LAX

PROJECT ID: 5408-00-70

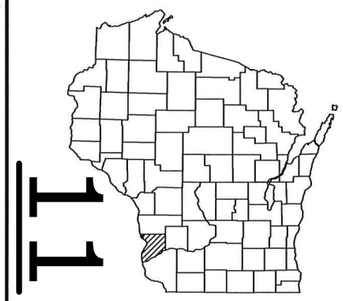
COUNTY: CRAWFORD

JANUARY 2026

ORDER OF SHEETS

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

TOTAL SHEETS = 60



N

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

V DESOTO, MILL PARK DRIVE

MISSISSIPPI TRIB BRIDGE B-12-0258

LOCAL STREET
CRAWFORD COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5408-00-70	WISC 2026132	1

STATE PROJECT NUMBER

5408-00-70

DESIGN DESIGNATION 5408-00-00

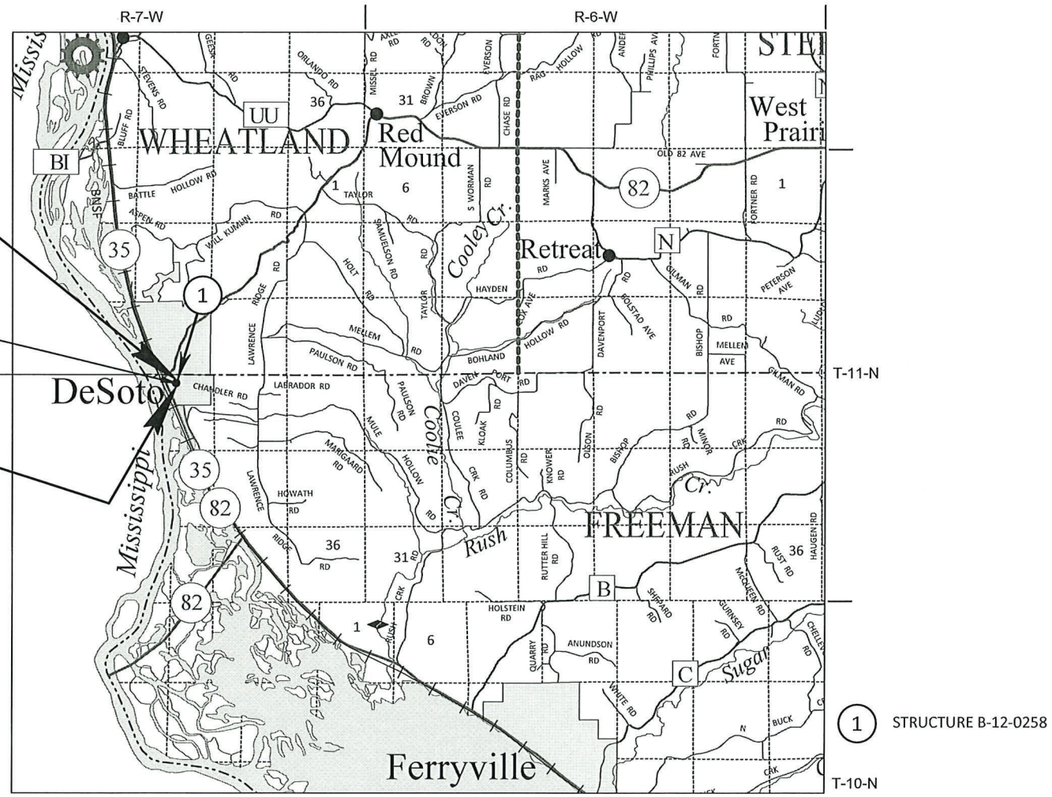
A.A.D.T.	2026	=	1,190
A.A.D.T.	2046	=	1,215
D.H.V.		=	122
D.D.		=	50/50
T.		=	10.0%
DESIGN SPEED		=	25 MPH
ESALS		=	280,000

BEGIN PROJECT
STA 9+00.00
Y = 256823.20
X = 304462.77

STRUCTURE B-12-258
STA 9+67 - STA 10+19

VERNON COUNTY
CRAWFORD COUNTY

END PROJECT
STA 10+75.00



LAYOUT

SCALE 0 2MI

TOTAL NET LENGTH OF CENTERLINE = 0.033 MI

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

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

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ACCEPTED FOR

CRAWFORD COUNTY

Date 7/28/25 Kayla Kegalka-Highway Commissioner
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY

SEH Building a Better World for All of Us™

Short Elliott Hendrickson Inc.
6808 Odana Road, Suite 200
Madison, WI 53719-1137
608.620.6199 main | 888.908.8166 fax
800.732.4362 toll free | www.sehinc.com

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

7/28/2025 (Date)

(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SEH
Designer	SEH
Project Manager	JOSH SCHOENMANN, PE
Regional Examiner	SWR
Regional Supervisor	KYLE HEMP, PE

APPROVED FOR THE DEPARTMENT

DATE: 7/28/25 (Signature)

E

FILE NAME : X:\AE\C\CRAWC\176936\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\C3D\SHEETS\SEC 01 TITLE\010101-TI (TITLE SHEET 5408-00-70 MILL PARK DR BRDG - VIL DESOTO).DWG PLOT DATE : 7/24/2025 1:31 PM PLOT BY : SEH PLOT NAME :

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
COB	CENTER OF BARRIER
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
R	RIVER
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)
TYP	TYPICAL
VAR	VARIABLE
VC	VERTICAL CURVE
Y	NORTH GRID COORDINATE
YD	YARD

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPERANGE (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 = 0.3 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.2 ACRES

DNR AREA LIAISON:

DNR SERVICE CENTER
3550 MORMON COULEE RD
LA CROSSE, WI 54601
TELEPHONE: 608.785.9115
608.406.7880
ATTENTION: KAREN KALVELAGE
EMAIL: KAREN.KALVELAGE@WISCONSIN.GOV

COUNTY CONTACT:

CRAWFORD COUNTY HIGHWAY DEPARTMENT
21515 STH 27
PO BOX 39
SENECA, WI 54654
TELEPHONE: 608.734.9500
ATTENTION: KYLE KOZELKA
EMAIL: KKOZELKA@CO.CRAWFORD.WI.GOV

WISDOT CONTACT:

WISCONSIN DEPT OF TRANSPORTATION
SOUTHWEST REGION
2101 WRIGHT ST
MADISON, WI 53704-2583
TELEPHONE: 608.246.5448
ATTENTION: JOSH SCHOENMANN
EMAIL: JOSH.SCHOENMANN@DOT.WI.GOV

DESIGN CONTACT:

SHORT ELLIOTT HENDRICKSON INC
6808 ODANA ROAD, SUITE 200
MADISON, WI 53719-1137
TELEPHONE: 608.620.6192
ATTENTION: CHRISTOPHER BLUM
EMAIL: CBLUM@SEHINC.COM

UTILITY CONTACT LIST:

VILLAGE OF DESOTO - SANITARY
10135 STATE HWY 35
DESOTO, WI 54624
TELEPHONE: 68.498.2071
ATTENTION: STEVE HOLT

MEDIACOM - COMMUNICATIONS
1240 HIGHWAY 52 SOUTH
CHATFIELD, MN 55923
TELEPHONE: 563.419.5160
ATTENTION: CRAIG EGGERT
EMAIL: CEGGERT@MEDIACOMCC.COM

VERNON COMMUNICATIONS COOPERATIVE - COMMUNICATIONS
103 N MAIN STREET
PO BOX 20
WESTBY, WI 54667
TELEPHONE: 608.634.7434
ATTENTION: SCOTT FREDERICK
EMAIL: SFREDERICK@VERNONCOM.COOP

XCEL ENERGY - ELECTRIC
PO BOX 8
EAU CLAIRE, WI 54701
TELEPHONE: 715.737.1495
ATTENTION: DAVID MELSNESS
EMAIL: DAVID.J.MELSNESS@XCELENERGY.COM

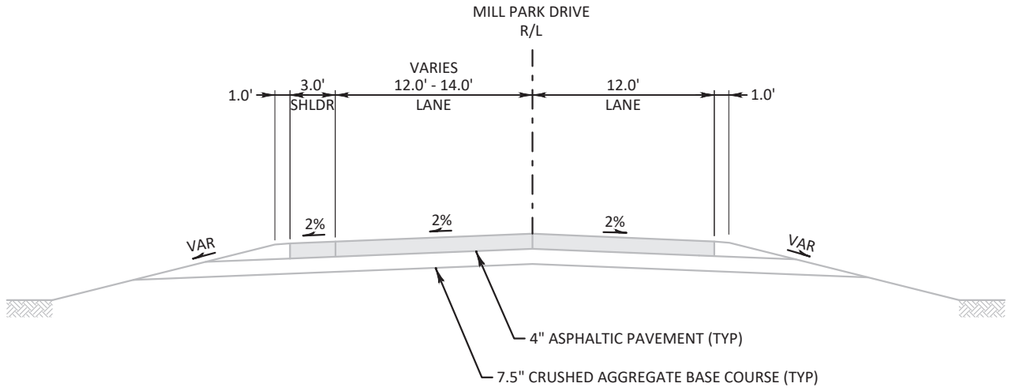
DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

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. PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL VERIFY RELATED DRAINAGE INFORMATION IN THE PLANS WITH THE ENGINEER.
5. CONCRETE COLLAR REQUIRED AT JOINTS BETWEEN EXISTING AND NEW CULVERT PIPE.
6. JOINT TIES WILL BE REQUIRED ON THE ENDWALL AND LAST 2 SECTIONS PER STD 520 AND 524 ON ALL CULVERT PIPES.
7. INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
8. 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.
9. BROKEN CONCRETE CONTAINING RE-BAR SHALL NOT BE USED AS RIPRAP.
10. CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 4-INCH TYPICAL DEPTH.
11. TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
12. REMOVAL OF EROSION CONTROL DEVICES IS INCLUDED IN THE COST OF THEIR RESPECTIVE BID ITEMS.
13. THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.
14. ASPHALTIC AND CONCRETE SURFACES SHALL BE SAWCUT AT THE MATCH LINE AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.
15. DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE TOPSOILED, FERTILIZED, SEEDED, AND EROSION MATTED.
16. FERTILIZER SHALL NOT BE USED NEAR NAVIGABLE WATERWAYS OR WETLANDS.
17. A CONVERSION FACTOR OF 2.0 TONS/CY IS USED TO ESTIMATE QUANTITIES FOR BASE AGGREGATE DENSE.
18. APPLY TACK COAT AT A RATE OF 0.05 GA/SY BETWEEN LAYERS OF HMA PAVEMENT.
19. HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
20. THE CONTRACTOR'S PAVING OPERATIONS SHALL BE CONSISTENT WITH THE PLAN AND TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT HMA LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING OR PARKING LANE.

2

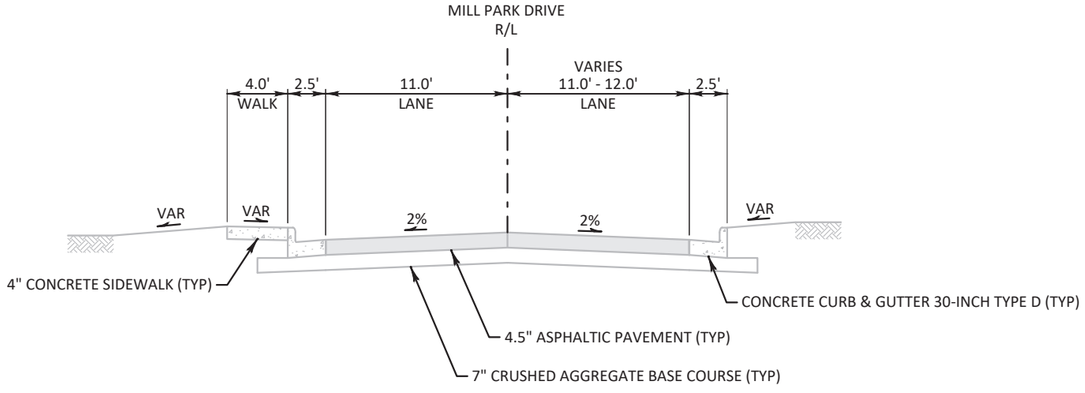
2



TYPICAL EXISTING SECTION

S MILL PARK DR

STA 9+00.00 TO STA 9+60.00



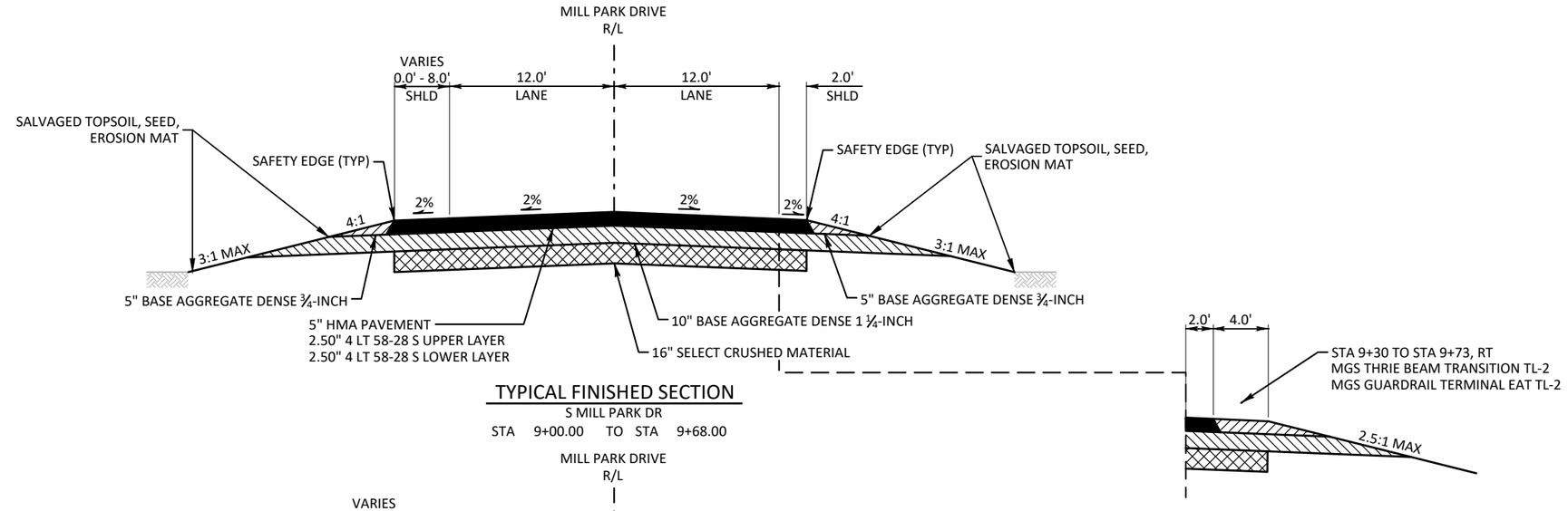
TYPICAL EXISTING SECTION

S MILL PARK DR

STA 10+10.00 TO STA 10+75.00

PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	TYPICAL SECTIONS	SHEET 3	E

2



TYPICAL FINISHED SECTION

S MILL PARK DR

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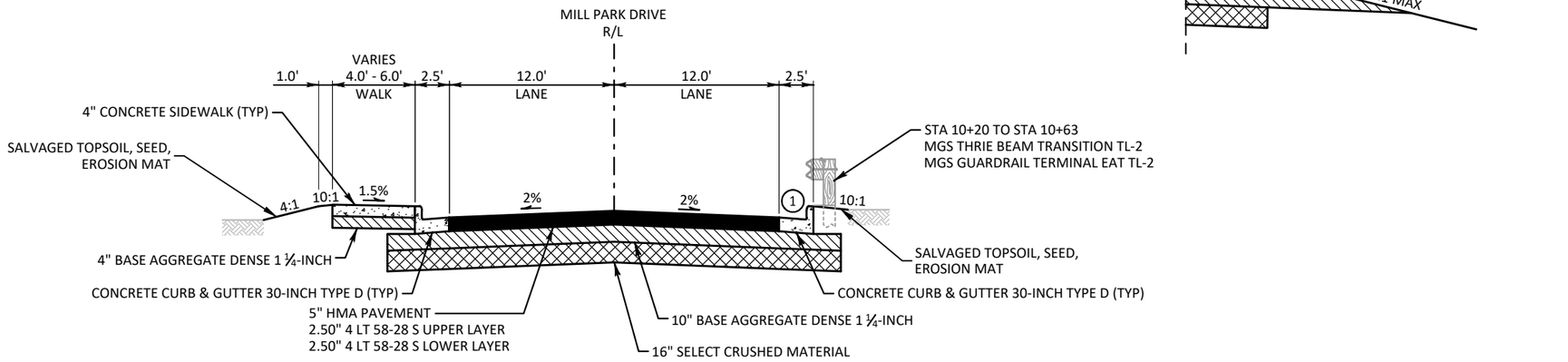
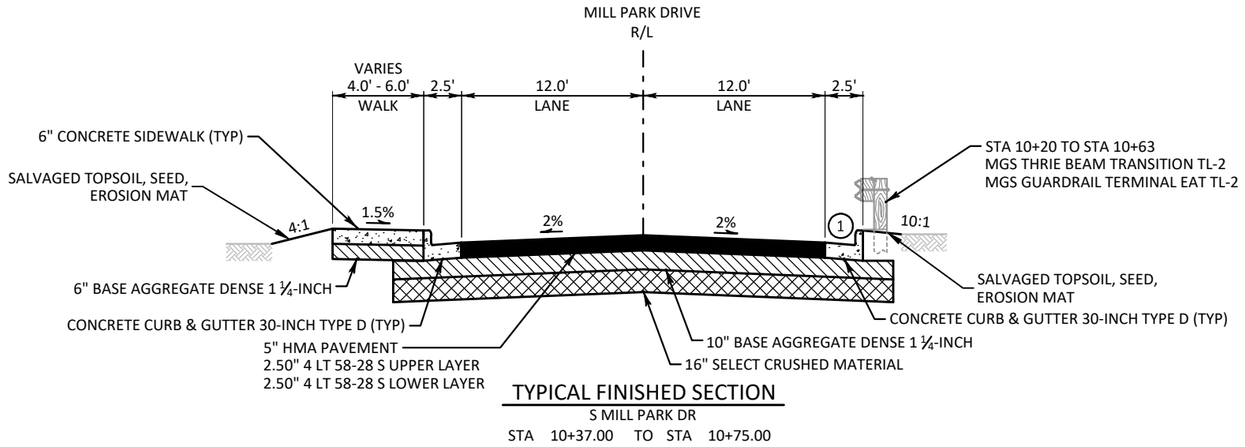


TYPICAL FINISHED SECTION

S MILL PARK DR

STA 10+18.00 TO STA 10+37.00



TYPICAL FINISHED SECTION

S MILL PARK DR

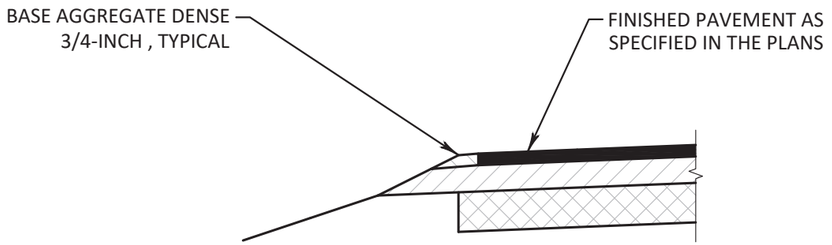
STA 10+37.00 TO STA 10+75.00

GENERAL NOTES:

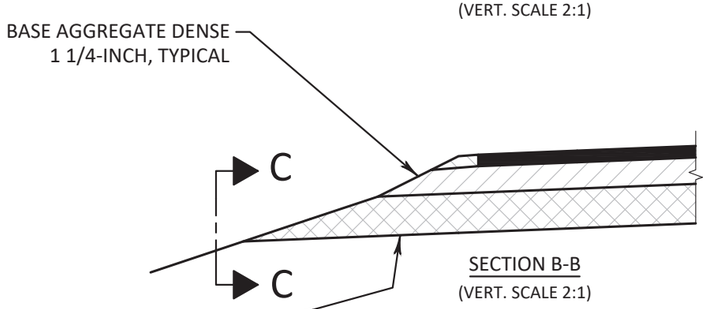
(1) INSTALL DRIVEWAY CURB BEGINNING AT POST 3

PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	TYPICAL SECTIONS	SHEET 4	E

2



SECTION A-A
(VERT. SCALE 2:1)



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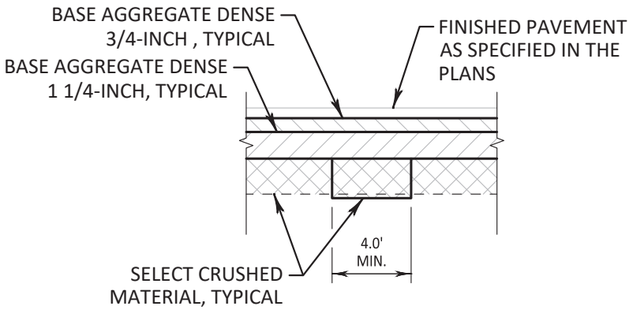
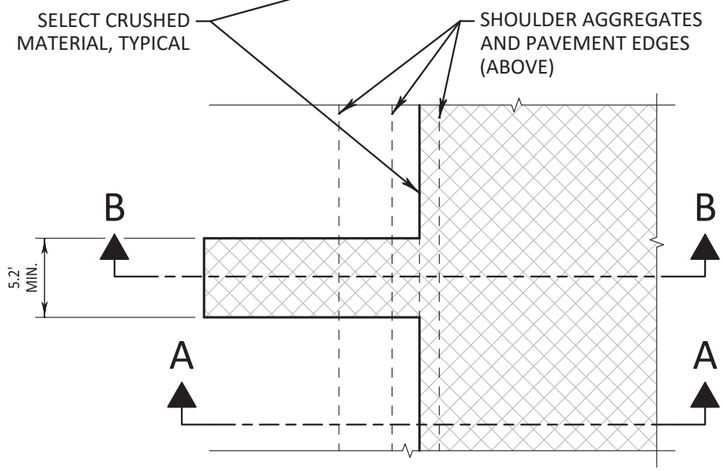


SECTION C-C
(VERT. SCALE 2:1)



PLAN VIEW
(VIEW PLANE AT TOP OF SELECT
CRUSHED MATERIAL)

RELIEF TRENCH

NOTE:

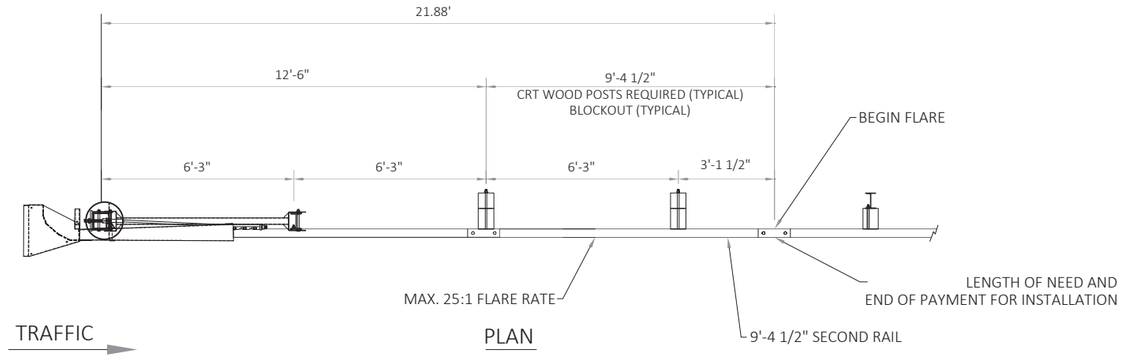
CONSTRUCT RELIEF TRENCHES AT 200'-300' INTERVALS AND AT PROFILE SAG POINTS (LEFT AND RIGHT).

FINAL LOCATIONS TO BE APPROVED OR DETERMINED BY THE ENGINEER IN THE FIELD.

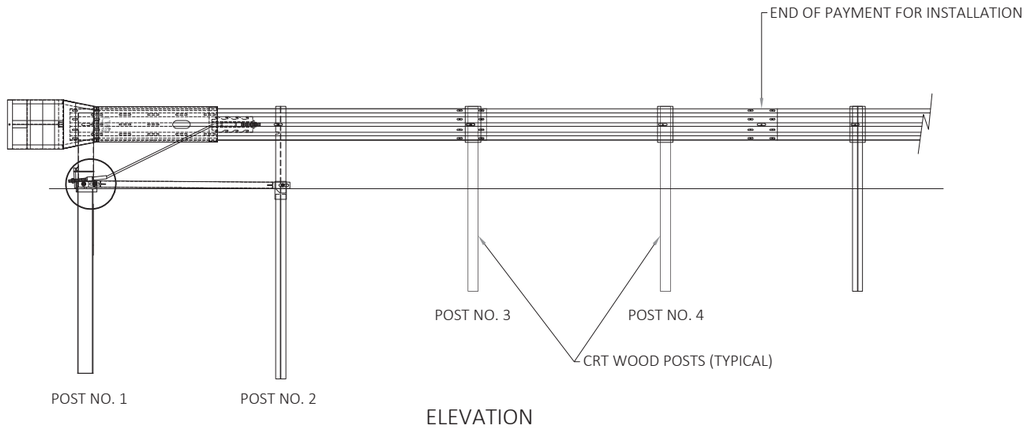
MATERIALS AND LABOR FOR RELIEF TRENCH ARE INCLUDED IN THE SELECT CRUSHED MATERIAL BID ITEM.

SEE "MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL" STANDARD DETAIL DRAWING AND MANUFACTURER DRAWINGS FOR MORE DETAILS

2



PLAN



ELEVATION

MGS GUARDRAIL TERMINAL EAT TL-2

PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 6	E

2

GENERAL NOTES

1. POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.
2. WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
3. TOLERANCE FOR TOP OF W-BEAM RAIL IS + 1".

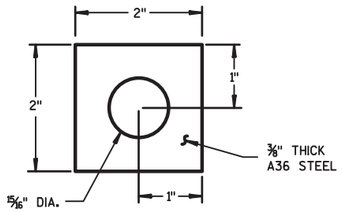
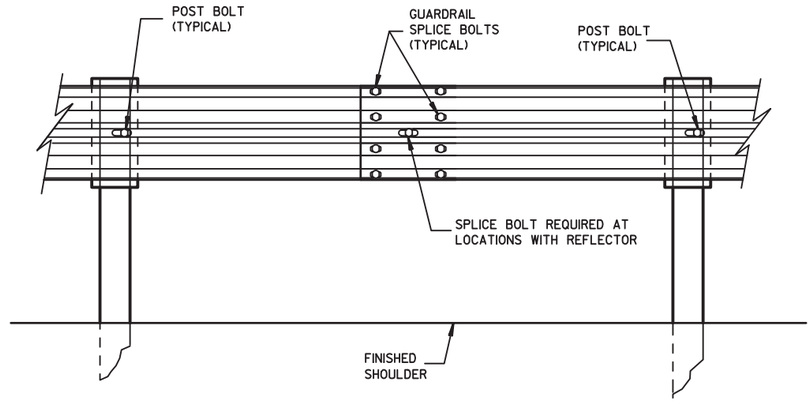
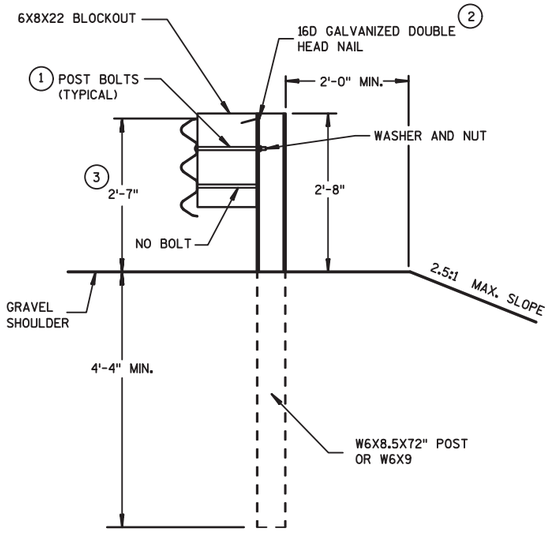


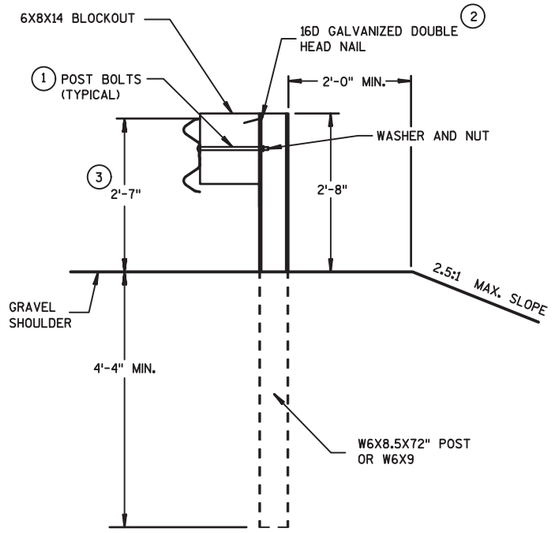
PLATE WASHER DETAIL



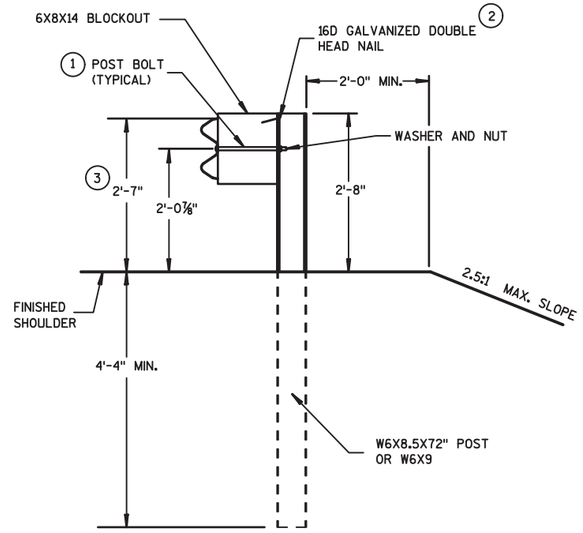
SPLICE DETAIL



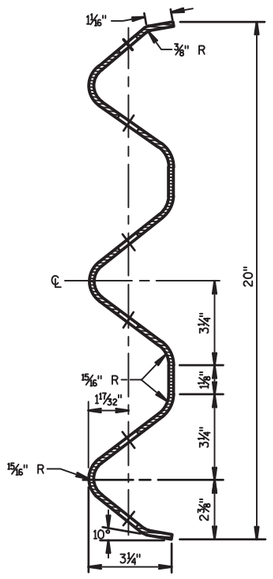
SECTION A–A
POST 1



SECTION B–B
POST 2



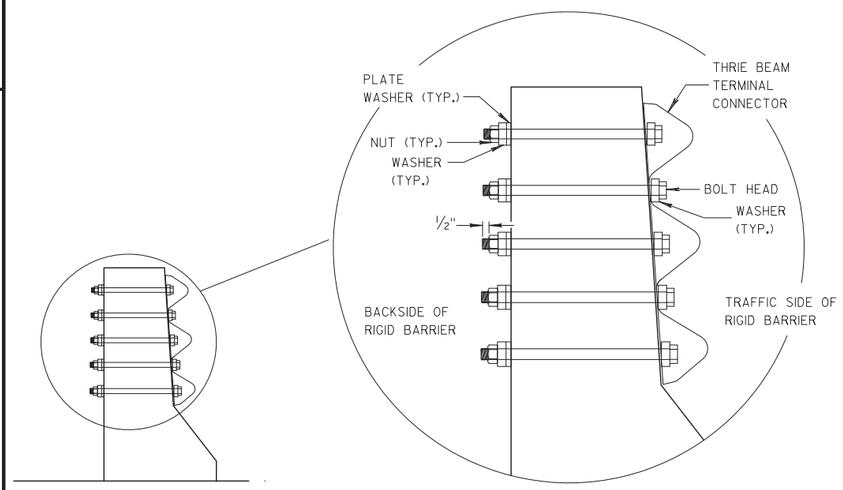
SECTION C–C
POSTS 3–4



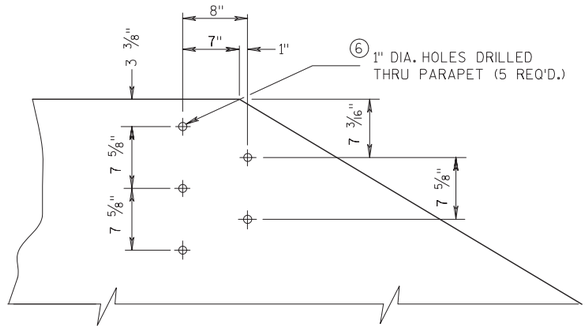
SECTION THRU THRIE
BEAM RAIL ELEMENT

MGS THRIE BEAM TRANSITION TL–2

PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 7	E



SECTION I-I



DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION

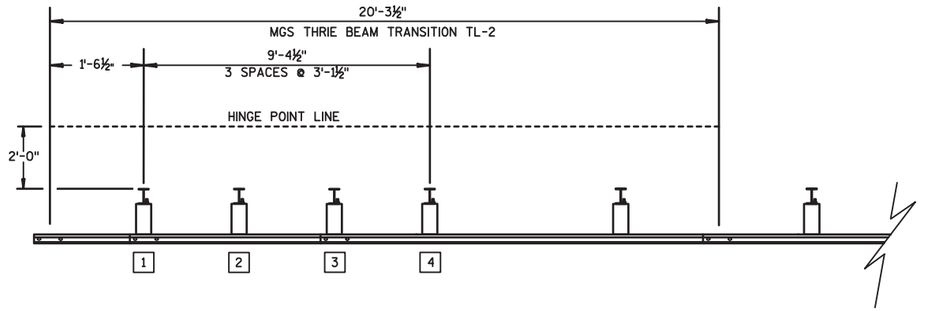
GENERAL NOTES

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

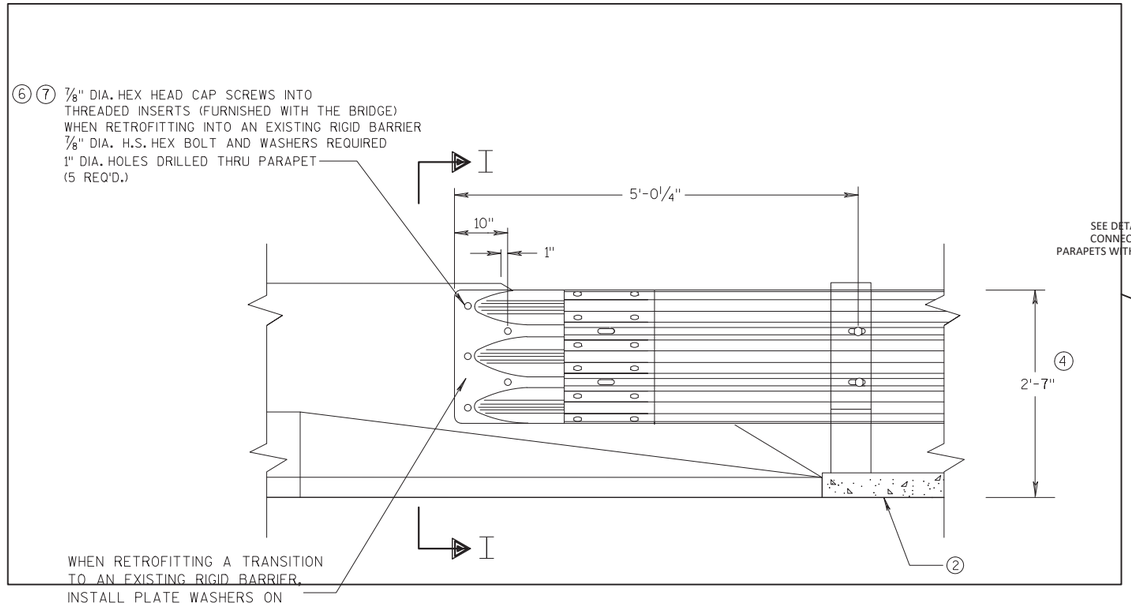
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

