

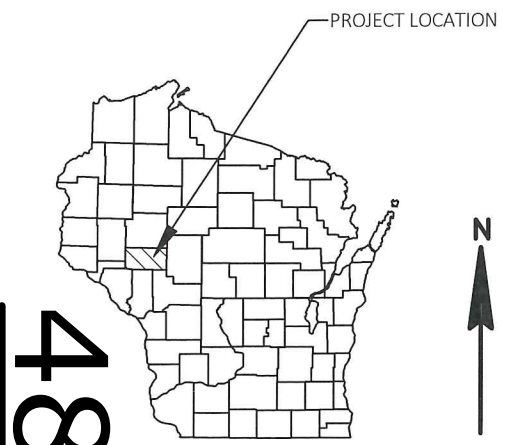
EAU
PROJECT ID: 7824-00-11
WITH: N/A
COUNTY: EAU CLAIRE

MAY 2019

ORDER OF SHEETS

Section No.		Title
Section No. 1		Typical Sections and Details
Section No. 2		Estimate of Quantities
Section No. 3		Miscellaneous Quantities
Section No. 4		Right of Way Plat
Section No. 5		Plan and Profile (Includes Erosion Control)
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 = 104



DESIGN DESIGNATION

A.A.D.T.	2019	=	990
A.A.D.T.	2039	=	1,330
D.H.V.		=	133
D.D.		=	50/50
T.		=	10 %
DESIGN SPEED		=	30
ESALS		=	380,000

CONVENTIONAL SYMBOLS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

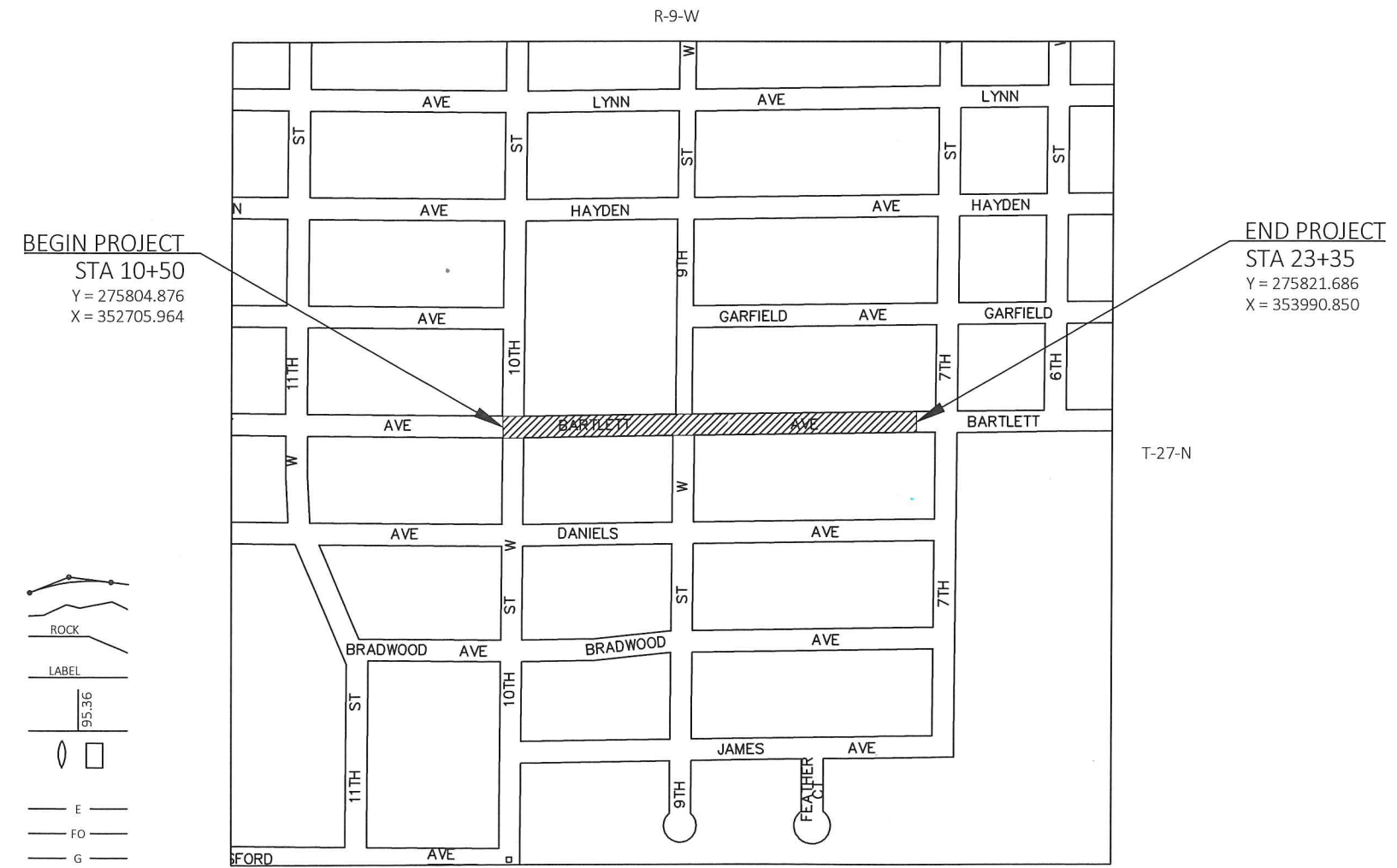
C ALTOONA, BARTLETT AVE

10TH STREET W TO 7TH STREET W

LOCAL STREET

EAU CLAIRE COUNTY

STATE PROJECT NUMBER
7824-00-11



LAYOUT

SCALE 0 500 FT

TOTAL NET LENGTH OF CENTERLINE = 0.243 MI.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, EAU CLAIRE COUNTY, NAD 83 (2007).

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7824-00-11	WISC 2019329	1

ACCEPTED FOR
CITY OF ALTOONA

Date 2/1/19 David A. Z. [Signature]
(DIRECTOR OF PUBLIC WORKS SIGNATURE)

ORIGINAL PLANS PREPARED BY

SEH

JEFFREY S. NUSSBAUM
E-37104
EAU CLAIRE
WI

2/1/19 [Signature]
(Professional Engineer Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

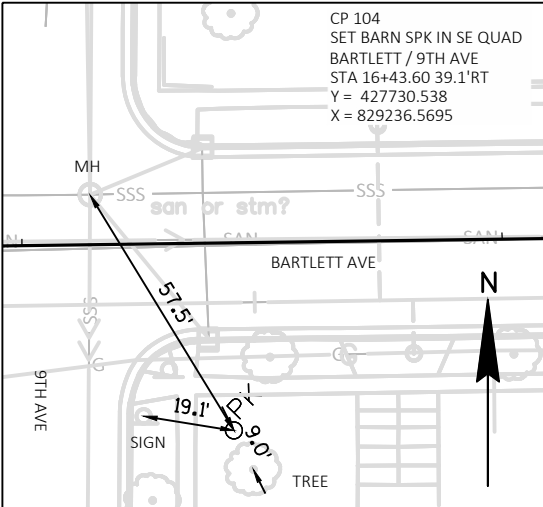
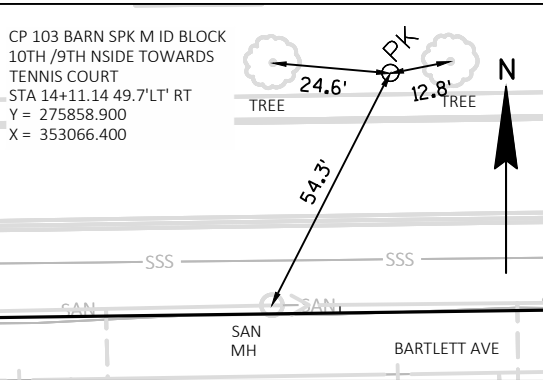
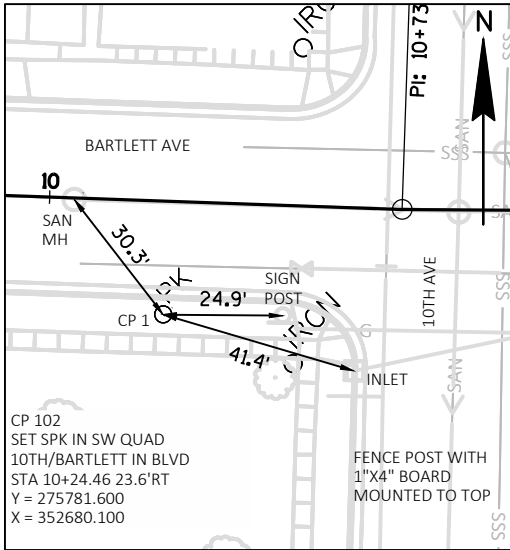
PREPARED BY
Surveyor SEH
Designer SEH

APPROVED FOR THE DEPARTMENT

DATE: 2/1/19 [Signature]
(Signature)

E

ALIGNMENT TIES



GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

WHEN THE QUANTITY OF BASE AGGREGATE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY ARE TO BE 4-INCH TOPSOILED, FERTILIZED, SEEDED AND MULCHED.

ALL PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING PAVEMENTS AT REMOVAL LIMITS.

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 2.1 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 2.1 ACRES

UTILITY CONTACTS
AT&T DISTRIBUTION - COMMUNICATION
304 SOUTH DEWEY STREET
EAU CLAIRE, WI 54701
TELEPHONE: 715.839.5565
ATTENTION: RICK PODOLAK
EMAIL: RP4514@ATT.COM

CHARTER COMMUNICATION - COMMUNICATION
1201 MCCANN DRIVE
ALTOONA, WI 54720
TELEPHONE: 715.831.8940 EXT. 619
ATTENTION: SHANE YODER
EMAIL: SHANE.YODER@CHARTERCOM.COM

CITY OF ALTOONA - WATER AND SANITARY
1303 LYNN AVENUE
ALTOONA, WI 54720
TELEPHONE: 715.839.6092
ATTENTION: DAVID WALTER
EMAIL: DAVIDW@CI.ALTOONA.WI.US

XCEL ENERGY - ELECTRICITY
PO BOX 8
1414 W HAMILTON AVENUE
EAU CLAIRE, WI 54702
TELEPHONE: 715.737.1431
ATTENTION: JOHN KELSER
EMAIL: JOHN.KELSER@XCELENERGY.COM

XCEL ENERGY - GAS
PO BOX 8
1414 W HAMILTON AVENUE
EAU CLAIRE, WI 54702
TELEPHONE: 715.737.1450
ATTENTION: BRADY GARDOW
EMAIL: BRADY.P.GARDOW@XCELENERGY.COM



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

DESIGN CONTACT

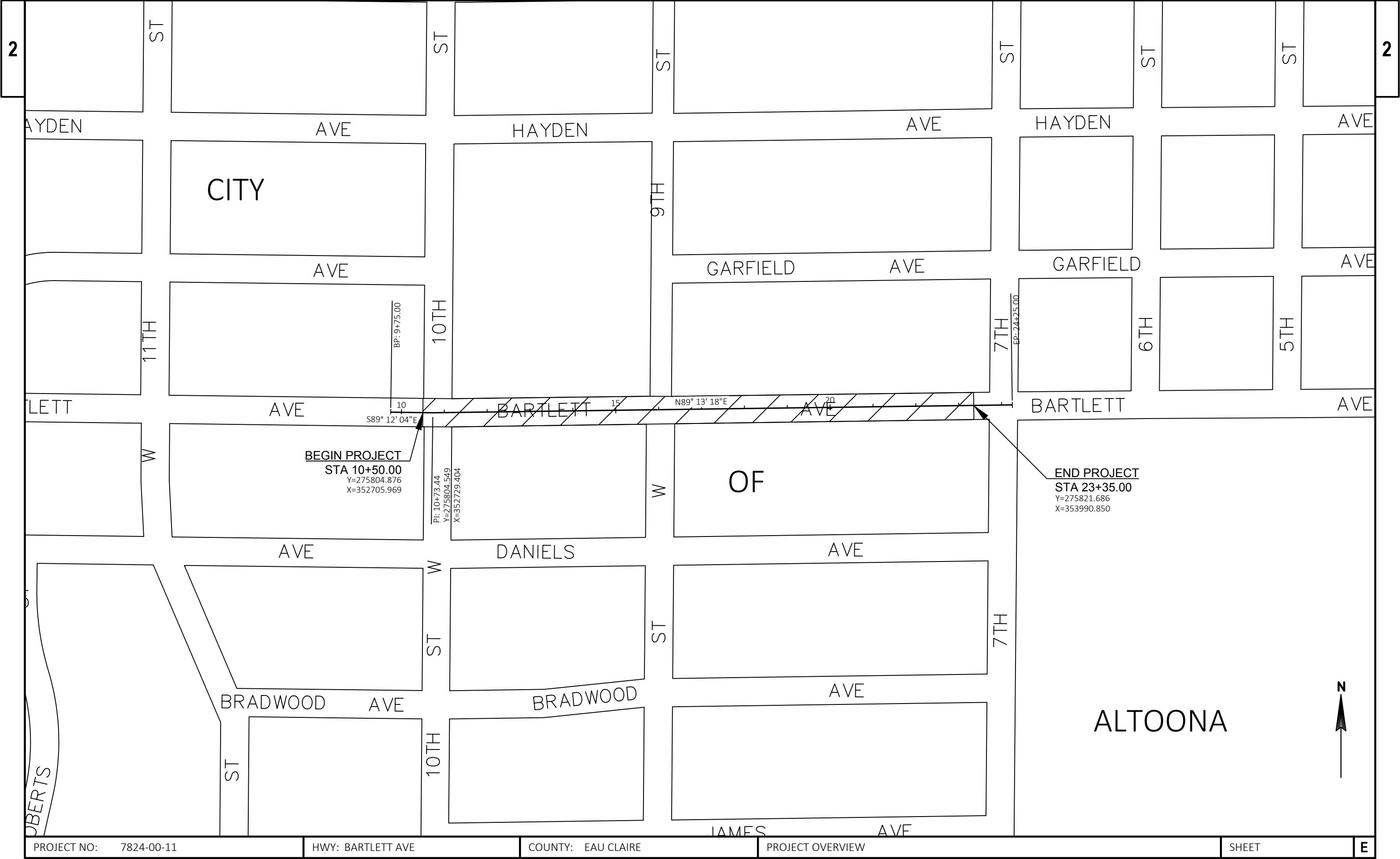
SEH
10 NORTH BRIDGE STREET
CHIPPEWA FALLS, WI 54729
TELEPHONE: 715.720.6255
ATTENTION: JEFF NUSSBAUM
EMAIL: JNUSSBAUM@SEHINC.COM

WDNR CONTACT

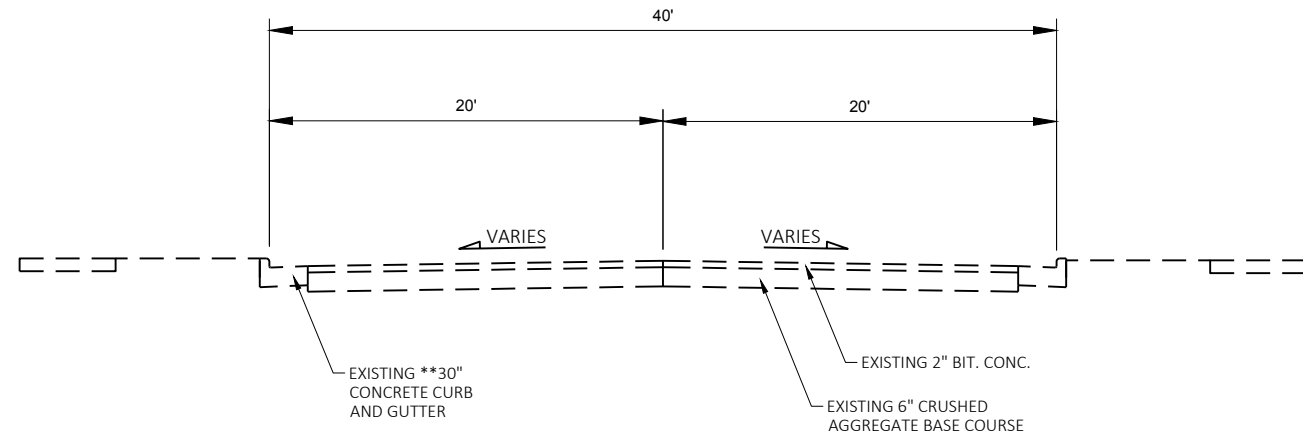
DNR NORTHERN REGION HQ
1300 W CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
TELEPHONE: 715.934.9014
ATTENTION: LEAH NICOL
EMAIL: LEAH.NICOL@WISCONSIN.GOV

CITY CONTACT

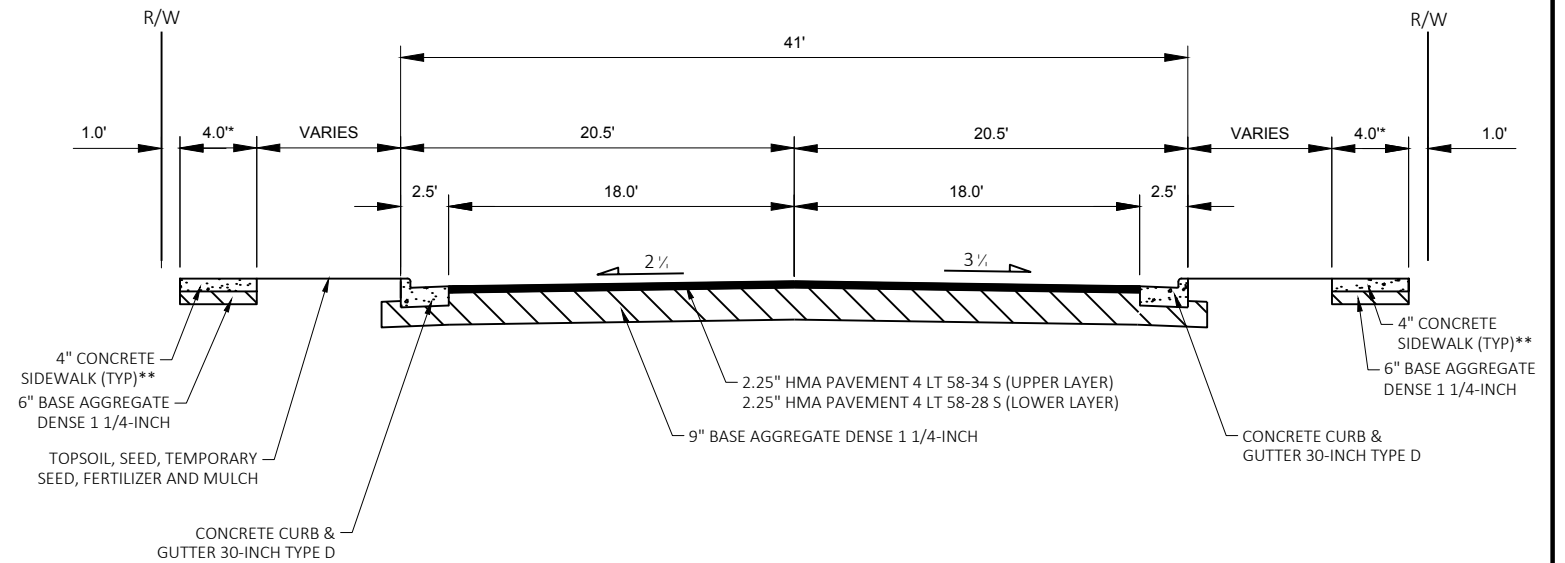
CITY OF ALTOONA
1303 LYNN AVENUE
ALTOONA, WI 54720
TELEPHONE: 715.839.6092
ATTENTION: DAVID WALTER
EMAIL: DAVIDW@CI.ALTOONA.WI.US



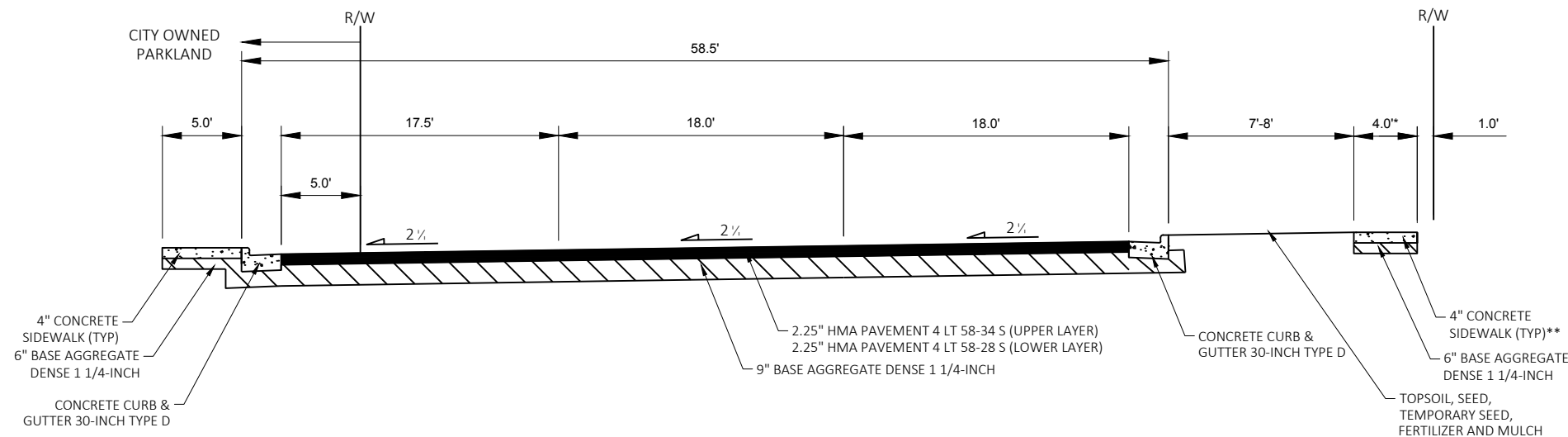
PROJECT NO: 7824-00-11	HWY: BARTLETT AVE	COUNTY: EAU CLAIRE	PROJECT OVERVIEW	SHEET	E
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**EXISTING TYPICAL SECTION**

STA 10+50 - 23+35

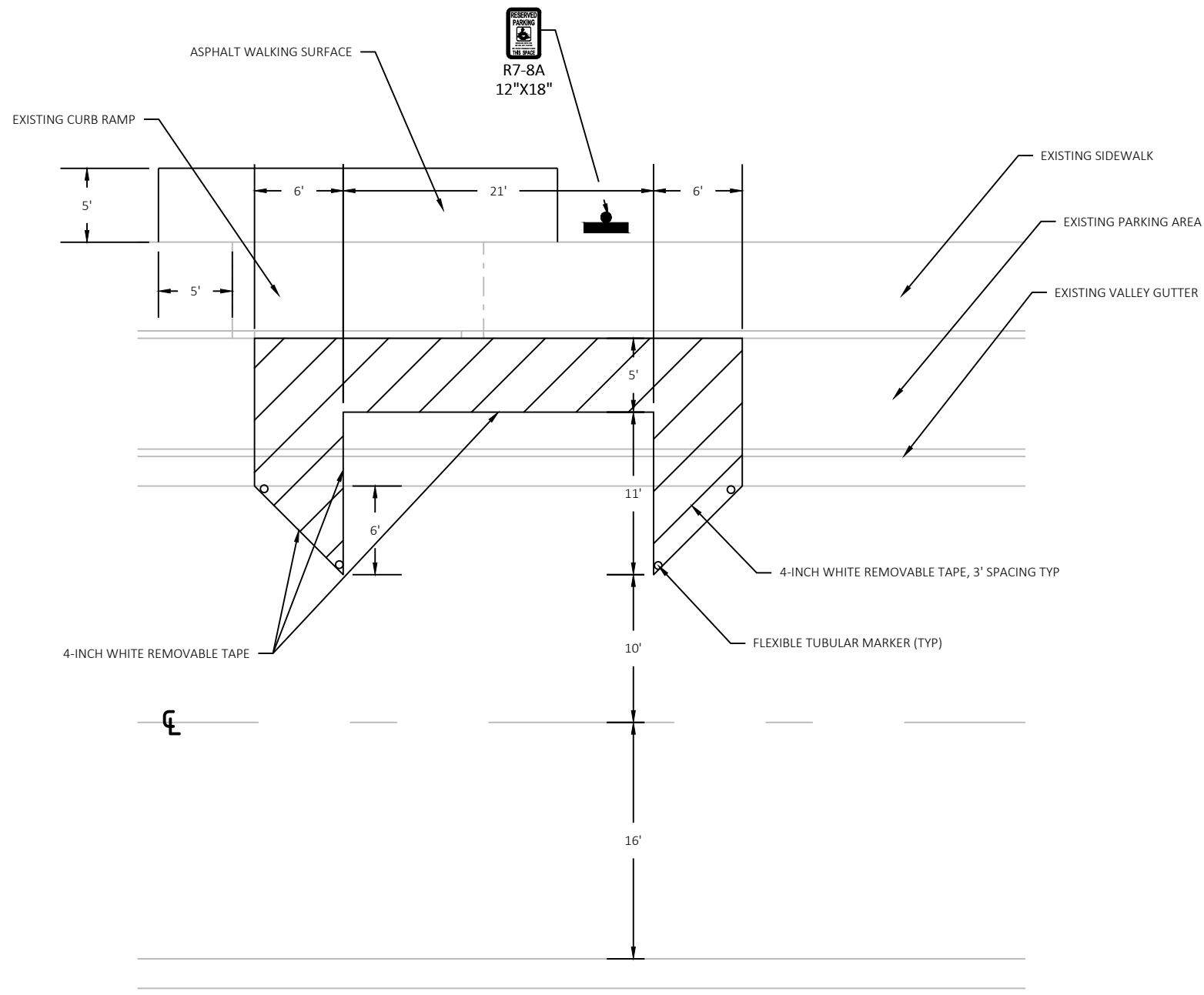
**PROPOSED TYPICAL SECTION**

STA 16+00 - 23+35

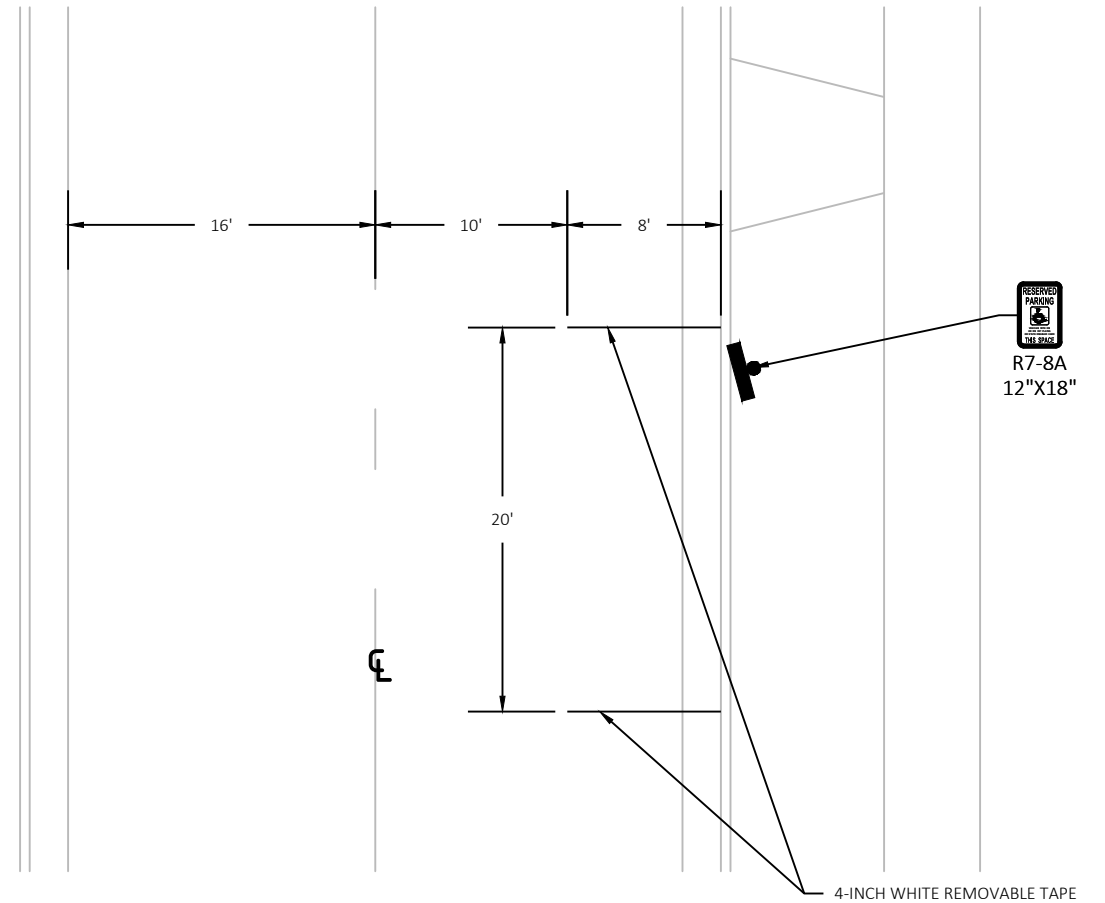
**PROPOSED TYPICAL SECTION**

STA 10+50 - 16+00

- * SIDEWALK TO BE REPLACED ONLY WHERE SHOWN ON PLANS OR AS DIRECTED BY ENGINEER
- * SIDEWALK WITHIN PROPOSED BUMP OUTS TO BE 5.0' WIDE
- ** SEE S.D.D. "DRIVEWAY AND SIDEWALK RAMPS, TYPES X & Y" FOR THICKNESS AT DRIVEWAY
- ***SEE S.D.D. "CONCRETE CURB, CONCRETE CURB & GUTTER" FOR 30" CONCRETE CURB AND GUTTER CURB DIMENSIONS



TEMPORARY ADA ACCESSIBLE PARKING STALL, 9TH ST



TEMPORARY ADA ACCESSIBLE PARKING STALL, 10TH ST

NOTE: INSTALL TEMPORARY ADA ACCESSIBLE PARKING STALL AS DIRECTED BY ENGINEER

PROJECT NO: 7824-00-11

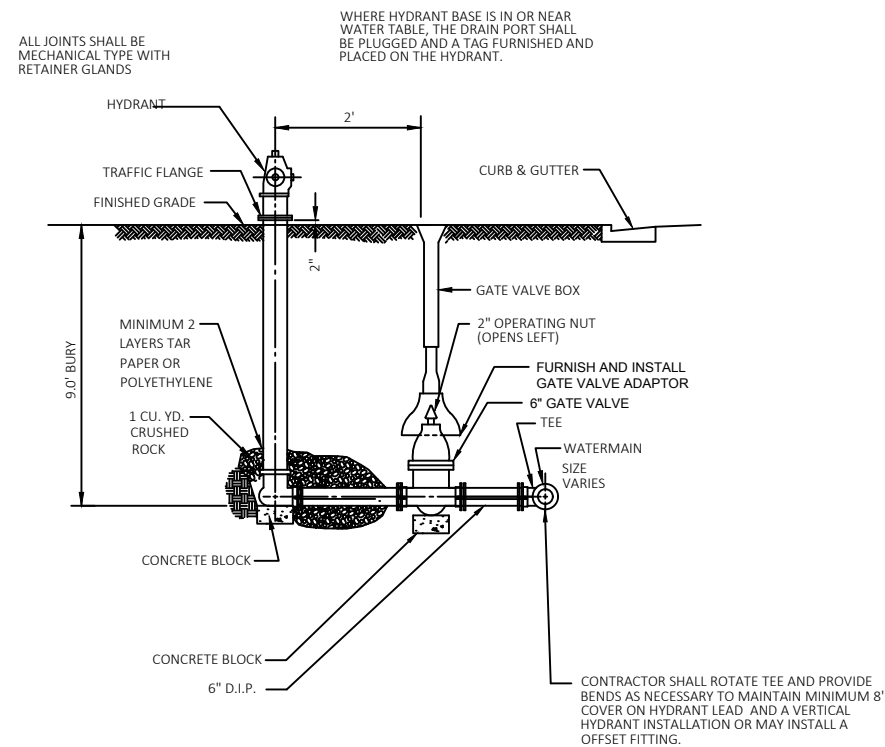
HWY: BARTLETT AVE

COUNTY: EAU CLAIRE

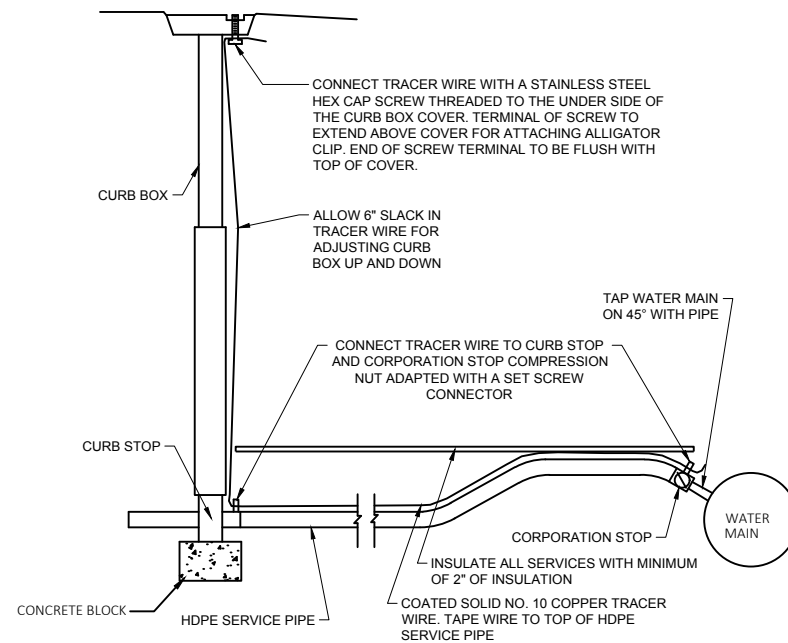
PLAN: DETAILS

SHEET

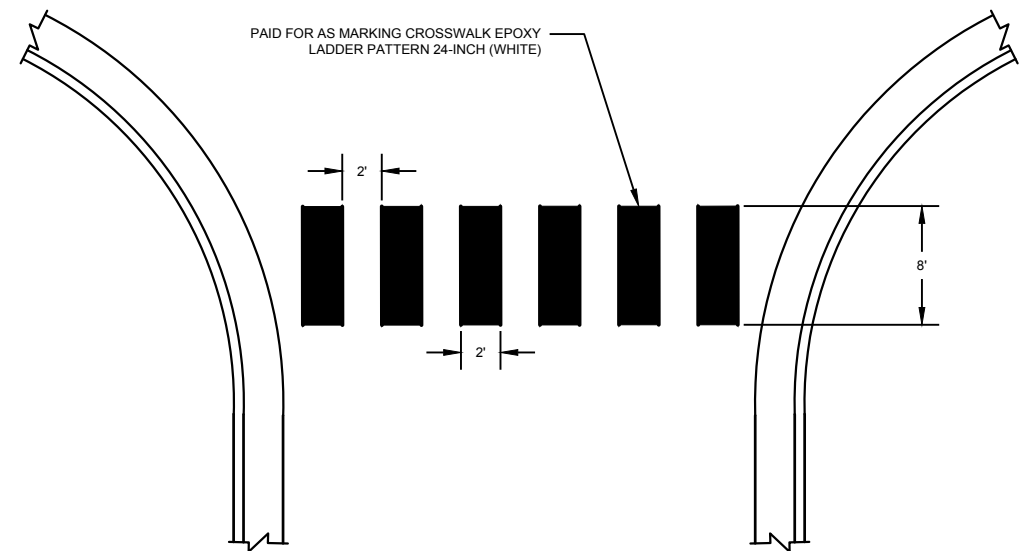
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FIRE HYDRANT

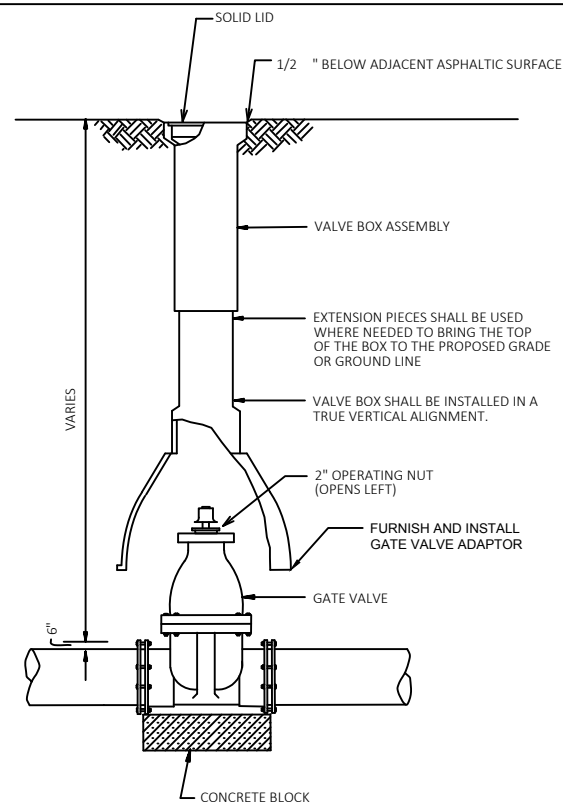


TRACER WIRE DETAIL

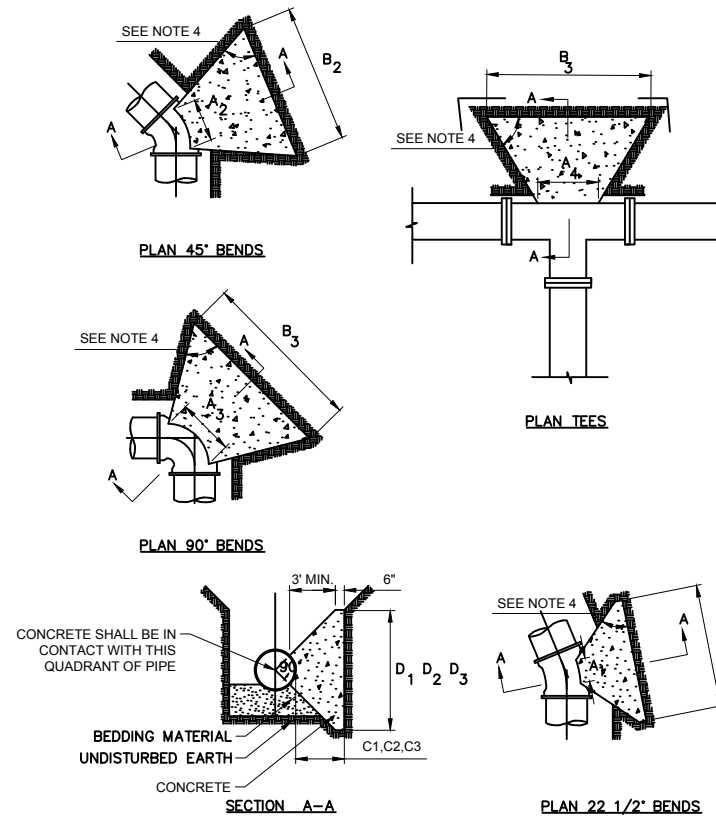


PAVEMENT MARKING CROSSWALK DETAIL

- 1 PAINTED AREAS TO BE CENTERED ON CENTERLINE AND LANE LINES.
- 2 A MINIMUM OF 1.5 FEET CLEAR DISTANCE SHALL BE LEFT ADJACENT TO THE CURB. IF THE LAST PAINTED AREA FALLS INTO THIS DISTANCE, IT MUST BE OMITTED.
- 3 THE BLOCKS SHALL BE PLACED SO THAT THEY ARE NOT LOCATED IN THE WHEEL PATH OF THE VEHICLES.



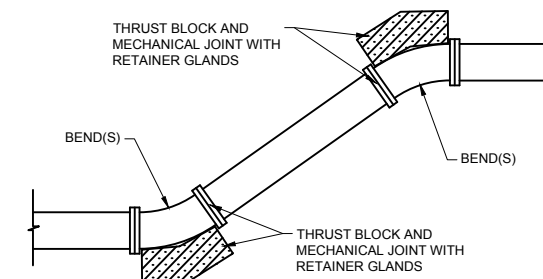
GATE VALVE & BOX

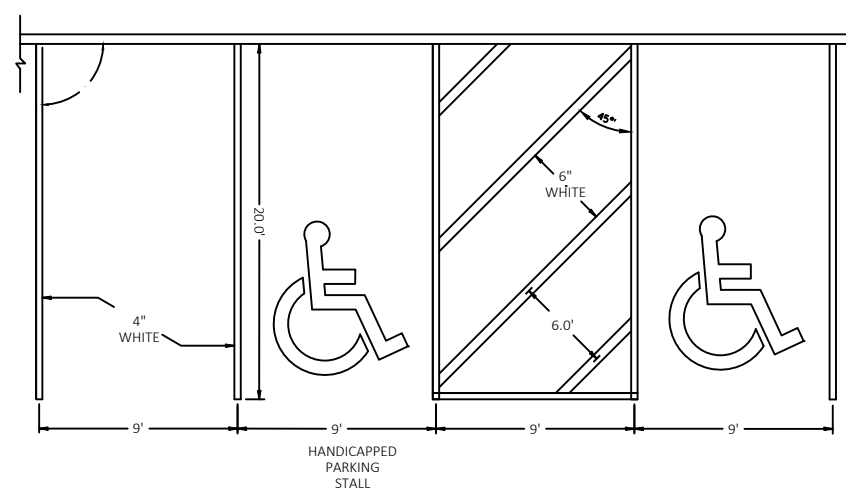


CONCRETE THRUST BLOCKING

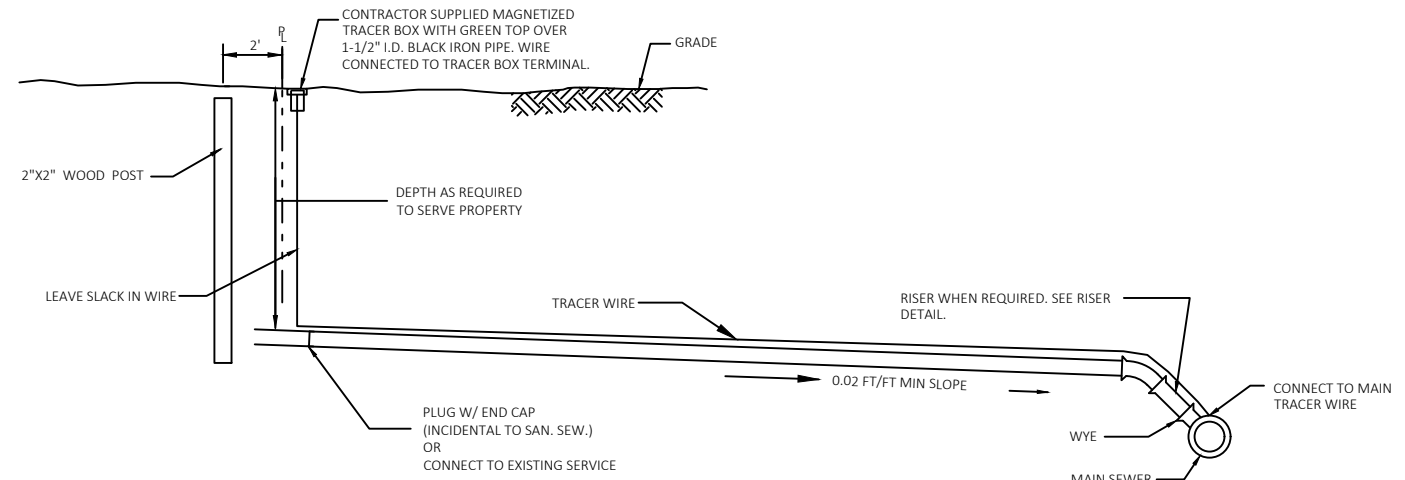
- GENERAL NOTES:
1. SHAPE OF BACK BUTTRESS MAY VARY AS LONG AS POURED AGAINST FIRM UNDISTURBED EARTH.
 2. DIMENSION C1,C2,C3 SHOULD BE LARGE ENOUGH TO MAKE ANGLE Θ EQUAL TO OR LARGER THAN 45°.
 3. DIMENSION A1,A2,A3, & A4 SHOULD BE AS LARGE AS POSSIBLE WITHOUT INTERFERING WITH MJ BOLTS.
 4. 45° MINIMUM.
 5. PLACE POLYETHYLENE BETWEEN CONCRETE AND PIPE.

PIPE SIZE	BUTTRESS DIMENSIONS					
	22 1/2° BEND	45° BEND	90° BEND/TEE			
	B ₁	D ₁	B ₂	D ₂	B ₃	D ₃
6"	1'-5"	1'-5"	1'-5"	1'-5"	2'-1"	1'-6"
8"	1'-5"	1'-5"	2'-1"	1'-6"	2'-8"	2'-0"
12"	1'-10"	1'-10"	3'-4"	2'-0"	4'-9"	2'-6"
16"	3'-0"	2'-0"	3'-10"	3'-0"	6'-2"	3'-6"
20"	3'-6"	2'-8"	5'-6"	3'-4"	8'-4"	4'-0"
24"	4'-4"	3'-0"	6'-10"	3'-10"	9'-8"	5'-0"
30"	-	-	9'-3"	6'-0"	17'-0"	6'-0"



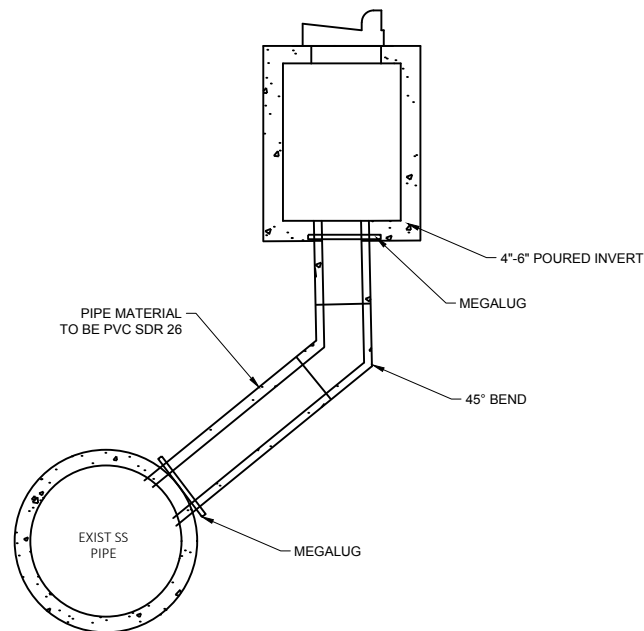


PARKING STALLS
(TYPICAL)



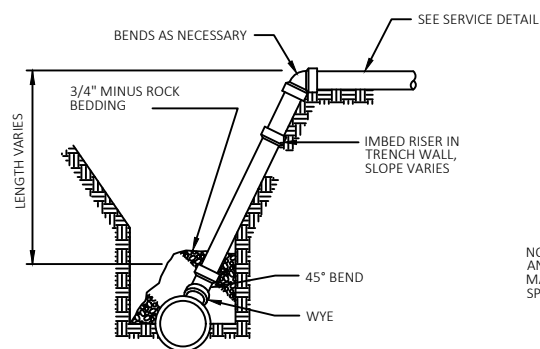
SANITARY SEWER SERVICE

NOTE: SANITARY SERVICE TO BE INSTALLED
AT A MINIMUM GRADE OF 1/4" PER FOOT
UNLESS OTHERWISE DIRECTED BY THE
ENGINEER

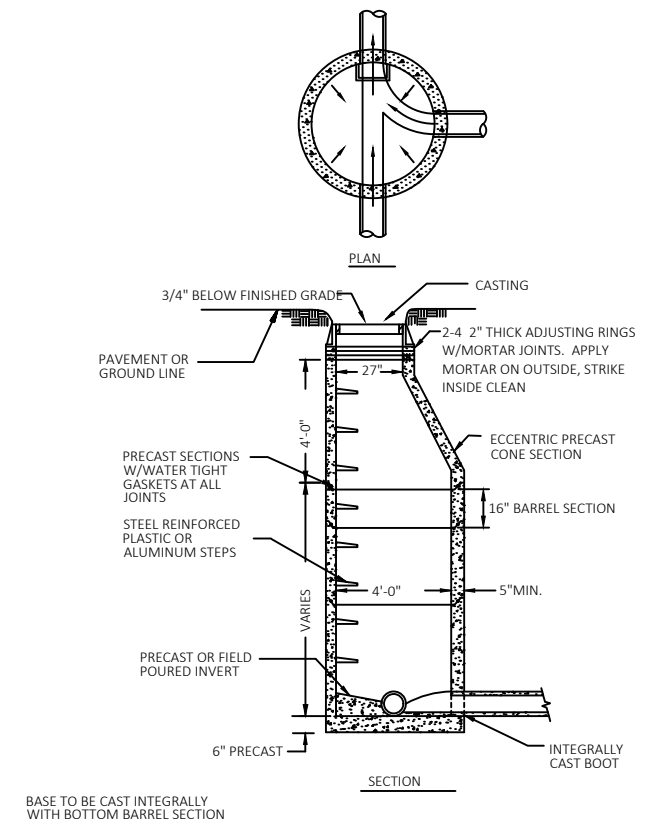


INLET DETAIL FOR PIPE SLOPE
GREATER THAN 15%

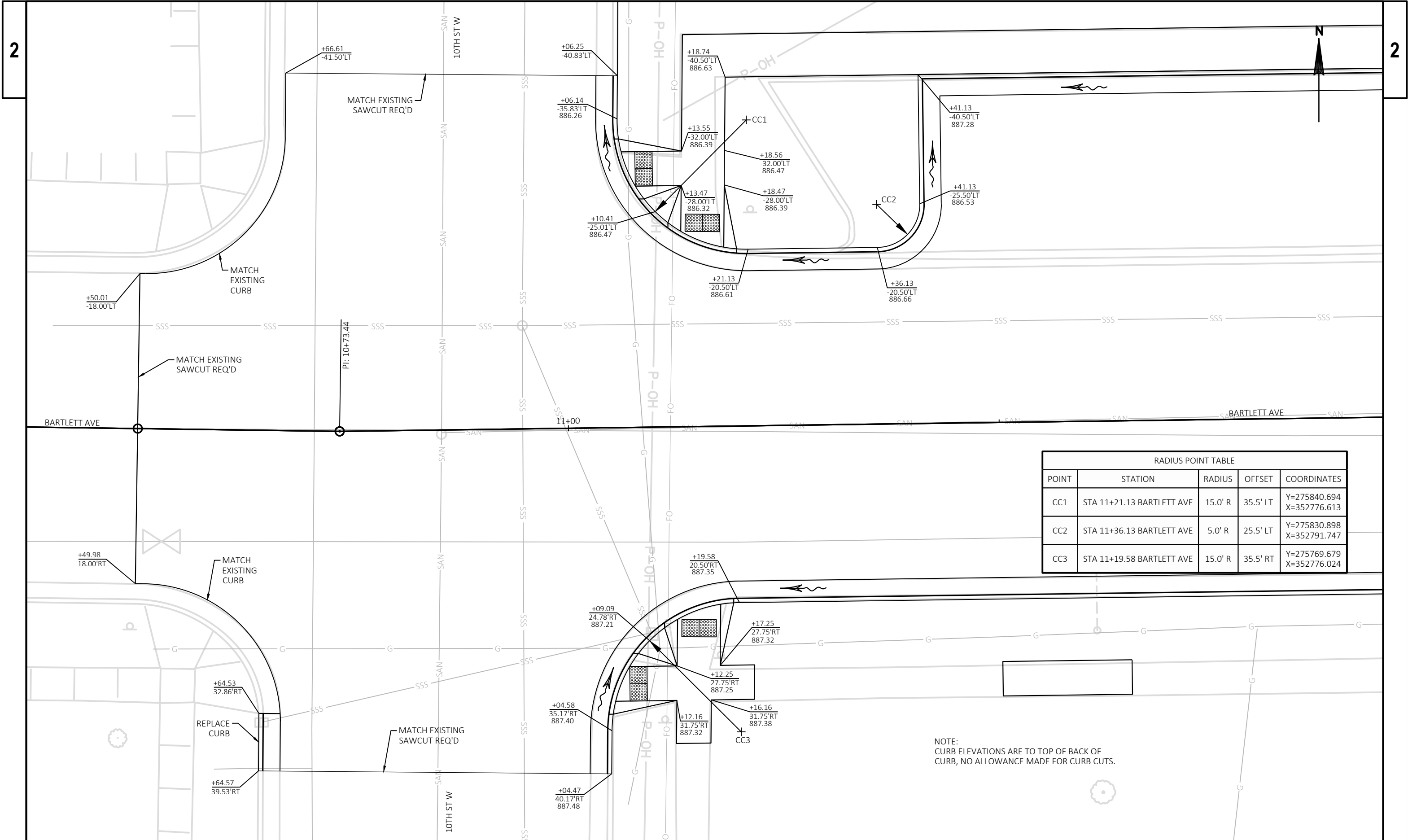
NOTE: FITTINGS AND CONNECTIONS TO BE INCIDENTAL
TO PIPE BID ITEM. PIPE TO BE PAID FOR AS STORM
SEWER PIPE REINFORCED CONCRETE CLASS III.



SANITARY SEWER SERVICE RISER



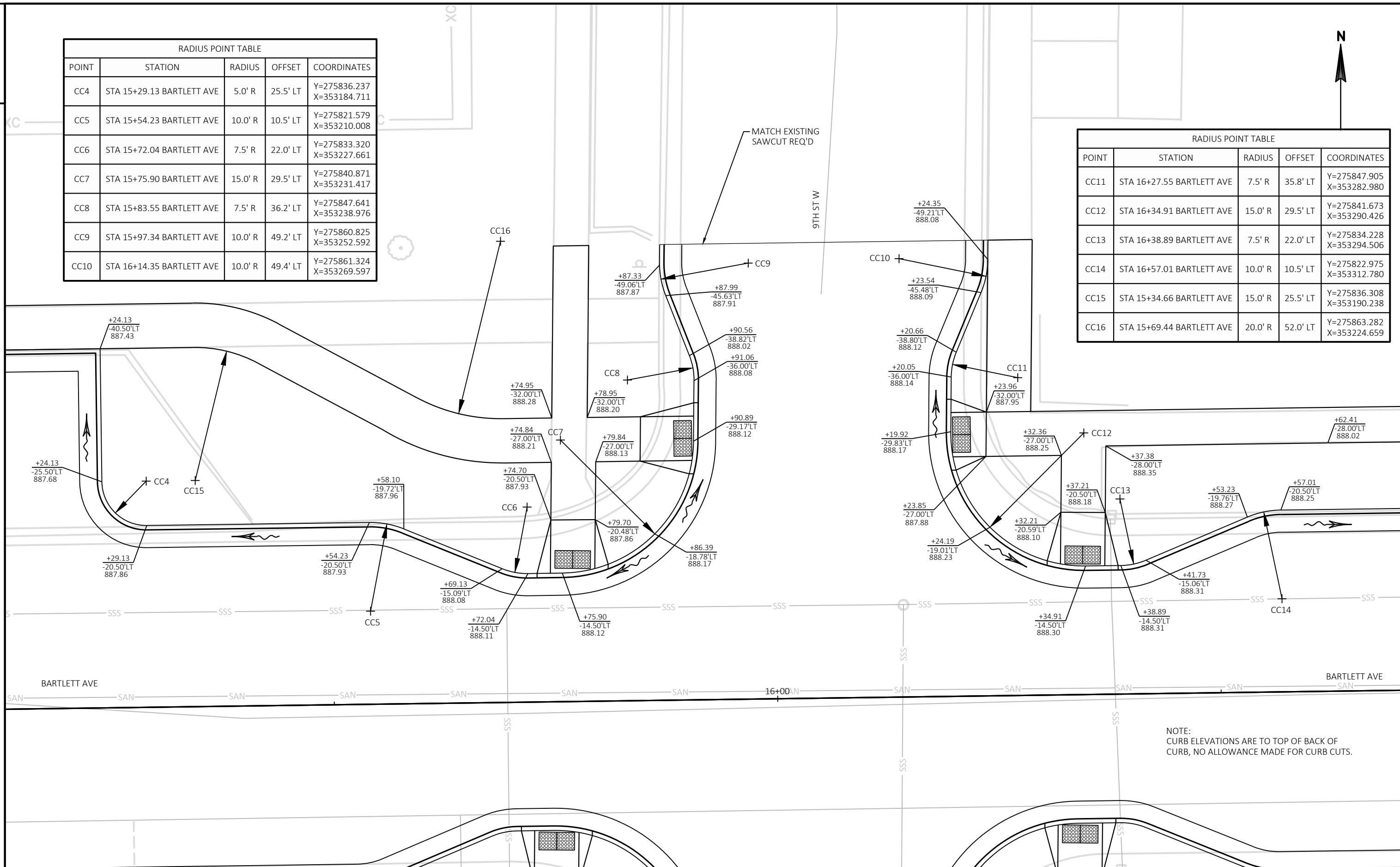
SANITARY MANHOLE

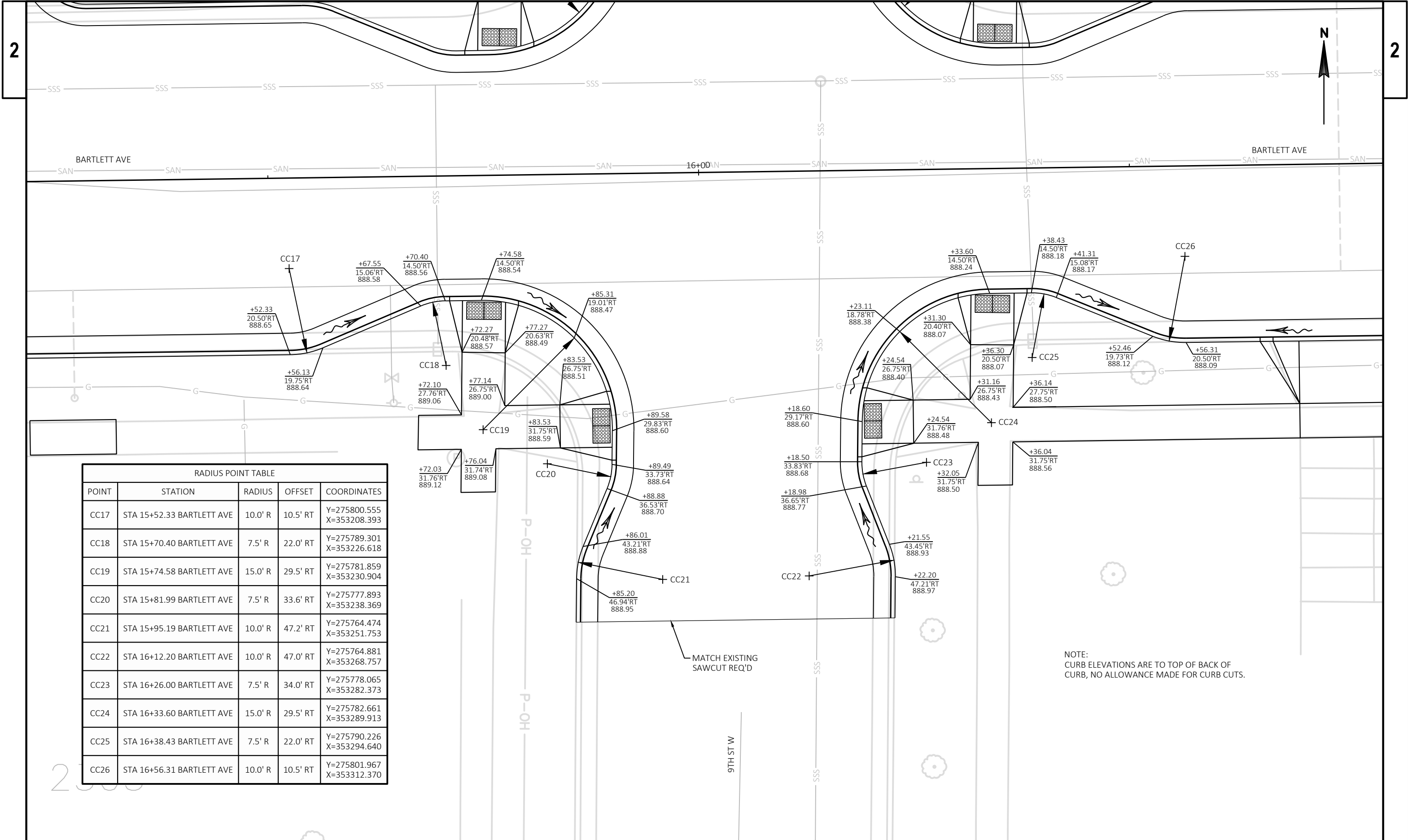


RADIUS POINT TABLE				
POINT	STATION	RADIUS	OFFSET	COORDINATES
CC1	STA 11+21.13 BARTLETT AVE	15.0' R	35.5' LT	Y=275840.694 X=352776.613
CC2	STA 11+36.13 BARTLETT AVE	5.0' R	25.5' LT	Y=275830.898 X=352791.747
CC3	STA 11+19.58 BARTLETT AVE	15.0' R	35.5' RT	Y=275769.679 X=352776.024

RADIUS POINT TABLE				
POINT	STATION	RADIUS	OFFSET	COORDINATES
CC4	STA 15+29.13 BARTLETT AVE	5.0' R	25.5' LT	Y=275836.237 X=353184.711
CC5	STA 15+54.23 BARTLETT AVE	10.0' R	10.5' LT	Y=275821.579 X=353210.008
CC6	STA 15+72.04 BARTLETT AVE	7.5' R	22.0' LT	Y=275833.320 X=353227.661
CC7	STA 15+75.90 BARTLETT AVE	15.0' R	29.5' LT	Y=275840.871 X=353231.417
CC8	STA 15+83.55 BARTLETT AVE	7.5' R	36.2' LT	Y=275847.641 X=353238.976
CC9	STA 15+97.34 BARTLETT AVE	10.0' R	49.2' LT	Y=275860.825 X=353252.592
CC10	STA 16+14.35 BARTLETT AVE	10.0' R	49.4' LT	Y=275861.324 X=353269.597

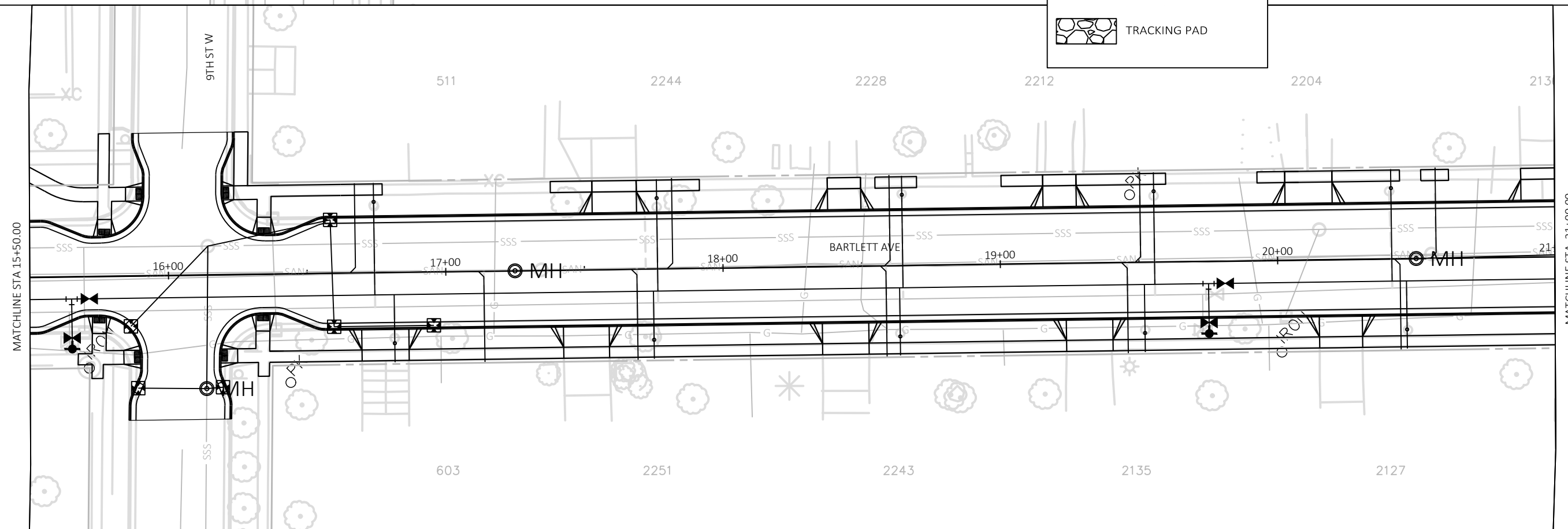
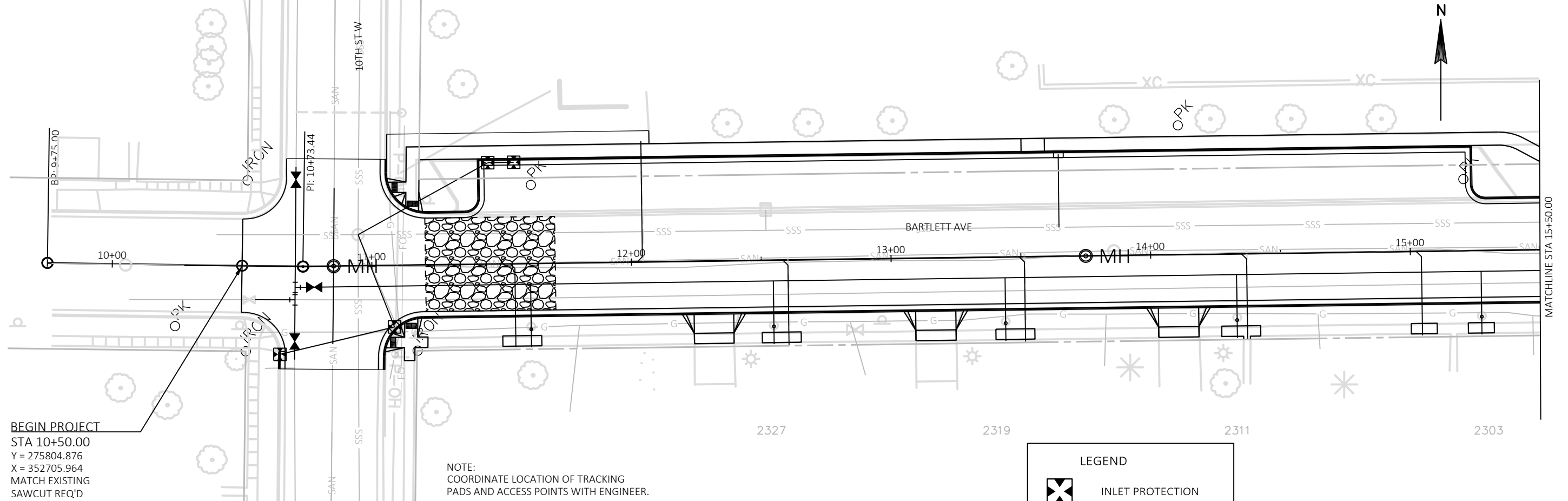
RADIUS POINT TABLE				
POINT	STATION	RADIUS	OFFSET	COORDINATES
CC11	STA 16+27.55 BARTLETT AVE	7.5' R	35.8' LT	Y=275847.905 X=353282.980
CC12	STA 16+34.91 BARTLETT AVE	15.0' R	29.5' LT	Y=275841.673 X=353290.426
CC13	STA 16+38.89 BARTLETT AVE	7.5' R	22.0' LT	Y=275834.228 X=353294.506
CC14	STA 16+57.01 BARTLETT AVE	10.0' R	10.5' LT	Y=275822.975 X=353312.780
CC15	STA 15+34.66 BARTLETT AVE	15.0' R	25.5' LT	Y=275836.308 X=353190.238
CC16	STA 15+69.44 BARTLETT AVE	20.0' R	52.0' LT	Y=275863.282 X=353224.659





RADIUS POINT TABLE				
POINT	STATION	RADIUS	OFFSET	COORDINATES
CC17	STA 15+52.33 BARTLETT AVE	10.0' R	10.5' RT	Y=275800.555 X=353208.393
CC18	STA 15+70.40 BARTLETT AVE	7.5' R	22.0' RT	Y=275789.301 X=353226.618
CC19	STA 15+74.58 BARTLETT AVE	15.0' R	29.5' RT	Y=275781.859 X=353230.904
CC20	STA 15+81.99 BARTLETT AVE	7.5' R	33.6' RT	Y=275777.893 X=353238.369
CC21	STA 15+95.19 BARTLETT AVE	10.0' R	47.2' RT	Y=275764.474 X=353251.753
CC22	STA 16+12.20 BARTLETT AVE	10.0' R	47.0' RT	Y=275764.881 X=353268.757
CC23	STA 16+26.00 BARTLETT AVE	7.5' R	34.0' RT	Y=275778.065 X=353282.373
CC24	STA 16+33.60 BARTLETT AVE	15.0' R	29.5' RT	Y=275782.661 X=353289.913
CC25	STA 16+38.43 BARTLETT AVE	7.5' R	22.0' RT	Y=275790.226 X=353294.640
CC26	STA 16+56.31 BARTLETT AVE	10.0' R	10.5' RT	Y=275801.967 X=353312.370

NOTE:
CURB ELEVATIONS ARE TO TOP OF BACK OF
CURB, NO ALLOWANCE MADE FOR CURB CUTS.



