RHI

MAY 2023

PROJECT ID: 9250-12-61

WITH: NA

COUNTY: IRON

ORDER OF SHEETS

TOTAL SHEETS = 122

32

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

MELLEN - HURLEY

ASHLAND CO LINE TO UPSON LAKE ROAD

STH 77

IRON COUNTY

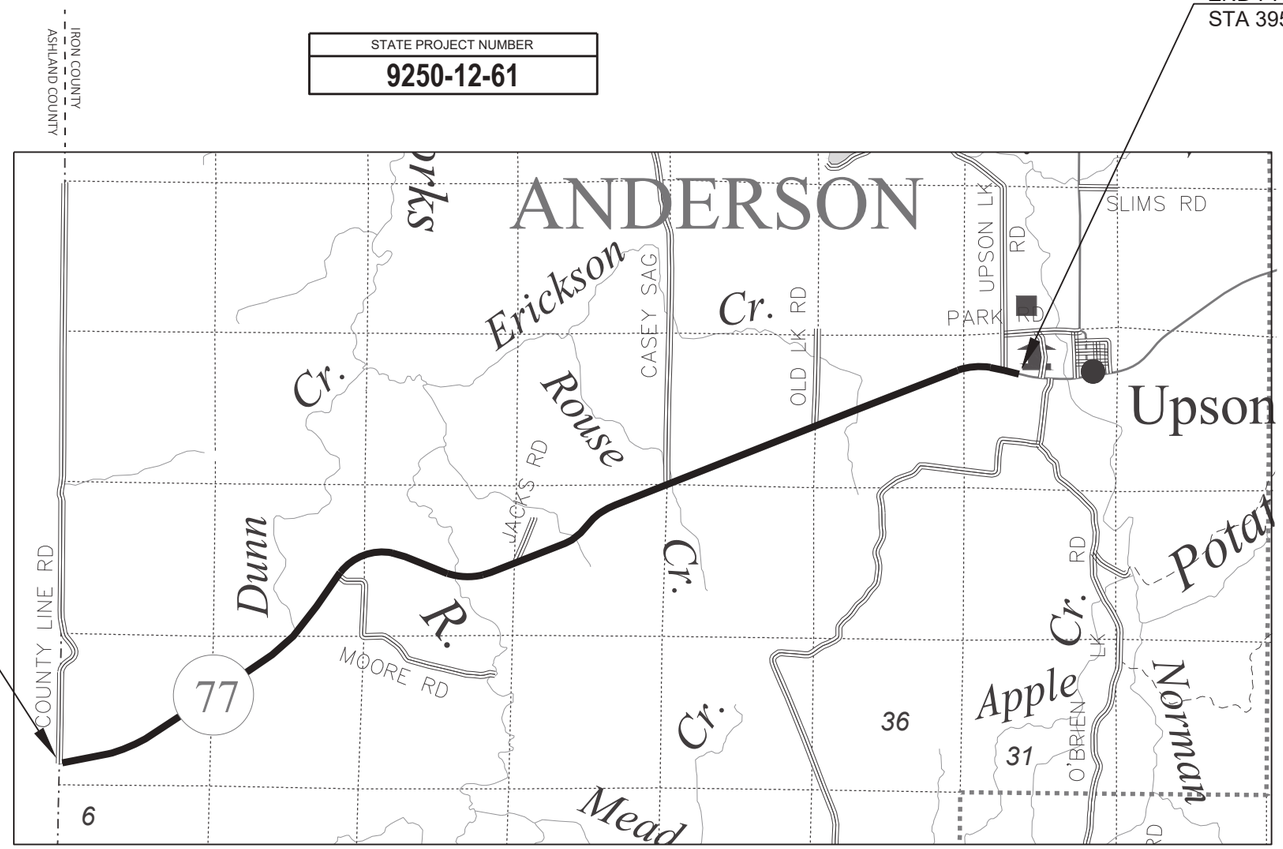
STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9250-12-61	———	———

STATE PROJECT NUMBER

9250-12-61

END PROJECT
STA 395+50

BEGIN PROJECT
STA 20+00
X = 650,917.4978
Y = 326,892.9486



DESIGN DESIGNATION

A.A.D.T.	2022	=	820
A.A.D.T.	2042	=	820
D.H.V.		=	
D.D.		=	
T.		=	11.0%
DESIGN SPEED		=	55 MPH
ESALS		=	130,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

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

LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 7.055 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), IRON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	COLEMAN ENGINEERING
Designer	MARC SHEAN
Project Manager	NICHOLAS VOS
Regional Examiner	ZACHARY GRULING
Regional Supervisor	DANIEL ERVA

APPROVED FOR THE DEPARTMENT

DATE: 10/14/2022 (Signature)

E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\010101-TI.DWG

PLOT DATE : 10/13/2022 2:44 PM

PLOT BY : OETTINGER, JEFFERY M

PLOT NAME :

GENERAL NOTES

1. CURVE DATA IS BASED ON THE ARC DEFINITION.
2. WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR THICKNESS OF THE LAYER SHOWN ON THE PLAN MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER
3. CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND RESEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY HIS OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS
4. THE LOCATION OF EXISTING & PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLAN
5. PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST

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 = 86.203 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 3.248 ACRES

UTILITY CONTACTS:

BRIGHTSPEED - COMMUNICATIONS LINE
1120 SOUTH TRYON ST
CHARLOTTE, NC 28203
KEVIN ZICKERT
(980) 376-1502 (OFFICE)
KEVIN.ZICKERT@BRIGHTSPEED.COM

TELEPHONE USA OF WISCONSIN, LLC
CENTURYLINK - COMMUNICATIONS LINE
425 ELLINGSON AVENUE
HAWKINS, WI 54530
BRIAN HUHN
(608) 615-7347
(715) 563-8294 (MOBILE)
BRIAN.HUHN@LUMEN.COM

XCEL ENERGY - ELECTRICITY - TRANSMISSION
414 NICOLLET MALL 5TH FLOOR
MINNEAPOLIS, MN 55401
MITCHELL DIENGER
(612) 321-3109
MITCHELL.A.DIENGER@XCELENERGY.COM

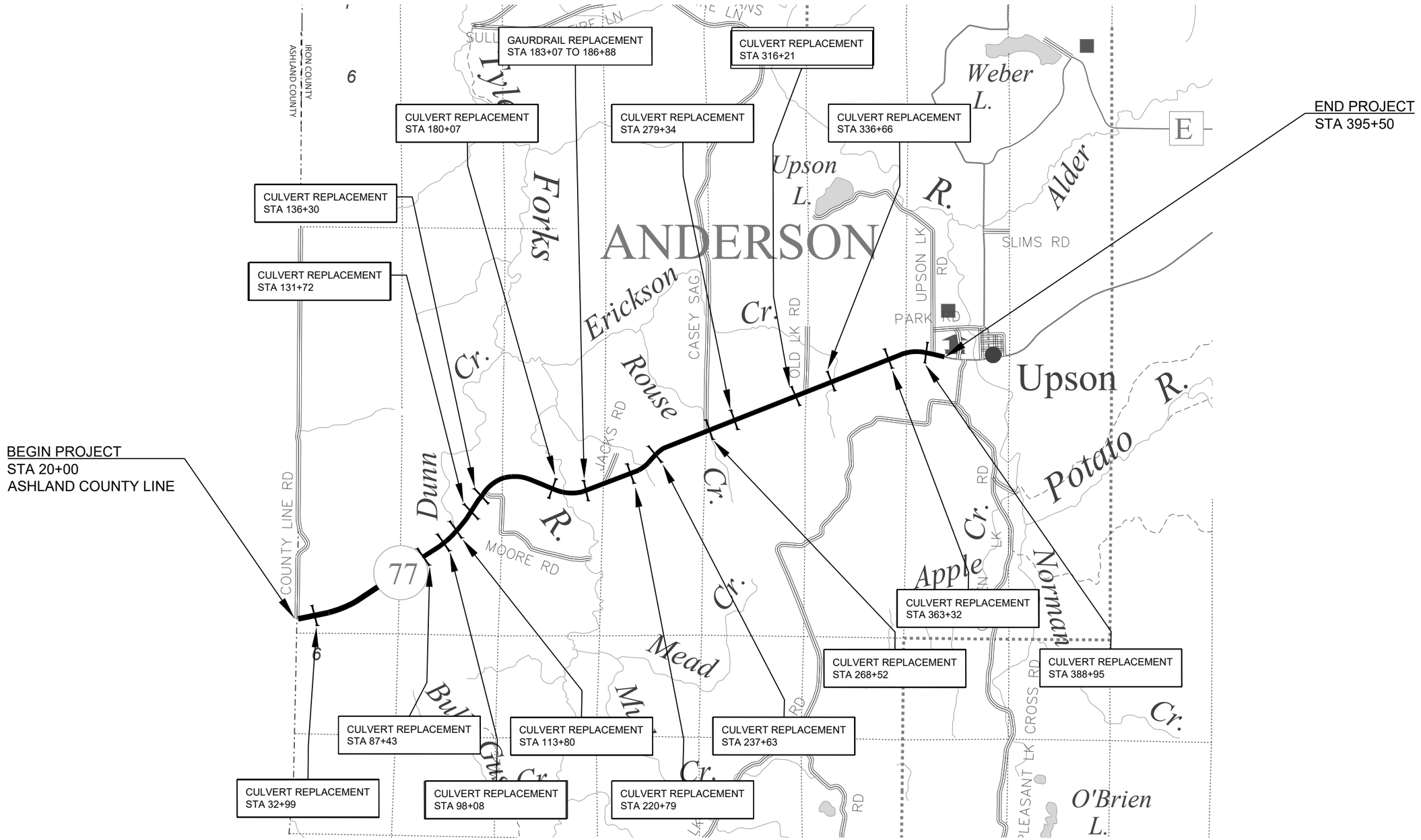
ORDER OF DETAIL SHEETS:

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

DNR CONTACT:

Jon Simonsen
107 Sutliff Ave
Rhinelander, Wi 54501
jonathon.simonsen@wisconsin.gov
715-367-1936

2

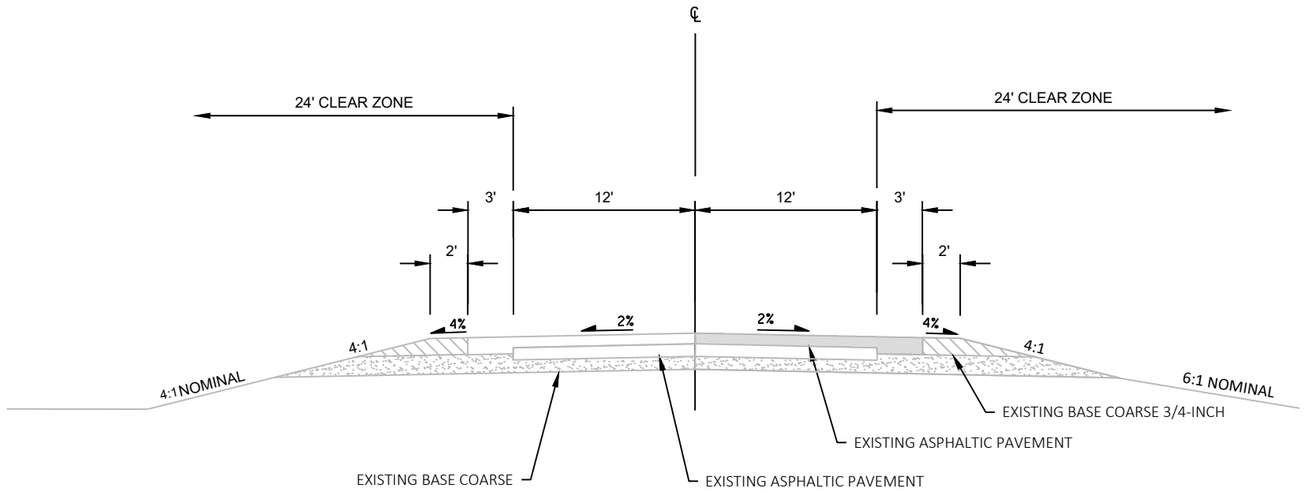


PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 01

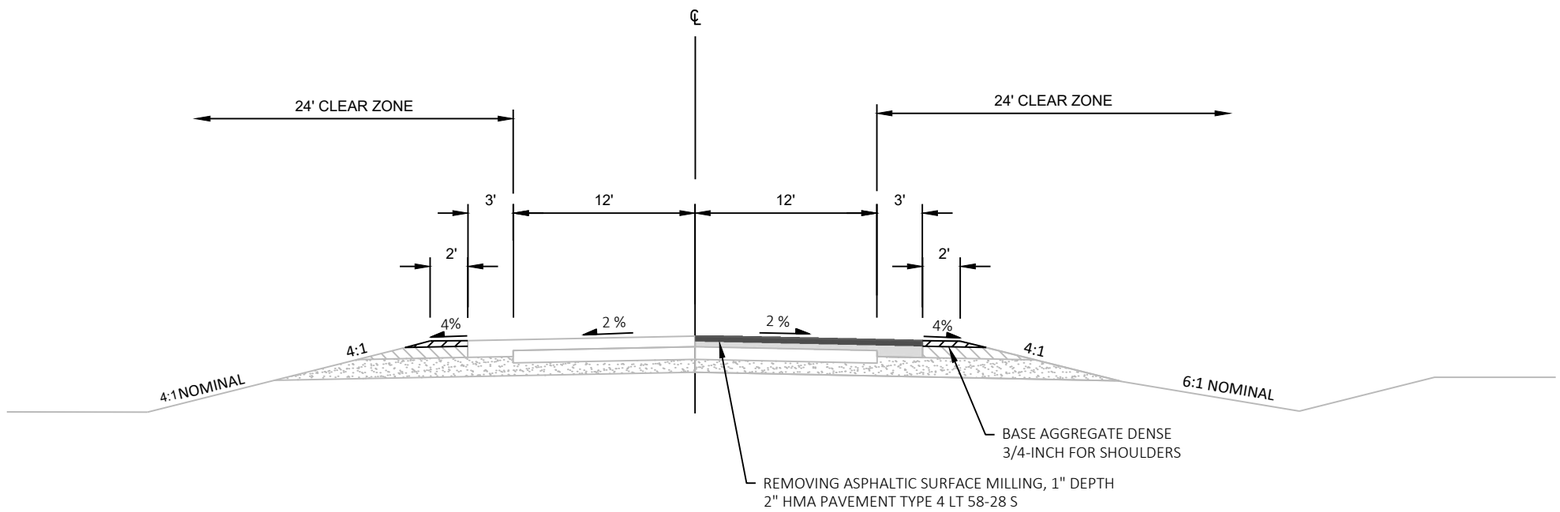
PLOT DATE : 10/13/2022 3:08 PM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:1 MI

2



EXISTING TYPICAL SECTION

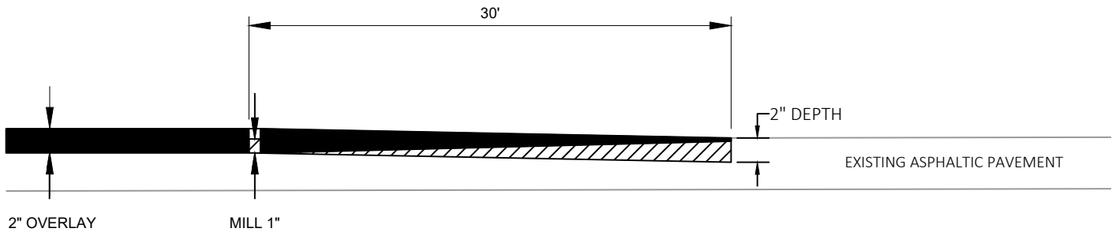
STA 20+00 - STA 395+50



FINISHED TYPICAL SECTION

STA 20+00 - STA 395+50

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	TYPICAL SECTION	SHEET 4 E

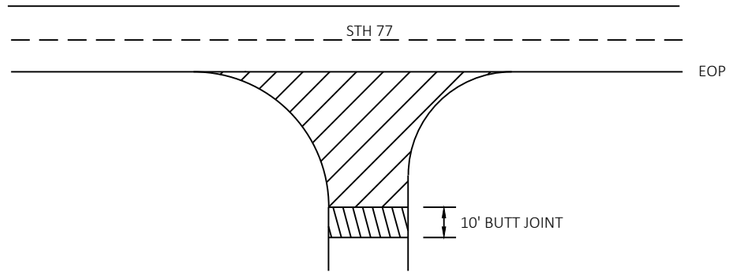


REMOVING ASPHALTIC SURFACE BUTT JOINTS

HMA PAVEMENT 4 LT 58-28 S

MAINLINE BUTT JOINT

STA 20+00 - STA 20+30
STA 395+20 - STA 395+50



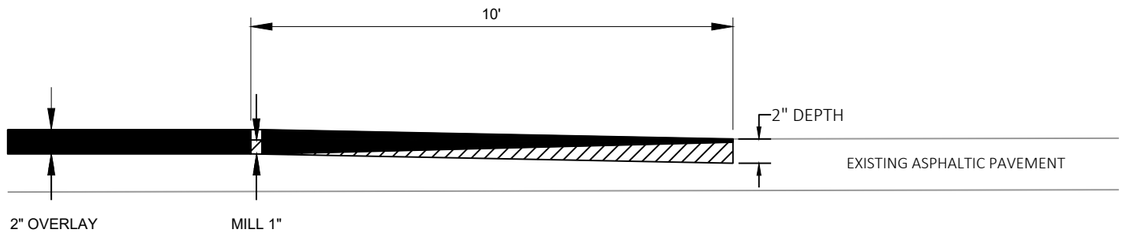
REMOVING ASPHALTIC SURFACE MILLING

REMOVING ASPHALTIC SURFACE BUTT JOINTS
SEE BUTT JOINT DETAIL

NOTE: WHEN MATCHING TO AN UNPAVED SURFACE BUTT JOINT IS NOT REQUIRED

SIDE ROADS
WITHOUT CURB AND GUTTER

MOORE PARK ROAD
JACKS ROAD
CASEY SAG ROAD
OLD LAKE ROAD
UPSON LAKE ROAD

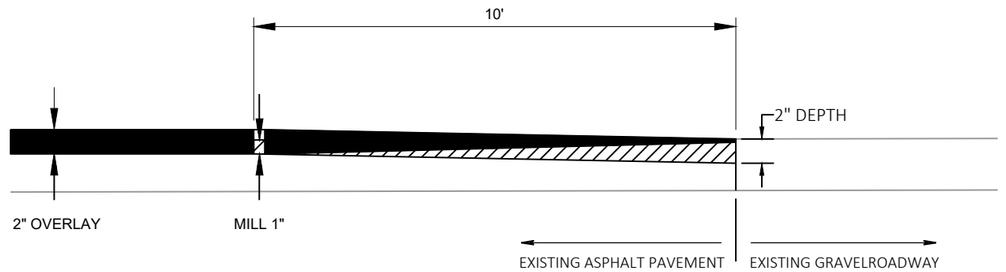


REMOVING ASPHALTIC SURFACE BUTT JOINTS

HMA PAVEMENT 4 LT 58-28 S

SIDE ROAD BUTT JOINT

UPSON LAKE ROAD

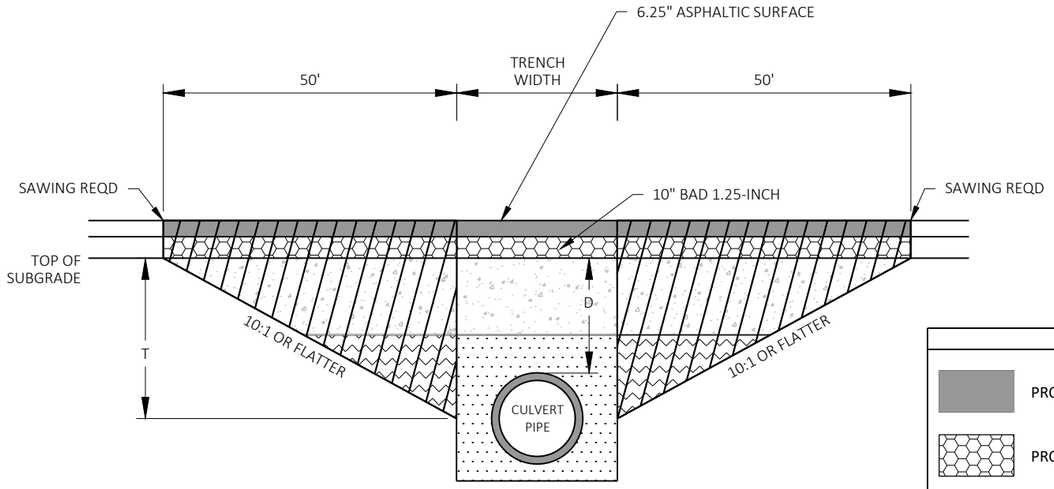


REMOVING ASPHALTIC SURFACE MILLING

HMA PAVEMENT 4 LT 58-28 S

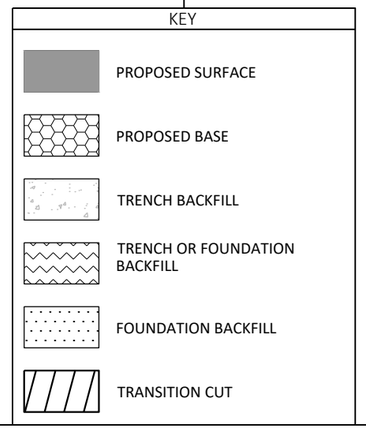
UNPAVED SIDE ROAD TRANSITION

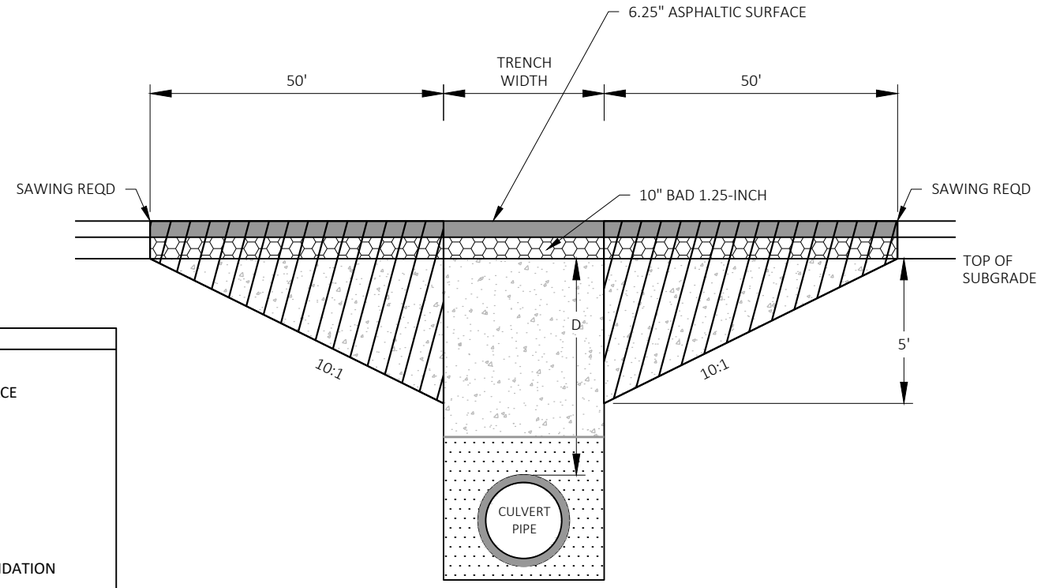
MOORE PARK ROAD
JACKS ROAD
CASEY SAG ROAD
OLD LAKE ROAD



DEPTH D < 6 FT

TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.





DEPTH D ≥ 6 FT

2

NOTES

TRANSITION CUT IS PAID AS EXCAVATION COMMON.

TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.

BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.

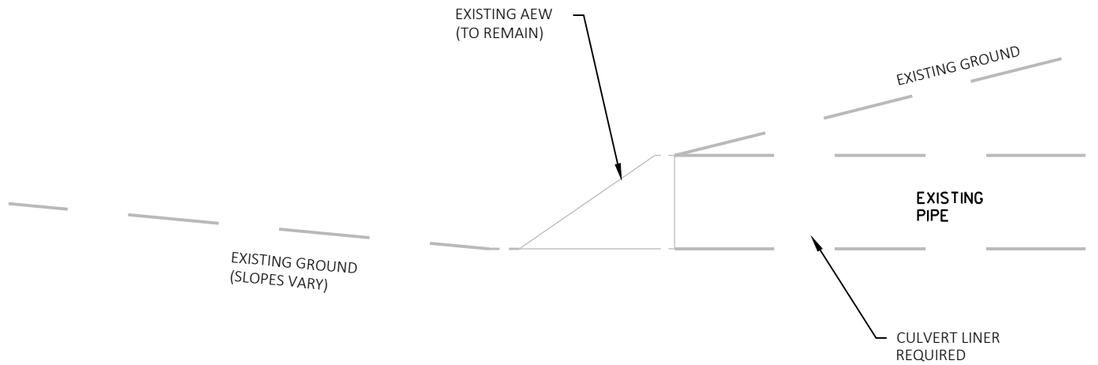
PERFORM CULVERT PIPE INSTALLATION BEFORE *MILLING AND PAVING* .

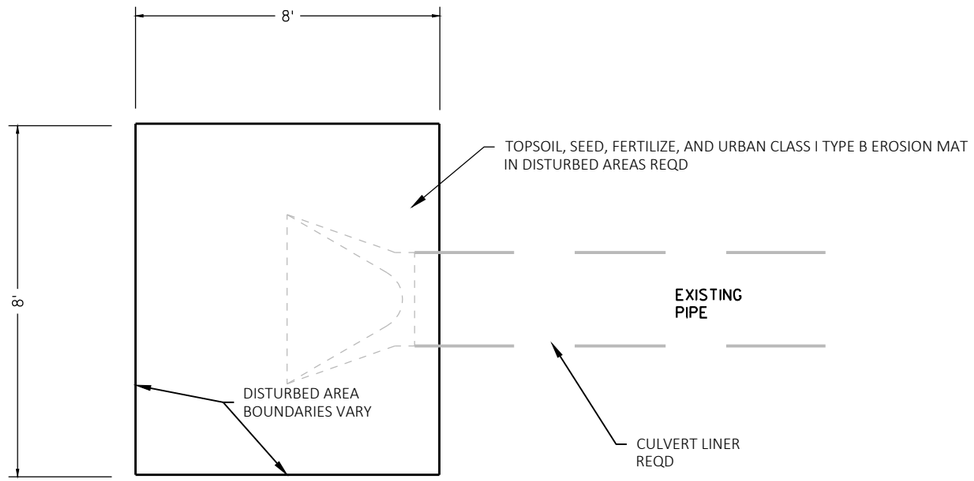
PLACE ASPHALTIC SURFACE AFTER CULVERT PIPE INSTALLATION AND BEFORE MAINLINE REMOVING SURFACE MILLING.

CULVERT PIPE TRANSITION

ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
STH 77	32+99	2.7	30"	26077000765
STH 77	87+43	2.9	30"	26077000767
STH 77	98+08	2.3	30"	26077000768
STH 77	113+80	3.8	53 X 83" HE	26077000769
STH 77	131+72	9.8	30"	26077000771
STH 77	136+30	4.1	30"	26077000772
STH 77	180+07	3.5	30"	26077000775
STH 77	196+29	9.4	36"	26077000776
STH 77	220+79	6.7	30"	26077000778
STH 77	237+63	5.8	30"	26077000780
STH 77	268+53	2.2	48 X 76" HE	26077000783
STH 77	279+35	7.9	30"	26077000784
STH 77	316+22	3.7	24"	26077000786
STH 77	336+66	2.8	36"	26077000788
STH 77	363+32	3.4	30"	26077000792
STH 77	388+95	4.0	30"	26077000793

2

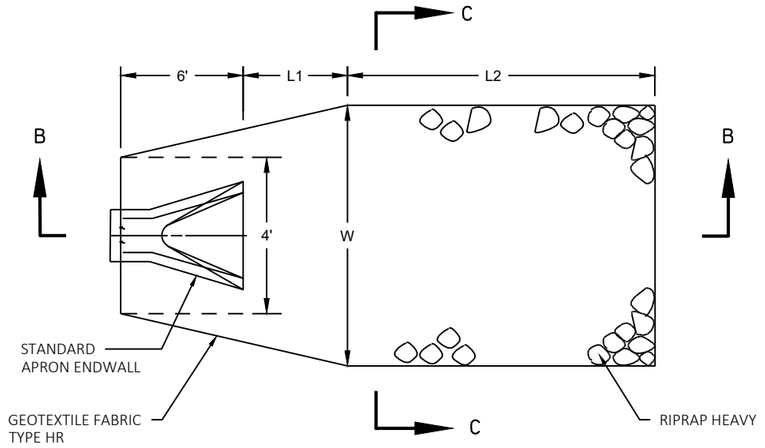




CULVERT END RESTORATION AT CULVERT LINER

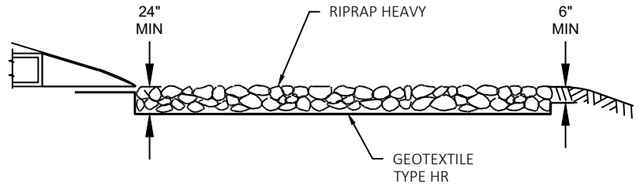
STA 205+55 LT & RT (30" CULVERT PIPE)
STA 394+97 LT & RT (24" CULVERT PIPE)

2

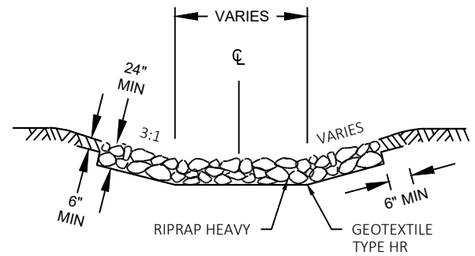


OUTLET ENDWALL RIPRAP AND GEOTEXTILE FABRIC DETAIL

STA - STA	OFFSET	W	L1	L2
98+08	32' LT	24'	3'	10'
113+80	42' LT	20'	3'	24'
131+72	62' LT	24'	3'	10'
136+30	50' LT	20'	3'	8'
167+12	47' LT	24'	3'	8'
196+29	52' LT	20'	3'	15'
237+63	64' LT	24'	3'	12'
321+66	35' LT	24'	3'	18'
388+95	50' LT	24'	3'	10'

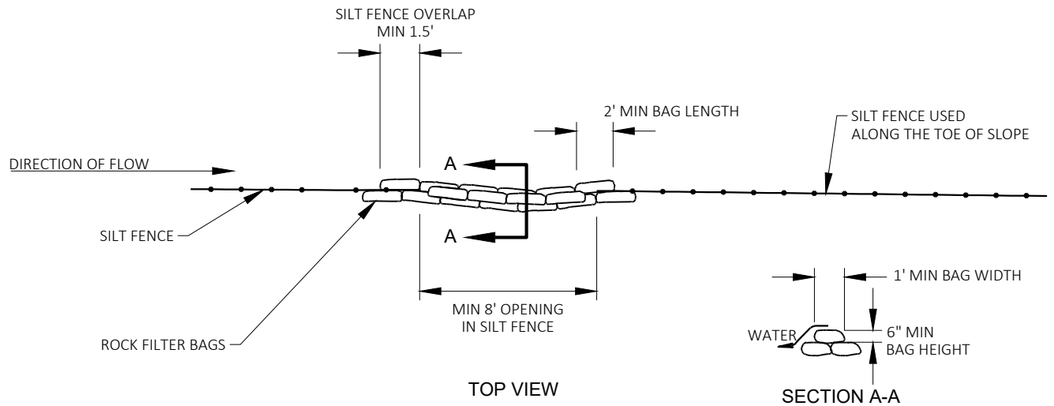


SECTION B-B



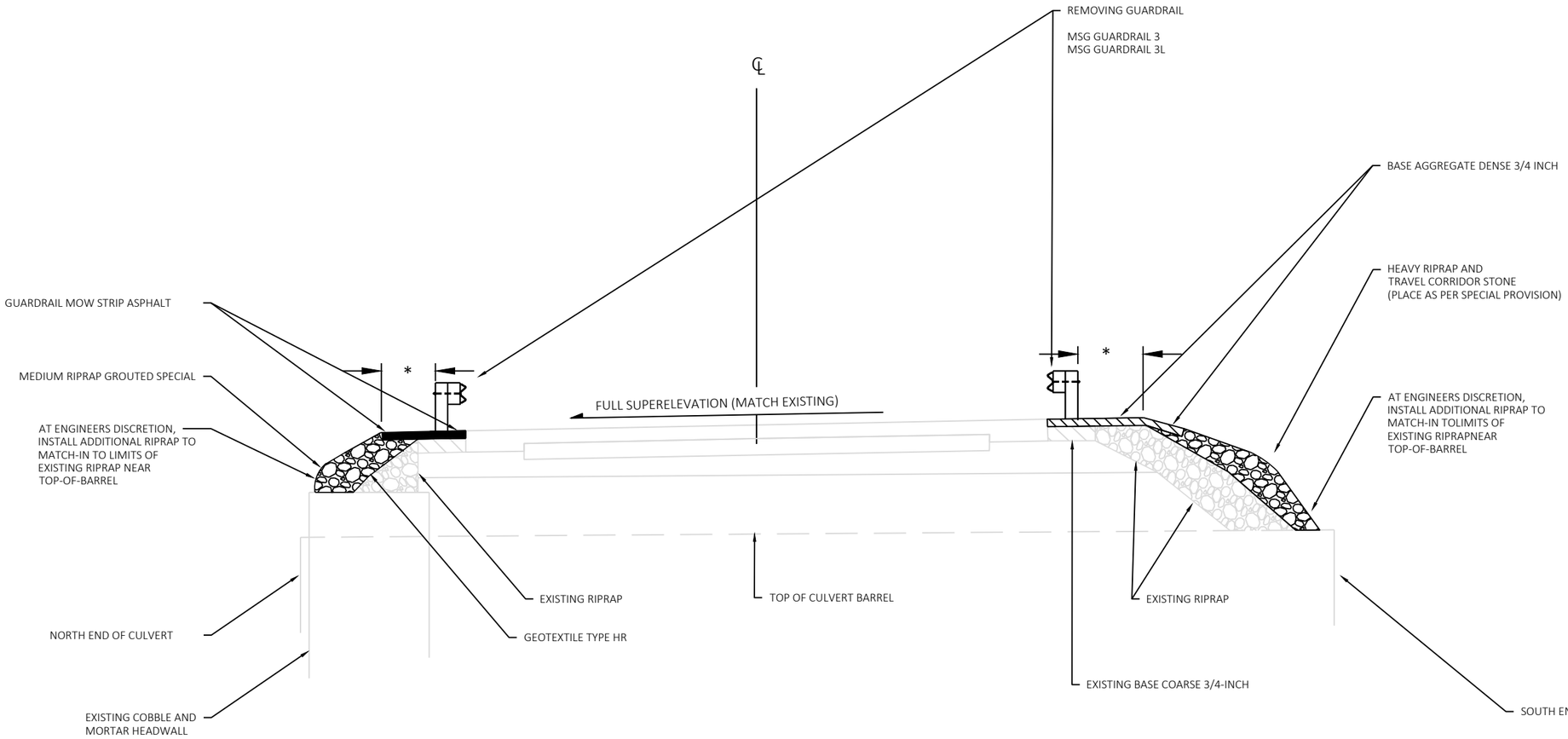
SECTION C-C

2



ROCK BAGS USED FOR SILT FENCE RELIEF

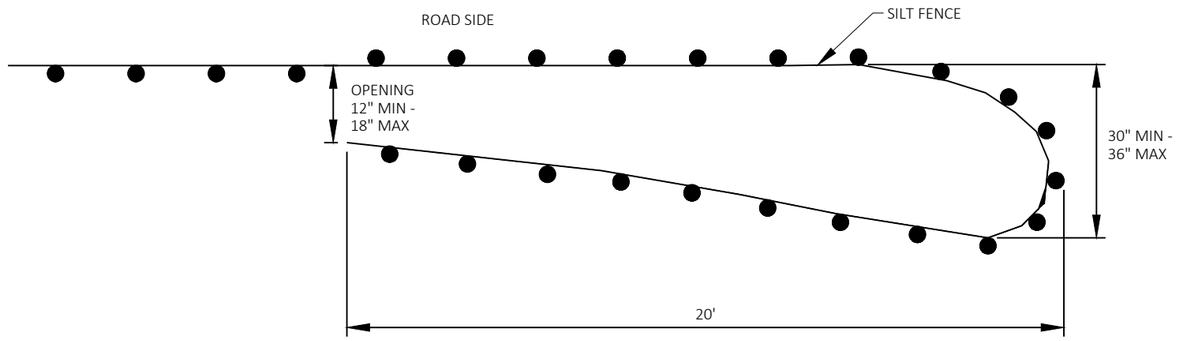
2



RIPRAP DETAIL TYLER FORKS CULVERT
C-26-922

STA 184+00 - STA 185+25

*	BACK - OF - POST TO SHOULDER - HINGE - POINT DISTANCE
2' - 0'	STA 184+50 LT TO STA 184+76.5 LT
0'	STA 184+76.5 LT TO STA 185+01.5 LT
0' - 2'	STA 185+01.5 LT TO STA 185+20 LT
2' - 0'	STA 184+60 RT TO STA 184+76.5 RT
0'	STA 184+76.5 RT TO STA 185+01.5 RT
0' - 2'	STA 185+01.5 RT TO STA 185+25 RT



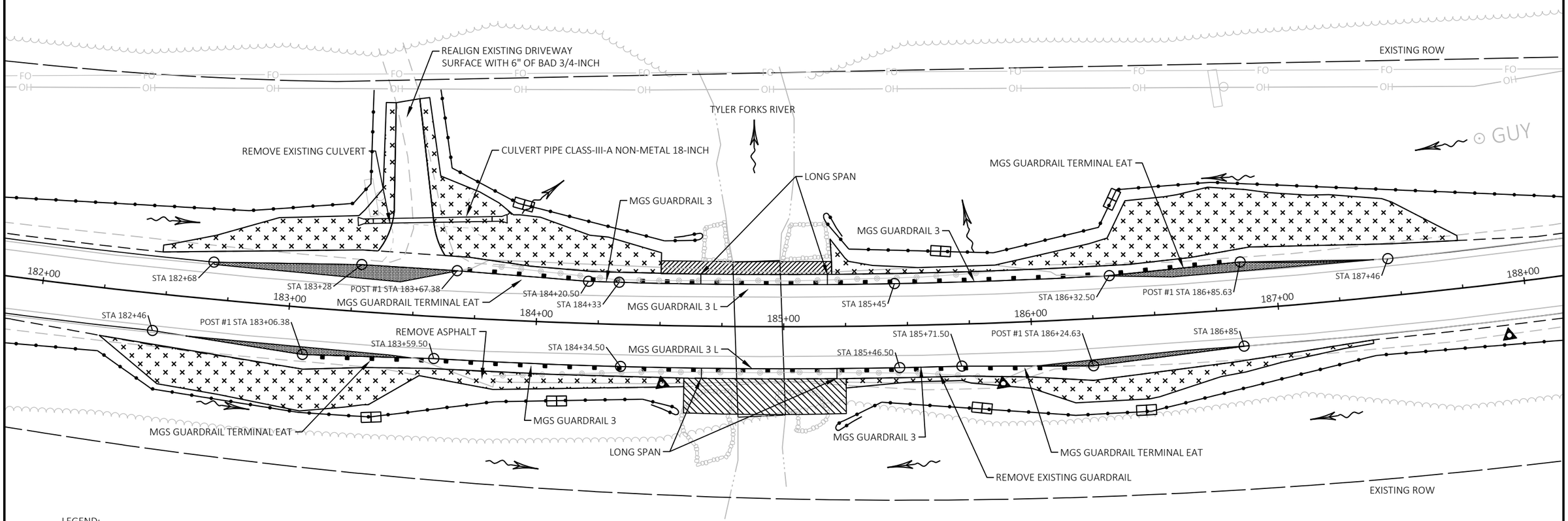
PLAN VIEW

GENERAL NOTES:

FOR THE TURN-AROUND SILT FENCE AND POSTS
- PLACE POSTS ON THE OUTSIDE OF THE TURN-AROUND
- TRENCH SILT FENCE ACCORDING TO SILT FENCE REQUIREMENTS

TEMPORARY SMALL ANIMAL TURN-AROUND

2



LEGEND:

- SILT FENCE (INSTALL SMALL ANIMAL TURN AROUND AT ALL ENDS)
- SILT FENCE RELIEF
- EROSION MAT URBAN TYPE I
- HEAVY RIPRAP (SEE CONSTRUCTION DETAIL)
- MEDIUM RIPRAP GROUTED SPECIAL (SEE CONSTRUCTION DETAIL)
- SHOULDER WIDENING
  - PREPARE FOUNDATION FOR FOR ASPHALTIC SHOULDERS
  - 2" ASPHALTIC SURFACE LOWER LIFT
  - 2" HMA PAVEMENT 4 LT 58-28 S UPPER LIFT

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CULVERT C-26-922 CONSTRUCTION DETAIL	SHEET 13	E

2

2

ROW

637
Post 1479.041
RWGP

OH

PI: 19+45.33

19+00

20+00

21+00

WETLAND BOUNDRY

WETLAND

WETLAND

ROW

PERMITTED WETLAND IMPACT
0.010 ACRES TEMPORARY IMPACT
WETLAND ID W-1

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 14	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 01

PLOT DATE : 10/18/2022 8:44 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

ROW

OH OH OH OH OH OH OH OH OH OH

HO HO HO HO HO HO HO HO HO

FO

IP 3054.286
IP 1487.442
IP RWGP

GUY

TEMP LANE SHIFT RESTORATION

PC: 33+24.16

32+00 33+00 34+00

WETLAND BOUNDRY

ROW

WETLAND

WETLAND

PERMITTED WETLAND IMPACT
0.001 ACRES PERMANENT IMPACT
WETLAND ID W-3

PERMITTED WETLAND IMPACT
0.004 ACRES TEMPORARY IMPACT
WETLAND ID W-2

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

2

2

PERMITTED WETLAND IMPACT
0.007 ACRES TEMPORARY IMPACT
WETLAND ID W-4

PERMITTED WETLAND IMPACT
0.001 ACRES PERMANENT IMPACT
WETLAND ID W-5

WETLAND BOUNDRY

ROW

WETLAND

WETLAND

TEMP LANE SHIFT RESTORATION

86+00

87+00

88+00

WETLAND BOUNDRY

ROW

WETLAND

WETLAND

PERMITTED WETLAND IMPACT
0.001 ACRES PERMANENT IMPACT
WETLAND ID W-6

PERMITTED WETLAND IMPACT
0.008 ACRES TEMPORARY IMPACT
WETLAND ID W-7

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 16	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 03

PLOT DATE : 10/18/2022 8:47 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

TEMP LANE SHIFT RESTORATION

ROW

FO

FO

FO

97+00

98+00

99+00

ROW

NO WETLANDS AT THIS LOCATION

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 17	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 04

PLOT DATE : 10/18/2022 8:48 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

PERMITTED WETLAND IMPACT
0.002 ACRES TEMPORARY IMPACT
WETLAND ID W-8

PERMITTED WETLAND IMPACT
0.005 ACRES PERMANENT IMPACT
WETLAND ID W-9

ROW

WETLAND BOUNDRY

WETLAND BOUNDRY

WETLAND

TEMP LANE SHIFT RESTORATION

113+00

114+00

115+00

WETLAND BOUNDRY

WETLAND BOUNDRY

ROW

WETLAND

WETLAND

PERMITTED WETLAND IMPACT
0.001 ACRES TEMPORARY IMPACT
WETLAND ID W-10

PERMITTED WETLAND IMPACT
0.001 ACRES PERMANENT IMPACT
WETLAND ID W-11

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 18	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 05

PLOT DATE : 10/31/2022 6:31 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

OH
FO
ROW
IP RWGP
PC 132+07.79
TEMP LANE SHIFT RESTORATION
131+00
132+00
133+00
ROW
NO WETLANDS AT THIS LOCATION

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 19	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 06

PLOT DATE : 10/18/2022 8:49 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

WETLAND BOUNDRY

PERMITTED WETLAND IMPACT
0.002 ACRES PERMANENT IMPACT
WETLAND ID W-12

WETLAND

WETLAND

ROW

TEMP LANE SHIFT RESTORATION

PT 135+63.87

135+00

136+00

137+00

WETLAND

WETLAND

PERMITTED WETLAND IMPACT
0.001 ACRES PERMANENT IMPACT
WETLAND ID W-13

WETLAND BOUNDRY

PERMITTED WETLAND IMPACT
0.005 ACRES TEMPORARY IMPACT
WETLAND ID W-14

ROW

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 20	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 07

PLOT DATE : 10/18/2022 8:50 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

PERMITTED WETLAND IMPACT
0.004 ACRES PERMANENT IMPACT
WETLAND ID W-15

WETLAND BOUNDRY

WETLAND

ROW

FO

FO

OH

PT: 165+59.69

166+00

167+00

168+00

ROW

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 21	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 08

PLOT DATE : 10/18/2022 8:51 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

ROW

ROW

TEMP LANE SHIFT RESTORATION

ROW

PI: 179+42.55

PC: 180+54.06

179+00

180+00

181+00

ROW

NO WETLANDS AT THIS LOCATION

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 22	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 09

PLOT DATE : 10/18/2022 8:52 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

ROW

OH

FO

TEMP LANE SHIFT RESTORATION

PT: 196+83.42

195+00

196+00

197+00

ROW

NO WETLANDS AT THIS LOCATION

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 23	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 11

PLOT DATE : 10/18/2022 8:54 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

ROW

FO FO FO

OH OH OH OH OH OH OH OH OH OH OH OH OH OH

WETLAND

WETLAND BOUNDRY

WETLAND

PERMITTED WETLAND IMPACT
0.011 ACRES TEMPORARY IMPACT
WETLAND ID W-16

W 6980979
1436.520
QTR S28/
IP RWGP

+00 205+00 206+00 207+00

ROW

1973
1436.520
QTR S28/

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 24	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 12

PLOT DATE : 10/18/2022 8:55 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

PERMITTED WETLAND IMPACT
0.007 ACRES TEMPORARY IMPACT
WETLAND ID W-17

ROW

WETLAND BOUNDRY

WETLAND

WETLAND

FO FO FO FO

OH OH OH OH OH OH OH OH OH OH OH OH OH

TEMP LANE SHIFT RESTORATION

220+00

221+00

222+00

ROW

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 25	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 13

PLOT DATE : 10/18/2022 8:56 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

PERMITTED WETLAND IMPACT
0.001 ACRES PERMANENT IMPACT
WETLAND ID W-18

WETLAND

WETLAND

ROW

WETLAND BOUNDRY

TEMP LANE SHIFT RESTORATION

OH OH OH OH FO OH FO FO OH OH OH OH OH OH

PC: 237+34.96

237+00

238+00

239+00

ROW

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 26	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 14

PLOT DATE : 10/18/2022 8:57 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

PERMITTED WETLAND IMPACT
0.001 ACRES TEMPORARY IMPACT
WETLAND ID W-19

ROW

WETLAND BOUNDRY

WETLAND

WETLAND

TEMP LANE SHIFT RESTORATION

OH

FO

267+00

268+00

269+00

270+00

WETLAND BOUNDRY

WETLAND

WETLAND

ROW

PERMITTED WETLAND IMPACT
0.005 ACRES TEMPORARY IMPACT
WETLAND ID W-20

PERMITTED WETLAND IMPACT
0.001 ACRES PERMANENT IMPACT
WETLAND ID W-21

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 27	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 15

PLOT DATE : 10/18/2022 8:58 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

PERMITTED WETLAND IMPACT
0.005 ACRES) TEMPORARY IMPACT
WETLAND ID W-22

WETLAND BOUNDRY

ROW

TEMP LANE SHIFT RESTORATION

278+00

279+00

280+00

WETLAND BOUNDRY

ROW

PERMITTED WETLAND IMPACT
0.004 ACRES TEMPORARY IMPACT
WETLAND ID W-23

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 28	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 16

PLOT DATE : 10/18/2022 8:58 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

2

PERMITTED WETLAND IMPACT
0.001 ACRES TEMPORARY IMPACT
WETLAND ID W-24

OH OH OH OH OH OH OH OH OH OH

WETLAND

WETLAND

WETLAND BOUNDRY

ROW

FO FO FO

TEMP LANE SHIFT RESTORATION

315+00

316+00

317+00

WETLAND

WETLAND

WETLAND BOUNDRY

ROW

PERMITTED WETLAND IMPACT
0.005 ACRES TEMPORARY IMPACT
WETLAND ID W-25

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 29	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 17

PLOT DATE : 10/18/2022 8:59 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

