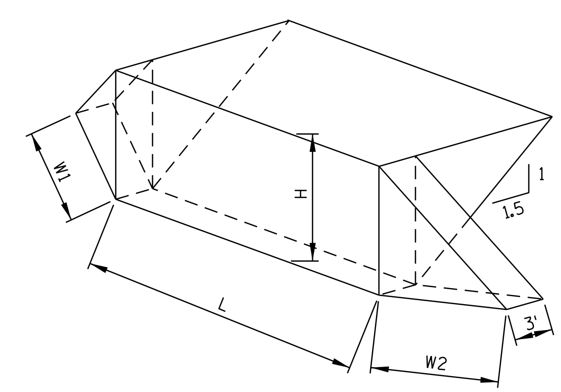
Protective Surface Treatment
Manufacturer: Vexcon Chemical
Product Name: Penseal 244 40%



AT ABUTMENTS — IN SPAN

CROSS SECTION THRU BRIDGE

(LOOKING NORTH)

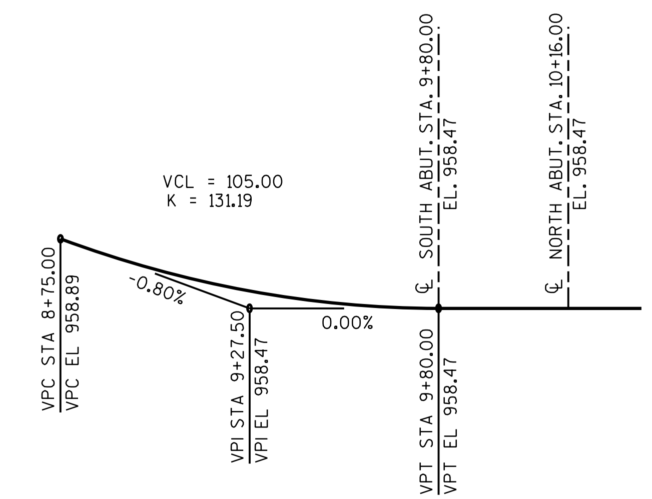


ABUTMENT BACKFILL DIAGRAM

L = OUT-TO-OUT OF ABUTMENT
H = AVERAGE ABUTMENT FILL HEIGHT
W1 = WING 1 LENGTH
W2 = WING 2 LENGTH

$V_{CF} = (L)(3.0')(H)+(L)(0.5)(1.5H)(H)+(0.5)(H)(W1+W2)(3.0')$

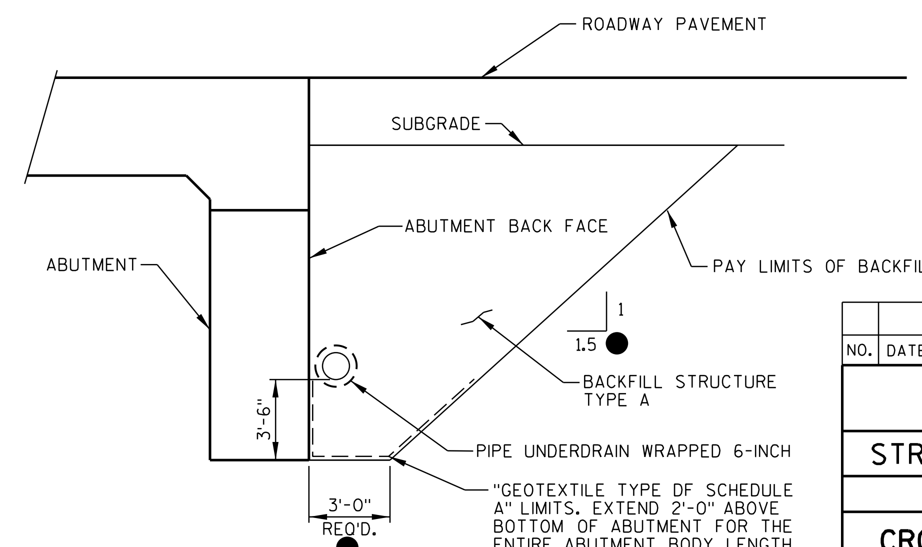
$V_{TON} = V_{CF}\,(2.0)/27$



PROFILE GRADE LINE - DOLPHIN ROAD

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	SOUTH ABUT.	NORTH ABUT.	SUPER	TOTAL
203.0600.S.01	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-41-312	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	135	135	-	270
502.0100	CONCRETE MASONRY BRIDGES	CY	30	30	70	130
502.3200	PROTECTIVE SURFACE TREATMENT	SY	18	18	135	171
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2885	2885	-	5770
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1505	1505	11740	14750
513.4061.01	RAILING TUBULAR TYPE M B-41-312	LF	-	-	81	81
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6	-	12
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	140	105	-	245
606.0300	RIPRAP HEAVY	CY	50	30	-	80
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80	80	-	160
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	30	30	-	60
645.0120	GEOTEXTILE TYPE HR	SY	90	60	-	150
	NON-BID ITEMS					
	PREFORMED FILLER	SIZE				½" & ¾"



STRUCTURE BACKFILL DETAIL

● — NORMAL TO ℄ OF SUBSTRUCTURE

NO.	DATE	REVISION	BY

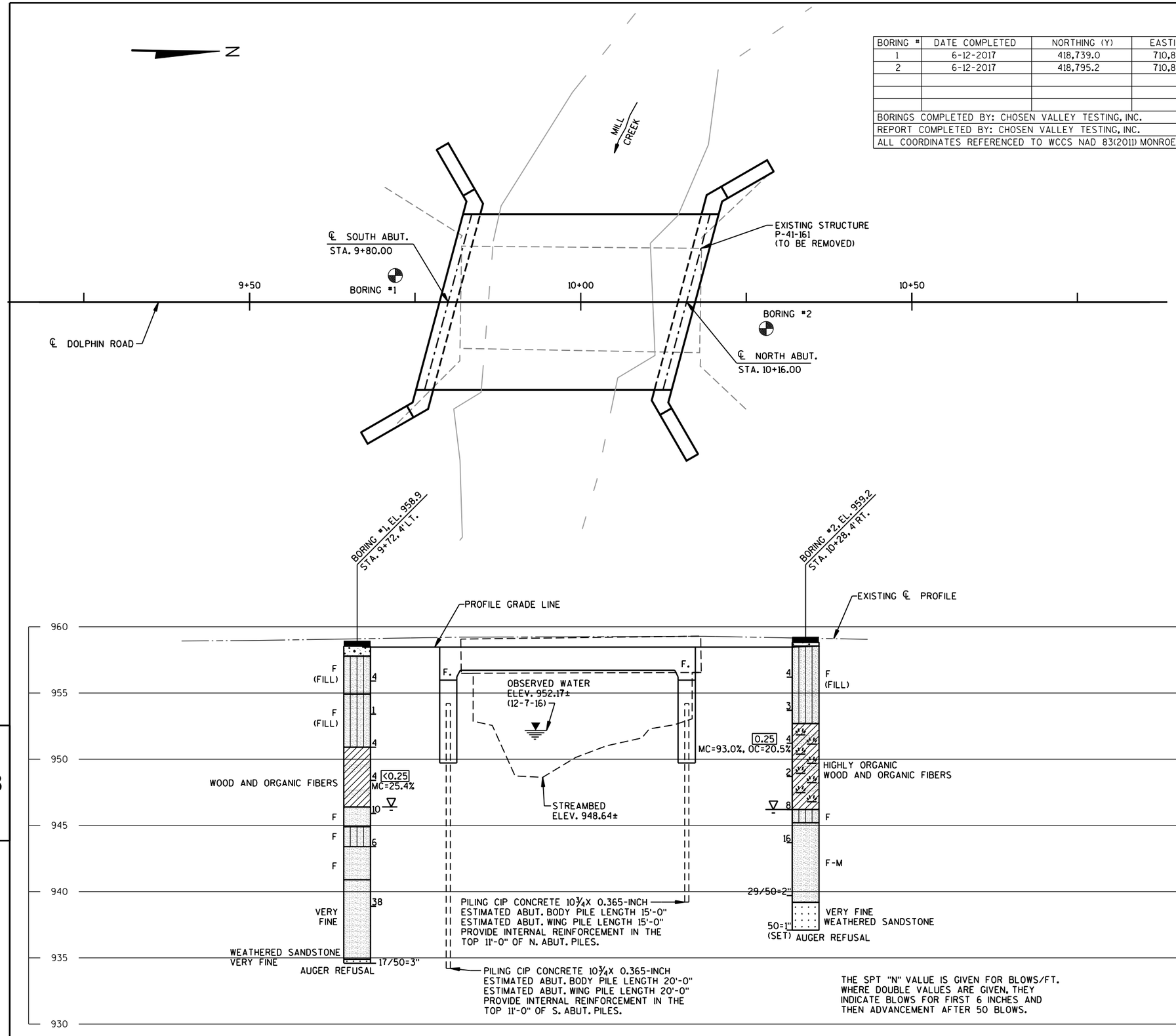
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-312

DRAWN BY RLR — PLANS CK'D. JAS

CROSS SECTION, QUANTITIES & NOTES

SHEET 2 OF 9



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	6-12-2017	418,739.0	710,857.8
2	6-12-2017	418,795.2	710,864.8
BORINGS COMPLETED BY: CHOSEN VALLEY TESTING, INC.			
REPORT COMPLETED BY: CHOSEN VALLEY TESTING, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(2011) MONROE COUNTY			