PROJECT NO: 7824-00-11

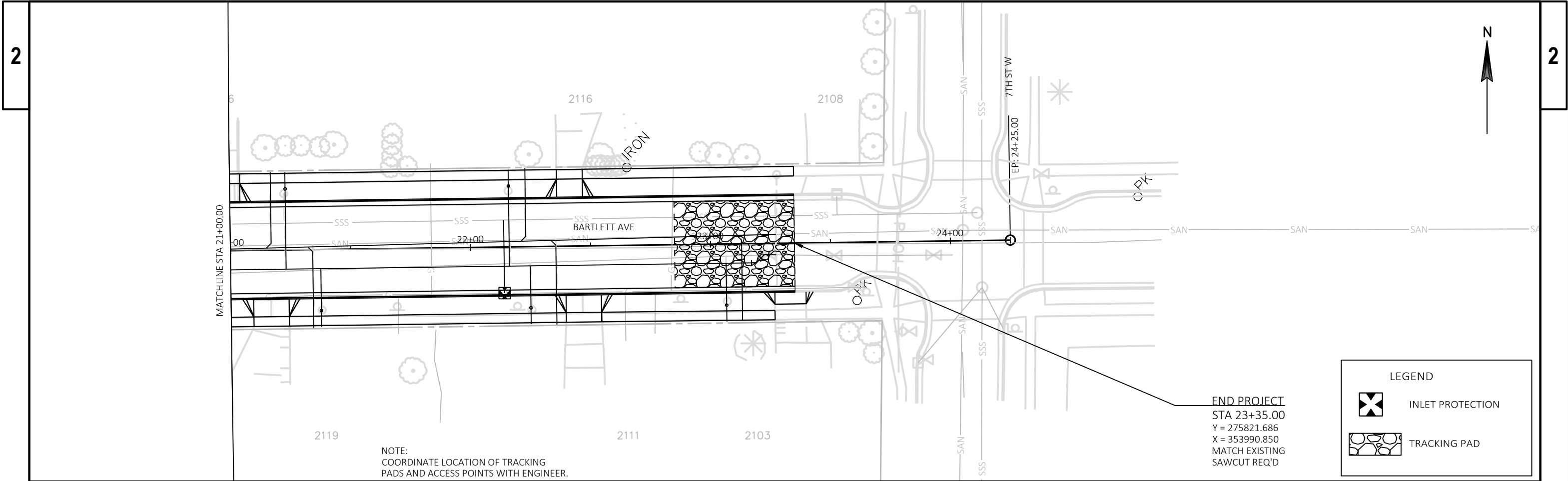
HWY: BARTLETT AVE

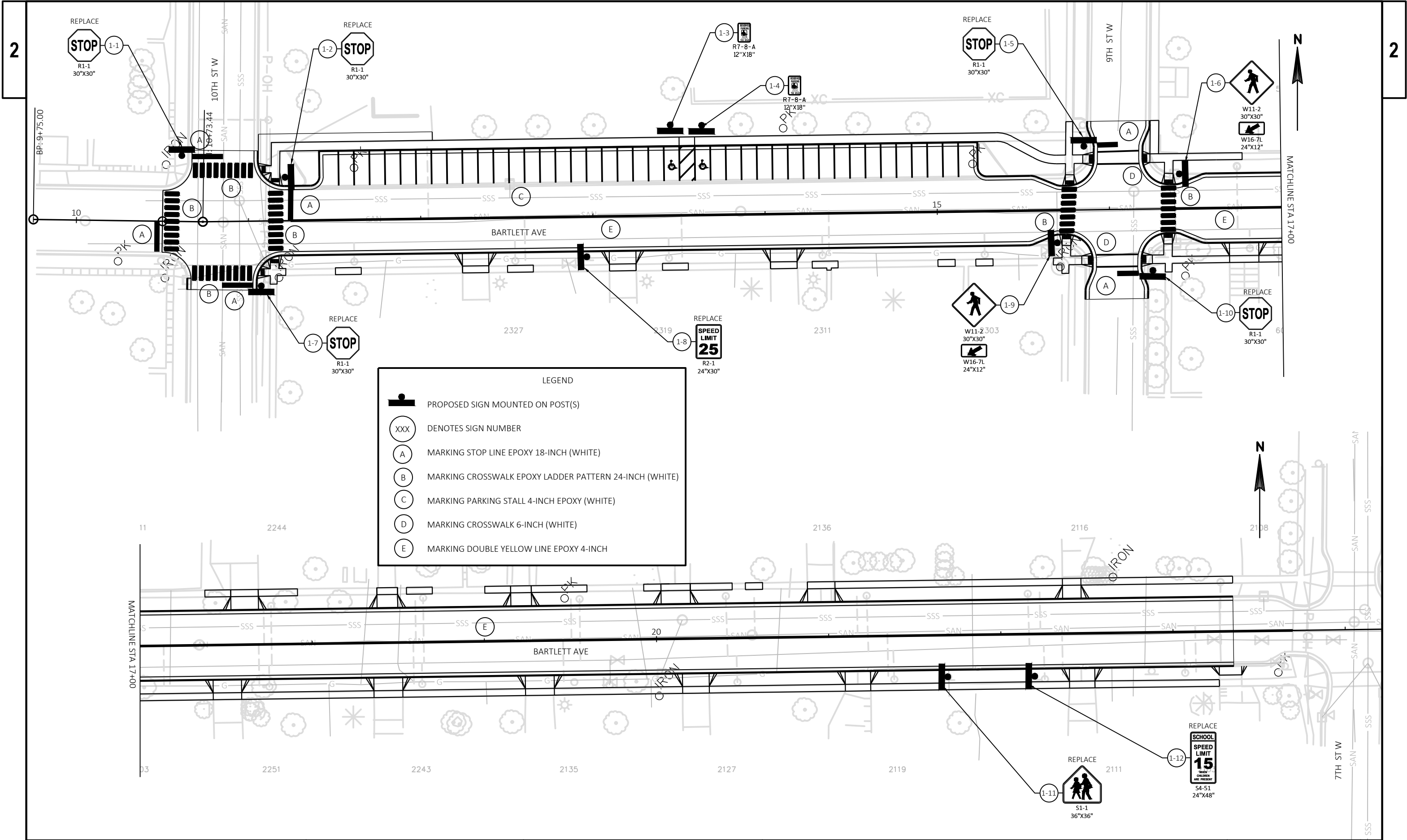
COUNTY: EAU CLAIRE

EROSION CONTROL

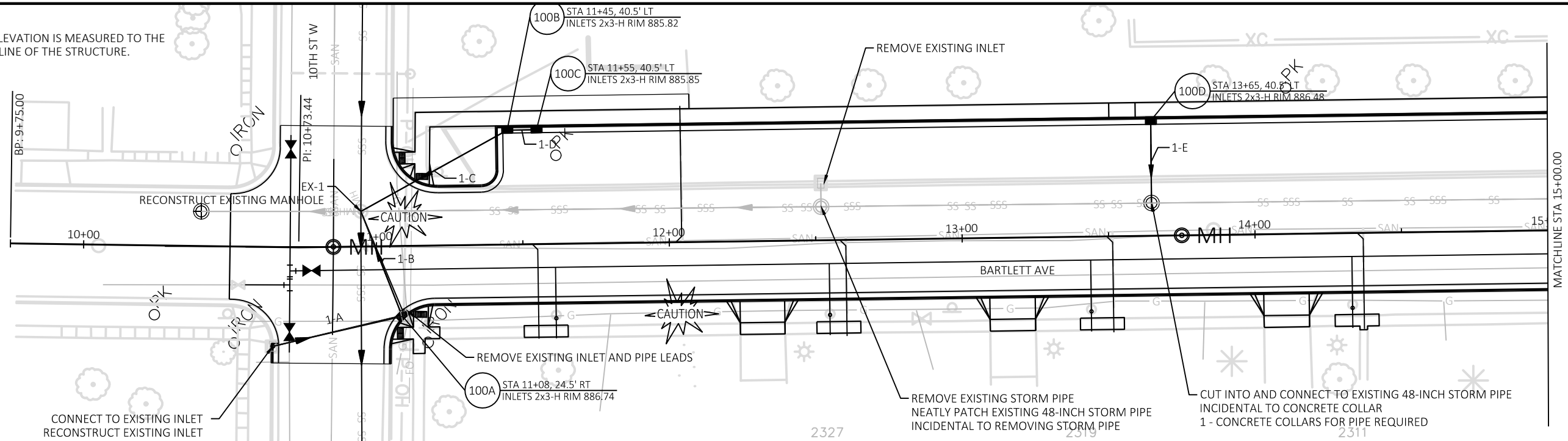
SHEET

E

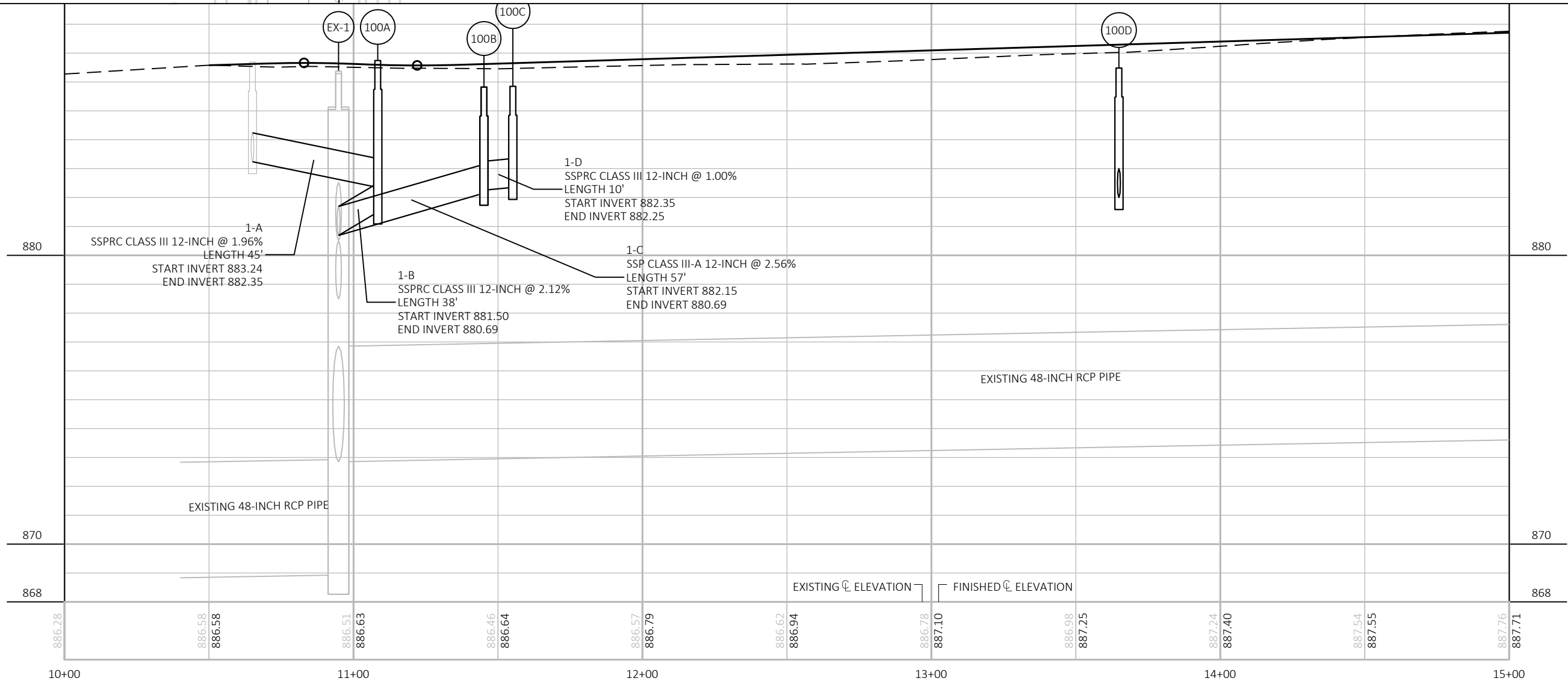




NOTE:
RIM ELEVATION IS MEASURED TO THE
FLOWLINE OF THE STRUCTURE.



5



5

PROJECT NO: 7824-00-11

HWY: BARTLETT AVE

COUNTY: EAU CLAIRE

STORM SEWER

SHEET

E

FILE NAME : \\SEHCF1\PROJECTS\AE\ALTOO\146835\CIVIL 3D\SHEETSPLAN\022501_SS.DWG
LAYOUT NAME - 01

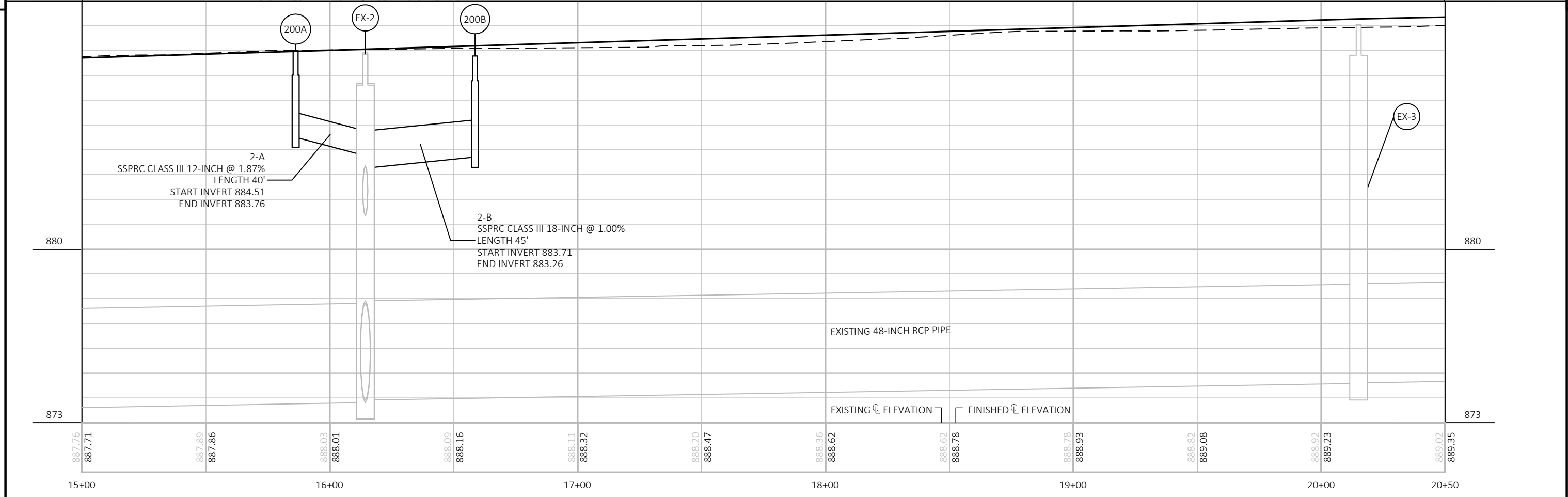
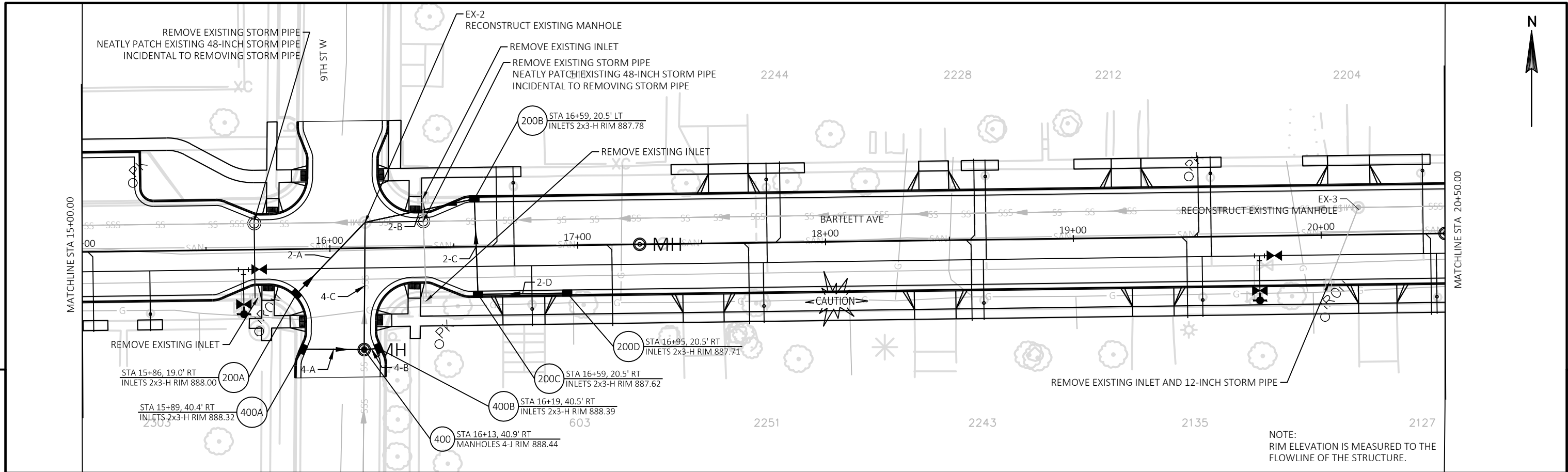
PLOT DATE : 1/31/2019 1:40 PM

PLOT BY : JUSTIN SHAVLIK

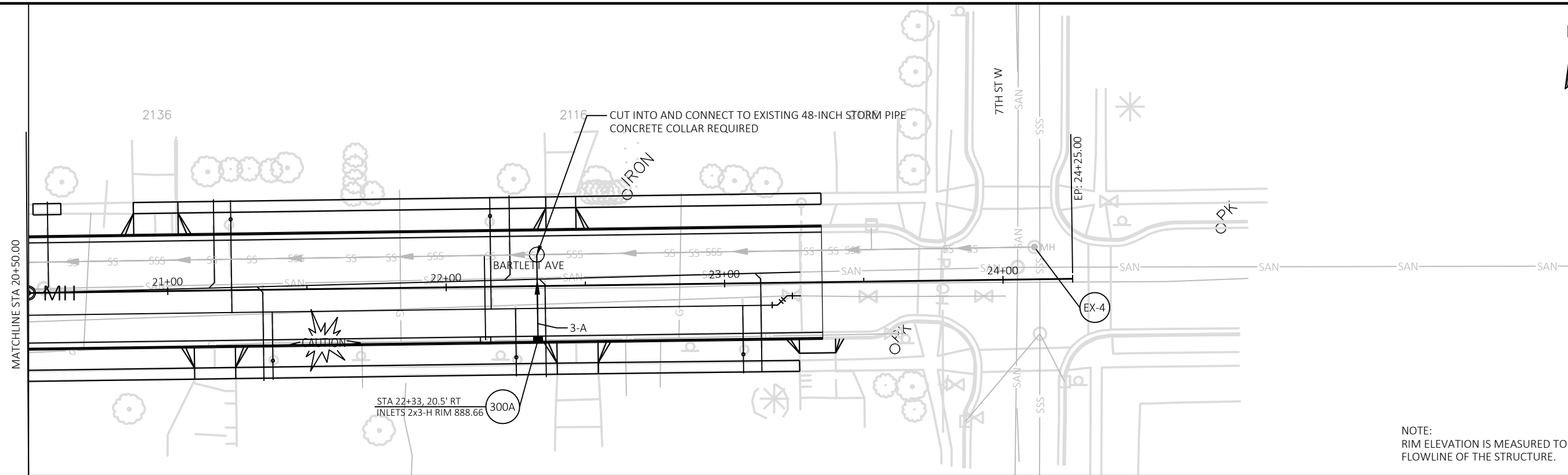
PLOT NAME :

PLOT SCALE : 1 IN:40 FT

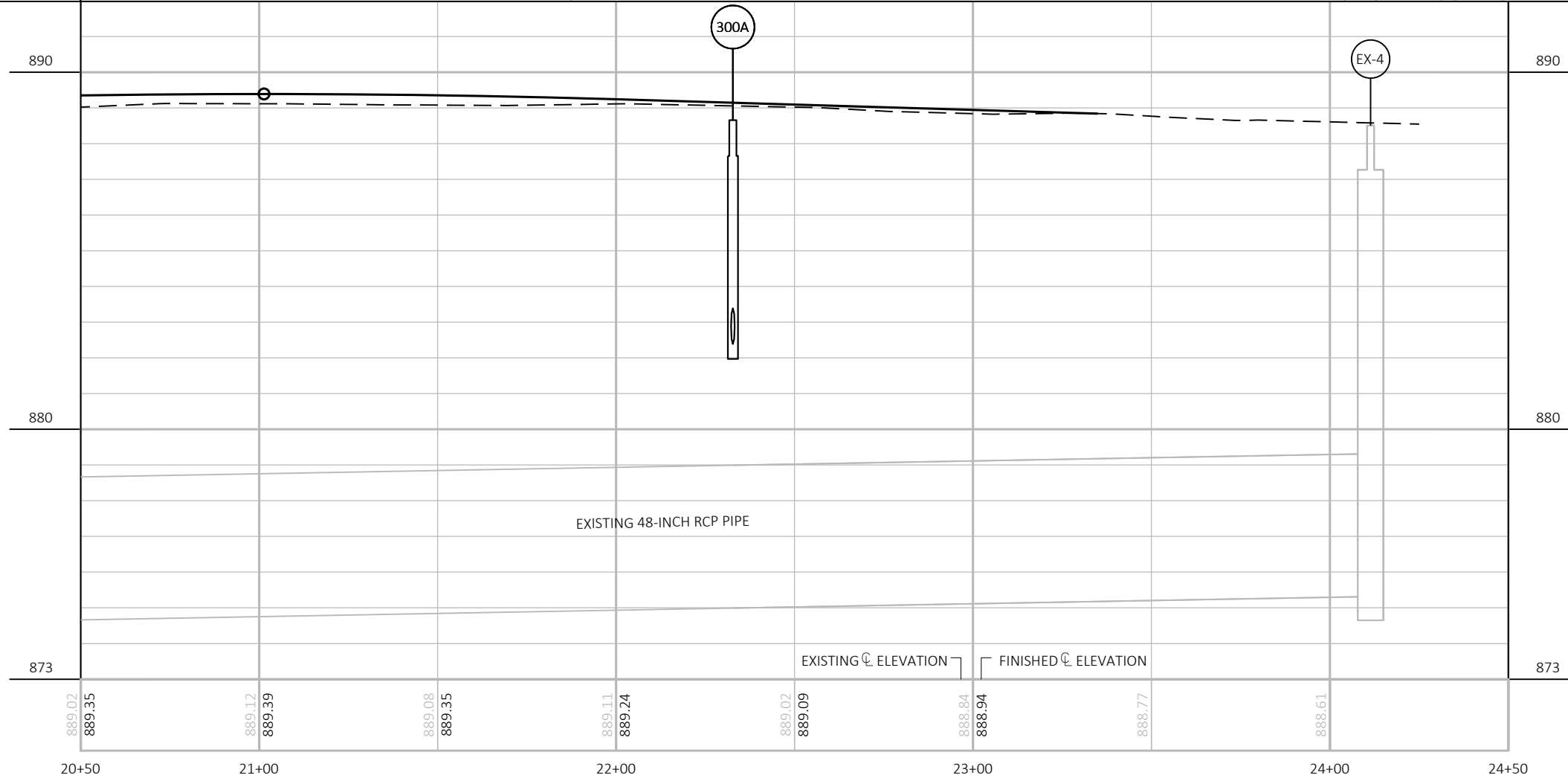
WISDOT/CADD5 SHEET 44



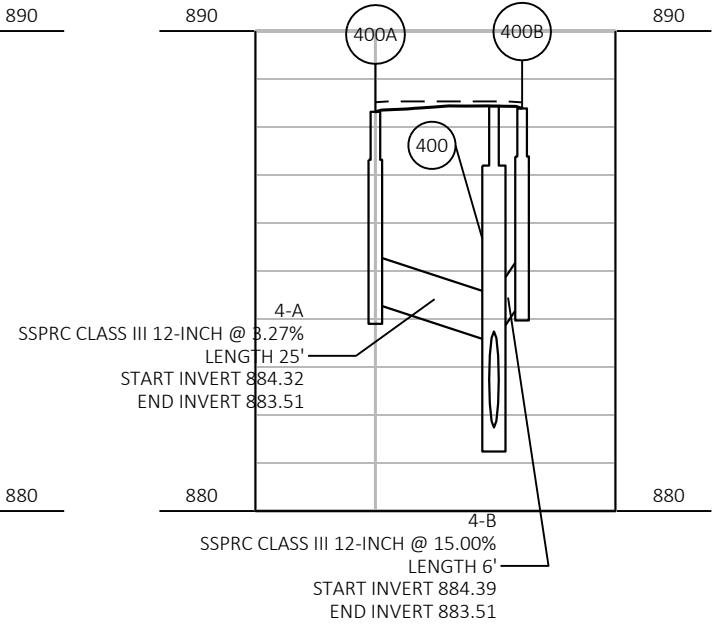
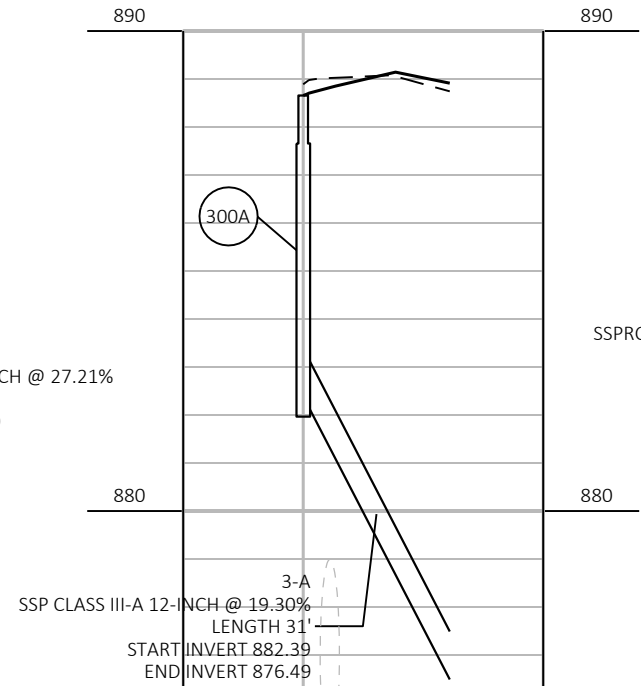
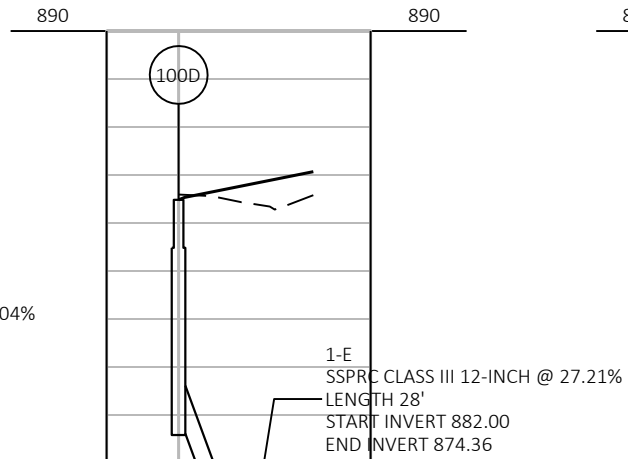
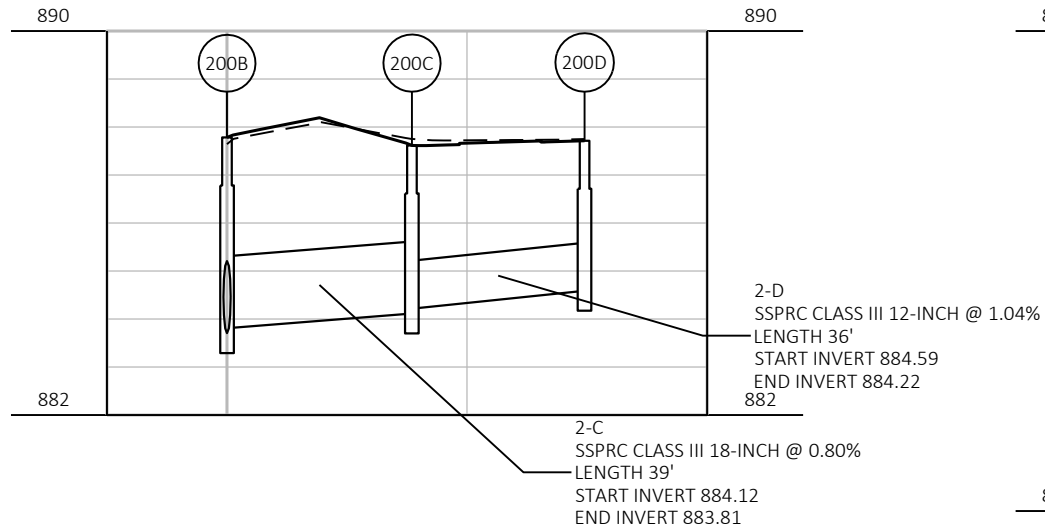
PROJECT NO: 7824-00-11	HWY: BARTLETT AVE	COUNTY: EAU CLAIRE	STORM SEWER	SHEET	E
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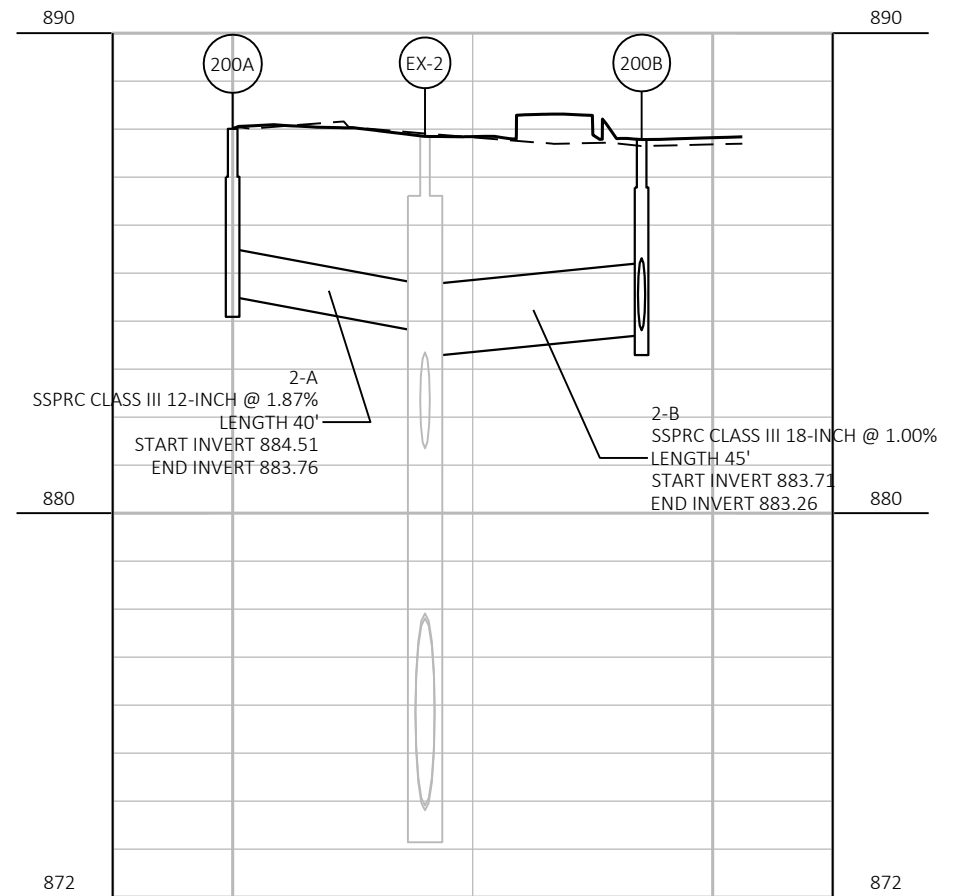
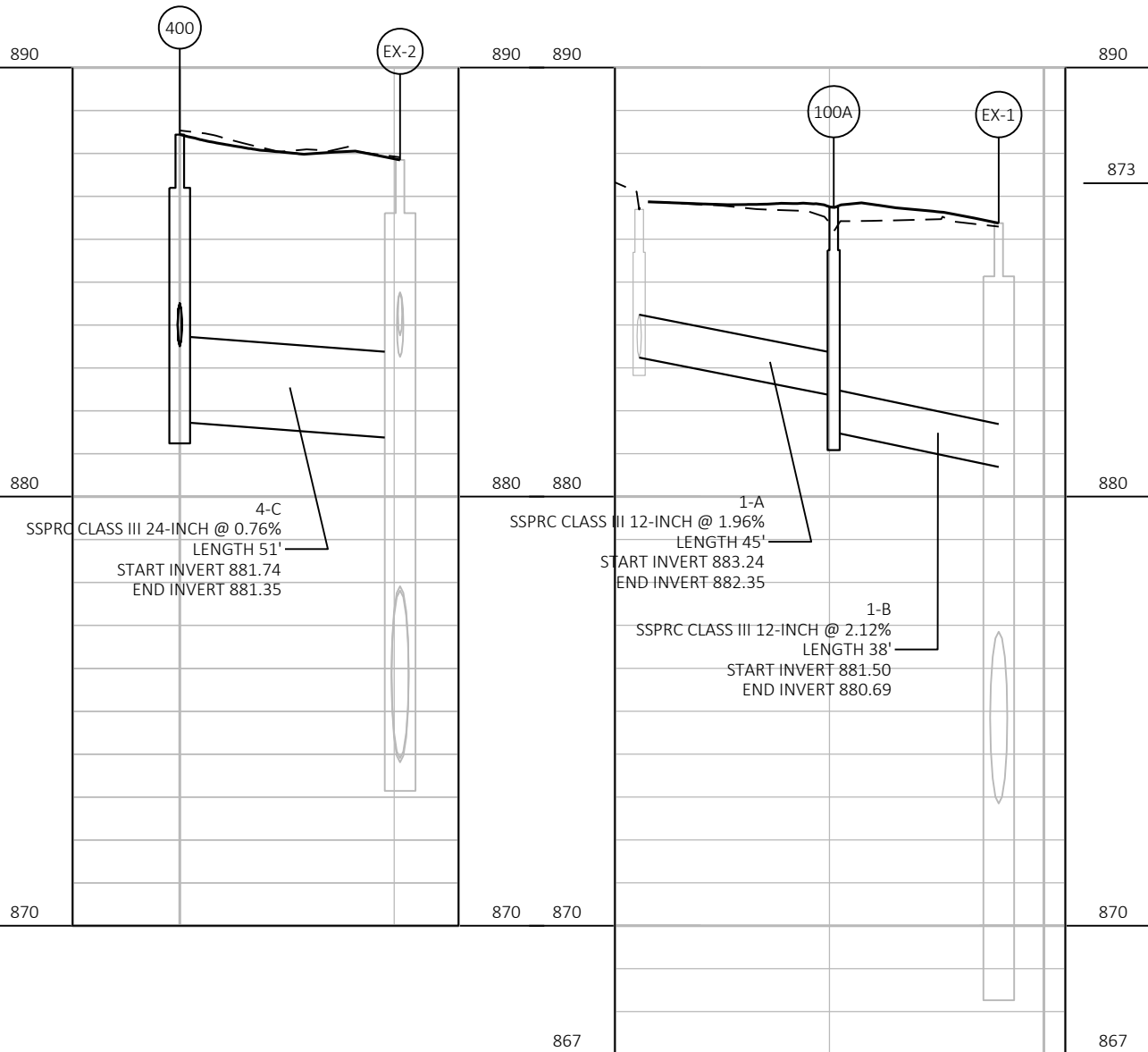
NOTE:
RIM ELEVATION IS MEASURED TO THE
FLOWLINE OF THE STRUCTURE.



PROJECT NO: 7824-00-11	HWY: BARTLETT AVE	COUNTY: EAU CLAIRE	STORM SEWER	SHEET	E
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SEE "INLET DETAIL FOR PIPE SLOPE GREATER THAN 15%" FOR MATERIALS AND RESTRAINING SYSTEM



PROJECT NO: 7824-00-11

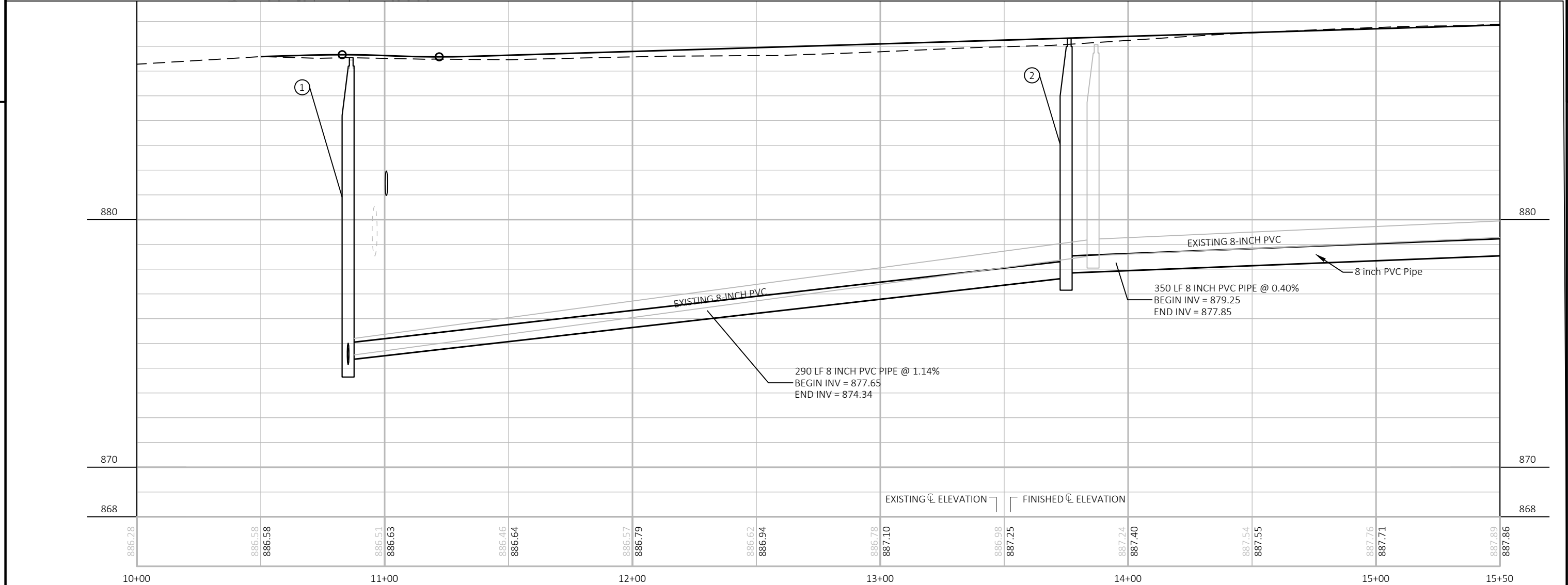
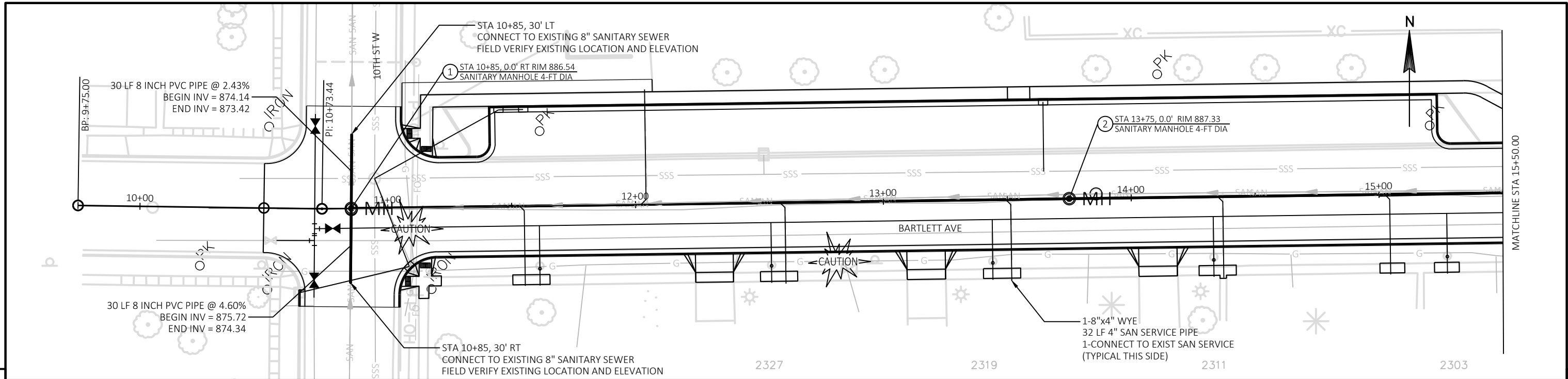
HWY: BARTLETT AVE

COUNTY: EAU CLAIRE

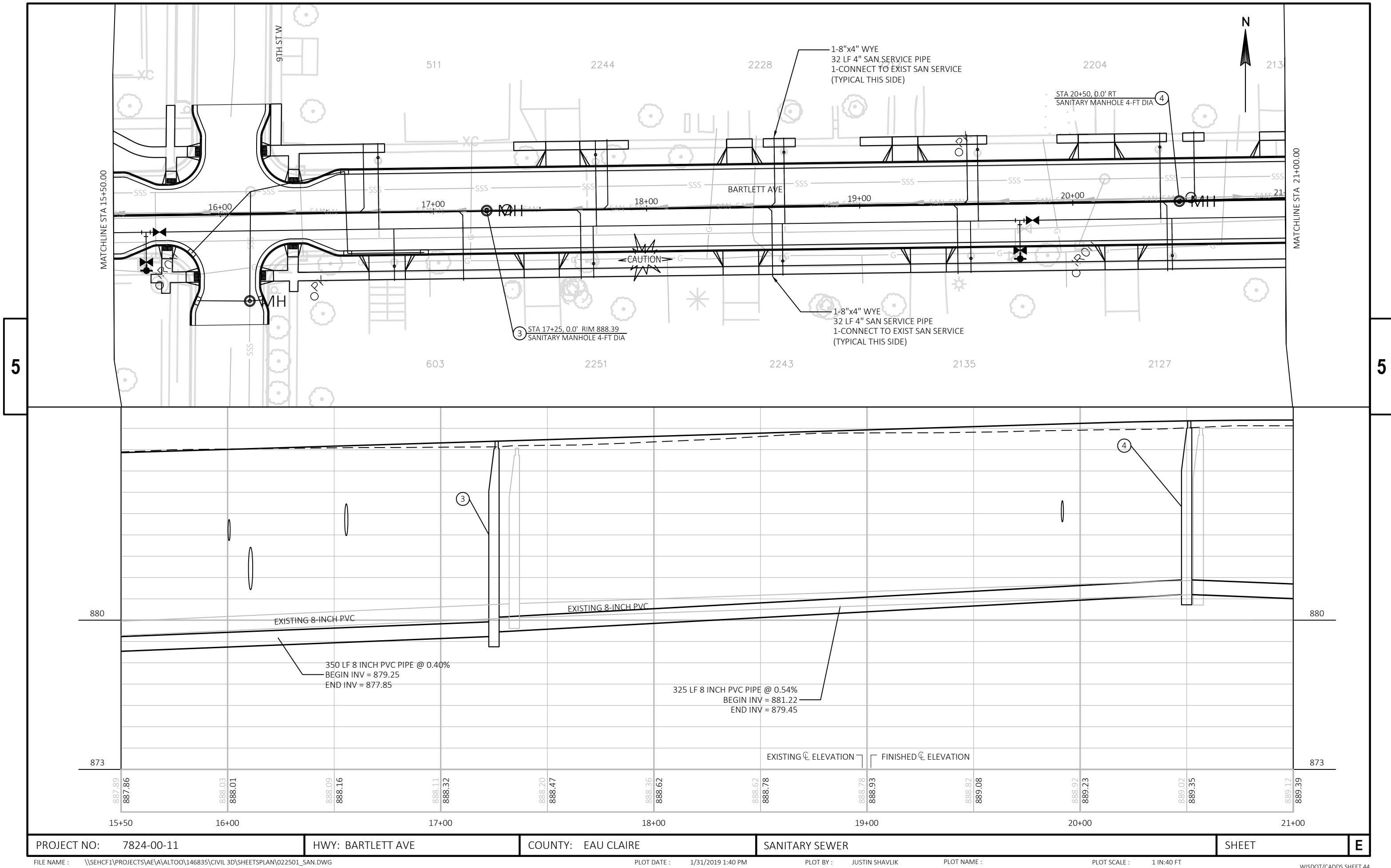
STORM SEWER

SHEET

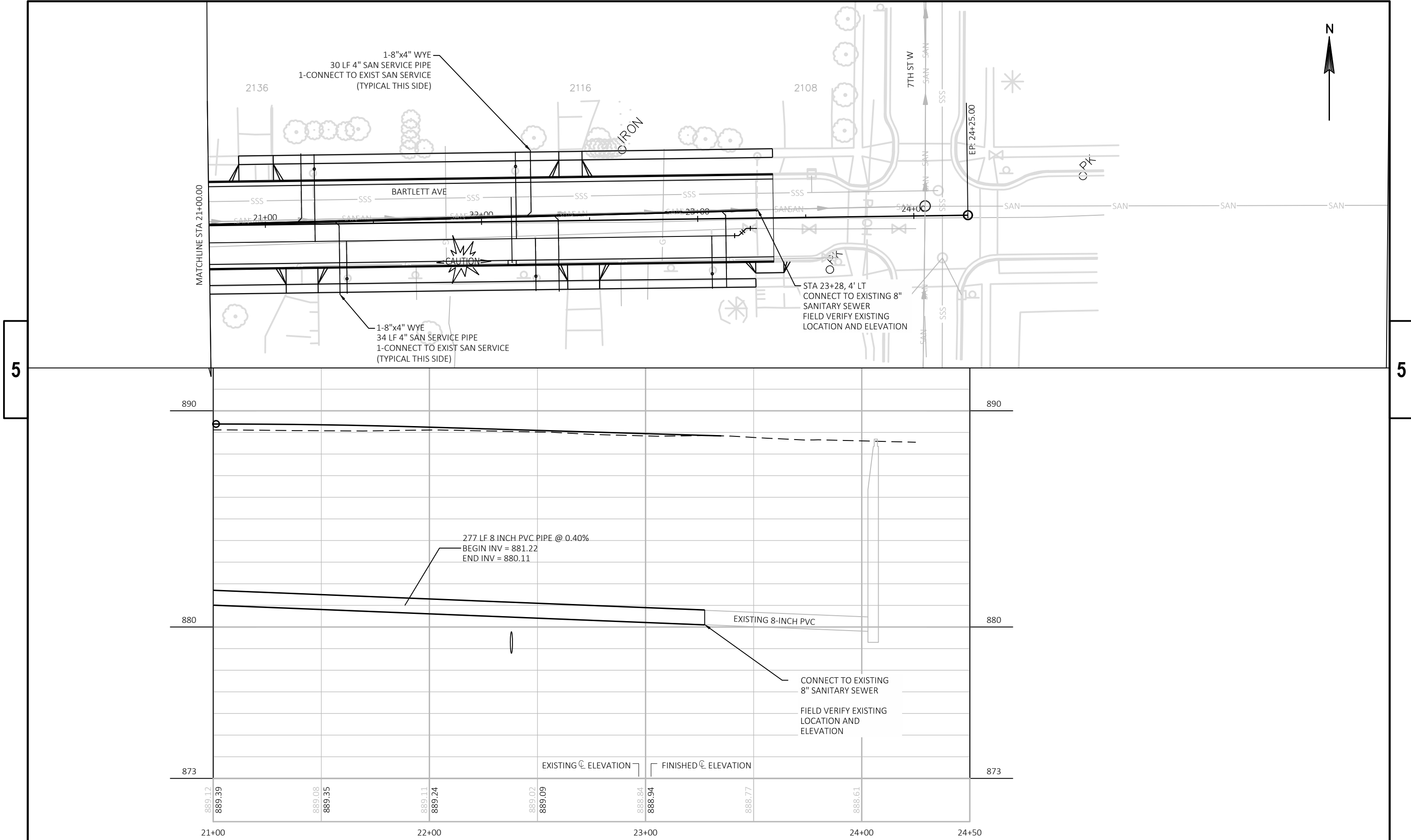
E



PROJECT NO: 7824-00-11	HWY: BARTLETT AVE	COUNTY: EAU CLAIRE	SANITARY SEWER	SHEET	E
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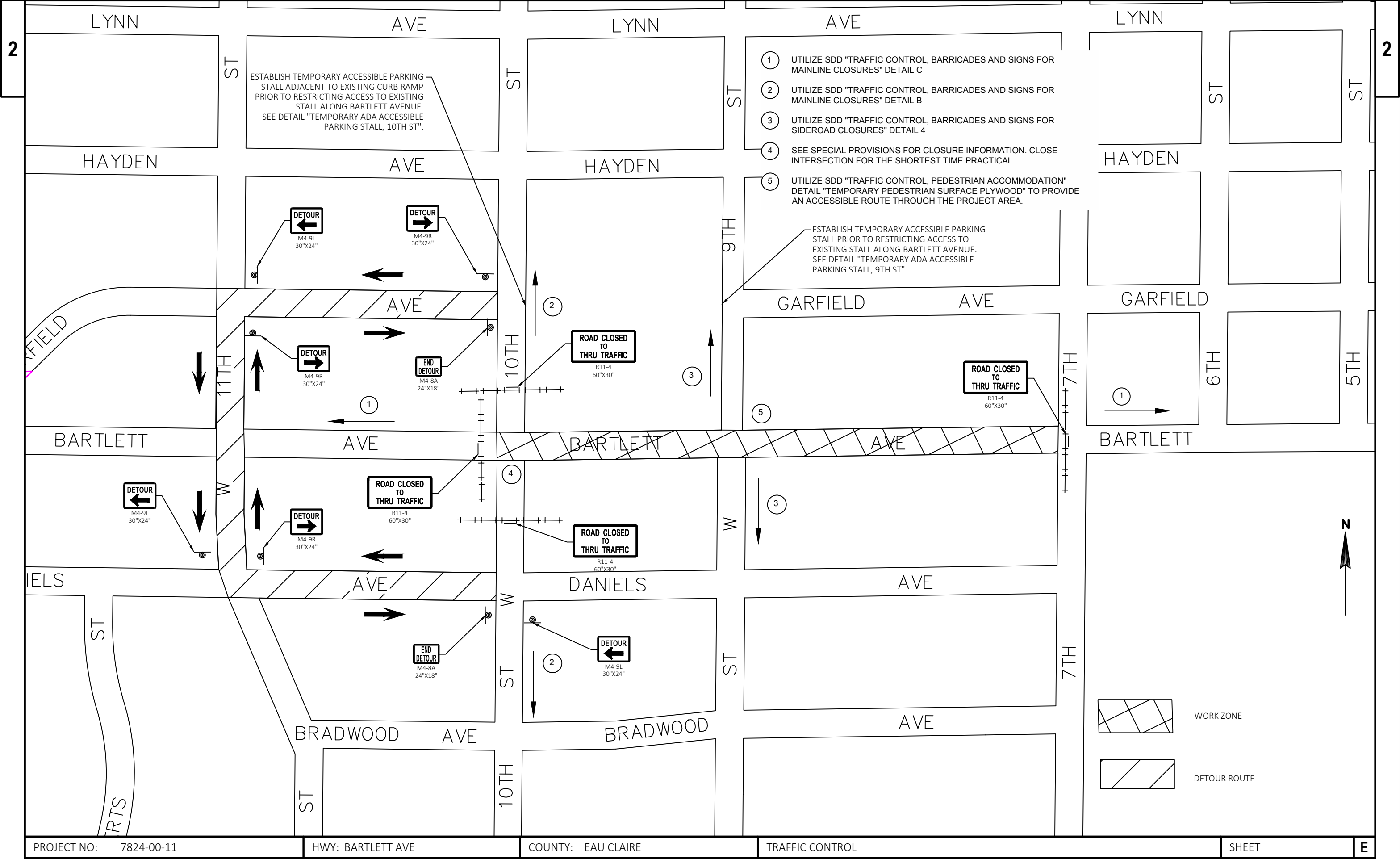


PROJECT NO: 7824-00-11	HWY: BARTLETT AVE	COUNTY: EAU CLAIRE	SANITARY SEWER	SHEET	E
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5

5



Estimate Of Quantities

7824-00-11

Line	Item	Item Description	Unit	Total	Qty
0002	201.0220	Grubbing	ID	2.000	2.000
0004	204.0110	Removing Asphaltic Surface	SY	6,731.000	6,731.000
0006	204.0150	Removing Curb & Gutter	LF	2,976.000	2,976.000
0008	204.0155	Removing Concrete Sidewalk	SY	953.000	953.000
0010	204.0210	Removing Manholes	EACH	3.000	3.000
0012	204.0220	Removing Inlets	EACH	6.000	6.000
0014	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	80.000	80.000
0016	204.0245	Removing Storm Sewer (size) 02. 24-Inch	LF	51.000	51.000
0018	205.0100	Excavation Common	CY	2,521.000	2,521.000
0020	213.0100	Finishing Roadway (project) 01. 7824-00-11	EACH	1.000	1.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	4,701.000	4,701.000
0024	416.0160	Concrete Driveway 6-Inch	SY	372.000	372.000
0026	455.0605	Tack Coat	GAL	387.000	387.000
0028	460.2000	Incentive Density HMA Pavement	DOL	1,050.000	1,050.000
0030	460.5224	HMA Pavement 4 LT 58-28 S	TON	808.000	808.000
0032	460.5244	HMA Pavement 4 LT 58-34 S	TON	808.000	808.000
0034	520.8000	Concrete Collars for Pipe	EACH	2.000	2.000
0036	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	2,598.000	2,598.000
0038	602.0405	Concrete Sidewalk 4-Inch	SF	5,710.000	5,710.000
0040	602.0415	Concrete Sidewalk 6-Inch	SF	745.000	745.000
0042	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	116.000	116.000
0044	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	316.000	316.000
0046	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	84.000	84.000
0048	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	51.000	51.000
0050	611.0420	Reconstructing Manholes	EACH	3.000	3.000
0052	611.0430	Reconstructing Inlets	EACH	1.000	1.000
0054	611.0530	Manhole Covers Type J	EACH	1.000	1.000
0056	611.0624	Inlet Covers Type H	EACH	10.000	10.000
0058	611.2004	Manholes 4-FT Diameter	EACH	1.000	1.000
0060	611.3230	Inlets 2x3-FT	EACH	10.000	10.000
0062	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7824-00-11	EACH	1.000	1.000
0064	619.1000	Mobilization	EACH	1.000	1.000
0066	624.0100	Water	MGAL	50.000	50.000
0068	625.0100	Topsoil	SY	2,856.000	2,856.000
0070	627.0200	Mulching	SY	2,856.000	2,856.000
0072	628.1504	Silt Fence	LF	250.000	250.000
0074	628.1520	Silt Fence Maintenance	LF	250.000	250.000

Estimate Of Quantities

7824-00-11

Line	Item	Item Description	Unit	Total	Qty
0076	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0078	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0080	628.7005	Inlet Protection Type A	EACH	11.000	11.000
0082	628.7015	Inlet Protection Type C	EACH	11.000	11.000
0084	628.7560	Tracking Pads	EACH	2.000	2.000
0086	629.0205	Fertilizer Type A	CWT	1.800	1.800
0088	630.0140	Seeding Mixture No. 40	LB	51.000	51.000
0090	630.0200	Seeding Temporary	LB	8.000	8.000
0092	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	12.000	12.000
0094	637.2210	Signs Type II Reflective H	SF	41.900	41.900
0096	637.2230	Signs Type II Reflective F	SF	23.250	23.250
0098	638.2602	Removing Signs Type II	EACH	8.000	8.000
0100	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0102	642.5001	Field Office Type B	EACH	1.000	1.000
0104	643.0420	Traffic Control Barricades Type III	DAY	1,162.000	1,162.000
0106	643.0500	Traffic Control Flexible Tubular Marker Posts	EACH	4.000	4.000
0108	643.0600	Traffic Control Flexible Tubular Marker Bases	EACH	4.000	4.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	1,494.000	1,494.000
0112	643.0900	Traffic Control Signs	DAY	1,182.000	1,182.000
0114	643.5000	Traffic Control	EACH	1.000	1.000
0116	644.1420.S	Temporary Pedestrian Surface Plywood	SF	160.000	160.000
0118	646.1020	Marking Line Epoxy 4-Inch	LF	2,358.000	2,358.000
0120	646.5220	Marking Symbol Epoxy	EACH	2.000	2.000
0122	646.6120	Marking Stop Line Epoxy 18-Inch	LF	96.000	96.000
0124	646.7020	Marking Diagonal Epoxy 6-Inch	LF	31.000	31.000
0126	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	97.000	97.000
0128	646.7520	Marking Crosswalk Epoxy Ladder Pattern 24-Inch	LF	400.000	400.000
0130	646.8320	Marking Parking Stall Epoxy	LF	820.000	820.000
0132	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	206.000	206.000
0134	650.4000	Construction Staking Storm Sewer	EACH	11.000	11.000
0136	650.4500	Construction Staking Subgrade	LF	1,285.000	1,285.000
0138	650.5000	Construction Staking Base	LF	1,285.000	1,285.000
0140	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2,598.000	2,598.000
0142	650.9000	Construction Staking Curb Ramps	EACH	6.000	6.000
0144	650.9910	Construction Staking Supplemental Control (project) 01. 7824-00-11	LS	1.000	1.000
0146	690.0150	Sawing Asphalt	LF	314.000	314.000
0148	690.0250	Sawing Concrete	LF	423.000	423.000
0150	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0152	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

Estimate Of Quantities

7824-00-11

Line	Item	Item Description	Unit	Total	Qty
0154	SPV.0060	Special 01. 6" Gate Valve and Box	EACH	2.000	2.000
0156	SPV.0060	Special 02. 8" Gate Valve and Box	EACH	5.000	5.000
0158	SPV.0060	Special 03. Hydrant	EACH	2.000	2.000
0160	SPV.0060	Special 04. 1" Curb Stop & Box	EACH	18.000	18.000
0162	SPV.0060	Special 05. 1" Corporation	EACH	18.000	18.000
0164	SPV.0060	Special 06. Connect to Exist Water Service	EACH	18.000	18.000
0166	SPV.0060	Special 07. Connect to Existing Watermain	EACH	4.000	4.000
0168	SPV.0060	Special 08. Sanitary Manholes 4-FT Dia	EACH	4.000	4.000
0170	SPV.0060	Special 09. 8"x4" Wye	EACH	21.000	21.000
0172	SPV.0060	Special 10. 8"x6" Wye	EACH	2.000	2.000
0174	SPV.0060	Special 11. Connect to Exist San Service	EACH	21.000	21.000
0176	SPV.0060	Special 12. Connect to Existing Sanitary	EACH	3.000	3.000
0178	SPV.0090	Special 01. 6" Ductile Iron Watermain	LF	36.000	36.000
0180	SPV.0090	Special 02. 8" Ductile Iron Watermain	LF	1,348.000	1,348.000
0182	SPV.0090	Special 03. 1" HDPE Service	LF	528.000	528.000
0184	SPV.0090	Special 04. 8" PVC Sanitary Sewer	LF	1,303.000	1,303.000
0186	SPV.0090	Special 05. 4" PVC Sanitary Service	LF	708.000	708.000
0188	SPV.0090	Special 06. 6" PVC Sanitary Service	LF	71.000	71.000
0190	SPV.0200	Special 01. Excess Manhole Depth	VF	7.300	7.300

3

GRUBBING			
STATION - STATION	LOCATION	201.0220 ID	
BARTLETT AVE 17+71	RT	1	
17+84	LT	1	
ITEM TOTAL		2	

CATEGORY 0020

REMOVING ASPHALTIC SURFACE			
STATION - STATION	LOCATION	204.0110 SY	REMARKS
BARTLETT AVE 10+50 - 16+04	LT & RT	2615	
11+23 - 15+41	LT	950	PARKING AREA
16+04 - 23+35	LT & RT	3166	
ITEM TOTAL		6731	

REMOVING CURB & GUTTER			
STATION - STATION	LOCATION	204.0150 LF	REMARKS
BARTLETT AVE 10+63	RT	7	
11+03 - 15+86	RT	521	
11+05 - 15+88	LT	521	
11+23 - 15+41	LT	451	PARKING AREA
16+22 - 23+35	RT	737	
16+20 - 23+35	LT	739	
ITEM TOTAL		2976	

REMOVING CONCRETE SIDEWALK			
STATION - STATION	LOCATION	204.0155 SY	
BARTLETT AVE 11+06 - 15+87	LT	284	
11+14	RT	14	
11+50 - 11+65	RT	6	
12+23 - 12+39	RT	6	
12+50 - 12+65	RT	6	
13+09 - 13+25	RT	7	
13+50 - 13+55	RT	7	
14+02 - 14+18	RT	6	
14+27 - 14+42	RT	6	
15+00 - 15+10	RT	4	
15+22 - 15+32	RT	4	
15+67 - 15+85	RT	15	
16+22 - 23+26	RT	327	
16+24 - 16+77	LT	40	
17+38 - 17+92	LT	24	
18+38 - 18+50	LT	5	
18+55 - 18+70	LT	5	
19+00 - 19+60	LT	25	
19+93 - 20+44	LT	19	
20+52 - 20+62	LT	4	
20+88 - 23+35	LT	139	
ITEM TOTAL		953	

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

REMOVING STRUCTURES					
STATION - STATION	LOCATION	REMOVING MANHOLES 204.0210*	REMOVING INLETS 204.0220	REMOVING STORM SEWER (12-INCH) 204.0245.01	REMOVING STORM SEWER (24-INCH) 204.0245.02
		EACH	EACH	LF	LF
BARTLETT AVE 10+84	CL	1	-	-	-
11+09	RT	-	1	-	-
12+52	LT	-	1	8	-
15+70	RT	-	1	31	-
16+13	RT	-	-	-	51
16+38	LT	-	1	11	-
16+39	RT	-	1	30	-
17+35	CL	1	-	-	-
20+03	RT	-	1	-	-
20+56	CL	1	-	-	-
ITEM TOTALS		3	6	80	51

*CATEGORY 0020

FINISHING ROADWAY		
STATION - STATION	213.0100 EACH	
BARTLETT AVE 10+50 - 23+35	1	
ITEM TOTAL	1	

EXCAVATION		
STATION - STATION	LOCATION	205.0100 EXCAVATION COMMON CY
10+50 - 16+05		1307
16+05 - 23+35		1214
ITEM TOTAL		2521

NOTES:
1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN COMMON EXCAVATION.
2) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXCAVATION VOLUME.
3) FILL WILL BE BACKFILLED WITH CUT OR BORROW.
4) POSITIVE BORROW INDICATES A SHORTAGE OF MATERIAL.
5) EXPANSION FACTOR = 1.3

7824-00-11 EARTHWORK DATA SUMMARY TABLE									
Division	From/To Station	Location	205.0100 Excavation Common (1)	Available Material (2)	Unexpanded Fill	Expanded Fill (3)	Mass Ordinate +/- (4)	Waste	208.0100 Borrow
			Cut			Factor 1.30			
Division 1	10+50 - 16+05	Beg. Project to 9th St	1,307	1,307	24	32	1,275	1,275	0
Disivion 2	16+05 - 23+35	9th St to End Project	1,214	1,214	61	79	1,135	1,135	0
Grand Total			2,521	2,521	86	111	2,410	2,410	0
Total Common Exc			2,521						

Notes:
(1) Common Excavation is the sum of the Cut columns. Item number 205.0100
(2) Available Material = Cut
(3) Expanded Fill Factor = 1.3
Expanded Fill = Unexpanded Fill * Fill Factor
(4) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division.