PERMITTED WETLAND IMPACT
0.010 ACRES PERMANENT IMPACT
WETLAND ID W-26

ROW

OH OH OH OH OH OH OH OH OH OH

WETLAND BOUNDRY

WETLAND

WETLAND

FO FO FO

321+00

322+00

323+00

WETLAND BOUNDRY

ROW

WETLAND

WETLAND

PERMITTED WETLAND IMPACT
0.008 ACRES TEMPORARY IMPACT
WETLAND ID W-27

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

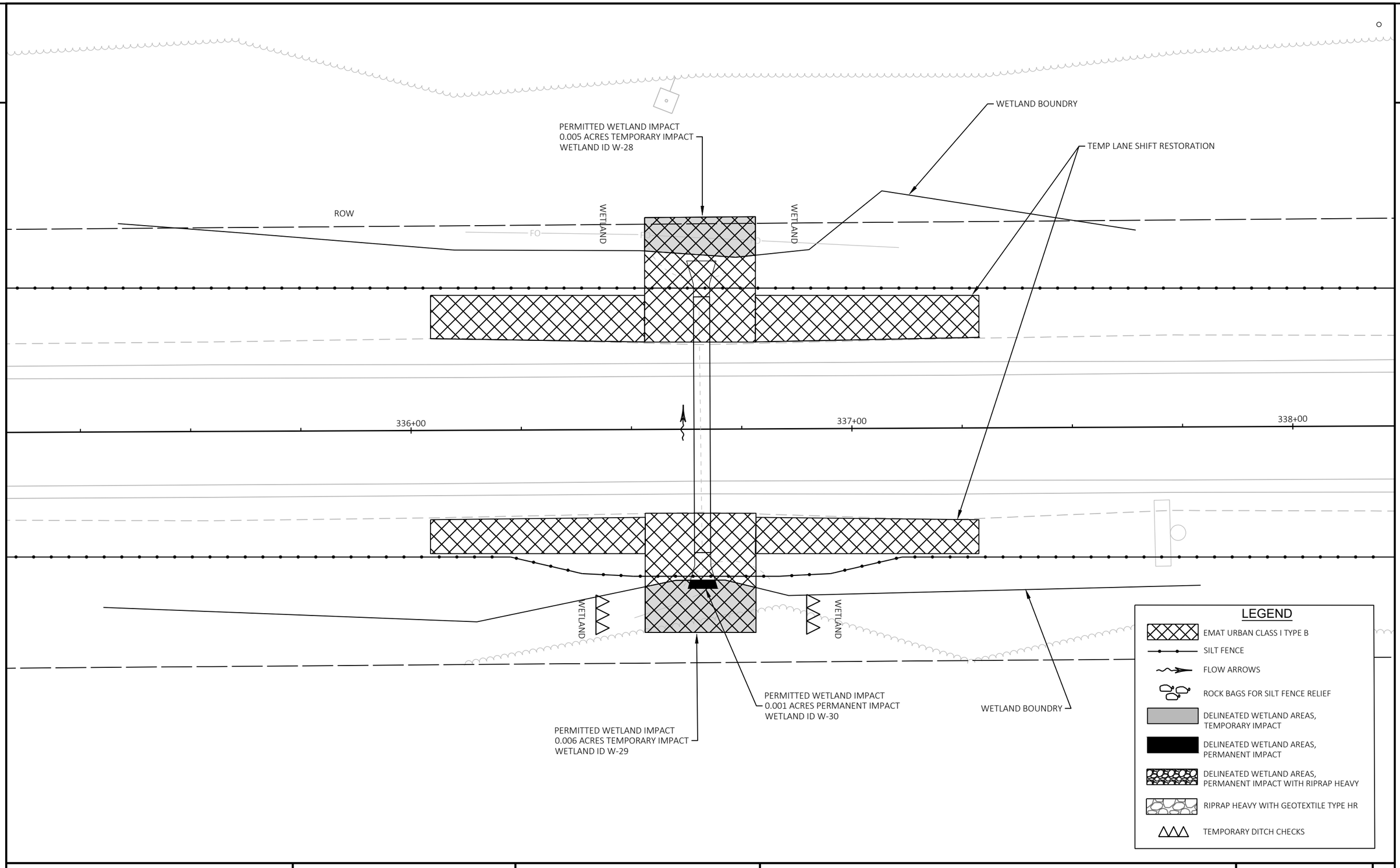
PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 30	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 18

PLOT DATE : 10/18/2022 9:00 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2



PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 31	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 19

PLOT DATE : 10/18/2022 9:01 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

OH OH OH OH OH OH OH OH OH OH OH

PERMITTED WETLAND IMPACT
0.005 ACRES TEMPORARY IMPACT
WETLAND ID W-31

WETLAND BOUNDRY

ROW

WETLAND

WETLAND

FO FO FO

TEMP LANE SHIFT RESTORATION

PI 363+54.54

362+00

363+00

364+00

WETLAND BOUNDRY

ROW

WETLAND

WETLAND

PERMITTED WETLAND IMPACT
0.001 ACRES TEMPORARY IMPACT
WETLAND ID W-32

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 32	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 20
PLOT DATE : 10/18/2022 9:01 AM
PLOT BY : OETTINGER, JEFFERY M
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 42

2

2

WETLAND BOUNDRY

ROW

WETLAND

FO

FO

WETLAND

FO

TEMP LANE SHIFT RESTORATION

PI: 388+66.73

388+00

389+00

390+00

WETLAND BOUNDRY

WETLAND

WETLAND

ROW

PERMITTED WETLAND IMPACT
0.006 ACRES TEMPORARY IMPACT
WETLAND ID W-33

LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 33	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 21

PLOT DATE : 10/18/2022 9:02 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT

2

2

WETLAND BOUNDRY

WETLAND

WETLAND

ROW

FO

FO

FO

394+00

395+00

396+00

WETLAND BOUNDRY

ROW

WETLAND

WETLAND

PERMITTED WETLAND IMPACT
0.001 ACRES TEMPORARY IMPACT
WETLAND ID W-34

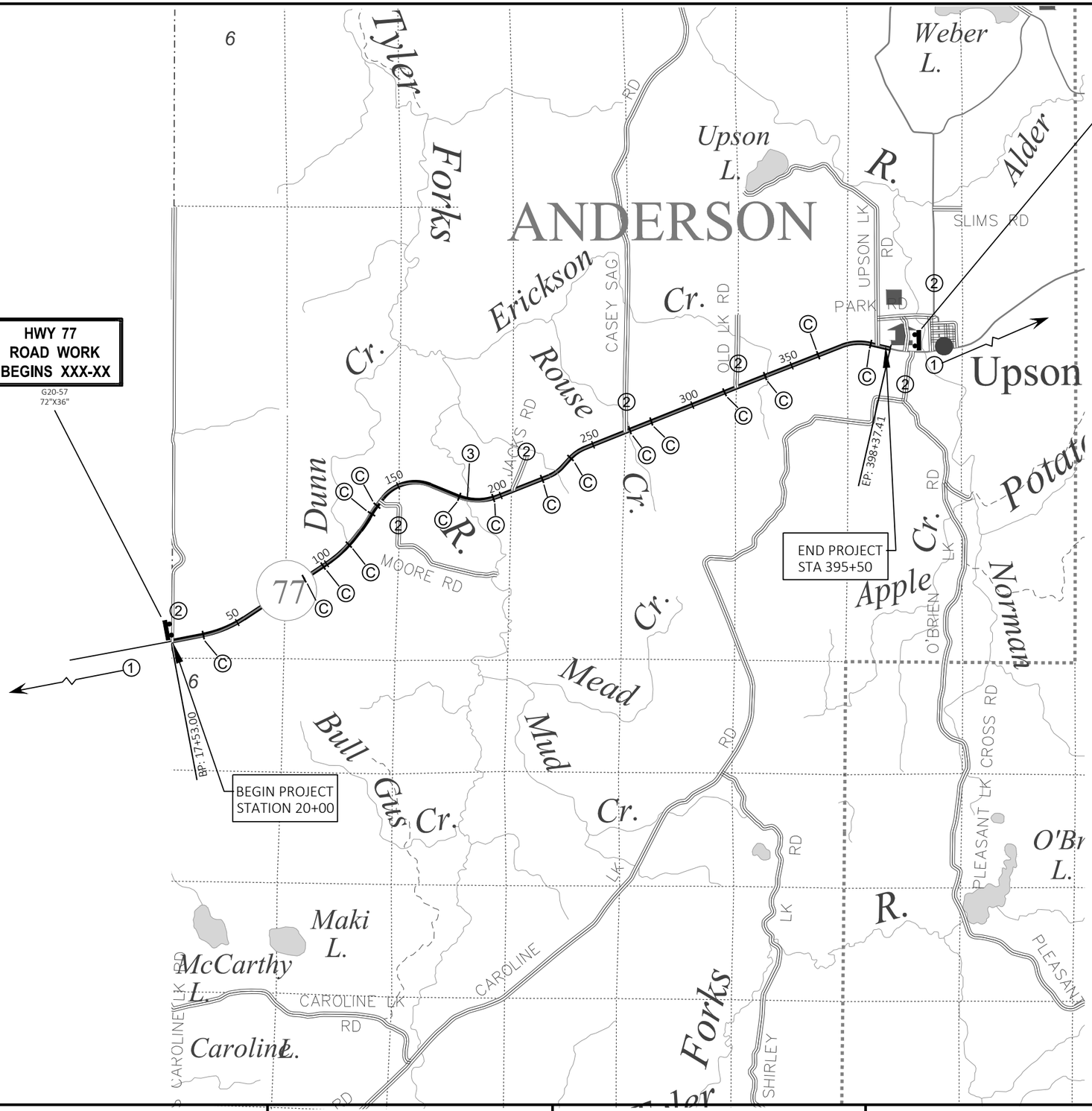
LEGEND

- EMAT URBAN CLASS I TYPE B
- SILT FENCE
- FLOW ARROWS
- ROCK BAGS FOR SILT FENCE RELIEF
- DELINEATED WETLAND AREAS, TEMPORARY IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT
- DELINEATED WETLAND AREAS, PERMANENT IMPACT WITH RIPRAP HEAVY
- RIPRAP HEAVY WITH GEOTEXTILE TYPE HR
- TEMPORARY DITCH CHECKS

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	EROSION CONTROL	SHEET 34	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\022002-EC.DWG
LAYOUT NAME - 22

PLOT DATE : 10/18/2022 9:02 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:20 FT



LEGEND

1. PLACE TRAFFIC CONTROL SIGNS PER SDD "TYPICAL CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC".
2. PLACE TRAFFIC CONTROL SIGNS PER "TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL "IN SDD" TRAFFIC CONTROL, ADVANCED WARNING SIGNS 45 M.P.H. OR GREATER, TWO WAY UNDIVIDED ROAD OPEN TO TRAFFIC".
3. PLACE TRAFFIC CONTROL SIGNS PER "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY".

C SEE SDD "TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATIONS" FOR LANE SHIFT DETAILS AT CULVERT REPLACEMENTS.

TRAFFIC CONTROL GENERAL NOTES

1. ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
2. "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
3. PLACE TRAFFIC CONTROL SIGNS AND DRUMS PER SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATONS."
4. PLACE LOW SHOULDER AND UNEVEN LANE SIGNS DURING THE MILLING AND PAVING OPERATION. SEE SDD "TRAFFIC CONTROL FOR DROP-OFF SIGNING" FOR ADDITIONAL INFORMATION.
5. PLACE GROOVED PAVEMENT AND BUMP SIGNS DURING THE MILLING AND PAVING OPERATIONS. SEE SDD "TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES." FOR ADDITIONAL INFORMATION.
6. PLACE G20-57 SIGNS 7 DAYS PRIOR TO CONSTRUCTION AND REMOVE WHEN CONSTRUCTIONS BEGINS. ADJUST THE PROJECT BEGIN DATE ACCORDINGLY.

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN: TRAFFIC CONTROL - OVERVIEW	SHEET 35	E

9250-12-61

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	19.000	19.000
0004	204.0110	Removing Asphaltic Surface	SY	65.000	65.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	99.000	99.000
0008	204.0120	Removing Asphaltic Surface Milling	SY	125,750.000	125,750.000
0010	204.0165	Removing Guardrail	LF	407.000	407.000
0012	204.9060.S	Removing (item description) 01. Apron Endwalls	EACH	2.000	2.000
0014	205.0100	Excavation Common	CY	11,200.000	11,200.000
0016	208.0100	Borrow	CY	597.000	597.000
0018	208.1500.S	Temporary Lane Shift During Culvert Work	EACH	32.000	32.000
0020	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 9250-12-61	EACH	1.000	1.000
0022	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	4.000	4.000
0024	213.0100	Finishing Roadway (project) 01. 9250-12-61	EACH	1.000	1.000
0026	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,762.000	2,762.000
0028	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	4,900.000	4,900.000
0030	305.0500	Shaping Shoulders	STA	295.000	295.000
0032	450.4000	HMA Cold Weather Paving	TON	1,250.000	1,250.000
0034	455.0605	Tack Coat	GAL	9,220.000	9,220.000
0036	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0038	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0040	460.2005	Incentive Density PWL HMA Pavement	DOL	11,515.000	11,515.000
0042	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	75,100.000	75,100.000
0044	460.2010	Incentive Air Voids HMA Pavement	DOL	14,394.000	14,394.000
0046	460.5224	HMA Pavement 4 LT 58-28 S	TON	14,497.000	14,497.000
0048	465.0105	Asphaltic Surface	TON	2,236.000	2,236.000
0050	465.0110	Asphaltic Surface Patching	TON	50.000	50.000
0052	465.0475	Asphalt Centerline Rumble Strips 2-Lane Rural	LF	35,550.000	35,550.000
0054	517.3001.S	Structure Overcoating Cleaning and Priming (structure) 01. C-26-922	EACH	1.000	1.000
0056	517.4001.S	Containment and Collection of Waste Materials (structure) 01. C-26-922	EACH	1.000	1.000
0058	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	2.000	2.000
0060	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	6.000	6.000
0062	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	24.000	24.000
0064	520.1036	Apron Endwalls for Culvert Pipe 36-Inch	EACH	2.000	2.000
0066	520.1042	Apron Endwalls for Culvert Pipe 42-Inch	EACH	2.000	2.000
0068	520.1060	Apron Endwalls for Culvert Pipe 60-Inch	EACH	2.000	2.000
0070	520.3618	Culvert Pipe Class III-B Non-metal 18-Inch	LF	48.000	48.000
0072	520.3624	Culvert Pipe Class III-B Non-metal 24-Inch	LF	64.000	64.000
0074	520.3630	Culvert Pipe Class III-B Non-metal 30-Inch	LF	784.000	784.000
0076	520.3636	Culvert Pipe Class III-B Non-metal 36-Inch	LF	60.000	60.000
0078	520.9700.S	Culvert Pipe Liners (size) 01. 24-Inch	LF	64.000	64.000
0080	520.9700.S	Culvert Pipe Liners (size) 02. 30-Inch	LF	128.000	128.000
0082	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	3.000	3.000
0084	522.0142	Culvert Pipe Reinforced Concrete Class III 42-Inch	LF	58.000	58.000
0086	522.0160	Culvert Pipe Reinforced Concrete Class III 60-Inch	LF	100.000	100.000
0088	522.2353	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 53x83-Inch	LF	68.000	68.000
0090	522.2358	Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 58x91-Inch	LF	74.000	74.000
0092	522.2653	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 53x83-Inch	EACH	2.000	2.000
0094	522.2658	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 58x91-Inch	EACH	2.000	2.000
0096	606.0200	Riprap Medium	CY	8.700	8.700
0098	606.0300	Riprap Heavy	CY	296.900	296.900

9250-12-61

Line	Item	Item Description	Unit	Total	Qty
0100	614.0396	Guardrail Mow Strip Asphalt	SY	94.000	94.000
0102	614.2300	MGS Guardrail 3	LF	200.000	200.000
0104	614.2340	MGS Guardrail 3 L	LF	224.000	224.000
0106	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0108	618.0100	Maintenance And Repair of Haul Roads (project) 01. 9250-12-61	EACH	1.000	1.000
0110	619.1000	Mobilization	EACH	1.000	1.000
0112	624.0100	Water	MGAL	133.000	133.000
0114	625.0100	Topsoil	SY	1,183.000	1,183.000
0116	625.0500	Salvaged Topsoil	SY	6,500.000	6,500.000
0118	628.1504	Silt Fence	LF	21,630.000	21,630.000
0120	628.1520	Silt Fence Maintenance	LF	21,630.000	21,630.000
0122	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0124	628.1910	Mobilizations Emergency Erosion Control	EACH	6.000	6.000
0126	628.2008	Erosion Mat Urban Class I Type B	SY	16,415.000	16,415.000
0128	628.7504	Temporary Ditch Checks	LF	400.000	400.000
0130	628.7555	Culvert Pipe Checks	EACH	183.000	183.000
0132	628.7570	Rock Bags	EACH	70.000	70.000
0134	629.0210	Fertilizer Type B	CWT	6.000	6.000
0136	630.0130	Seeding Mixture No. 30	LB	138.000	138.000
0138	630.0500	Seed Water	MGAL	172.600	172.600
0140	633.5200	Markers Culvert End	EACH	44.000	44.000
0142	638.2102	Moving Signs Type II	EACH	12.000	12.000
0144	638.4000	Moving Small Sign Supports	EACH	12.000	12.000
0146	642.5201	Field Office Type C	EACH	1.000	1.000
0148	643.0300	Traffic Control Drums	DAY	1,997.000	1,997.000
0150	643.0705	Traffic Control Warning Lights Type A	DAY	697.000	697.000
0152	643.0900	Traffic Control Signs	DAY	1,995.000	1,995.000
0154	643.1000	Traffic Control Signs Fixed Message	SF	36.000	36.000
0156	643.3105	Temporary Marking Line Paint 4-Inch	LF	34,952.000	34,952.000
0158	643.3120	Temporary Marking Line Epoxy 4-Inch	LF	39,791.000	39,791.000
0160	643.5000	Traffic Control	EACH	1.000	1.000
0162	645.0120	Geotextile Type HR	SY	533.300	533.300
0164	646.1020	Marking Line Epoxy 4-Inch	LF	114,891.000	114,891.000
0166	646.6464	Cold Weather Marking Epoxy 4-Inch	LF	39,791.000	39,791.000
0168	648.0100	Locating No-Passing Zones	MI	7.110	7.110
0170	650.6000	Construction Staking Pipe Culverts	EACH	16.000	16.000
0172	650.8000	Construction Staking Resurfacing Reference	LF	37,550.000	37,550.000
0174	650.9911	Construction Staking Supplemental Control (project) 01. 9250-12-61	EACH	1.000	1.000
0176	650.9920	Construction Staking Slope Stakes	LF	2,634.000	2,634.000
0178	690.0150	Sawing Asphalt	LF	960.000	960.000
0180	740.0440	Incentive IRI Ride	DOL	14,090.000	14,090.000
0182	SPV.0060	Special 01. Temporary Water Diversion - Station 87+43	EACH	1.000	1.000
0184	SPV.0060	Special 02. Temporary Water Diversion - Station 113+80	EACH	1.000	1.000
0186	SPV.0060	Special 03. Temporary Water Diversion - Station 196+29	EACH	1.000	1.000
0188	SPV.0060	Special 04. Temporary Water Diversion - Station 268+53	EACH	1.000	1.000
0190	SPV.0060	Special 05. Temporary Water Diversion - Station 336+66	EACH	1.000	1.000
0192	SPV.0090	Special 01. Medium Riprap Grouted Special	LF	70.000	70.000
0194	SPV.0165	Special 01. Repointing Stone Masonry	SF	150.000	150.000
0196	SPV.0195	Special 01. Travel Corridor Stone	TON	30.000	30.000

3

REMOVING ASPHALTIC SURFACE MILLING

STATION		STATION	LOCATION	COMMENTS	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS (SY)	204.0120 REMOVING ASPHALTIC SURFACE MILLING (SY)
20+00	-	395+50	STH 77	MAINLINE AND PAVED SHOULDERS	-	125167
355+75	-	357+50	STH 77	PERFORM 2" MILL PRIOR TO MAINLINE MILLING	-	583
20+00	-	20+10	STH 77	BEGIN PROJECT	33	-
395+40	-	395+50	STH 77	END PROJECT	33	-
UPSON LAKE ROAD			LT	SIDE ROAD	33	-
				TOTALS:	99	125750

NOTE: SEE GUARDRAIL QUANTITY TABLE FOR "REMOVING ASPHALTIC SURFACE" ITEM 204.0110

BASE AGGREGATE DENSE

STATION		STATION		LOCATION	COMMENTS	305.0110 BASE AGGREGATE DENSE $^{3}/_{4}$-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 $^{1}/_{4}$-INCH (TON)	305.0500 SHAPING SHOULDERS (STA)	624.0100 WATER (MGAL)
20+00	LT	- 395+50	LT	STH 77 NORTH SHOULDER	LT (NORTH) SHOULDER	1029	-	-	10
20+00	RT	- 395+50	RT	STH 77 SOUTH SHOULDER	RT (SOUTH) SHOULDER	1029	-	-	10
33+24		53+63		STH 77 CURVE SHOULDERS	LT & RT (NORTH &SOUTH) SHOULDERS			42	
99+64	-	118+63		STH 77 CURVE SHOULDERS	LT & RT (NORTH &SOUTH) SHOULDERS	-	-	37	-
122+27	-	129+67		STH 77 CURVE SHOULDERS	LT & RT (NORTH &SOUTH) SHOULDERS	-	-	15	-
132+08	-	135+64		STH 77 CURVE SHOULDERS	LT & RT (NORTH &SOUTH) SHOULDERS	-	-	7	-
140+80	-	165+60		STH 77 CURVE SHOULDERS	LT & RT (NORTH &SOUTH) SHOULDERS	-	-	50	-
180+54	-	196+85		STH 77 CURVE SHOULDERS	LT & RT (NORTH &SOUTH) SHOULDERS	-	-	33	-
224+50	-	231+63		STH 77 CURVE SHOULDERS	LT & RT (NORTH &SOUTH) SHOULDERS	-	-	14	-
237+35	-	245+99		STH 77 CURVE SHOULDERS	LT & RT (NORTH &SOUTH) SHOULDERS	-	-	17	-
375+10		388+67		STH 77 CURVE SHOULDERS	LT & RT (NORTH &SOUTH) SHOULDERS			27	
PROJECT LIMITS									
CULVERT PIPE REPLACEMENTS				AT PIPE REPLACEMENTS	SHOULDER & BASE AT TRENCH	654	4880	-	111
183+48 LT				PE DRIVEWAY	RELOCATION DUE TO BEAM GUARD	32			1
UNDISTRIBUTED				UNDISTRIBUTED	AS NEEDED	18	20	53	1
					TOTALS:	2762	4900	295	133

NOTE. CONDITIONS OF SHOULDERS AT CURVE LOCATIONS MAY VERY,
CONSULT ENGINEER FOR SHAPING SHOULDER NEEDS.

EARTHWORK

STATION		STATION	LOCATION	205.0100 EXCAVATION COMMON (CY)	(*) 208.0100 BORROW (CY)	208.1500.S TEMPORARY LANE SHIFT DURRING CULVERT WORK (EACH)
CULVERT REPLACEMENTS						
32+99			PIPE REPLACEMENT 2607700765	631	-	2
87+43			PIPE REPLACEMENT 2607700767	654	-	2
98+08			PIPE REPLACEMENT 2607700768	593	-	2
113+80			PIPE REPLACEMENT 2607700769/770	730	-	2
131+72			PIPE REPLACEMENT 2607700771	730	-	2
136+30			PIPE REPLACEMENT 2607700772	730	-	2
180+07			PIPE REPLACEMENT 2607700775	706	-	2
183+48 LT			DRIVEWAY CULVERT REPLACEMENT	0	52	-
196+29			PIPE REPLACEMENT 2607700776	730	-	2
220+79			PIPE REPLACEMENT 2607700778	730	-	2
237+63			PIPE REPLACEMENT 2607700780	730	-	2
268+53			PIPE REPLACEMENT 2607700782/783	654	50	2
279+35			PIPE REPLACEMENT 2607700784	730	-	2
316+22			PIPE REPLACEMENT 2607700786	702	-	2
336+66			PIPE REPLACEMENT 2607700788	654	-	2
363+32			PIPE REPLACEMENT 2607700792	706	-	2
388+95			PIPE REPLACEMENT 2607700793	730	-	2
GUARDRAIL						
182+45 LT	-	184+50 LT	GUARDRAIL REPLACEMENT	-	29	-
185+20 LT	-	187+75 LT	GUARDRAIL REPLACEMENT	-	72	-
182+25 RT	-	184+60 RT	GUARDRAIL REPLACEMENT	-	84	-
185+25 RT	-	187+38 RT	GUARDRAIL REPLACEMENT	-	13	-
UNDISTRIBUTED			PROJECT LIMITS (AS NEEDED)	59	50	-
			TOTALS:	11200	350	32

(*) ADDITIONAL QUANITIY SHOWN ELSEWHERE IN PLAN (*)

3

3

HMA PAVEMENT

STATION		STATION	LOCATION	COMMENTS	450.4000 HMA COLD WEATHER PAVING (TON)	455.0605 TACK COAT (GAL)	460.5224 HMA PAVEMENT 4 LT 58-28 S (TON)	465.0105 ASPHALTIC SURFACE (TON)	465.0110 ASPHALTIC SURFACE PATCHING (TON)
20+00	-	395+50	STH 77	BOTH 12-FOOT TRAVELLED LANES	-	7009	11515	-	-
20+00	-	395+50	STH 77	BOTH 3-FOOT PAVED SHOULDERS	-	1752	2879	-	-
355+75	-	357+50	STH 77	2" MILL & OVERLAY (PRIOR TO MAINLINE 1" MILL)	-	41	-	67	-
182+46	-	187+46	BEAM GUARD	EAT SHOULDER WIDENING AREAS	-	7	-	11	-
SIDE ROAD PAVING (5)			SIDE ROADS	SIDE ROAD LOCATIONS	-	-	103	-	-
CULVERT PIPE REPLACEMENTS (16)			CULVERT PIPE TRANSITIONS	CULVERT PATCHES	-	411	-	2108	-
UNDISTRIBUTED			PROJECT LIMITS	AS NEEDED PATCHING	-	-	-	50	50
UNDISTRIBUTED			PROJECT LIMITS	HMA COLD WEATHER PAVING	1250	-	-	-	-
				TOTALS:	1250	9220	14497	2236	50

PWL MIXTURE USE TABLE

LOCATION	ROADWAY	STATION (see NOTE)	MIXTURE USE	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR: MIXTURE ACCEPTANCE	QUALITY MANAGEMENT PROGRAM TO BE USED FOR: DENSITY ACCEPTANCE
Driving Lane 12-foot	STH 77 WB main line	20+00 LT 395+50 LT	Surface layer	existing apsh. Pavt.	HMA Pavement 4 LT 58-28 S	5758	2.00"	PWL Incentive Air Voids HMA Pavement, 460.2010	Incentive Density PWL HMA Pavement, 460.2005
3-foot shoulder to WB Driving Lane	STH 77 WB shoulder	20+00 LT 395+50 LT	Surface layer	existing asph. pavt.	HMA Pavement 4 LT 58-28 S	1439	2.00"	PWL Incentive Air Voids HMA Pavement, 460.2010	Acceptance testing by the Department; Not eligible for incentive of disincentive
Driving Lane 12-foot	STH 77 EB main line	20+00 RT 395+50 RT	Surface layer	existing apsh. Pavt.	HMA Pavement 4 LT 58-28 S	5758	2.00"	PWL Incentive Air Voids HMA Pavement, 460.2010	Incentive Density PWL HMA Pavement, 460.2005
3-foot shoulder to EB Driving Lane	STH 77 EB shoulder	20+00 RT 395+50 RT	Surface layer	existing asph. pavt.	HMA Pavement 4 LT 58 28 S	1439	2.00"	PWL Incentive Air Voids HMA Pavement, 460.2010	Acceptance testing by the Department; Not eligible for incentive of disincentive
Side Roads	Moore Park Rd Jacks Rd Casey Sag Rd Old Lake Rd Upson Lake Rd	139+75 RT 207+25 LT 267+00 LT 322+50 LT 392+00 LT	Surface Layer	existing asph. pavt.	HMA Pavement 4 LT 58-28 S	103	2.00"	QMP HMA Pavement, 460.2010	Acceptance testing by the Department; not eligible for incentive.

RUMBLE STRIPS

STATION		STATION	LOCATION	465.0475 ASPHALTIC CENTER LINE RUMBLE STRIP 2-LANE RURAL (LF)
20+00	-	137+84	MOORE PARK RD	11784
141+84	-	204+90	JACKS RD	6306
208+90	-	264+79	CASEY SAG RD	5589
268+79	-	320+33	OLD LAKE RD	5154
324+33	-	390+12	UPSON LAKE RD	6579
394+12	-	395+50	END PROJECT	138
			TOTAL:	35550

APRON ENDWALLS FOR CULVERT PIPE
CULVERT PIPE CLASS III NON-METAL
CULVERT PIPE REINF. CONC. HORIZ. ELLIPTICAL
APRON ENDWALLS FOR CULVERT PIPE REINF. CONC. HORIZ. ELLIPTICAL

STATION	CULVERT INFORMATION	COMMENTS	203.0100 REMOVING SMALL PIPE CULVERTS (EACH)	204.9060.S REMOVING APRON ENDWALLS (EACH)	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH (EACH)	(*) 520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH (EACH)	(*) 520.1030 APRON ENDWALLS FOR CULVERT PIPE 30-INCH (EACH)	520.1036 APRON ENDWALLS FOR CULVERT PIPE 36-INCH (EACH)	520.1042 APRON ENDWALLS FOR CULVERT PIPE 42-INCH (EACH)	520.1060 APRON ENDWALLS FOR CULVERT PIPE 60-INCH (EACH)	520.3418 CULVERT PIPE CLASS III-B NON-METAL 18-INCH (LF)	520.3424 CULVERT PIPE CLASS III-B NON-METAL 24-INCH (LF)	520.3430 CULVERT PIPE CLASS III-B NON-METAL 30-INCH (LF)	520.3436 CULVERT PIPE CLASS III-B NON-METAL 36-INCH (LF)	522.0142 CULVERT PIPE REINFORCED CONCRETE CLASS III 42-INCH (LF)	522.0160 CULVERT PIPE REINFORCED CONCRETE CLASS III 60-INCH (LF)	522.2353 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 53x83-INCH (LF)	522.2358 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 58x91-INCH (LF)	522.2653 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 53x83-INCH (EACH)	522.2658 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 58x91-INCH (EACH)
20+38	24" DIA, CULV # 26077000764	AFW-ONLY REPLACEMENT	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32+99	30" DIA, CULV # 26077000765	REPLACE CULVERT	1	-	-	-	2	-	-	-	-	-	66	-	-	-	-	-	-	-
87+43	36" DIA, CULV # 26077000767	REPLACE CULVERT	1	-	-	-	-	2	-	-	-	-	-	60	-	-	-	-	-	-
98+08	30" DIA, CULV # 26077000768	REPLACE CULVERT	1	-	-	-	2	-	-	-	-	-	58	-	-	-	-	-	-	-
113+80	58x91" HE, CULV # 26077000770	REPLACE CULVERT	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74	-	2
131+72	30" DIA, CULV # 26077000771	REPLACE CULVERT	1	-	-	-	2	-	-	-	-	-	106	-	-	-	-	-	-	-
136+30	30" DIA, CULV # 26077000772	REPLACE CULVERT	1	-	-	-	2	-	-	-	-	-	76	-	-	-	-	-	-	-
180+07	30" DIA, CULV # 26077000775	REPLACE CULVERT	1	-	-	-	2	-	-	-	-	-	76	-	-	-	-	-	-	-
183-48 LT	18" DIA, P.E. CULV	REPLACE CULVERT	1		2						48									
196+29	60" DIA, CULV # 26077000776	REPLACE CULVERT	1	-	-	-	-	-	-	2	-	-	-	-	-	100	-	-	-	-
220+79	30" DIA, CULV # 26077000778	REPLACE CULVERT	1	-	-	-	2	-	-	-	-	-	86	-	-	-	-	-	-	-
237+63	30" DIA, CULV # 26077000780	REPLACE CULVERT	1	-	-	-	2	-	-	-	-	-	90	-	-	-	-	-	-	-
268+53	53x83" HE, CULV # 26077000783	REPLACE CULVERT	2	-	-	-	-	-	-	-	-	-	-	-	-	-	68	-	2	-
279+35	30" DIA, CULV # 26077000784	REPLACE CULVERT	1				2						88							
316+22	24" DIA, CULV # 26077000786	REPLACE CULVERT	1			2						64								
336+66	42" DIA, CULV # 26077000788	REPLACE CULVERT	1	-	-	-	-	-	2	-	-	-	-	-	58	-	-	-	-	-
363+32	30" DIA, CULV # 26077000792	REPLACE CULVERT	1	-	-	-	2	-	-	-	-	-	62	-	-	-	-	-	-	-
388+95	30" DIA, CULV # 26077000793	REPLACE CULVERT	1	-	-	-	2	-	-	-	-	-	76	-	-	-	-	-	-	-
	TOTALS.		19	2	2	4	20	2	2	2	48	64	784	60	58	100	68	74	2	2

(*) ADDITIONAL QUANTITY SHOWN ELSEWHERE IN PLAN

CULVERT PIPE LINERS

STATION	COMMENTS	EXISTING SLOPE (FT/FT)	517.3001.S STRUCTURE OVERCOATING CLEANING AND PRIMING (STRUCTURE) 01. C-26-922 (EACH)	517.4001.S CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. C-26-922 (EACH)	520.9700.01.S CULVERT PIPE LINERS (SIZE) 24-INCH (LF)	520.9700.01.S CULVERT PIPE LINERS (SIZE) 30-INCH (LF)	520.9750.01.S CLEANING CULVERT PIPES FOR LINER VERIFICATION (EACH)	(*) 520.1024 APRON ENDWALLS FOR CULVERT PIPE 24-INCH (EACH)	(*) 520.1030 APRON ENDWALLS FOR CULVERT PIPE 30-INCH (EACH)
184+90	TYLER FORKS CULVERT C-26-922	-	1	1	-	-	-	-	-
205+55	30" DIA, CORRUGATED ALUMINUM CULV # 26077000777	0.004	-	-	-	62	1	-	2
321+66	30" DIA, CORRUGATED ALUMINUM CULV # 26077000787	0.016	-	-	-	66	1	-	2
394+97	24" DIA, CORRUGATED ALUMINUM CULV # 26077000794	0.006	-	-	64	-	1	2	-
	TOTALS:		1	1	64	128	3	2	4
								(*)	(*)

(*) ADDITIONAL QUANTITY SHOWN ELSEWHERE IN PLAN

3

3

EROSION CONTROL MOBILIZATIONS

STATION		STATION	LOCATION	COMMENTS	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
20+00	-	395+50	STH 77	AS NEEDED	3	6
				TOTALS:	3	6

GUARDRAIL

STATION		STATION	LOCATION	COMMENTS	204.0110 REMOVING ASPHALTIC SURFACE (SY)	204.0165 REMOVING GUARDRAIL (LF)	(*) 208.0100 BORROW (CY)	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS (STA)	614.0396 GUARDRAIL MOW STRIP ASPHALT (SY)	614.2300 MGS GUARDRAIL 3 (LF)	614.2340 MGS GUARDRAIL 3L (LF)	614.2610 MGS GUARDRAIL TERMINAL EAT (LF)
183+81 LT	-	185+86 LT	NORTH SIDE STH 77	15' LT TO BACK OF POST	36	205	-	-	-	-	-	-
183+84 LT		185+86 RT	SOUTH SIDE STH 77	15' RT TO BACK OF POST	29	202						
182+68 LT		183+67 LT	NORTH SIDE STH 77	APPROACH PAVING WIDENING				1				
186+32 LT	-	187+46 LT	NORTH SIDE STH 77	APPROACH PAVING WIDENING	-	-	-	1	-	-	-	-
182+46 RT	-	183+60 RT	SOUTH SIDE STH 77	APPROACH PAVING WIDENING	-	-	-	1	-	-	-	-
186+03 RT		186+85 RT	SOUTH SIDE STH 77	APPROACH PAVING WIDENING				1				
183+67.4 LT	-	184+20.5 LT	NORTH SIDE STH 77	EAT ASSEMBLY	-	-	36	-	-	-	-	1
184+20.5 LT	-	184+33 LT	NORTH SIDE STH 77	MGS 3 INSTALLATION	-	-	-	-	-	12.5		-
184+33 LT	-	185+45 LT	NORTH SIDE STH 77	MSG 3L INSTALLATION	-	-	-	-	-		112	-
185+45 LT	-	186+32.5 LT	NORTH SIDE STH 77	MSG 3 INSTALLATION	-	-	-	-	-	87.5		-
186+32.5 LT	-	186+85.6 LT	NORTH SIDE STH 77	EAT ASSEMBLY	-	-	90	-	-	-	-	1
184+50 LT	-	185+20 LT	NORTH SIDE STH 77	GROUTED RIPRAP	-	-	-	-	-	-	-	-
184+20.5 LT	-	186+32.5 LT	NORTH SIDE STH 77	MOW STRIP	-	-	-	-	94	-	-	-
183+06.4 RT	-	183+59.5 RT	SOUTH SIDE STH 77	EAT ASSEMBLY	-	-	105	-	-	-	-	1
183+59.5 RT		184+35.5 RT	SOUTH SIDE STH 77	MSG 3 INSTALLATION						75		
184+34.5 RT		185+46.5 RT	SOUTH SIDE STH 77	MSG 3L INSTALLATION							112	
185+46.5 RT	-	185+71.5 RT	SOUTH SIDE STH 77	MSG 3 INSTALLATION	-	-	-	-	-	25	-	-
185+71.5 RT		186+24.6 RT	SOUTH SIDE STH 77	EAT ASSEMBLY			16					1
184+60 RT	-	185+25 RT	SOUTH SIDE STH 77	RIPRAP, CORRIDOR STONE	-	-	-	-	-	-	-	-
				TOTALS:	65	407	247	4	94	200	224	4
(*) ADDITIONAL QUANITIY SHOWN ELSEWHERE IN PLAN							(*)					

3

LANDSCAPING

STATION	-	STATION	LOCATION	625.0100 TOPSOIL (SY)	625.0500 SALVAGED TOPSOIL (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0130 SEEDING MIXTURE NO. 30 (LB)	630.0500 SEED WATER (MGAL)
CULVERT REPLACEMENTS								
32+99			PIPE REPLACEMENT 2607700765	-	317	0.2	5.7	7.1
87+43			PIPE REPLACEMENT 2607700767	-	394	0.3	7.1	8.8
98+08			PIPE REPLACEMENT 2607700768	-	360	0.3	6.5	8.1
113+80			PIPE REPLACEMENT 2607700769/770		407	0.3	7.3	9.1
131+72			PIPE REPLACEMENT 2607700771		456	0.3	8.2	10.2
136+30			PIPE REPLACEMENT 2607700772	-	334	0.3	6.0	7.5
180+07			PIPE REPLACEMENT 2607700775		348	0.3	6.3	7.8
183+48 LT			DRIVEWAY CULVERT REPLACEMENT		210	0.2	3.8	4.7
196+29			PIPE REPLACEMENT 2607700776	-	376	0.3	6.8	8.4
220+79			PIPE REPLACEMENT 2607700778	-	183	0.2	3.3	4.1
237+63			PIPE REPLACEMENT 2607700780	-	391	0.3	7.0	8.8
268+53			PIPE REPLACEMENT 2607700782/783	-	429	0.3	7.7	9.6
279+35			PIPE REPLACEMENT 2607700784	-	410	0.3	7.4	9.2
316+22			PIPE REPLACEMENT 2607700786	-	344	0.3	6.2	7.7
336+66			PIPE REPLACEMENT 2607700788	-	351	0.3	6.3	7.9
363+32			PIPE REPLACEMENT 2607700792	-	353	0.3	6.4	7.9
388+95			PIPE REPLACEMENT 2607700793	-	343	0.3	6.2	7.7
CULVERT LINERS								
205+55			CULVERT LINER 2607700777	-	186	0.2	3.3	4.2
321+66			CULVERT LINER 2607700787	-	69	0.1	1.2	1.5
394+97			CULVERT LINER 2607700794	-	100	0.1	1.8	2.2
ENDWALL ONLY REPLACEMENTS								
20+38			ENDWALL REPLACEMENTS		139	0.1	2.5	3.1
GUARDRAIL								
182+45 LT	-	184+50 LT	GUARDRAIL REPLACEMENT	348	-	0.3	6.3	7.8
185+20 LT		187+75 LT	GUARDRAIL REPLACEMENT	374		0.3	6.7	8.4
182+25 RT	-	184+60 RT	GUARDRAIL REPLACEMENT	255	-	0.2	4.6	5.7
185+25 RT	-	187+38 RT	GUARDRAIL REPLACEMENT	114	-	0.1	2.1	2.6
SCOUR PROTECTION								
167+12 LT			LT (NORTH) OUTFALL SCOUR	92	-	0.1	1.7	2.1
UNDISTRIBUTED			PROJECT LIMITS					
			TOTALS:	1183	6500	6	138	172.6

RIPRAP
GEOTEXTILE FABRIC

STATION	-	STATION	OFFSET	COMMENTS	606.0200 RIPRAP MEDIUM (CY)	606.0300 RIPRAP HEAVY (CY)	645.0120 GEOTEXTILE TYPE HR (SY)	SPV.0165.01 REPOINTING STONE MASONRY (SF)	SPV.0090.01 MEDIUM RIPRAP GROUTED SPECIAL (LF)	SPV.0195.01 TRAVEL CORRIDOR STONE (TON)
98+08		-	32' LT	CULVERT OUTFALL	-	17.3	54.9	-	-	-
113+80		-	42' LT	CULVERT OUTFALL	-	30.0	80.7	-	-	-
131+72		-	62' LT	CULVERT OUTFALL	-	17.3	54.9	-	-	-
136+30		-	50' LT	CULVERT OUTFALL	-	12.2	41.6	-	-	-
167+12		-	47' LT	CULVERT OUTFALL	-	14.7	49.1	-	-	-
184+50	-	185+20	21' LT	NORTH SIDE STH 77	-	-	-	-	70	-
184+60	-	185+25	21' RT	SOUTH SIDE STH 77	-	120	-	-	-	30
184+60	-	184+76	21' RT	BEHIND GUARDRAIL	3.6	-	-	-	-	-
184+90				NW WINGWALL	-	-	-	75	-	-
184+90				WEST ABUTMENT	-	-	-	5	-	-
184+90				NE WINGWALL	-	-	-	25	-	-
184+90				EAST ABUTMENT	-	-	-	25	-	-
185+02	-	185+25	21' RT	BEHIND GUARDRAIL	5.1	-	-	-	-	-
196+29		-	52' LT	CULVERT OUTFALL	-	20.0	58.7	-	-	-
237+63		-	64' LT	CULVERT OUTFALL	-	20.0	60.7	-	-	-
321+66		-	35' LT	CULVERT OUTFALL	-	28.0	78.0	-	-	-
388+95		-	50' LT	CULVERT OUTFALL	-	17.3	54.9	-	-	-
				UNDISTRIBUTED				20		
				TOTALS:	8.7	296.9	533.3	150	70	30

3

EROSION CONTROL

STATION	-	STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	628.7504 TEMPORARY DITCH CHECKS (LF)	628.7570 ROCK BAGS (EACH)	628.7555 CULVERT PIPE CHECKS (EACH)
CULVERT REPLACEMENTS									
32+99			PIPE REPLACEMENT 2607700765	170	170	317	40		5
87+43			PIPE REPLACEMENT 2607700767	170	170	394	40	-	10
98+08			PIPE REPLACEMENT 2607700768	170	170	360	40	-	10
113+80			*PIPE REPLACEMENT 2607700769/770	-	-	407	20	-	15
131+72			PIPE REPLACEMENT 2607700771	170	170	456	20	-	10
136+30			PIPE REPLACEMENT 2607700772	170	170	334	20	-	10
180+07			*PIPE REPLACEMENT 2607700775	-	-	348	20	-	10
183+48 LT			*DRIVEWAY CULVERT REPLACEMENT			210			5
196+29			PIPE REPLACEMENT 2607700776	170	170	376	20	-	10
220+79			PIPE REPLACEMENT 2607700778	170	170	183	20	-	10
237+63			PIPE REPLACEMENT 2607700780	175	175	391	20	-	10
268+53			*PIPE REPLACEMENT 2607700782/783	-	-	429	30	-	15
279+35			PIPE REPLACEMENT 2607700784	170	170	410	10	-	10
316+22			PIPE REPLACEMENT 2607700786	170	170	344	20	-	5
336+66			*PIPE REPLACEMENT 2607700788			351	20		10
363+32			*PIPE REPLACEMENT 2607700792	-	-	353	-	-	10
388+95			PIPE REPLACEMENT 2607700793	170	170	343	20	-	10
CULVERT LINERS									
205+55			CULVERT LINER 2607700777	165	165	186	-	-	5
321+66			CULVERT LINER 2607700787	-	-	69	10	-	5
394+97			CULVERT LINER 2607700794			100	20		5
ENDWALL ONLY REPLACEMENTS									
20+38			ENDWALL REPLACEMENTS	-	-	139	10	-	3
GUARDRAIL									
182+45 LT	-	184+50 LT	GUARDRAIL REPLACEMENT	-	-	3129	-	10	-
185+20 LT	-	187+75 LT	GUARDRAIL REPLACEMENT	-	-	3368	-	20	-
182+25 RT	-	184+60 RT	GUARDRAIL REPLACEMENT	-	-	2297	-	20	-
185+25 RT	-	187+38 RT	GUARDRAIL REPLACEMENT	-	-	1029	-	20	-
RARY SMALL ANIMAL TURNAROUND									
105+00		123+00	BOTH SIDES OF ROADWAY	3680	3680				
175+00		194+75	BOTH SIDES OF ROADWAY	4065	4065				
258+75	-	278+50	BOTH SIDES OF ROADWAY	4050	4050	-	-	-	-
327+00	-	365+50	BOTH SIDES OF ROADWAY	7795	7795	-	-	-	-
SCOUR PROTECTION									
167+12 LT				-	-	92	-	-	-
UNDISTRIBUTED			PROJECT LIMITS						
			TOTALS:	21630	21630	16415	400	70	183

NOTE: STATIONING FOR TEMPORARY SMALL ANIMAL TURNAROUND SILT FENCING MAY VARY,

CONSULT LEAD PROJECT ENGINEER FOR ACCEPTIBLE TURNAROUND LOCATIONS.

FOLLOW CONSTRUCTION DETAIL AND PLAN SHEET FOR PLACING TEMPORARY SMALL ANIMAL TURNAROUND AND GAPPING DRIVEWAYS.

*SILT FENCE FROM SMALL ANIMAL TURNAROUND SEGMENTS COVER PIPE REPLACEMENT AND GUARDRAIL WORK LOCATIONS.