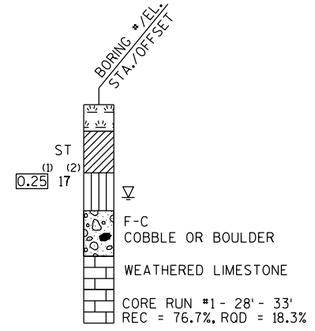
STATE PROJECT NUMBER

7102-00-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING
▼ END OF DRILLING
▽ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-312

DRAWN BY RLR · PLANS CK'D. JAS

SUBSURFACE EXPLORATION

SHEET 3 OF 9
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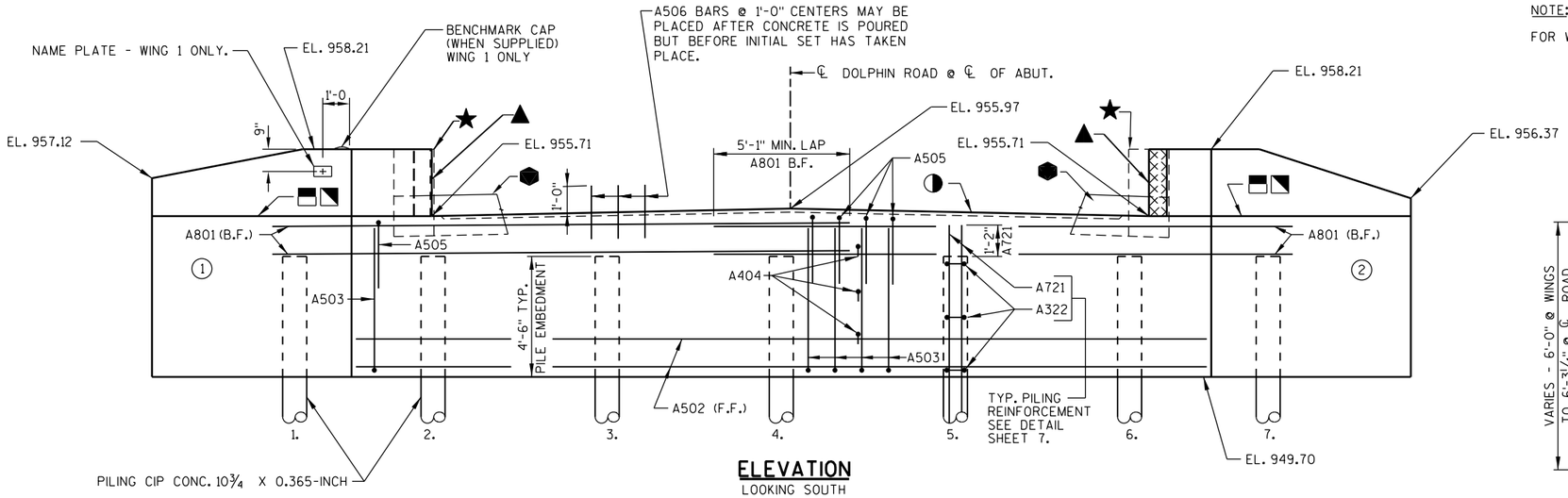
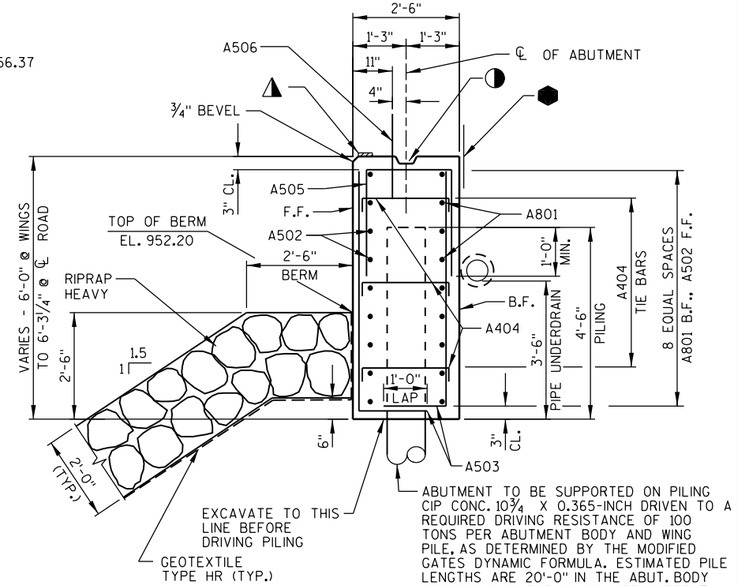


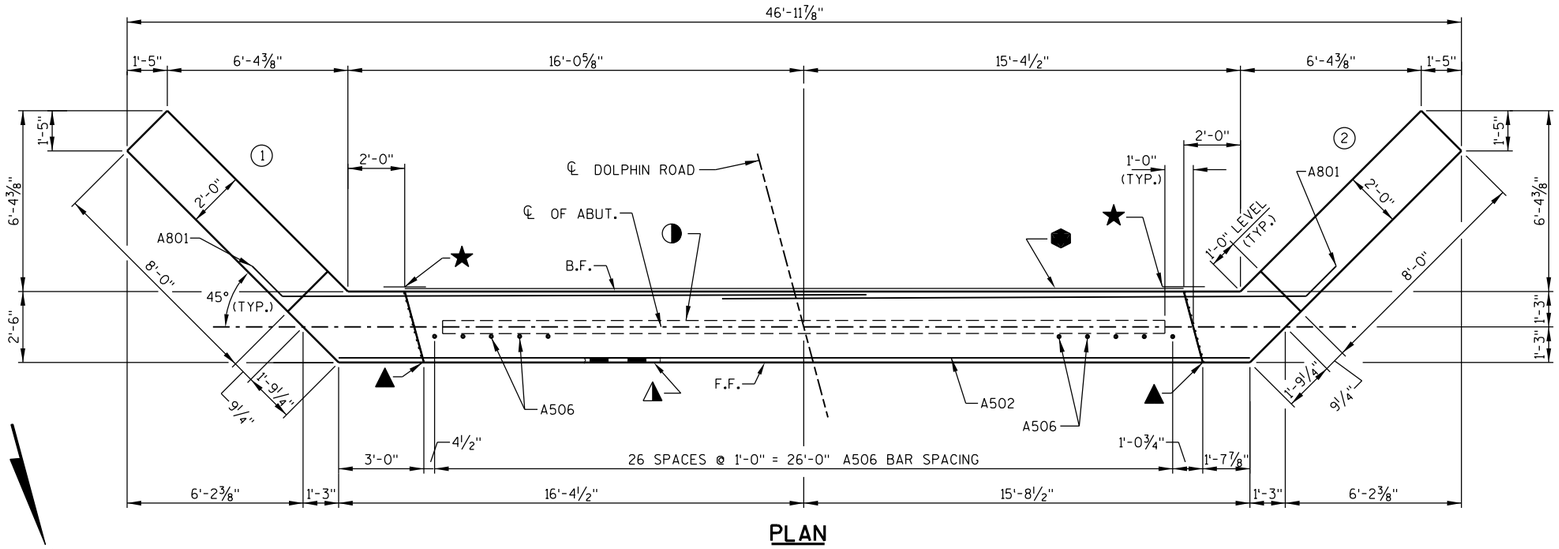
ELEVATION
LOOKING SOUTH

NOTE:

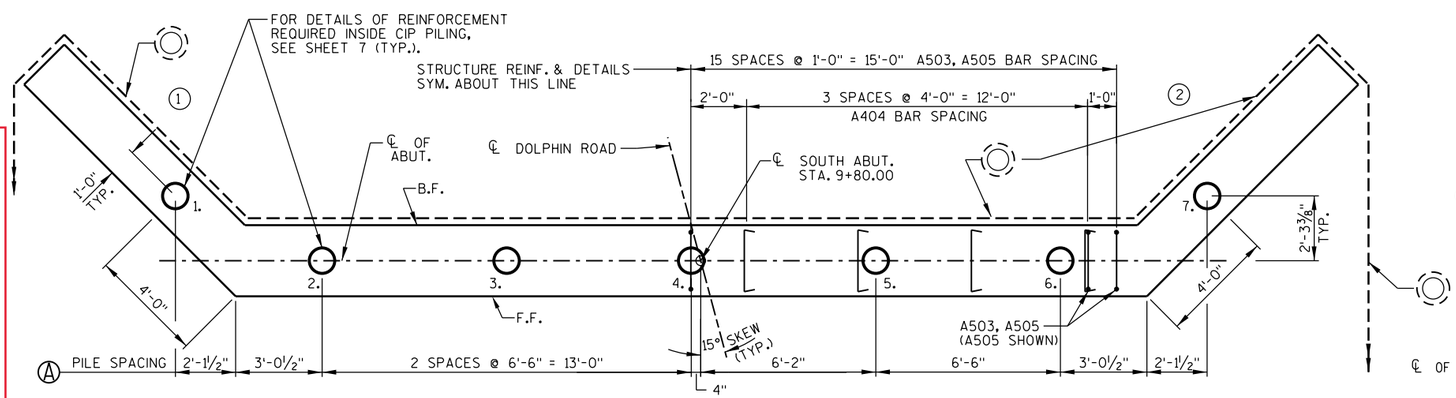
FOR WING DETAILS SEE SHEET 5.



