MAD

JANUARY 2021

PROJECT ID: 3636-00-72

WITH: N/A

COUNTY: JEFFERSON

ORDER OF SHEETS

TOTAL SHEETS = 38

04

N

DESIGN DESIGNATION

A.A.D.T.	2019	=	637
A.A.D.T.	2039	=	765
D.H.V.		=	76
D.D.		=	53/47
T.		=	12.9%
DESIGN SPEED		=	45 MPH
ESALS		=	130,000

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

TOWN OF JEFFERSON, WILL ROAD

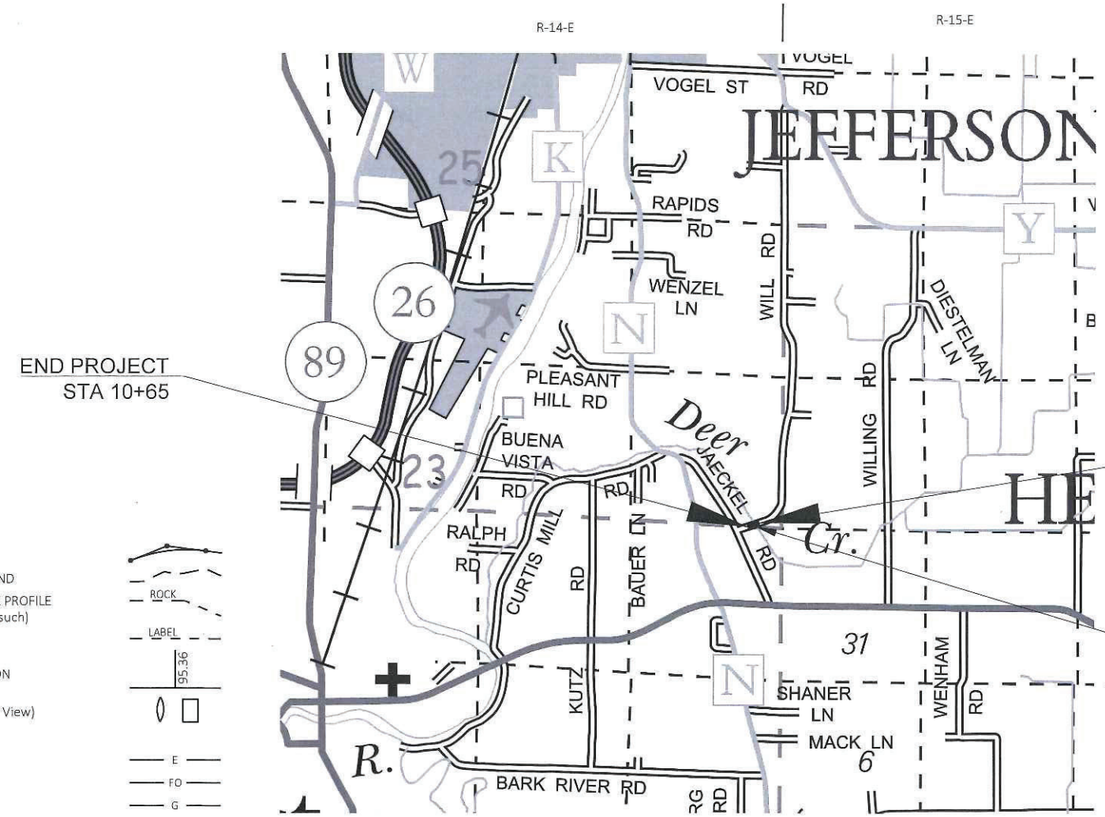
DEER CREEK BRIDGE B-28-0194

LOCAL STREET

JEFFERSON COUNTY

STATE PROJECT NUMBER
3636-00-72

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3636-00-72	———	—



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.025 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), JEFFERSON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. VERTICAL DATUM BASED ON USGS (NAVD 88)(2012).

ACCEPTED FOR
TOWN OF JEFFERSON

7-24-2020 (DATE) Michael A Hollenger (TOWN CHAIR)

ORIGINAL PLANS PREPARED BY

SEH

WISCONSIN
CHRISTOPHER J. BLUM
E-33157
MADISON, WI
PROFESSIONAL ENGINEER

1-24-2020

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SEH
Designer	SEH
Project Manager	ZACHARY PEARSON
Regional Supervisor	OSCAR WINGER

APPROVED FOR THE DEPARTMENT

DATE: 7/27/2020 (Signature)

E

FILE NAME : P:\FJ\J\JEFFT\152186\4-PRELIM-DSGN-RPTS\CIVIL 3D\36360002\SHEETSPLAN\010101_TI.DWG

PLOT DATE : 7/17/2020 2:09 PM

PLOT BY : SAVANNAH A. STEHN

PLOT NAME :

GENERAL NOTES:

1. NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.
2. THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
3. THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.
4. WETLANDS, WATERWAYS, AND OTHER ENVIRONMENTALLY SENSITIVE AREAS SHALL BE PROTECTED AT ALL TIMES. DO NOT STORE EQUIPMENT OR MATERIALS NEAR THESE SITES UNLESS APPROVED BY THE ENGINEER.
5. SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND IN PLACE PRIOR TO BRIDGE REMOVAL.
6. BROKEN CONCRETE CONTAINING RE-BAR SHALL NOT BE USED AS RIPRAP.
7. TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
8. THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
9. ASPHALTIC AND CONCRETE SURFACES SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
10. DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGE TOPSOILED, FERTILIZED, SEEDED AND MULCHED.
11. A CONVERSION FACTOR OF 2.1 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 3/4-INCH.
12. A CONVERSION FACTOR OF 2.0 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE 1 1/4-INCH.
13. A CONVERSION FACTOR OF 112 LBS/IN/SY IS USED TO ESTIMATE QUANTITIES FOR HMA PAVEMENT.
14. THE 4" ASPHALTIC SURFACE SHALL CONSIST OF A 2" UPPER LAYER WITH 12.5MM NOMINAL SIZE AGGREGATE AND A 2" LOWER LAYER WITH 12.5MM NOMINAL SIZE AGGREGATE.

STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
AECPRC	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
AECPCS	APRON ENDWALL FOR CULVERT PIPE CORRUGATED STEEL
ASPH	ASPHALTIC
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BF	BACK FACE
BM	BENCH MARK
BR	BRIDGE
CE	COMMERCIAL ENTRANCE
C/L	CENTER LINE
Δ	CENTRAL ANGLE OR DELTA
CONC	CONCRETE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL
CR	CREEK
CY	CUBIC YARD
C&G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DISCH	DISCHARGE
DG	DITCH GRADE
DWY	DRIVEWAY
X	EAST GRID COORDINATE
EAT	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
EOR	END POINT OF RADIUS
EL	ELEVATION
ENT	ENTRANCE
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FC	FACE OF CURB
FF	FACE TO FACE
FERT	FERTILIZE
FE	FIELD ENTRANCE
FL	FLOW LINE
FO	FIBER OPTIC
CWT	HUNDREDWEIGHT
HYD	HYDRANT
ID	INSIDE DIAMETER
INV	INVERT
IP	IRON PIPE ON PIN
LHF	LEFT-HAND FORWARD
L	LENGTH OF CURVE
LF	LINEAR FOOT
LC	LONG CHORD OF CURVE
LS	LUMP SUM
MH	MANHOLE
MOR	MID POINT OF RADIUS
NC	NORMAL CROWN
NO	NUMBER
OBLIT	OBLITERATE
PAVT	PAVEMENT
PE	PRIVATE ENTRANCE
PVRC	POINT OF VERTICAL REVERSE CURVE
QOR	QUARTER POINT OF RADIUS
R	RADIUS
REQ'D	REQUIRED
RES	RESIDENCE OR RESIDENTIAL
RHF	RIGHT-HAND FORWARD
R/W	RIGHT-OF-WAY
RDWY	ROADWAY
R/L	REFERENCE LINE
SALV	SALVAGED
SAN	SANITARY SEWER
SF	SQUARE FEET
SY	SQUARE YARD
SDD	STANDARD DETAIL DRAWINGS
STA	STATION
SS	STORM SEWER
SSPRC	STORM SEWER PIPE REINFORCED CONCRETE
SE	SUPERELEVATION RATE
TC	TOP OF CURB
T OR TN	TOWN
T	TRUCKS (PERCENT OF)
TWLTL	TWO-WAY LEFT TURN LANE
TYP	TYPICAL
VAR	VARIABLE
VC	VERTICAL CURVE
Y	NORTH GRID COORDINATE
YD	YARD

DESIGN CONSULTANT

SEH INC
CHRIS BLUM
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MADISON, WI 53719
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TOWN OF JEFFERSON

MICHAEL HOLLINGER, TOWN CHAIR
W7002 COUNTY HIGHWAY J
PHONE: (920) 650-0576
EMAIL: chair@townofjefferson.com

WDNR LIASON

DNR SERVICE CENTER
3911 FISH HATCHERY RD
FITCHBURG, WI 53711
SHELLEY WARWICK
PHONE: (608) 444-2835
EMAIL: shelley.warwick@wisconsin.gov

UTILITY CONTACTS

WE ENERGIES
ATTN: BRYAN STOEHR
OFFICE: (414) 944-5516
CELL: (414) 416-6059
EMAIL: bryan.stoehr@we-energies.com

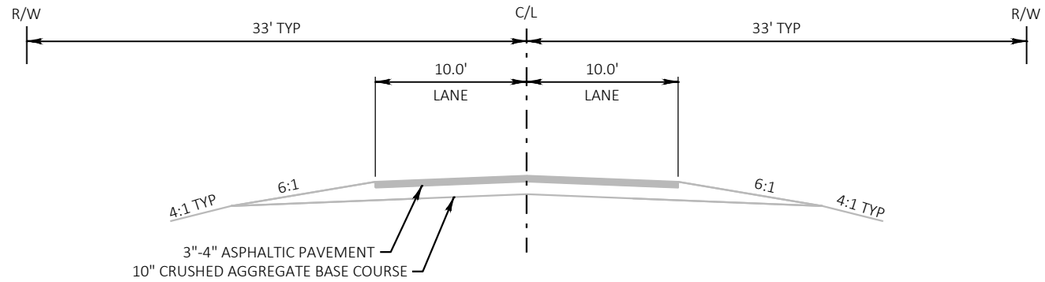
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

RUNOFF COEFFICIENT TABLE

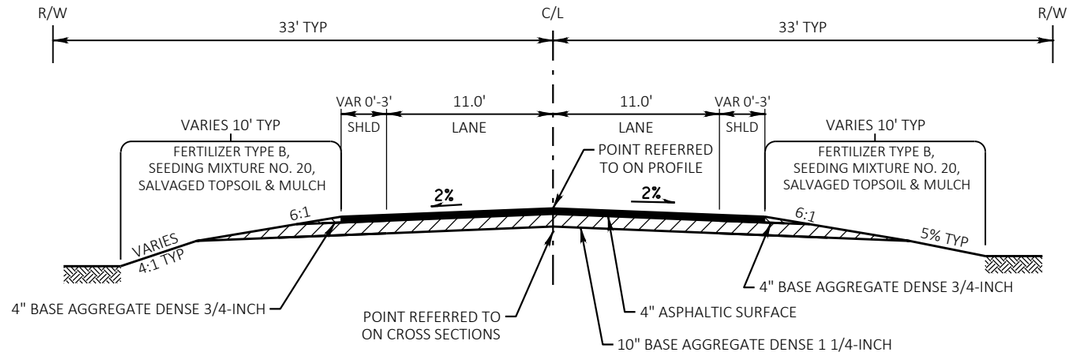
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA = 0.26 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.21 ACRES

2



TYPICAL EXISTING SECTION
STA 9+35 TO STA 10+65



TYPICAL PROPOSED SECTION
STA 9+35 TO STA 10+65

PROJECT NO: 3636-00-72	HWY: WILL ROAD	COUNTY: JEFFERSON	TYPICAL SECTIONS	SHEET 3	E

FILE NAME : P:\FJ\J\JEFFT\152186\4-PRELIM-DSGN-RPTS\CIVIL 3D\36360002\SHEETSPLAN\020301_TS.DWG
LAYOUT NAME - 020301_ts
PLOT DATE : 7/17/2020 2:11 PM PLOT BY : SAVANNAH A. STEHN PLOT NAME : PLOT SCALE : 1 IN:10 FT
WISDOT/CADDS SHEET 42

3636-00-72

Line	Item	Item Description	Unit	Total	Qty
0002	203.0500.S	Removing Old Structure Over Waterway (station) 01. 10+00	LS	1.000	1.000
0004	204.0100	Removing Concrete Pavement	SY	37.000	37.000
0006	205.0100	Excavation Common	CY	124.000	124.000
0008	206.1000	Excavation for Structures Bridges (structure) 01. B-28-0194	LS	1.000	1.000
0010	210.1500	Backfill Structure Type A	TON	230.000	230.000
0012	213.0100	Finishing Roadway (project) 01. 3636-00-72	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	3.000	3.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	204.000	204.000
0018	455.0605	Tack Coat	GAL	14.000	14.000
0020	465.0105	Asphaltic Surface	TON	61.000	61.000
0022	502.0100	Concrete Masonry Bridges	CY	127.000	127.000
0024	502.3200	Protective Surface Treatment	SY	155.000	155.000
0026	505.0400	Bar Steel Reinforcement HS Structures	LB	3,800.000	3,800.000
0028	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,400.000	15,400.000
0030	513.4061	Railing Tubular Type M	LF	114.000	114.000
0032	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0034	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	600.000	600.000
0036	606.0300	Riprap Heavy	CY	120.000	120.000
0038	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	200.000	200.000
0040	618.0100	Maintenance And Repair of Haul Roads (project) 01. 3636-00-72	EACH	1.000	1.000
0042	619.1000	Mobilization	EACH	1.000	1.000
0044	624.0100	Water	MGAL	2.000	2.000
0046	625.0500	Salvaged Topsoil	SY	220.000	220.000
0048	627.0200	Mulching	SY	220.000	220.000
0050	628.1504	Silt Fence	LF	375.000	375.000
0052	628.1520	Silt Fence Maintenance	LF	375.000	375.000
0054	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0056	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0058	628.6005	Turbidity Barriers	SY	190.000	190.000
0060	629.0210	Fertilizer Type B	CWT	0.200	0.200
0062	630.0120	Seeding Mixture No. 20	LB	4.000	4.000
0064	630.0500	Seed Water	MGAL	5.000	5.000
0066	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0068	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0070	638.2602	Removing Signs Type II	EACH	1.000	1.000
0072	638.3000	Removing Small Sign Supports	EACH	1.000	1.000
0074	642.5001	Field Office Type B	EACH	1.000	1.000

Line	Item	Item Description	Unit	Total	Qty
0076	643.0420	Traffic Control Barricades Type III	DAY	810.000	810.000
0078	643.0705	Traffic Control Warning Lights Type A	DAY	720.000	720.000
0080	643.0900	Traffic Control Signs	DAY	630.000	630.000
0082	643.5000	Traffic Control	EACH	1.000	1.000
0084	645.0111	Geotextile Type DF Schedule A	SY	60.000	60.000
0086	645.0120	Geotextile Type HR	SY	260.000	260.000
0088	650.4500	Construction Staking Subgrade	LF	96.000	96.000
0090	650.5000	Construction Staking Base	LF	96.000	96.000
0092	650.6500	Construction Staking Structure Layout (structure) 01. B-28-0194	LS	1.000	1.000
0094	650.9910	Construction Staking Supplemental Control (project) 01. 3636-00-72	LS	1.000	1.000
0096	650.9920	Construction Staking Slope Stakes	LF	96.000	96.000
0098	690.0150	Sawing Asphalt	LF	40.000	40.000
0100	715.0502	Incentive Strength Concrete Structures	DOL	762.000	762.000
0102	SPV.0090	Special 01. Flashing Stainless Steel	LF	69.000	69.000

3

REMOVING CONCRETE PAVEMENT

STATION - STATION	204.0100 (SY)	REMARKS
9+99 - 10+16	37	EXISTING CONCERTE PAVEMENT OVER PIPES
PROJECT TOTALS	**37**	

EARTHWORK SUMMARY

LOCATION	205.0100 EXCAVATION COMMON (CY) (3)	FILL (CY) (1)	EXPANDED FILL (CY) (2)	WASTE (CY)
SOUTH APPROACH	124	1	1	122
NORTH APPROACH			0	0
PROJECT TOTAL	**124**	**1**	**1**	**122**

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

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEERS ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

BASE AGGREGATE DENSE

STATION	-	STATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	**624.0100 WATER (MGAL)
9+35	-	9+83	1	102	1
10+17	-	10+65	1	102	1
PROJECT TOTALS			**3**	**204**	**2**

** WATER CONVERSION IS 1 MGAL/100 TON OF BASE AGGREGATE DENSE MATERIAL. USE WATER FOR BASE COMPACTION AND DUST CONTROL

3

ASPHALTIC PAVEMENT ITEMS

STATION	-	STATION	LAYER THICKNESS (IN)	455.0605 TACK COAT (GAL)	465.0105 ASPHALTIC SURFACE (TON)	
9+35	-	9+83	2.00	-	15.2	LOWER
9+35	-	9+83	2.00	7	15.2	UPPER
10+17	-	10+65	2.00	-	15.2	LOWER
10+17	-	10+65	2.00	7	15.2	UPPER
PROJECT TOTALS				**14**	**61**	

EROSION CONTROL ITEMS

STATION	-	STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.6005 TURBIDITY BARRIER (SY)
9+35	-	9+83	LT	75	75	-
9+35	-	9+83	RT	75	75	-
10+17	-	10+65	LT	75	75	-
10+17	-	10+65	RT	75	75	-
			B-28-0092	-	-	57
			B-28-0194	-	-	101
			UNDISTRIBUTED	75	75	32
			PROJECT TOTALS	**375**	**375**	**190**

EROSION CONTROL MOBILIZATION

DESCRIPTION	628.1905 MOBILIZATION EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
PROJECT 3636-00-72	2	2
TOTAL	**2**	**2**

MAINTENANCE AND REPAIR OF HAUL ROADS 3636-00-72

LOCATION	CATEGORY	618.1000 (EACH)
PROJECT 3636-00-72	0030	1
TOTAL		**1**

3

FINISHING ITEMS

STATION	-	STATION	LOCATION	625.0500 SALVAGED TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0500 SEED WATER (MGAL)
9+35	-	9+83	LT	39	39	0.02	0.7	1
9+35	-	9+83	RT	42	42	0.03	0.8	1
10+17	-	10+65	LT	50	50	0.03	0.9	1
10+17	-	10+65	RT	53	53	0.03	1.0	1
			UNDISTRIBUTED	37	37	0.06	0.7	1
			PROJECT TOTALS	**220**	**220**	**0.2**	**4.0**	**5**

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEERS ESTIMATE CATEGORY 0010 UNLESS OTHERWISE NOTED.