3

MARKERS CULVERT END

STATION	COMMENTS	PIPE NUMBER	633.5200 MARKERS CULVERT END (EACH)
20+38	ENDWALL REPLACEMENT	26077000765	2
32+99	PIPE REPLACEMENT	26077000765	2
87+43	PIPE REPLACEMENT	26077000767	2
98+08	PIPE REPLACEMENT	26077000768	2
113+80	PIPE REPLACEMENT	26077000769/70	2
131+72	PIPE REPLACEMENT	26077000771	2
136+30	PIPE REPLACEMENT	26077000772	2
167+12	SCOUR REPAIR, LT	26077000774	2
180+07	PIPE REPLACEMENT	26077000775	2
185+00	TYLER FORKS RIVER	C-26-922	2
196+29	PIPE REPLACEMENT	26077000776	2
205+55	LINER PLACEMENT IN PIPE	26077000777	2
220+79	PIPE REPLACEMENT	26077000778	2
237+63	PIPE REPLACEMENT	26077000780	2
268+53	PIPE REPLACEMENT	26077000782/83	2
279+35	PIPE REPLACEMENT	26077000784	2
316+22	PIPE REPLACEMENT	26077000786	2
321+66	LINER PLACEMENT IN PIPE	26077000787	2
336+66	PIPE REPLACEMENT	26077000788	2
363+32	PIPE REPLACEMENT	26077000792	2
388+95	PIPE REPLACEMENT	26077000793	2
394+97	LINER PLACEMENT IN PIPE	26077000794	2
	TOTALS:		44

PERMANENT SIGNING ITEMS

LOCATION	REMARKS	(*) 638.2102 MOVING SIGNS TYPE II (EACH)	(*) 638.4000 MOVING SMALL SIGN SUPPORTS (EACH)
PROJECT LIMITS	NO PASSING ZONE SIGNS	12	12
		12	12

(*) USE ITEM AS DIRECTED BY ENGINEER FOR NO PASSING ZONE SIGNS THAT MUST BE MOVED

TRAFFIC CONTROL

STATION		STATION	LOCATION	643.0300 TRAFFIC CONTROL DRUMS (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE (SF)
PROJECT LIMITS							
20+00	-	395+50	STH 77	-	1464	-	36
PIPE REPLACEMENTS							
32+99			30" DIA, CULV # 26077000765	60	24	30	-
87+43			36" DIA, CULV # 26077000767	60	24	30	-
98+08			30" DIA, CULV # 26077000768	60	24	30	-
113+80			53X83" DIA, CULV # 26077000769/70	60	24	30	-
131+72			30" DIA, CULV # 26077000771	60	24	30	-
136+30			30" DIA, CULV # 26077000772	60	24	30	-
180+07			30" DIA, CULV # 26077000775	60	24	30	-
196+29			36" DIA, CULV # 26077000776	60	24	30	-
220+79			30" DIA, CULV # 26077000778	60	24	30	
237+63			30" DIA, CULV # 26077000780	60	24	30	
268+53			48X76" DIA, CULV # 26077000782/83	60	24	30	-
279+35			30" DIA, CULV # 26077000784	60	24	30	
316+22			24" DIA, CULV # 26077000786	60	24	30	
336+66			36" DIA, CULV # 26077000788	60	24	30	-
363+32			30" DIA, CULV # 26077000792	60	24	30	-
388+95			30" DIA, CULV # 26077000793	60	24	30	-
CULVERT PIPE LINERS							
205+55			30" DIA, CULV # 26077000777	24	6	10	-
321+66			30" DIA, CULV # 26077000787	24	6	10	-
394+97			24" DIA, CULV # 26077000794	24	6	10	-
ENDWALL-ONLY REPLACEMENTS							
20+38			24" DIA, CULV # 26077000764	24	2	10	-
GUARDRAIL							
182+00 LT	-	188+50 LT	LT SHOULDER	420	14	70	-
182+00 RT	-	188+50 RT	RT SHOULDER	420	14	70	-
SCOUR PROTECTION							
167+12 LT			30" DIA, CULV # 26077000774	24	2	10	
2-INCH DEPTH MILL AND OVERLAY (PRIOR TO MAINLINE MILLING)							
355+75		357+50			4		
PAVEMENT MARKING OPERATIONS							
20+00	-	395+50		-	16	-	-
UNDISTRIBUTED			PROJECT LIMITS	77	77	27	-
			TOTALS:	1997	1995	697	36

3

PAVEMENT MARKING

STATION	-	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH (LF)	646.6464 COLD WEATHER MARKING EPOXY 4-INCH	648.0100 LOCATING NO-PASSING ZONES (MI)	643.3105 TEMPORARY MARKING LINE PAINT 4-INCH (LF)	643.3120 TEMPORARY MARKING LINE EPOXY 4-INCH (LF)
20+00	-	395+50	CENTERLINE	39791	39791	7.11	34952	39791
20+00	-	395+50	EDGELINE LT	37550	-	-	-	-
20+00	-	395+50	EDGELINE RT	37550	-	-	-	-
			TOTALS:	114891	39791	7.11	34952	39791

TEMPORARY PAINT ON CL MILLED SURFACES.

TEMPORARY EPOXY AT CL ON NEW HMA, PRIOR TO CL RUMBLE STRIPS INSTALLATION.

PERMANENT MARKING APPLIED TO CL AFTER CUTTING RUMBLE STRIPS.

TEMPORARY WATER DIVERSION

STATION	CULERT NUMBER	STREAM NAME	SPV.0060.01 TEMPORARY WATER DIVERSION STATION 87+43 (EACH)	SPV.0060.02 TEMPORARY WATER DIVERSION STATION 113+80 (EACH)	SPV.0060.03 TEMPORARY WATER DIVERSION STATION 196+29 (EACH)	SPV.0060.04 TEMPORARY WATER DIVERSION STATION 268+53 (EACH)	SPV.0060.05 TEMPORARY WATER DIVERSION STATION 336+66 (EACH)
STA 87+43	2607700767	DUNN CREEK	1	-	-	-	-
STA 113+80	2607700769/70	JAVORSKY CREEK	-	1	-	-	-
STA 196+29	2607700776	TRIBUTARY TYLER FORKS	-	-	1	-	-
STA 268+53	2607700782/83	ROUSE CREEK	-	-	-	1	-
STA 336+66	2607700788	ERICKSON CREEK	-	-	-	-	1
			1	1	1	1	1

CONSTRUCTION STAKING

STATION		STATION	COMMENT	650.6000 CONSTRUCTION STAKING PIPE CULVERTS (EACH)	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE (LF)	650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)
20+00	-	395+50	PROJECT LIMITS	-	37550	-
32+99			CULVERT REPLACEMENT	1		110
87+43			CULVERT REPLACEMENT	1	-	110
98+08			CULVERT REPLACEMENT	1	-	110
113+80			CULVERT REPLACEMENT	1		110
131+72			CULVERT REPLACEMENT	1	-	110
136+30			CULVERT REPLACEMENT	1	-	110
180+07			CULVERT REPLACEMENT	1		110
183+48 LT			CULVERT REPLACEMENT	1	-	67
220+79			CULVERT REPLACEMENT	1	-	110
237+63			CULVERT REPLACEMENT	1		110
268+53			CULVERT REPLACEMENT	1	-	110
279+35			CULVERT REPLACEMENT	1	-	110
316+22			CULVERT REPLACEMENT	1	-	110
336+66			CULVERT REPLACEMENT	1	-	110
363+32			CULVERT REPLACEMENT	1	-	110
388+95			CULVERT REPLACEMENT	1	-	110
182+46	-	187+46	GUARDRAIL	-	-	917
				16	37550	2634

SAWING ASPHALT

STATION	LOCATION	COMMENTS	690.0150 SAWING ASPHALT (LF)
32+99	CULVERT REPLACEMENT	TRENCH LIMITS	60
87+43	CULVERT REPLACEMENT	TRENCH LIMITS	60
98+08	CULVERT REPLACEMENT	TRENCH LIMITS	60
113+80	CULVERT REPLACEMENT	TRENCH LIMITS	60
131+72	CULVERT REPLACEMENT	TRENCH LIMITS	60
136+30	CULVERT REPLACEMENT	TRENCH LIMITS	60
180+07	CULVERT REPLACEMENT	TRENCH LIMITS	60
196+29	CULVERT REPLACEMENT	TRENCH LIMITS	60
220+79	CULVERT REPLACEMENT	TRENCH LIMITS	60
237+63	CULVERT REPLACEMENT	TRENCH LIMITS	60
268+53	CULVERT REPLACEMENT	TRENCH LIMITS	60
279+35	CULVERT REPLACEMENT	TRENCH LIMITS	60
316+22	CULVERT REPLACEMENT	TRENCH LIMITS	60
336+66	CULVERT REPLACEMENT	TRENCH LIMITS	60
363+32	CULVERT REPLACEMENT	TRENCH LIMITS	60
388+95	CULVERT REPLACEMENT	TRENCH LIMITS	60
	TOTAL:		960

BEGIN PROJECT 9250-12-61
STA 20+00
MATCH EXISTING

COUNTY LINE RD

BURIED FIBEROPTIC
CENTURY TEL

OVERHEAD ELECTRIC
XCEL ENERGY

EXIST ROW

BP: 17+53.00

PI: 19+45.33

18+00 19+00 20+00 21+00 22+00 23+00 24+00 25+00 26+00 27+00 28+00 29+00 30+00 31+00 32+00

STH 77

EXIST ROW

BUTT JOINT REQD

STA 20+38
APRON ENDWALLS FOR CULVERT PIPE 24-INCH

N

5

5

BURIED FIBEROPTIC
CENTURY TEL

STA 32+99
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE CLASS III-B NON-METAL 30-INCH
APRON ENDWALLS FOR CULVERT PIPE 30-INCH
STA 32+99 , 29.60' LT , INV 1469.00
STA 32+99 , 36.40' RT , INV 1468.35
SLOPE 0.01 '/'

OVERHEAD ELECTRIC
XCEL ENERGY

PI STA = 43+56.61
DELTA = 22°21'18"
D = 1°05'48"
T = 1032.44'
L = 2038.62'
R = 5225.00'
PC STA = 33+24.16
PT STA = 53+62.79

PC: 33+24.16

GUY

EXIST ROW

32+00 33+00 34+00 35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00 43+00 44+00 45+00 46+00 47+00

STH 77

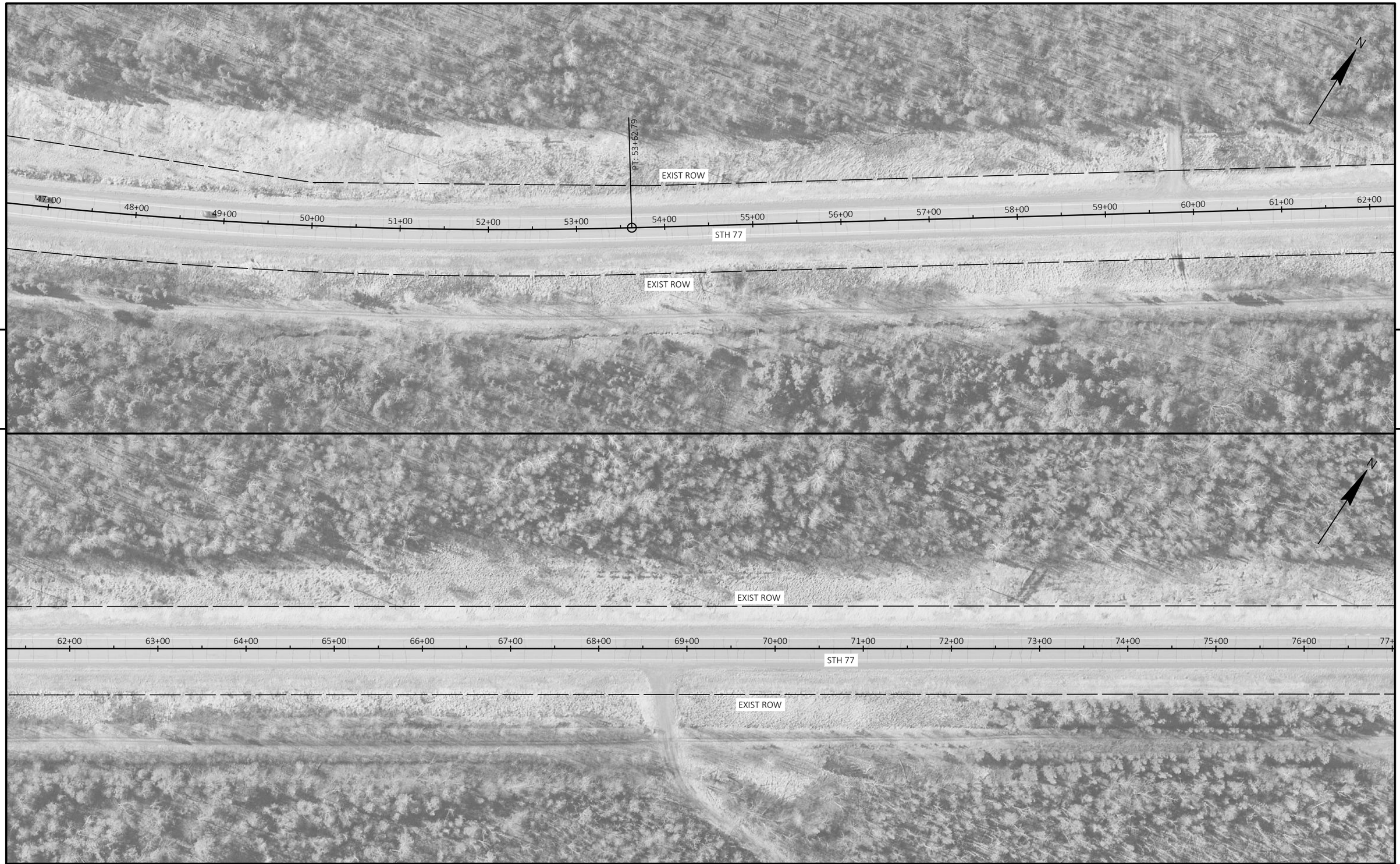
EXIST ROW

N

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 46	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 01

PLOT DATE : 3/10/2023 8:40 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT



5 5

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 47	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 02

PLOT DATE : 3/10/2023 8:40 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

STA 87+43
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE CLASS III-B NON-METAL 36-INCH
APRON ENDWALLS FOR CULVERT PIPE 36-INCH
STA 87+46 , 29.00' LT , 1481.80
STA 87+40 , 31.00' RT , 1481.80
SLOPE 0.0 '/'

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

OH OH OH OH OH

EXIST ROW

00 77+00 78+00 79+00 80+00 81+00 82+00 83+00 84+00 85+00 86+00 87+00 88+00 89+00 90+00 91+00

STH 77

EXIST ROW

5

5

STA 98+08
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE CLASS III-B NON-METAL 30-INCH
APRON ENDWALLS FOR CULVERT PIPE 30-INCH
STA 98+08 , 28.00' LT , INV 1469.19
STA 98+08 , 30.00' RT , INV 1470.60
SLOPE 0.0243 '/'
RIPRAP HEAVY REQD AT LT OUTFALL

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

PC: 99+64.35

EXIST ROW

91+00 92+00 93+00 94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00 103+00 104+00 105+00 106+00

STH 77

EXIST ROW

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 48	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 03

PLOT DATE : 3/10/2023 8:40 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

STA 113+72
REMOVING SMALL PIPE CULVERTS

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

PI STA = 109+04.83
DELTA = 18°25'15"
D = 0°59'16"
T = 940.48'
L = 1864.72'
R = 5800.00'
PC STA = 99+64.35
PT STA = 118+29.08

EXIST ROW

106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00 119+00 120+00 121+00

STH 77

EXIST ROW

STA 113+80
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 58x91-INCH
APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 58x91-INCH
STA 113+82 , 35.00' LT , INV 1444.00
STA 113+78 , 39.00' RT , INV 1444.37
SLOPE 0.005 '/'
RIPRAP HEAVY REQD AT CHANNEL SIDES AT LT SIDE, BUT NOT IN THE STREAM

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

PI STA = 133+86.05
DELTA = 7°07'18"
D = 2°00'00"
T = 178.27'
L = 356.08'
R = 2864.79'
PC STA = 132+07.79
PT STA = 135+63.87

EXIST ROW

121+00 122+00 123+00 124+00 125+00 126+00 127+00 128+00 129+00 130+00 131+00 132+00 133+00 134+00 135+00

STH 77

EXIST ROW

STA 131+72
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE CLASS III-B NON-METAL 30-INCH
APRON ENDWALLS FOR CULVERT PIPE 30-INCH
STA 131+72 , 57.00' LT , INV 1436.75
STA 131+72 , 49.00' RT , INV 1439.40
SLOPE 0.025 '/'
RIPRAP HEAVY REQD AT LT OUTFALL

PI STA = 125+97.73
DELTA = 7°24'04"
D = 1°00'00"
T = 370.57'
L = 740.11'
R = 5729.58'
PC STA = 122+27.16
PT STA = 129+67.27

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 49 E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 04

PLOT DATE : 3/10/2023 8:40 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

OVERHEAD ELECTRIC
XCEL ENERGY

STA 136+30
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE CLASS III-B NON-METAL 30-INCH
APRON ENDWALLS FOR CULVERT PIPE 30-INCH
STA 136+32 , 44.90' LT , INV 1432.25
STA 136+29 , 31.00' RT , INV 1437.12
SLOPE 0.064 '/'
RIRPAP HEAVY REQD AT LT OUTFALL

EXIST ROW

PC: 140+80.27

PT: 135+63.87

OH

STH 77

MOORE PARK RD

EXIST ROW

END OF PAVEMENT,
BUTT JOINT REQD

BURIED FIBEROPTIC
CENTURY TEL

N

PI STA = 155+28.91
DELTA = 74°17'58"
D = 2°59'48"
T = 1448.64'
L = 2479.42'
R = 1912.00'
PC STA = 140+80.27
PT STA = 165+59.69

STH 77

OVERHEAD ELECTRIC
XCEL ENERGY

N

OH

EXIST ROW

6196
1440.330
NGS 8F78

EXIST ROW

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 50	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 05

PLOT DATE : 3/10/2023 8:41 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

STA 167+12
RIPRAP HEAVY REQD AT LT OUTFALL

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 175+06 - STA 194+74 LT

N

6196
1440.330
NGS 8F78

PT 165+59.69

EXIST ROW

PT 179+42.55

165+00 166+00 167+00 168+00 169+00 170+00 171+00 172+00 173+00 174+00 175+00 176+00 177+00 178+00 179+00 180+00

STH 77

EXIST ROW

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 175+06 - STA 194+74 RT

5

5

BURIED FIBEROPTIC
XCEL ENERGY

STA 180+07
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE CLASS III-B NON-METAL 30-INCH
APRON ENDWALLS FOR CULVERT PIPE 30-INCH
STA 180+08 , 38.95' LT , INV 1407.93
STA 180+06 , 36.95' RT , INV 1412.41
SLOPE 0.059 '/'

STA 183+48 LT
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE CLASS III-B NON-METAL 18-INCH
APRON ENDWALLS FOR CULVERT PIPE 18-INCH
STA 183+31.5 , 36.85' LT , INV 1408.13
STA 183+80.1 , 40.54' LT , INV 1410.00
SLOPE 0.039 '/'

REMOVING GUARDRAIL
MGS GUARDRAIL 3 L
MGS GUARDRAIL TERMINAL EAT

GUARDRAIL MOW STRIP EMULSIFIED ASPHALT
SEE TYLER FORKS CULVERT RIPRAP CONSTRUCTION DETAIL

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 175+06 - STA 194+74 LT

N

PT 179+42.55

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

EXIST ROW

180+00 181+00 182+00 183+00 184+00 185+00 186+00 187+00 188+00 189+00 190+00 191+00 192+00 193+00 194+00 195+00

STH 77

TYLER FORKS RIVER

EXIST ROW

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 175+06 - STA 194+74 RT

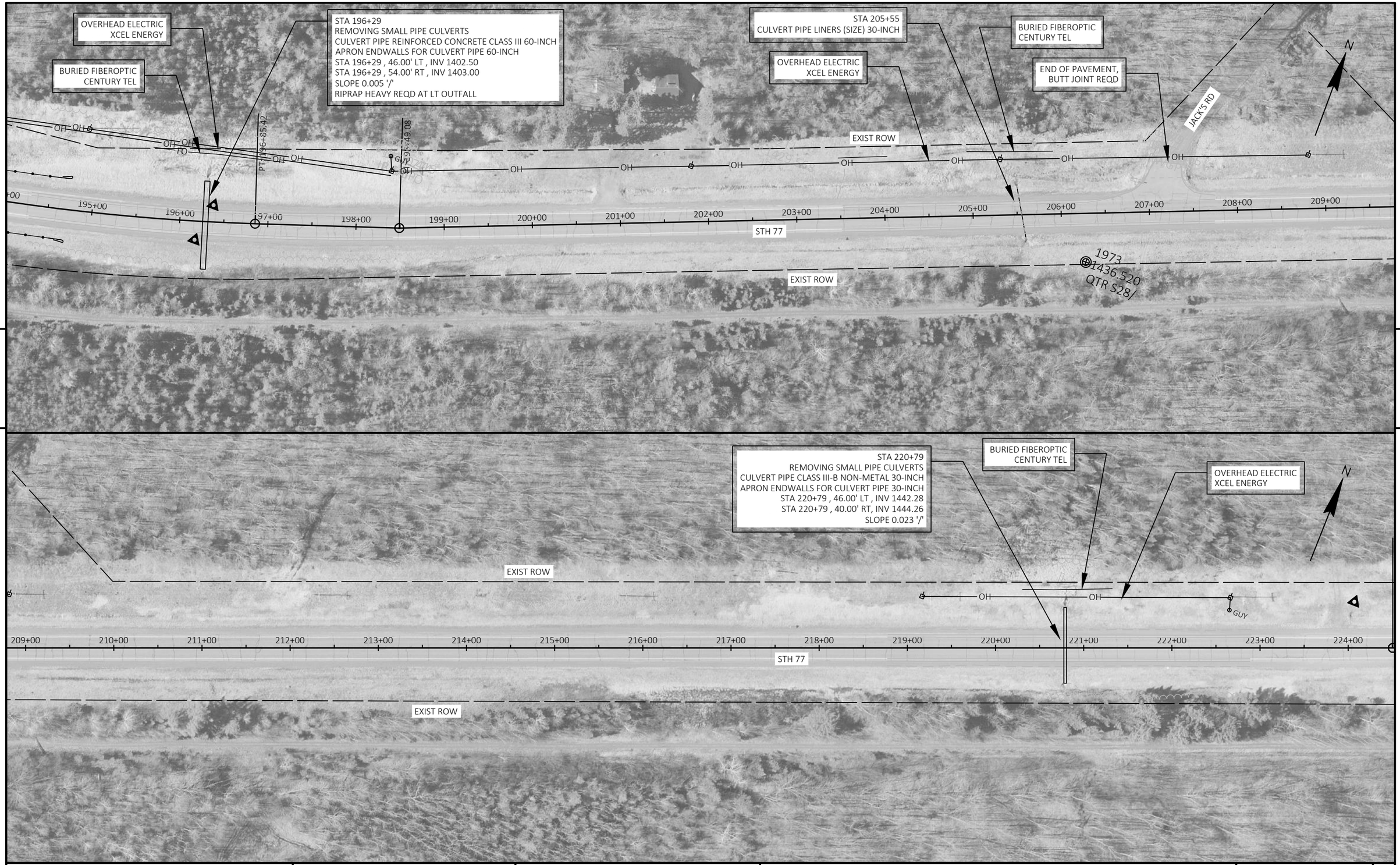
PI STA = 189+02.22
DELTA = 38°42'19"
D = 2°22'21"
T = 848.21'
L = 1631.42'
R = 2415.00'
PC STA = 180+54.00
PT STA = 196+85.42

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 51	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 06

PLOT DATE : 3/10/2023 8:41 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



5

5

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 52	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 07

PLOT DATE : 3/10/2023 8:41 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

5 5

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 53	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 08

PLOT DATE : 3/10/2023 8:41 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 258+69 - STA 278+37 LT

END OF PAVEMENT,
BUTT JOINT REQD

CASEY SAG RD

EXIST ROW

OH

FO

00 254+00 255+00 256+00 257+00 258+00 259+00 260+00 261+00 262+00 263+00 264+00 265+00 266+00 267+00 268+00

STH 77

EXIST ROW

2316
1487.469
SEC 22/2

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 258+69 - STA 278+37 RT

5

5

STA 268+44
REMOVING SMALL PIPE CULVERTS

STA 268+53
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE REINFORCED CONCRETE HORIZONAL ELLIPTICAL CLASS HE-III 53x83-INCH
APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONAL ELLIPTICAL CLASS HE-III 53x83-INCH
STA 268+54.50 , 34.00' LT , INV 1478.40
STA 268+50.50 , 34.00' RT , INV 1478.90
SLOPE 0.007 '/'

OVERHEAD ELECTRIC
XCEL ENERGY

STA 279+35
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE CLASS III-B NON-METAL 30-INCH
APRON ENDWALLS FOR CULVERT PIPE 30-INCH
STA 279+37.50 , 44.50' LT , INV 1481.00
STA 279+31.50 , 43.50' RT , INV 1484.25
SLOPE 0.037 '/'

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 258+69 - STA 278+37 LT

BURIED FIBEROPTIC
CENTURY TEL

EXIST ROW

OH

OH

OH

FO

268+00 269+00 270+00 271+00 272+00 273+00 274+00 275+00 276+00 277+00 278+00 279+00 280+00 281+00 282+00 283+00

STH 77

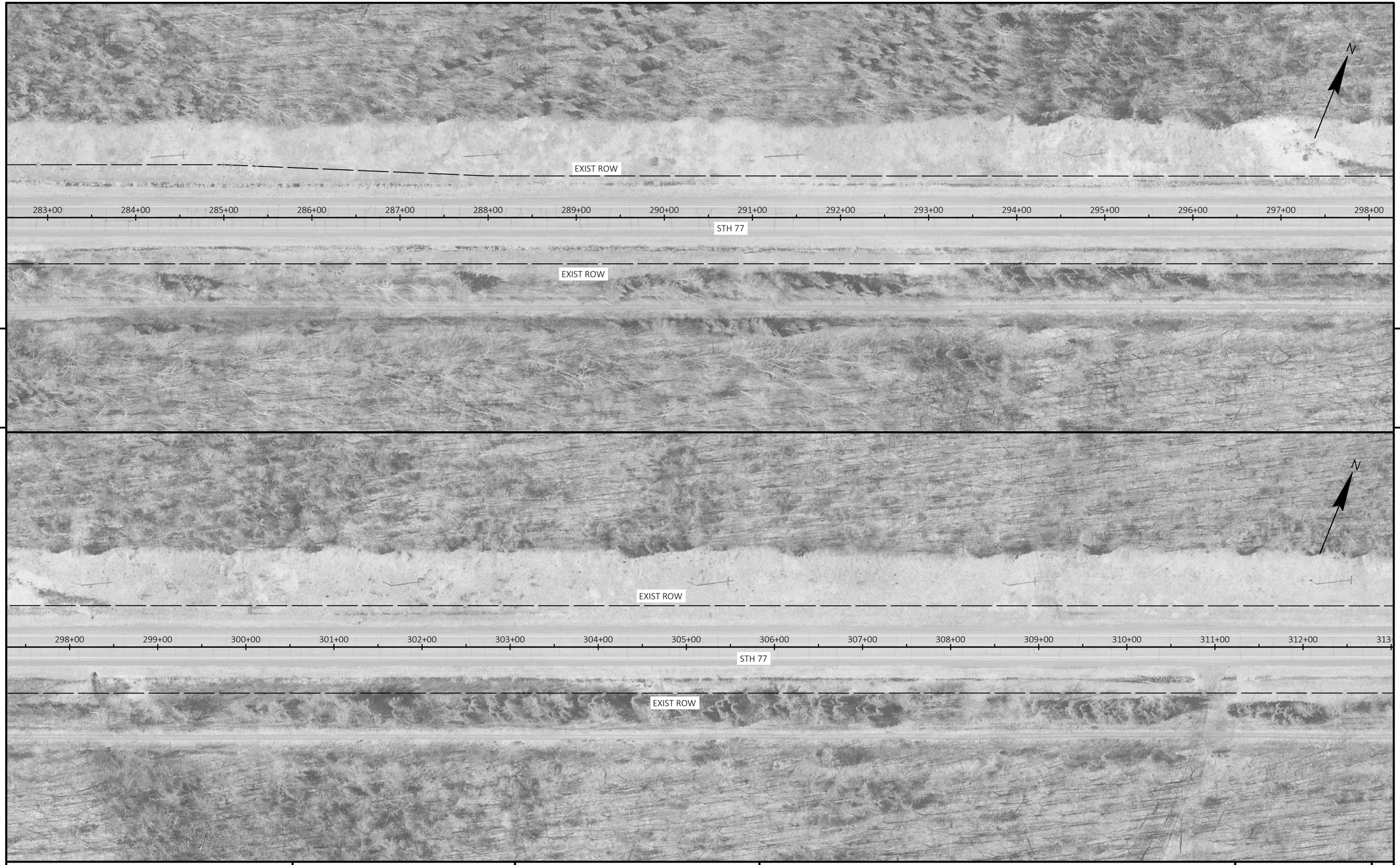
EXIST ROW

BURIED FIBEROPTIC
CENTURY TEL

OVERHEAD ELECTRIC
XCEL ENERGY

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 258+69 - STA 278+37 RT

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 54	E



PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 55	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 10

PLOT DATE : 3/10/2023 8:41 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

STA 316+22
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE CLASS III-B NON-METAL 24-INCH
APRON ENDWALLS FOR CULVERT PIPE 24-INCH
STA 316+20 , 33.00' LT , INV 1502.50
STA 316+23 , 31.00' RT , INV 1504.00
SLOPE 0.0234 '/'

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

STA 321+66
CULVERT PIPE LINERS (SIZE) 30-INCH
RIPRAP HEAVY REQD AT LT OUTFALL
STA 321+67 , 31.00' LT , INV 1505.52
STA 321+65 , 31' RT , INV 1506.58
SLOPE 0.0171 '/'

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

END OF PAVEMENT,
BUTT JOINT REQD

OLD LAKE RD

N

OH

EXIST ROW

313+00 314+00 315+00 316+00 317+00 318+00 319+00 320+00 321+00 322+00 323+00 324+00 325+00 326+00 327+00

STH 77

EXIST ROW

5

5

STA 336+66
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE REINFORCED CONCRETE CLASS III 42-INCH
APRON ENDWALLS FOR CULVERT PIPE 42-INCH
STA 336+66 , 30.00' LT , INV 1494.50
STA 336+66 , 28.00' RT , INV 1495.00
SLOPE 0.008 '/'

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 326+82 - STA 346+65 LT

PI: 331+13.38

N

EXIST ROW

327+00 328+00 329+00 330+00 331+00 332+00 333+00 334+00 335+00 336+00 337+00 338+00 339+00 340+00 341+00 342+00

STH 77

EXIST ROW

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 326+82 - STA 346+65 RT

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 56	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 11

PLOT DATE : 3/10/2023 8:42 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 326+82 - STA 346+65 LT

STA 355+75 - STA 357+50
REMOVING ASPHALTIC SURFACE MILLING (2-INCH DEEP)
ASPHALTIC SURFACE (2-INCH THICK)
PERFORM PRIOR TO MAINLINE ASPHALTIC SURFACE MILLING

N

EXIST ROW

342+00 343+00 344+00 345+00 346+00 347+00 348+00 349+00 350+00 351+00 352+00 353+00 354+00 355+00 356+00 357+00

STH 77

EXIST ROW

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 326+82 - STA 346+65 RT

EXISTING CULVERT
(TO REMAIN)

5

5

STA 363+32
REMOVING SMALL PIPE CULVERTS
CULVERT PIPE CLASS III-B NON-METAL 30-INCH
APRON ENDWALLS FOR CULVERT PIPE 30-INCH
STA 363+32 , 31.50' LT , INV 1484.50
STA 363+32 , 30.50' RT , INV 1486.20
SLOPE 0.0274 '/'

OVERHEAD ELECTRIC
XCEL ENERGY

BURIED FIBEROPTIC
CENTURY TEL

N

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 346+65 - STA 366+48 LT

OH OH

PI: 363+35.54

EXIST ROW

357+00 358+00 359+00 360+00 361+00 362+00 363+00 364+00 365+00 366+00 367+00 368+00 369+00 370+00 371+00 372+

STH 77

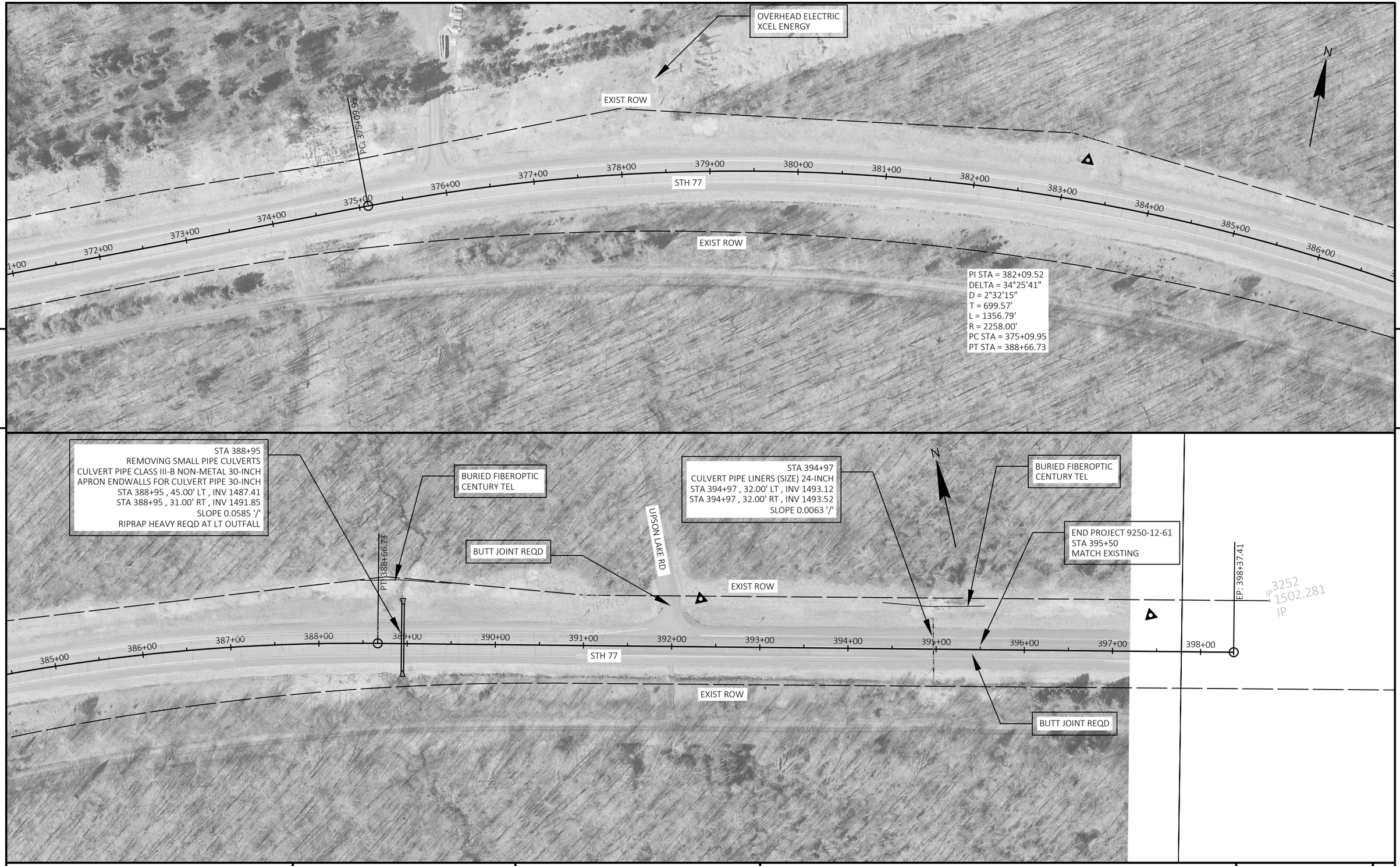
EXIST ROW

SILT FENCE FOR USE AS TURTLE FENCING
INCLUDES TEMPORARY SMALL ANIMAL TURN-AROUNDS
STA 346+65 - STA 366+48 LT

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 57	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 12

PLOT DATE : 3/10/2023 8:42 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT



PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	PLAN	SHEET 58	E

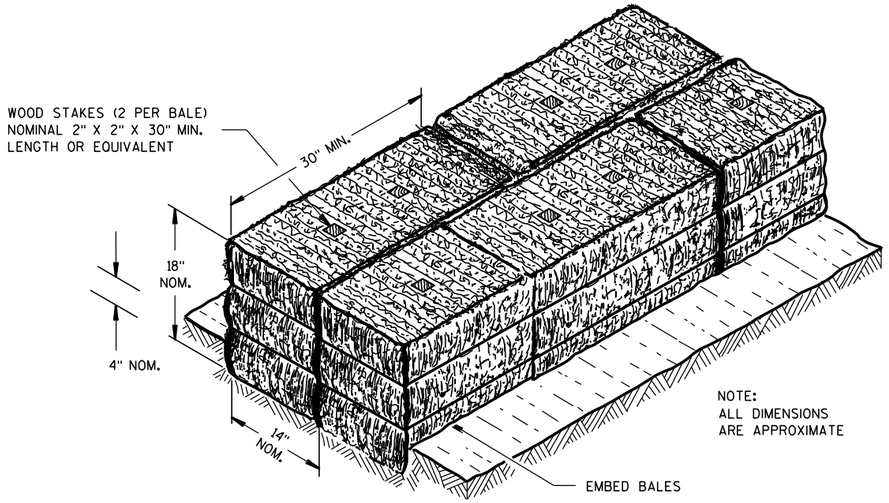
FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 13

PLOT DATE : 3/10/2023 8:42 AM PLOT BY : SHEAN, MARC RYAN PLOT NAME : PLOT SCALE : 1 IN:100 FT

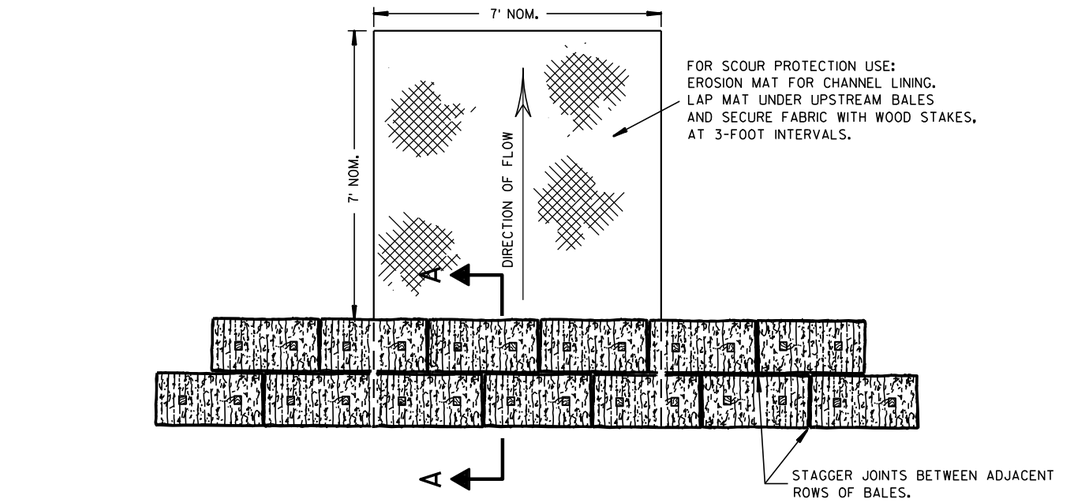
Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-08	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-04A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-04C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C08-22B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15C19-07A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D48-01	TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATION
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

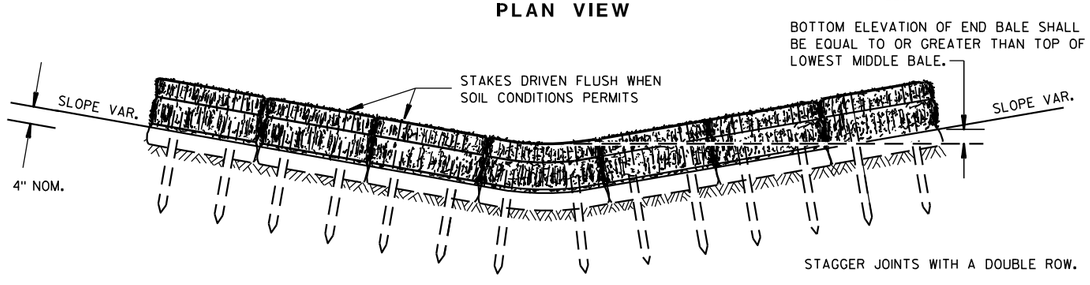
6



SECTION A-A



PLAN VIEW



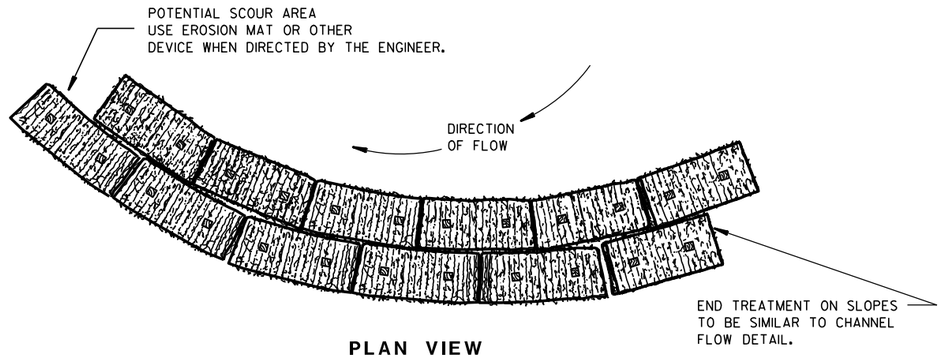
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

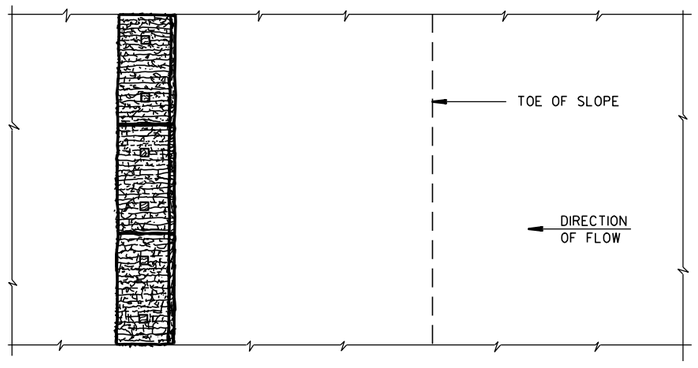
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

(1) TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

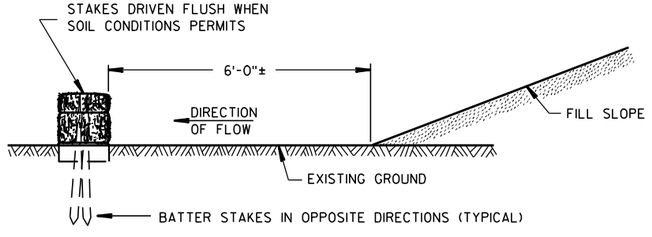


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

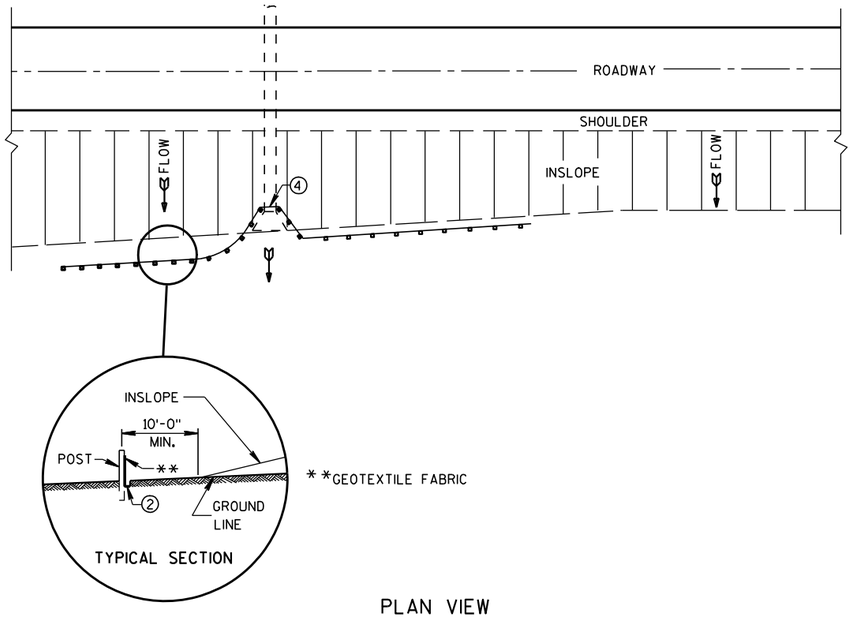
6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

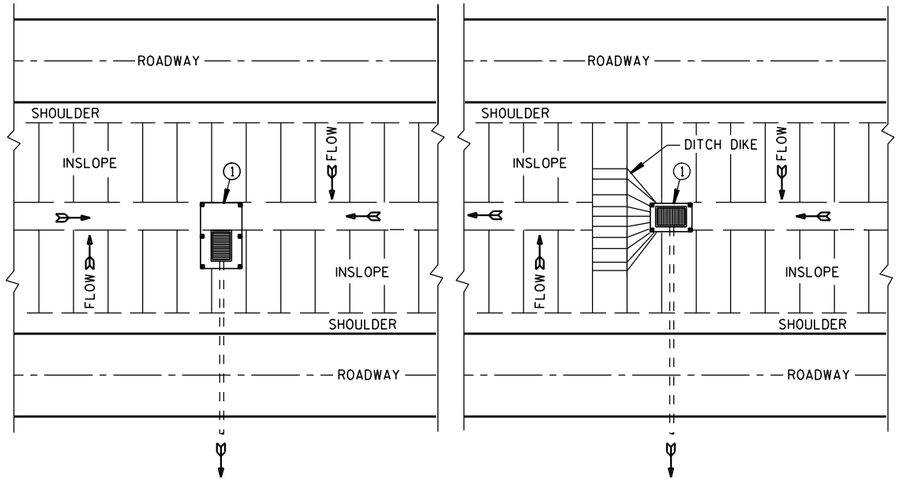
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



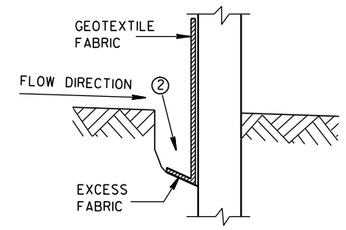
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

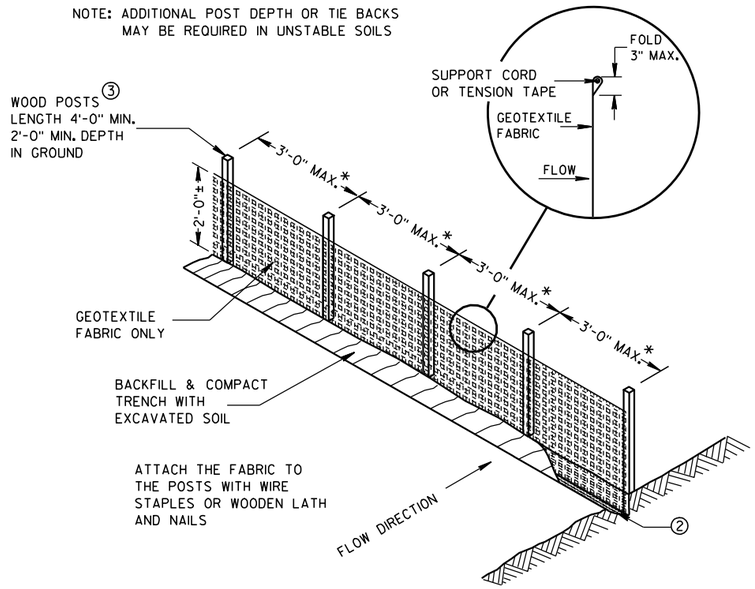
GENERAL NOTES

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

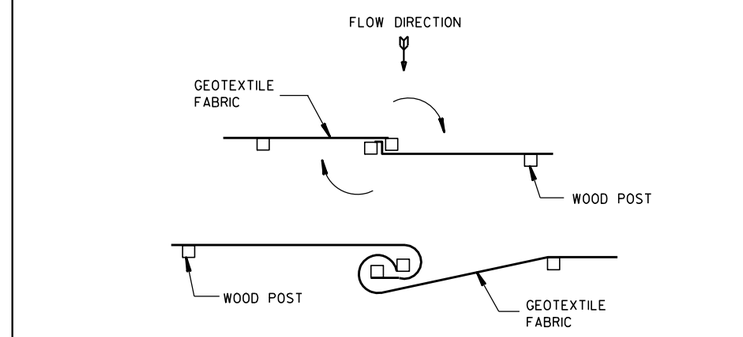
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



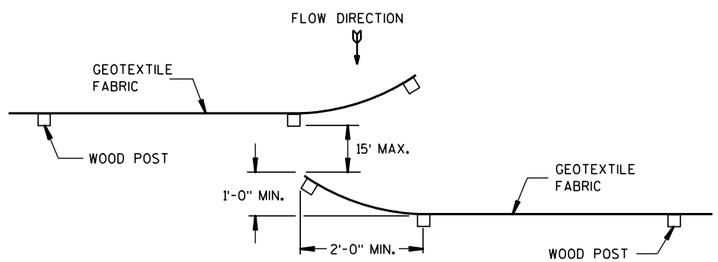
TRENCH DETAIL



SILT FENCE

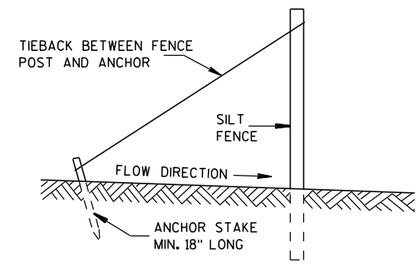


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

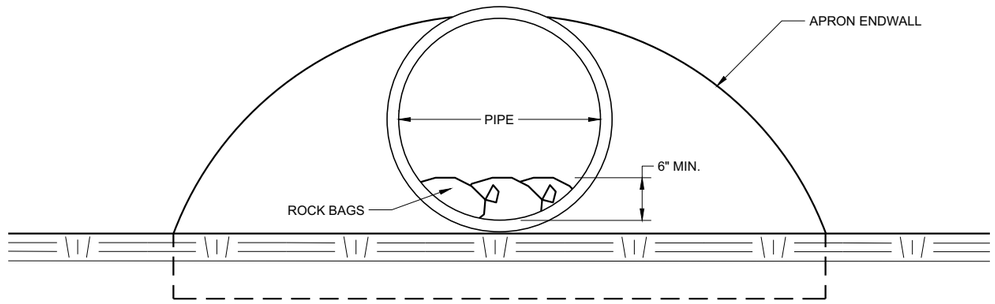
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