BASE AGGREGATE DENSE			
STATION - STATION	LOCATION	305.0120 1 1/4-INCH TON	624.0100 WATER MGAL
BARTLETT AVE 10+50 - 16+04		2485	26
16+04 - 23+35		2216	24
ITEM TOTALS		4701	50

CONCRETE DRIVEWAY, 6-INCH		
STATION	LOCATION	416.0160 SY
BARTLETT AVE 12+31	RT	23
13+17	RT	23
14+10	RT	23
16+78	RT	25
17+50	RT	24
17+61	LT	24
18+43	RT	25
18+43	LT	19
19+22	LT	19
19+32	RT	25
20+11	LT	25
20+23	RT	23
20+96	LT	24
21+17	RT	22
22+42	LT	17
22+47	RT	22
23+33	RT	9
ITEM TOTAL		372

CURB RAMP DETECTABLE WARNING FIELD YELLOW			
STATION - STATION	LOCATION	602.0505 SF	
BARTLETT AVE 11+15	LT	18	
11+15	RT	18	
15+85	LT	20	
15+85	RT	20	
16+30	LT	20	
16+30	RT	20	
ITEM TOTAL		116	

3

3

ASPHALTIC PAVEMENT ITEMS					
STATION - STATION	LOCATION	455.0605	460.2000	460.5224	460.5244
		TACK COAT GAL	INCENTIVE DENSITY HMA PAVEMENT DOL	PAVEMENT 4 LT 58-28 S TON	PAVEMENT 4 LT 58-34 S TON
BARTLETT AVE					
10+50 - 16+04	LT	200	540	421	421
11+07 - 12+07		7	20	10	10
16+04 - 23+35		180	490	377	377
ITEM TOTALS		387	1050	808	808

CONCRETE CURB & GUTTER 30-INCH TYPE D			
STATION - STATION	LOCATION	601.0411	
		LF	
BARTLETT AVE			
11+04 - 15+86	RT	532	
11+05 - 15+88	LT	568	
16+22 - 23+35	RT	750	
16+24 - 23+35	LT	748	
ITEM TOTAL		2598	

MAINTENANCE AND REPAIR OF HAUL ROADS		
STATION - STATION	618.0100	
	EACH	
BARTLETT AVE		
10+50 - 23+35	1	
ITEM TOTAL	1	

MOBILIZATION		
STATION - STATION	619.1000	
	EACH	
BARTLETT AVE		
10+50 - 23+35	1	
ITEM TOTAL	1	

STORM SEWER PIPE REINFORCED CONCRETE CLASS III					
PIPE	CONCRETE COLLARS FOR PIPE		12-INCH	18-INCH	24-INCH
	520.8000	608.0312	608.0318	608.0324	608.0324
BARTLETT AVE					
1-A	-	45	-	-	-
1-B	-	38	-	-	-
1-C	-	57	-	-	-
1-D	-	10	-	-	-
1-E	1	28	-	-	-
2-A	-	40	-	-	-
2-B	-	-	45	-	-
2-C	-	-	39	-	-
2-D	-	36	-	-	-
3-A	1	31	-	-	-
4-A	-	25	-	-	-
4-B	-	6	-	-	-
4-C	-	-	-	51	-
ITEM TOTALS	2	316	84	51	

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

CONCRETE SIDEWALK				
STATION - STATION	LOCATION	602.0405		602.0415
		4-INCH	6-INCH	SF
BARTLETT AVE				
11+15	LT	-	104	
11+15	RT	-	132	
11+15 - 13+51	LT	-	-	
11+50 - 11+65	RT	60	-	
12+50 - 12+65	RT	60	-	
13+40 - 13+55	RT	60	-	
13+51 - 13+60	LT	-	45	
13+60 - 15+78	LT	1177	-	
14+27 - 14+42	RT	63	-	
15+00 - 15+10	RT	40	-	
15+22 - 15+32	RT	40	-	
15+75	RT	126	80	
15+78	LT	-	139	
16+28	LT	-	99	
16+28 - 16+77	LT	322	-	
16+34	RT	-	146	
16+34 - 16+69	RT	173	-	
16+86 - 17+42	RT	222	-	
17+38 - 17+53	LT	60	-	
17+59 - 18+36	RT	304	-	
17+69 - 17+92	LT	91	-	
18+52 - 19+24	RT	280	-	
18+55 - 18+70	LT	60	-	
19+00 - 19+16	LT	60	-	
19+28 - 19+60	LT	129	-	
19+40 - 20+15	RT	291	-	
19+93 - 20+03	LT	40	-	
20+20 - 20+44	LT	98	-	
20+30 - 21+09	RT	306	-	
20+52 - 20+62	LT	40	-	
21+04 - 22+36	LT	528	-	
21+24 - 22+39	RT	443	-	
22+47 - 23+35	LT	352	-	
22+54 - 23+27	RT	285	-	
ITEM TOTALS		5710	745	

PERMANENT SIGNING							
SIGN GROUP CODE	SIGN CODE	TYPE II SIZE	637.2210	637.2230	634.0612	638.2602	638.3000
			SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	POSTS WOOD 4X6-INCH 12-FT EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
1-1	R1-1	30x30	5.18	-	1	1	1
1-2	R1-1	30x30	5.18	-	1	1	1
1-3	R7-8A	12x18	1.50	-	1	-	-
1-4	R7-8A	12x18	1.50	-	1	-	-
1-5	R1-1	30x30	5.18	-	1	1	1
1-6	W11-2	30x30	-	6.25	1	-	-
	W16-7L	24x12	-	2	-	-	-
1-7	R1-1	30x30	5.18	-	1	1	1
1-8	R2-1	24x30	5.00	-	1	1	1
1-9	W11-2	30x30	-	6	1	-	-
	W16-7L	24x12	-	2	-	-	-
1-10	R1-1	30x30	5.18	-	1	1	1
1-11	S1-1	36x36	-	6.75	1	1	1
1-12	S4-51	24x48	8	-	1	1	1
ITEM TOTALS			41.90	23.25	12	8	8

MOBILIZATIONS EROSION CONTROL			
STATION - STATION	628.1905	628.1910	
	EROSION CONTROL EACH	EMERGENCY EROSION CONTROL EACH	
BARTLETT AVE			
10+50 - 23+35	1	1	
ITEM TOTALS	1	1	

FIELD OFFICE TYPE B		
STATION - STATION	642.5001	
	EACH	
BARTLETT AVE		
10+50 - 23+35	1	
ITEM TOTAL	1	

TEMPORARY PEDESTRIAN SURFACE PLYWOOD		
STATION - STATION	644.1420.S	
	SF	
BARTLETT AVE		
16+00	160	
ITEM TOTAL	160	

EROSION CONTROL ITEMS					
STATION - STATION	LOCATION	628.1504	628.1520	628.7005	628.7015
		SILT FENCE LF	SILT FENCE MAINTENANCE LF	INLET PROTECTION TYPE A EACH	INLET PROTECTION TYPE C EACH
BARTLETT AVE					
10+50 - 23+35		250	250	11	11
ITEM TOTALS		250	250	11	11

TOPSOIL, MULCHING AND SEEDING					
STATION - STATION	LOCATION	625.0100	627.0200	629.0205	630.0140
		TOPSOIL SY	MULCHING SY	FERTILIZER TYPE A CWT	SEEDING MIXTURE NO. 40 LB
BARTLETT AVE					
10+50 - 23+35		2856	2856	1.80	51.40
ITEM TOTALS		2856	2856	1.80	51.40

TRAFFIC CONTROL ITEMS					
STATION - STATION	LOCATION	643.0420	643.0500	643.0600	643.0705
		BARRICADES TYPE III DAY	FLEXIBLE POSTS EACH	TUBULAR MARKER BASES EACH	WARNING LIGHTS TYPE A DAY
BARTLETT AVE					
10+50 - 23+35		1022	4	4	1314
DETOUR		140	-	-	180
ITEM TOTALS		1162	4	4	1494

3

PROJECT NO: 7824-00-11	HWY: BARTLETT AVE	COUNTY: EAU CLAIRE	MISCELLANEOUS QUANTITIES	SHEET	E
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PAVEMENT MARKING EPOXY									
STATION - STATION LOCATION		646.1020 4-INCH YELLOW LF	646.5220 SYMBOL EACH	646.6120 STOP LINE 18-INCH LF	646.7020 DIAGONAL 6-INCH LF	646.7420 CROSSWALK TRANSVERSE LINE 6-INCH LF	646.7520 CROSSWALK LADDER PATTERN 24-INCH LF	646.8320 PARKING STALL LF	649.0150 TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH LF
10TH STREET		-	-	-	-	-	-	-	16
9TH STREET		-	-	-	-	-	-	-	190
BARTLETT AVE									
10+47	RT	-	-	18	-	-	-	-	-
10+55	LT & RT	-	-	-	-	-	72	-	-
10+67 - 10+85	LT	-	-	-	-	-	-	-	-
10+67 - 11+02	LT	-	-	18	-	-	72	-	-
10+67 - 11+02	RT	-	-	-	-	-	72	-	-
10+84 - 11+02	RT	-	-	18	-	-	-	-	-
11+16	LT & RT	-	-	-	-	-	72	-	-
11+24	LT	-	-	18	-	-	-	-	-
11+24 - 15+71	CL	896	-	-	-	-	-	-	-
11+52 - 15+12	LT	-	-	-	-	-	-	820	-
13+46	LT	-	1	-	-	-	-	-	-
13+55	LT	-	-	-	31	-	-	-	-
13+64	LT	-	1	-	-	-	-	-	-
15+75	LT & RT	-	-	-	-	-	56	-	-
15+92 - 16+16	RT	-	-	-	-	48	-	-	-
15+93 - 16+18	LT	-	-	-	-	49	-	-	-
15+93 - 16+05	LT	-	-	12	-	-	-	-	-
16+04 - 16+16	RT	-	-	12	-	-	-	-	-
16+34	LT & RT	-	-	-	-	-	56	-	-
16+38 - 23+70	CL	1462	-	-	-	-	-	-	-
ITEM TOTALS		2358	2	96	31	97	400	820	206

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

PROJECT NO: 7824-00-11

HWY: BARTLETT AVE

COUNTY: EAU CLAIRE

MISCELLANEOUS QUANTITIES

SHEET

E

CONSTRUCTION STAKING

STATION - STATION LOCATION		650.4000 STORM SEWER EACH	650.4500 SUBGRADE LF	650.5000 BASE LF	650.5500 CURB & GUTTER LF	650.9000 CURB RAMPS EACH	650.9910 SUPPLEMENTAL CONTROL (7824-00-11) LS
BARTLETT AVE							
10+50 - 23+35		-	1285	1285	-	-	1
11+04 - 15+86	RT	-	-	-	532	-	-
11+05 - 15+88	LT	-	-	-	568	-	-
11+14	LT	-	-	-	-	1	-
11+14	RT	-	-	-	-	1	-
11+08	RT	1	-	-	-	-	-
11+45	LT	1	-	-	-	-	-
11+50	LT	1	-	-	-	-	-
15+75	RT	-	-	-	-	1	-
15+77	LT	-	-	-	-	1	-
15+86	RT	1	-	-	-	-	-
15+89	RT	1	-	-	-	-	-
16+13	RT	1	-	-	-	-	-
16+19	RT	1	-	-	-	-	-
16+22 - 23+35	RT	-	-	-	750	-	-
16+24 - 23+35	LT	-	-	-	748	-	-
16+27	LT	-	-	-	-	1	-
16+33	RT	-	-	-	-	1	-
16+59	LT	1	-	-	-	-	-
16+59	RT	1	-	-	-	-	-
16+95	RT	1	-	-	-	-	-
22+33	RT	1	-	-	-	-	-
ITEM TOTALS		11	1285	1285	2598	6	1

SAWING ASPHALT

STATION - STATION LOCATION		690.0150 LF
BARTLETT AVE		
10+50	LT-RT	36
10+66 - 11+04	LT	38
10+67 - 11+01	RT	34
11+07 - 12+07	LT	100
15+87 - 16+20	RT	33
15+90 - 16+22	LT	32
23+35		41
ITEM TOTAL		314

SAWING CONCRETE

STATION - STATION LOCATION		690.0250 LF
BARTLETT AVE		
10+50 - 23+35	LT-RT	423
ITEM TOTAL		423

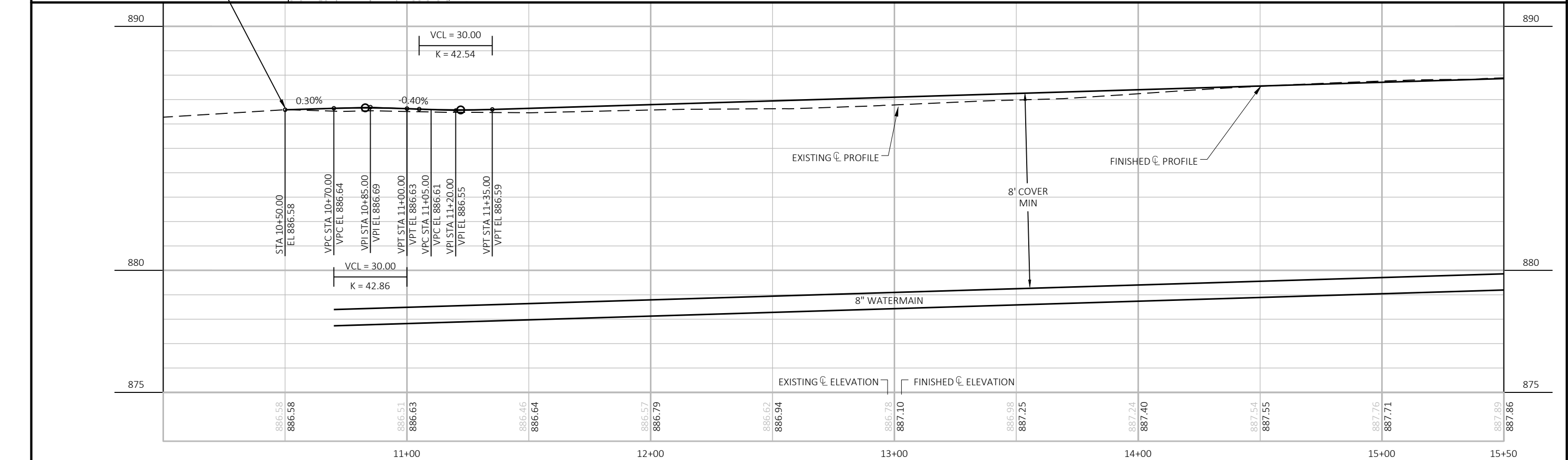
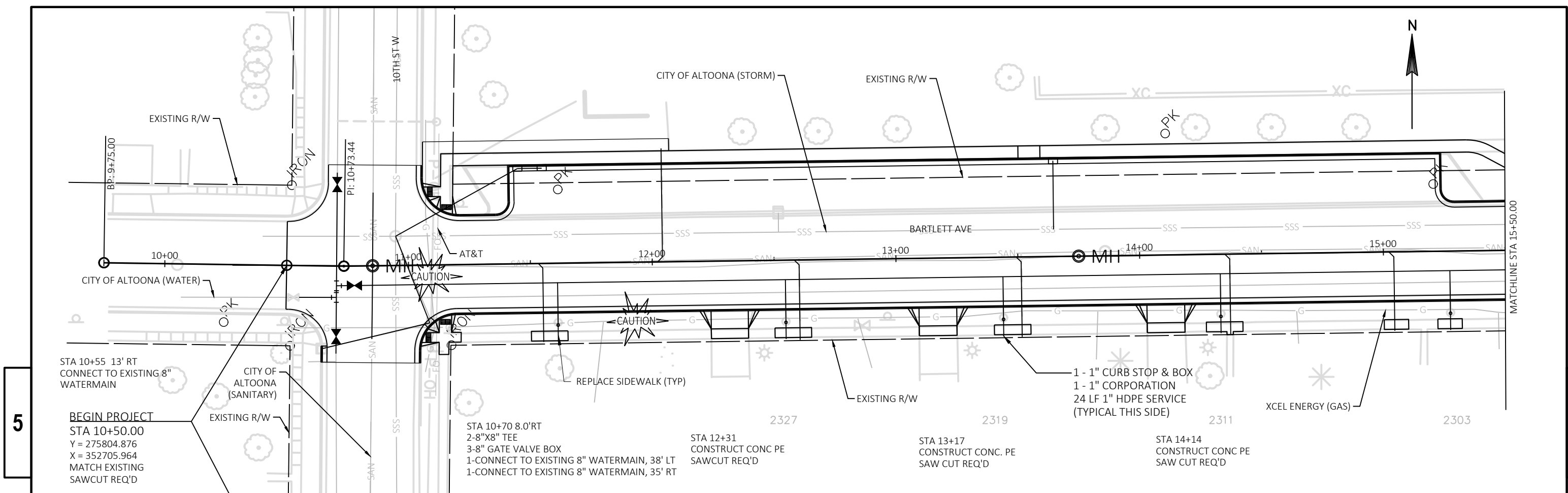
3

WATERMAIN SPECIAL PROVISIONS											
STATION - STATION	LOCATION	6" GATE	8" GATE	HYDRANT	1" CURB	1"	CONNECT TO	CONNECT TO	6" DUCTILE	8" DUCTILE	1" HDPE
		VALVE AND BOX SPV.0060.01 EACH	VALVE AND BOX SPV.0060.02 EACH	SPV.0060.03 EACH	STOP & BOX SPV.0060.04 EACH	CORPORATION SPV.0060.05 EACH	EXIST WATER SERVICE SPV.0060.06 EACH	EXISTING WATERMAIN SPV.0060.07 EACH	IRON WATERMAIN SPV.0090.01 LF	IRON WATERMAIN SPV.0090.02 LF	SERVICE SPV.0090.03 LF
BARTLETT AVE											
10+54	RT	-	-	-	-	-	-	1	-	-	-
10+54 - 10+70	RT	-	-	-	-	-	-	-	-	16	-
10+70	LT & RT	-	-	-	-	-	-	2	-	74	-
10+70 - 23+27	RT	-	2	-	-	-	-	-	-	1258	-
10+78	RT	-	1	-	-	-	-	-	-	-	-
11+61	RT	-	-	-	1	1	1	-	-	-	24
12+54	RT	-	-	-	1	1	1	-	-	-	24
13+44	RT	-	-	-	1	1	1	-	-	-	24
14+34	RT	-	-	-	1	1	1	-	-	-	24
15+28	RT	-	-	-	1	1	1	-	-	-	24
15+65	RT	1	-	1	-	-	-	-	18	-	-
15+71	RT	-	1	-	-	-	-	-	-	-	-
16+75	LT	-	-	-	1	1	1	-	-	-	40
16+81	RT	-	-	-	1	1	1	-	-	-	24
17+75	RT	-	-	-	1	1	1	-	-	-	24
17+76	LT	-	-	-	1	1	1	-	-	-	40
18+64	RT	-	-	-	1	1	1	-	-	-	24
18+65	LT	-	-	-	1	1	1	-	-	-	40
19+52	RT	-	-	-	1	1	1	-	-	-	24
19+53	LT	-	-	-	1	1	1	-	-	-	40
19+75	RT	1	-	1	-	-	-	-	18	-	-
19+80	RT	-	1	-	-	-	-	-	-	-	-
20+41	LT	-	-	-	1	1	1	-	-	-	40
20+46	RT	-	-	-	1	1	1	-	-	-	24
22+16	LT	-	-	-	1	1	1	-	-	-	40
22+25	RT	-	-	-	1	1	1	-	-	-	24
23+06	RT	-	-	-	1	1	1	-	-	-	24
23+27	RT	-	-	-	-	-	-	1	-	-	-
ITEM TOTALS		2	5	2	18	18	18	4	36	1348	528

3

SANITARY SEWER SPECIAL PROVISIONS										
STATION - STATION	LOCATION	SANITARY MANHOLES	8"X4"	8"X6"	CONNECT TO EXIST	CONNECT TO	8" PVC	4" PVC	6" PVC	EXCESS MANHOLE
		4-FT DIA SPV.0060.08 EACH	WYE SPV.0060.09 EACH	WYE SPV.0060.10 EACH	SAN SERVICE SPV.0060.11 EACH	EXISTING SANITARY SPV.0060.12 EACH	SANITARY SEWER SPV.0090.04 LF	SANITARY SERVICE SPV.0090.05 LF	SANITARY SERVICE SPV.0090.06 LF	DEPTH SPV.0200.01 VF
BARTLETT AVE		-	-	2	-	-	-	-	71	-
10+85	LT & RT	1	-	-	-	2	60	-	-	4.4
10+85 - 13+75	CL	-	-	-	-	-	290	-	-	-
11+55	RT	-	1	-	1	-	-	33	-	-
12+04	LT	-	1	-	1	-	-	46	-	-
12+60	RT	-	1.00	-	1.00	-	-	33.00	-	-
13+51	RT	-	1	-	1	-	-	33	-	-
13+75	CL	1	-	-	-	-	-	-	-	1.7
13+75 - 17+25	CL	-	-	-	-	-	350	-	-	-
14+37	RT	-	1	-	1	-	-	33	-	-
15+04	RT	-	1.00	-	1.00	-	-	33.00	-	-
16+67	LT	-	1	-	1	-	-	33	-	-
17+14	RT	-	1	-	1	-	-	33	-	-
17+25	CL	1	-	-	-	-	-	-	-	1.1
17+25 - 20+50	CL	-	-	-	-	-	325	-	-	-
17+69	RT	-	1.00	-	1.00	-	-	33.00	-	-
17+80	LT	-	1	-	1	-	-	33	-	-
18+59	RT	-	1	-	1	-	-	33	-	-
18+60	LT	-	1	-	1	-	-	33	-	-
19+46	RT	-	1	-	1	-	-	33	-	-
19+50	LT	-	1.00	-	1.00	-	-	33.00	-	-
20+44	RT	-	1	-	1	-	-	33	-	-
20+50	CL	1	-	-	-	-	-	-	-	0.1
20+50 - 23+28	CL	-	-	-	-	-	278	-	-	-
20+57	LT	-	1	-	1	-	-	33	-	-
21+17	LT	-	1.00	-	1.00	-	-	32.00	-	-
21+34	RT	-	1	-	1	-	-	34	-	-
22+23	LT	-	1	-	1	-	-	30	-	-
22+35	RT	-	1	-	1	-	-	35	-	-
23+13	RT	-	1	-	1	-	-	36	-	-
23+28	LT	-	-	-	-	1	-	-	-	-
ITEM TOTALS		4	21	2	21	3	1303	708	71	7.3

ALL ITEMS ARE CATEGORY 0020
UNLESS OTHERWISE NOTED



PROJECT NO: 7824-00-11	HWY: BARTLETT AVE	COUNTY: EAU CLAIRE	PLAN AND PROFILE: BARTLETT AVE	SHEET	E
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FILE NAME : \\SEHCF1\PROJECTS\AE\A\ALTOO\146835\CIVIL 3D\SHEETS\PLAN\050101_PP.DWG
LAYOUT NAME - 01

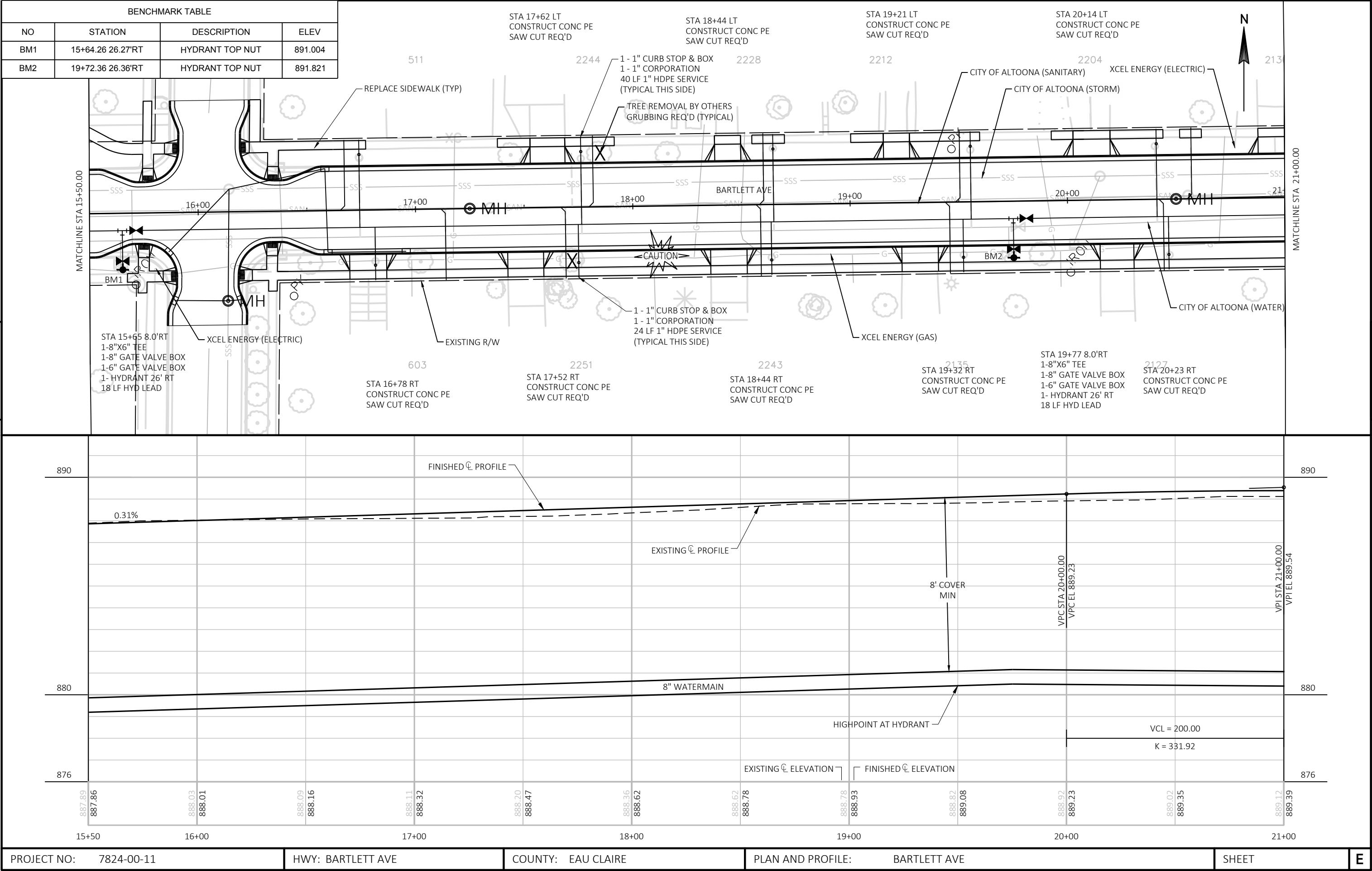
PLOT DATE : 1/31/2019 1:41 PM

PLOT BY : JUSTIN SHAVLIK

PLOT NAME :

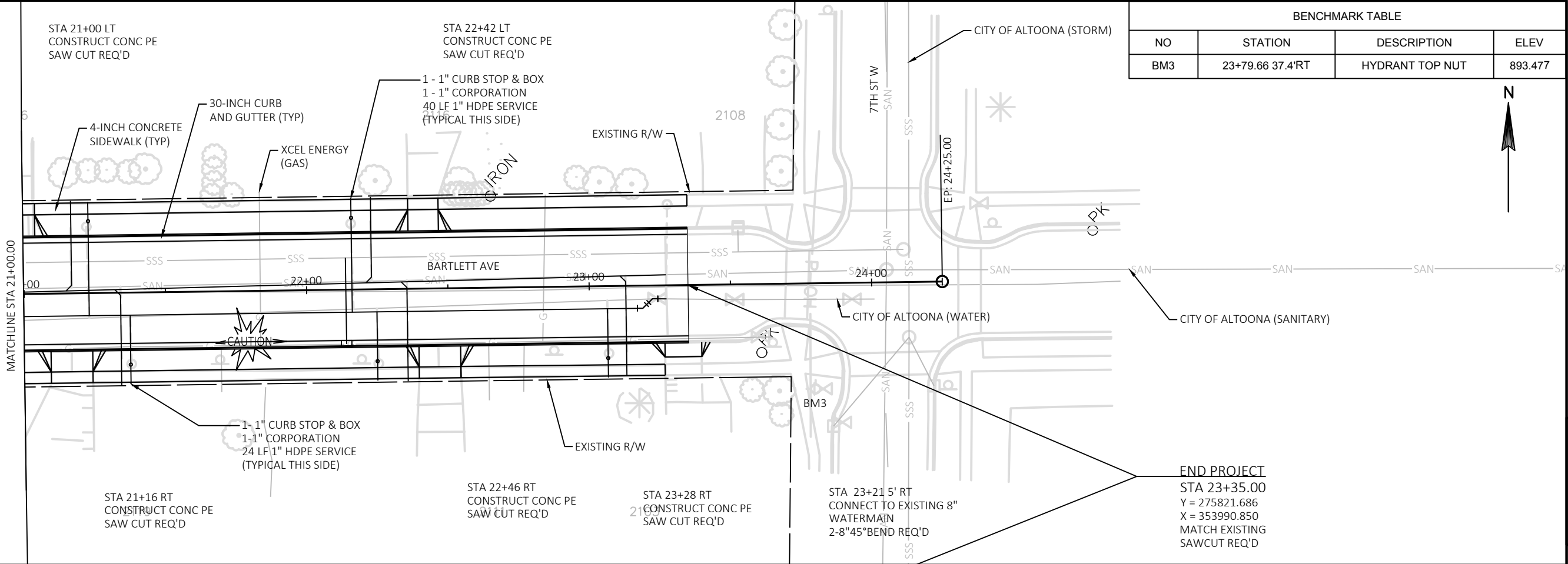
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDs SHEET 44

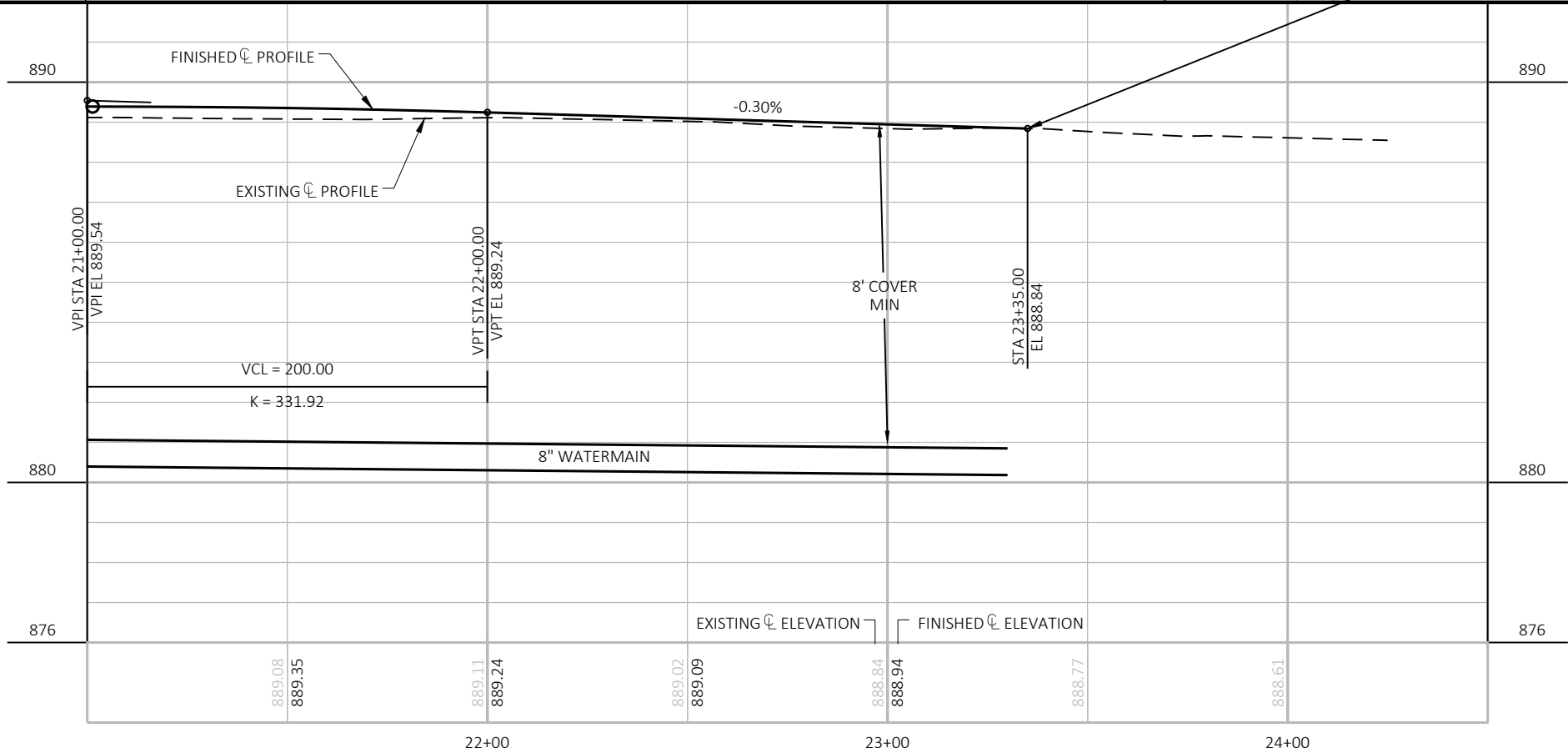


5

5



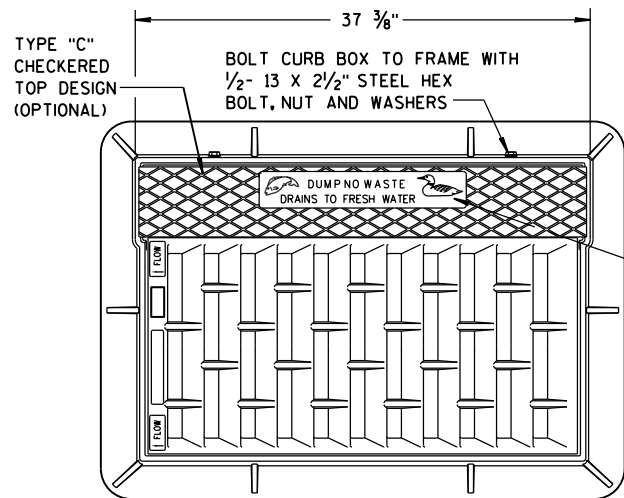
BENCHMARK TABLE			
NO	STATION	DESCRIPTION	ELEV
BM3	23+79.66 37.4'RT	HYDRANT TOP NUT	893.477



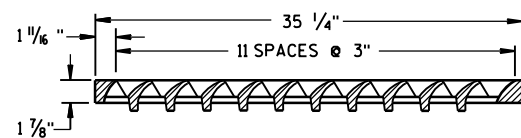
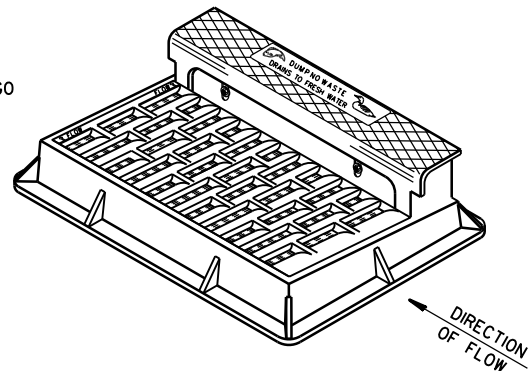
PROJECT NO: 7824-00-11	HWY: BARTLETT AVE	COUNTY: EAU CLAIRE	PLAN AND PROFILE: BARTLETT AVE	SHEET	E
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Standard Detail Drawing List

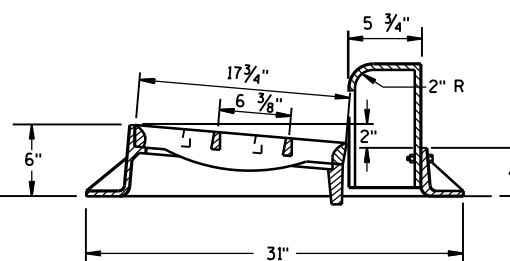
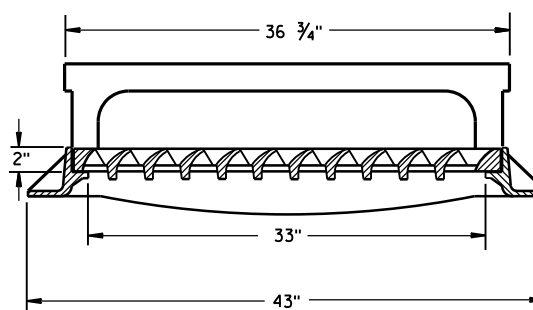
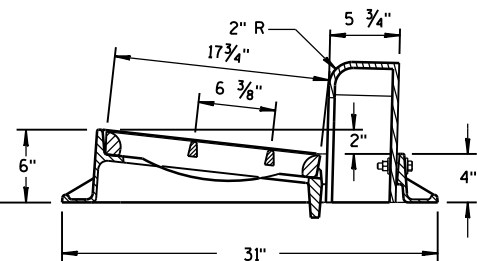
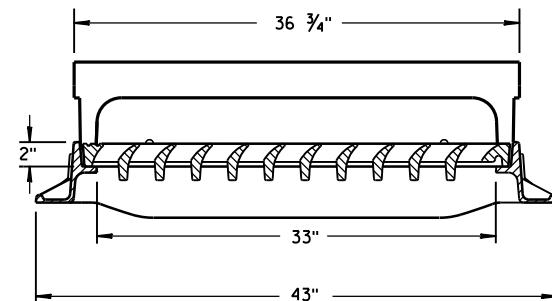
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19D	INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-02	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D05-19A	CURB RAMPS TYPES 1 AND 1-A
08D05-19B	CURB RAMPS TYPES 2 AND 3
08D05-19C	CURB RAMPS TYPES 4A AND 4A1
08D05-19D	CURB RAMPS TYPE 4B AND 4B1
08D05-19E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-19F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-19G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D19-02	DRIVEWAY AND SIDEWALK RAMPS TYPE Z
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C07-14A	PAVEMENT MARKING SYMBOLS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D30-04A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-04B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-04C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



**NOTE:
GRATE IS REVERSIBLE.**

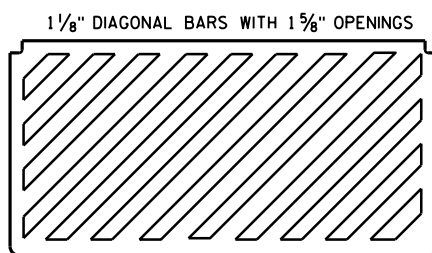


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

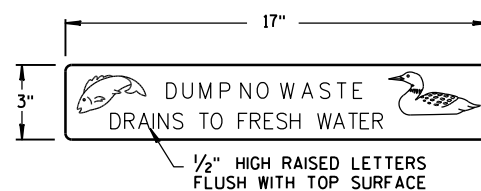


TYPE "H"

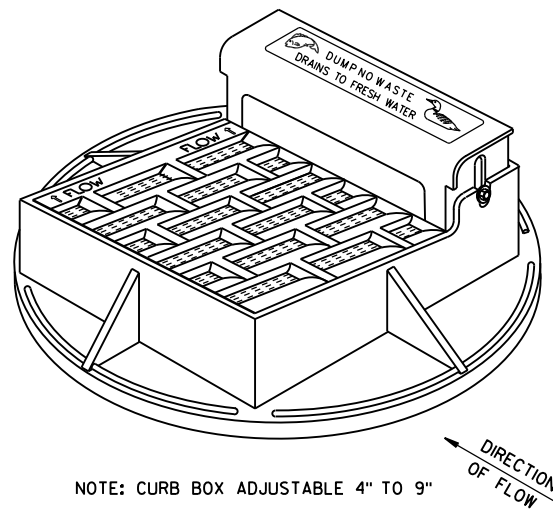
NOTE: EITHER CASTING IS ACCEPTABLE



**SPECIAL GRATE FOR
TYPE "H" COVER**
(MEASURES 35 1/4" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)

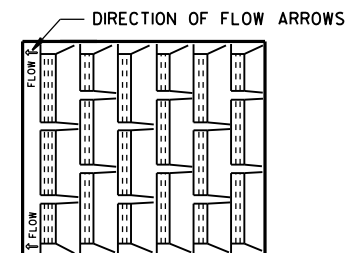


LOGO DETAIL

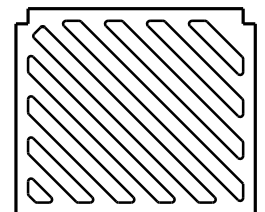


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

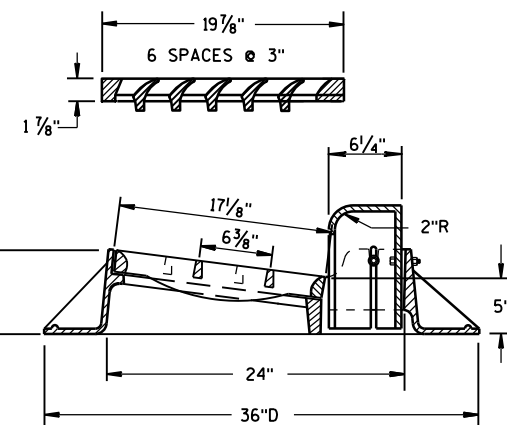
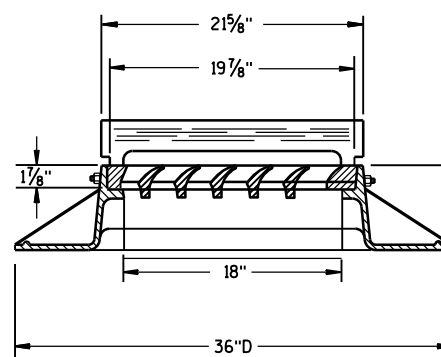
**NOTE:
GRATE IS REVERSIBLE.**



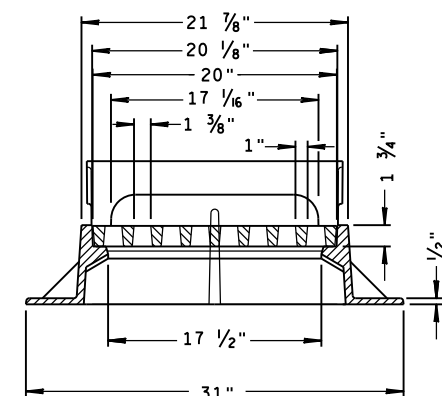
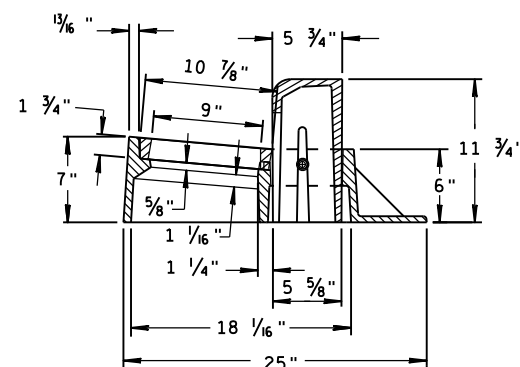
1" DIAGONAL BARS
WITH 1 1/2" OPENINGS



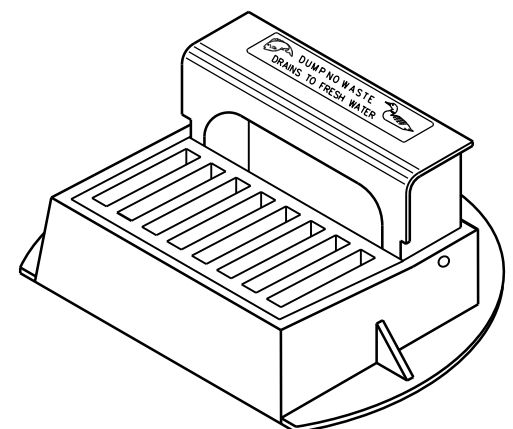
**SPECIAL GRATE FOR
TYPE "A" COVER**
(MEASURES 19 3/4" X 17" X 1 1/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



TYPE "Z"

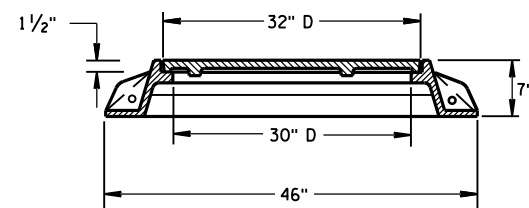
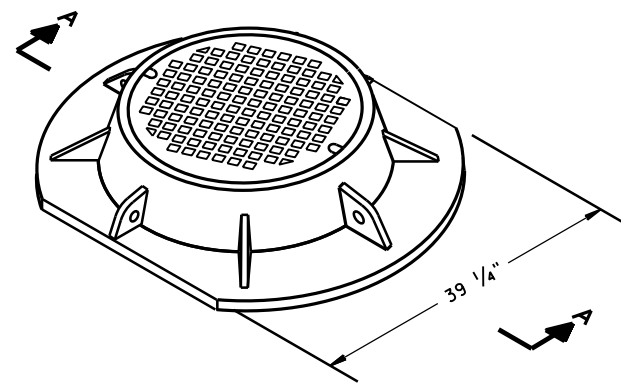


**INLET COVERS
TYPE A, H, A-S, H-S & Z**

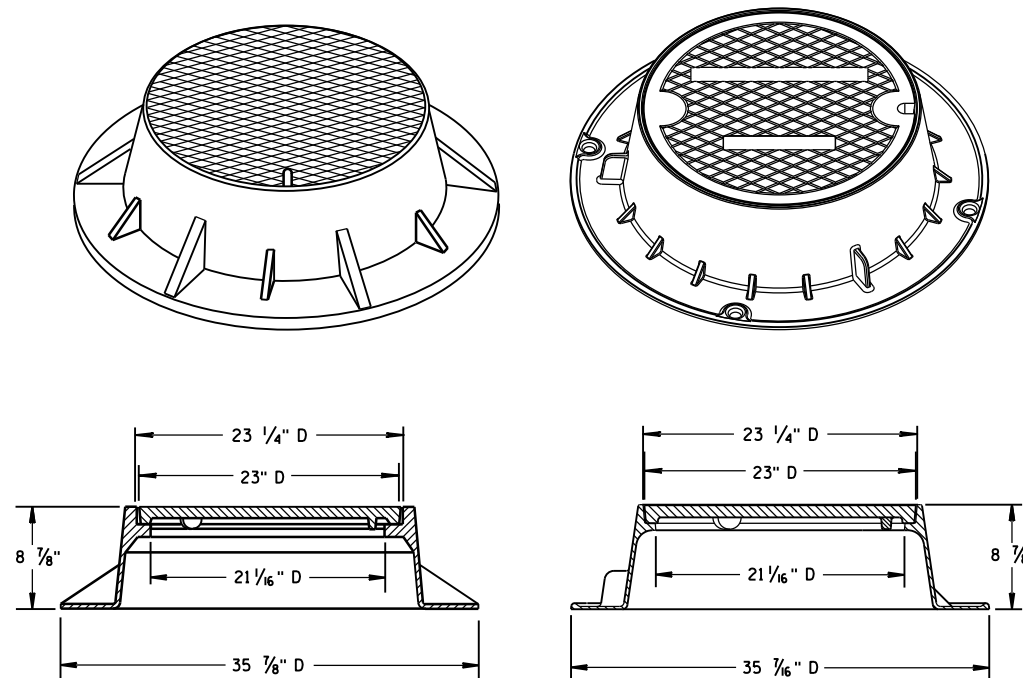
**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED
11-27-13
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

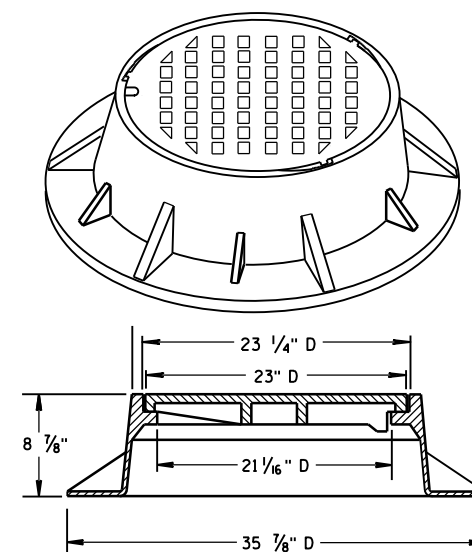
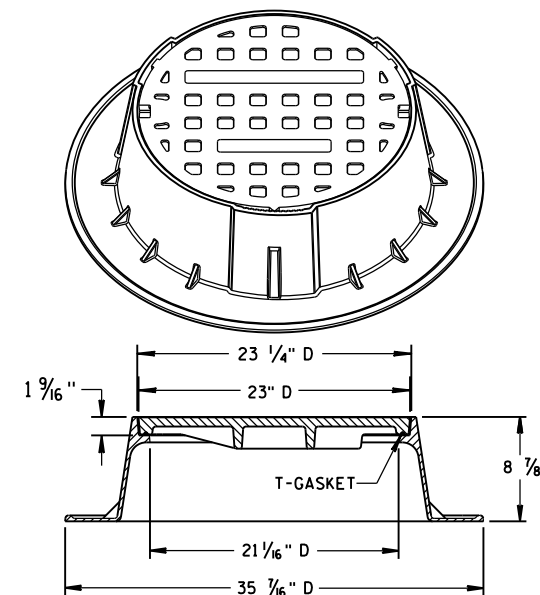


SECTION A-A
TYPE "K"



TYPE "J"

NOTE: EITHER CASTING IS ACCEPTABLE

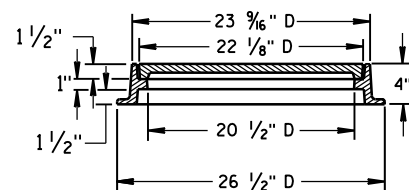
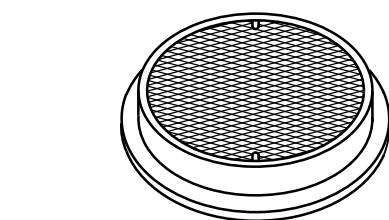


TYPE "J" SPECIAL

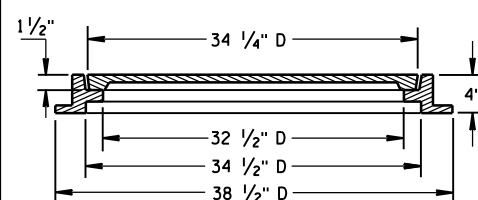
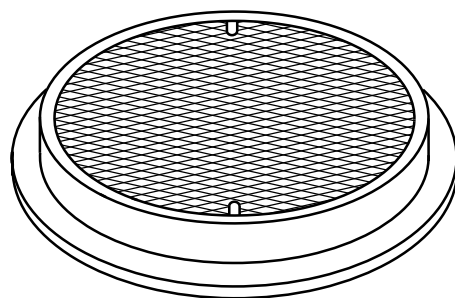
TYPE "B" NON-ROCKING SELF-SEAL LID

(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

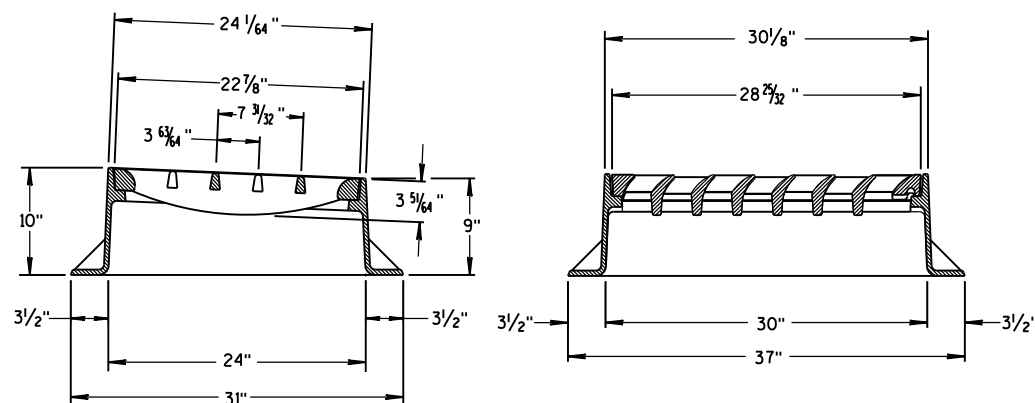
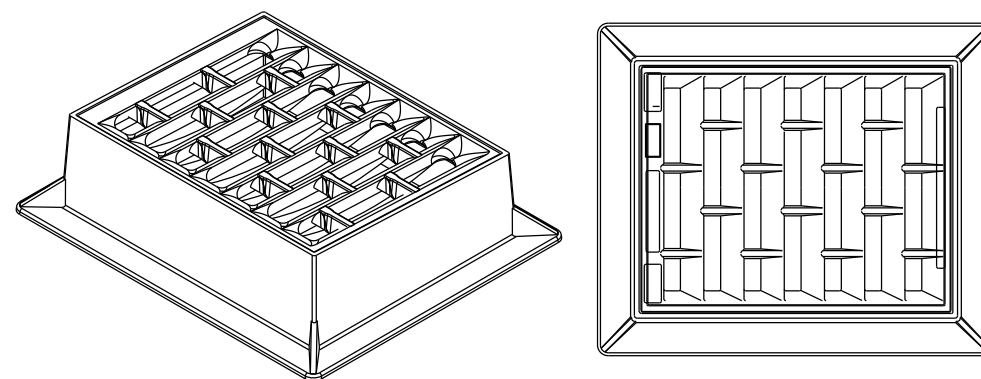
NOTE: EITHER CASTING IS ACCEPTABLE



TYPE "L"



TYPE "M"



INLET COVER TYPE "BW"

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.

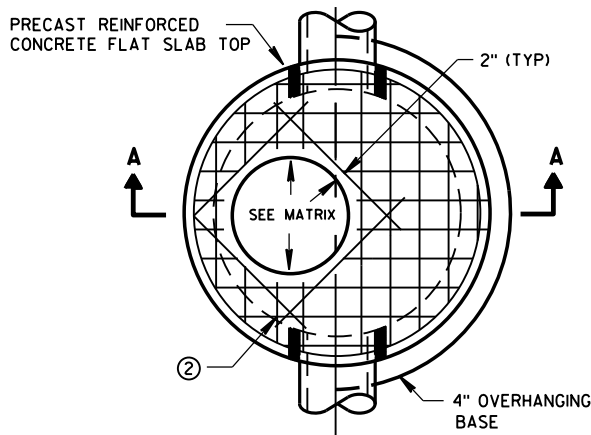
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

INLET COVER TYPE BW
MANHOLE COVERS, TYPE K,
J, J-S, L & M

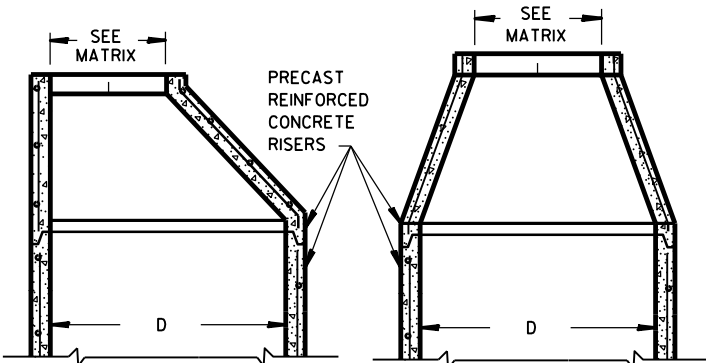
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/27/2013
DATE
FHWA

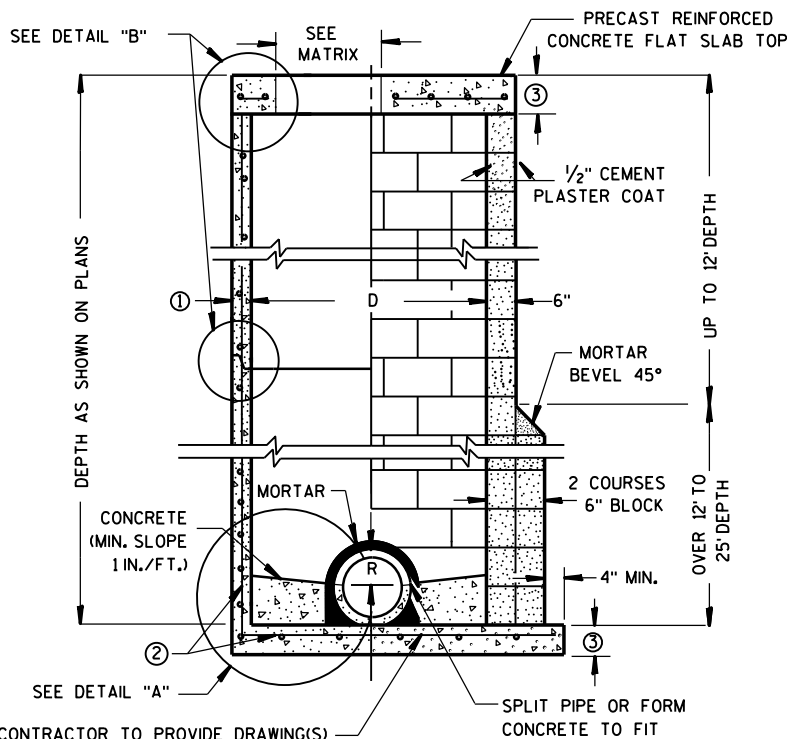
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



PLAN VIEW CIRCULAR OPENING

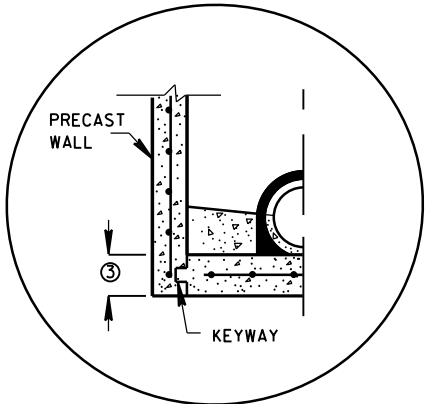


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

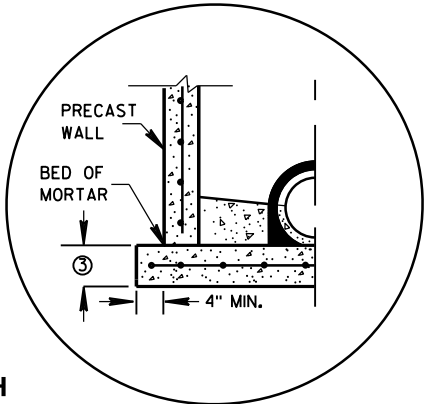


CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES

PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE
CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②



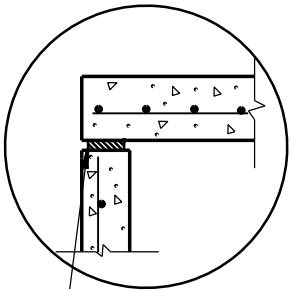
PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



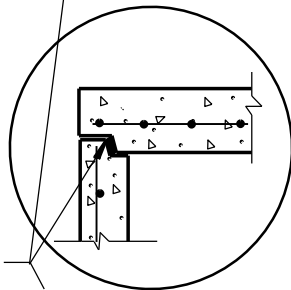
SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"

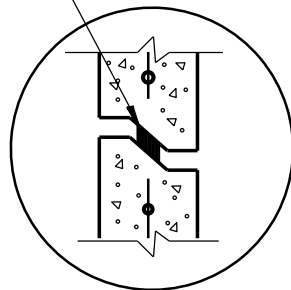
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)



TOP WITH PLAIN END JOINT

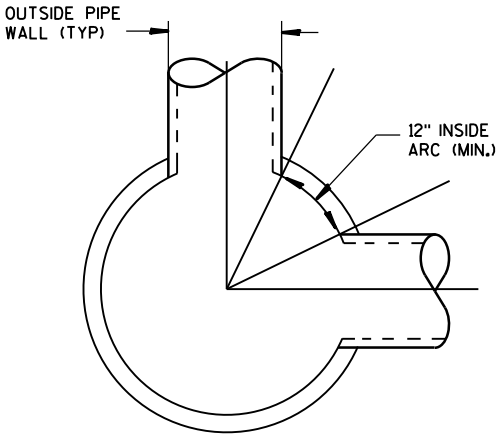


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"

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

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND 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 DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" 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.

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

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

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

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 "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

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

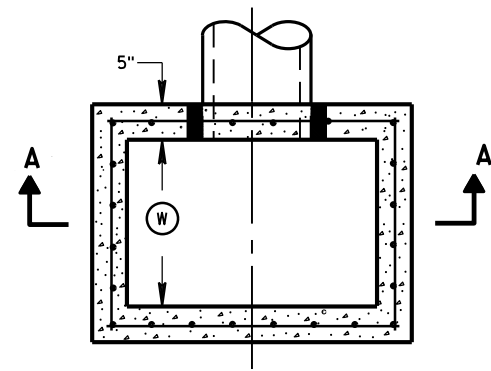
PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

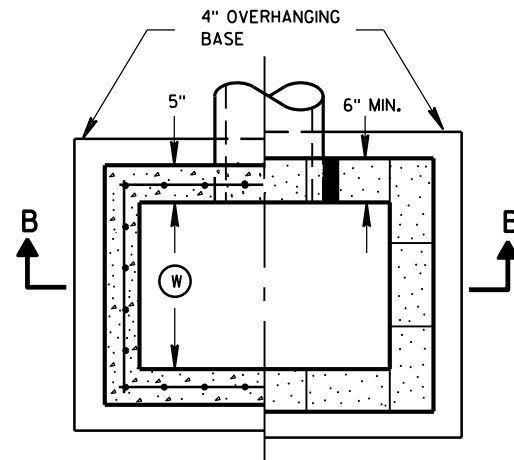
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

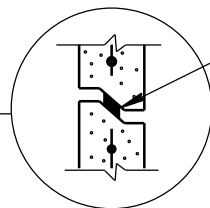
APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



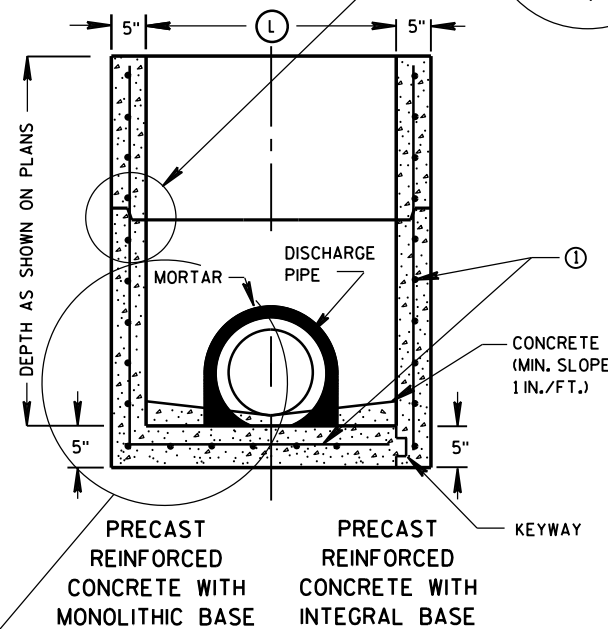
PLAN VIEW



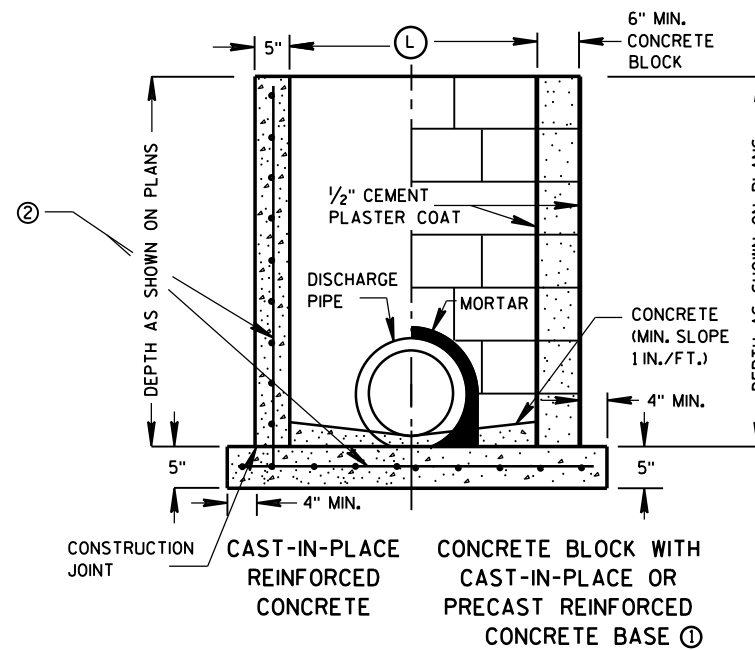
PLAN VIEW



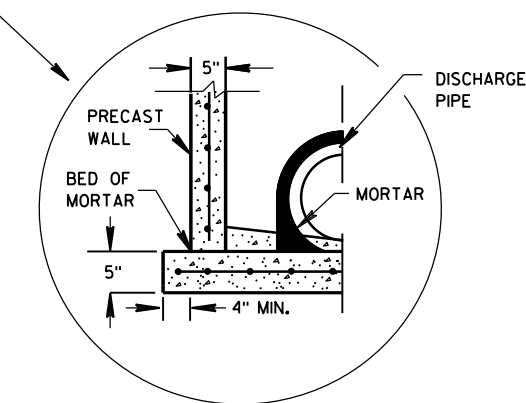
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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 INLET 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 PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES 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.

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

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

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND 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.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

1 FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

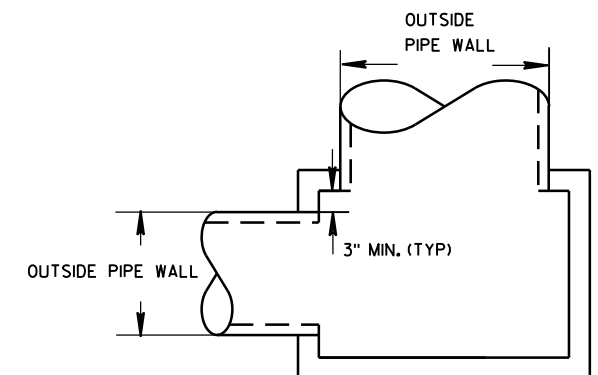
2 CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE	WIDTH ① (FT)	INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
		LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

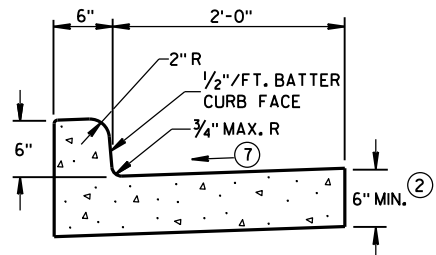
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

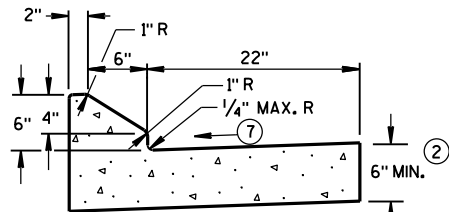
APPROVED
Sept., 2016
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

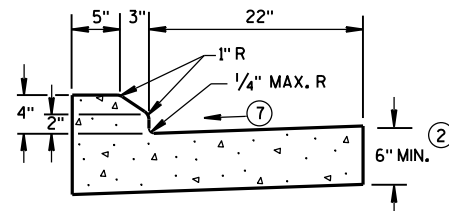
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



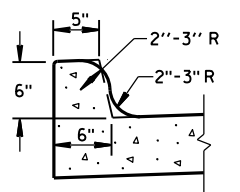
TYPES A^① & D



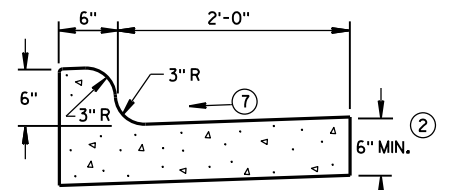
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

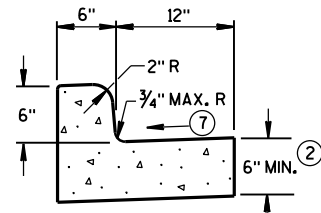


TYPES K^① & L
(OPTIONAL CURB SHAPE)



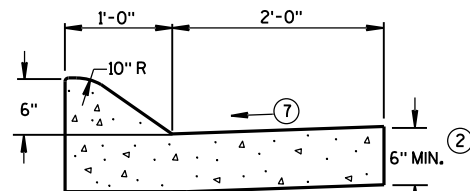
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

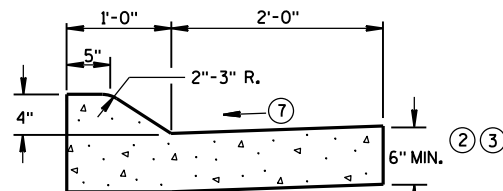


TYPES A^① & D

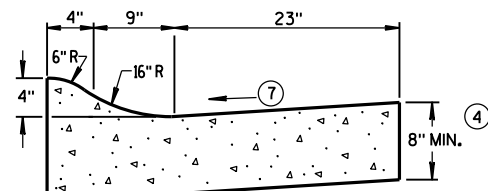
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

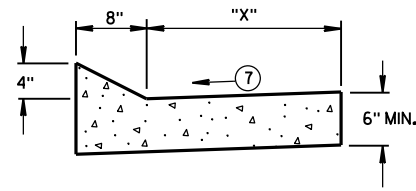


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

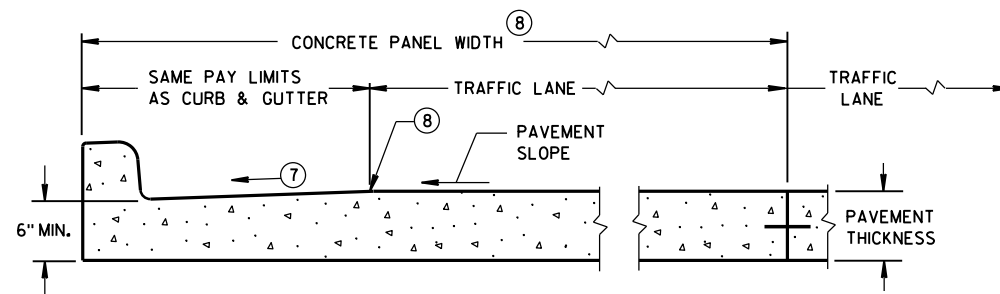
CONCRETE CURB & GUTTER 36"



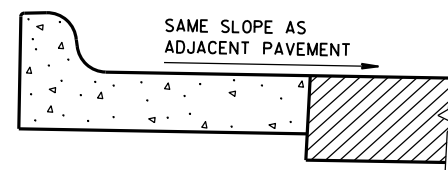
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

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



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS 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 & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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 GUTTER 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 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.

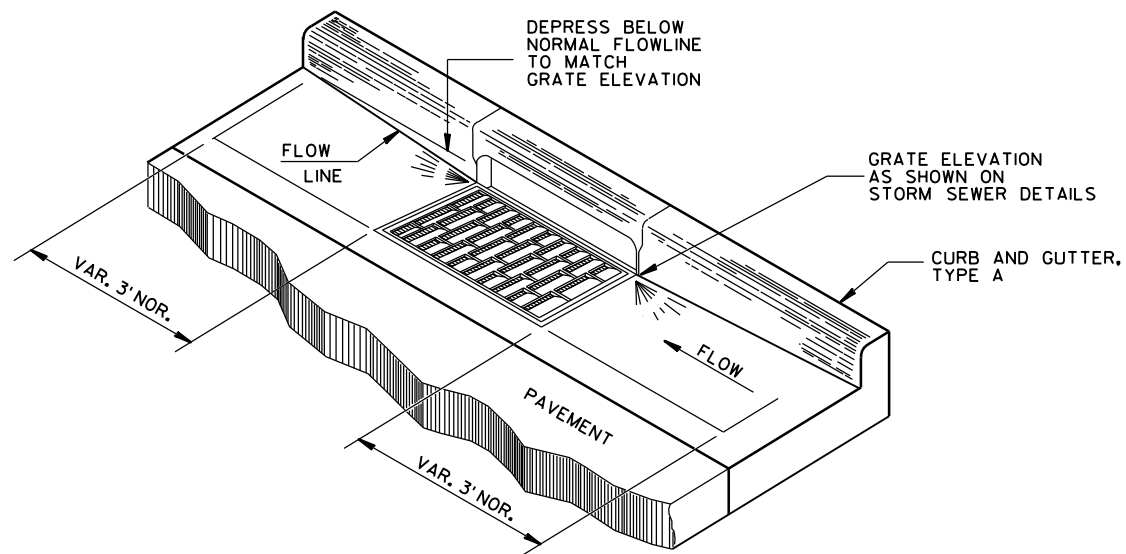
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

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

* BIKE LANE IS NOT SHOWN.

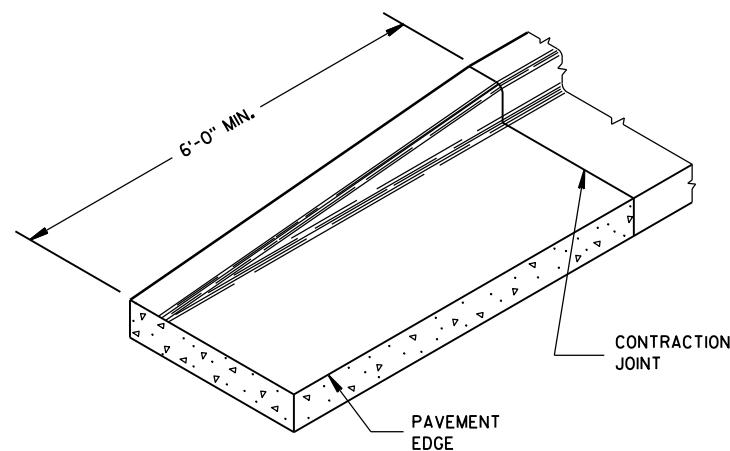
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

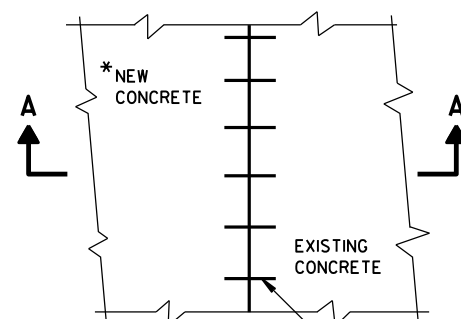


DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

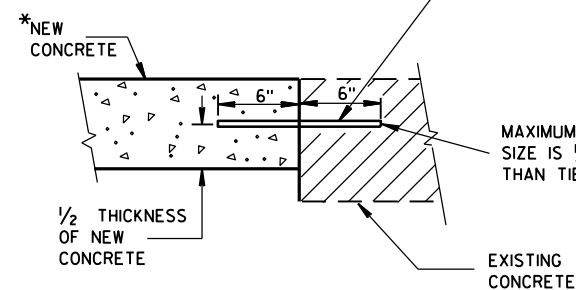


END SECTION CURB & GUTTER



PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.



**SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT**

NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT.

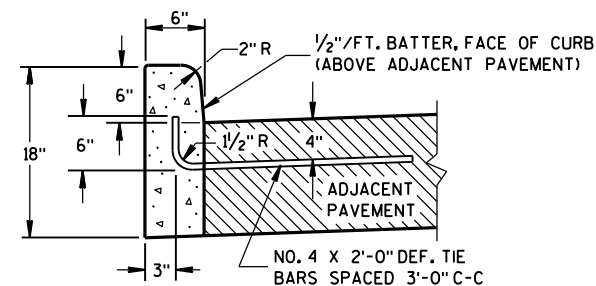
GENERAL NOTES

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

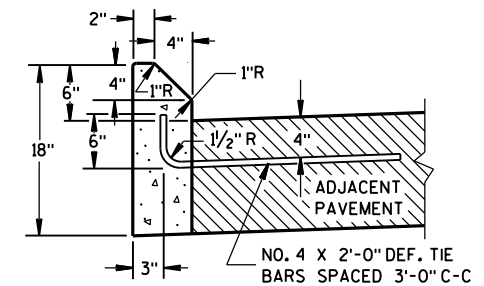
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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 GUTTER 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.
- ⑨ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

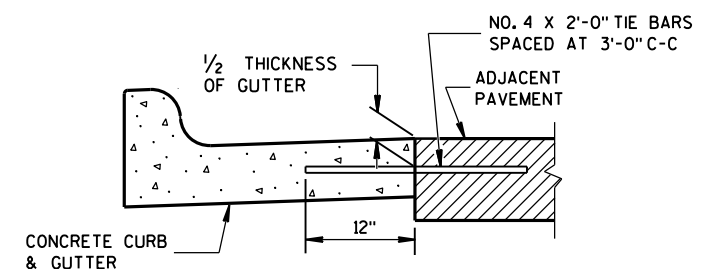


TYPES A^① & D

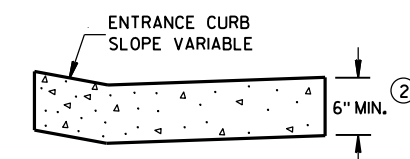


TYPES G^① & J

CONCRETE CURB



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2017

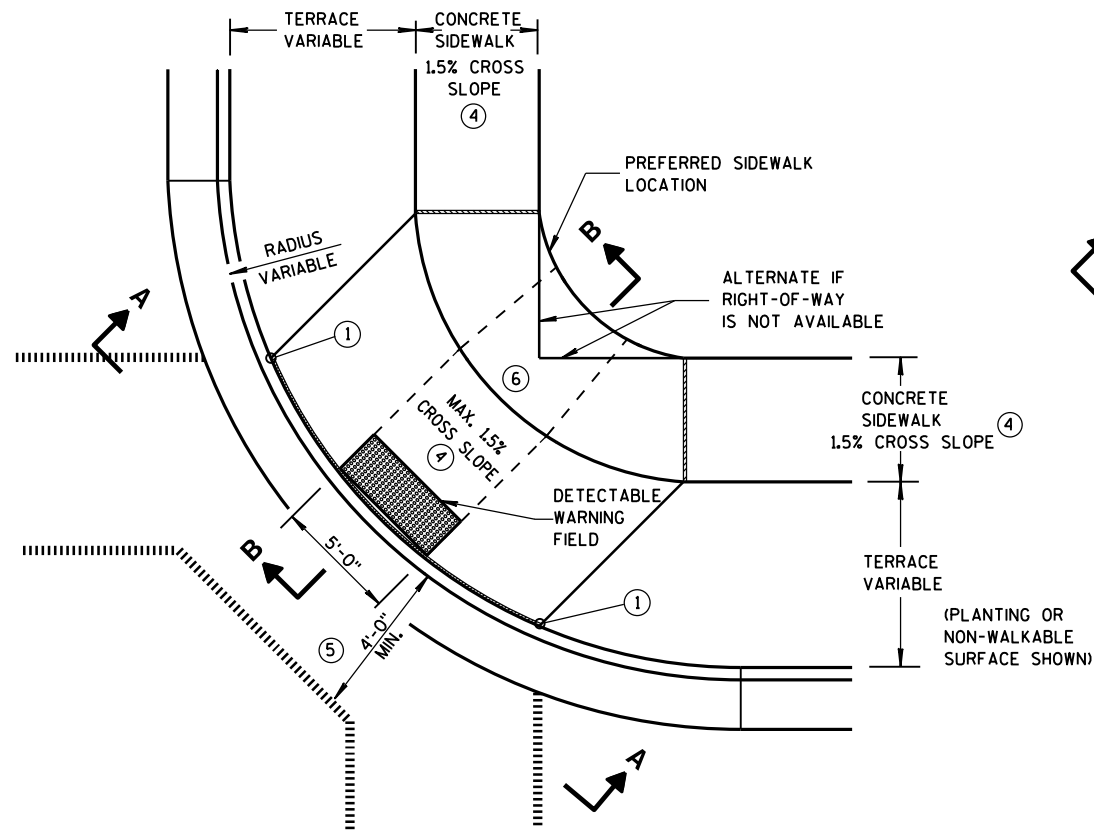
DATE

FHWA

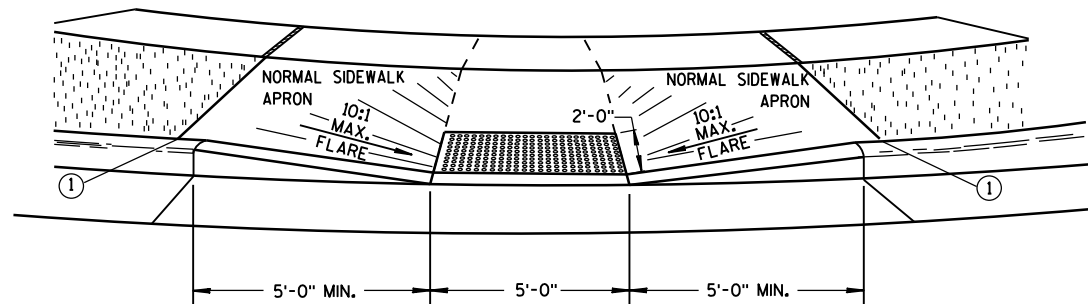
/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

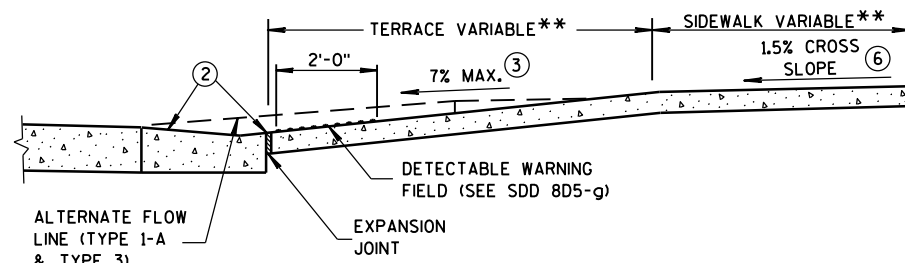


**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)

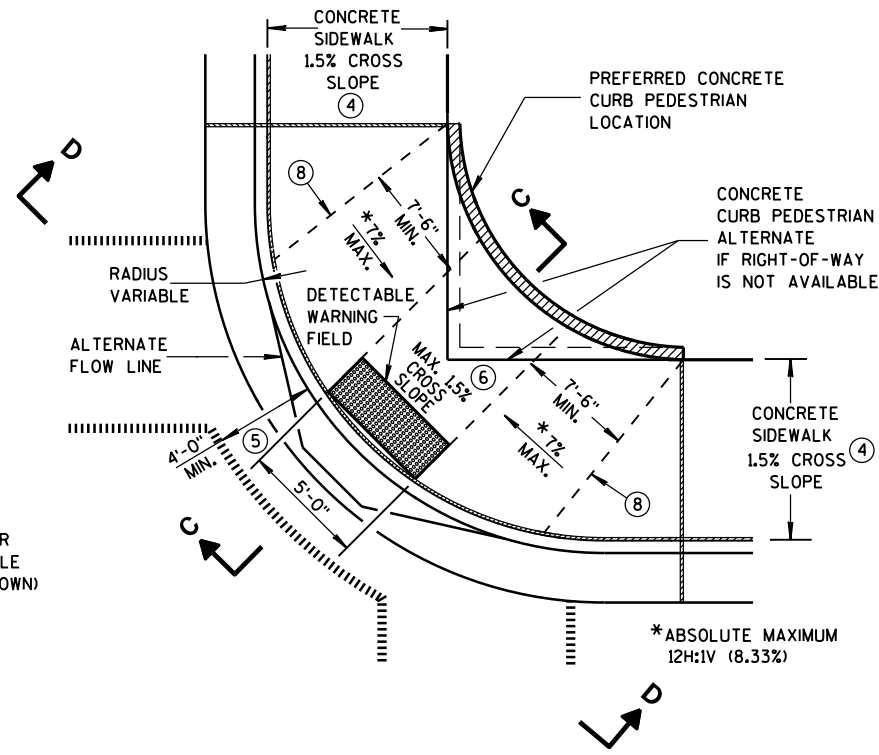


VIEW A-A

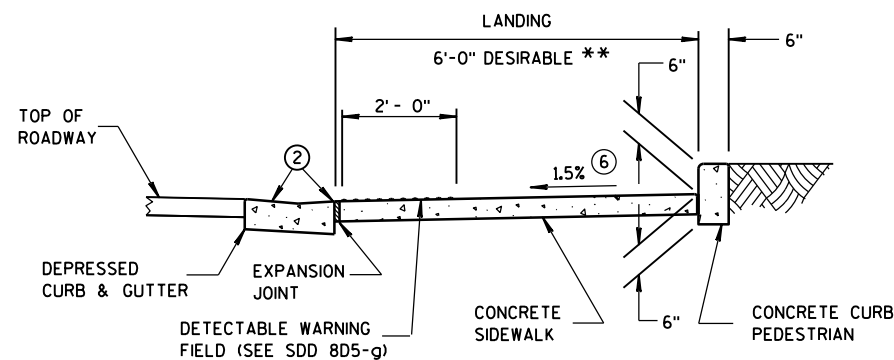
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



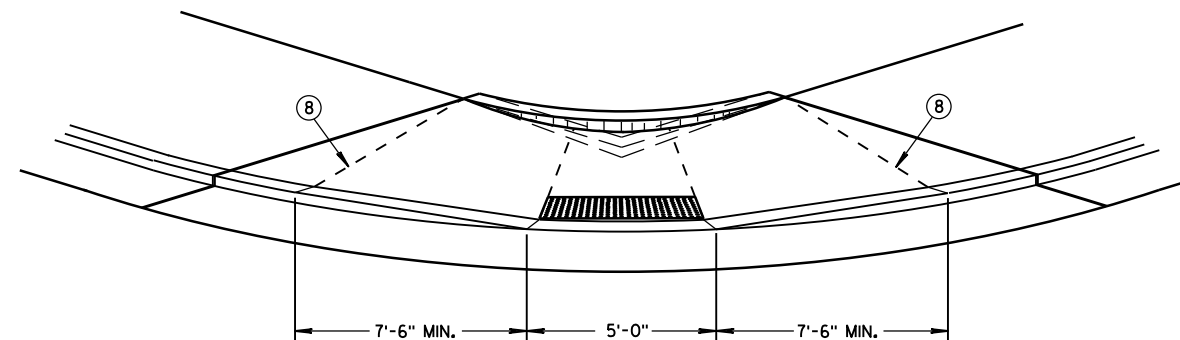
SECTION B-B



**PLAN VIEW
TYPE 1-A RAMP**
(NO TERRACE)



SECTION C-C



VIEW D-D

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

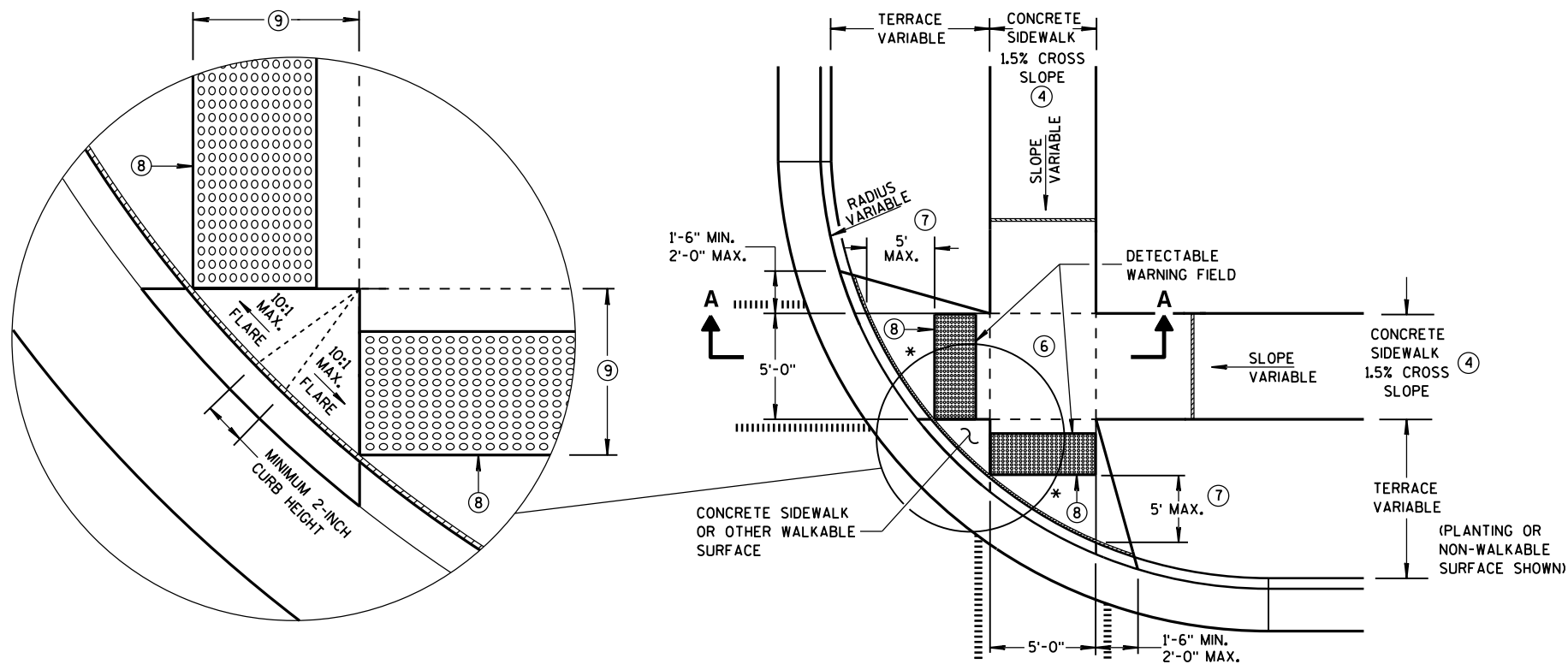
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

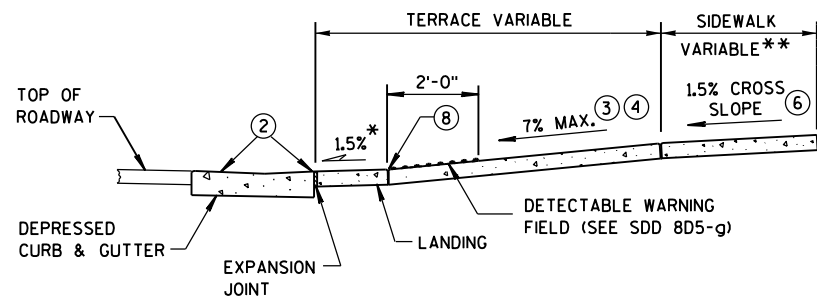
**CURB RAMPS
TYPES 1 AND 1-A**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



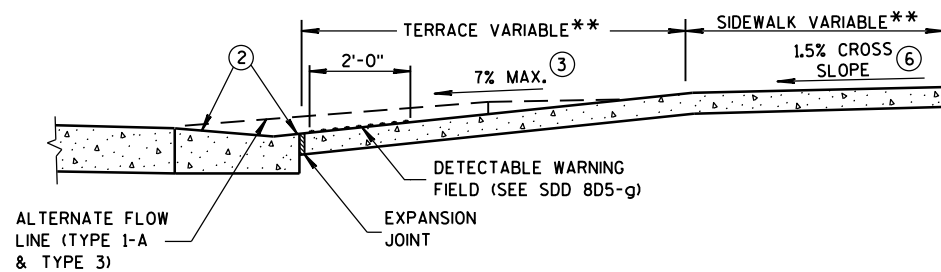
**PLAN VIEW
TYPE 2 RAMP**
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE BREAK



SECTION A-A

** WIDTH SHOWN ELSEWHERE
IN THE PLANS



SECTION B-B

GENERAL NOTES

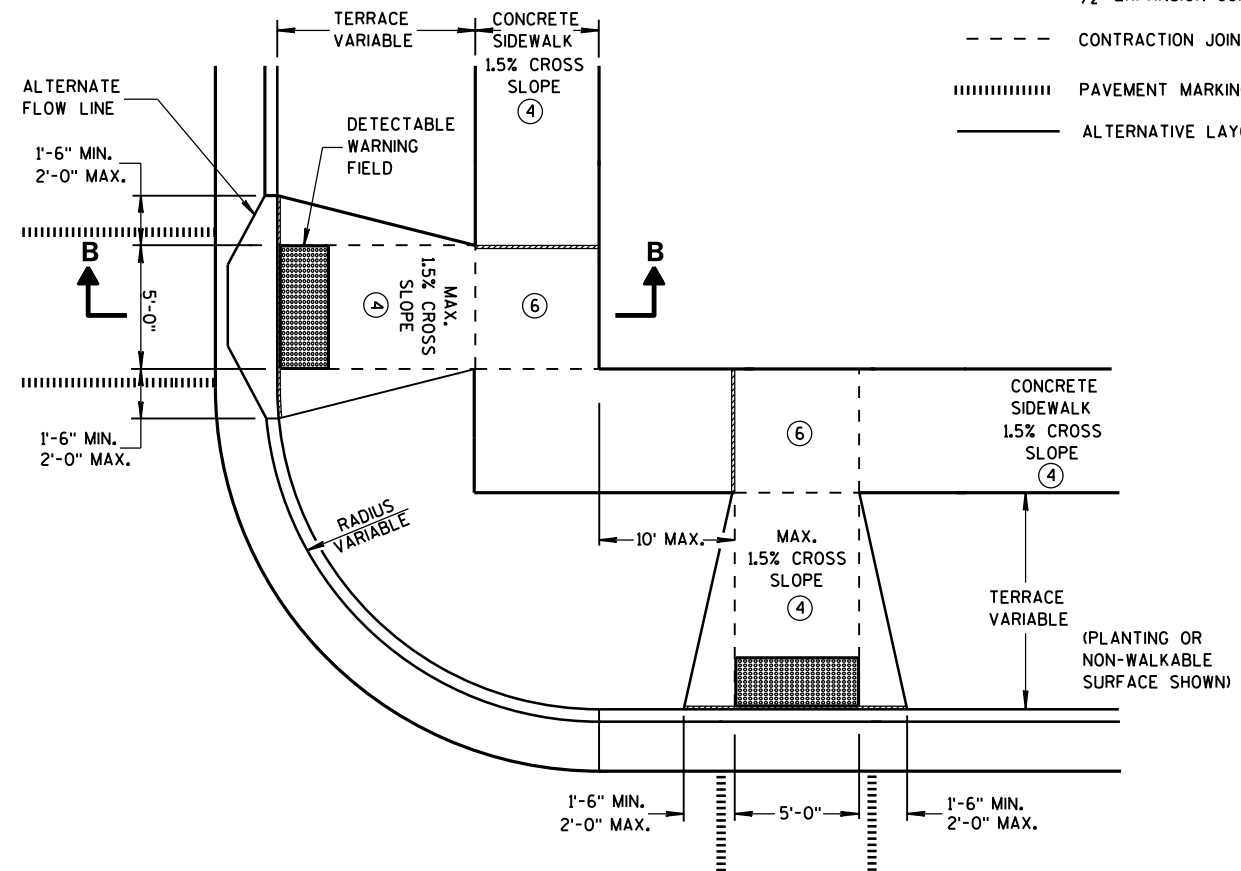
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



**PLAN VIEW
TYPE 3 RAMP**
(OUTSIDE OF CROSSWALK AREA)

**CURB RAMPS
TYPES 2 AND 3**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION




RADIUS (AT CURB FACE)	X
10 FEET	4'-7"
15 FEET	6'-5½"

INTERMEDIATE RADII CAN BE INTERPOLATED



LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
 CONTRACTION JOINT FIELD LOCATED
 PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

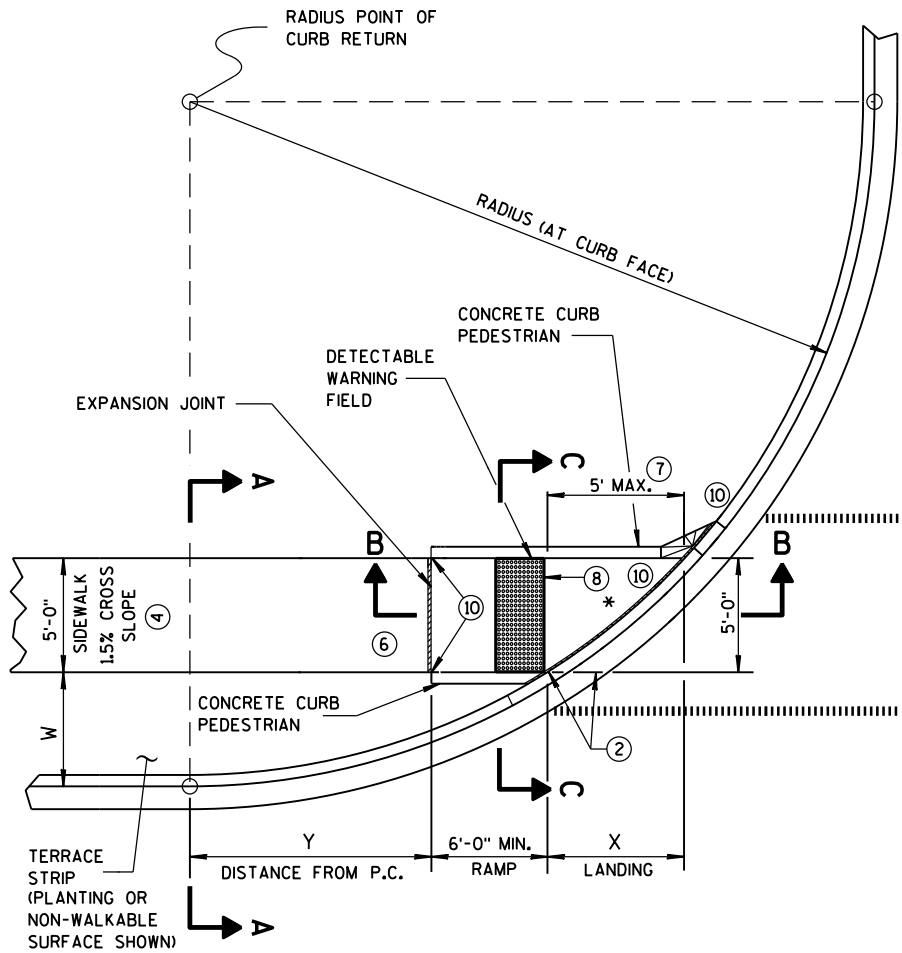
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

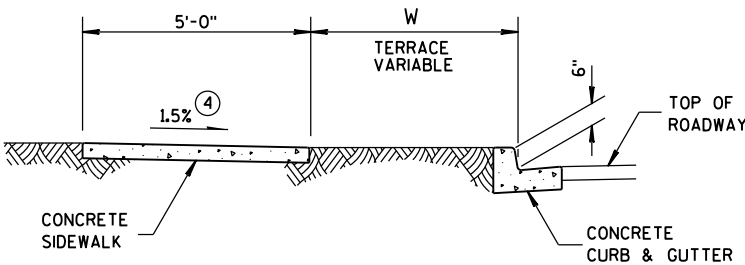
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

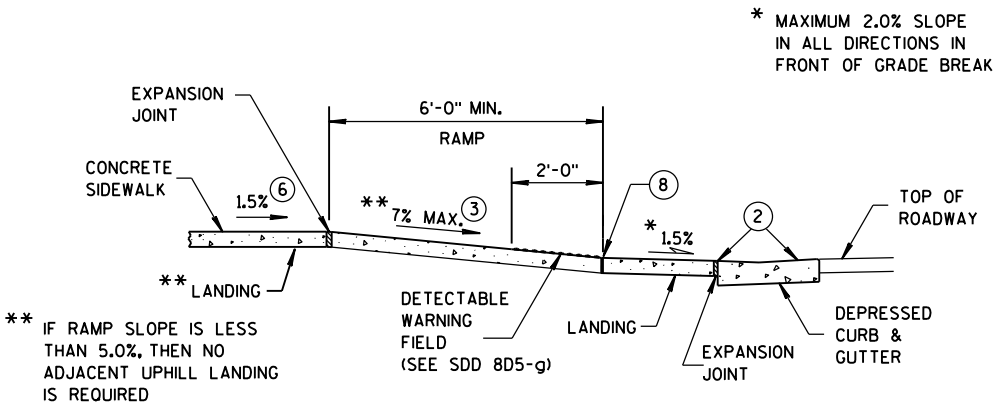
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



**CURB RAMP TYPE 4B
PLAN VIEW**



SECTION A-A FOR TYPE 4B



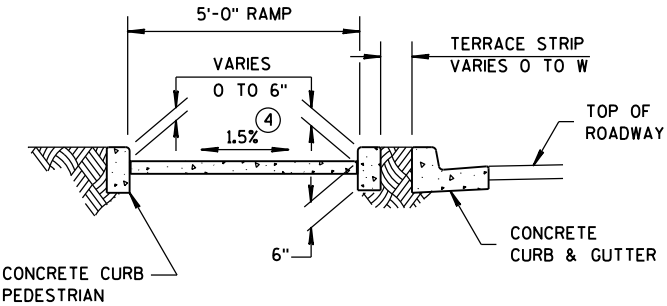
SECTION B-B FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2'-10 1/4"	0'-5"	2'-1"	1'-4 1/2"	1'-5"	2'-1"	0'-10"	2'-7 1/2"	0'-3 1/4"	3'-0 1/4"						
15 FEET	4'-6 3/4"	2'-1 3/4"	3'-9"	3'-5 1/4"	3'-1 1/4"	4'-6"	2'-6 3/4"	5'-4 1/2"	2'-1"	6'-1"	1'-8"	6'-8 1/2"	1'-3 1/4"	7'-2 1/2"	0'-10 3/4"	7'-7 1/4"
20 FEET	5'-9 3/4"	3'-6 1/2"	4'-11 1/2"	5'-1 3/4"	4'-3 1/4"	6'-5 1/2"	3'-8 3/4"	7'-7"	3'-3"	8'-6 1/2"	2'-10"	9'-4 1/2"	2'-5 1/2"	10'-1 1/4"	2'-1 1/4"	10'-9"
30 FEET			6'-9 1/4"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 3/4"	4'-10 3/4"	12'-5 3/4"	4'-5 1/2"	13'-7 3/4"	4'-0 3/4"	14'-8 1/2"	3'-8 1/2"	15'-8 1/4"
40 FEET									6'-1 3/4"	15'-8 1/2"	5'-8"	17'-2"	5'-3"	18'-5 3/4"	4'-10 3/4"	19'-8 1/4"
50 FEET															5'-10 1/4"	23'-2"

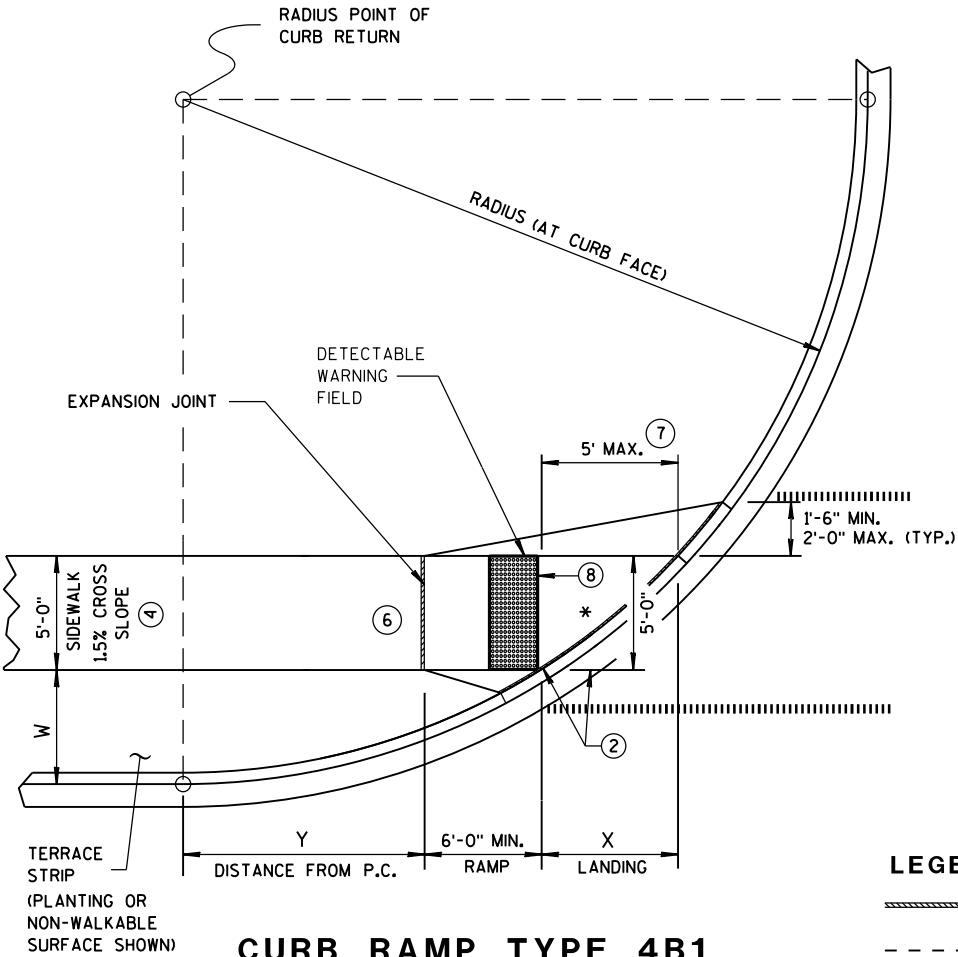
INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH

GENERAL NOTES

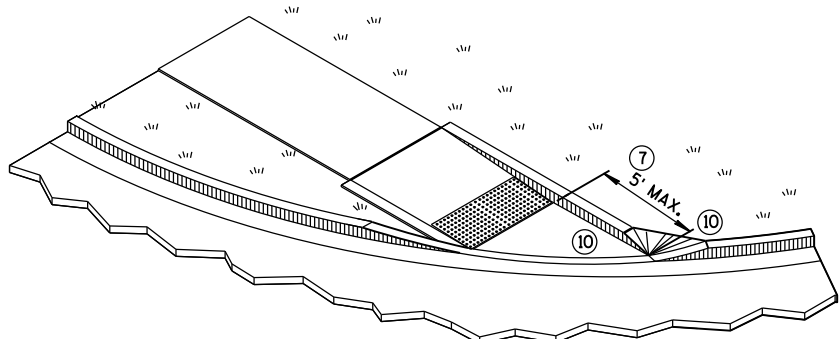
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



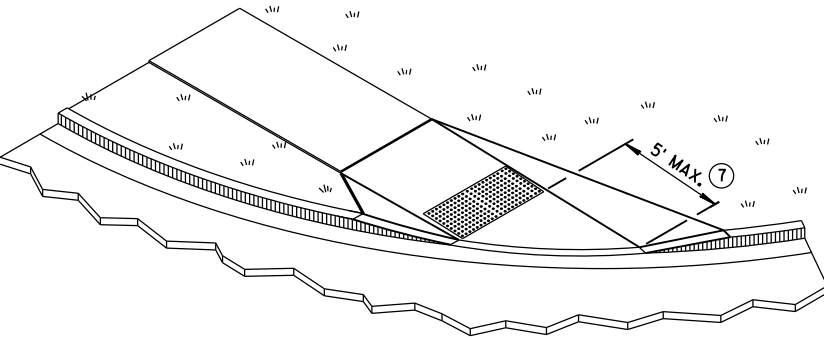
SECTION C-C FOR TYPE 4B



**CURB RAMP TYPE 4B1
PLAN VIEW**



ISOMETRIC VIEW FOR TYPE 4B



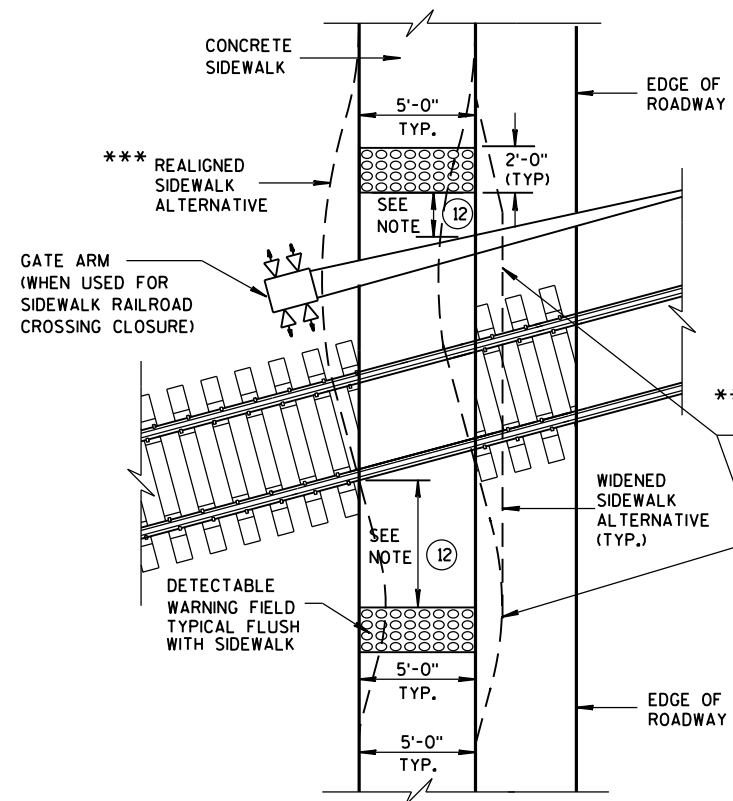
ISOMETRIC VIEW FOR TYPE 4B1

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

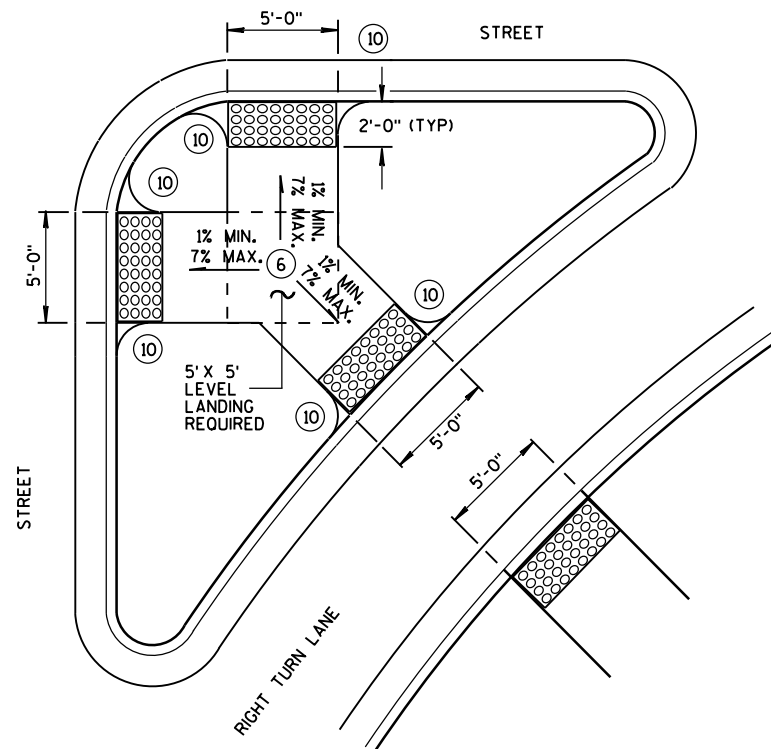
**CURB RAMPS
TYPE 4B AND 4B1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

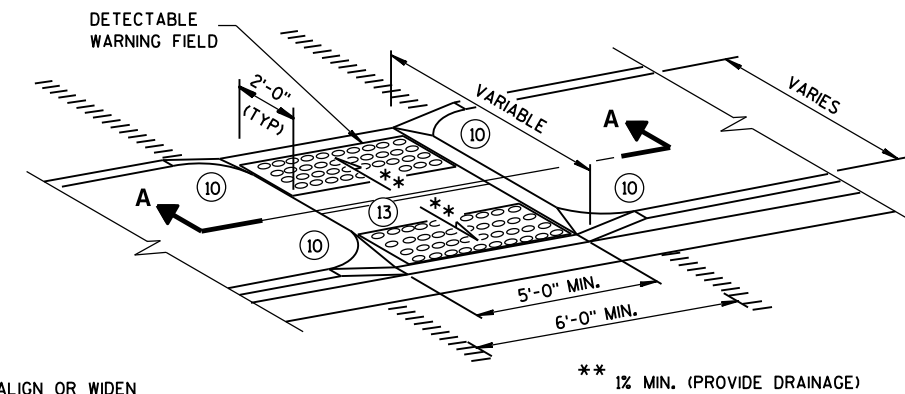


TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING

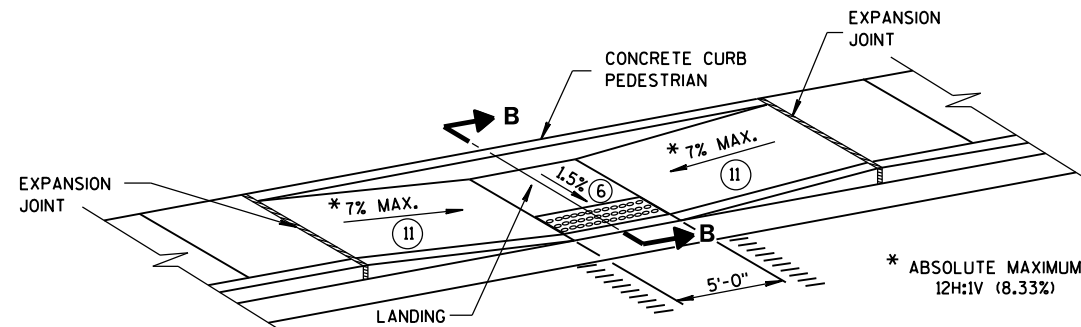
REFER TO GENERAL NOTES ② AND ③
FOR ALL ISLAND CURB RAMP



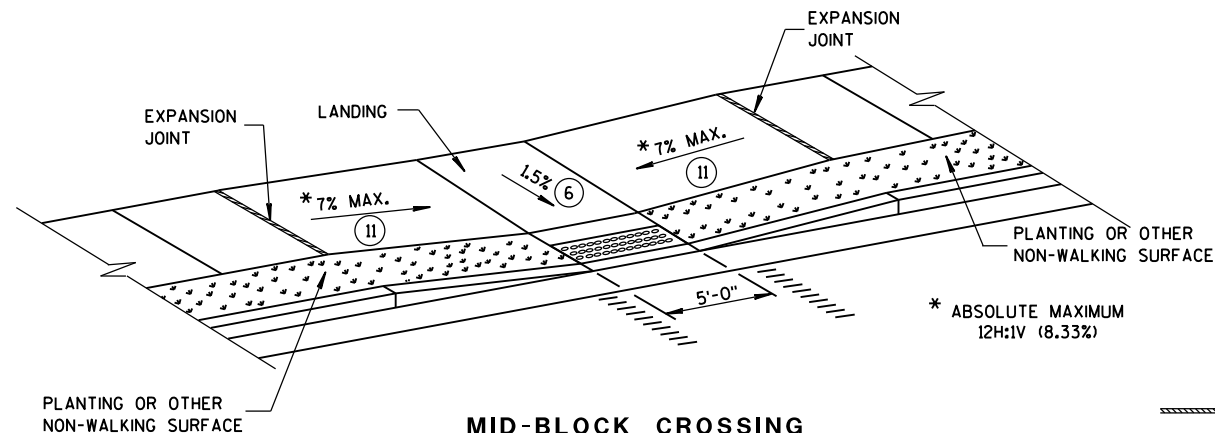
TYPE 6
DETECTABLE WARNING AT ISLANDS



MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING
TYPE 5



MID-BLOCK CROSSING
TYPE 7A

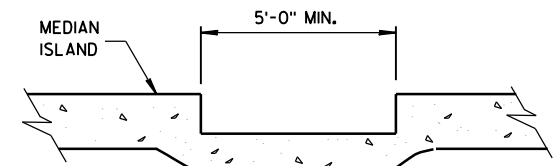


MID-BLOCK CROSSING
TYPE 7B

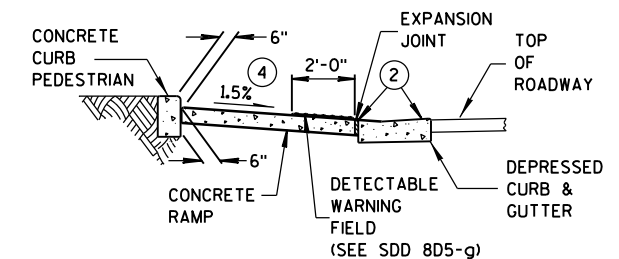
NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMP
MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 15 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STREET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2-FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.



SECTION A-A



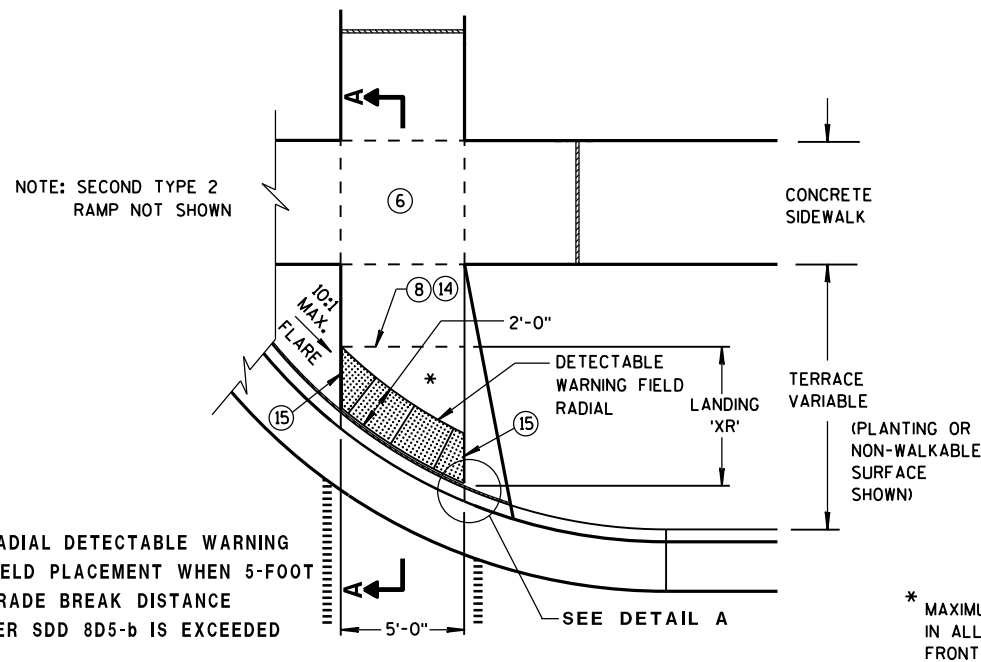
SECTION B-B

LEGEND

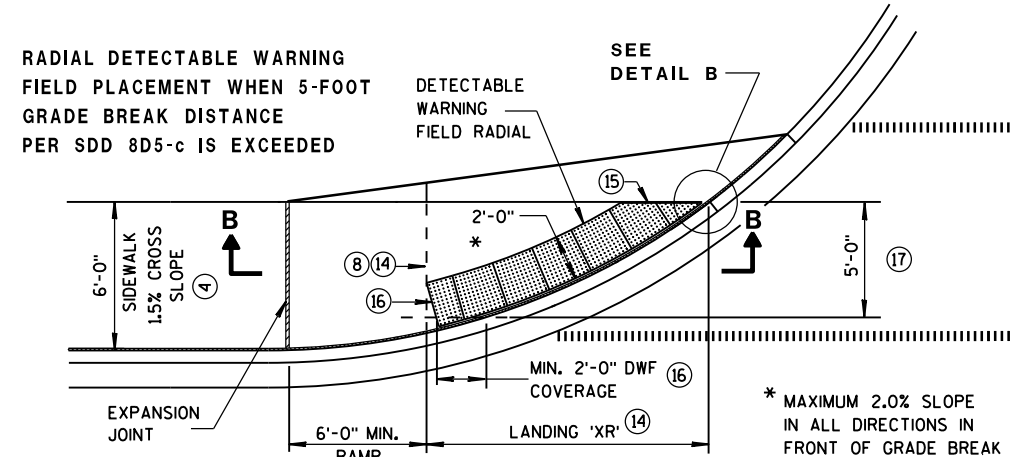
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMP
TYPES 5, 6, 7A, 7B & 8

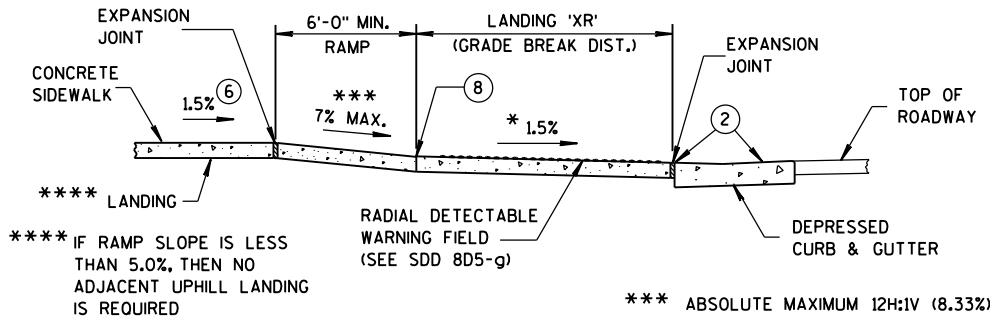
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



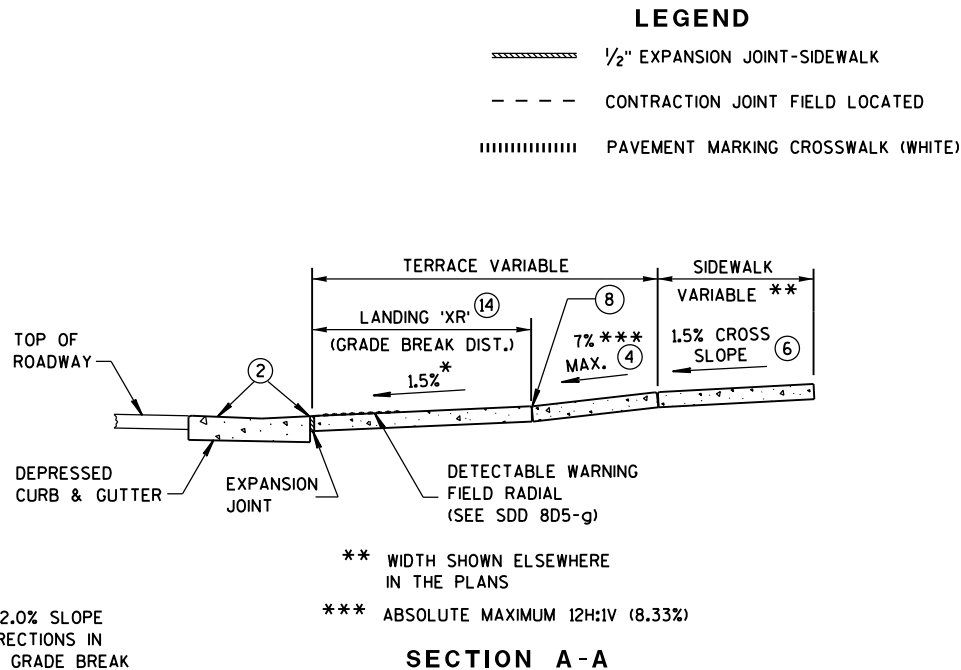
TYPE 2 RAMP
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)



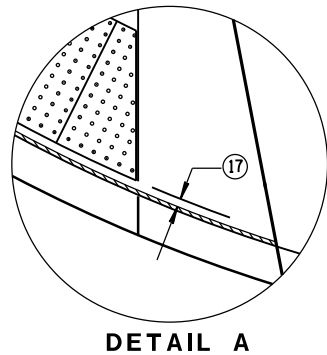
CURB RAMP TYPE 4A1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



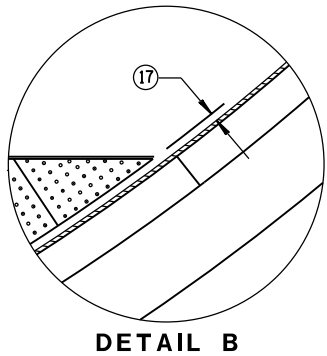
SECTION B-B FOR TYPE 4A1



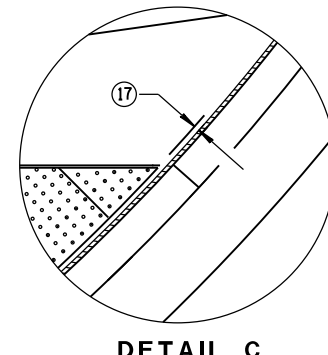
SECTION A-A



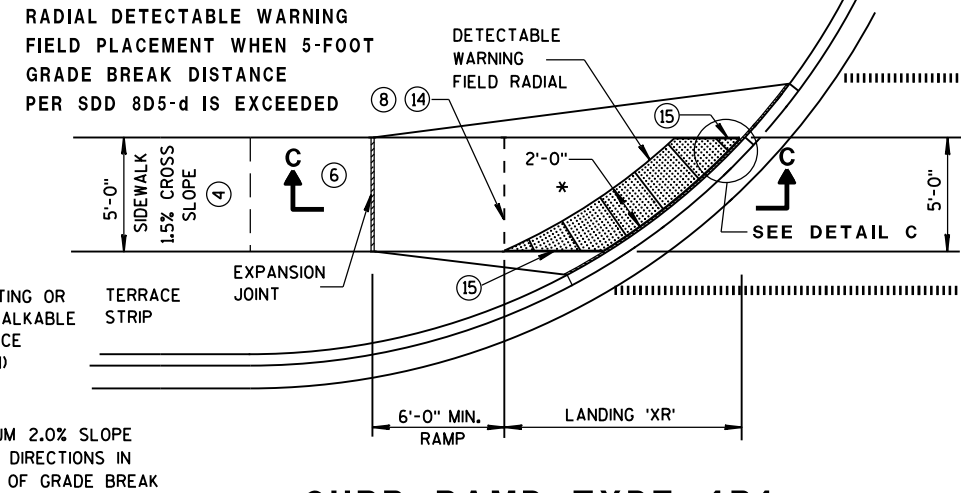
DETAIL A



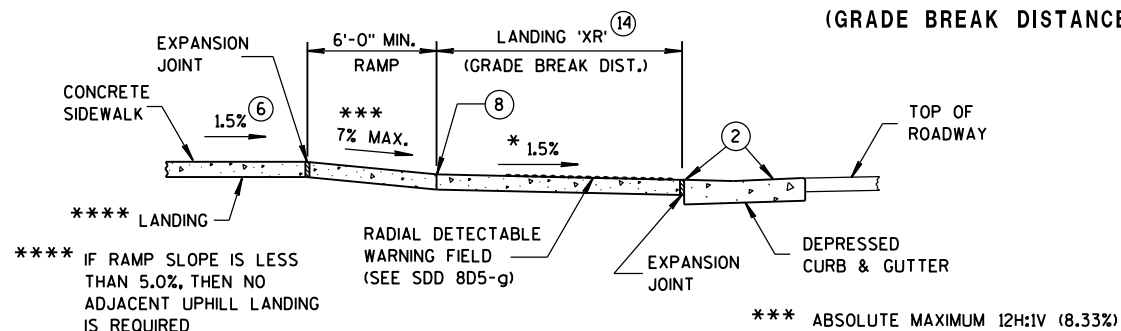
DETAIL B



DETAIL C



CURB RAMP TYPE 4B1
PLAN VIEW
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION C-C FOR TYPE 4B1

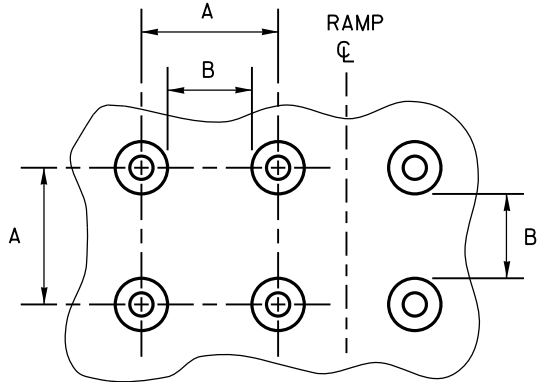
- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

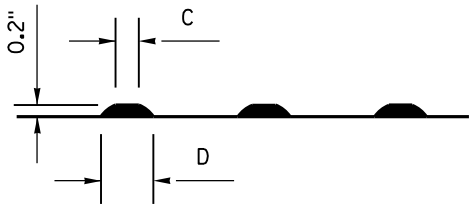
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETECTABLE WARNING FIELDS (DWFs) THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.
- REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.
- FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.
- DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION 'XR') REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- USE 1'X 2' RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2'-0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- A MAXIMUM 3-INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

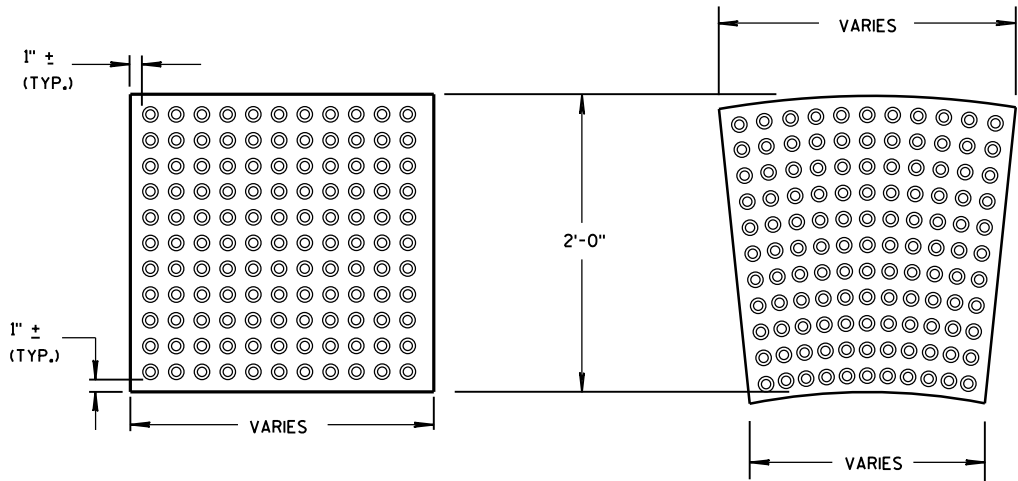


PLAN VIEW



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



RECTANGULAR PLATES
RADIAL PLATES
DETECTABLE WARNING FIELDS (TYPICAL)

PLAN VIEW

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

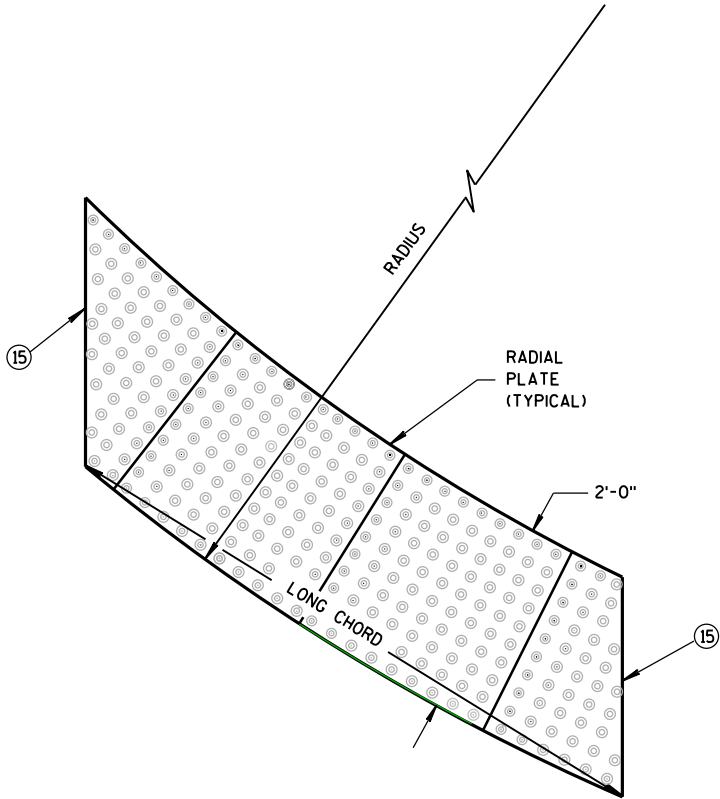
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGES IN COMBINATION WITH SQUARE PANELS ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.



RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

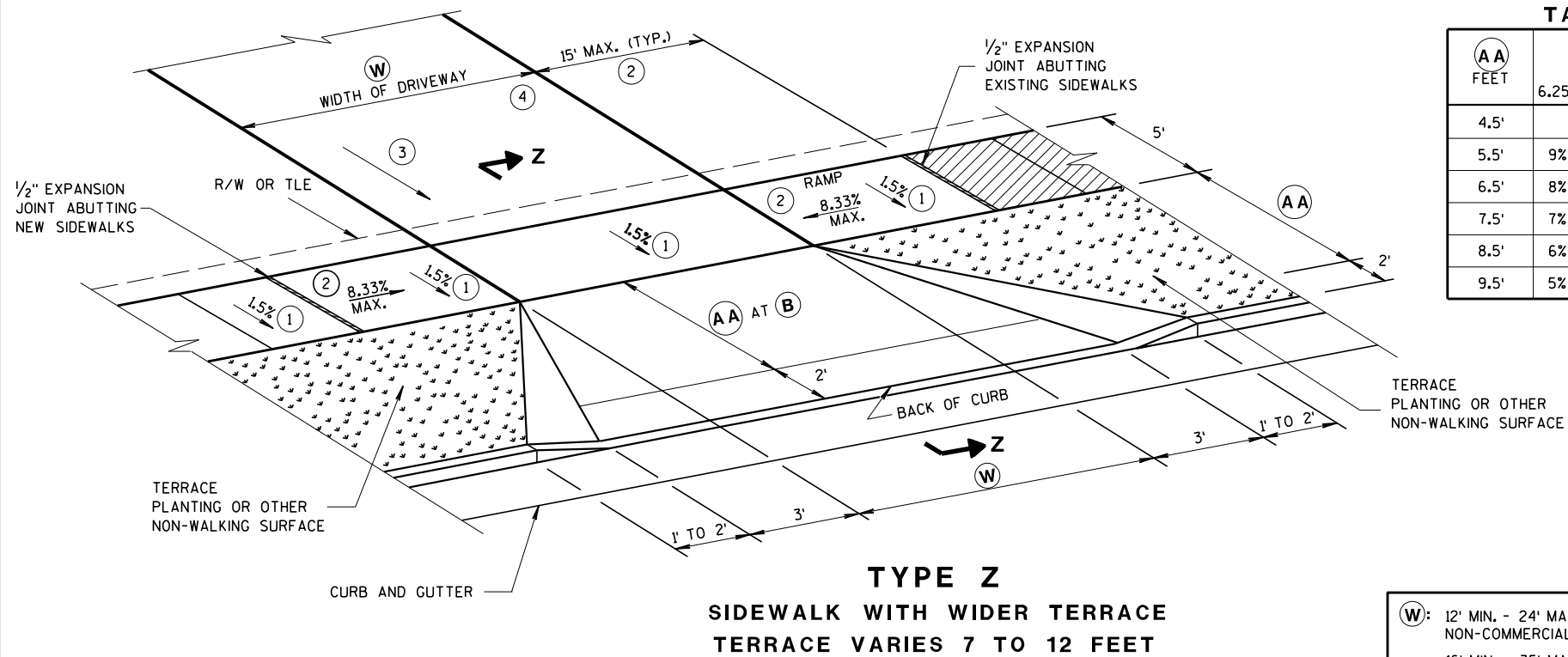


TABLE Z

AA FEET	B %	B %
4.5'	6.25% GUTTER	4% GUTTER
5.5'	11.5%	9% TO 11.5%
6.5'	9% TO 11.5%	8% TO 11.5%
7.5'	8% TO 11.5%	6% TO 11.5%
8.5'	7% TO 11.5%	6% TO 11.5%
9.5'	6% TO 11.5%	5% TO 11.5%
	5% TO 11.5%	4% TO 11.5%

GENERAL NOTES

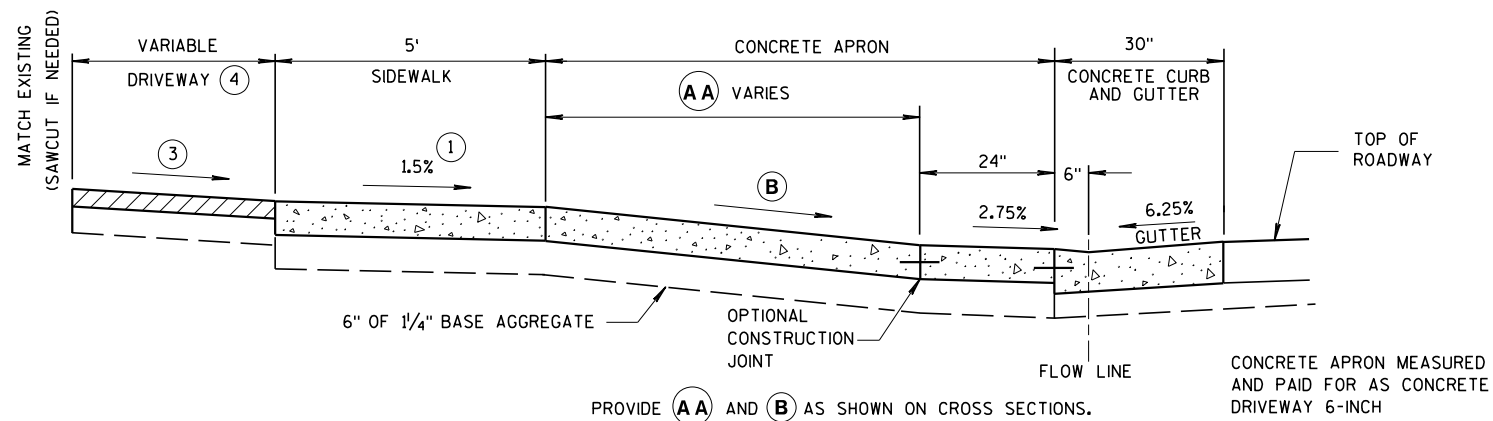
PROVIDE CONSTRUCTION JOINTS ALONG THE CENTER OF THE CONCRETE FOR DRIVEWAYS UNDER 20 FEET IN WIDTH AND AT THE THIRD POINTS OVER 20 FEET IN WIDTH.

(W) IS SHOWN ON PLAN AND PROFILE SHEETS.