CONSTRUCTION STAKING

STATION	-	STATION	650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	650.9920 SLOPE STAKES (LF)	650.9910 SUPPLEMENTAL CONTROL 3636-00-72 (LS)
9+35	-	9+83	48	48	48	-
10+17	-	10+65	48	48	48	-
		PROJECT TOTALS	**96**	**96**	**96**	**1**

3

SIGNING ITEMS

LOCATION	SIGN CODE	SIGN SIZE	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	634.0612 POSTS WOOD 4X6-INCH X 12 FT (EACH)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	REMARKS
SW BRIDGE CORNER	W5-52L	12"X36"	-	-	1	3.00	EXISTING OBJECT MARKER
SE BRIDGE CORNER	W5-52R	12"X36"	-	-	1	3.00	EXISTING OBJECT MARKER
NW BRIDGE CORNER	W5-52L	12"X36"	-	-	1	3.00	EXISTING OBJECT MARKER
NE BRIDGE CORNER	W5-52R	12"X36"	-	-	1	3.00	EXISTING OBJECT MARKER
STA 10+60, LT			1	1	-	-	EXISTING WEIGHT LIMIT POSTING
		PROJECT TOTALS	**1**	**1**	**4**	**12.00**	

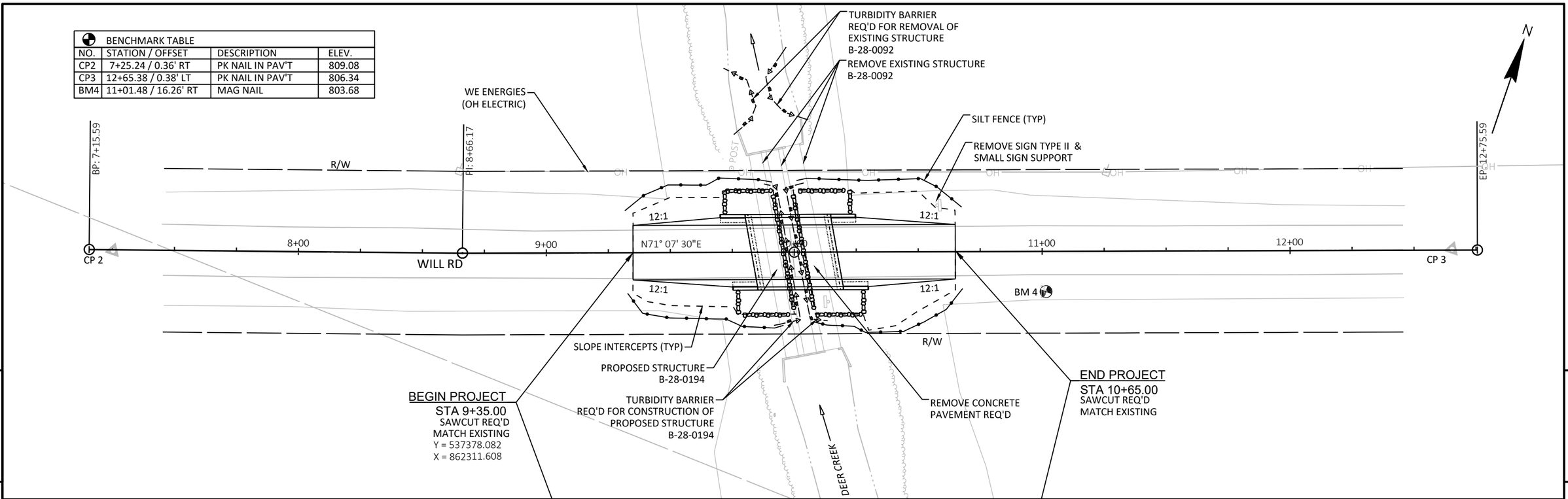
SAWING ASPHALT

STATION	LOCATION	690.0150 (LF)	REMARKS
9+35	CL	20	TRANSVERSE
10+65	CL	20	TRANSVERSE
PROJECT TOTALS		**40**	

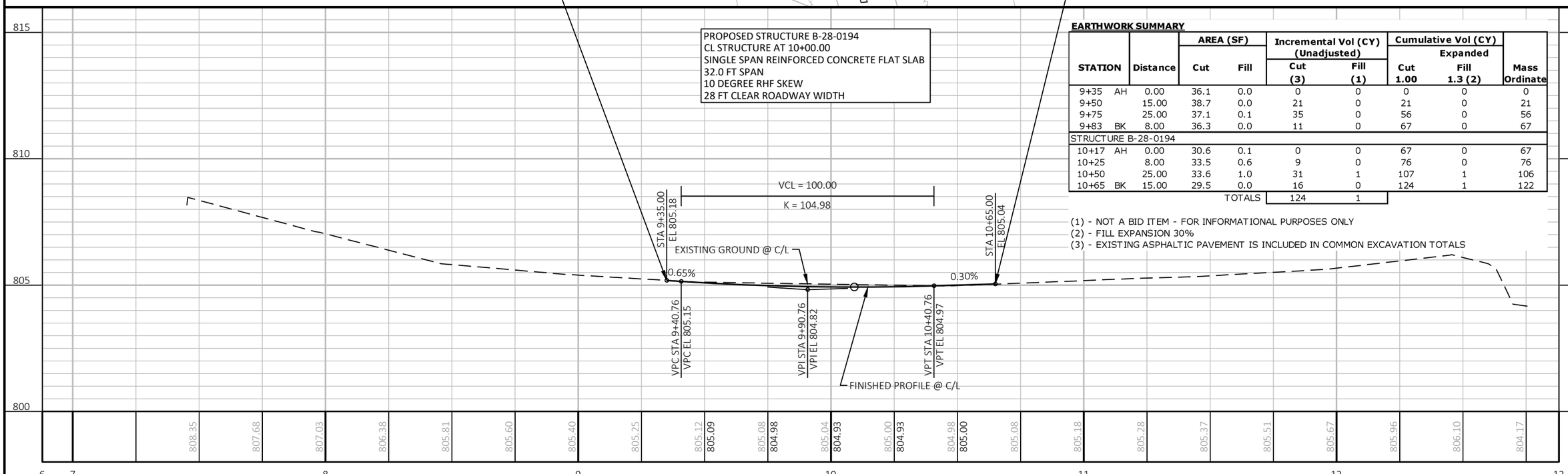
TRAFFIC CONTROL

DESCRIPTION	DAYS	BARRICADES TYPE III EACH	643.0420 BARRICADES TYPE III (DAYS)	WARNING LIGHTS TYPE A EACH	643.0705 WARNING LIGHTS TYPE A (DAYS)	643.0900 SIGNS (DAYS)	643.5000 TRAFFIC CONTROL (EACH)
3636-00-72	45	18	810	16	720	630	1
			810		**720**	**630**	**1**

BENCHMARK TABLE			
NO.	STATION / OFFSET	DESCRIPTION	ELEV.
CP2	7+25.24 / 0.36' RT	PK NAIL IN PAV'T	809.08
CP3	12+65.38 / 0.38' LT	PK NAIL IN PAV'T	806.34
BM4	11+01.48 / 16.26' RT	MAG NAIL	803.68



PROPOSED STRUCTURE B-28-0194
CL STRUCTURE AT 10+00.00
SINGLE SPAN REINFORCED CONCRETE FLAT SLAB
32.0 FT SPAN
10 DEGREE RHF SKEW
28 FT CLEAR ROADWAY WIDTH



EARTHWORK SUMMARY

STATION		Distance	AREA (SF) Cut	AREA (SF) Fill	Incremental Vol (CY) (Unadjusted) Cut (3)	Incremental Vol (CY) (Unadjusted) Fill (1)	Cumulative Vol (CY) Expanded Cut 1.00	Cumulative Vol (CY) Expanded Fill 1.3 (2)	Mass Ordinate
9+35	AH	0.00	36.1	0.0	0	0	0	0	0
9+50		15.00	38.7	0.0	21	0	21	0	21
9+75		25.00	37.1	0.1	35	0	56	0	56
9+83	BK	8.00	36.3	0.0	11	0	67	0	67
STRUCTURE B-28-0194									
10+17	AH	0.00	30.6	0.1	0	0	67	0	67
10+25		8.00	33.5	0.6	9	0	76	0	76
10+50		25.00	33.6	1.0	31	1	107	1	106
10+65	BK	15.00	29.5	0.0	16	0	124	1	122
				TOTALS	124	1			

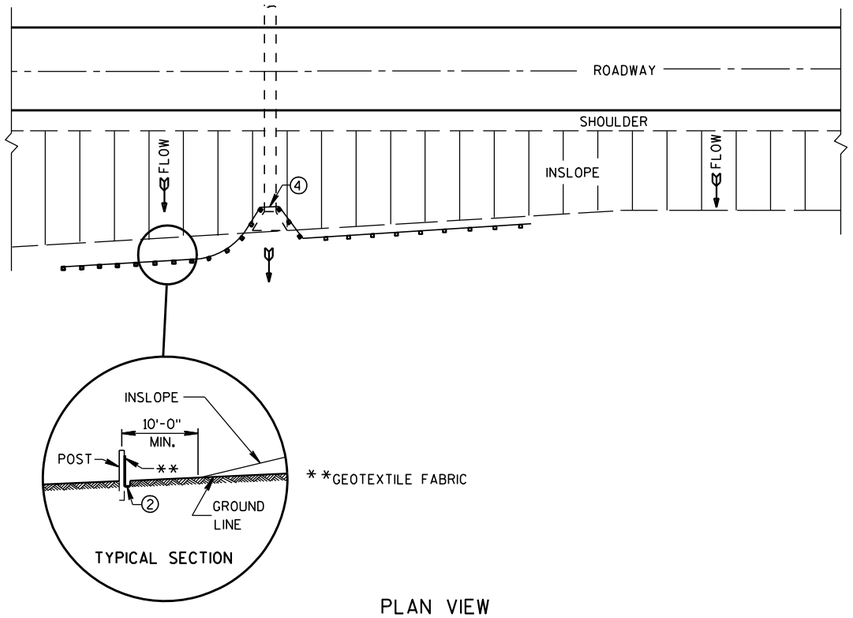
(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY
(2) - FILL EXPANSION 30%
(3) - EXISTING ASPHALTIC PAVEMENT IS INCLUDED IN COMMON EXCAVATION TOTALS

PROJECT NO: 3636-00-02	HWY: WILL ROAD	COUNTY: JEFFERSON	PLAN AND PROFILE: WILL ROAD	SHEET 8	E

FILE NAME : P:\FJ\J\JEFFT\152186\4-PRELIM-DSGN-RPTS\CIVIL 3D\36360002\SHEETSPLAN\050101_PP.DWG
LAYOUT NAME - 050101_pp
PLOT DATE : 7/17/2020 2:12 PM
PLOT BY : SAVANNAH A. STEHN
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44

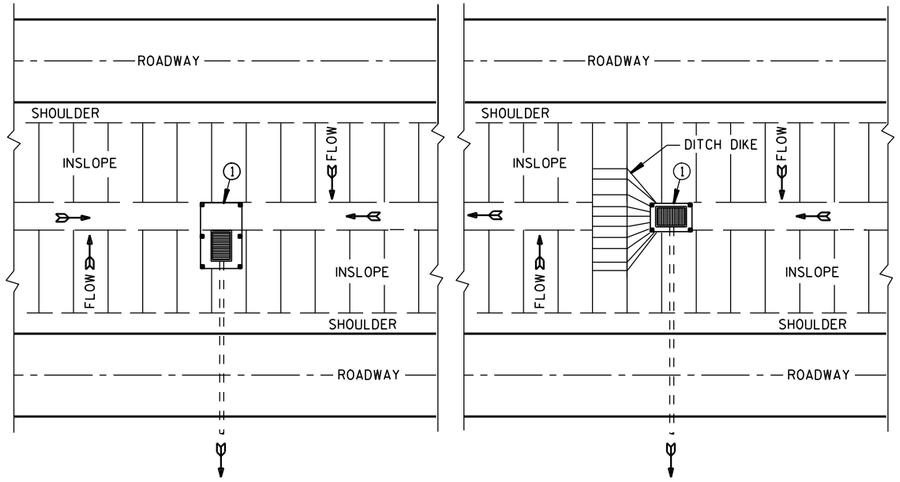
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	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.

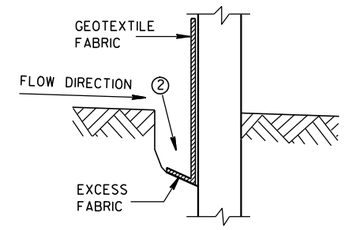
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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.

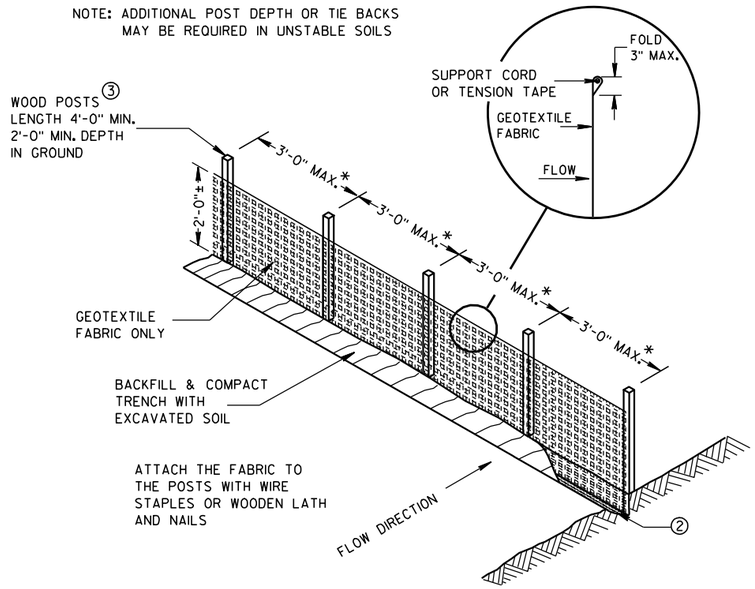
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

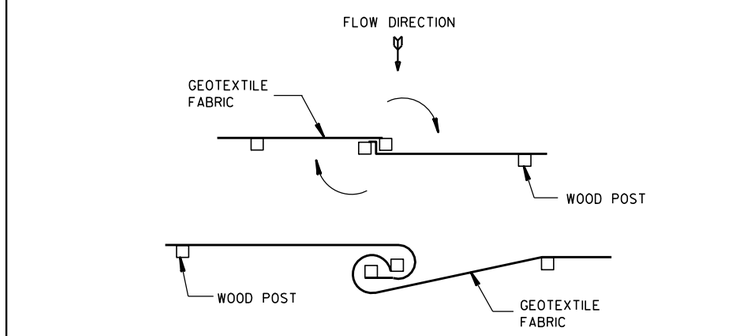
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



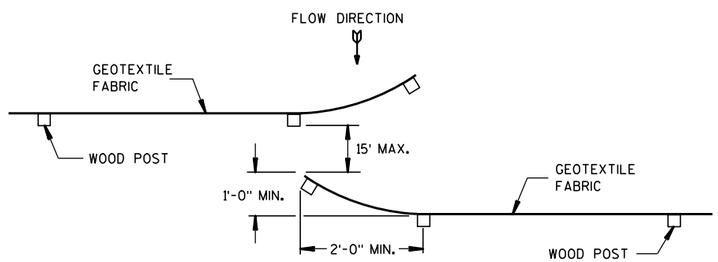
TRENCH DETAIL



SILT FENCE

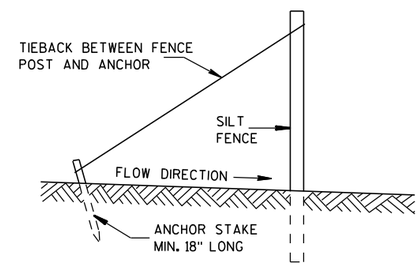


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

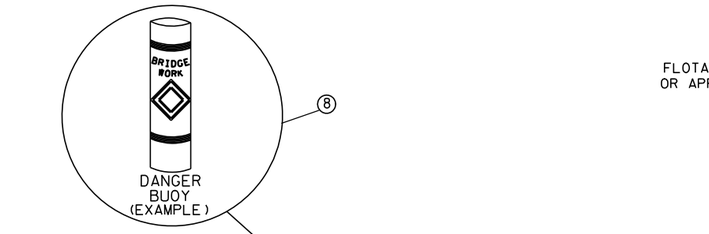
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

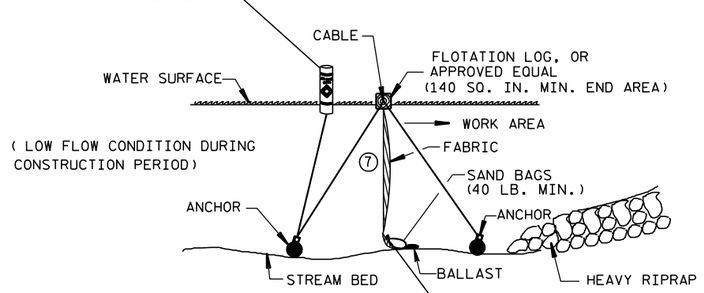
6

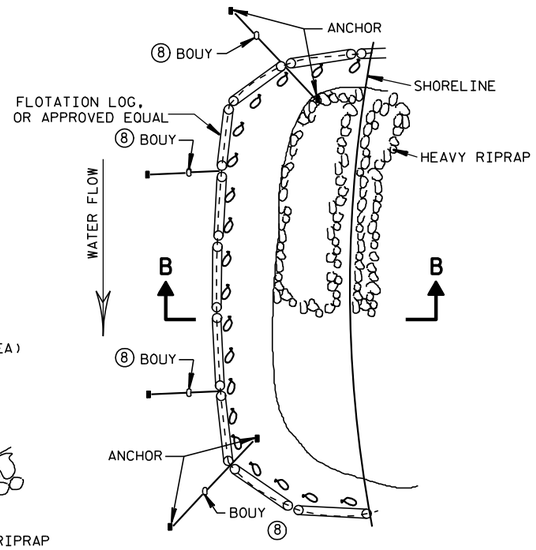
S.D.D. 8 E 9-6

6

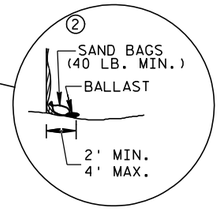
S.D.D. 8 E 9-6



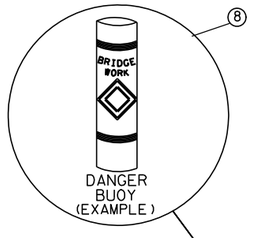


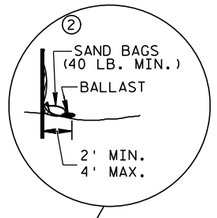


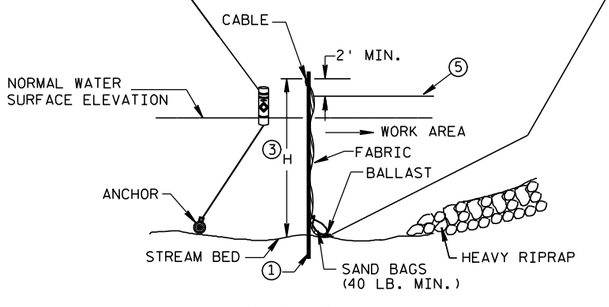
SECTION B-B



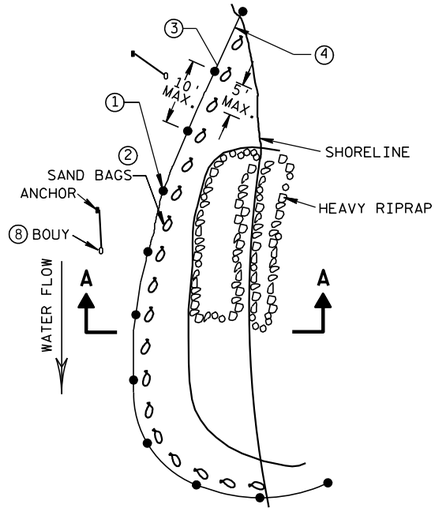
TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6







SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

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

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

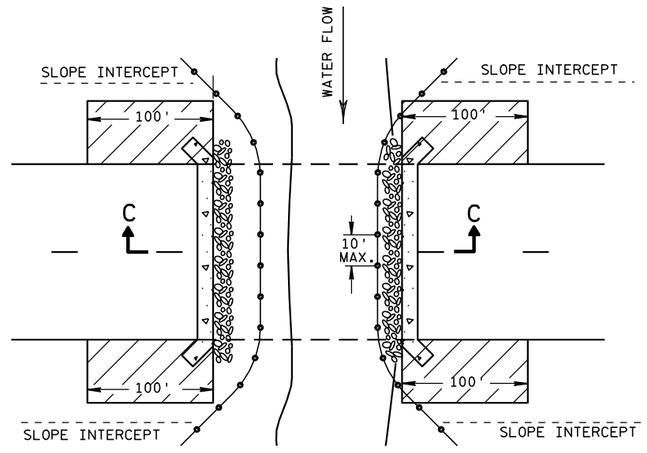
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

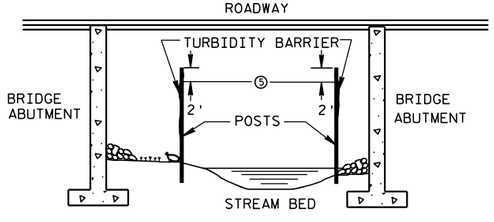
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

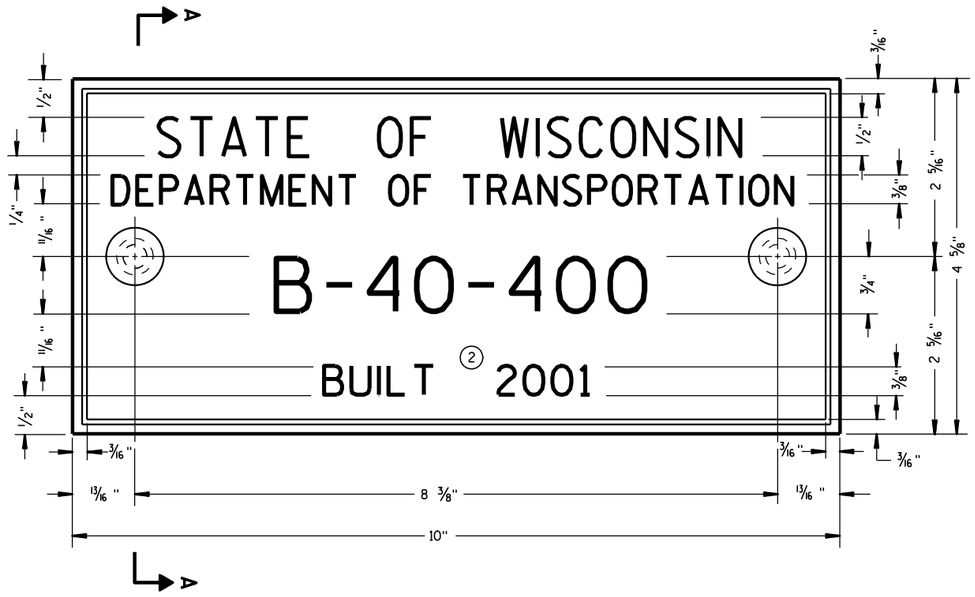
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 11-2



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

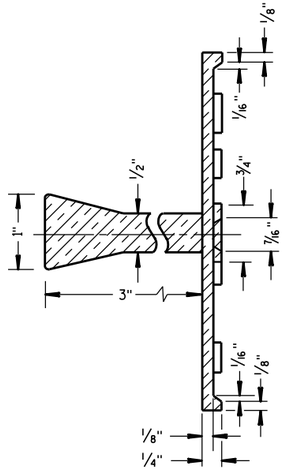
GENERAL NOTES

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

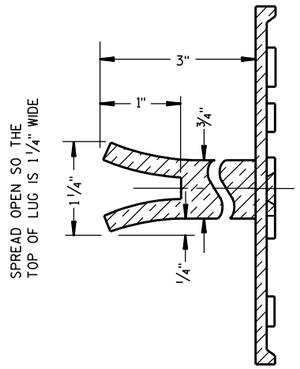
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