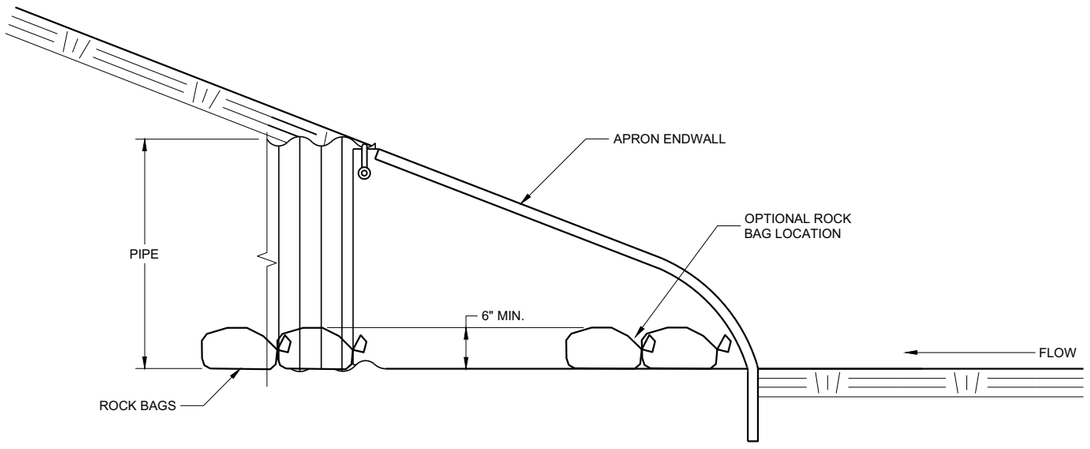
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6



END VIEW



SIDE VIEW

CULVERT PIPE CHECK

(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI
FHWA	

6

SDD 08E15 - 01

6

SDD 08E15 - 01

METAL APRON ENDWALLS

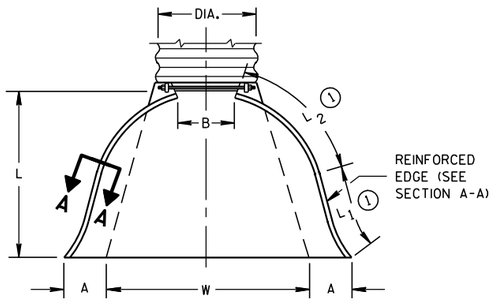
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

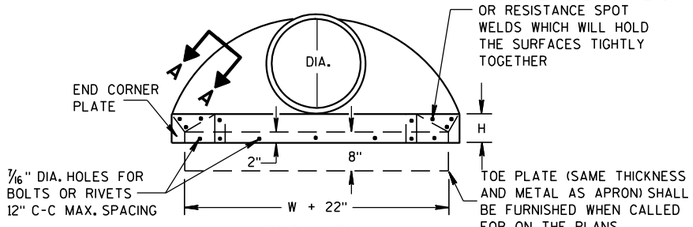
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

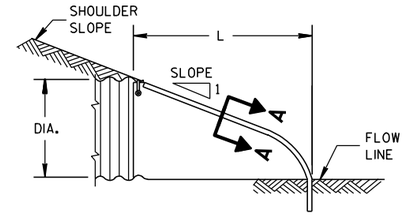
*MINIMUM
**MAXIMUM



PLAN VIEW

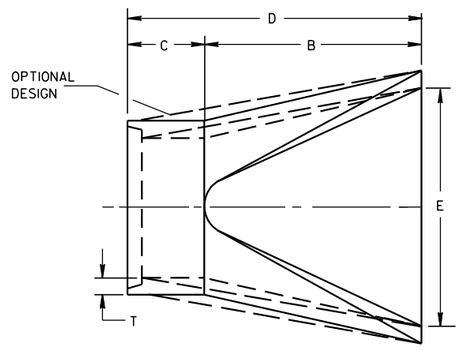


END VIEW

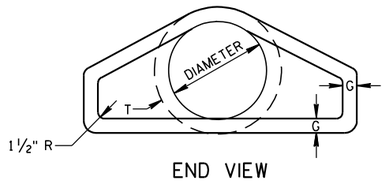


SIDE ELEVATION

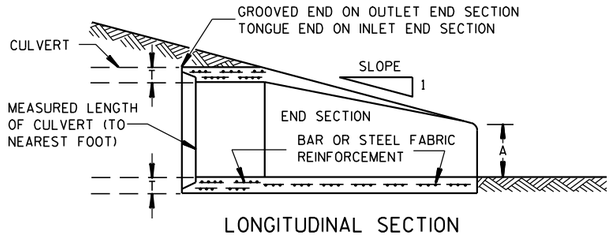
METAL ENDWALLS



PLAN

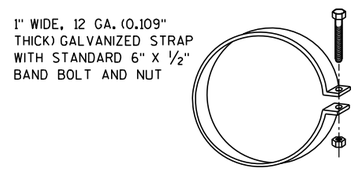


END VIEW



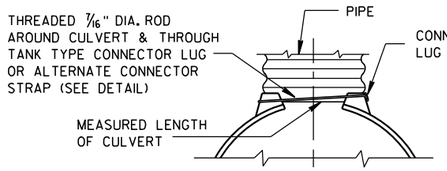
LONGITUDINAL SECTION

CONCRETE ENDWALLS

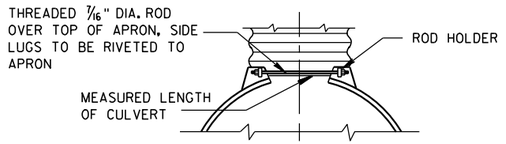


ALTERNATE FOR TYPE 1 CONNECTION

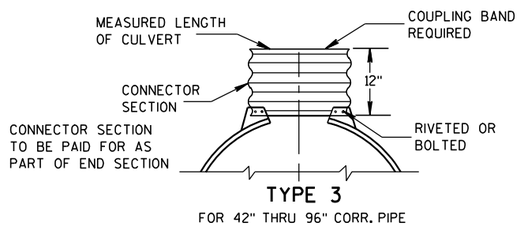
END SECTION CONNECTOR STRAP



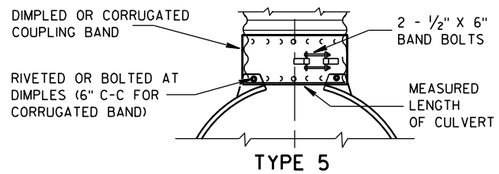
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

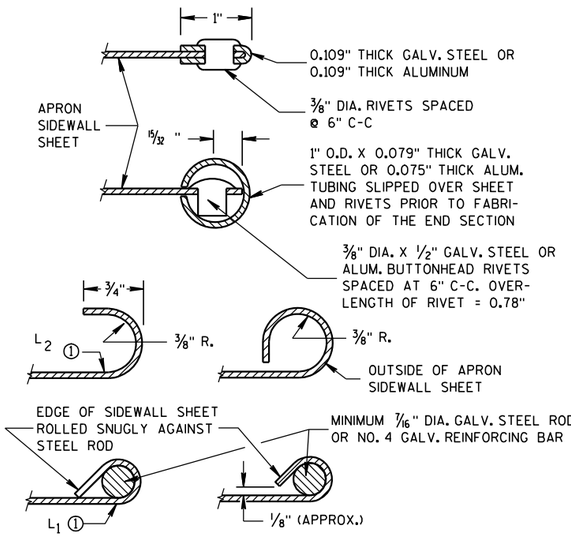
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

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.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

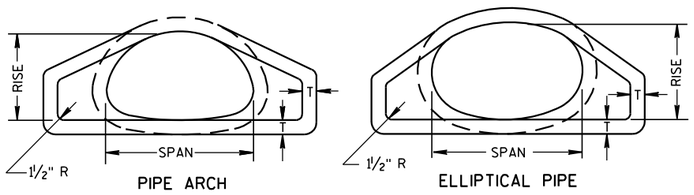
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

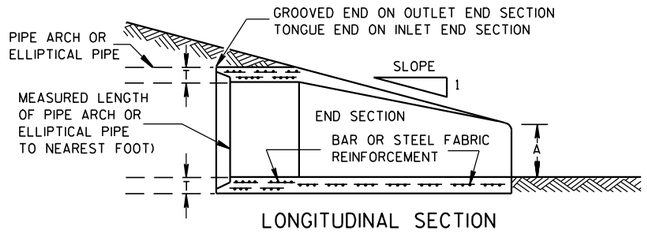
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

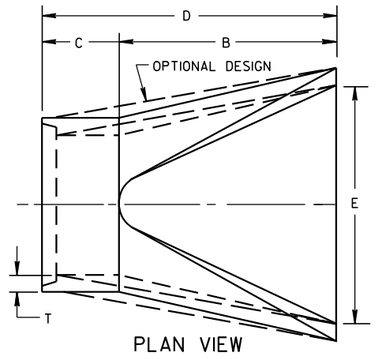
S.D.D. 8 F 1-11



END VIEW

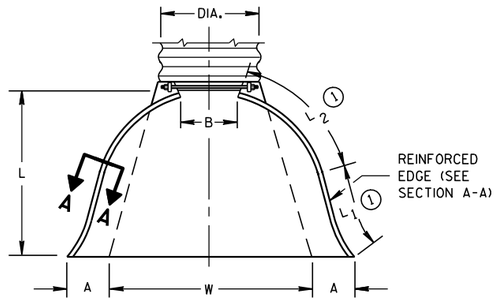


LONGITUDINAL SECTION

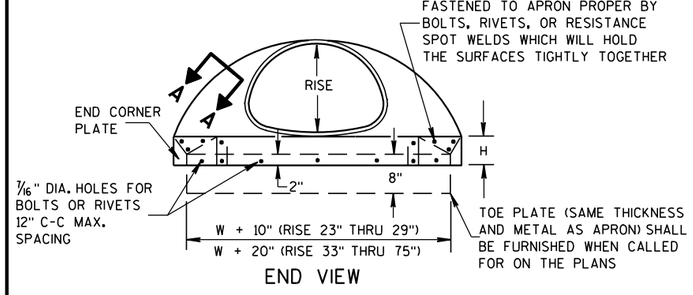


PLAN VIEW

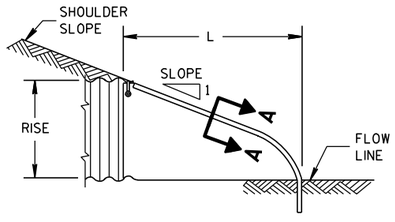
CONCRETE ENDWALLS



PLAN VIEW

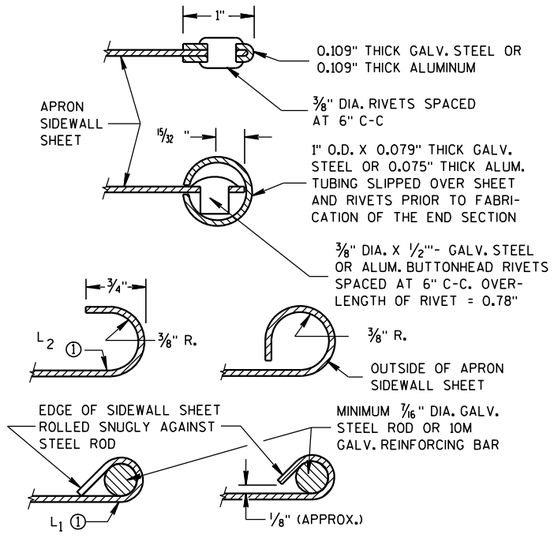


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

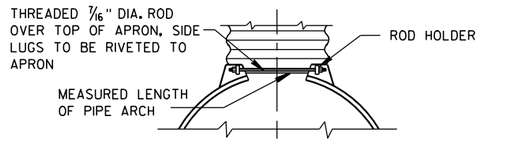
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

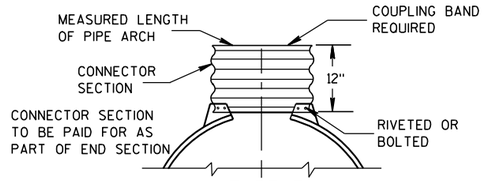
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



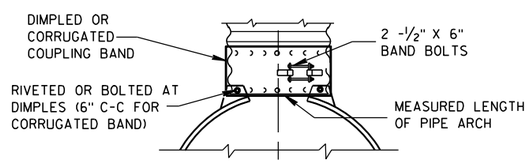
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

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

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

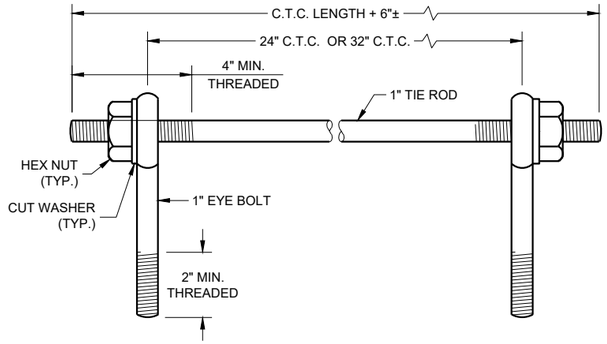
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

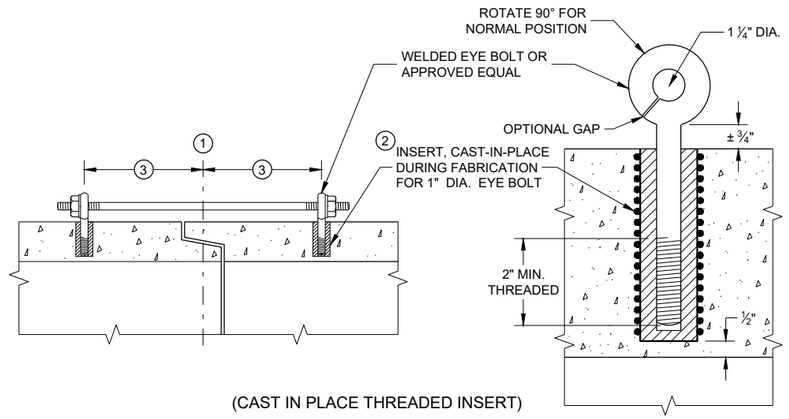
11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



EYE BOLTS AND TIE ROD



(CAST IN PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

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

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

(1) CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

(2) THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

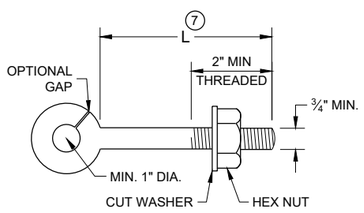
(3) HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.

(4) BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

(5) OPENING TO BE ROD DIAMETER PLUS 1 INCH.

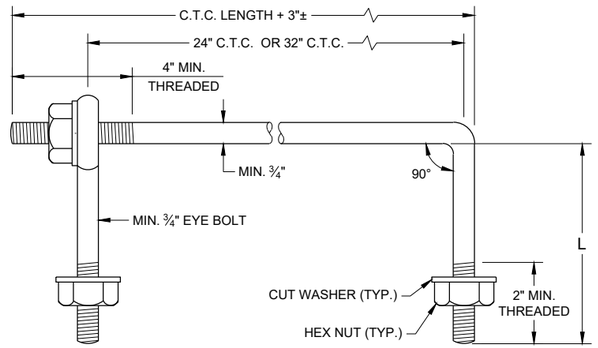
(6) LENGTH ADEQUATE TO EXTEND TO WITHIN ½ INCH OF THE INNER SURFACE OF THE PIPE.

(7) EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

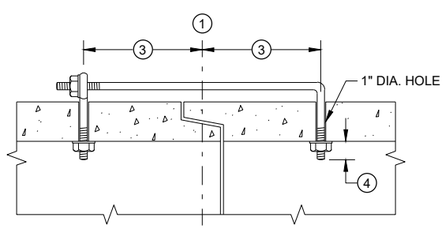


EYE BOLT (7)

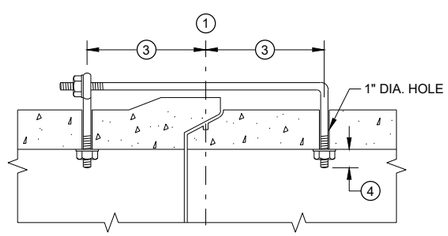
NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)



(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

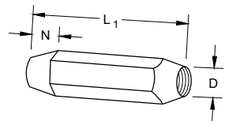
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

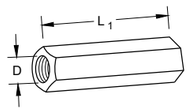
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12 - 60	⅝	⅝	5	½
66 - 84	¾	¾	5	½
90 - 144	1	1	7	1 7/16

DIMENSIONS SHOWN ARE IN INCHES



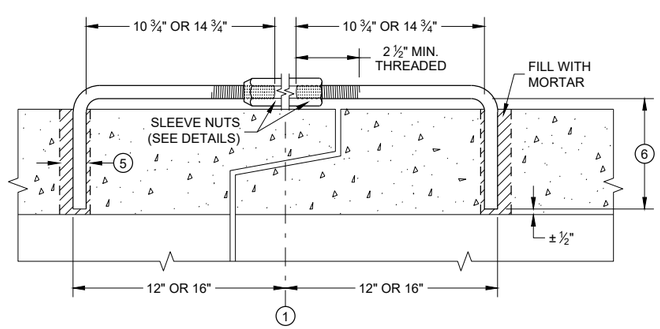
TAPERED



PLAIN

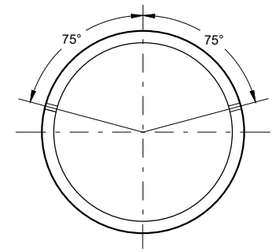
RIGHT AND LEFT THREADS

SLEEVE NUTS



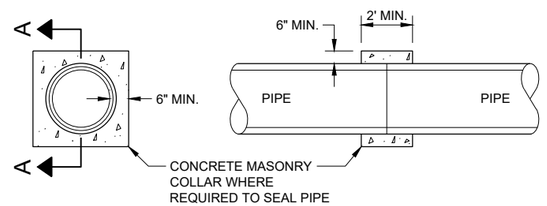
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A - A

CONCRETE COLLAR DETAIL

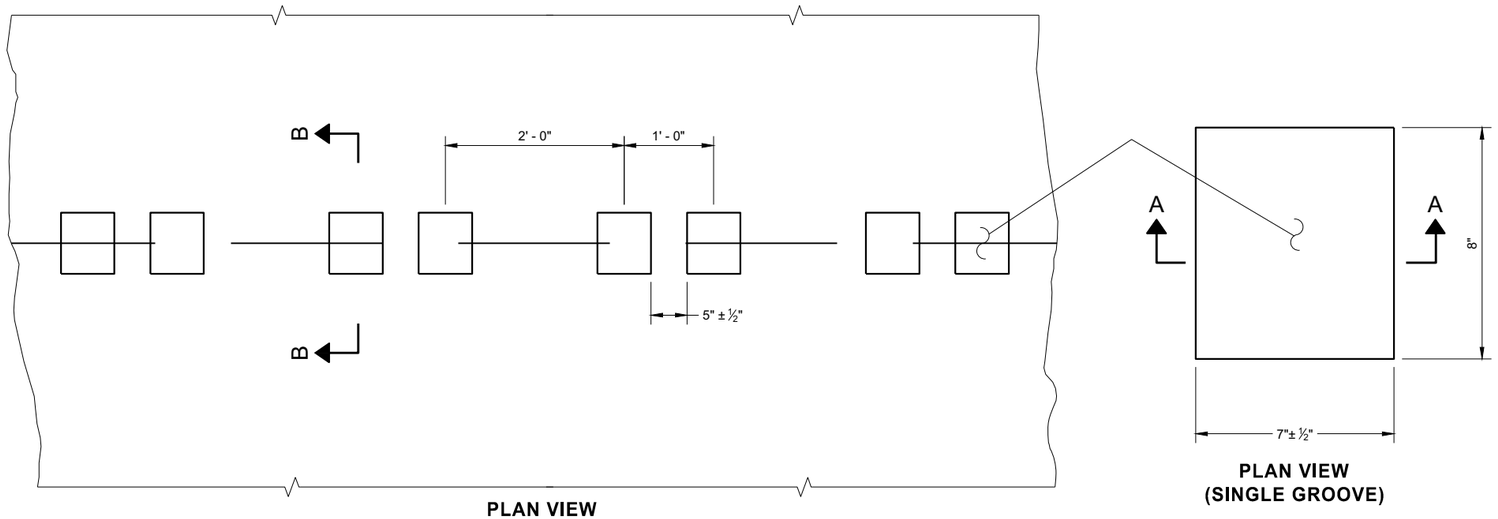
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER
FHWA

SDD 08F04 - 08

SDD 08F04 - 08



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

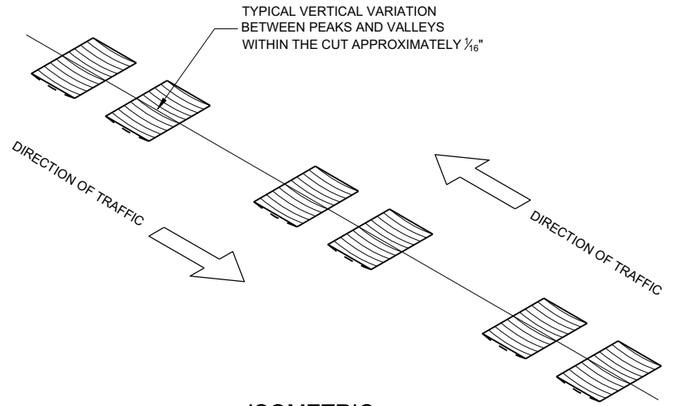
DETAILS OF CONSTRUCTION NO SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTERLINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

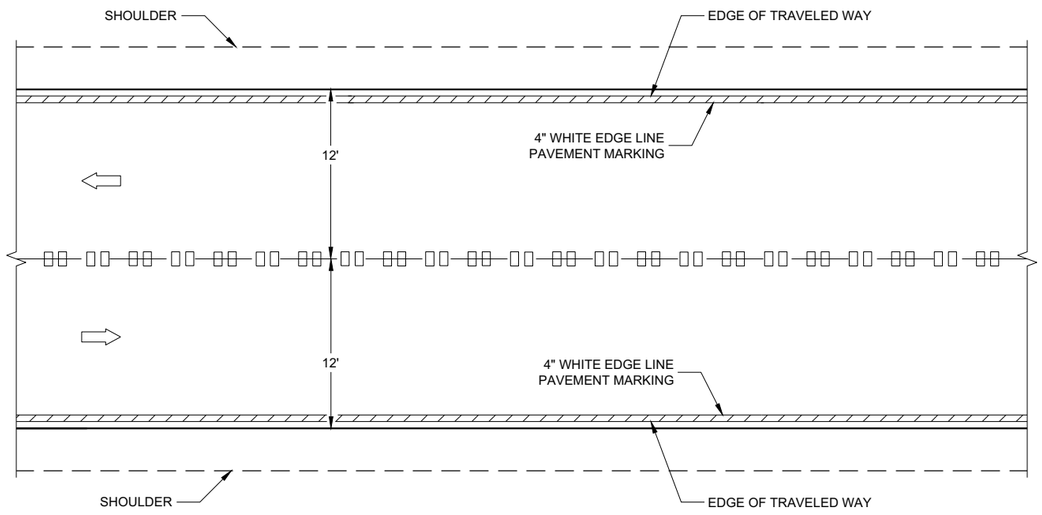
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

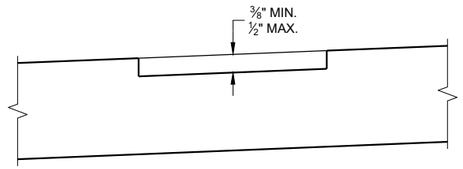
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



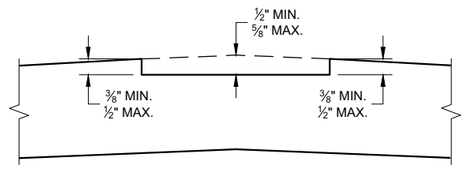
ISOMETRIC



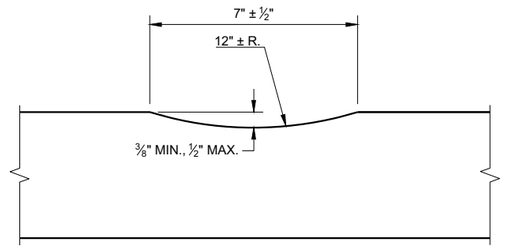
CENTERLINE GROOVES ON TWO-WAY ROADWAYS



SECTION B - B
SUPERELEVATED ROADWAY



SECTION B - B
CROWNED ROADWAY



SECTION A - A

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

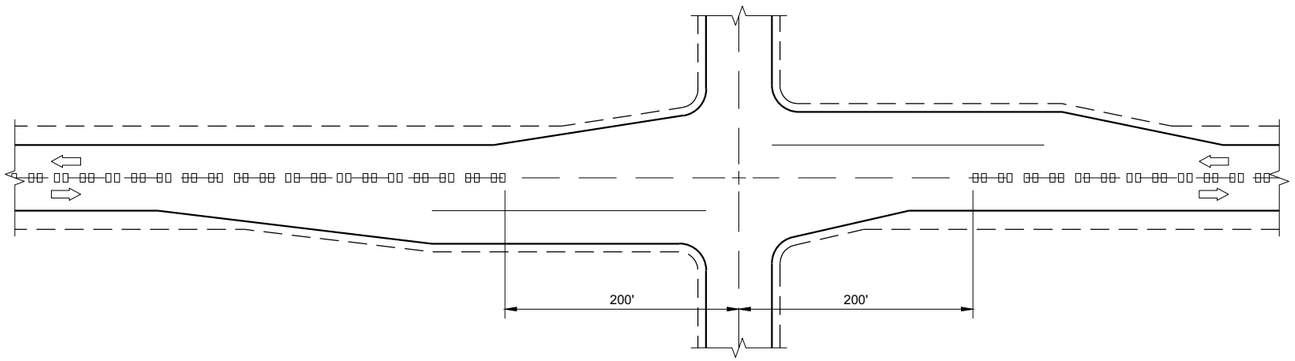
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

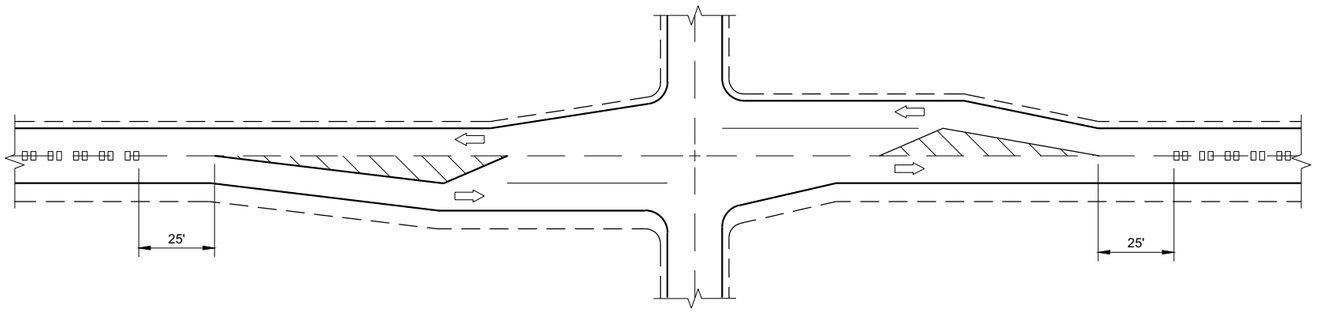
SDD 13A11 - 03a

6

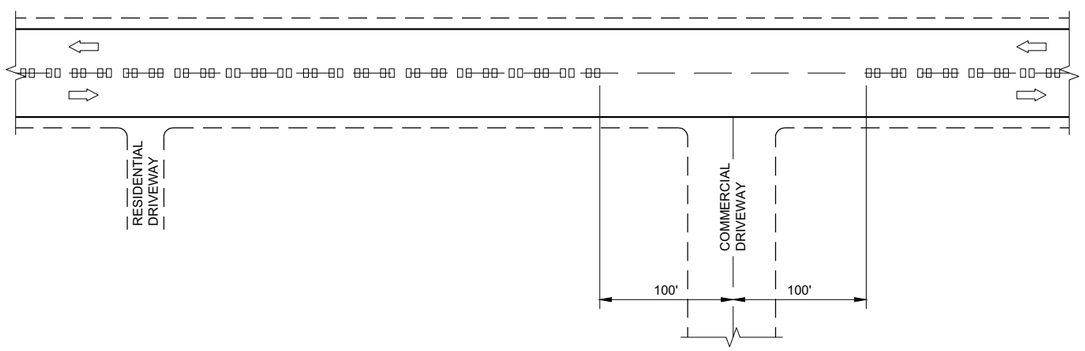
SDD 13A11 - 03a



CENTERLINE GROOVES AT INTERSECTIONS



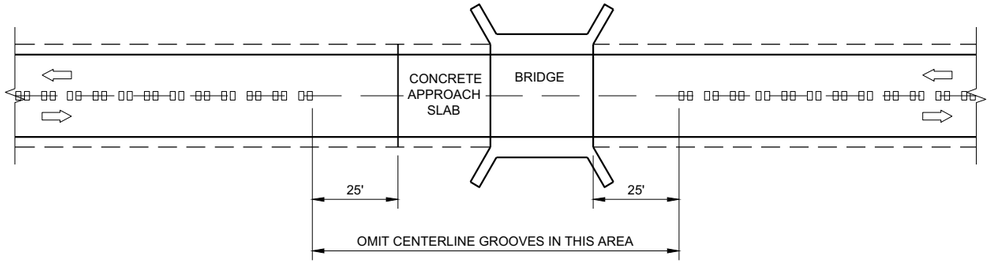
CENTERLINE GROOVES AT INTERSECTIONS (WITH LEFT TURN LANES)



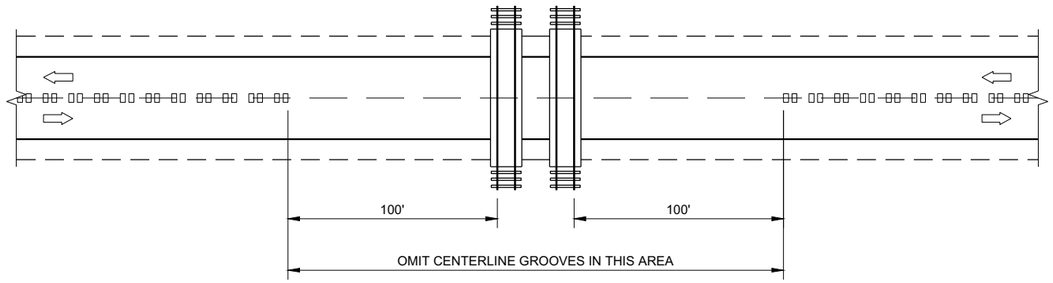
CENTERLINE GROOVES AT DRIVEWAYS (1)

GENERAL NOTES

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS. WHEN DIRECTED BY THE ENGINEER.



CENTERLINE GROOVES AT BRIDGES



CENTERLINE GROOVES AT RAILROADS

2-LANE RURAL CENTERLINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE ENGINEER

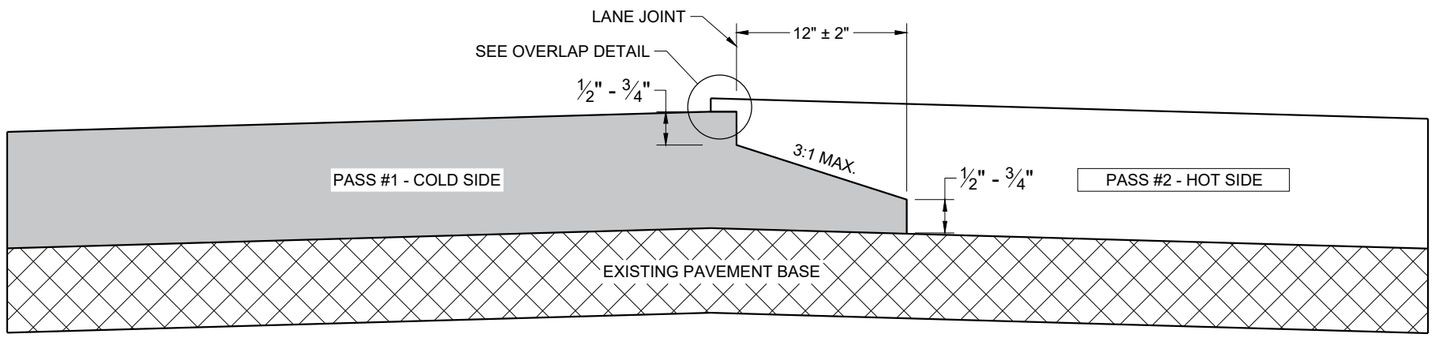
FHWA

6

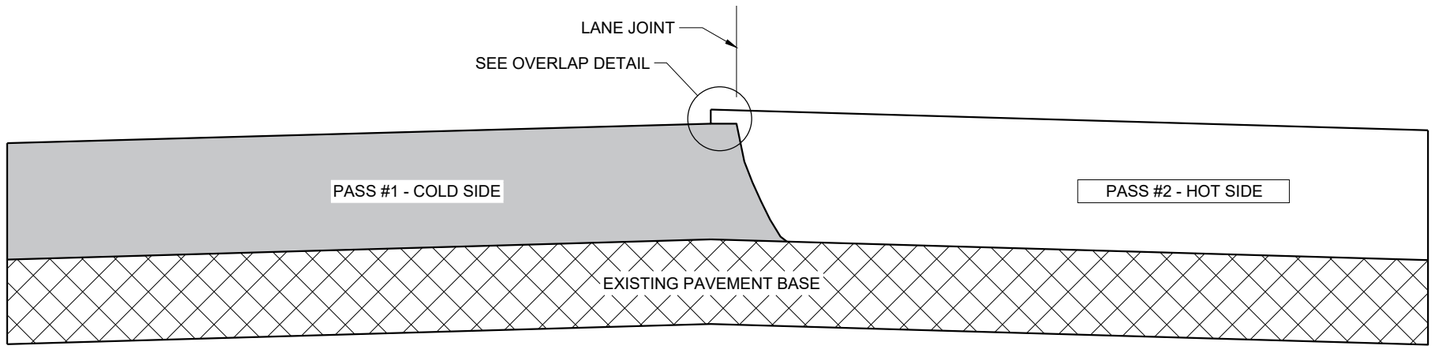
SDD 13A11 - 03b

6

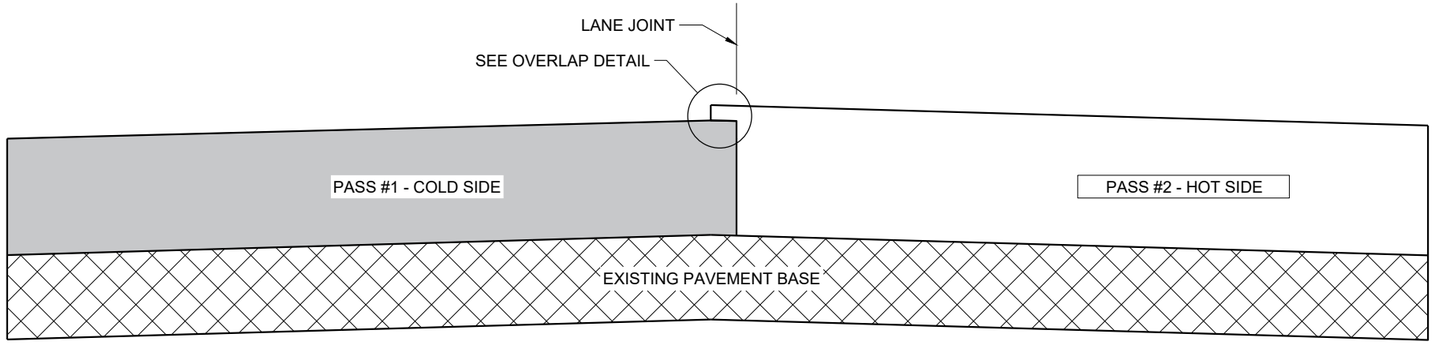
SDD 13A11 - 03b



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

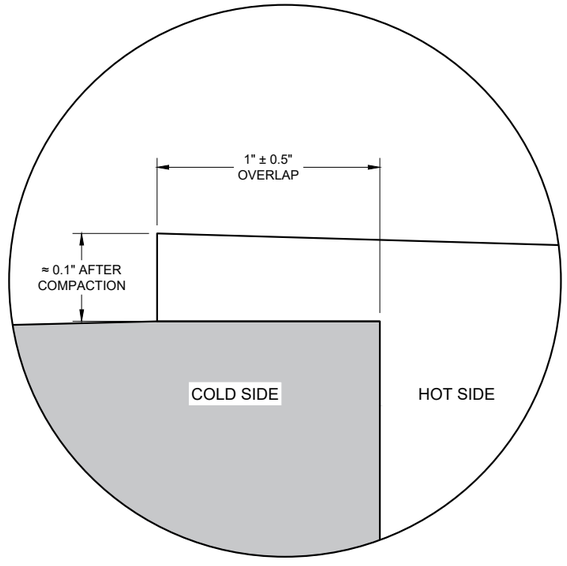
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

6

6

SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA

(1) WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

(2) USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

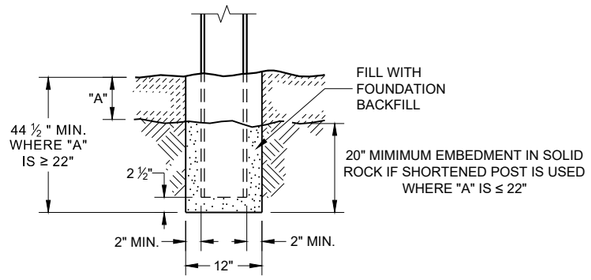
(3) IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

(4) WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

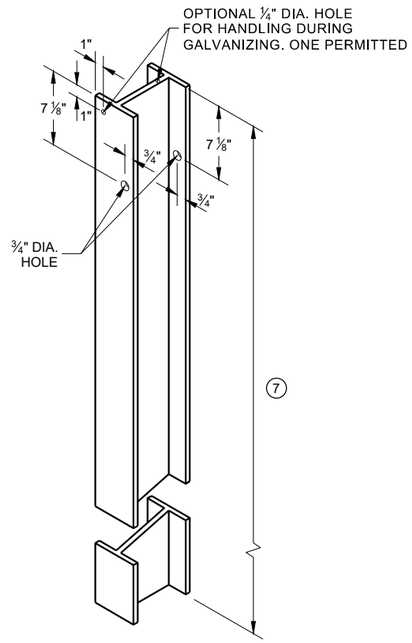
(5) FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ±1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 ¾" TO 32".

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

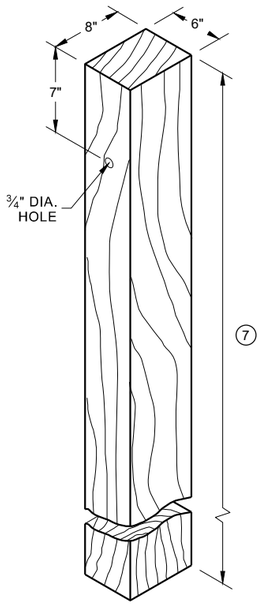
(7) TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".



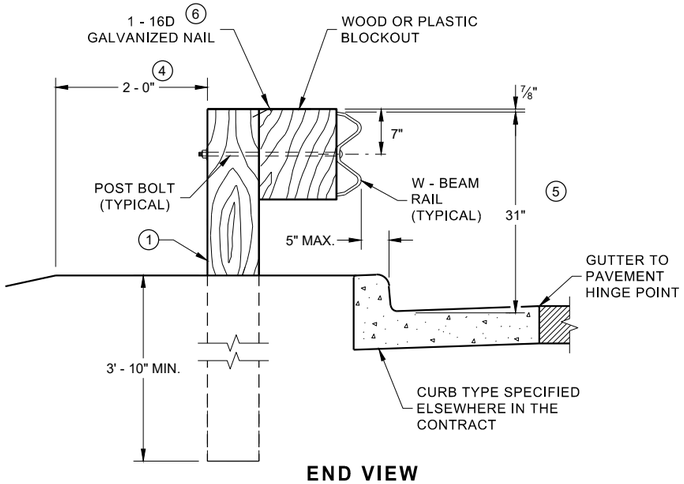
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



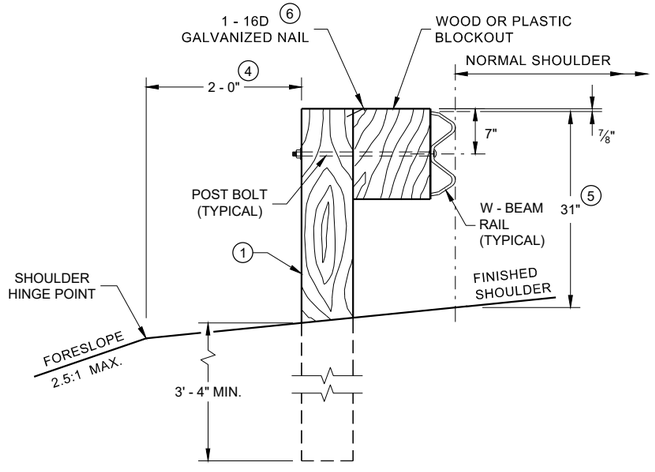
STEEL POST & HOLE PUNCHING DETAIL (W 6 X 9) (1)



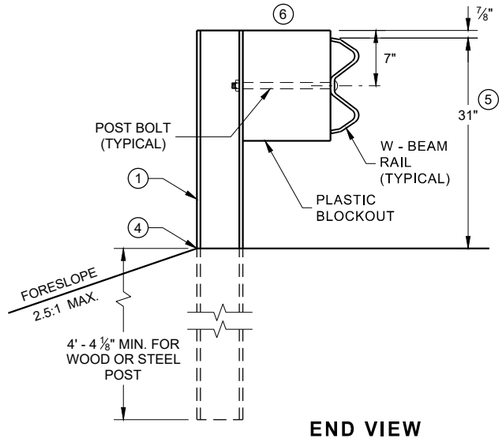
WOOD POST (6" X 8") NOMINAL (1)



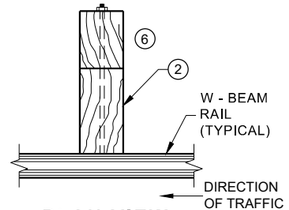
END VIEW
LOCATED ALONG A CURBED ROADWAY



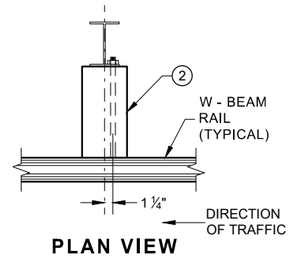
END VIEW
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



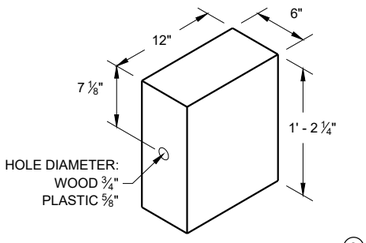
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, PLASTIC BLOCKOUT & BEAM



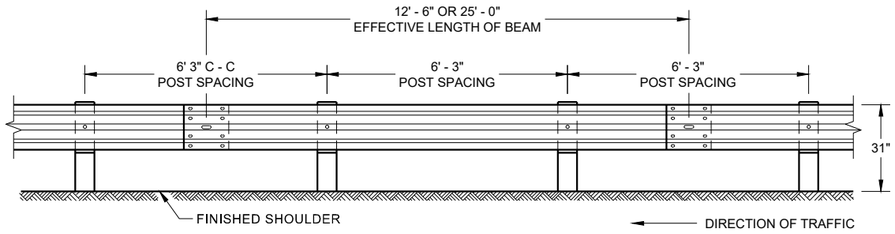
WOOD OR PLASTIC BLOCKOUT (2)

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

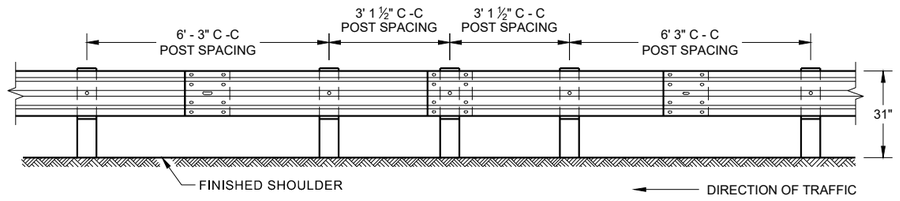
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B42 - 07a

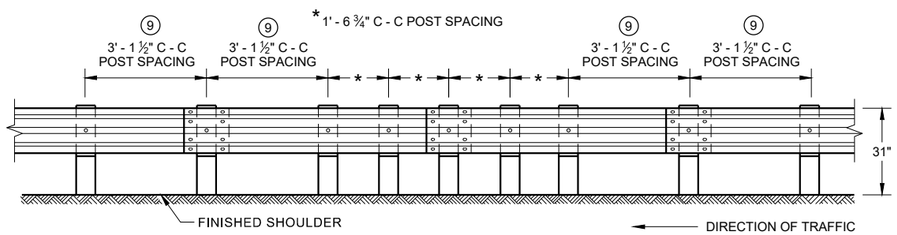
SDD 14B42 - 07a



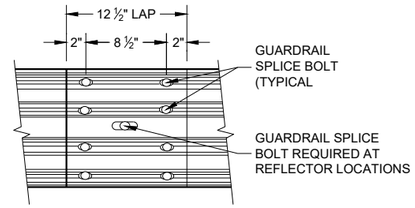
FRONT VIEW
POST SPACING STANDARD INSTALLATION



FRONT VIEW
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



FRONT VIEW
QUARTER POST SPACING (QS)



FRONT VIEW
MID-SPAN BEAM SPLICE

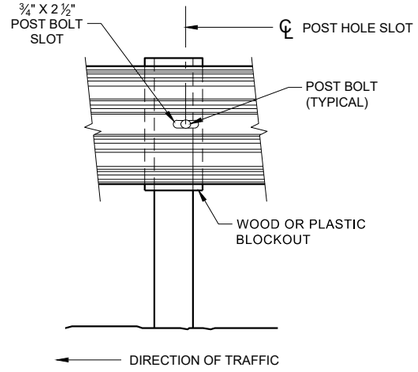
GENERAL NOTES

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

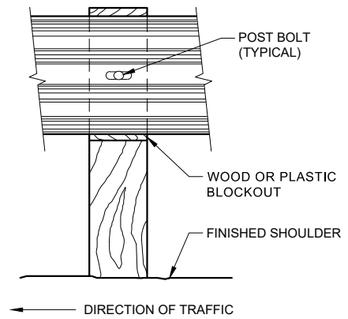
⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

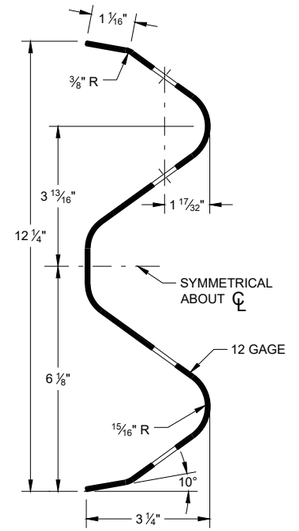
GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



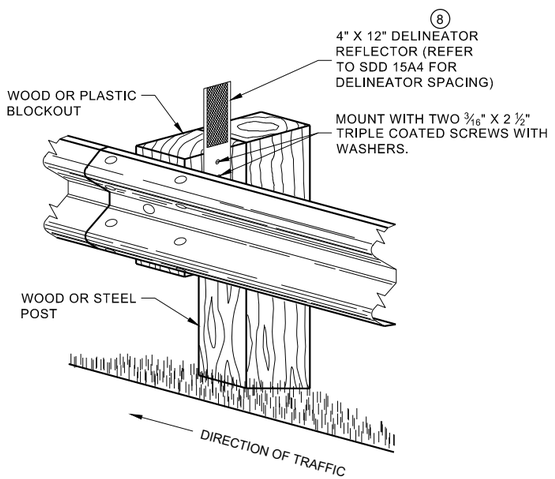
FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL

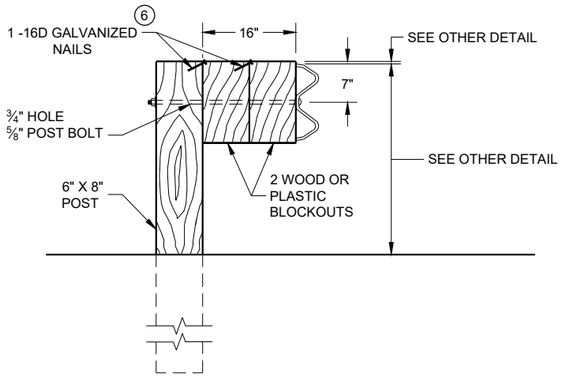


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

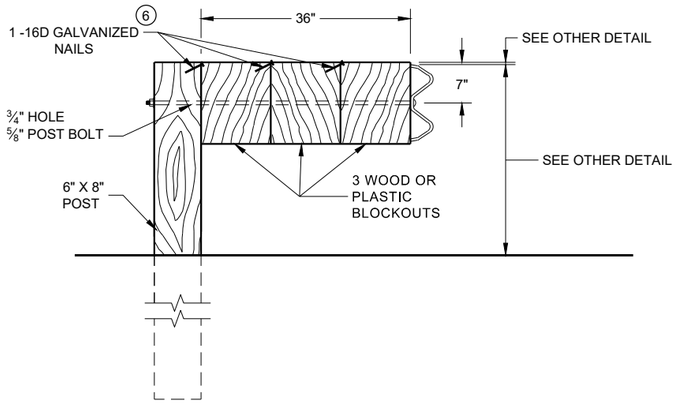
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6
SDD 14B42 - 07b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