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

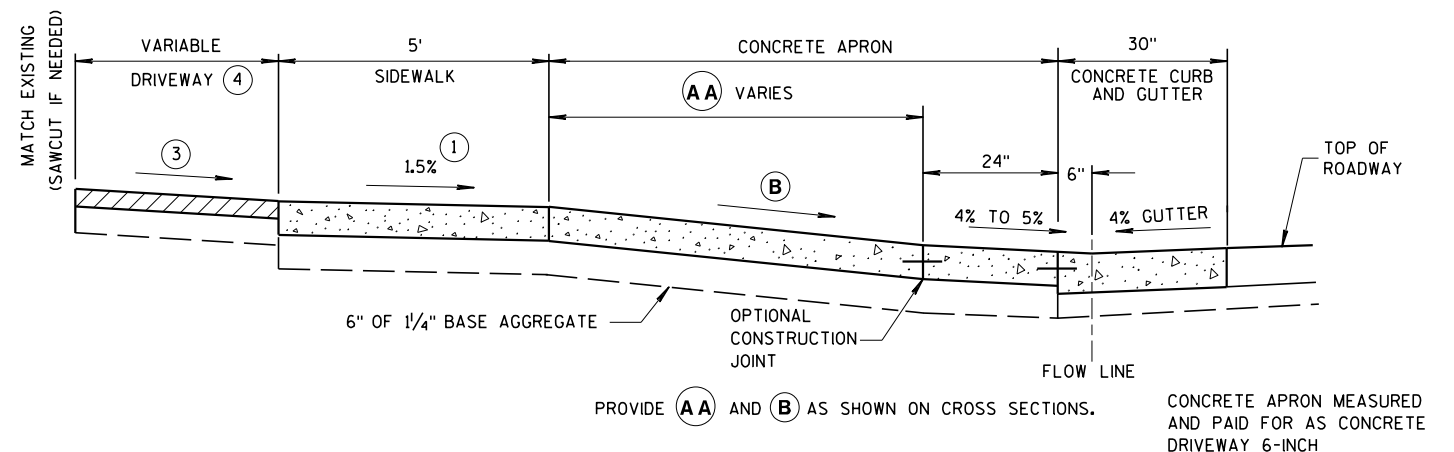
- CONSTRUCTION TOLERANCE OF $0.5\% \pm$ FOR SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- THE SIDEWALK RAMP MAXIMUM RUNNING SLOPE SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET TO AVOID CHASING THE SLOPE INDEFINITELY WHEN CONNECTING TO STEEP GRADES. WHEN APPLYING THE 15 FOOT MAXIMUM LENGTH, THE RUNNING SLOPE OF THE SIDEWALK SHALL BE AS FLAT AS FEASIBLE AND NOT EXCEED THE LONGITUDINAL GRADE OF THE ROADWAY.
- 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
- 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)

(W): 12' MIN. - 24' MAX. RESIDENTIAL AND
NON-COMMERCIAL (PE & FE)
16' MIN. - 35' MAX. COMMERCIAL (CE)



SECTION Z-Z

**DRIVEWAY DETAIL WITH CONCRETE CURB & GUTTER
(URBAN AND SUBURBAN)**



**DRIVEWAY AND SIDEWALK
RAMPS
TYPE Z**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

March 2018

DATE

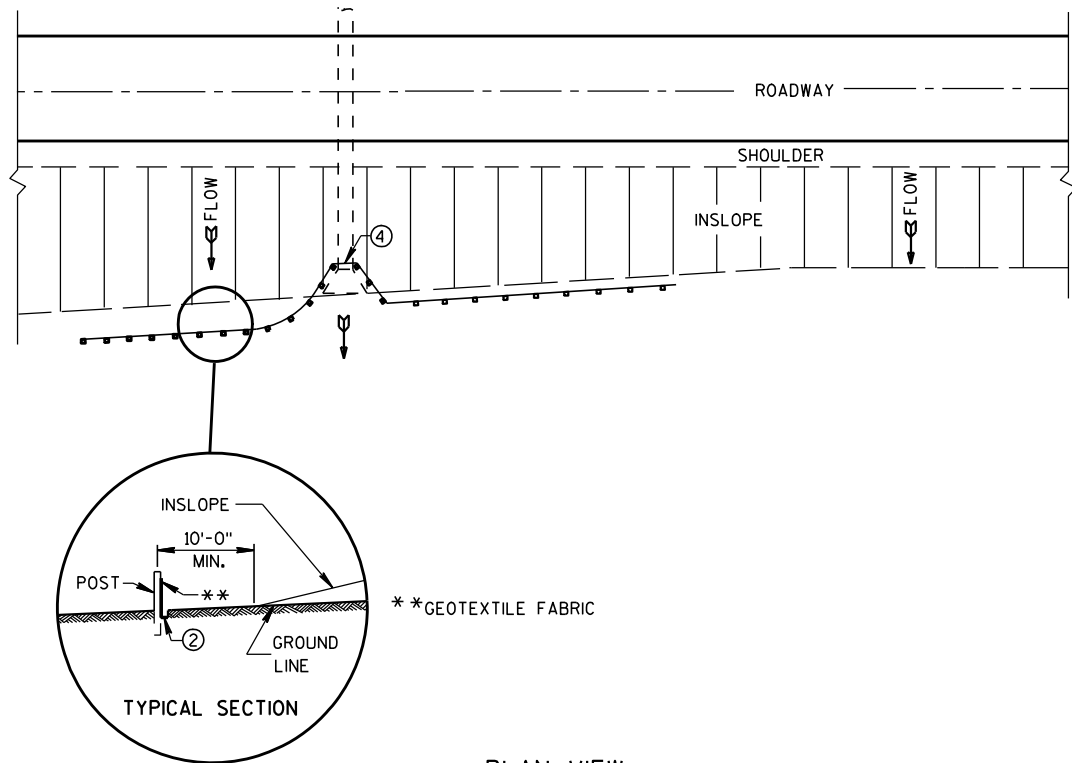
FHWA

/S/ Rodney Taylor

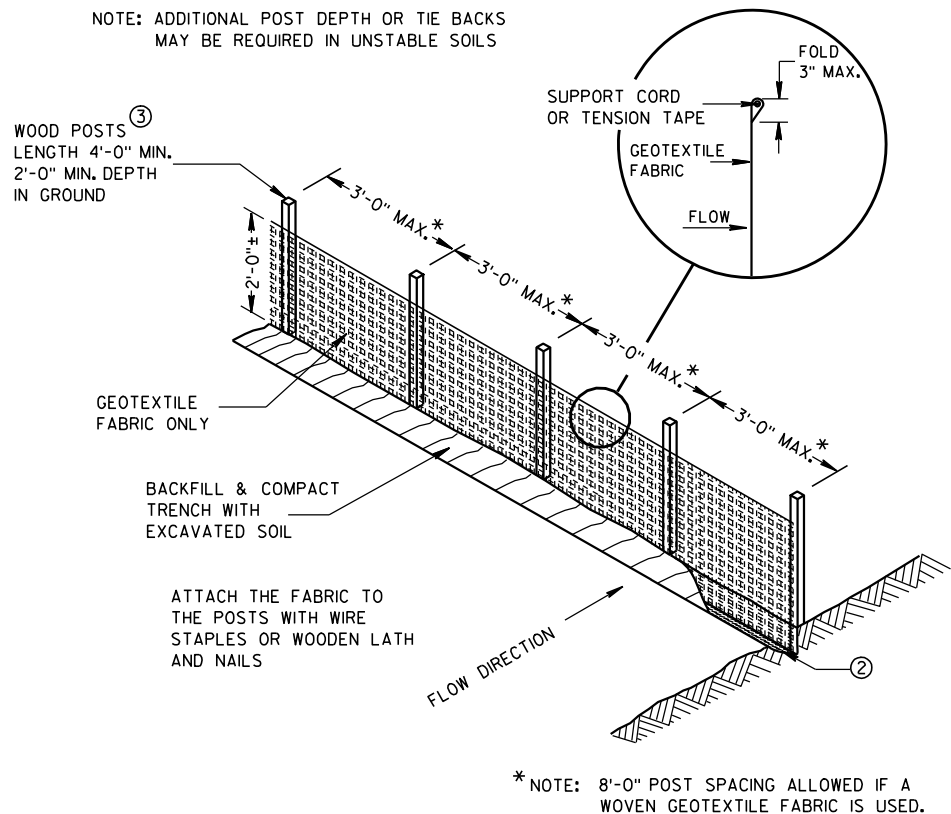
ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

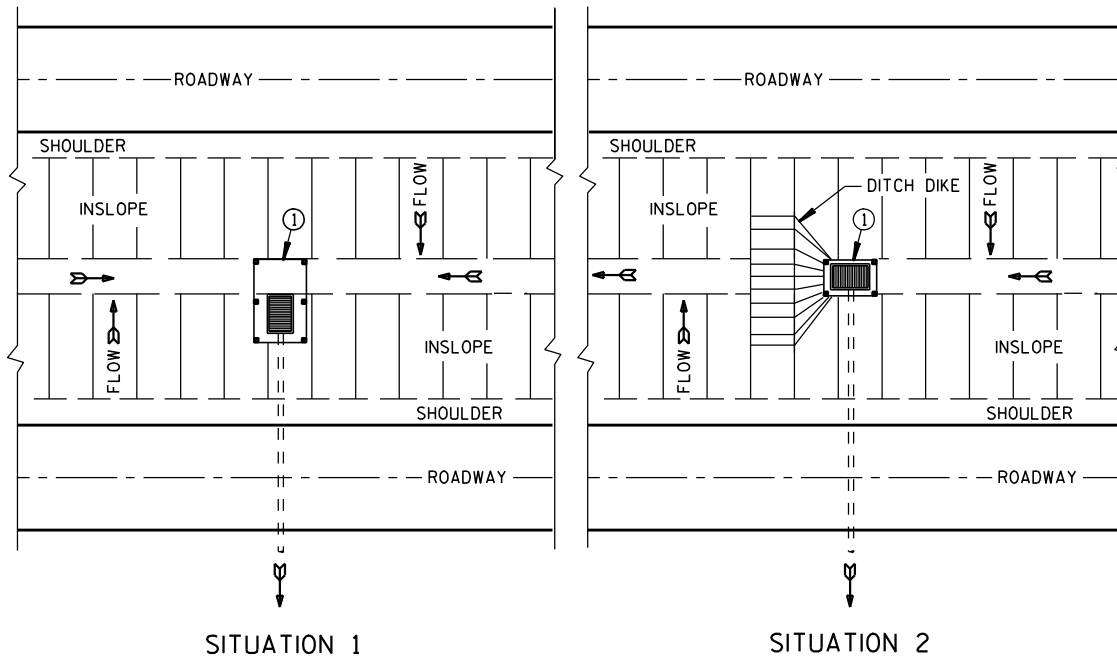
NOT TO SCALE



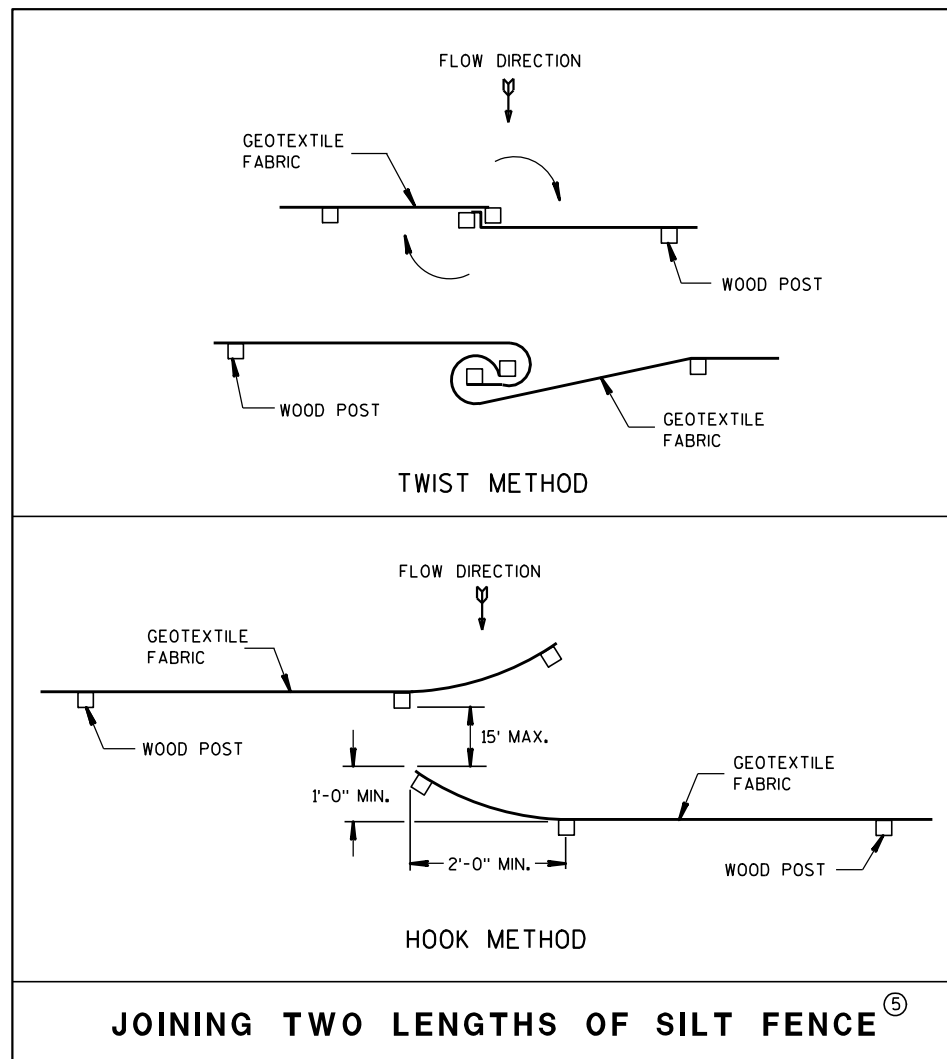
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

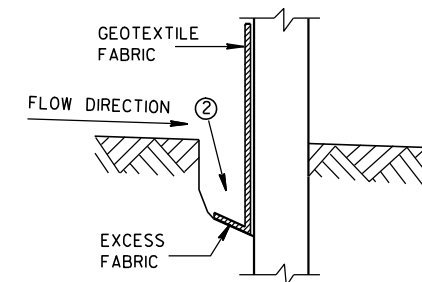


JOINING TWO LENGTHS OF SILT FENCE ⑤

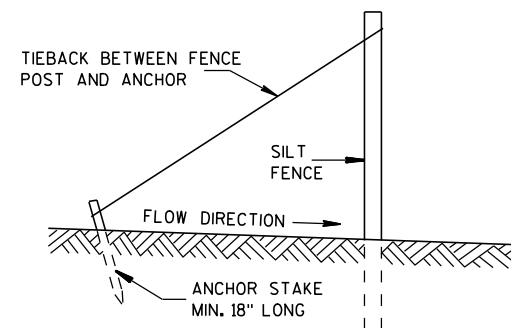
GENERAL NOTES

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

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

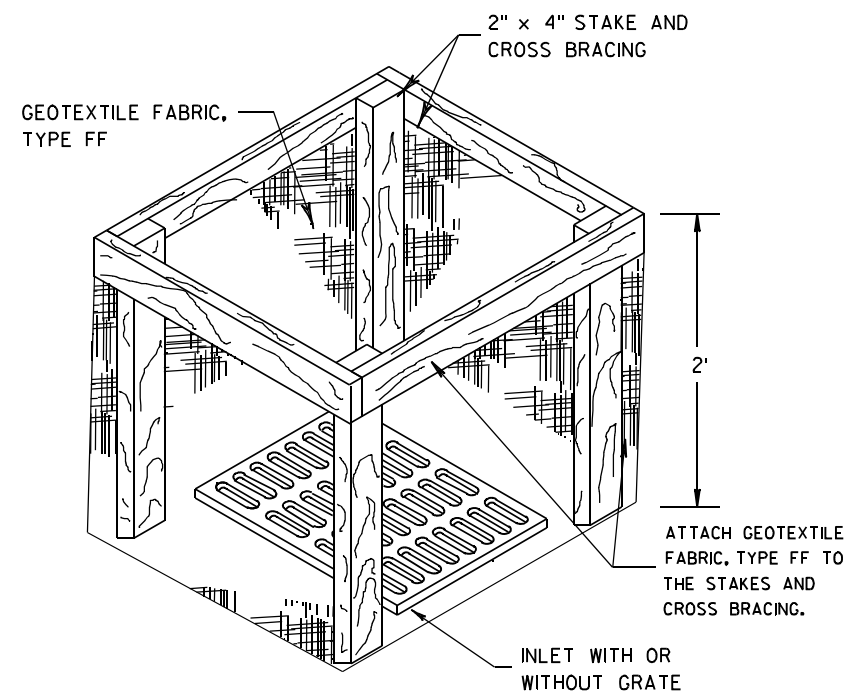
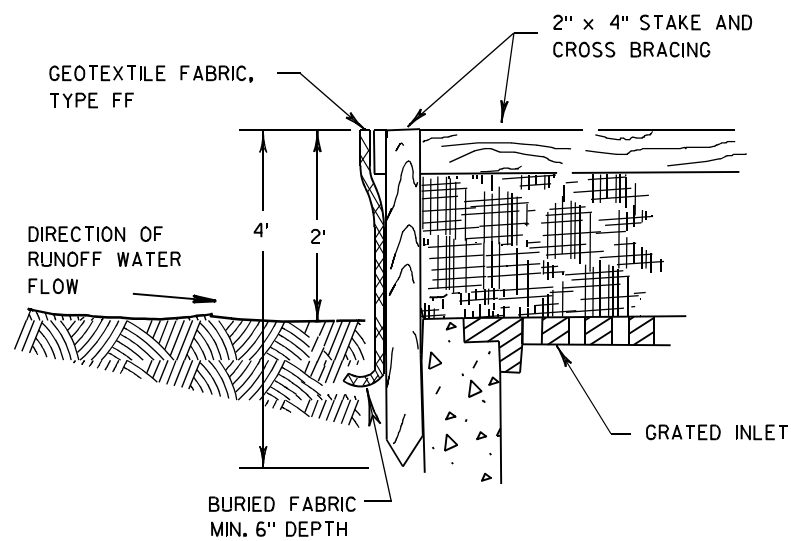


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



INLET PROTECTION, TYPE A

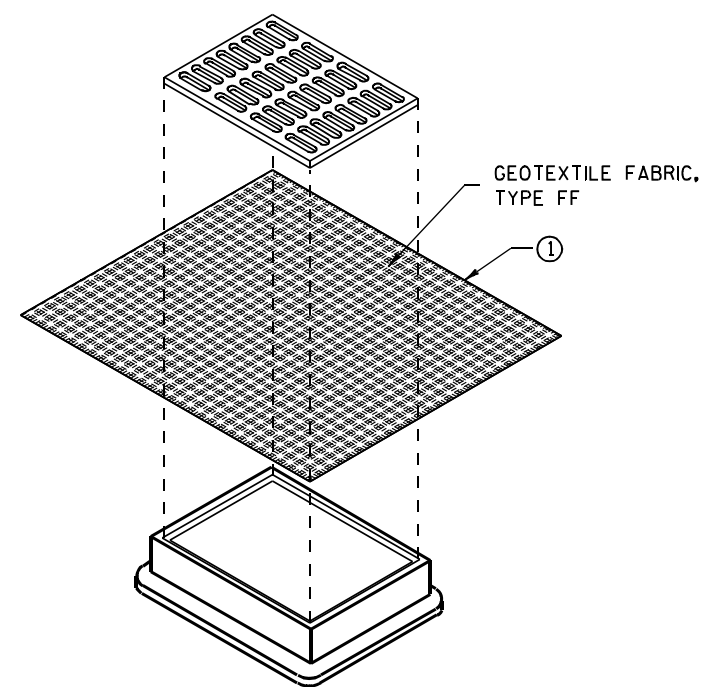
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

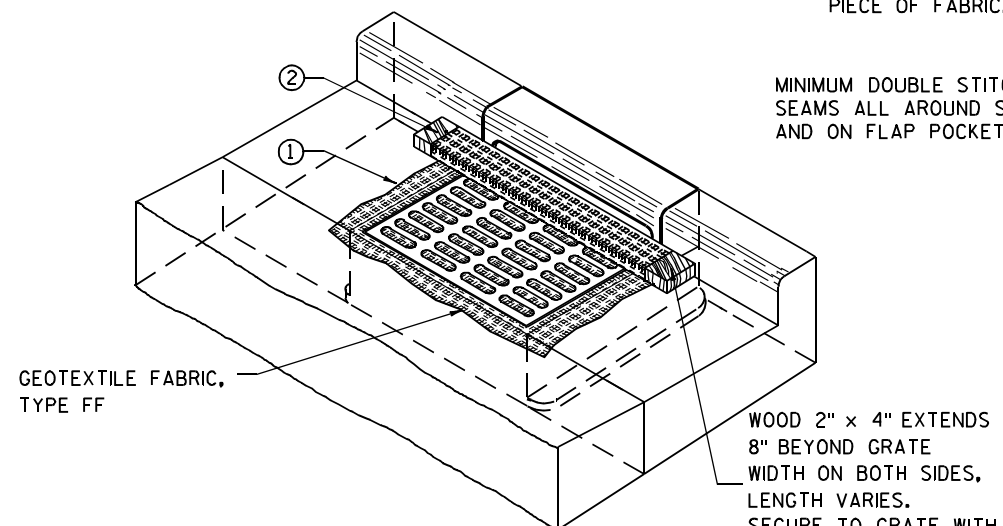
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

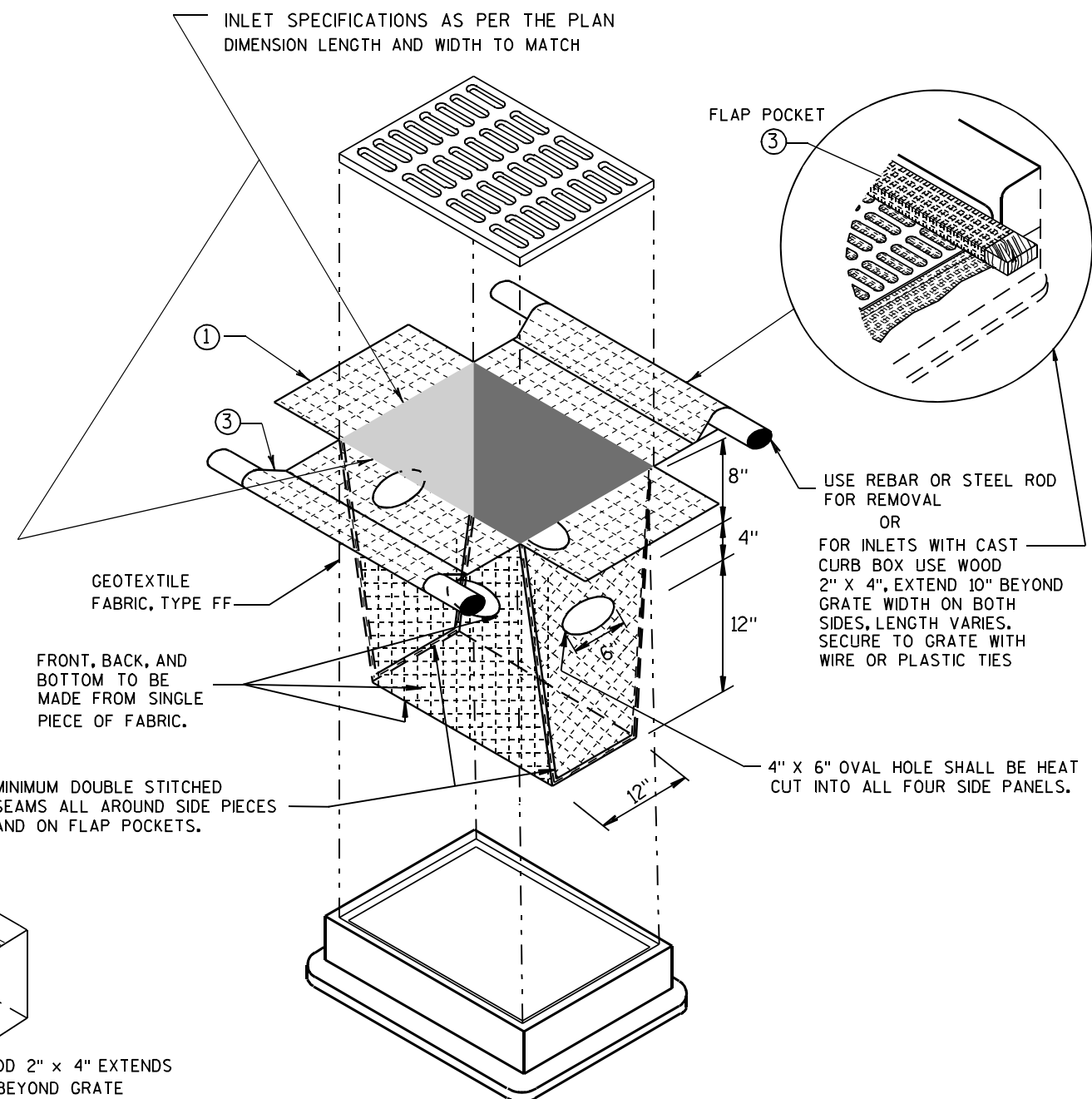
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



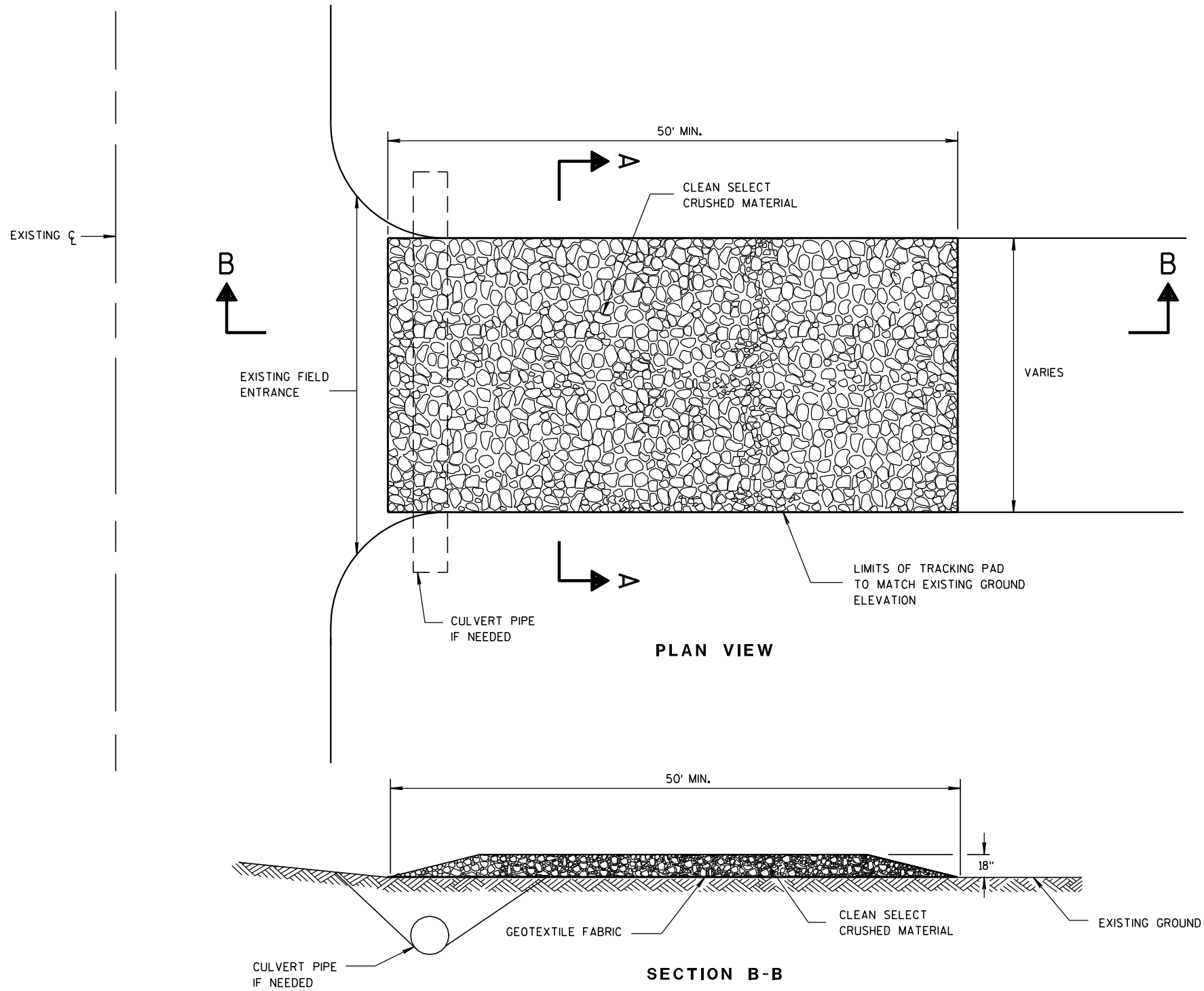
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



TRACKING PAD

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

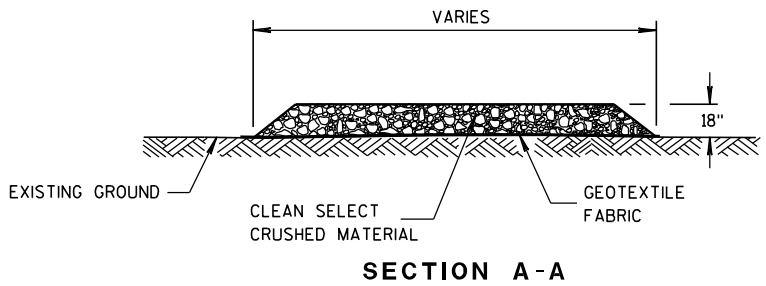
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

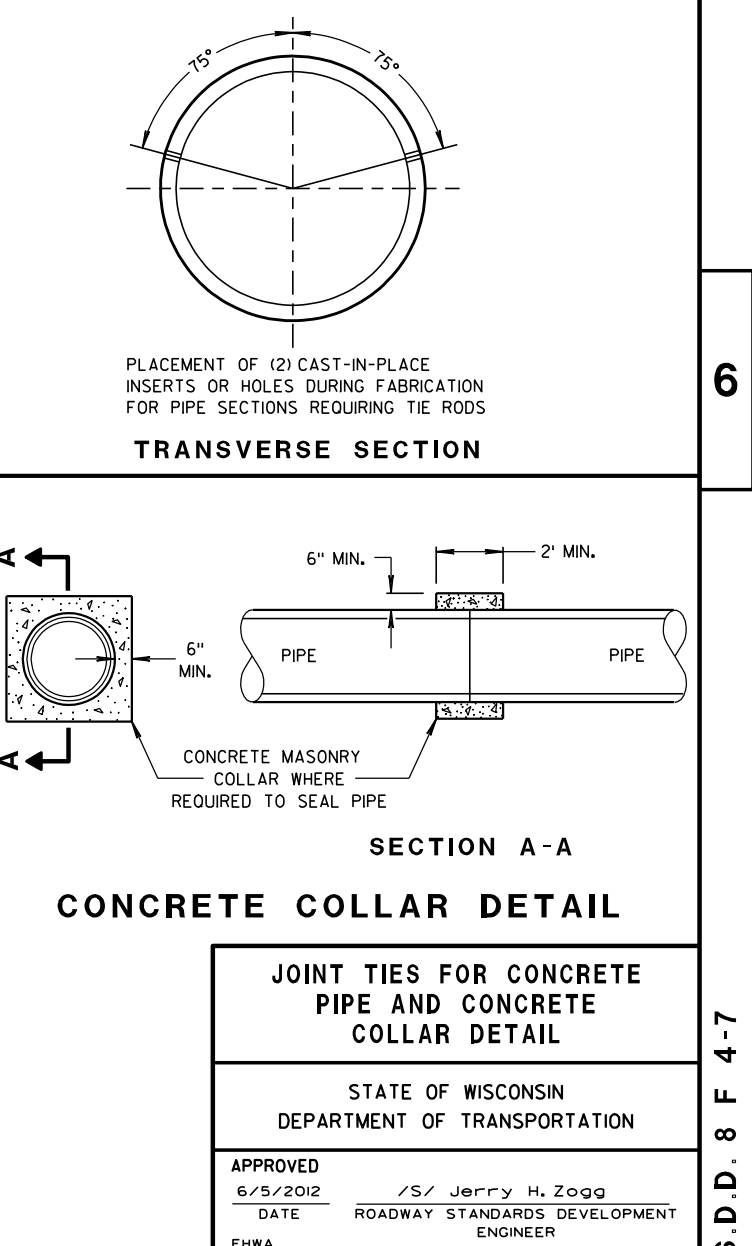
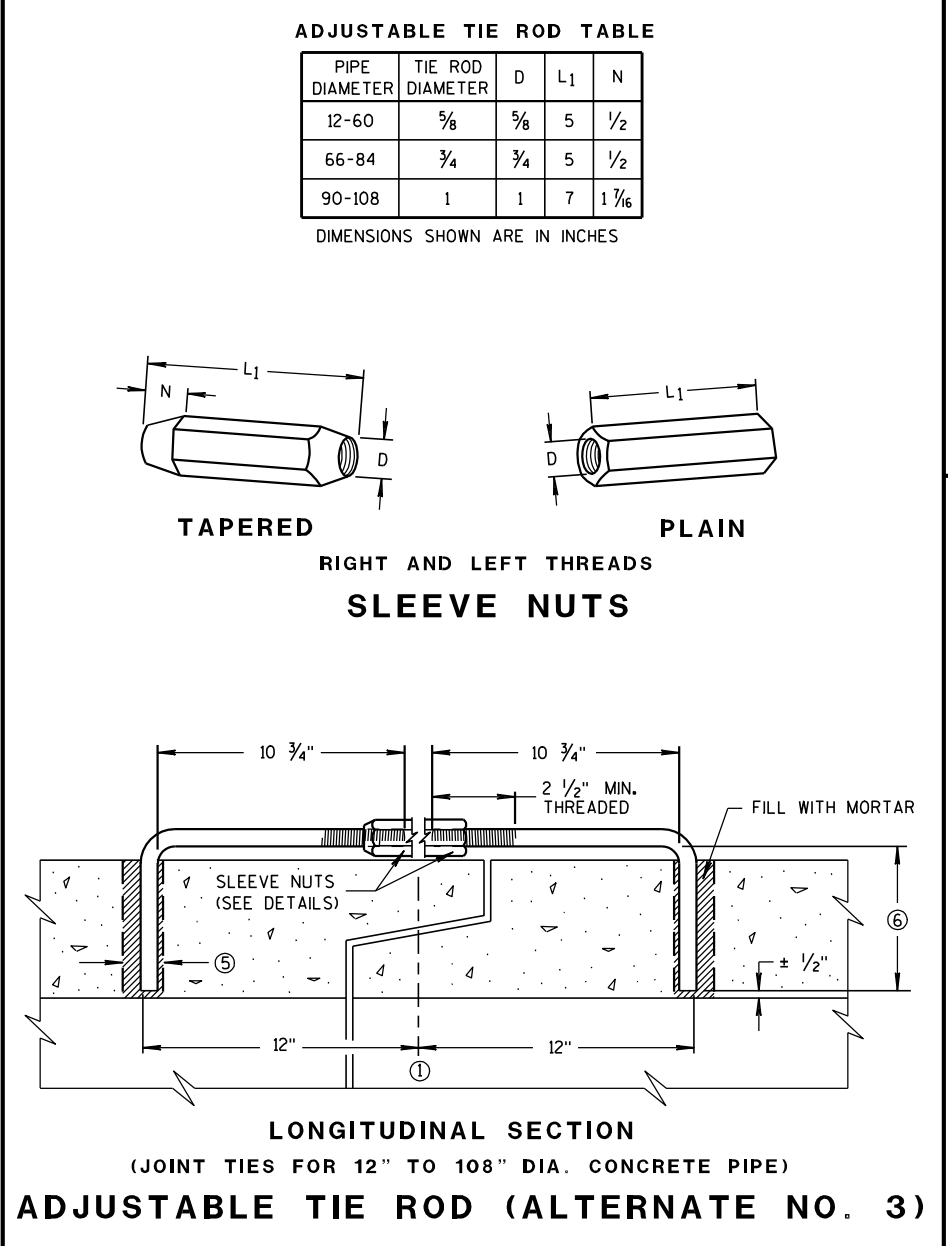
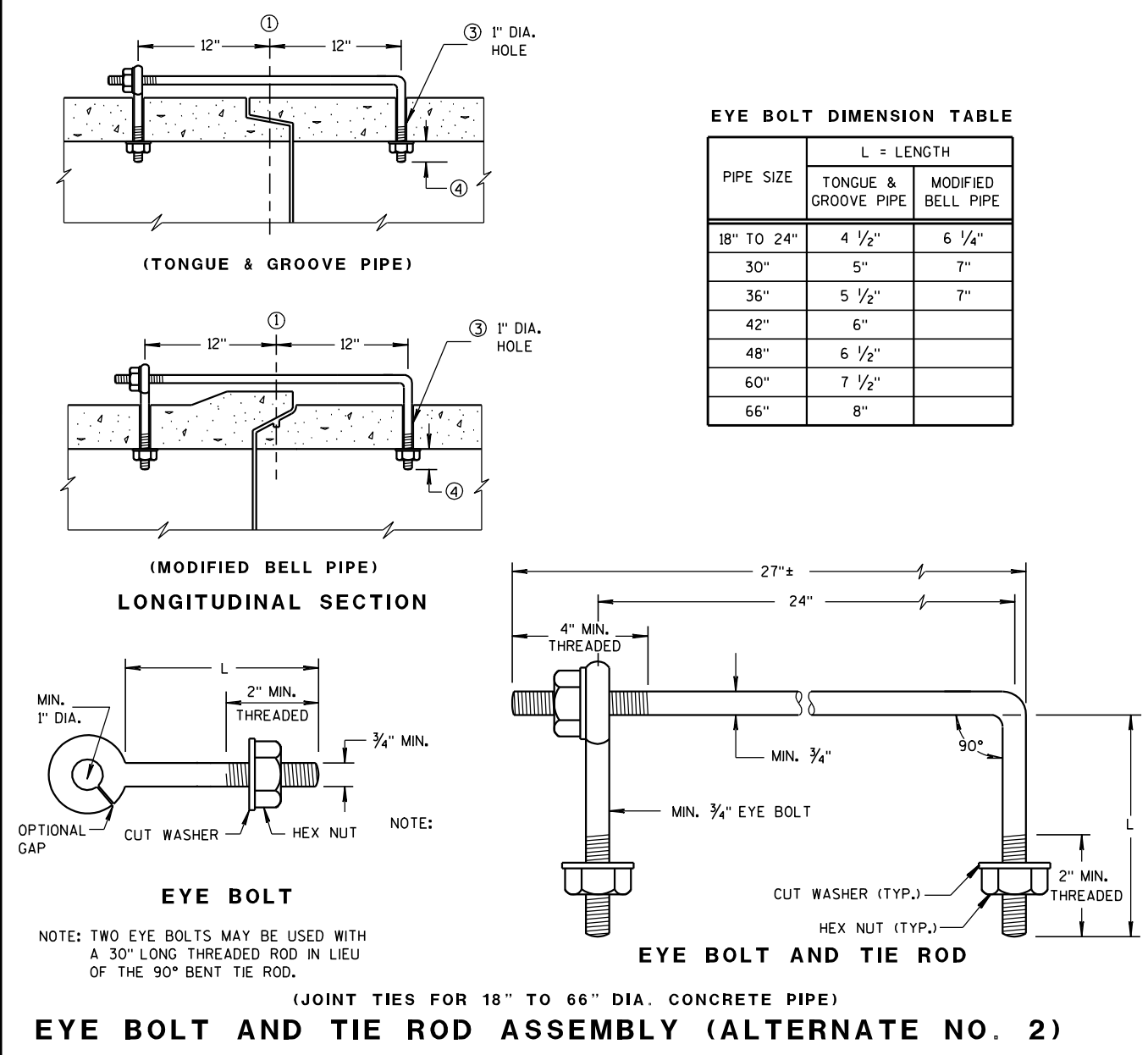
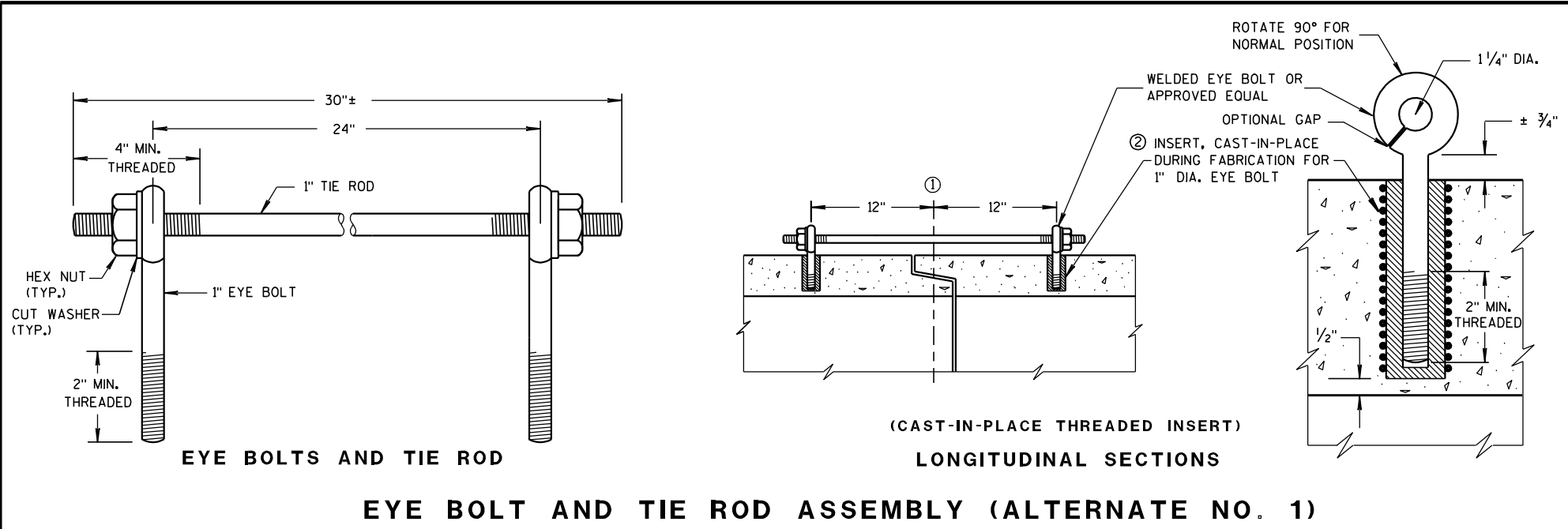
THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.

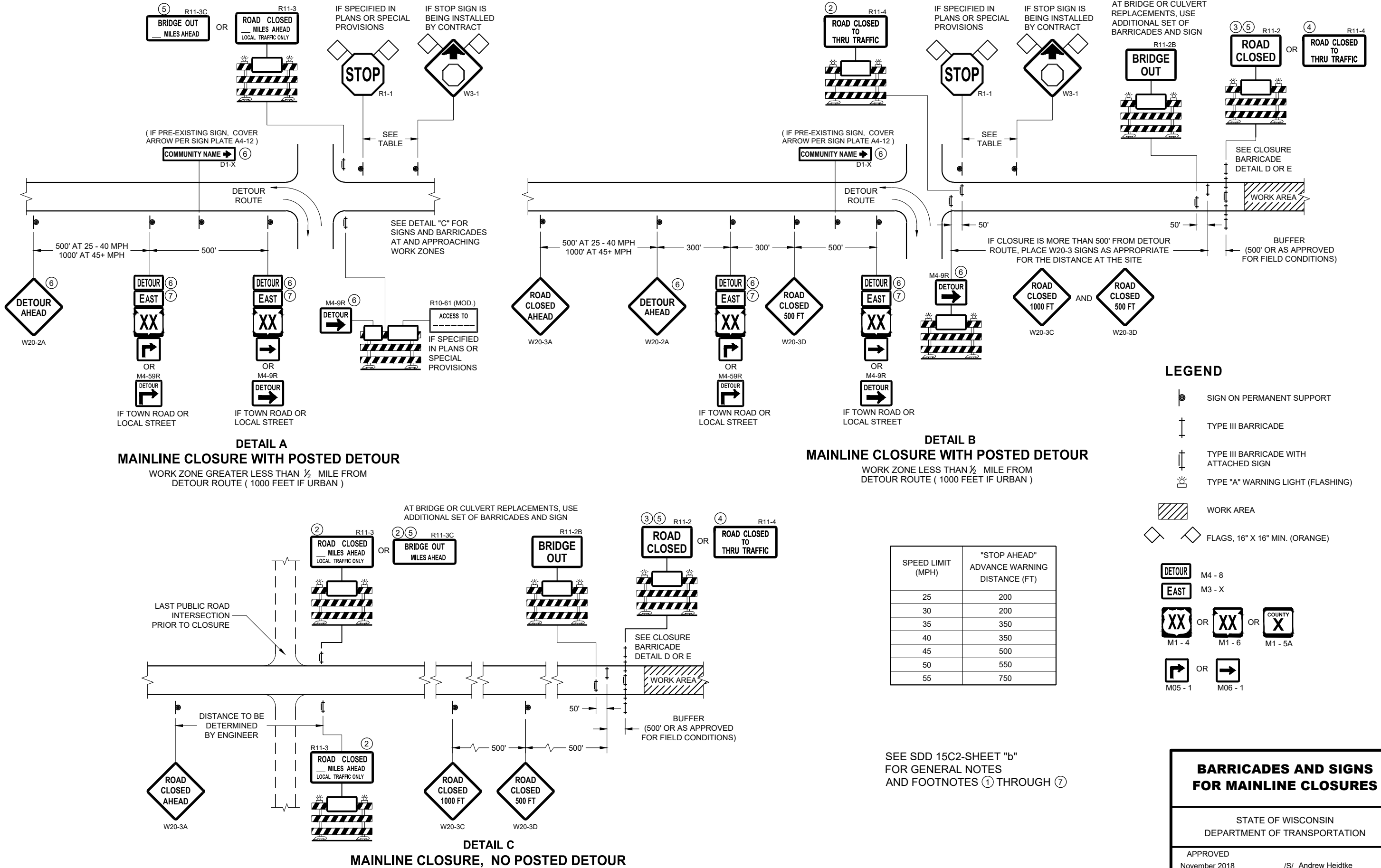


TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA





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 OR **XX** OR **COUNTY X**
M1 - 4 M1 - 6 M1 - 5A
→ OR **→**
M05 - 1 M06 - 1

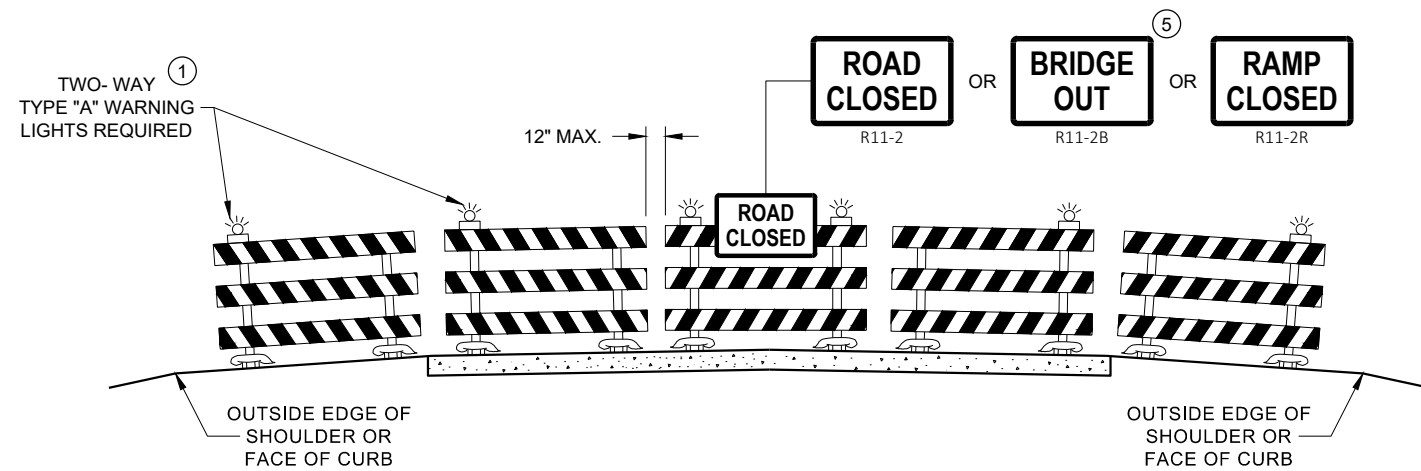
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

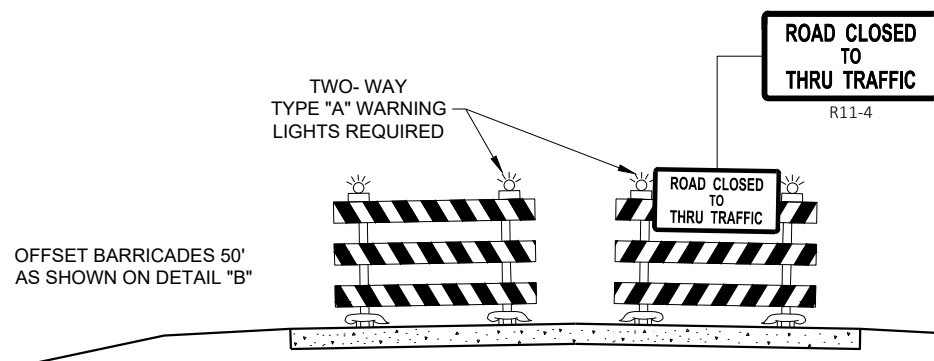
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



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:

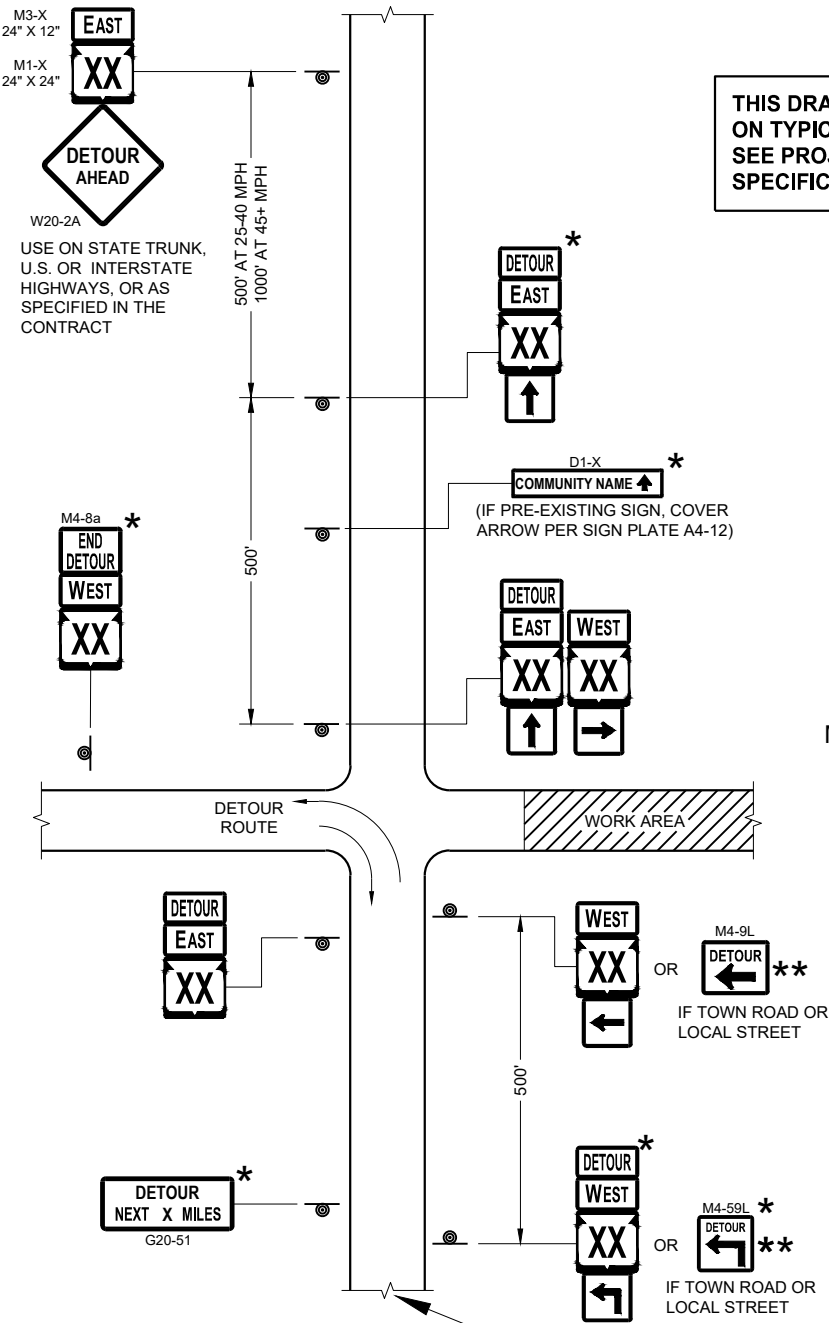
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 15" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

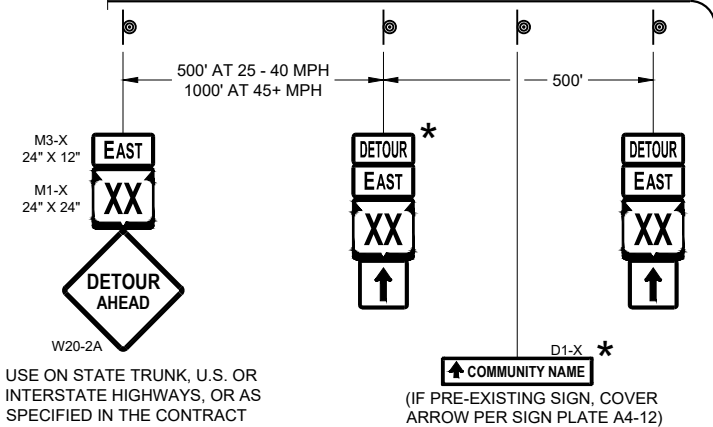
APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



SEE SPECIFIC PROJECT DETOUR
SIGNING DETAIL SHEETS AND
DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

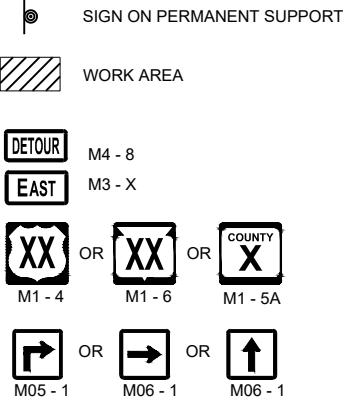
THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT



DETAIL F
DETOUR SIGNING

LEGEND



GENERAL NOTES

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

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. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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.

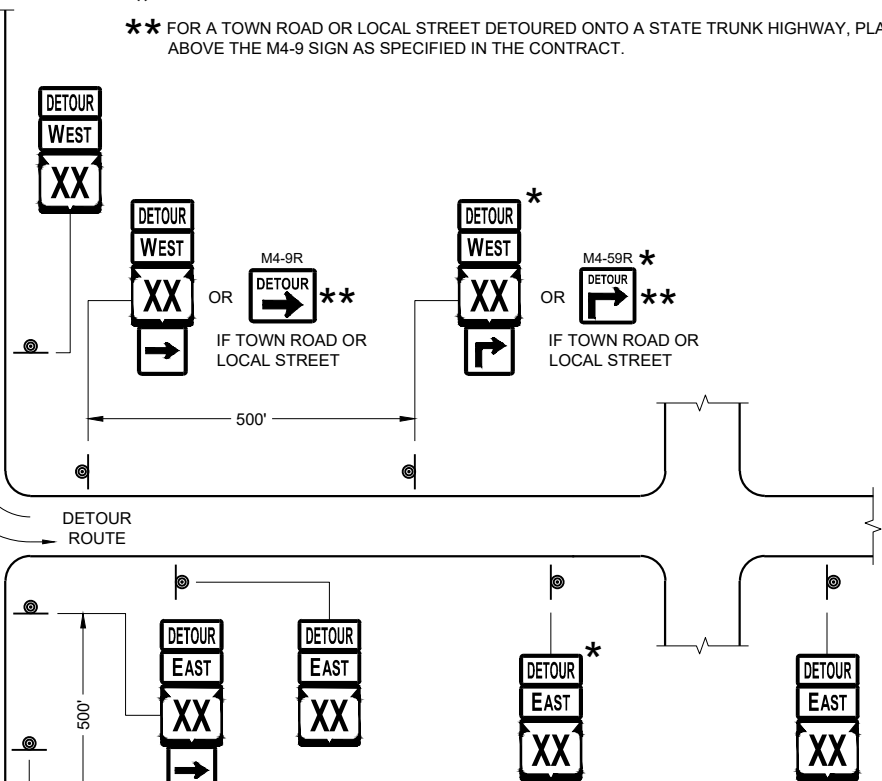
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-9R SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2 SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

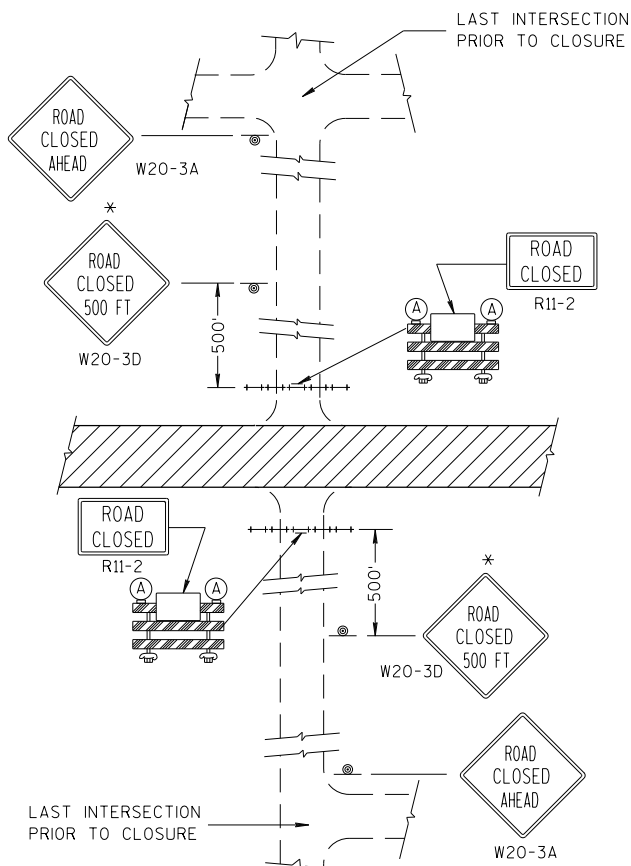


PLACE SIGNS BEYOND INTERSECTIONS
WITH STATE OR COUNTY TRUNK
HIGHWAYS OR AT 4 MILE MAXIMUM
SPACING (4 BLOCKS IF URBAN AREA)

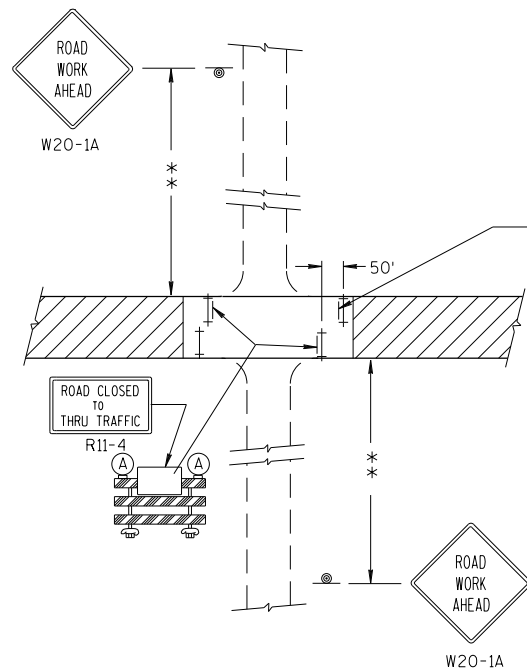
DETOUR SIGNING
FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

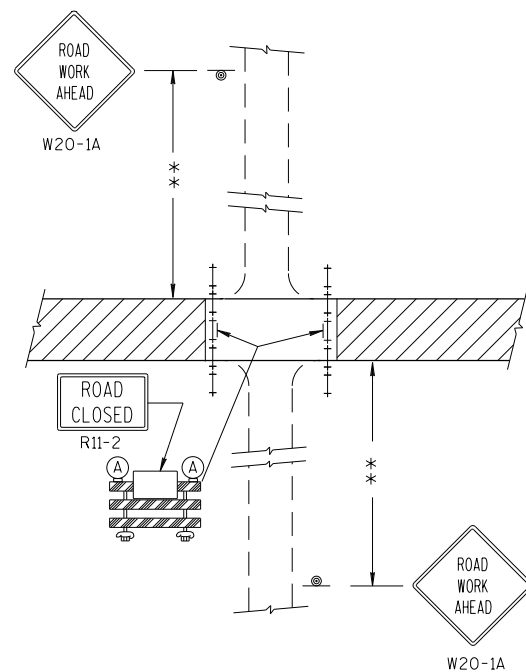
APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



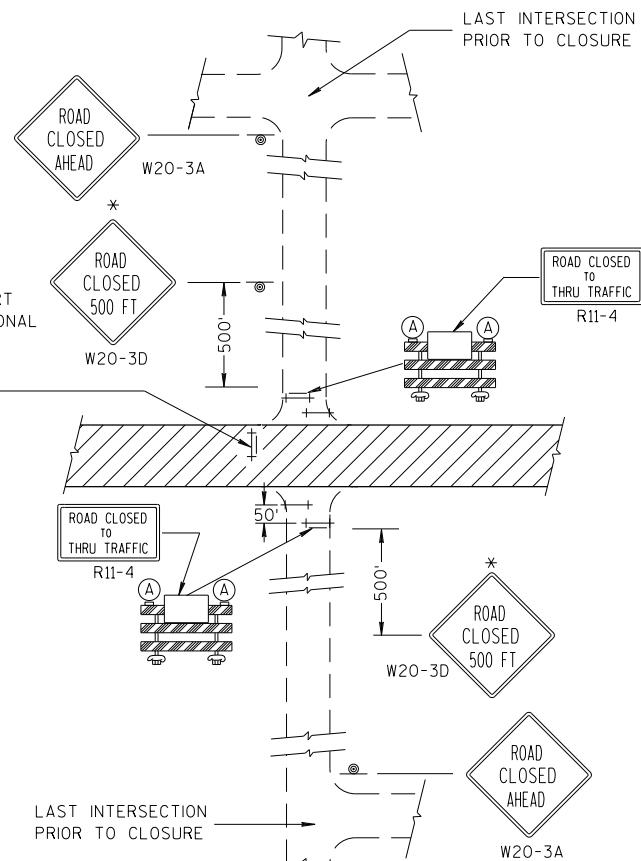
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND RESIDENT 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 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 RE-ESTABLISHED.

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 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 FT. OR LESS FROM THE WORK ZONE.

**500' MAX. OR AT LAST INTERSECTION WHICHEVER IS CLOSER.

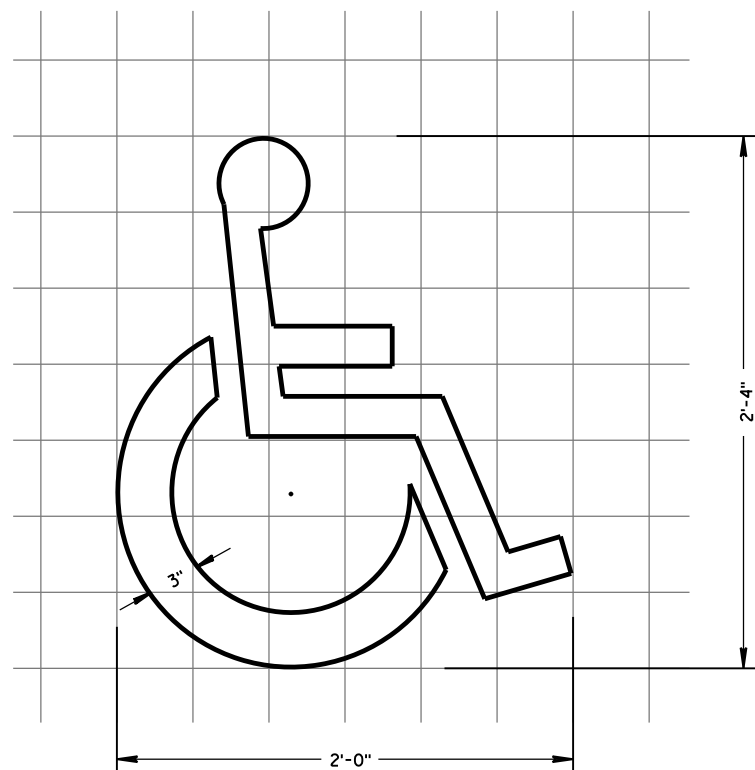
LEGEND

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

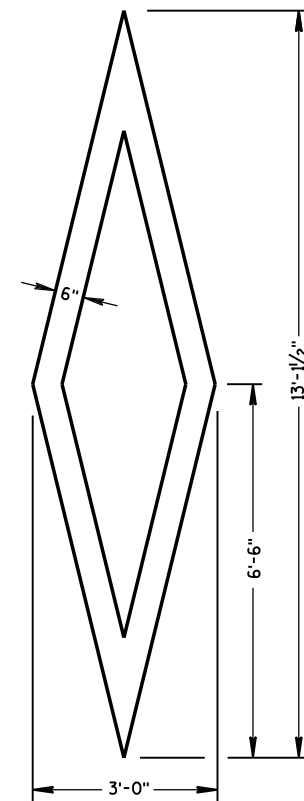
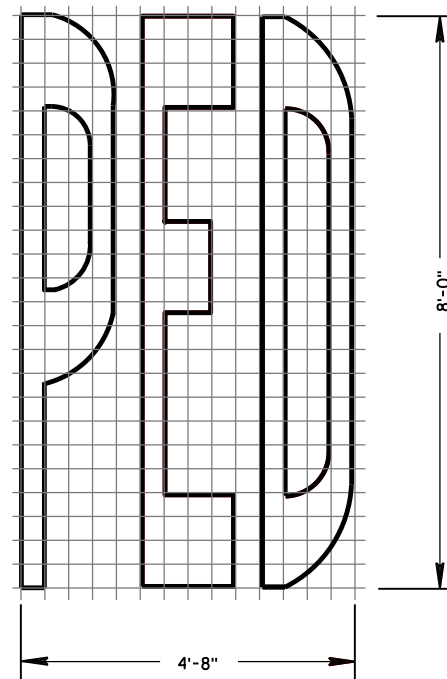
BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN
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APPROVED
7/2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA



HANDICAP SYMBOL

PREFERENTIAL
LANE SYMBOL**GENERAL NOTES**

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

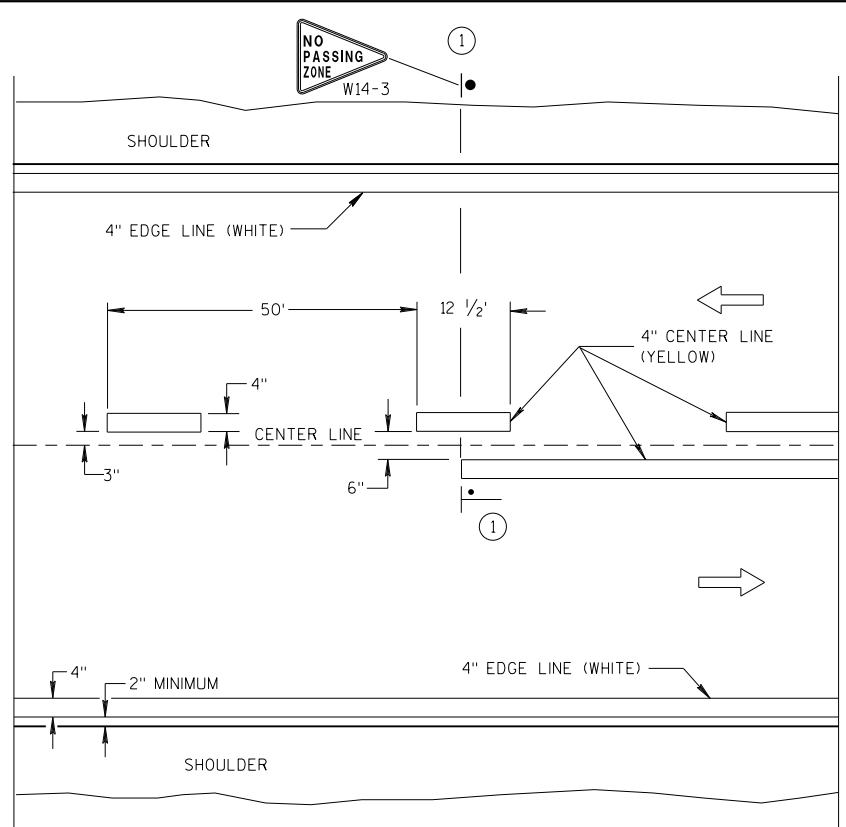
PAVEMENT MARKING SYMBOLS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

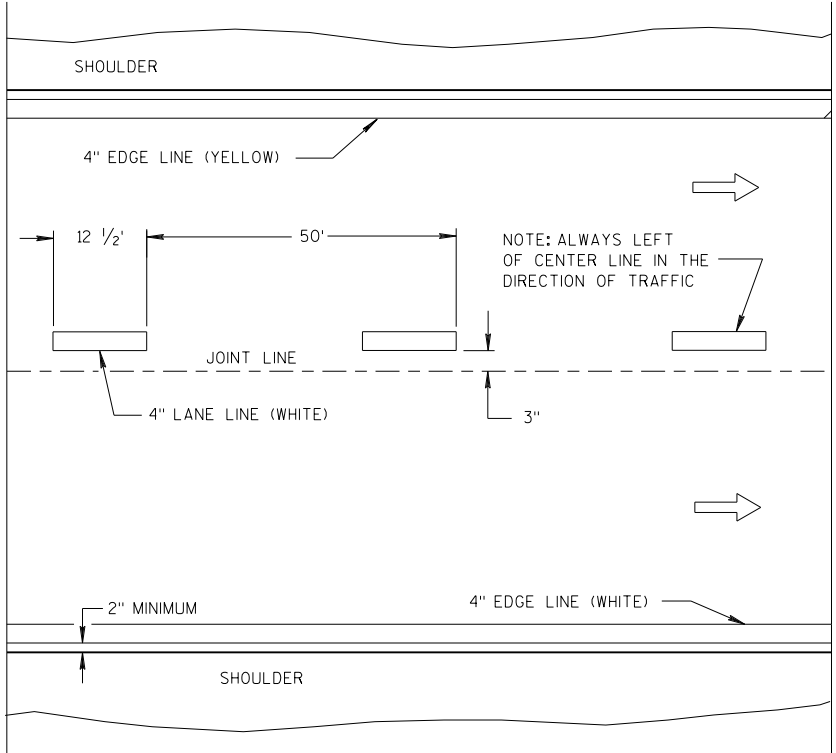
APPROVED

June 2017
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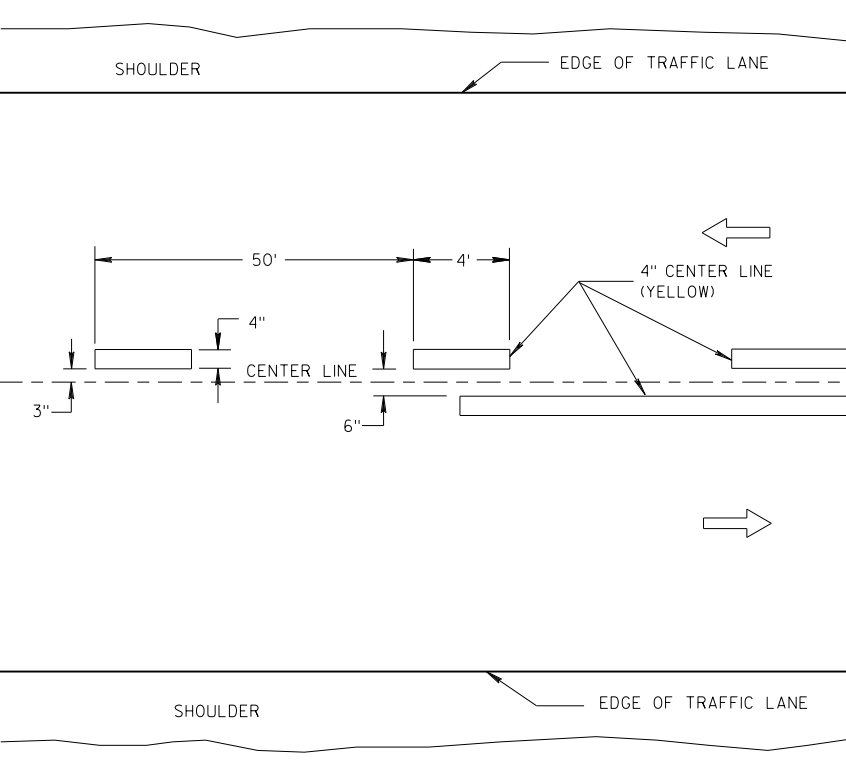