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

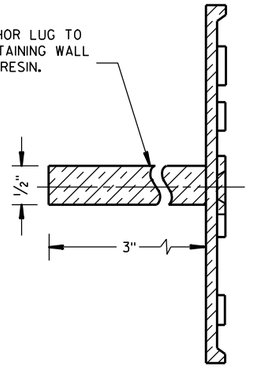


SECTION A-A



ALTERNATE LUG

(1) ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

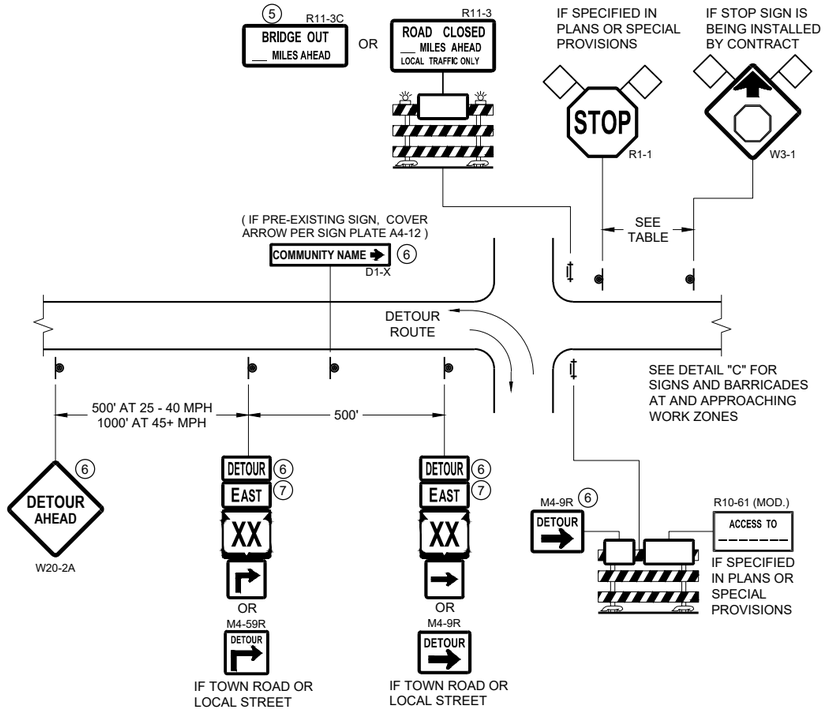
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

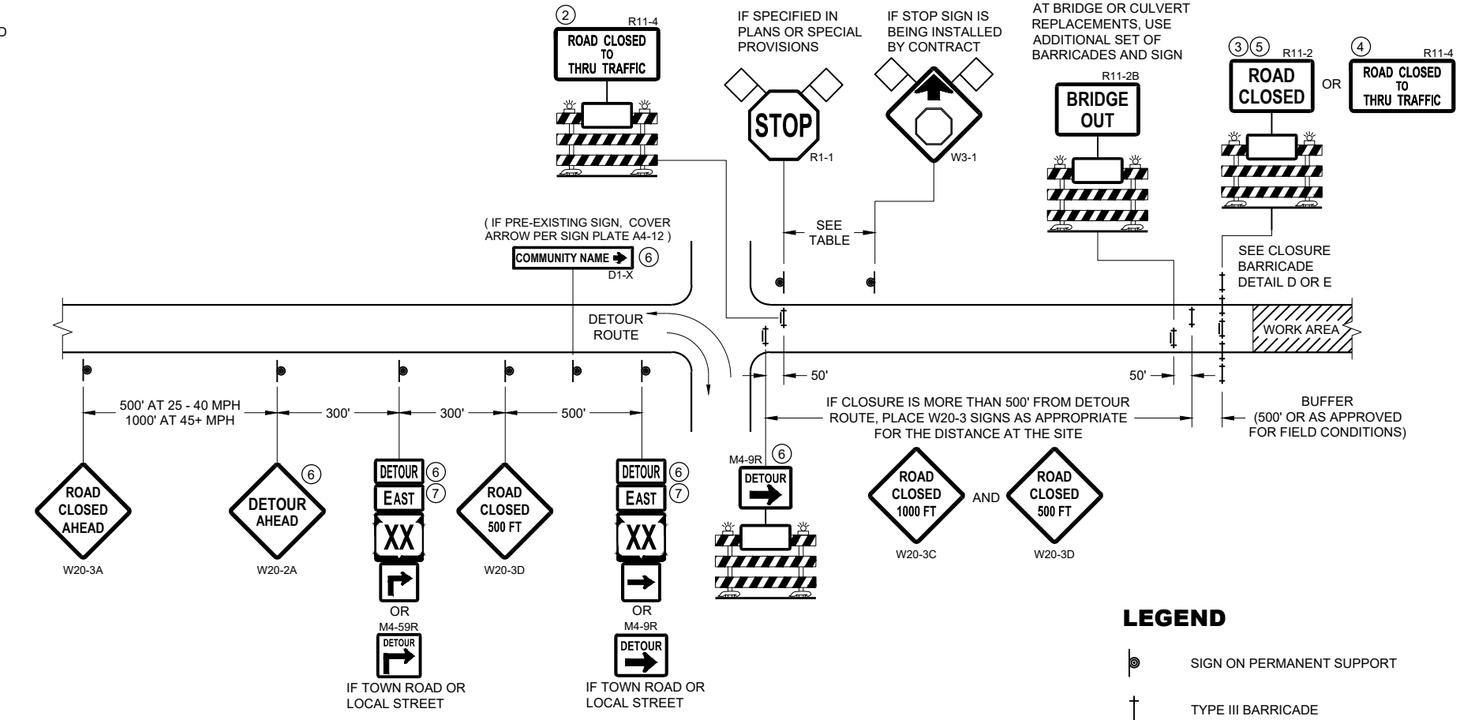
6

S.D.D. 12 A 3-10



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



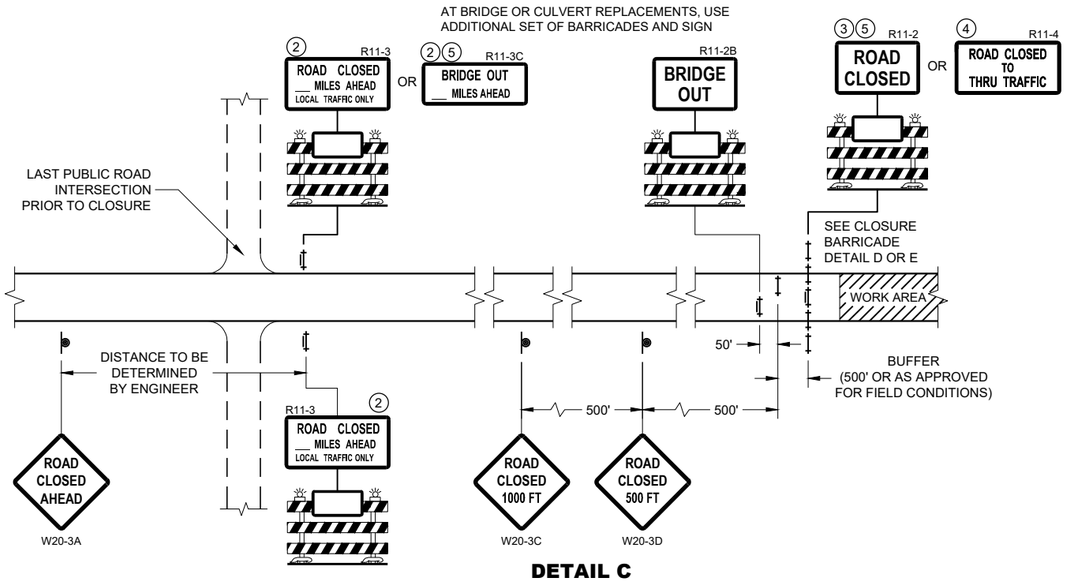
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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

LEGEND

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

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

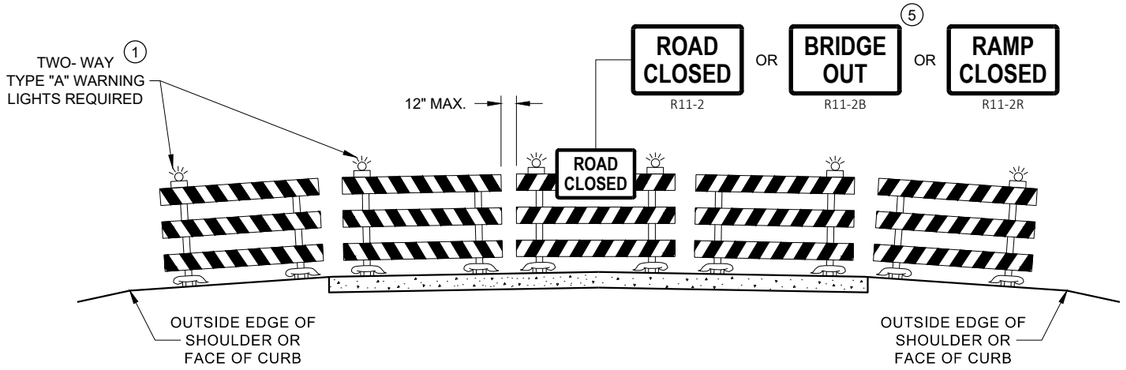
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

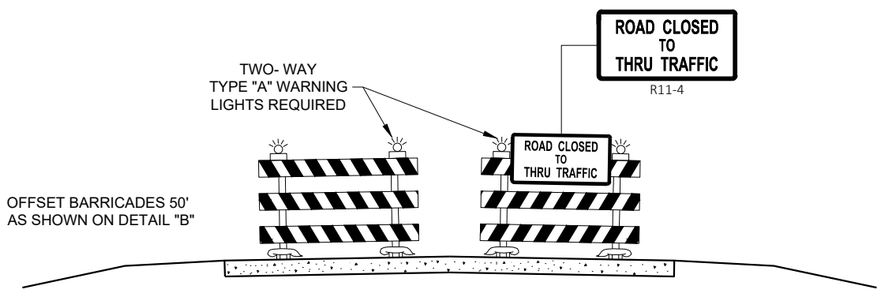
6

SDD 15C02 - 08a

SDD 15C02 - 08a



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

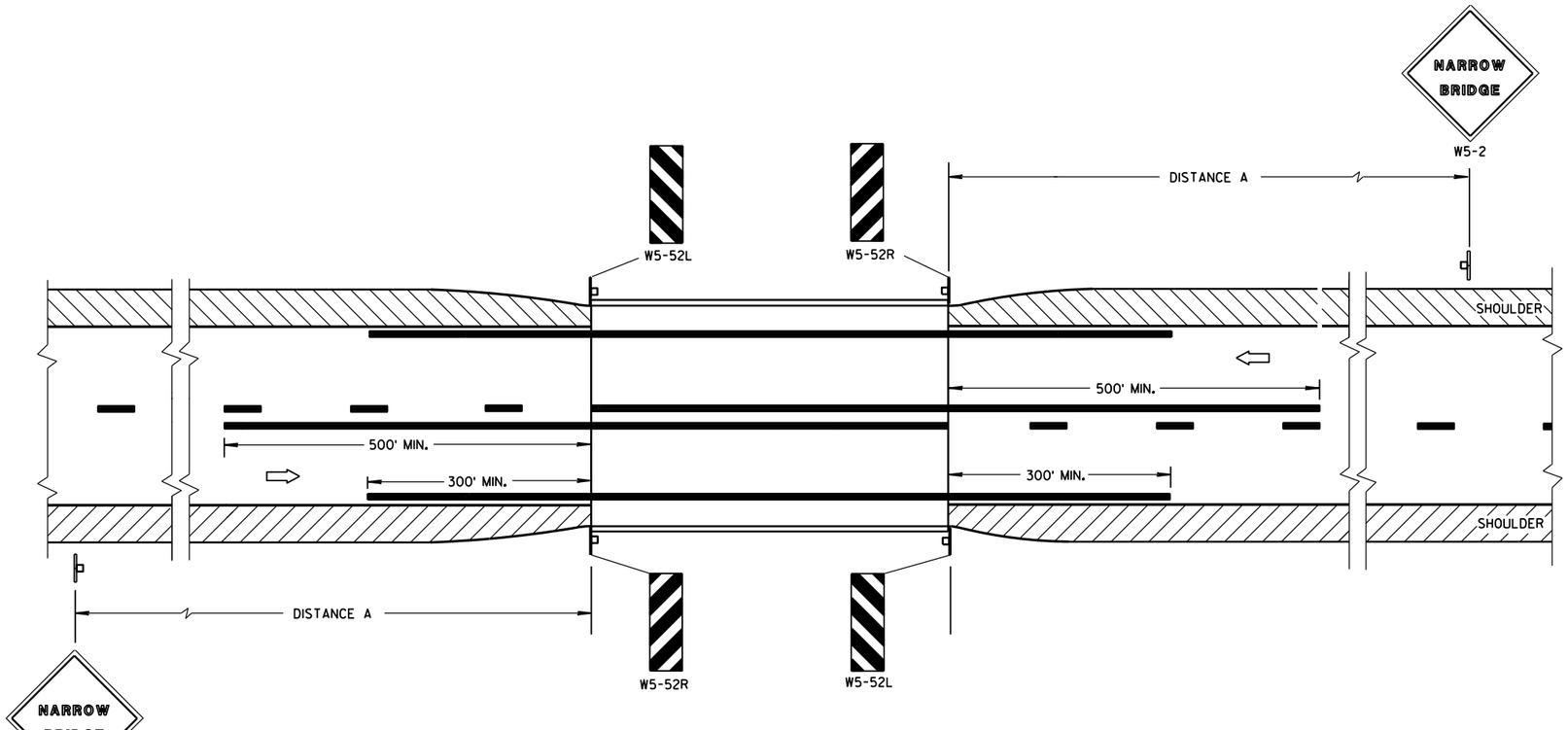
APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C02 - 08b

6

SDD 15C02 - 08b



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

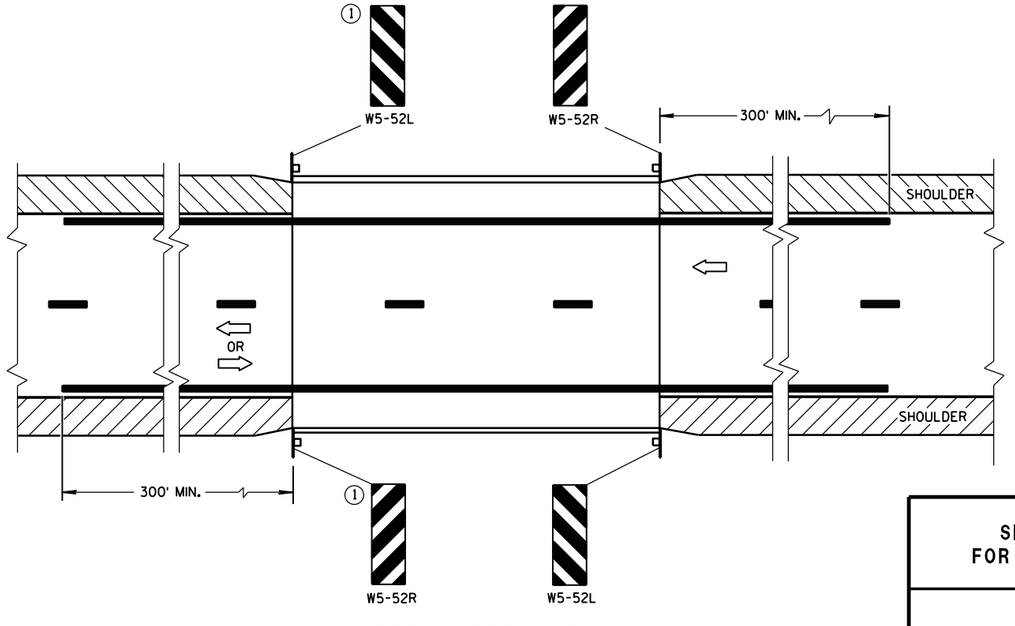
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]EER

FHWA

6

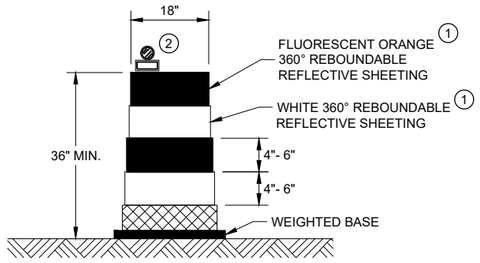
S.D.D. 15 C 6-9

6

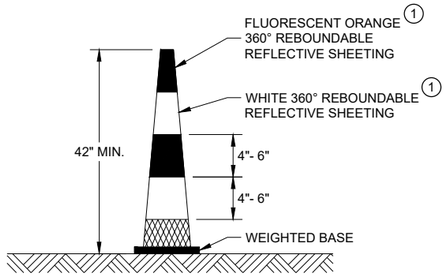
S.D.D. 15 C 6-9

GENERAL NOTES

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

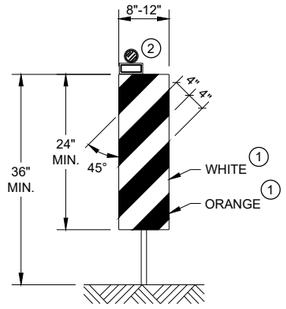


DRUM



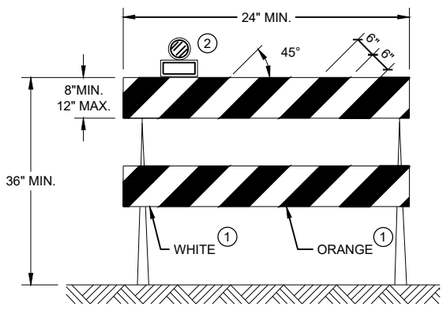
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



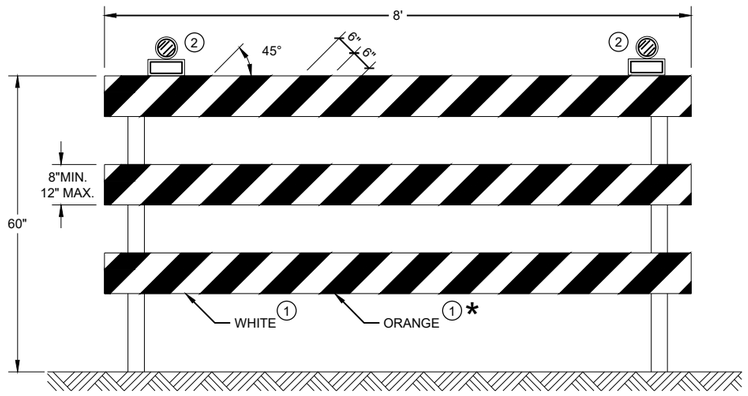
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

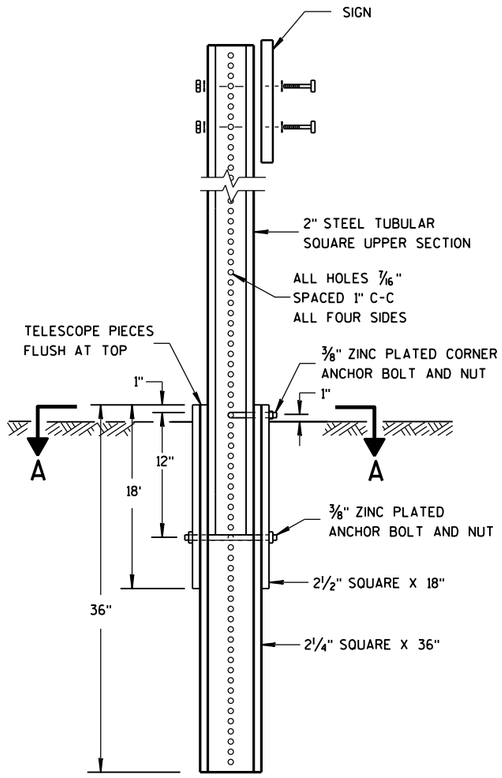
APPROVED
June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

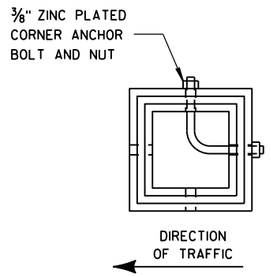
FHWA

6

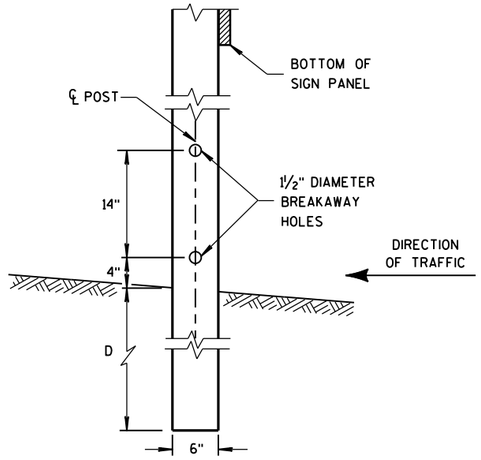
SDD 15C11 - 07b
SDD 15C11 - 07b



DETAIL OF TUBULAR STEEL SIGN POST



SECTION A-A



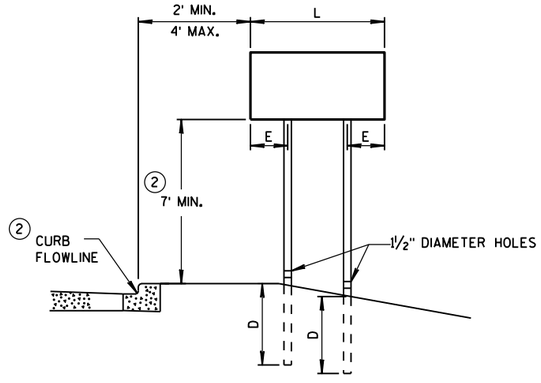
4"x6" WOOD POST MODIFICATION

GENERAL NOTES

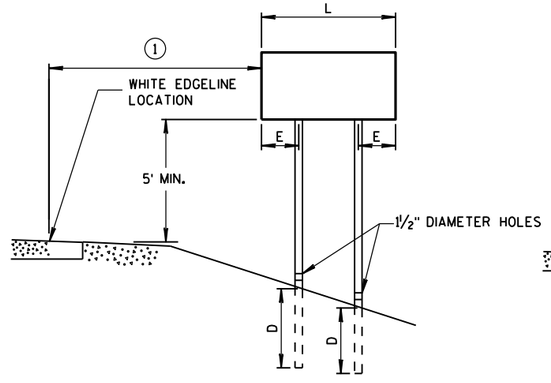
(1) 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.

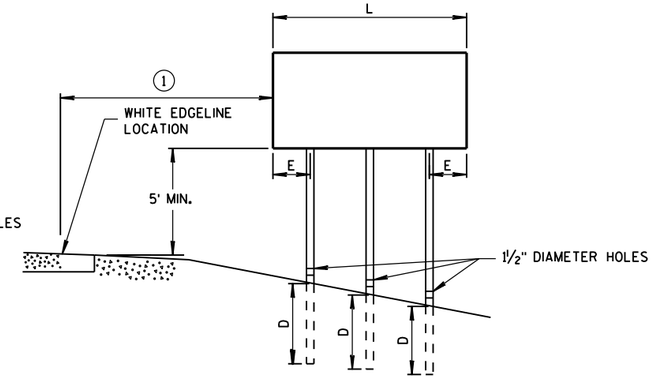
(2) THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK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

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



URBAN AREA





RURAL AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

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

WOOD POST EMBEDMENT DEPTH

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

4" X 6" WOOD POST

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

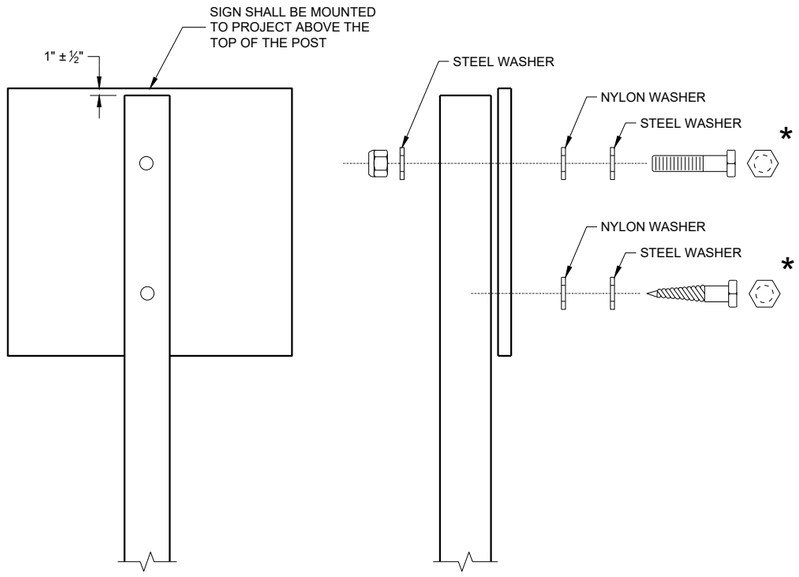
SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

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



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 POST (4" x 6")
LAG SCREWS - ⅜" x 3"
MACHINE BOLTS - 5/16" x 6 ½" OR 7" LENGTH W/NUTS

SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ⅜" x 3 ¼" LENGTH W/NUTS
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM
BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,
GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x 1/16" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

6

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SDD 15D38 - 02b

SDD15D38 - 02b

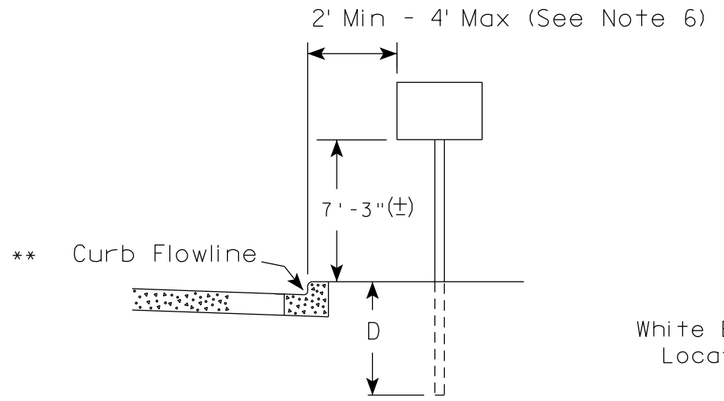
ATTACHMENT OF SIGNS TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

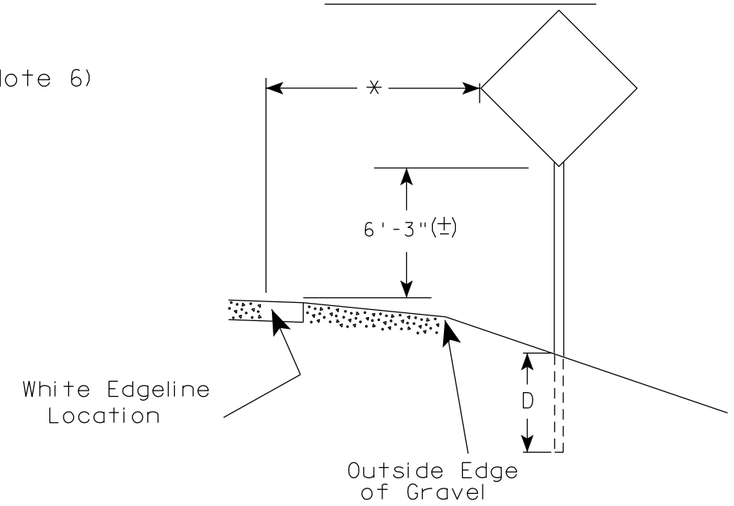
APPROVED
June 2017
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

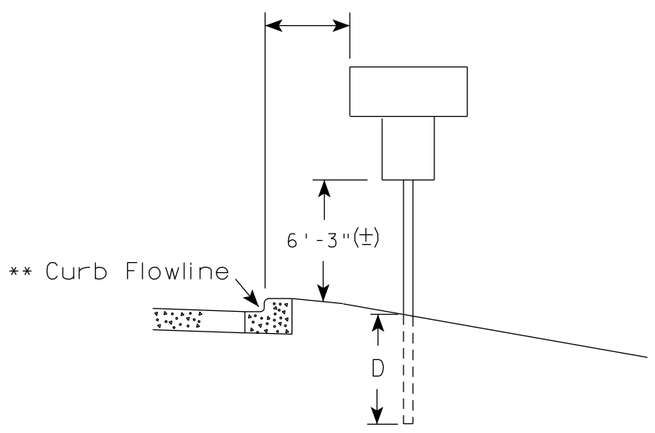
FHWA

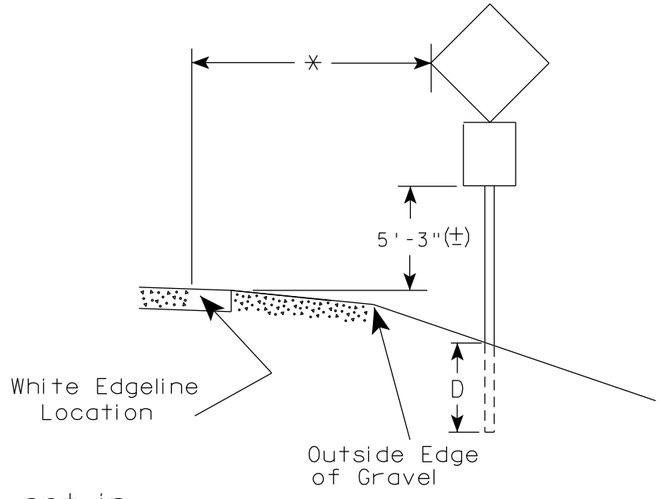
URBAN AREA



RURAL AREA (See Note 2)







** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

POST EMBEDMENT DEPTH

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

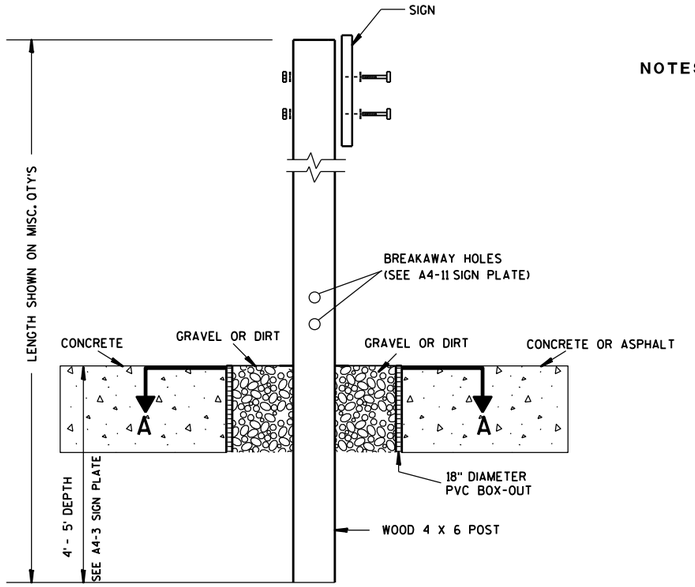
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

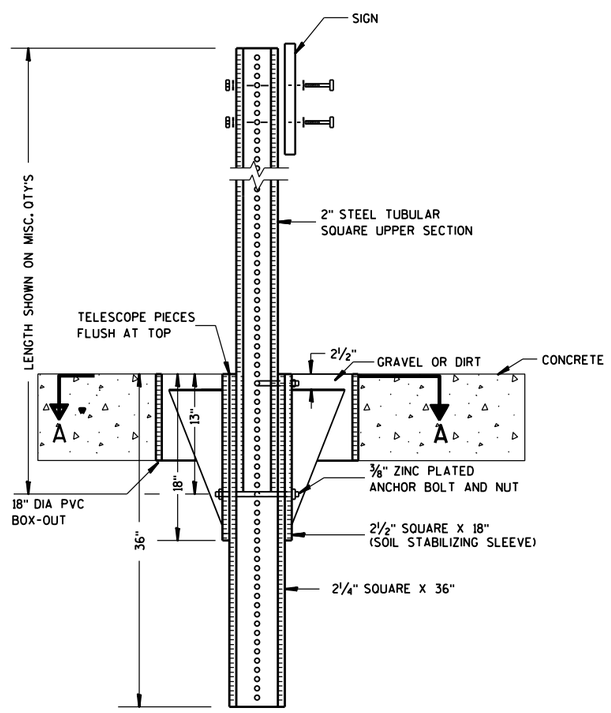
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 19	E



ELEVATION VIEW

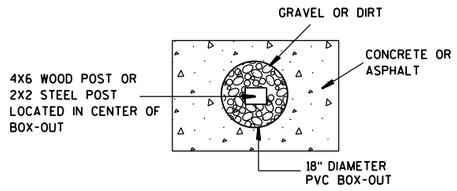
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

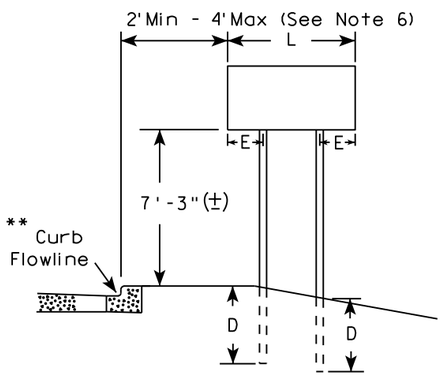
APPROVED Matthew R Rauch
for State Traffic Engineer

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

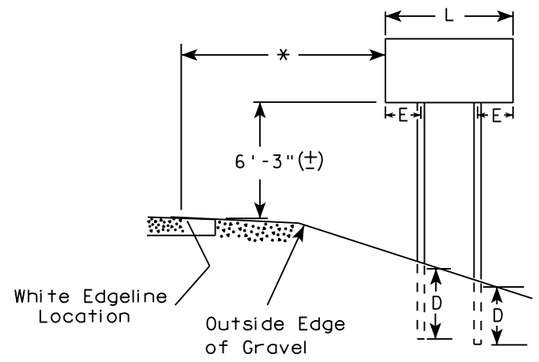
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

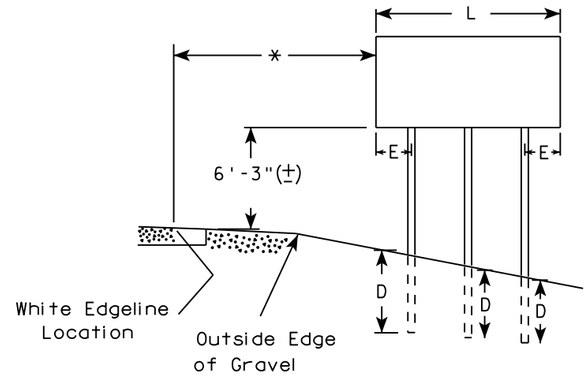
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

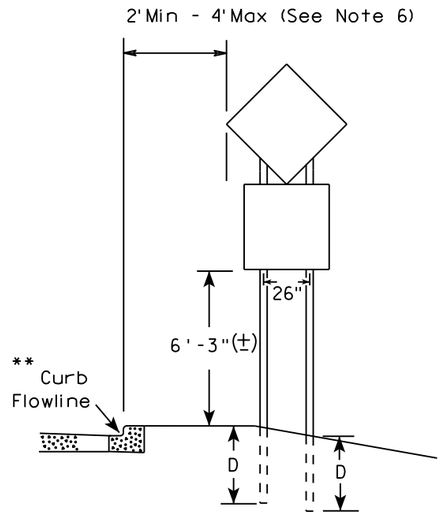
URBAN AREA



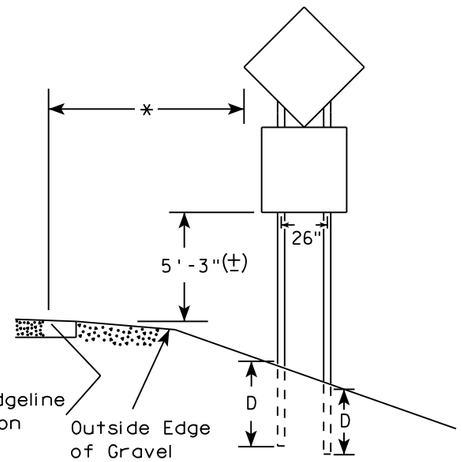
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. J-Assemblies are considered to be one sign for mounting height.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

POST EMBEDMENT DEPTH

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

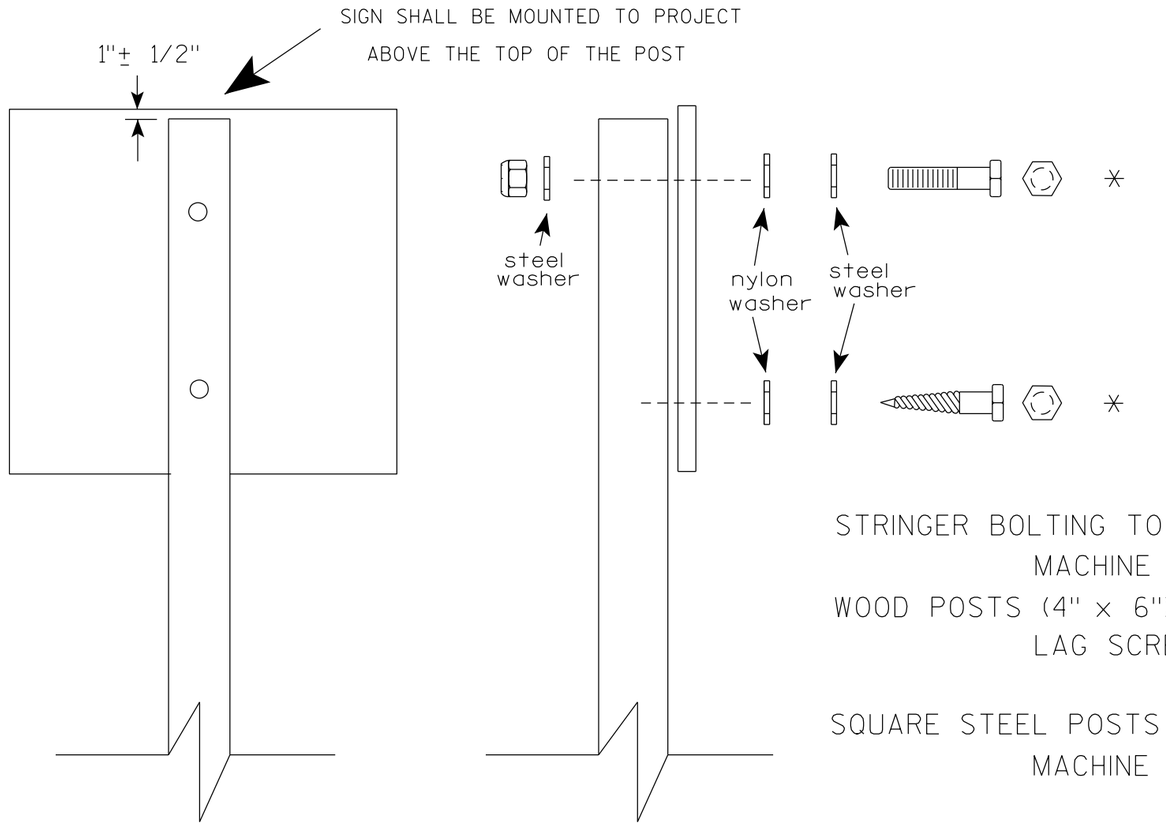
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 21	E



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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

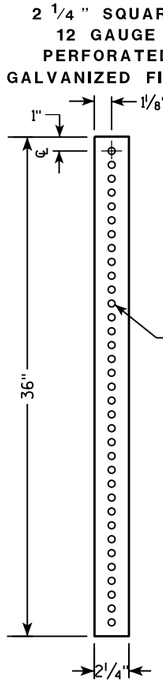
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

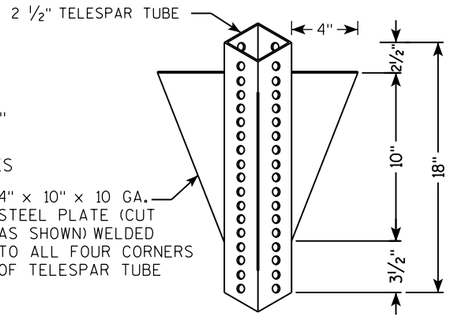
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

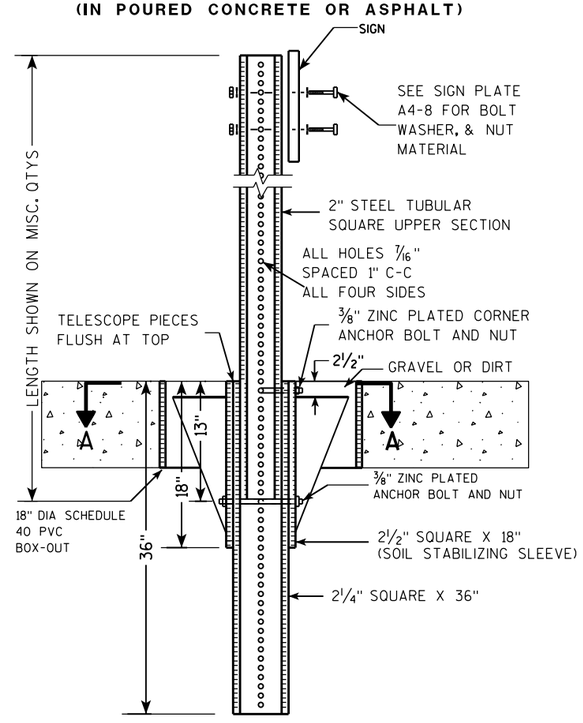
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



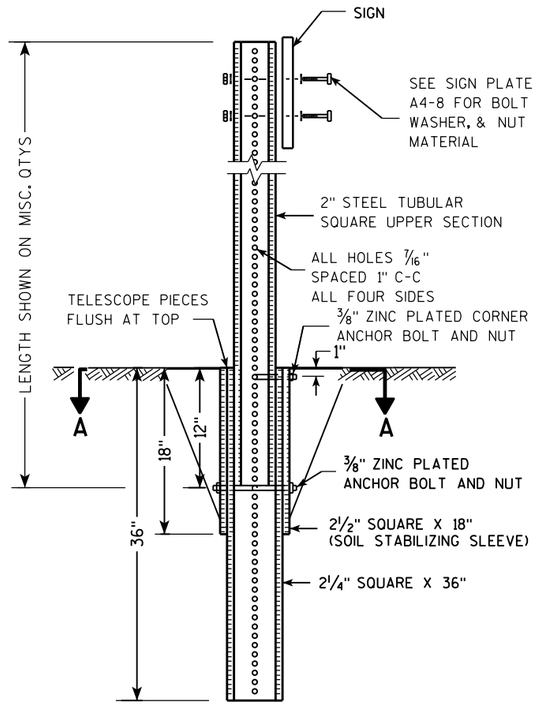
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