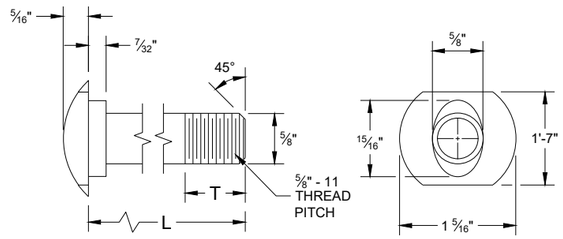
DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

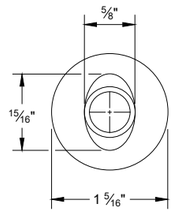
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN ¼" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

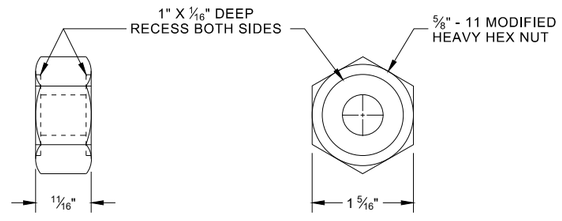


POST BOLT TABLE

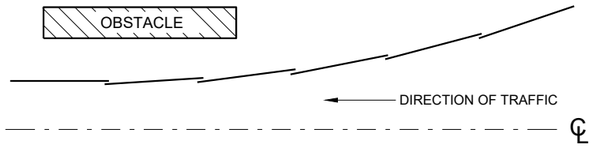
L	T (MIN.)
1 ¼"	1 ⅛"
2"	1 ¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



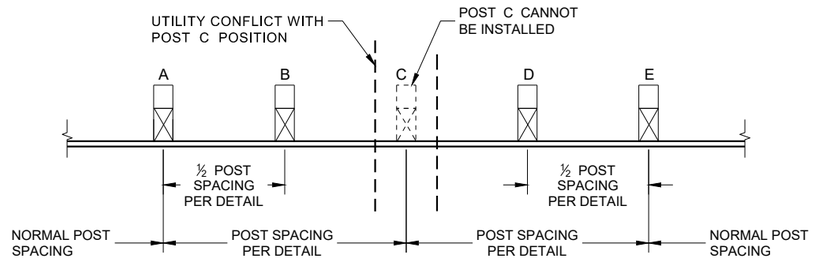
ALTERNATE BOLT HEAD



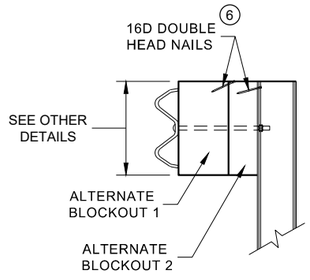
POST BOLT, SPLICE BOLT AND RECESS NUT



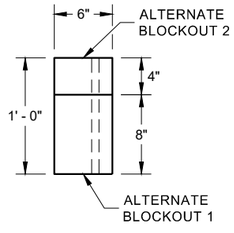
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

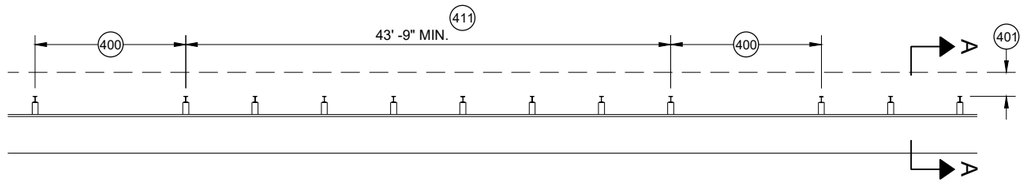


PLAN VIEW

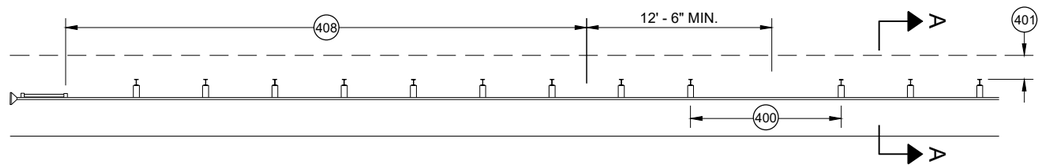
ALTERNATE WOOD BLOCKOUT DETAIL

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

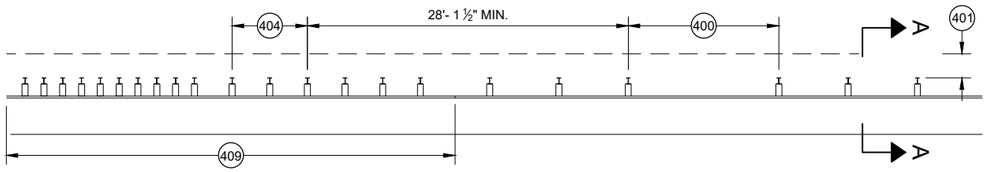
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL



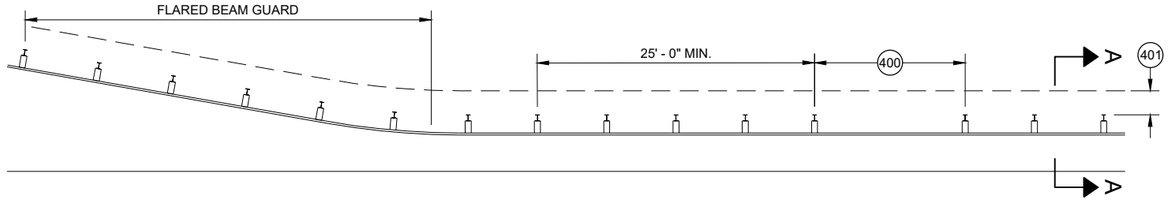
MISSING POST IN MGS GUARDRAIL



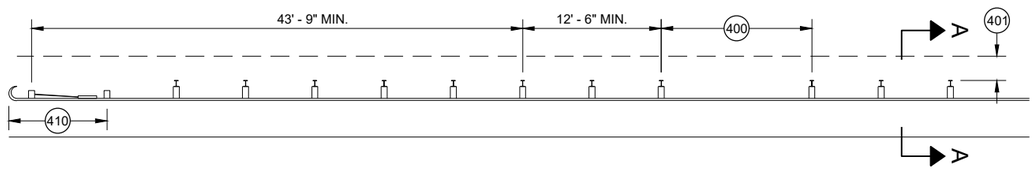
MISSING POST IN MGS GUARDRAIL NEAR EAT



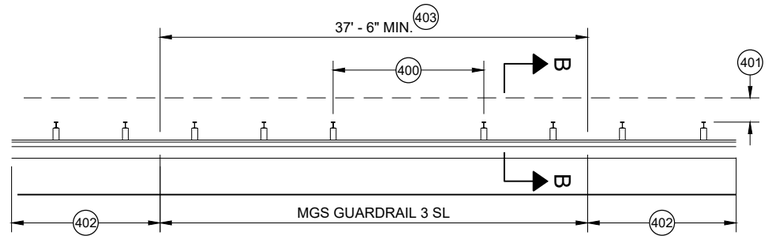
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

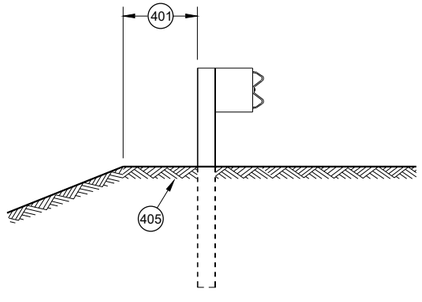


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

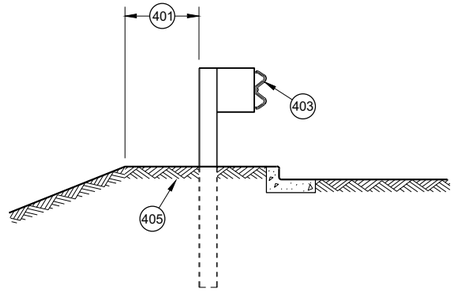


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL) 407

400 MAX SPAN 12' - 6"
401 2' MIN.
402 MGS GUARDRAIL 3
403 NESTING BEAM GUARD
404 ASYMMETRIC TRANSITION
405 SOIL WELL DRAINED AND COMPACTED
406 SEE OTHER DRAWINGS IN THIS SDD
407 SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
408 SEE SDD 14B44
409 SEE SDD 14B45
410 SEE SDD 14B47
411 MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A 406



SECTION B - B 406

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA

6

SDD 14B42 - 07d

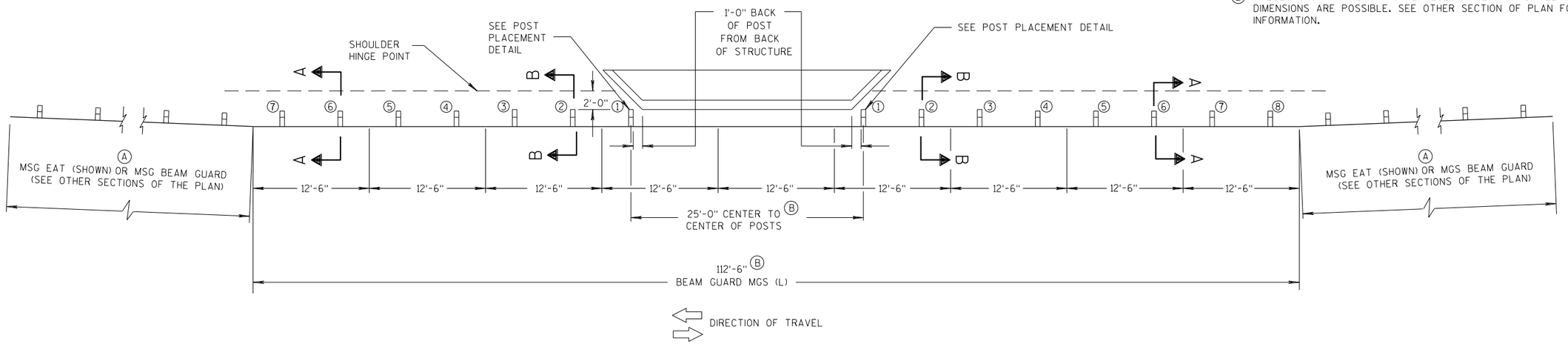
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

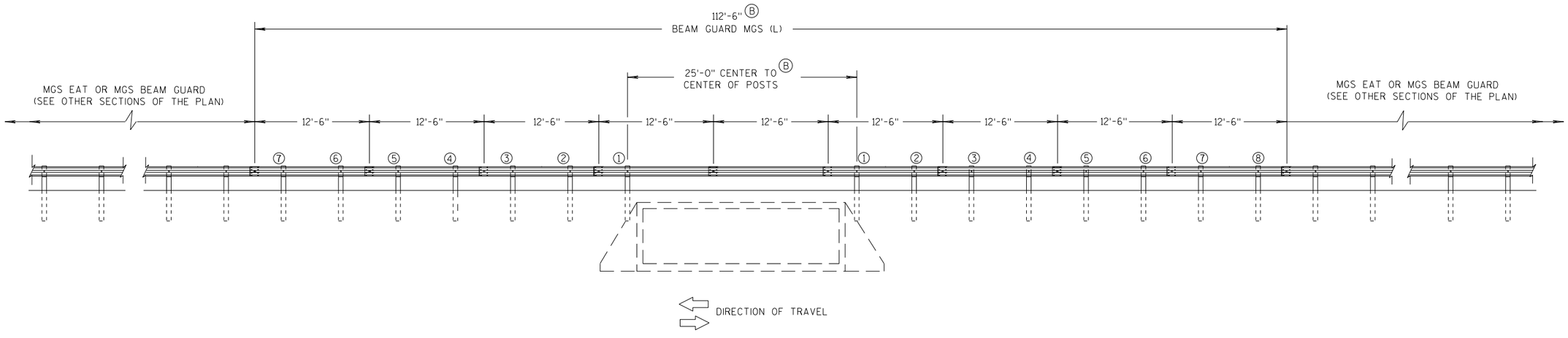
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

S.D.D. 14 B 43-4a

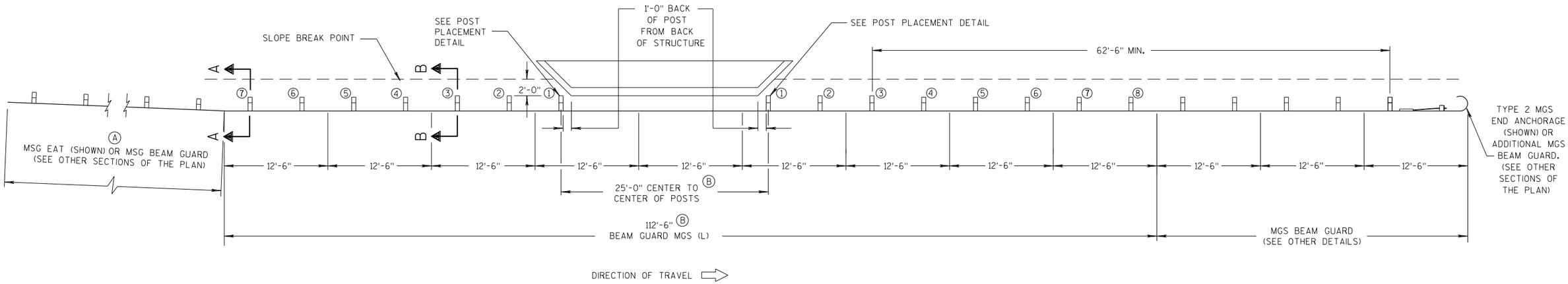
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

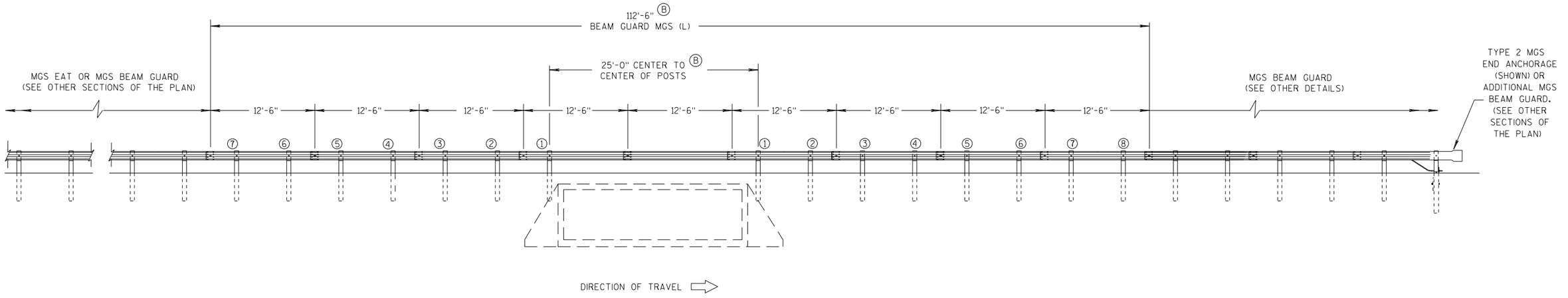
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



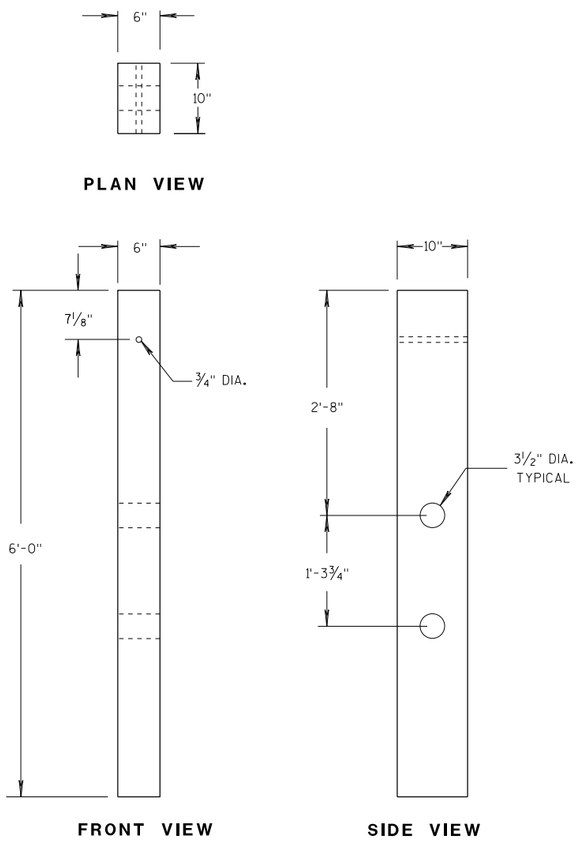
ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

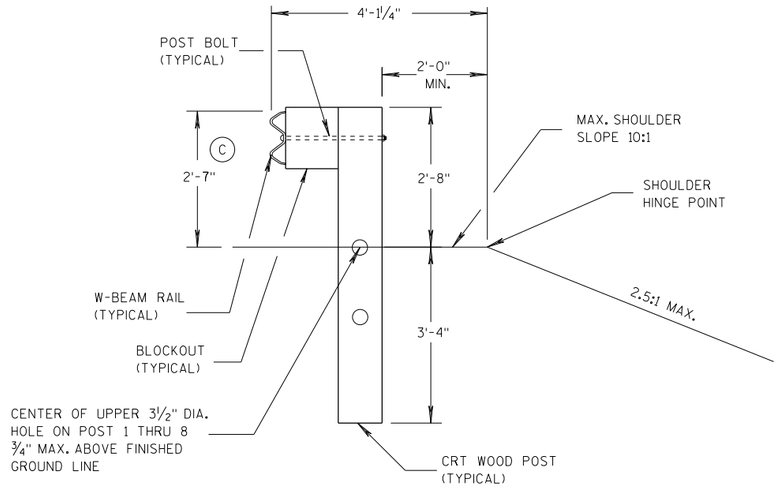
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	74

6

S.D.D. 14 B 43-4b



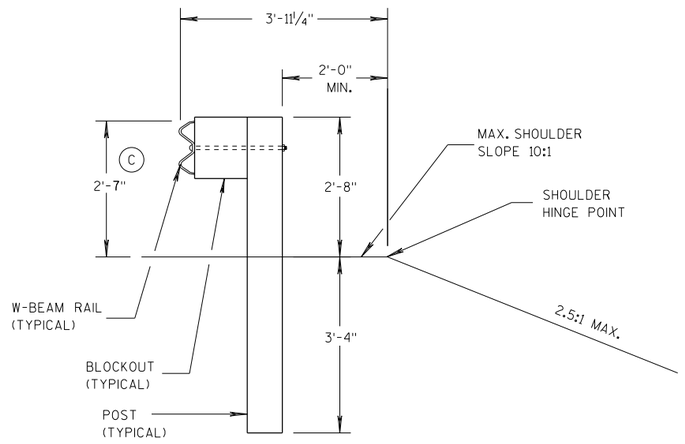
CRT WOOD POST



SECTION B-B

POSTS NO. 1-3

SEE OTHER DETAILS



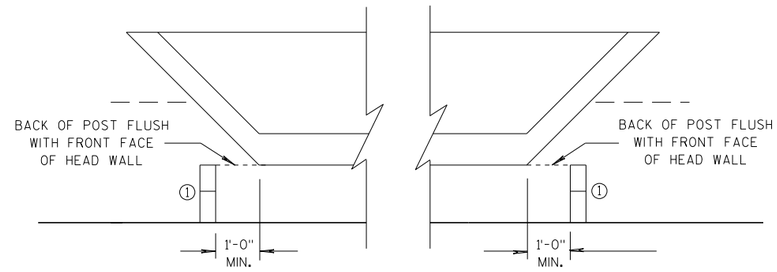
SECTION A-A

POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

(C) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
07/2018
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS D 75 NT
ENGINEER

6

S.D.D. 14 B 43-4c

6

S.D.D. 14 B 43-4c

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED

(C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.

(D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.

(E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.

DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

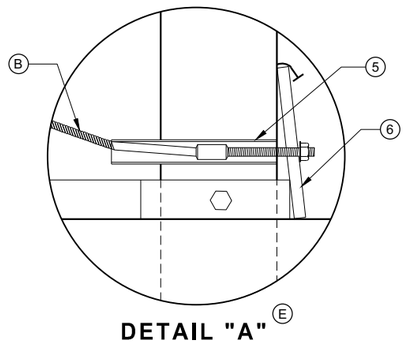
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

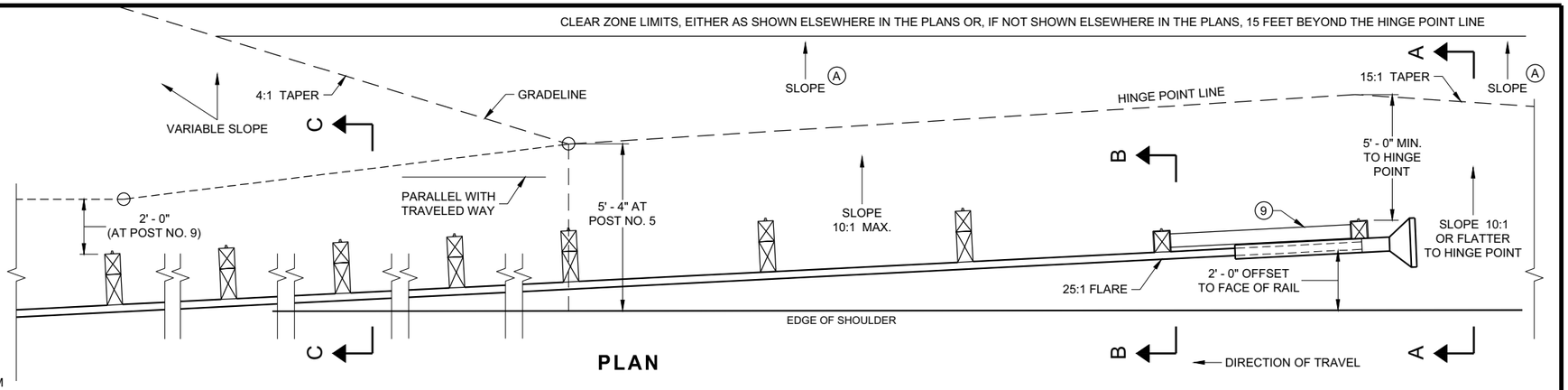
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

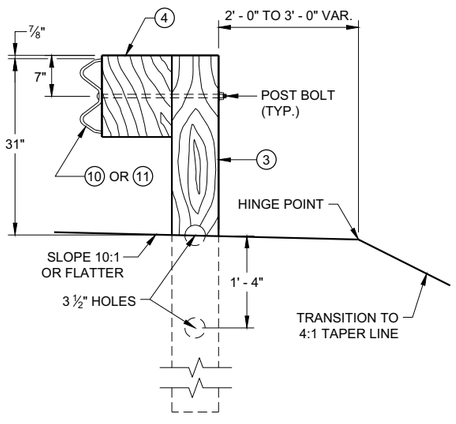
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

THE CENTER OF THE UPPER 3 ½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.

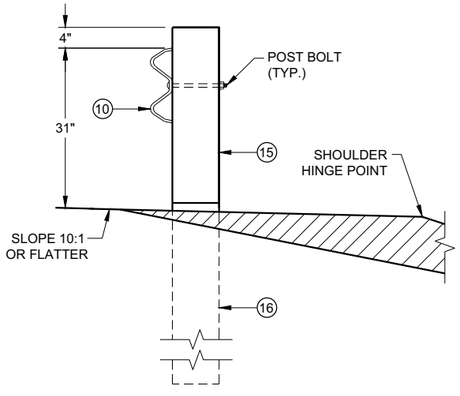


DETAIL "A" (E)

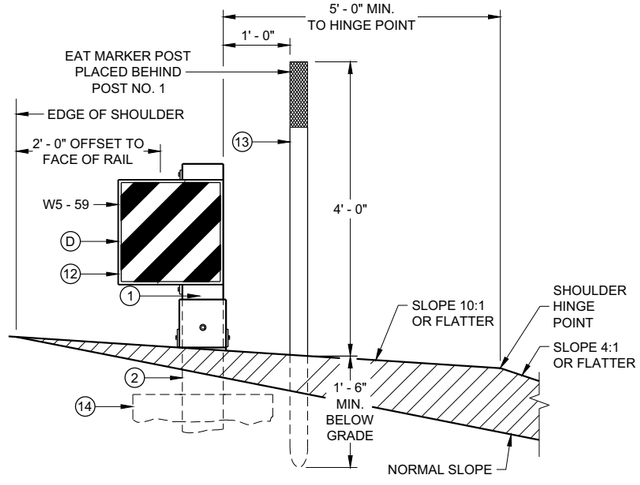




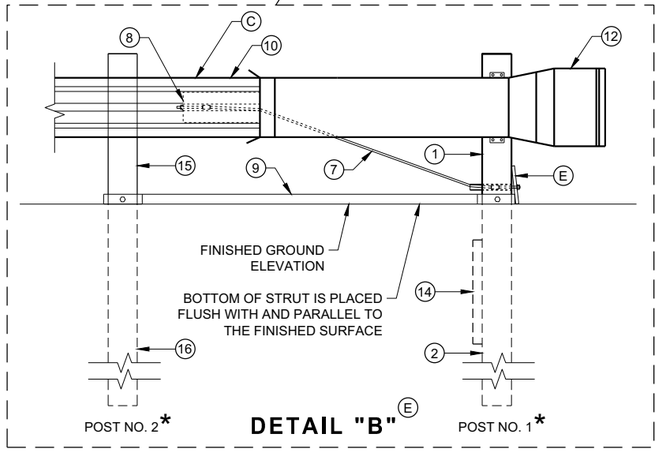
SECTION C - C
TYPICAL AT POST NOS. 3 - 9



SECTION B - B
TYPICAL AT POST NO. 2*



SECTION A - A
TYPICAL AT POST NO. 1*



MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL (MGS)

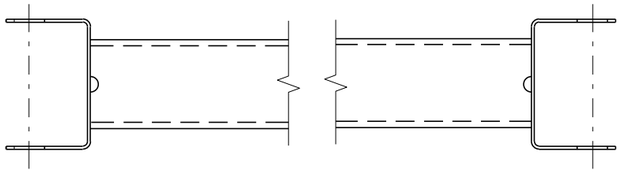
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

SDD 14B44 - 04a

6

SDD 14B44 - 04a

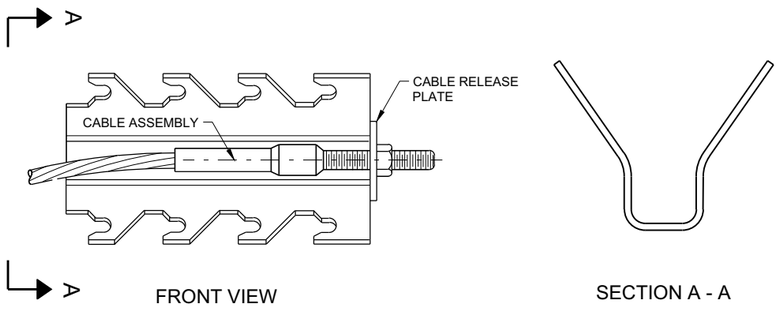
6



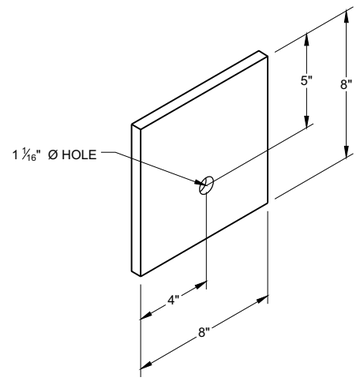
GENERIC GROUND STRUT (9) (E)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUGACTURER'S DETAILS FOR MORE INFORMATION.
(1)	UPPER POST NO. 1 6" X 6" TUBE
(2)	LOWER POST NO. 1
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	IMPACT HEAD
(13)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
(14)	SOIL PLATE
(15)	UPPER POST NO. 2
(16)	LOWER POST NO. 2



GENERIC ANCHOR CABLE BOX (9) (E)



BEARING PLATE (6) (E)

6

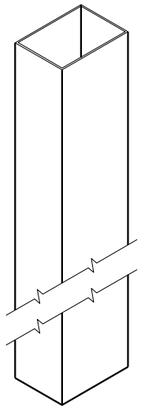
6

SDD 14B44 - 04b

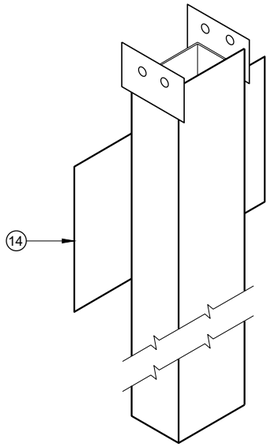
SDD 14B44 - 04b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

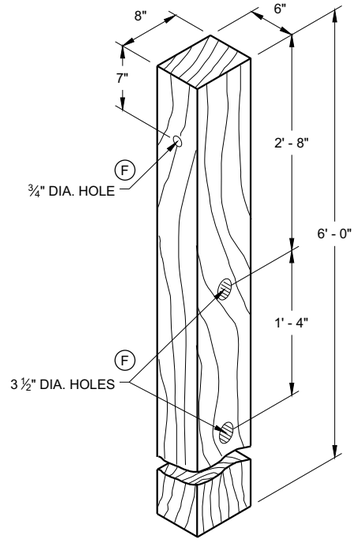
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



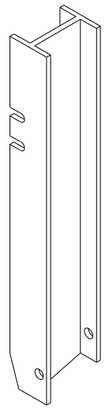
UPPER POST NO. 1 (1) (E)



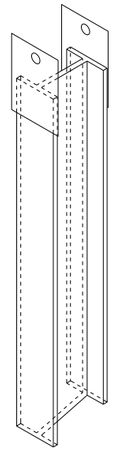
LOWER POST NO. 1 (2) (E)



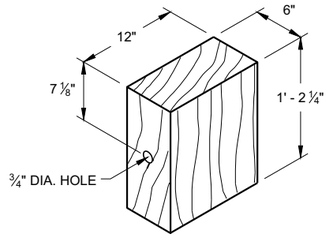
WOOD CRT POST (3) (E)
POSTS NUMBER 3-9



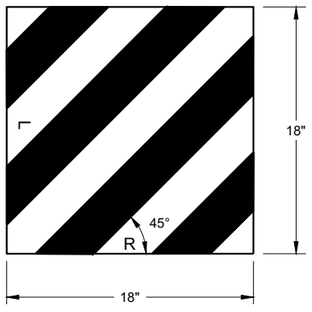
UPPER POST NO. 2 (15) (E)



LOWER POST NO. 2 (16) (E)

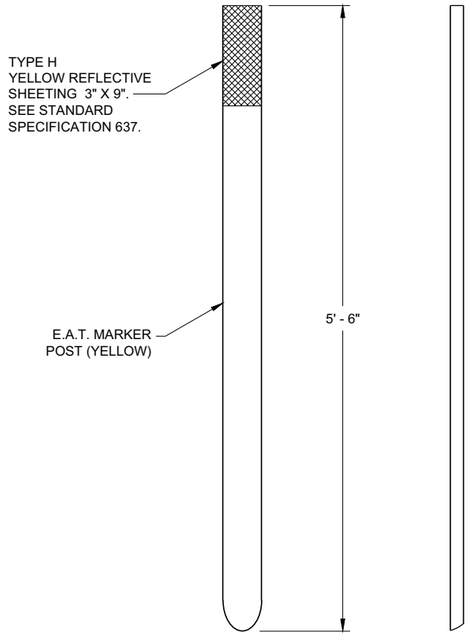


WOOD BLOCKOUT (4)
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



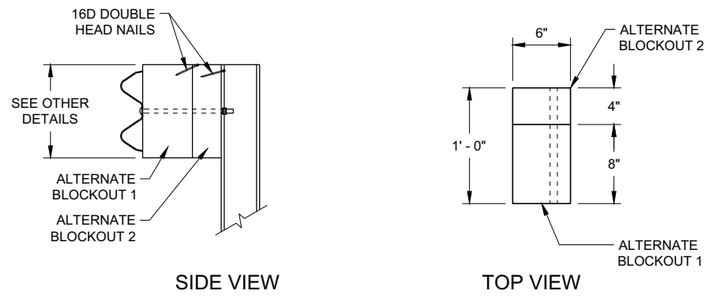
W5 - 59

REFLECTIVE SHEETING DETAIL (E)



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

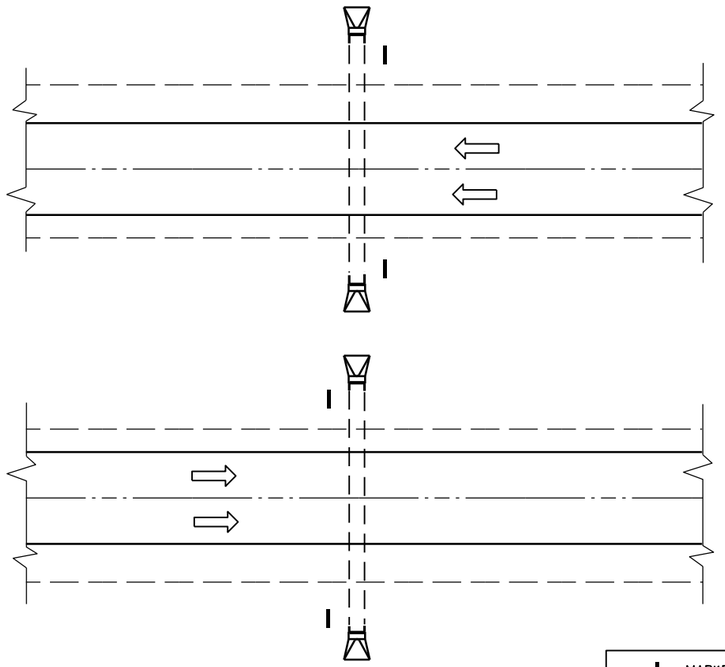
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS DEVE UNIT SUPERVISOR

FHWA

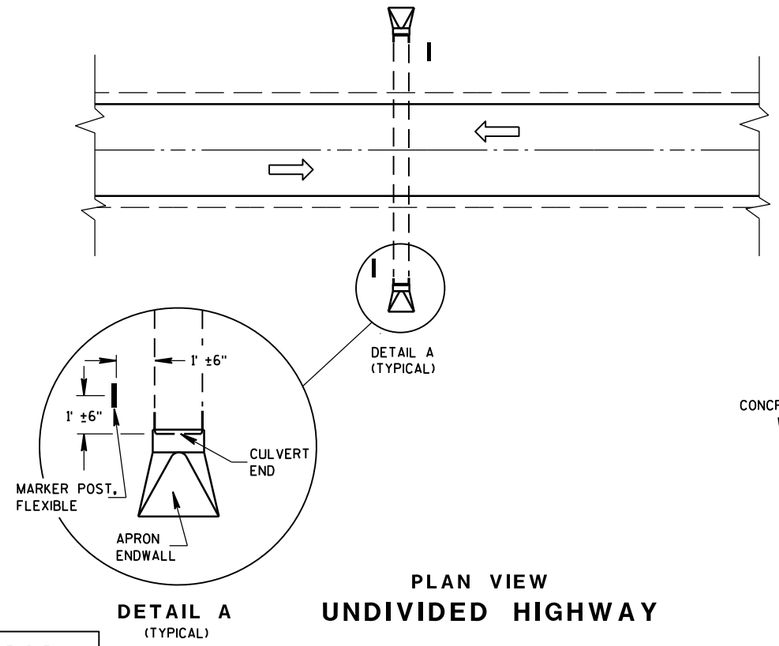
6

SDD 14B44 - 04c



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

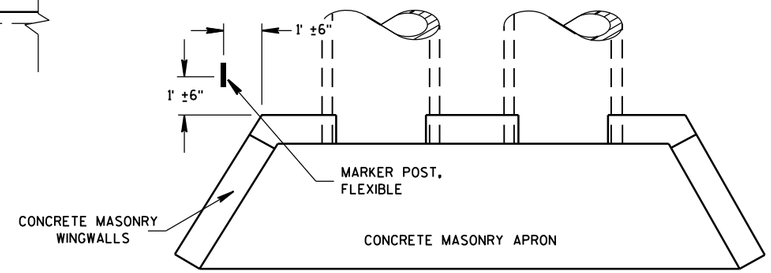
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

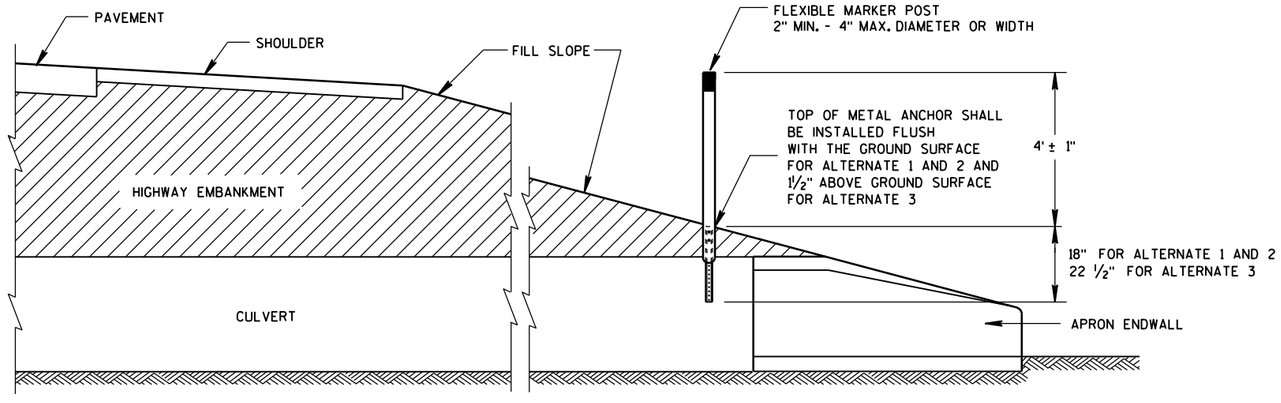
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

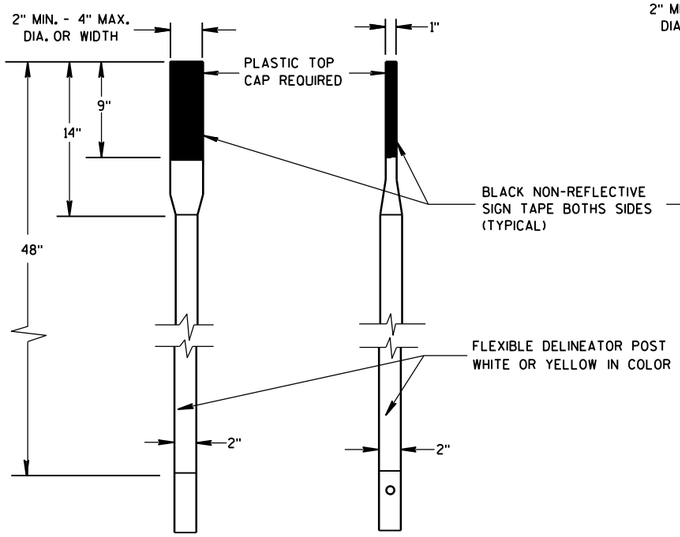
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

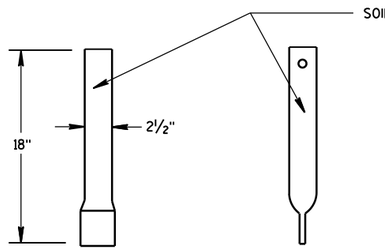
6

S.D.D. 15 A 3-2a

6

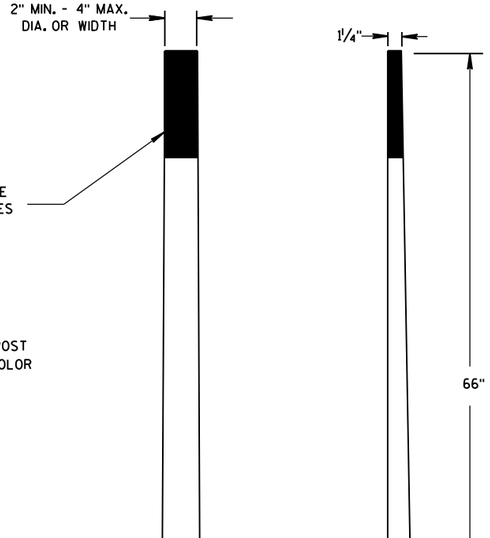
S.D.D. 15 A 3-2a





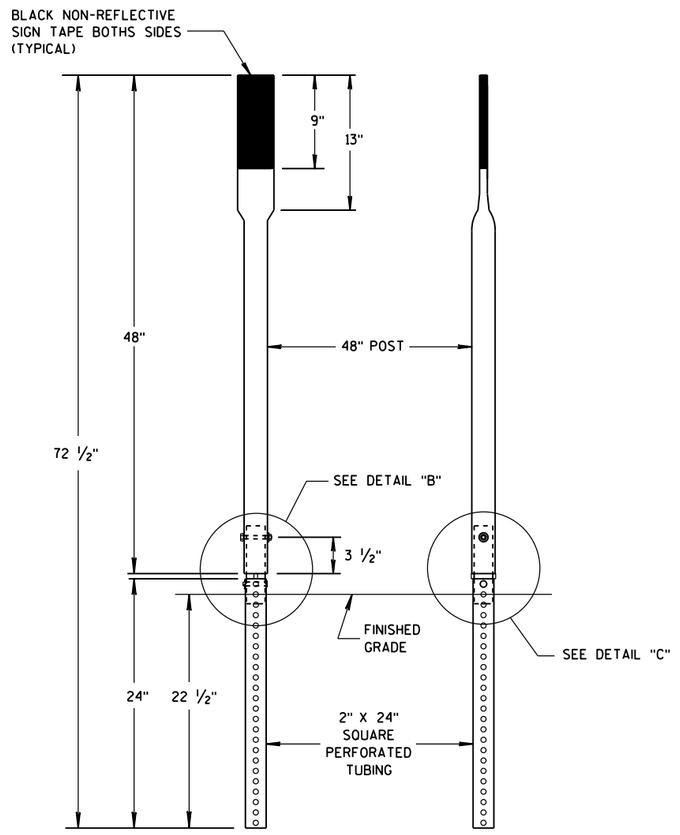
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

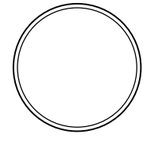
ALTERNATE 2



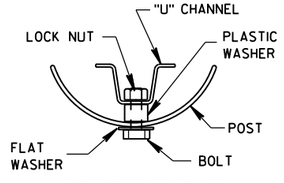
FRONT VIEW SIDE VIEW

ALTERNATE 3

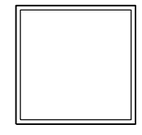
FLEXIBLE MARKER POSTS



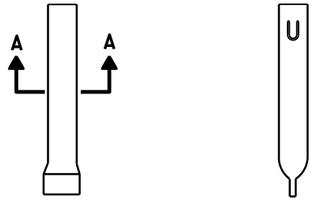
SECTION A-A



SECTION B-B

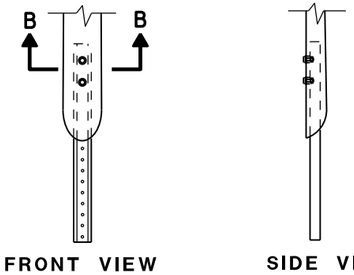


SECTION C-C



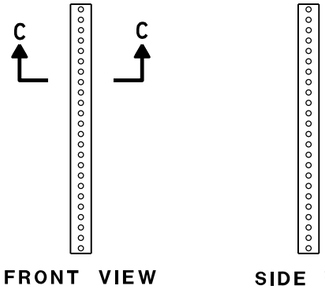
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

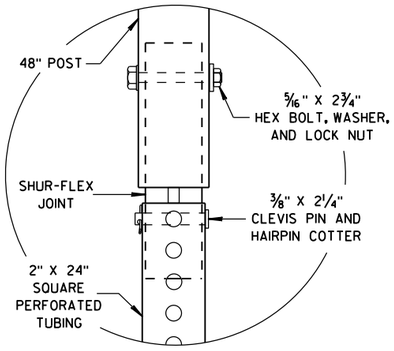
ALTERNATE 2



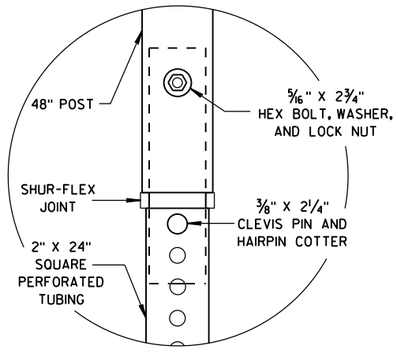
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

S.D.D. 15 A 3-2b

6

S.D.D. 15 A 3-2b

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

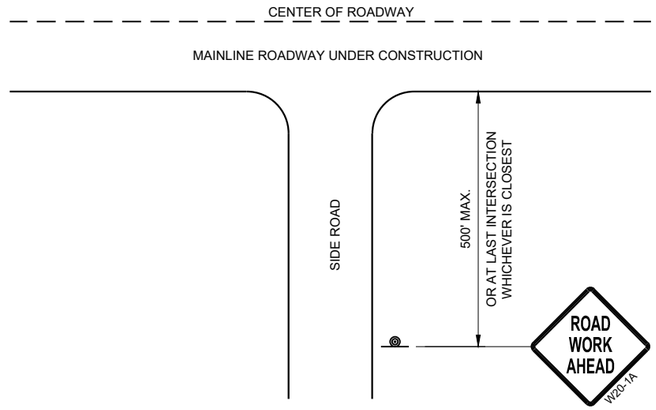
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS

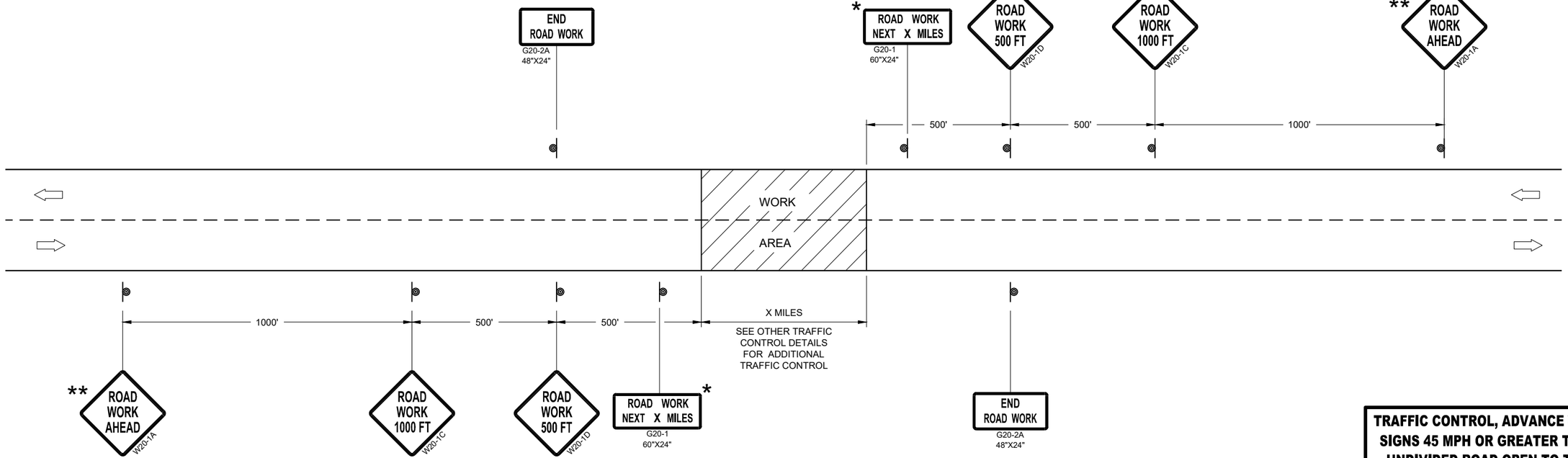
** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C04 - 05