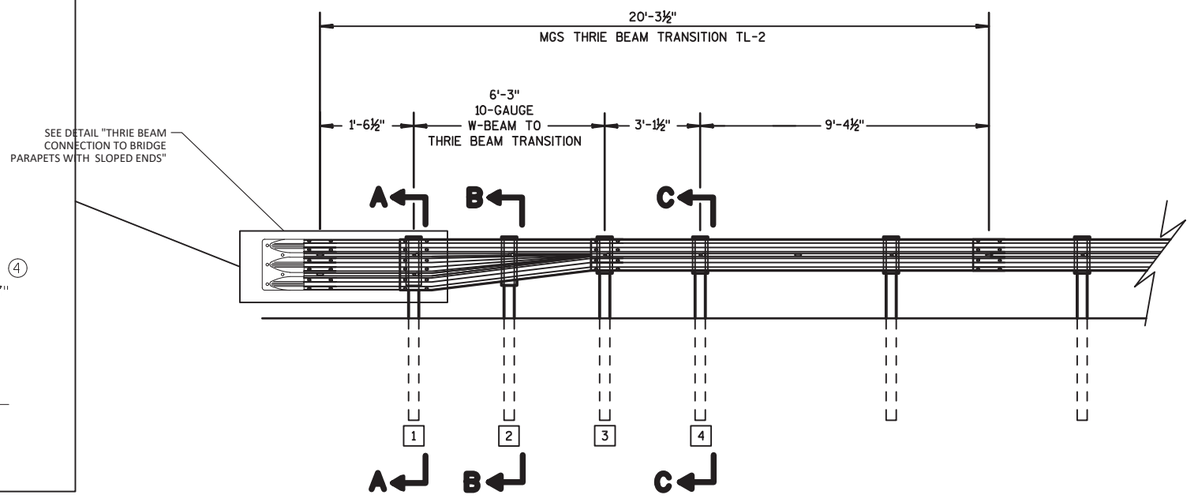
⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X ⅝" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



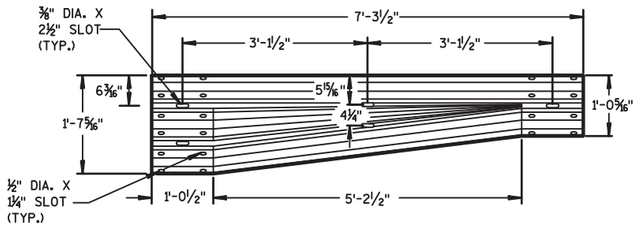
PLAN VIEW



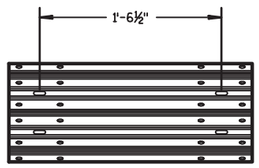


ELEVATION VIEW

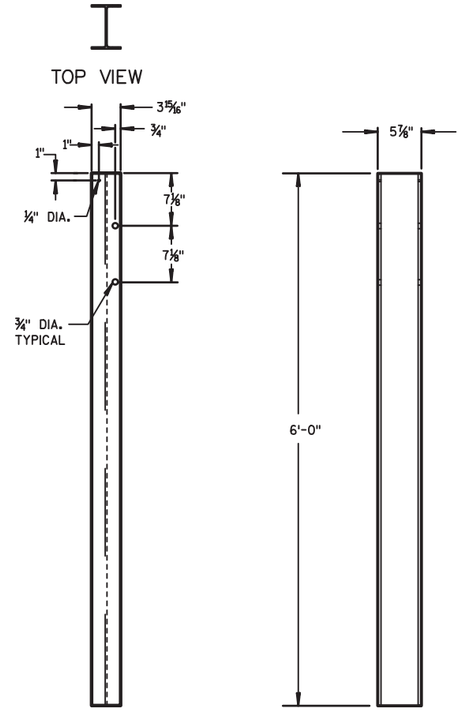
MGS THRIE BEAM TRANSITION TL-2



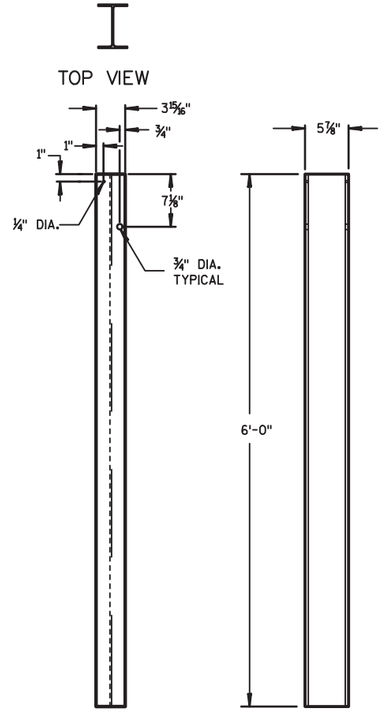
10 GAUGE W–BEAM TO THRIE BEAM TRANSITION SECTION



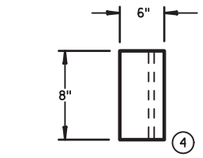
10 GAUGE THRIE BEAM SECTION

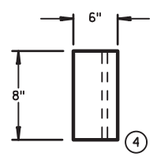


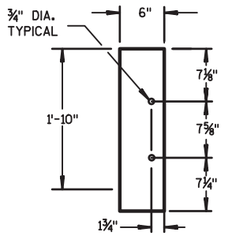
STEEL POSTS 1–2

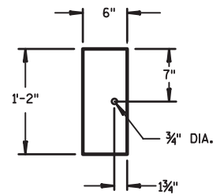


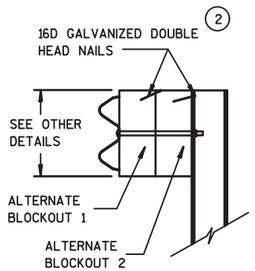
STEEL POSTS 3–4

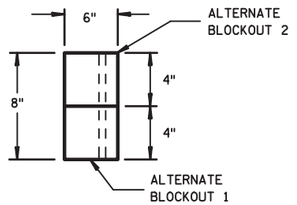












ALTERNATE WOOD BLOCKOUT DETAIL

GENERAL NOTES

STEEL POSTS ARE W6X8.5 OR W6X9.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(2) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(4) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MGS THRIE BEAM TRANSITION TL–2

PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	CONSTRUCTION DETAILS	SHEET 9	E

EROSION CONTROL LEGEND

- TURBIDITY BARRIER
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- SLOPE INTERCEPT

VILLAGE OF DESOTO
ID: 116-0010-0000

VILLAGE OF DESOTO

BM1

CP1

7+00

8+00

S MILL PARK DR

N28° 32' 08"W

MEDIACOM ON XCEL POWER POLES

9+00

C1

BEGIN PROJECT
STA 9+00.00
SAWCUT REQ'D
MATCH EX PAVEMENT
Y = 256823.198
X = 304462.771

PI: 8+91.71

B-12-0258 REQ'D
SEE STRUCTURE PLAN

PARCEL 1 TLE FOR
WING CONSTRUCTION
0.007 ACRES

COTTONWOOD PKWY

CP2

10+00

BM2

REMOVE EXISTING STRUCTURE
P-12-0703 REQ'D

SLOPE INTERCEPTS (TYP)

MISSISSIPPI RIVER TRIBUTARY

11+00

PT: 11+20.40

VILLAGE OF DESOTO
ID: 116-0111-0000

MEDIACOM

MEDIACOM ON XCEL POWER POLES

VERNON COMMUNICATIONS COOP

APPROX R/W (TYP)

BM3

N38° 50' 25"W

12+00

CP3

S MILL PARK DR

VILLAGE OF DESOTO

INLET PROTECTION, TYPE D

END PROJECT
STA 10+75.00
SAWCUT REQ'D
MATCH EX PAVEMENT

APPROX PL (TYP)

AARON R LA HAIE
OWEN G LA HAIE
ID: 116-0009-0001

AARON R LA HAIE
OWEN G LA HAIE
ID: 116-0009-0000

SALLIE FLICK
ID: 116-0008-0000

SPRING ST

ERICA L SHERRY
SHAUN B SHERRY
ID: 116-0004-0000

ERICA L SHERRY
SHAUN B SHERRY
ID: 116-0003-0000

KICKAPOO
CRAFTSMAN LLC
ID: 116-0006-0000

FRONTIER PROPERTY
MANAGEMENT LLC
ID: 116-0005-0000

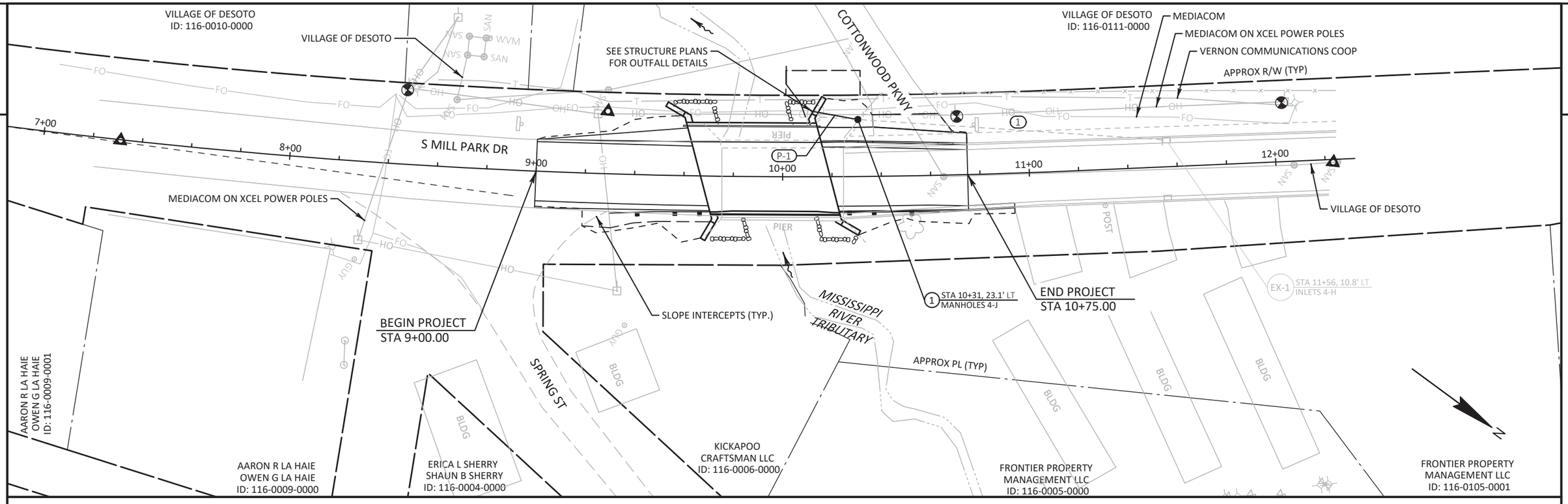
FRONTIER PROPERTY
MANAGEMENT LLC
ID: 116-0105-0001

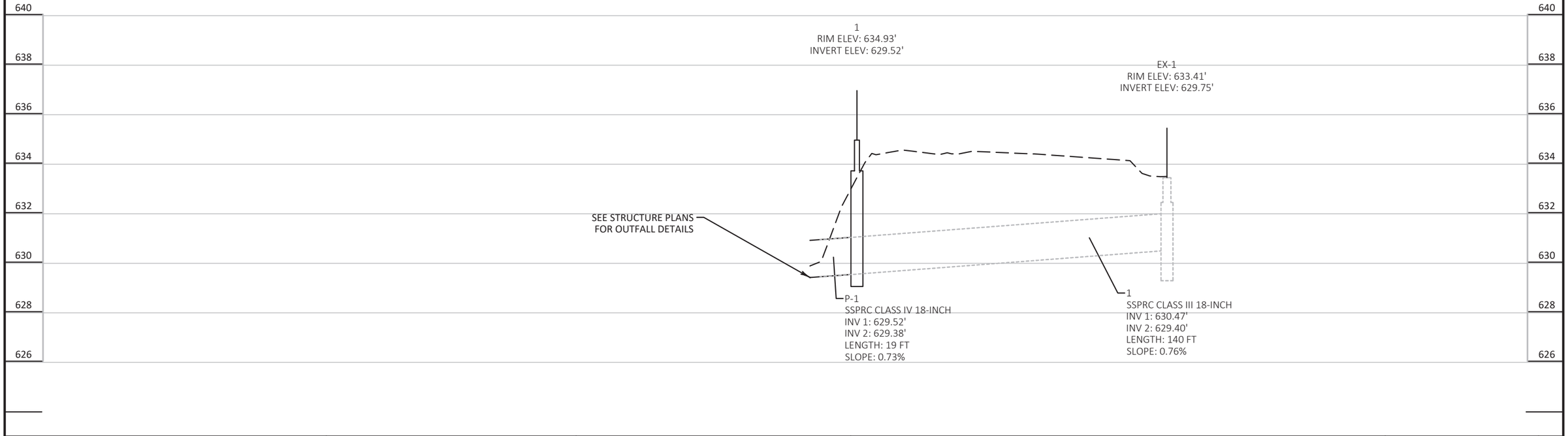
BORE

BLDG

5

PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	EROSION CONTROL	SHEET 10 E





PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	STORM SEWER	SHEET 11	E

Estimate Of Quantities

5408-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-12-0703	EACH	1.000	1.000
0008	204.0150	Removing Curb & Gutter	LF	120.000	120.000
0010	204.0245	Removing Storm Sewer (size) 01. 18-Inch	LF	20.000	20.000
0012	205.0100	Excavation Common	CY	385.000	385.000
0014	205.0508.S	Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil	TON	114.000	114.000
0016	206.1001	Excavation for Structures Bridges (structure) 01. B-12-0258	EACH	1.000	1.000
0018	210.1500	Backfill Structure Type A	TON	500.000	500.000
0020	213.0100	Finishing Roadway (project) 01. 5408-00-70	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	20.000	20.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	260.000	260.000
0026	312.0110	Select Crushed Material	TON	400.000	400.000
0028	455.0605	Tack Coat	GAL	40.000	40.000
0030	460.2000	Incentive Density HMA Pavement	DOL	80.000	80.000
0032	460.5224	HMA Pavement 4 LT 58-28 S	TON	120.000	120.000
0034	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	5.000	5.000
0036	502.0100	Concrete Masonry Bridges	CY	255.000	255.000
0038	502.3200	Protective Surface Treatment	SY	268.000	268.000
0040	502.3210	Pigmented Surface Sealer	SY	24.000	24.000
0042	505.0400	Bar Steel Reinforcement HS Structures	LB	5,720.000	5,720.000
0044	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	38,080.000	38,080.000
0046	513.7084	Railing Steel Type NY4	LF	56.000	56.000
0048	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0050	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	800.000	800.000
0052	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	136.000	136.000
0054	602.0405	Concrete Sidewalk 4-Inch	SF	115.000	115.000
0056	602.0810	Concrete Driveway 6-Inch	SY	23.000	23.000
0058	606.0300	Riprap Heavy	CY	86.000	86.000
0060	608.0418	Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	LF	19.000	19.000
0062	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0064	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0066	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	195.000	195.000
0068	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	2.000	2.000
0070	616.0404	Fence Chain Link Salvaged 4-FT	LF	24.000	24.000
0072	618.0100	Maintenance and Repair of Haul Roads (project) 01. 5408-00-70	EACH	1.000	1.000
0074	619.1000	Mobilization	EACH	1.000	1.000
0076	624.0100	Water	MGAL	20.000	20.000
0078	625.0500	Salvaged Topsoil	SY	163.000	163.000
0080	628.1504	Silt Fence	LF	217.000	217.000
0082	628.1520	Silt Fence Maintenance	LF	217.000	217.000
0084	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0086	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0088	628.2008	Erosion Mat Urban Class I Type B	SY	162.000	162.000
0090	628.6005	Turbidity Barriers	SY	220.000	220.000
0092	628.7020	Inlet Protection Type D	EACH	2.000	2.000
0094	630.0120	Seeding Mixture No. 20	LB	6.000	6.000
0096	630.0200	Seeding Temporary	LB	6.000	6.000
0098	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000

5408-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0102	638.2602	Removing Signs Type II	EACH	4.000	4.000
0104	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0106	642.5001	Field Office Type B	EACH	1.000	1.000
0108	643.0420	Traffic Control Barricades Type III	DAY	1,370.000	1,370.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	2,130.000	2,130.000
0112	643.0900	Traffic Control Signs	DAY	1,065.000	1,065.000
0114	643.5000	Traffic Control	EACH	1.000	1.000
0116	645.0111	Geotextile Type DF Schedule A	SY	70.000	70.000
0118	645.0120	Geotextile Type HR	SY	130.000	130.000
0120	650.4000	Construction Staking Storm Sewer	EACH	1.000	1.000
0122	650.4500	Construction Staking Subgrade	LF	142.000	142.000
0124	650.5000	Construction Staking Base	LF	142.000	142.000
0126	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	75.000	75.000
0128	650.6501	Construction Staking Structure Layout (structure) 01. B-12-0258	EACH	1.000	1.000
0130	650.9500	Construction Staking Sidewalk (project) 01. 5408-00-70	EACH	1.000	1.000
0132	650.9911	Construction Staking Supplemental Control (project) 01. 5408-00-70	EACH	1.000	1.000
0134	650.9920	Construction Staking Slope Stakes	LF	142.000	142.000
0136	690.0150	Sawing Asphalt	LF	78.000	78.000
0138	690.0250	Sawing Concrete	LF	30.000	30.000
0140	715.0502	Incentive Strength Concrete Structures	DOL	1,530.000	1,530.000
0142	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 9+93	EACH	1.000	1.000
0144	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	1,200.000	1,200.000
0146	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0148	SPV.0060	Special 01. MGS Guardrail Terminal EAT TL-2	EACH	2.000	2.000
0150	SPV.0090	Special 01. MGS Thrie Beam Transition TL-2	LF	40.600	40.600
0152	SPV.0090	Special 02. Removing Existing Timber Piling	LF	75.000	75.000

3

CLEARING & GRUBBING

CATEGORY	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
0010	10+52	RT	1	1
	ITEM TOTALS		1	1

HMA PAVEMENT

CATEGORY	STATION	455.0605 TACK COAT GAL	460.5224 HMA PAVEMENT 4 LT 58-28 S TON	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
0010	9+00 TO 9+67	20	70	-
	10+19 TO 10+75	20	50	5
	ITEM TOTALS	40	120	5

3

REMOVALS

CATEGORY	STATION	LOCATION	204.0150 REMOVING CURB & GUTTER LF	204.0245 REMOVING STORM SEWER 18-INCH LF
0010	10+25 TO 10+94	LT/RT	120	-
	10+30	LT	-	20
	PROJECT TOTALS		120	20

CONCRETE CURB & GUTTER

CATEGORY	STATION	TO	STATION	LOCATION	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D LF
0010	10+18	TO	10+75	LT	60
	10+18	TO	10+94	RT	76
			PROJECT TOTAL		136

CONCRETE SIDEWALK & DRIVEWAY

CATEGORY	STATION	TO	STATION	LOCATION	602.0405 CONCRETE SIDEWALK 4-INCH SF	602.0810 CONCRETE DRIVEWAY 6-INCH SY
0010	10+18	TO	10+75	LT	115	23
			PROJECT TOTAL		115	23

EARTHWORK SUMMARY

CATEGORY	STATION	LOCATION	205.0100 EXCAVATION COMMON (1) CY	AVAILABLE MATERIAL (2) CY	EXPANDED FILL (3) CY	MASS ORDINATE (4) +/-
0010	9+00 TO 9+67	LT/RT	215	188	4	184
	10+20 TO 10+94	LT/RT	170	154	95*	59
	PROJECT TOTAL		385	342	99	243

NOTES:
(1) UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN COMMON EXCAVATION.
(2) AVAILABLE MATERIAL DOES NOT INCLUDE UNUSABLE PAVEMENT EXCAVATION.
(3) EXPANSION FACTOR = 1.3
(4) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
* INCLUDES FILL FOR EXCAVATION OF POTENTIAL CREOSOTE CONTAMINATED SOIL.

EXCAVATION, HAULING, AND DISPOSAL OF POTENTIAL CREOSOTE CONTAMINATED SOIL

CATEGORY	STATION	LOCATION	205.0508.S TON
0010	9+75	LT/RT	57
	10+25	LT/RT	57
	PROJECT TOTAL		114

NOTE: EXCAVATE A 5-FOOT BUFFFER AROUND EACH EXISTING BRIDGE TIMBER SUBSTRUCTURE AND 3' DEEP.

BASE AGGREGATE DENSE

CATEGORY	STATION	TO	STATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	312.0110 SELECT CRUSHED MATERIAL TON	624.0100 WATER MGAL	REMARKS
0010	9+00	TO	10+75	20	220	320	10	MAINLINE & SHLD
	10+19	TO	10+75	-	40	-	10	DWY, SIDEWALK, & CURB AND GUTTER
	UNDISTRIBUTED			-	-	80	-	SEE RELIEF TRENCH CONSTRUCTION DETAIL
	PROJECT TOTAL			20	260	400	20	

STORM SEWER

CATEGORY	STATION	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH LF	611.0530 MANHOLE COVERS TYPE J EACH	611.2004 MANHOLES 4-FT DIAMETER EACH
0010	10+30, LT	19	1	1
	PROJECT TOTALS	19	1	1

FENCING ITEMS

CATEGORY	STATION	LOCATION	616.0404 FENCE CHAIN LINK SALVAGED 4-FT LF
0010	10+34	LT	24
		PROJECT TOTAL	24

PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	MISCELLANEOUS QUANTITIES	SHEET 14	E

3

MAINTENANCE AND REPAIR OF HAUL ROADS (01. 5408-00-70)

CATEGORY	STATION	618.0100 EACH
0030		
	PROJECT LENGTH	1
	ITEM TOTAL	1

TOPSOIL AND SEEDING

CATEGORY	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 TEMPORARY SEEDING LB
0010	9+00 TO 9+67	LT/RT	65	2	2
	10+19 TO 10+75	LT/RT	58	2	2
	UNDISTRIBUTED		40	2	2
	ITEM TOTALS		163	6	6

REMOVING SIGNS

CATEGORY	STATION	LOCATION	MESSAGE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
0010	9+60	LT	CLEARANCE STRIPER	1	1
	9+71	RT	CLEARANCE STRIPER	1	1
	10+14	LT	CLEARANCE STRIPER	1	1
	10+23	RT	CLEARANCE STRIPER	1	1
	PROJECT TOTAL			4	4

3

MOBILIZATIONS EROSION CONTROL

CATEGORY	STATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PROJECT LENGTH	3	2
	ITEM TOTALS	3	2

TRAFFIC CONTROL

CATEGORY	STAGE	PROJECT LOCATION	APPROX. SERVICE DAYS PERIOD	QTY.	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	QTY.	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	QTY.	643.0900 TRAFFIC CONTROL SIGNS DAY	REMARKS
0010	1	PROJECT LENGTH	76	18	1,370	28	2,128	14	1,064	SEE SDD 15C02-09A & 15-C02-09B
		PROJECT TOTAL			1,370		2,130		1,065	

EROSION CONTROL ITEMS

CATEGORY	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.6005 TURBIDITY BARRIERS SY	628.7020 INLET PROTECTION TYPE D EACH
0010	9+00 TO 9+67	LT/RT	107	107	65	-	-
	9+67 TO 10+19	LT/RT	-	-	-	170	-
	10+19 TO 10+75	LT/RT	60	60	58	-	-
	11+60	LT/RT	-	-	-	-	2
	UNDISTRIBUTED		50	50	40	50	-
	ITEM TOTALS		217	217	162	220	2

CONSTRUCTION STAKING

CATEGORY	STATION	LOCATION	650.4000 STORM SEWER EACH	650.4500 SUBGRADE LF	650.5000 BASE LF	650.5500 CURB GUTTER AND CURB & GUTTER LF	650.6501 STRUCTURE LAYOUT (B-12-0258) EACH	650.9500 SIDEWALK (5408-00-70) EACH	650.9911 SUPPLEMENTAL CONTROL (5408-00-70) EACH	650.9920 SLOPE STAKES LF
0010	PROJECT LENGTH	LT/RT		-	-	-	1	1	1	-
	9+00 TO 9+67	LT/RT		67	67	-	-	-	-	67
	10+19 TO 10+94	LT/RT	1	75	75	75	-	-	-	75
	ITEM TOTALS		1	142	142	75	1	1	1	142

PERMANENT SIGNING

CATEGORY	STATION	LOCATION	SIGN CODE	SIZE (INCH)	SIZE (INCH)	MESSAGE	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF
0010	9+60	LT	W5-52-L	12	36	CLEARANCE STRIPER	1	3
	9+71	RT	W5-52-R	12	36	CLEARANCE STRIPER	1	3
	10+14	LT	W5-52-R	12	36	CLEARANCE STRIPER	1	3
	10+23	RT	W5-52-L	12	36	CLEARANCE STRIPER	1	3
	PROJECT TOTAL						4	12

SAWING

CATEGORY	STATION	LOCATION	690.0150 SAWING ASPHALT LF	690.0250 SAWING CONCRETE LF
0010	9+00	LT/RT	28	-
	10+50	LT	27	-
	10+75	LT/RT	23	10
	10+94	RT	-	20
	ITEM TOTALS		78	30

INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (STATION)

CATEGORY	STATION	999.2000.S EACH
0010	01. 9+93	1
	ITEM TOTALS	1

GUARDRAIL ITEMS

CATEGORY	STATION	SPV.0060 01. MGS GUARDRAIL TERMINAL EAT TL-2 EACH	SPV.0090 01. MGS THRIE BEAM TRANSITION TL-2 LF
0010	9+30 TO 10+63	2	40.6
	PROJECT TOTALS	2	40.6

VILLAGE OF DESOTO
ID: 116-0010-0000

VILLAGE OF DESOTO

RECONSTRUCT 10FT ASPH RAMP

B-12-0258 REQ'D
SEE STRUCTURE PLAN

W5-52L
12"X36"

W5-52R
12"X36"

COTTONWOOD PKWY

PARCEL 1 TLE FOR
WING CONSTRUCTION
0.007 ACRES

FENCE CHAIN LINK
SALVAGED 4-FT

RECONSTRUCT ASPH ENTRANCE

VILLAGE OF DESOTO
ID: 116-0111-0000

PT: 11+20.40

MEDIACOM ON XCEL POWER POLES

VERNON COMMUNICATIONS COOP

APPROX R/W (TYP)

BM1

BM2

BM3

CP1

CP2

CP3

7+00

8+00

9+00

10+00

11+00

12+00

S MILL PARK DR

N28° 32' 08"W

N38° 50' 25"W

C1

MEDIACOM ON XCEL POWER POLES

VILLAGE OF DESOTO

SLOPE INTERCEPTS (TYP.)

REMOVE

BEGIN PROJECT
STA 9+00.00
SAWCUT REQ'D
MATCH EX PAVEMENT
Y = 256823.198
X = 304462.771

PI: 8+91.71

REMOVE EXISTING STRUCTURE
P-12-0703 REQ'D

MGS GUARDRAIL TERMINAL EAT TL-2
MGS THRIE BEAM TRANSITION TL-2

MISSISSIPPI RIVER TRIBUTARY

APPROX PL (TYP)

END PROJECT
STA 10+75.00
SAWCUT REQ'D
MATCH EX PAVEMENT

MGS GUARDRAIL TERMINAL EAT TL-2
MGS THRIE BEAM TRANSITION TL-2
BEGIN DRIVEWAY CURB AT POST 3

STA 10+75 TO 10+94, RT
REMOVE C&G
20 LF CURB AND GUTTER 30-INCH
TYPE D (DRIVEWAY) REQ'D

C1

PI STA =	8+91.71
Y =	256,821.5248
X =	304,476.3388
Δ =	10°18'17"
D =	2°14'49"
T =	229.93'
L =	458.62'
R =	2,550.00'
PC STA =	6+61.78
PT STA =	11+20.40

SURVEY CONTROL POINTS

POINT ID	STATION	OFFSET	NORTHING	EASTING	ELEVATION
CP1	7+31.07	0.24' RT	256680.057	304552.459	636.11
CP2	9+28.39	25.34' LT	256832.312	304425.936	634.19
CP3	12+23.27	1.16' RT	257081.466	304268.523	634.47

BENCHMARK TABLE

NO.	STATION / OFFSET	DESCRIPTION	ELEV.
BM1	8+46.00 / 30.10' LT	SPK IN PP	635.69
BM2	10+71.17 / 23.66' LT	SPK IN PP	634.92
BM3	12+03.36 / 23.89' LT	SPK IN PP	635.30

AARON R LA HAIE
OWEN G LA HAIE
ID: 116-0009-0001

AARON R LA HAIE
OWEN G LA HAIE
ID: 116-0009-0000

ERICA L SHERRY
SHAUN B SHERRY
ID: 116-0004-0000

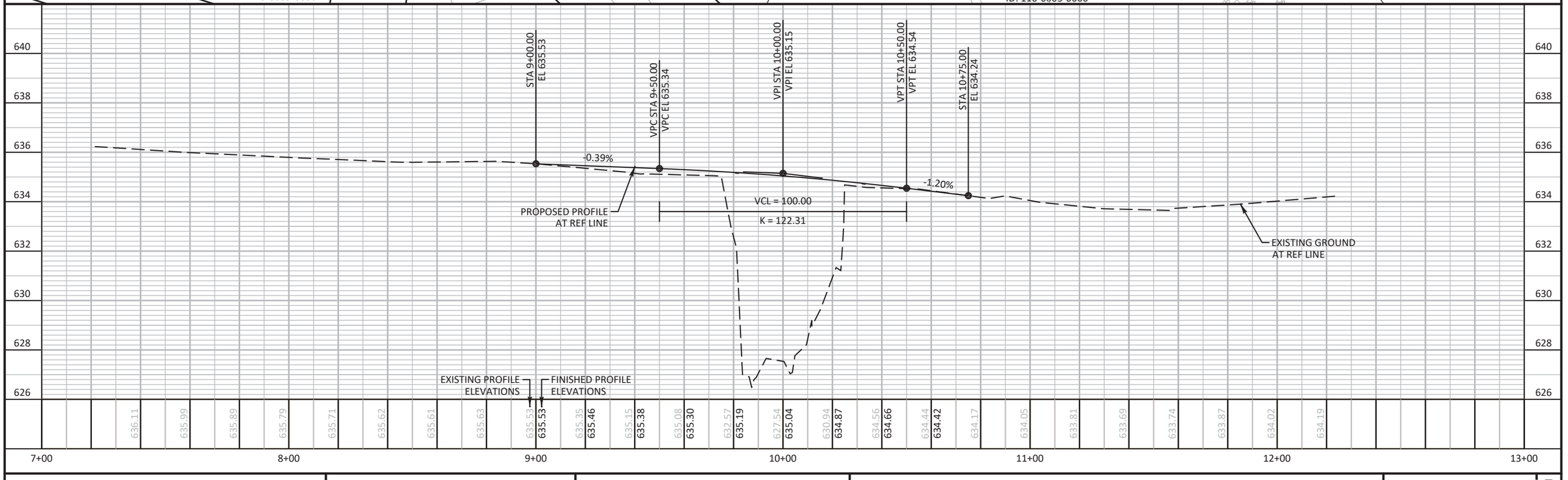
KICKAPOO
CRAFTSMAN LLC
ID: 116-0006-0000

FRONTIER PROPERTY
MANAGEMENT LLC
ID: 116-0005-0000

FRONTIER PROPERTY
MANAGEMENT LLC
ID: 116-0105-0001

SPRING ST

5



PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	PLAN AND PROFILE: S MILL PARK DR	SHEET 16	E

FILE NAME : X:\AE\C\CRAWC\176936\5-final-dsgn\51-drawings\40-TransHwy\C3D\sheets\SEC 05 Plan & Profile\050101-pp (PnP Mill Park Rd Vil Desoto).dwg
PLOT DATE : 7/25/2025 11:28 AM
PLOT BY : SEH
LAYOUT NAME : 01
PLOT SCALE : 1.0 IN = 40.0 FT

Standard Detail Drawing List

08A05-21E	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-04	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER
08D01-23A	CONCRETE CURB & GUTTER
08D01-23B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D18-04	DRIVEWAY AND SIDEWALK RAMPS TYPES X & Y
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

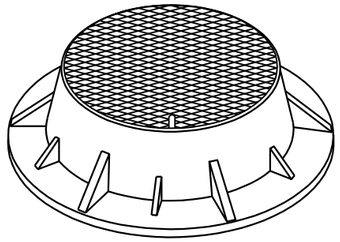
6

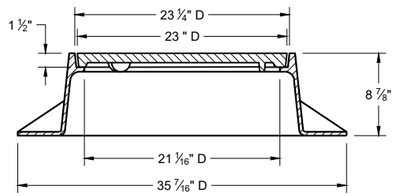
GENERAL NOTES

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.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

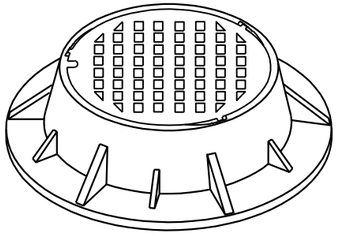
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

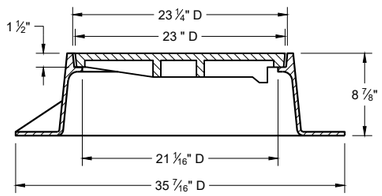




TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

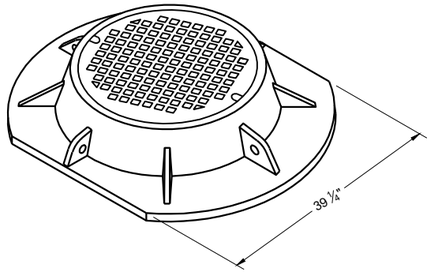


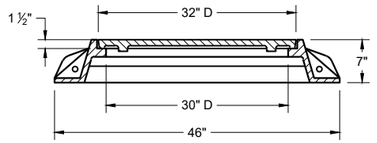


TYPE "J" SPECIAL

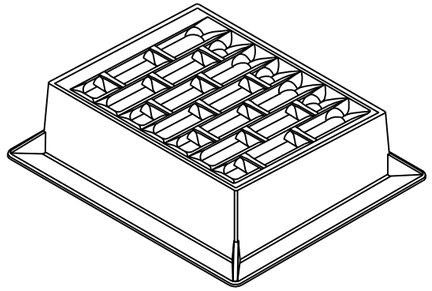
TYPE "B" NON-ROCKING SELF-SEAL LID
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

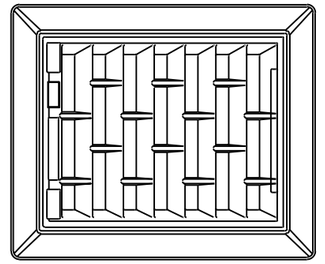
NOTE: EITHER CASTING IS ACCEPTABLE

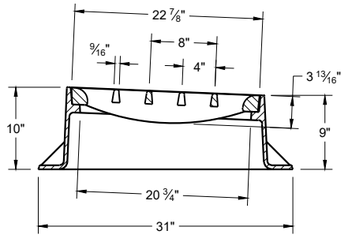


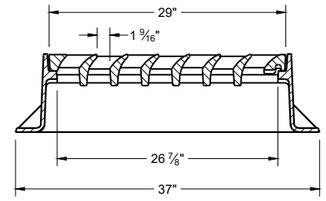


TYPE "K"

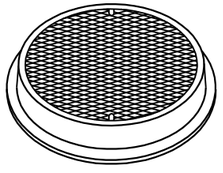


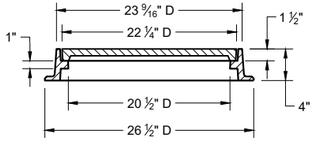




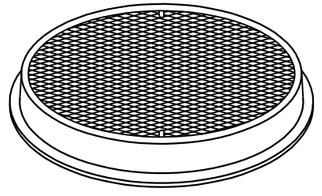


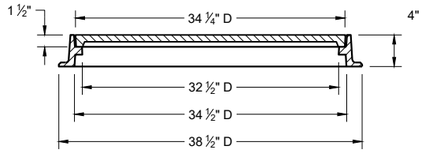
INLET COVER TYPE "BW"





TYPE "L"





TYPE "M"

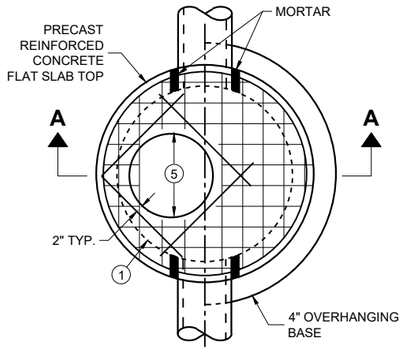
INLET COVERS TYPES BW
MANHOLE COVERS TYPES K, J, J-S, L, AND M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

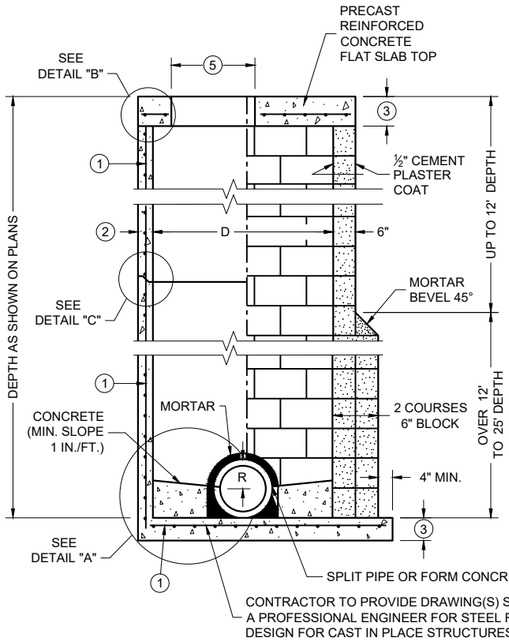
FHWA

6
SDD 08A05-21e



PLAN VIEW

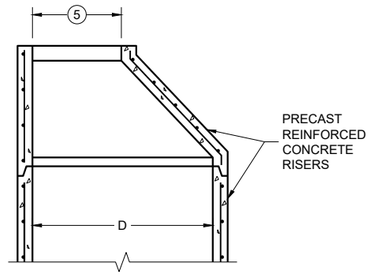
CIRCULAR OPENING



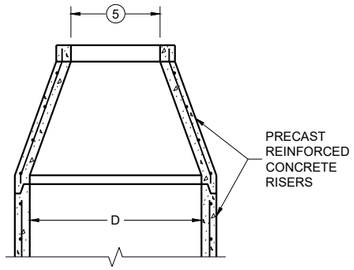
SECTION A - A

PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

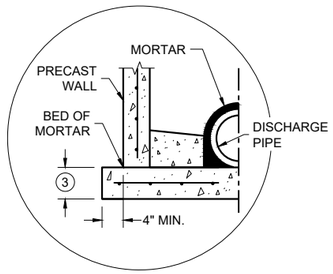
CONCRETE BLOCK WITH CAST IN PLACE OR PRECAST REINFORCED CONCRETE BASE (1)



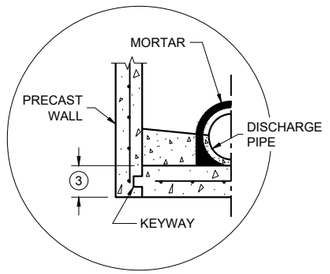
OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP



OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

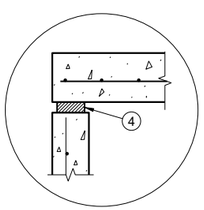


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

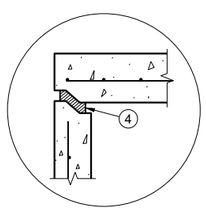


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

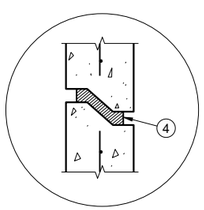
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

DETAIL "C"

MANHOLE COVER OPENING MATRIX

OPENING SIZE (FT.) (5) \ MANHOLE COVER TYPE	C	ALL J'S	K	L	M
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

MANHOLE SIZE (DIA.)	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES		MINIMUM WALL THICKNESS (IN)	MINIMUM PRECAST FLAT SLAB TOP AND BASE THICKNESS
	180° SEPARATION (IN)	90° SEPARATION (IN)		
3-FT	15	12	4	6
4-FT	24	18	4	6
5-FT	36	24	5	8
6-FT	42	36	6	8
7-FT	48	36/42 *	7	8
8-FT	60	42	8	8
9-FT	66	54	9	10
10-FT	72	60	10	10

*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES. SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL IMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½ INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

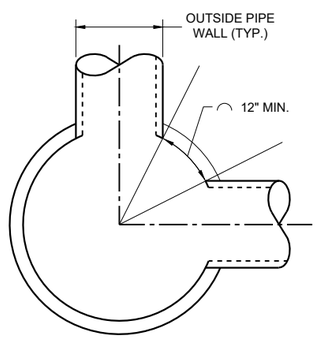
(1) FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

(2) SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES

(3) SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.