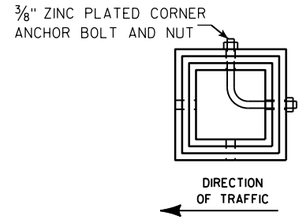


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

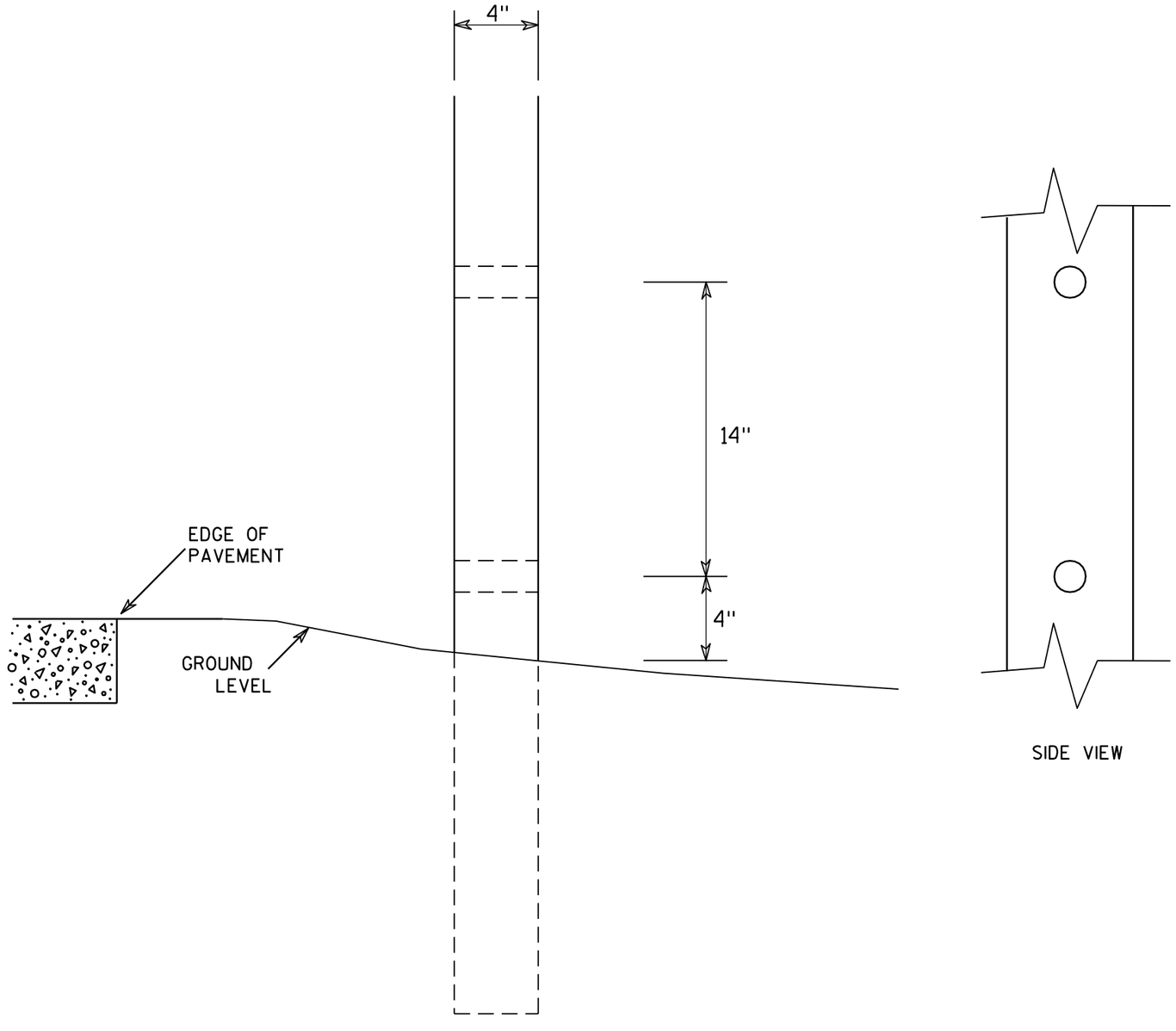
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



SIDE VIEW

GENERAL NOTES

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

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

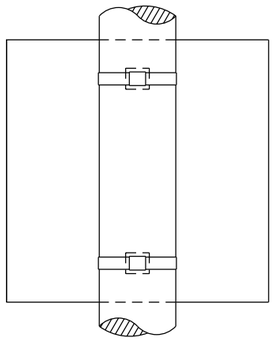
APPROVED Chester J Spang for State Traffic Engineer

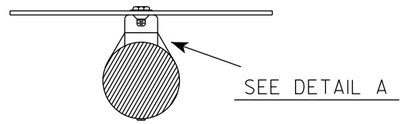
DATE 3/27/97 PLATE NO. A4-11.2

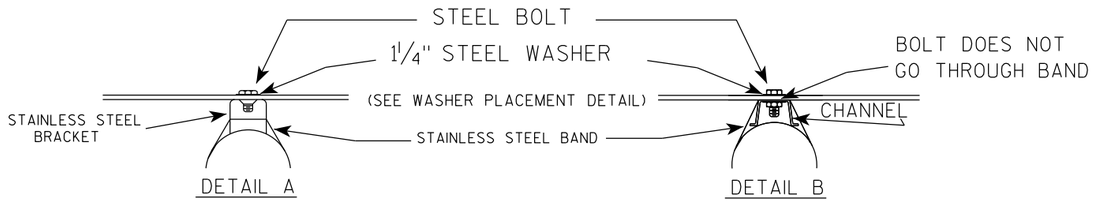
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 24	E

BANDING

SINGLE SIGN



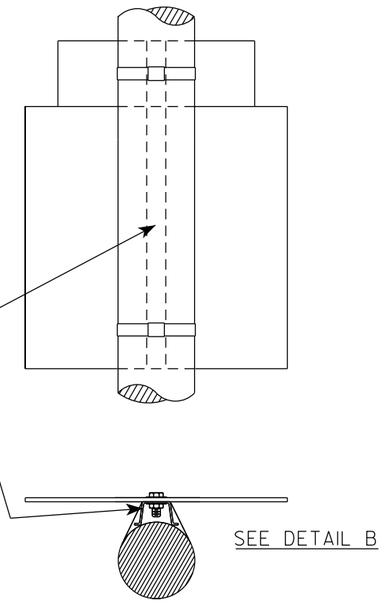




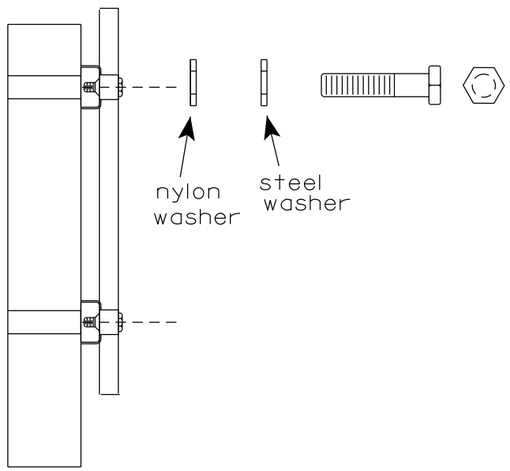
GENERAL NOTES

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

"J" ASSEMBLY



WASHER PLACEMENT



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

STANDARD SIGN
SIGN BANDING DETAILS

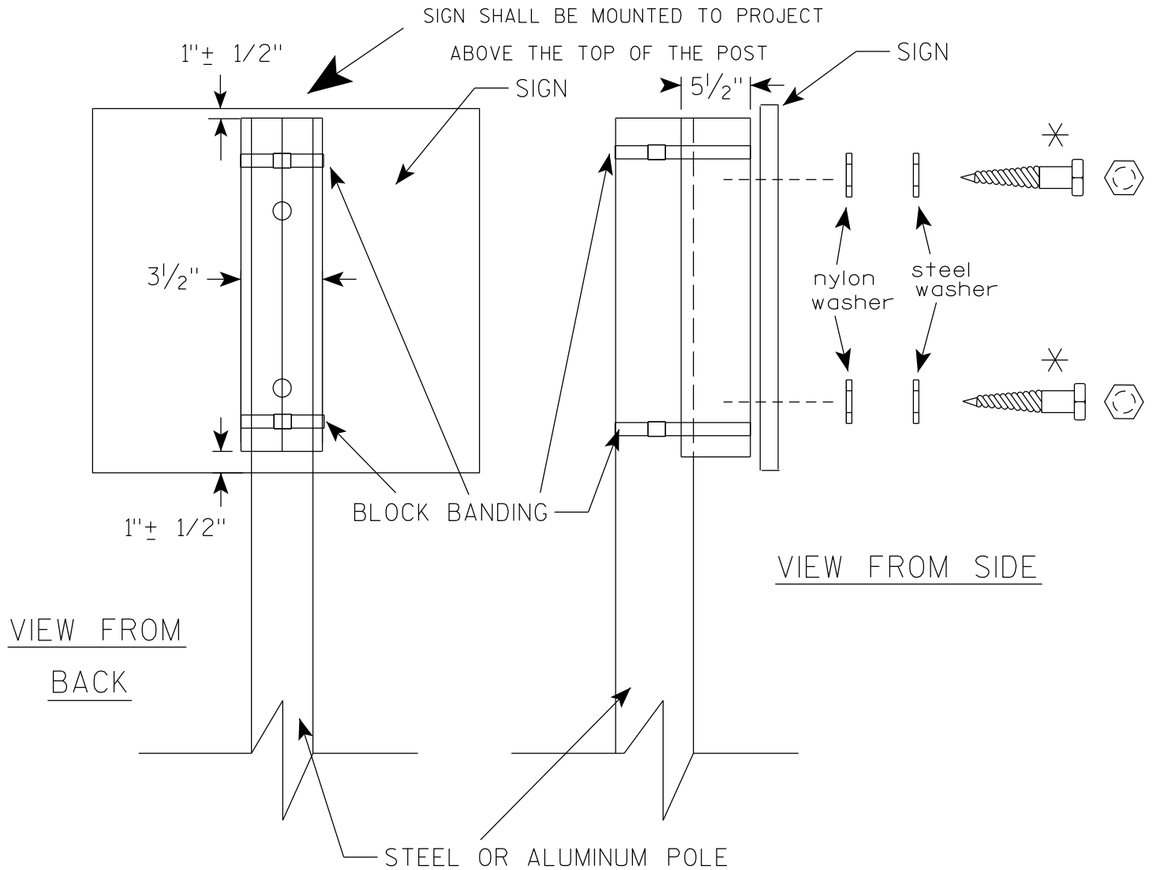
WISCONSIN DEPT OF TRANSPORTATION

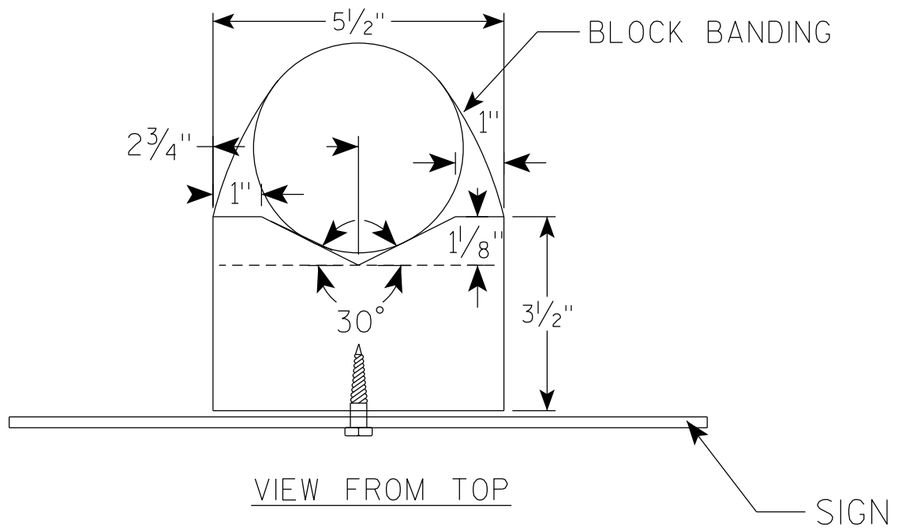
APPROVED Matthew R Rauch
for State Traffic Engineer

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

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

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





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
   b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

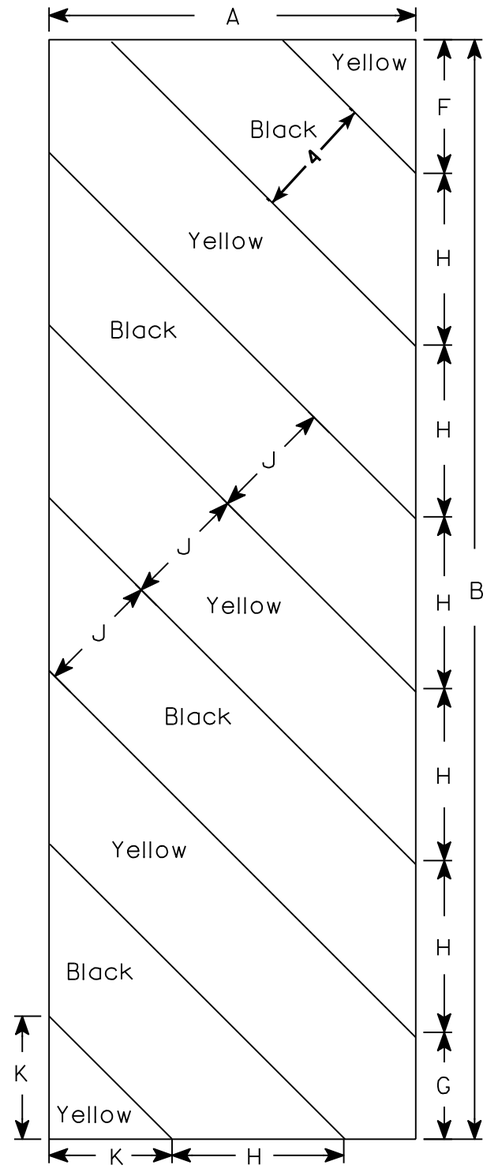
BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

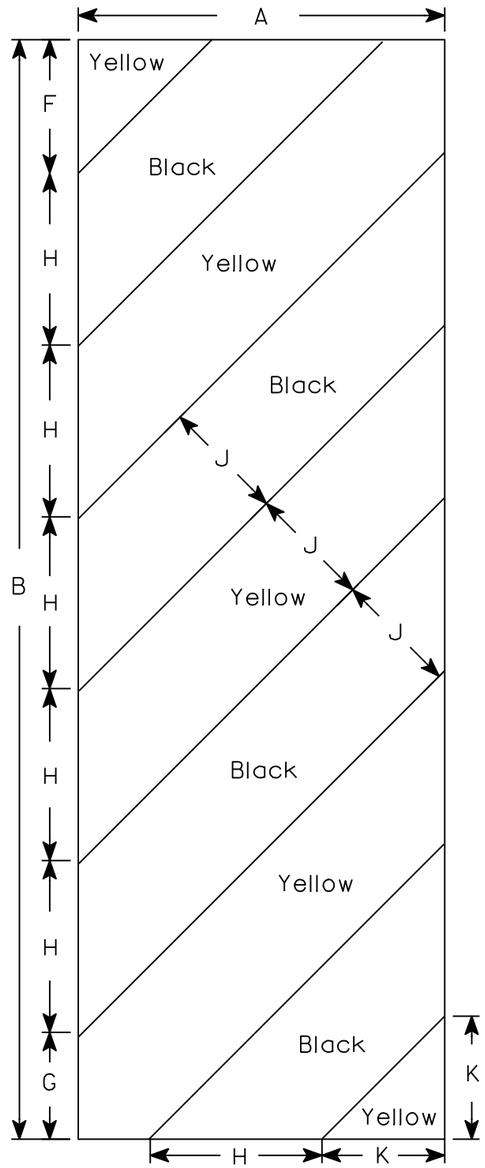
APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

PROJECT NO: | SHEET NO: 26 | 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

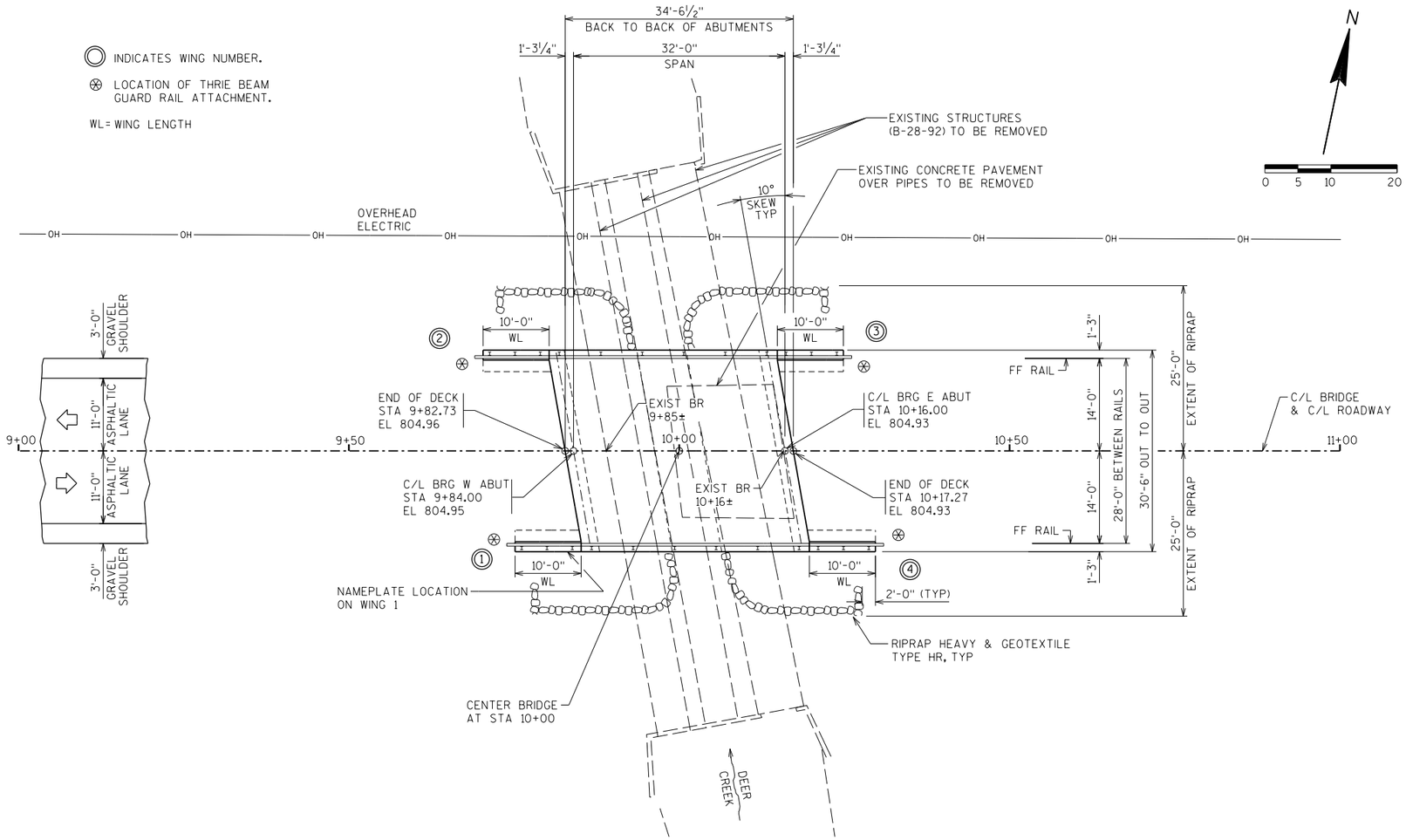
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 27 | E

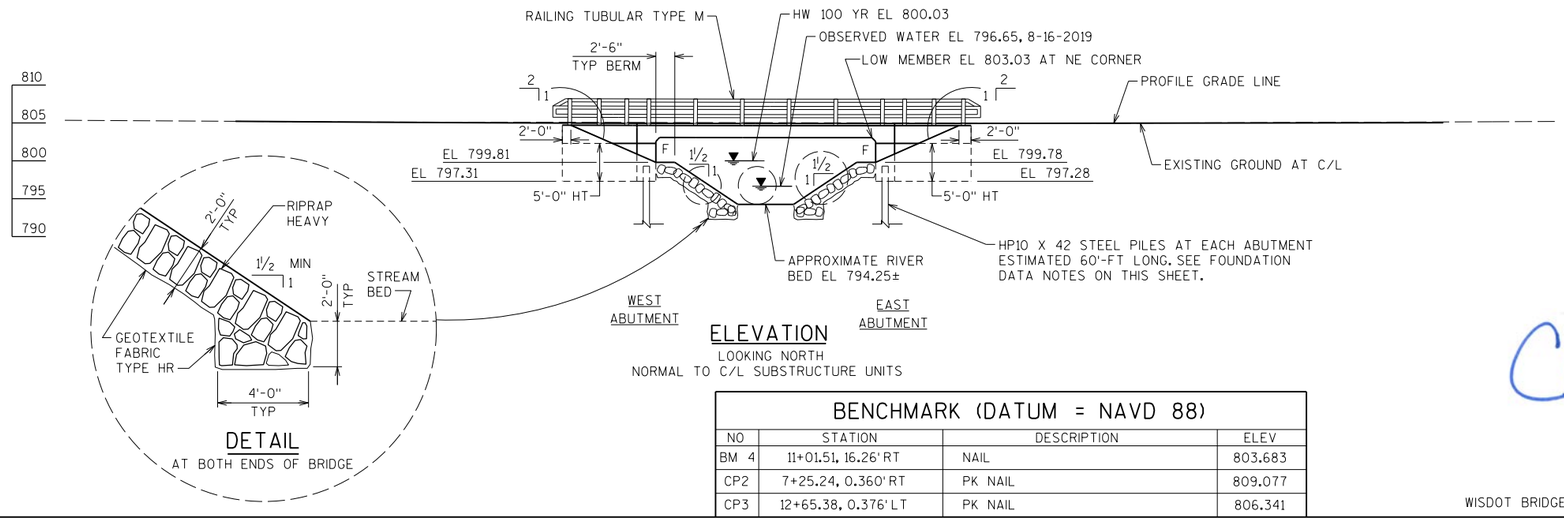
PLOT DATE: 3/23/2020 PLOT TIME: 11:20:39 AM
FILE NAME : S:\FJV\JEFFTV\52186\5-final-dsgn\5i-drawings\20-Struct\bridge\b28194gl.dgn

STATE PROJECT NUMBER
3636-00-72



PLAN

SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB BRIDGE



ELEVATION

LOOKING NORTH
NORMAL TO C/L SUBSTRUCTURE UNITS

DETAIL

AT BOTH ENDS OF BRIDGE

BENCHMARK (DATUM = NAVD 88)

NO	STATION	DESCRIPTION	ELEV
BM 4	11+01.51, 16.26' RT	NAIL	803.683
CP2	7+25.24, 0.360' RT	PK NAIL	809.077
CP3	12+65.38, 0.376' LT	PK NAIL	806.341

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: RF = 1.03
OPERATING RATING FACTOR: RF = 1.33
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF

INVENTORY AND OPERATING RATINGS DO NOT INCLUDE FUTURE WEARING SURFACE.

MATERIAL PROPERTIES:

CONCRETE MASONRY - SUPERSTRUCTURE f'c = 4,000 psi
- ALL OTHER f'c = 3,500 psi

HIGH STRENGTH BAR STEEL REINFORCEMENT
AASHTO GRADE 60 fy = 60,000 psi

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 60-FEET LONG AT EACH ABUTMENT.

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

SOILS REPORT AND BORING NOTES:
1. GROUNDWATER MAY BE PRESENT WHEN EXCAVATING FOR ABUTMENT UNITS.
2. DENSE LAYER OF GRANULAR SOIL PRESENT AT BORING 1 ABOUT 52 FEET FROM GROUND LEVEL. RECOMMEND PILES EXTEND THROUGH THIS LAYER.