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

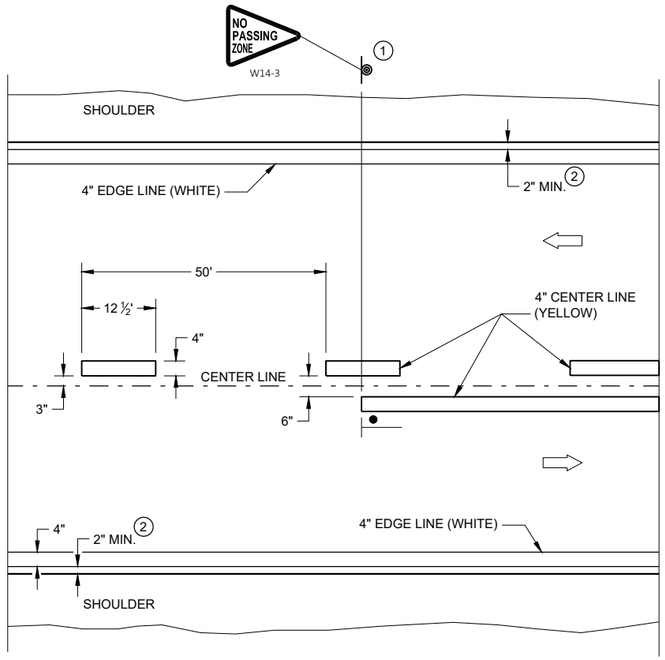
(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

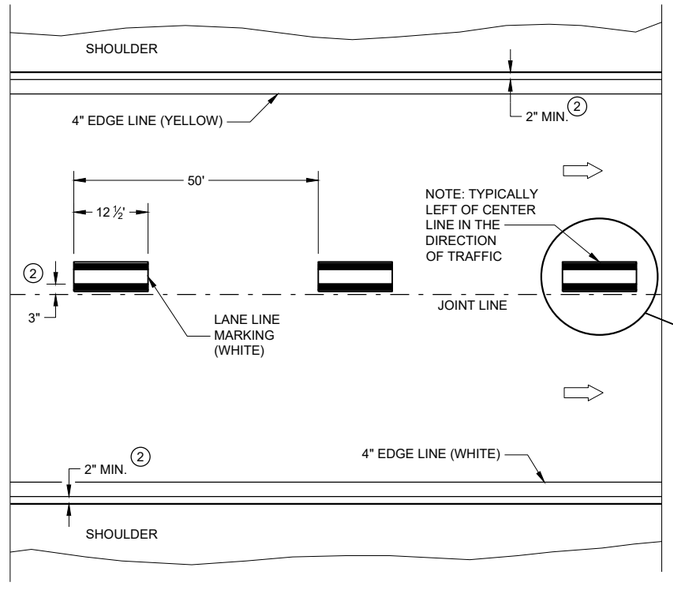
"T" MARKING

SIGN ON PERMANENT SUPPORT

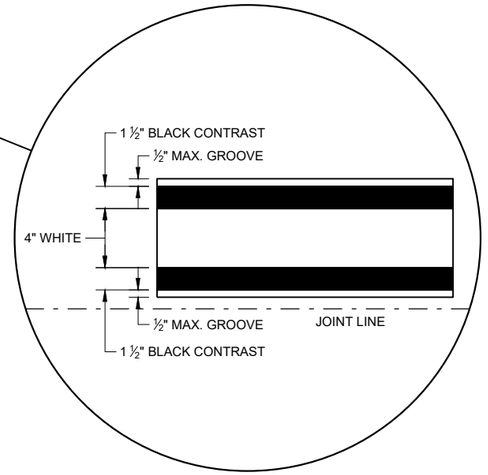
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Jeannie Silver — STATEWIDE SIGNING AND M ENGINEER

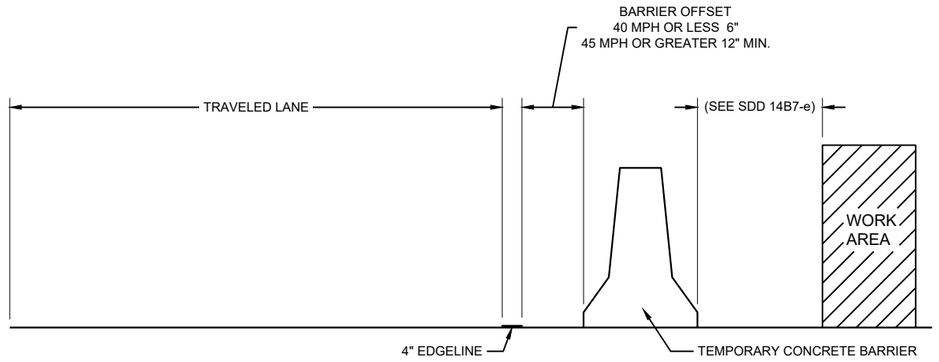
FHWA

6

SDD 15C08 - 22a

6

SDD 15C08 - 22a



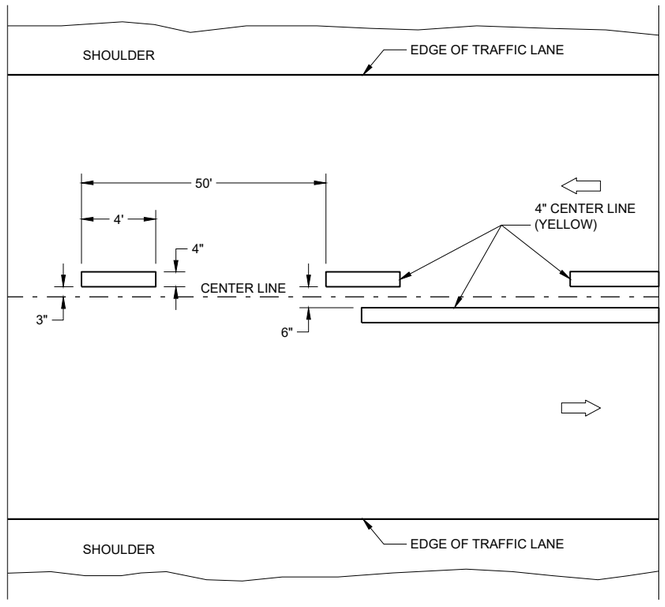
TEMPORARY BARRIER OFFSET FROM EDGELINE

GENERAL NOTES

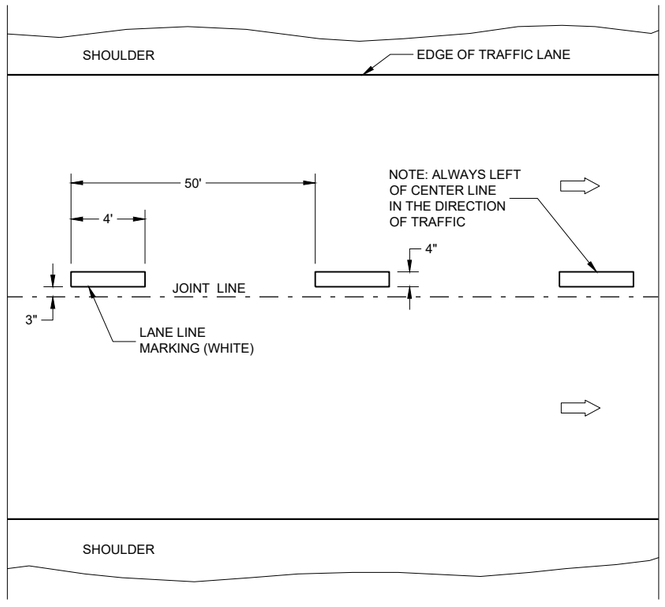
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

LEGEND

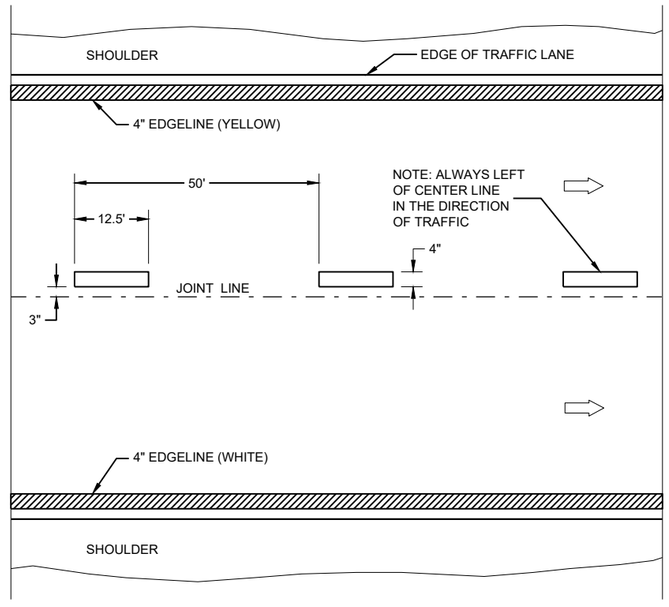
DIRECTION OF TRAFFIC



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

May 2022
DATE

/S/ Jeannie Silver
STATEWIDE SIGNING AND M
ENGINEER

FHWA

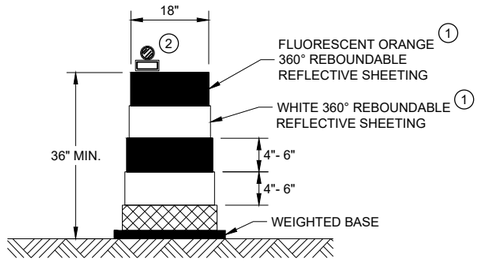
6

SDD 15C08 - 22b

SDD 15C08 - 22b

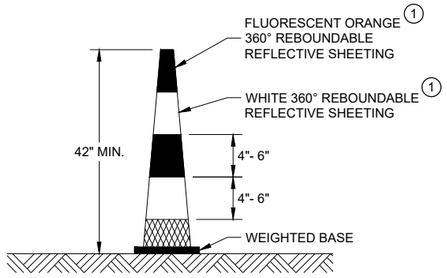
GENERAL NOTES

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



DRUM

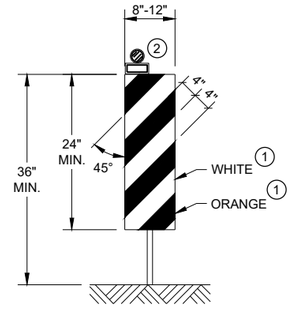
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

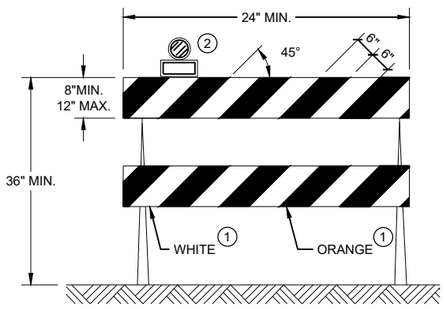
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



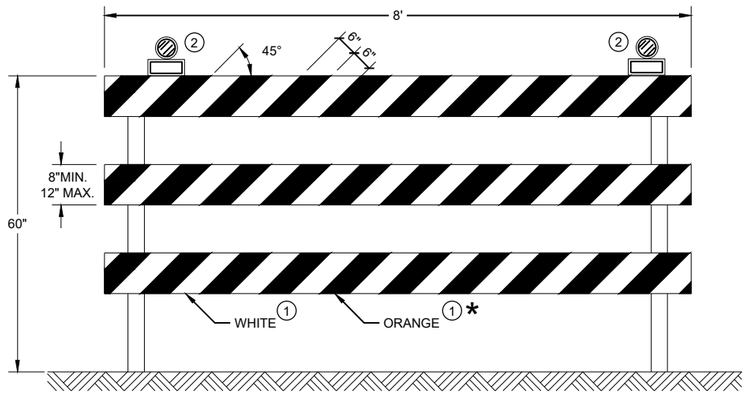
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

6

SDD 15C11 - 10b

6

SDD 15C11 - 10b

LEGEND

SIGN ON PORTABLE OR PERMANENT SUPPORT

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

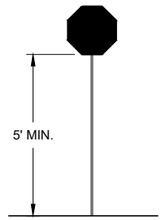
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



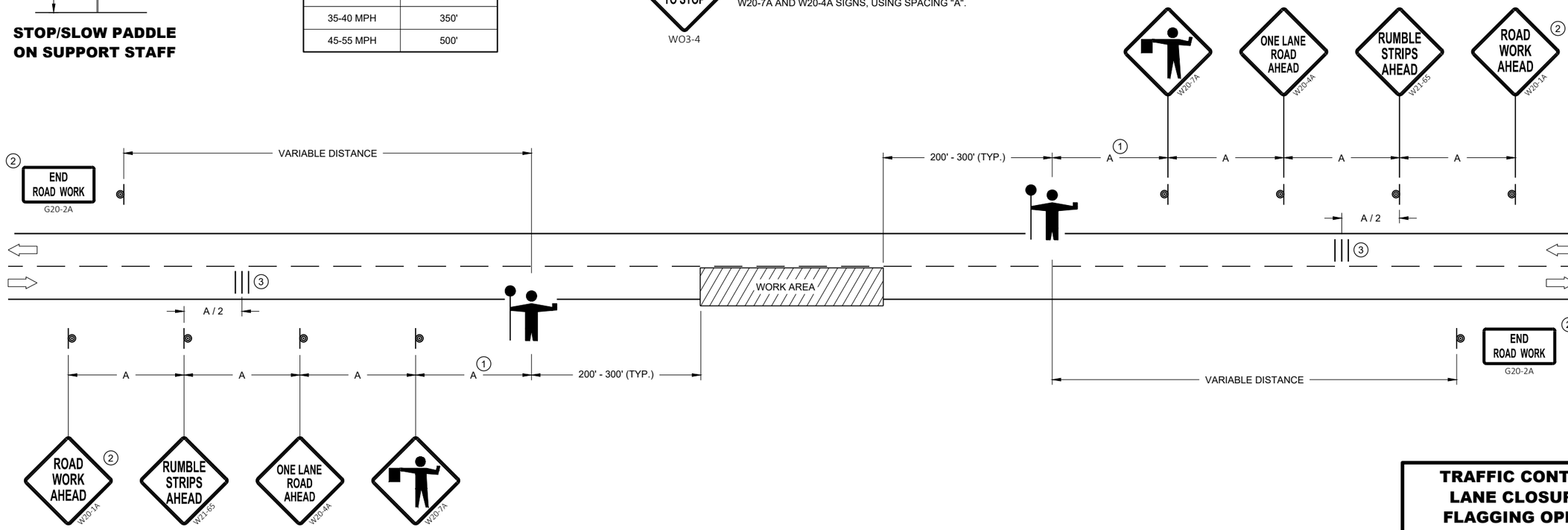
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C12 - 09a

6

SDD 15C12 - 09a

GENERAL NOTES

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL CONE 42-INCH

TRAFFIC CONTROL DRUM

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

AFAD — AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

IF THE AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD) STOPS WORKING, FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

(1) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(2) IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

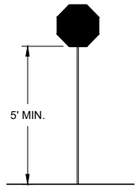
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

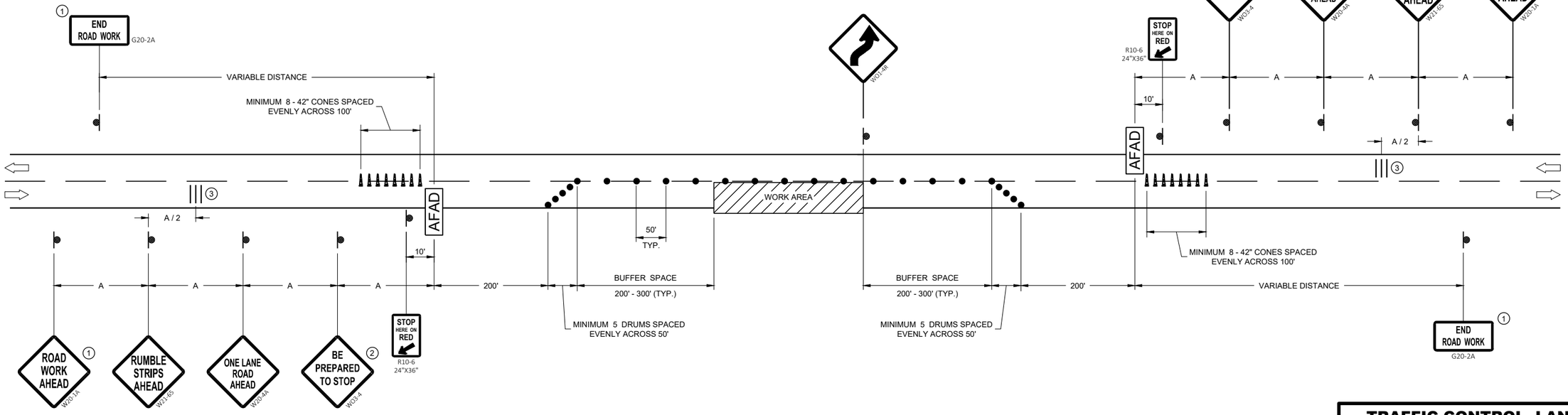
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C12 - 09b

SDD 15C12 - 09b

LEGEND

V1 LEAD VEHICLE

V2 MARKING VEHICLE

V3 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

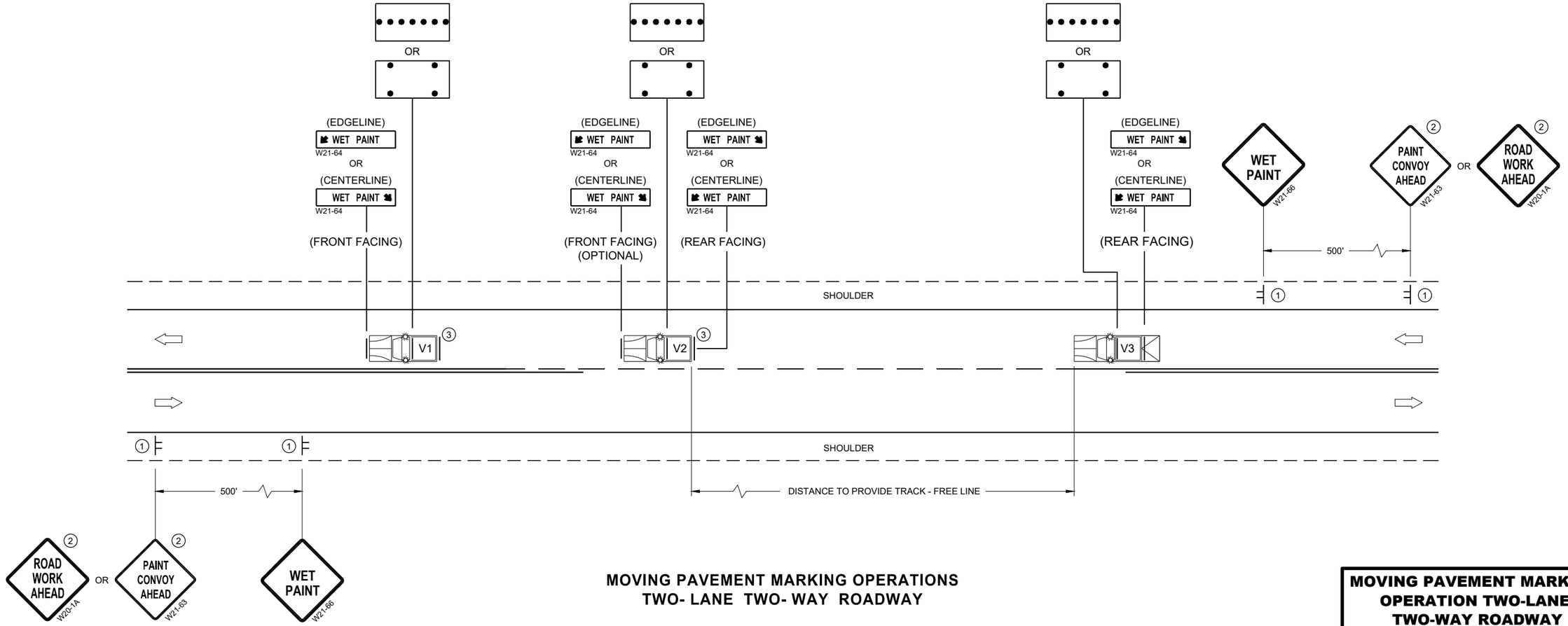
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

(1) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(2) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.

(3) V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.



MOVING PAVEMENT MARKING OPERATIONS
TWO- LANE TWO- WAY ROADWAY

MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C19 - 07a

6

SDD 15C19 - 07a

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

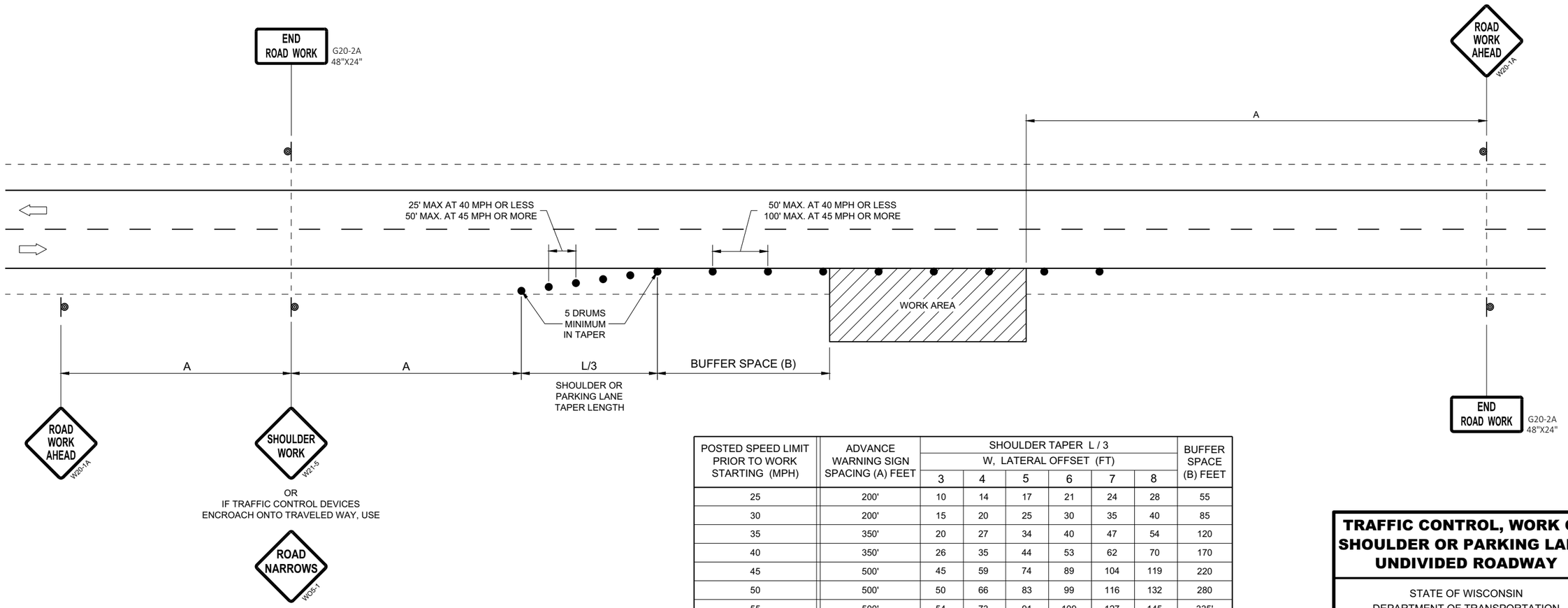
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

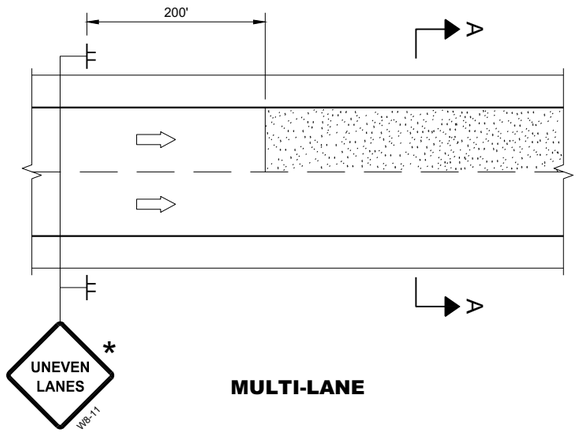
APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

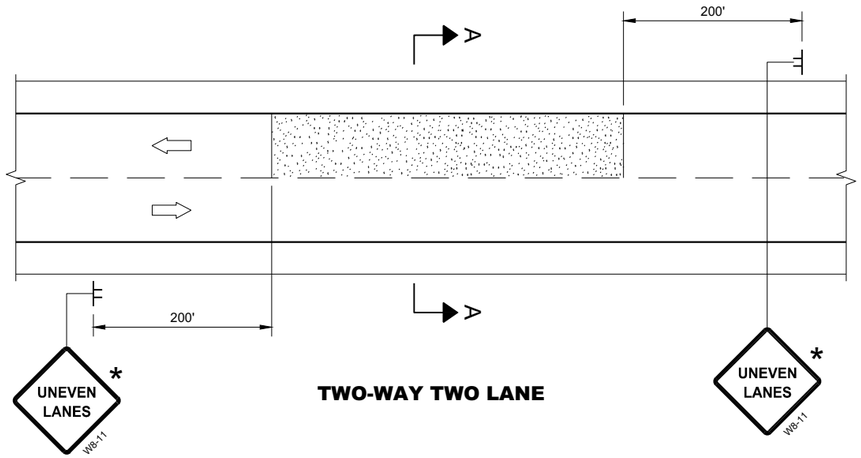
FHWA

SDD 15D28 - 04

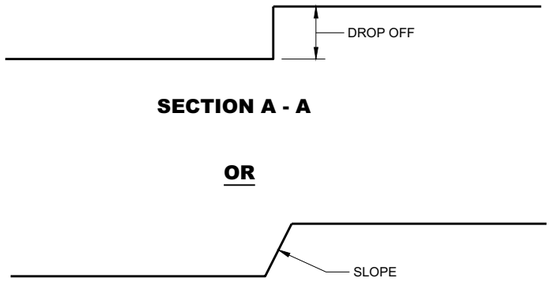
SDD 15D28 - 04



MULTI-LANE



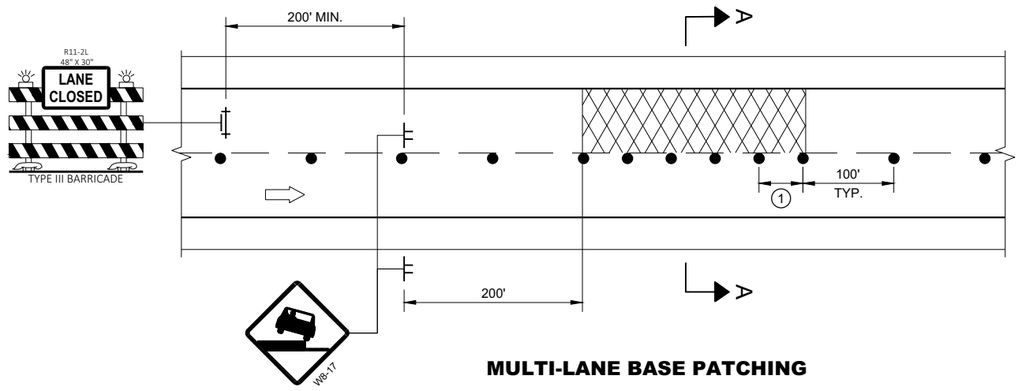
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

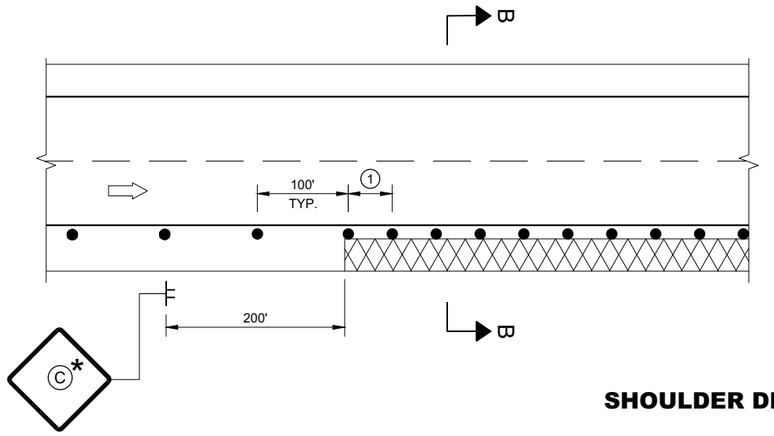
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

* IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.

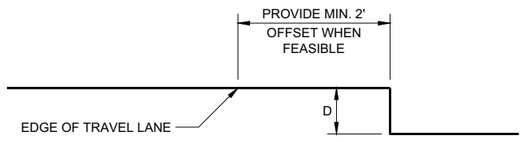
(1) USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP - OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D39 - 02

SDD 15D39 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

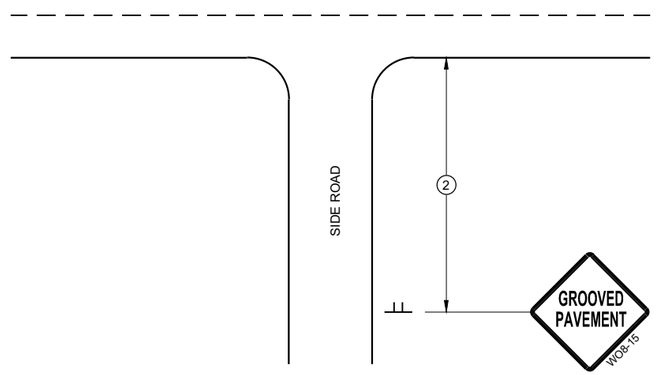
(1) PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

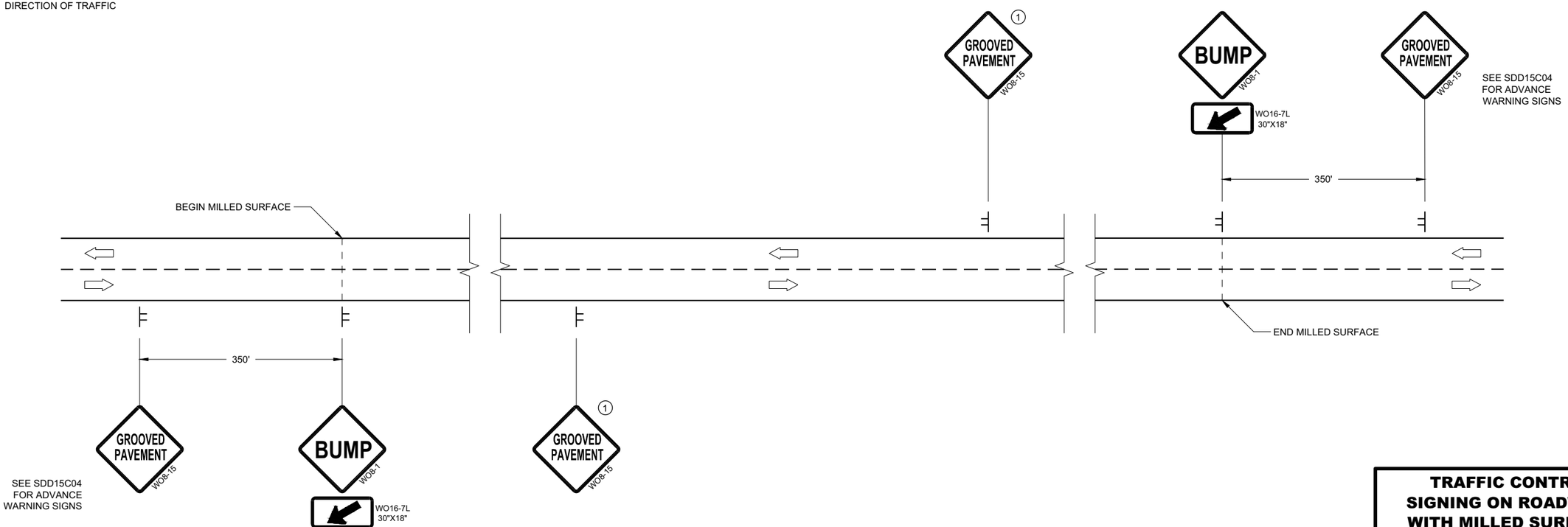
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

SDD 15D44 - 02

SDD 15D44 - 02

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

(1) PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

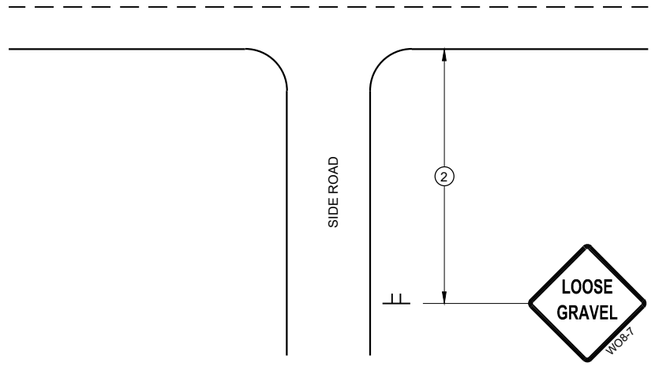
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

(3) ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

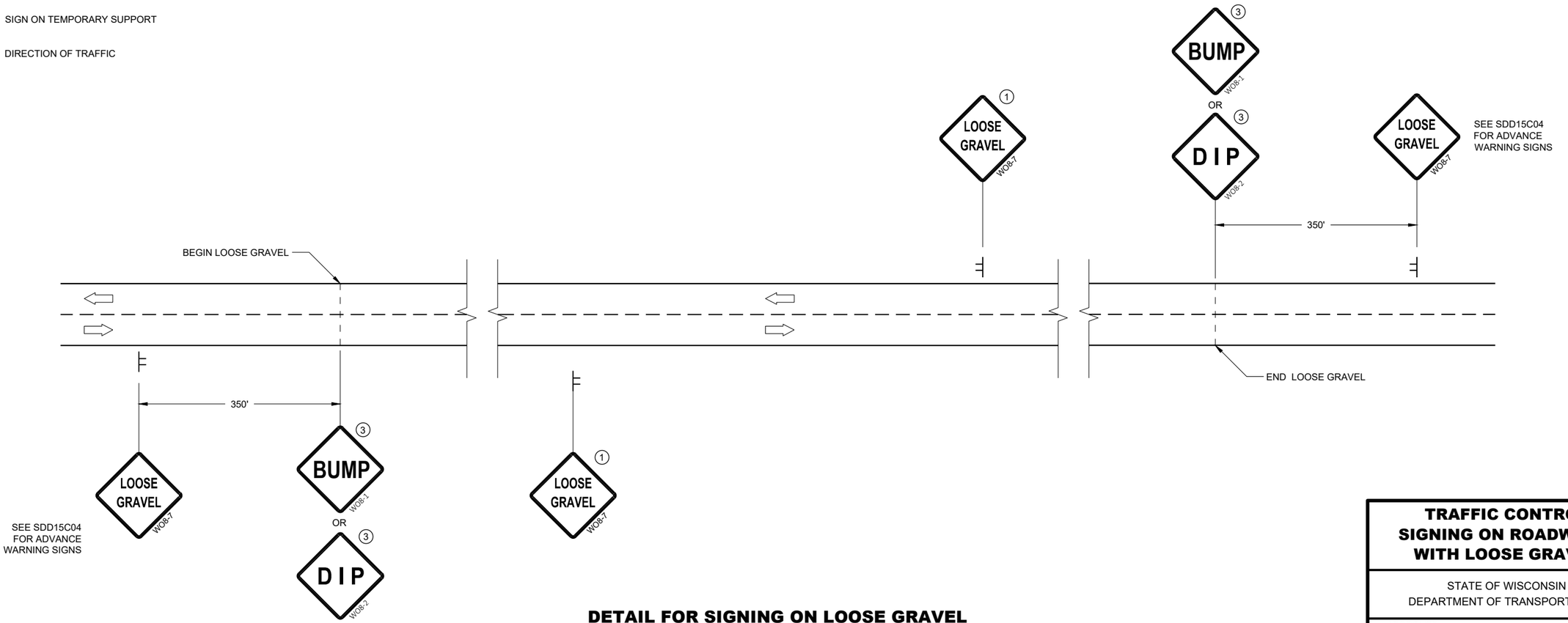
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

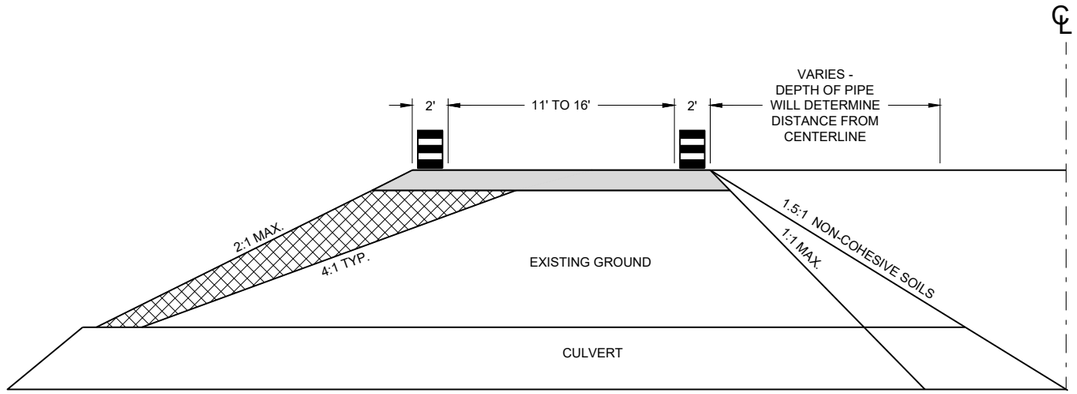
APPROVED
February 2021
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D45 - 03



CROSS SECTION

GENERAL NOTES

USE 1:1 FOR COHESIVE CLAYS AND SILTS, LOAMS, SANDY CLAYS AND ANGULAR GRAVEL SOILS.
USE 1.5:1 FOR NON-COHESIVE SOILS.

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

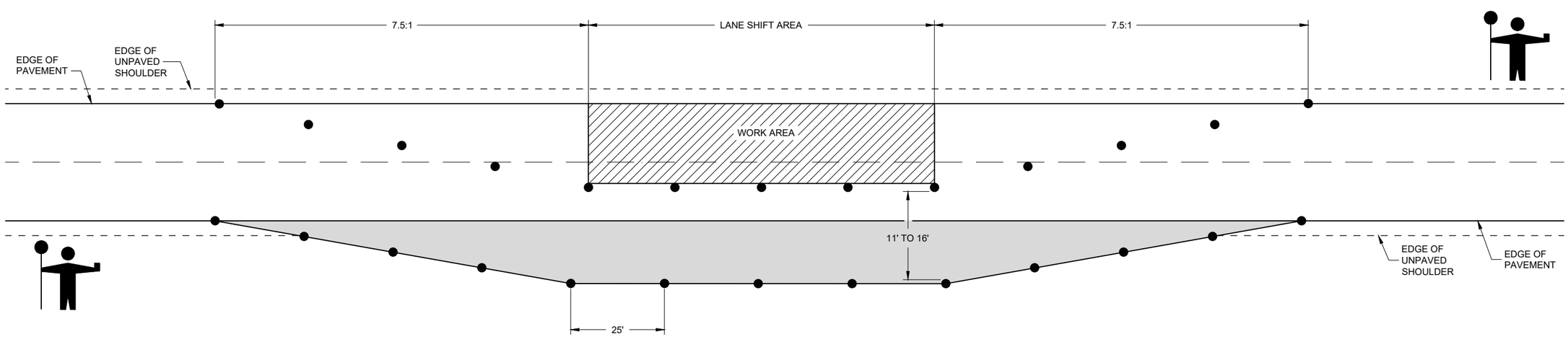
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

USE WITH SDD 15C12 "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS"

USE WITH SDD 15D45 "SIGNING ON ROADWAYS WITH LOOSE GRAVEL"

LEGEND

- DRUM WITHOUT WARNING LIGHT
- 6" BASE AGGREGATE DENSE 1 ¼" -INCIDENTAL TO LANE SHIFT ITEM
- FILL - INCIDENTAL TO LANE SHIFT ITEM
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



LANE SHIFT IN FLAGGING OPERATION

TRAFFIC CONTROL, TEMPORARY LANE SHIFT DURING CULVERT WORK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D48 - 01

6

SDD 15D48 - 01

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

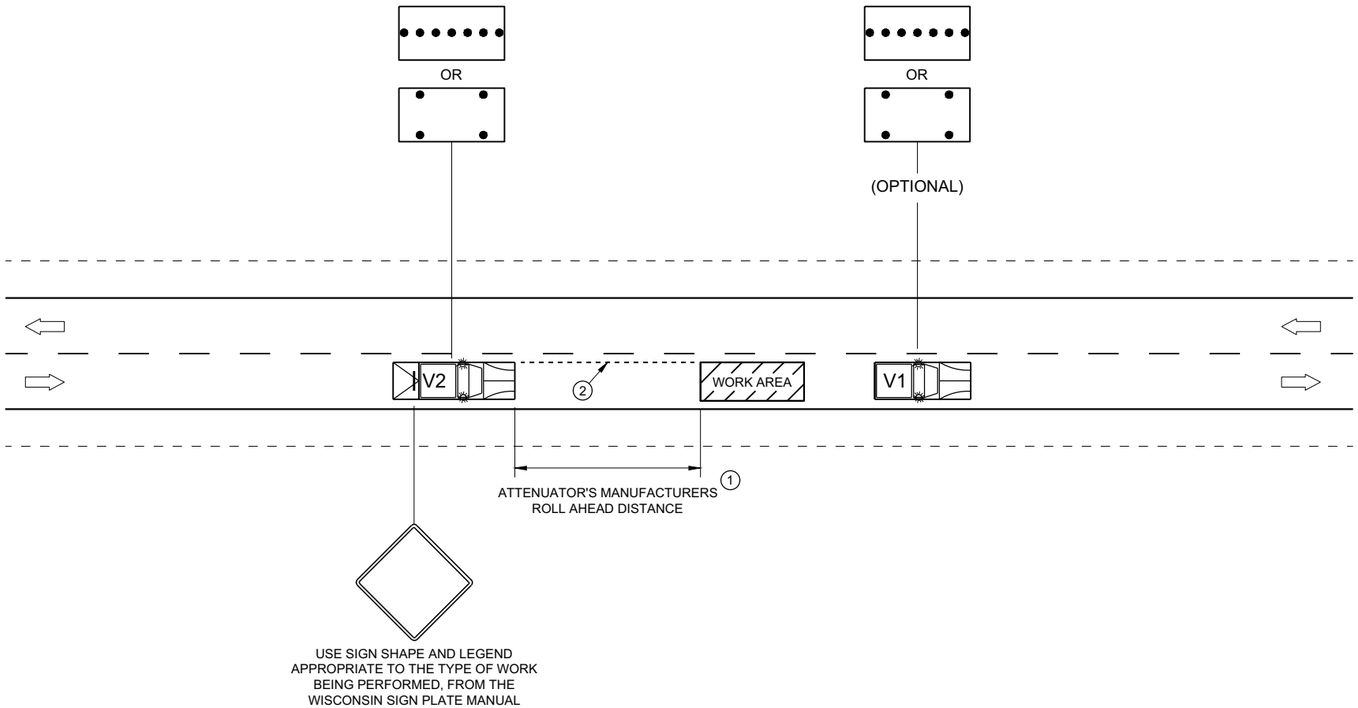
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

(1) DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



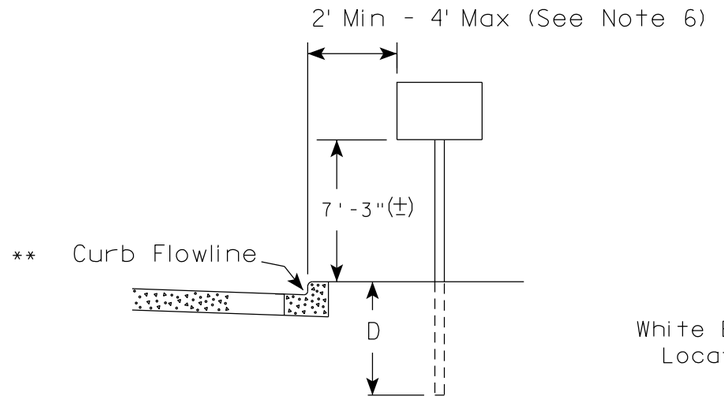
TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

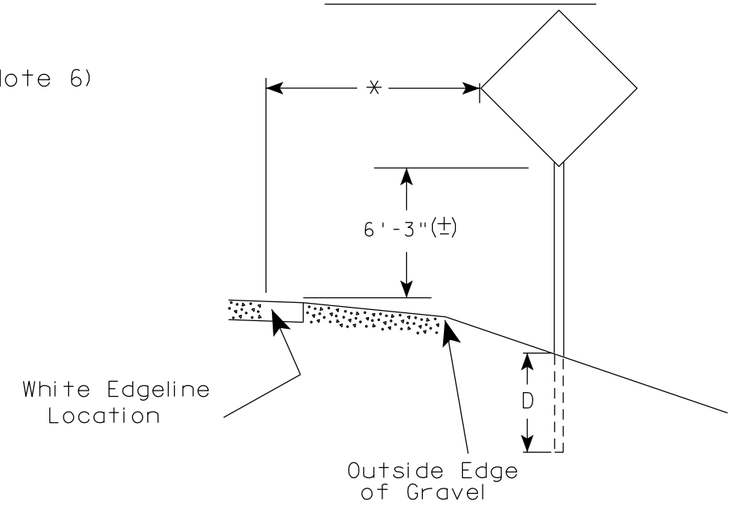
APPROVED
February 2021 — DATE
/S/ Andrew Heidtke — STATEWIDE WORK ZONE T SAFETY ENGINEER
FHWA

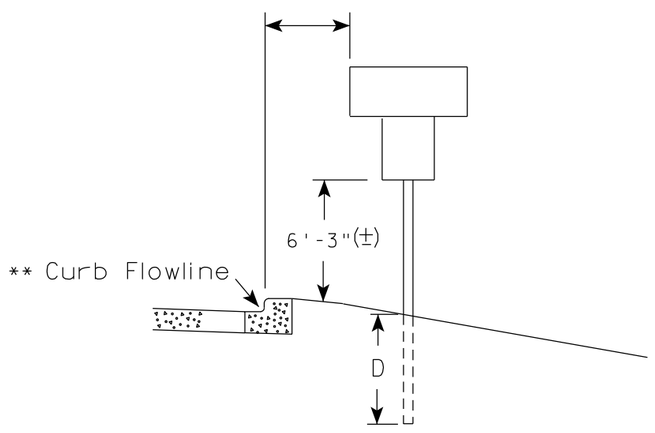
6
SDD 15D51 - 01

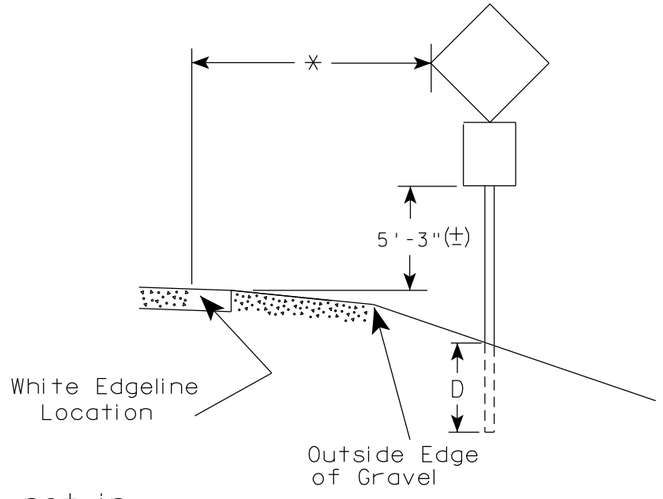
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

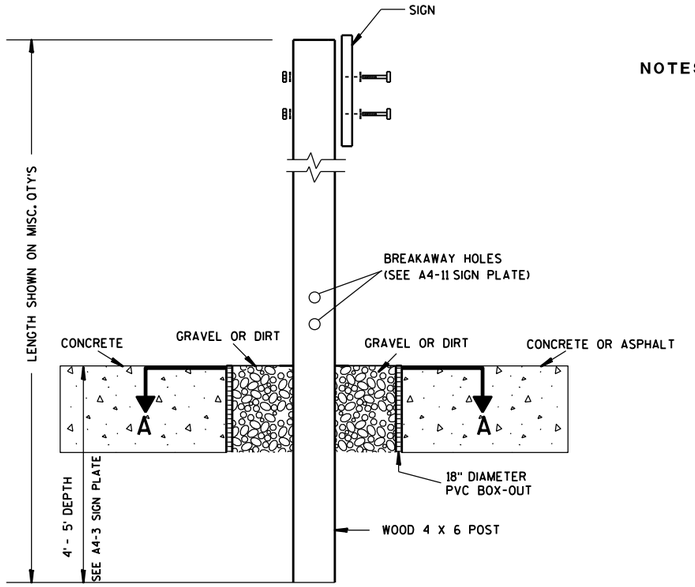
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