(4) JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.

(5) SEE MANHOLE COVER OPENING MATRIX.



MINIMUM HORIZONTAL PIPE SEPARATION

DETAIL "D"

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

MANHOLES, 3-FT, 4-FT 5-FT, 6-FT, 7-FT, 8-FT, 9-FT AND 10-FT DIAMETER

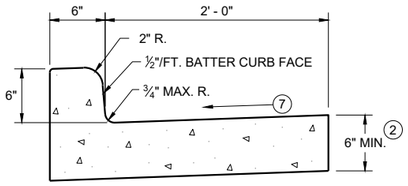
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

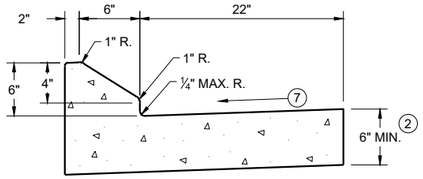
FHWA

SDD 08B09-04

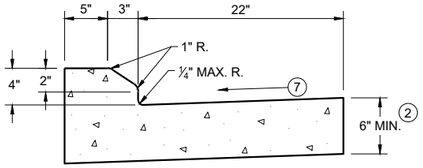
6



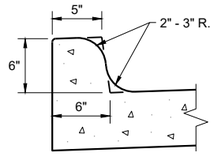
TYPES A (1) & D



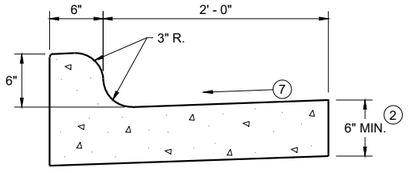
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

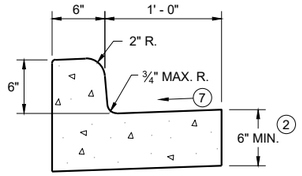


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



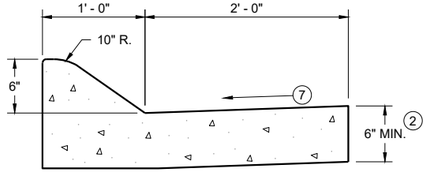
TYPES K (1) & L

CONCRETE CURB AND GUTTER 30"

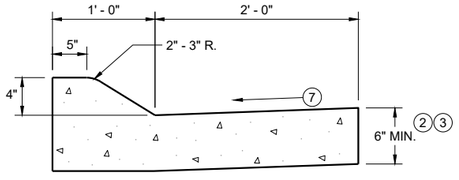


TYPES A (1) & D

CONCRETE CURB AND GUTTER 18"

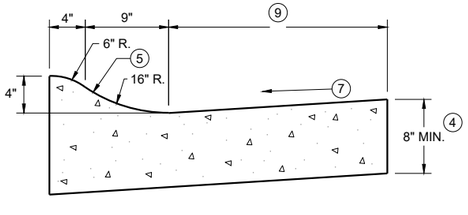


6" SLOPED CURB TYPES A (1) & D



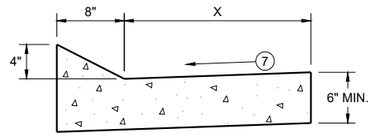
4" SLOPED CURB TYPES A (1) & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R (1) & T

TBT & TBTT	X
30"	22"
36"	28"

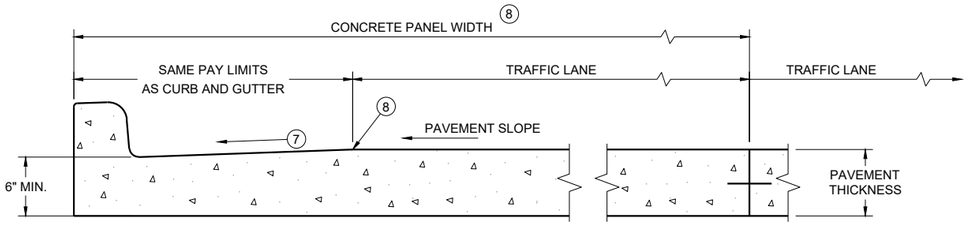


TYPES TBT & TBTT (1)

CONCRETE CURB AND GUTTER

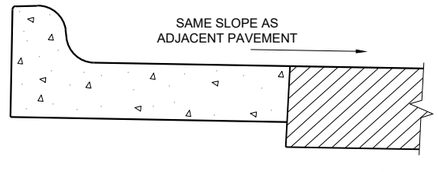
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB AND GUTTER

* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

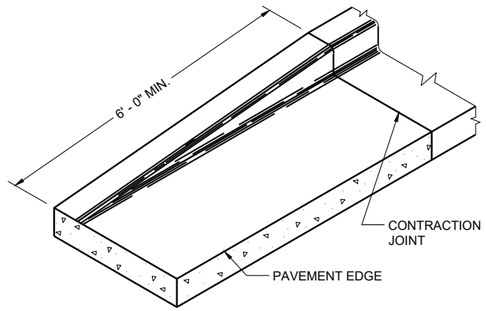
(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

(9) CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

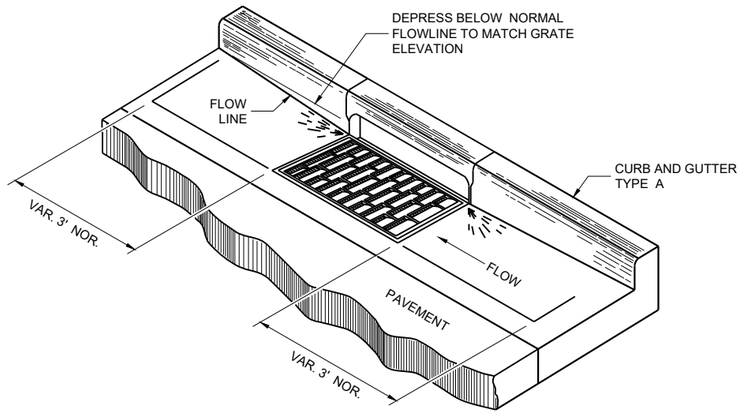
CONCRETE CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 08D01-23a



END SECTION CURB AND GUTTER



DETAIL OF CURB AND GUTTER AT INLETS

(TYPICAL H INLET COVER SHOWN)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

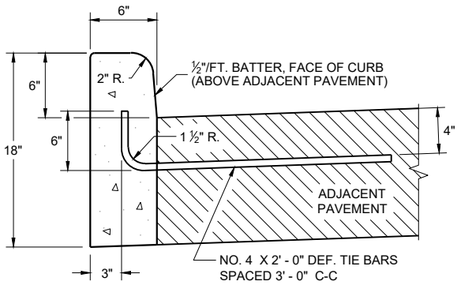
UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.

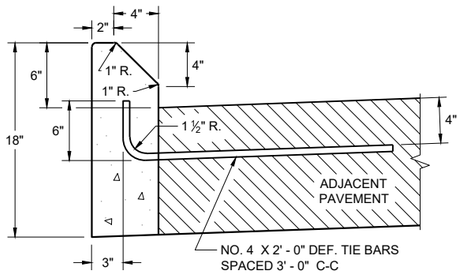
(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(10) REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

(11) PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.

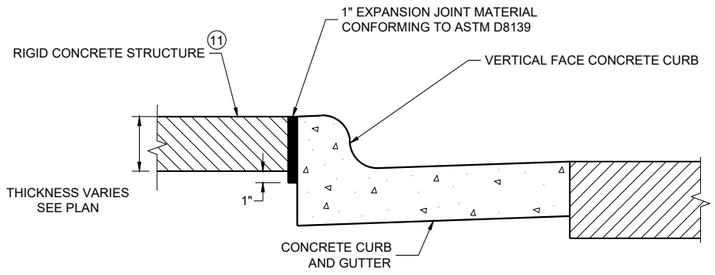


TYPES A (1) & D

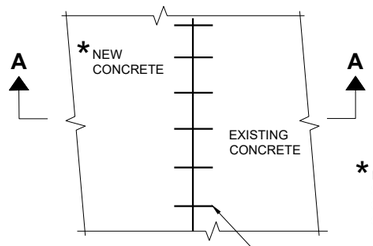


TYPES G (1) & J

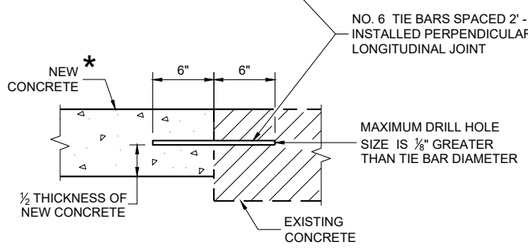
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE (11)

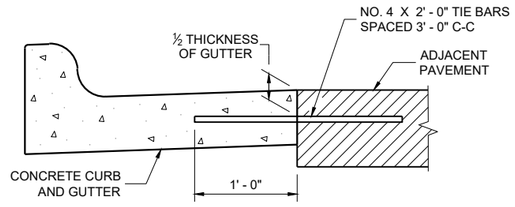


PLAN VIEW

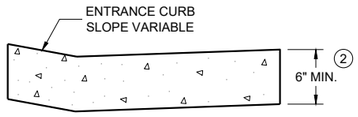


SECTION A - A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (10)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 — DATE
/S/ Rodnery Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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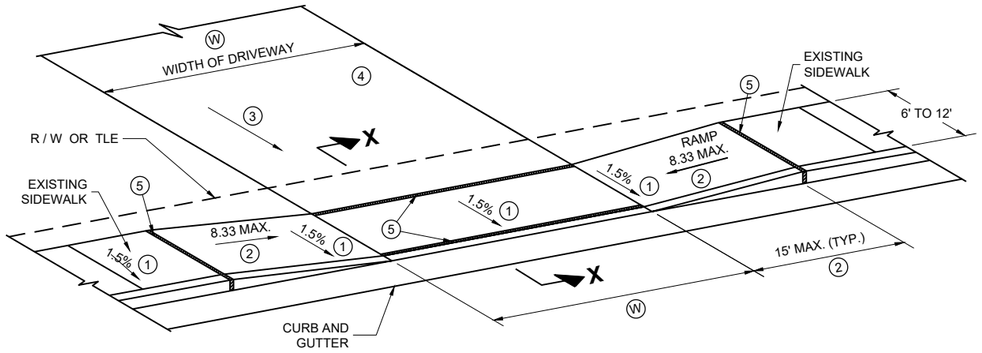
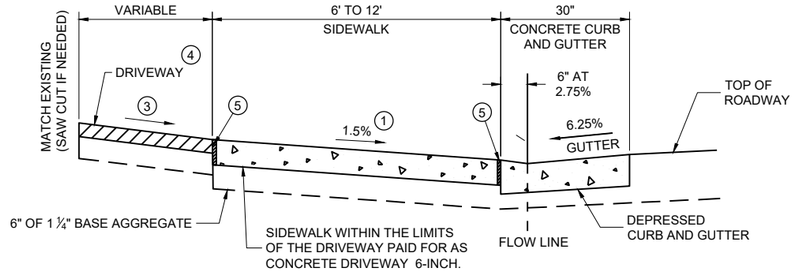
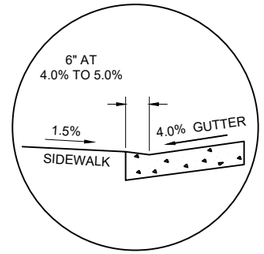
SDD 08D01-23b



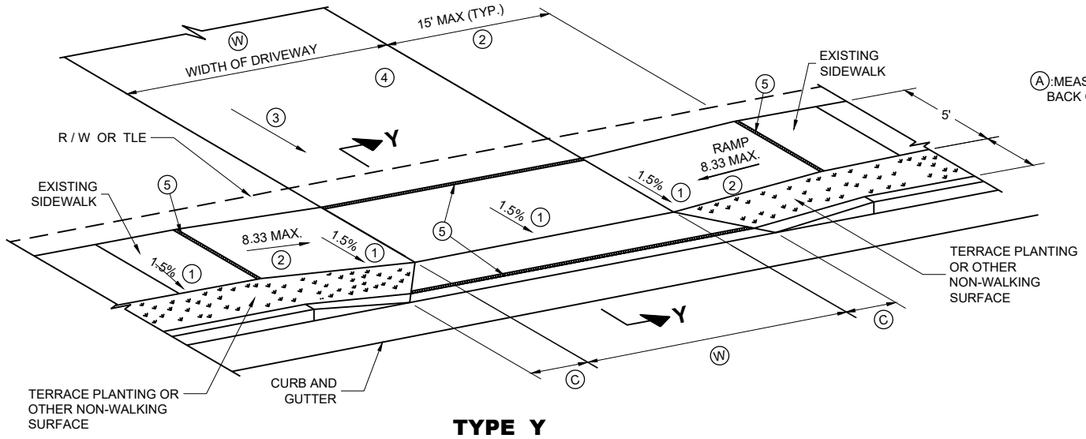
TYPE X
SIDEWALK ABUTS CURB AND GUTTER
TERRACE VARIES 0 TO 3 FEET



SECTION X - X



SECTION X - X
4% GUTTER SLOPE



TYPE Y
SIDEWALK WITH NARROWER TERRACE
TERRACE VARIES 4 TO 6 FEET

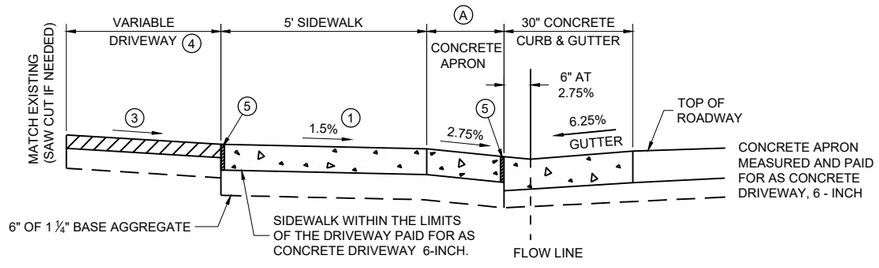
Ⓐ:MEASURE FROM BACK OF CURB

Ⓦ: 12' MIN. - 24' MAX. RESIDENTIAL AND NON-COMMERCIAL (PE & FE)

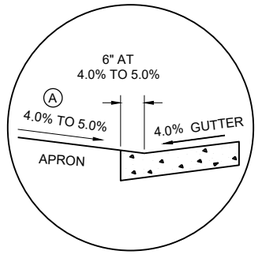
16' MIN. - 35' MAX. COMMERCIAL (CE)

TABLE Y

Ⓐ FEET	Ⓒ FEET
3.5'	2.0'
4.5'	3.0'
5.5'	3.5'



NOTE: SIDEWALK MY BE DEPRESSED IN DRIVEWAY AREAS



SECTION Y - Y
4% GUTTER SLOPE

SECTION Y - Y

DRIVEWAY DETAIL WITH CONCRETE CURB AND GUTTER

(URBAN AND SUBURBAN)

GENERAL NOTES

PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

Ⓦ IS SHOWN ON PLAN AND PROFILE SHEETS.

OFFSETS, ELEVATIONS, AND PERCENT GRADE ARE SHOWN ON THE CROSS SECTIONS.

① CONSTRUCTION TOLERANCE OF 0.5%± FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

② THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY. SLOPE SIDEWALK RAMP TOWARD APRON AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

③ DRIVEWAY SLOPES: DESIRABLE MAXIMUM
- 10.5% UP AWAY FROM SIDEWALK (SAG)
- 8.5% DOWN AWAY FROM SIDEWALK (CREST)
- ABSOLUTE MAXIMUM 15% FOR BOTH CREST AND SAG

④ DRIVEWAY TYPES
- 6-INCH CONCRETE DRIVEWAY PAVEMENT OVER 6-INCH BASE AGGREGATE
- 2-INCH TO 3-INCH ASPHALTIC SURFACE OVER 6-INCH BASE AGGREGATE
- 6-INCH BASE AGGREGATE (MAY BE INCREASED FOR CLAY SUBGRADES.)

⑤ ½" EXPANSION JOINT FILLER

DRIVEWAY AND SIDEWALK RAMPS TYPES X AND Y

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2023 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA

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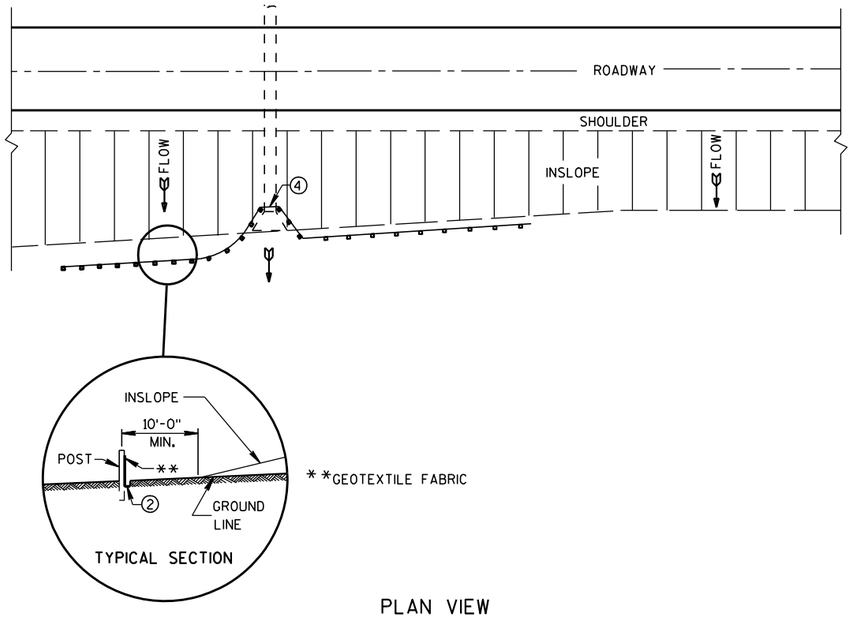
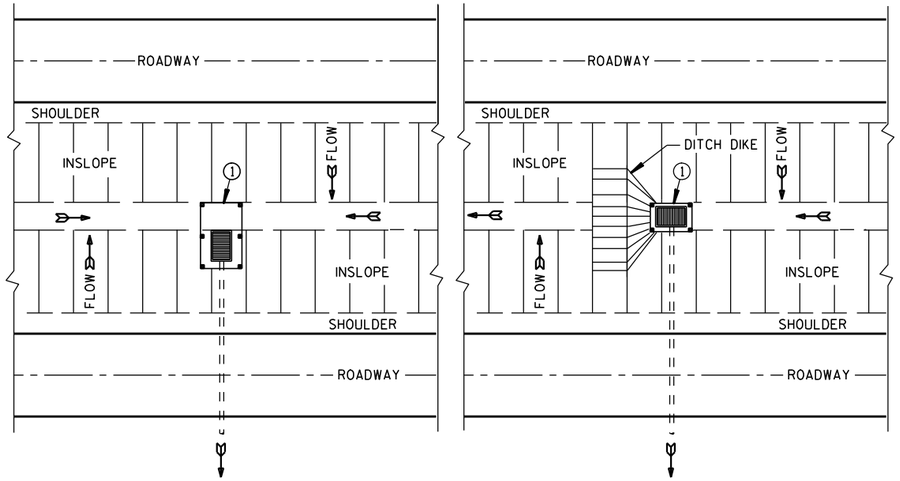
SDD 08D18-04



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



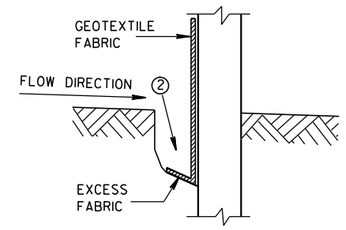
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

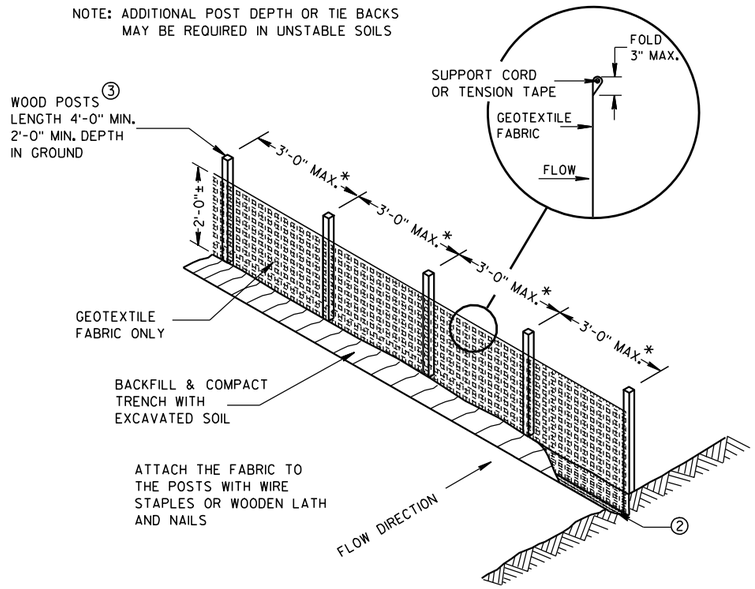
GENERAL NOTES

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

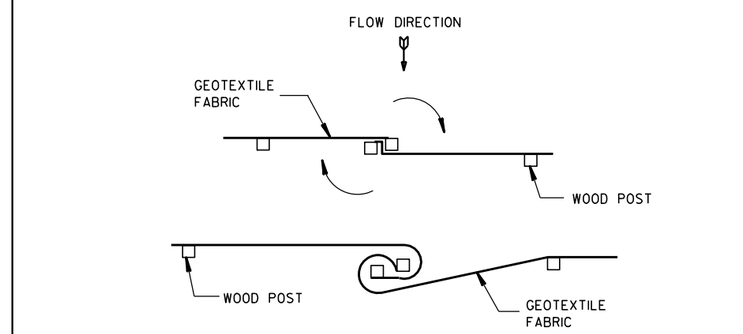
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



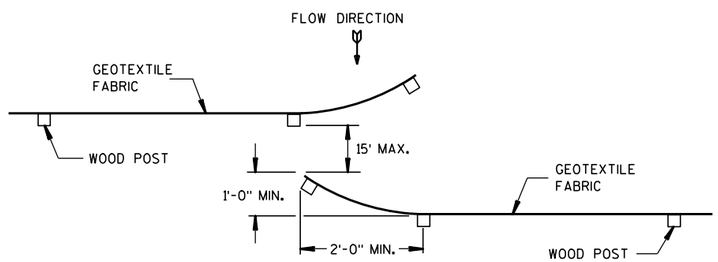
TRENCH DETAIL



SILT FENCE

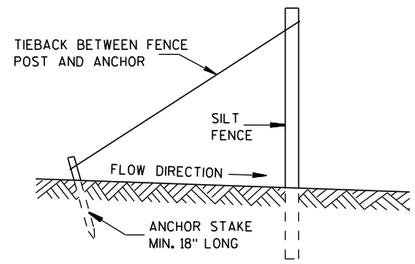


TWIST METHOD



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

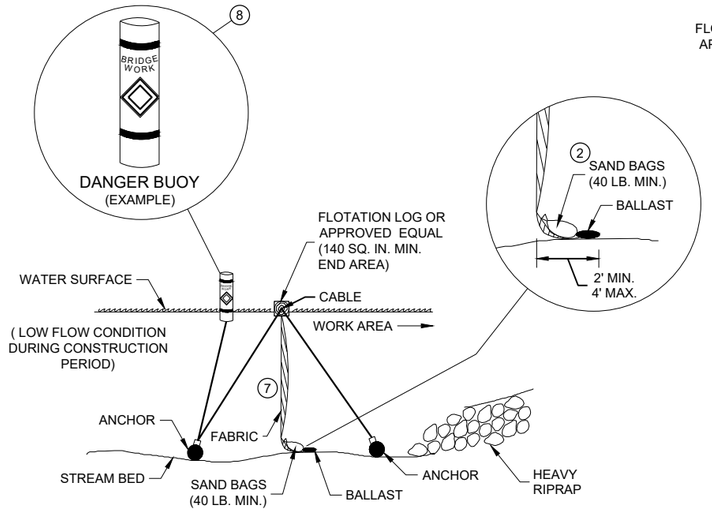
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

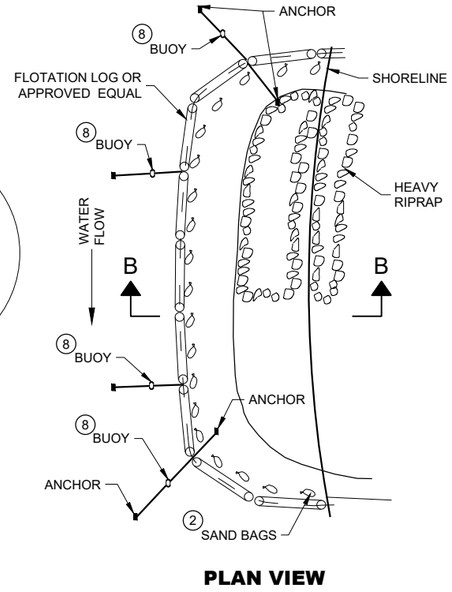
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

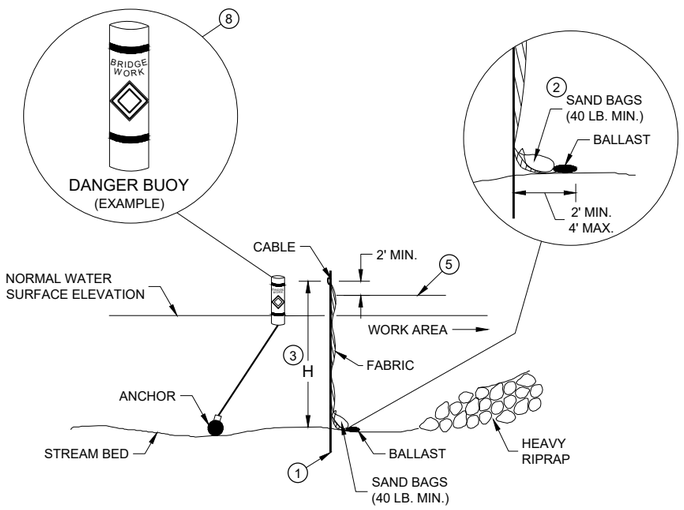


SECTION B - B

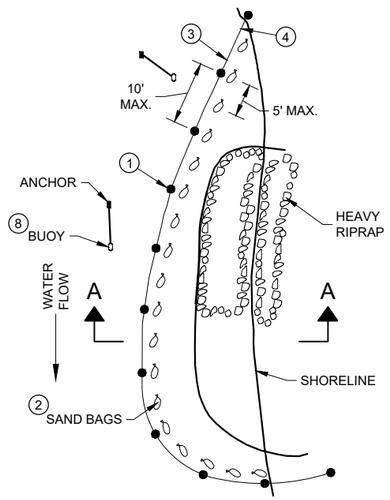


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

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

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

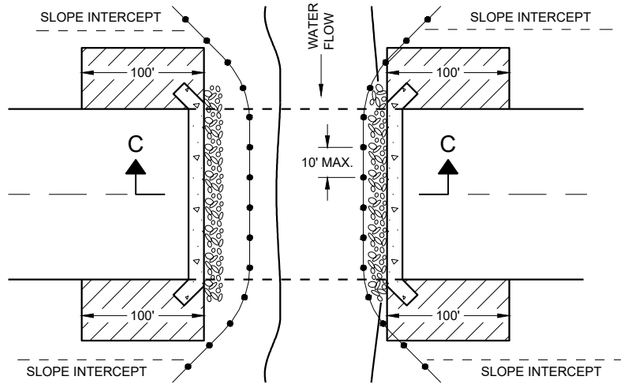
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

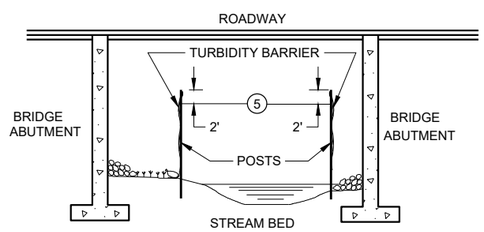
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

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

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



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

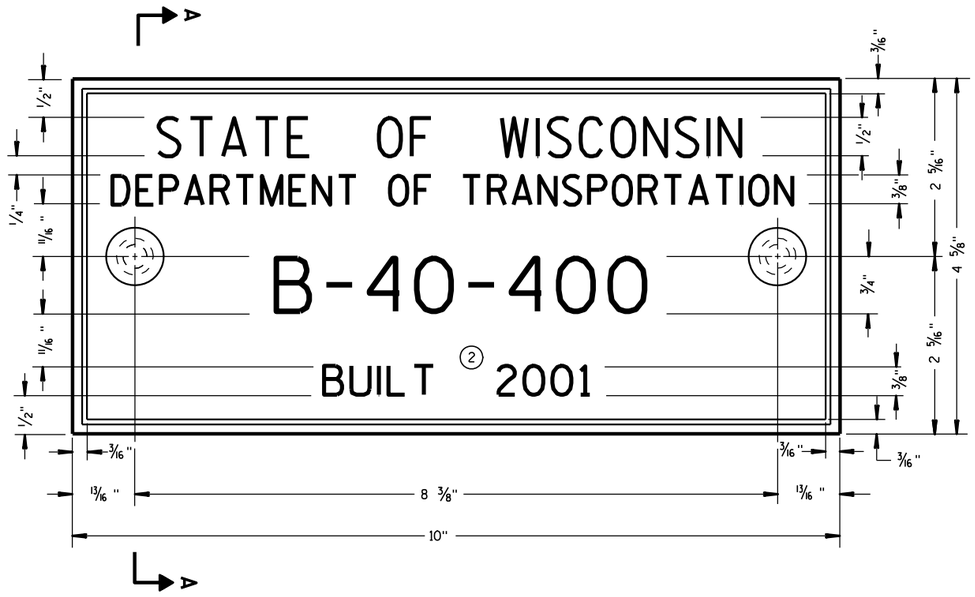
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

6
SDD 08E11 - 02



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

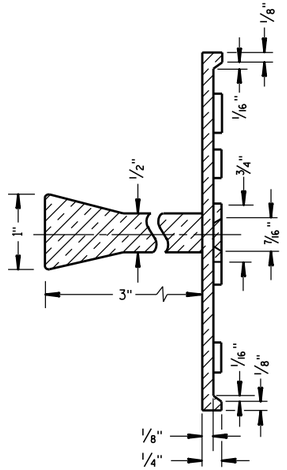
GENERAL NOTES

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

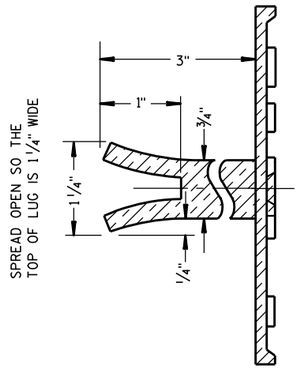
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

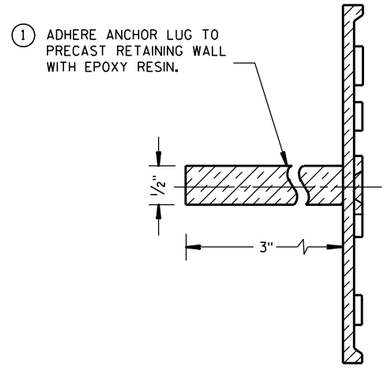
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

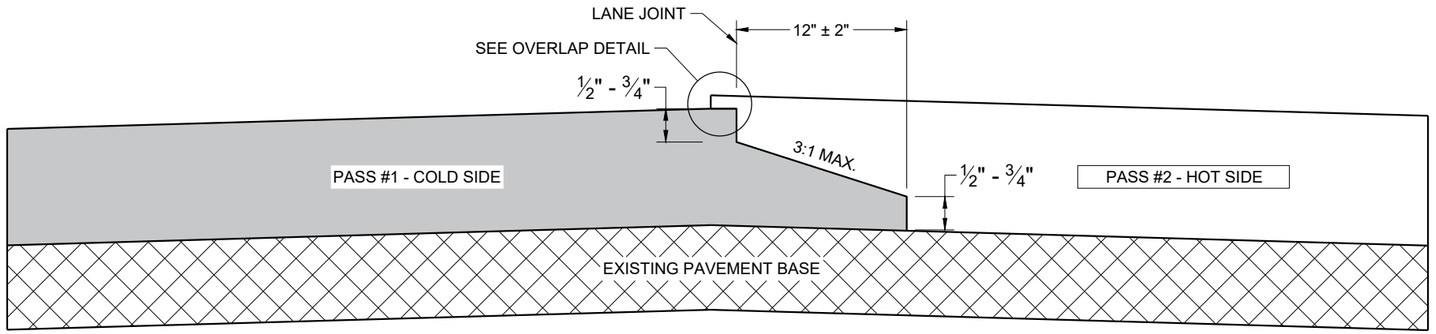
3/26/10 DATE

/S/ Scot Beck CHIEF STRUCTURAL DEVELOPMENT ENGINEER

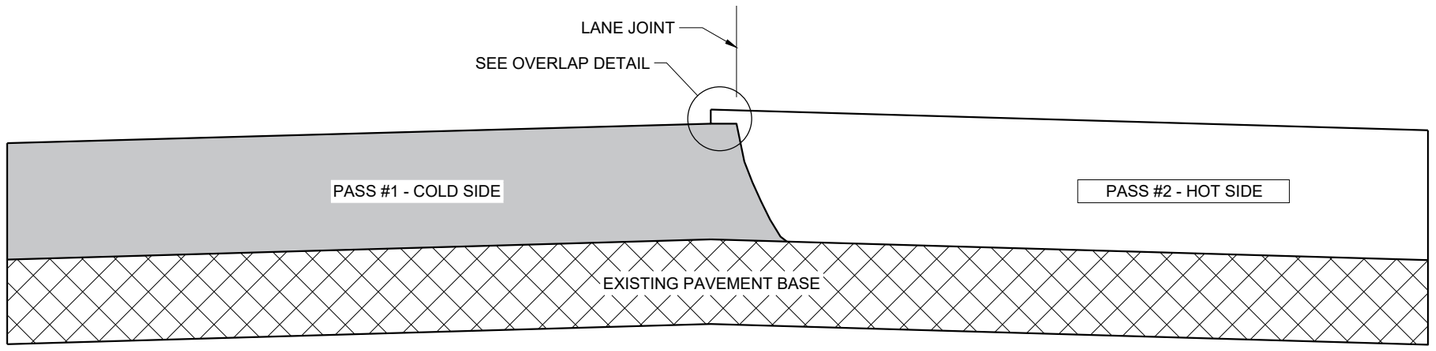
FHWA

6

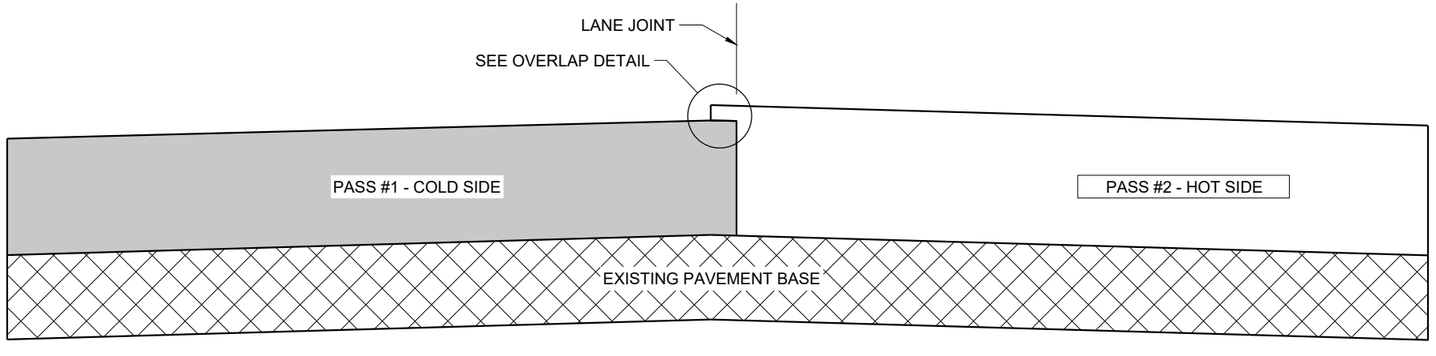
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