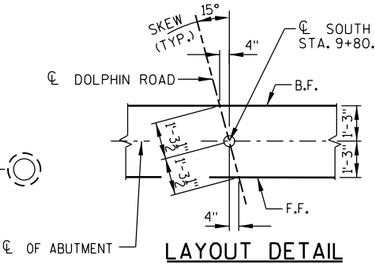
TYPICAL SECTION THRU ABUTMENT



PLAN



PILE PLAN



LAYOUT DETAIL

LEGEND

- ◑ — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ▲ — ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◭ — 4"x ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
- ⬢ — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS.
- ◓ — OPTIONAL KEYED CONST. JOINT ON WING FORMED BY BEVELED 2 X 6. IF JOINT IS USED, PLACE ⬢ ON B.F. OF WING. COST OF ⬢ IS INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".
- ◥ — ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONSTRUCTION JOINT IS USED.
- ◎ — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT SHIELD AT ENDS OF PIPE. FOR RODENT DETAILS, SEE SHEET 5.
- Ⓐ — EXISTING FOUNDATION TYPE IS UNKNOWN. IF EXISTING PILING ARE PRESENT AND THEY CONFLICT WITH THE NEW PILES, ADJUST THE LOCATION OF THE NEW PILES UP TO AN 8'-0" MAXIMUM PILE SPACING. KEEP PILES 2 AND 6 BETWEEN A MINIMUM OF 2-0" AND A MAXIMUM OF 3'-3" FROM THE ABUTMENT F.F. CORNERS.
- ○ — INDICATES WING NUMBER F.F.— FRONT FACE B.F.—BACK FACE CL.—CLEAR

Pile numbers 6 and 4 were cut 1 foot below plan grade. The falsework had to match and since the contractor cut pile numbers 2 and 4 on the north abutment they had to cut pile numbers 6 and 4 on the south abutment. The designers were okay with cutting pile number 6 and 4.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-312

DRAWN BY RLR | PLANS CK'D. JAS

SOUTH ABUTMENT

SHEET 4 OF 9
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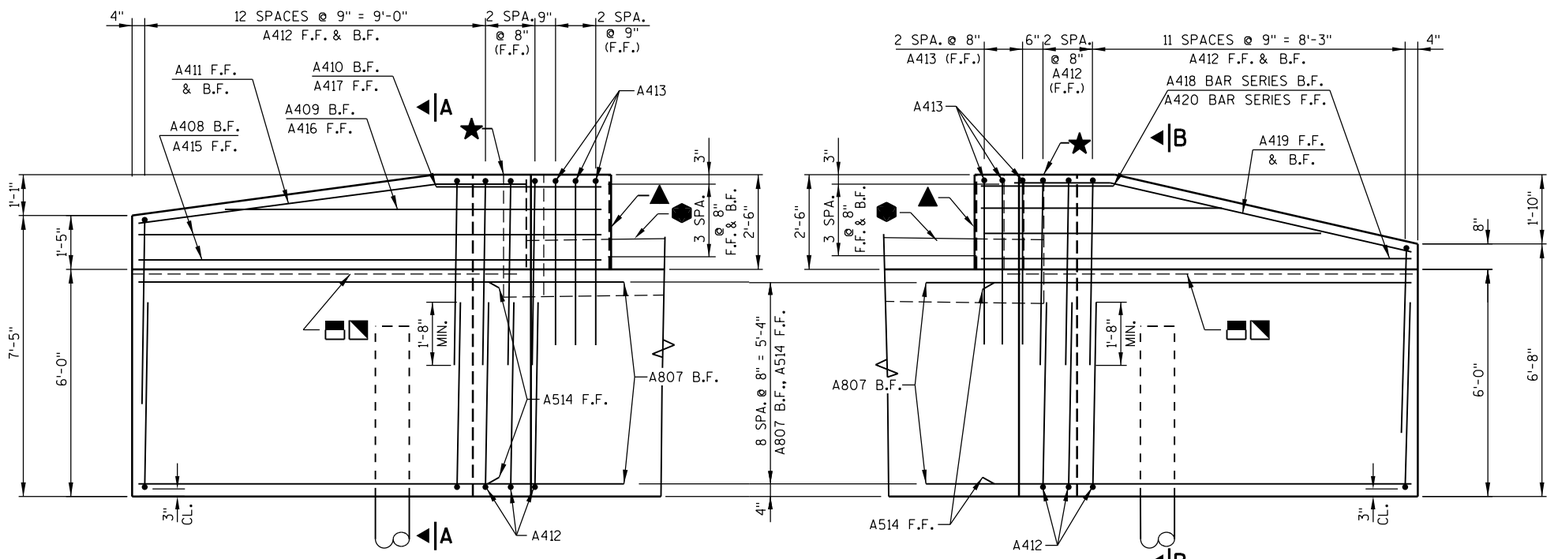
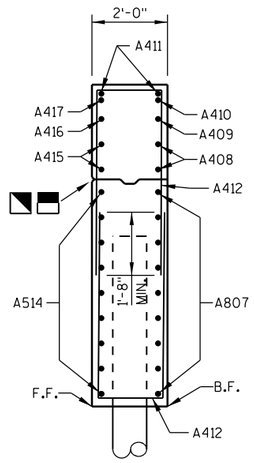
7102-00-70

SEE LEGEND ON SHEET 4 FOR DESCRIPTION OF ★ ⬢ ◥ ▬ ▲

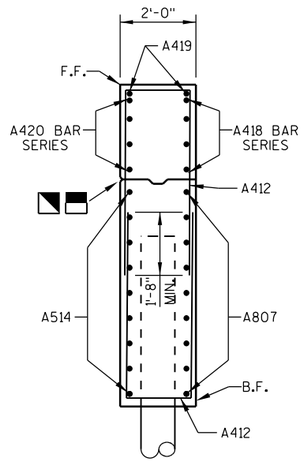


ELEVATION WING 1
(LOOKING AT F.F. OF WING)

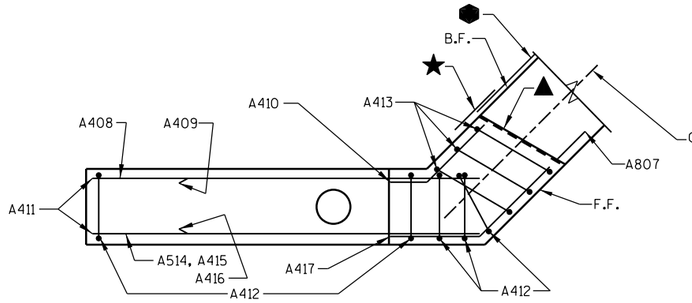
ELEVATION WING 2
(LOOKING AT F.F. OF WING)



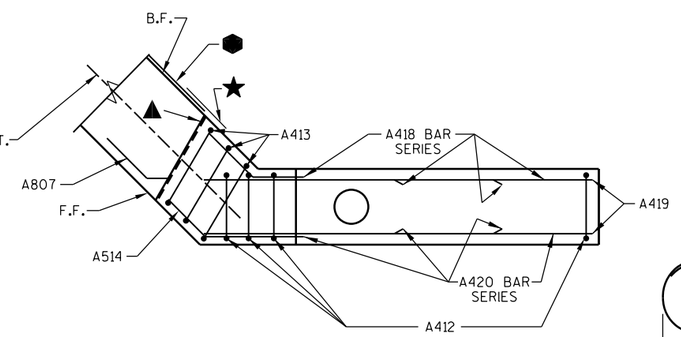
SECTION A-A
THRU WING 1



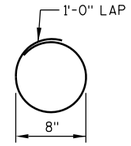
SECTION B-B
THRU WING 2



PLAN WING 1



PLAN WING 2



A322

A503

BILL OF BARS (SOUTH ABUT.)

COATED 1505 LBS.
UNCOATED 2885 LBS.

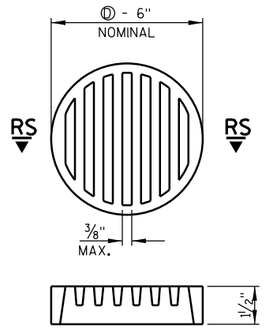
MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
A801	-	18	22'-0"	X		ABUTMENT BODY - B.F. - HORIZ.
A502	-	9	32'-0"			ABUTMENT BODY - F.F. - HORIZ.
A503	-	62	7'-0"	X		ABUTMENT BODY - F.F. & B.F. - VERT.
A404	-	24	2'-9"	X		ABUTMENT BODY - TIES - HORIZ.
A505	-	31	7'-1"	X		ABUTMENT BODY - TOP - VERT.
A506	27	-	2'-0"			ABUTMENT BODY - TOP DOWEL - VERT.
A807	18	-	13'-2"	X		WINGS - B.F. - HORIZ.
A408	2	-	10'-9"	X		WING 1 - B.F. - HORIZ.
A409	1	-	8'-6"	X		WING 1 - B.F. - HORIZ.
A410	1	-	3'-0"	X		WING 1 - B.F. - HORIZ.
A411	2	-	10'-3"	X		WING 1 - F.F. & B.F. - TOP - HORIZ.
A412	58	-	11'-4"	X		WINGS - F.F. & B.F. - VERT.
A413	6	-	10'-4"	X		WINGS - F.F. & B.F. - TOP - VERT.
A514	18	-	11'-8"	X		WINGS - F.F. - HORIZ.
A415	2	-	12'-9"	X		WING 1 - F.F. - HORIZ.
A416	1	-	10'-6"	X		WING 1 - F.F. - HORIZ.
A417	1	-	4'-11"	X		WING 1 - F.F. - HORIZ.
A418	4	-	6'-11"	X	Ⓢ	WING 2 - B.F. - HORIZ.
A419	2	-	10'-6"	X		WING 2 - F.F. & B.F. - TOP - HORIZ.
A420	4	-	7'-9"	X	Ⓢ	WING 2 - F.F. - HORIZ.
A721	-	28	13'-0"			PILING 1 - 7 - VERT.
A322	-	49	3'-2"	X		PILING 1 - 7 - TIES - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

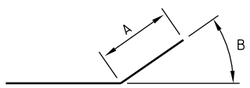
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER.
A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH STAINLESS STEEL SHEET METAL SCREWS. THE RODENT SHIELD, PIPE COUPLING AND SCREWS, SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



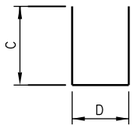
SECTION RS-RS

RODENT SHIELD

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



MARK	A	B
A801 A807 A514	1'-6"	45°
A408 A409 A410	1'-11"	45°
A411	2'-5"	8°
A415 A416 A417	2'-7"	45°
A418	1'-9"	45°
A419	2'-6"	13°
A420	1'-5"	45°



MARK	C	D
A404	4½"	2'-2"
A505	2'-7"	2'-2"
A412	4'-11"	1'-8"
A413	4'-2"	2'-2"

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

BENT BARS IF USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.