HYDRAULIC DATA

100 YEAR FREQUENCY

Q_{100}	175	CFS
Q_{100} THRU STRUCTURE	175	CFS
VELOCITY	2.09	FPS
HIGH WATER$_{100}$ EL	800.03	FT
WATERWAY AREA	84	SQ FT
DRAINAGE AREA	7.8	SQ MI

2 YEAR FREQUENCY

Q_2	100	CFS
Q_2 HIGH WATER EL	798.72	FT
V_2	1.86	FPS

SCOUR CODE 5

TRAFFIC DATA

ADT (2019)	=	637
ADT (2039)	=	765
DHV	=	76
DD	=	53/47 %
T	=	12.9 %
DESIGN SPEED	=	45 MPH

LIST OF DRAWINGS

WISCONSIN PROFESSIONAL ENGINEER
CHRISTOPHER J. BLUM E-33157 MADISON WI

5/11/2020

SEH CONTACT: CHRIS BLUM, PE, 608.620.6192
WISDOT BRIDGE OFFICE CONTACT: AARON BONK, PE, 608.261.0261

NO.	DATE	REVISION	BY

SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 09/04/20
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-28-194

WILL ROAD OVER DEER CREEK

COUNTY	TOWN ~~CITY / VILLAGE~~
JEFFERSON	JEFFERSON

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

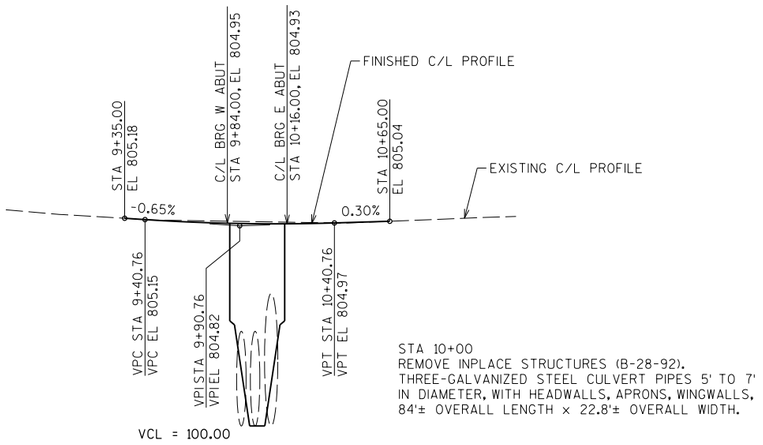
DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
CJB	NCK	DLF	CJB

GENERAL PLAN

SHEET 1 OF 8
28

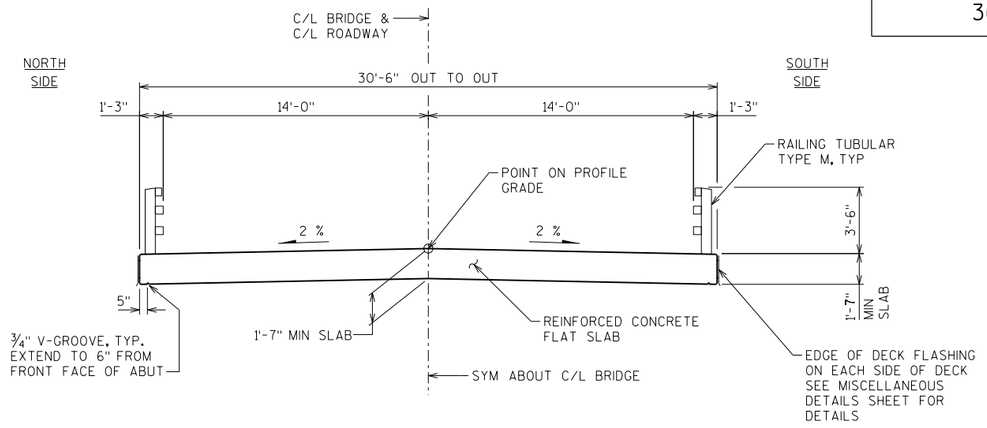
8

STATE PROJECT NUMBER
3636-00-72



STA 10+00
REMOVE INPLACE STRUCTURES (B-28-92).
THREE-GALVANIZED STEEL CULVERT PIPES 5' TO 7' IN DIAMETER, WITH HEADWALLS, APRONS, WINGWALLS, 84'± OVERALL LENGTH x 22.8'± OVERALL WIDTH.

PROFILE GRADE LINE



CROSS SECTION THRU BRIDGE

(LOOKING EAST)

TOTAL ESTIMATED QUANTITIES - B-28-194

	BID ITEM NUMBER	BID ITEMS	UNIT	WEST ABUT	EAST ABUT	SUPER	TOTALS
	203.0500.S	REMOVING OLD STRUCTURE OVER WATERWAY STATION 10+00	LS	-	-	-	1
	206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-28-194	LS	-	-	-	1
(1)	210.1500	BACKFILL STRUCTURE TYPE A	TON	115	115	-	230
	502.0100	CONCRETE MASONRY BRIDGES	CY	30	30	67	127
(3)	502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	155	155
	505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1900	1900	-	3800
	505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1365	1365	12,670	15,400
	513.4061	RAILING TUBULAR TYPE M B-28-194	LF	-	-	114	114
(4)	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-	18
	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	300	300	-	600
	606.0300	RIPRAP HEAVY	CY	60	60	-	120
(2)	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100	100	-	200
	645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	30	30	-	60
	645.0120	GEOTEXTILE TYPE HR	SY	130	130	-	260
	SPV.0090.01	FLASHING STAINLESS STEEL	LF	-	-	69	69
		NON-BID ITEMS					
		FILLER	SIZE	———	———	———	½ & ¾
		NAMEPLATE	EACH	1	———	———	1

(1) A FACTOR OF 2.0 WAS USED TO CONVERT CU YDS TO TONS.

(2) INCLUDES RODENT SHIELD FOR PIPE UNDERDRAIN PER SDD 8F6-4.

(3) FURNISH AND APPLY A PROTECTIVE SURFACE FINISH TREATMENT TO THE ENTIRE TOP OF THE BRIDGE DECK, INCLUDING THE SLAB EDGE AND 1'-0" UNDER SLAB, THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENT.

(4) INCLUDES QUANTITY ON BACKFACE OF WINGS.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

FOR EXISTING STRUCTURE SEE PROFILE GRADE LINE THIS SHEET.

REFER TO ROADWAY DRAWINGS FOR EXISTING UTILITY LOCATIONS.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

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

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

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-28-194" SHALL BE THE EXISTING GROUNDLINE.

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

THE QUANTITY FOR BACKFILL STRUCTURE TYPE A IS CALCULATED BASED ON THE BACKFILL STRUCTURE LIMITS DETAILS SHOWN ON MISCELLANEOUS DETAILS SHEET.

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

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

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION M213.

APPLY A PROTECTIVE SURFACE TREATMENT PER THE STANDARD SPECIFICATIONS AND THE SUPERSTRUCTURE DETAILS SHEET.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-194

DRAWN BY DLF | PLANS CK'D. CJB

CROSS SECTION AND QUANTITIES

SHEET 2 OF 8

29

8

8

PLOT DATE: 3/23/2020 PLOT TIME: 11:20:40 AM

FILE NAME : S:\FJ\JJEFFT\52186\5-final-dsgn\5l-drawings\20-Struct\bridge\b28l94g2.dgn

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-01	8/20/2019	-	-
B-02	8/19/2019	-	-
		-	-

SOIL BORINGS PERFORMED BY:

PROFESSIONAL SERVICES INDUSTRIES, INC.
821 CORPORATE COURT, SUITE 100
WAUKESHA, WISCONSIN 53189
PH: (262) 521-2125
www.psiusa.com

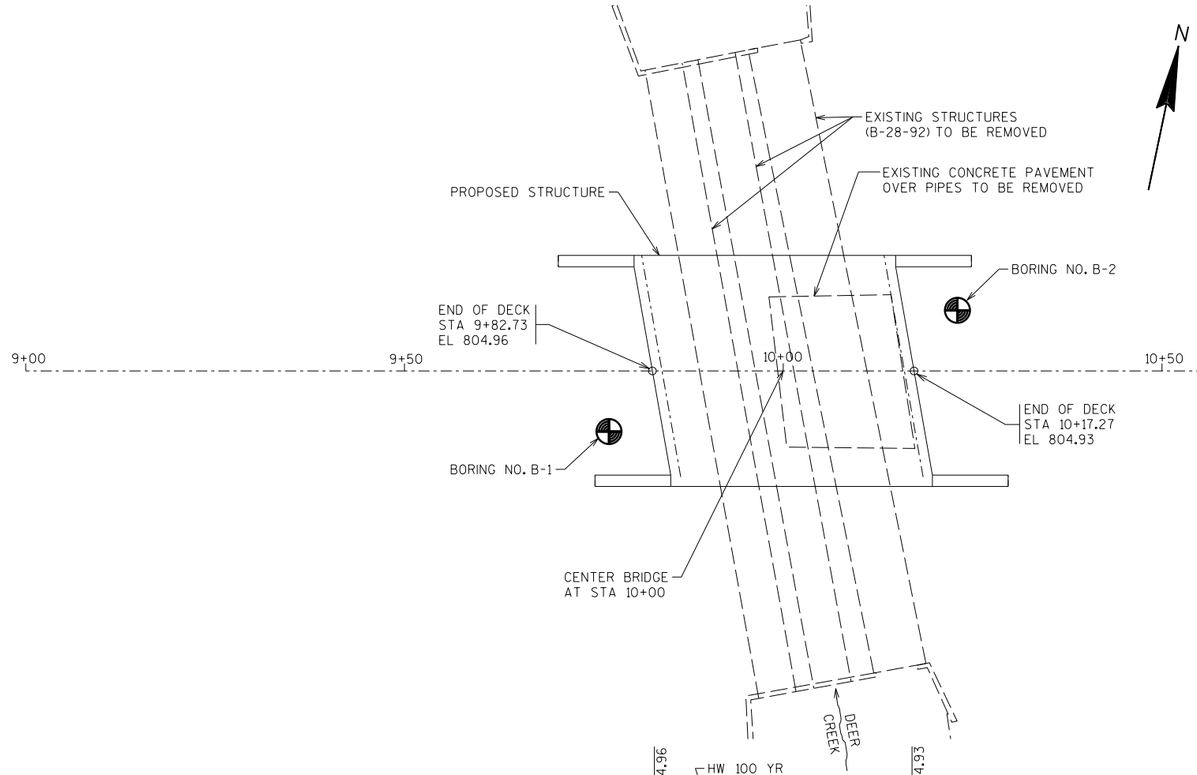
REPORT BY:
BRADLEY J BROBACK, P.E.
DEPARTMENT MANAGER
GEOTECHNICAL SERVICES

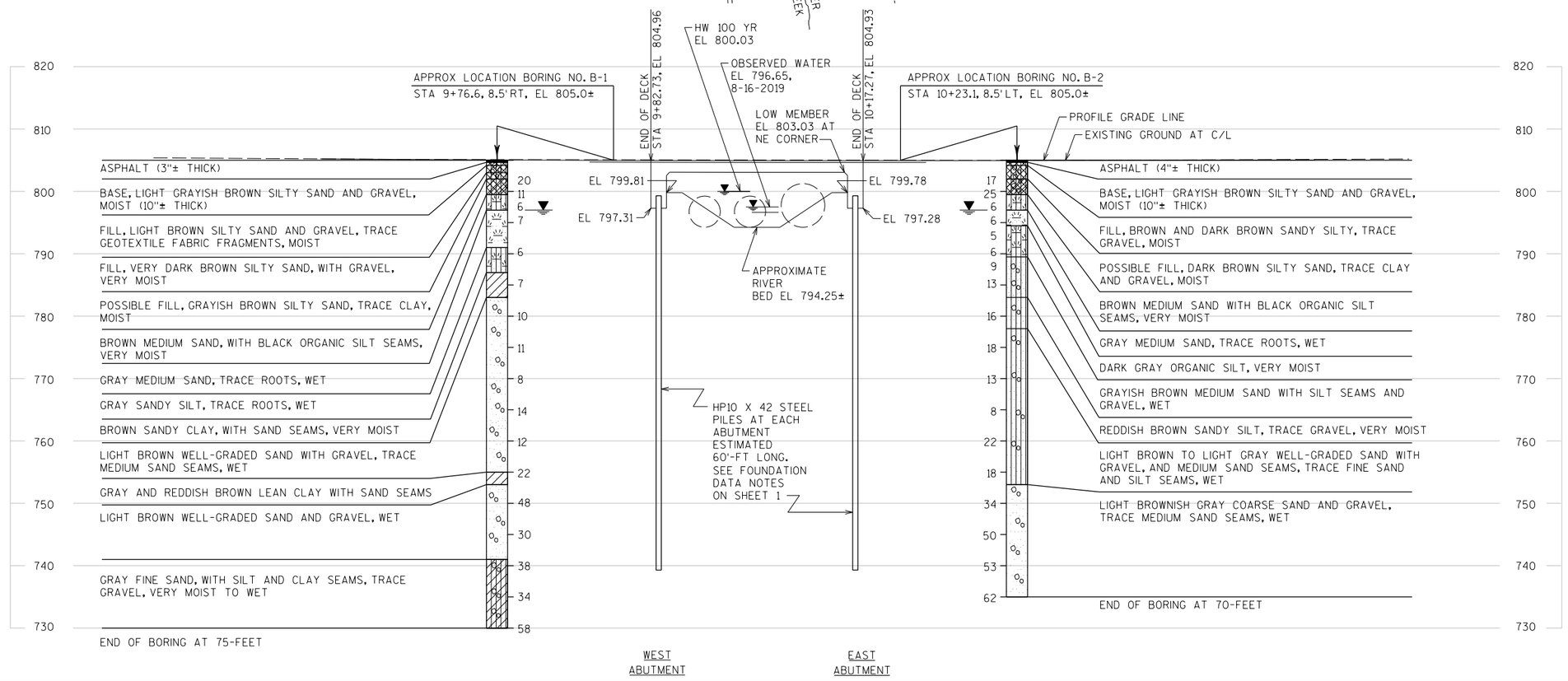
STATE PROJECT NUMBER

3636-00-72

MATERIAL SYMBOLS

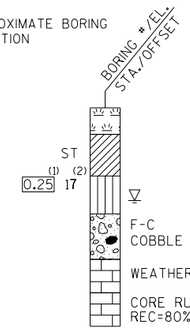
ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/META





LEGEND OF BORING

= APPROXIMATE BORING LOCATION



(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-28-194

DRAWN BY DLF | PLANS CK'D. CJB

SUBSURFACE EXPLORATION

SHEET 3 OF 8

30

8

8

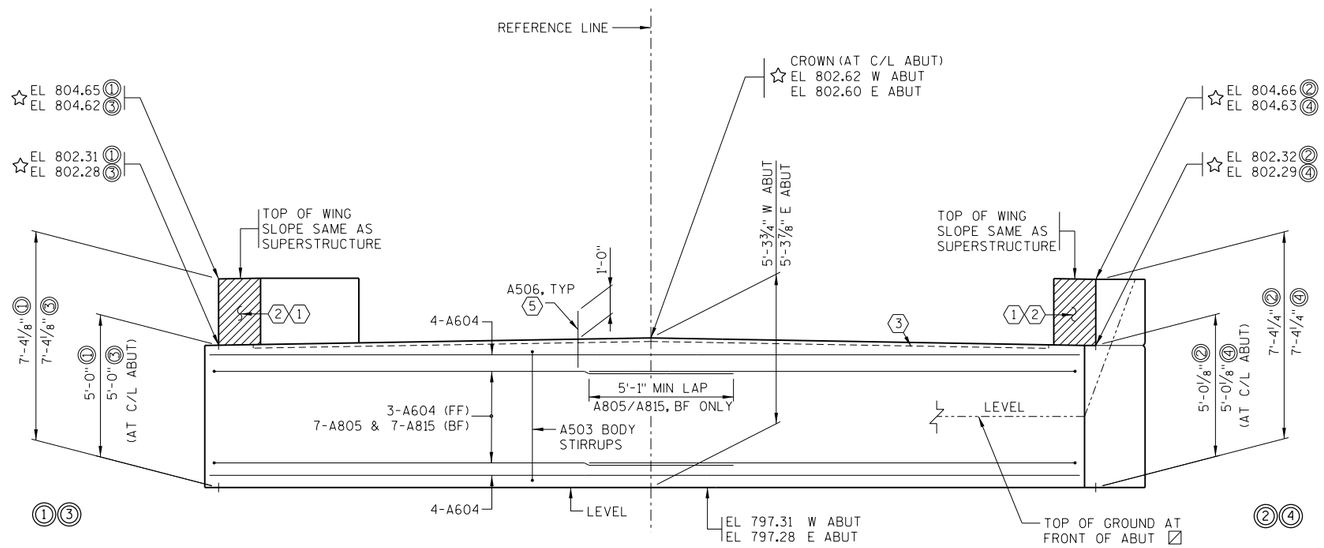
PLOT DATE: 3/23/2020 PLOT TIME: 1h20:40 AM

FILE NAME : S:\FJV\JEFFT\152186\5-final-dsgn\5i-drawings\20-Struct\bridge\b28194bl.dgn

PLOT TIME: 11:20:40 AM
PLOT DATE: 3/23/2020
FILE NAME : S:\FJ\J\JEFFT\52806\5-final-dsgn\5l-drawings\20-Struct\bridge\b28194al.dgn

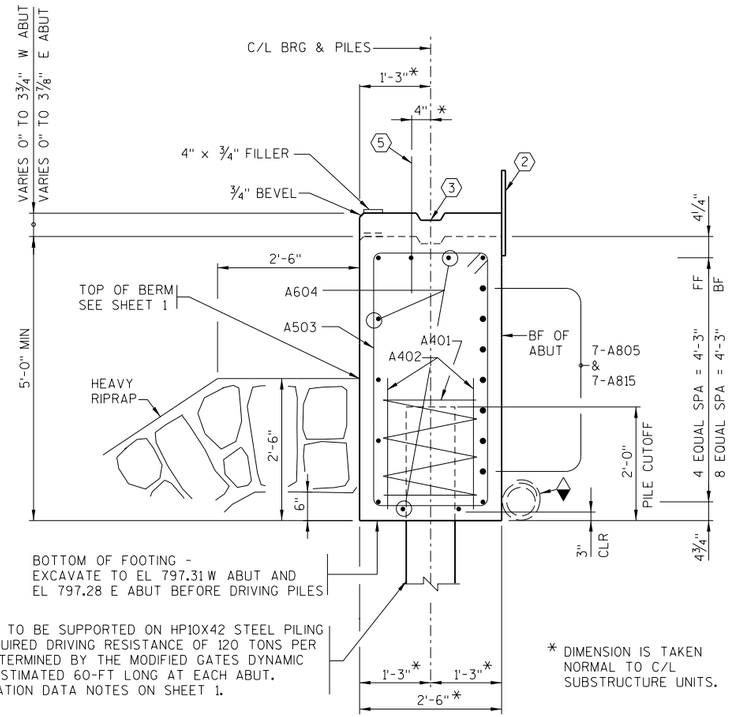
STATE PROJECT NUMBER

3636-00-72



FRONT ELEVATION

(WEST ABUTMENT SHOWN, EAST ABUTMENT SIMILAR BY ROTATION EXCEPT AS NOTED)
(PILES NOT SHOWN FOR CLARITY)

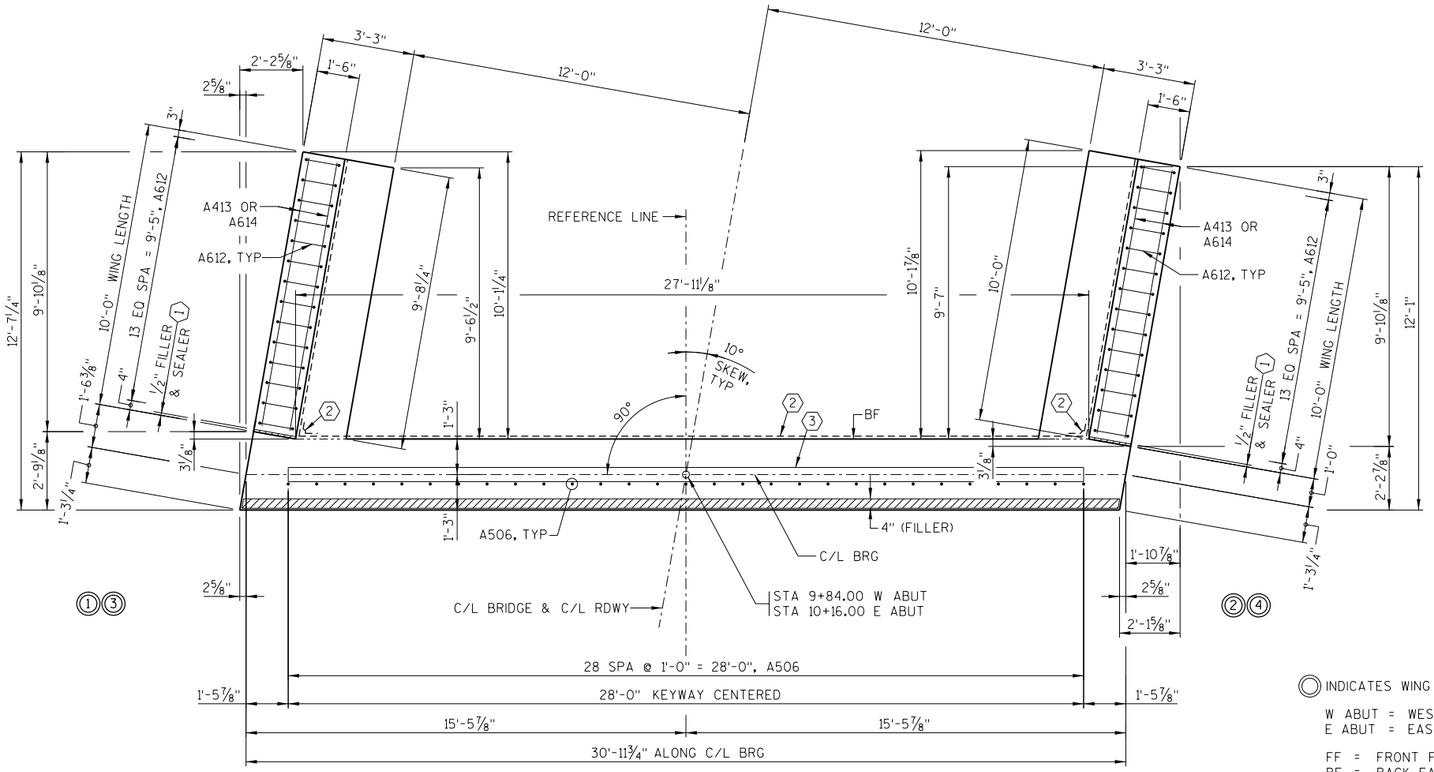


ABUTMENTS TO BE SUPPORTED ON HP10X42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 120 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 60-FT LONG AT EACH ABUT. SEE FOUNDATION DATA NOTES ON SHEET 1.

* DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS.

TYPICAL SECTION THRU BODY

ALL HORIZ BARS TO BE A604 UNLESS OTHERWISE SHOWN OR NOTED



PLAN

(WEST ABUTMENT SHOWN, EAST ABUTMENT SIMILAR BY ROTATION EXCEPT AS NOTED)
(SEE SHEET 1 FOR ORIENTATION)

◯ INDICATES WING NUMBER.

W ABUT = WEST ABUTMENT
E ABUT = EAST ABUTMENT

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

ABUTMENT NOTES

① SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE). FILLER INCLUDED IN WING LENGTH.

② 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ & VERT JOINTS ON BACKFACE. VERTICAL WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WING.

③ KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6".

④ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY A BEVELED 2" X 6" WITH MEMBRANE ON BACKFACE.

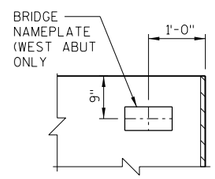
⑤ A506 BARS MAY BE PLACED AFTER CONCRETE HAS BEEN POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.

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

Ⓘ ATTACH RODENT SHIELD AT END OF PIPE UNDERDRAIN, FOR RODENT SHIELD DETAIL SEE MISCELLANEOUS DETAILS SHEET 8.

☒ COAT WITH PROTECTIVE SURFACE TREATMENT PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENT.

☆ ELEV GIVEN AT THIS POINT, SEE 'ELEVATION LOCATION DRAWING' ONSHEET 5.



NAMEPLATE LOCATION DETAIL

(ON WING 1 WEST ABUTMENT ONLY)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-194

DRAWN BY DLF | PLANS CK'D. CJB

ABUTMENT DETAILS

SHEET 4 OF 8
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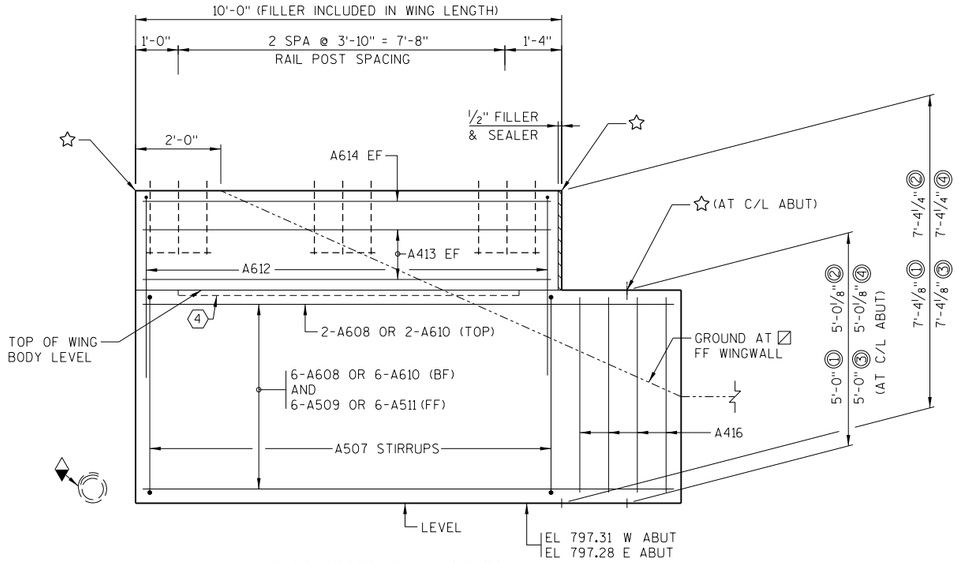
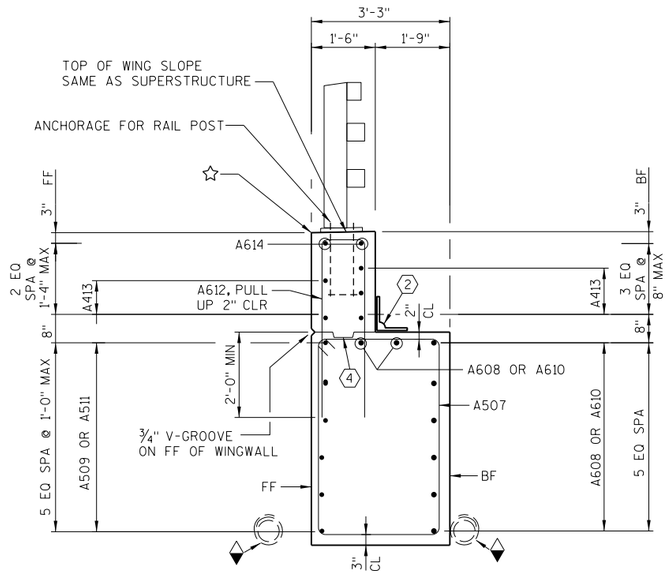
8

8

STATE PROJECT NUMBER
3636-00-72



TYP WING ELEVATION



TYP SECTION THRU WINGWALLS

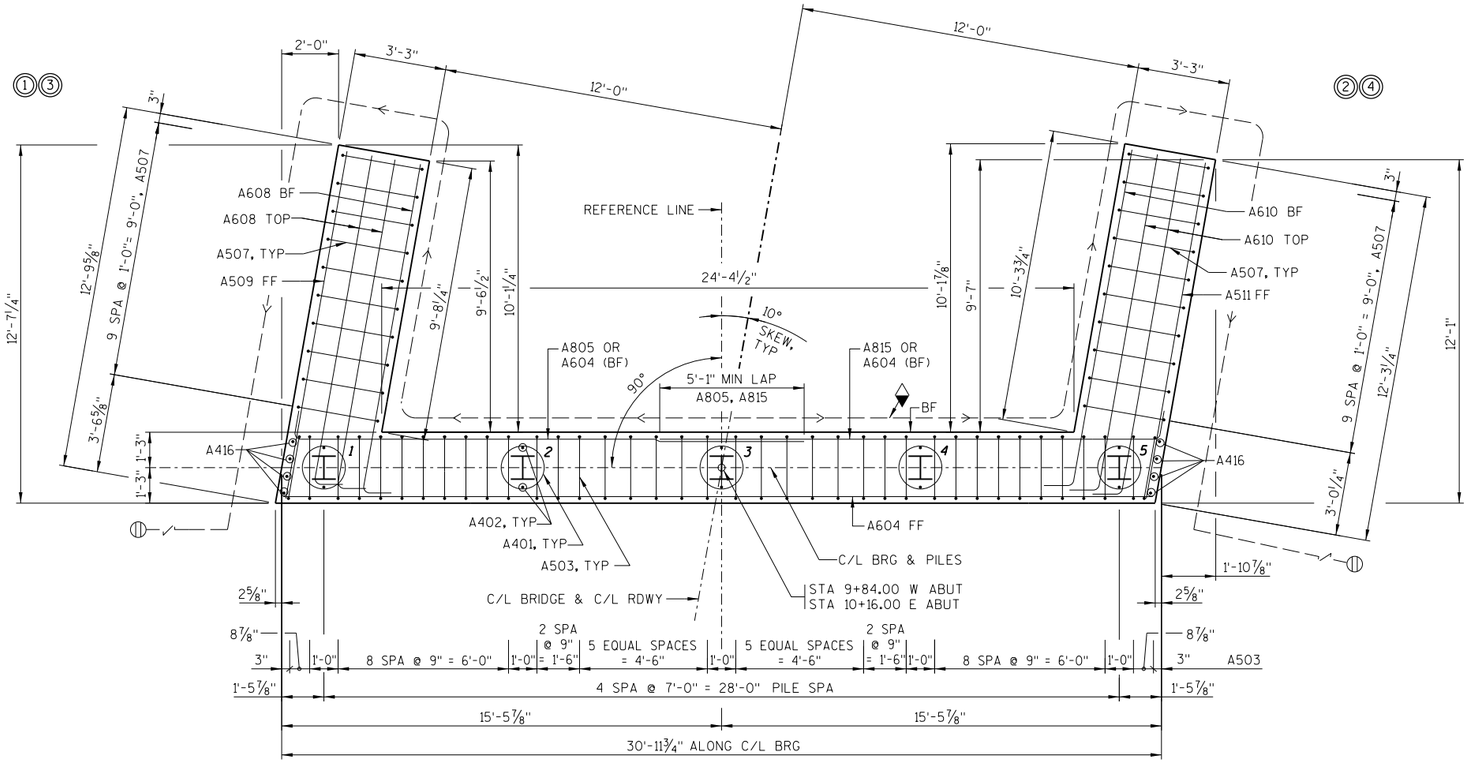
NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

* NO. REQ'D. IS FOR 2 ABUTMENTS. DIVIDE BY 2 FOR EACH ABUTMENT.

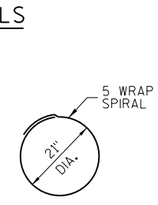
BILL OF BARS — BOTH ABUTMENTS

BAR MARK	COAT	NO. * REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
A401		10	28 - 0		X	BODY AT PILES
A402		20	2 - 3			BODY AT PILES
A503		76	13 - 11		X	BODY STIRRUPS
A604		22	30 - 6			BODY HORIZ
A805		14	19 - 0		X	BODY HORIZ BF
A506	X	58	2 - 0			BODY DOWELS
A507	X	40	15 - 3		X	WING STIRRUPS
A608	X	16	12 - 9		X	WING HORIZ BF 1 & 3 & TOP
A509	X	12	12 - 4			WING HORIZ FF 1 & 3
A610	X	16	13 - 3		X	WING HORIZ BF 2 & 4 & TOP
A511	X	12	11 - 11			WING HORIZ FF 2 & 4
A612	X	56	9 - 6		X	WING VERT
A413	X	20	9 - 7			WING HORIZ EF
A614	X	8	9 - 7			WING HORIZ EF TOP
A815		14	19 - 0		X	BODY HORIZ BF
A416		16	4 - 7			BODY VERT ABUT ENDS

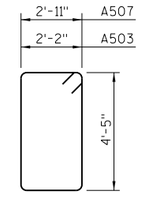


FOOTING LAYOUT

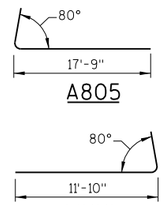
(WEST ABUTMENT SHOWN, EAST ABUTMENT SIMILAR BY ROTATION EXCEPT AS NOTED)
(SEE SHEET 1 FOR ORIENTATION)



A401



A503, A507



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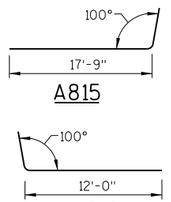

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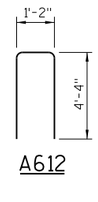
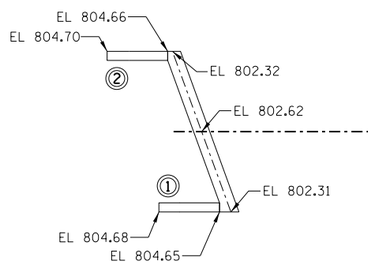


A612

A608

A610



WEST ABUT

EAST ABUT

ELEVATION LOCATION DRAWING

NOTES

SEE ABUTMENT NOTES ON SHEET 4 (② ④ ◆ ◍ ◪).

W ABUT = WEST ABUTMENT
E ABUT = EAST ABUTMENT

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

☆ ELEV GIVEN AT THIS POINT. SEE 'ELEVATION LOCATION DRAWING' ON THIS SHEET.

◎ INDICATES WING NUMBER.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-194

DRAWN BY DLF | PLANS CK'D. CJB

ABUTMENT DETAILS

SHEET 5 OF 8
32

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PLOT DATE: 3/23/2020
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8

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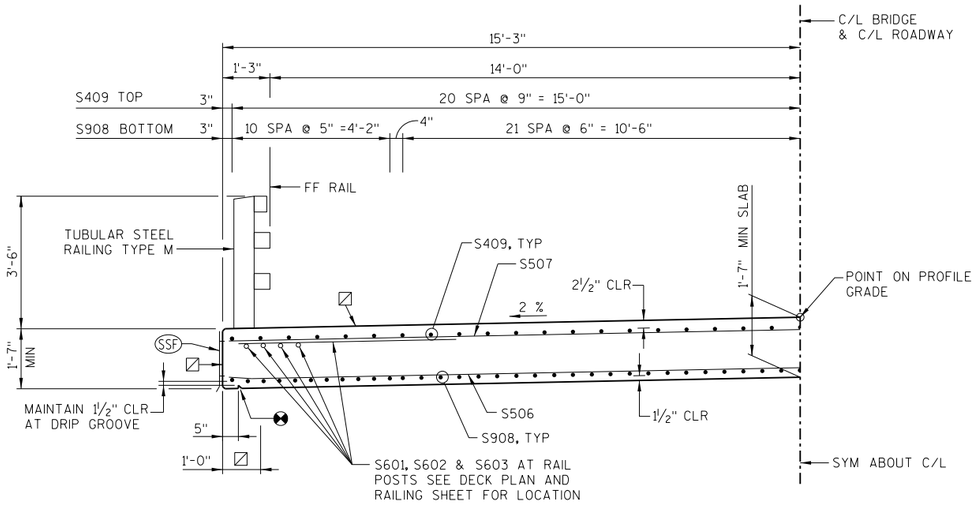
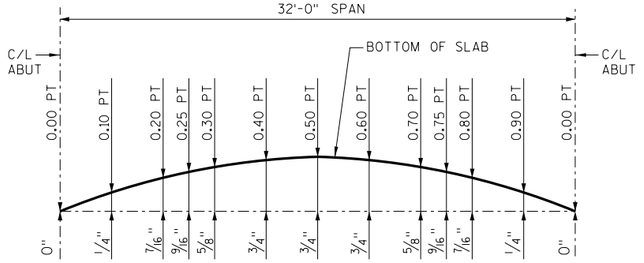


HALF TRANSVERSE SECTION



CAMBER DIAGRAM

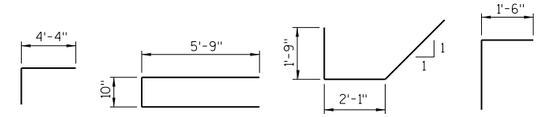
CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE VERTICAL ROADWAY PROFILE OR ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION ONLY EQUALS APPROXIMATELY 1/3 OF CAMBER VALUES SHOWN.

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

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

BILL OF BARS SUPERSTRUCTURE

BAR MARK	COAT	NO. REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
S601	X	32	6 - 0			RAIL POST
S602	X	16	6 - 0		X	RAIL POST
S603	X	24	12 - 0		X	RAIL POST
S504	X	62	5 - 10		X	END OF DECK
S505	X	62	3 - 1		X	END OF DECK
S506	X	51	30 - 7			BOT TRANS
S507	X	35	30 - 7			TOP TRANS
S908	X	65	34 - 2			BOT LONG
S409	X	41	34 - 2			TOP LONG



SUPERSTRUCTURE NOTES

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

PRIOR TO RELEASING SLAB FLASEWORK, TAKE TOP OF SLAB ELEVATIONS AT C/L ABUTMENTS AND 5/10 POINTS TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE LINE AND CROWN OR C/L.

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE C/L OF SUBSTRUCTURE UNITS.

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 ON CONTINUOUS BAR CHAINS APPROXIMATELY 4'-0" CENTERS.

◐ ¾" V-GROOVE, EXTEND V-GROOVE TO 6" FROM FRONT FACE OF ABUTMENT.

▨ COAT WITH PROTECTIVE SURFACE TREATMENT PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENT.

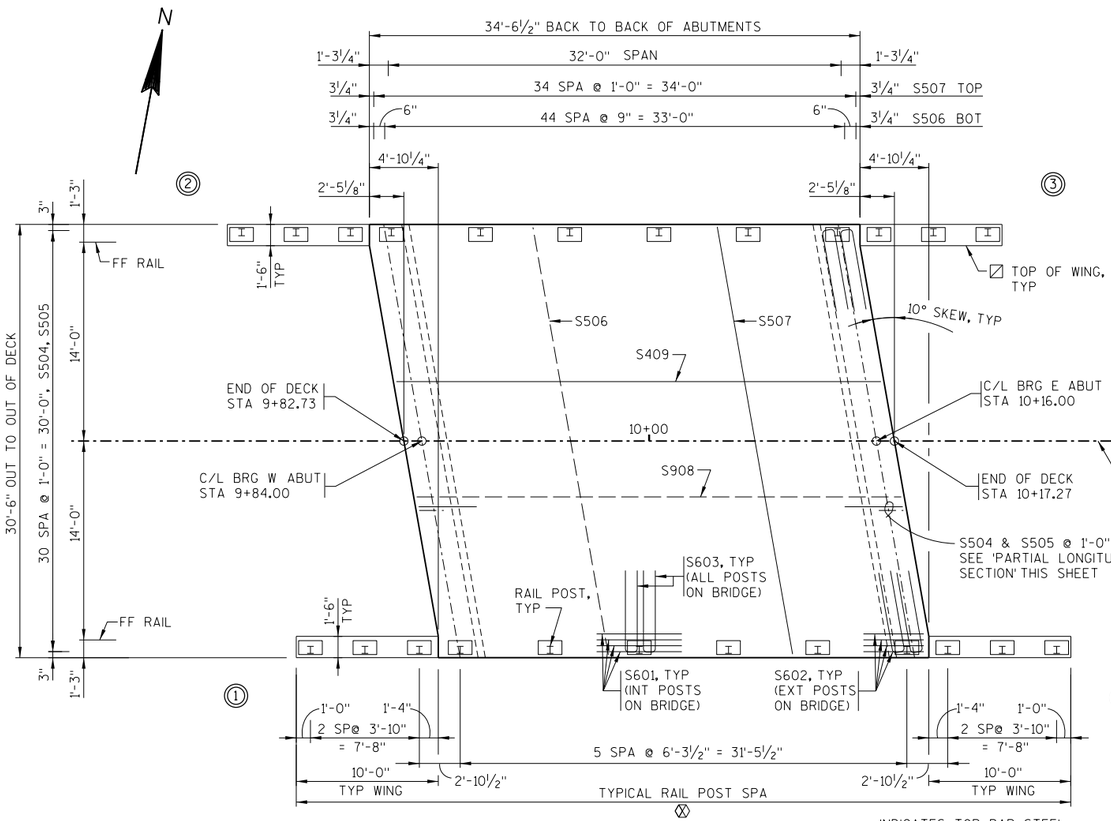
(SSF) EDGE OF DECK FLASHING TYP EACH SIDE OF DECK. SEE MISCELLANEOUS DETAILS SHEET FOR DETAILS. FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

⊗ TYPICAL EACH SIDE OF DECK. MEASURED ALONG EDGE OF DECK.

FF = FRONT FACE
BF = BACK FACE
EF = EACH FACE

UN = UNLESS NOTED OTHERWISE

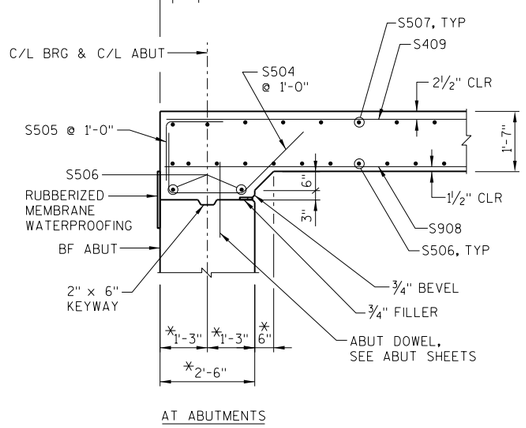
◯ INDICATES WING NUMBER.



DECK PLAN

——— INDICATES TOP BAR STEEL REINFORCEMENT

– – – – INDICATES BOTTOM BAR STEEL REINFORCEMENT



AT ABUTMENTS

PARTIAL LONGITUDINAL SECTION

* DIMENSION IS TAKEN NORMAL TO C/L SUBSTRUCTURE UNITS.