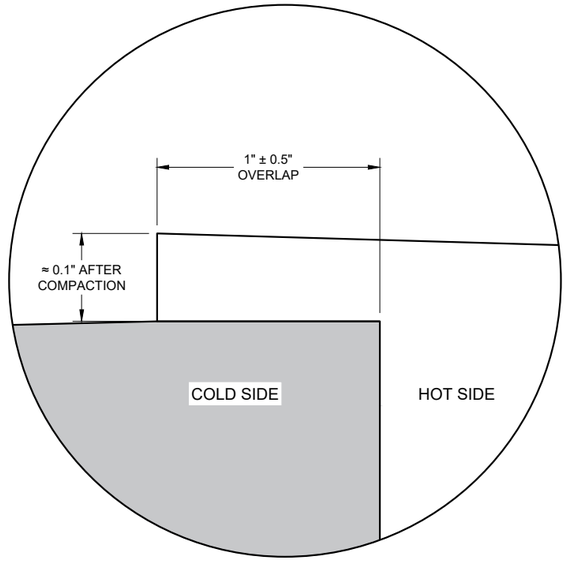
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

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SDD 13C19 - 03

SDD 13C19 - 03

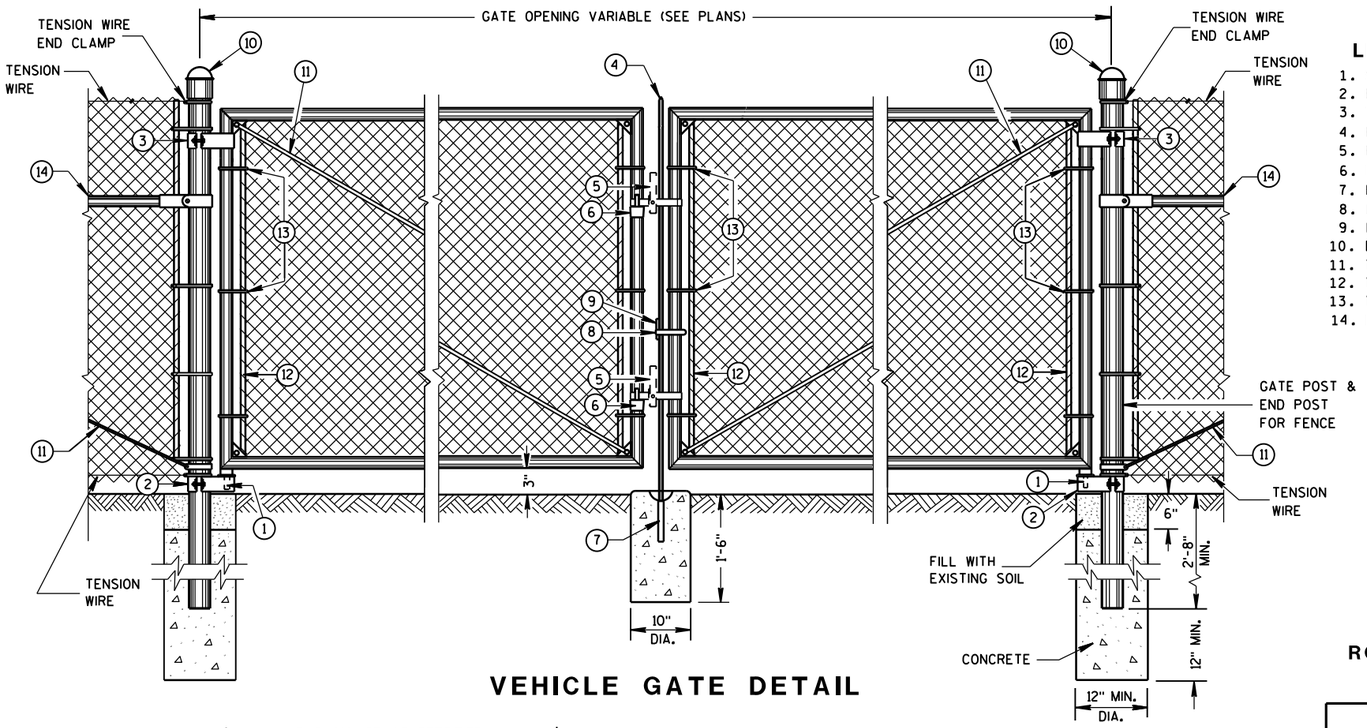
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

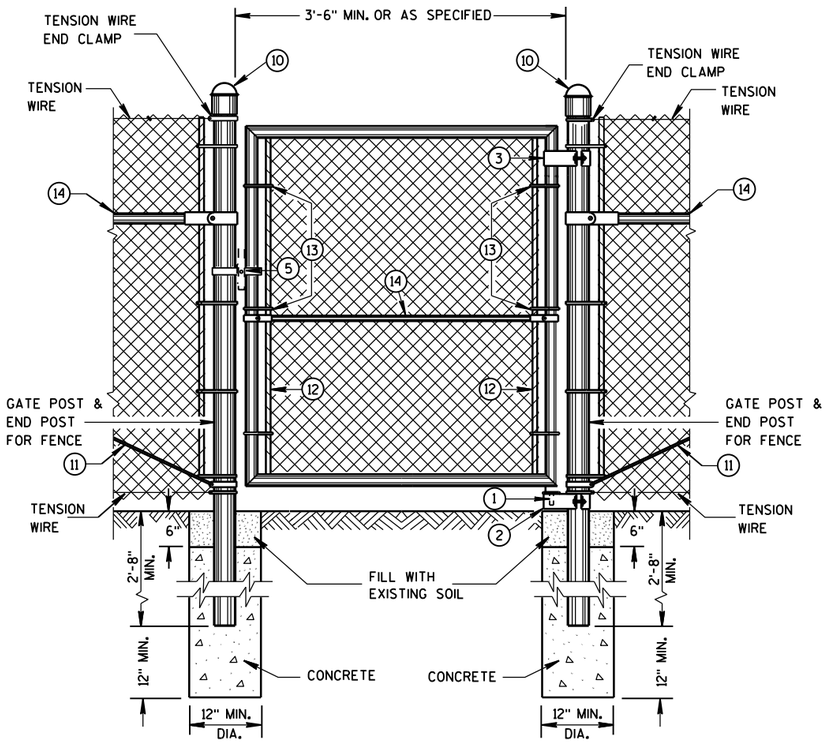
APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

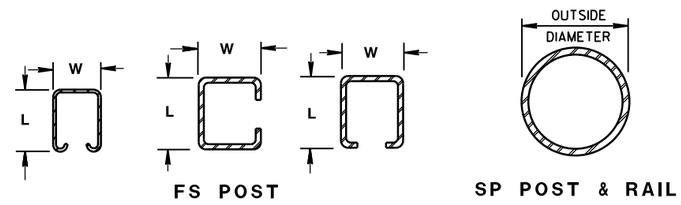
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



FS POST

SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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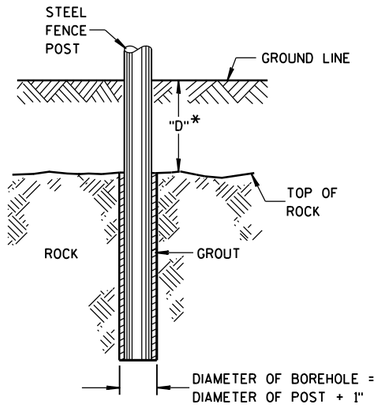
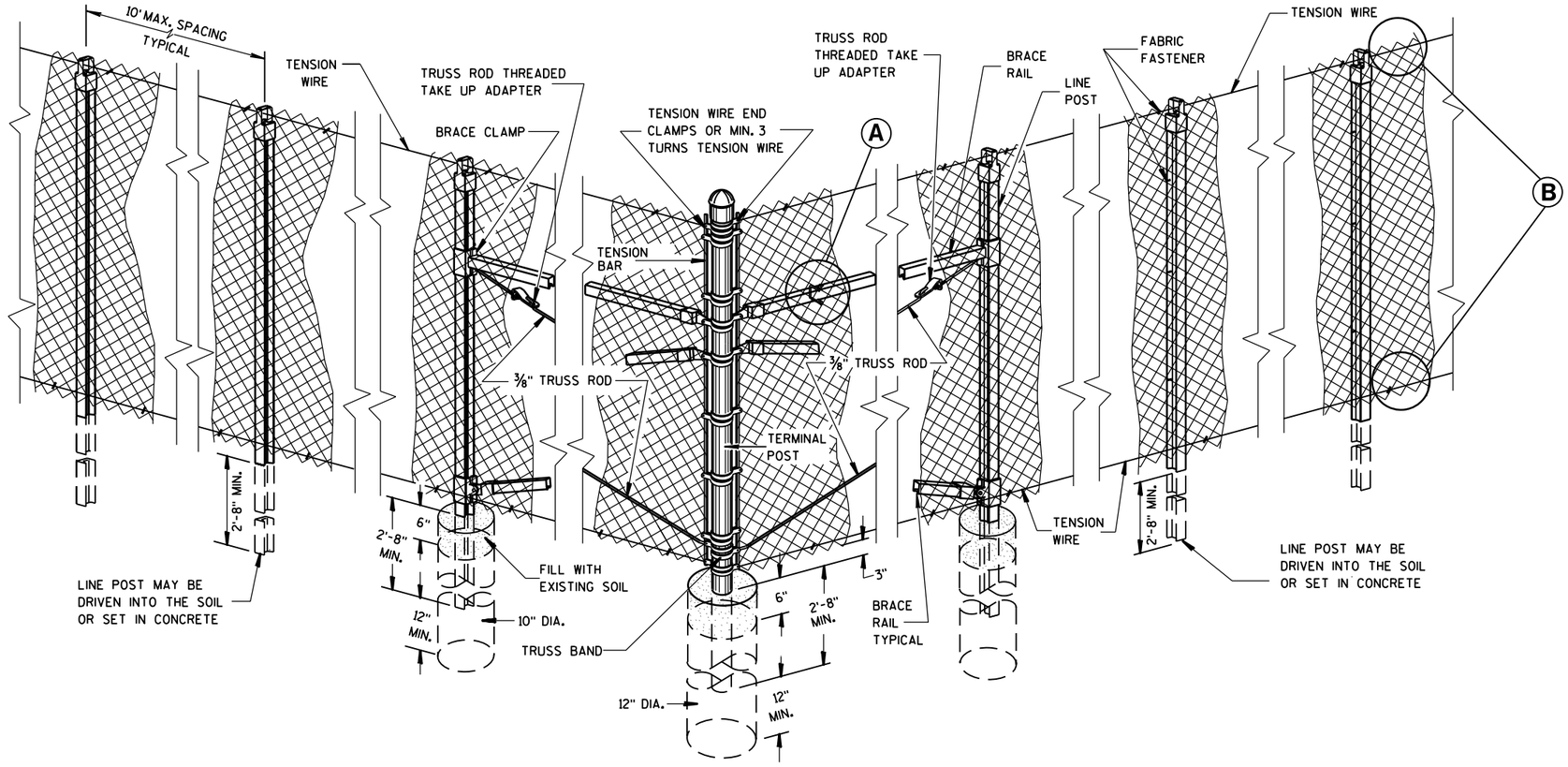
S.D.D. 15 B 3-15a

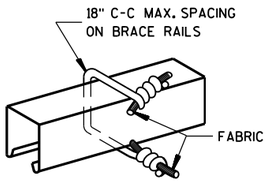


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



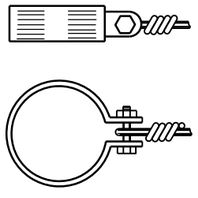
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



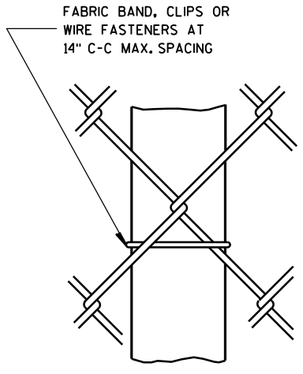
BRACE RAIL

FABRIC FASTENER

Ⓐ



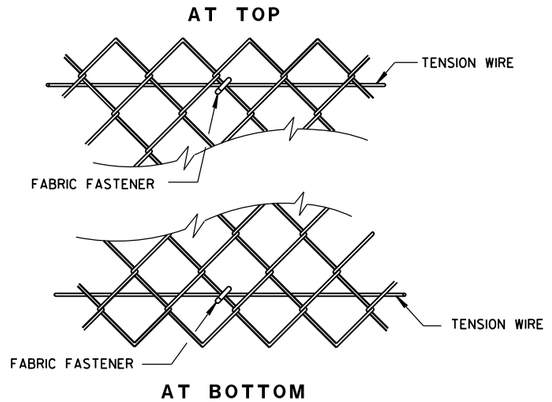
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
FEB. 2015 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

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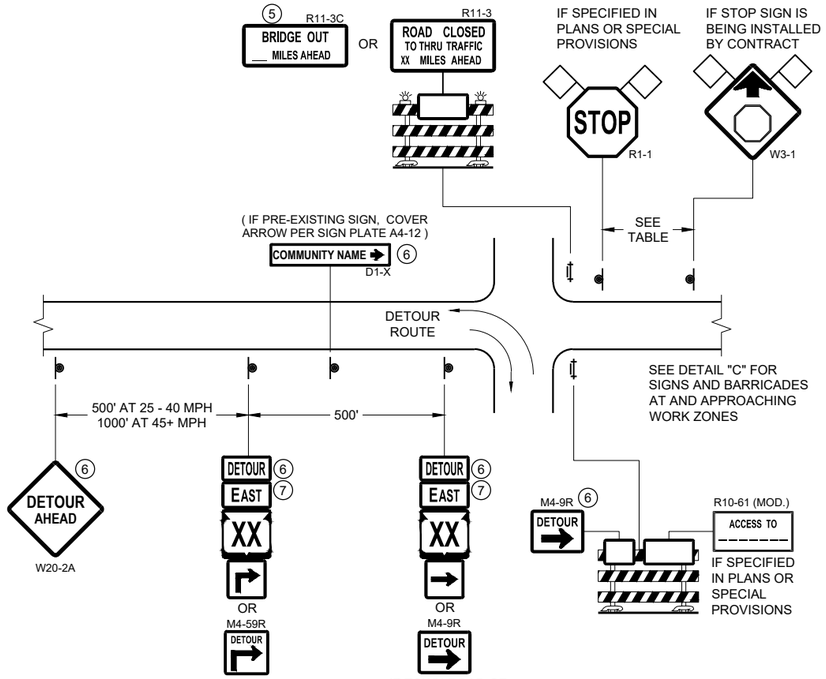
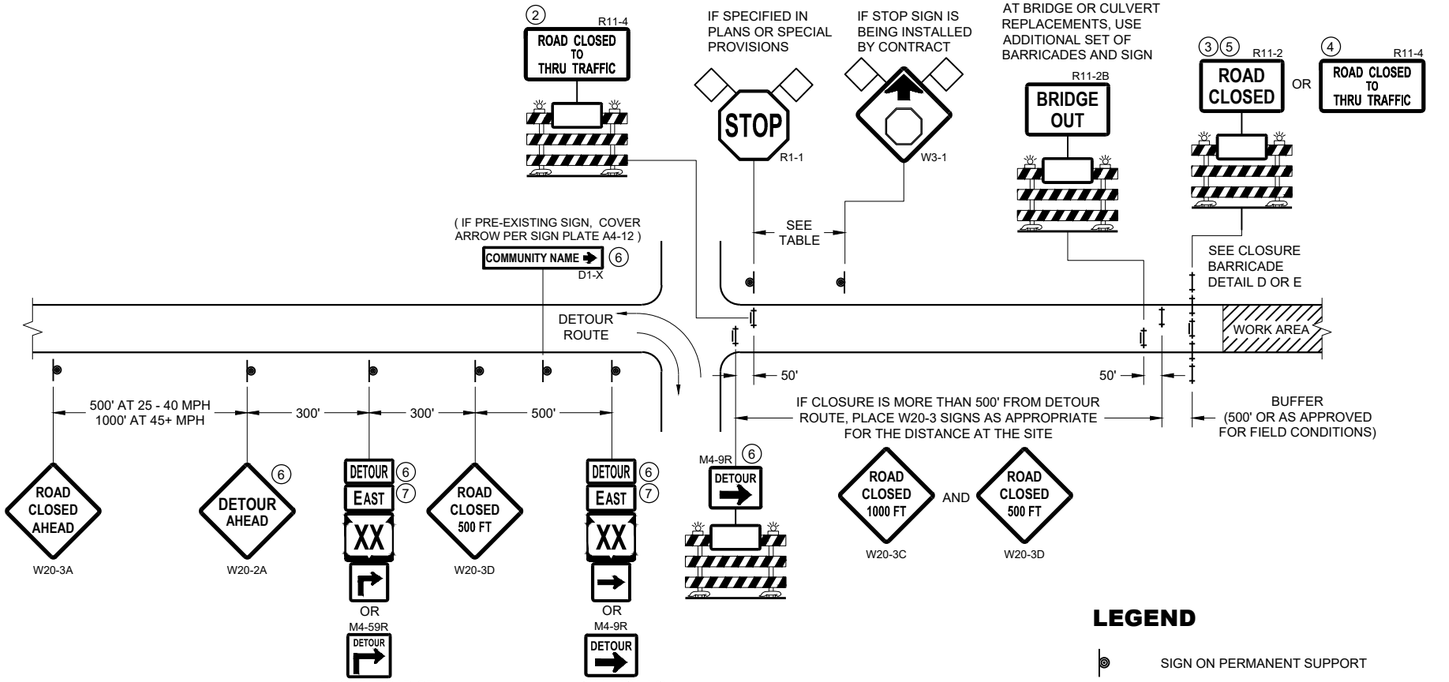
S.D.D. 15 B 3-15b



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



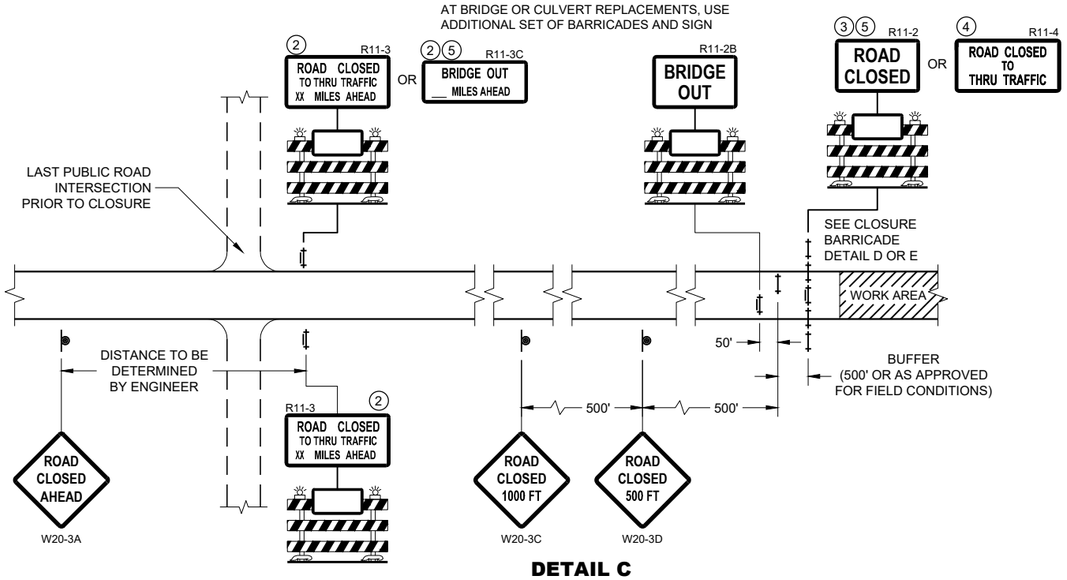
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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

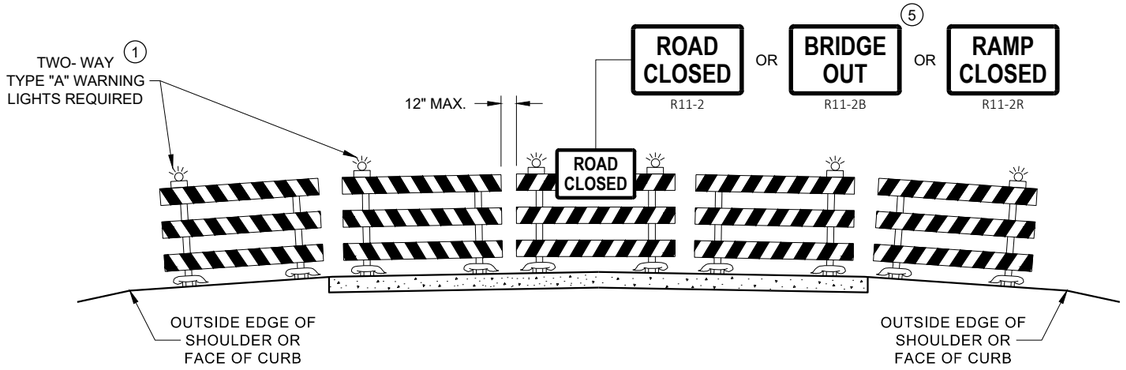
APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

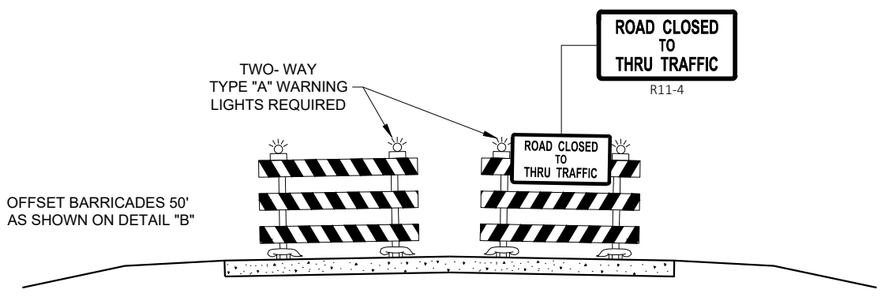
6

SDD 15C02 - 09a

SDD 15C02 - 09a



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
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

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SDD 15C02 - 09b

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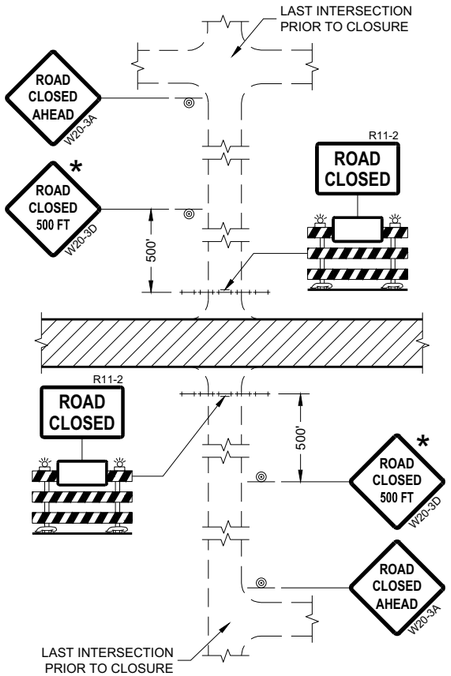
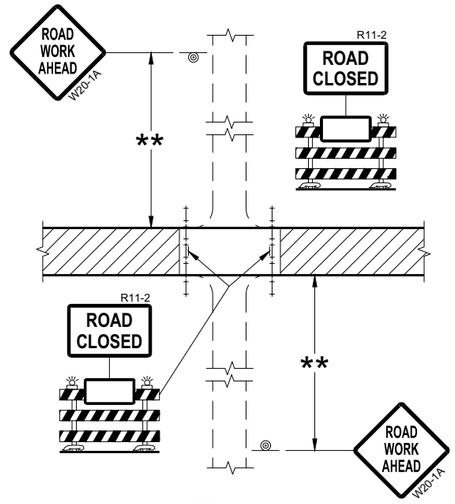
SDD 15C02 - 09b



DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)

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 (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

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

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN 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.

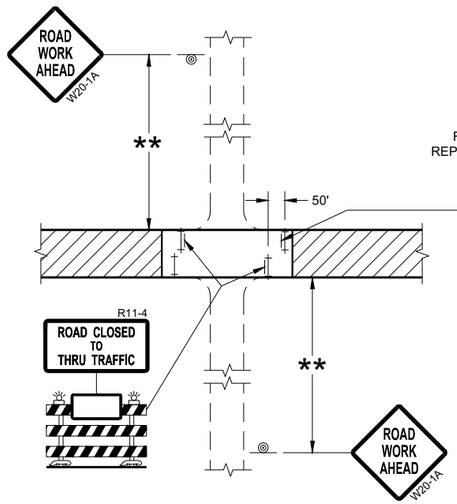
TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

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

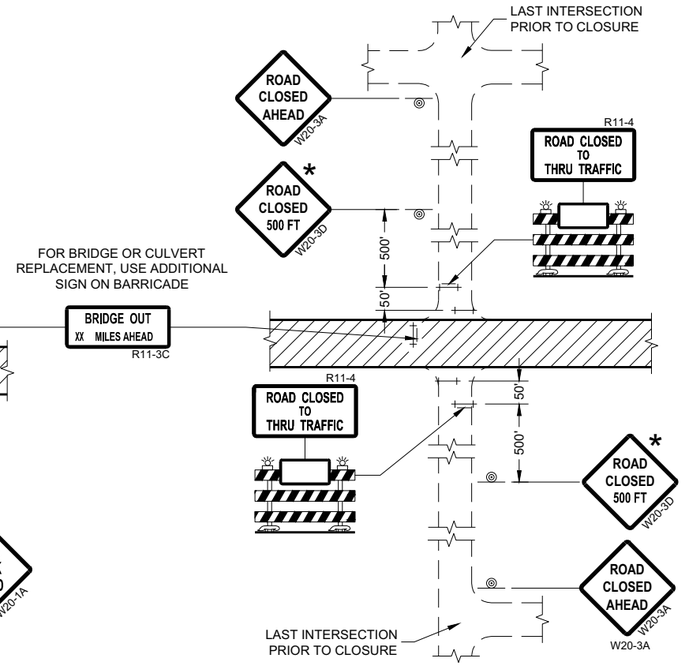
ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.

** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

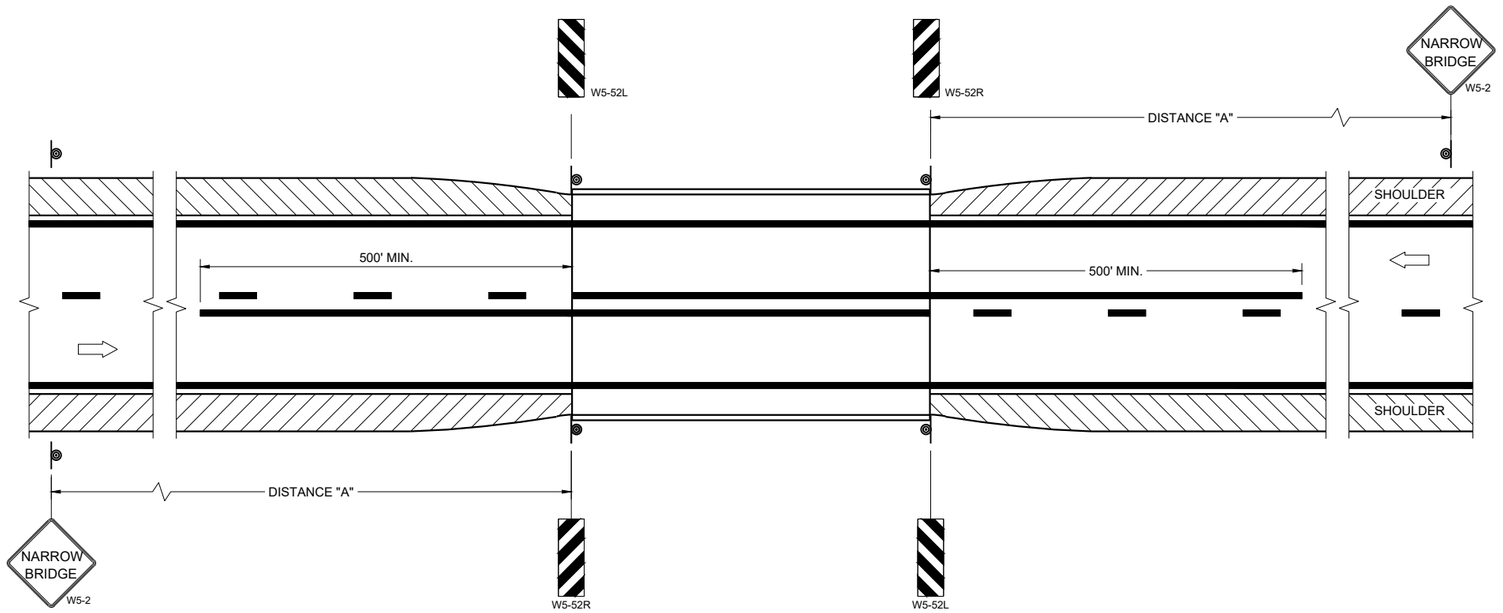
FHWA

6

SDD 15C03 - 05

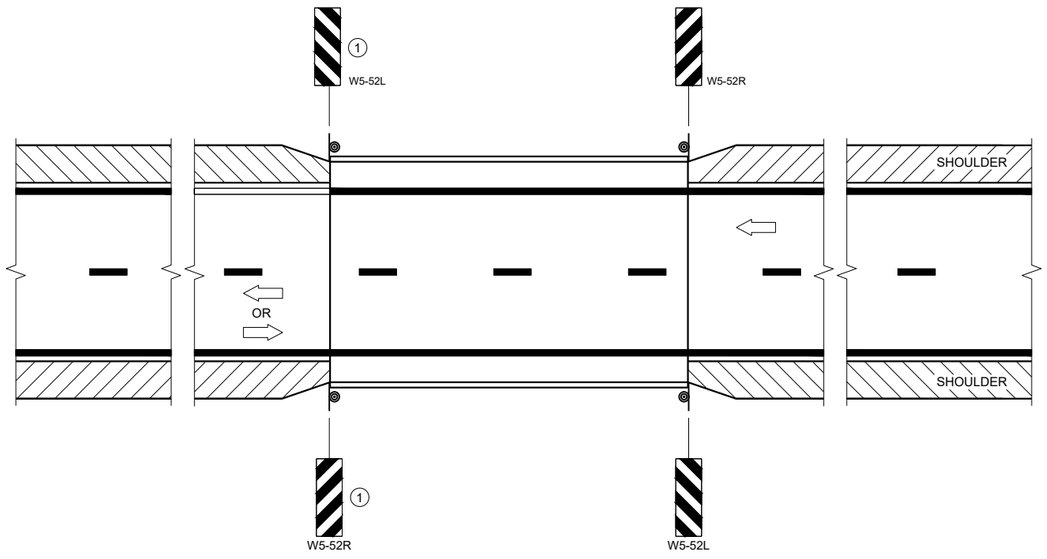
6

SDD 15C03 - 05



SITUATION 1

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



SITUATION 2

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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

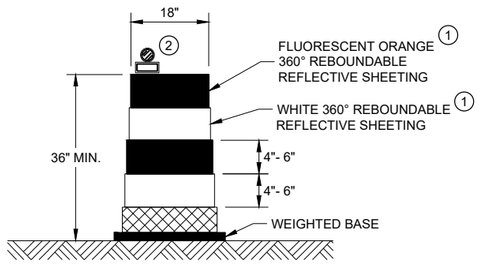
APPROVED
May 2023
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer
FHWA

6

SDD 15C06-12

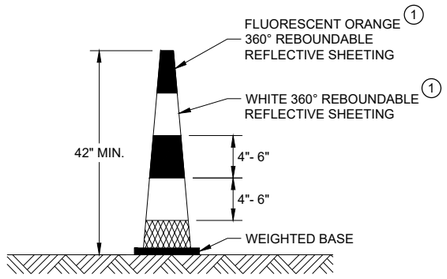
GENERAL NOTES

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



DRUM

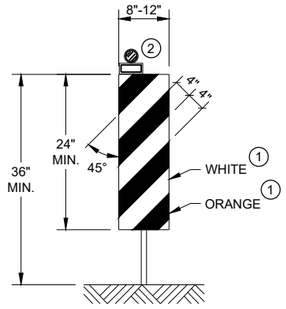
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

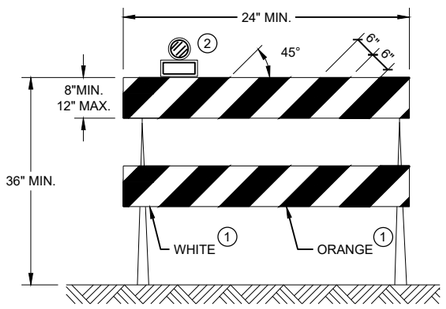
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



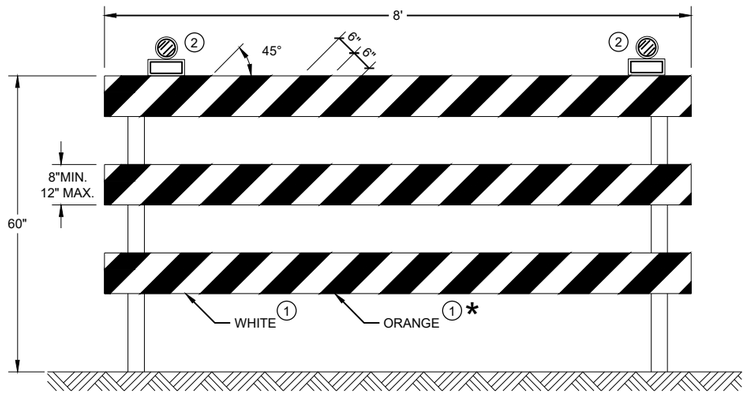
VERTICAL PANEL

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



TYPE 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
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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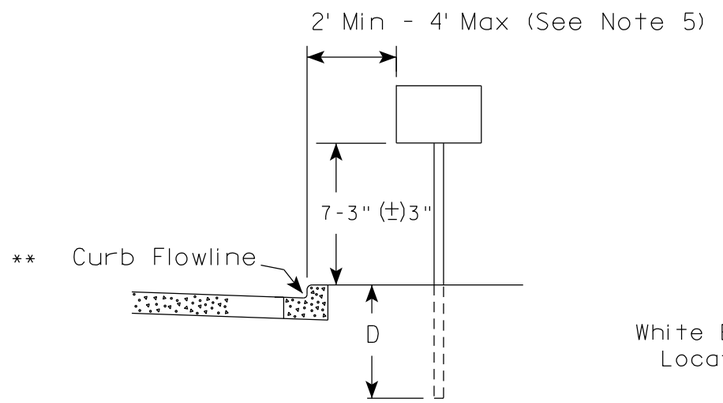
SDD 15C11 - 10b