TWO WAY TRAFFIC

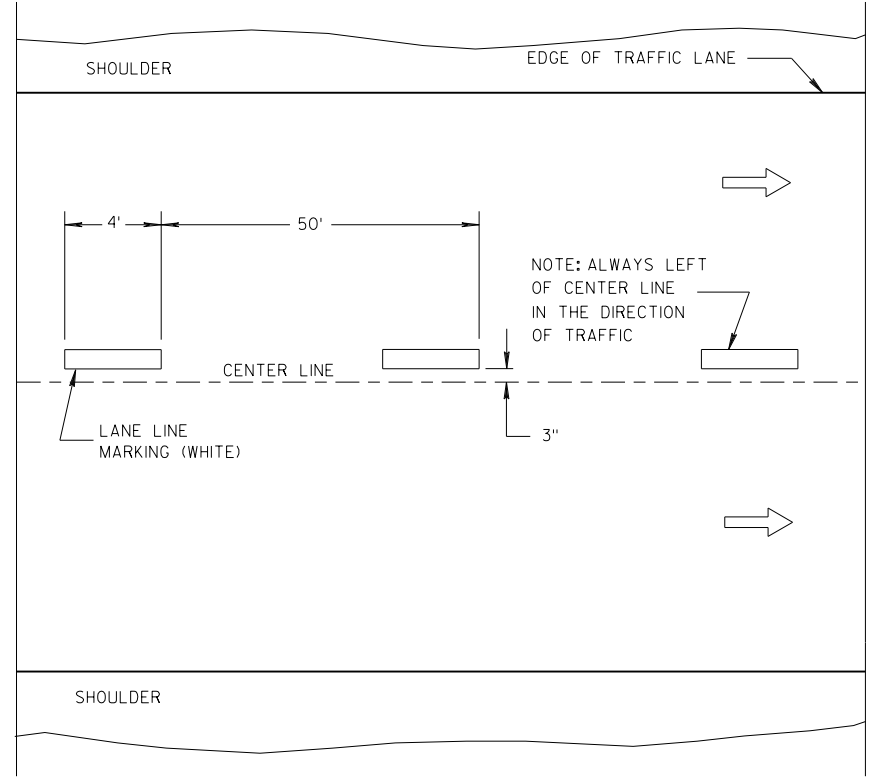


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

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

NOTE

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

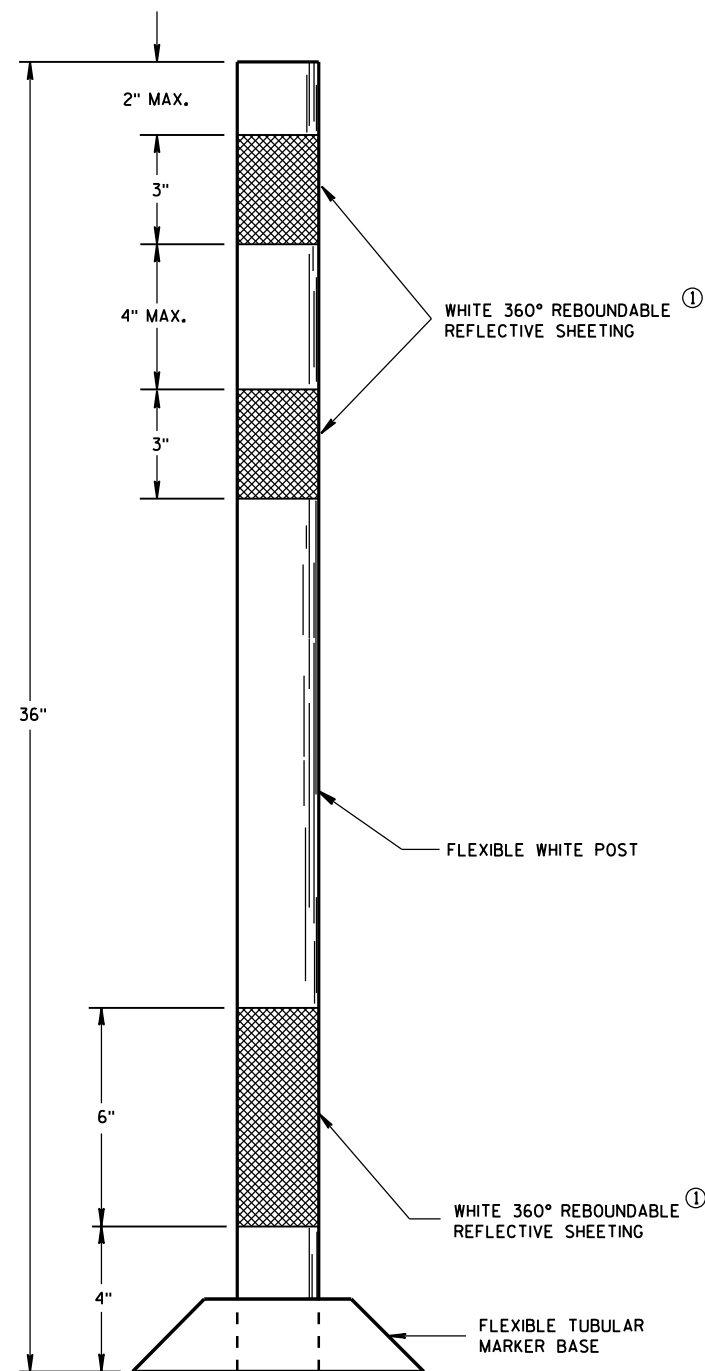
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

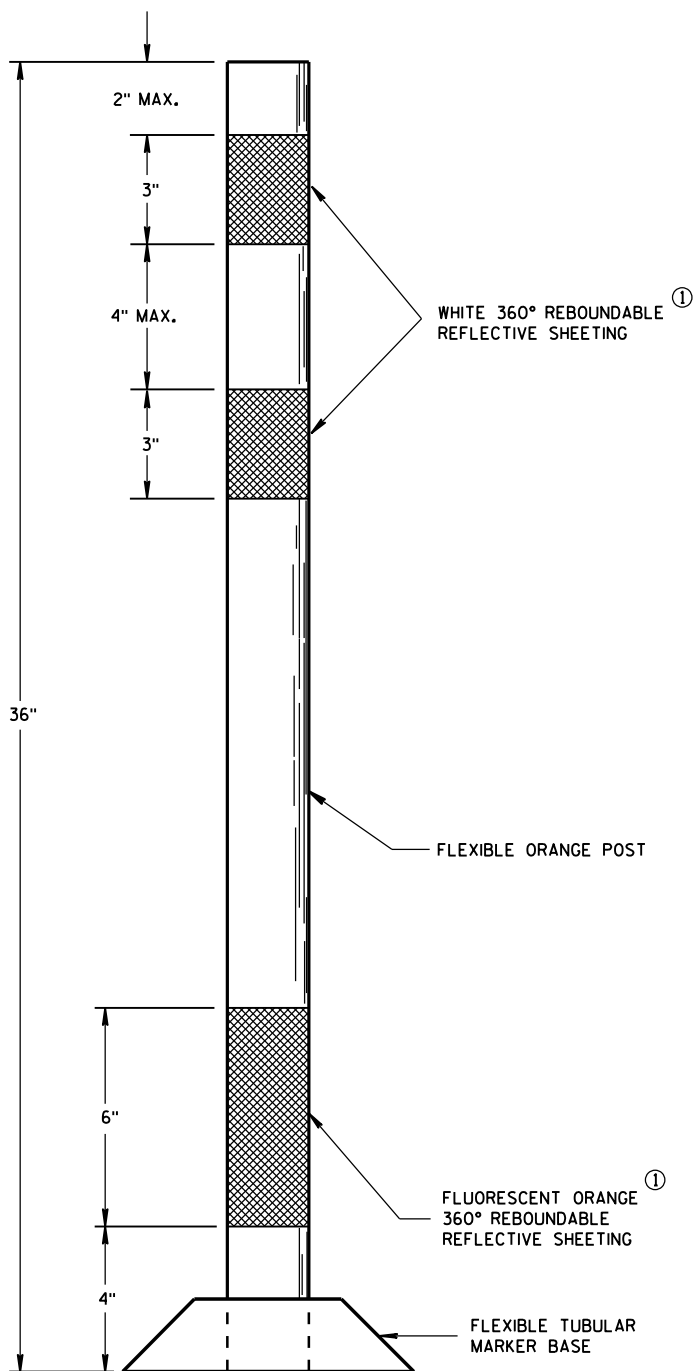
LONGITUDINAL MARKING (MAINLINE)

STATE OF WISCONSIN
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7/2018 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



**FLEXIBLE
TUBULAR MARKER POST
PERMANENT CROSSOVER**



**FLEXIBLE
TUBULAR MARKER POST
WORK ZONE**

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

**CHANNELIZING DEVICES
FLEXIBLE TUBULAR MARKER
POST**

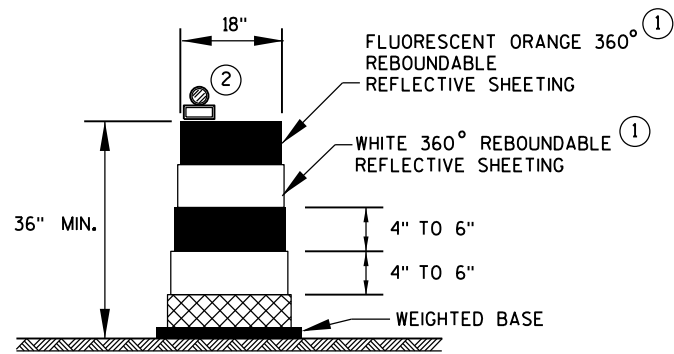
**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED

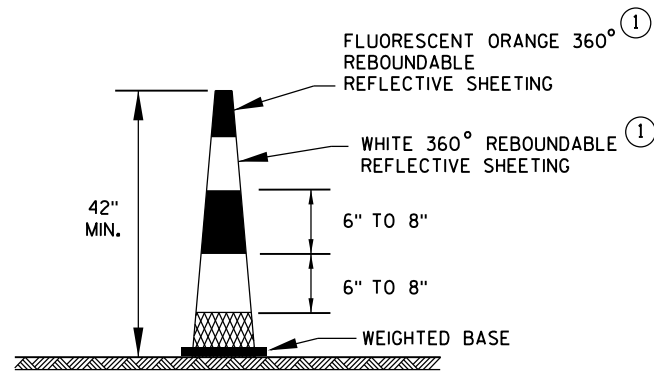
June 2017
DATE

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WORK ZONE ENGINEER

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DRUM

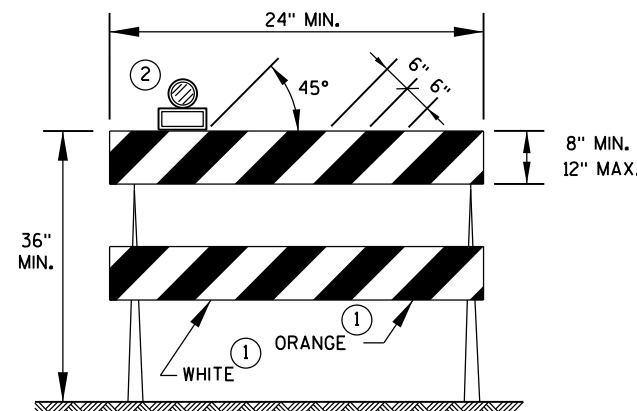


42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

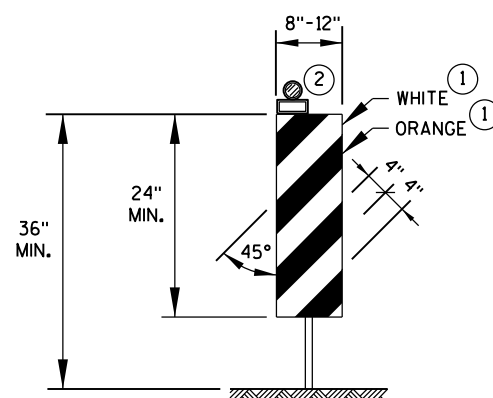
GENERAL NOTES

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



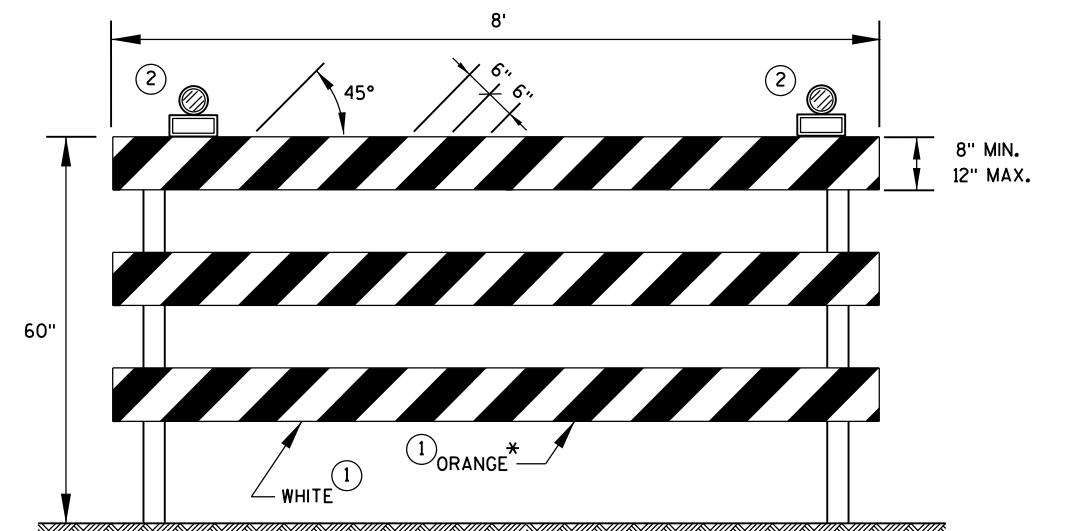
TYPE 2 BARRICADE

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



VERTICAL PANEL

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



TYPE 3 BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION, USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

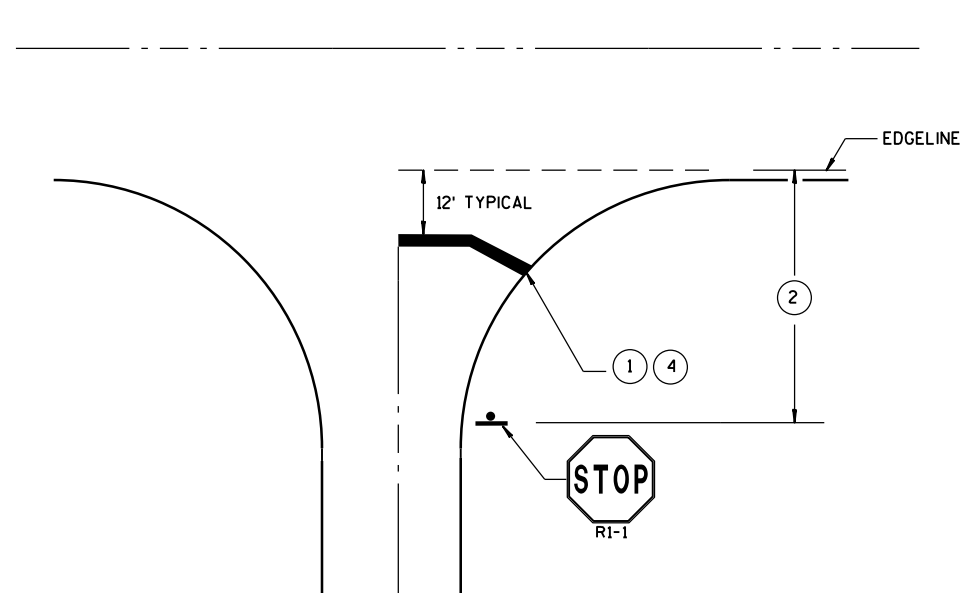
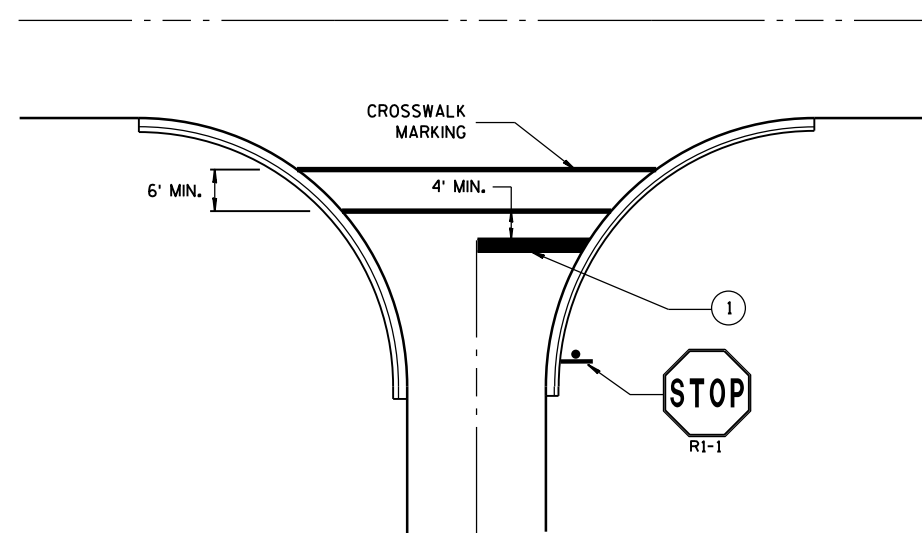
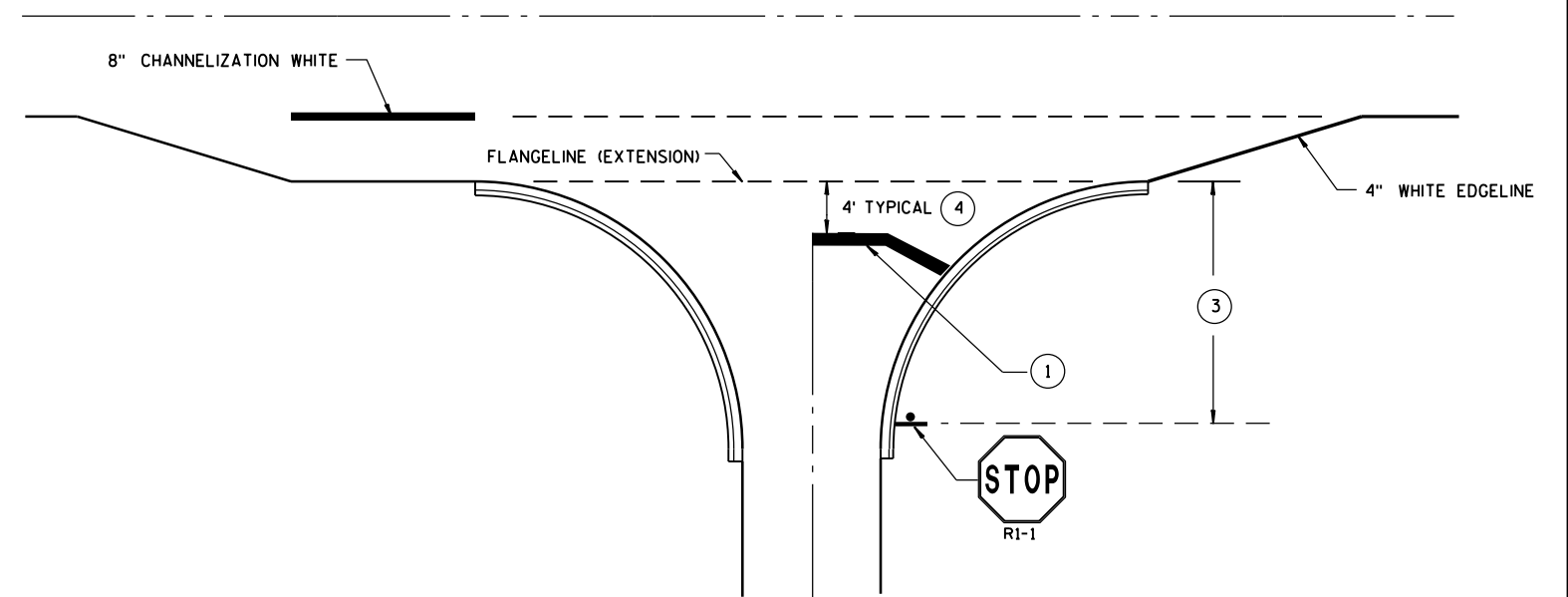
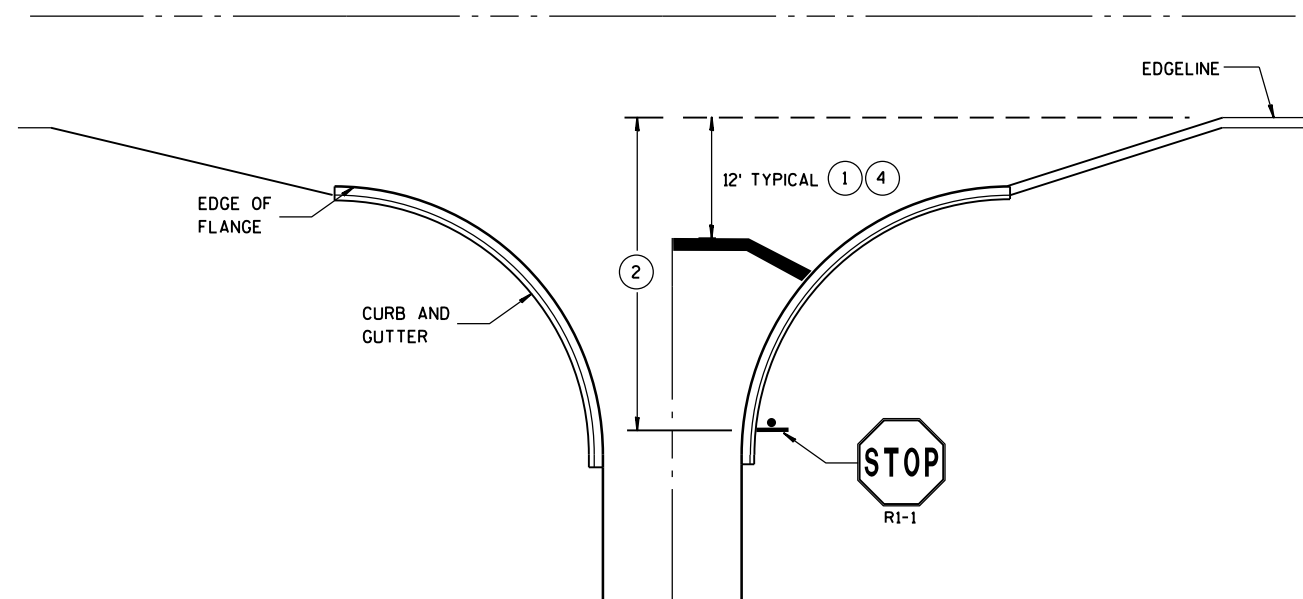
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2017
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA



GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
- 3 IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- 4 MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept., 2017
DATE

DA

DATE Sept., 2017 /S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

[illegible]

6

4' MINIMUM
5' DESIRABLE

**SIDEWALK
CLOSED**

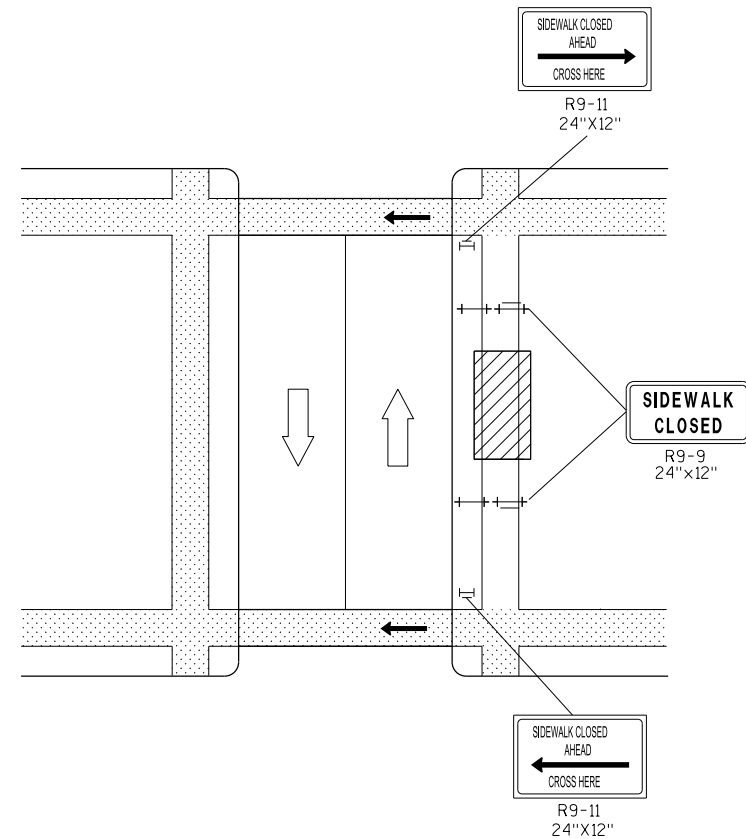
R9-9
24"x12"

1

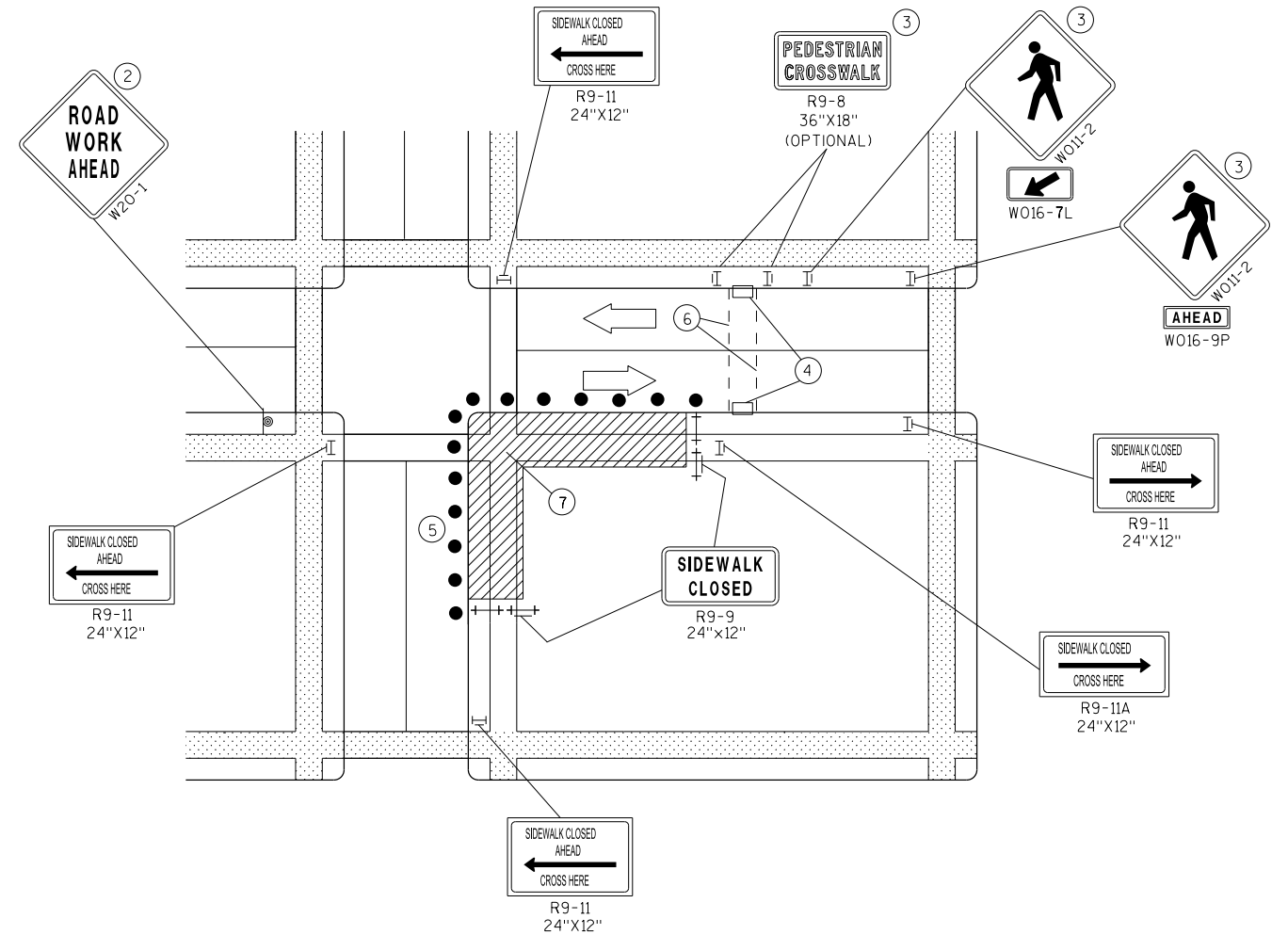
TEMPORARY
PEDESTRIAN
CROSSING. SEE
SECTION 15.03.00
FOR "C".

The diagram shows a cross-section of a temporary pedestrian crossing. A sidewalk on the left is closed, indicated by a hatched rectangular area. A signpost labeled '1' holds a sign that reads 'SIDEWALK CLOSED'. The sign is R9-9, 24"x12". The crossing is marked with two large white arrows pointing in opposite directions on the pavement. The crossing is flanked by concrete curbs. The text '4' MINIMUM 5' DESIRABLE' is shown above the crossing area. The text 'TEMPORARY PEDESTRIAN CROSSING. SEE SECTION 15.03.00 FOR "C".' is shown below the crossing area.

S.D.D. 15 D 30-4a



MID-BLOCK SIDEWALK CLOSURE



6

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETACHEABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK, AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.









"WO" SIGN IS THE SAME AS "W" SIGN EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

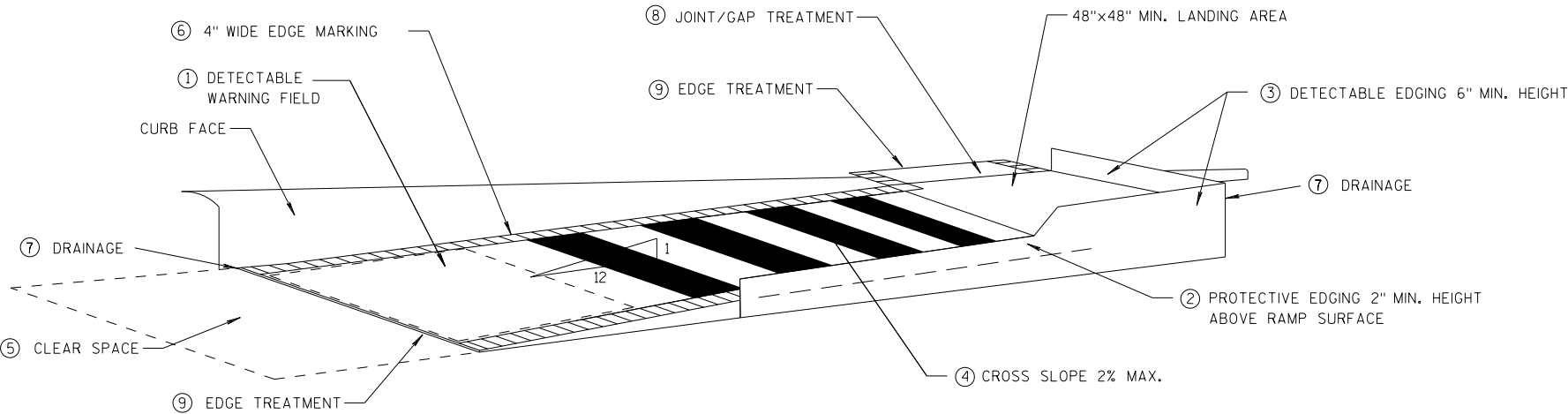
- ## LEGEND
- | | | | |
|---|--|---|-------------------------|
|  | SIGN ON PERMANENT
SUPPORT |  | DIRECTION OF
TRAFFIC |
|  | UNDER PEDESTRIAN
TRAFFIC |  | TRAFFIC CONTROL
DRUM |
|  | WORK AREA | | |
|  | PEDESTRIAN
CHANNELIZATION
DEVICE | | |
|  | TYPE II BARRICADE
WITH/WITHOUT SIGN (ALL
WITH ONE WARNING
LIGHT, TYPE A, LOW-
INTENSITY FLASHING) | | |
|  | TYPE III BARRICADE
WITH/WITHOUT SIGN (ALL
WITH ONE WARNING
LIGHT, TYPE A, LOW-
INTENSITY FLASHING) | | |

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

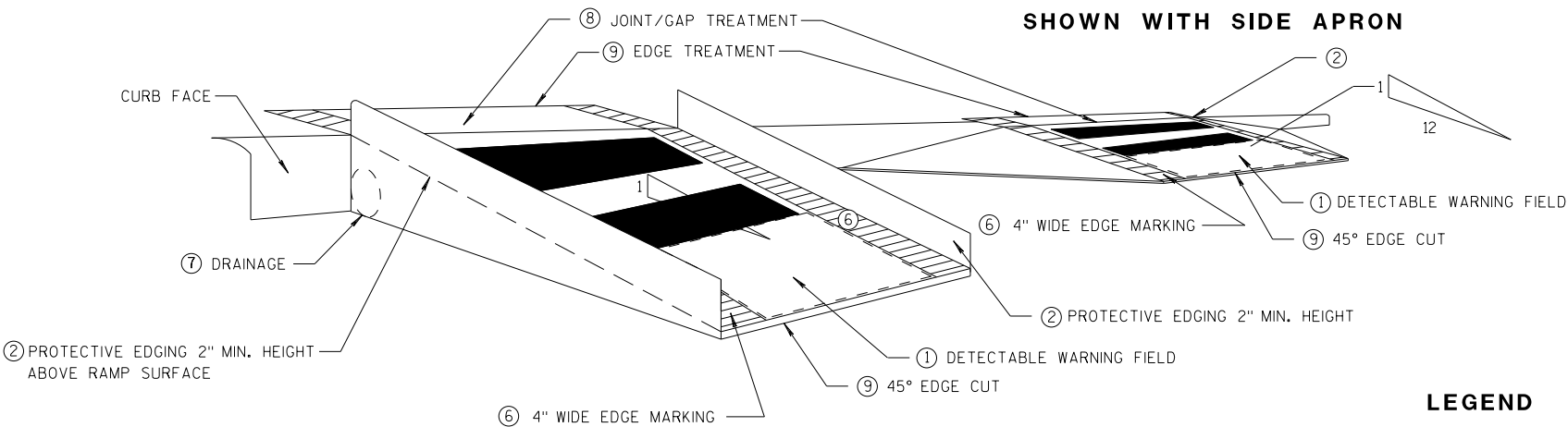
S.D.D. 15 D 30-4a

GENERAL NOTES

- NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.
ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.
- 1 CURB RAMP SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 805 SHEET "E".
 - 2 PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMP OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
 - 3 DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
 - 4 CURB RAMP AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
 - 5 CLEAR SPACE OF 48"x48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
 - 6 THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.
 - 7 DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
 - 8 LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
 - 9 CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
 - 10 5' WIDE MIN. WITH PEDSETRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.

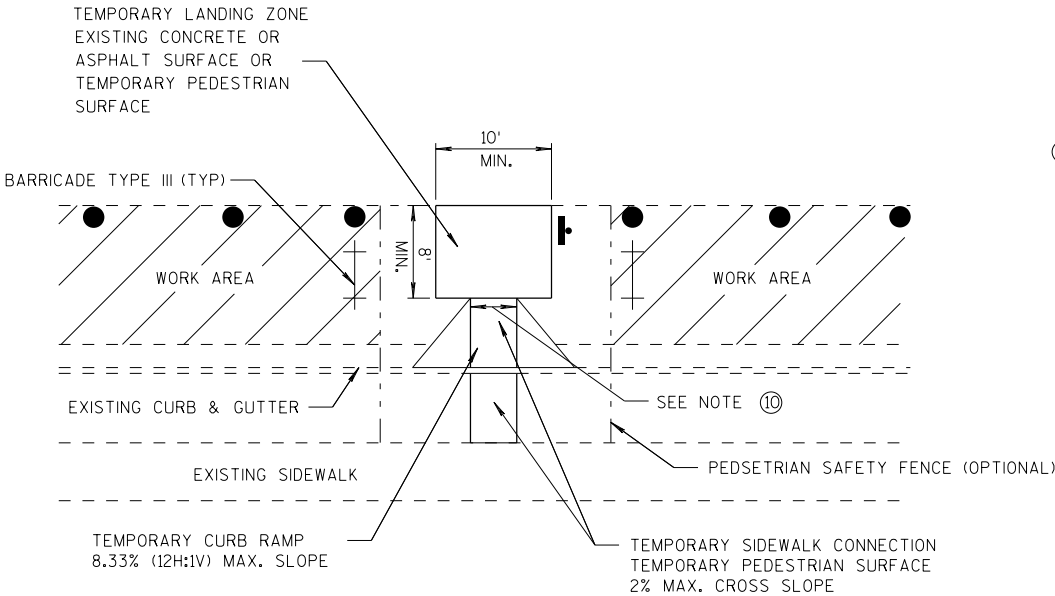


TEMPORARY CURB RAMP
PARALLEL TO CURB



SHOWN WITH PROTECTIVE EDGE

TEMPORARY CURB RAMP
PERPENDICULAR TO CURB

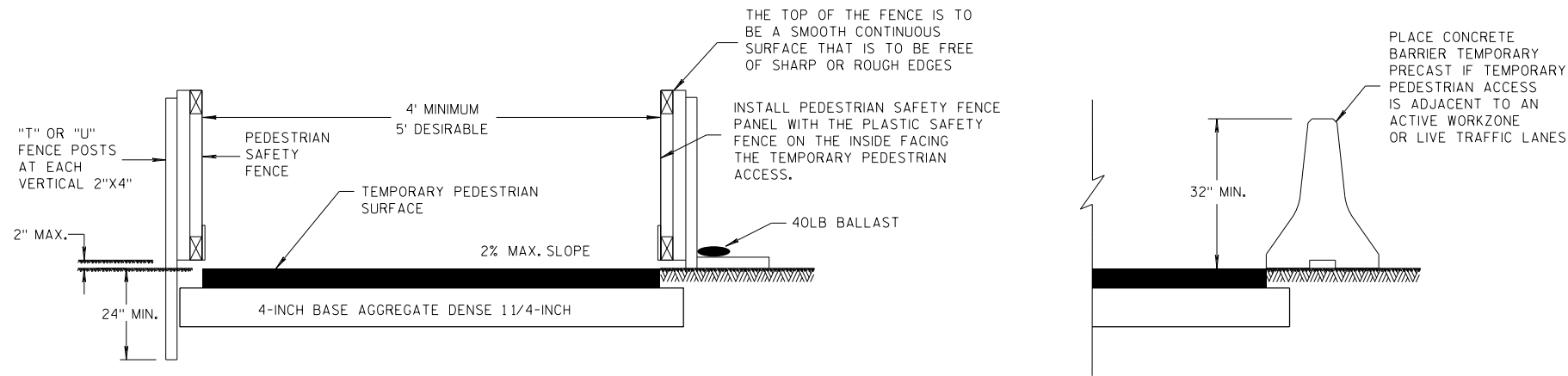


TEMPORARY BUS STOP PAD

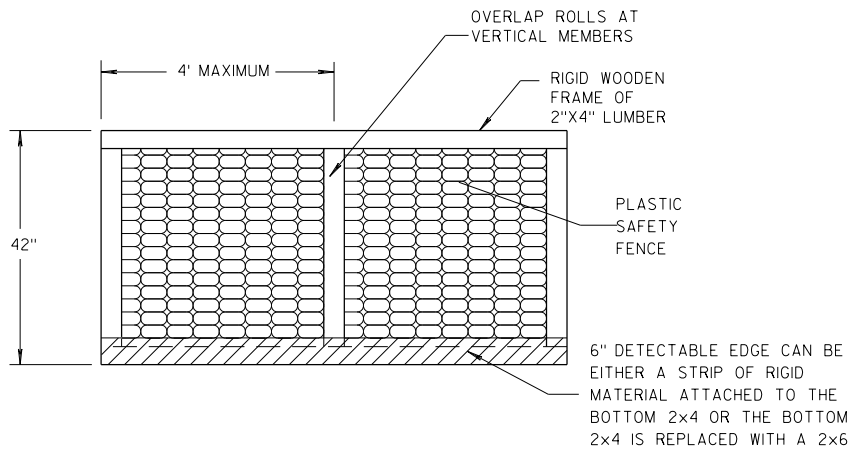
LEGEND

	WORK AREA
	TYPE III BARRICADE
	TRAFFIC CONTROL DRUM

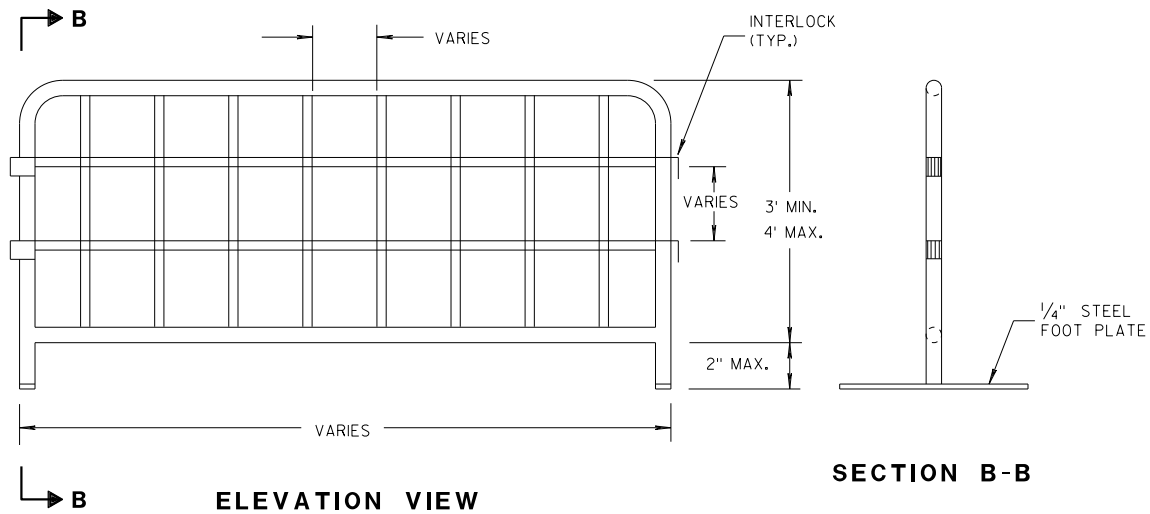
TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/2018 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	



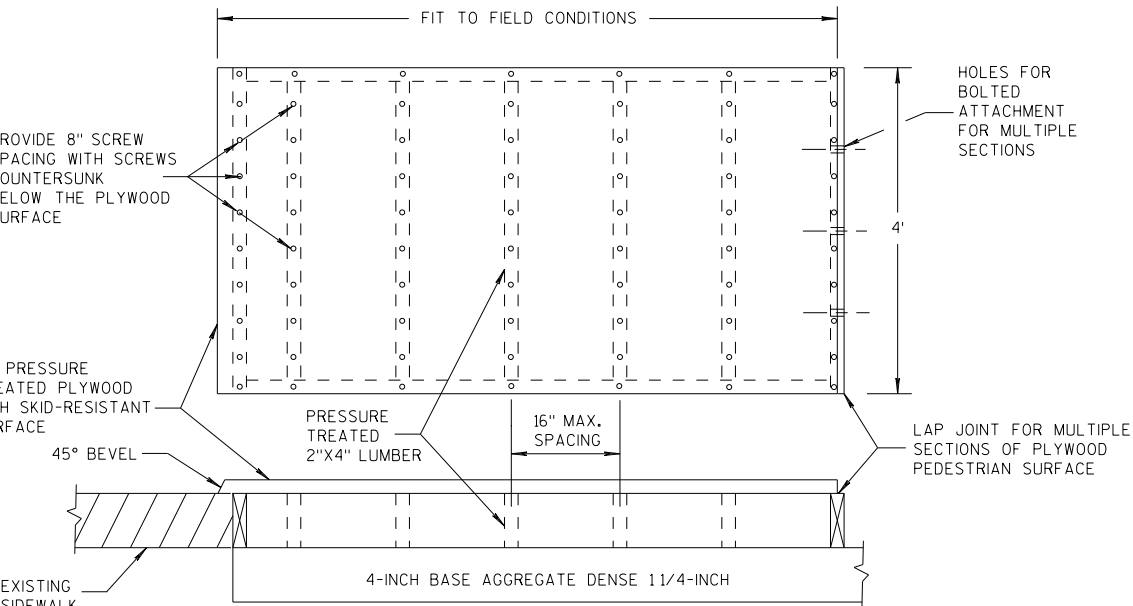
TEMPORARY PEDESTRIAN ACCESS



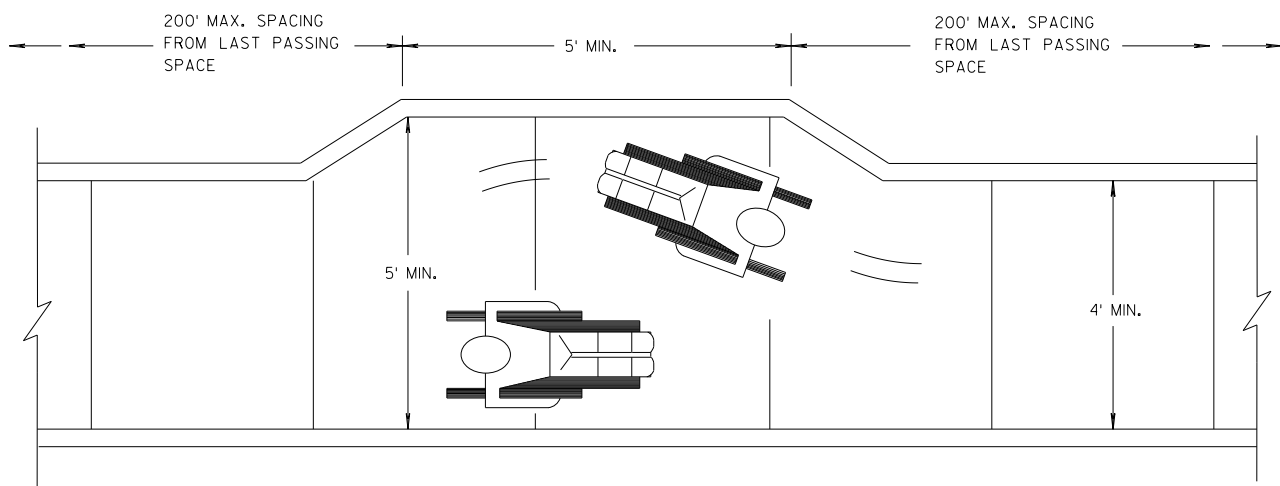
PEDESTRIAN SAFETY FENCE



TEMPORARY PEDESTRIAN STEEL BARRICADE

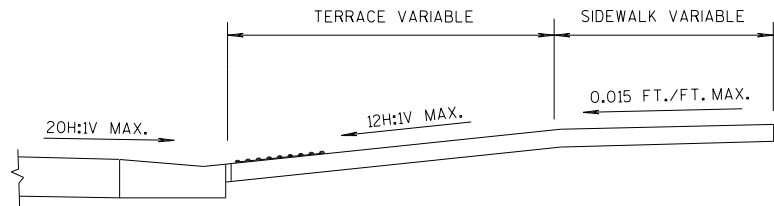


TEMPORARY PEDESTRIAN SURFACE PLYWOOD

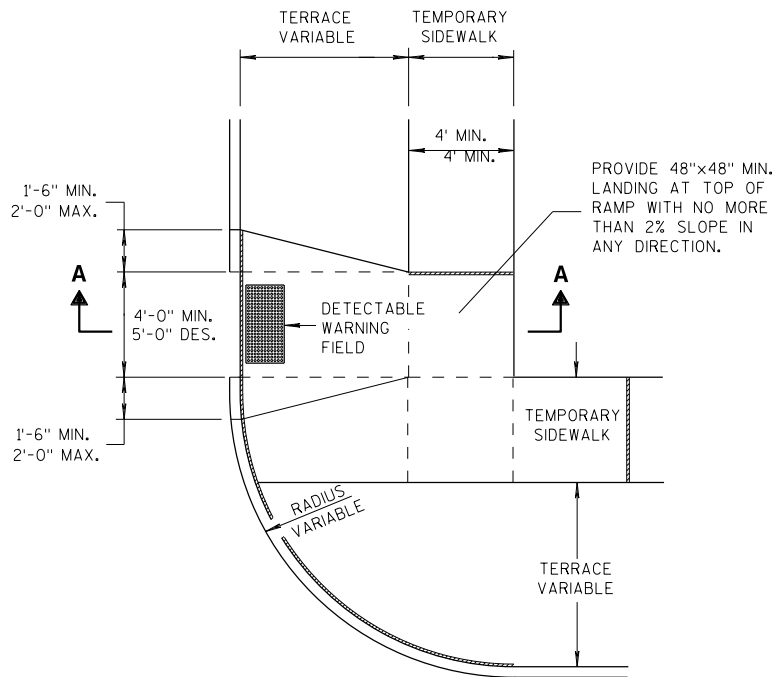


NARROW SIDEWALK PASSING DETAIL

- GENERAL NOTES**
- ① INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



SECTION A-A



PLAN VIEW
TEMPORARY TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 7/2018 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

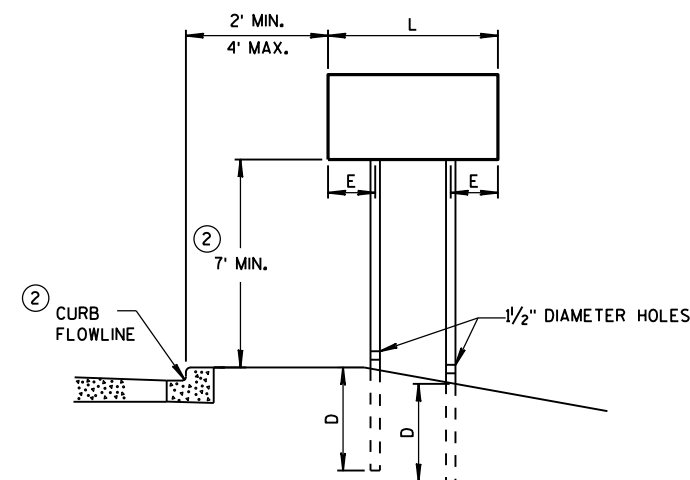
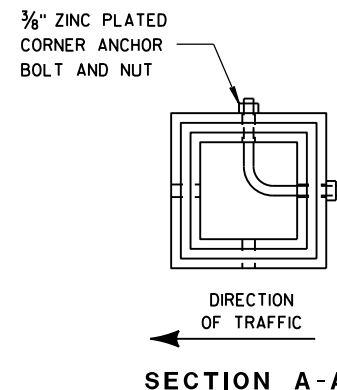


DETAIL OF TUBULAR
STEEL SIGN POST

TUBULAR STEEL POSTS

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

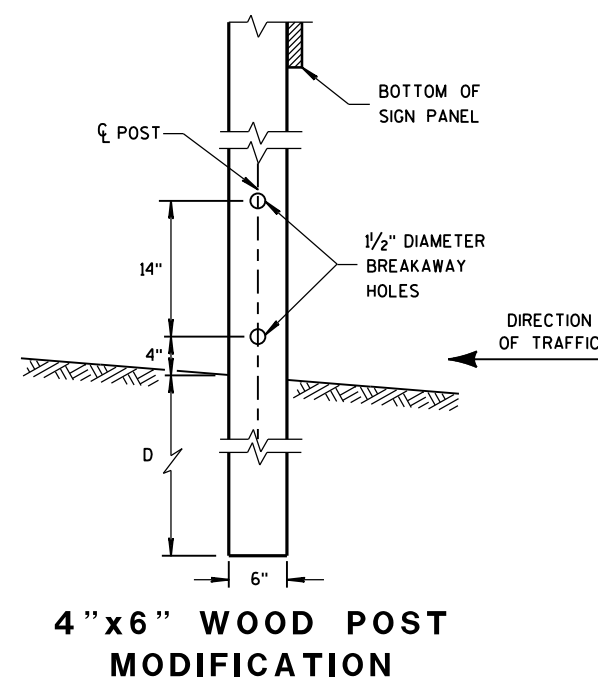
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



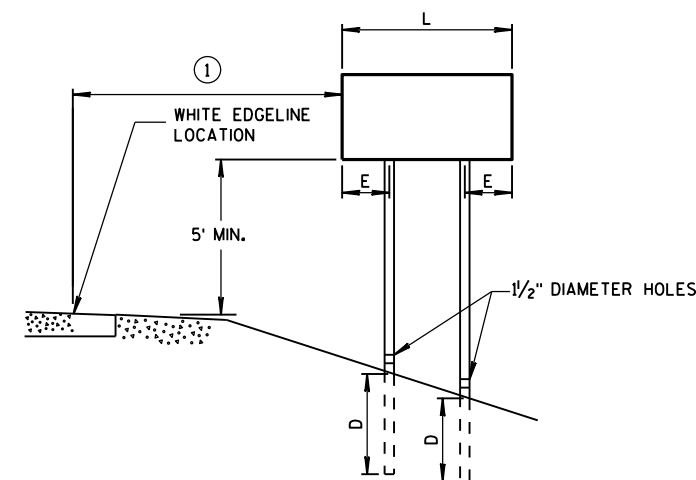
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

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



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

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

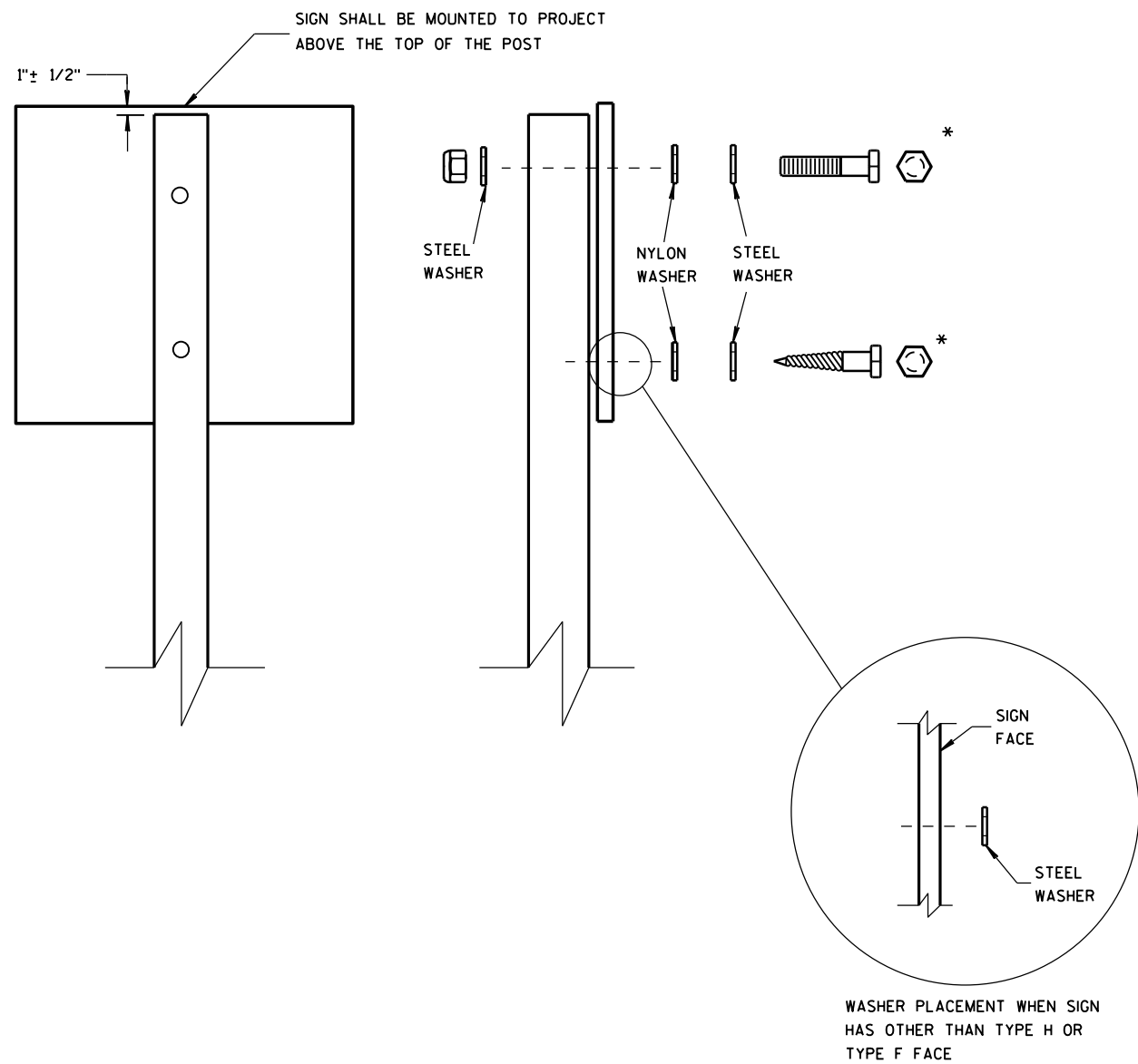
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
 - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

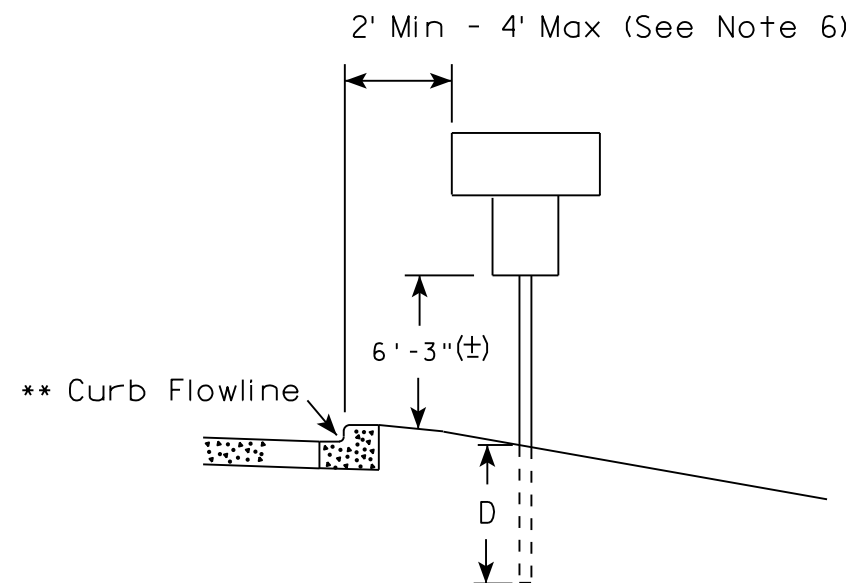
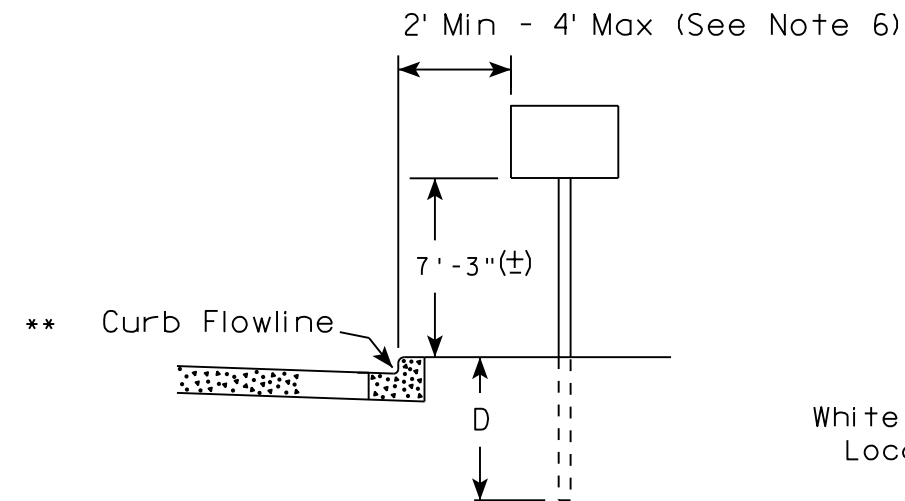
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" x 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

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

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

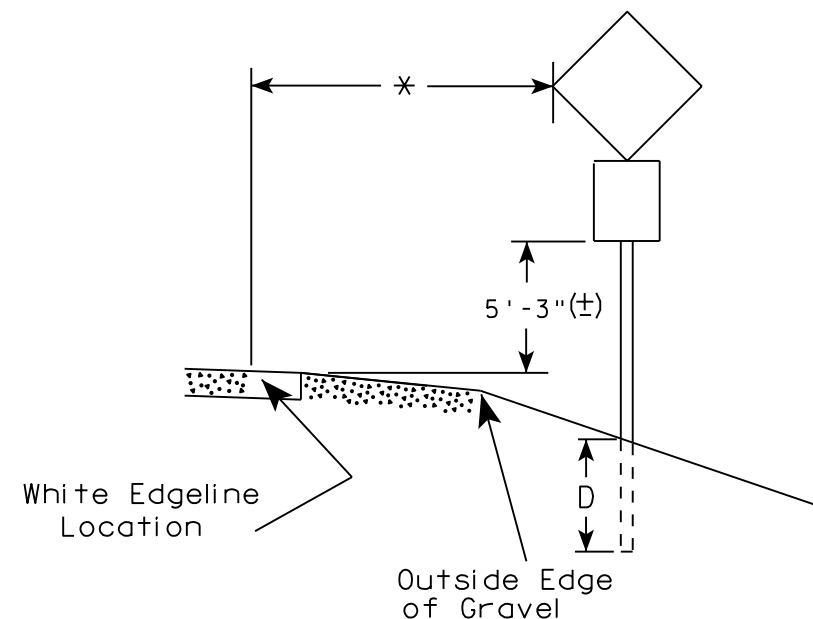
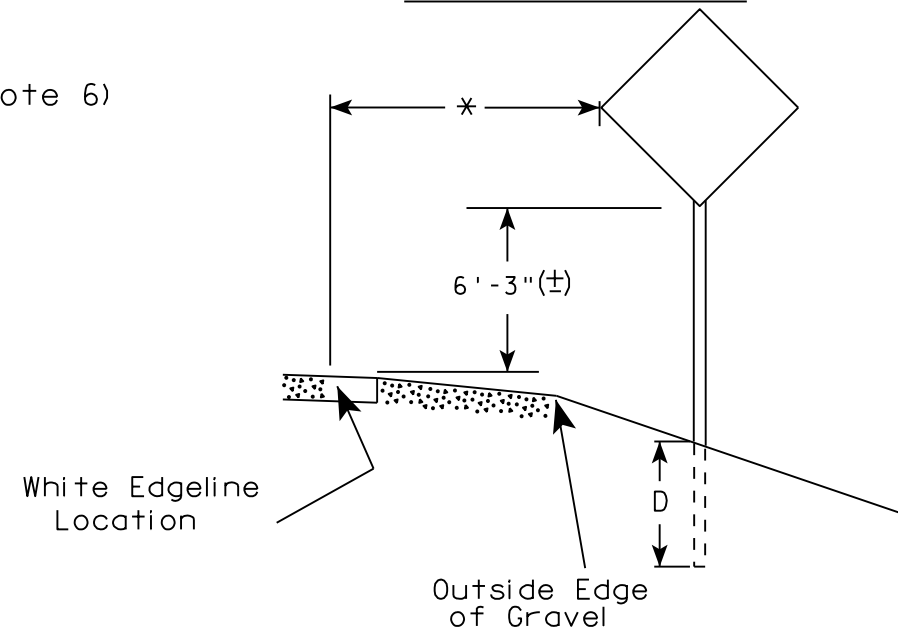
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



✱✱ 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.