FINAL TOP OF DECK ELEVATIONS

	SPAN										
	WEST ABUT C/L	.1	.2	.3	.4	.5	.6	.7	.8	.9	EAST ABUT C/L
NORTH EDGE OF DECK	804.66	804.65	804.65	804.64	804.63	804.63	804.63	804.62	804.62	804.62	804.62
C/L	804.95	804.95	804.94	804.94	804.93	804.93	804.93	804.92	804.92	804.92	804.93
SOUTH EDGE OF DECK	804.65	804.64	804.64	804.63	804.63	804.63	804.62	804.62	804.62	804.62	804.63

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-194

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SUPERSTRUCTURE DETAILS

SHEET 6 OF 8
33

8

8

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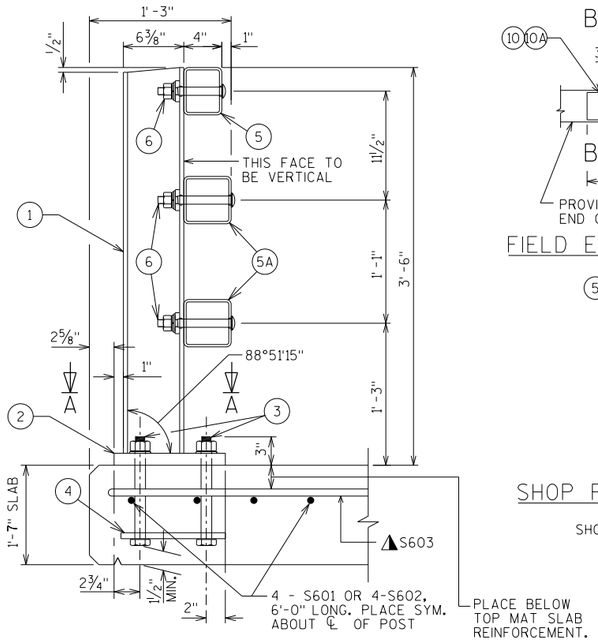
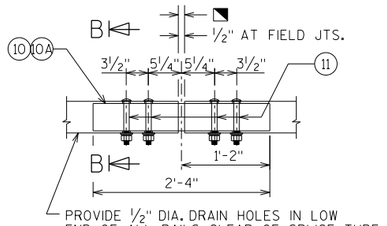
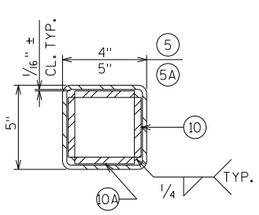


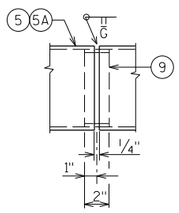
SECTION THRU RAILING ON DECK



FIELD ERECTION JOINT DETAIL

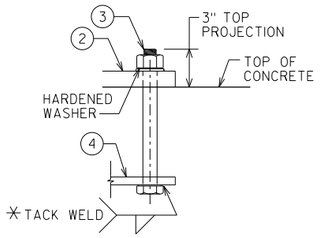


SECTION B-B

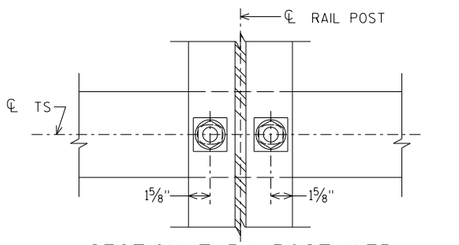


SHOP RAIL SPLICE DETAIL

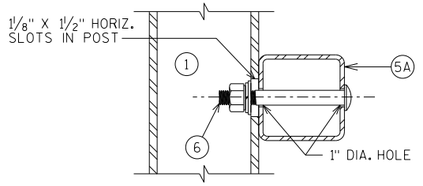
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



ANCHOR BOLTS



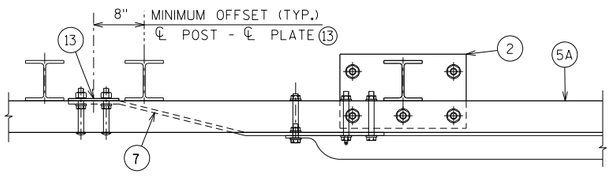
SECTION THRU POST WEB



SECTION THRU RAIL

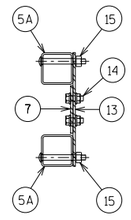
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT



SECTION C-C

LEGEND

(1) W6 x 25 WITH 1 1/8" X 1 1/2" 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 1 1/4" x 11 3/4" x 1'-8" WITH 15/16" X 1 5/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

(3) ASTM A449 - 1 1/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10 3/4" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTIBILITY.)

(4) 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3

(5) TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(5A) TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.

(6) 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1 5/8" X 1 5/8" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)

(7) 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" X 1 1/2" 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 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.

(9) SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".

(10) 3/8" X 3 5/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.

(10A) 3/8" X 2 5/8" X 2'-4" PLATE USED IN NO. 5, 3/8" X 3 5/8" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.

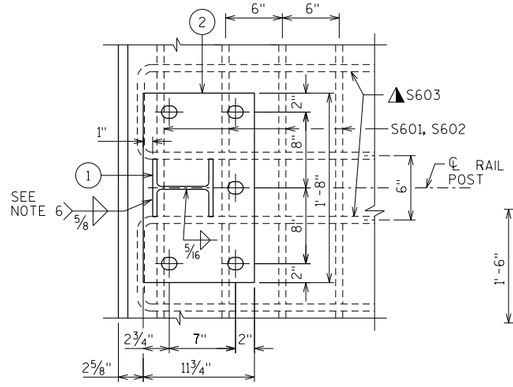
(11) 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15/16" X 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.

(12) 7/8" DIA. X 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).

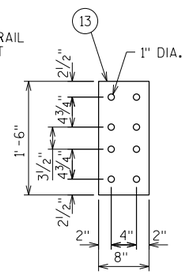
(13) 3/8" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.

(14) 7/8" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).

(15) 1" DIA. HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

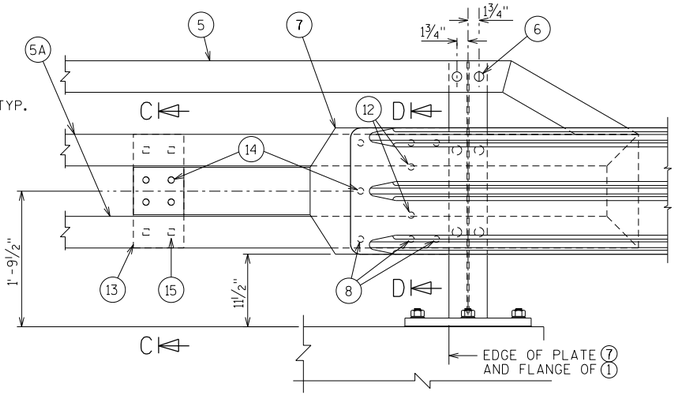


SECTION A-A



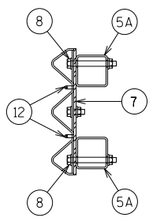
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

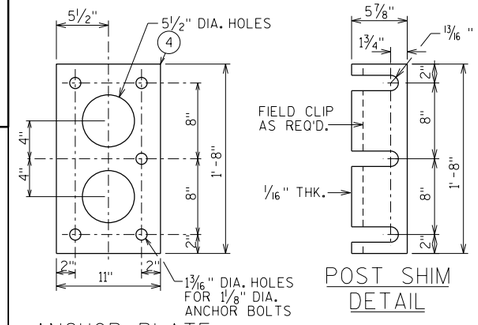


DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT



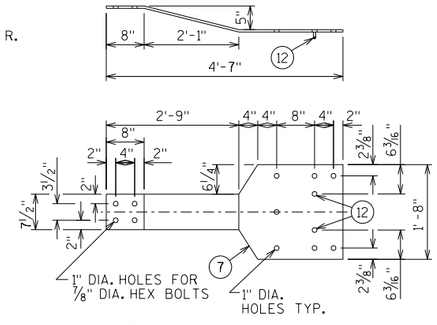
SECTION D-D



ANCHOR PLATE

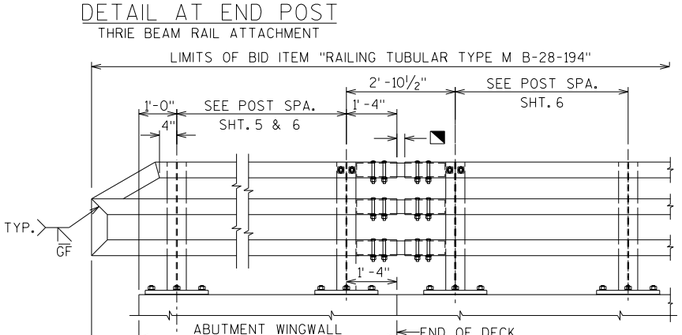
AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

▲ TIE TO TOP MAT OF STEEL.

✳ FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTIBILITY.

◥ 1/2" OPENING FOR A1 ABUTMENT.

SEE SHEET 5 & 6 FOR POST SPACING

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-28-194" 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 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-194

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TUBULAR STEEL RAILING TYPE 'M'

SHEET 7 OF 8

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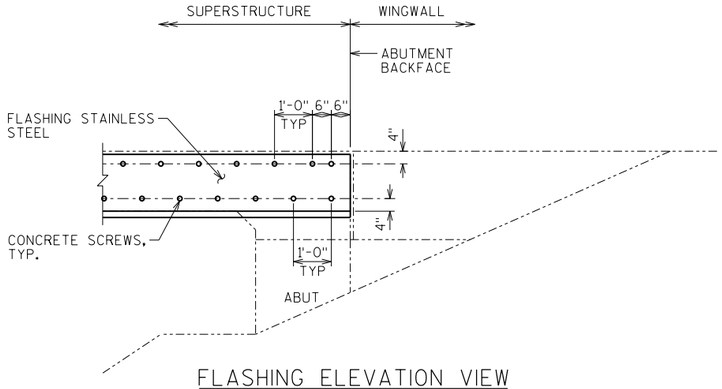
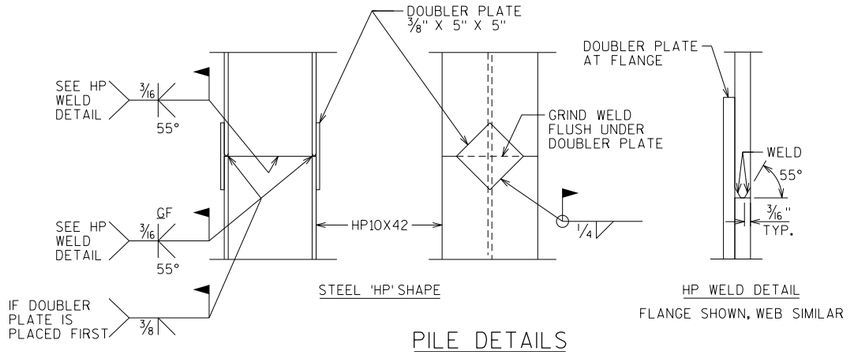
RAILM 1-19

STATE PROJECT NUMBER
3636-00-72



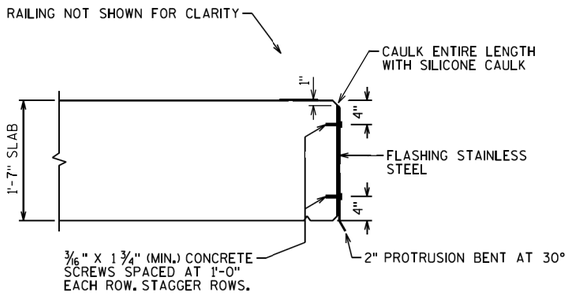
FLASHING ELEVATION VIEW



STEEL 'HP' SHAPE

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

PILE DETAILS



FLASHING DETAIL FOR NEW BRIDGES WITH OPEN RAILING

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK, 3/16" CONCRETE SCREWS AND CLEANING THE EDGE OF THE DECK PRIOR TO ATTACHMENT OF THE FLASHING.

FLASHING NOTES

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK AND 3/16" CONCRETE SCREWS.

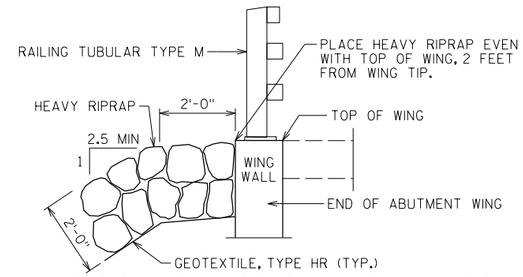
FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

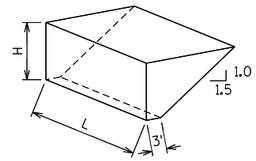
EXTEND FLASHING TO B.F. OF ABUTMENT DIAPHRAGM.

TOP OF FLASHING TO BEGIN APPROX. 1-INCH BELOW TOP OF DECK/SLAB SURFACE.

THE FLASHING IS TO TO BE A CONSTANT HEIGHT BASED ON THE THINNEST SLAB DEPTH OVER THE BRIDGE LENGTH.

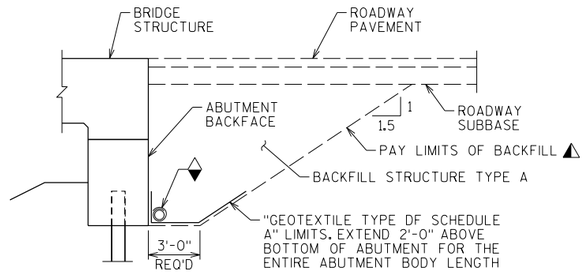


TYPICAL FILL SECTION AT WING TIPS



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

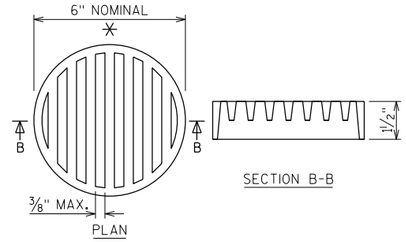
L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF} (EF)/27
V_{TON} = V_{CY} (2.0)



TYPICAL SECTION THRU ABUTMENT

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

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



RODENT SHIELD DETAIL

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

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

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

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-28-194

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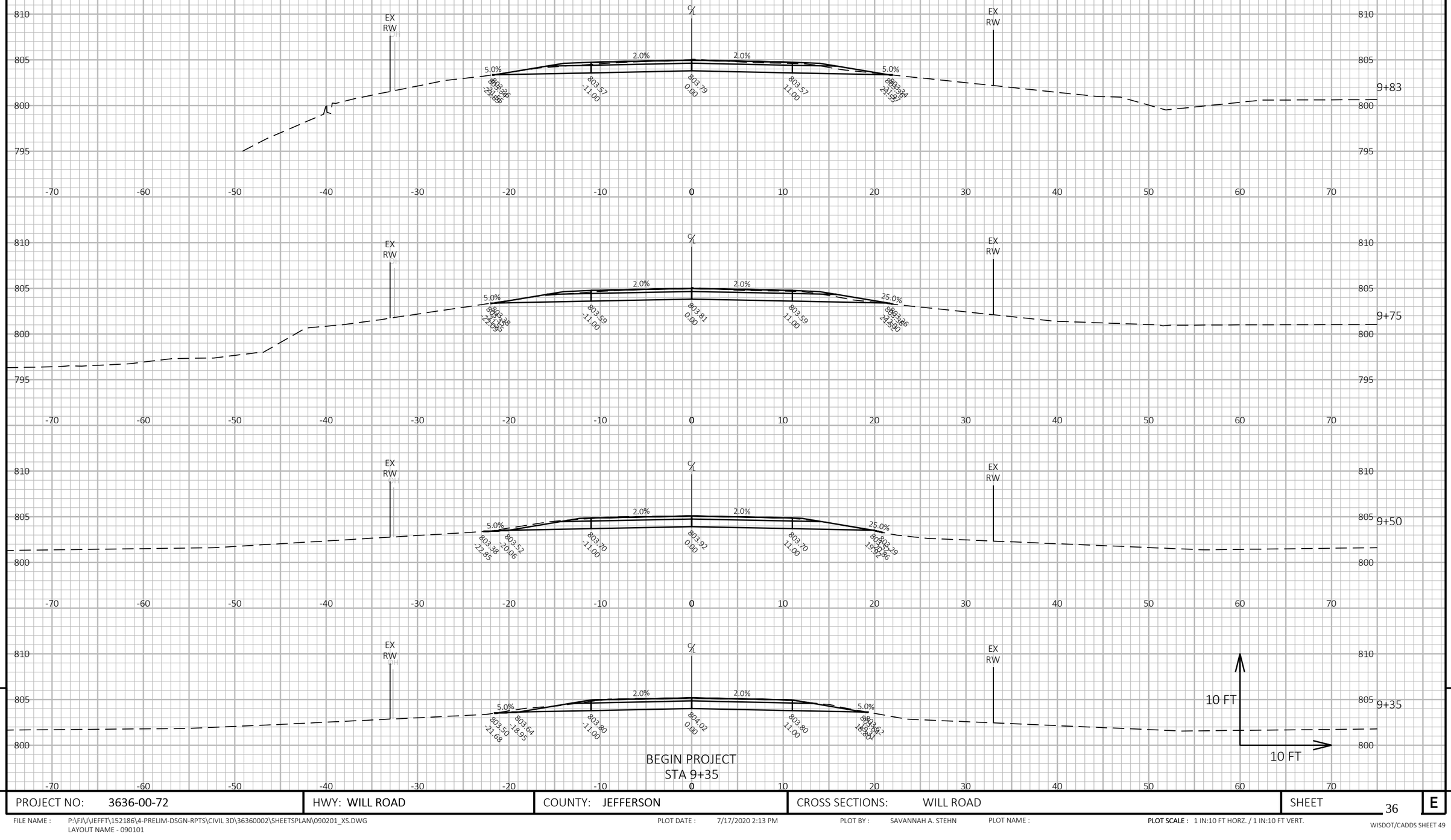
MISCELLANEOUS DETAILS

SHEET 8 OF 8
35

PLOT DATE: 3/23/2020
PLOT TIME: 11:20:42 AM
FILE NAME : S:\FJU\JEFFT\52186\5-final-dsgn\5i-drawings\20-Struct\bridge\b28194miscdet.dgn

8

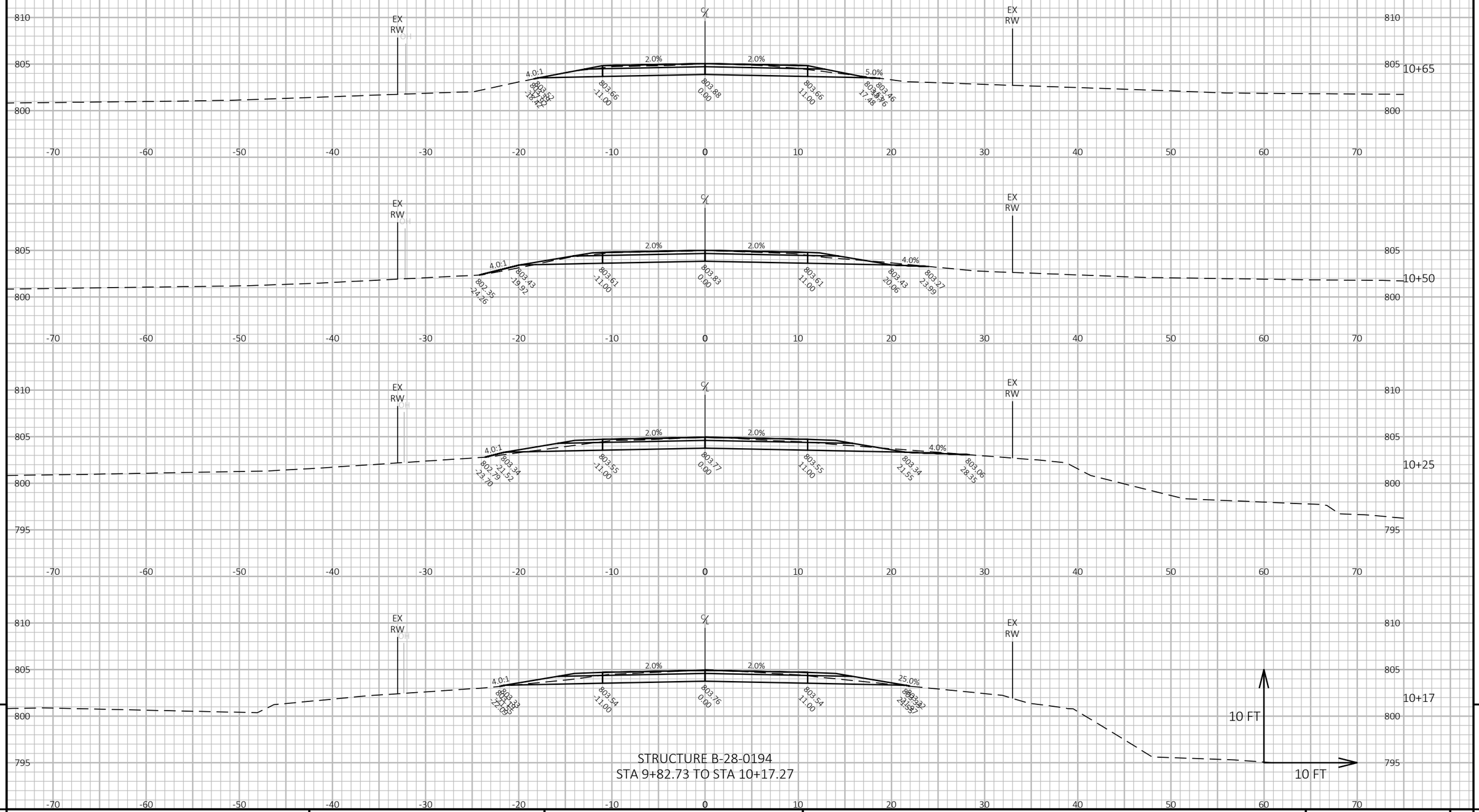
STRUCTURE B-28-0194
STA 9+82.73 TO STA 10+17.27



PROJECT NO: 3636-00-72	HWY: WILL ROAD	COUNTY: JEFFERSON	CROSS SECTIONS: WILL ROAD	SHEET 36	E

FILE NAME : P:\FJ\J\JEFFT\152186\4-PRELIM-DSGN-RPTS\CIVIL 3D\36360002\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090101
PLOT DATE : 7/17/2020 2:13 PM PLOT BY : SAVANNAH A. STEHN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

END PROJECT
STA 10+65



PROJECT NO: 3636-00-72	HWY: WILL ROAD	COUNTY: JEFFERSON	CROSS SECTIONS: WILL ROAD	SHEET 37

FILE NAME : P:\FJ\J\JEFFT\152186\4-PRELIM-DSGN-RPTS\CIVIL 3D\36360002\SHEETSPLAN\090201_XS.DWG
LAYOUT NAME - 090102

PLOT DATE : 7/17/2020 2:13 PM PLOT BY : SAVANNAH A. STEHN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

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