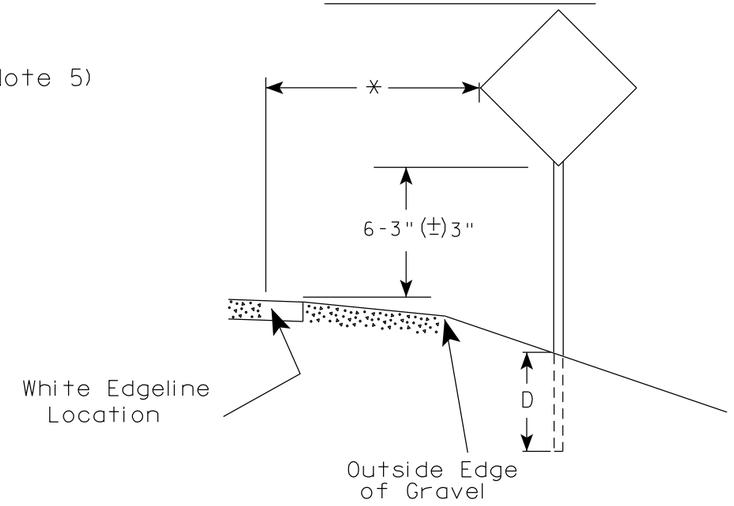
6

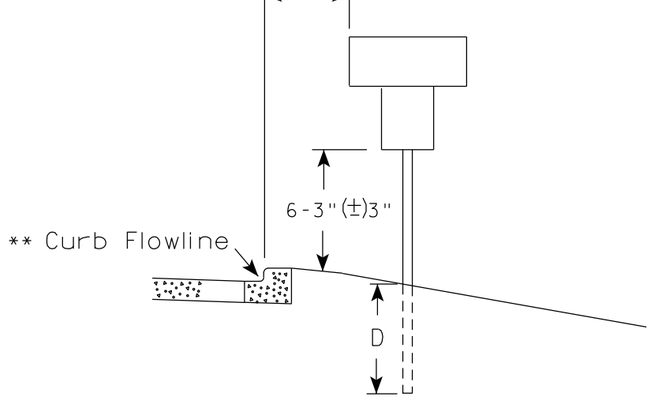
SDD 15C11 - 10b

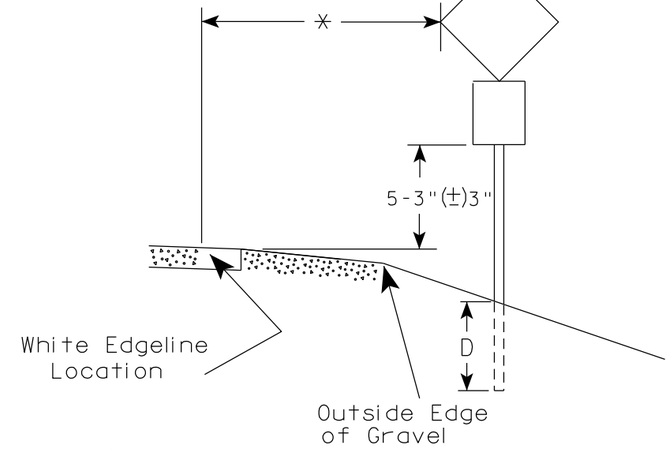
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

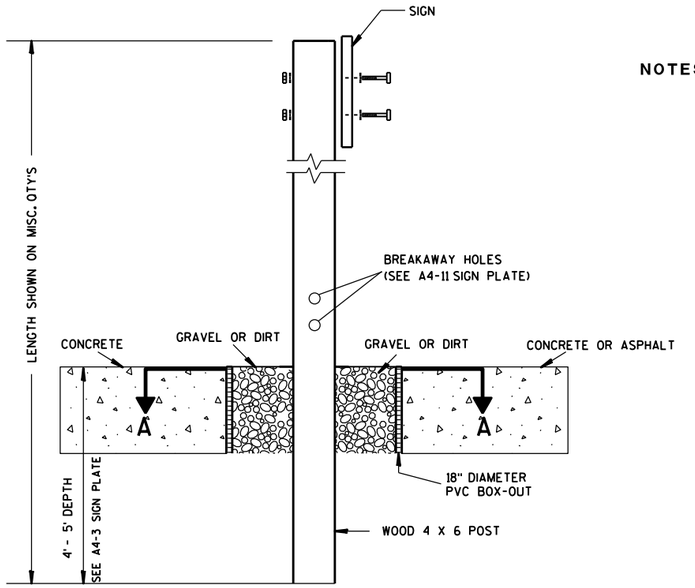
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

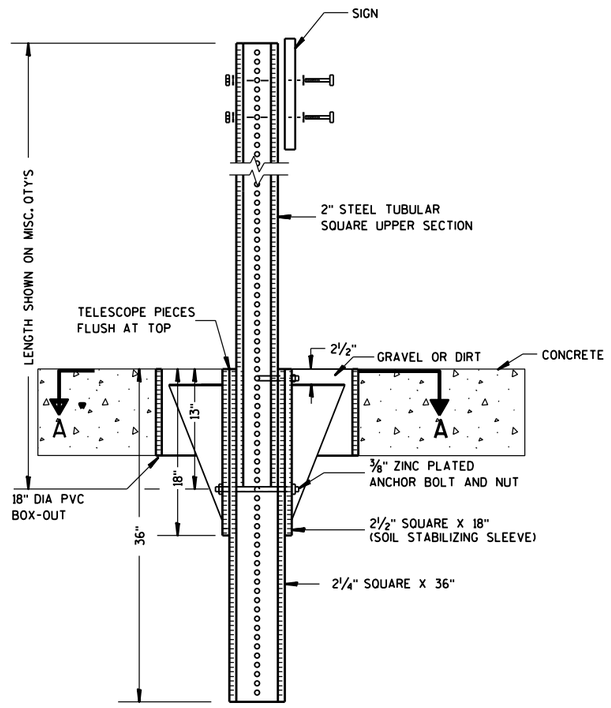
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 34	E



ELEVATION VIEW

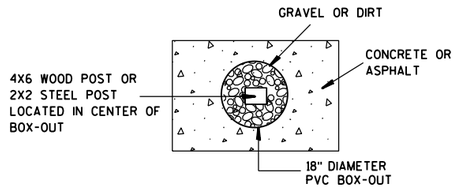
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

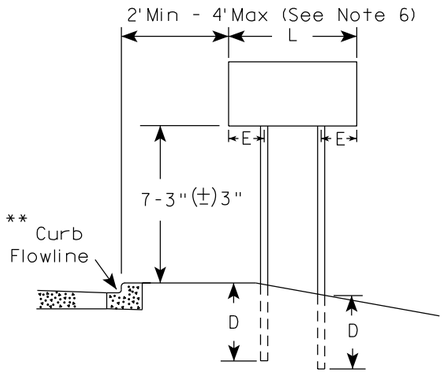
APPROVED Matthew R Rauch
for State Traffic Engineer

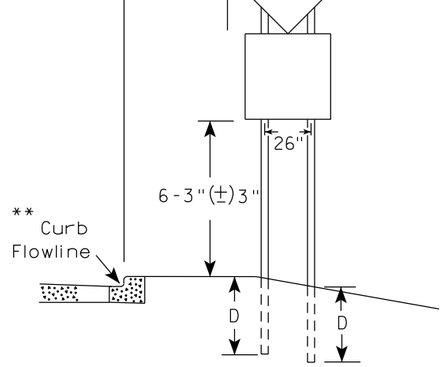
DATE 1/27/14 PLATE NO. A4-3B.1

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

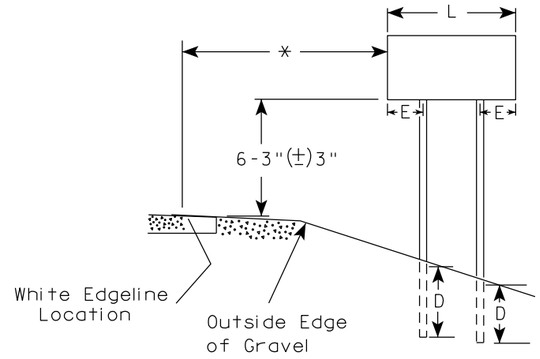
URBAN AREA

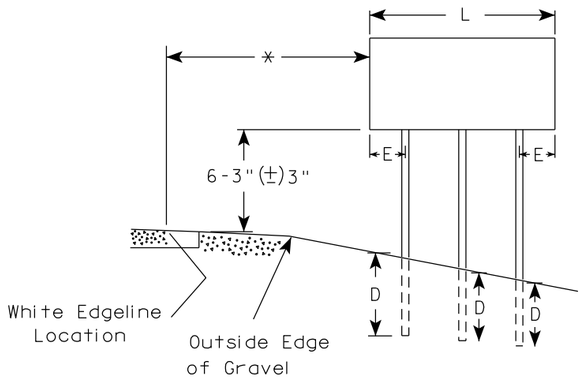


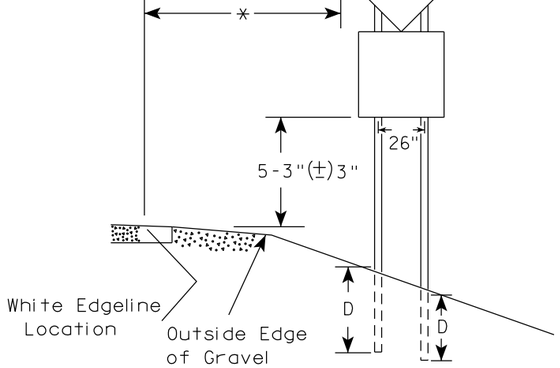


48" DIAMOND WARNING SIGN

RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

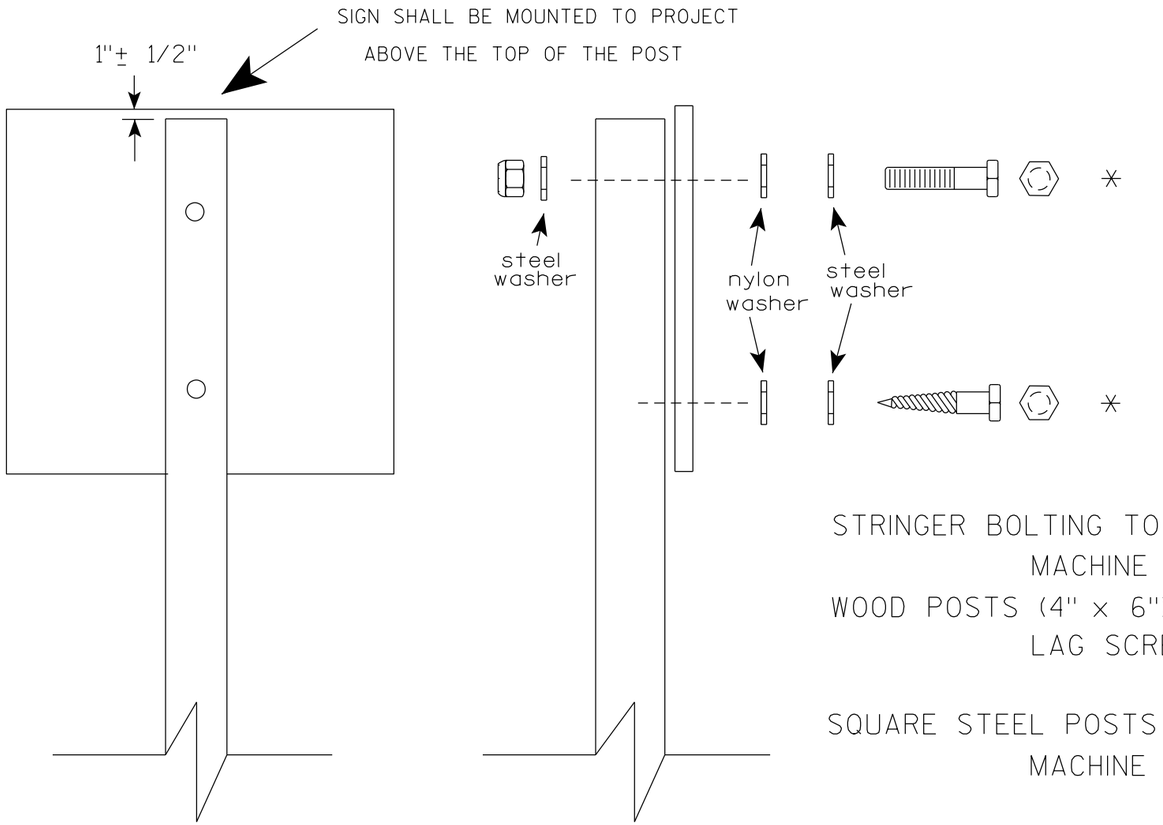
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 36	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

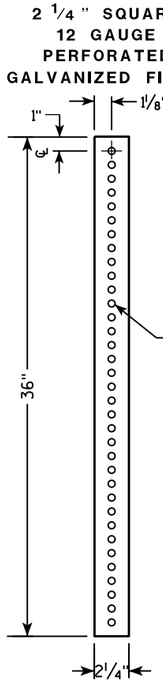
DATE 4/1/2020 PLATE NO. A4-8.9

PROJECT NO:

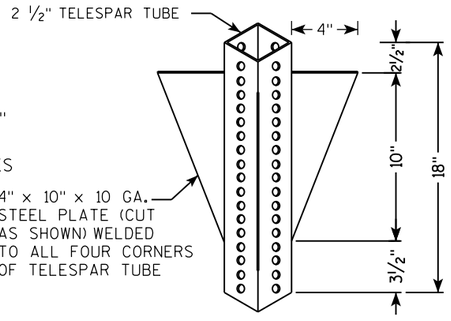
SHEET NO: 37 E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

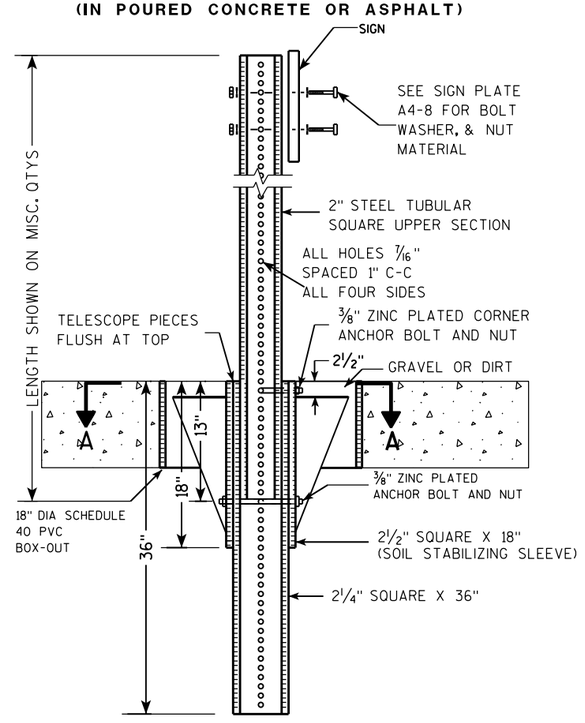
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



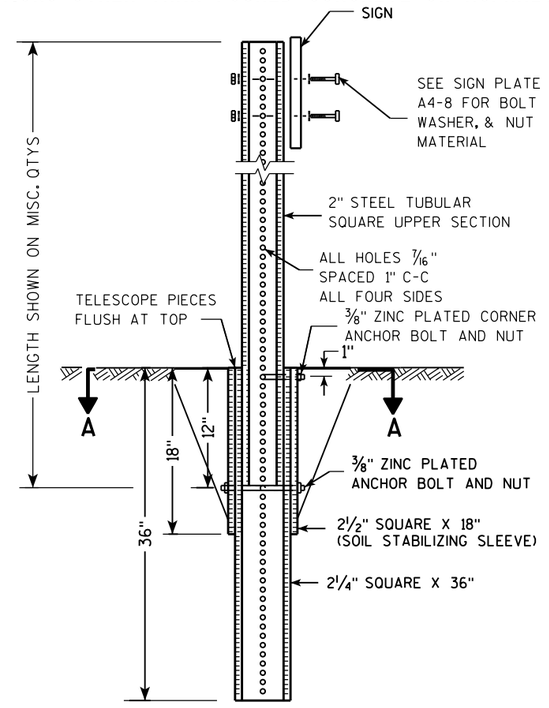
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

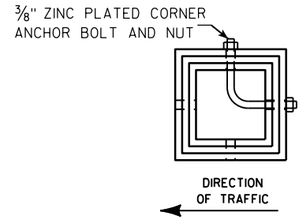


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

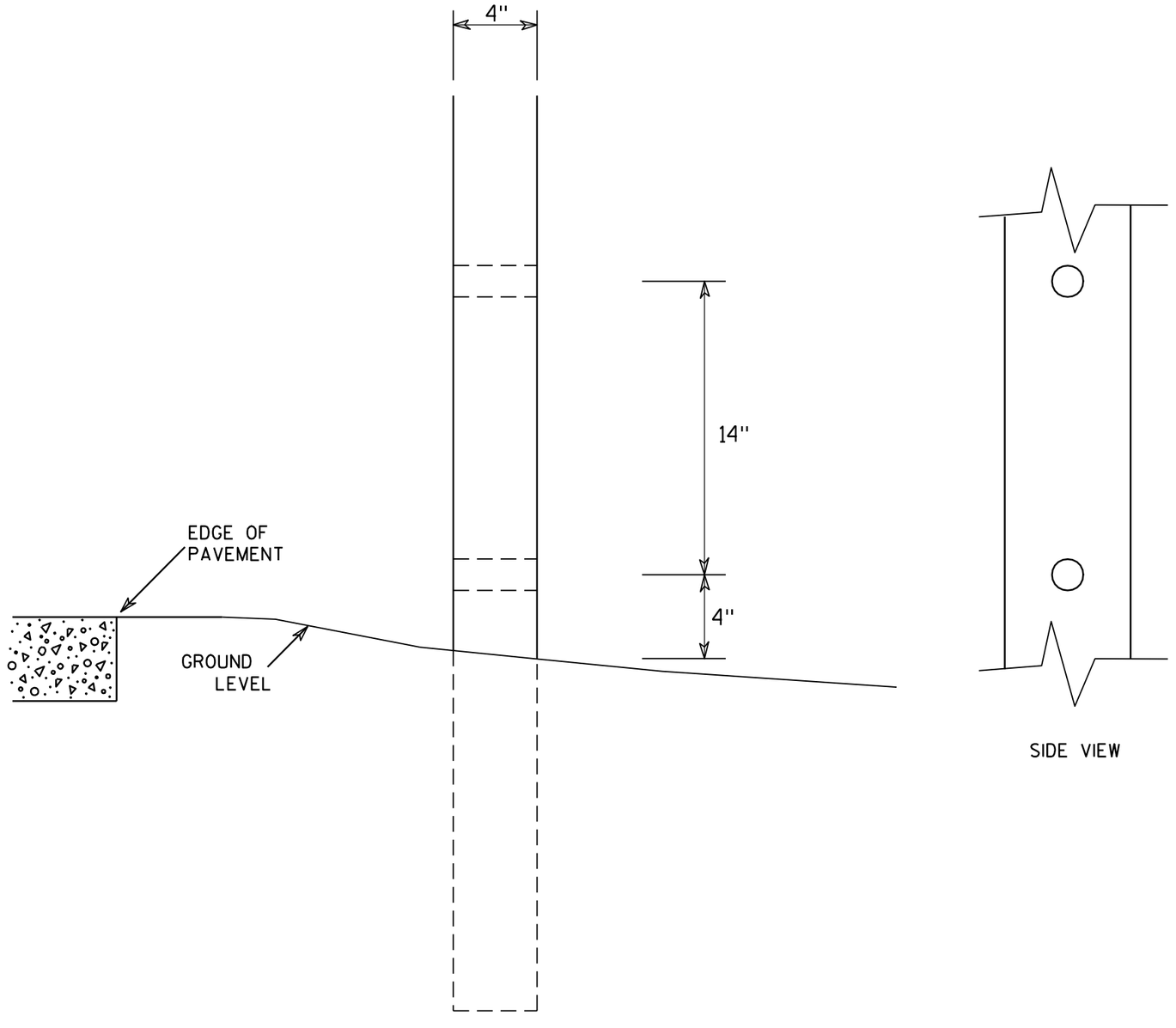
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

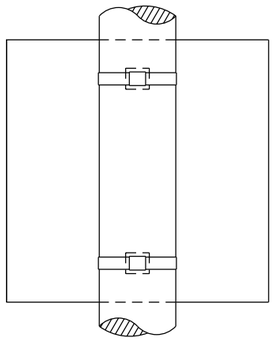
APPROVED Chester J Spang for State Traffic Engineer

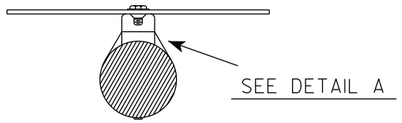
DATE 3/27/97 PLATE NO. A4-11.2

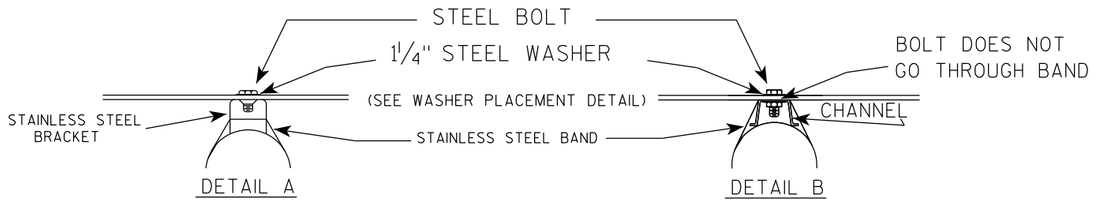
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 39	E

BANDING

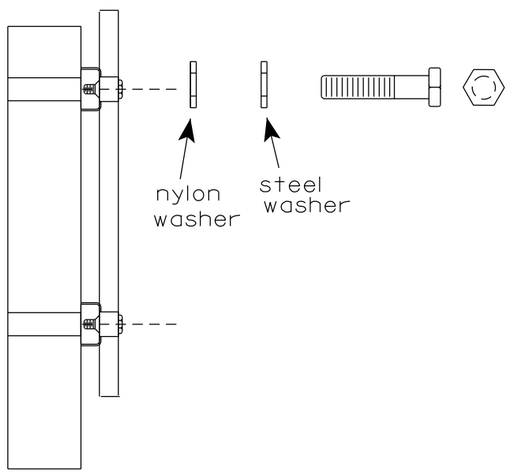
SINGLE SIGN







WASHER PLACEMENT

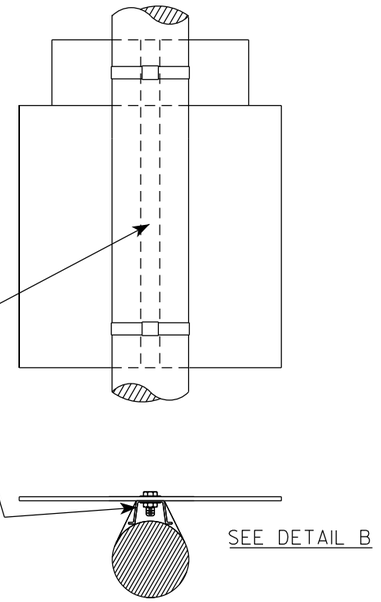


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



STANDARD SIGN
SIGN BANDING DETAILS

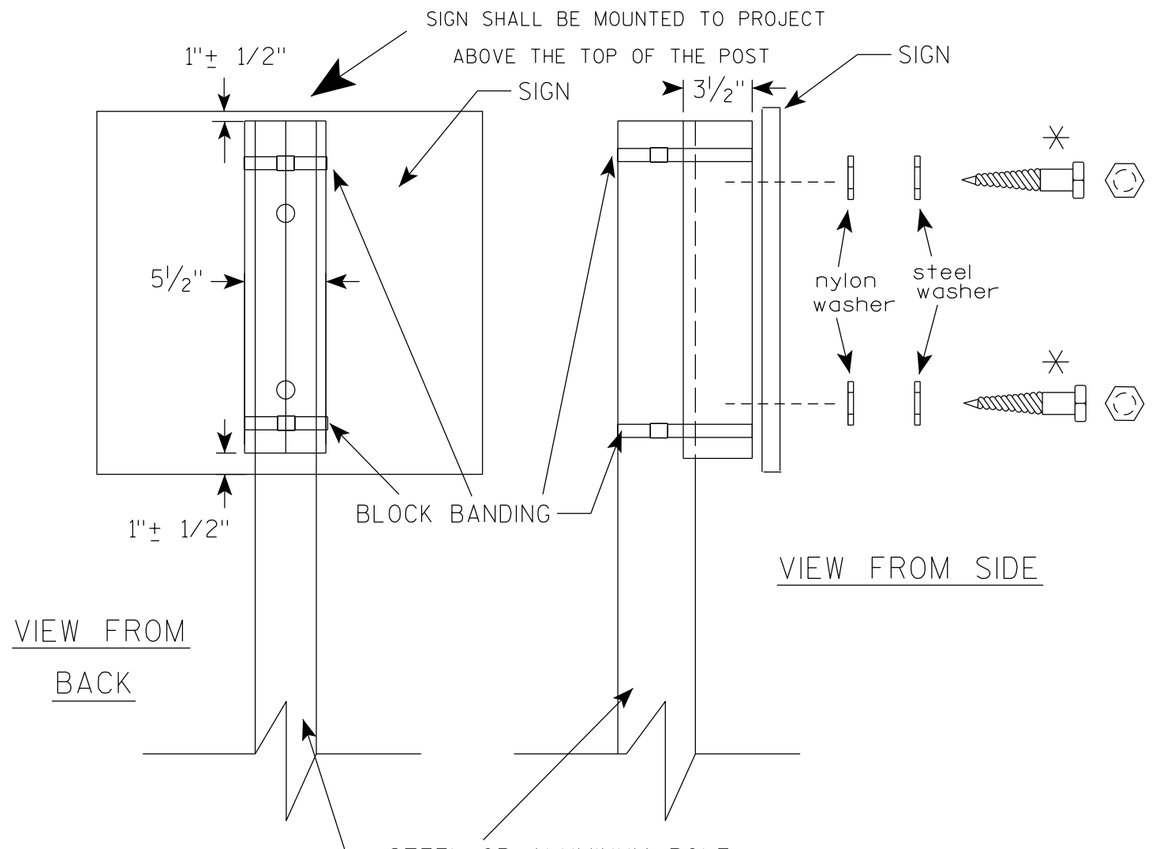
WISCONSIN DEPT OF TRANSPORTATION

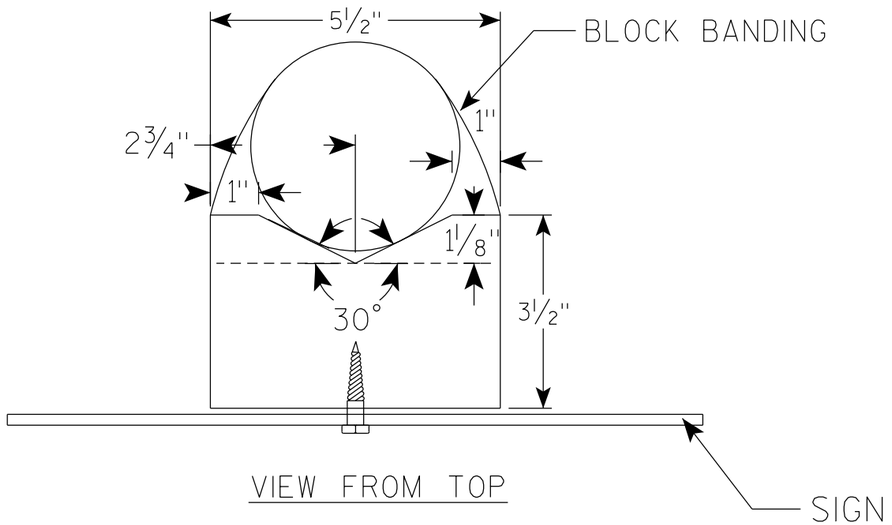
APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 40	E

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





GENERAL NOTES

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

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

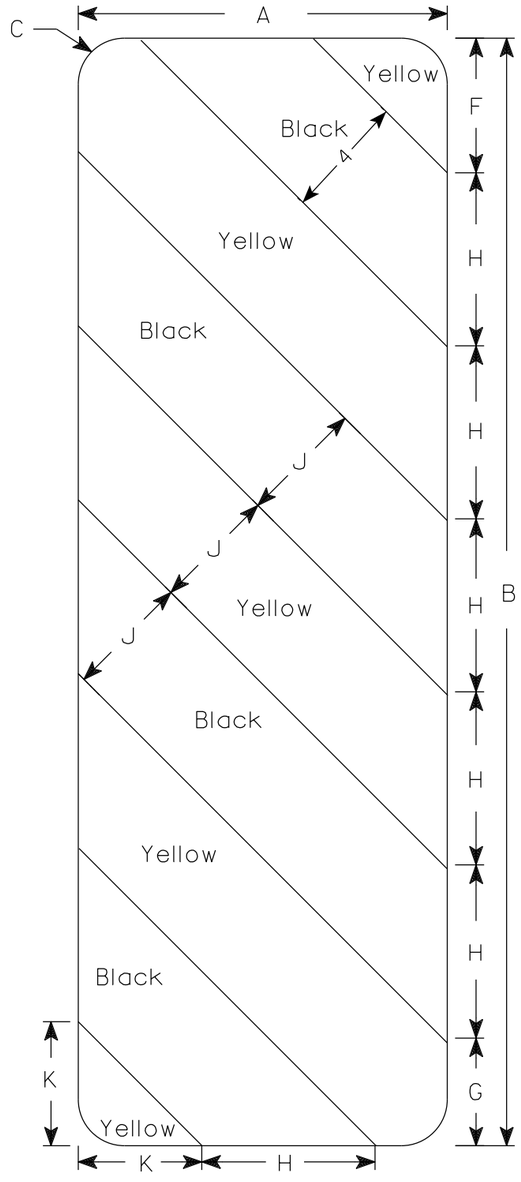
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

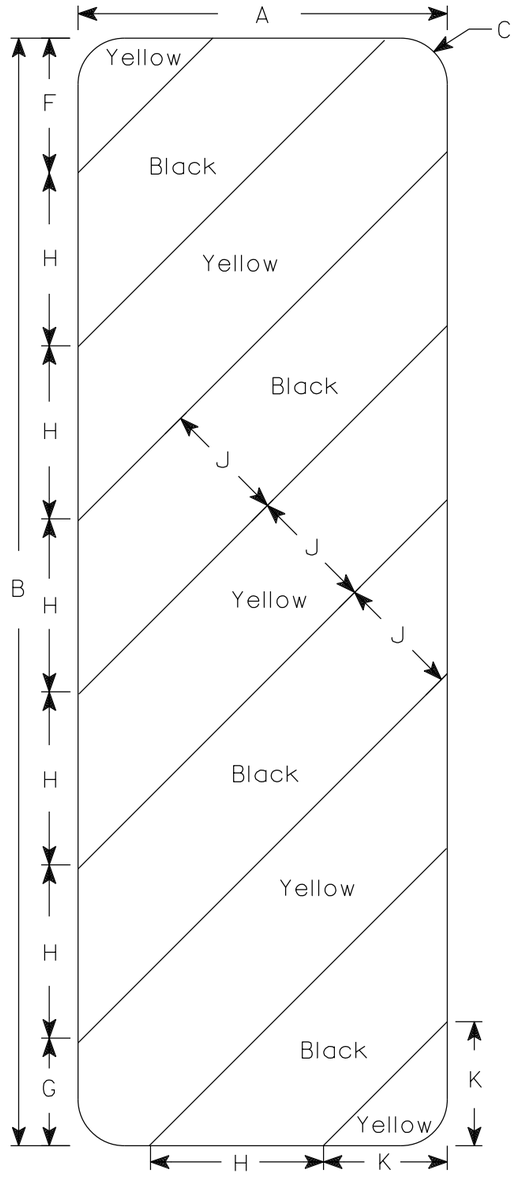
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 41 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. Alternate colors of stripes as shown.

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

STANDARD SIGN

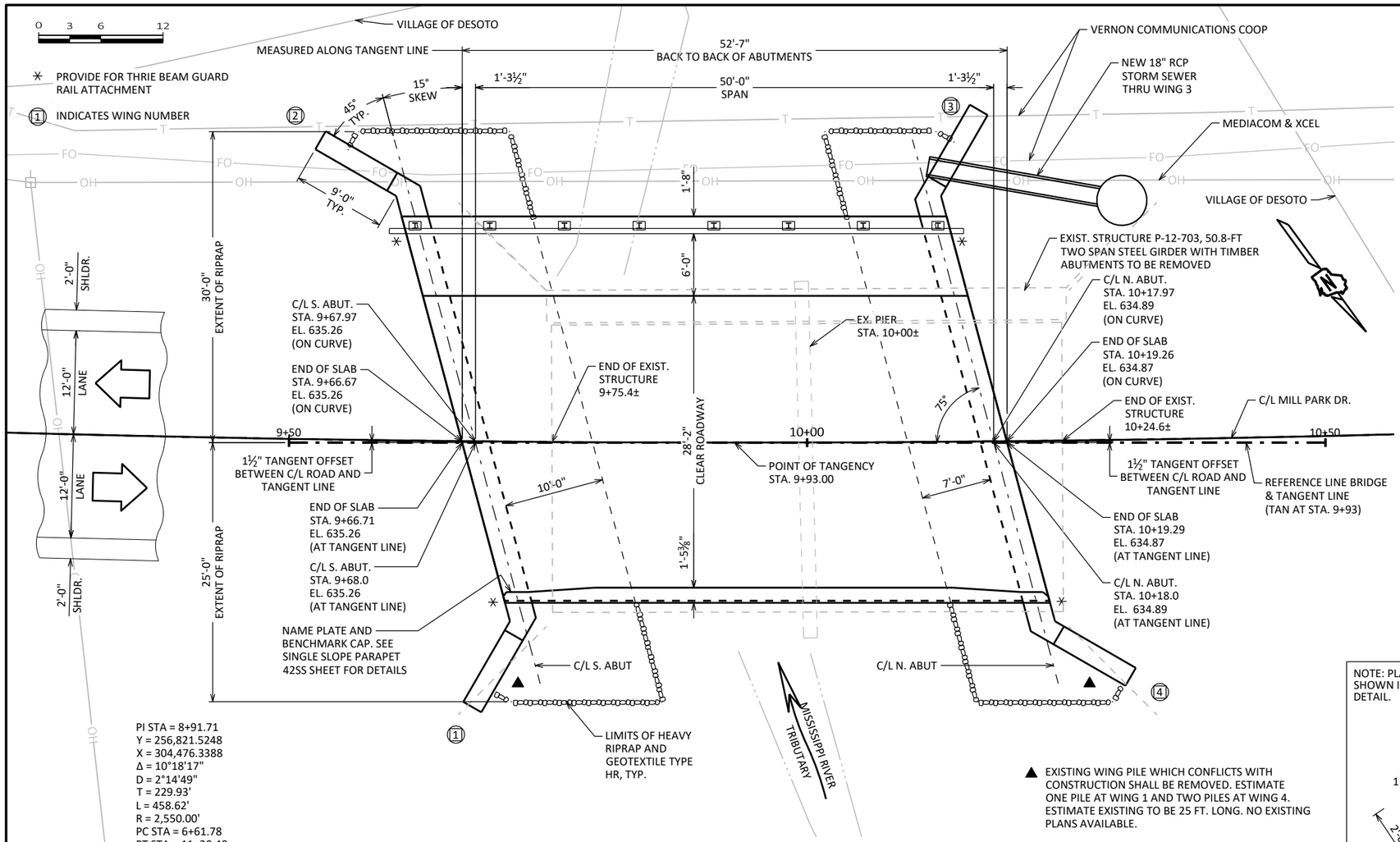
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/4/2024 PLATE NO. W5-52.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 42 E

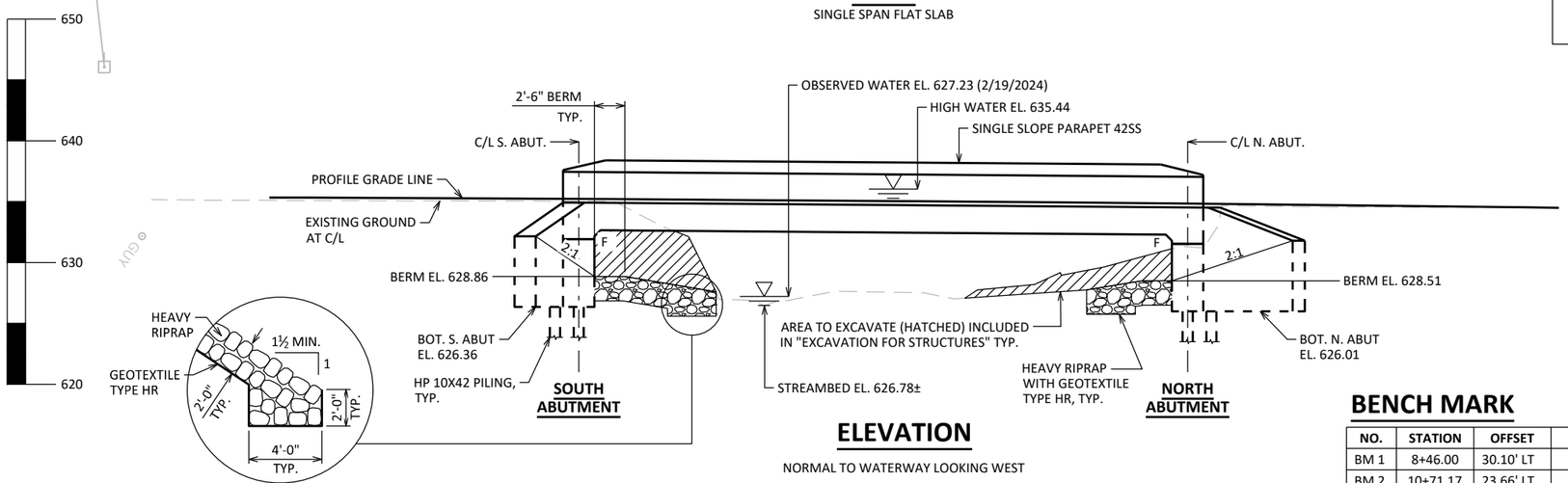


PI STA = 8+91.71
Y = 256,821.5248
X = 304,476.3388
Δ = 10°18'17"
D = 2°14'49"
T = 229.93'
L = 458.62'
R = 2,550.00'
PC STA = 6+61.78
PT STA = 11+20.40

▲ EXISTING WING PILE WHICH CONFLICTS WITH CONSTRUCTION SHALL BE REMOVED. ESTIMATE ONE PILE AT WING 1 AND TWO PILES AT WING 4. ESTIMATE EXISTING TO BE 25 FT. LONG. NO EXISTING PLANS AVAILABLE.