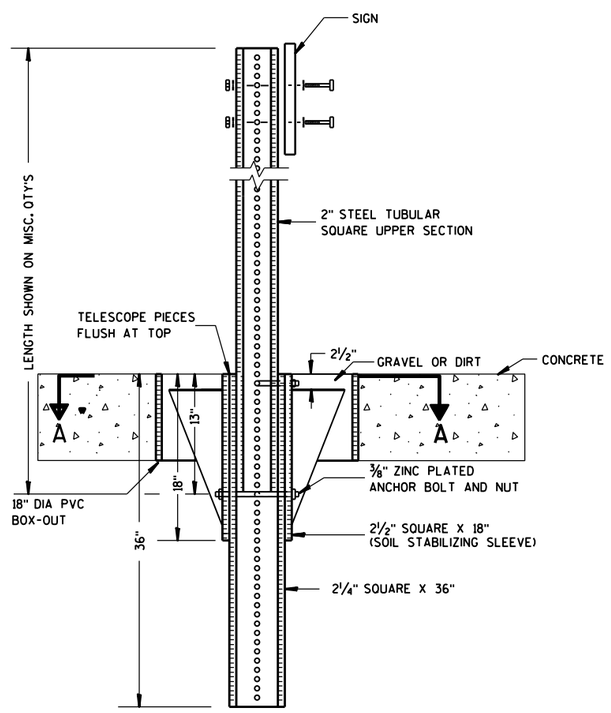
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 94	E



ELEVATION VIEW

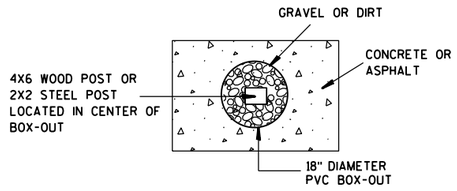
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

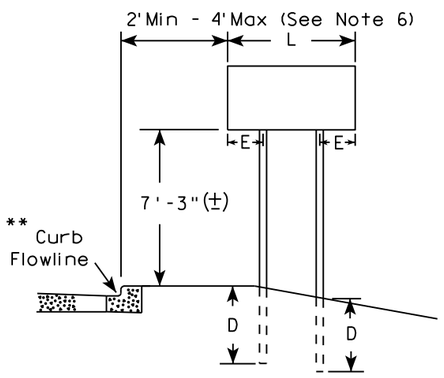
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

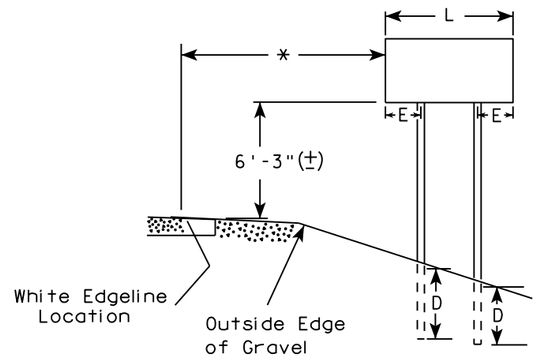
DATE 1/27/14 PLATE NO. A4-3B.1

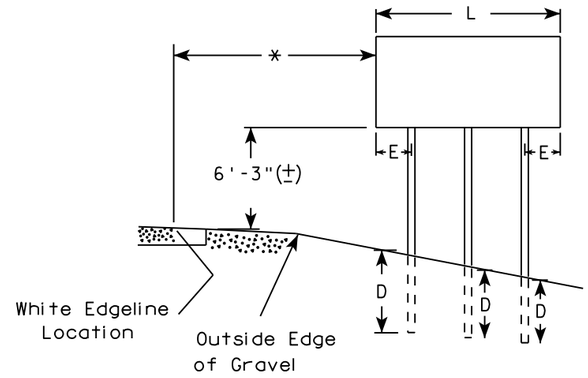
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

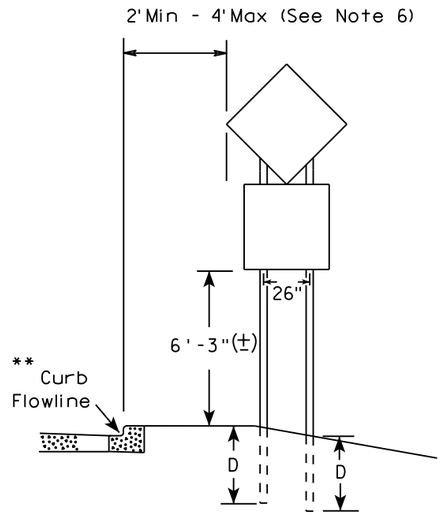
URBAN AREA



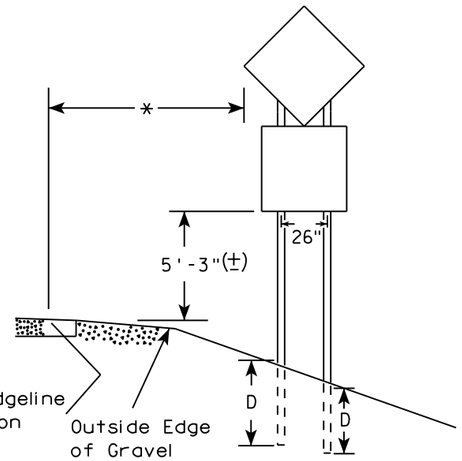
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

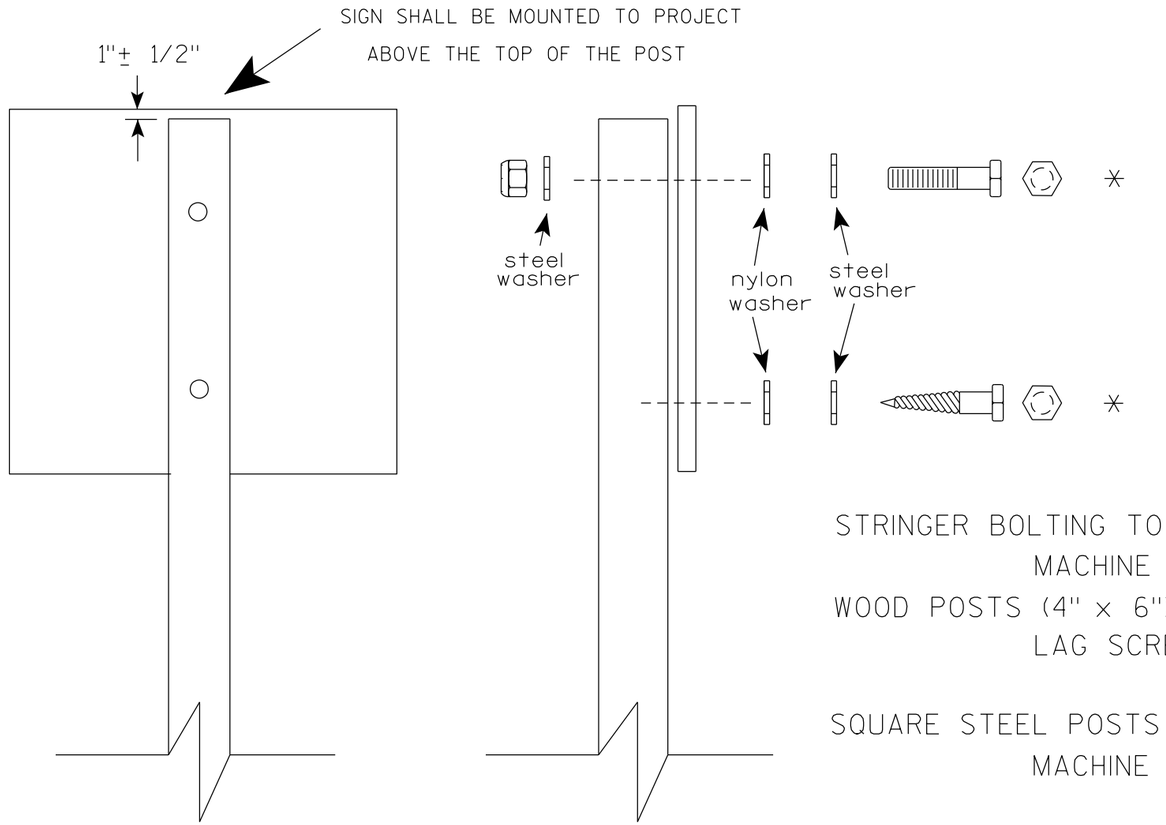
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 96	E



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

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

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

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

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

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

WOOD POSTS (4" x 6")

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

SQUARE STEEL POSTS (2" x 2")

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

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

WASHERS (ALL POSTS) -

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

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

ATTACHMENT OF SIGNS TO POSTS

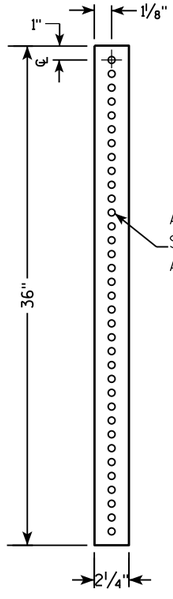
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

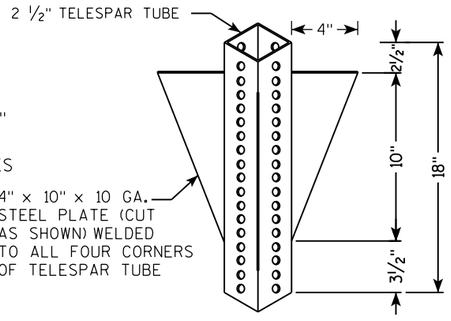
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

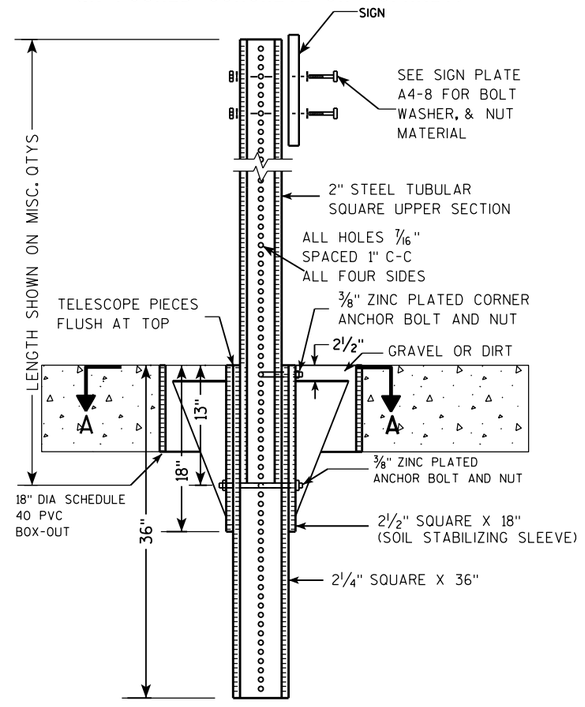
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



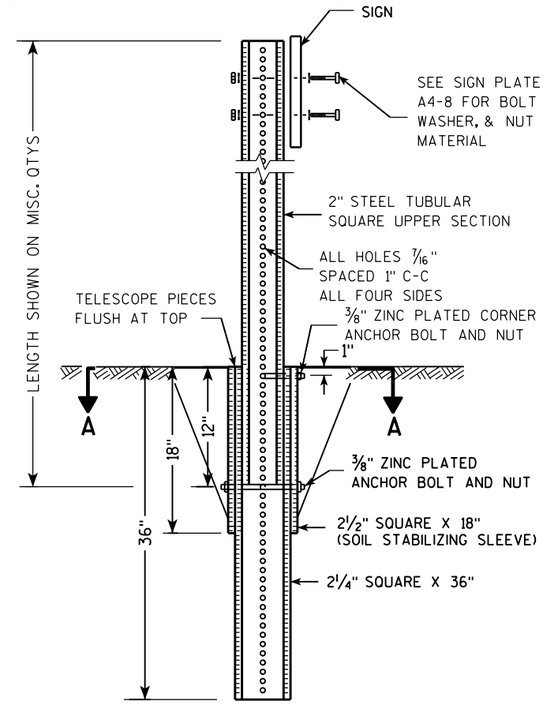
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

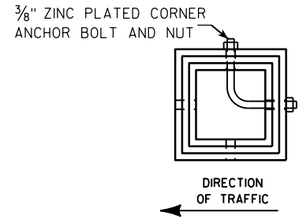


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

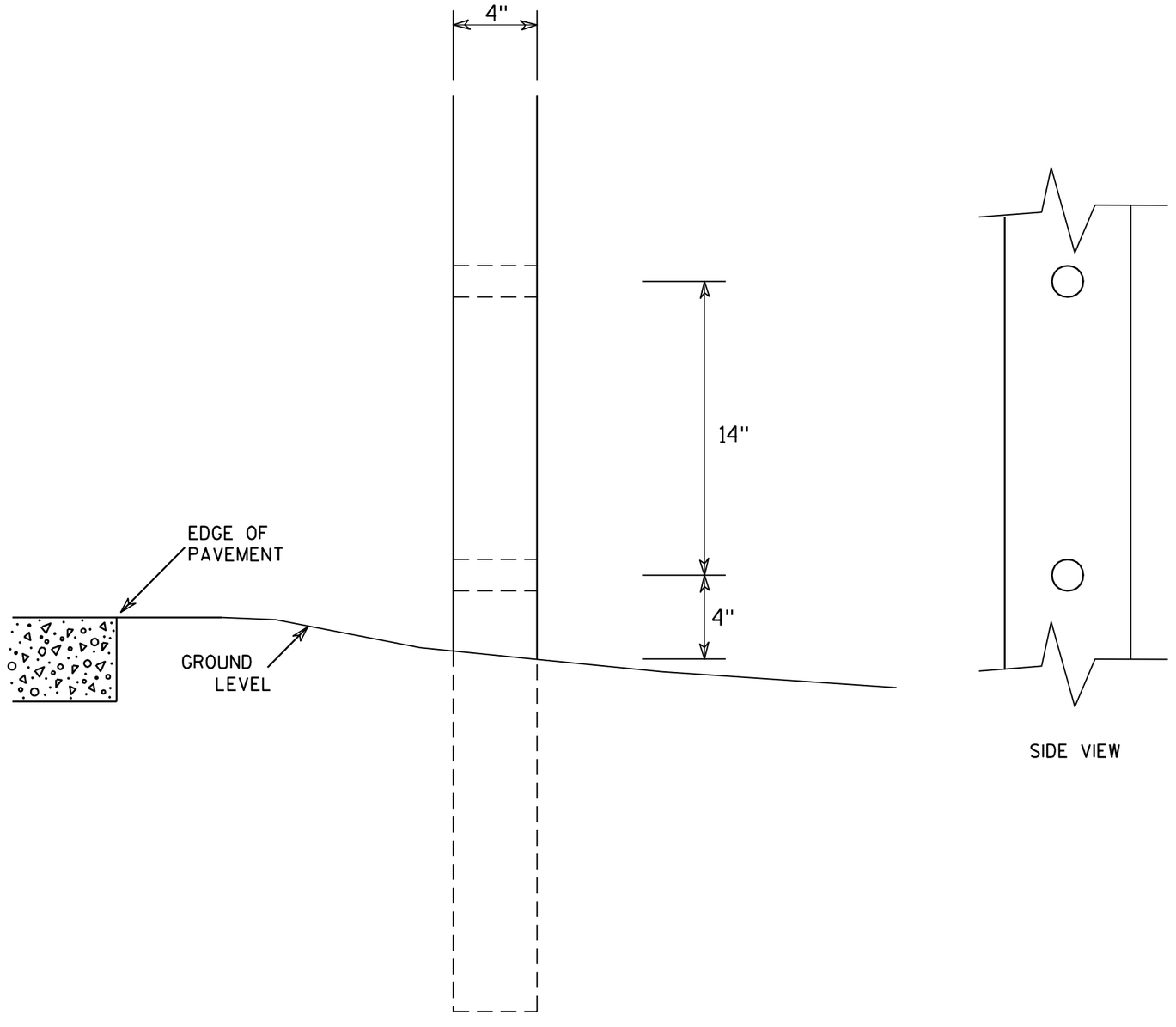
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 98 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

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

7

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

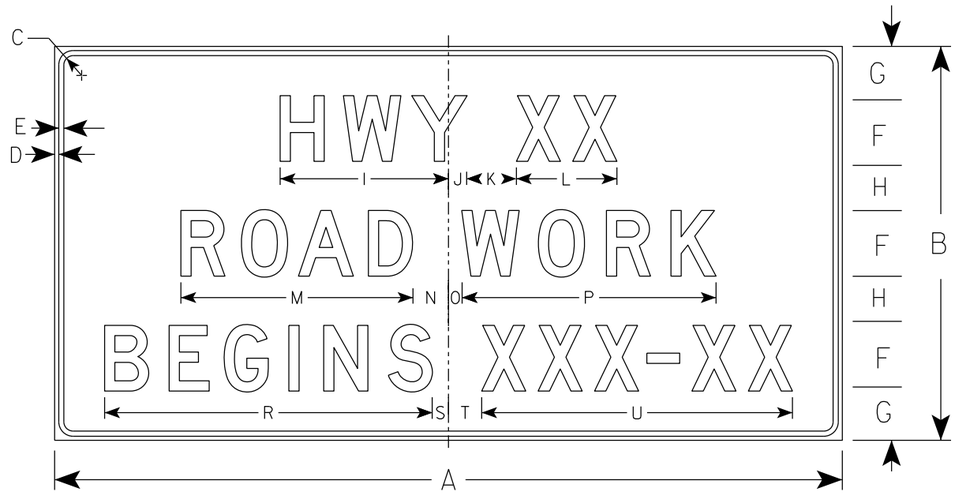
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 99	E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57

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																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	21 1/4	3 1/2	1 1/2	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	28 1/4	4 3/8	1 5/8	31		39 1/4	2	4	37 7/8						32.0
5																											

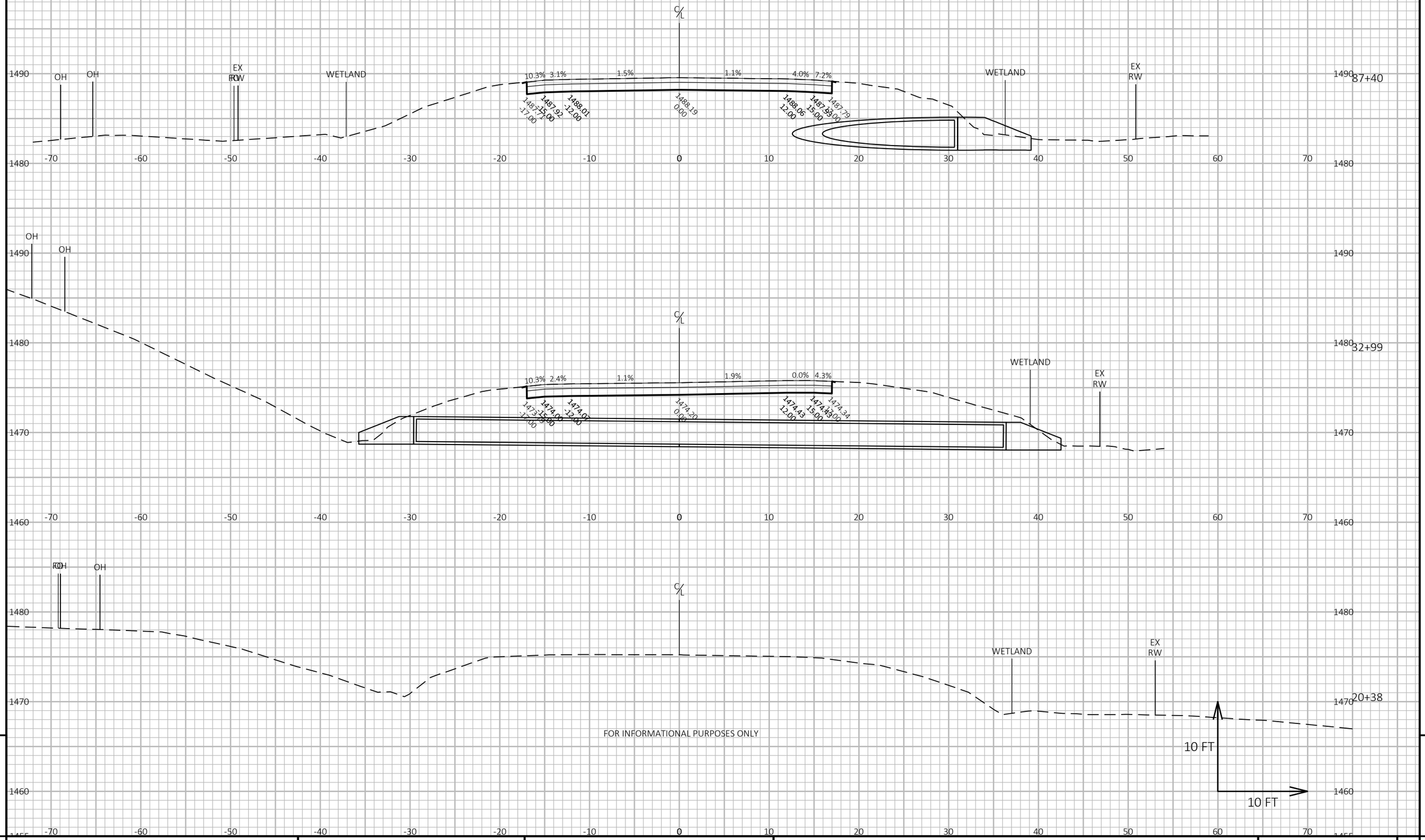
STANDARD SIGN
G20-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57.3

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 100 | E



FOR INFORMATIONAL PURPOSES ONLY

9

9

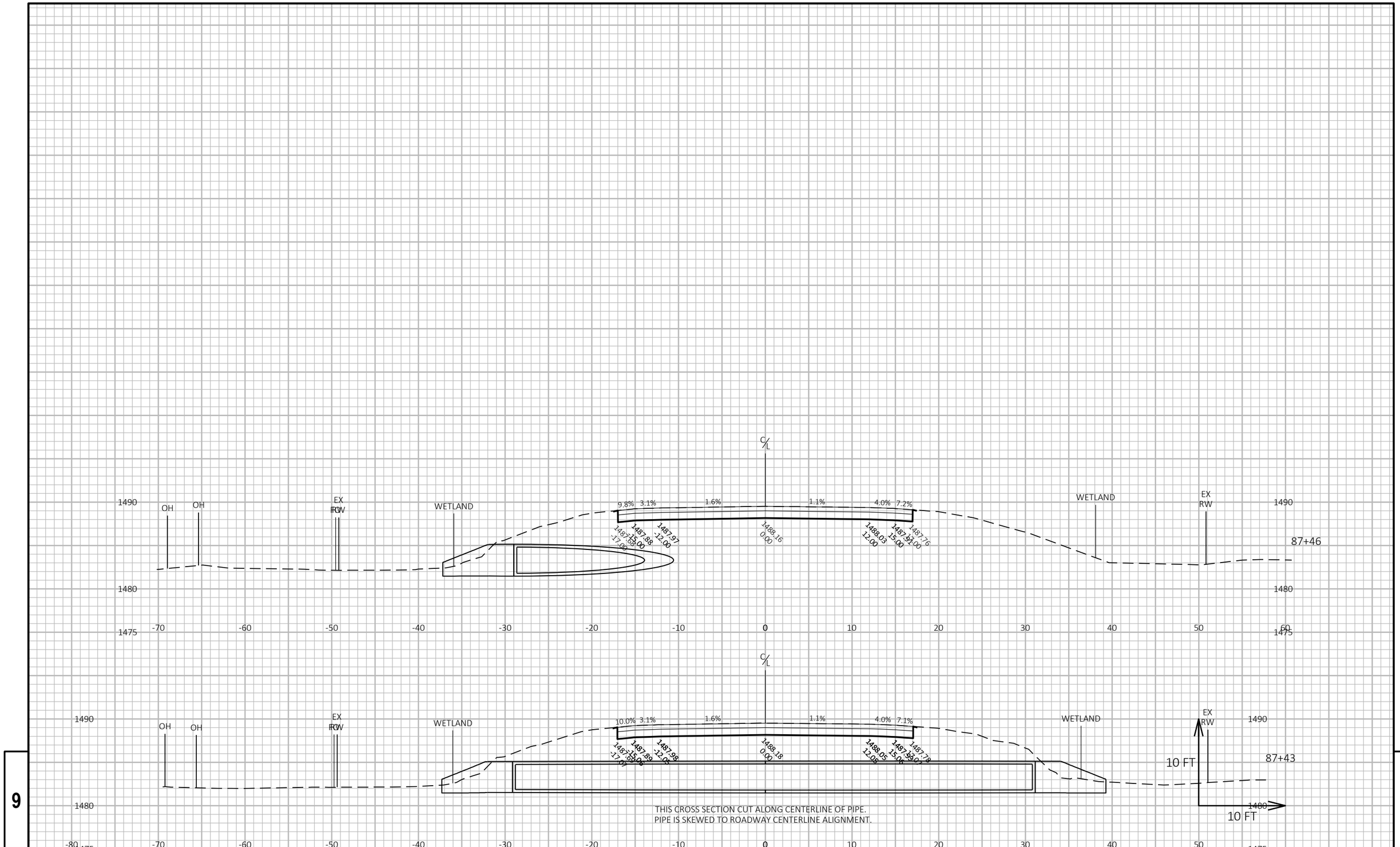
PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 101	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-1

PLOT DATE : 11/8/2022 11:10 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME :

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

WISDOT/CADDS SHEET 49



PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 102	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-2

PLOT DATE : 11/8/2022 11:11 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

9

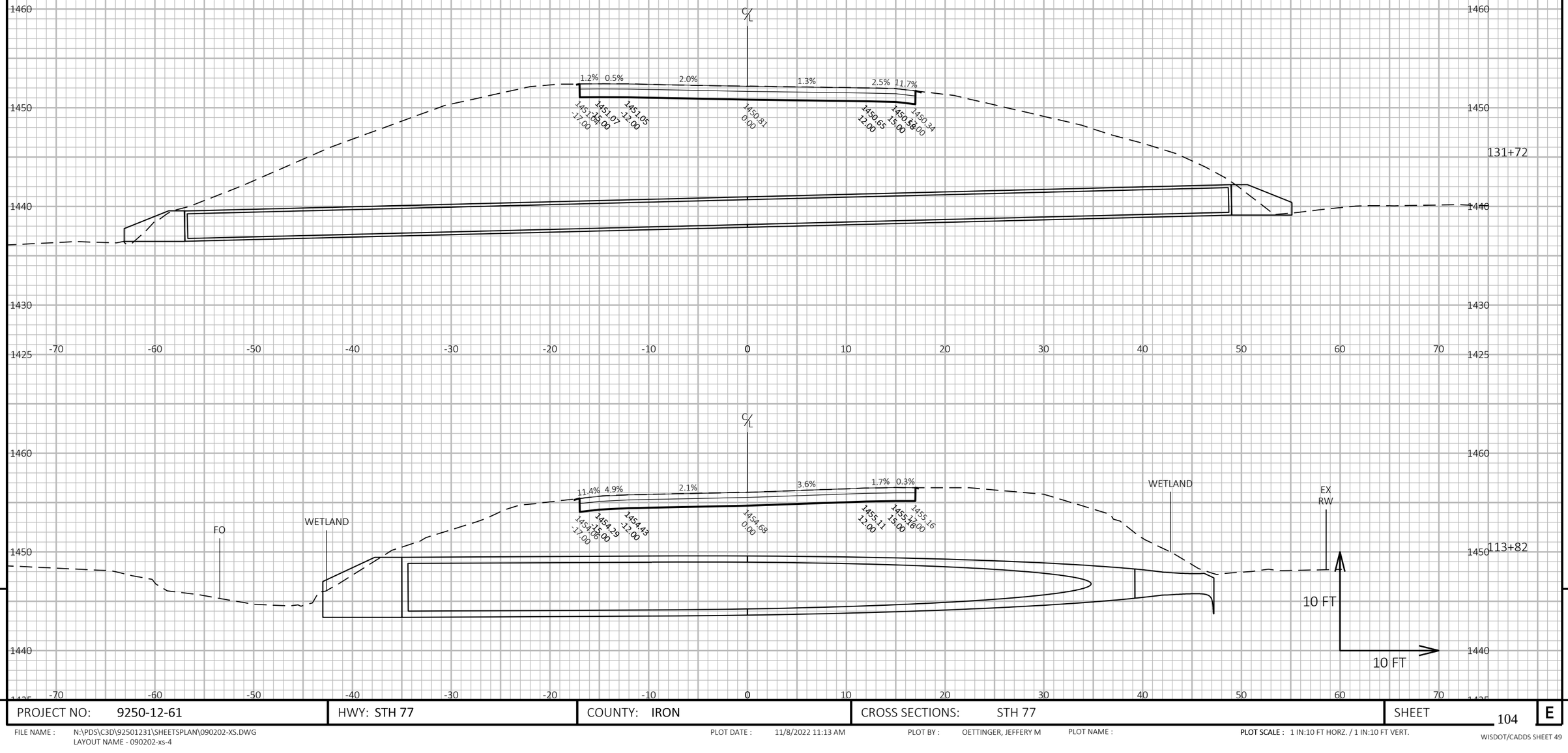
9

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 103	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-3

PLOT DATE : 11/8/2022 11:13 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

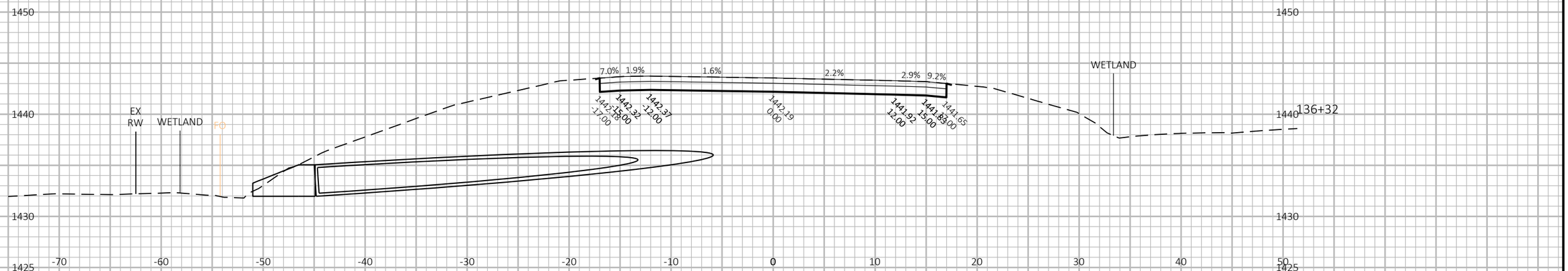


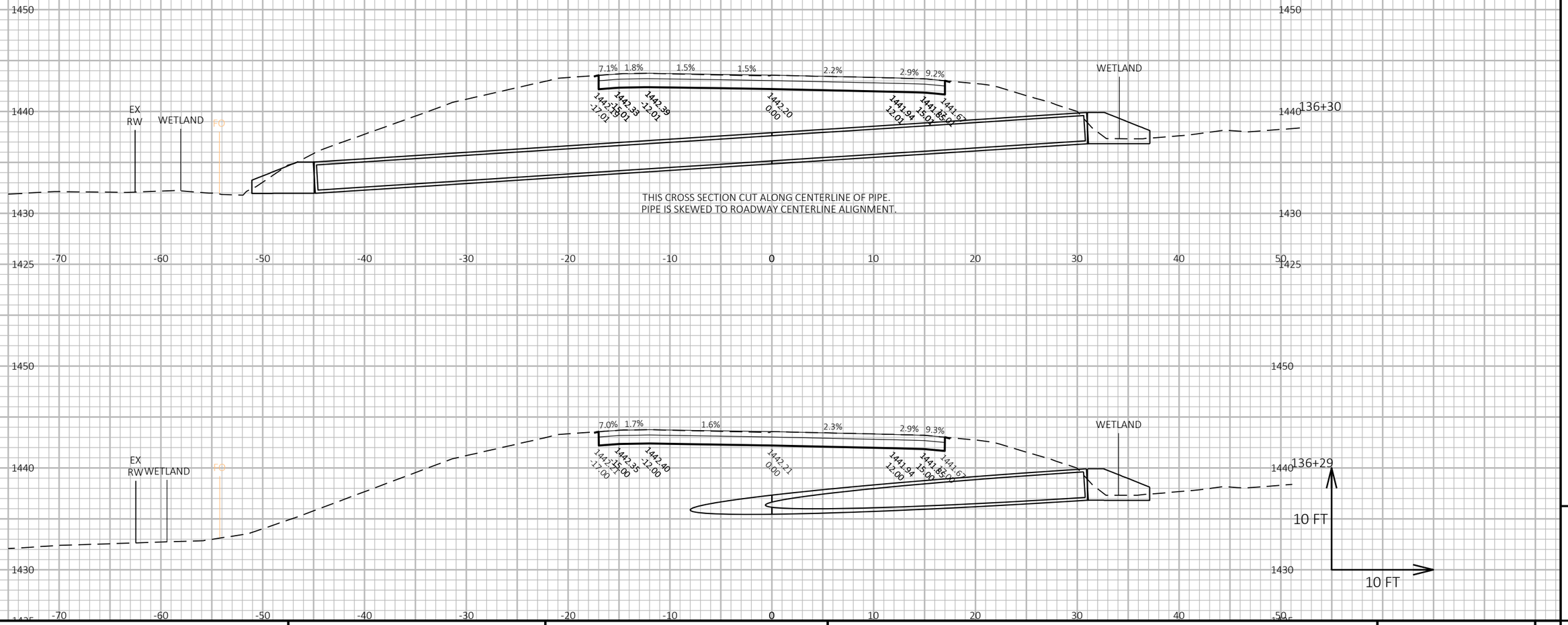
PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 104	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-4

PLOT DATE : 11/8/2022 11:13 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





9

9

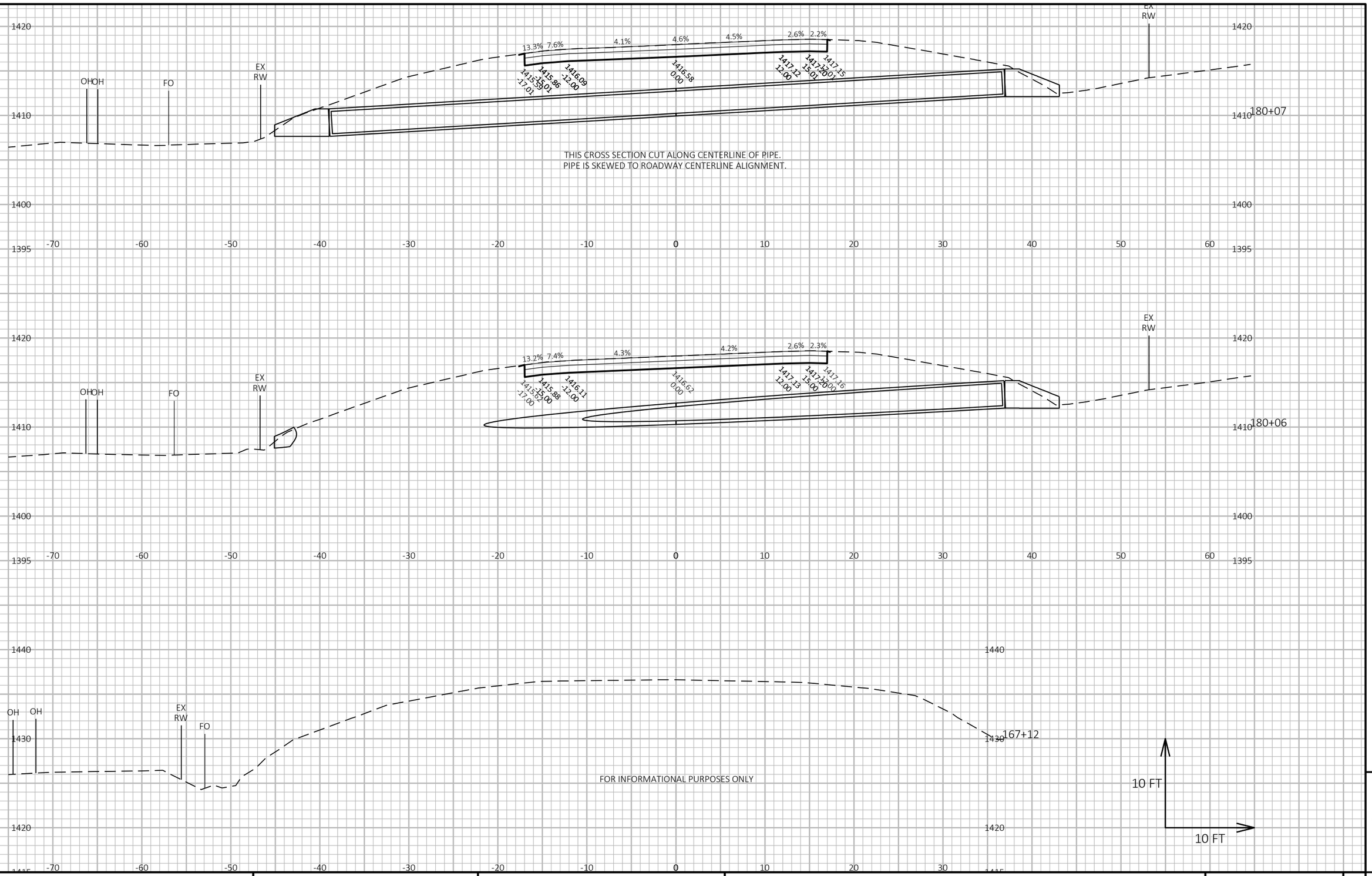
PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 105	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-5

PLOT DATE : 10/19/2022 3:38 PM PLOT BY : OETTINGER, JEFFERY M PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

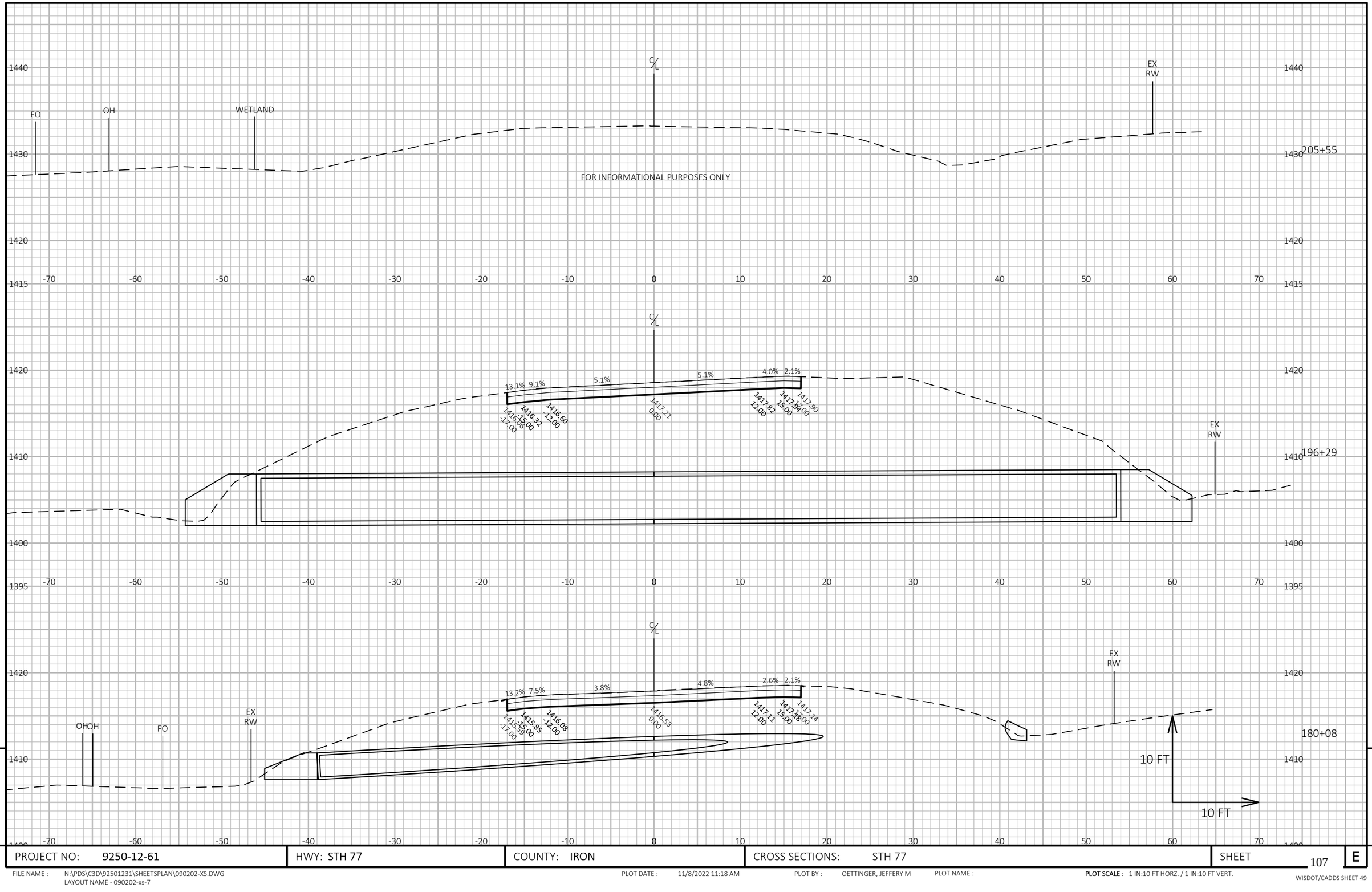
9

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 106	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-6

PLOT DATE : 10/20/2022 7:56 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



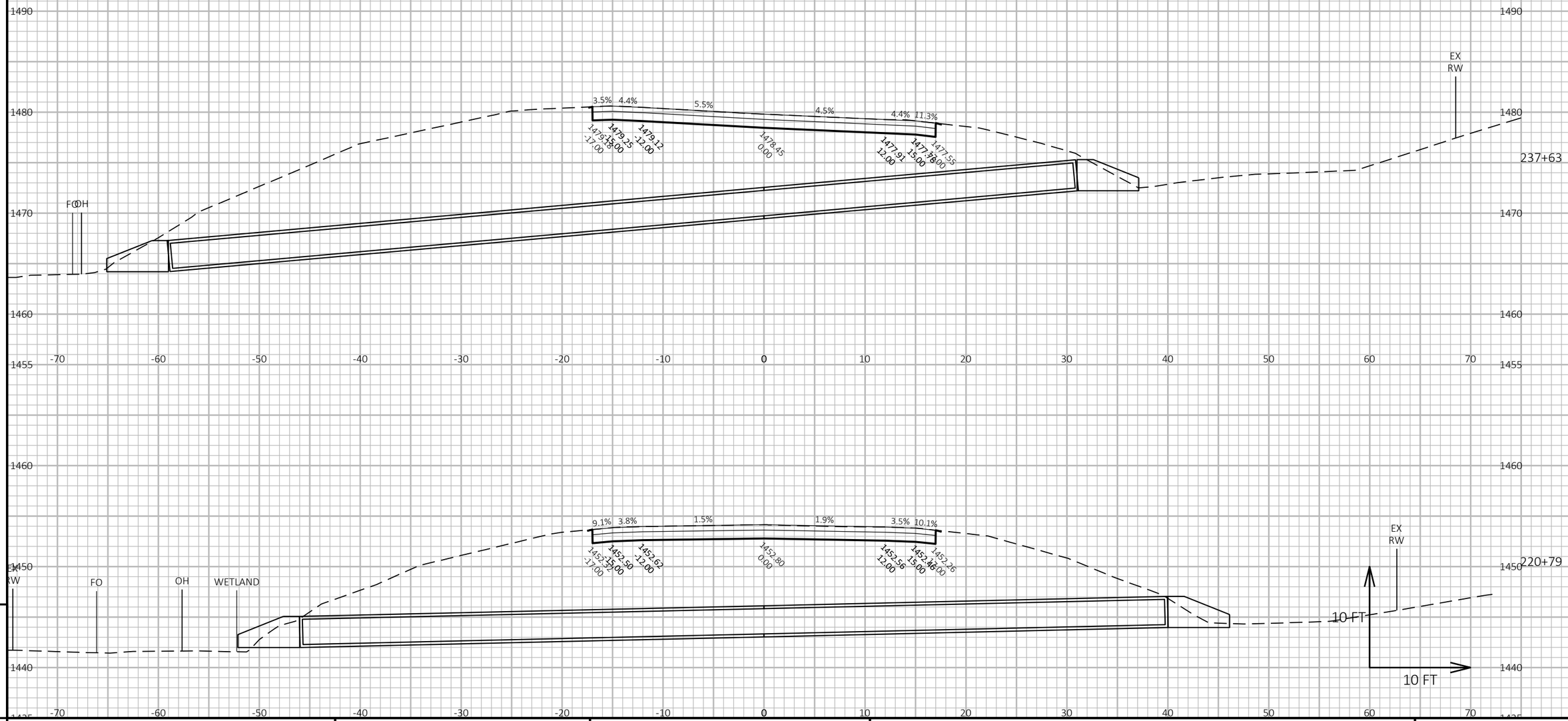
9 9

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 107	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-7

PLOT DATE : 11/8/2022 11:18 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



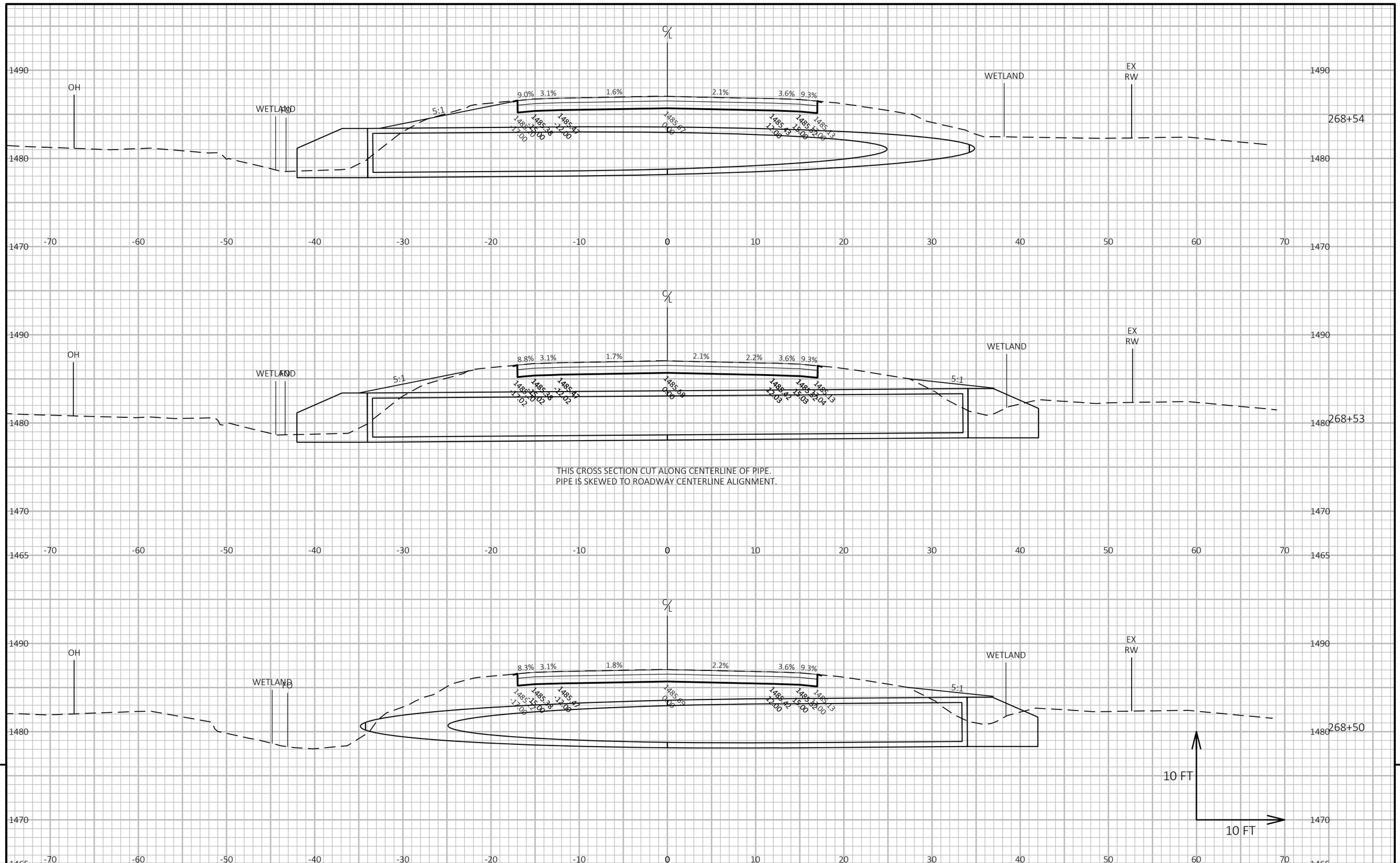
PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 108	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-8

PLOT DATE : 10/20/2022 7:57 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME :

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

WISDOT/CADDS SHEET 49



THIS CROSS SECTION CUT ALONG CENTERLINE OF PIPE.
PIPE IS SKEWED TO ROADWAY CENTERLINE ALIGNMENT.