BAR MARK	NO. REQ'D.	LENGTH
A418	1 SERIES OF 4	3'-1" TO 10'-9"
A420	1 SERIES OF 4	3'-11" TO 11'-7"

BAR SERIES TABLE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-312

DRAWN BY RLR | PLANS CK'D. JAS

SOUTH ABUTMENT DETAILS

SHEET 5 OF 9
27

FILE= 5848028_05.DGN
DATE= 4/24/2018

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STATE PROJECT NUMBER

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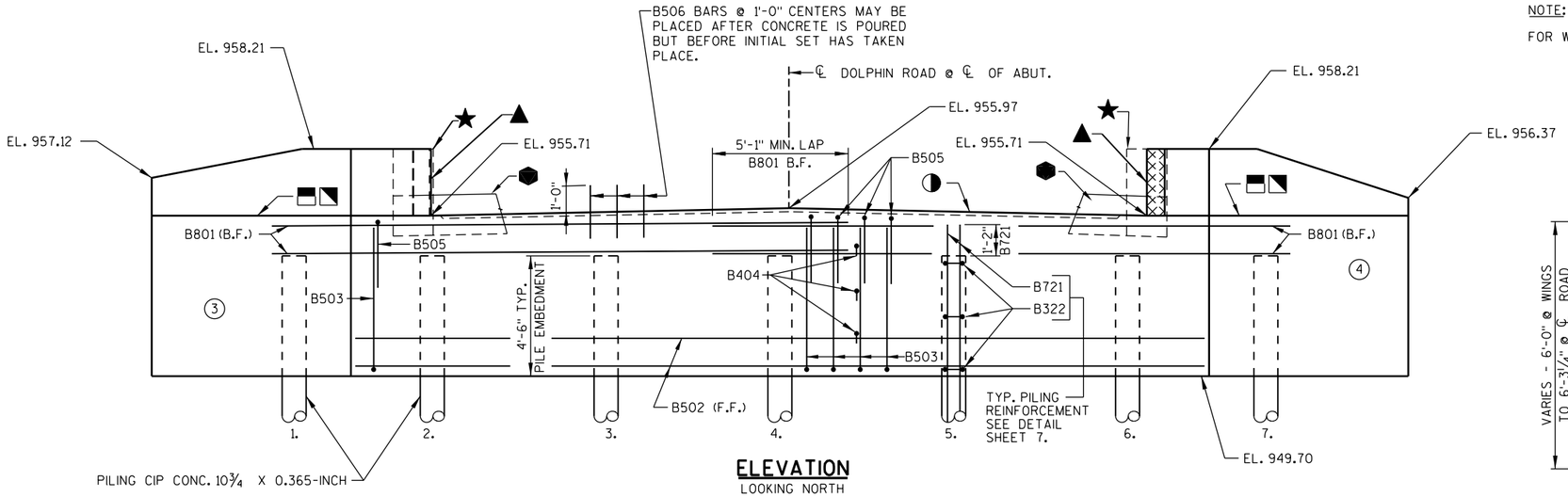
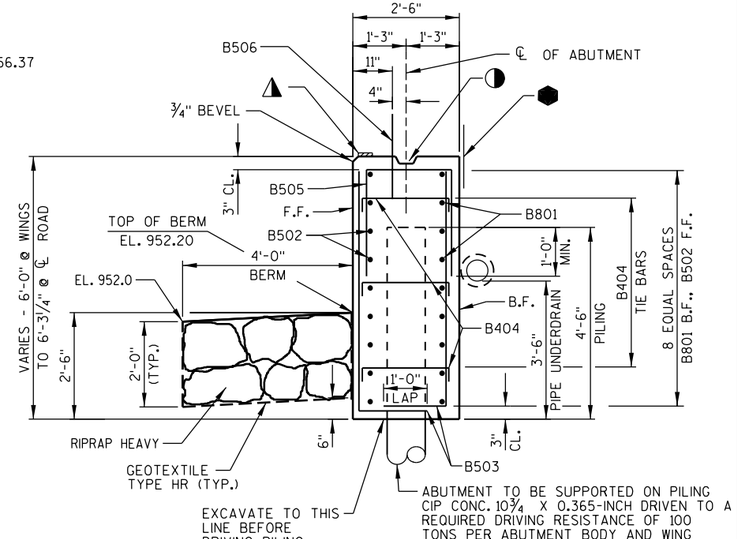


ELEVATION
LOOKING NORTH

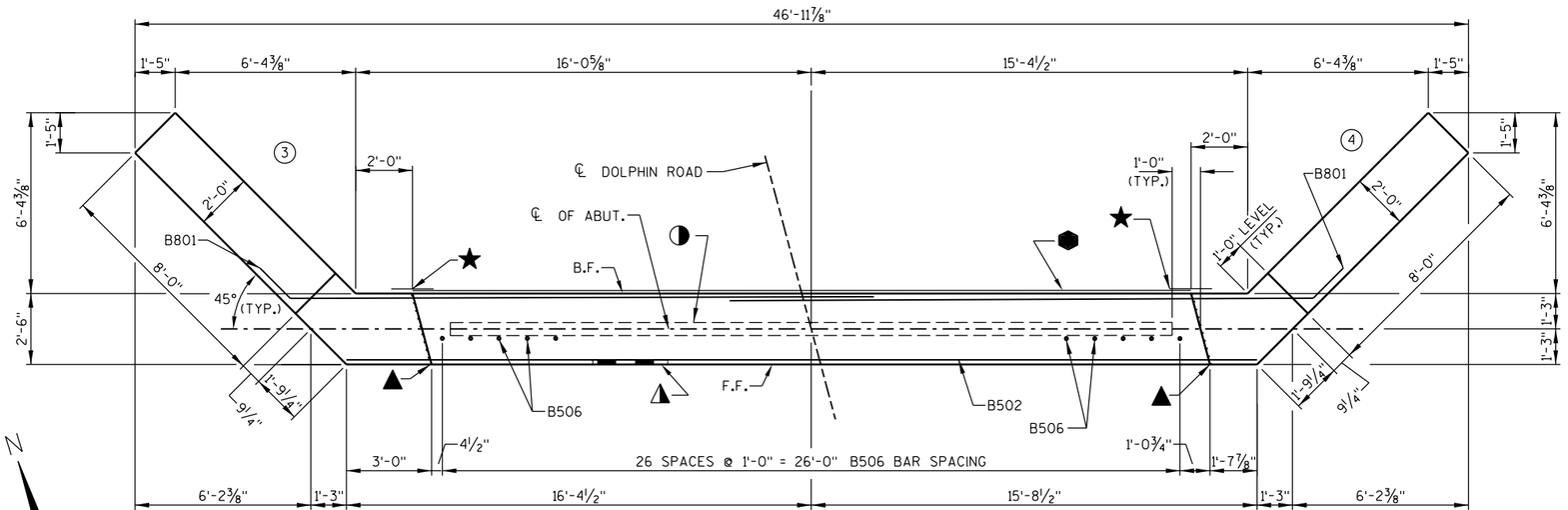
NOTE:

FOR WING DETAILS SEE SHEET 7.



ABUTMENT TO BE SUPPORTED ON PILING CIP CONC. 10¾ X 0.365-INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 100 TONS PER ABUTMENT BODY AND WING PILE, AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 15'-0" IN THE ABUT. BODY AND 15'-0" IN THE WINGS. SEE SHEET 7 FOR PILE SPLICE DETAILS.

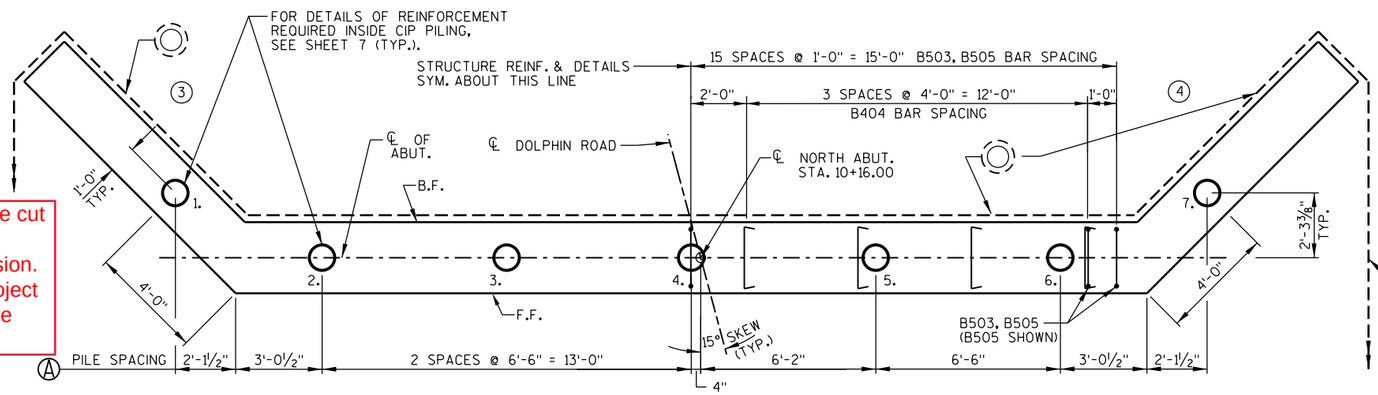
TYPICAL SECTION THRU ABUTMENT



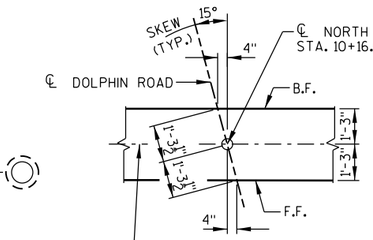
PLAN

LEGEND

- ◑ — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
- ▲ — ½" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONCRETE).
- ◭ — 4"x ¾" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
- ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
- ⬢ — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS.
- ⬒ — OPTIONAL KEYED CONST. JOINT ON WING FORMED BY BEVELED 2 X 6. IF JOINT IS USED, PLACE ⬢ ON B.F. OF WING. COST OF ⬢ IS INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".
- ◥ — ¾" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONSTRUCTION JOINT IS USED.
- ◎ — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT SHIELD AT ENDS OF PIPE. FOR RODENT DETAILS, SEE SHEET 5.
- Ⓐ — EXISTING FOUNDATION TYPE IS UNKNOWN. IF EXISTING PILING ARE PRESENT AND THEY CONFLICT WITH THE NEW PILES, ADJUST THE LOCATION OF THE NEW PILES UP TO AN 8'-0" MAXIMUM PILE SPACING. KEEP PILES 2 AND 6 BETWEEN A MINIMUM OF 2'-0" AND A MAXIMUM OF 3'-3" FROM THE ABUTMENT F.F. CORNERS.
- ○ — INDICATES WING NUMBER F.F.— FRONT FACE B.F.—BACK FACE CL.—CLEAR



PILE PLAN



LAYOUT DETAIL

Piles number 2 and 4 were cut 2 feet below plan grade without asking for permission. The designers told the project engineer the cut piles were okay to leave alone.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-312

DRAWN BY RLR | PLANS CK'D. JAS

NORTH ABUTMENT

SHEET 6 OF 9
28

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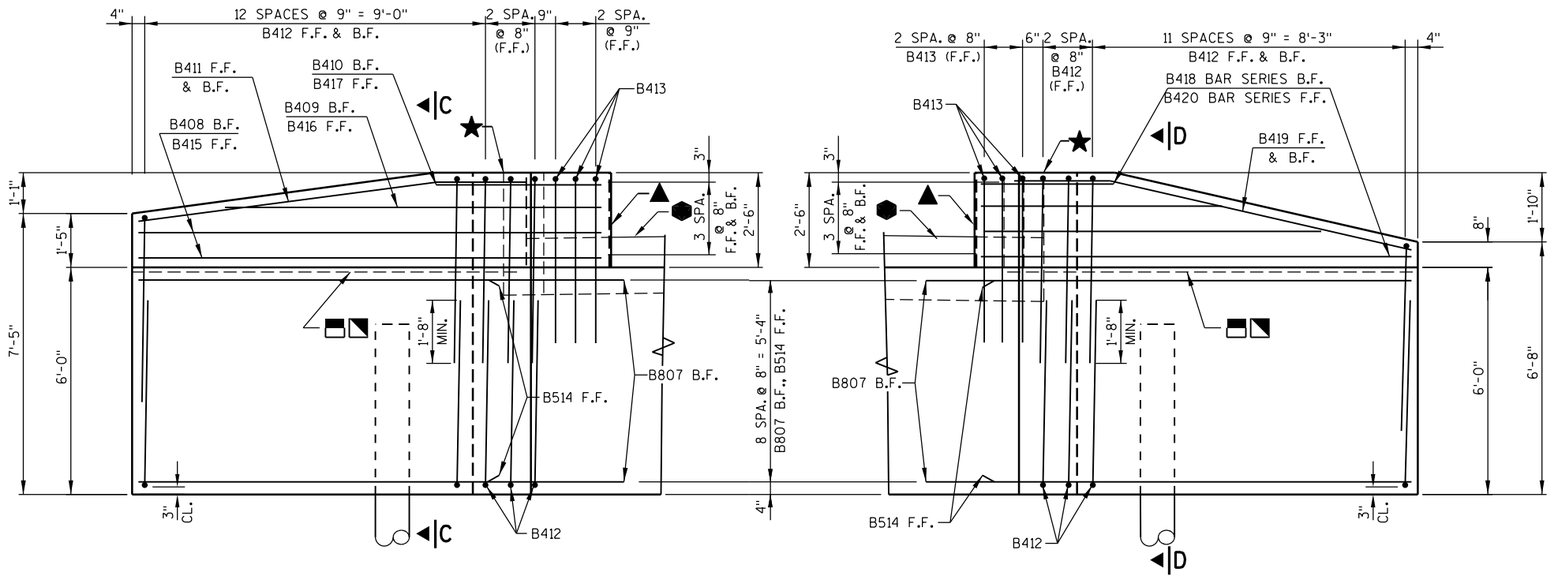
STATE PROJECT NUMBER

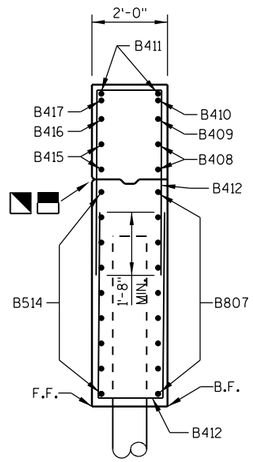
7102-00-70

SEE LEGEND ON SHEET 6 FOR DESCRIPTION OF ★ ⬢ ◥ ▬ ▲

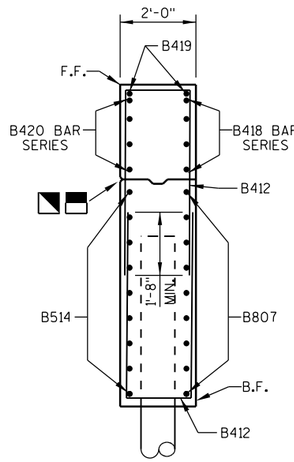


ELEVATION WING 3
(LOOKING AT F.F. OF WING)

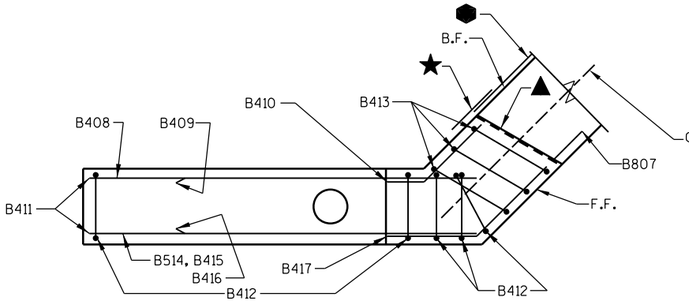
ELEVATION WING 4
(LOOKING AT F.F. OF WING)



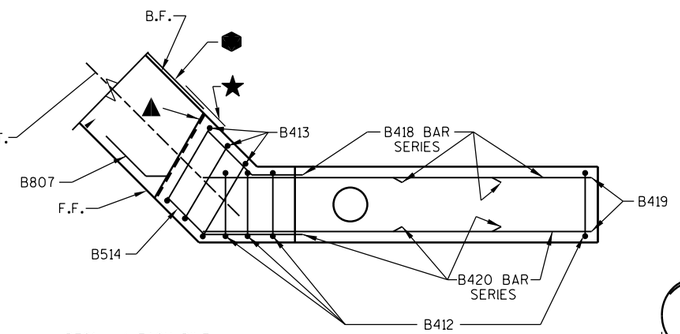
SECTION C-C THRU WING 3



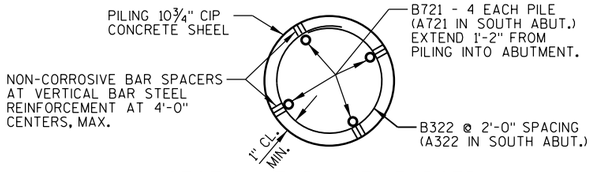
SECTION D-D THRU WING 4



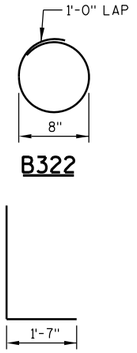
PLAN WING 3



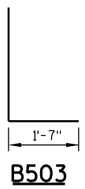
PLAN WING 4



SECTION THRU REINFORCED CONCRETE CAST-IN-PLACE PILING



B322



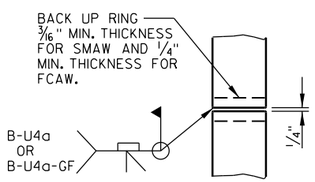
B503

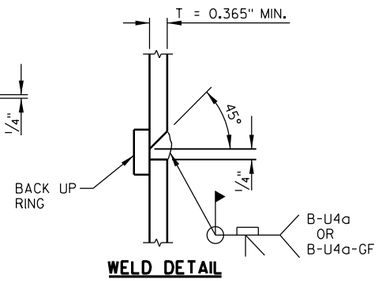
BILL OF BARS (NORTH ABUT.)

COATED 1505 LBS.
UNCOATED 2885 LBS.

MARK	NUMBER REQUIRED COATED	NUMBER REQUIRED UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
B801	-	18	22'-0"	X		ABUTMENT BODY - B.F. - HORIZ.
B502	-	9	32'-0"			ABUTMENT BODY - F.F. - HORIZ.
B503	-	62	7'-0"	X		ABUTMENT BODY - F.F. & B.F. - VERT.
B404	-	24	2'-9"	X		ABUTMENT BODY - TIES - HORIZ.
B505	-	31	7'-1"	X		ABUTMENT BODY - TOP - VERT.
B506	27	-	2'-0"			ABUTMENT BODY - TOP DOWEL - VERT.
B807	18	-	13'-2"	X		WINGS - B.F. - HORIZ.
B408	2	-	10'-9"	X		WING 3 - B.F. - HORIZ.
B409	1	-	8'-6"	X		WING 3 - B.F. - HORIZ.
B410	1	-	3'-0"	X		WING 3 - B.F. - HORIZ.
B411	2	-	10'-3"	X		WING 3 - F.F. & B.F. - TOP - HORIZ.
B412	58	-	11'-4"	X		WINGS - F.F. & B.F. - VERT.
B413	6	-	10'-4"	X		WINGS - F.F. & B.F. - TOP - VERT.
B514	18	-	11'-8"	X		WINGS - F.F. - HORIZ.
B415	2	-	12'-9"	X		WING 3 - F.F. - HORIZ.
B416	1	-	10'-6"	X		WING 3 - F.F. - HORIZ.
B417	1	-	4'-11"	X		WING 3 - F.F. - HORIZ.
B418	4	-	6'-11"	X	Ⓢ	WING 4 - B.F. - HORIZ.
B419	2	-	10'-6"	X		WING 4 - F.F. & B.F. - TOP - HORIZ.
B420	4	-	7'-9"	X	Ⓢ	WING 4 - F.F. - HORIZ.
B721	-	28	13'-0"			PILING 1 - 7 - VERT.
B322	-	49	3'-2"	X		PILING 1 - 7 - TIES - HORIZ.

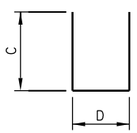
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



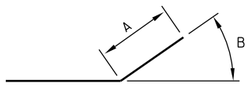


PILE SPLICE DETAILS

WELD DETAIL



MARK	C	D
B404	4½"	2'-2"
B505	2'-7"	2'-2"
B412	4'-11"	1'-8"
B413	4'-2"	2'-2"



MARK	A	B
B801 B807 B514	1'-6"	45°
B408 B409 B410	1'-11"	45°
B411	2'-5"	8°
B415 B416 B417	2'-7"	45°
B418	1'-9"	45°
B419	2'-6"	13°
B420	1'-5"	45°

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

BENT BARS IF USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.

BAR MARK	NO. REQ'D.	LENGTH
B418	1 SERIES OF 4	3'-1" TO 10'-9"
B420	1 SERIES OF 4	3'-11" TO 11'-7"

BAR SERIES TABLE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-312

DRAWN BY RLR | PLANS CK'D. JAS

NORTH ABUTMENT DETAILS

SHEET 7 OF 9
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STATE PROJECT NUMBER

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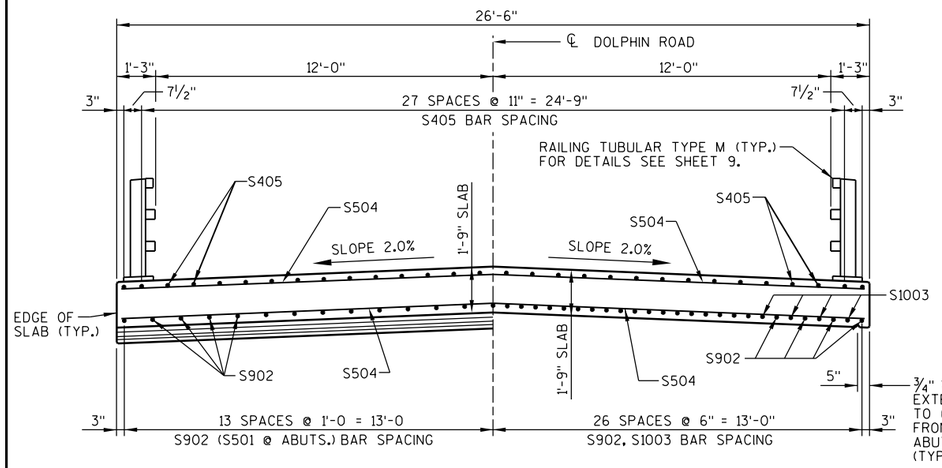


AT ABUTMENTS IN SPAN

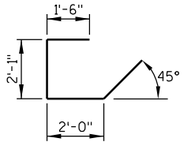
CROSS SECTION THRU BRIDGE

(LOOKING NORTH)

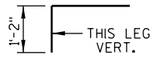
BILL OF BARS (COATED) 11,740 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	54	7'-3"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S902	27	38'-2"		SLAB BOTTOM - LONGIT.
S1003	26	30'-5"		SLAB BOTTOM - LONGIT.
S504	94	27'-1"		SLAB TOP & BOTTOM - TRANS.
S405	30	38'-2"		SLAB TOP - LONGIT.
S606	28	12'-0"	X	SLAB TOP @ RAIL POST, 2 PER POST
S607	40	6'-0"		SLAB TOP @ RAIL POST, 4 PER POST
S608	16	6'-0"	X	SLAB TOP @ RAIL END POST AS NOTED

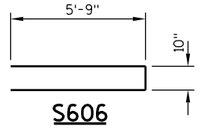
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT.



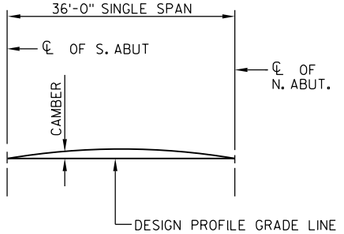
S501



S608



S606



CAMBER DIAGRAM

CAMBER SPANS AS SHOWN ABOVE AND IN THE TABLE OF VALUES TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION APPROXIMATES 1/3 OF CAMBER VALUES SHOWN.

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

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

GENERAL NOTES

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

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 TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE PLACED ON THE SKEW.

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	SPAN POINT	WEST SLAB EDGE	C/L DOLPHIN ROAD	EAST SLAB EDGE
SOUTH ABUT.	1.0	958.195	958.45	958.2
	1.5	958.22	958.495	958.27
NORTH ABUT.	2.0	958.2	958.42	958.195

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS AND AT THE 0.5 PTS. TO VERIFY CAMBER, TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR ℄. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TOP OF SLAB ELEVATIONS AND CAMBER VALUES

LOCATION	SPAN POINT	EAST SLAB EDGE	C/L DOLPHIN ROAD	WEST SLAB EDGE	CAMBER VALUE (INCHES)
SOUTH ABUT.	1.0	958.21	958.47	958.21	0.0
	1.1	958.21	958.47	958.21	0.3
	1.2	958.21	958.47	958.21	0.6
	1.3	958.21	958.47	958.21	0.8
	1.4	958.21	958.47	958.21	0.9
	1.5	958.21	958.47	958.21	0.9
	1.6	958.21	958.47	958.21	0.9
	1.7	958.21	958.47	958.21	0.8
	1.8	958.21	958.47	958.21	0.6
	1.9	958.21	958.47	958.21	0.3
NORTH ABUT.	2.0	958.21	958.47	958.21	0.0