PLAN

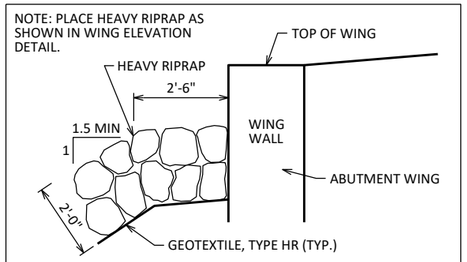
SINGLE SPAN FLAT SLAB



ELEVATION

NORMAL TO WATERWAY LOOKING WEST

NOTE: PLACE HEAVY RIPRAP AS SHOWN IN WING ELEVATION DETAIL.



TYPICAL FILL SECTION AT WING

BENCH MARK

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
BM 1	8+46.00	30.10' LT	SPK IN PP	635.69'
BM 2	10+71.17	23.66' LT	SPK IN PP	634.92'
BM 3	12+03.36	23.89' LT	SPK IN PP	635.30'

STATE PROJECT NUMBER

5408-00-70

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.10
OPERATING RATING: RF = 1.42
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

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

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE — f'_c = 4,000 PSI
ALL OTHER — f'_c = 3,500 PSI

HIGH STRENGTH BAR STEEL REINFORCEMENT
GRADE 60 — f_y = 60,000 PSI

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.

ESTIMATED 45'-0" LONG FOR THE SOUTH ABUTMENT.
ESTIMATED 55'-0" LONG FOR THE NORTH ABUTMENT.

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

TRAFFIC DATA

FEATURE ON:

ADT	= 1190 (2026)
ADT	= 1215 (2046)
DHV	= 122
DD	= 50/50%
T	= 10%
DESIGN SPEED	= 25 MPH

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100}	2800 C.F.S.
Q_{BR}	1988 C.F.S.
Q_{RD}	812 C.F.S
V_{100}	9.30 F.P.S.
HW_{100}	635.44 FT.
WATERWAY AREA	213.00 SQ. FT.
DRAINAGE AREA	2.8 SQ. MI.
ROADWAY OVERTOPPING	Q40 = 1870 CFS
SCOUR CRITICAL CODE	5

2-YEAR FREQUENCY:

Q_2	220 C.F.S.
V_2	2.10 F.P.S.
HW_2	629.90 FT.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. SOUTH ABUTMENT
5. SOUTH ABUTMENT DETAILS
6. NORTH ABUTMENT
7. NORTH ABUTMENT DETAILS
8. BILL OF BAR DETAILS
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE DETAILS
11. TUBULAR STEEL RAILING TYPE NY4
12. SINGLE SLOPE PARAPET 42SS

STRUCTURE DESIGN CONTACTS:

CHRIS BLUM 608.620.6192
AARON BONK 608.261.0261

WISCONSIN PROFESSIONAL ENGINEER
CHRISTOPHER J. BLUM E-33157 MADISON WI
11/17/2025

NO.	DATE	REVISION	BY

SEH
SHORT ELLIOTT HENDRICKSON INC.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED JLR 11/18/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-12-258

MILL PARK DRIVE OVER MISSISSIPPI RIVER TRIBUTARY

COUNTY	VILLAGE
CRAWFORD	DE SOTO

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATION

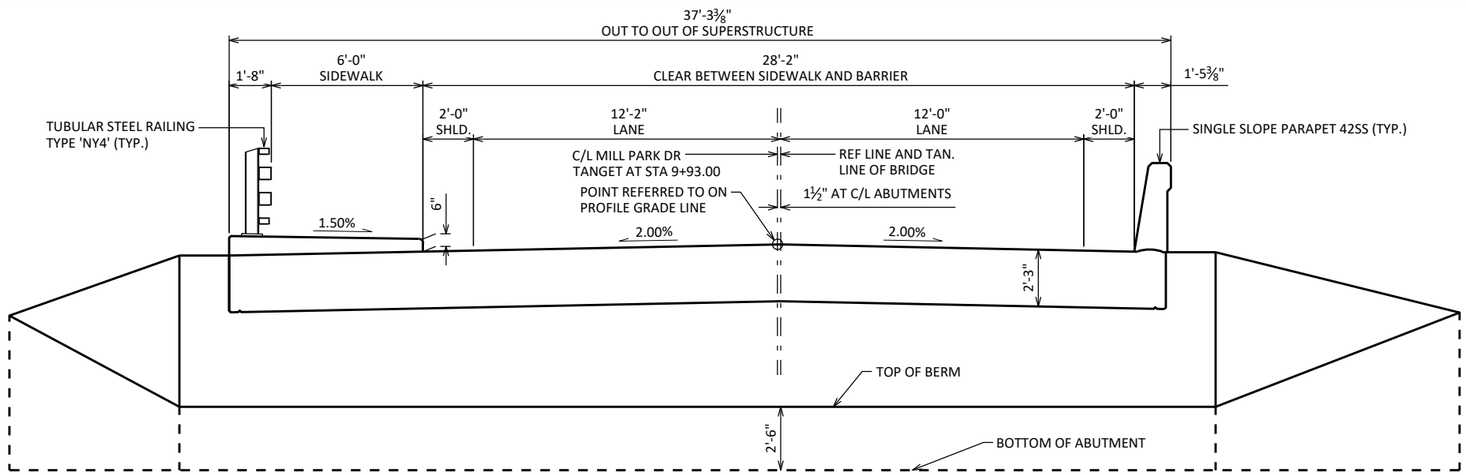
DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
JGM	NCK	ZLM	JGM

GENERAL PLAN

SHEET 1 OF 12
43

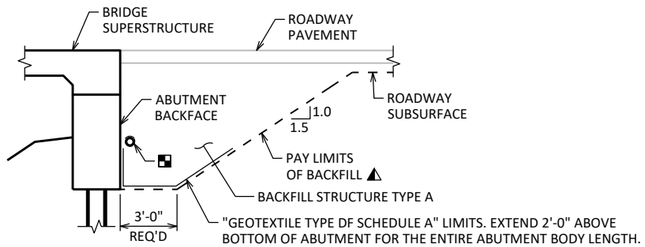
I.D.
DATE:

X:\AE\C\RAWC\176936\5-final-dsgn\51-drawings\20-Struct\B-12-258\Sheet\1-GENERAL.dwg, 7/31/2025 11:04:04 AM, _DWG To PDF.pc3



CROSS SECTION THRU ROADWAY

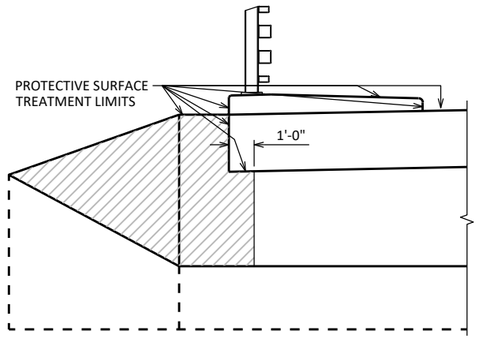
LOOKING UP STATION
(PILING NOT SHOWN FOR CLARITY)



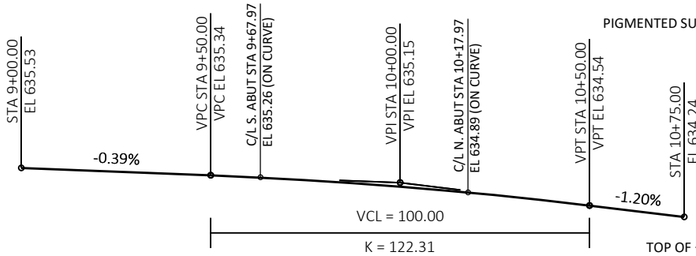
TYPICAL SECTION THRU ABUTMENT

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

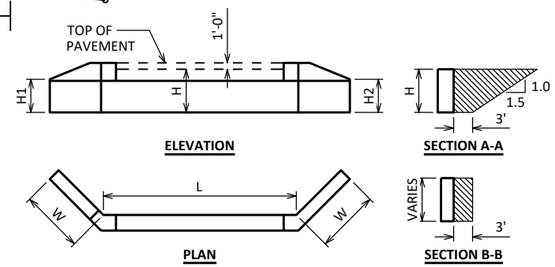
▪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.



PROTECTIVE SURFACE TREATMENT DETAILS

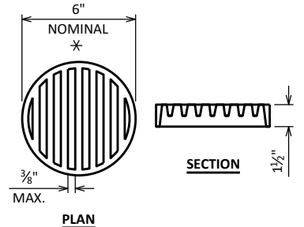


PROFILE GRADE LINE



TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	SOUTH ABUT.	NORTH ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-12-703	EACH	-	-	-	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-12-258	EACH	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-	250	250	500
502.0100	CONCRETE MASONRY BRIDGES	CY	185	35	35	255
502.3200	PROTECTIVE SURFACE TREATMENT	SY	230	19	19	268
502.3210	PIGMENTED SURFACE SEALER	SY	24	-	-	24
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-	2,860	2,860	5,720
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	34,690	1,700	1,690	38,080
513.7084	RAILING STEEL TYPE NY4	LF	56	-	-	56
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-	9	9	18
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	-	360	440	800
606.0300	RIPRAP HEAVY	CY	-	50	36	86
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-	100	95	195
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-	-	2
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	-	35	35	70
645.0120	GEOTEXTILE TYPE HR	SY	-	75	55	130
SPV.0090	REMOVE EXISTING TIMBER PILING	LF	-	25	50	75
	NON-BID ITEMS					
	FILLER	SIZE	-	-	-	1/2", 3/4"
	NAMEPLATE	EACH	1	-	-	1
	BENCHMARK	EACH	1	-	-	1



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.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS OTHERWISE NOTED.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES B-12-258" SHALL BE THE EXISTING GROUNDLINE.

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

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

THE QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH SLOPE PAVING MATERIAL TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.

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

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO ENTIRE EXPOSED TOP OF SLAB, SIDEWALK SURFACE AND VERTICAL SIDE SURFACES OF SIDEWALK, THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND FRONT FACE OF ABUTMENT TO 1'-0" PAST THE EDGE OF SLAB ON THE OPEN RAIL SIDE, THE EXTERIOR EDGE OF THE DECK, AND 1'-0" UNDERSIDE OF THE DECK ON THE OPEN RAIL SIDE.

PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND TOP OF PARAPET.

ABUTMENT BACKFILL DIAGRAM

L = ABUTMENT BODY LENGTH AT BACKFACE (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
H1 = WING 1 HEIGHT AT TIP (FT)
H2 = WING 2 HEIGHT AT TIP (FT)
W = WING LENGTH (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) + (3')(0.5)(H1+H2+H+H)(W)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STATE PROJECT NUMBER
5408-00-70

STRUCTURE B-12-258

DRAWN BY ZLM | PLANS CK'D JGM

CROSS SECTION & QUANTITIES

SHEET 2 OF 12
44

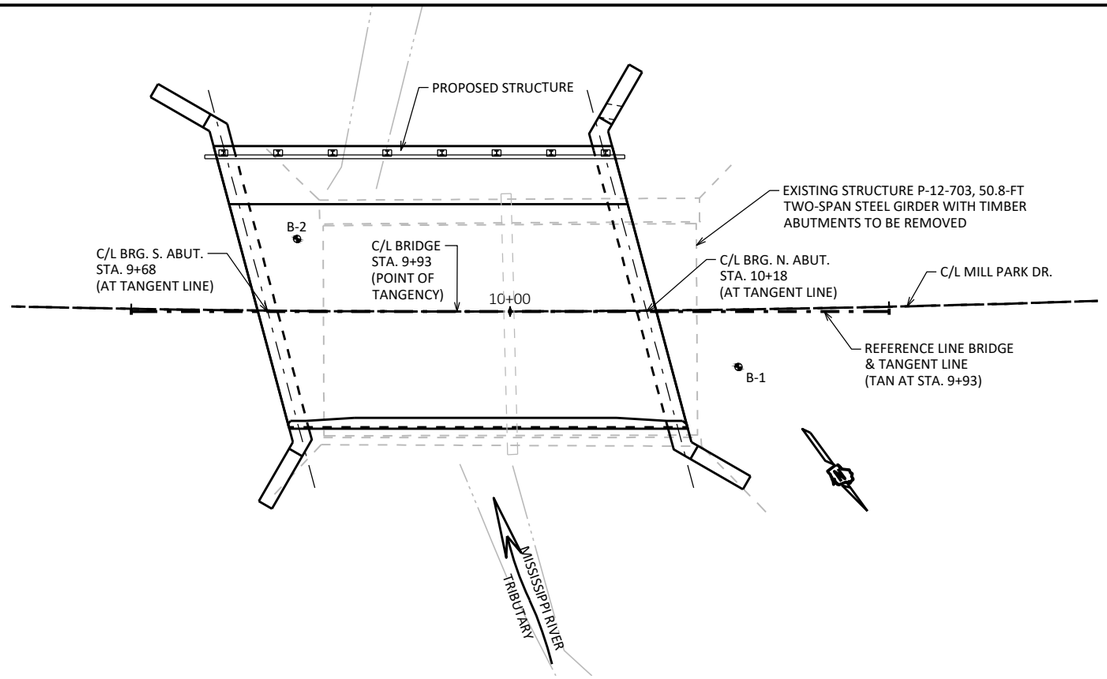
8

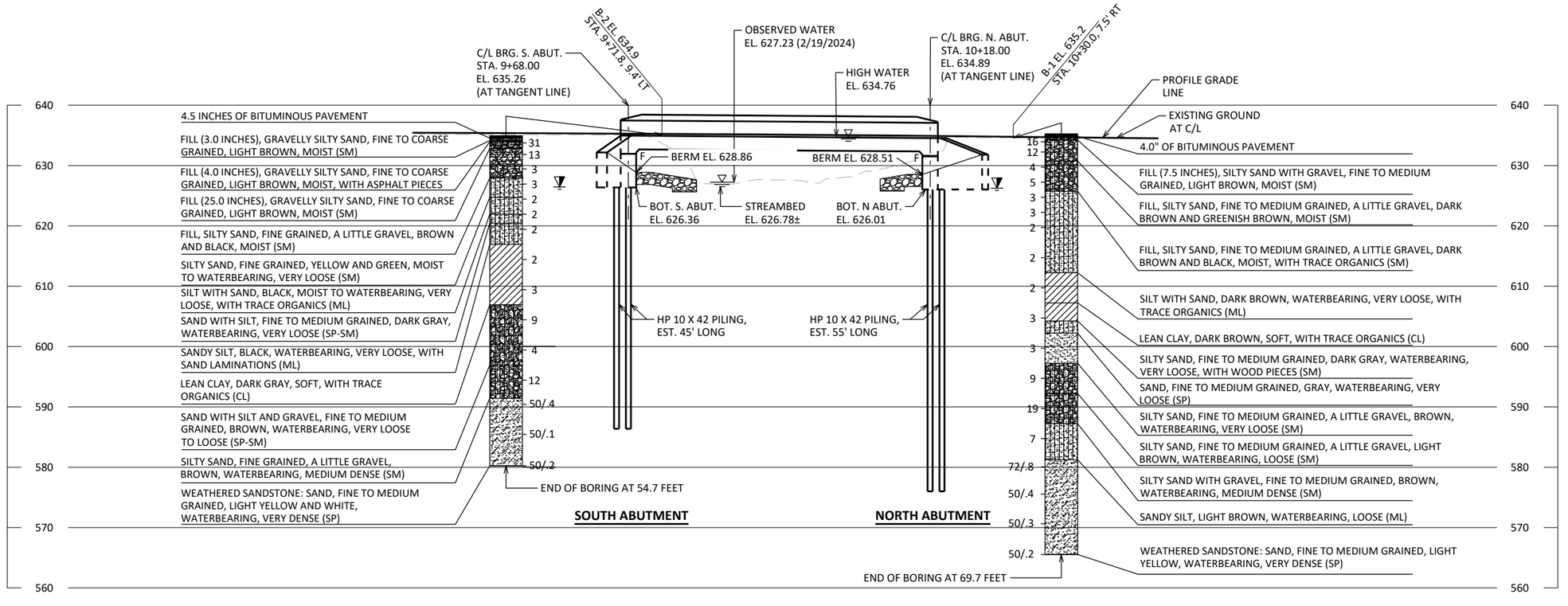
BORING #	DATE COMPLETED
B-1	4/5/2024
B-2	4/5/2024

BORINGS COMPLETED BY:
AMERICAN ENGINEERING TESTING
1837 COUNTY HIGHWAY OO
CHIPPEWA FALLS, WI 54729
715.861.5045

REPORT COMPLETED BY: MATTHEW B. WILLIAMS, P.E.

ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CRAWFORD COUNTY





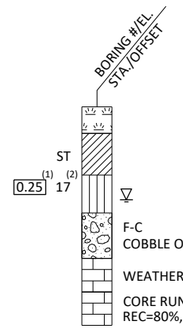
STATE PROJECT NUMBER

5408-00-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-258

DRAWN BY	ZLM	PLANS CK'D	JGM

SUBSURFACE EXPLORATION

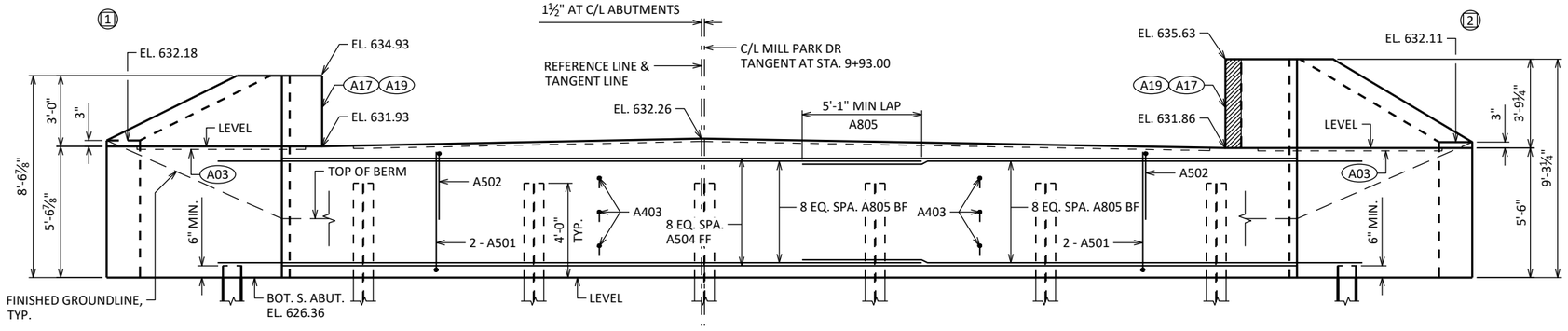
SHEET 3 OF 12
45

8

8

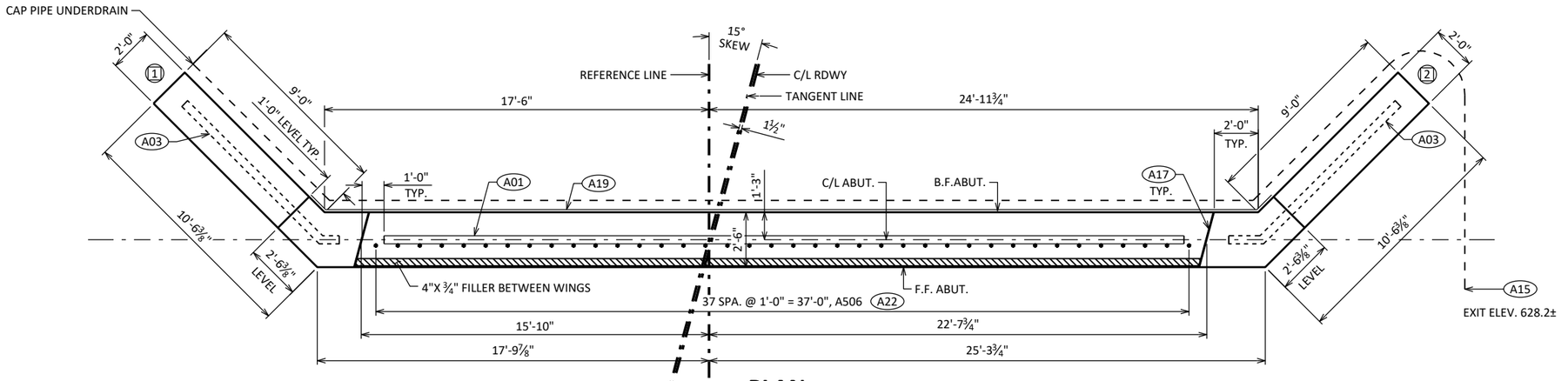
STATE PROJECT NUMBER

5408-00-70

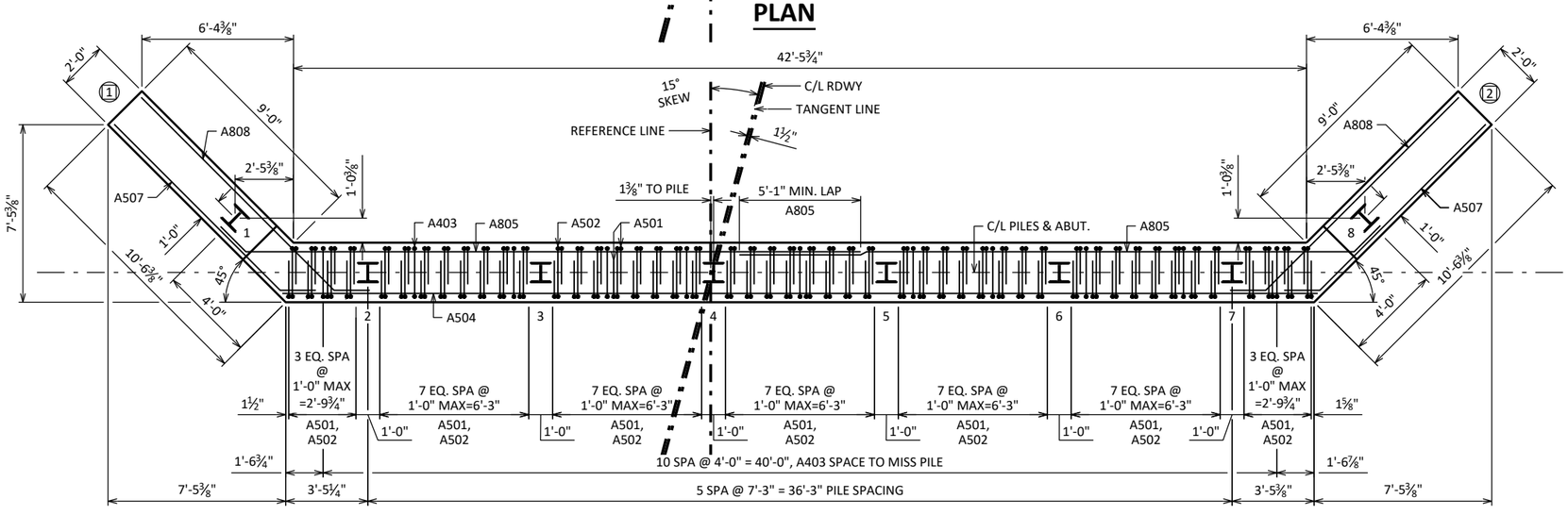


FRONT ELEVATION

(SOUTH ABUTMENT LOOKING SOUTH)



PLAN



PILE LAYOUT

ABUTMENT NOTES

- (A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A22) A506 BARS SPACED @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

N. ABUT. = NORTH ABUTMENT
S. ABUT. = SOUTH ABUTMENT

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

(1) (2) INDICATES WING NUMBER

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-12-258

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SOUTH ABUTMENT

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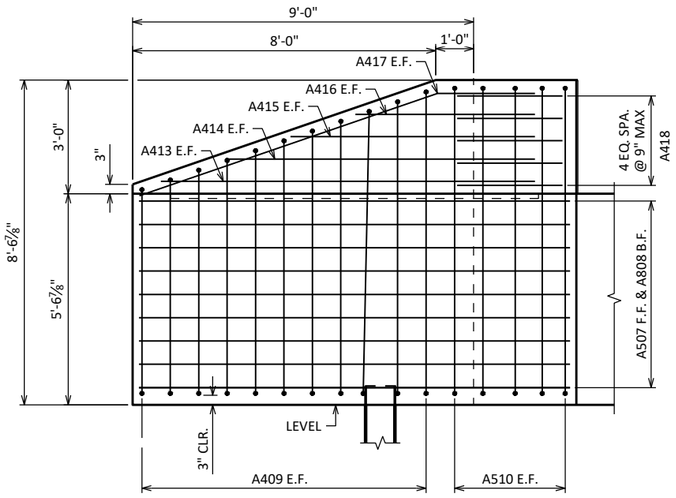
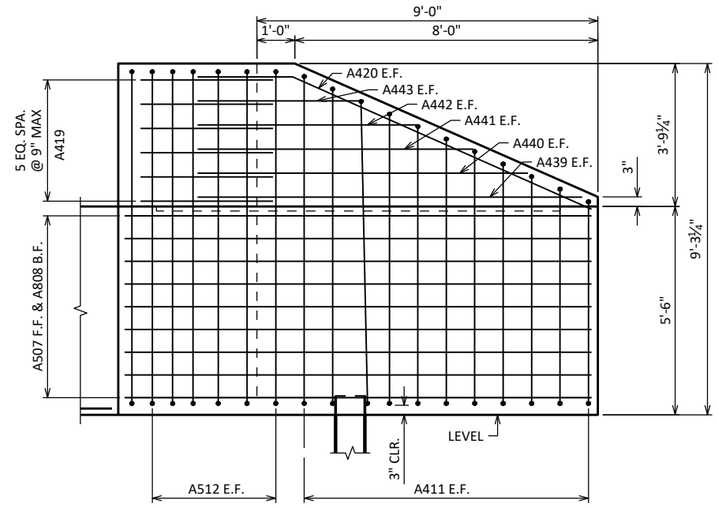


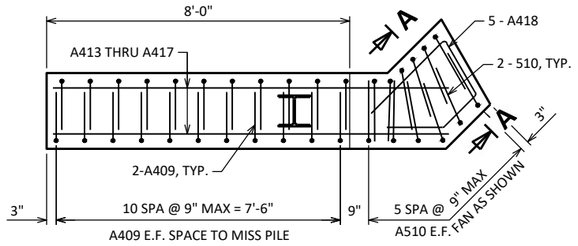
WING 1 ELEVATION

SHOWING F.F. WING

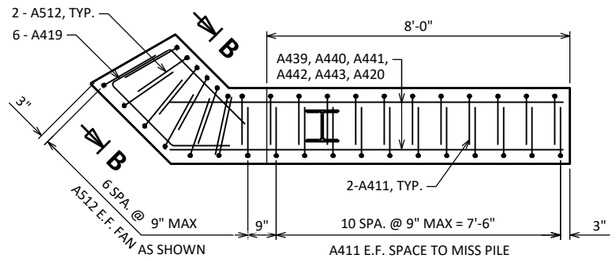


WING 2 ELEVATION

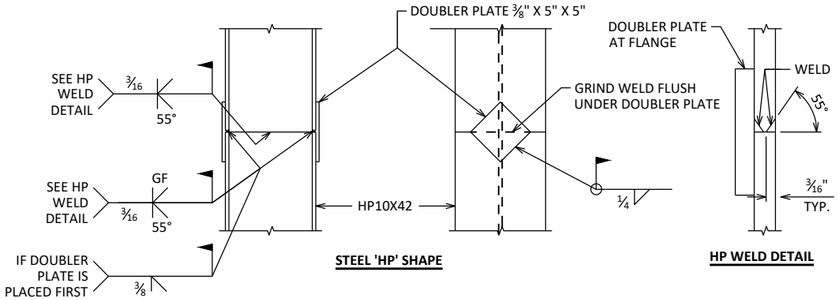
SHOWING F.F. WING



WING 1 PLAN



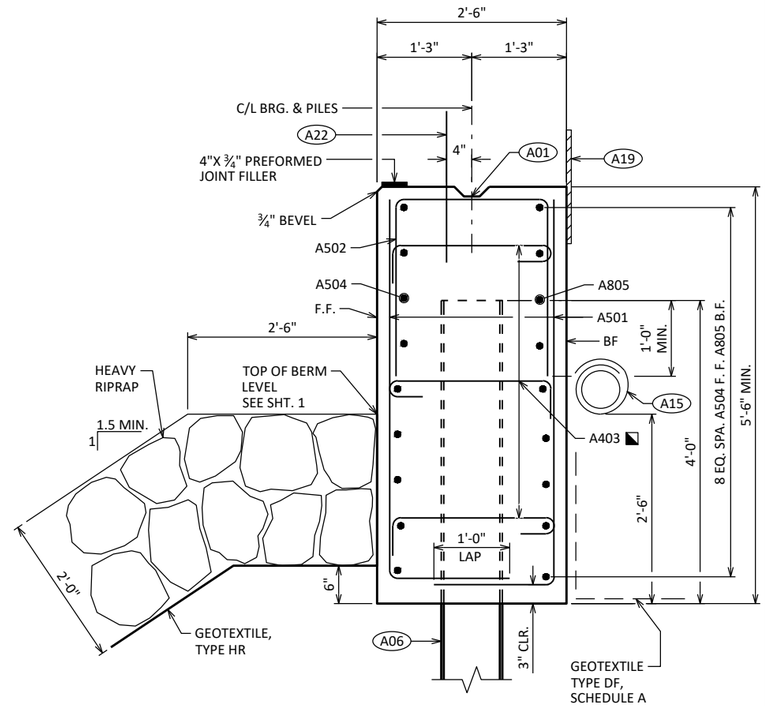
WING 2 PLAN



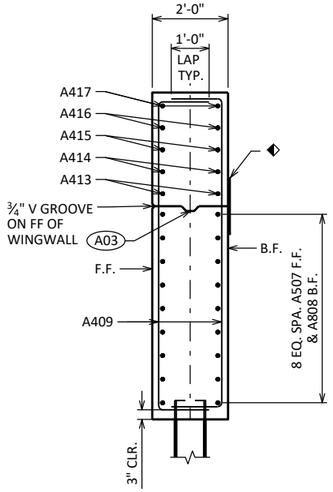
STEEL 'HP' SHAPE

HP WELD DETAIL

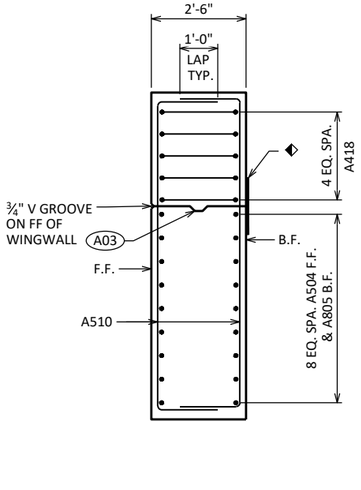
'HP' PILE DETAILS



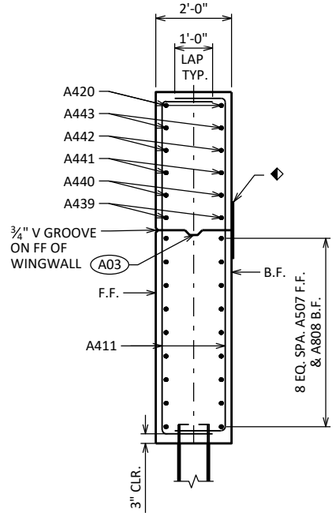
SECTION THRU BODY



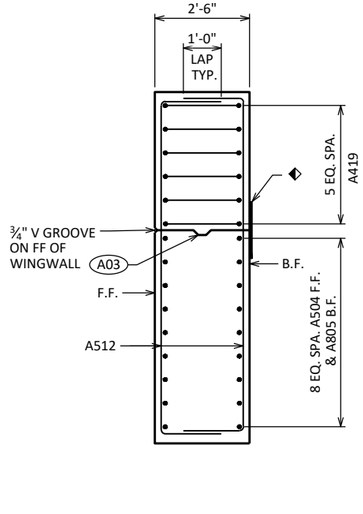
SECTION THRU WING 1



SECTION A-A



SECTION THRU WING 2



SECTION B-B

NOTES

- (A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 x 6.
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A06) SUPPORT ABUTMENT ON HP 10 x 42 STEEL PILING, ESTIMATED 45'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A22) A506 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- ◥ ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.

E.F. = EACH FACE
B.F. = BACK FACE
F.F. = FRONT FACE

◆ RMW IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES")

NO.	DATE	REVISION	BY

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SOUTH ABUTMENT DETAILS

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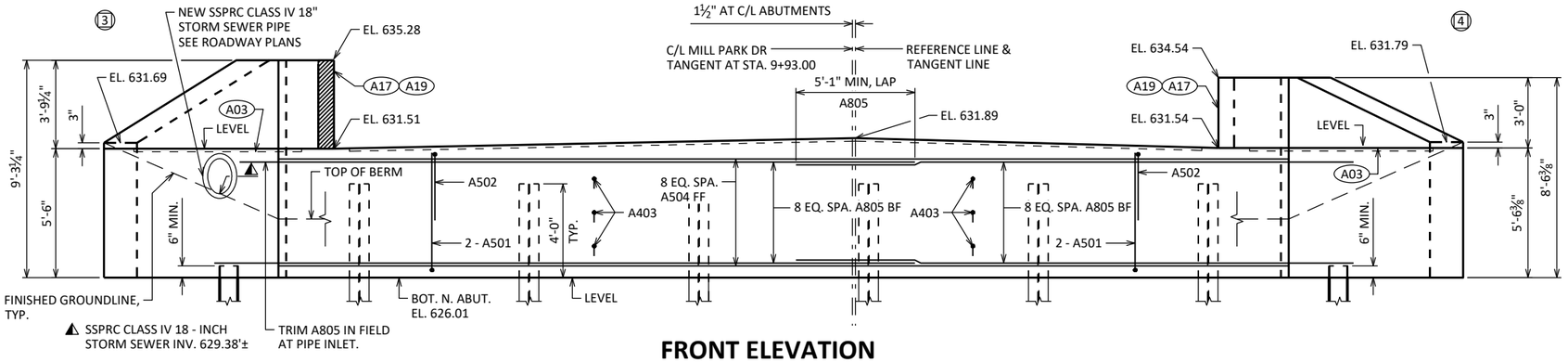

FRONT ELEVATION

(NORTH ABUTMENT LOOKING NORTH)

ABUTMENT NOTES

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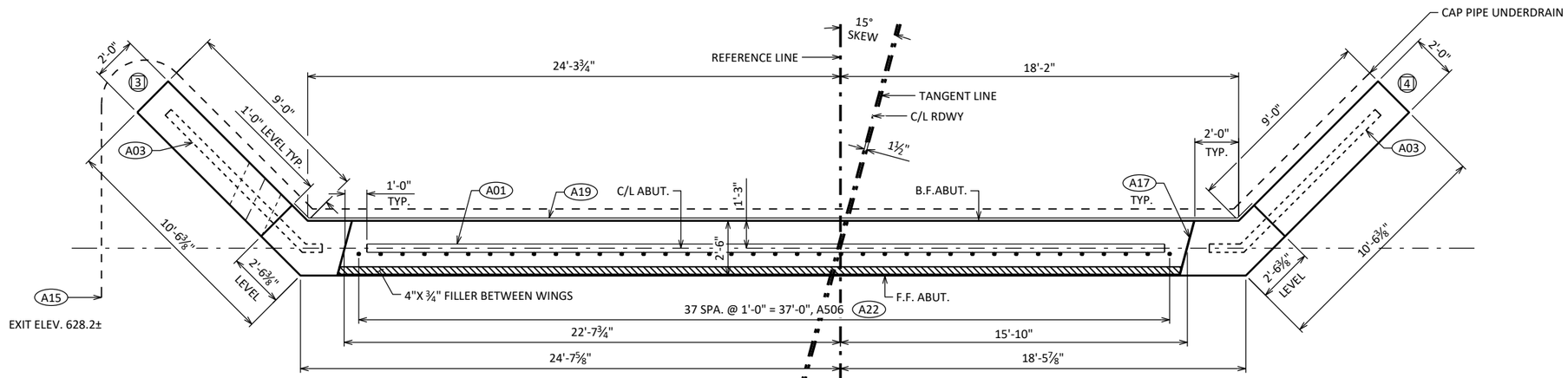
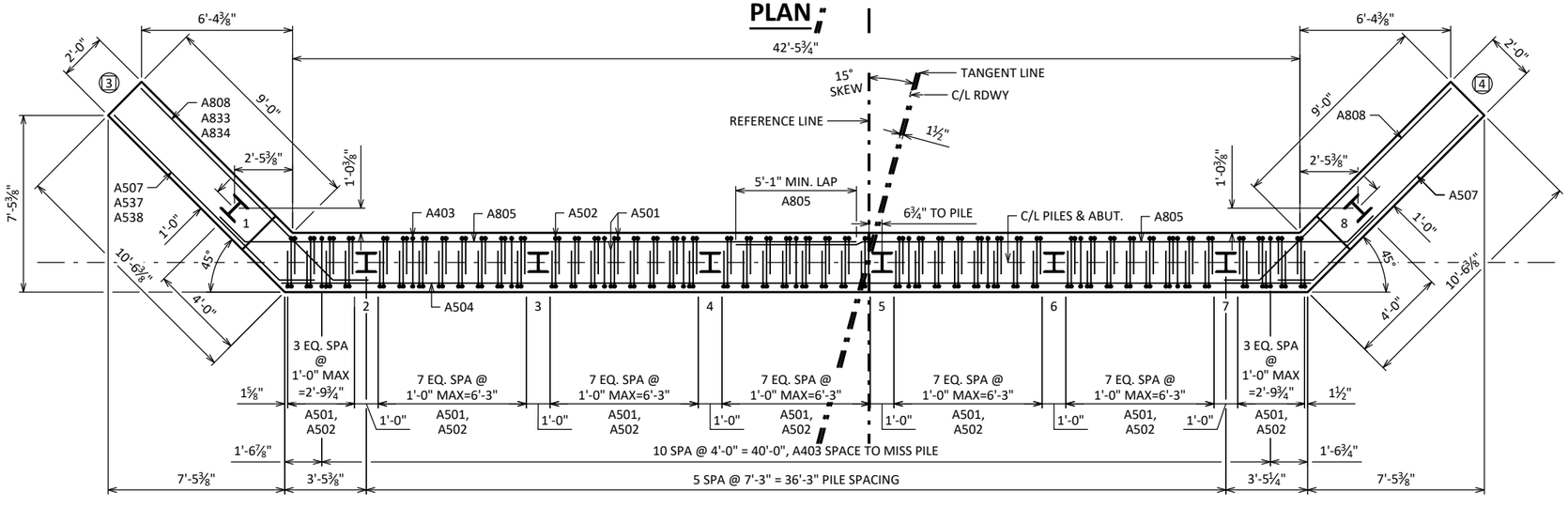


PLAN



PILE LAYOUT

N. ABUT. = NORTH ABUTMENT
S. ABUT. = SOUTH ABUTMENT

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

(3) INDICATES WING NUMBER

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STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-258

DRAWN BY ZLM | PLANS CK'D CJB

NORTH ABUTMENT

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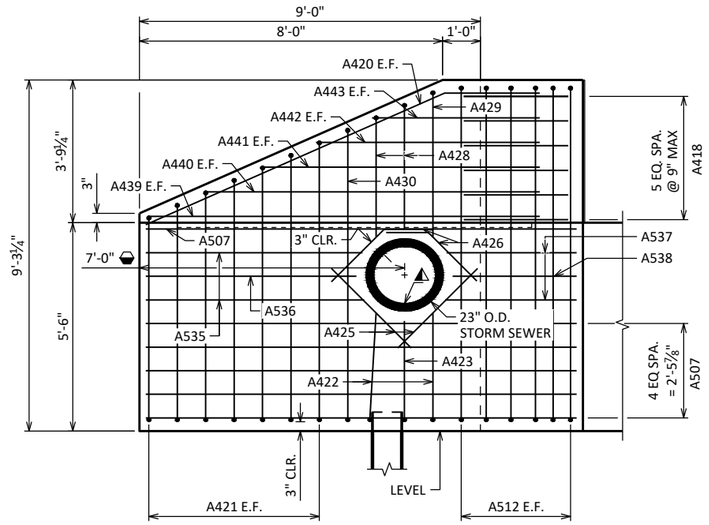
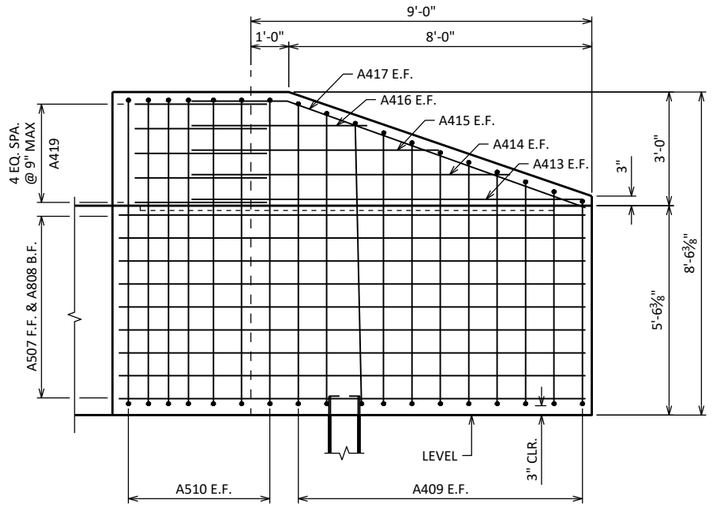


▲ SSPRC CLASS IV 18 - INCH STORM SEWER INV. 629.38'±

⏚ CONTRACTOR TO VERIFY PIPE LOCATION PRIOR TO POURING WING

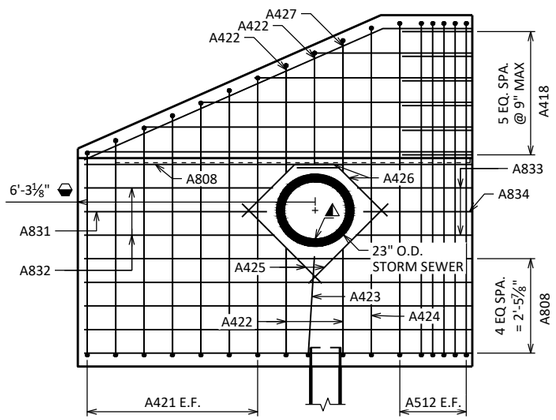
WING 3 ELEVATION

SHOWING F.F. WING



WING 4 ELEVATION

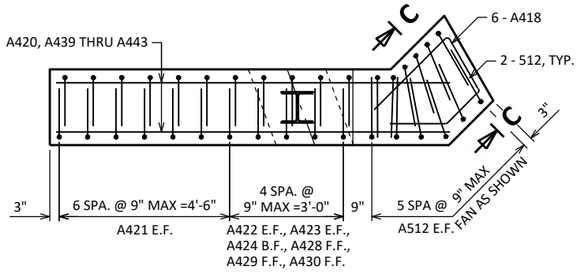
SHOWING F.F. WING



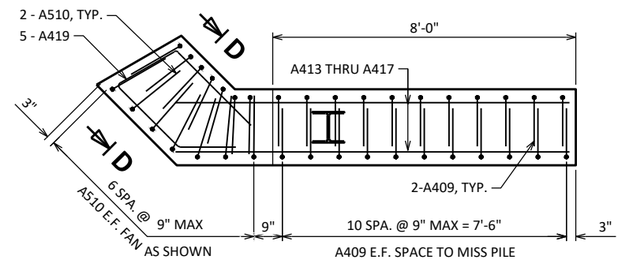
▲ SSPRC CLASS IV 18 - INCH STORM SEWER INV. 629.38'±

WING 3 ELEVATION

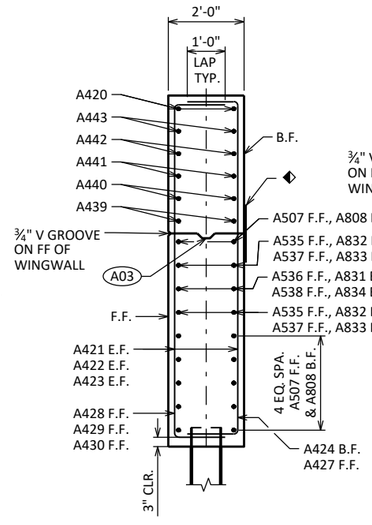
SHOWING B.F. WING



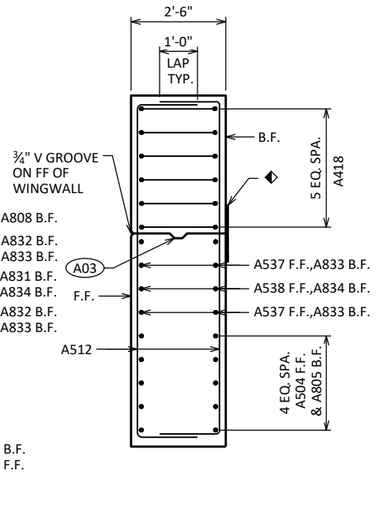
WING 3 PLAN



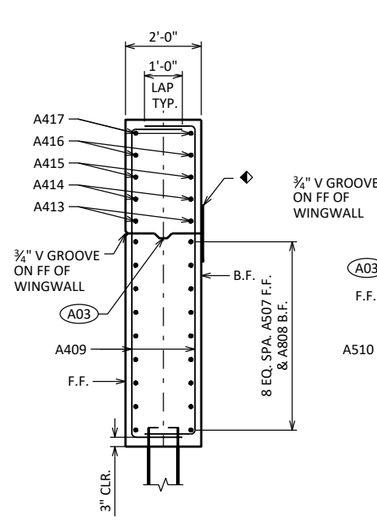
WING 4 PLAN



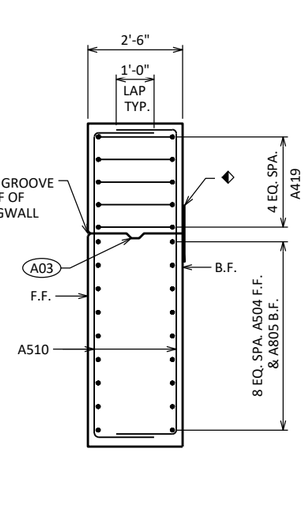
SECTION THRU WING 3



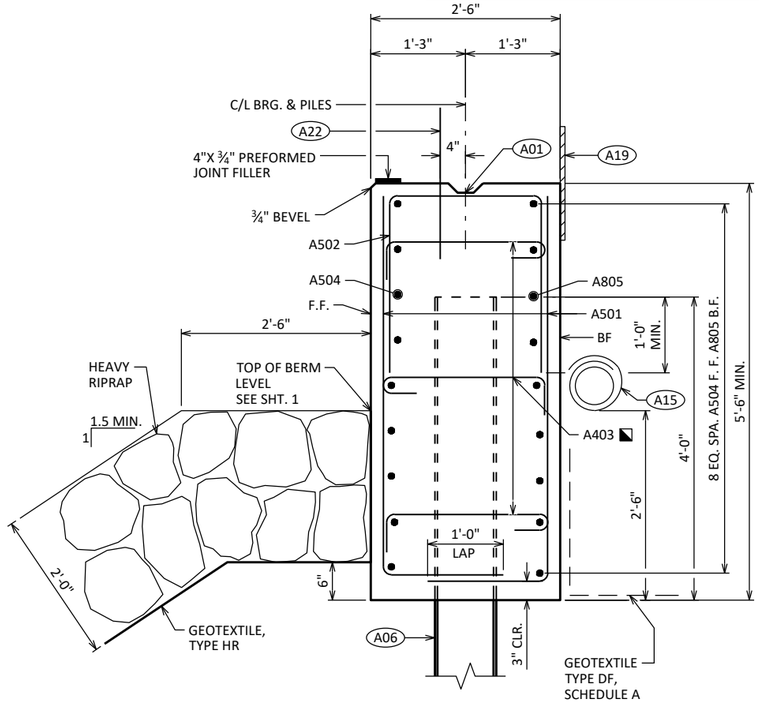
SECTION C-C



SECTION THRU WING 4



SECTION D-D



SECTION THRU BODY

NOTES

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- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).
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- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A22) A506 BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)

◆ ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
E.F. = EACH FACE
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◆ RMW IF CONST. JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES")

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DEPARTMENT OF TRANSPORTATION

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NORTH ABUTMENT DETAILS

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BILL OF BARS — BOTH ABUTMENTS

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

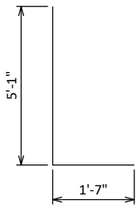
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		192	6'-7"	X		ABUTMENT BODY VERT. STIRRUPS
A502		96	7'-11"	X		ABUTMENT BODY VERT. STIRRUPS, TOP U-BAR
A403		66	3'-0"	X		ABUTMENT BODY TIES
A504		18	42'-11"			ABUTMENT BODY HORIZ. FF
A805		36	27'-9"	X		ABUTMENT BODY HORIZ. BF
A506	X	76	2'-0"			ABUTMENT BODY DOWELS
A507	X	33	11'-9"	X		WING LOWER HORIZ. FF
A808	X	33	13'-5"	X		WING LOWER HORIZ. BF
A409	X	44	9'-3"	X	X	WING 1 & 4 VERT. E.F. STIRRUPS
A510	X	26	11'-0"	X		WING 1 & 4 VERT. E.F. STIRRUPS
A411	X	22	9'-6"	X	X	WING 2 VERT. E.F. STIRRUPS
A512	X	26	11'-7"	X		WING 2 & 3 VERT. E.F. STIRRUPS
A413	X	4	10'-1"			WING 1 & 4 UPPER HORIZ.
A414	X	4	8'-2"			WING 1 & 4 UPPER HORIZ.
A415	X	4	6'-3"			WING 1 & 4 UPPER HORIZ.
A416	X	4	4'-3"			WING 1 & 4 UPPER HORIZ.
A417	X	4	10'-6"	X		WING 1 & 4 TOP HORIZ.
A418	X	11	7'-8"	X		WING 1 & 3 UPPER HORIZ. CORNER
A419	X	11	9'-1"	X		WING 2 & 4 UPPER HORIZ. CORNER
A420	X	4	10'-9"	X		WING 2 & 3 TOP HORIZ.
A421	X	14	8'-10"	X	X	WING 3 VERT. E.F. STIRRUPS
A422	X	6	4'-2"	X		WING 3 VERT. E.F. STIRRUPS
A423	X	2	3'-11"	X		WING 3 VERT. E.F. STIRRUPS
A424	X	1	11'-0"	X		WING 3 VERT. B.F.
A425	X	4	3'-3"			WING 3 VERT/HORIZ. E.F. PIPE CUTOUT
A426	X	4	3'-3"	X		WING 3 VERT/HORIZ. E.F. PIPE CUTOUT
A427	X	1	4'-9"	X		WING 3 VERT. B.F. STIRRUPS
A428	X	2	4'-5"	X		WING 3 VERT. F.F. STIRRUPS
A429	X	1	5'-1"	X		WING 3 VERT. F.F. STIRRUPS
A430	X	1	10'-1"	X		WING 3 VERT F.F. STIRRUPS
A831	X	1	4'-11"			WING 3 HORIZ. B.F.
A832	X	2	5'-1"			WING 3 HORIZ. B.F.
A833	X	2	6'-2"	X		WING 3 HORIZ. B.F.
A834	X	1	6'-1"	X		WING 3 HORIZ. B.F.
A535	X	2	5'-10"			WING 3 HORIZ. F.F.
A536	X	1	5'-8"			WING 3 HORIZ. F.F.
A537	X	2	3'-10"	X		WING 3 HORIZ. F.F.
A538	X	1	3'-9"	X		WING 3 HORIZ. F.F.
A439	X	4	10'-1"			WING 2 & 3 HORIZ. E.F.
A440	X	4	8'-6"			WING 2 & 3 HORIZ. E.F.
A441	X	4	7'-0"			WING 2 & 3 HORIZ. E.F.
A442	X	4	5'-5"			WING 2 & 3 HORIZ. E.F.
A443	X	4	3'-10"			WING 2 & 3 HORIZ. E.F.

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

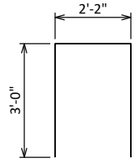
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

BAR MARK	NO. REQ'D.	LENGTH
A409	4 SERIES OF 11	7'-11" TO 10'-6"
A411	2 SERIES OF 11	7'-11" TO 11'-0"
A421	2 SERIES OF 7	7'-11" TO 9'-9"



A501



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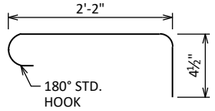

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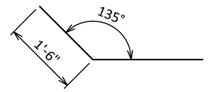
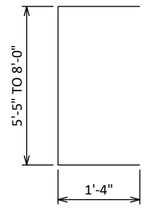
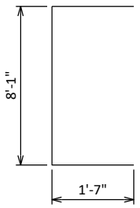


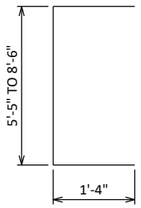
A805, A507, A808



A409



A510



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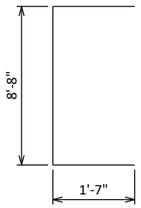

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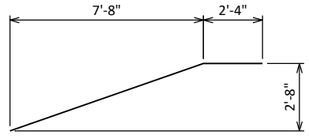

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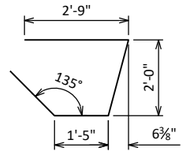

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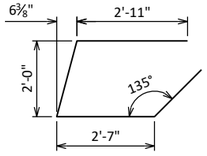

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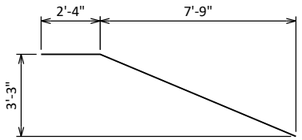

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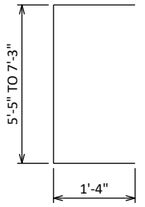

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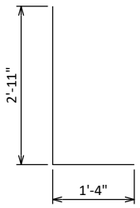

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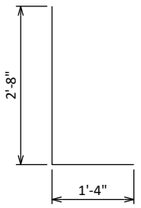

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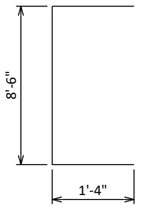

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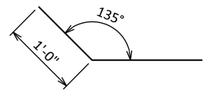

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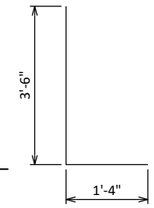

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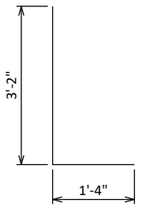

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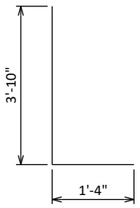

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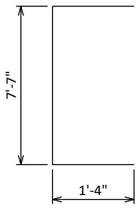

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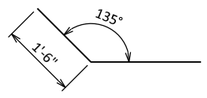

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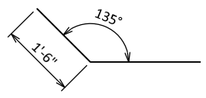

A537, A538

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-258

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BILL OF BAR DETAILS

SHEET 8 OF 12

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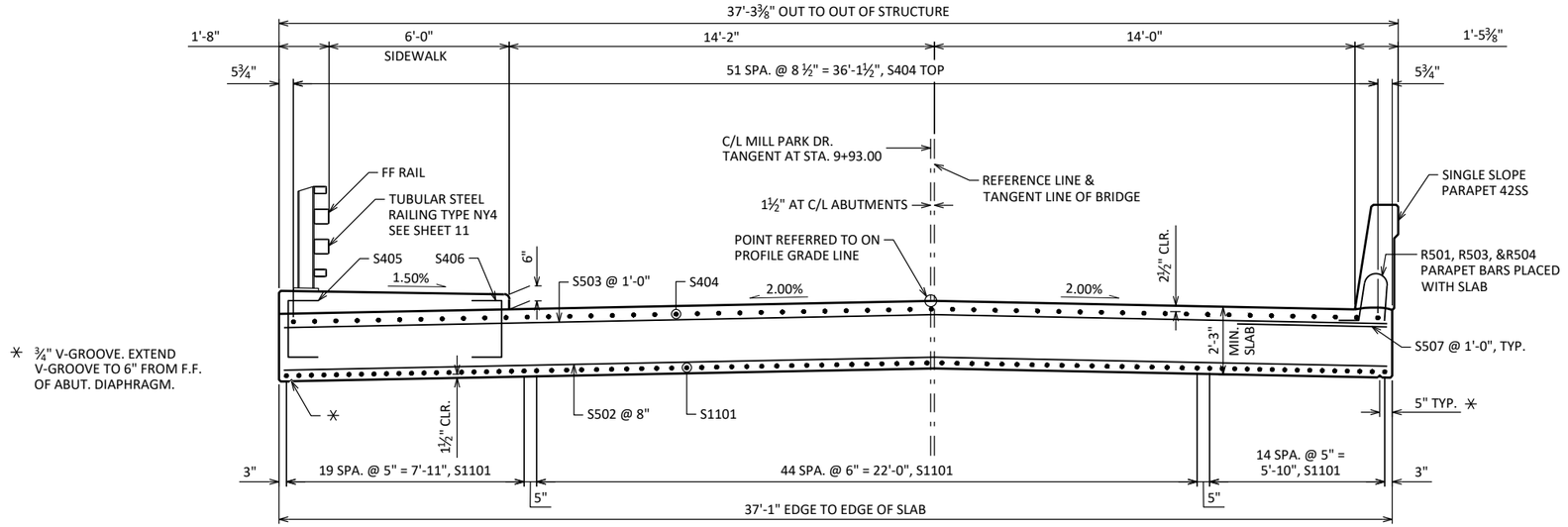
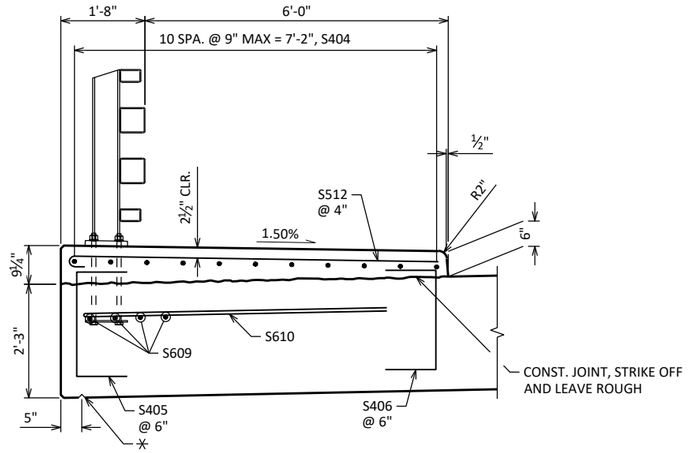
STATE PROJECT NUMBER

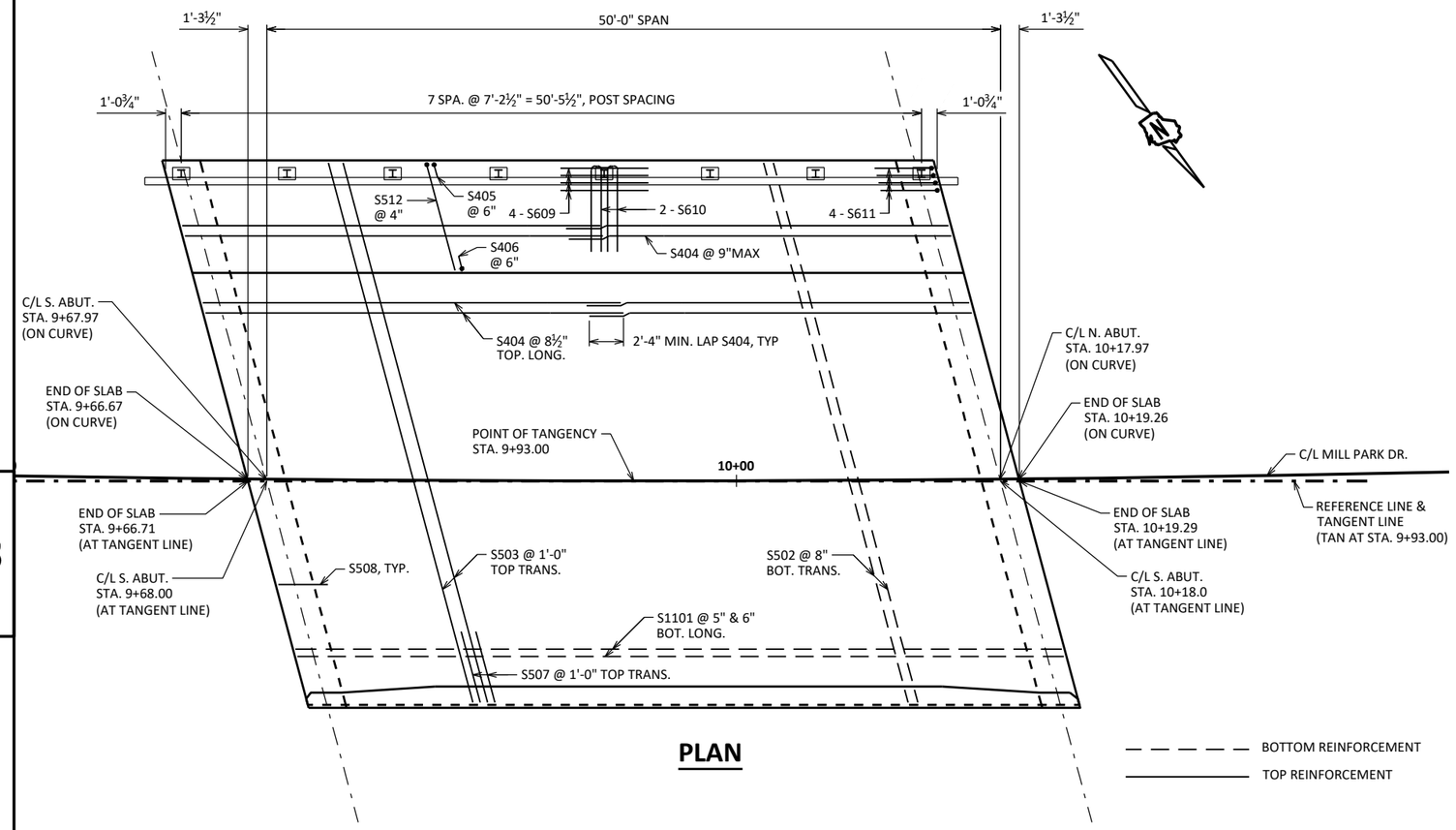
5408-00-70



TYPICAL SECTION THRU BRIDGE



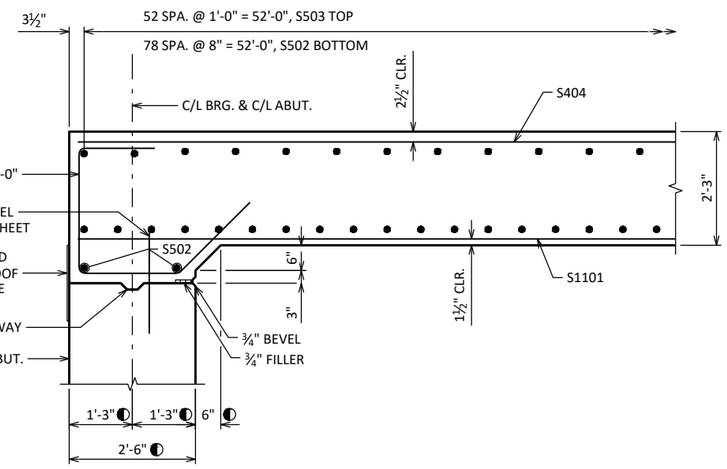
TYPICAL SECTION THRU SIDEWALK



PLAN

BOTTOM REINFORCEMENT

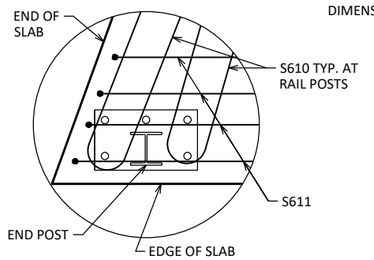
TOP REINFORCEMENT



PARTIAL LONGITUDINAL SECTION

DIMENSIONS ARE GIVEN PARALLEL TO C/L REFERENCE LINE
UNLESS OTHERWISE NOTED

◐ MEASURED NORMAL TO THE C/L OF ABUTMENT.
DIMENSIONS ARE TYPICAL FOR BOTH ABUTMENTS



END POST DETAIL

REINFORCEMENT AT CORNERS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-258

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SUPERSTRUCTURE

SHEET 9 OF 12

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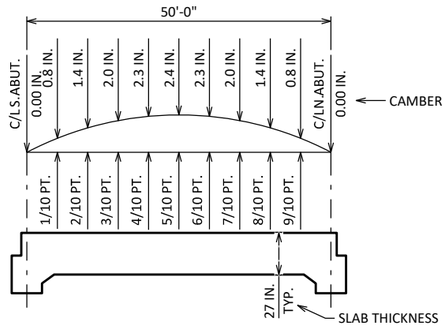


CAMBER AND SLAB THICKNESS DIAGRAM

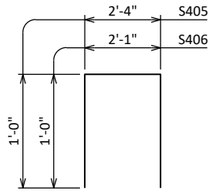
CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. PARAPETS AND SIDEWALK PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED, EXCEPT FOR STAGED CONSTRUCTION.

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

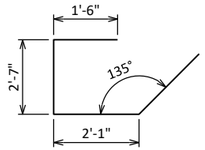
	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION

TOP OF SLAB ELEVATIONS

LOCATION	C/L BRG. S. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. N. ABUT.
W. EDGE OF DECK	634.86	634.83	634.81	634.77	634.73	634.70	634.67	634.63	634.59	634.55	634.50
W. EDGE OF DECK AT FF CURB	634.98	634.94	634.91	634.87	634.83	634.80	634.76	634.72	634.68	634.65	634.61
CROWN OR R/L	635.26	635.22	635.19	635.15	635.11	635.08	635.04	635.00	634.96	634.93	634.89
E. EDGE OF DECK AT FF PARAPET	634.98	634.94	634.91	634.87	634.83	634.80	634.76	634.72	634.68	634.65	634.61



S405 & S406



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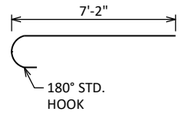

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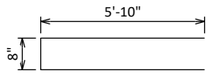

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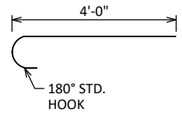

S611

BILL OF BARS

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S1101	X	80	52'-3"			SLAB BOTTOM LONGITUDINAL
S502	X	83	38'-0"			SLAB BOTTOM TRANSVERSE
S503	X	53	38'-0"			SLAB TOP TRANSVERSE
S404	X	126	27'-4"			SLAB AND SIDEWALK TOP LONGITUDINAL
S405	X	105	4'-1"	X		SLAB AT SIDEWALK AT EDGE OF SLAB
S406	X	105	3'-11"	X		SLAB AT SIDEWALK AT CURB
S507	X	52	5'-0"			SLAB TRANSVERSE AT EDGE
S508	X	74	8'-0"	X		ABUTMENT DIAPHRAGM STIRRUPS
S609	X	24	6'-0"			SLAB TOP LONGITUDINAL UNDER RAIL POSTS
S610	X	16	12'-0"	X		SLAB TOP STIRRUPS UNDER RAIL POSTS
S611	X	8	6'-0"	X		SLAB TOP LONGITUDINAL UNDER CORNER RAIL END POSTS
S512	X	157	7'-7"	X		SIDEWALK TOP TRANSVERSE

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	C/L BRG. S. ABUTMENT	5/10 PT.	C/L BRG. N. ABUTMENT
W. GUTTER			
CROWN OR R/L			
E. GUTTER			

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

NOTES

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

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

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STRUCTURE B-12-258

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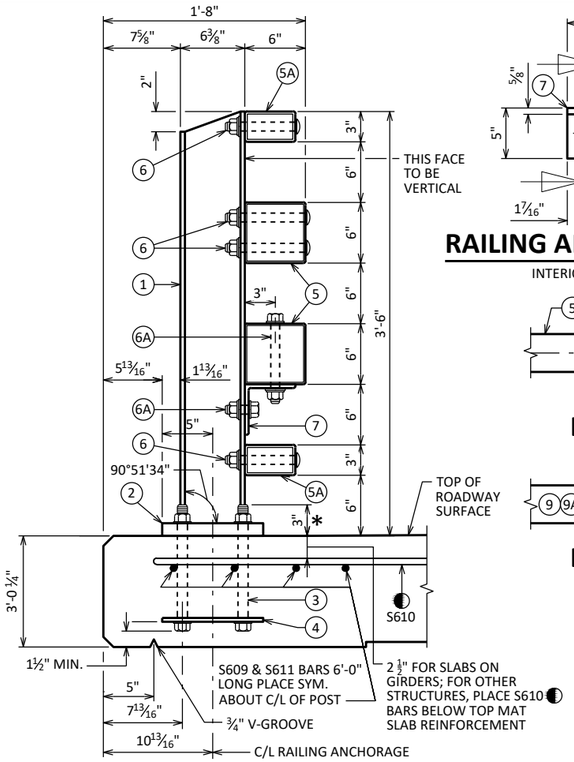
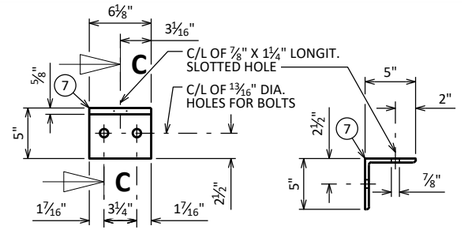
SUPERSTRUCTURE DETAILS

SHEET 10 OF 12



SECTION THRU RAILING ON DECK

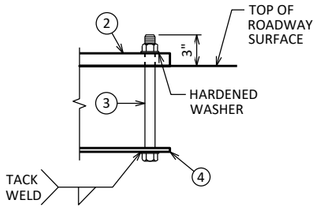


RAILING ANGLE DETAIL

INTERIOR ELEVATION

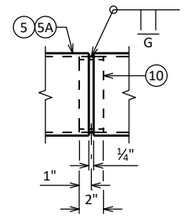
SECTION C-C

ANGLE SECTION



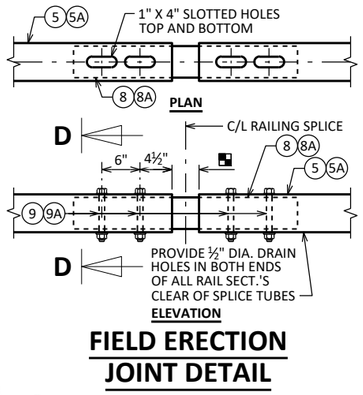
ANCHOR BOLTS

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

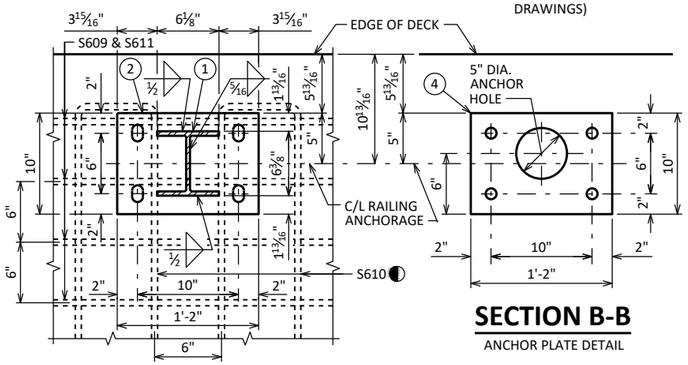


SHOP RAIL SPLICE DETAIL

(LOCATION MUST BE SHOWN ON SHOP DRAWINGS)

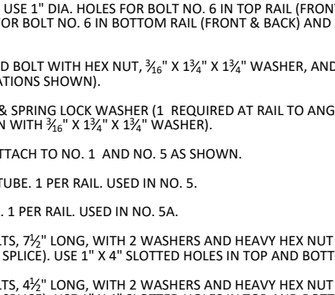


FIELD ERECTION JOINT DETAIL



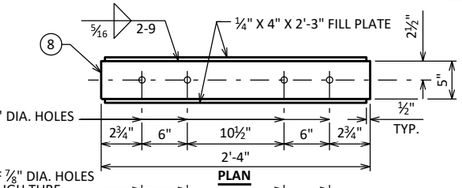
SECTION A-A

BASE PLATE DETAIL

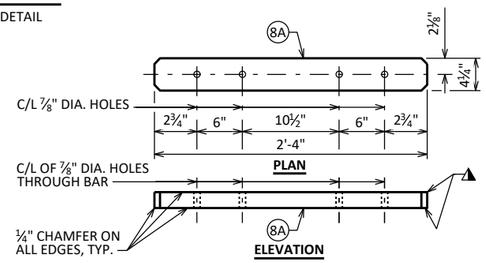


SECTION B-B

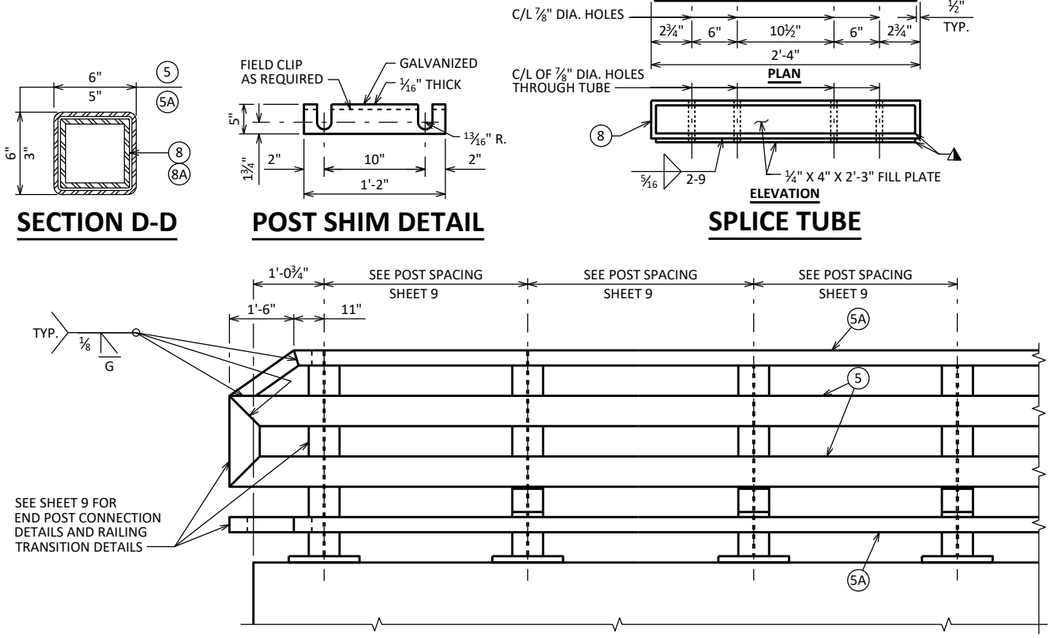
ANCHOR PLATE DETAIL



SPLICE TUBE

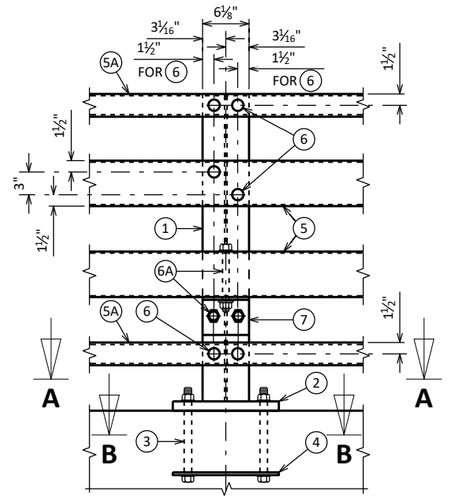


SPLICE BAR



PART ELEVATION OF RAILING

INTERIOR ELEVATION



PART ELEVATION OF RAILING AT POST

INTERIOR ELEVATION

SECTION D-D

POST SHIM DETAIL

LEGEND

(1) W6 X 25 WITH 1⅛" X 1⅜" HORIZONTAL SLOTTED HOLES ON EACH SIDE OF POST FOR BOLT NO. 6 AT TOP TWO RAILS. USE 1" DIA. HOLES FOR BOLTS NO. 6 AT BOTTOM NO. 5A AND FOR BOLT NO. 6A AT NO. 7. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.

(2) PLATE 1¼" X 10" X 1'-2" WITH 1⅛" X 1⁷⁄₁₆" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.

(3) ASTM A449 - 1" DIA. ANCHOR BOLTS WITH HEAVY HEX NUT AND 2" O.D. HARDENED WASHER (ALL GALVANIZED). 4 REQUIRED PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 17½" LONG BOLT.

(4) ⅜" X 10" X 1'-2" ANCHOR PLATE (GALVANIZED) WITH 1¹⁄₁₆" DIA. HOLES FOR ANCHOR BOLTS NO. 3.

(5) TS 6 X 6 X ³⁄₁₆" STRUCTURAL TUBING. USE 1" DIA. HOLES FOR BOLT NO. 6 (FRONT & BACK) & ⅞" DIA. HOLES FOR BOLT NO. 6A (TOP & BOTTOM).

(5A) TS 5 X 3 X ¼" STRUCTURAL TUBING. USE 1" DIA. HOLES FOR BOLT NO. 6 IN TOP RAIL (FRONT & BACK). USE 1⅛" X 1⅜" HORIZONTAL SLOTTED HOLES FOR BOLT NO. 6 IN BOTTOM RAIL (FRONT & BACK) AND A 2" O.D. WASHER UNDER BOLT HEAD.

(6) ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH HEX NUT, ³⁄₁₆" X 1¾" X 1¾" WASHER, AND SPRING LOCK WASHER (2 REQUIRED AT RAIL TO POST LOCATIONS SHOWN).

(6A) ¾" DIA. A325 BOLT WITH HEX NUT & SPRING LOCK WASHER (1 REQUIRED AT RAIL TO ANGLE & 2 REQUIRED AT ANGLE TO POST LOCATIONS SHOWN WITH ³⁄₁₆" X 1¾" X 1¾" WASHER).

(7) L 5 X 5 X ⅝" STRUCTURAL ANGLE. ATTACH TO NO. 1 AND NO. 5 AS SHOWN.

(8) TS 5 X 5 X ⁵⁄₁₆" X 2'-4" LONG SPLICE TUBE. 1 PER RAIL. USED IN NO. 5.

(8A) 4¼" X 2⅛" X 2'-4" LONG SPLICE BAR. 1 PER RAIL. USED IN NO. 5A.

(9) ¾" DIA. A325 FULLY THREADED BOLTS, 7½" LONG, WITH 2 WASHERS AND HEAVY HEX NUT ON EACH BOLT. NUT TO BE FINGER TIGHT. (4 REQUIRED PER SPLICE). USE 1" X 4" SLOTTED HOLES IN TOP AND BOTTOM OF NO. 5.

(9A) ¾" DIA. A325 FULLY THREADED BOLTS, 4½" LONG, WITH 2 WASHERS AND HEAVY HEX NUT ON EACH BOLT. NUT TO BE FINGER TIGHT. (4 REQUIRED PER SPLICE). USE 1" X 4" SLOTTED HOLES IN TOP AND BOTTOM OF NO. 5A.

(10) SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".

■ ROADWAY OPENING OR 2½" MIN. FOR STRIP SEAL EXP. JOINT & ½" OPENING FOR A1 ABUTMENT. ½" AT FIXED JOINTS. SPLICES ARE REQUIRED IN ANY RAILING SPAN BETWEEN POSTS THAT CONTAINS A SUPERSTRUCTURE EXPANSION JOINT.

▲ PROTRUSIONS CAUSED BY WELDING OR GALVANIZING ARE NOT PERMITTED ON THE ADJOINING SURFACES OF THE RAILS, SPLICE TUBES AND FILL PLATES.

◐ #6 BARS X 12'-0" LONG. BEND AS SHOWN. TIE TO TOP MAT OF STEEL. (DESIGNER TO PLACE THESE BARS IN BILL OF BARS FOR SUPERSTRUCTURE).

NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE NY4" WHICH INCLUDES ALL ITEMS SHOWN.

RAILING SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.

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.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS, ANGLES, SPLICE TUBES, SPLICE BARS AND STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING PER SSPC SPECIFICATIONS.

RAIL POST, BASE PLATES, SPLICE BAR, ANGLES AND SPLICE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED fY = 50 KSI. ANCHOR PLATES & SHIMS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.

THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.

FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. CAULK AROUND PERIMETER OF NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

STEEL SHIMS SHALL BE PROVIDED & USED UNDER PLATE NO. 2 WHERE REQUIRED FOR ALIGNMENT, AND SHALL BE GALVANIZED.

STATE PROJECT NUMBER

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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-258

DRAWN BY ZLM | PLANS CK'D CJB

TUBULAR STEEL RAILING TYPE NY4

SHEET 11 OF 12

53

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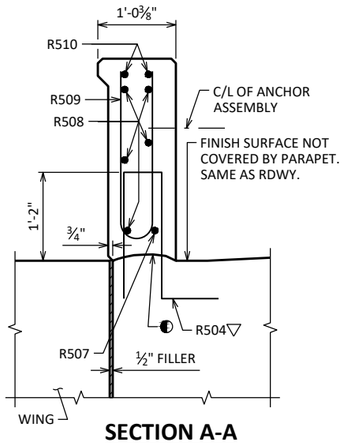
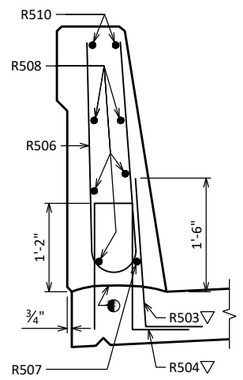
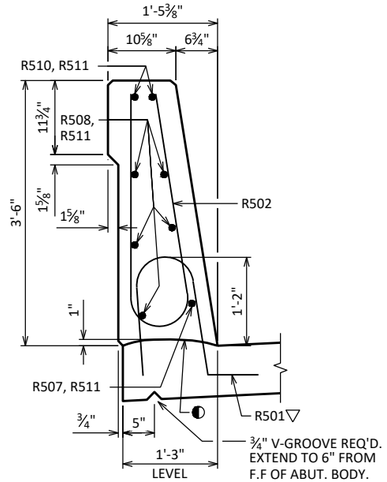


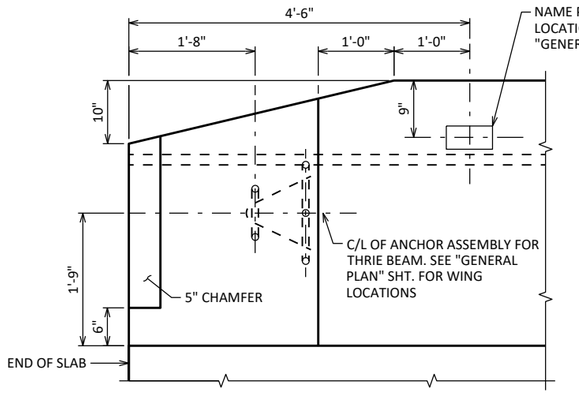
SECTION A-A



SECTION B-B



SECTION C-C



PARAPET END TREATMENT DETAIL

LOOKING AT INSIDE FACE OF PARAPET

STATE PROJECT NUMBER

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BILL OF BARS

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

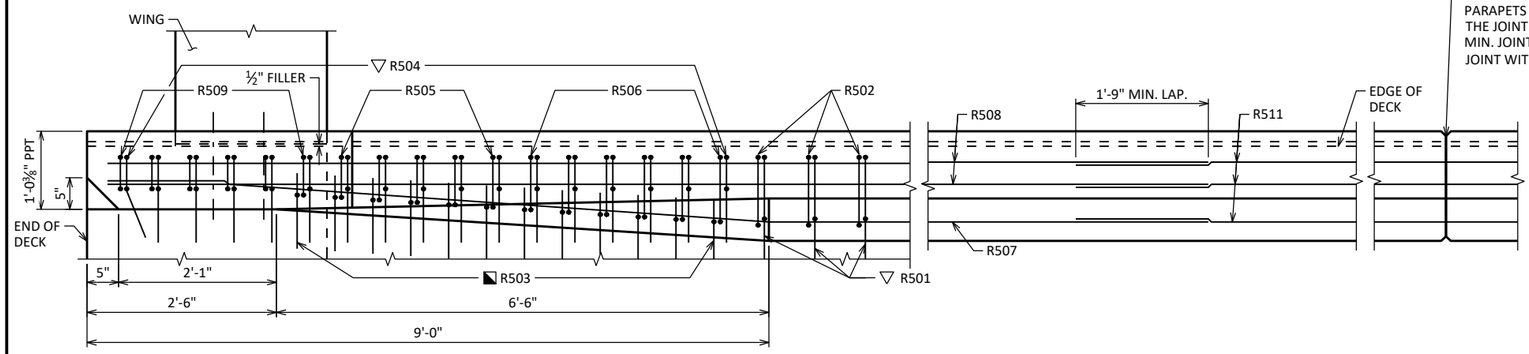
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	53	4'-5"	X		PARAPET VERT.
R502	X	53	6'-8"	X		PARAPET VERT.
R503	X	24	2'-9"	X		PARAPET VERT.
R504	X	34	4'-4"	X		PARAPET VERT.
R505	X	10	6'-5"	X		PARAPET VERT.
R506	X	12	6'-6"	X		PARAPET VERT.
R507	X	2	18'-0"	X		PARAPET HORIZ.
R508	X	10	18'-0"			PARAPET HORIZ.
R509	X	12	5'-5"	X	⚠	PARAPET VERT.
R510	X	4	18'-0"	X		PARAPET HORIZ.
R511	X	8	20'-0"			PARAPET HORIZ.

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

BAR SERIES TABLE

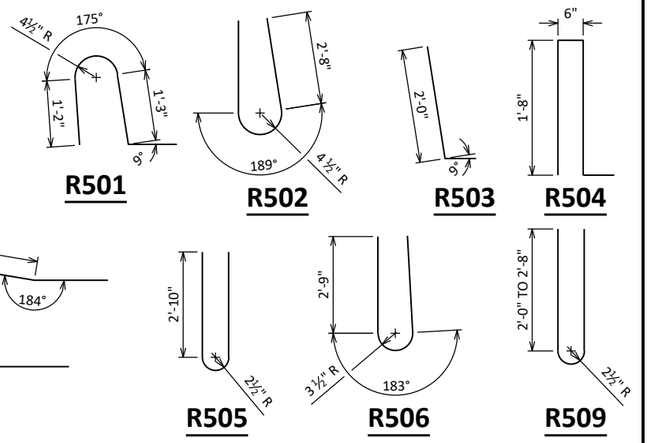
BUNDLE AND TAG EACH SERIES SEPARATELY.

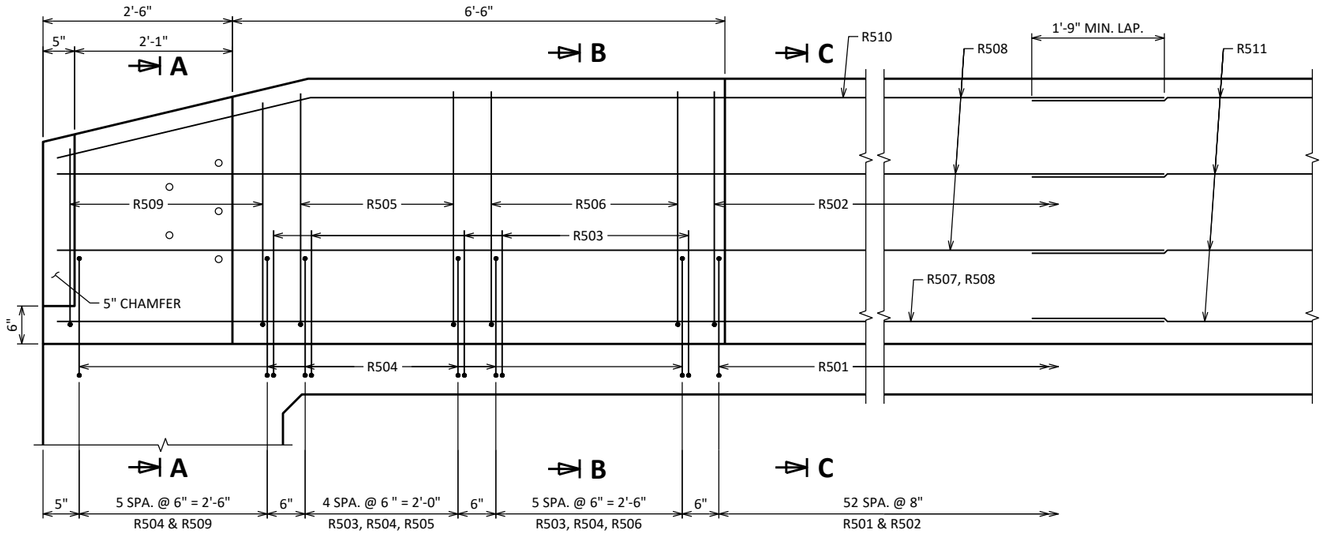
BAR MARK	NO. REQ'D.	LENGTH
R509	2 SERIES OF 6	4'-9" TO 6'-1"



PLAN

CORNER1 CORNER SHOWN, OTHERS SIMILAR

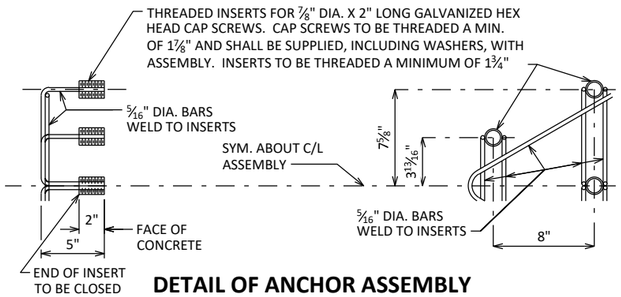




INSIDE ELEVATION

CORNER2 CORNER SHOWN, OTHERS SIMILAR

- ◐ CONST. JOINT - STRIKE OFF AS SHOWN
- ◪ USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▽ R501, R503, R504, AND R511 BARS TO BE TIED TO SUPERSTRUCTURE STEEL BEFORE SUPERSTRUCTURE IS POURED.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH ASTM F2329.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-12-258

DRAWN BY ZLM | PLANS CK'D CJB

SINGLE SLOPE PARAPET 42SS

SHEET 12 OF 12

54

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BRIDGE B-12-0258

EARTHWORK SUMMARY

STATION		REAL STATION	DISTANCE	AREA (SF)		INCREMENTAL VOL (CY) (UNADJUSTED)		CUMULATIVE VOL (CY)		MASS ORDINATE
				CUT	FILL	CUT (3)	FILL (1)	CUT 1.00	FILL 1.3 (2)	
9+00	AH	900.00	0.00	75.8	0.06	0.00	0.00	0.00	0.00	0.00
9+30.34		930.34	30.34	94.13	0.44	95.48	0.28	95.48	0.37	95.11
9+39.64		939.64	9.30	90.5	2.02	31.80	0.42	127.27	0.92	126.36
9+48.95		948.95	9.31	89.66	3.15	31.06	0.89	158.33	2.07	156.26
9+50		950.00	1.05	89.80	3.46	3.49	0.13	161.82	2.24	159.58
9+65	BK	965.00	15.00	101.63	0.03	53.18	0.97	215.00	3.50	211.50
STRUCTURE B-12-0258										
10+20	AH	1020.00	0.00	0.00	98.72	0.00	0.00	215.00	3.50	211.50
10+44.59		1044.59	24.59	96.28	0.00	43.84	44.95	258.84	61.94	196.90
10+50		1050.00	5.41	99.38	0.00	19.60	0.00	278.44	61.94	216.50
10+53.90		1053.90	3.90	94.05	0.00	13.97	0.00	292.41	61.94	230.47
10+63.21		1063.21	9.31	91.49	0.00	31.99	0.00	324.40	61.94	262.46
10+75		1075.00	11.79	70.09	0.15	35.28	0.03	359.68	61.99	297.70
10+93.63	BK	1093.63	18.63	1.67	0.00	24.76	0.05	384.44	62.05	322.39
							TOTALS	**385**	**62**	

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY

(2) - FILL EXPANSION 30%

(3) - EXISTING ASPHALTIC PAVEMENT IS INCLUDED IN COMMON EXCAVATION TOTALS

9

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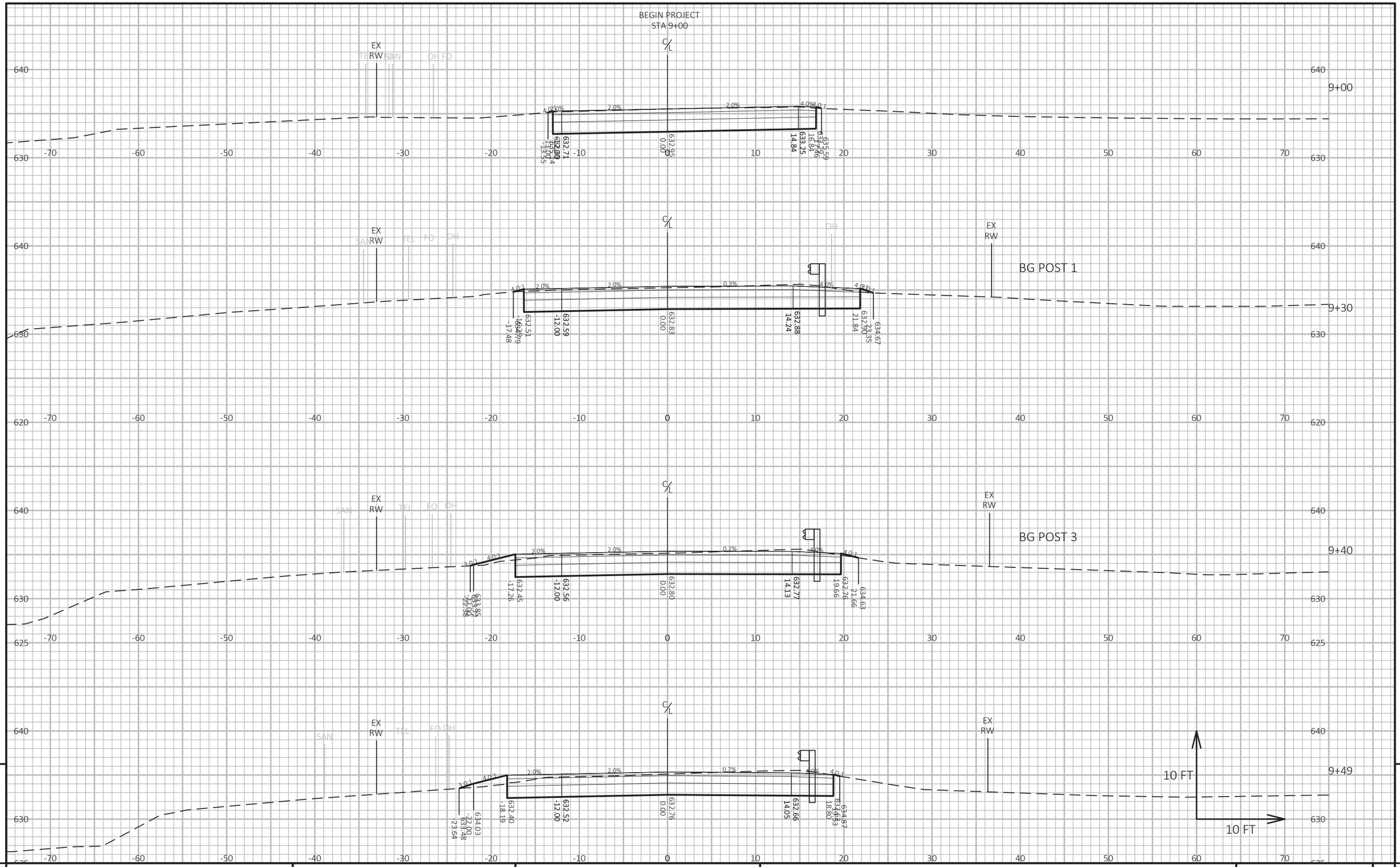


9

9

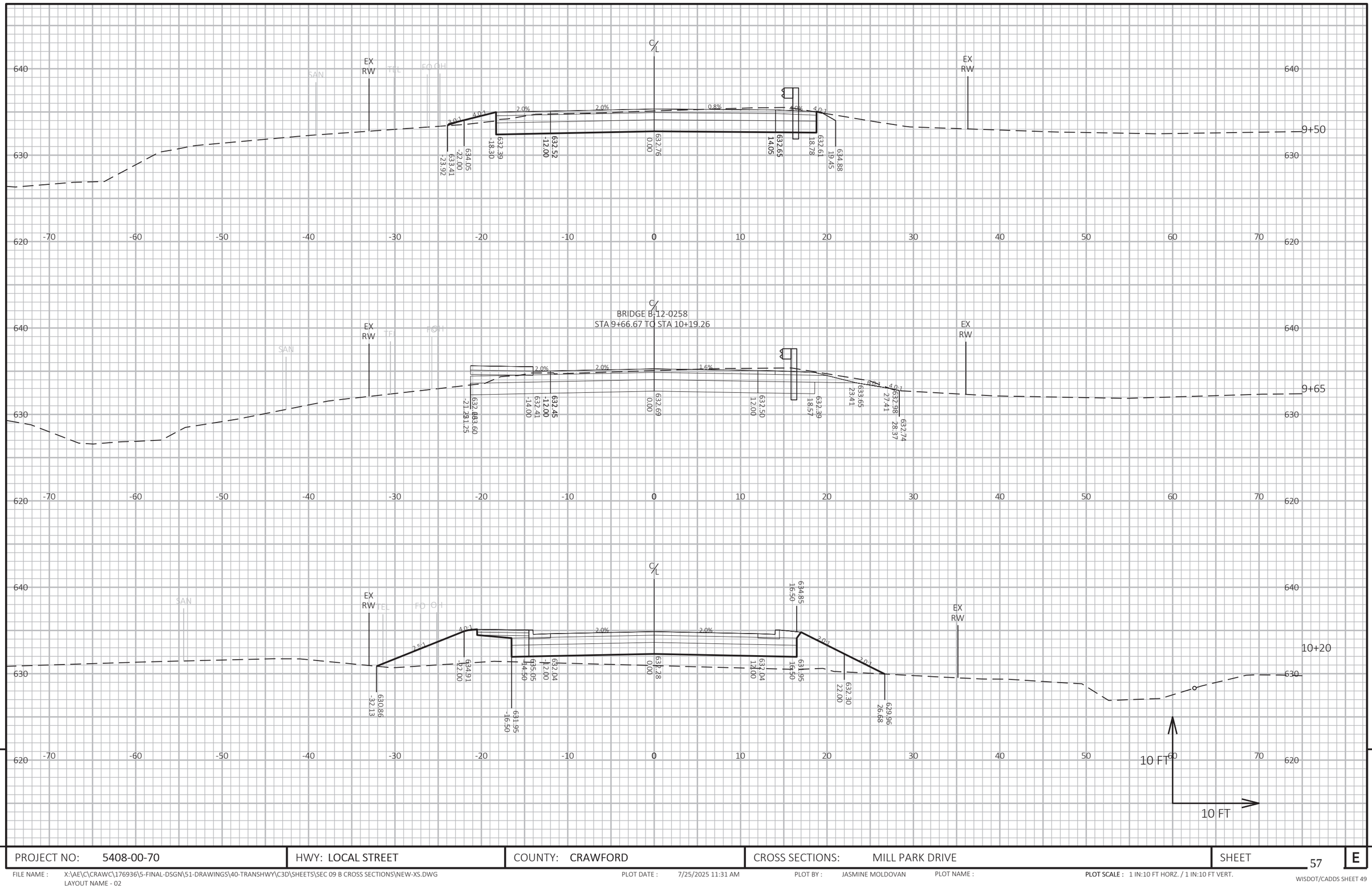
PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	CROSS SECTIONS: MILL PARK DRIVE	SHEET 56	E

FILE NAME : X:\AE\C\CRAWC\176936\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\C3D\SHEETS\SEC 09 B CROSS SECTIONS\NEW-XS.DWG
LAYOUT NAME - 01

PLOT DATE : 7/25/2025 11:31 AM PLOT BY : JASMINE MOLDOVAN PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

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PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	CROSS SECTIONS: MILL PARK DRIVE	SHEET 57	E

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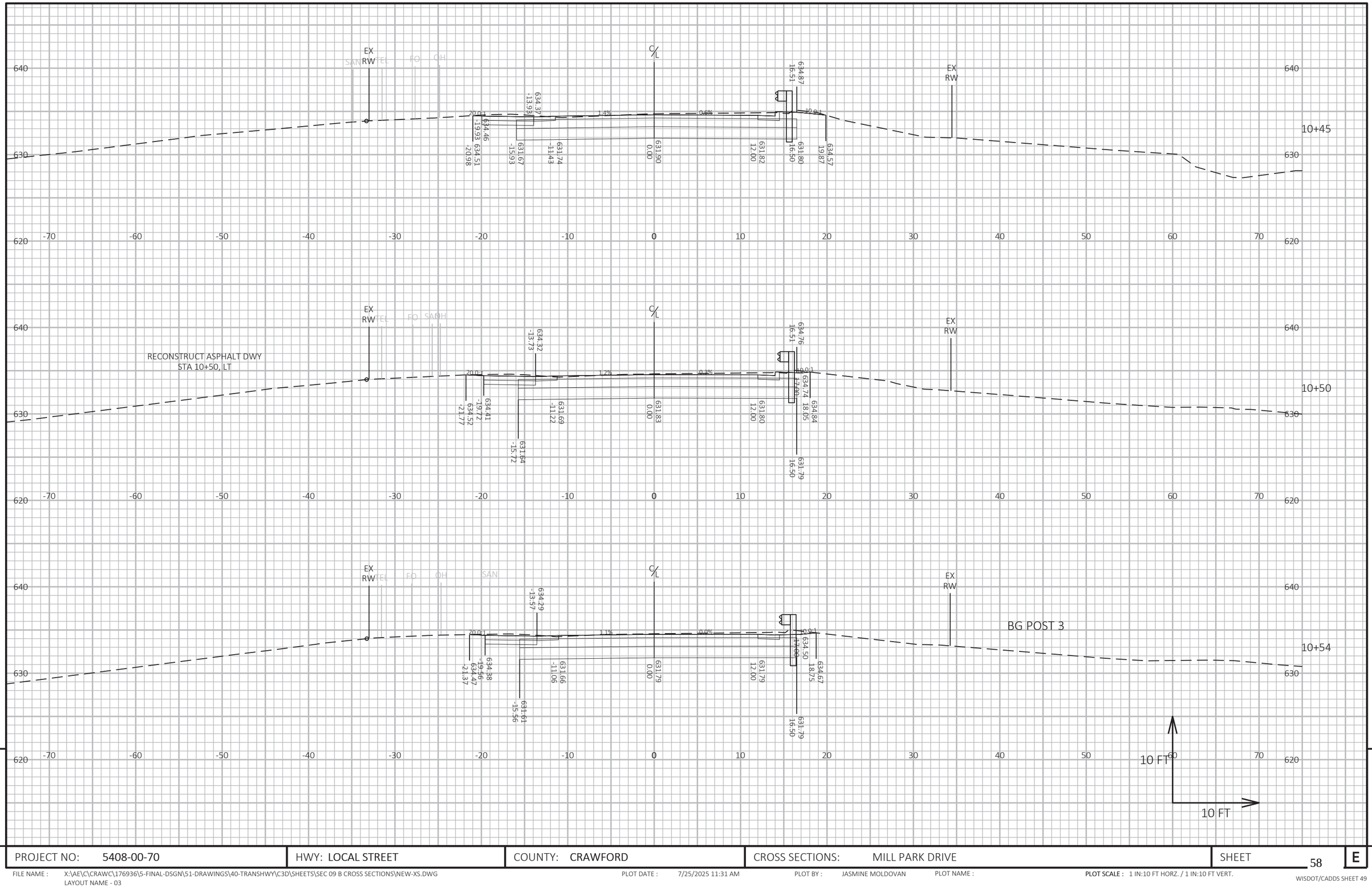
LAYOUT NAME - 02

PLOT DATE : 7/25/2025 11:31 AM PLOT BY : JASMINE MOLDOVAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

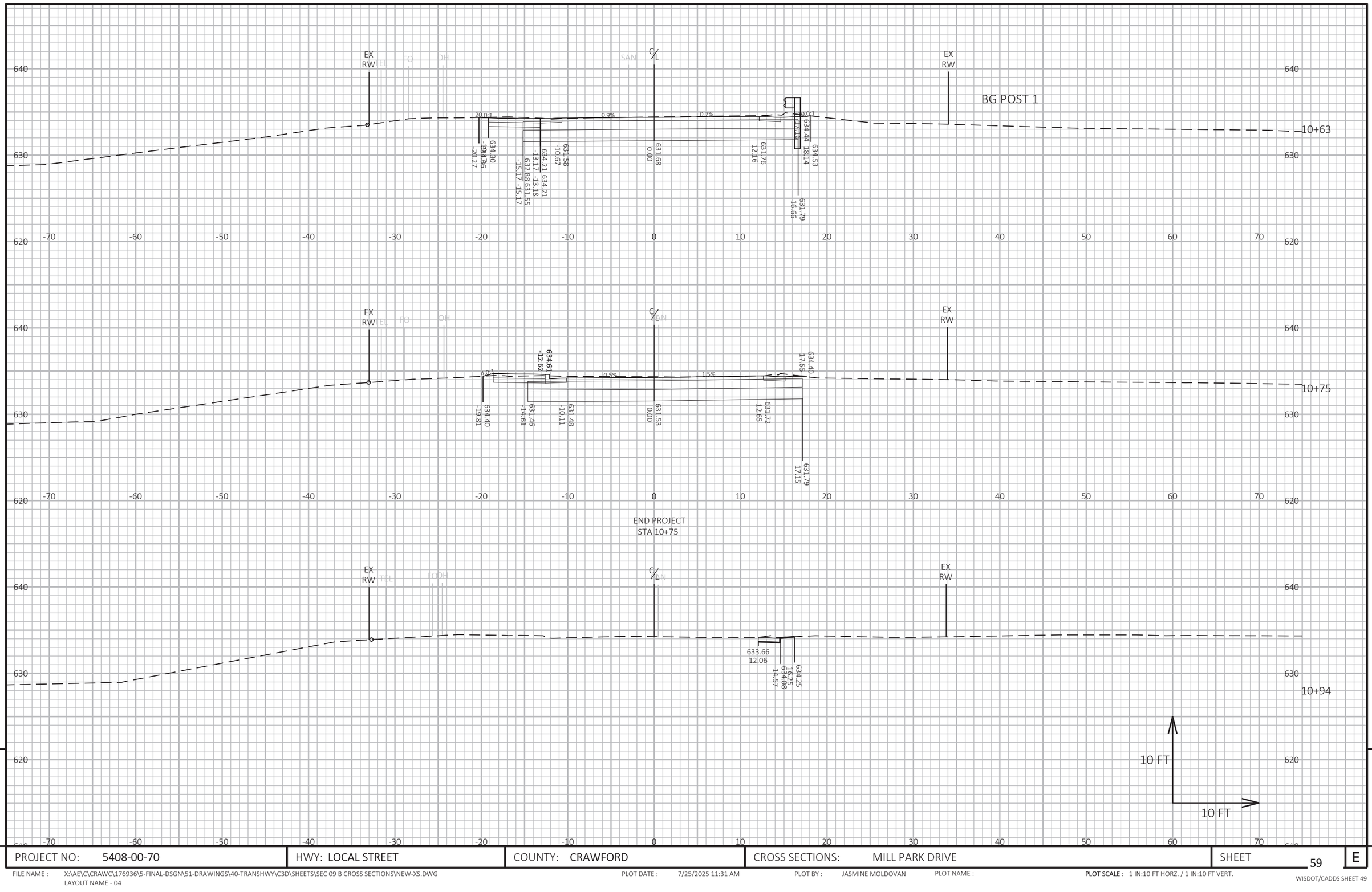


PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	CROSS SECTIONS: MILL PARK DRIVE	SHEET 58	E

FILE NAME : X:\AE\C\CRAWC\176936\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\C3D\SHEETS\SEC 09 B CROSS SECTIONS\NEW-XS.DWG
LAYOUT NAME - 03

PLOT DATE : 7/25/2025 11:31 AM PLOT BY : JASMINE MOLDOVAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 5408-00-70	HWY: LOCAL STREET	COUNTY: CRAWFORD	CROSS SECTIONS: MILL PARK DRIVE	SHEET 59	E

FILE NAME : X:\AE\C\CRAWC\176936\5-FINAL-DSGN\51-DRAWINGS\40-TRANSHWY\C3D\SHEETS\SEC 09 B CROSS SECTIONS\NEW-XS.DWG
LAYOUT NAME - 04

PLOT DATE : 7/25/2025 11:31 AM PLOT BY : JASMINE MOLDOVAN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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