RURAL AREA (See Note 2)



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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

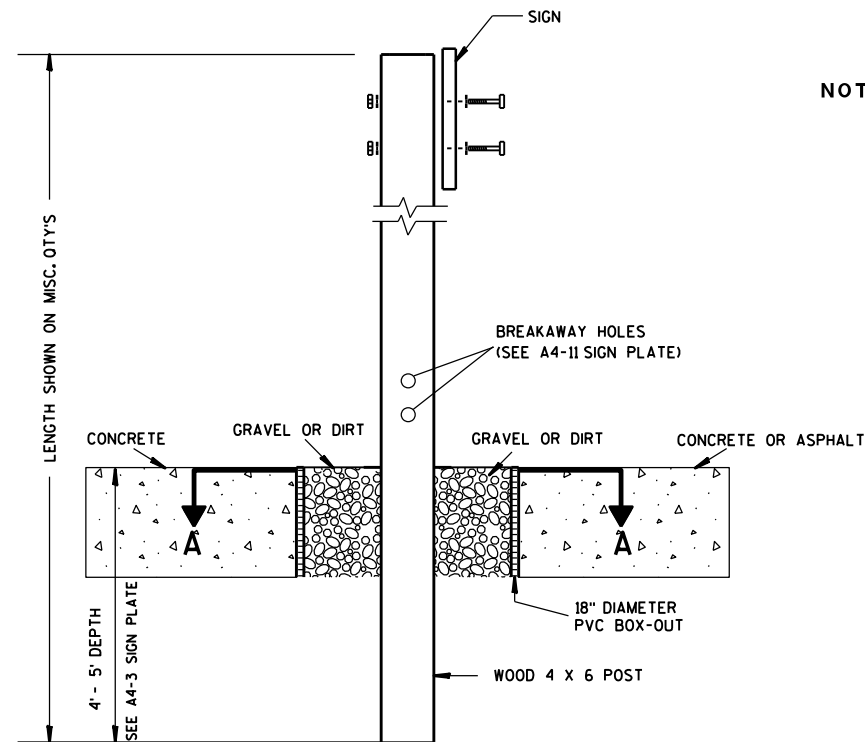
1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

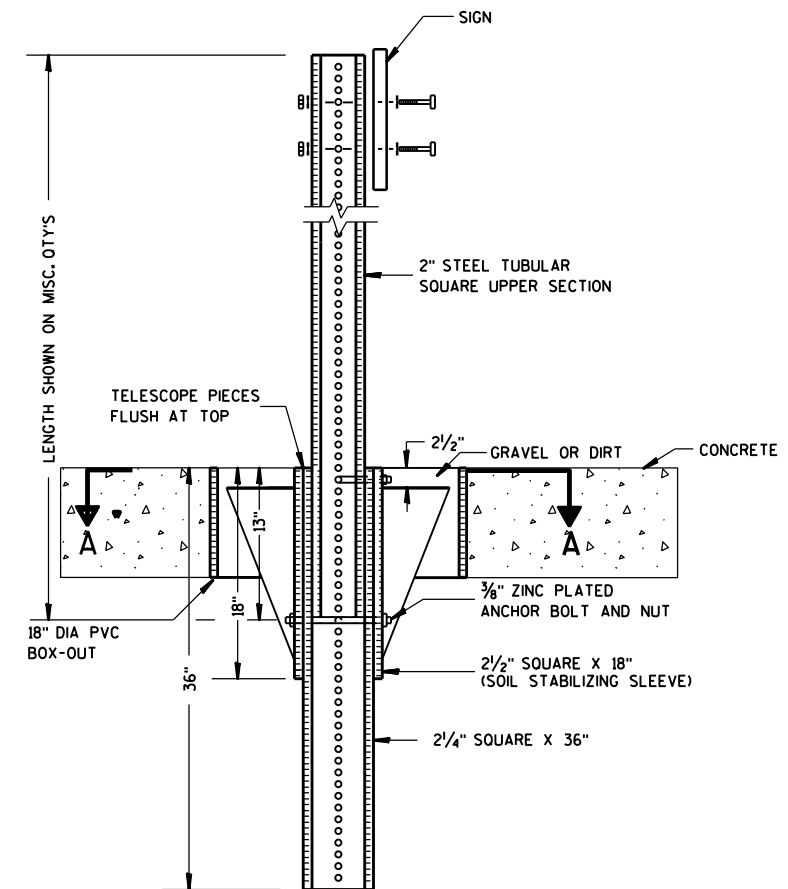
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

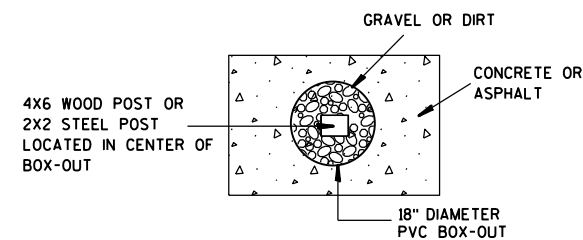
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

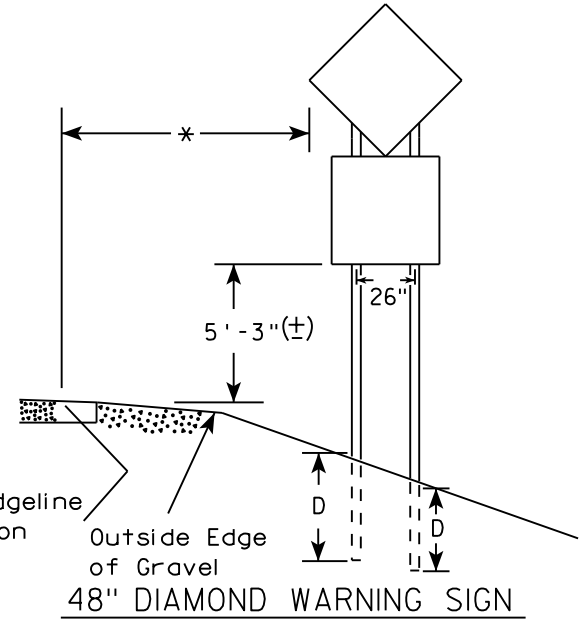
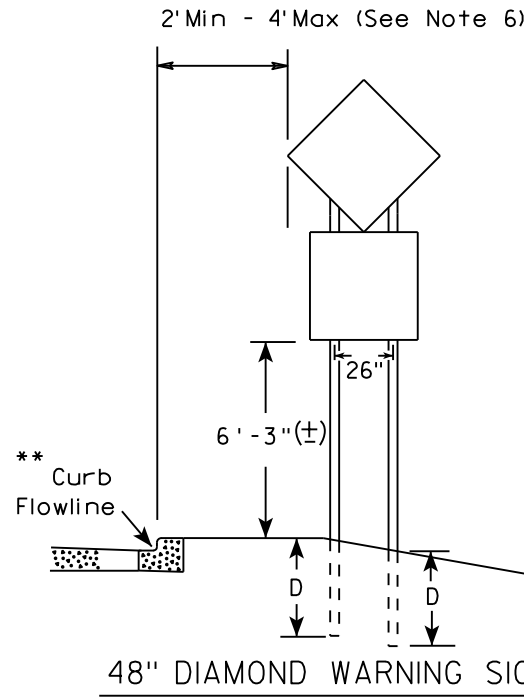
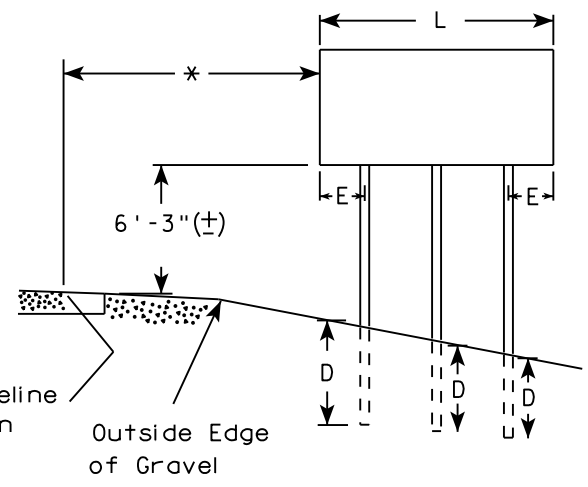
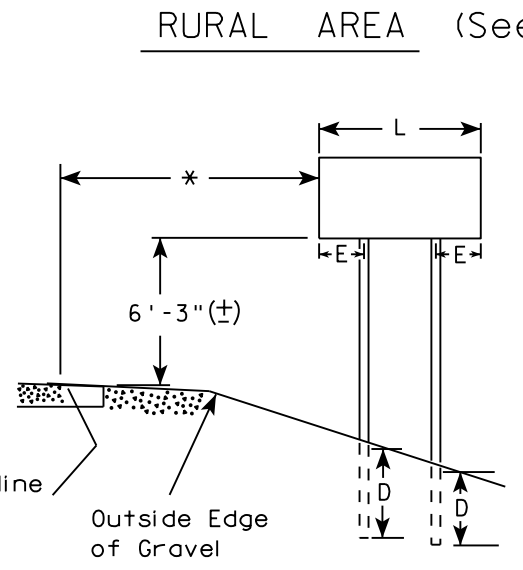
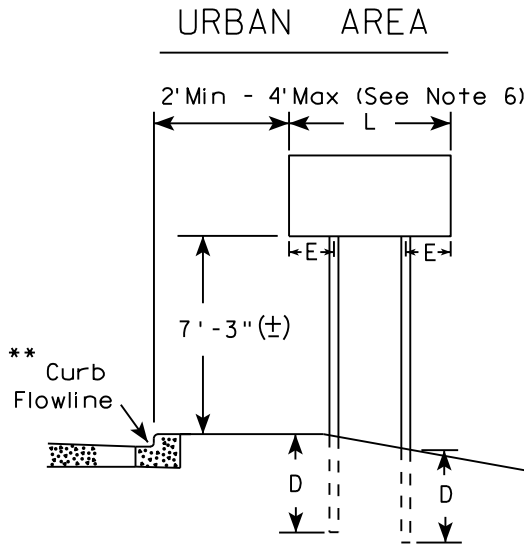
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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

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

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

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"

POST EMBEDMENT DEPTH

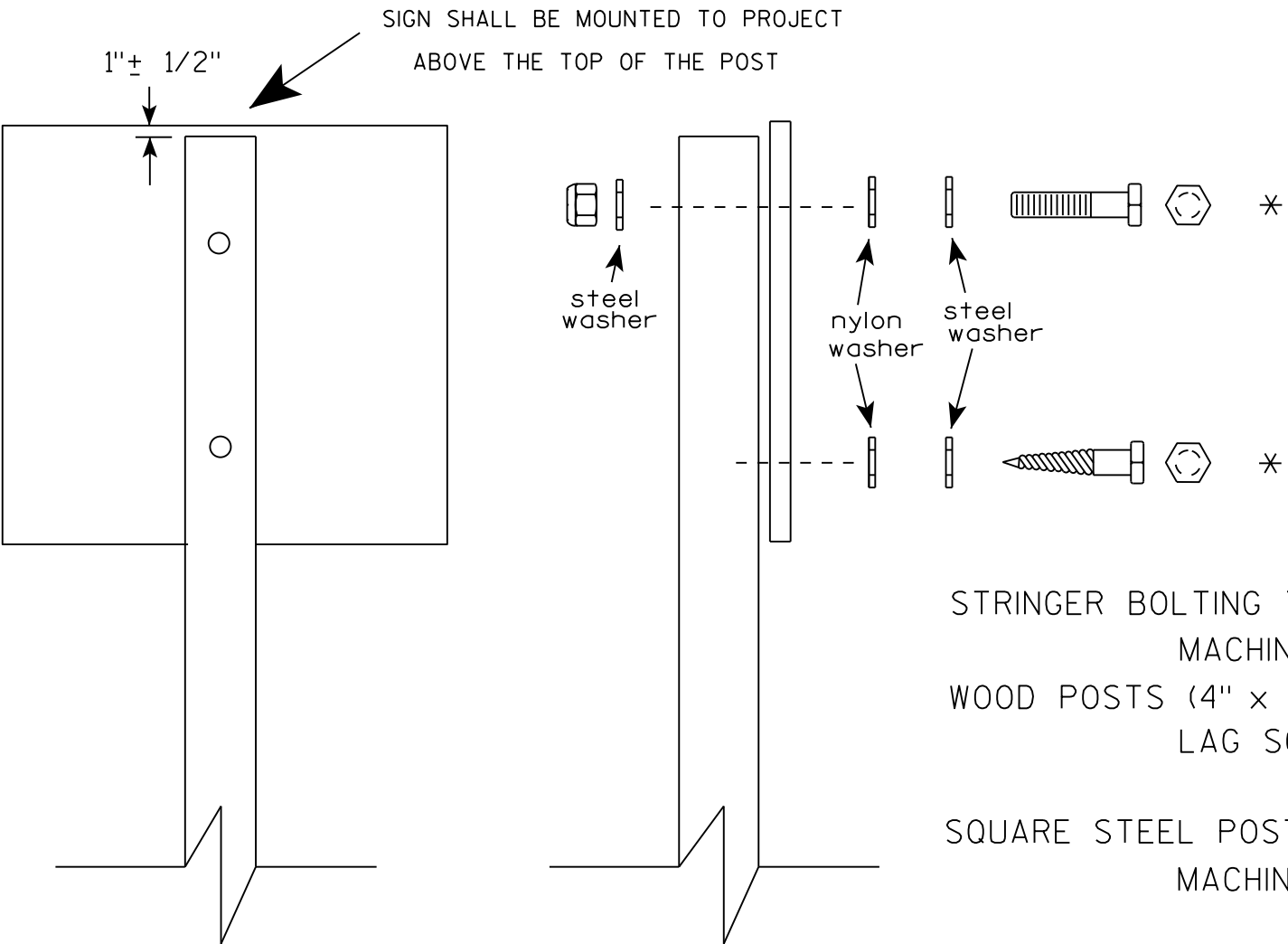
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



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

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
 - 3/8" X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 - 3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS
TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**

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

TECHNICAL DRAWING OF A VERTICAL SIGNPOST ASSEMBLY:

- SIGN**: Indicated at the top of the post.
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL**: Reference to material specifications.
- 2" STEEL TUBULAR SQUARE UPPER SECTION**: The main vertical support structure.
- ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES**: Specification for the upper section's perforations.
- $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT**: Component used for securing the base.
- 2 $\frac{1}{2}$ " GRAVEL OR DIRT**: Material filling the base area around the anchor bolts.
- $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT**: Component used for securing the base.
- 2 $\frac{1}{2}$ " SQUARE X 18" (SOIL STABILIZING SLEEVE)**: Sleeve component near the base.
- 2 $\frac{1}{4}$ " SQUARE X 36"**: The bottom-most square section of the post.
- TELESCOPE PIECES FLUSH AT TOP**: Note regarding the connection between sections.
- Dimensions**:
 - Total height: 36"
 - Upper section height: 18"
 - Lower section height: 13"
 - Base width: 18"
- 18" DIA SCHEDULE 40 PVC BOX-OUT**: The base container for the assembly.

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY.

Side View Dimensions:

- Overall height: LENGTH SHOWN ON MISC. QTY'S
- Distance from ground to top of signpost: 36"
- Distance from ground to center of anchor bolt: 18"
- Distance from ground to center of anchor bolt (alternative view): 12"

End View Details:

- SIGN**: Indicated at the top.
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL**: Reference to sign plate specifications.
- 2" STEEL TUBULAR SQUARE UPPER SECTION**: The upper part of the post.
- ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES**: Specification for the perforated section.
- $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT**: The bolt securing the post to the ground.
- 1"**: Dimension for the corner anchor bolt.
- $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT**: The bolt securing the post to the ground.
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)**: The sleeve around the post.
- 2 1/4" SQUARE X 36"**: The main post section.
- TELESCOPE PIECES FLUSH AT TOP**: Note on the top connection.

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT

DIRECTION
OF TRAFFIC

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 Matthaeus R. Rauch

for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

PROJECT NO:

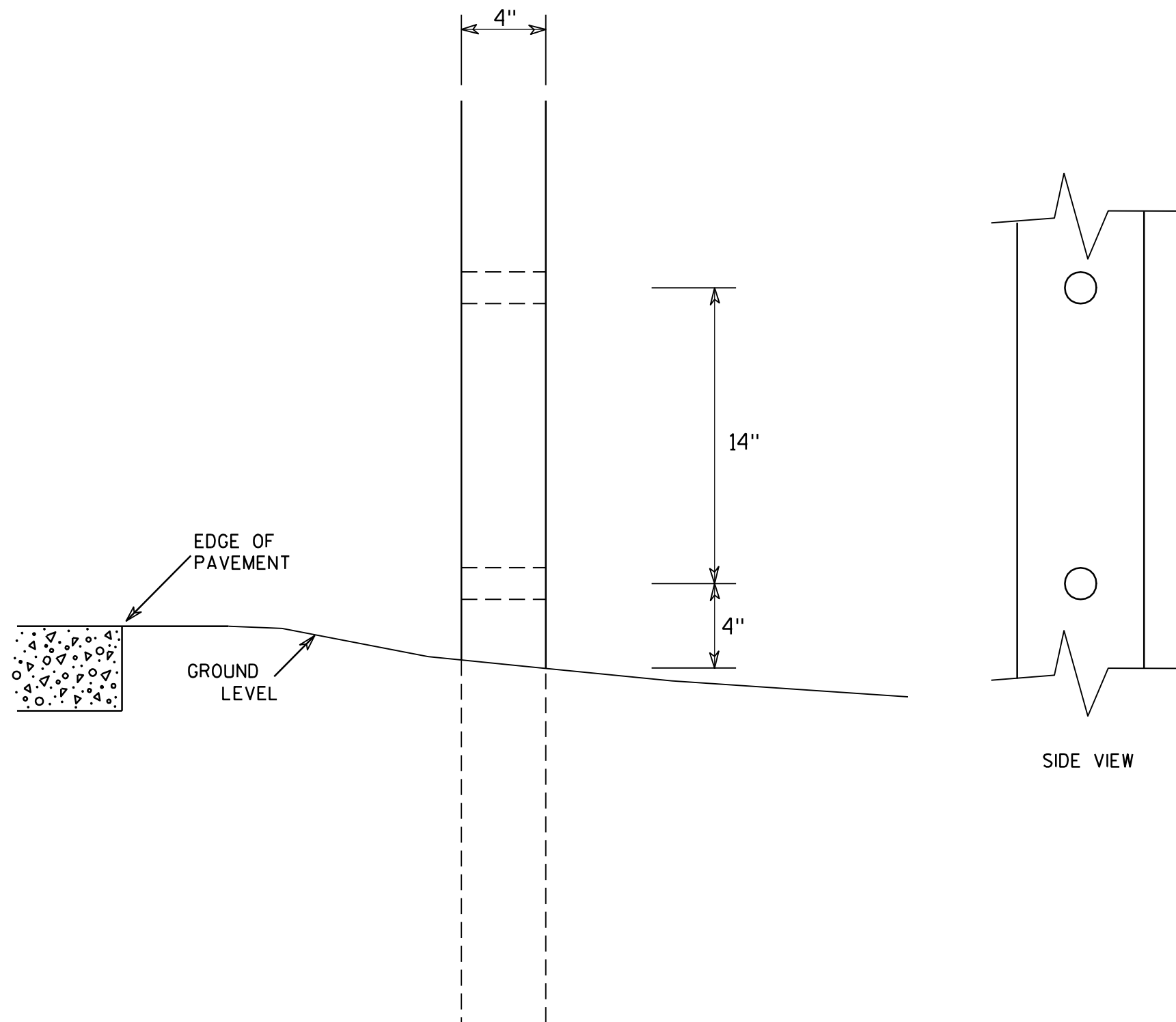
HWY:

COUNTY:

SHEET NO:

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7



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

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:

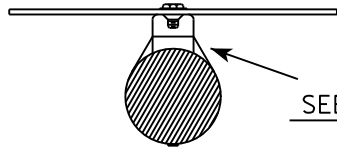
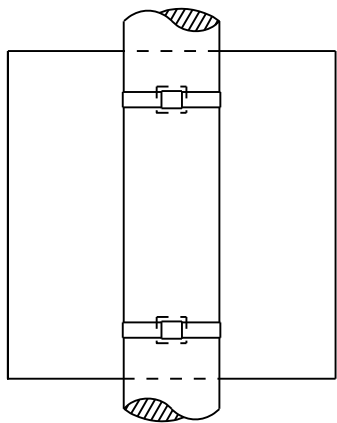
COUNTY:

SHEET NO:

E

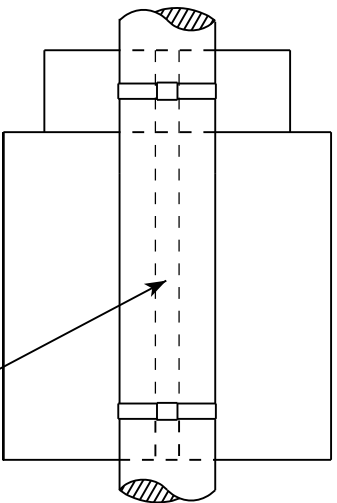
BANDING

SINGLE SIGN

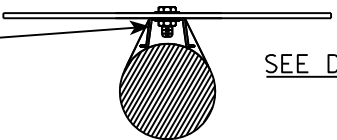


SEE DETAIL A

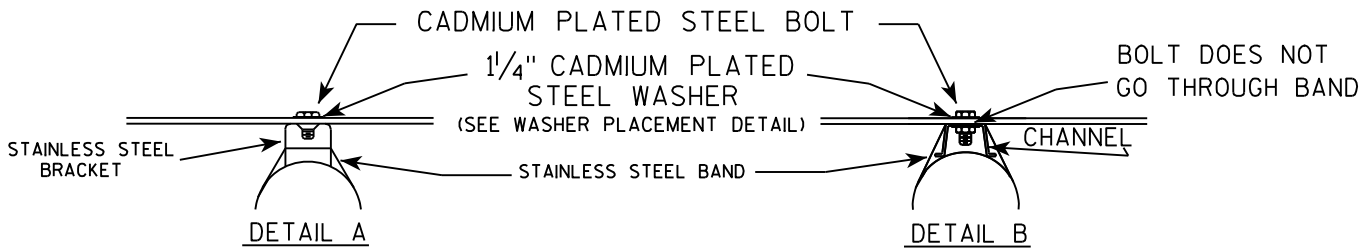
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



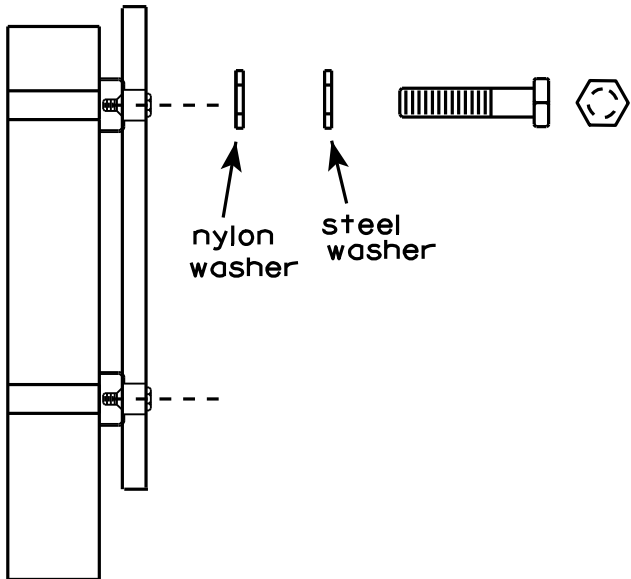
SEE DETAIL B



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 $\frac{3}{4}$ " in width and 0.025" thickness.

WASHER PLACEMENT



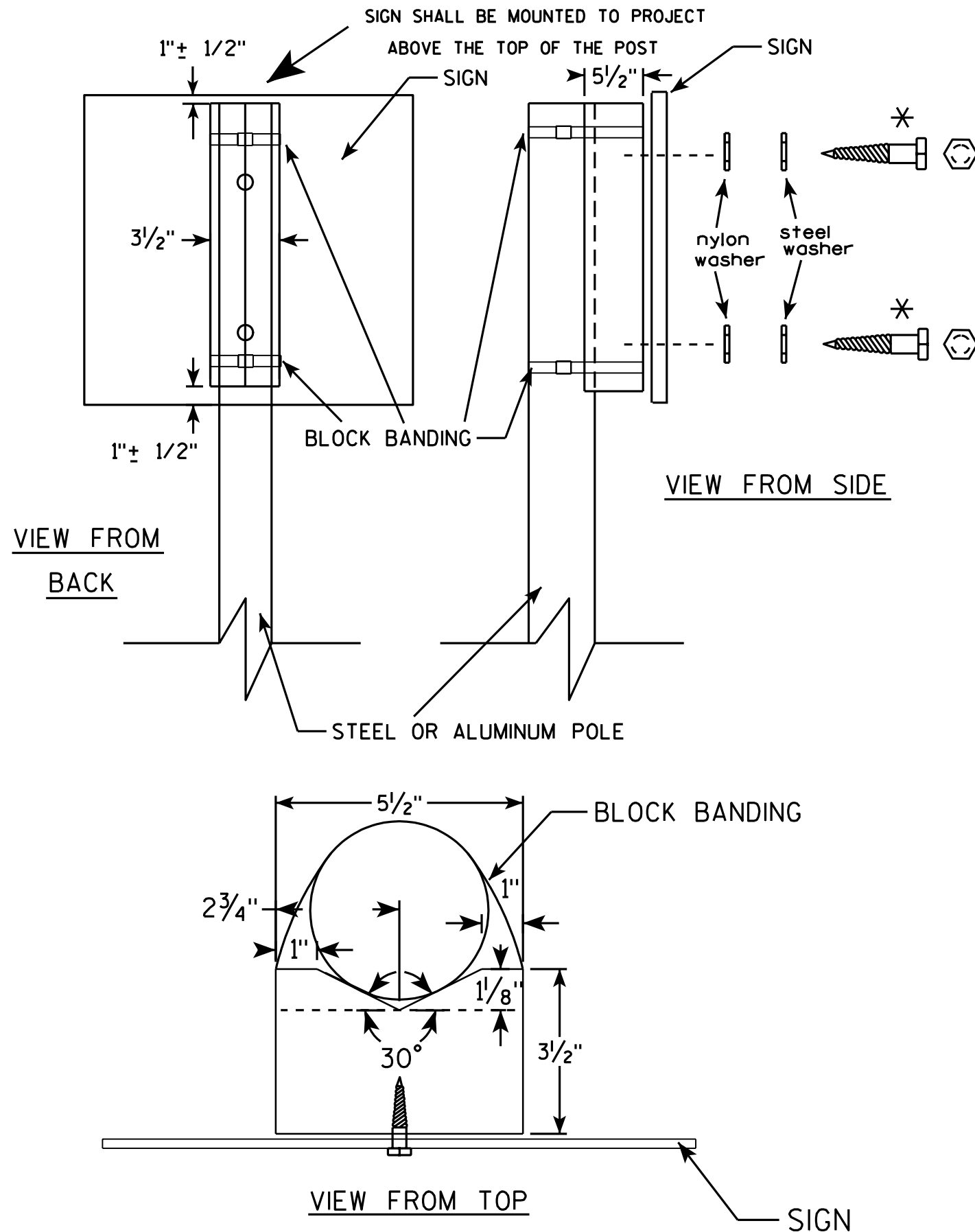
WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3



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, 3/4" 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 NORMALLY 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, or
 - b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
 - c. 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 1 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

* LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

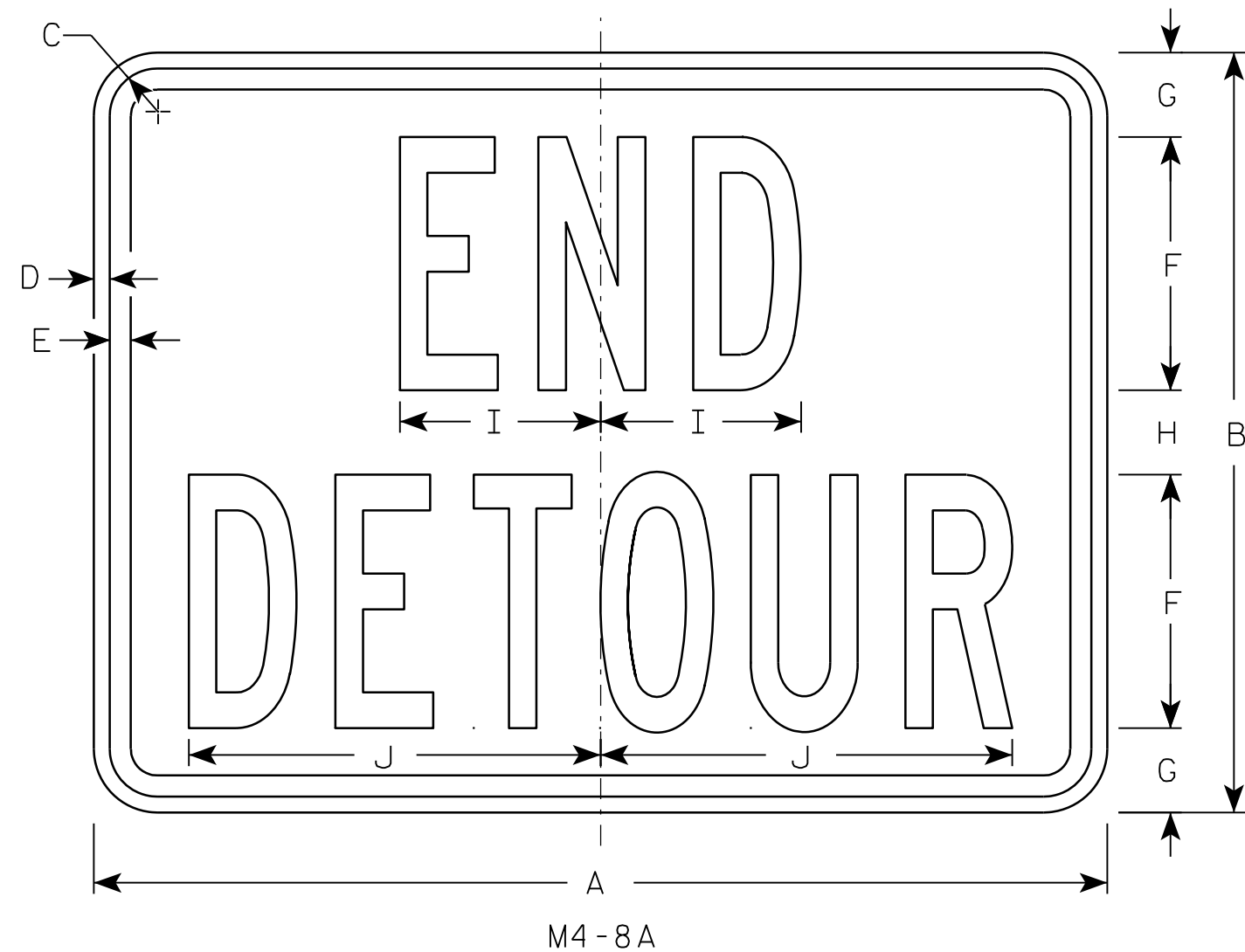
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO:

E

7



NOTES

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

7

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																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

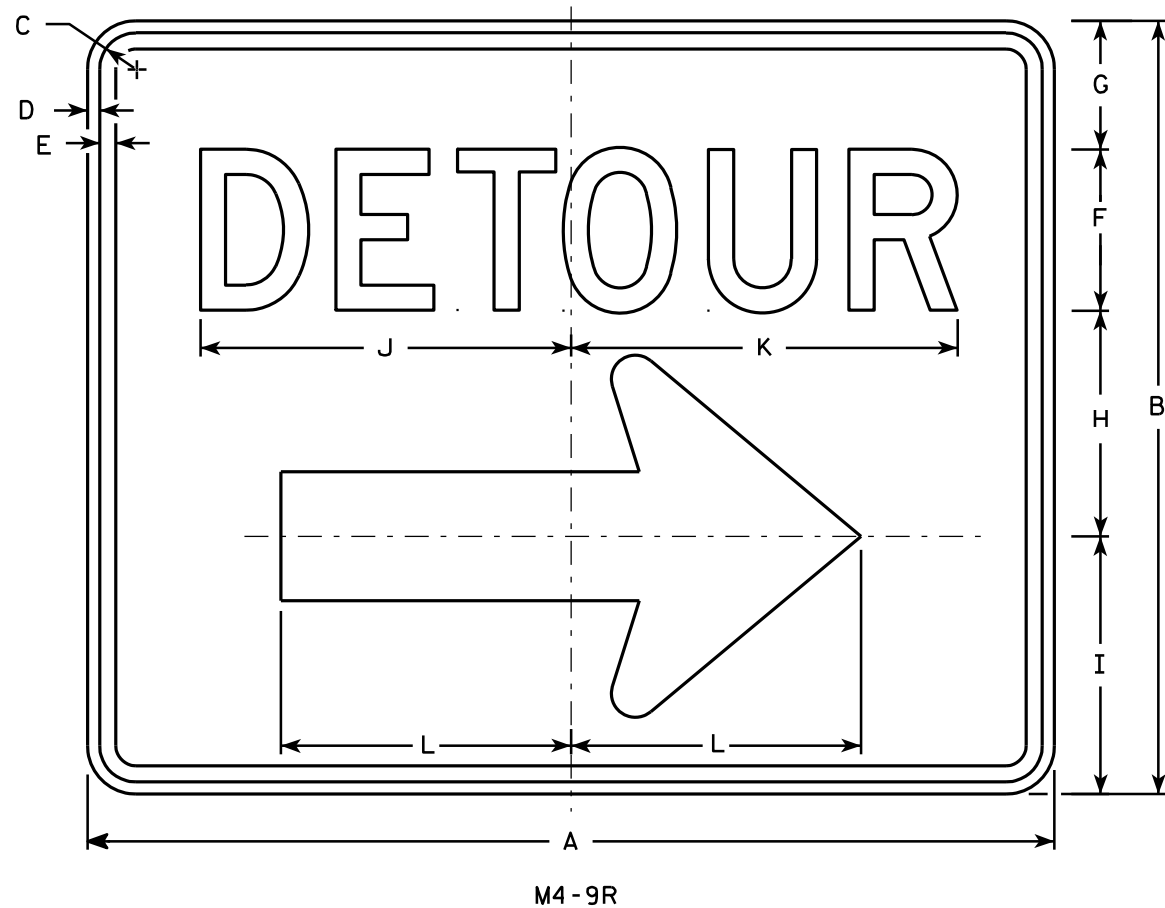
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M4-8A

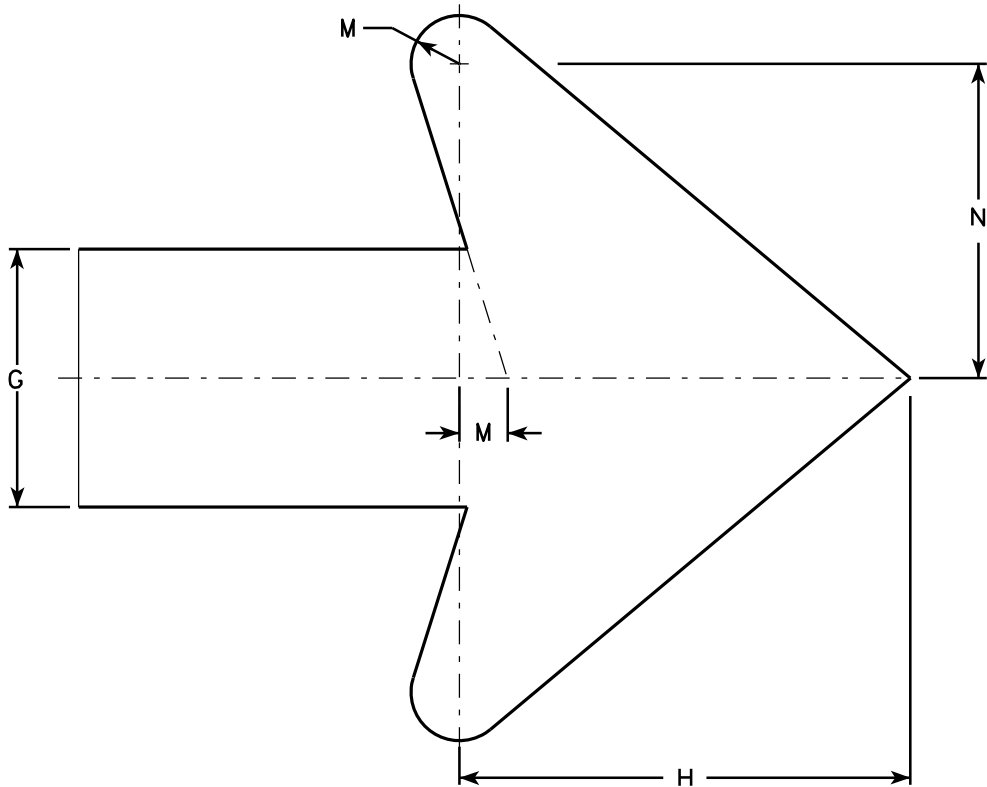
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2



- NOTES**
- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 - 2. Color:
Background - Orange
Message - Black
 - 3. Message Series - D
 - 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 - 5. M4-9L is the same as M4-9R except the arrow is reversed.

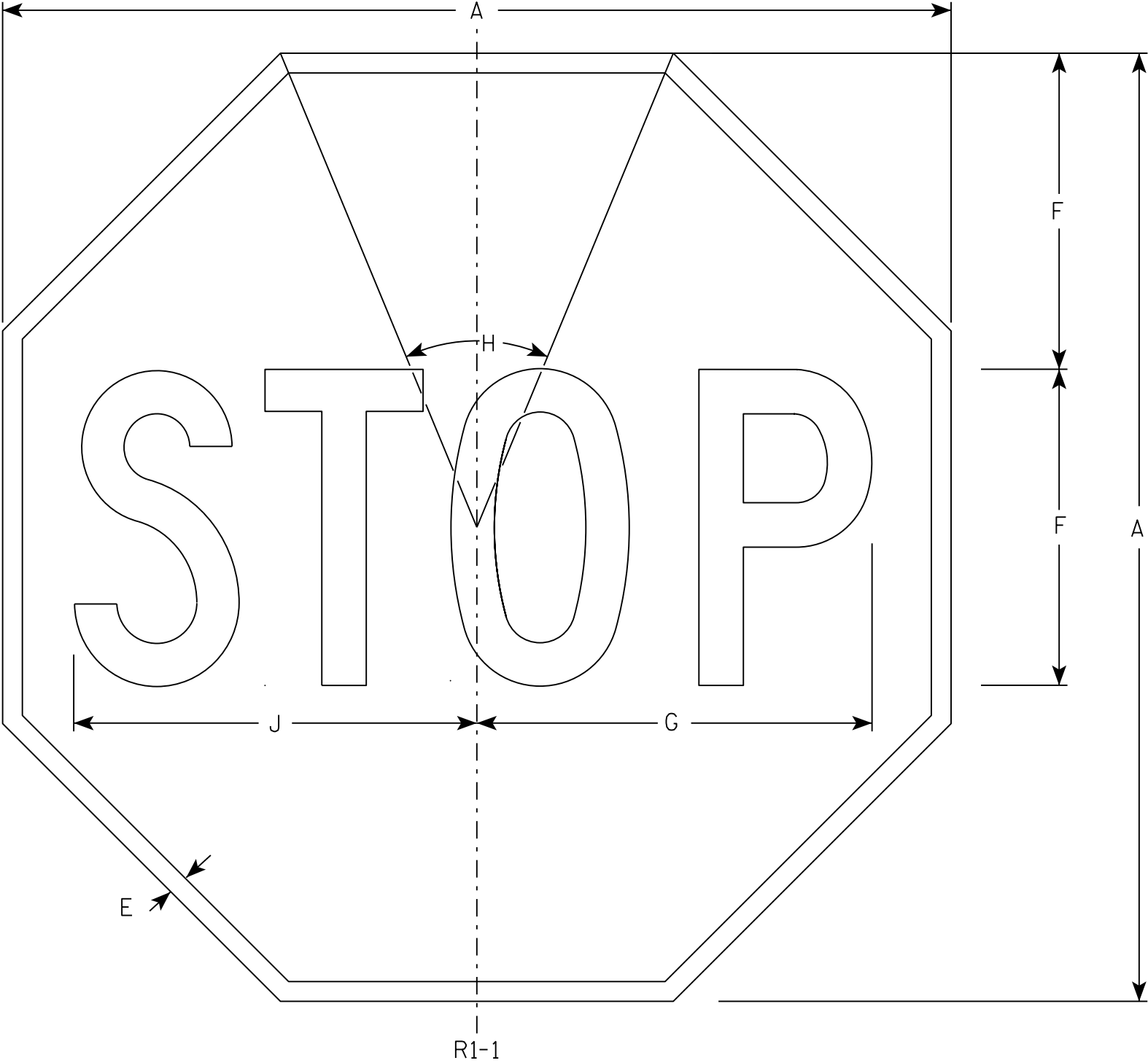


Arrow Detail

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																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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NOTES

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

7

R1-1

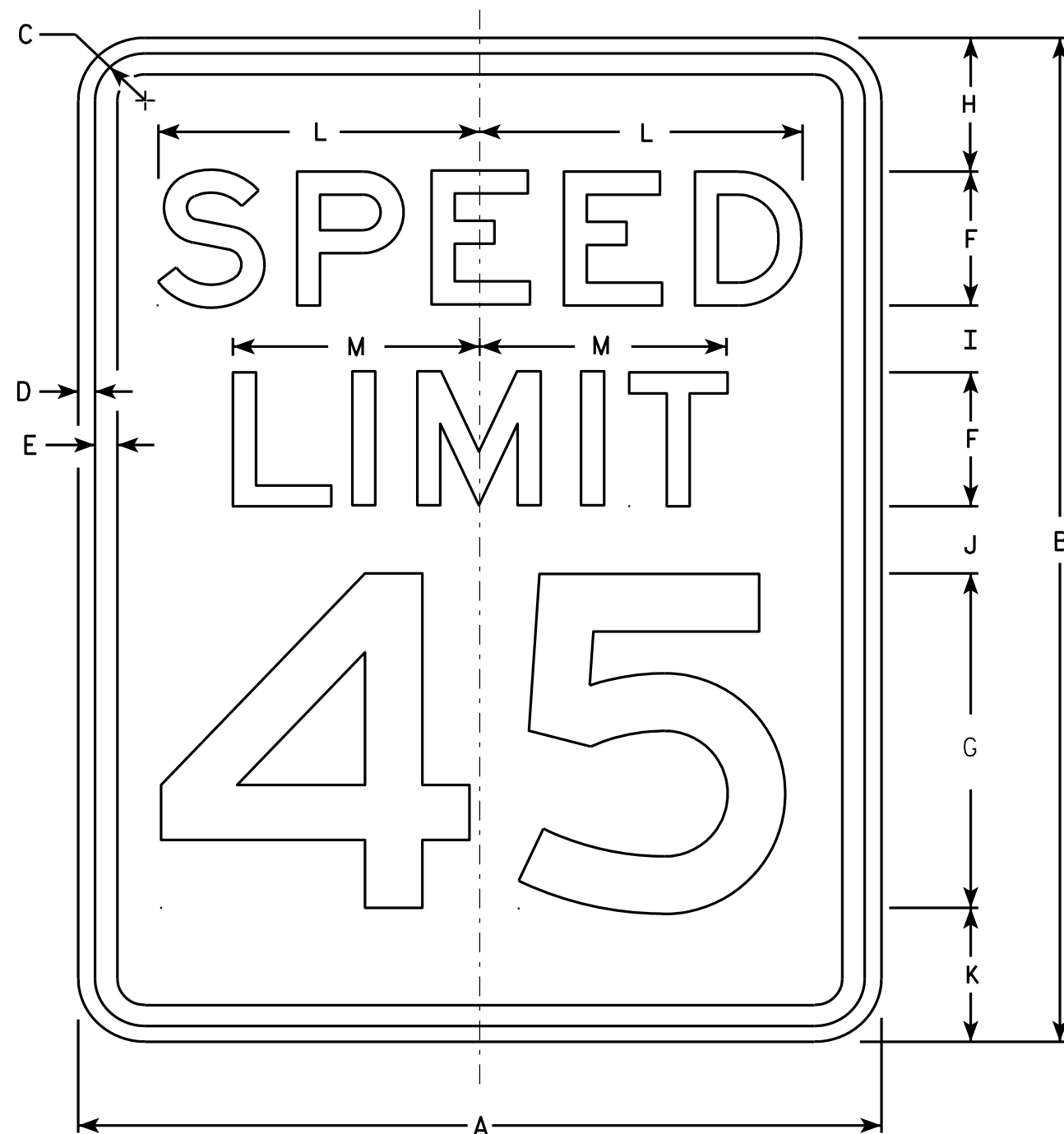
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

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	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

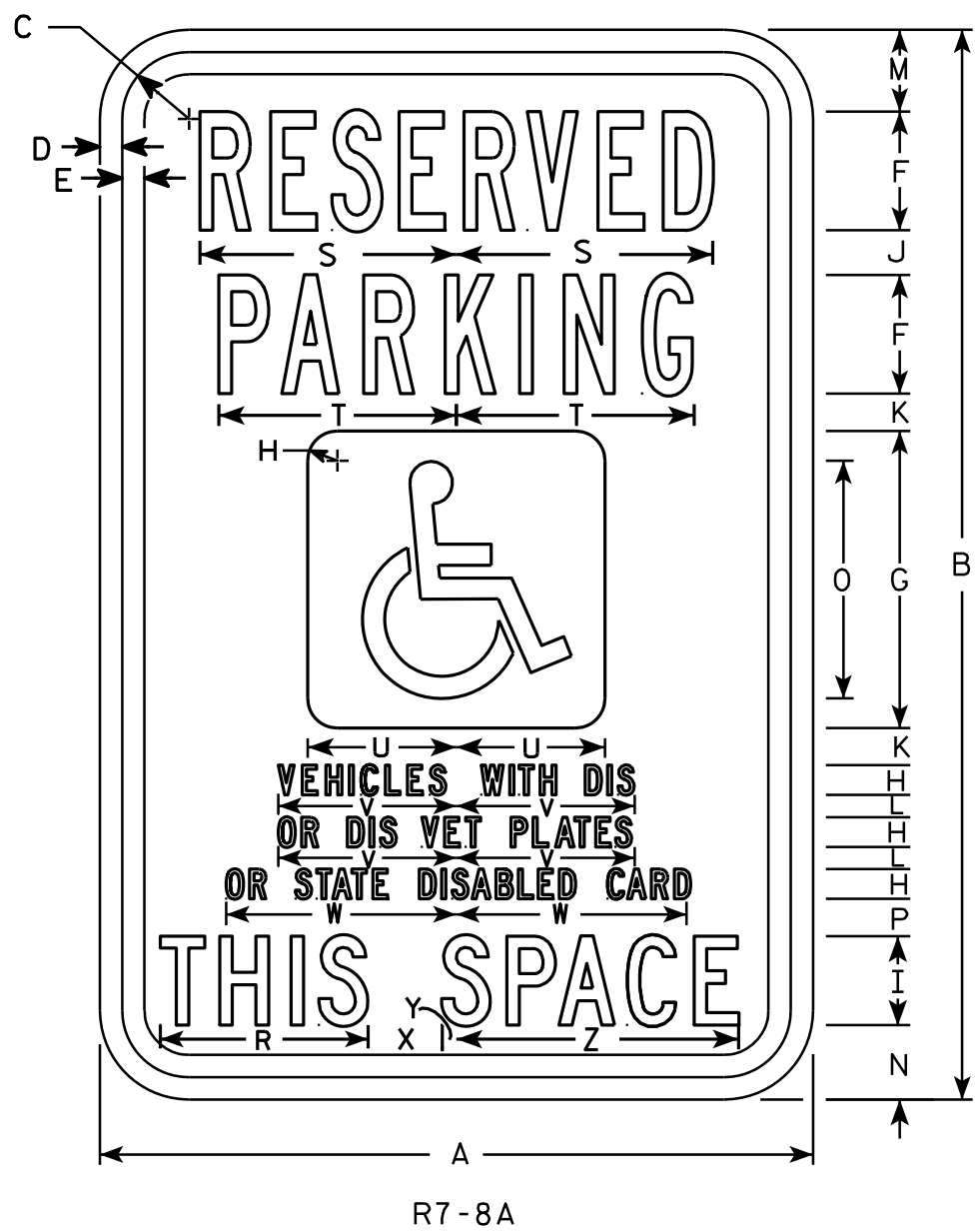
STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Sign is white Type H Reflective; paraplegic background is blue.
 - Message - Legend and border are green; paraplegic symbol is white
- 3. Message Series - Lines 1 & 2 are Series B
Lines 3, 4, 5 & 6 are Series C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

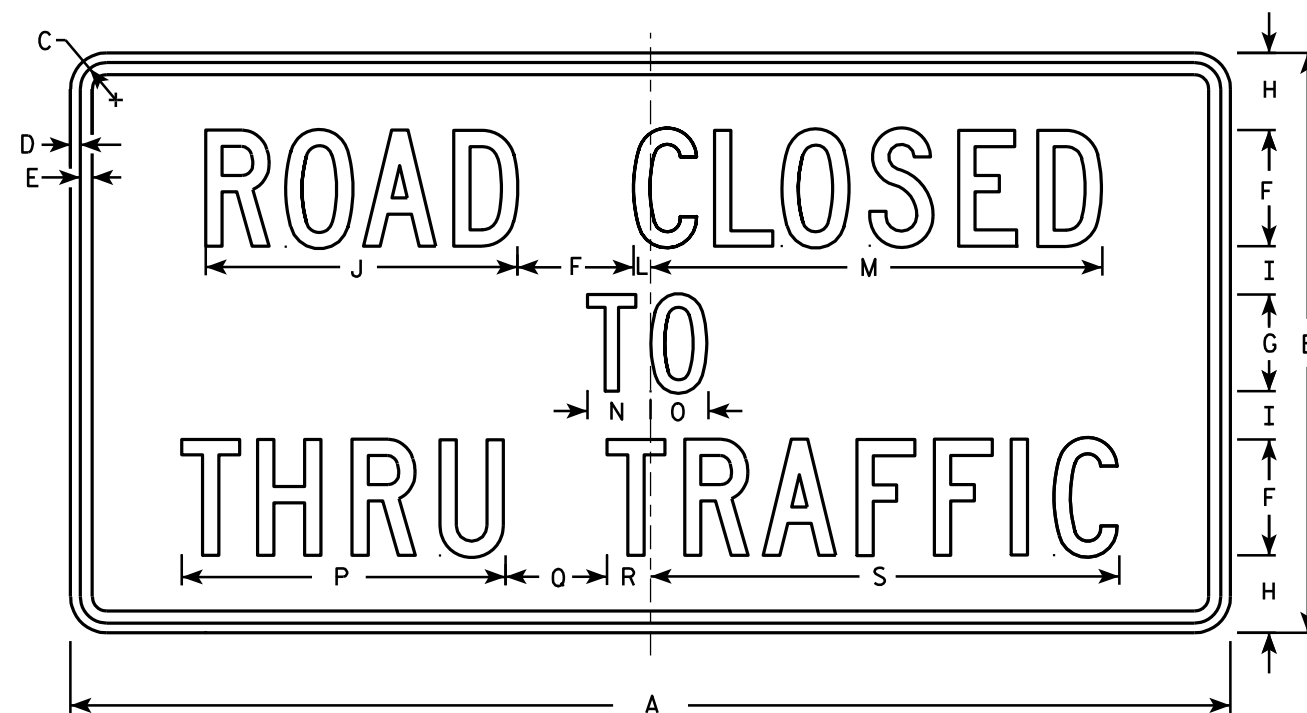
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	18	1 1/8	3/8	3/8	2	5	1/2	1 1/2	3/4	5/8	3/8	1 3/8	1 1/4	4	5/8		3 1/2	4 3/8	4	2 1/2	3	3 7/8	1 1/4	1/4	4 3/4	1.5
2M	18	24	1 1/8	3/8	1/2	3	6	3/4	2	7/8	5/8	1/2	1 7/8	2	5	3/4		4 5/8	6 1/2	5 3/8	3	4 1/2	5 7/8	1 1/2	1/4	6 3/8	3.0
3	18	24	1 1/8	3/8	1/2	3	6	3/4	2	7/8	5/8	1/2	1 7/8	2	5	3/4		4 5/8	6 1/2	5 3/8	3	4 1/2	5 7/8	1 1/2	1/4	6 3/8	3.0
4																											
5																											

STANDARD SIGN
R7-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/25/2011 PLATE NO. R7-8A.6



R11-4

NOTES

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

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	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
2M	60	30	1 3⁄8	½	5⁄8	6	5	4	2 ½	16 ⅛		7⁄8	23 3⁄8	3 ¼	3	16 ¾	5 ¼	2 ¼	24 ¼								12.5
3																											
4																											
5																											

STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

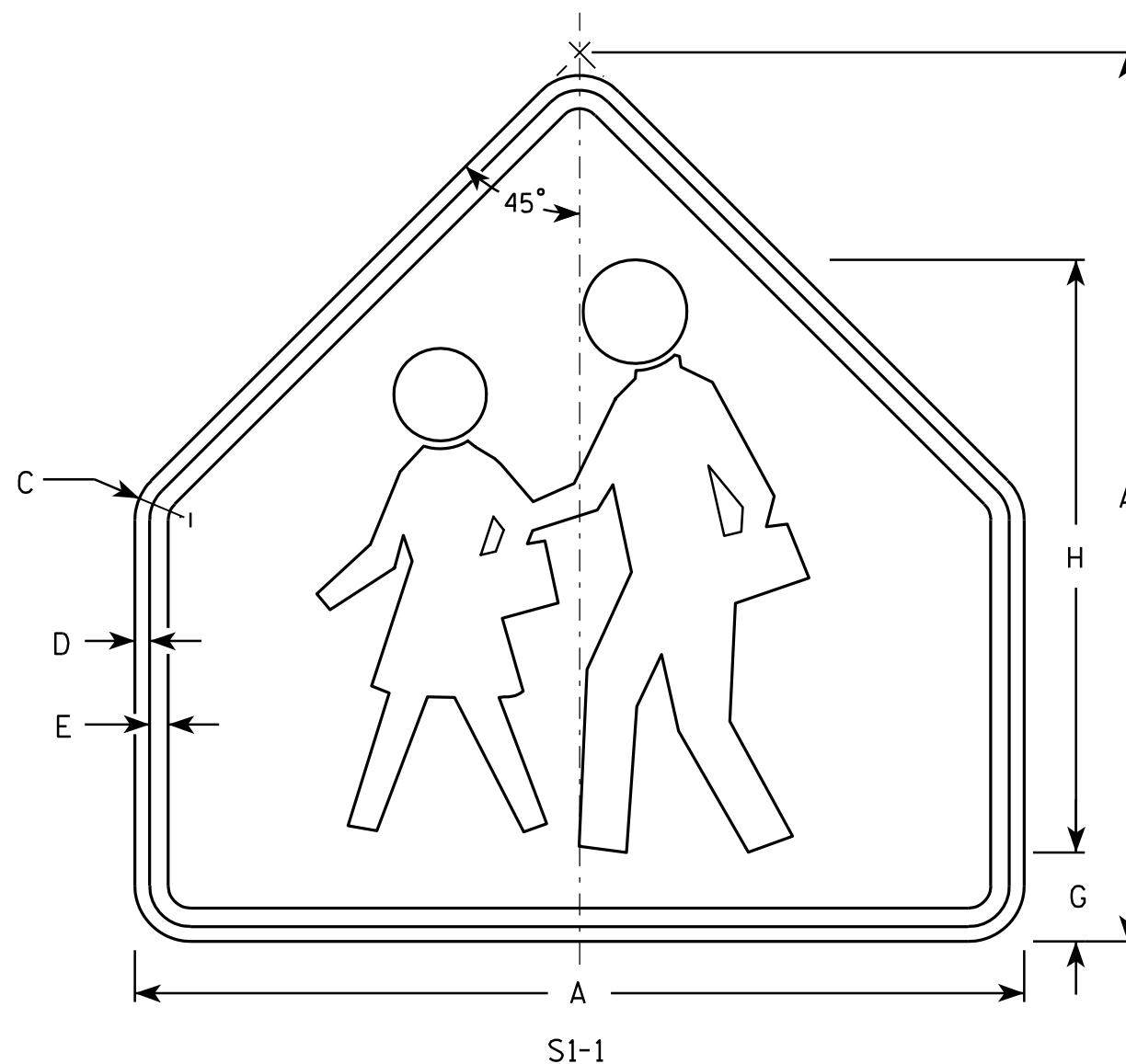
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

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

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	30		1 3/8	1/2	5/8		3	20																			4.69
2	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
3	36		1 5/8	5/8	3/4		3 1/2	24																			6.75
4	48		2 1/4	3/4	1		4 3/4	32																			12
5																											

STANDARD SIGN S1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
for State Traffic Engineer
DATE 6/30/05 PLATE NO. S1-1.8

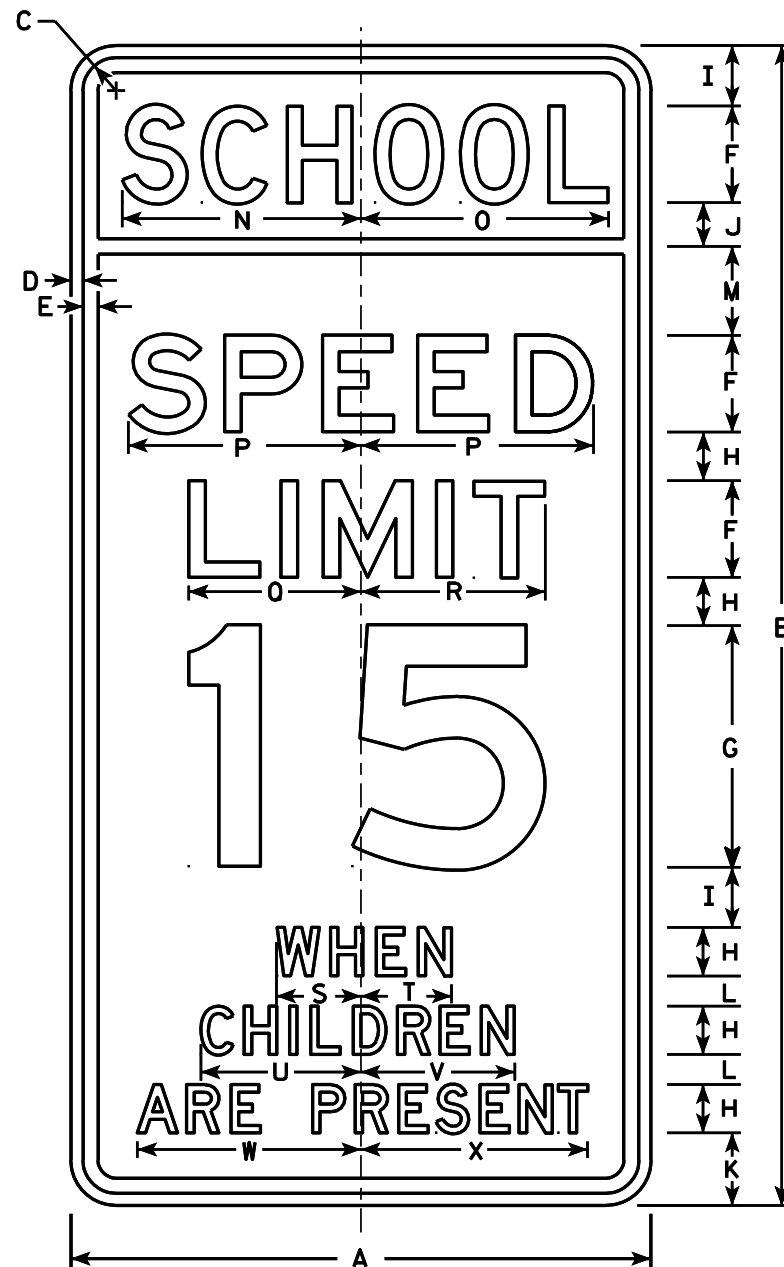
PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 1200 mm
3	900 mm X 1800 mm
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24	48	1 ⅜	½	⅝	4	10	2	2 ½	1 ¾	3	1 ¼	3 ¾	9 ⅞	10 ¼	9 ⅝	7 ⅛	7 ⅝	3 ½	3 ⅜	6 ⅝	6 ⅜	9 ¼	9 ⅜			8.00	0.72
3	36	72	2 ¼	¾	1	6	15	3	3 ¾	2 ¾	4 ½	1 ⅞	5 ½	15	15 ¼	14 ½	11 ¼	11 ½	5 ½	5 ¾	10	9 ¾	14	14 ⅛			18.00	1.62
4																												
5																												

PROJECT NO:			HWY:			COUNTY:						SHEET NO:			E
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S4-51

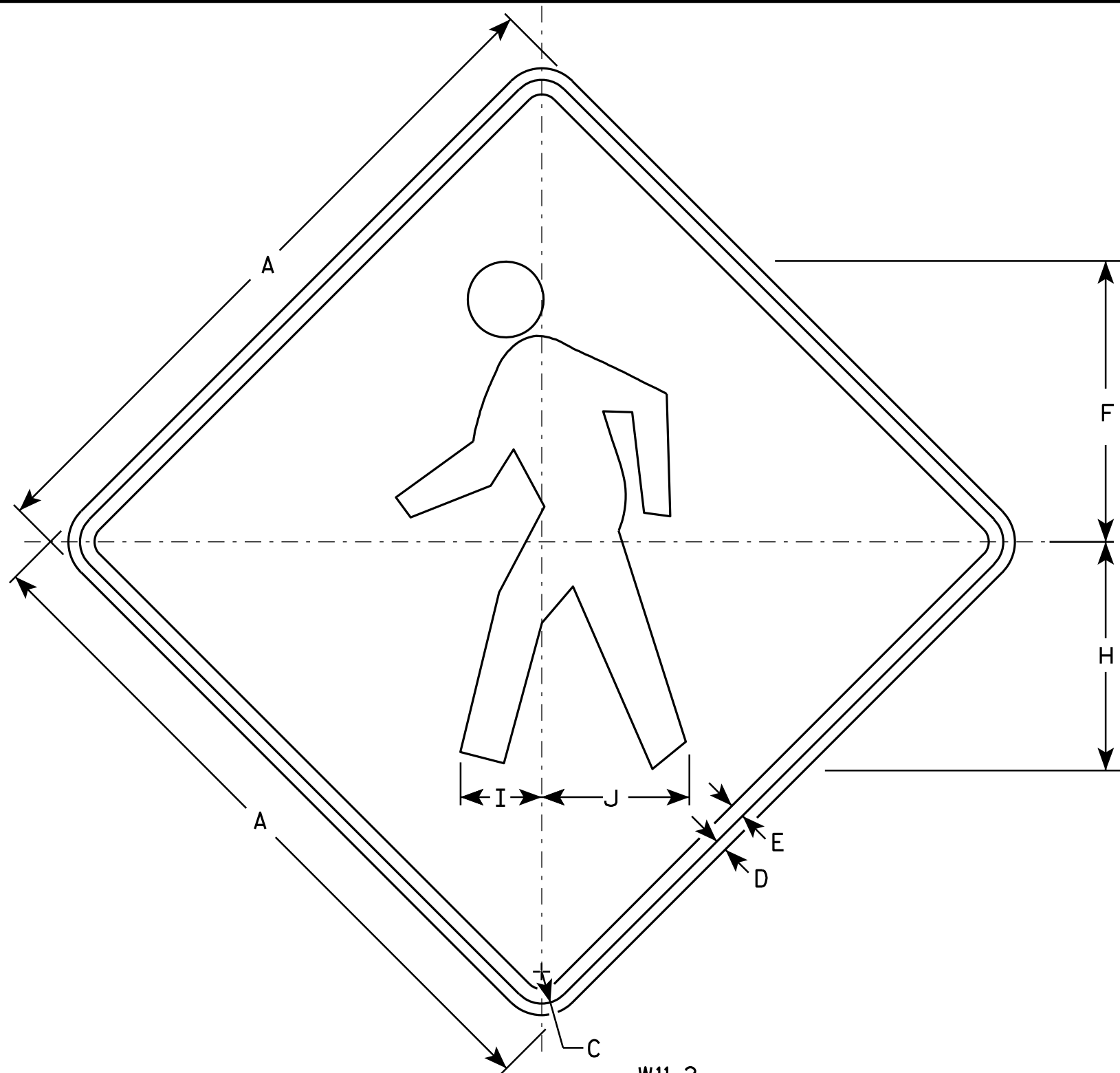
NOTES

1. Sign is Type II - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition. (See note 5).
2. Color:
Background - See note 5
Message - Black
3. Message Series - See note 6
4. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
5. Top panel (SCH00L) background - Yellow Green -Type F Reflective.
Lower panel background - White -Type H Reflective.
6. From top to bottom:
Lines 1, 5, 6 & 7 are series D
Lines 2, 3 & 4 are series E
7. Line 4 substitute appropriate numerals and
adjust spacing to achieve proper balance.

STANDARD SIGN
S4-51

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 4/26/10 PLATE NO. S4-51.9



W11-2

NOTES

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

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	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN W11-2

WISCONSIN DEPT OF TRANSPORTATION

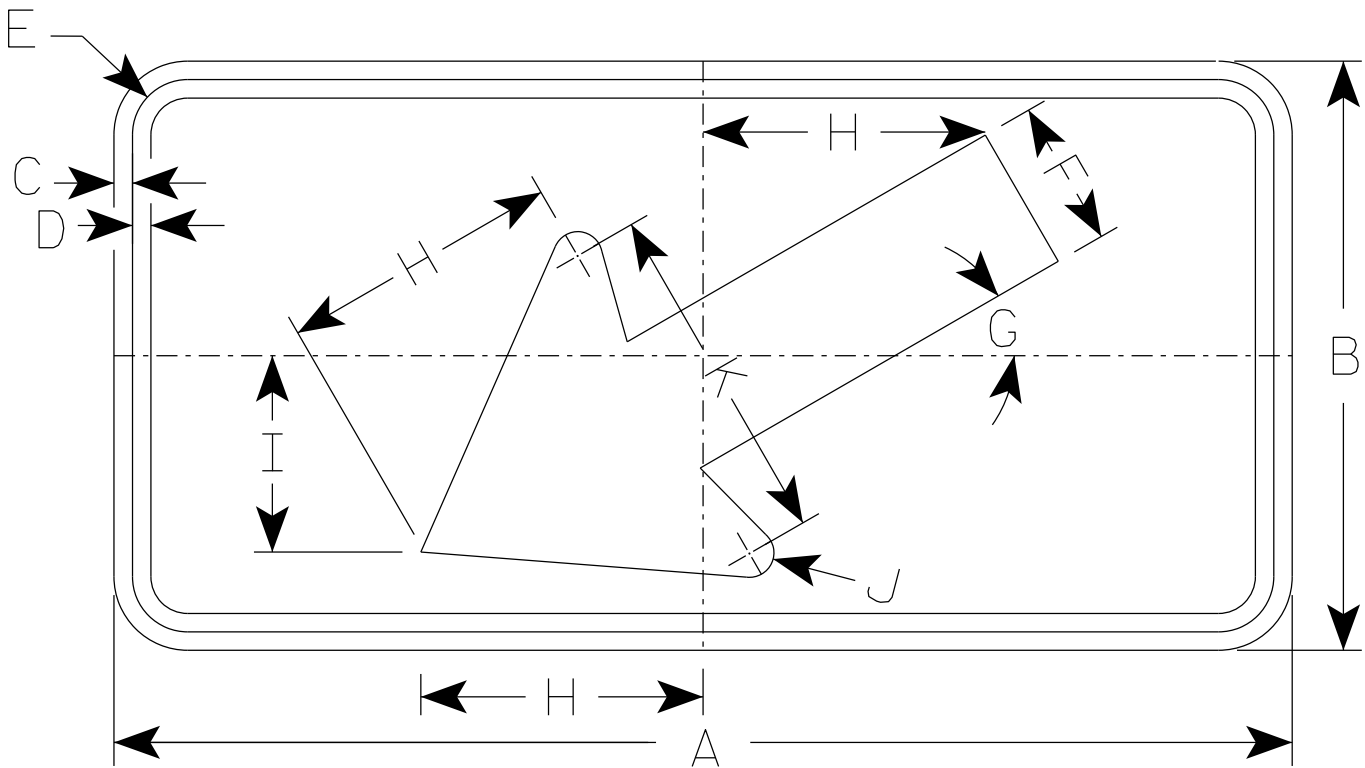
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO: HWY: COUNTY: SHEET NO: E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. W16-7R is the same as W16-L
except the arrow is reversed along
the vertical centerline.



W16-7L

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	24	12	3⁄8	3⁄8	1 1⁄8	3	30°	5 3⁄4	4	1⁄2	7																2.0
2M	30	18	3⁄8	1⁄2	1 1⁄8	4 1⁄2	30°	8 1⁄2	6	5⁄8	10 1⁄4																3.75
3	30	18	3⁄8	1⁄2	1 1⁄8	4 1⁄2	30°	8 1⁄2	6	5⁄8	10 1⁄4																3.75
4	48	24	1⁄2	5⁄8	1 3⁄8	6	30°	11 1⁄2	8	1	14																8.0
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN

W16-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

For State Traffic Engineer

DATE 7/11/18

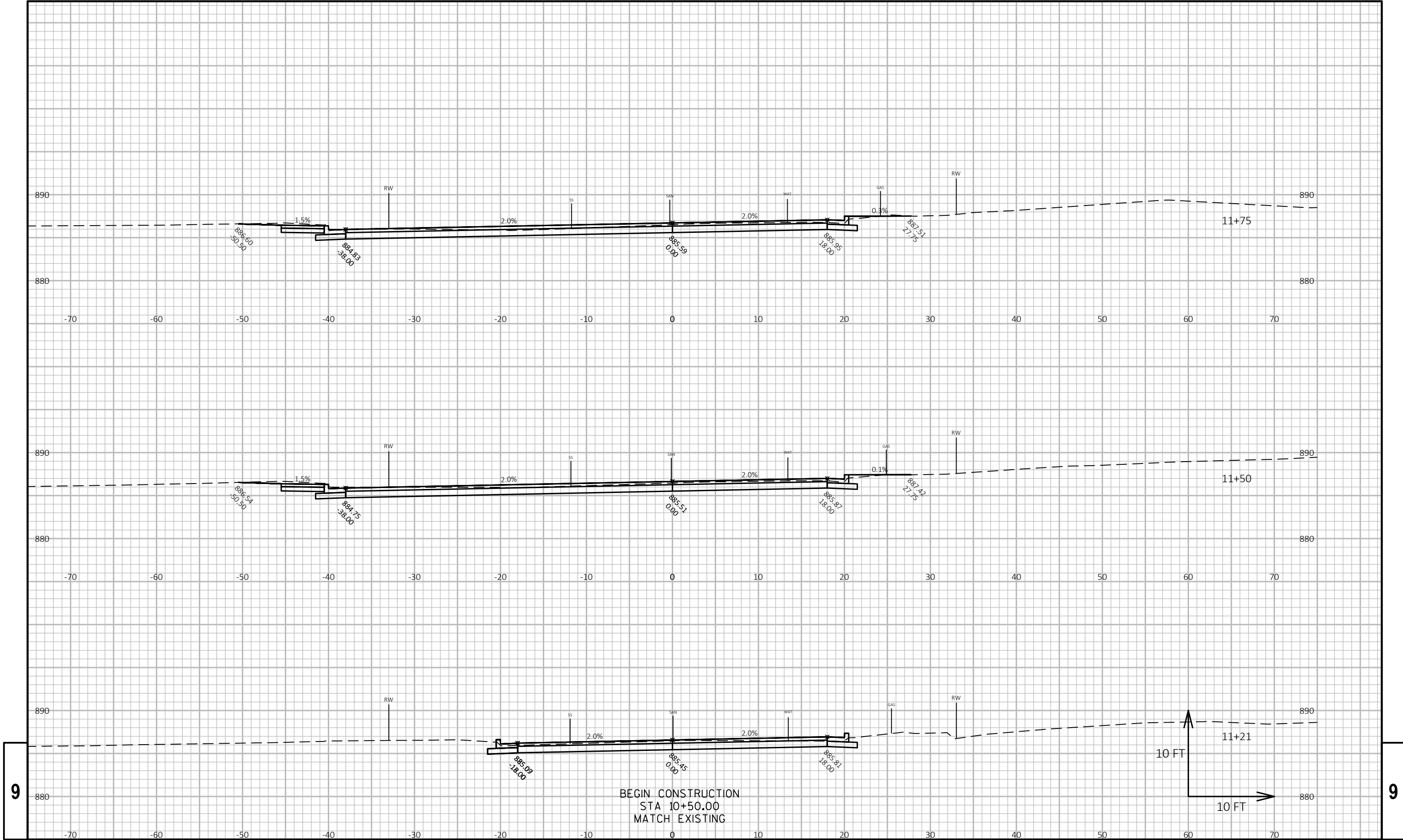
PLATE NO. W16-7.6

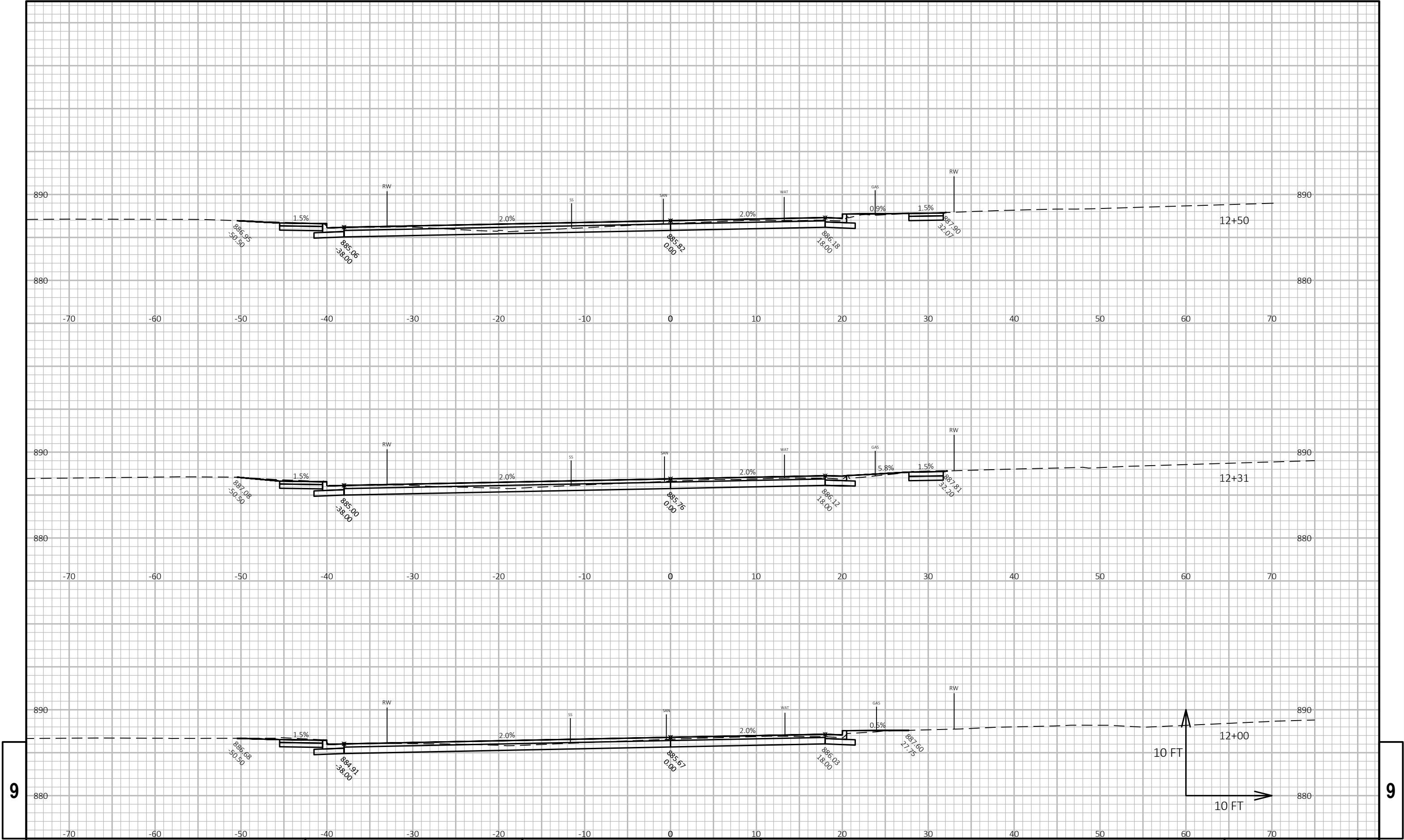
PROJECT ID 7824-00-11
DIVISION 1
CATEGORY 0010

Station	Real Station	Distance	Area (SF)		Volume (CY) (Raw)		Volume (CY) (Adjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	Fill	Cut Factor 1.00	Fill Factor 1.30	Cut	Fill	
10+50	1050.00	0.00	0.00	0.00	0	0			0	0	0
10+75	1075.00	25.00	96.99	0.00	45	0	45	0	45	0	45
11+00	1100.00	25.00	91.34	0.00	87	0	87	0	132	0	132
11+25	1125.00	25.00	39.46	6.43	61	3	61	4	193	4	189
11+50	1150.00	25.00	67.65	1.19	50	4	50	5	242	8	234
11+75	1175.00	25.00	63.61	1.07	61	1	61	1	303	10	293
12+00	1200.00	25.00	62.53	1.48	58	1	58	2	361	11	350
12+25	1225.00	25.00	63.97	0.52	59	1	59	1	420	13	407
12+50	1250.00	25.00	54.45	1.43	55	1	55	1	475	14	461
12+75	1275.00	25.00	53.83	1.67	50	1	50	2	525	16	509
13+00	1300.00	25.00	55.97	1.45	51	1	51	2	576	17	558
13+25	1325.00	25.00	56.88	1.03	52	1	52	1	628	19	609
13+50	1350.00	25.00	58.46	0.53	53	1	53	1	681	20	662
13+75	1375.00	25.00	63.56	1.17	56	1	56	1	738	21	717
14+00	1400.00	25.00	66.31	1.59	60	1	60	2	798	23	775
14+25	1425.00	25.00	70.38	1.15	63	1	63	2	861	24	837
14+50	1450.00	25.00	74.44	0.90	67	1	67	1	928	25	903
14+75	1475.00	25.00	77.63	1.04	70	1	70	1	999	27	972
15+00	1500.00	25.00	80.29	0.57	73	1	73	1	1,072	28	1,044
15+25	1525.00	25.00	46.70	0.79	59	1	59	1	1,131	28	1,102
15+50	1550.00	25.00	47.27	2.21	44	1	44	2	1,174	30	1,144
15+75	1575.00	25.00	27.42	0.16	35	1	35	1	1,209	32	1,177
16+00	1600.00	25.00	134.35	0.00	75	0	75	0	1,284	32	1,252
16+04.76	1604.76	4.76	133.25	0.00	24	0	24	0	1,307	32	1,275
COLUMN TOTALS							1,307	32			

PROJECT ID 7824-00-11
DIVISION 2
CATEGORY 0010

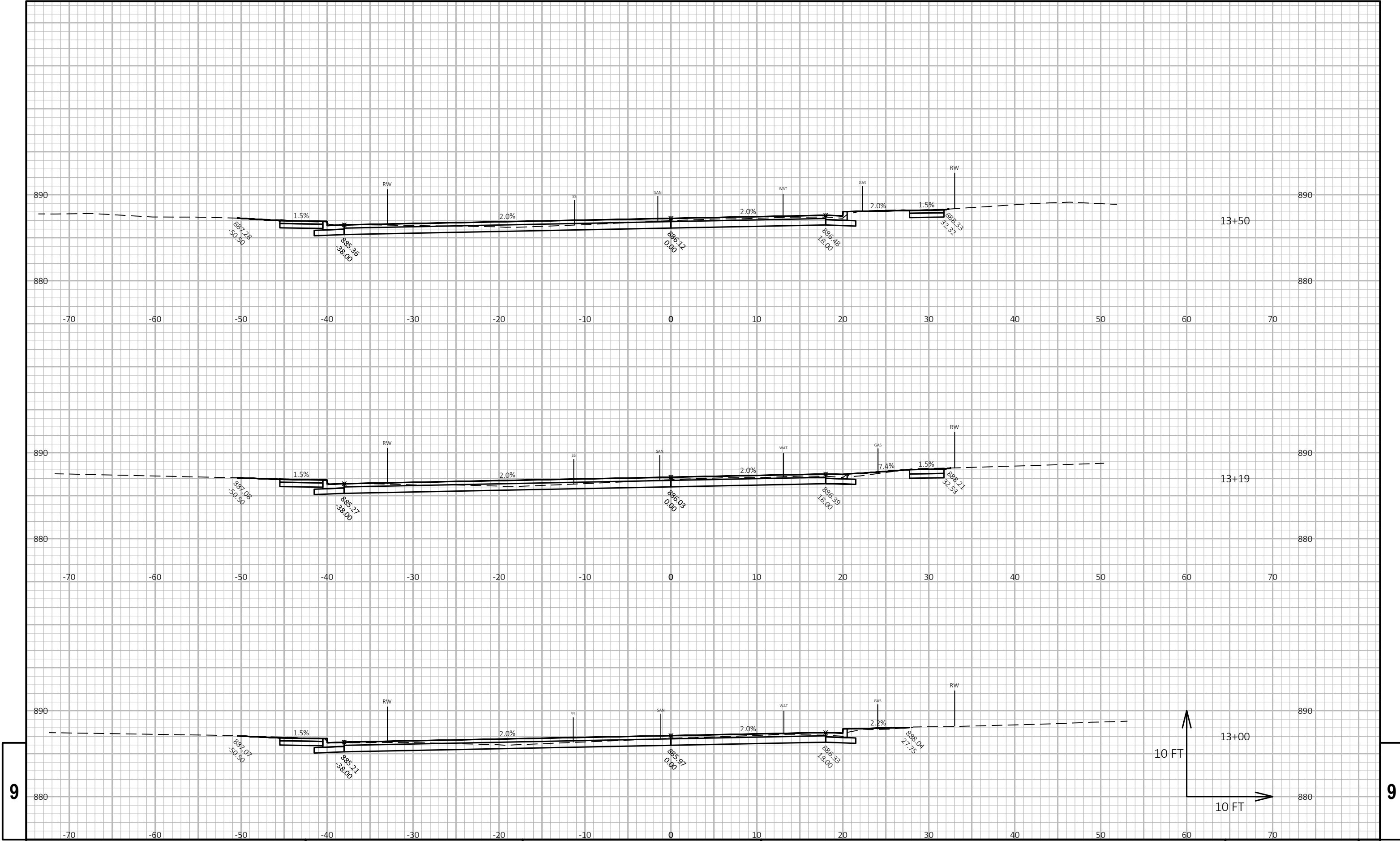
Station	Real Station	Distance	Area (SF)		Volume (CY) (Raw)		Volume (CY) (Adjusted)		Cumulative Vol (CY)		Mass Ordinate
			Cut	Fill	Cut	Fill	Cut Factor 1.00	Fill Factor 1.30	Cut	Fill	
16+04.76	1604.76	0.00	133.25	0.00	0	0	0	0	0	0	0
16+25	1625.00	20.24	43.86	0.00	66	0	66	0	66	0	66
16+50	1650.00	25.00	41.98	3.69	40	2	40	2	106	2	104
16+75	1675.00	25.00	50.11	0.76	43	2	43	3	149	5	144
17+00	1700.00	25.00	45.27	0.61	44	1	44	1	193	6	187
17+25	1725.00	25.00	42.04	1.00	40	1	40	1	233	7	227
17+50	1750.00	25.00	48.03	0.92	42	1	42	1	275	8	267
17+75	1775.00	25.00	43.64	0.56	42	1	42	1	317	9	309
18+00	1800.00	25.00	41.90	1.13	40	1	40	1	357	10	347
18+25	1825.00	25.00	43.09	0.80	39	1	39	1	396	11	386
18+50	1850.00	25.00	50.41	1.62	43	1	43	1	440	12	427
18+75	1875.00	25.00	44.24	2.24	44	2	44	2	484	15	469
19+00	1900.00	25.00	43.41	1.10	41	2	41	2	524	17	507
19+25	1925.00	25.00	52.65	1.92	44	1	44	2	569	19	550
19+50	1950.00	25.00	40.71	2.67	43	2	43	3	612	21	591
19+75	1975.00	25.00	37.93	3.16	36	3	36	4	648	25	623
20+00	2000.00	25.00	39.33	2.54	36	3	36	3	684	28	656
20+25	2025.00	25.00	39.51	3.61	36	3	36	4	720	32	689
20+50	2050.00	25.00	37.25	2.88	36	3	36	4	756	36	720
20+75	2075.00	25.00	38.77	3.40	35	3	35	4	791	40	752
21+00	2100.00	25.00	42.72	2.69	38	3	38	4	829	43	786
21+25	2125.00	25.00	38.40	5.16	38	4	38	5	867	48	819
21+50	2150.00	25.00	39.02	4.47	36	4	36	6	902	54	849
21+76	2176.00	26.00	40.91	3.81	38	4	38	5	941	59	882
22+00	2200.00	24.00	44.23	4.69	38	4	38	5	979	64	915
22+25	2225.00	25.00	47.77	2.64	43	3	43	4	1,021	68	953
22+50	2250.00	25.00	49.68	3.10	45	3	45	3	1,066	72	995
22+75	2275.00	25.00	46.59	2.51	45	3	45	3	1,111	75	1,036
23+00	2300.00	25.00	44.78	1.53	42	2	42	2	1,153	78	1,076
23+25	2325.00	25.00	47.05	1.07	43	1	43	2	1,196	79	1,117
23+35	2335.00	10.00	52.17	0.12	18	0	18	0	1,214	79	1,135
COLUMN TOTALS							1,214	79			

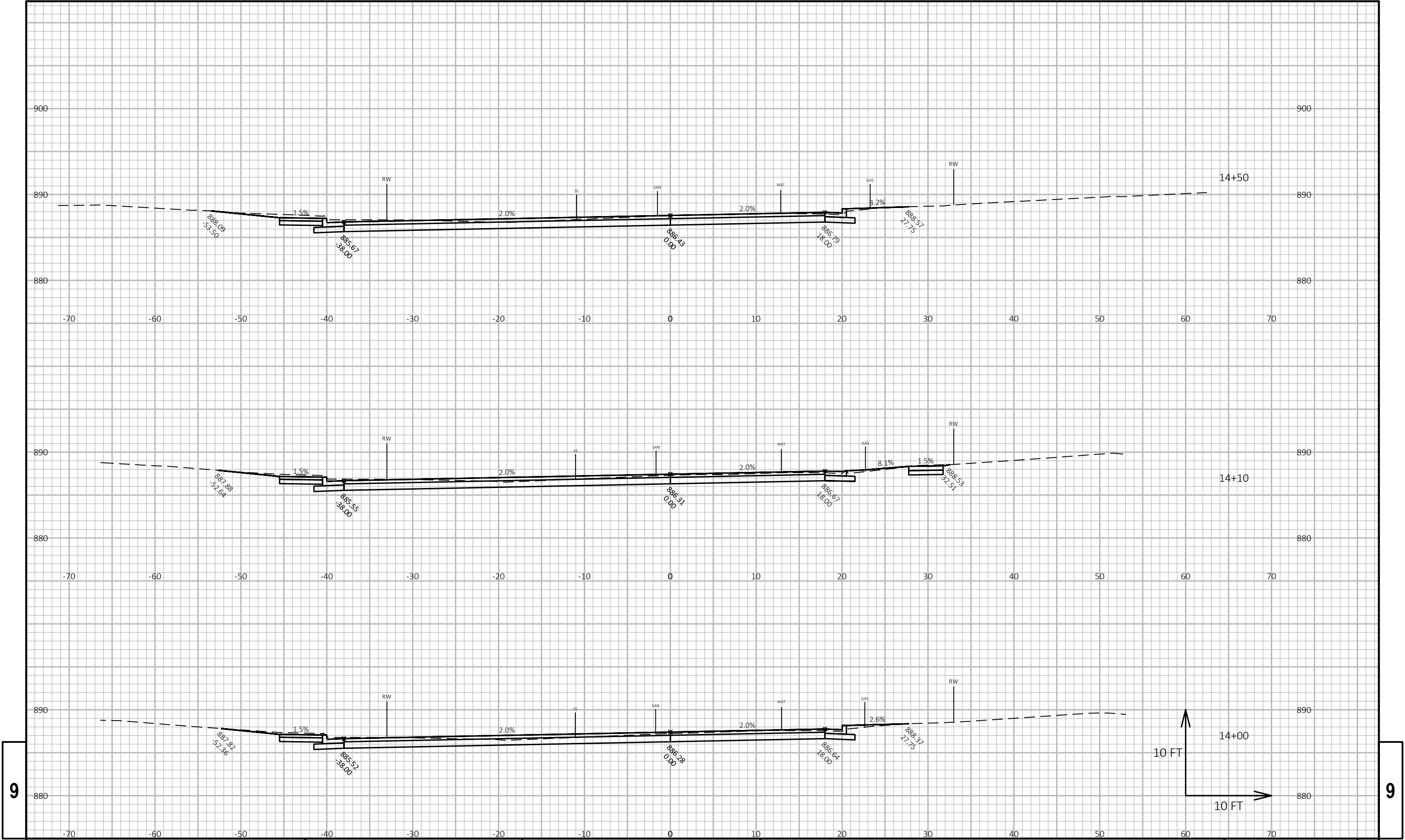




9

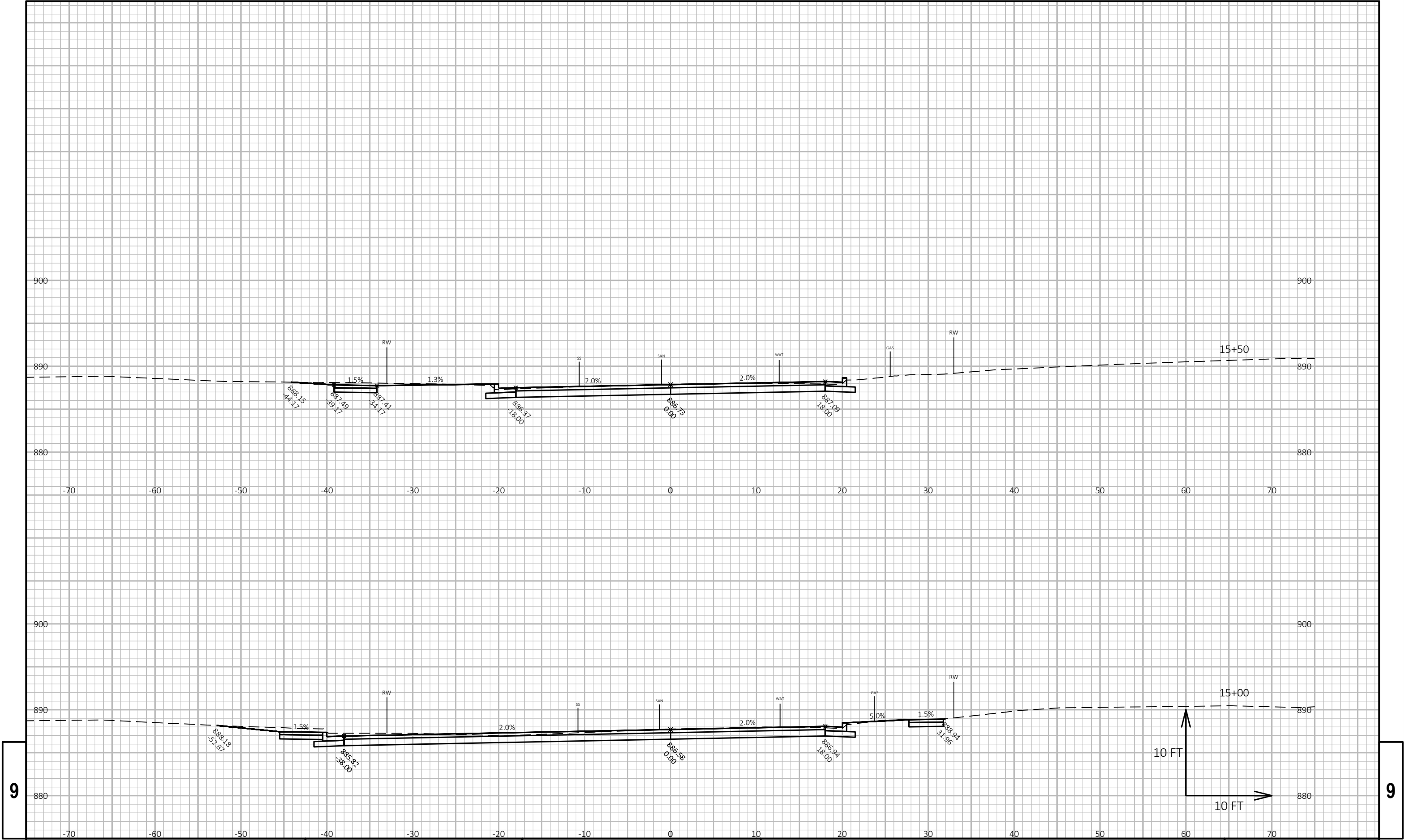
9





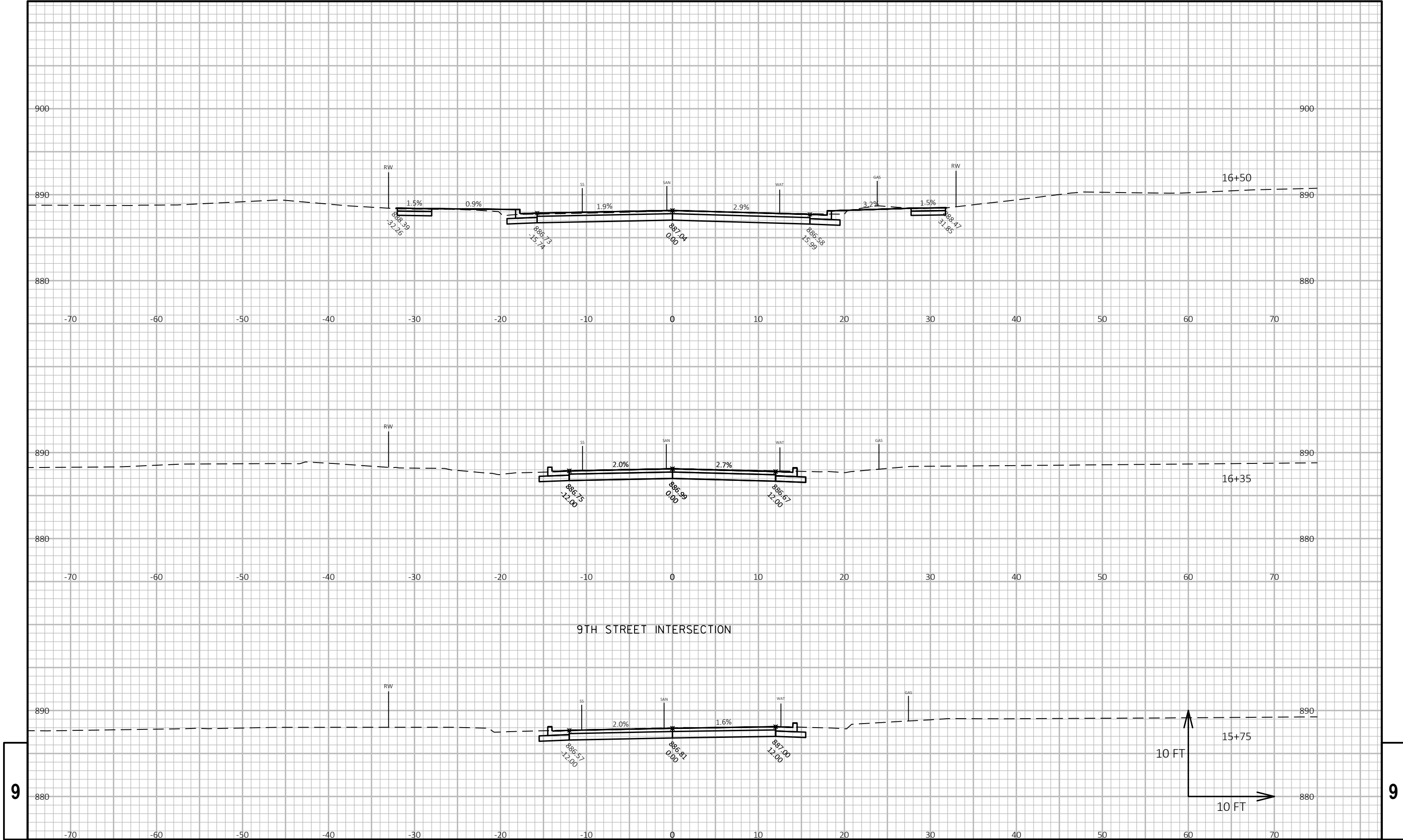
9

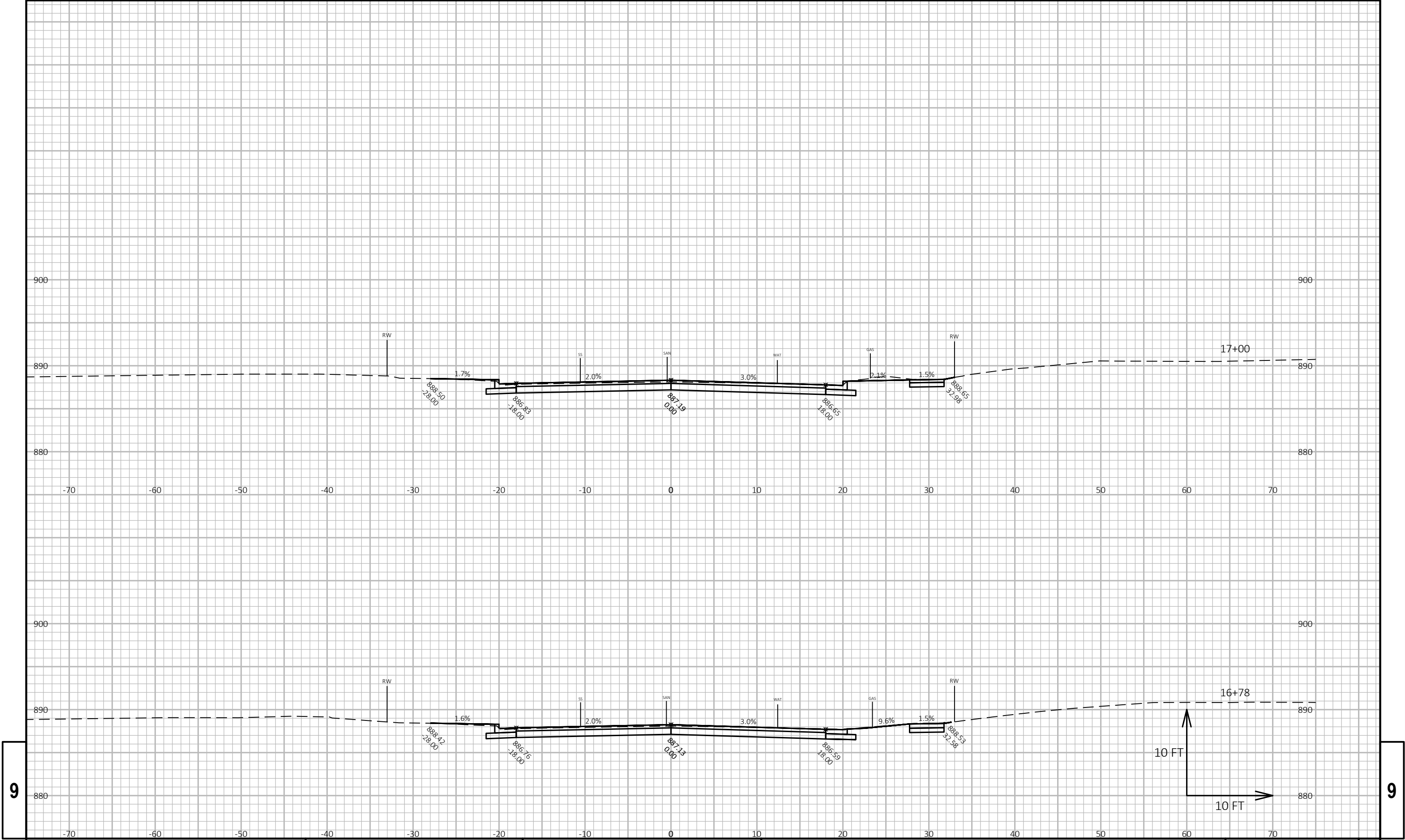
9

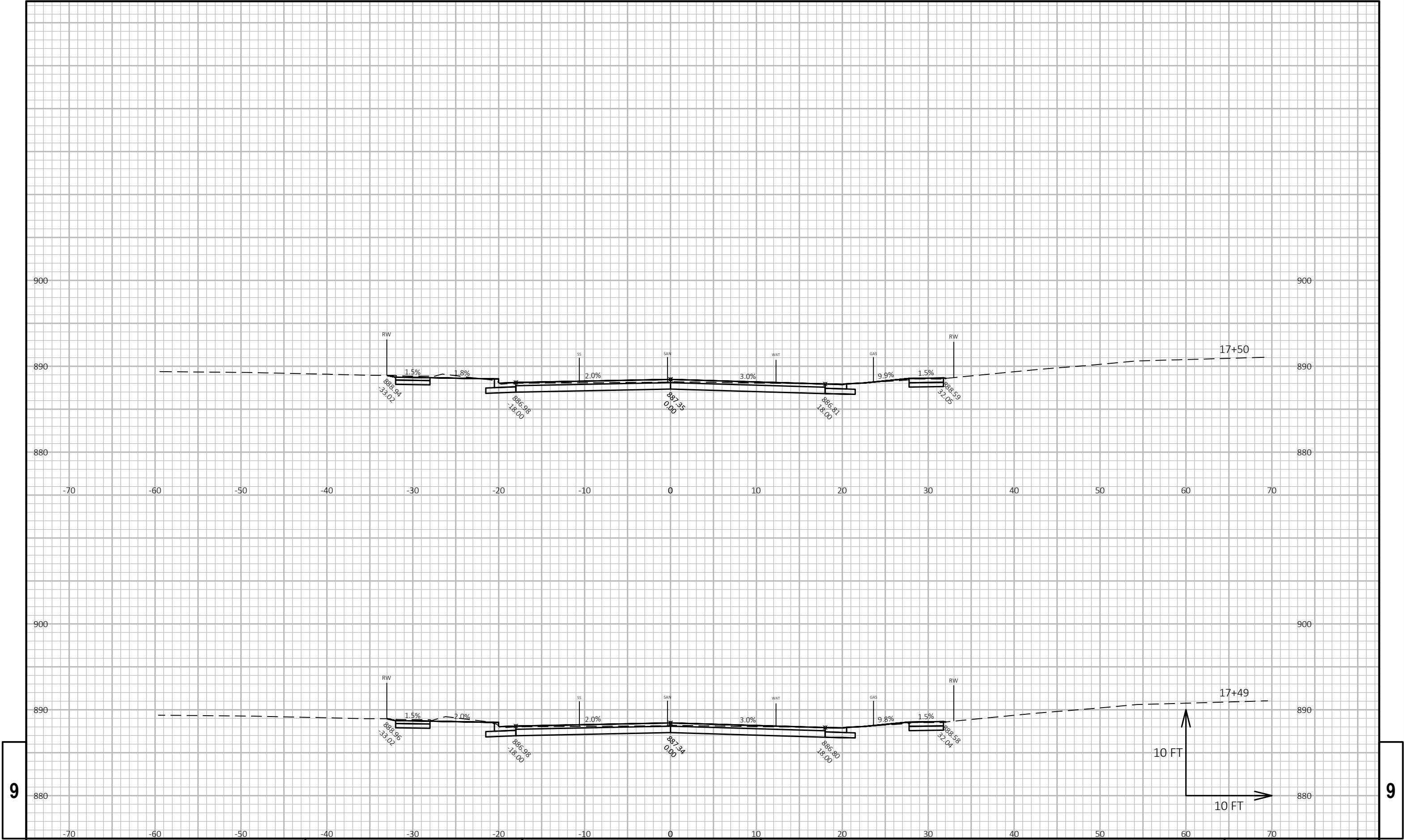


9

9

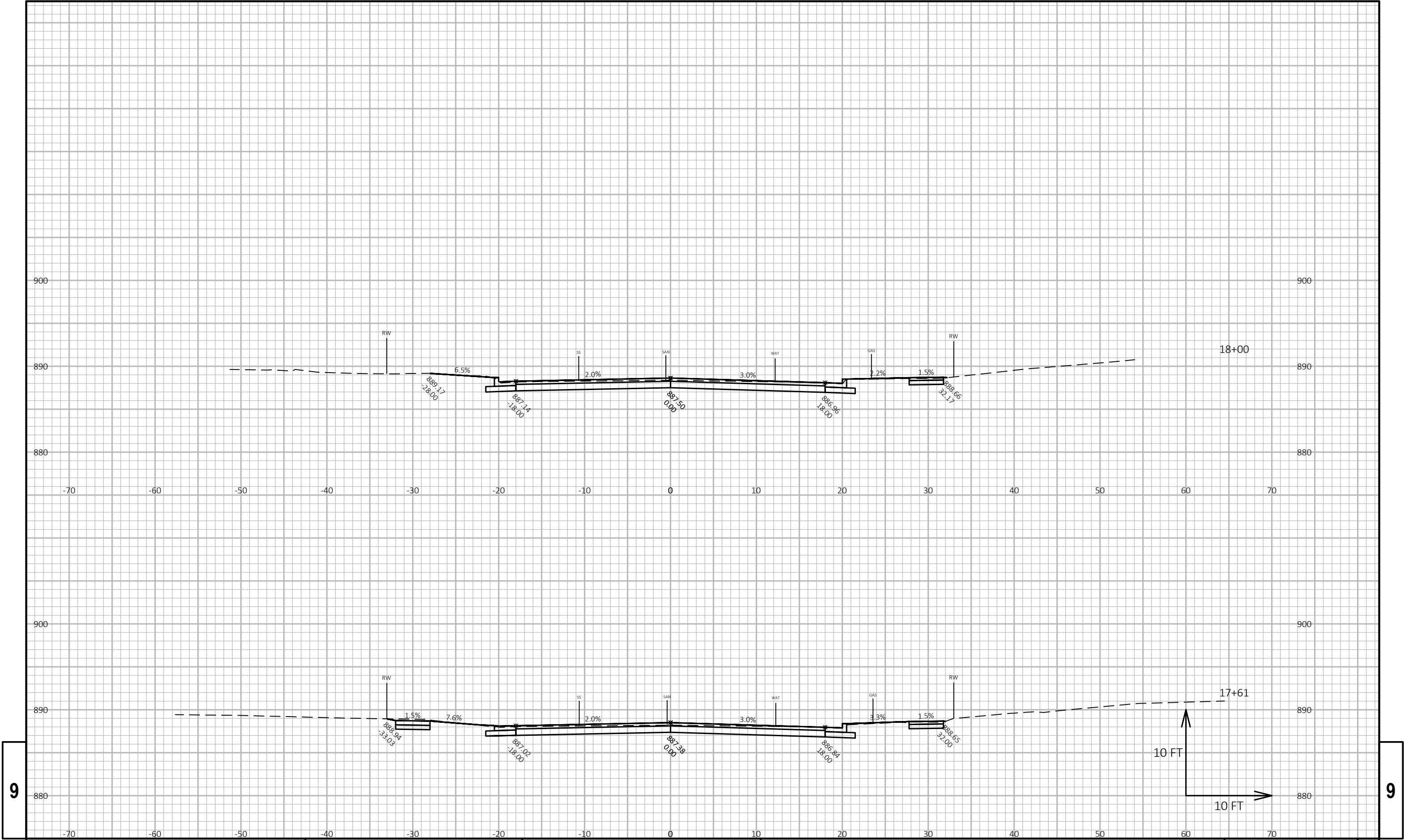






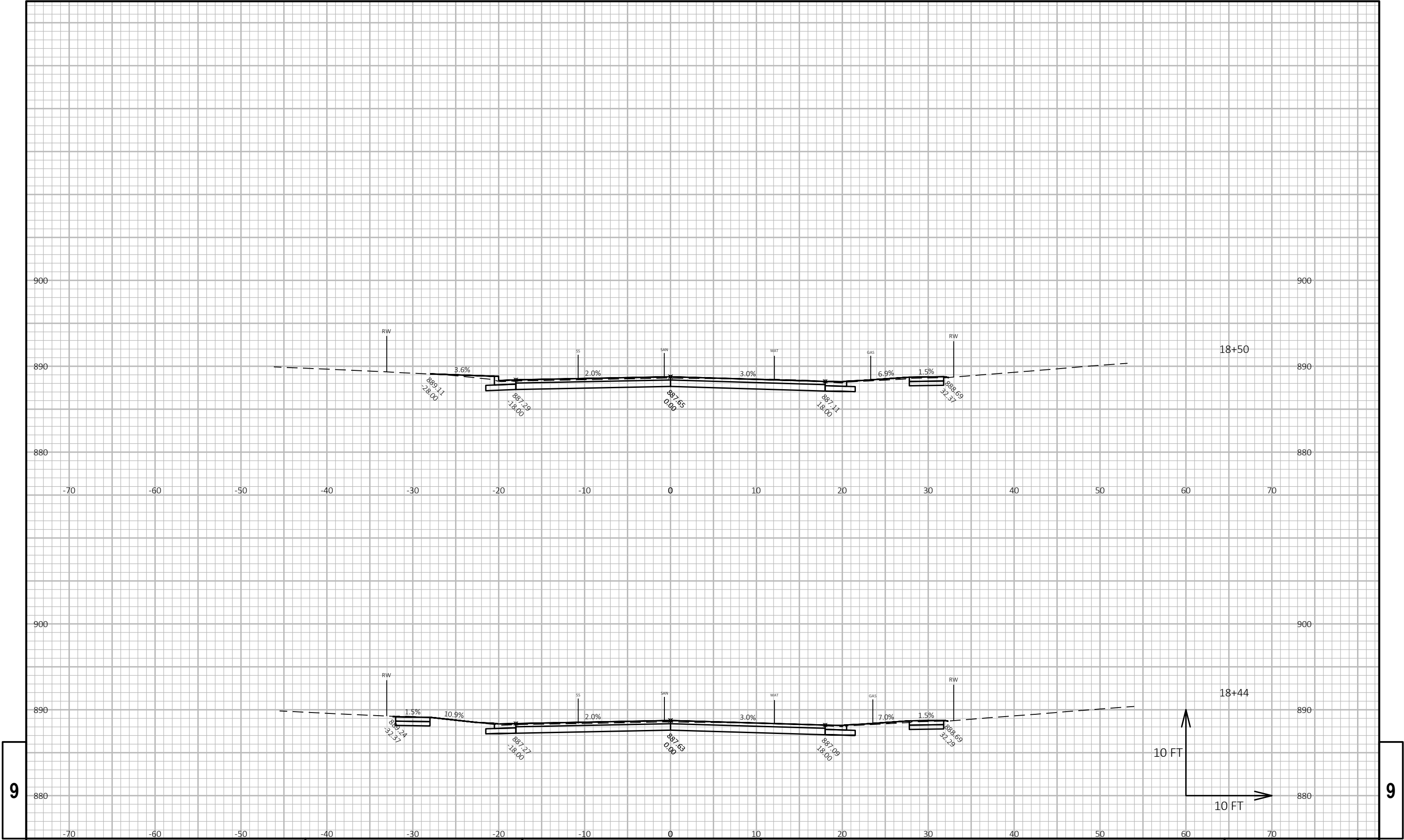
9

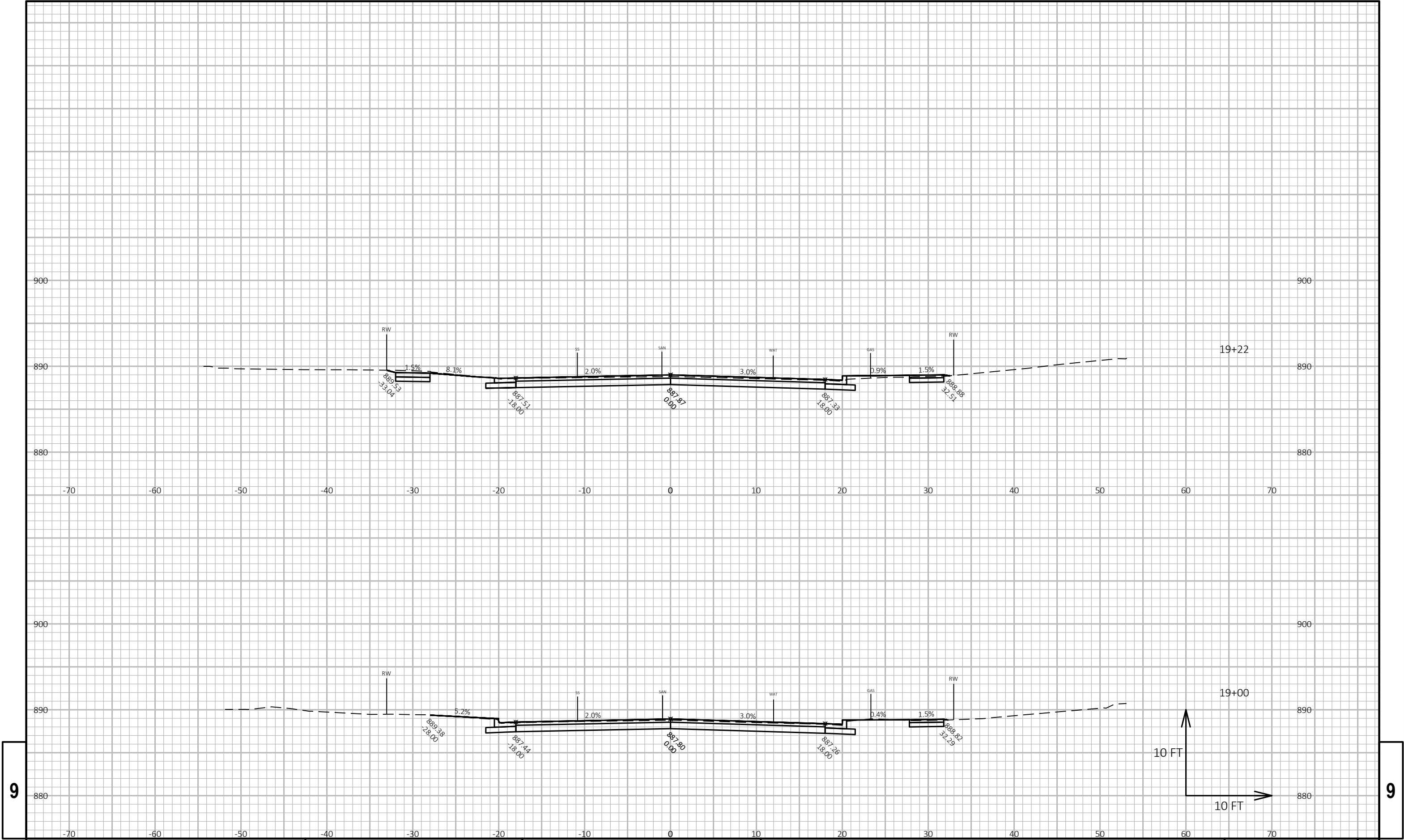
9



9

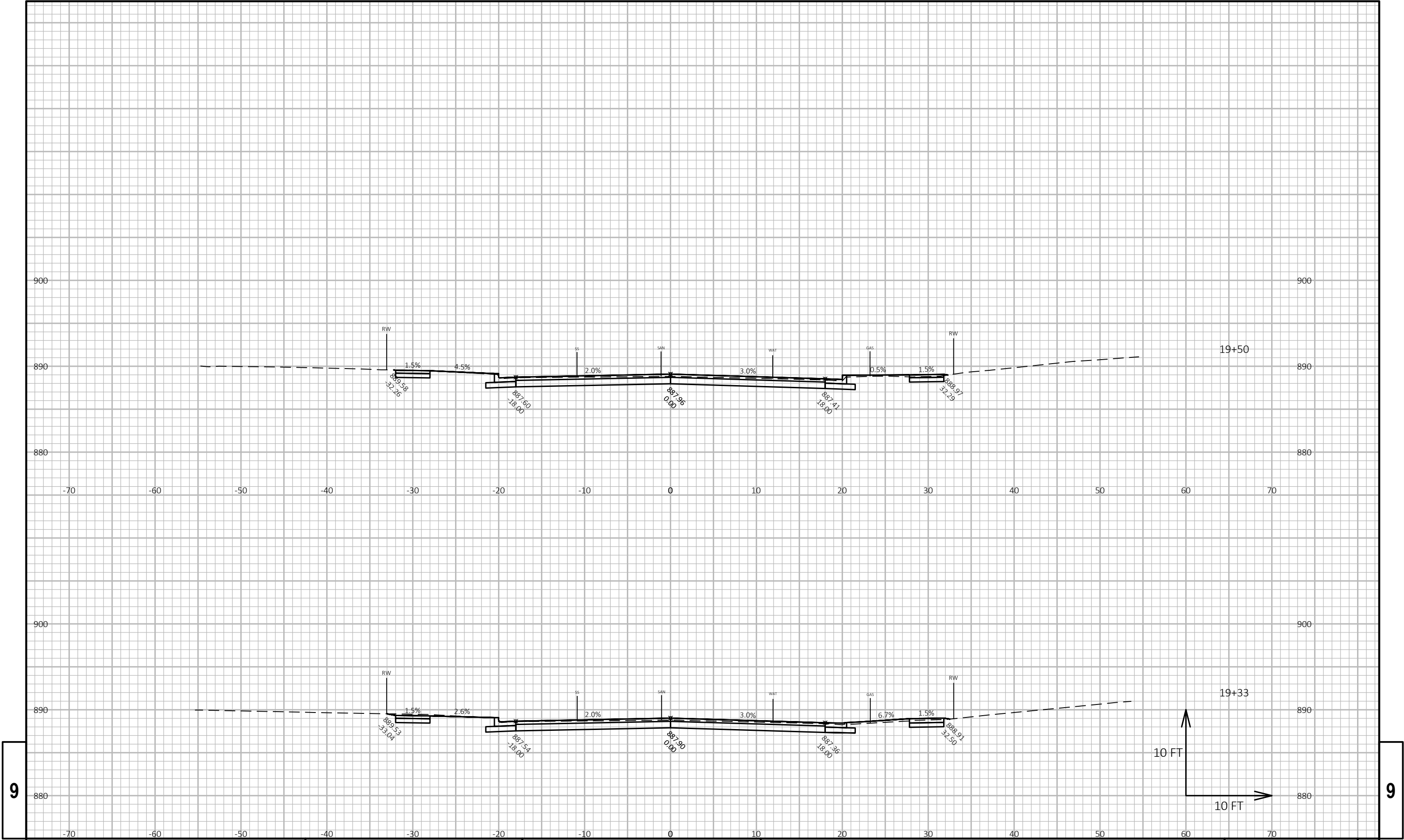
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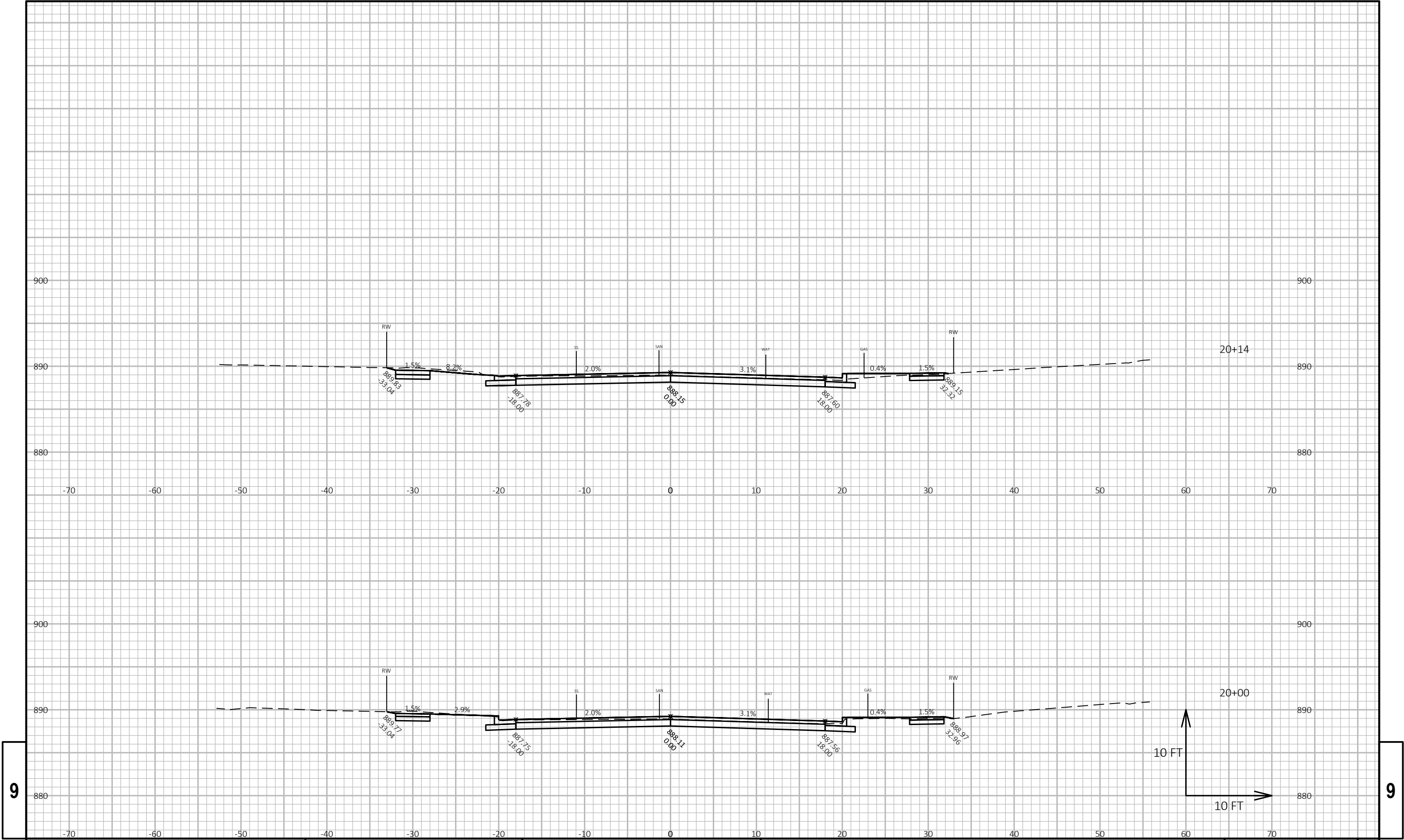


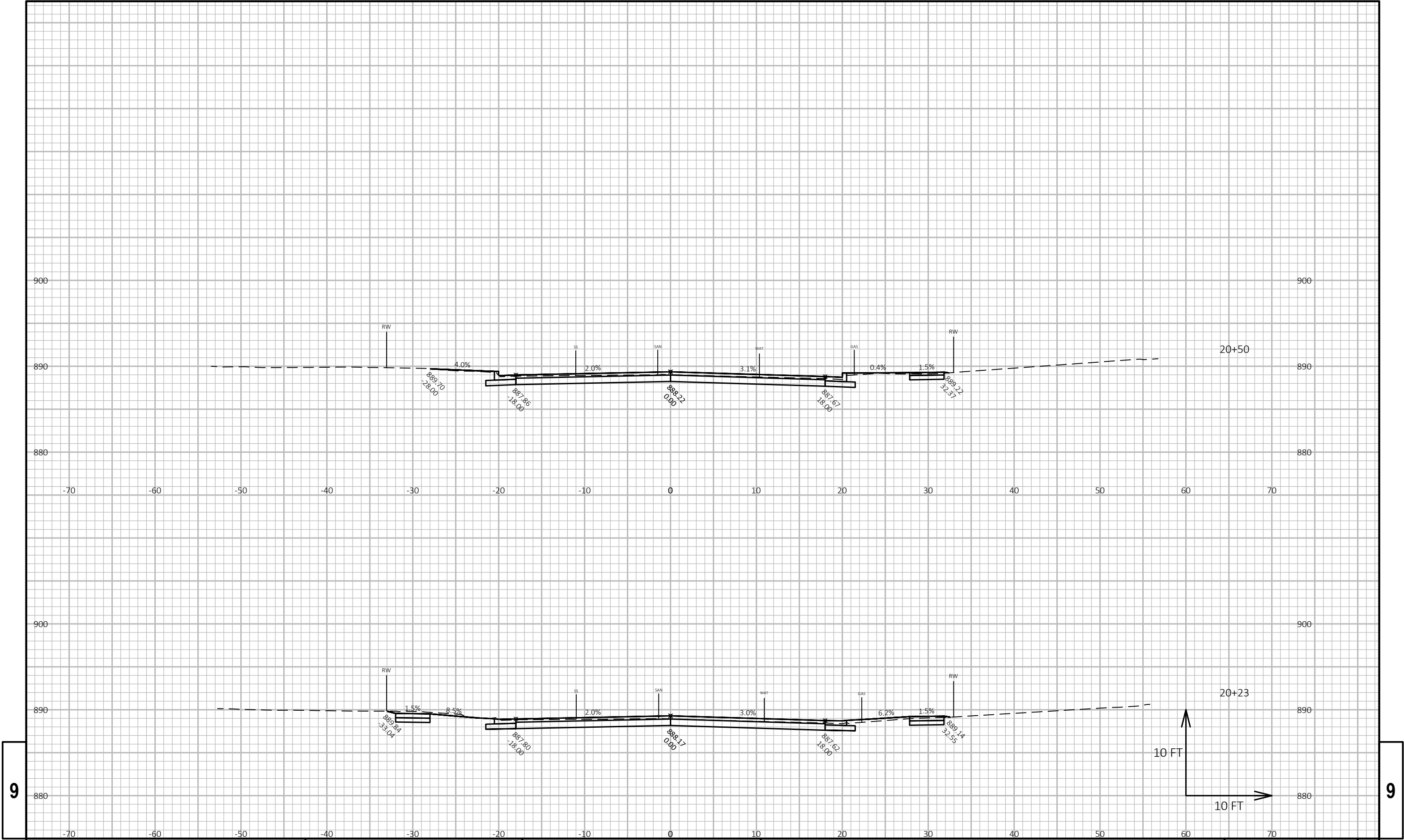


9

9

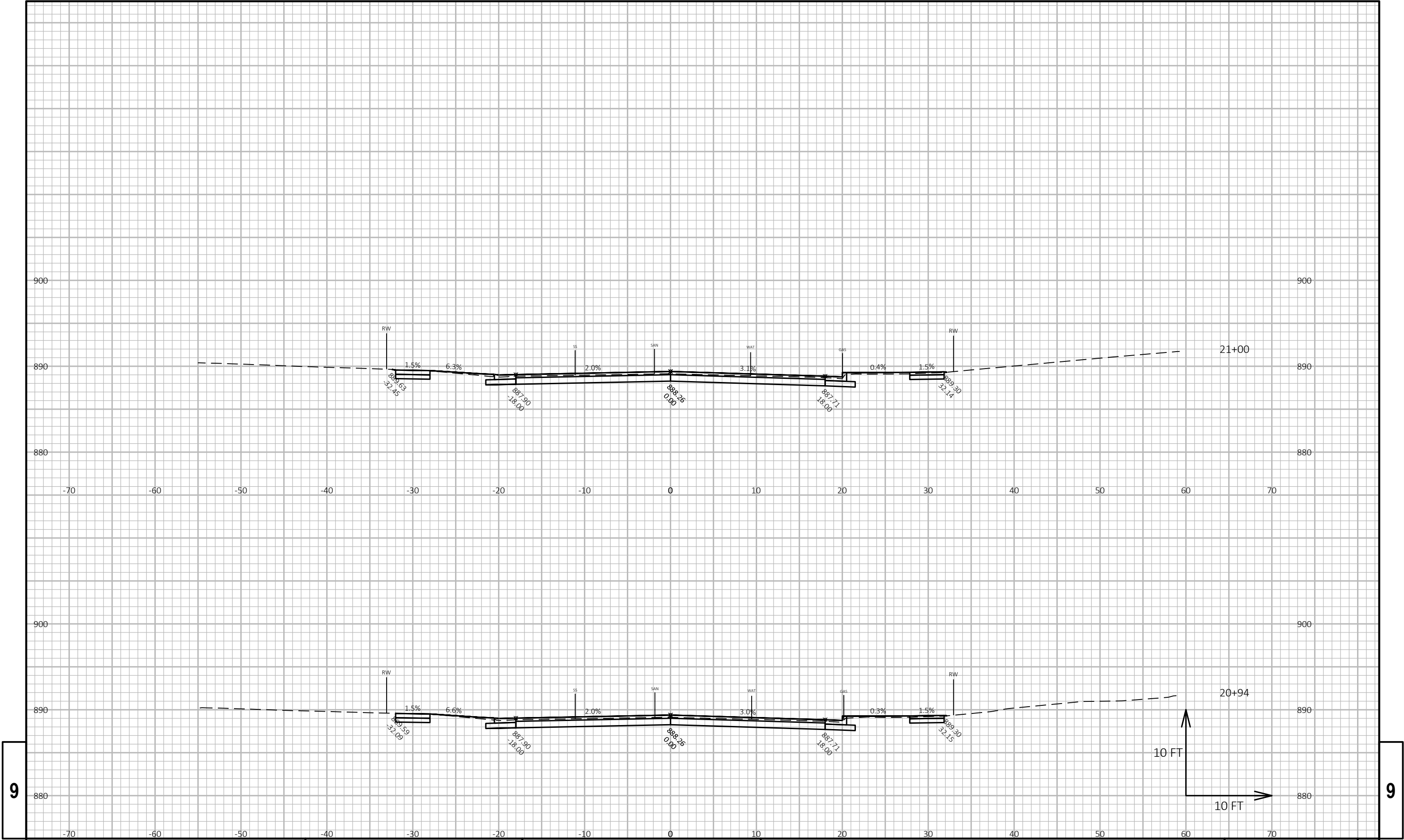






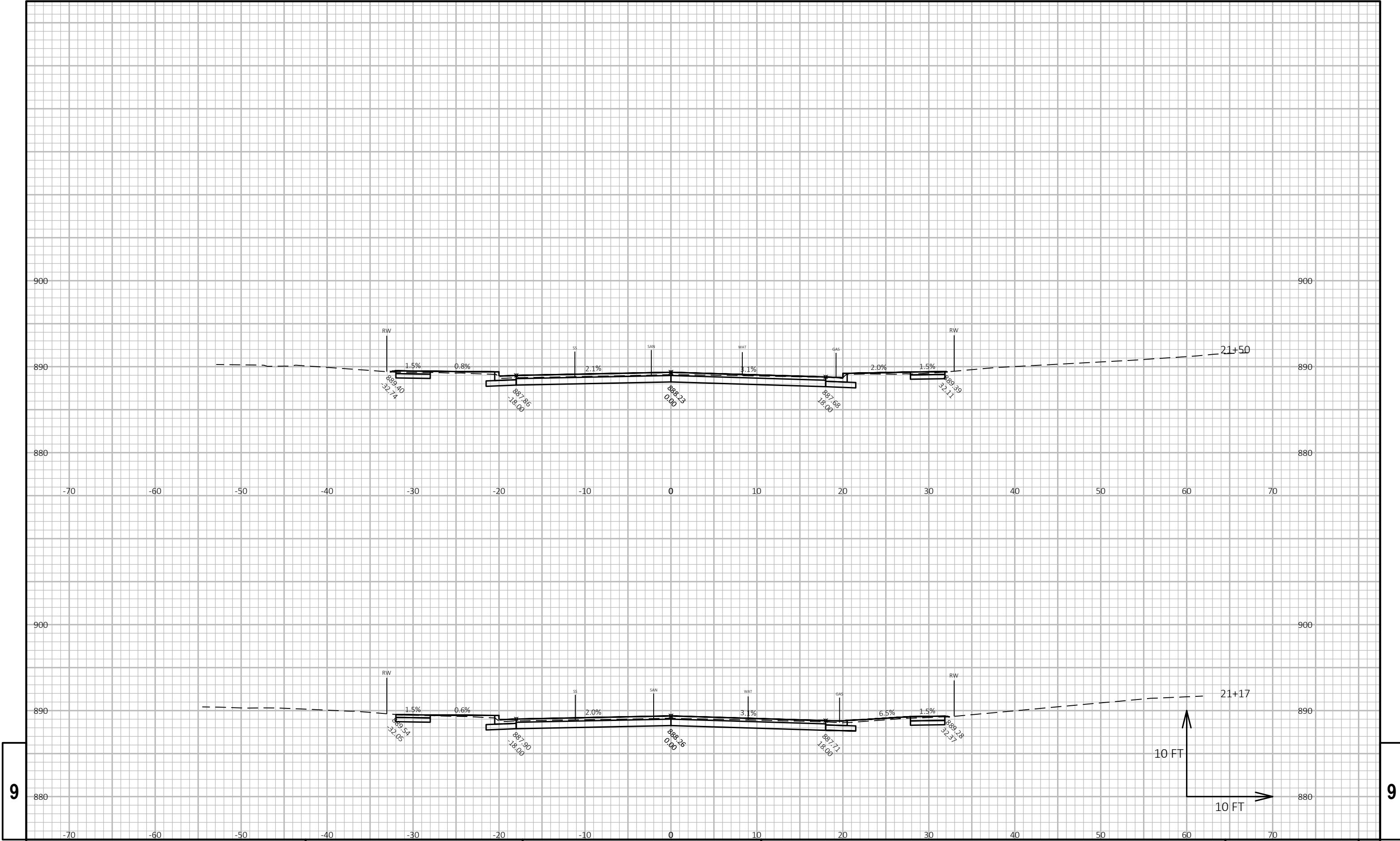
9

9



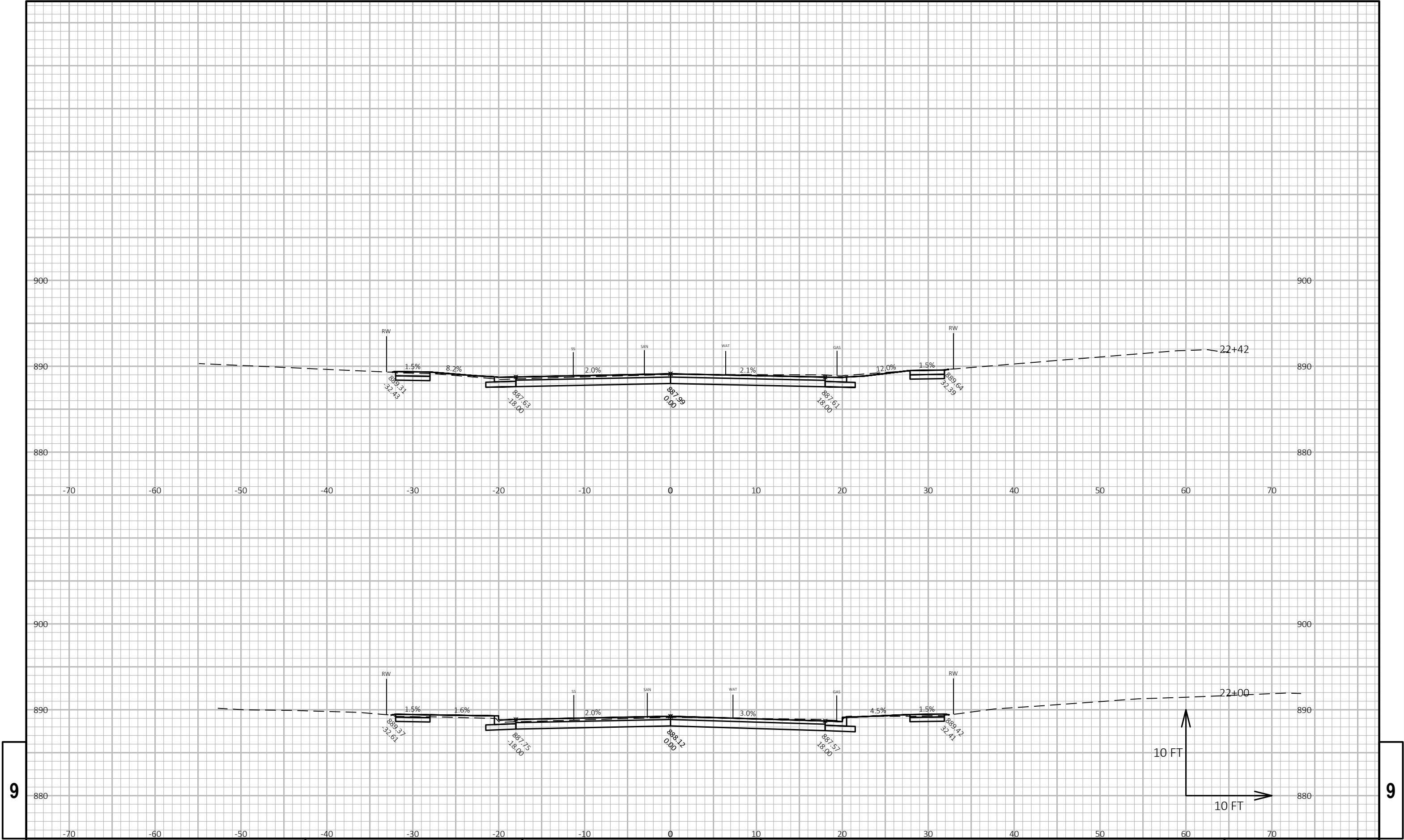
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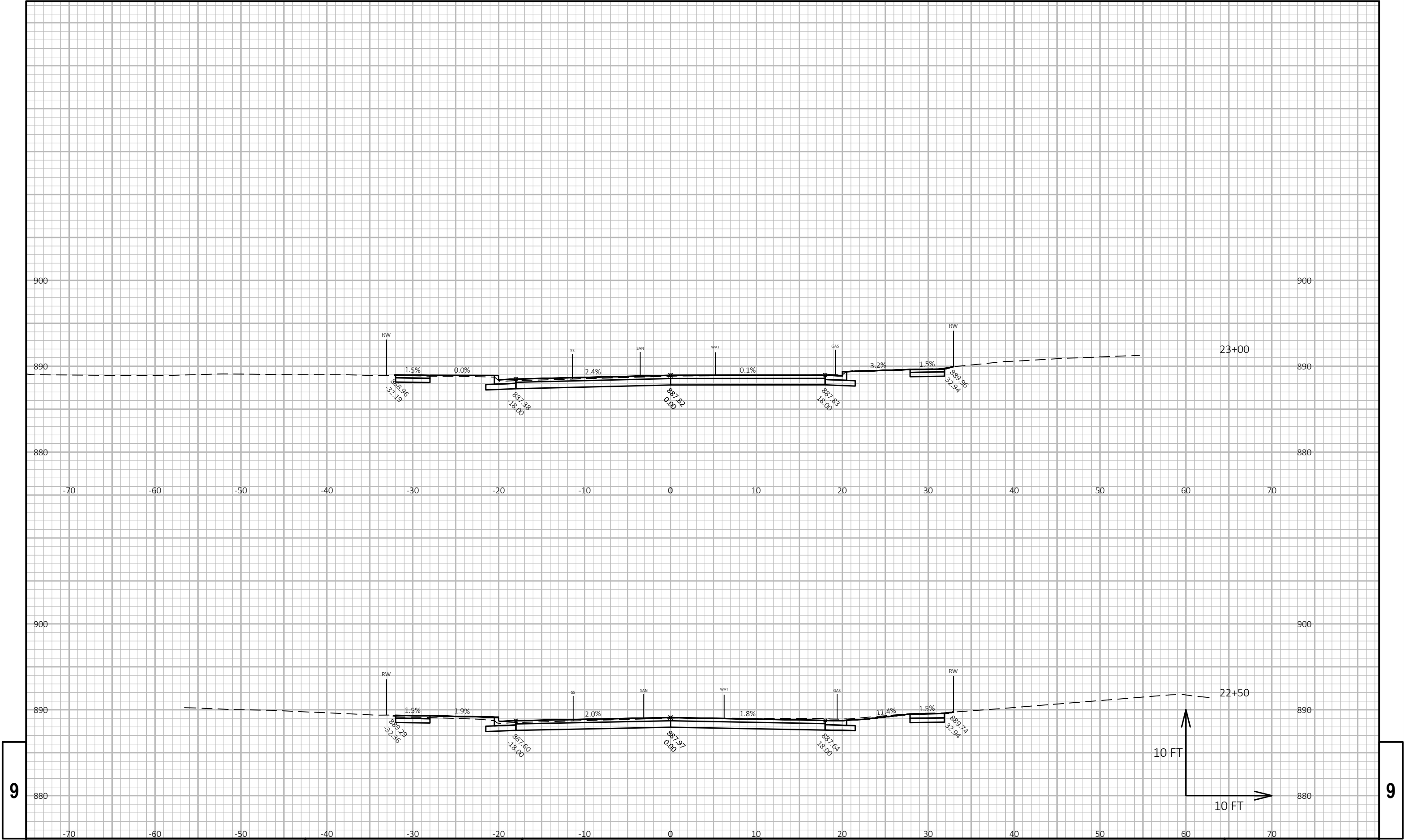
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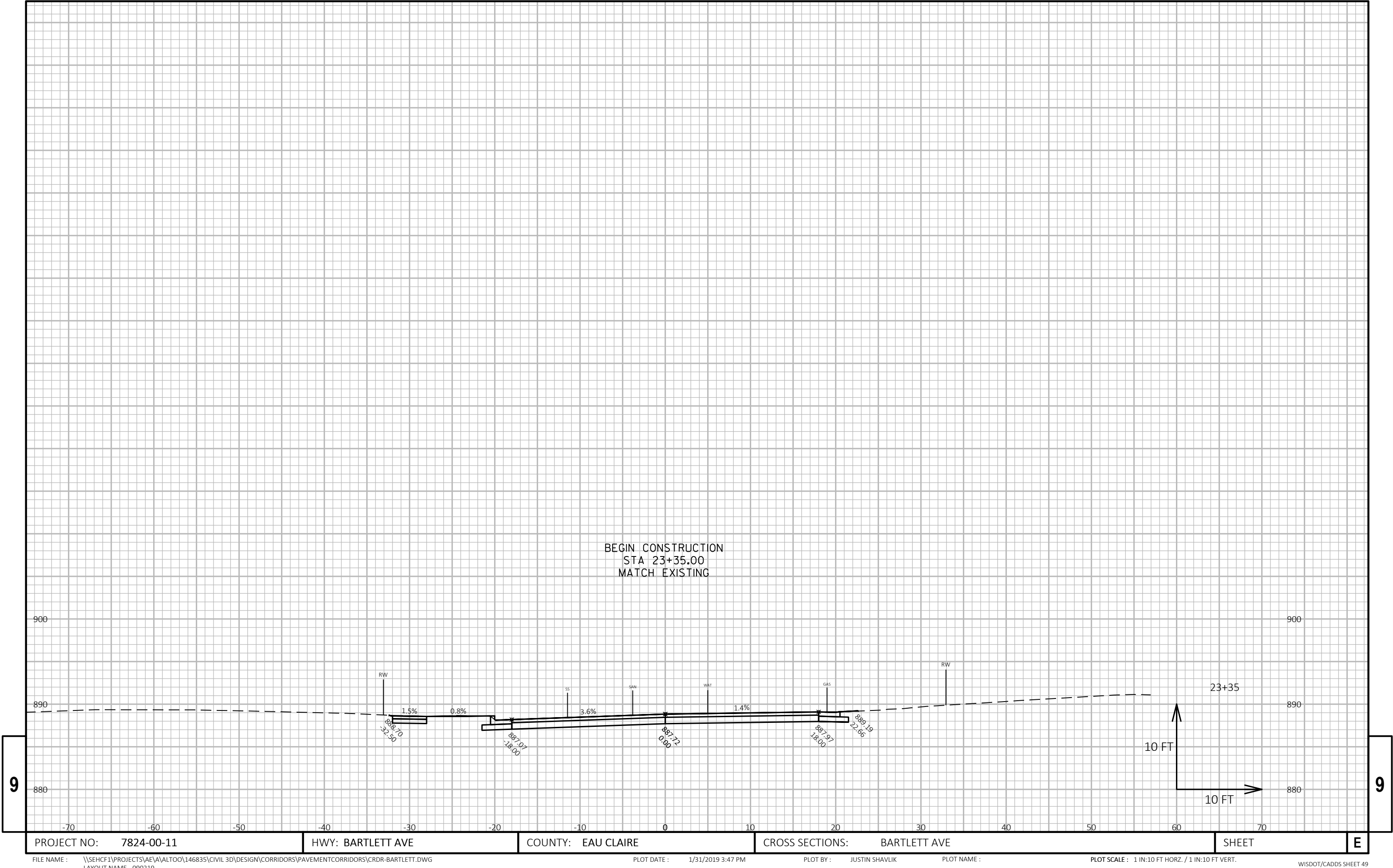


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Notes



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