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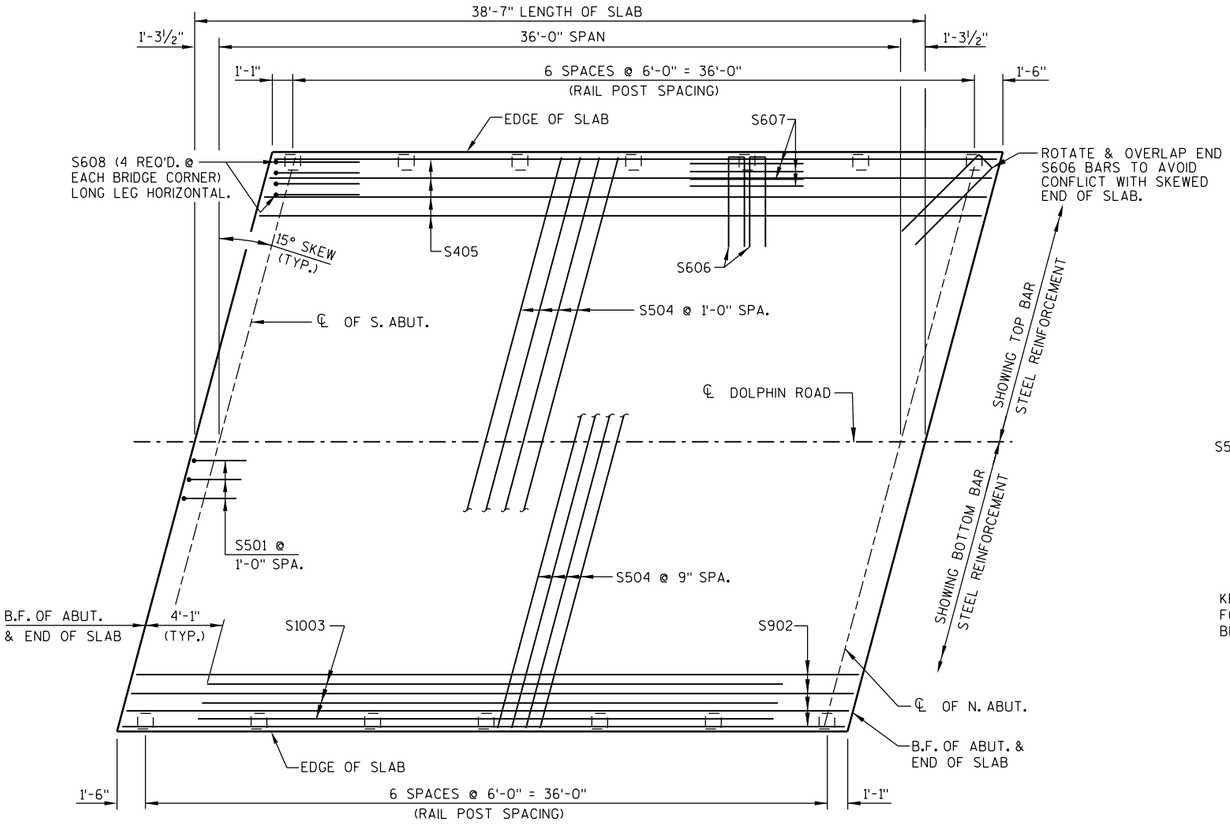
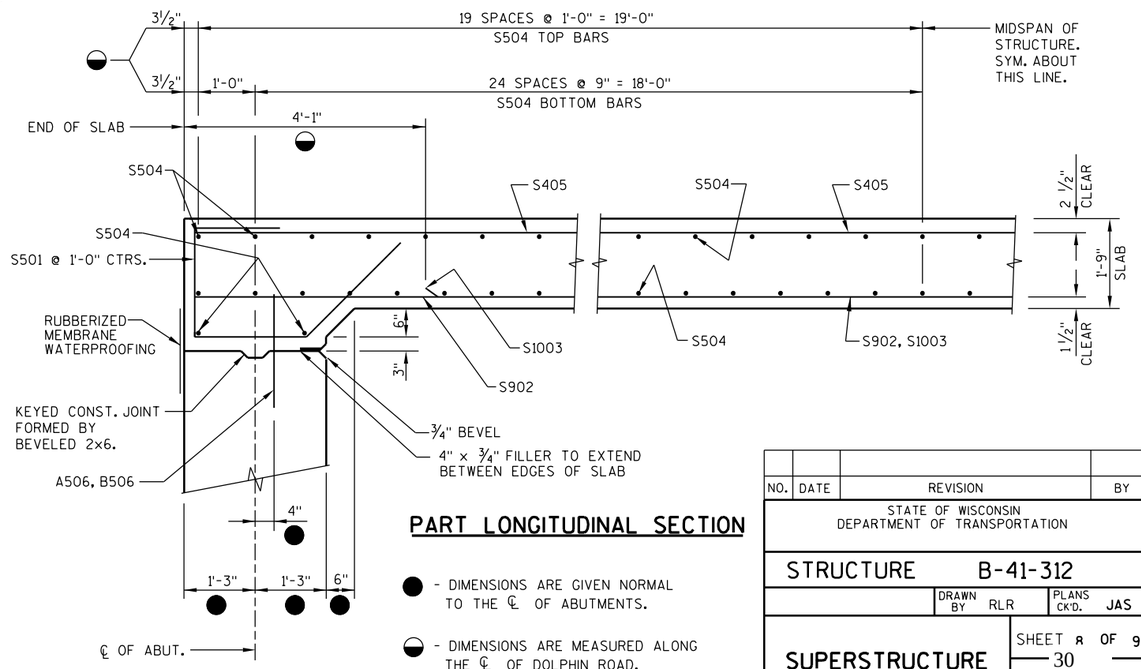


PLAN



PART LONGITUDINAL SECTION

- ● - DIMENSIONS ARE GIVEN NORMAL TO THE ℄ OF ABUTMENTS.
- ◒ - DIMENSIONS ARE MEASURED ALONG THE ℄ OF DOLPHIN ROAD.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-312

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SUPERSTRUCTURE

SHEET R OF 9
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DATE= 4/12/2018

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STATE PROJECT NUMBER

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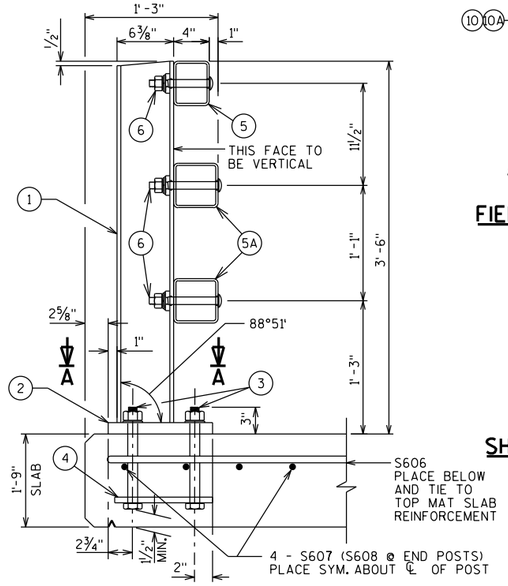
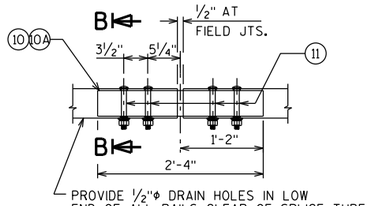
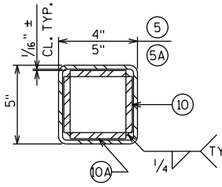


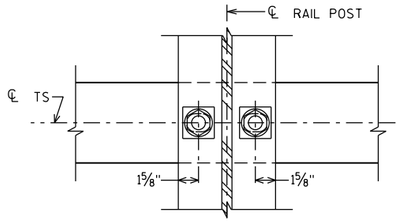
SECTION THRU RAILING ON SLAB



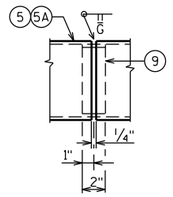
FIELD ERECTION JOINT DETAIL



SECTION B-B

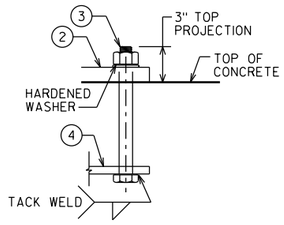


SECTION THRU POST WEB

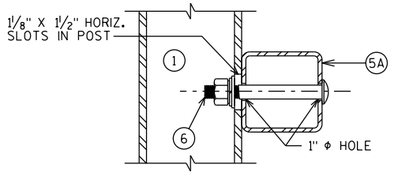


SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)



ANCHOR BOLTS



SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS

LEGEND

(1) W6 x 25 WITH 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'-3" LONG.

(4) ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1⅜" 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 IN PLATE NO. 10A.

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

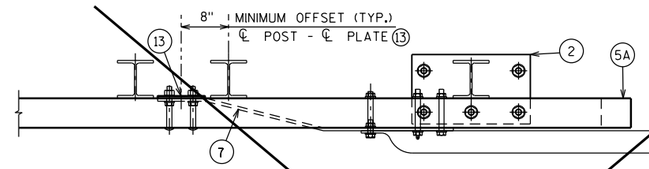
✳ (13) ⅜" X 8" X 1'-6" ANCHOR PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

✳ (14) ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQUIRED).

✳ (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.

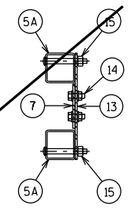
GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-41-312" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY S.S.P.C. SPECIFICATIONS.
10. PAINTING IS NOT REQUIRED.
11. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
12. ✳ DO NOT FURNISH ITEMS (7) (8) (12) (13) (14) AND (15). THRIE BEAM RAIL ATTACHMENT IS NOT INCLUDED.

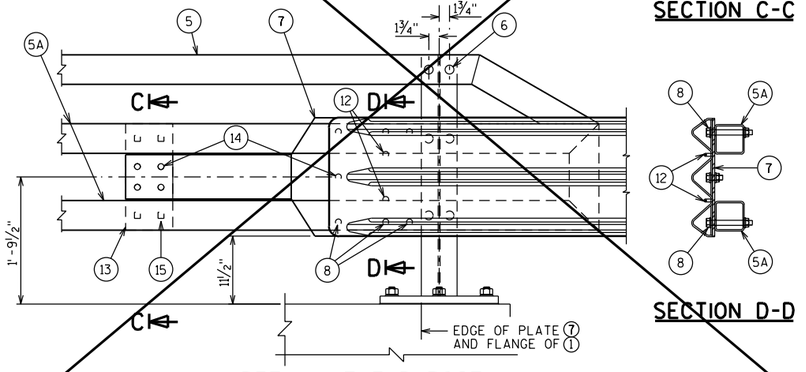


TOP VIEW AT END POST

(THRIE BEAM RAIL ATTACHMENT)



SECTION C-C

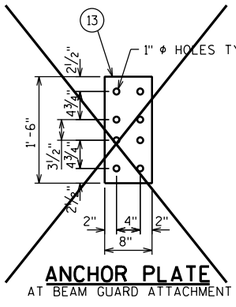


DETAIL AT END POST

(THRIE BEAM RAIL ATTACHMENT)

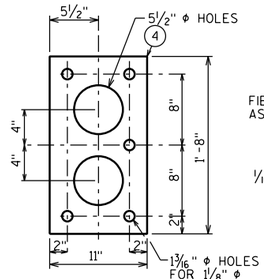
SECTION D-D

SECTION A-A



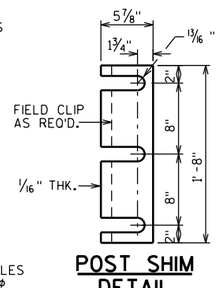
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

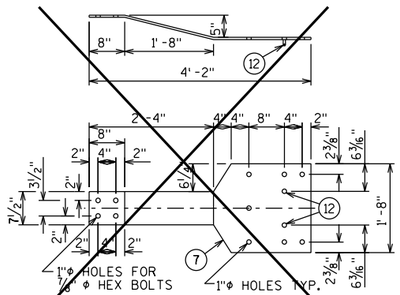


ANCHOR PLATE

AT RAIL TO DECK ATTACHMENT

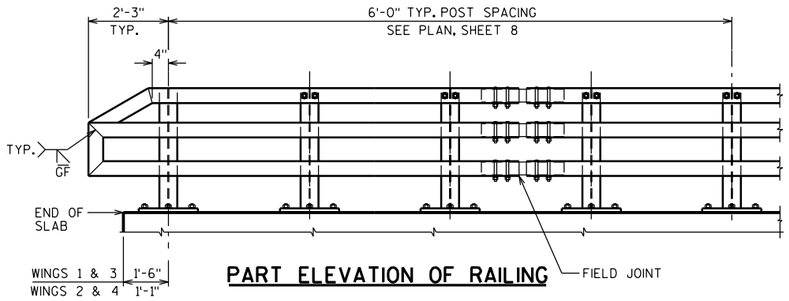


POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-312

DRAWN BY RLR | PLANS CK'D. JAS

RAILING TUBULAR TYPE M

SHEET 9 OF 9
31

FILE= 5848028_09.DGN
DATE= 4/25/2018

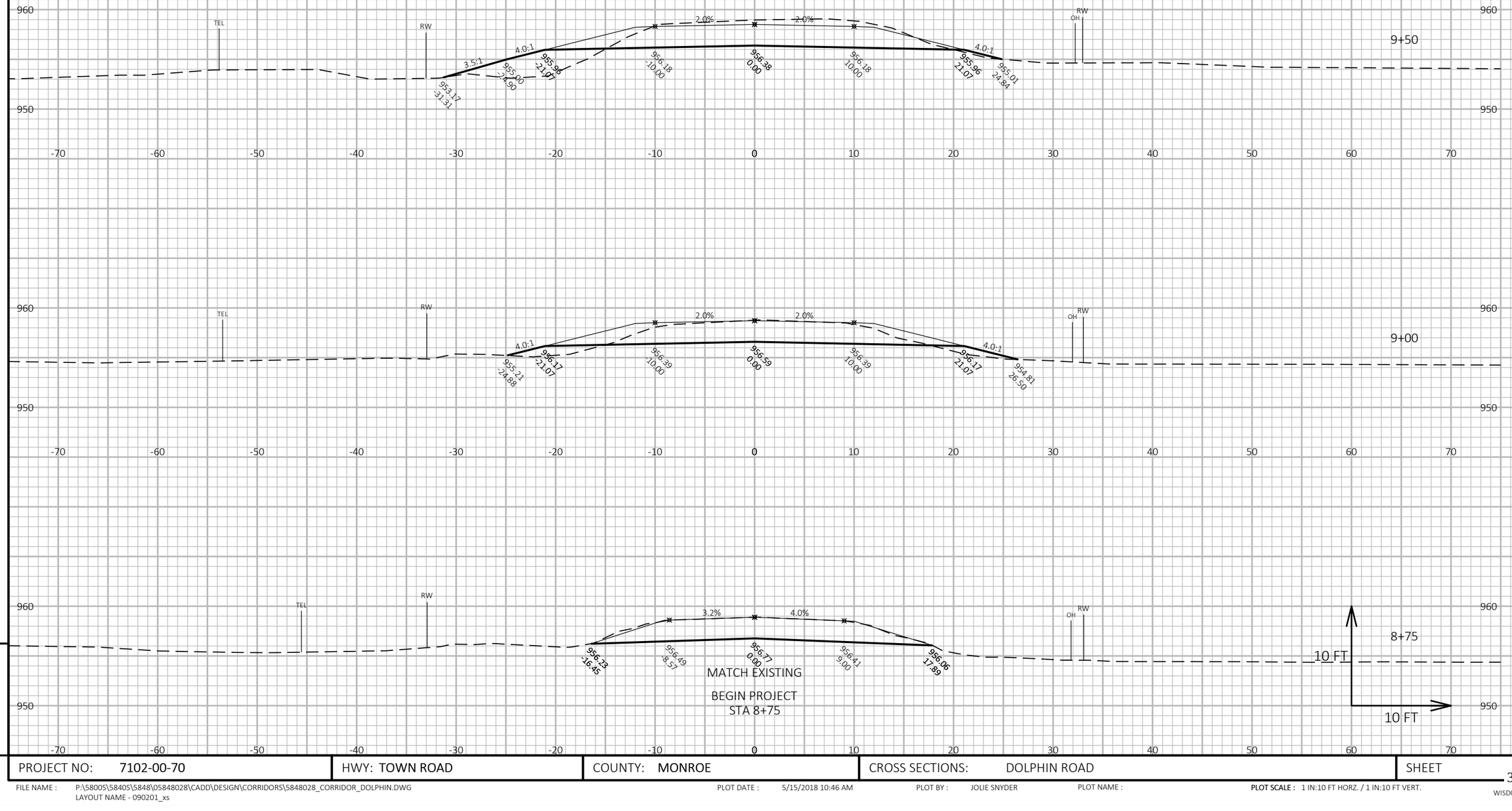
5848028_09.dgn 4/25/2018 8:45:35 AM lrabska

PROJECT I.D. 7102-00-70 EARTHWORK SUMMARY

STA	EXCAVATION COMMON CY	EXCAVATION ROCK CY	FILL (1) CY	EXPANDED FILL (2) CY	WASTE CY
8+75.00					
	49	0	5	7	42
9+00.00					
	116	0	31	40	76
9+50.00					
	75	0	31	40	35
9+78.71					
STRUCTURE B-41-312					
10+17.29					
	93	0	11	14	79
10+50.00					
	126	0	17	22	104
11+00.00					
	110	0	11	14	96
11+50.00					
SUBTOTALS					
SOUTH APPROACH	240	0	67	87	153
NORTH APPROACH	329	0	39	50	279
TOTALS	**569**	**0**	**106**	**137**	**432**

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%

STRUCTURE B-41-312



PROJECT NO: 7102-00-70	HWY: TOWN ROAD	COUNTY: MONROE	CROSS SECTIONS: DOLPHIN ROAD	SHEET 33 E

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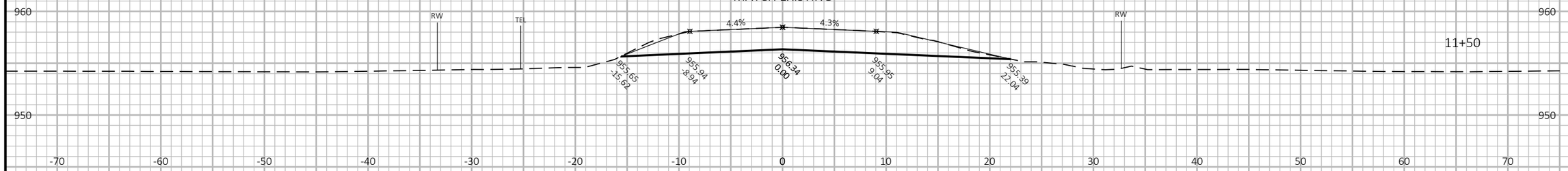
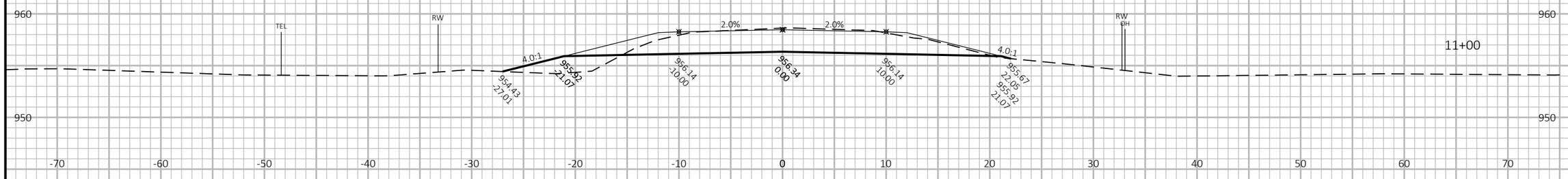
LAYOUT NAME - 090201_xs

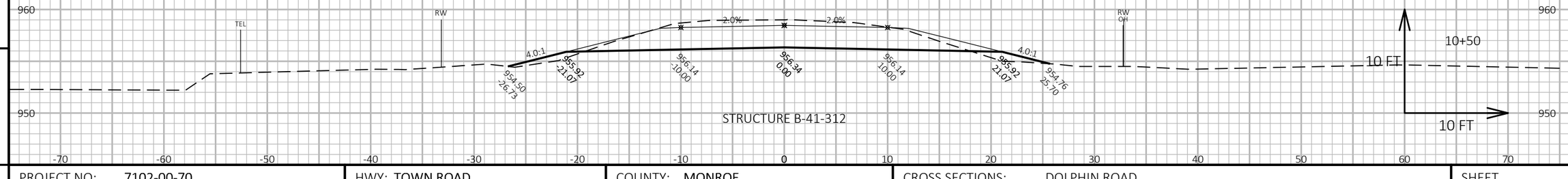
PLOT DATE : 5/15/2018 10:46 AM PLOT BY : JOLIE SNYDER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

END PROJECT
STA 11+50

MATCH EXISTING







STRUCTURE B-41-312

PROJECT NO: 7102-00-70	HWY: TOWN ROAD	COUNTY: MONROE	CROSS SECTIONS: DOLPHIN ROAD	SHEET 34 E

FILE NAME : P:\58005\58405\5848\05848028\CADD\DESIGN\CORRIDORS\5848028_CORRIDOR_DOLPHIN.DWG
LAYOUT NAME - 090202_xs

PLOT DATE : 5/15/2018 10:46 AM PLOT BY : JOLIE SNYDER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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