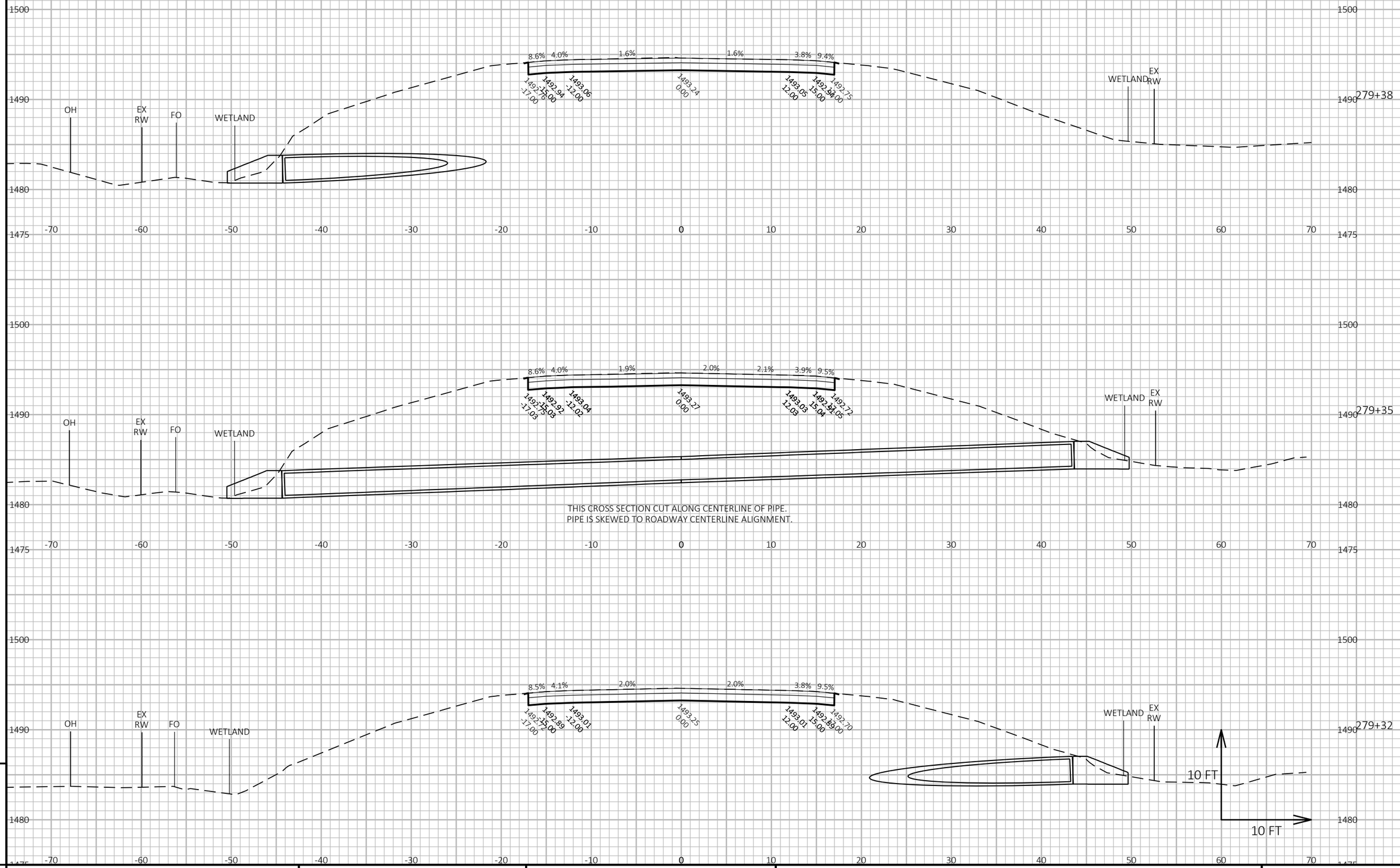
PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 109 E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-9

PLOT DATE : 11/8/2022 11:21 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

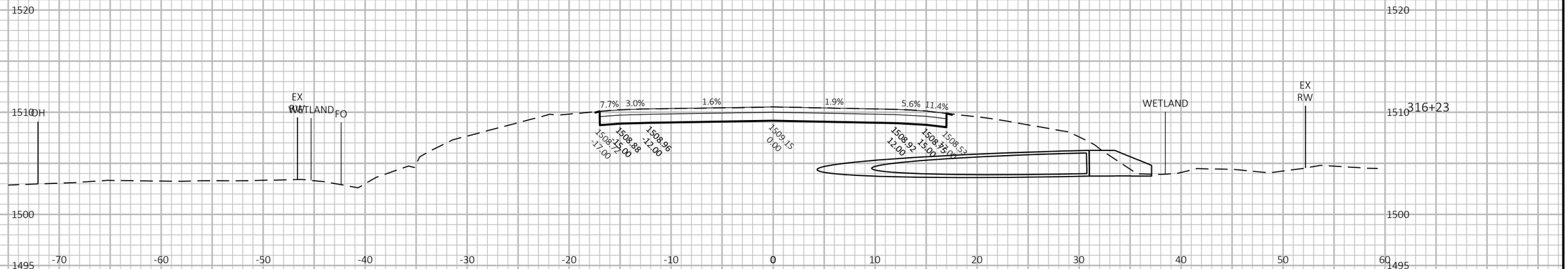
PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 110	E

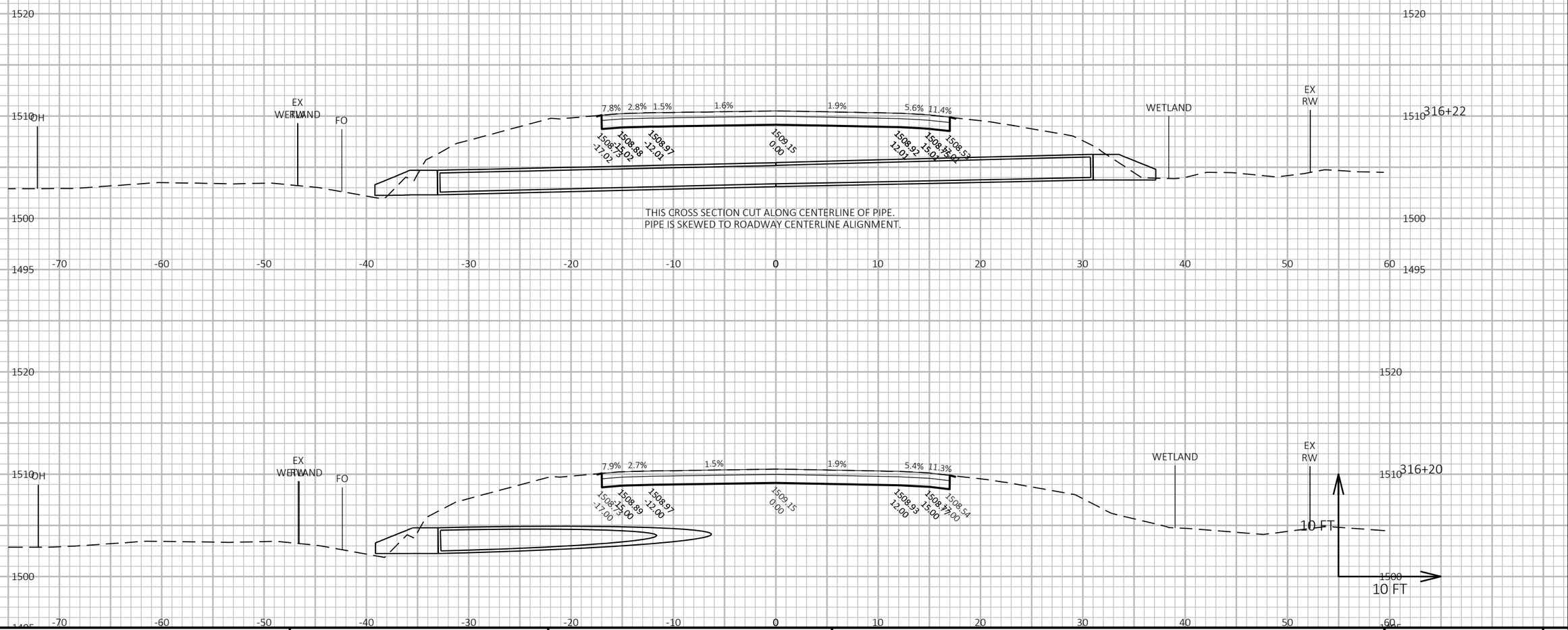
FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-10

PLOT DATE : 10/20/2022 7:58 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME :

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

WISDOT/CADDS SHEET 49





9

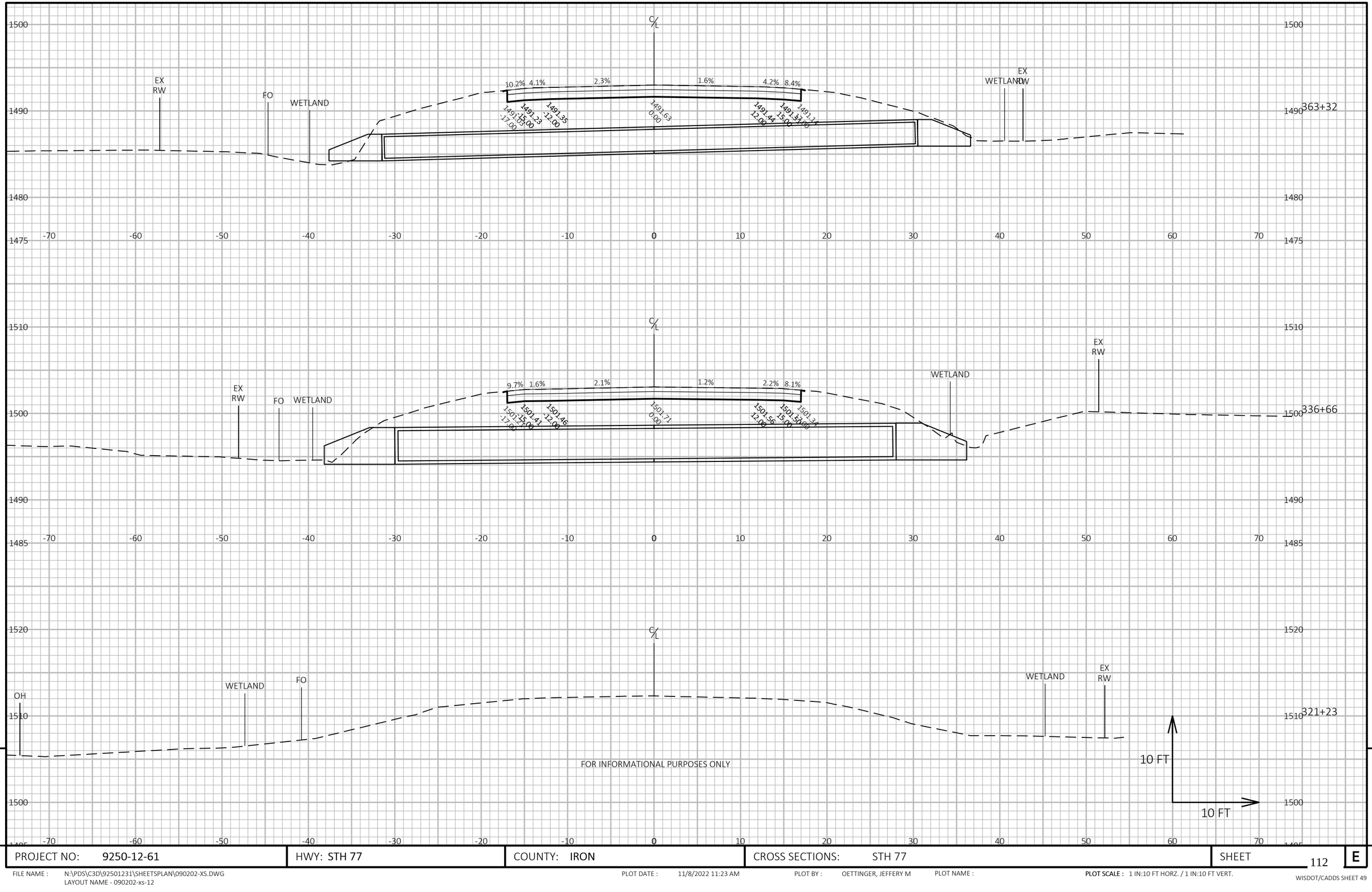
9

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 111	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-11

PLOT DATE : 10/20/2022 7:58 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

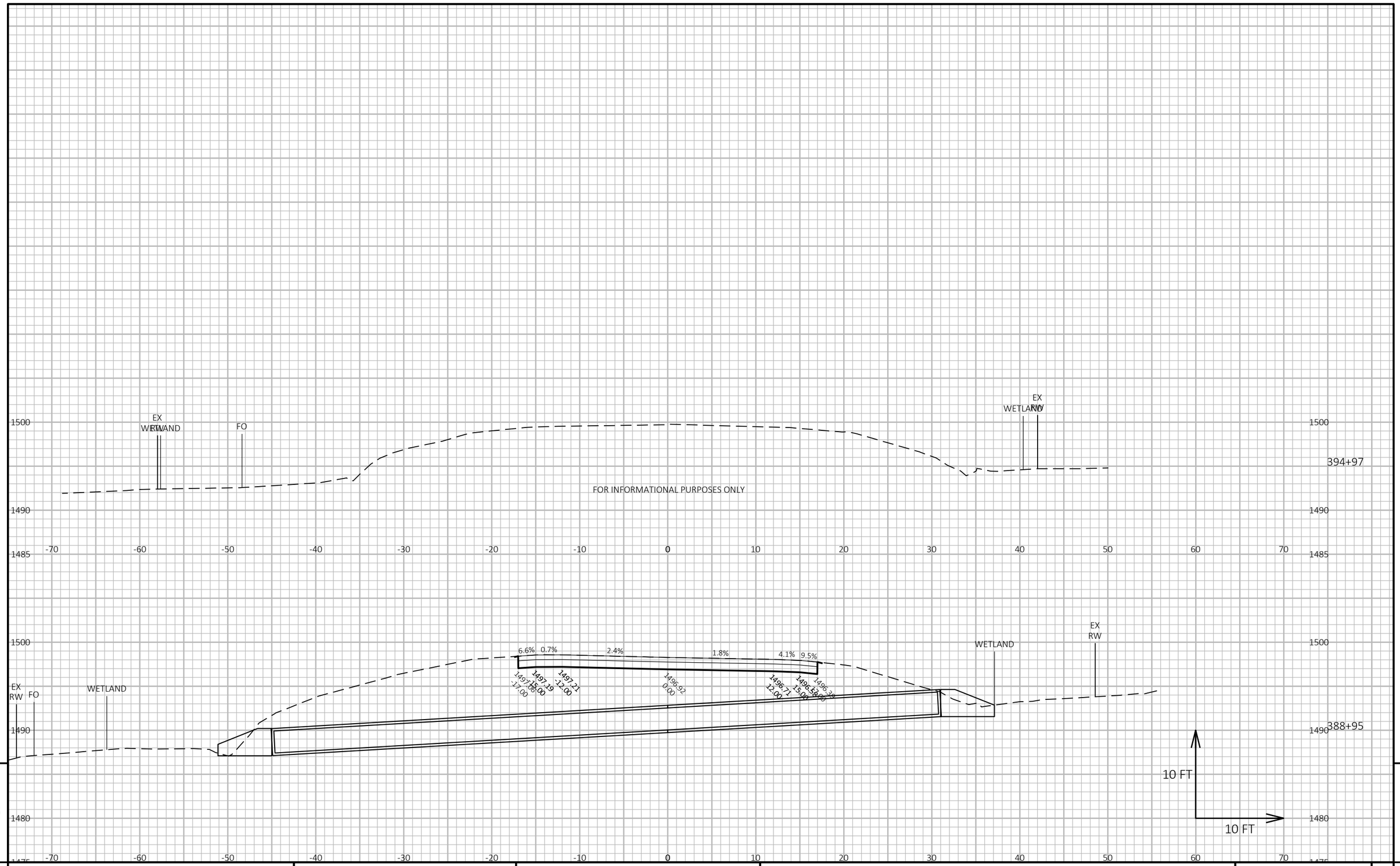
9

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 112	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-12

PLOT DATE : 11/8/2022 11:23 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

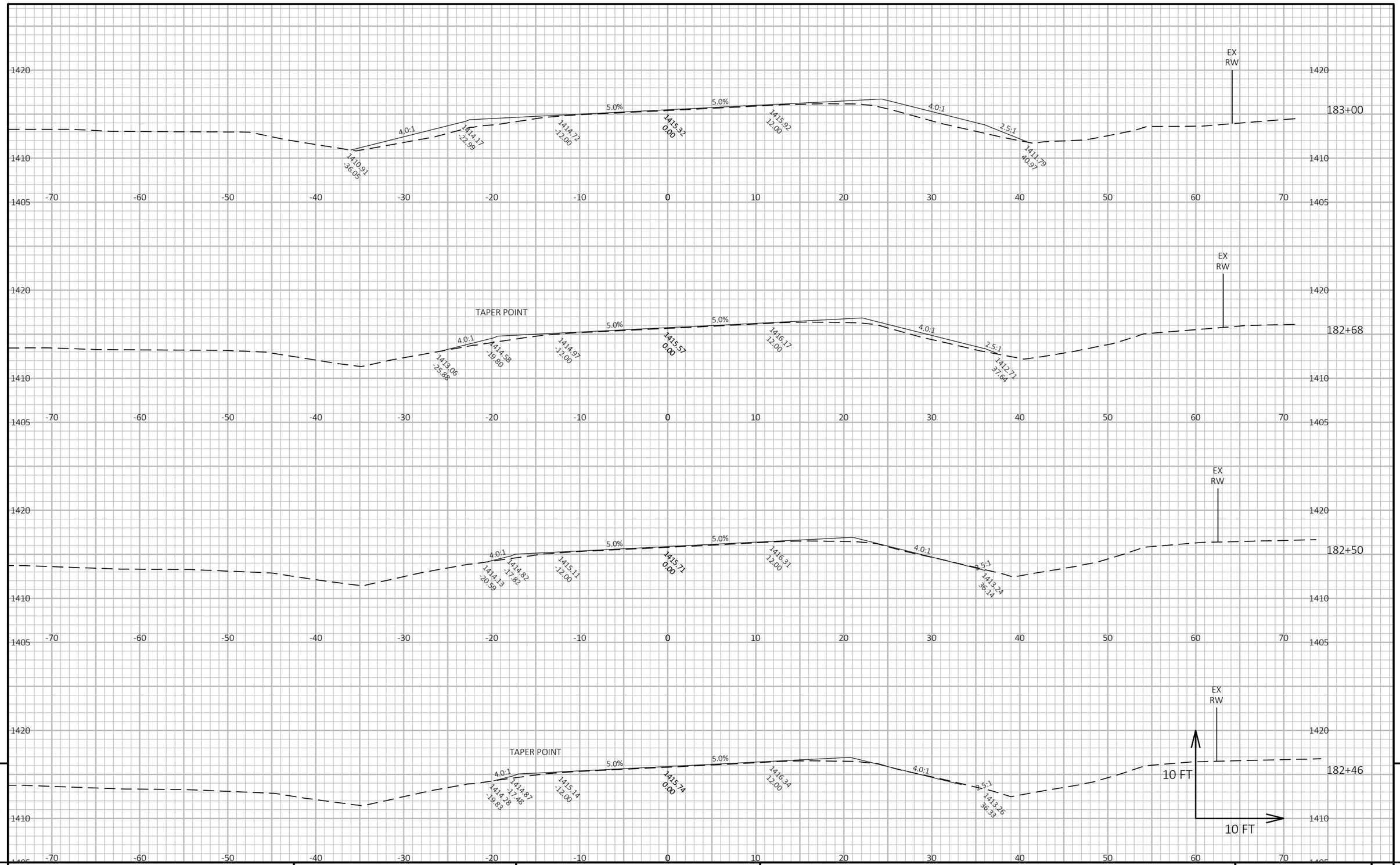
PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77	SHEET 113	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090202-xs-13

PLOT DATE : 10/20/2022 7:59 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME :

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

WISDOT/CADDS SHEET 49

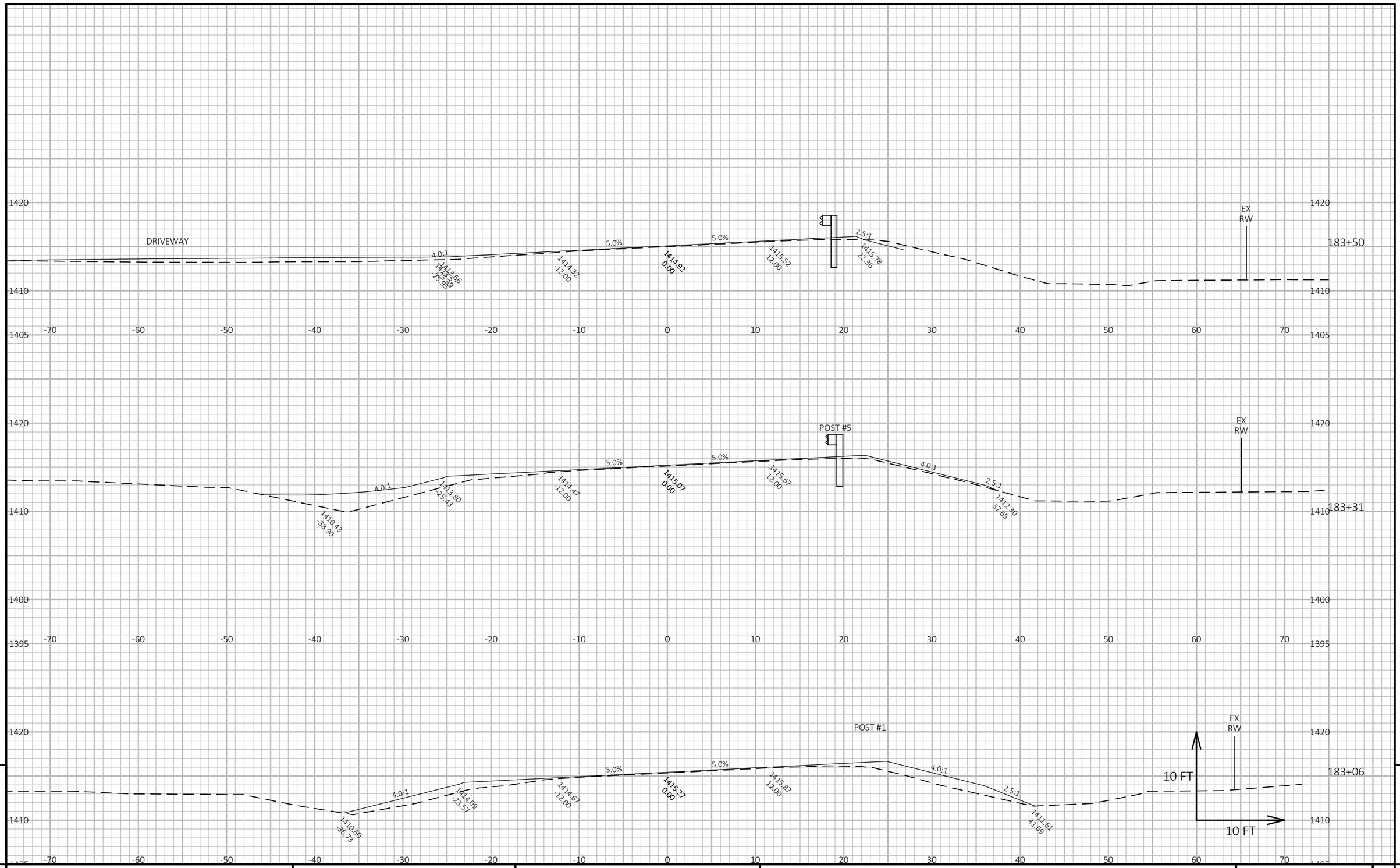


PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77 - BEAM GUARD	SHEET 114	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090203-XS-BG.DWG
LAYOUT NAME - 01

PLOT DATE : 10/20/2022 8:11 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77 - BEAM GUARD	SHEET 115	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090203-XS-BG.DWG
LAYOUT NAME - 02

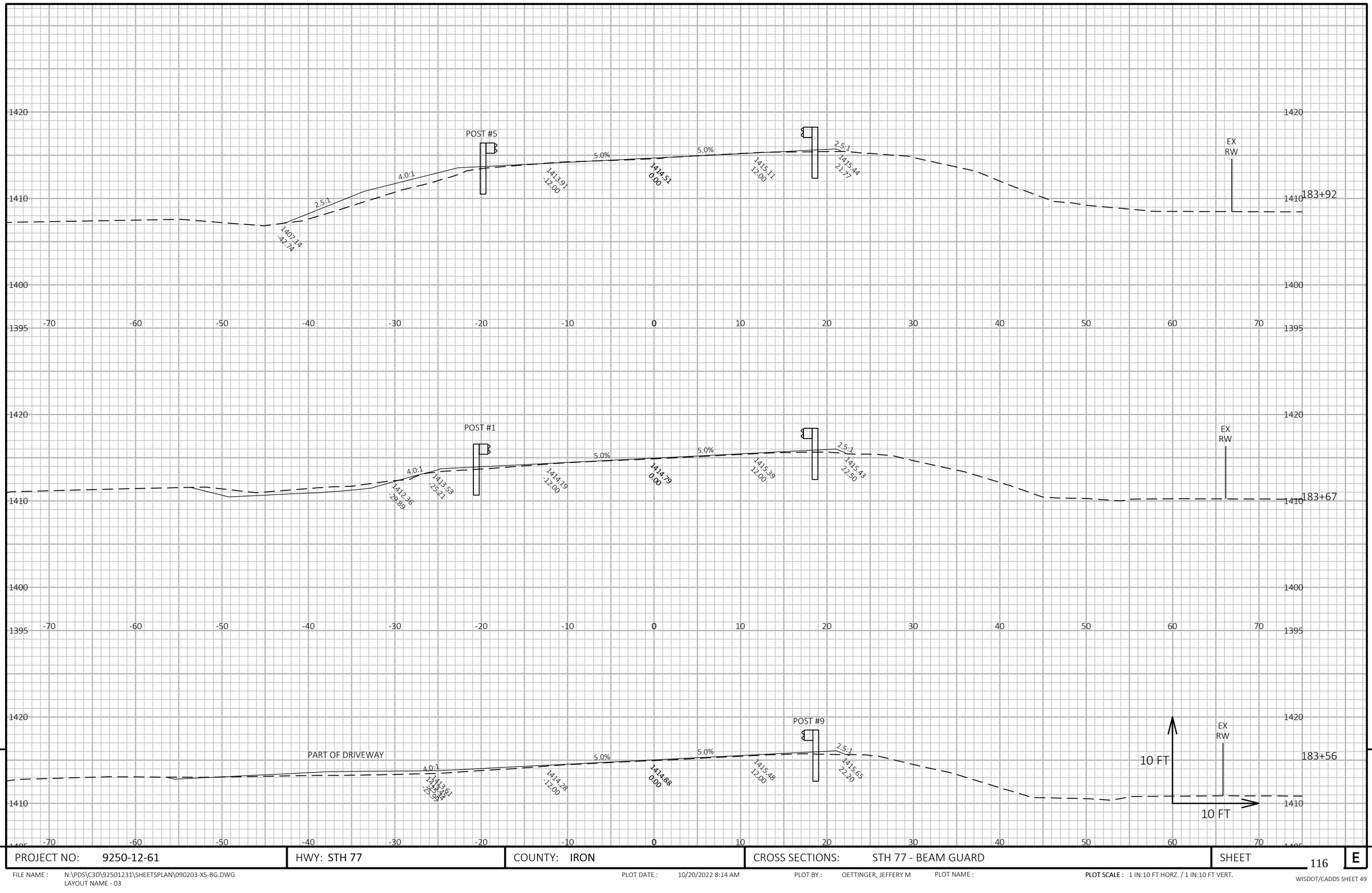
PLOT DATE : 10/20/2022 8:14 AM

PLOT BY : OETTINGER, JEFFERY M

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

9

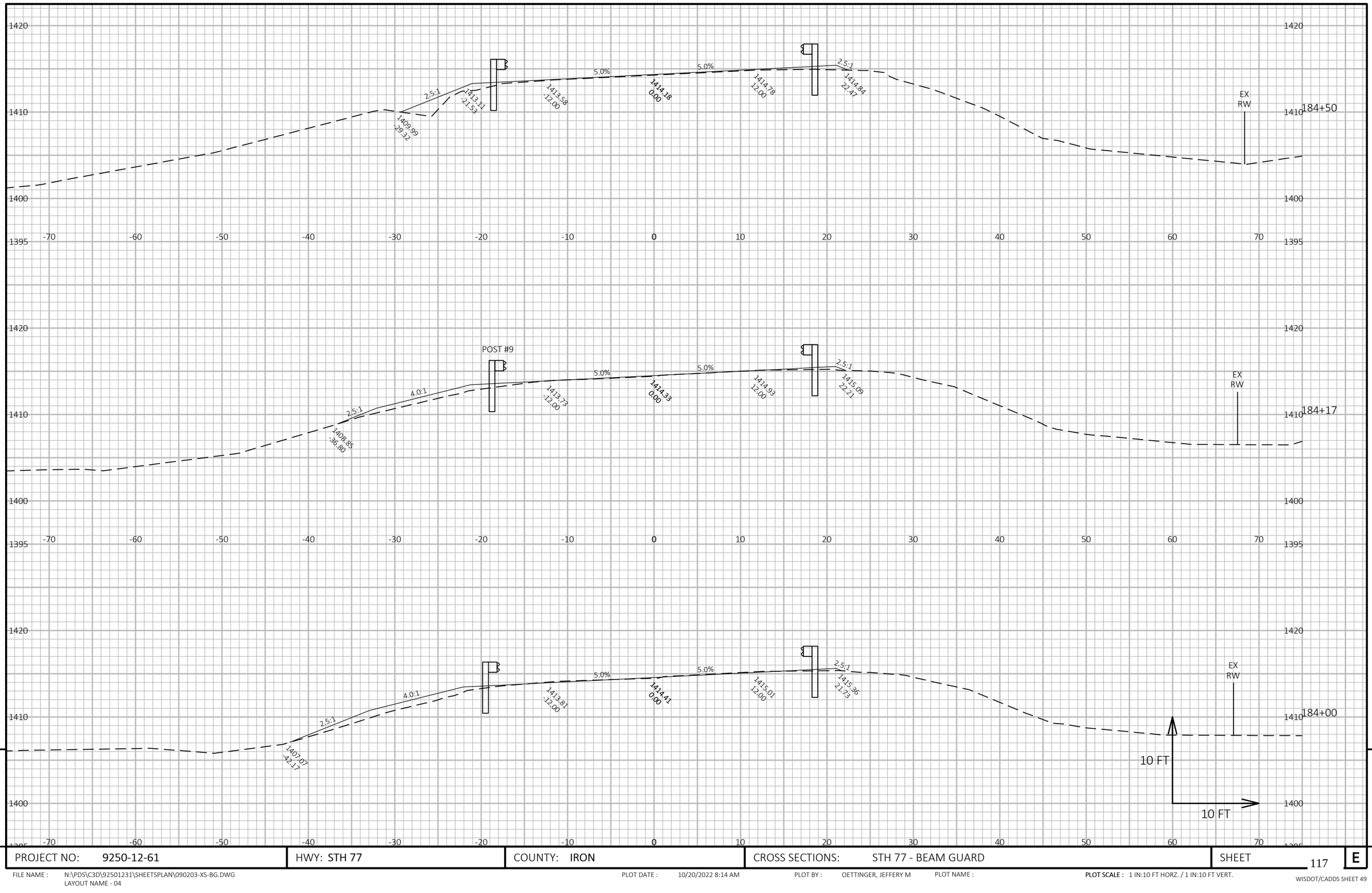
PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77 - BEAM GUARD	SHEET 116	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090203-XS-BG.DWG
LAYOUT NAME - 03

PLOT DATE : 10/20/2022 8:14 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME :

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

WISDOT/CADDS SHEET 49

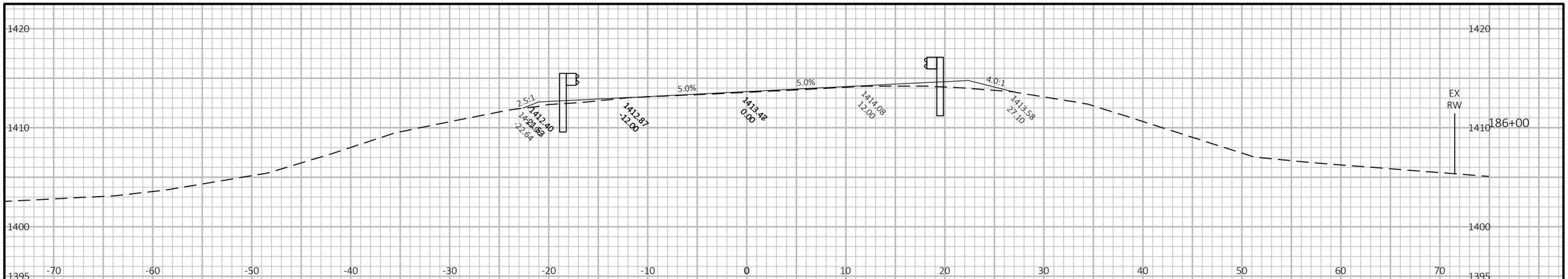


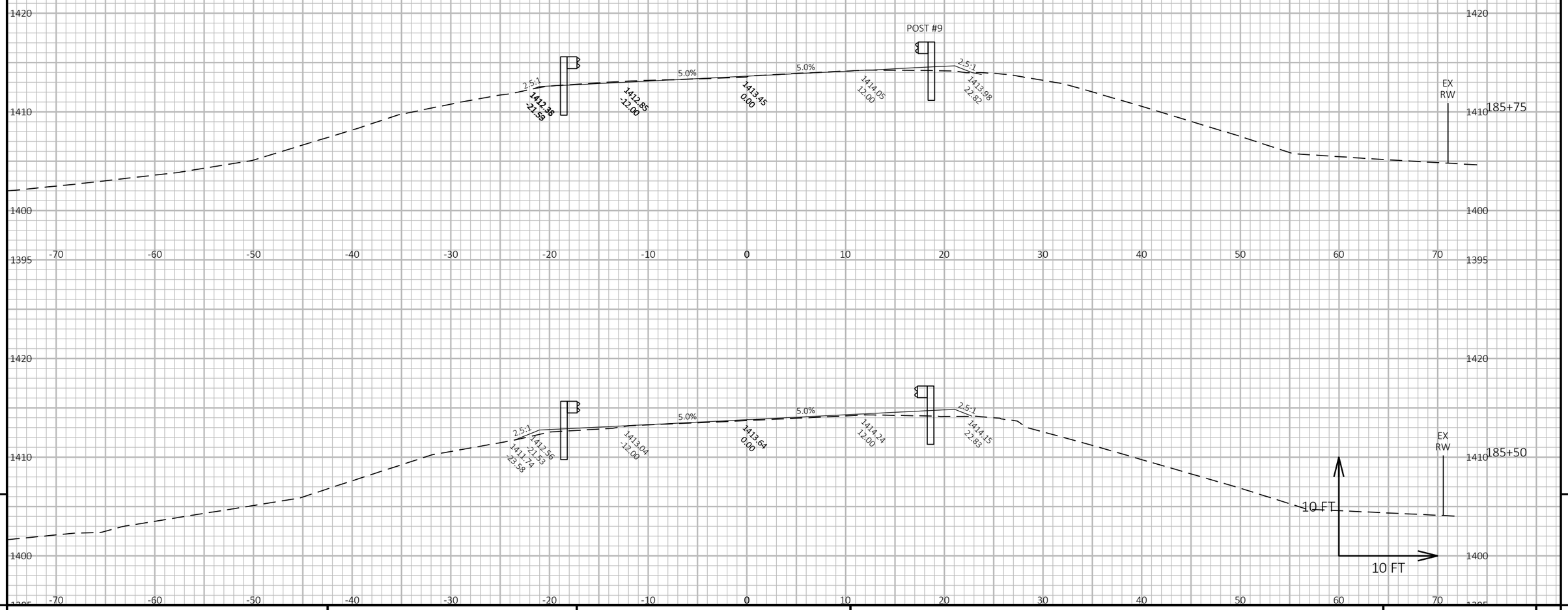
PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77 - BEAM GUARD	SHEET 117	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090203-XS-BG.DWG
LAYOUT NAME - 04

PLOT DATE : 10/20/2022 8:14 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49





9

9

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77 - BEAM GUARD	SHEET 118	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090203-XS-BG.DWG
LAYOUT NAME - 05

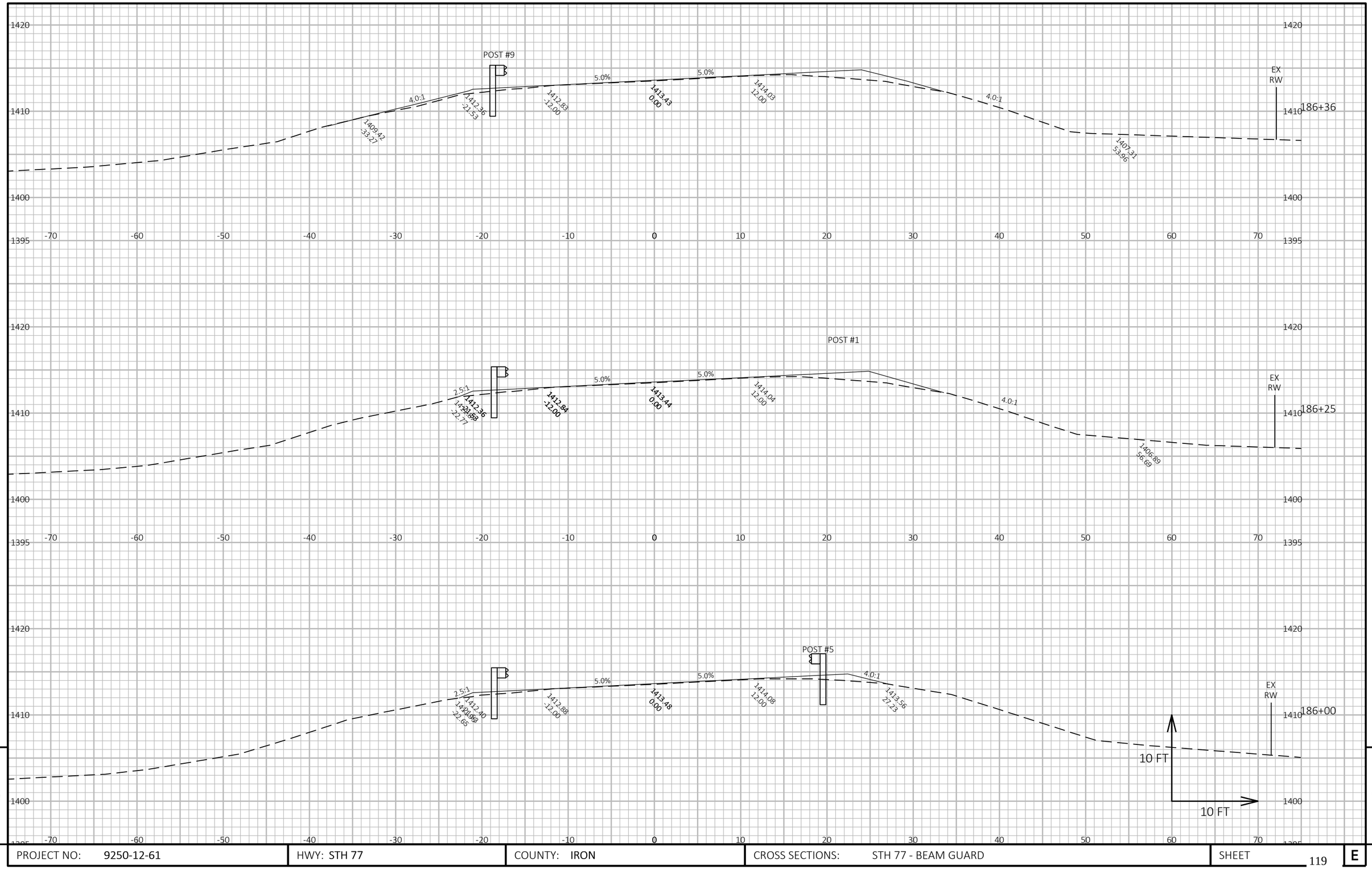
PLOT DATE : 10/20/2022 8:15 AM

PLOT BY : OETTINGER, JEFFERY M

PLOT NAME :

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

WISDOT/CADDS SHEET 49



9

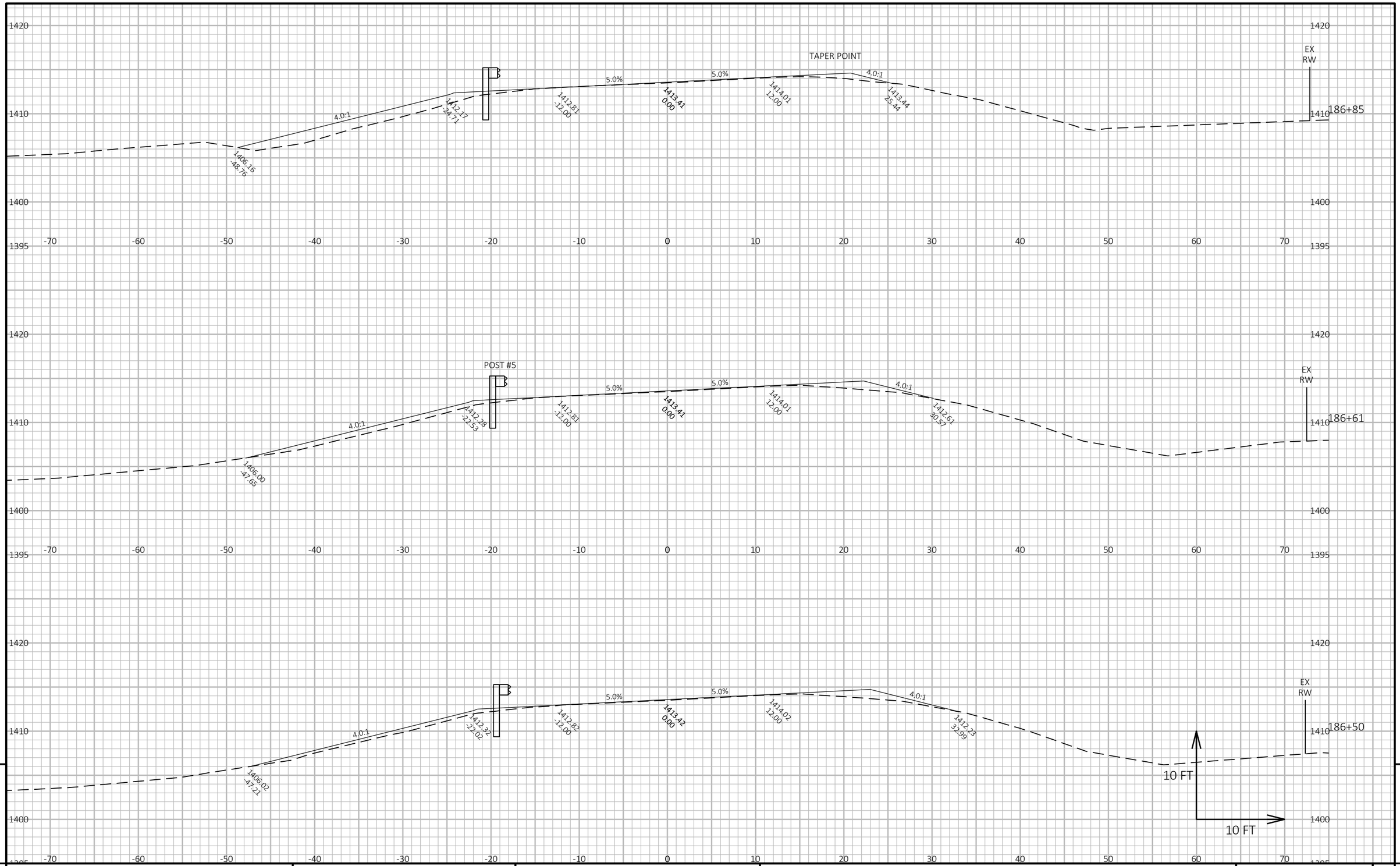
9

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77 - BEAM GUARD	SHEET 119	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090203-XS-BG.DWG
LAYOUT NAME - 06

PLOT DATE : 10/20/2022 8:15 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



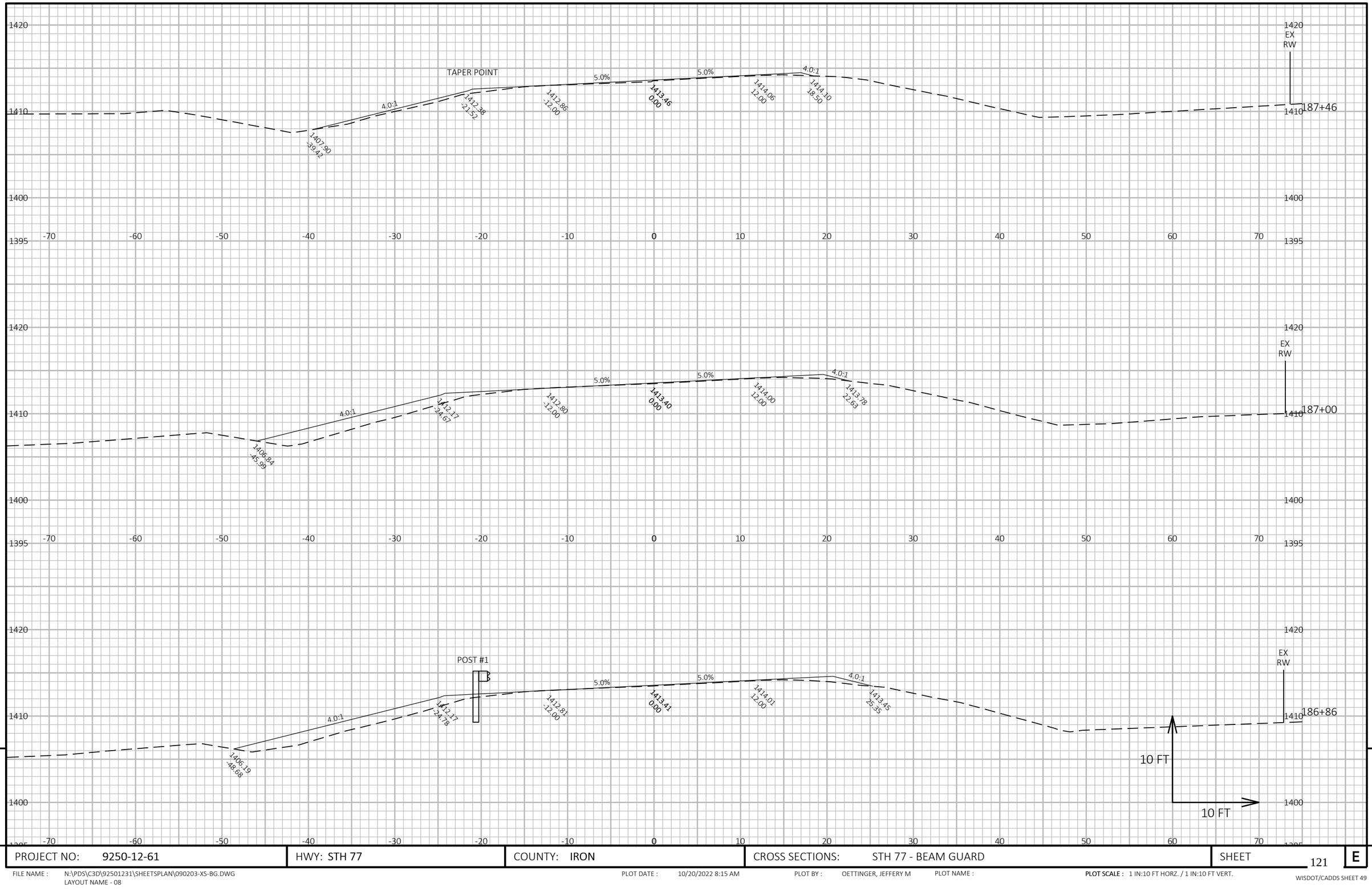
9

9

PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77 - BEAM GUARD	SHEET 120	E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090203-XS-BG.DWG
LAYOUT NAME - 07

PLOT DATE : 10/20/2022 8:15 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



PROJECT NO: 9250-12-61	HWY: STH 77	COUNTY: IRON	CROSS SECTIONS: STH 77 - BEAM GUARD	SHEET 121 E

FILE NAME : N:\PDS\C3D\92501231\SHEETSPLAN\090203-XS-BG.DWG
LAYOUT NAME - 08

PLOT DATE : 10/20/2022 8:15 AM PLOT BY : OETTINGER, JEFFERY M PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov